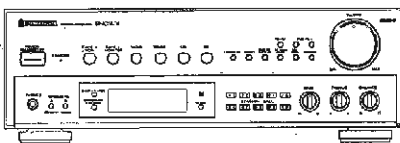


Service Manual

PIONEER®
The Art of Entertainment



The illustration shows model SX-403RDS.

ORDER NO.
ARP2859

STEREO RECEIVER

SX-403RDS

SX-303RDS

SX-203RDS

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.
	SX-403RDS	SX-303RDS	SX-203RDS		
HEXK	○	○	○	AC220-230V	AC240V, *
HBXK	—	○	○	AC240V	AC220-230V, *
HEWZXX	○	○	○	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: SX-403RDS/HEWZXX; SX-303RDS/HBXK and HEWZXX; SX-203/HBXK and HEWZXX, refer to page 40.

CONTENTS

1. EXPLODED VIEWS, PACKING AND PARTS LIST	2	6. FL INFORMATION	37
2. BLOCK DIAGRAM	5	7. IC INFORMATION	38
3. SCHEMATIC AND PCB CONNECTION DIAGRAMS	6	8. FOR SX-403RDS/HEWZXX, SX-303RDS/HBXK, HEWZXX, SX-203/HBXK AND HEWZXX TYPES ...	40
4. PCB PARTS LIST	31	9. PANEL FACILITIES	44
5. ADJUSTMENTS	35	10. SPECIFICATIONS	47

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
 © PIONEER ELECTRONIC CORPORATION 1994

O-DFO MAY 1994 Printed in Japan

SX-403RDS, SX-303RDS, SX-203RDS

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.

Parts List of Exterior and Packing

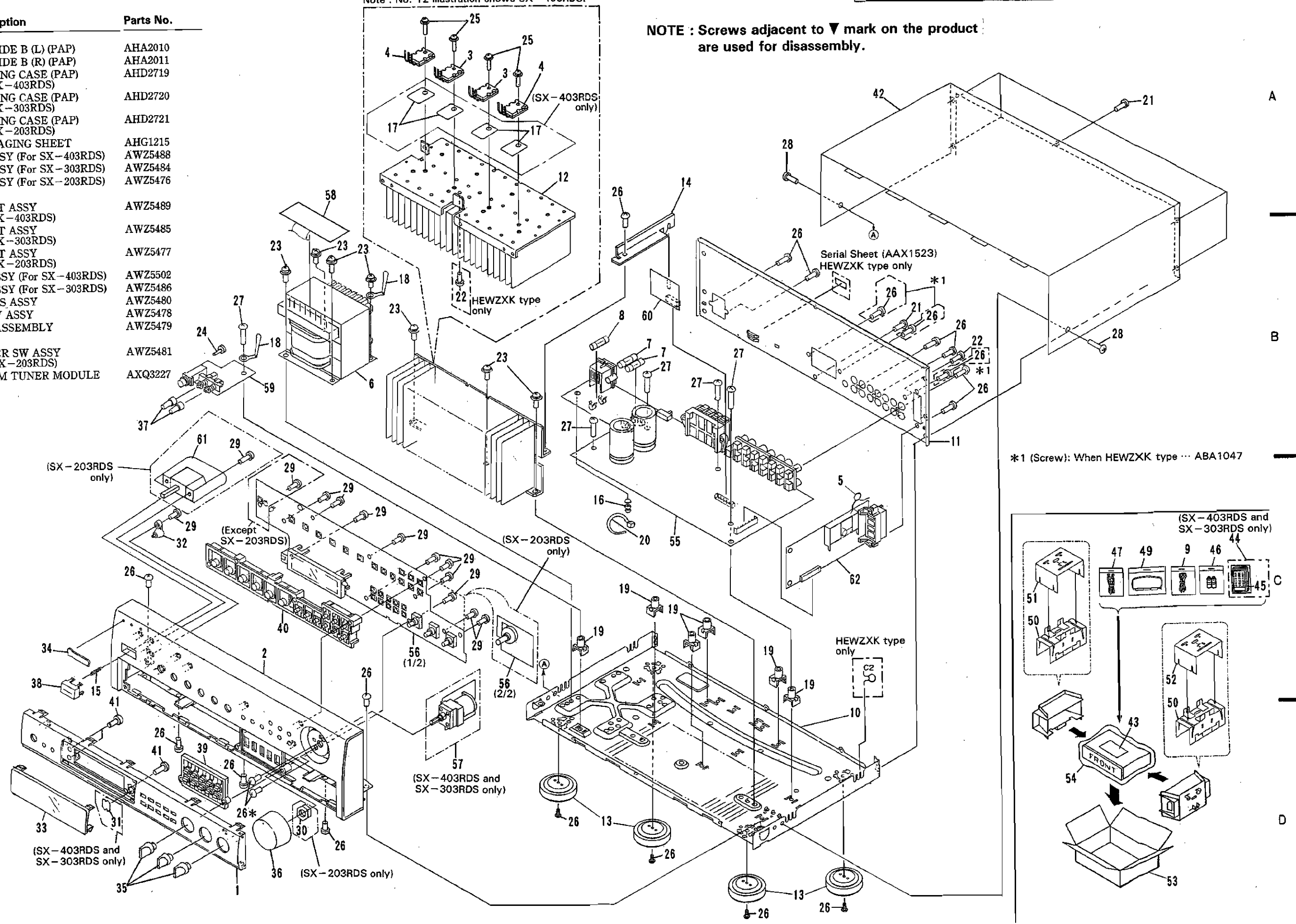
(For SX-403RDS/HEXK, SX-303RDS/HEXK and SX-203RDS/HEXK)

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	SUB PANEL (PLS)	AAP1465	21	SCREW (For SX-403RDS)	VCT30P080FZK	
	2	FRONT PANEL (PLS) (For SX-403RDS)	AMB2222	21	SCREW (For SX-303RDS and SX-203RDS)	BCZ30P080FZK	
	2	FRONT PANEL (PLS) (For SX-303RDS)	AMB2226	22	SCREW (STEEL)	ABA1047	
	2	FRONT PANEL (PLS) (For SX-203RDS)	AMB2227	23	SCREW	ABA1054	
Δ	3	TRANSISTOR (Q3, Q4) (For SX-403RDS)	2SA1302	24	SCREW (STEEL)	ABA1095	
Δ	3	POWER TRANSISTOR (Q3, Q4) (For SX-303RDS)	2SA1804	25	SCREW (STEEL)	ABA1194	
Δ	3	POWER TRANSISTOR (Q3, Q4) (For SX-203RDS)	2SA1803	26	SCREW	BBZ30P080FMC	
Δ	4	TRANSISTOR (Q1, Q2) (For SX-403RDS)	2SC3281	27	SCREW	BBZ30P200FMC	
Δ	4	POWER TRANSISTOR (Q1, Q2) (For SX-303RDS)	2SC4689	28	SCREW	BCZ30P080FZK	
Δ	4	POWER TRANSISTOR (Q1, Q2) (For SX-203RDS)	2SC4688	29	SCREW	BPZ26P080FMC	
	5	CERAMIC CAPACITOR (C1)	CKDYB102K50	30	NUT (SX-203RDS only)	NK90FUC	
Δ	6	POWER TRANSFORMER (T1) (For SX-403RDS)	ATS1544	31	IR FILTER (PLS) (SX-403RDS and SX-303RDS only)	AAK2551	
Δ	6	POWER TRANSFORMER (T1) (For SX-303RDS)	ATS1543	32	LED LENS (PLS)	AAK2553	
Δ	6	POWER TRANSFORMER (T1) (For SX-203RDS)	ATS1542	33	FL PANEL (PLS) (For SX-403RDS and SX-303RDS)	AAK2556	
Δ	7	FUSE (T800MA/250V, FU3, FU4)	AEK-507	33	FL PANEL (PLS) (For SX-203RDS)	AAK2557	
Δ	8	FUSE (T2A/250V, FU1) (For SX-403RDS)	AEK-511	34	NAME PLATE	PAM1608	
Δ	8	FUSE (T1.6A/250V, FU1) (For SX-303RDS)	AEK-510	35	ROUND KNOB S (PLS)	AAB1389	
Δ	8	FUSE (1.25A/250V, FU1) (For SX-203RDS)	AEK-509	36	ROUND KNOB L (PLS)	AAB1390	
Δ	9	AC POWER CORD	ADG1135	37	PUSH BUTTON (PLS)	AAD2530	
NSP	10	CHASSIS (MET)	ANA1481	38	POWER BUTTON (PLS)	AAD2531	
	11	REAR PANEL (MET) (For SX-403RDS)	ANC2213	39	STATION BUTTON (PLS)	AAD2532	
	11	REAR PANEL (MET) (For SX-303RDS)	ANC2164	40	HINGE BUTTON (PLS) (For SX-403RDS)	AAD2534	
	11	REAR PANEL (MET) (For SX-203RDS)	ANC2165	40	HINGE BUTTON (PLS) (For SX-303RDS and SX-203RDS)	AAD2533	
NSP	12	RADIATOR (MET) (For SX-403RDS)	ANH1475	41	PUSH BUTTON (PLS)	AAD2535	
NSP	12	RADIATOR (MET) (For SX-303RDS)	ANH1476	42	BONNET CASE (MET)	ANE1502	
NSP	12	RADIATOR (MET) (For SX-203RDS)	ANH1477	43	OPERATING INSTRUCTIONS (English, French, German, Italian, Dutch, Swedish, Spanish, Portuguese)	ARE1312	
	13	INSULATOR	PNW1912	44	REMOTE CONTROL UNIT (CU-SX087) (SX-403RDS and SX-303RDS only)	AXD1397	
	14	HOLDER (MTL)	ANG1928	45	BATTERY COVER (SX-403RDS and SX-303RDS only)	AZA7031	
	15	SPRING (FE)	ABH1095	NSP 46	BATTERY (R6P, AA) (SX-403RDS and SX-303RDS only)	AEX-010	
	16	PCB SUPPORT	AEC1581	47	FM ANTENNA ASS'Y	ADH1019	
	17	SHEET (SX-403RDS only)	AEB1014	48	.....	
	18	BINDER	AEP-215	49	LOOP ANTENNA (L8042)	ATB1011	
	19	PCB MOLD (PP)	AMR2533	50	PAD SIDE A (PAP)	AHA2009	
NSP	20	BINDER (BK-1)	Z09-057				

