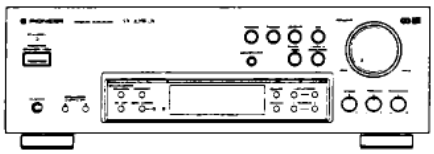
PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
RRV1539

STEREO RECEIVER

SX-305RDS
SX-205RDS

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

Type	Model		Power Requirement	Remarks
	SX-305RDS	SX-205RDS		
HYXK/EW	O	O	AC220–230V	
HYXK/GR	O	O	AC220–230V	
HVXK	–	O	AC230V	

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 parts. 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 PACKING

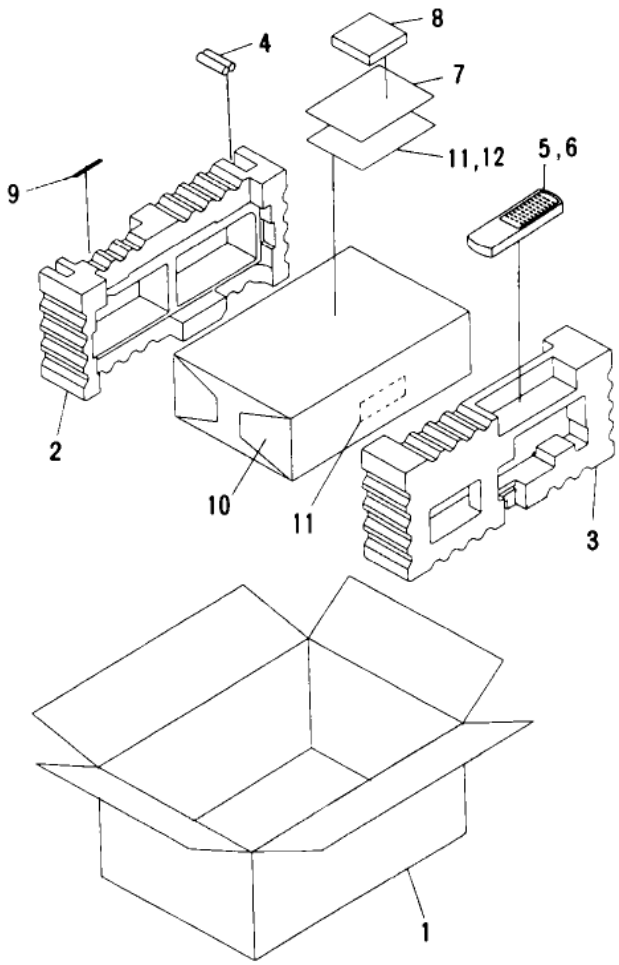
■ CONTRAST OF SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR AND HVXK

SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR and HVXK have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.					Remarks
			SX-305RDS		SX-205RDS			
			HYXK/EW	HYXK/GR	HYXK/EW	HYXK/GR	HVXK	
	1	Packing case	AHD7270	AHD7270	AHD7266	AHD7266	AHD7266	
	7	Operating instructions (English/French/German/ Italian/Swedish/Spanish/ Portuguese)	ARE7062	Not used	ARE7062	Not Used	Not used	
	7	Operating instructions (German)	Not used	ARC7106	Not used	ARC7106	Not used	
	7	Operating instructions (English)	Not used	Not used	Not used	Not used	ARB7068	

■ PARTS LIST FOR SX-305RDS/HYXK/EW

Mark	No.	Description	Parts No.
	1	Packing case	AHD7270
	2	Front pad	AHA7115
	3	Rear pad	AHA7116
NSP	4	Dry cell batteries (R6P, AA)	VEM-013
	5	Remote control unit (CU-SX109)	AXD7086
	6	Battery lid	AZA7123
	7	Operating instructions (English/French/German/ Italian/Dutch/Swedish/ Spanish/Portuguese)	ARE7062
	8	Loop antenna assy	ATB7006
	9	FM antenna	ADH7002
	10	Packing sheet	AHG1215
	11	Serial sheet (Warranty card and rear panel)	AAX1523
NSP	12	Warranty card	ARY7010



1.2 EXPLODED VIEWS (1/3)

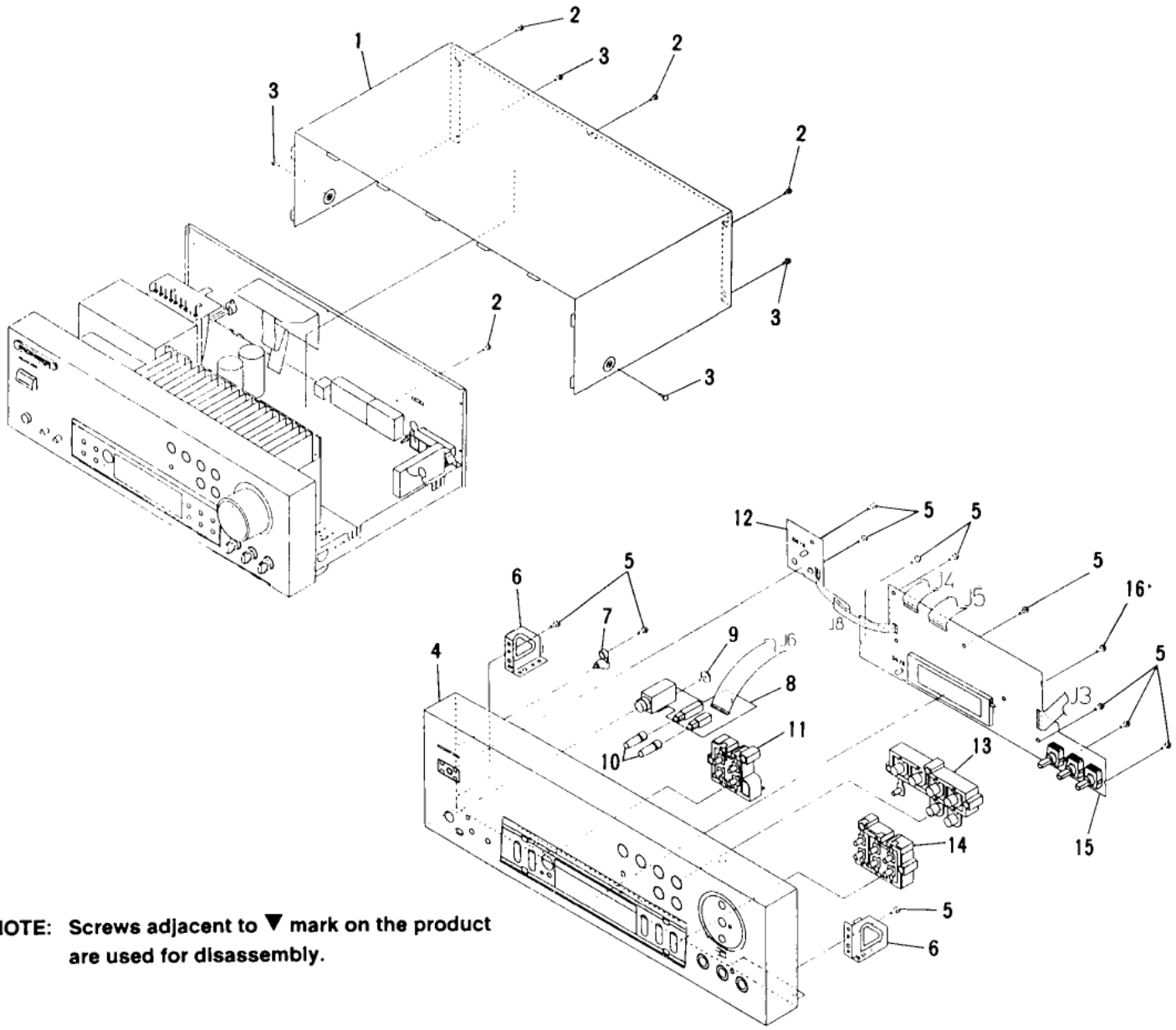
■ CONTRAST OF SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR AND HVXK

SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR and HVXK have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.					Remarks
			SX-305RDS		SX-205RDS			
			HYXK/EW	HYXK/GR	HYXK/EW	HYXK/GR	HVXK	
NSP	4 8	Front panel SP SW ASSY	AMB7335 AWZ8039	AMB7335 AWZ8039	AMB7332 AWZ8046	AMB7332 AWZ8046	AMB7332 AWZ8046	

■ PARTS LIST FOR SX-305RDS

Mark	No.	Description	Parts No.
	1	Bonnet case	ANE7121
	2	Screw	BCZ30P080FZK
	3	Screw	BBZ30P080FZK
	4	Front panel	AMB7335
	5	Screw	BPZ26P080FMC
	6	Panel holder	ANG7087
	7	LED lens	AAK2553
NSP	8	SP SW ASSY	AWZ8039
	9	Screw	ABA7009
	10	Push button	AAD7283
	11	Hinge button A	AAD7279
NSP	12	POWER SW ASSY	AWZ8038
	13	Function button	AAD7281
	14	Hinge button B	AAD7280
	15	FRONT ASSY	AWZ8036
	16	Screw	IPZ26P080FMC



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

1.3 EXPLODED VIEWS (2/3)

■ CONTRAST OF SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR AND HVXK

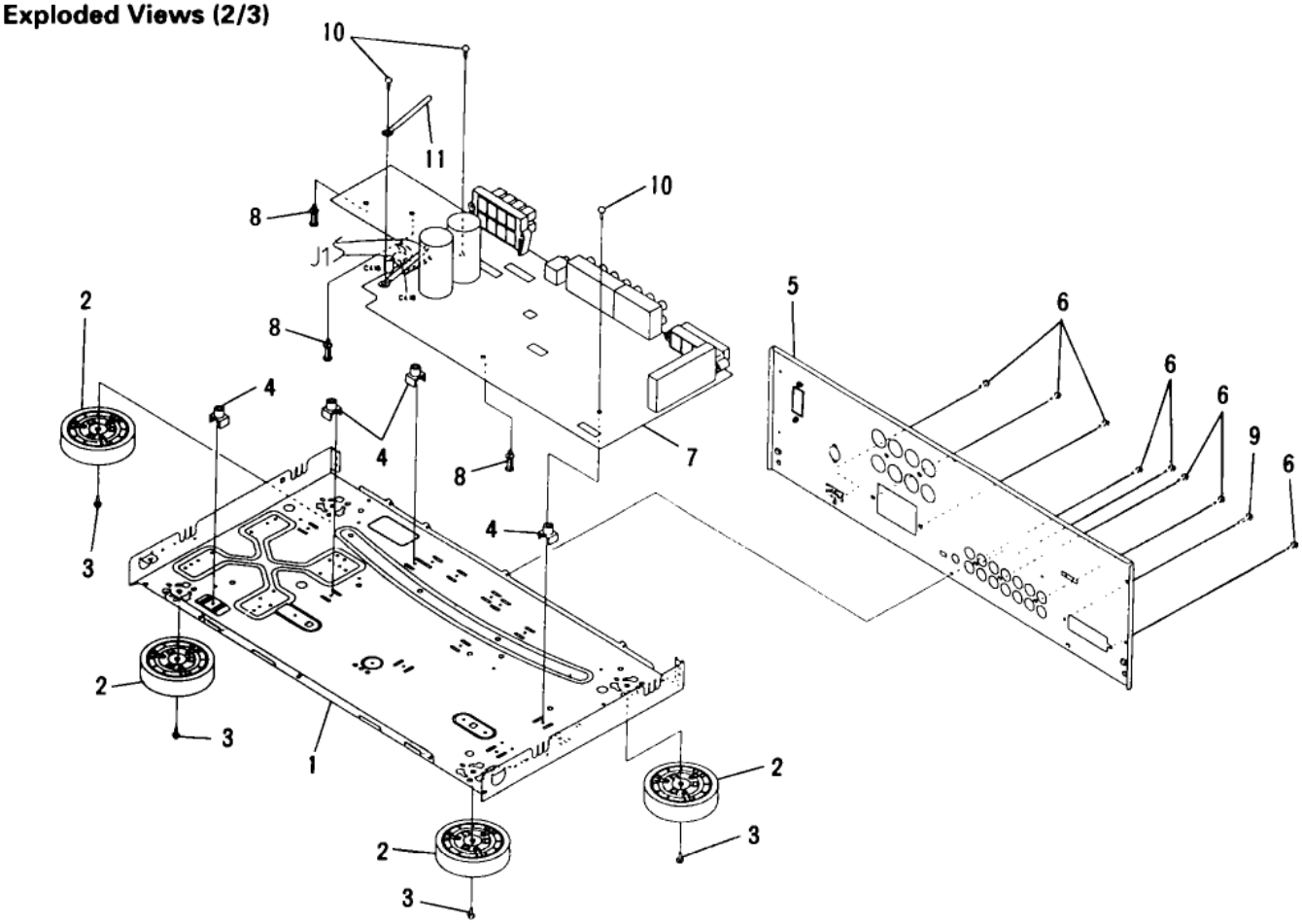
SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR and HVXK have the same construction except for the following:

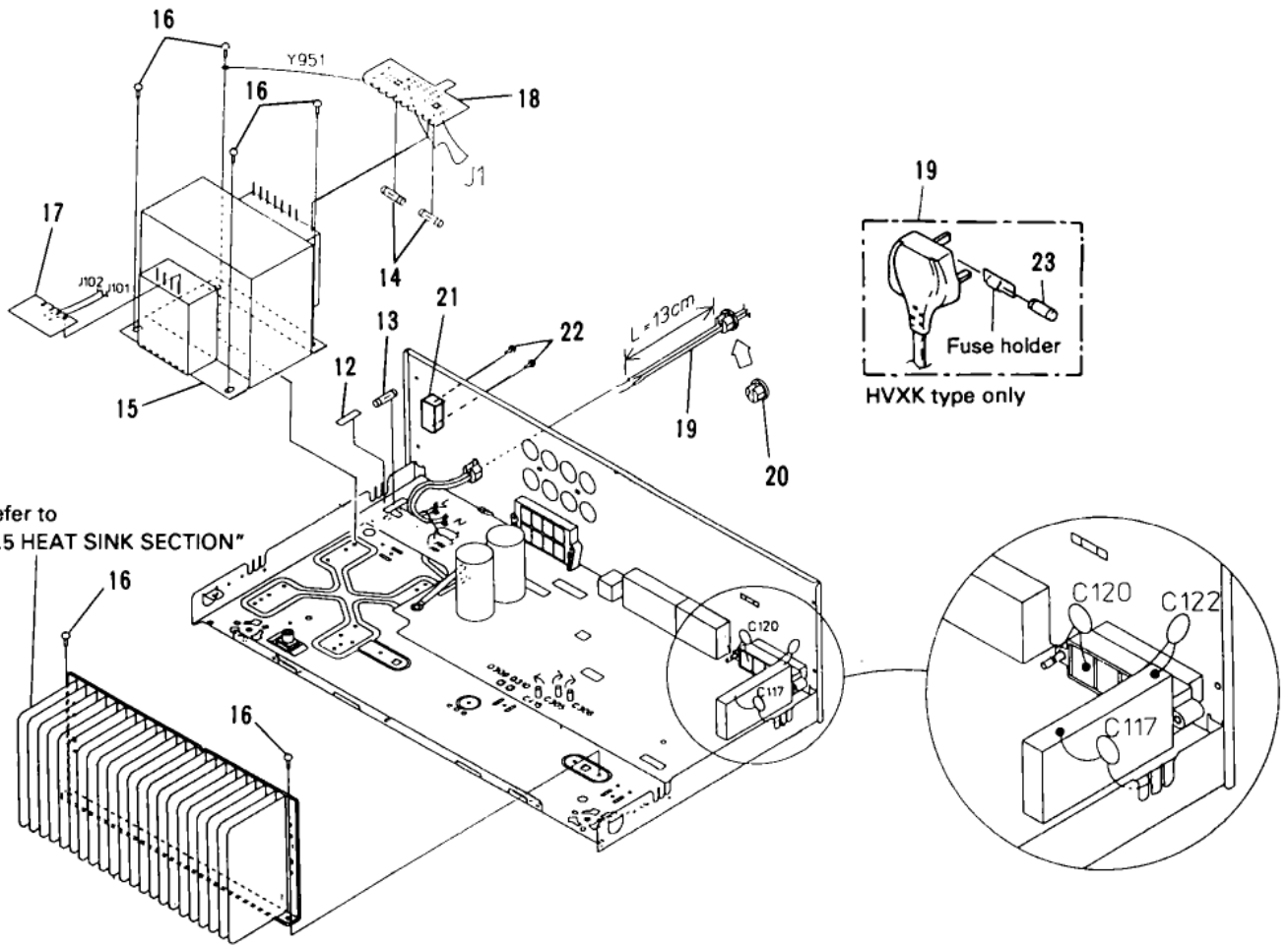
Mark	No.	Symbol & Description	Part No.					Remarks
			SX-305RDS		SX-205RDS			
			HYXK/EW	HYXK/GR	HYXK/EW	HYXK/GR	HVXK	
	5	Rear panel	ANC7343	ANC7343	ANC7345	ANC7345	ANC7357	
	7	MOTHER ASSY	AWZ8035	AWZ8035	AWZ8042	AWZ8042	AWZ8042	
	12	Fuse card (T2.5AL250V)	AAX7035	AAX7035	Not used	Not used	Not used	
⚠	13	Fuse (FU1, T2.5AL250V)	AEK1058	AEK1058	Not used	Not used	Not used	
⚠	13	Fuse (FU1, T1.25AL250V)	Not used	Not used	AEK1055	AEK1055	AEK1055	
⚠	15	Power transformer (AC220–230V)	ATS7120	ATS7120	ATS7121	ATS7121	ATS7121	
⚠	19	AC power cord	ADG1138	ADG1138	ADG1138	ADG1138	ADG1148	
⚠	23	Fuse (T5A/250V)	Not used	Not used	Not used	Not used	AEK1046	For AC power cord

■ PARTS LIST FOR SX-305RDS

Mark	No.	Description	Parts No.
NSP	1	Chassis	ANA1481
	2	Insulator	PNW1912
	3	Screw	BBZ30P080FZK
	4	PCB mold	AMR2533
	5	Rear panel	ANC7343
	6	Screw	BBZ30P080FZK
	7	MOTHER ASSY	AWZ8035
	8	PCB support	AEC1581
	9	Screw	ABA1047
	10	Screw	BBZ30P200FMC
NSP	11	Binder	RNE1277
	12	Fuse card	AAX7035
⚠	13	Fuse (FU1, T2.5AL250V)	AEK1058
⚠	14	Fuse (FU2, FU3, T800mAL250V)	AEK1053
⚠	15	Power transformer (T1) (T1 AC220–230V)	ATS7120
	16	Screw	ABA7019
NSP	17	PRIMARY ASSY	AWZ8391
NSP	18	TRANS ASSY	AWZ8040
⚠	19	AC power cord	ADG1138
	20	Strain relief	CM-22B
⚠	21	Main power switch	ASH-501
	22	Screw	BCZ30P080FZK

Exploded Views (2/3)





1.4 EXPLODED VIEWS (3/3)

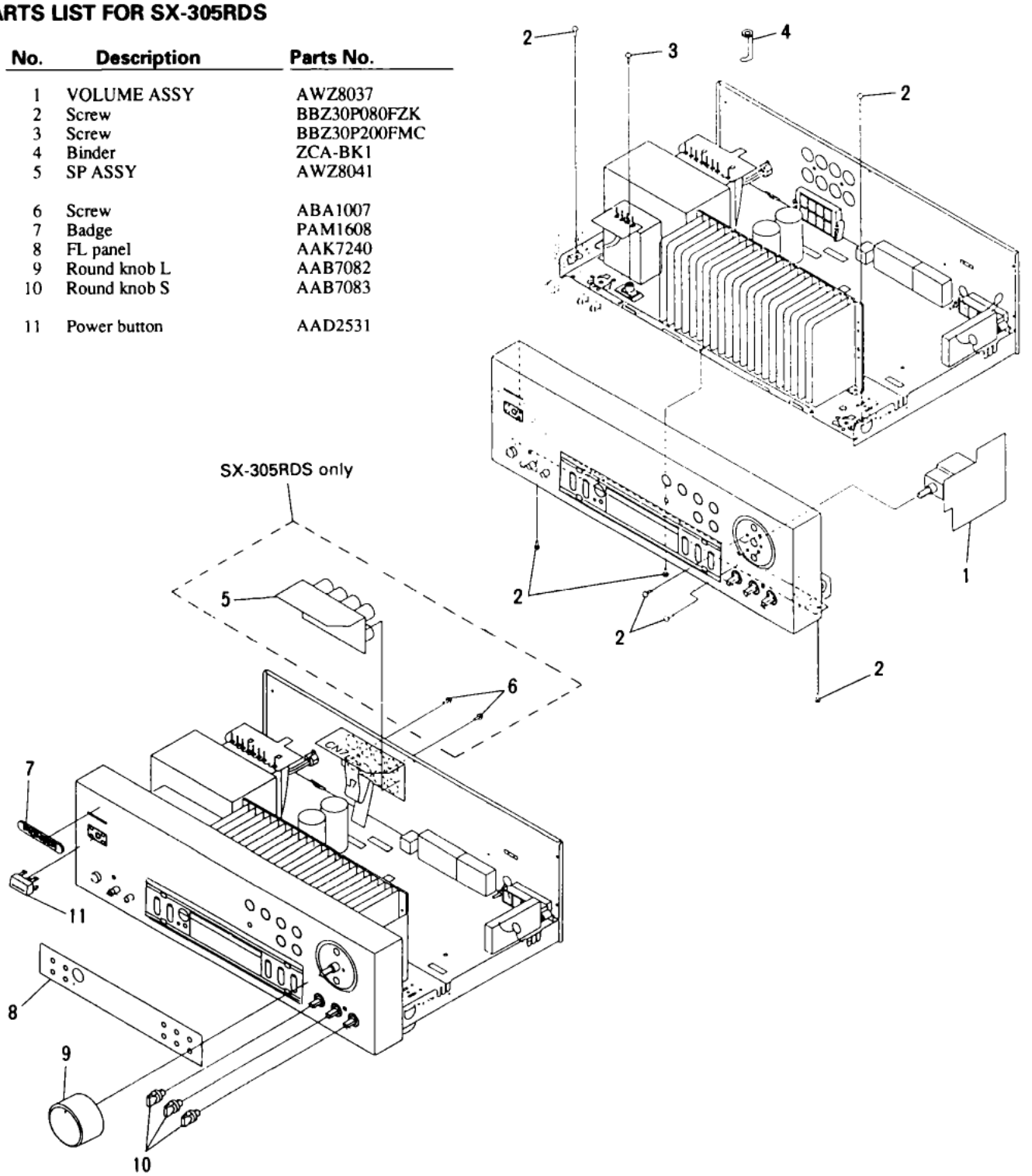
■ CONTRAST OF SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR AND HVXK

SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR and HVXK have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.					Remarks
			SX-305RDS		SX-205RDS			
			HYXK/EW	HYXK/GR	HYXK/EW	HYXK/GR	HVXK	
NSP	5	SP ASSY	AWZ8041	AWZ8041	Not used	Not used	Not Used	
	6	Screw	ABA1007	ABA1007	Not used	Not used	Not used	