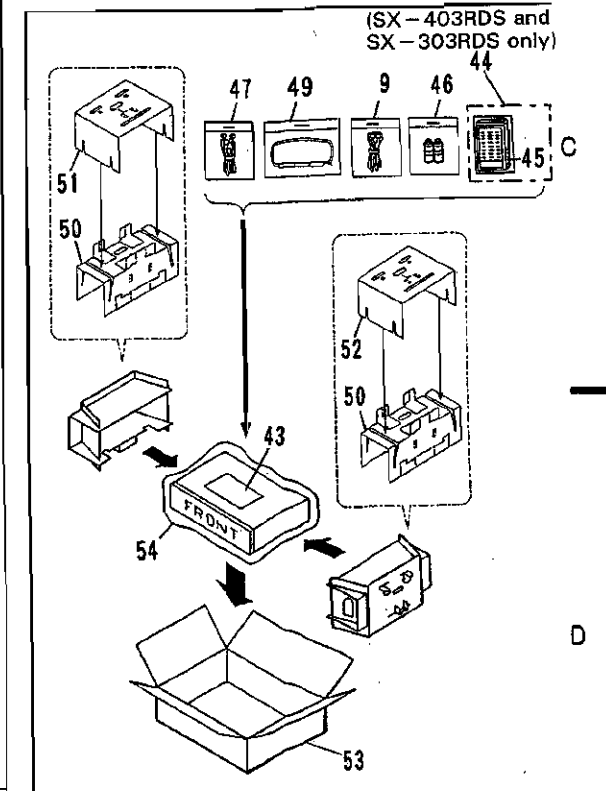
Mark	No.	Description	Parts No.
	51	PAD SIDE B (L) (PAP)	AHA2010
	52	PAD SIDE B (R) (PAP)	AHA2011
	53	PACKING CASE (PAP) (For SX-403RDS)	AHD2719
A	53	PACKING CASE (PAP) (For SX-303RDS)	AHD2720
	53	PACKING CASE (PAP) (For SX-203RDS)	AHD2721
	54	PACKAGING SHEET	AHG1215
	55	AF ASSY (For SX-403RDS)	AWZ5488
	55	AF ASSY (For SX-303RDS)	AWZ5484
	55	AF ASSY (For SX-203RDS)	AWZ5476
	56	FRONT ASSY (For SX-403RDS)	AWZ5489
	56	FRONT ASSY (For SX-303RDS)	AWZ5485
	56	FRONT ASSY (For SX-203RDS)	AWZ5477
	57	VR ASSY (For SX-403RDS)	AWZ5502
	57	VR ASSY (For SX-303RDS)	AWZ5486
	58	TRANS ASSY	AWZ5480
	59	SP SW ASSY	AWZ5478
	60	RDS ASSEMBLY	AWZ5479
B	61	POWER SW ASSY (For SX-203RDS)	AWZ5481
	62	FM/AM TUNER MODULE	AXQ3227

Note : No. 12 illustration shows SX-403RDS.

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

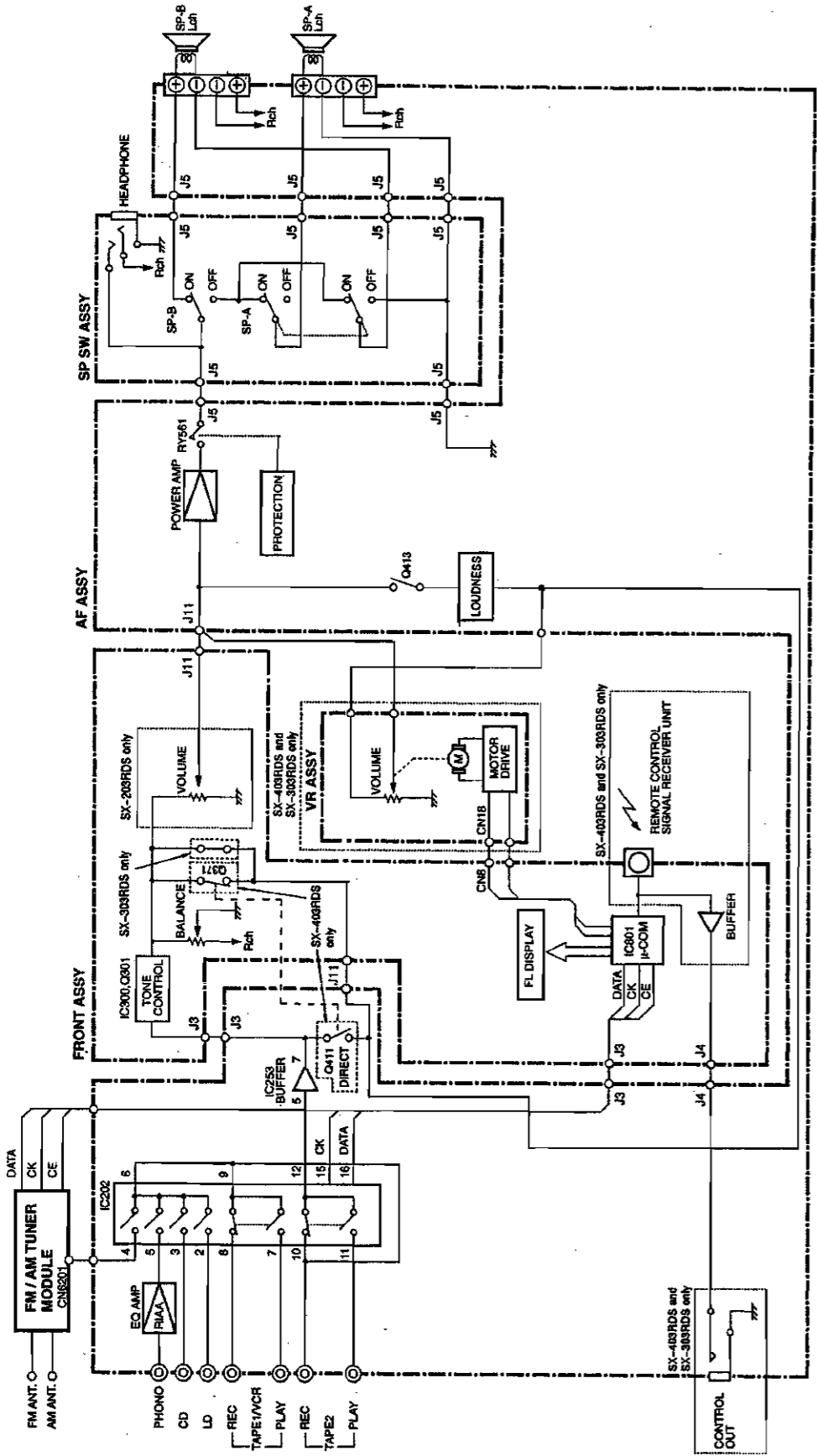


*1 (Screw): When HEWZK type ... ABA1047



* : SX-403RDS and SX-303RDS only

2. BLOCK DIAGRAM



3. SCHEMATIC AND PCB CONNECTION DIAGRAMS

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: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.
- CAPACITORS:**
Unit: p:pF or μF unless otherwise noted.
Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.
Rated voltage: 50V except for electrolytic capacitors.
- COILS:**
Unit: m:mH or μH unless otherwise noted.
- VOLTAGE AND CURRENT:**
AF AMPLIFIER SECTION:
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.
TUNER SECTION:
mV : Signal voltage at FM 1kHz, 100% MOD.
or - V :
mA or - mA :
DC current at no input signal unless otherwise noted.

NOTE FOR PCB DIAGRAMS:

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

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

- The transistor terminal marked with E or □ shows the emitter.
- The diode terminal marked with ⊙ or C shows cathode side.
- The capacitor terminal marked with ⊙ or □ shows negative terminal.

- 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):**

FRONT assy	S801	0	S816	LOUDNESS
	S802	9	S817	TUNING +
	S803	8	S818	TUNING -
	S804	7	S819	FM/AM
	S805	6	S820	CD
	S806	5	S821	LD
	S807	4	S822	TUNER
	S808	3	S823	PHONO
	S809	2	S824	TAPE2
	S810	1	S825	TAPE1/VCR
	S811	MEMORY	S826	RECEIVER
	S812	MPX MODE	S827	CLASS
	S813	MEMORY SCAN	S828	CHARACTER/SEARCH
	S814	DIRECT ACCESS	S829	DISPLAY MODE
	S815	DIRECT (SX-403RDS ONLY)		
	S815	RF ATT (EXCEPT SX-403RDS)		

SX-403RDS, SX-303RDS, SX-203RDS

3.1 OVERALL SCHEMATIC DIAGRAM

NOTE:

- The parts specified as "HEXK/HBXX TYPES" are required for the SX-403RDS/HEXK/HEXK and HBXX of SX-303RDS and SX-203RDS.
- The parts specified as "HBXX TYPE" are required for the HBXX of SX-303RDS and SX-203RDS.
- The parts specified as "HEWZXX TYPE" are required for the HEWZXX of SX-403RDS, SX-303RDS and SX-203RDS.
- The parts specified as "SX-403RDS" are required for the SX-403RDS/HEXK and HEWZXX.
- The parts specified as "SX-303RDS" are required for the SX-303RDS/HEXK, HBXX and HEWZXX.
- The parts specified as "SX-203RDS" are required for the SX-203RDS/HEXK, HBXX and HEWZXX.

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.