■ PARTS LIST FOR SX-305RDS

Mark	No.	Description	Parts No.
	1	VOLUME ASSY	AWZ8037
	2	Screw	BBZ30P080FZK
	3	Screw	BBZ30P200FMC
NSP	4	Binder	ZCA-BK1
NSP	5	SP ASSY	AWZ8041
	6	Screw	ABA1007
	7	Badge	PAM1608
	8	FL panel	AAK7240
	9	Round knob L	AAB7082
	10	Round knob S	AAB7083
	11	Power button	AAD2531



1.5 HEAT SINK SECTION

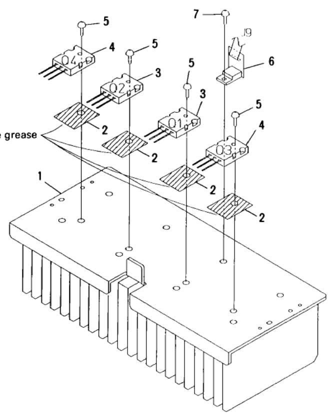
■ **CONTRAST OF SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR AND HVXK**

SX-305RDS/HYXK/EW, HYXK/GR, SX-205RDS/HYXK/EW, HYXK/GR and HVXK have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.					Remarks
			SX-305RDS		SX-205RDS			
			HYXK/EW	HYXK/GR	HYXK/EW	HYXK/GR	HVXK	
NSP	1	Heat sink	ANH1475	ANH1475	ANH1476	ANH1476	ANH1476	
⚠	3	Transistor (Q1, Q2)	2SC5198(P)	2SC5198(P)	2SC5196(P)	2SC5196(P)	2SC5196(P)	
⚠	4	Transistor (Q3, Q4)	2SA1941(P)	2SA1941(P)	2SA1939(P)	2SA1939(P)	2SA1939(P)	

■ **PARTS LIST FOR SX-305RDS**

Mark	No.	Description	Parts No.
NSP	1	Heat sink	ANH1475
	2	Mica wafer	AEE7010
⚠	3	Transistor (Q1, Q2)	2SA5198
⚠	4	Transistor (Q3, Q4)	2SA1941
	5	Screw	ABA1194
NSP	6	REG ASSY	AWZ8389
	7	Screw	BBZ30P080FZK



2. SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.1 OVERALL SCHEMATIC DIAGRAM

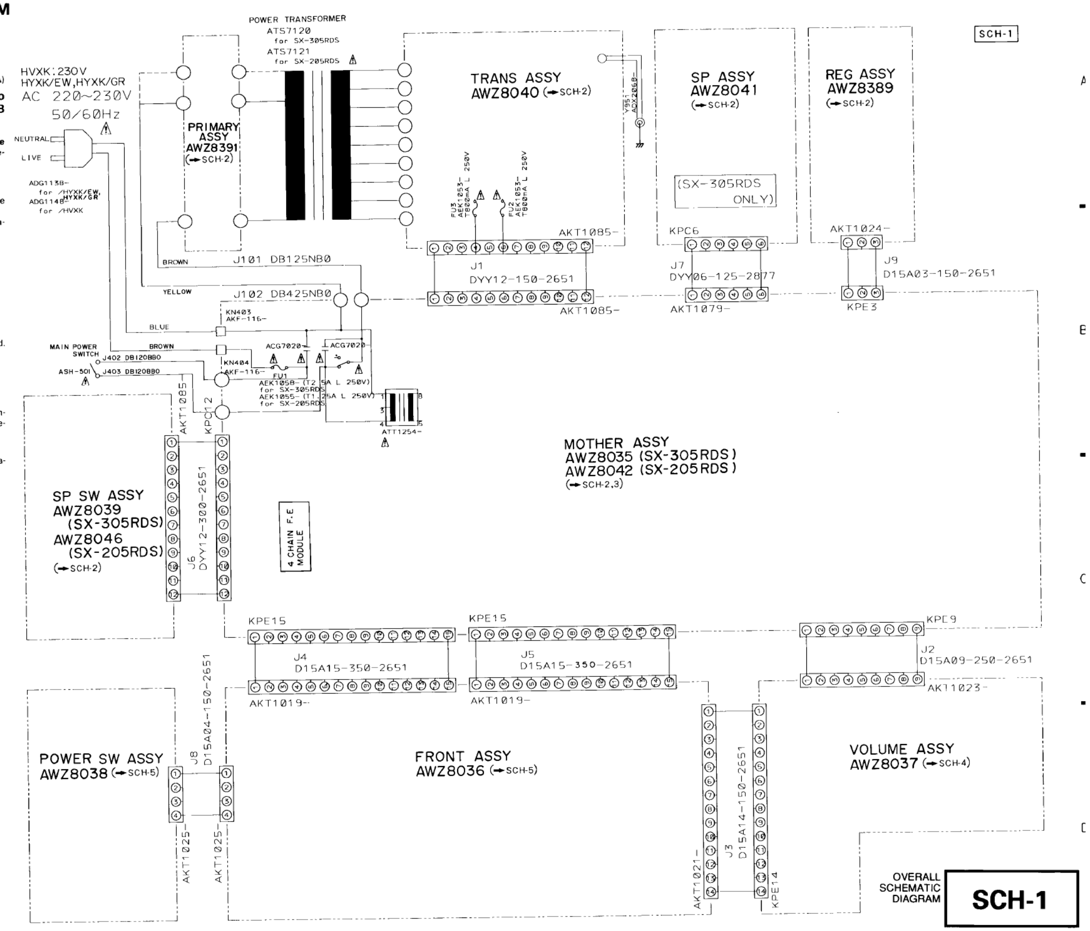
NOTE FOR SCHEMATIC DIAGRAMS (Type 2A)

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:**
   ⌴ or ← V :
   DC voltage (V) at no input signal unless otherwise noted.
   ⇦ mA or ← mA :
   DC current at no input signal unless otherwise noted
7. **OTHERS**:
   - ⊘ or ● : 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):

FRONT ASSY
S826 : STATION +
S827 : STATION −
S828 : CLASS
S829 : EON MODE
S830 : TUNING +
S831 : TUNING −
S832 : FM/AM
S833 : PHONO
S834 : TAPE 2 MONITOR
S835 : TAPE 1/VCR
S836 : LOUDNESS
S837 : MEMORY
S838 : CD
S839 : LD/DVD
S840 : TUNER
S841 : CHARACTER/SEARCH
S842 : RF ATT

POWER SW ASSY
S876 : POWER STANDBY/ON

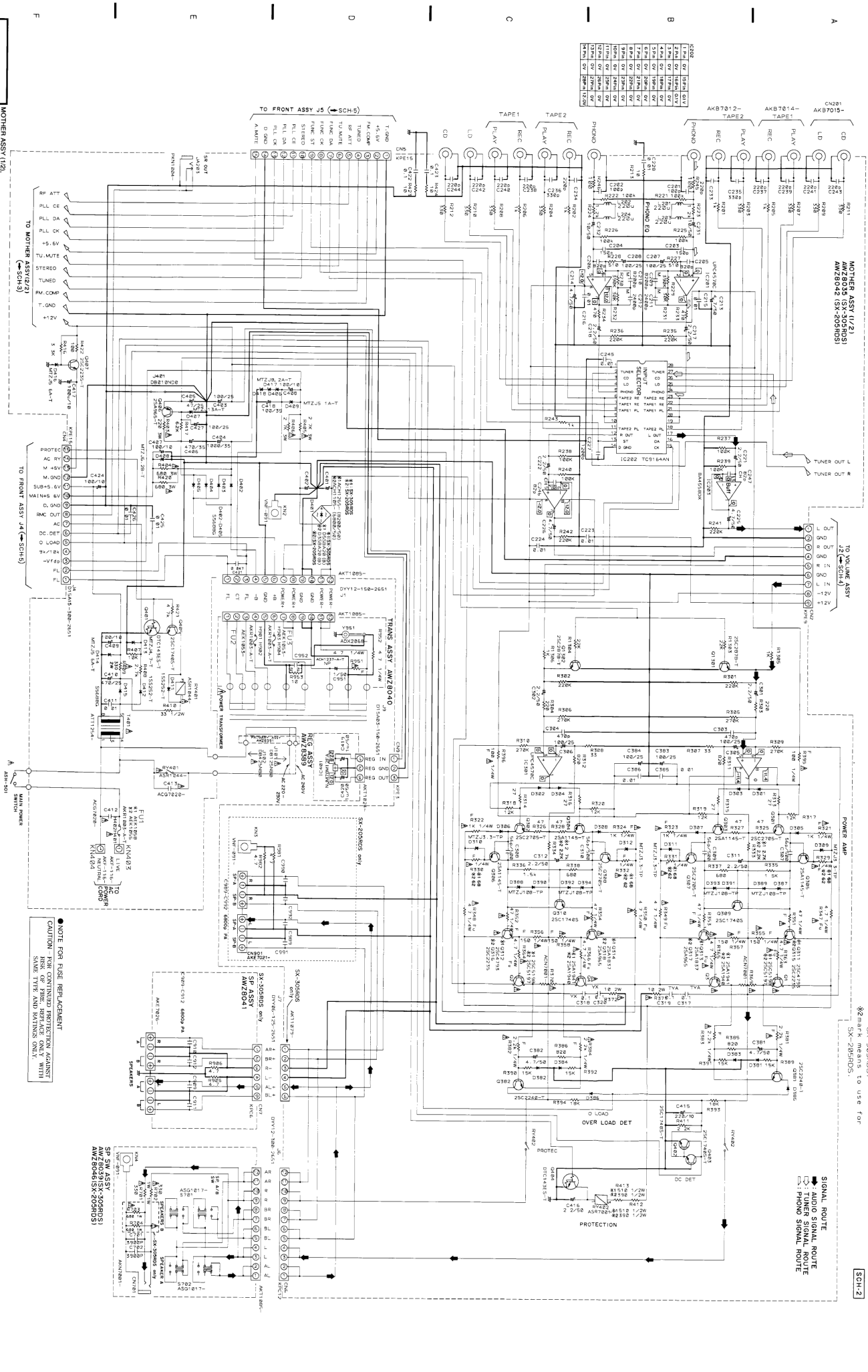
SP SW ASSY
S701 : SPEAKERS B ON-OFF
S702 : SPEAKERS A ON-OFF