SCH-1

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

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

Part No.	Description
T1	ATS1542
FU1	AEK-509 (T1.25A)

Part No.	Description
T1	ATS1543
FU1	AEK-510 (T1.6A)

Part No.	Description
T1	ATS1544
FU1	AEK-511 (T2A)

A

B

C

D

A

B

C

D

SCH-1

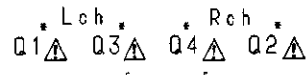
OVERALL SCHEMATIC DIAGRAM

SCH-1

OVERALL SCHEMATIC DIAGRAM

6

	SX-203RDS	SX-303RDS	SX-403RDS
Q1, Q2	25C4688	25C4689	25C3261
Q3, Q4	25A1803	25A1804	25A1302



POWER TRANSISTOR

SPEAKER

SR OUT

REAR PANEL

FM 75 Qh

PHONO

CD

LD

REC TAPE1/VCR

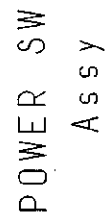
PLAY

REC TAPE 2

PLAY

SP. SW

HEADPHONE



POWER SW ASSY

OVERALL SCHEMATIC DIAGRAM

OVERALL SCHEMATIC DIAGRAM

POWER TRANSISTOR

FM/AM TUNER MODULE
(AXQ3227:HEXK/HBXX TYPES)
(AXQ3228:HEWZXX TYPE)

RDS Assy
(AWZ5479)

AF Assy

- (AWZ5488: SX-403RDS/HEXK)
- (AWZ5491: SX-403RDS/HEWZXX)
- (AWZ5484: SX-303RDS/HEXK)
- (AWZ5623: SX-303RDS/HBXX)
- (AWZ5487: SX-303RDS/HEWZXX)
- (AWZ5476: SX-203RDS/HEXK)
- (AWZ5622: SX-203RDS/HBXX)
- (AWZ5482: SX-203RDS/HEWZXX)

FRONT Assy

- (AWZ5489: SX-403RDS)
- (AWZ5485: SX-303RDS)
- (AWZ5477: SX-203RDS)

SX-403RDS, SX-303RDS ONLY

SX-203RDS ONLY

VR Assy

- (AWZ5602: SX-403RDS)
- (AWZ5486: SX-303RDS)

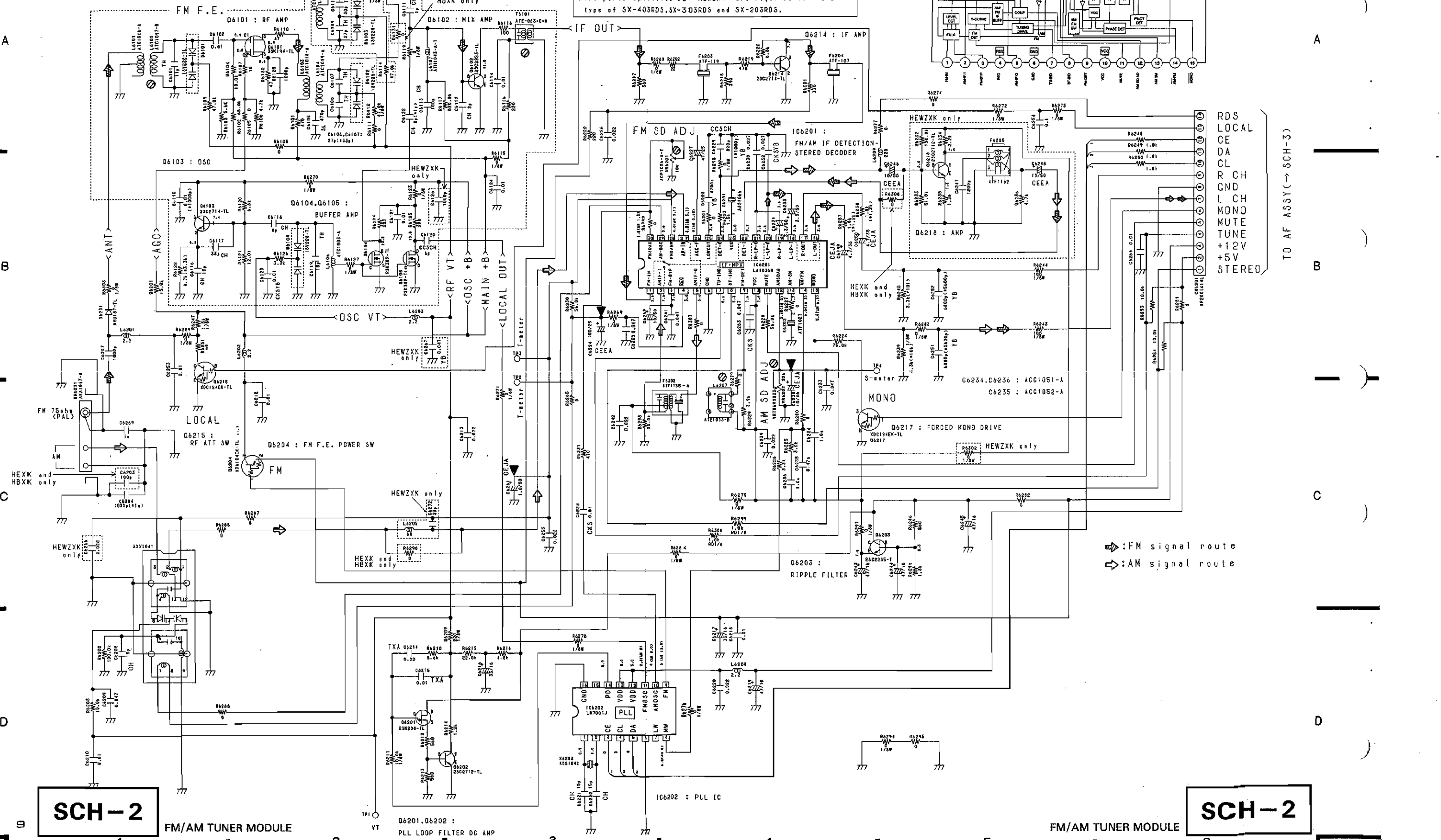
SX-403RDS, SX-303RDS ONLY

OVERALL SCHEMATIC DIAGRAM

SCH-1

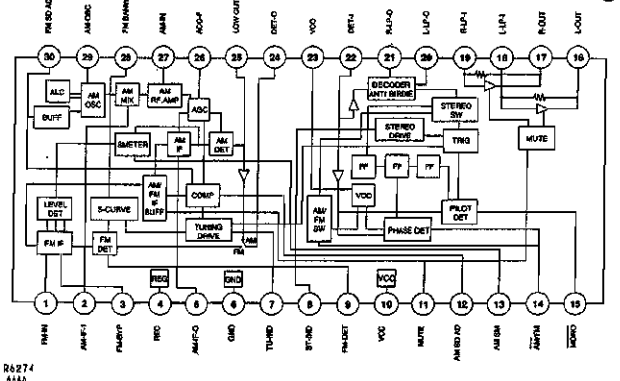
3.2 FM/AM TUNER MODULE

FM/AM TUNER MODULE
(AXQ3227:HEXX and HBXX types)
(AXQ3228:HEWZXX type)



Note:
Value in () is HEWZXX type.
The parts specified as "HEXX and HBXX" are required for SX-403RDS/HEXX:HEXX and HBXX types of SX-303RDS and SX-203RDS.
The parts specified as "HEWZXX" are required for HEWZXX type of SX-403RDS, SX-303RDS and SX-203RDS.

IC6201 (LA1836M)



SCH-2

RDS LOCAL
CE
DA
CL
R CH
GND
L CH
MONO
MUTE
TUNE
+12V
+5V
STEREO

TO AF ASSY (→ SCH-3)

↗: FM signal route
↘: AM signal route

SCH-2

SCH-2

FM/AM TUNER MODULE

FM/AM TUNER MODULE

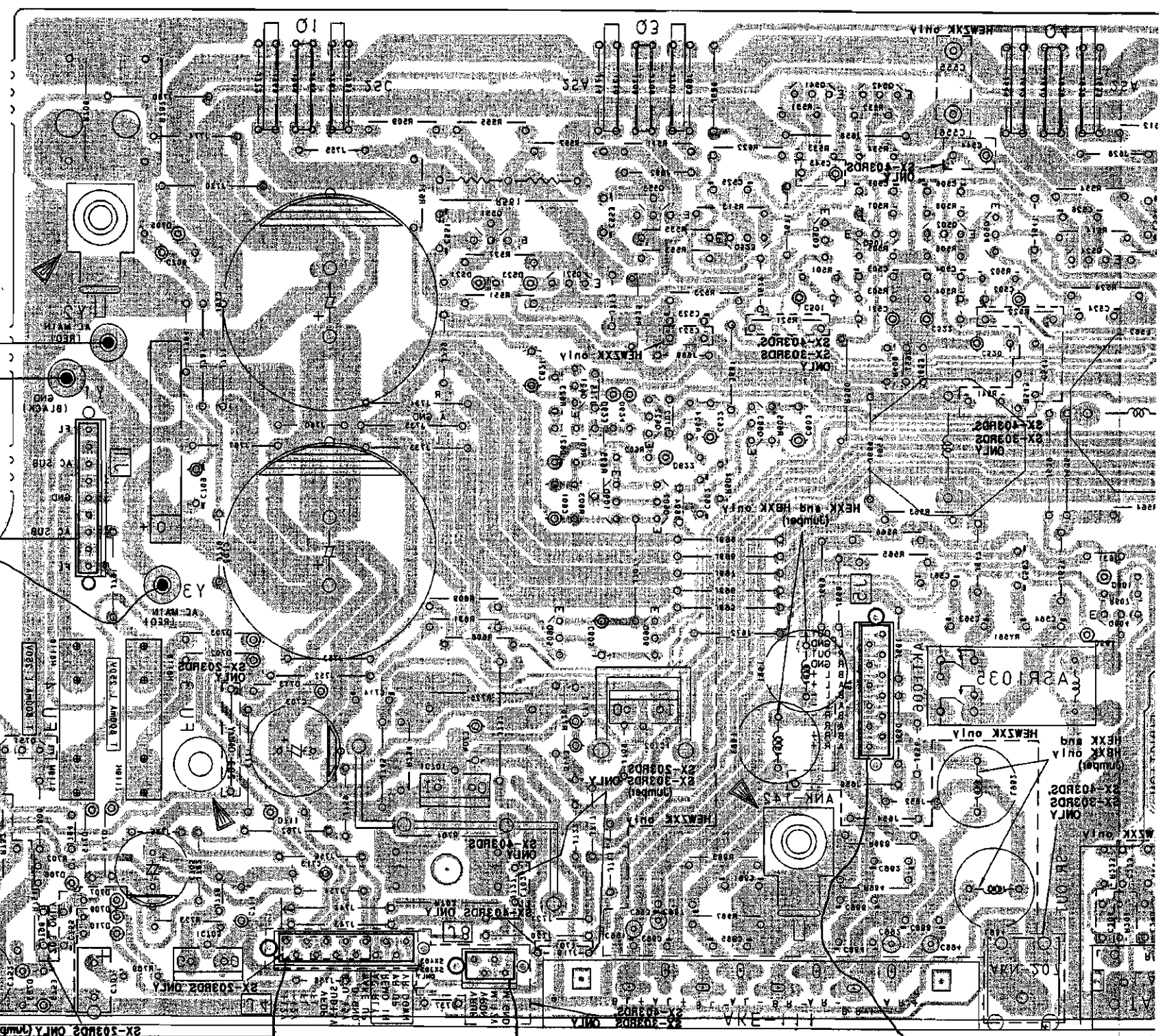
Q6201, Q6202 : PLL LOOP FILTER DC AMP

IC66202 : PLL IC

• This diagram is viewed from the foil side.

-To RDS Assy CN801

To AF Assy 15

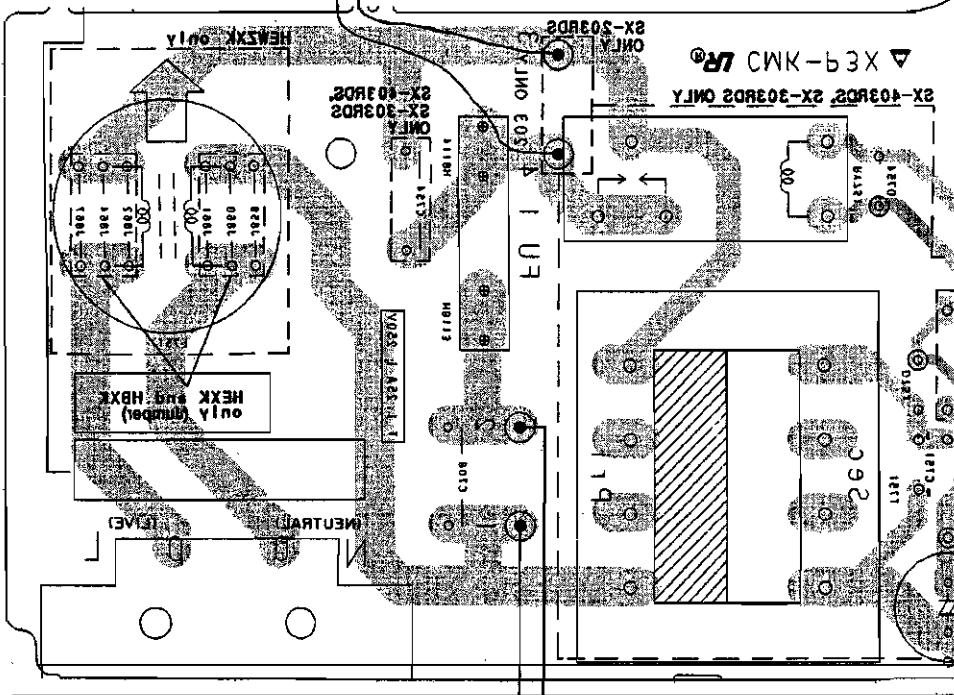
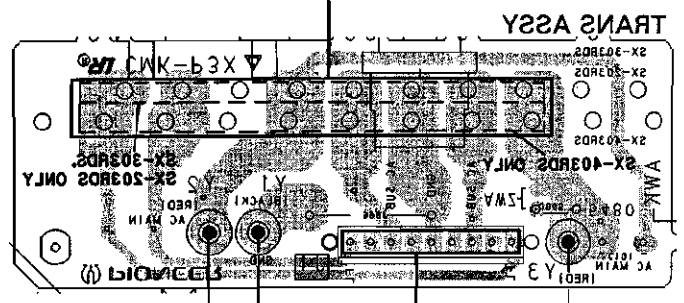
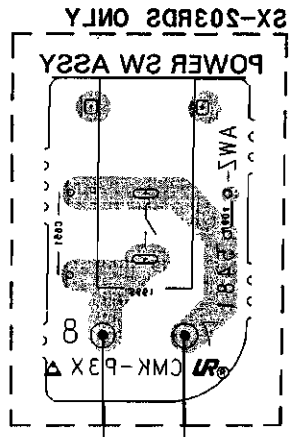


To SP SW Assy 12
To VR Assy 18
To FRONT Assy 14

To POWER TRANSFORMER T1

To POWER TRANSFORMER T1

SP SW ASSY



A

B

C

D

8

8

7

e

2

4

9

8

7

9

2

4

• This diagram is viewed from the mounted parts side.