SCH-1 OVERALL SCHEMATIC DIAGRAM

SCH-1 OVERALL SCHEMATIC DIAGRAM

2.2 MOTHER (1/2), REG, TRANS, SP AND SP SW ASSY



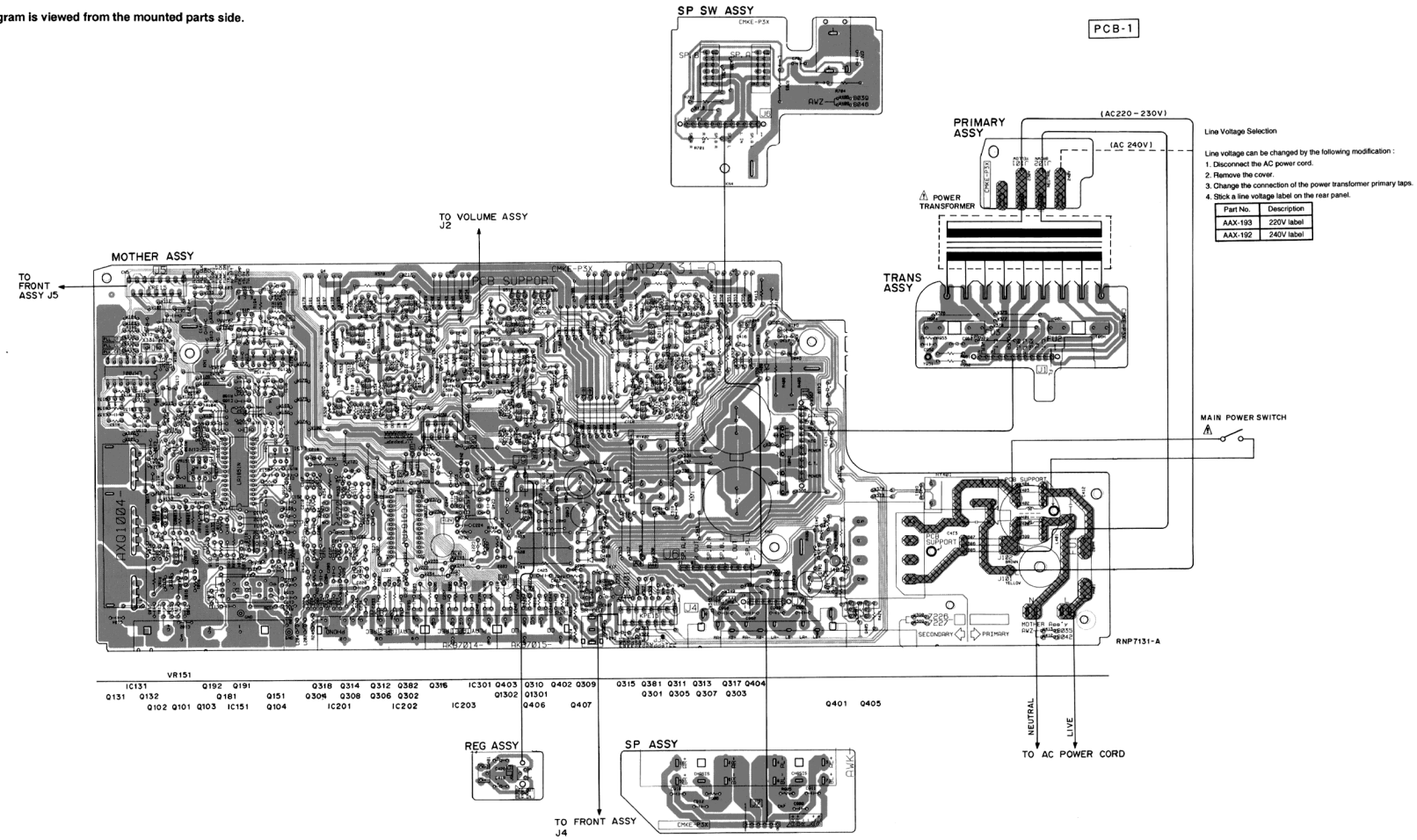
NOTE FOR PCB DIAGRAMS:

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.

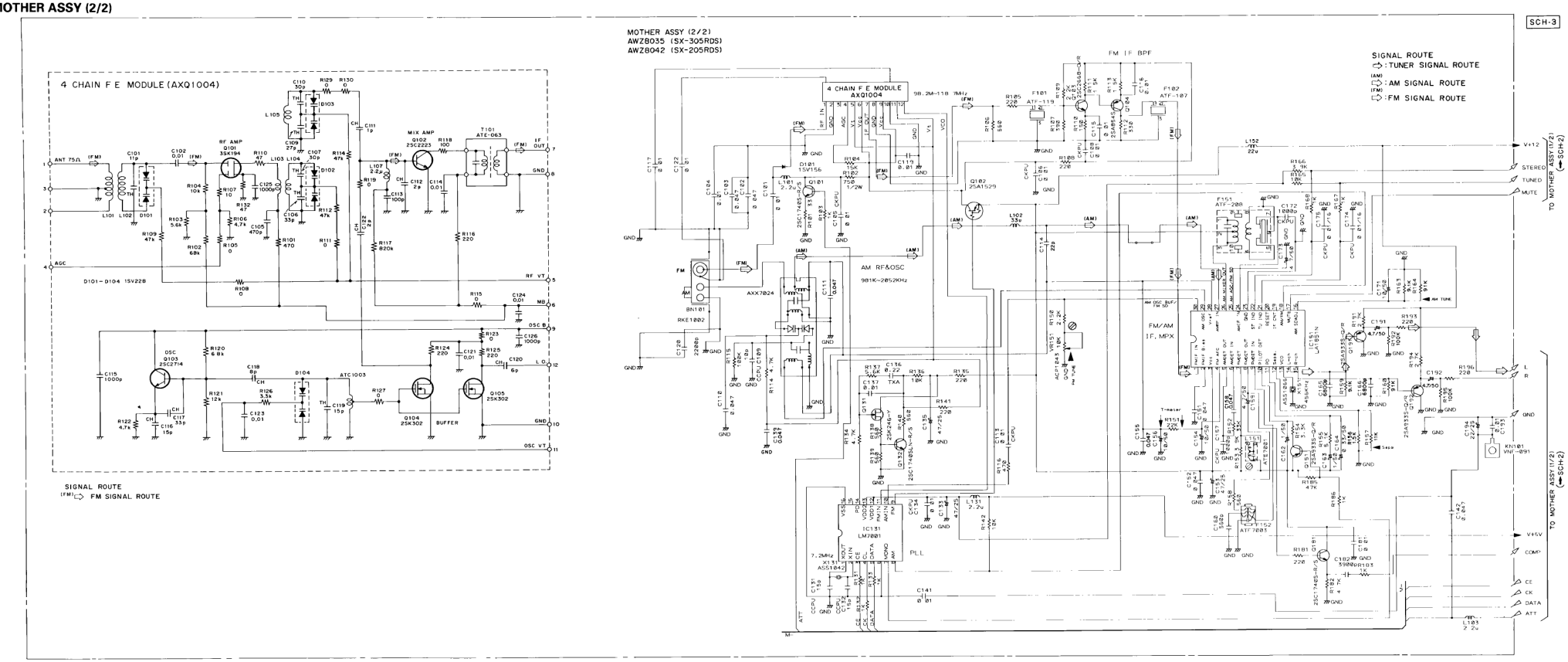
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor
		Resistor array
		3- terminal regulator

- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

- **This diagram is viewed from the mounted parts side.**



2.3 MOTHER ASSY (2/2)



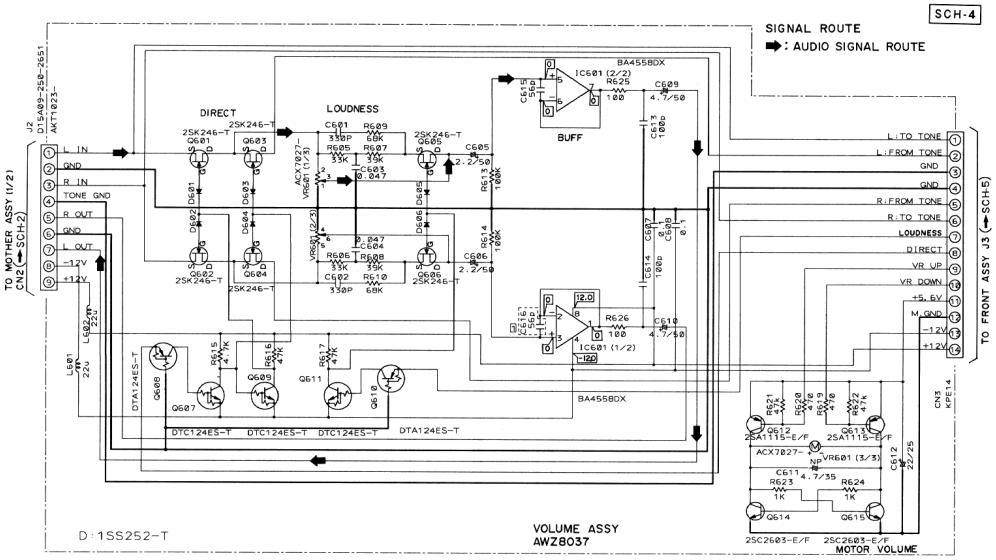
SCH-3

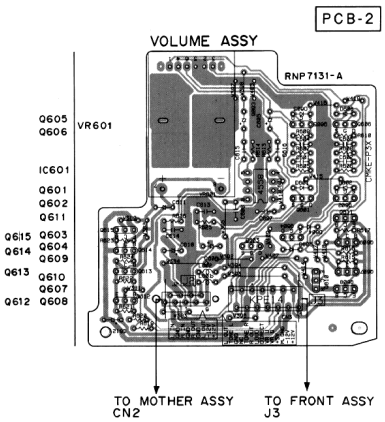
MOTHER ASSY (2/2)

SCH-3

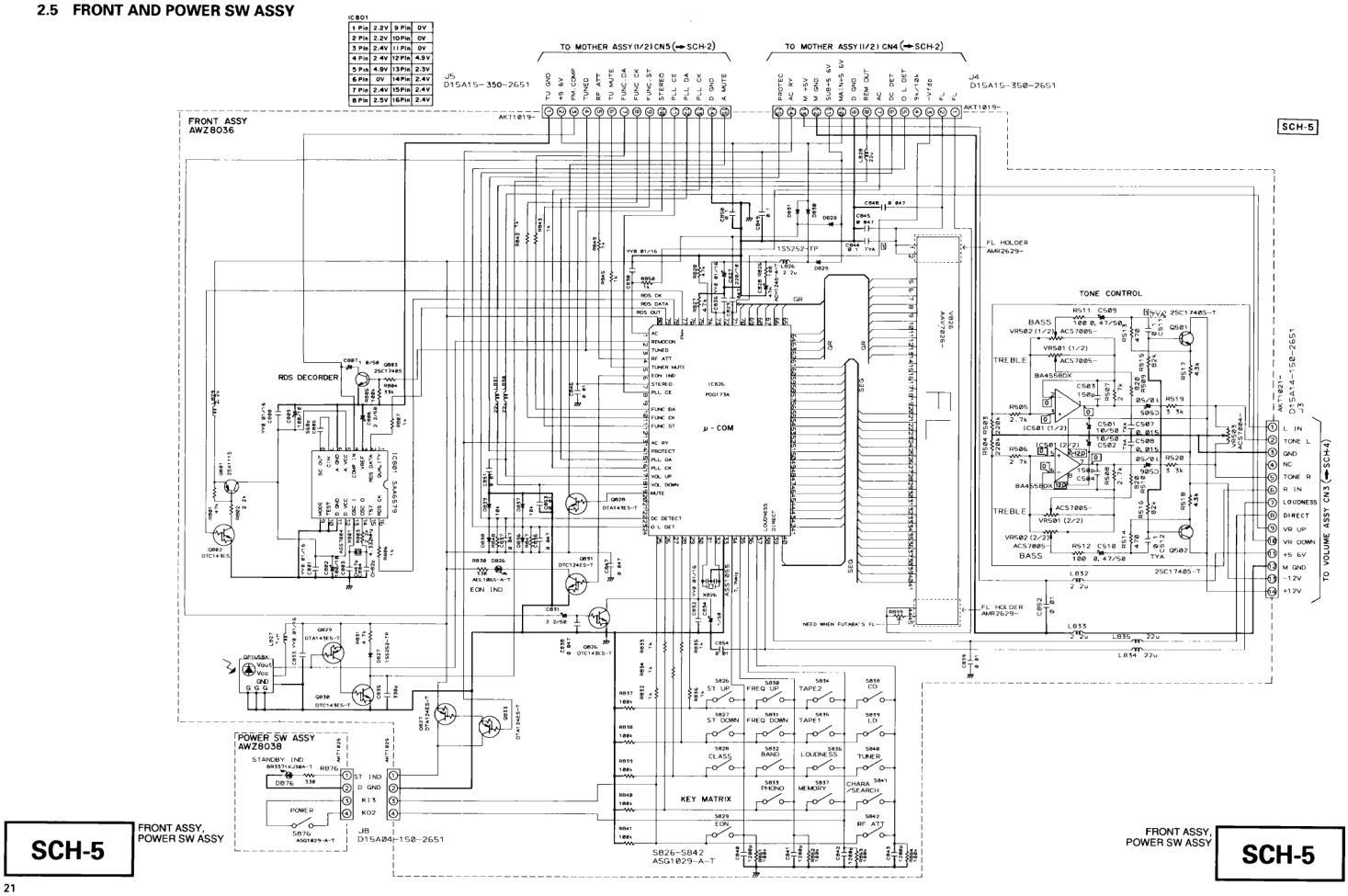
2.4 VOLUME ASSY

- **This diagram is viewed from the mounted parts side.**
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.

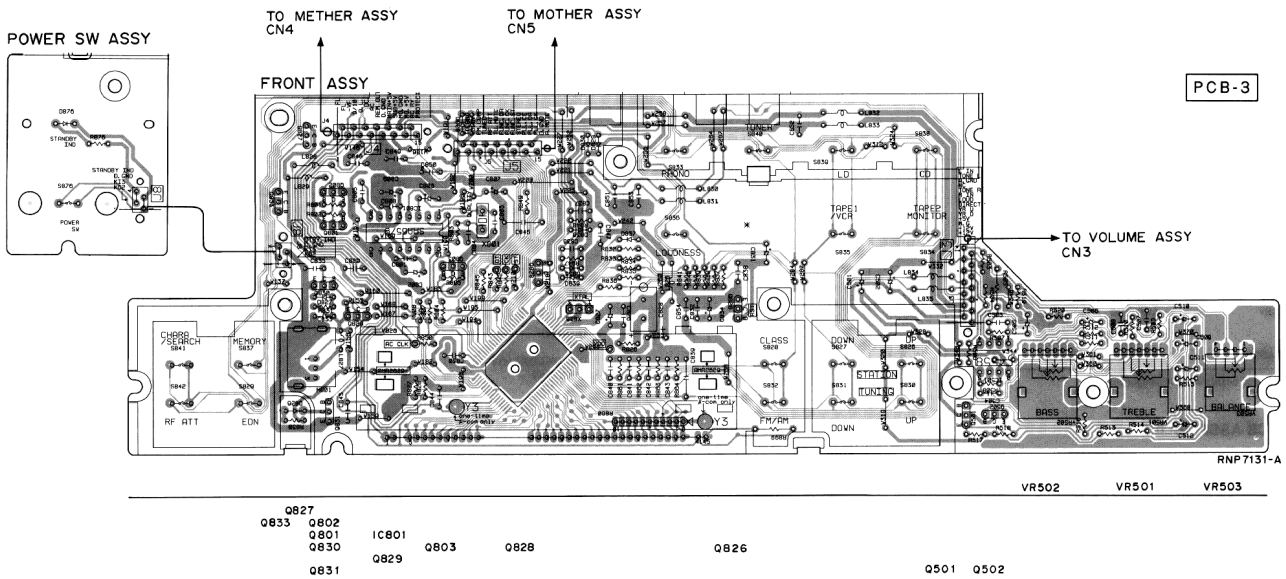




2.5 FRONT AND POWER SW ASSY



- **This diagram is viewed from the mounted parts side.**
- The parts mounted on this PCB include all necessary parts for several destinations. For further information for respective destinations, be sure to check with the schematic diagram.



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%).

560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 561 J
47 kΩ → 47 × 10³ → 473 ..... RD1/4PU 473 J
0.5 Ω → 0R5 ..... RN2H 0R5 K
1 Ω → 1R0 ..... RS1P 1R0 K

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

5.62 kΩ → 562 × 10¹ → 5621 ..... RN1/4PC 5621 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	PCB Assemblies	Part No.					Remarks
		SX-305RDS		SX-205RDS			
		HYXK/EW	HYXK/GR	HYXK/EW	HYXK/GR	HVXK	
	AF ASSY	AWK7226	AWK7226	AWK7227	AWK7227	AWK7227	
	├ MOTHER ASSY	AWZ8035	AWZ8035	AWZ8042	AWZ8042	AWZ8042	
	└ 4 CHAIN F.E MODULE	AXQ1004	AXQ1004	AXQ1004	AXQ1004	AXQ1004	
	├ FRONT ASSY	AWZ8036	AWZ8036	AWZ8036	AWZ8036	AWZ8036	
	├ VOLUME ASSY	AWZ8037	AWZ8037	AWZ8037	AWZ8037	AWZ8037	
NSP	├ POWER SW ASSY	AWZ8038	AWZ8038	AWZ8038	AWZ8038	AWZ8038	
NSP	├ SP SW ASSY	AWZ8039	AWZ8039	AWZ8046	AWZ8046	AWZ8046	
NSP	├ TRANS ASSY	AWZ8040	AWZ8040	AWZ8040	AWZ8040	AWZ8040	
NSP	├ SP ASSY	AWZ8041	AWZ8041	Not Used	Not Used	Not Used	
NSP	├ REG ASSY	AWZ8389	AWZ8389	AWZ8389	AWZ8389	AWZ8389	
NSP	└ PRIMARY ASSY	AWZ8391	AWZ8391	AWZ8391	AWZ8391	AWZ8391	*

* : Assembly only for printed boards without component parts.

■ CONTRAST PCB ASSEMBLIES

MOTHER ASSY

AWZ8035 and AWZ8042 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8035	AWZ8042	
⚠	Q311, Q312	2SC4793	Not Used	
	Q313, Q314	2SA1837	Not Used	
	Q315, Q316	Not Used	2SC2235	
	Q317, Q318	Not Used	2SA965	
	D401	D5SBA20(B)	D3SBA20(B)	
	C401, C402	ACH1265 (8200μF/50V)	ACH1105 (6800μF/50V)	
	C989–C992	Not Used	CQPA682J100	
	R329–R332	RD1/4PMF680J	RD1/4PMF620J	
	R333, R334	RD1/6PM272J	RD1/4PU222J	
	R412, R413	RD1/2PM511J	RD1/2PM391J	
	R981, R982	Not Used	RD1/6PM4R7J	
	CN901	Not Used	AKE7021	
	6P CABLE HOLDER	AKT1079	Not Used	

SP SW ASSY

AWZ8039 and AWZ8046 have the same construction except for the following:

Mark	Symbol & Description	Part No.		Remarks
		AWZ8039	AWZ8046	
	R703, R704	RS1LMF681J	Not Used	

■ PARTS LIST FOR SX-305RDS

Mark	No.	Description	Parts No.
MOTHER ASSY			
SEMICONDUCTORS			
	IC203		BA4558DX
	IC151		LA1851N
	IC131		LM7001J
	IC202		TC9164AN
	IC201, IC301		UPC4570C
	Q303-Q306		2SA1145
⚠	Q102		2SA1529
⚠	Q313, Q314		2SA1837
	Q104		2SA854S
	Q151, Q191, Q192		2SA933S
	Q406		2SA965
	Q101, Q181, Q309, Q310		2SC1740S
	Q402, Q403, Q405		2SC1740S
	Q132		2SC1740SLN
	Q407		2SC2235
	Q381, Q382		2SC2240
	Q103		2SC2668
	Q301, Q302, Q307, Q308		2SC2705
	Q1301, Q1302		2SC2878
⚠	Q311, Q312		2SC4793
	Q131		2SK246
	Q401, Q404		DTC143ES
	D301-D308, D381-D386		1SS252
	D389-D392, D411, D412		1SS252
	D101		1SV156
	D401		D5SBA20(B)
	D387, D388, D393, D394		MTZJ10B
	D407		MTZJ13A
	D309-D312		MTZJ3.3
	D413		MTZJ4.7
	D409		MTZJ5.1A
	D414, D416		MTZJ5.6A
	D408		MTZJ6.2B
	D406, D417, D418		MTZJ8.2A
	D402-D405, D415		S5688G
COILS AND FILTERS			
	X131 (7.200MHz)		ASS1042
	X151 (456kHz)		ASS1066
	L151		ATE7001
	F102		ATF-107
	F101		ATF-119
	F151		ATF-208
	F152		ATF7003
	L152		LAU220J
	L201-L204		LAU221J
	L101, L103, L131		LAU2R2J
	L102		LAU330J
SWITCHES AND RELAYS			
⚠	RY401		ASR1044
	RY402		ASR7001
CAPACITORS			
⚠	C412, C413 (10000pF/250V)		ACG7020
	C401, C402 (8200μF/50V)		ACH1265
	C246, C247		CCCCH820J50
	C201, C202		CCCSL101J50
	C203, C204		CCCSL151J50
	C114		CCCSL220J50
	C233, C234, C237-C244		CCCSL221J50
	C307-C310		CCCSL560K500
	C109		CCPUCH100J50
	C131, C132		CCPUCH150J50
	C162, C163		CEAS010M50
	C154, C156, C171, C231, C232		CEAS100M50
	C407-C409, C417, C424		CEAS101M10
	C207, C208, C305, C306		CEAS101M25
	C383, C384, C403, C427		CEAS101M25
	C418		CEAS101M35
	C404		CEAS102M35
	C194		CEAS220M25
	C415		CEAS221M10
	C217, C218, C221, C222		CEAS2R2M50
	C301, C302, C311, C312, C416		CEAS2R2M50
	C133, C135, C153, C405		CEAS470M25
	C410		CEAS471M25
	C406		CEAS471M35
	C159, C173, C191, C192		CEAS4R7M50
	C213, C214, C225, C226		CEAS4R7M50
	C381, C382		CEAS4R7M50
	C164		CEASR33M50
	C136		CFTXA224J50
	C317-C320		CFTYA104J50
	C101, C104, C115, C116, C119		CGCYX103M16
	C137, C141, C181, C193		CGCYX103M16
	C425, C426		CGCYX103M16
	C422, C423		CGCYX104M16
	C102, C103, C110, C111, C139		CGCYX473M16

Mark	No.	Description	Parts No.
	C151, C152, C155, C158		CGCYX473M16
	C227		CKCYB122K50
	C235, C236		CKCYB331K50
	C182		CKCYB392K50
	C303, C304		CKCYB471K50
	C160		CKCYB561K50
	C205, C206		CKCYB821K50
	C215, C216, C223, C224, C228		CKCYF103Z50
	C245, C385, C386, C411		CKCYF103Z50
	C421		CKCYF473Z50
⚠	C120		CKDYB222K50
⚠	C117, C122		CKDYX103M16
	C157, C172		CKPUYB102K50
	C142		CKPUYF473Z16
	C105, C106, C108, C113, C134		CKPUYY103M16
	C174, C175		CKPUYY103M16
	C211, C212		CQMA242J50
	C209, C210		CQMA822J50
	C165, C166		CQPA682J100