FM/AM TUNER MODULE

A

A

Q6101

B

B

Q6215

Q6204

Q6102 Q6214

Q6104

Q6103
Q6105

C

C

IC6202

VR6201

IC6201

Q6217

Q6202

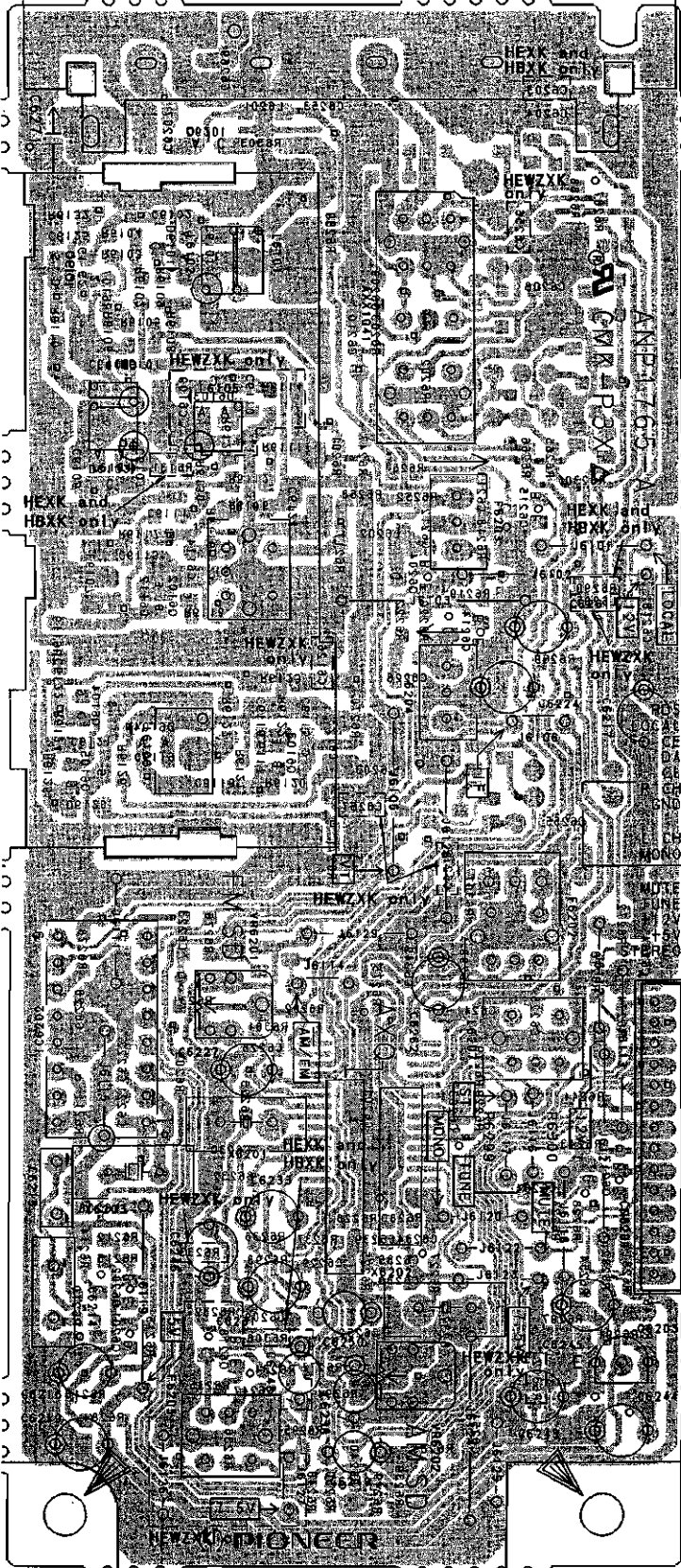
Q6201 Q6203
Q6218

VR6202

To AF assy

D

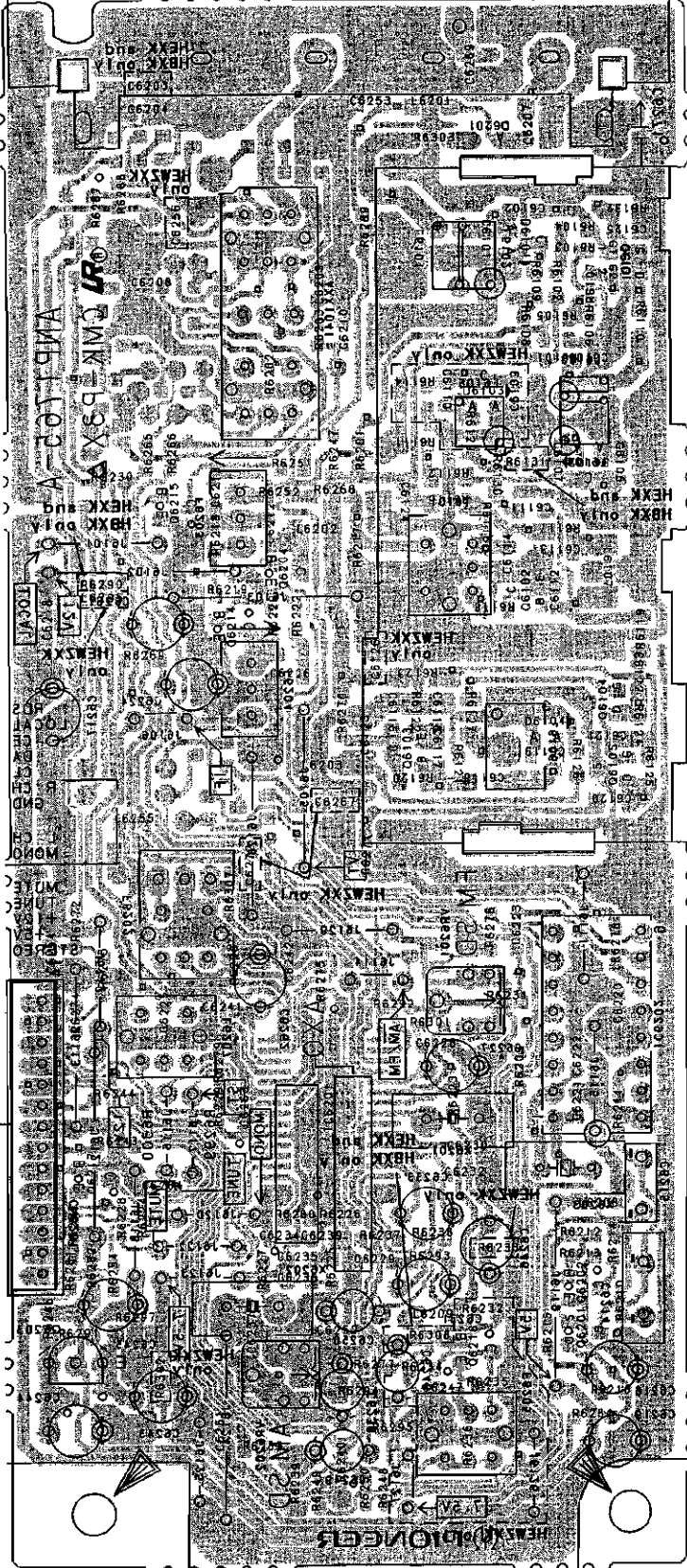
D



● This diagram is viewed from the foil side.

A
B
C
D

FM/AM TUNER MODULE



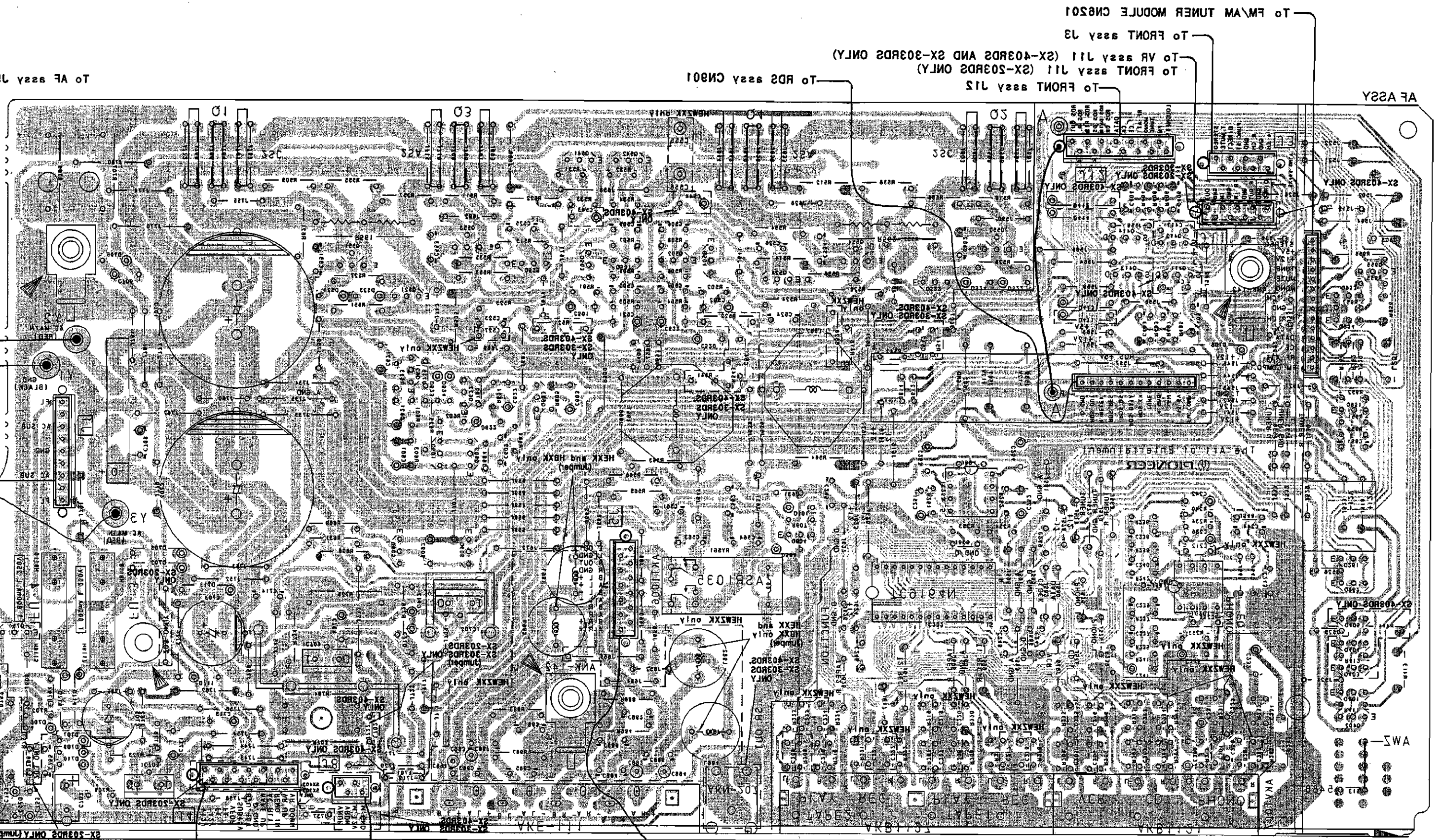
08101
08102
08103
08104
08105
08504
08505
08506
08507
08508
08509
08510
08511
08512
08513
08514
08515
08516
08517
08518
08519
08520
08521
08522
08523
08524
08525
08526
08527
08528
08529
08530
08531
08532
08533
08534
08535
08536
08537
08538
08539
08540
08541
08542
08543
08544
08545
08546
08547
08548
08549
08550

A
B
C
D

To AF assy

3.3 AF ASSY, SP SW ASSY, POWER SW ASSY AND TRANS ASSY

This diagram is viewed from the foil side.



A

B

C

D

15

To AF assy 11

To FM/TUNER MODULE CN8201

To FRONT assy 13

To VR assy 111 (SX-403RDS AND SX-303RDS ONLY)

To FRONT assy 112

To RDS assy CN801

AF ASSY

0401-0402
0221 0221 0225

IC501
0411 0412
0413 0414
0225
IC523
0224
0225
0224

IC203
0221
IC201
0205 0206 0202
0205 0223 0221 0221
0221

To SP SW assy 12

To VR assy 18

1

2

3

4

5

6

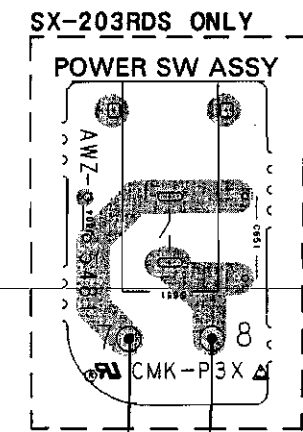
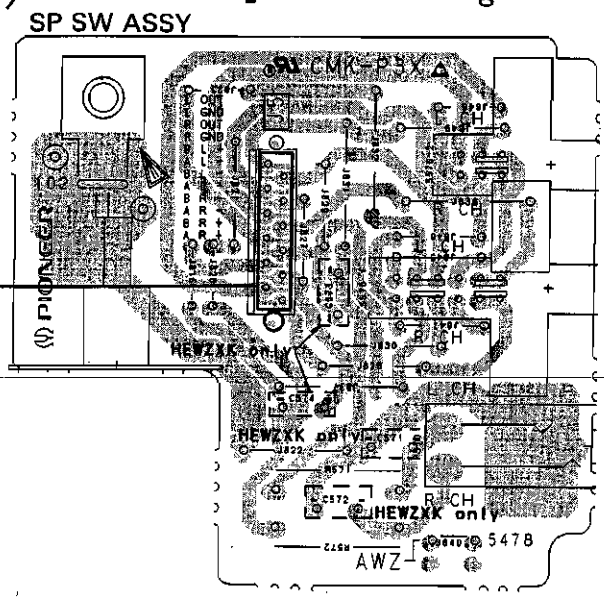
0221

• This diagram is viewed from the mounted parts side.