RESISTORS

⚠	R369, R370 (0.33Ω)		ACN7001
⚠	R410		RD1/2PM330J
	R412, R413		RD1/2PM511J
	R417		RD1/2PM622J
	R102		RD1/2PM751J
⚠	R395, R396		RD1/4PMF101J
⚠	R321-R324		RD1/4PMF102J
⚠	R355-R358		RD1/4PMF151J
⚠	R381-R384		RD1/4PMF222J
⚠	R351-R354		RD1/4PMF470J
⚠	R329-R332		RD1/4PMF680J
	R213		RD1/6PM100J
	R245, R246, R422		RD1/6PM101J
	R103, R1305, R1306, R131-R133		RD1/6PM102J
	R167, R168, R183, R186		RD1/6PM102J
	R201, R202, R205, R206, R243		RD1/6PM102J
	R136, R142, R165, R407		RD1/6PM103J
	R115, R192, R195, R221, R222		RD1/6PM104J
	R225, R226, R237-R240		RD1/6PM104J
	R157		RD1/6PM113J
	R223, R224		RD1/6PM122J
	R317-R320		RD1/6PM123J
	R110		RD1/6PM151J
	R111, R113, R156, R335, R336		RD1/6PM152J
	R104, R389-R392		RD1/6PM153J
	R393, R394		RD1/6PM183J
	R105, R108, R135, R141, R181		RD1/6PM221J
	R193, R196, R303, R304		RD1/6PM221J
	R109, R150, R411		RD1/6PM222J
	R1303, R1304, R151		RD1/6PM223J
	R235, R236, R241, R242		RD1/6PM224J
	R301, R302		RD1/6PM224J
	R313-R316		RD1/6PM270J
	R191, R194, R333, R334, R408		RD1/6PM272J
	R305, R306, R309, R310		RD1/6PM274J
	R231, R232		RD1/6PM303J
	R101, R307, R308		RD1/6PM330J
	R112, R203, R204, R207-R212		RD1/6PM331J
	R154		RD1/6PM332J
	R152		RD1/6PM333J
	R107		RD1/6PM391J
	R153, R166		RD1/6PM392J
	R229, R230		RD1/6PM394J
	R325-R328		RD1/6PM470J
	R116, R233, R234		RD1/6PM471J
	R114, R134, R182, R421		RD1/6PM472J
	R185		RD1/6PM473J
	R227, R228		RD1/6PM511J
	R155		RD1/6PM512J
	R106, R138-R140, R158		RD1/6PM561J
	R137		RD1/6PM562J
	R337, R338		RD1/6PM681J
	R311, R312, R385, R386		RD1/6PM821J
	R159, R160, R163		RD1/6PM912J
	R164		RD1/6PM913J
⚠	R347-R350, R363-R366		RFA1/4PS4R7J
⚠	R371, R372		RS2LMF100J
⚠	R409		RS2LMF331J
⚠	R403		RS3LMF221J
⚠	R405, R406		RS3LMF272J
⚠	R404, R420		RS3LMF681J
	VR151 (10kΩ)		ACP1043
	Other Resistors		RD1/4PU□□□J

OTHERS

	201	6P PIN JACK	AKB7012
	202	4P PIN JACK	AKB7014
	CN201	4P PIN JACK	AKB7015
	H401, H402	FUSE CLIP	AKR1003
		6P CABLE HOLDER	AKT1079
		12P CABLE HOLDER	AKT1085
⚠	T401	POWER TRANSFORMER	ATT1254
	CN6	12P JUMPER CONNECTOR	KPC12
	CN4, CN5	15P JUMPER CONNECTOR	KPE15
	CN9	3P JUMPER CONNECTOR	KPE3
	CN2	9P JUMPER CONNECTOR	KPE9
	JA203	REMOTE CONTROL JACK 12V	PKN1004
	102	ANTENNA TERMINAL	RKE1002
	1, 2	EARTH METAL FITTING	VNF-091
	101	AM RF TUNING BLOCK	AXX7024

4 CHAIN F.E MODULE

4 CHAIN F.E MODULE has no service part.

FRONT ASSY

SEMICONDUCTORS

IC501		BA4558DX
IC826		PDG173A
IC801		SAA6579
Q801		2SA1115

Mark	No.	Description	Parts No.
	Q501, Q502, Q803		2SC1740S
	Q827, Q833		DTA124ES
	Q828, Q829		DTA143ES
	Q831		DTC124ES
	Q802, Q826, Q830		DTC143ES
	D827-D831, D836-D839		1SS252
	D826		AEL1065
COILS AND FILTERS			
	X826		ASS1055
	X801		ASS7004
	L827		LAU010J
	L828, L830, L831, L834, L835		LAU220J
	L826, L829, L832, L833		LAU2R2J
SWITCHES AND RELAYS			
	S826-S842		ASG1029
CAPACITORS			
	C828		ACH1246
	C803		CCCCH470J50
	C804		CCCCH820J50
	C503, C504		CCCSL151J50
	C807, C834		CEAS010M50
	C501, C502, C505, C506		CEAS100M50
	C802, C809		CEAS101M10
	C827		CEAS221M10
	C806, C831		CEAS2R2M50
	C509, C510		CEASR47M50
	C507, C508		CFTXA153J50
	C511, C512, C844		CFTYA104J50
	C851-C854		CGCYX103M16
	C849, C850		CGCYX104M16
	C836-C838		CGCYX473M16
	C840-C843		CKCYB122K50
	C835		CKCYB331K50
	C805		CKCYB561K50
	C829, C845, C847, C848		CKCYF473Z50
	C839, C846		CKPUYF103Z25
	C801, C808, C826, C830		CKPUYY103M16
	C832, C833		CKPUYY103M16
RESISTORS			
	VR503 (500kΩ)		ACS7004
	VR501, VR502 (30kΩ)		ACS7005
	Other Resistors		RD1/6PM□□□J
OTHERS			
	V826	FL INDICATOR TUBE	AAV7026

VOLUME ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	IC601		BA4558DX
	Q612, Q613		2SA1115
	Q614, Q615		2SC2603
	Q601-Q606		2SK246
	Q608, Q610		DTA124ES
	Q607, Q609, Q611		DTC124ES
	D601-D606		1SS252
COILS AND FILTERS			
	L601, L602		LAU220J
CAPACITORS			
	C613, C614		CCCSL101J50
	C615, C616		CCCSL560K500
	C611		CEANP4R7M35
	C612		CEAS220M25
	C605, C606		CEAS2R2M50
	C609, C610		CEAS4R7M50
	C607, C608		CGCYX104M16
	C601, C602		CKCYB331K50
	C603, C604		CKCYF473Z50
RESISTORS			
	VR601 (100kΩ)		ACX7027
	Other Resistors		RD1/6PM□□□J
OTHERS			
		CABLE HOLDER	AKT1023
	CN3	14P JUMPER CONNECTOR	KPE14

POWER SW ASSY

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	D876		BR3371XJ30A
SWITCHES AND RELAYS			
	S876		ASG1029
RESISTORS			
	All Resistors		RD1/6PM□□□J

SP SW ASSY

Mark	No.	Description	Parts No.
SWITCHES AND RELAYS			
	S701, S702		ASG1017
CAPACITORS			
	C701, C702		CKCYB392K50
RESISTORS			
⚠	R701, R702		RS1LMF331J
⚠	R703, R704		RS1LMF681J
OTHERS			
	CN701	HEADPHONE JACK	AKN7001
		12P CABLE HOLDER	AKT1085
	4	EARTH METAL FITTING	VNF-091

TRANS ASSY

Mark	No.	Description	Parts No.
CAPACITORS			
	C951 (1μF/100V)		ACH1237
⚠	C952		CKCYF103Z50

Mark	No.	Description	Parts No.
RESISTORS			
⚠	R951		RD1/4PMF4R7J
⚠	R953		RD1/4PU100J
⚠	R952		RD1/4PU4R7J
OTHERS			
	H901-H904	FUSE CLIP	AKR1003
		12P CABLE HOLDER	AKT1085

SP ASSY

CAPACITORS			
	C909-C912		CQPA682J100
RESISTORS			
	All Resistors		RD1/6PM□□□J
OTHERS			
		8P SPEAKER TERMINAL	AKE7026
	CN7	6P JUMPER CONNECTOR	KPC6

REG ASSY

SEMICONDUCTORS			
	IC401		NJM78M12FA
CAPACITORS			
	C419, C420		CEAS010M50

PRIMARY ASSY

PRIMARY ASSY has no service part.

4. ADJUSTMENTS

ADJUSTMENT OF MW TUNER SECTION

- Set the FM/AM selector to AM (MW) BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level Check	999	Less than 65	999 kHz	—	Less than 65 dBμV/m. In case out of standard, cut the R164.

ADJUSTMENT OF FM TUNER SECTION

- Set the FM/AM selector to FM BAND.
- Connect the wiring as shown in Fig. 1–1.

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	98	60	98.0 MHz	L151	Adjust so that the DC voltage of R151's both ends becomes 0V±50mV. R151 V = 0±50mV DC VOLTMETER
2	Front-end Sensitivity Check	98	Less than 14	98.0 MHz	—	Less than 14 dBμV.
3	Stereo Separation Check	89	60	89.0 MHz	—	Less than 23 dB. In case out of standard, cut the R157.
4	TUNED IND. Lighting Level	98	18 (±3 dB)	98.0 MHz	VR151	18 dBμV±3 dB. Adjust so that the indicator of TUNED IND. starts to light up.

Note:

- *Make indicator adjustments in order of AM → FM.*

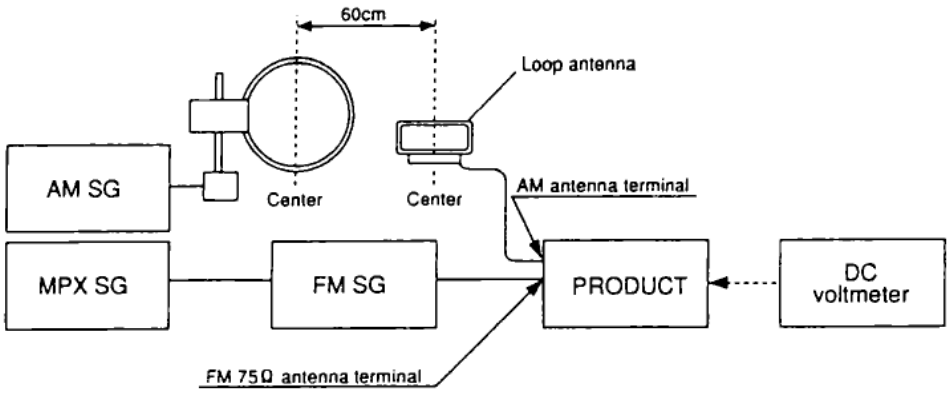


Fig. 1–1. AM and FM Adjustment Wiring Diagram

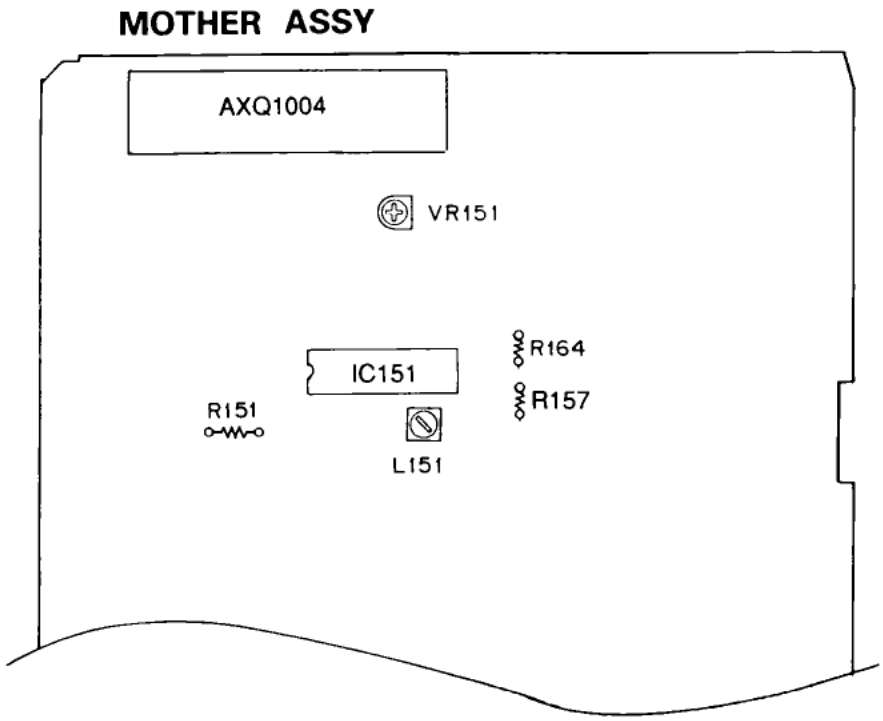


Fig. 1–2. Adjustment Points

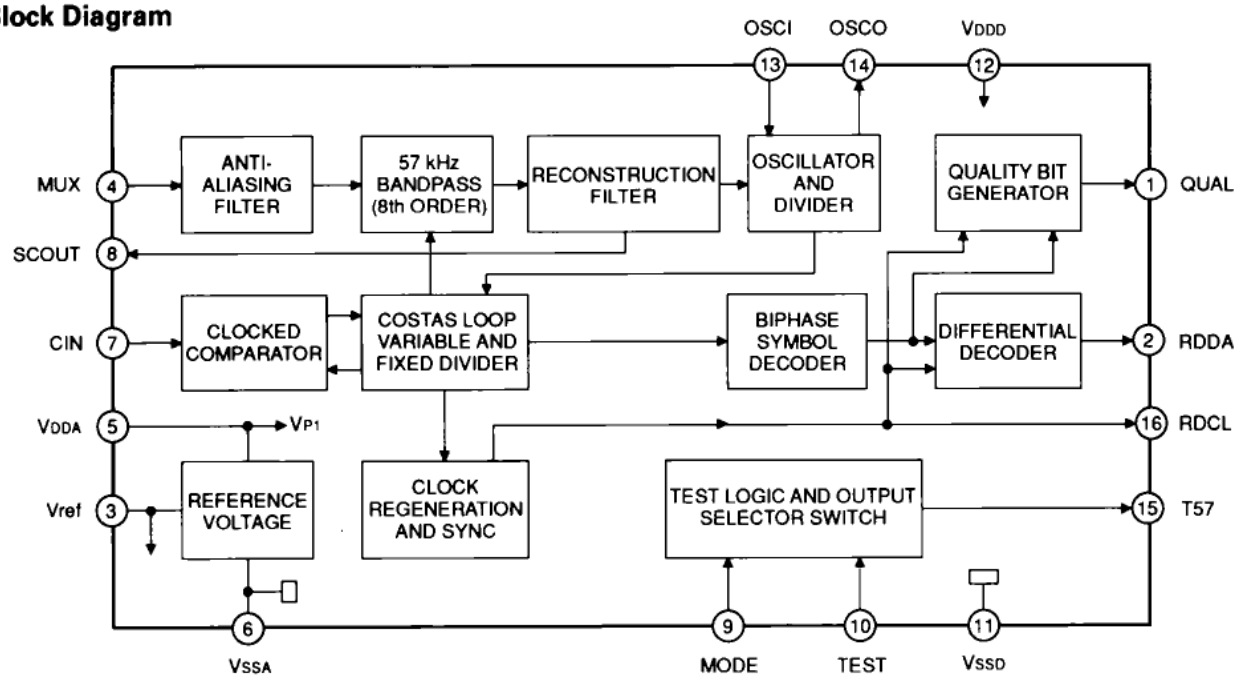
5. IC INFORMATION

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

■ SAA6579 (FRONT ASSY: IC801)
Radio data system demodulator (RDS), CMOS IC

The SAA6579 is a demodulator circuit for RDS applications. It contains a 57 kHz bandpass filter and a digital demodulator to regenerate the RDS data stream out of the multiplex signal (MPX).

● Block Diagram



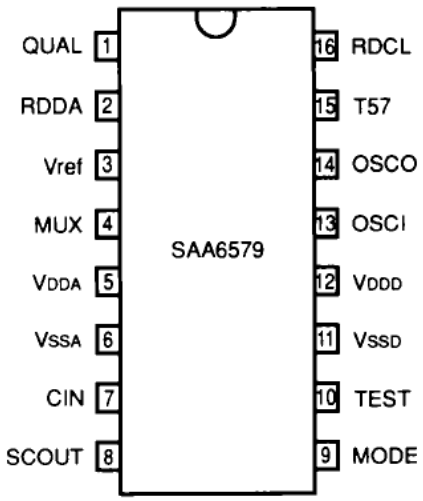
Via the pin MODE two different crystal frequencies can be used

MODE	x-tal clock
LOW	4.332 MHz
HIGH	8.664 MHz

● Pin Function

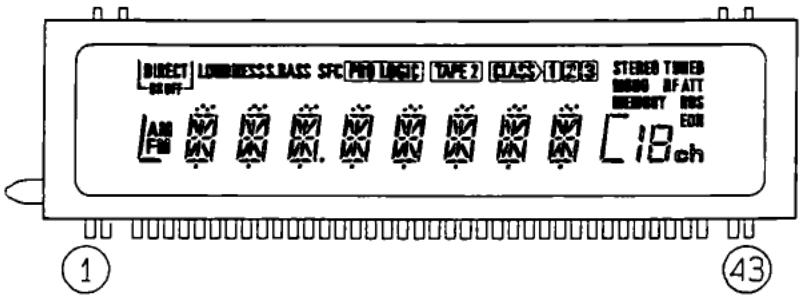
Pin No.	Pin Name.	I/O	Pin Function
1	QUAL	O	Quality indication output
2	RDDA	O	RDS data output
3	Vref	–	Reference voltage output (0.5 VDDA)
4	MUX	I	Multiplex signal input
5	VDDA	–	+5 V supply voltage for analog part
6	VSSA	–	Ground for analog part (0 V)
7	CIN	I	Subcarrier input to comparator
8	SCOUT	O	Subcarrier output of reconstruction filter
9	MODE	–	Oscillator mode/test control input
10	TEST	I	Test enable input
11	VSSD	–	Ground for digital part (0 V)
12	VDDD	–	+5 V supply voltage for digital part
13	OSCI	I	Oscillator input
14	OSCO	O	Oscillator output
15	T57	O	57 kHz clock signal output
16	RDCL	O	RDS clock output

● Pin Arrangement (Top View)



6. FL INFORMATION

■ AAV7026 (FRONT ASSY: V826)



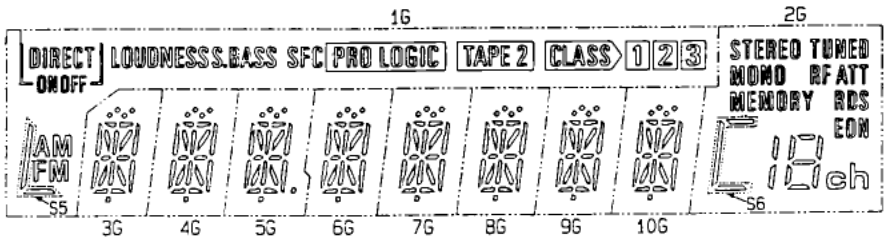
● Pin Assignment

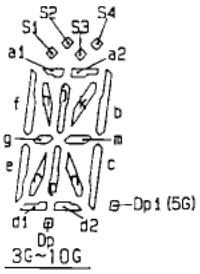
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Assignment	F1	F1	NP	G1	G2	G3	G4	G5	G6	G7	G8	G9	G10	NL	NL	NL	NL	NL	NL	S21	S16	S17

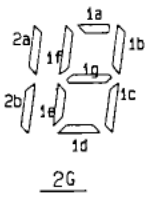
Pin No.	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43
Assignment	S15	S13	S12	S14	S11	S10	S9	S8	S7	S6	S5	S3	S4	S2	S1	S18	S19	S20	NP	F2	NL

F1, F2:Filament G1~G10:Grid S1~S21:Anode NL:No Lead NP:No Pin

● Grid Assignment



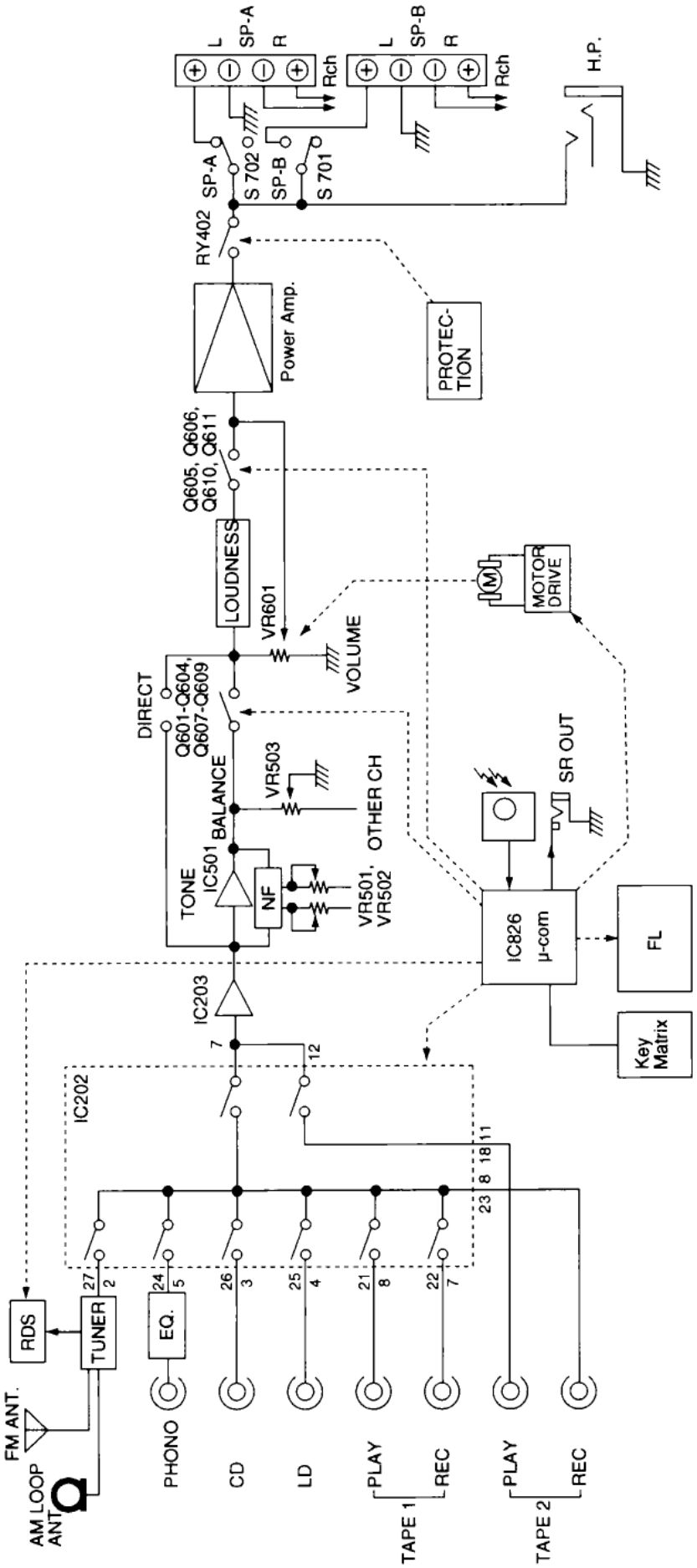




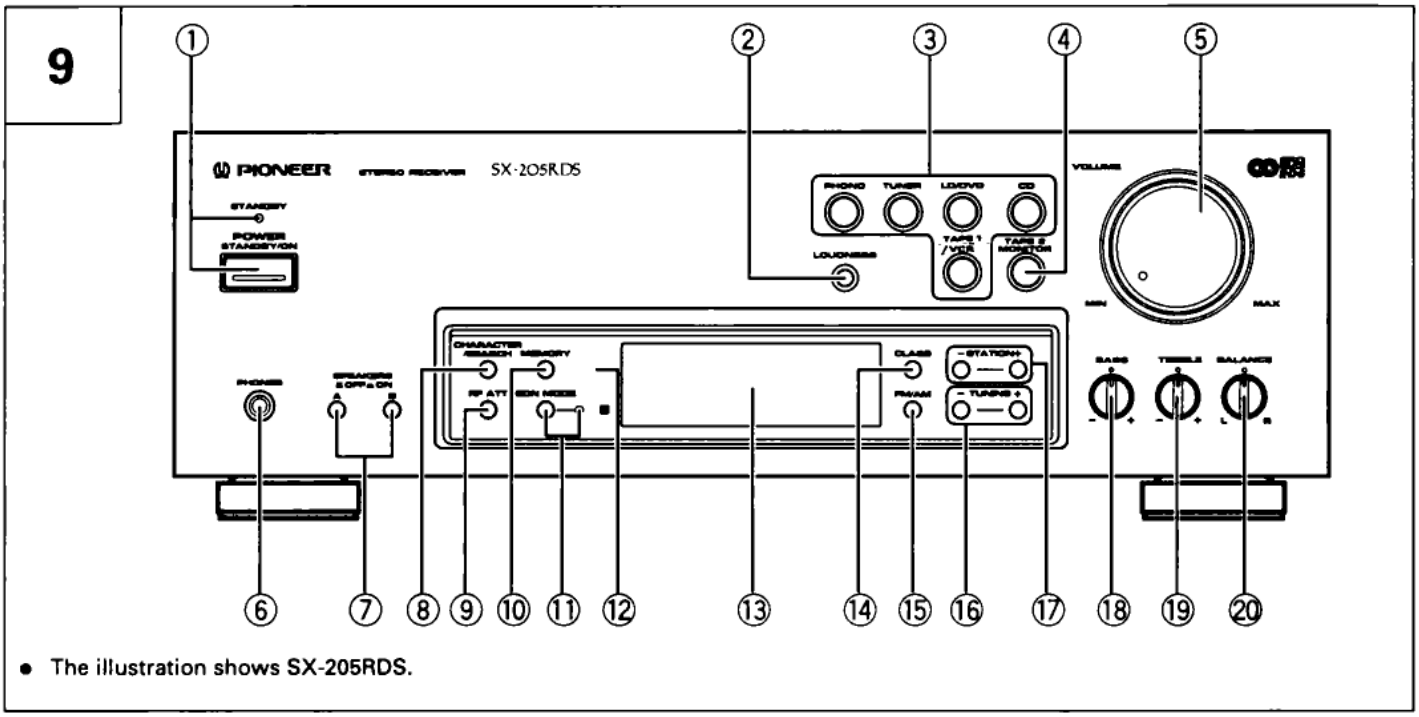
● Anode Grid Assignment

	1G	2G	3G, 4G, 6G~10G	5G
S1	S5	S6	a1	a1
S2	FM	2a, 2b	a2	a2
S3	AM	1a	h	h
S4	DIRECT	1b	j	j
S5	ON	1c	k	k
S6	OFF	1d	b	b
S7	PRO LOGIC	1e	f	f
S8	SFC	1f	m	m
S9	LOUDNESS	1g	g	g
S10	S. BASS	ch	c	c
S11	TAPE 2	STEREO	e	e
S12	CLASS	TUNED	r	r
S13	1	MONO	p	p
S14	2	RF ATT	n	n
S15	3	MEMORY	d1	d1
S16		RDS	d2	d2
S17		EON	Dp	Dp
S18			S1, S3	S1, S3
S19			S4	S4
S20			S2	S2
S21				Dp1

7. BLOCK DIAGRAM



8. PANEL FACILITIES



- The illustration shows SX-205RDS.

① POWER (STANDBY/ON) switch/STANDBY 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, STANDBY indicator lights and the main power flow is cut so the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

- The accessory remote control unit can also be used to operate STANDBY/ON.

NOTE:

When the power is initially turned ON, muting will be applied to prevent sound from being output for approx. 5 seconds.

② LOUDNESS button

Use when listening at low volume levels.

ON : Boosts low and high frequencies to produce a fuller sense of sound, particularly at low volume levels.

OFF : Normal position.

NOTE:

Cannot be used when the DIRECT function is ON.

The DIRECT function can be turned ON/OFF using the remote control unit.

③ Function buttons

Use to select playback source.

[PHONO] — Press when listening to record playback on a turn table.

[TUNER] — Press when listening to AM or FM broadcasts with a tuner.

[LD/DVD] —Press when listening to LaserDiscs played back from a LD player or Digital Video Discs played back from a DVD player.

[CD] — Press when listening to compact disc playback with a CD player.

[TAPE 1 /VCR] — Press when listening to tape playback with the cassette deck 1 or a video cassette recorder.

④ TAPE 2 MONITOR button

Press when listening to tape playback with cassette deck 2.

⑤ VOLUME control

Use to adjust the volume level.

⑥ PHONES jack

Connect the plug on your headphones to this jack. To listen to a program through the headphones, set both SPEAKERS A and B switches to the OFF position.

⑦ SPEAKERS (■ OFF, ▂ ON) buttons
These are used to select the speaker through which you wish to listen.
A : When the speakers connected to the A terminals are in use.
B : When the speakers connected to the B terminals are in use.
- Turn both A and B speakers to the OFF position when only headphones are in use.

⑧ CHARACTER/SEARCH button
When receiving an AM broadcast, or when in the FM RT, FM PS modes:
Press the button, "INPUT" is displayed, and the mode switches to manual station name input.
When in the FM PTY mode:
Press the button, "SEARCH" is displayed, and the mode switches to program type search.
- This button does not function when the frequency is displayed (FM broadcast only).

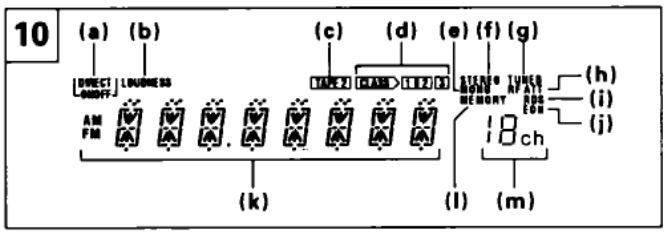
⑨ RF ATT button
Set this button to ON when receiving strong FM signals (near-by stations) to reduce sound distortion. (RF ATT indicator lights.)
Normally, this button should be set to OFF.
This button has no effect on reception of AM broadcasts.

⑩ MEMORY button
Pressing this button will result in the memorization of the current broadcast band, reception frequency, RF ATT (FM reception only) and FM AUTO/MONO mode.
This button is also used to select characters during station name entry and to clear memory during ERASE PI operation.

⑪ EON (Enhanced Other network information) MODE button/ indicator

⑫ Remote sensor

⑬ Operation display panel
(a) DIRECT ON/OFF indicator
(b) LOUDNESS indicator
(c) TAPE 2 monitor indicator.
(d) CLASS indicator
(e) MONO indicator
(f) Lights up when a stereo FM broadcast is being received.
(g) Lights up when a station is tuned.
(h) RF ATT indicator
(i) Lights when an RDS broadcast is received.
(j) Lights when a station bloadcasting EON information is received.
(k) Frequency, function, character display
(l) MEMORY indicator
(m) Channel display



⑭ CLASS button
Use to switch between preset memory classes 1 to 3. In each class, one station can be memorized in each of the 1 to 10 STATION CALL buttons, enabling a total of 30 stations to be memorized.

⑮ FM/AM selector button
This button is used to select either AM or FM reception.

⑯ TUNING buttons (–, +)
Use for tuning frequencies. Press the buttons to change the frequency display (3-speed Accel Tuning) (see page 28).
In the Manual Name input mode and PTY search mode, use to select characters and program types.

⑰ STATION buttons (–, +)
+: Stations change in order in the upward direction.
–: Stations change in order in the downward direction.

⑱ BASS tone control
Use to adjust low-frequency tones. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized.
NOTE:
This control can not be used when the DIRECT function is ON. The DIRECT function can be turned ON/OFF using the remote control unit.

⑲ TREBLE tone control
Use to adjust high-frequency tones. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized.
NOTE:
This control can not be used when the DIRECT function is ON. The DIRECT function can be turned ON/OFF using the remote control unit.

⑳ 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 can not be used when the DIRECT function is ON. The DIRECT function can be turned ON/OFF using the remote control unit.

9. SPECIFICATIONS

Amplifier Section

Continuous Power Output (DIN)*
- (SX-305RDS) 1 kHz, T.H.D. 1 %, 4 Ω ..... 85 W + 85 W
- (SX-205RDS) 1 kHz, T.H.D. 1 %, 4 Ω ..... 50 W + 50 W

Continuous Power Output (both channels driven)* **
- (SX-305RDS) 20 Hz - 20 kHz, T.H.D. 0.09 %, 8 Ω ..... 60 W + 60 W
- (SX-205RDS) 20 Hz - 20 kHz, T.H.D. 0.09 %, 8 Ω ..... 40 W + 40 W

Dynamic Power Output (with EIA test signal)
- (SX-305RDS) 4/8 Ω ..... 100 W/80 W
- (SX-205RDS) 4/8 Ω ..... 80/50 W

• *Above specifications are for when power supply is 230V.*

Input (Sensitivity/Impedance)
- PHONO ..... 2.5 mV/47 kΩ
- CD, LD/DVD, TAPE 1/VCR, TAPE 2 ..... 200 mV/22 kΩ

Phono Overload Level (T.H.D. 0.1 %, 1 kHz)
- PHONO ..... 100 mV

Output (Level/Impedance)
- TAPE 1/VCR REC, TAPE 2 REC MONITOR ..... 200 mV/1 kΩ

Frequency Response
- PHONO (RIAA Equalization) ..... 20 Hz to 20,000 Hz ± 0.5 dB
- CD, LD/DVD, TAPE 1/VCR, TAPE 2 ..... 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB

Signal-to-Noise Ratio (DIN, continuous power/50mW)**
- (SX-305RDS)
- PHONO ..... 67 dB/61 dB
- CD, LD/DVD, TAPE 1/VCR, TAPE 2 ..... 88 dB/63 dB
- (SX-205RDS)
- PHONO ..... 67 dB/61 dB
- CD, LD/DVD, TAPE 1/VCR, TAPE 2 ..... 82 dB/62 dB

Tone Control
- BASS ..... ± 8 dB (100 Hz)
- TREBLE ..... ± 8 dB (10 kHz)
- LOUDNESS ..... +6 dB (100 Hz at –40 dB)
  +4 dB (10 kHz at –40 dB)

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... 14.2 dBf, IHF (1.4 µV/75 Ω)
Sensitivity (DIN)
- MONO ..... 1.0 µV/75 Ω
- STEREO ..... 40 µV/75 Ω

Signal-to-Noise Ratio
- MONO ..... 77 dB (at 80 dBf)
- STEREO ..... 72 dB (at 80 dBf)

Signal-to-Noise Ratio (DIN)
- MONO ..... 62 dB
- STEREO ..... 58 dB

Distortion
- STEREO ..... 0.3 % (1 kHz)

Alternate Channel Selectivity ..... 64 dB (400 kHz)
Stereo Separation ..... 40 dB (1 kHz)
Frequency Response ..... 30 Hz to 15 kHz (±1 dB)
Antenna Input ..... 75 Ω unbalanced

AM Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz
Sensitivity
- IHF, Loop Antenna ..... 350 µV/m

Selectivity ..... 20 dB
Signal-to-Noise Ratio ..... 50 dB
Antenna ..... AM Loop Antenna

Miscellaneous

Power Requirements ..... a.c. 220 – 230 Volts, 50/60 Hz
Power Consumption (SX-305RDS) ..... 460 W
(SX-205RDS) ..... 370 W
Dimensions ..... 420 (W) X 140 (H) X 313 (D) mm
Weight (without package)
- (SX-305RDS) ..... 6.5 kg
- (SX-205RDS) ..... 5.4 kg

Furnished Parts

FM Antenna 1
AM Loop Antenna 1
Remote Control Unit 1
Dry Cell Batteries (AA/R6P) 2
Operating Instructions 1

NOTE:

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

* *Measured by audio spectrum analyzer.*
** *Direct ON.*