PCB-2

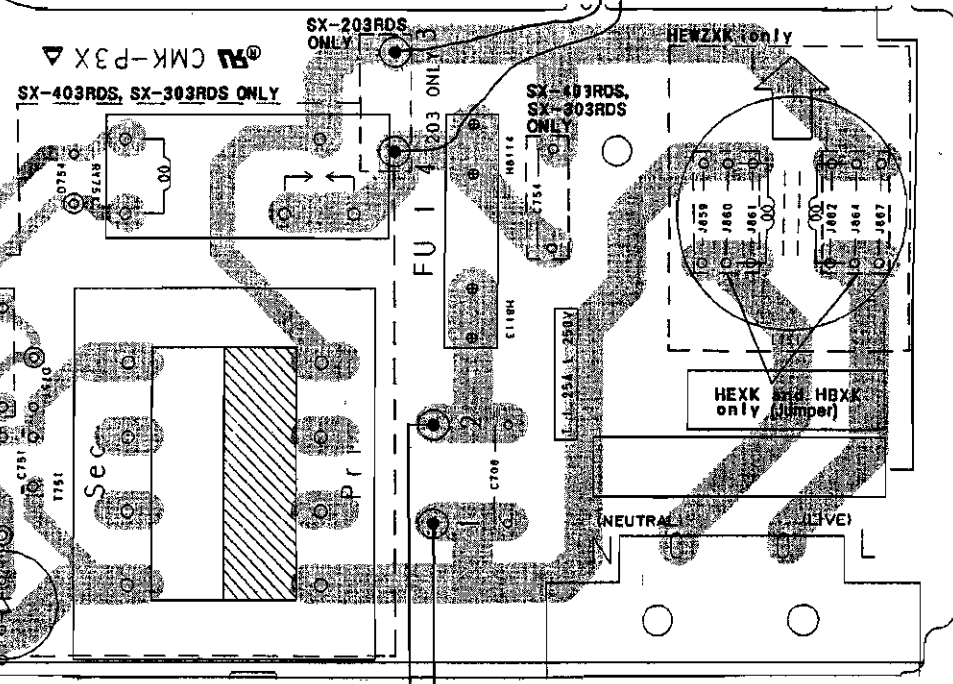
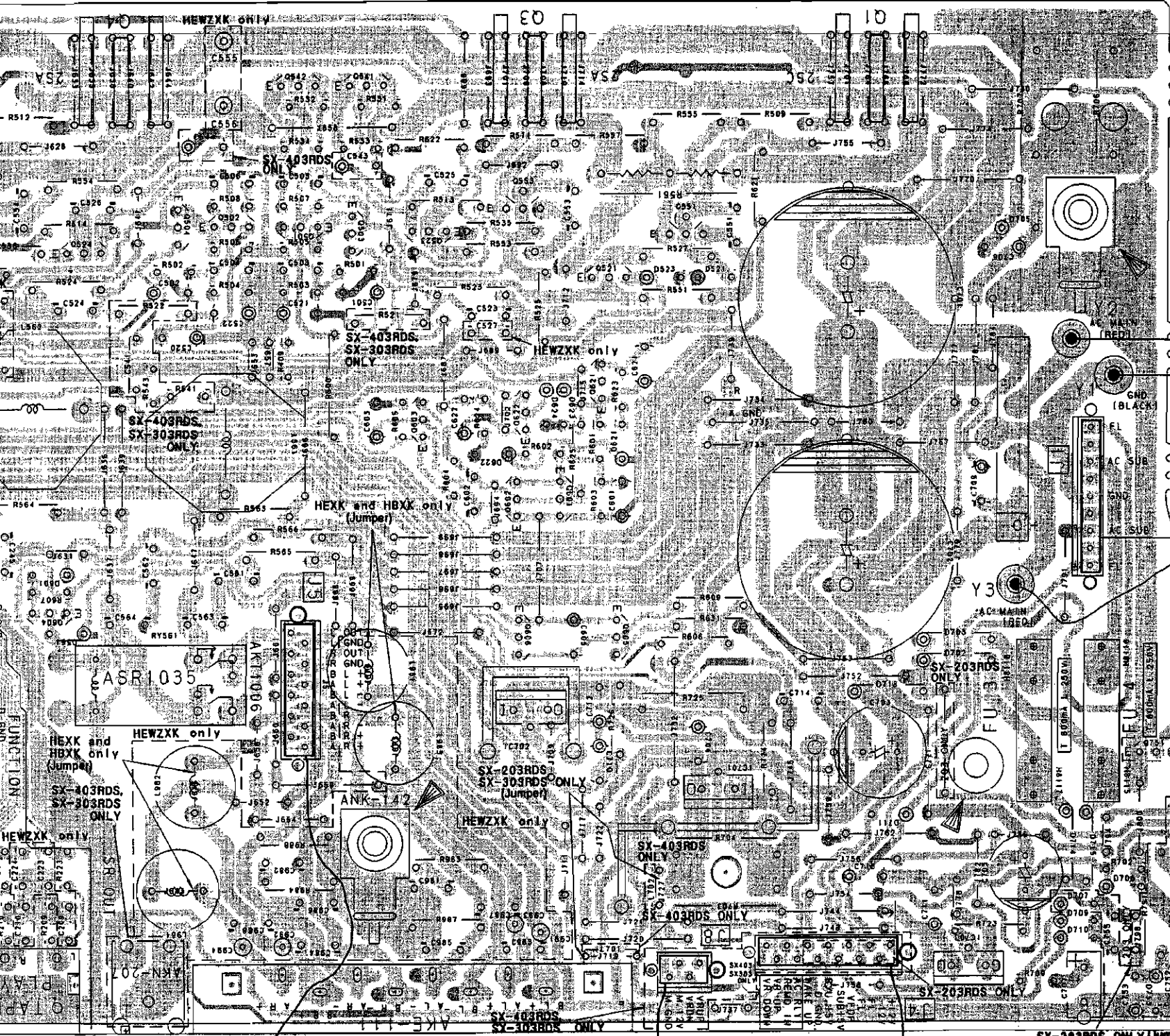
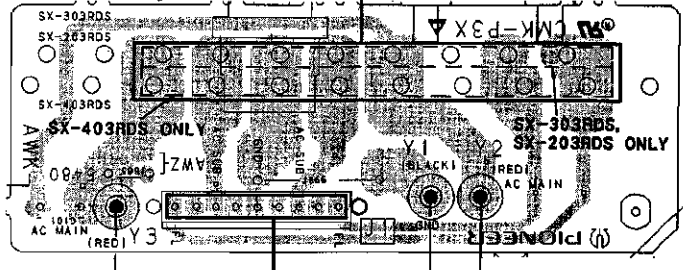
To RDS assy CN901

To AF assy J5



To POWER TRANSFORMER T1

TRANS ASSY



To SP SW assy J5

To VR assy J8

To FRONT assy J4

To POWER TRANSFORMER T1

Q524 Q504 Q502 Q542 Q501 Q541 Q503 Q523 Q553 Q521 Q551

Q604 Q603 Q602 Q622 Q601 Q621 IC701 IC703 Q751

IC702 Q605 Q605

TYPES	SX-203RDS			SX-303RDS			SX-403RDS		
ASSY NO	HEXK	HBXK	HEWZKX	HEXK	HBXK	HEWZKX	HEXK	HBXK	HEWZKX
AF Assy	AWZ5476	AWZ5622	AWZ5482	AWZ5484	AWZ5623	AWZ5487	AWZ5488	AWZ5489	AWZ5491

* MARKS indicate differences between models

MODELS	SX-203RDS			SX-303RDS			SX-403RDS		
TYPES	HEXK	HEWZKX	HBXK	HEXK	HEWZKX	HBXK	HEXK	HEWZKX	HBXK
R	521,522	1.2K	1.2K	1K	1K	910	910	910	910
	543,544			1K			910		910
706	2.2K 2W	2.2K 2W	2.2K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W
707	2.2K 2W	2.2K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W	2.7K 2W
C	701, 702	ACH1244 (5600/50)	ACH1244 (5600/50)	ACH1105 (6800/50)	ACH1105 (6800/50)	ACH1245 (6200/50)	ACH1245 (6200/50)	ACH1245 (6200/50)	ACH1245 (6200/50)
	985, 986	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
D	521,522	47/16	47/16	100/16	100/16	100/16	100/16	100/16	100/16
	701	D358A20	D358A20	D358A20	D358A20	D358A20F	D358A20F	D358A20F	D358A20F
RY	561	ASR1035	ASR1035	ASR1035	ASR1035	ASR112	ASR112	ASR112	ASR112
IC	201, 253	NJM4558DYP	NJM4558DYP	NJM4558DYP	NJM4558DYP	UPC4570C	UPC4570C	UPC4570C	UPC4570C
FU	1	AEK-509 (11.5A/250V)	AEK-509 (11.5A/250V)	AEK-510 (11.6A/250V)	AEK-510 (11.6A/250V)	AEK-511 (12A/250V)	AEK-511 (12A/250V)	AEK-511 (12A/250V)	AEK-511 (12A/250V)

To RDS ASSY CN901(→SCH-4)

To FRONT ASSY J12(→SCH-4)

To RDS ASSY CN901(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

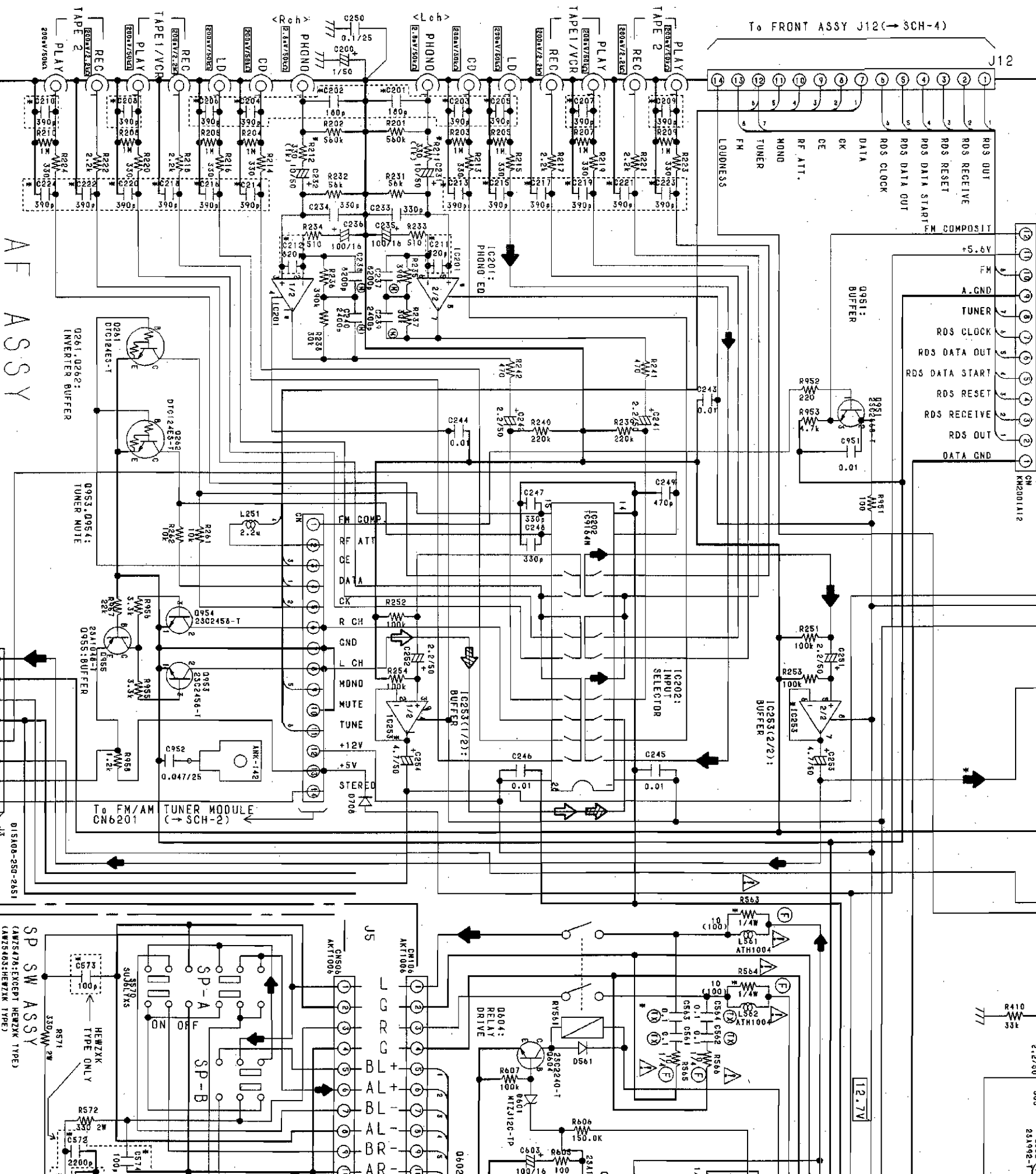
To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

To FRONT ASSY J11(→SCH-4)

SX-403RDS and SX-303RDS : To VR ASSY J11(→SCH-4)
 SX-203RDS : To FRONT ASSY J11(→SCH-4)

NOTE:
 Value in () is HEWZKX TYPE
 • The RDS is RDS/HBXK/SX-203RDS
 • The RDS is RDS/HBXK/SX-303RDS
 • The RDS is RDS/HBXK/SX-403RDS
 • The RDS is RDS/HBXK/SX-403RDS



SCH-3

AF ASSY, SP SW ASSY,
 POWER SW ASSY, TRANS ASSY

C201-C224:HEWZKX TYPE ONLY

AF ASSY

IC201: PHONO ED

IC202: INPUT SELECTOR

To FM/AM TUNER MODULE (→SCH-2)

To FRONT ASSY J3(→SCH-4)

To FRONT ASSY J3(→SCH-4)

1

2

3

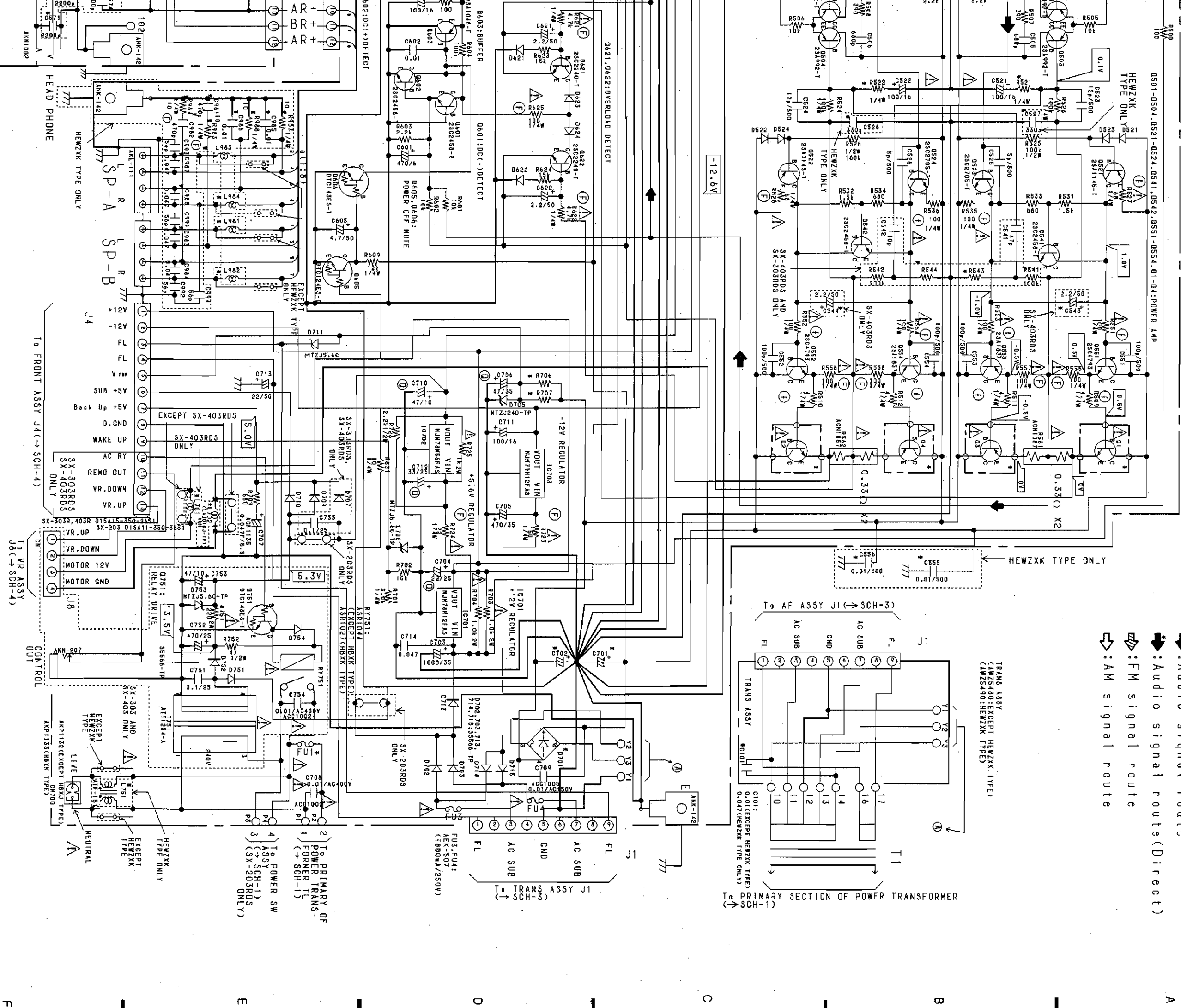
4

5

HEWZK TYPE are required for 303RDS/HEWZK and SX-203RDS/HEWZK. The SX-403RDS/HEWZK and SX-303RDS/HEWZK are required for the parts specified in the parts list. The SX-203RDS/HEWZK and HEWZK are required for the parts specified in the parts list.

- ➡: Audio signal route
- ➡: Audio signal route (Direct)
- ➡: FM signal route
- ➡: AM signal route

SCH-3



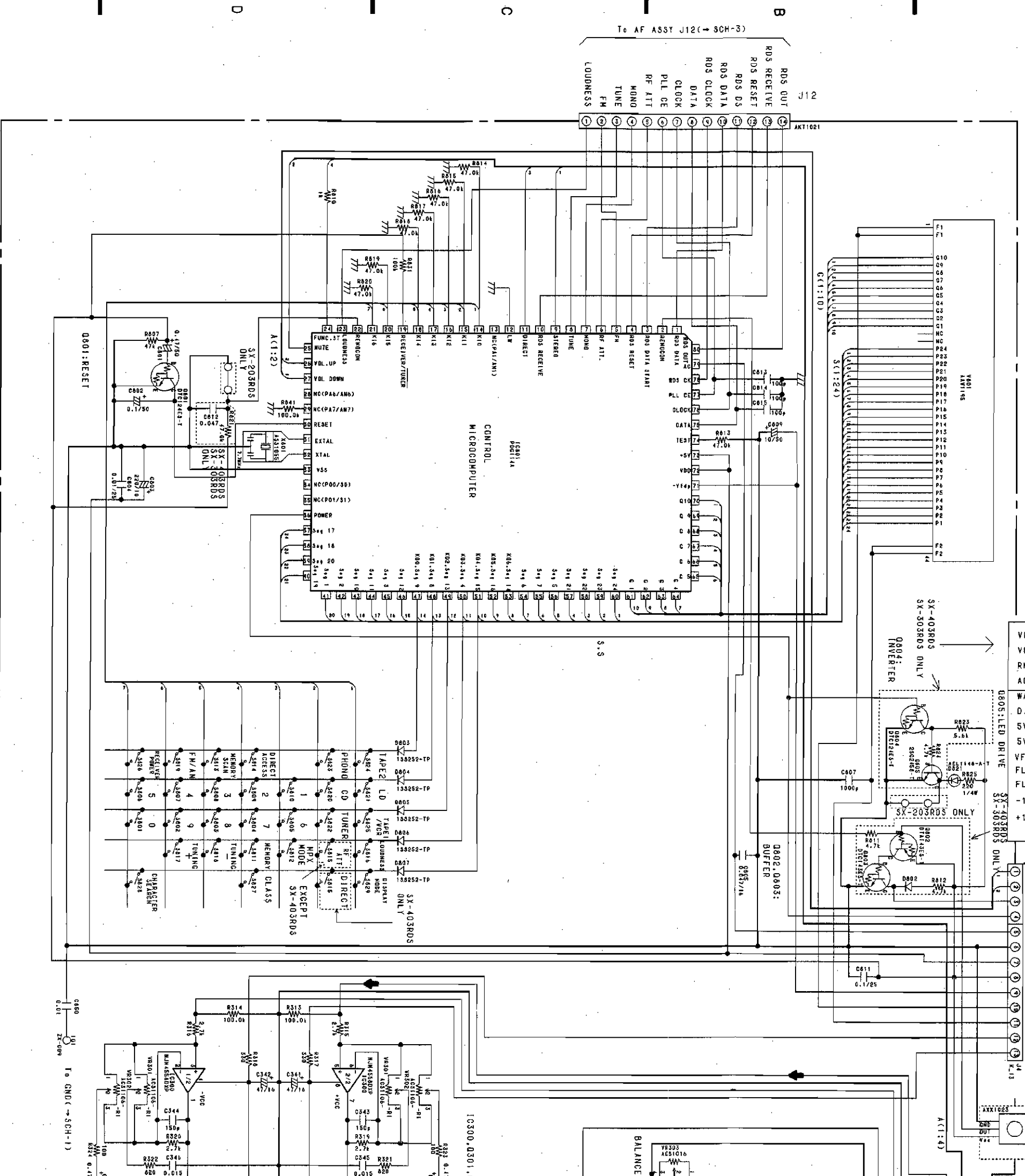
SCH-3

AF ASSY, SP SW ASSY, POWER SW ASSY, TRANS ASSY

3.4 FRONT ASSY, VR ASSY AND RDS ASSY

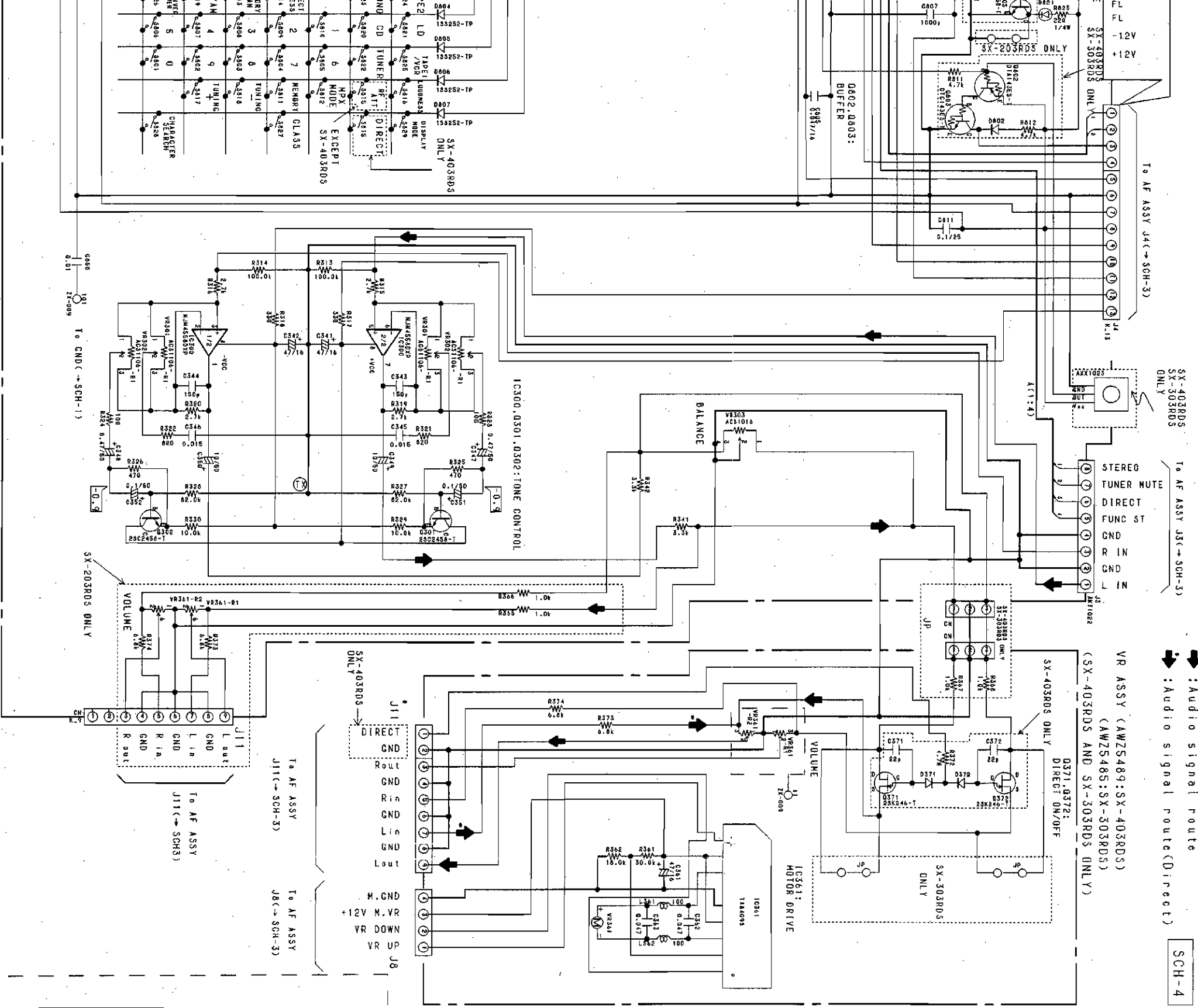
FRONT ASSY (AWZ5489: SX-403RDS)
(AWZ5485: SX-303RDS)
(AWZ5477: SX-203RDS)

NOTE:
• The parts specified as "SX-403RDS" are required for the SX-403RDS/HEXK and HEWZK.
• The parts specified as "SX-303RDS" are required for the SX-303RDS/HEXK, HBXK and HEWZK.
• The parts specified as "SX-203RDS" are required for the SX-203RDS/HEXK, HBXK and HEWZK.

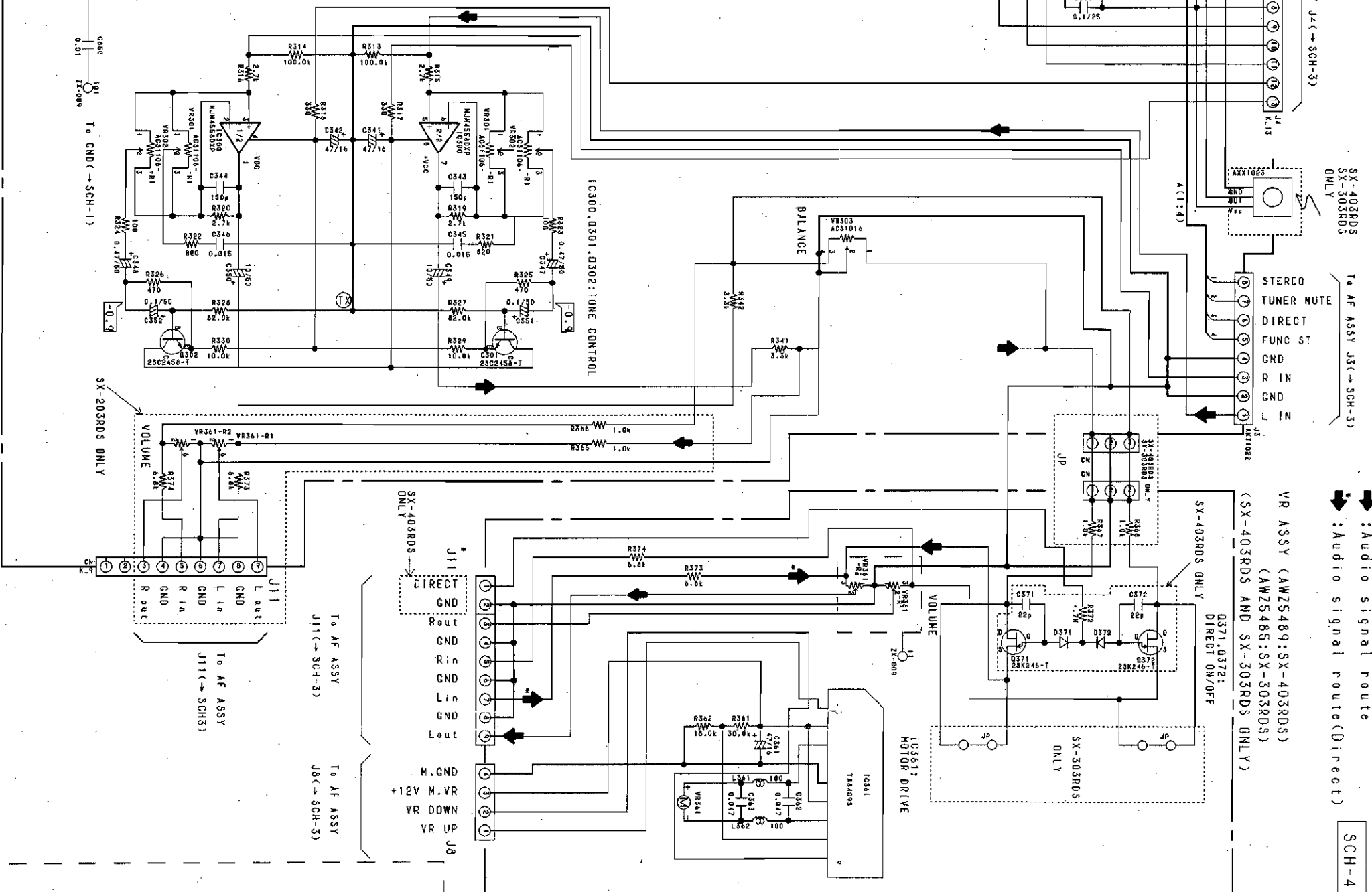
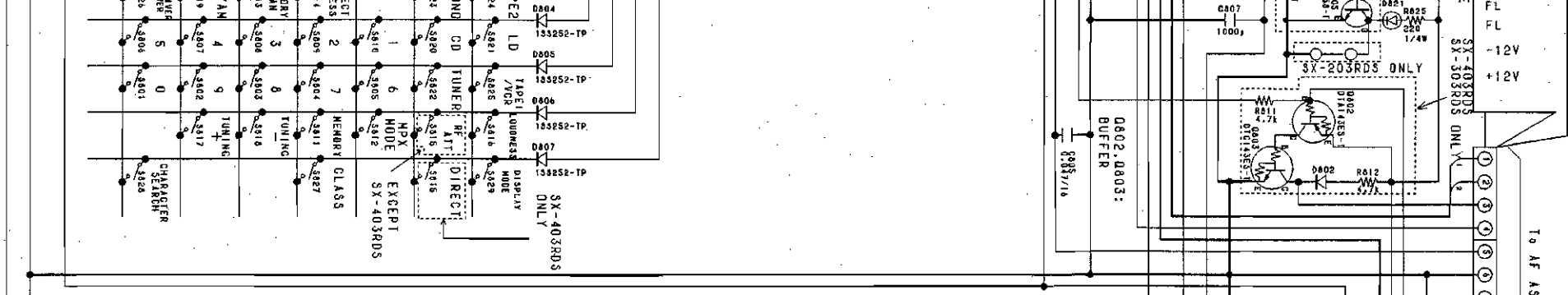


SCH-4

FRONT ASSY, VR ASSY, RDS ASSY



4
5
6
7
8

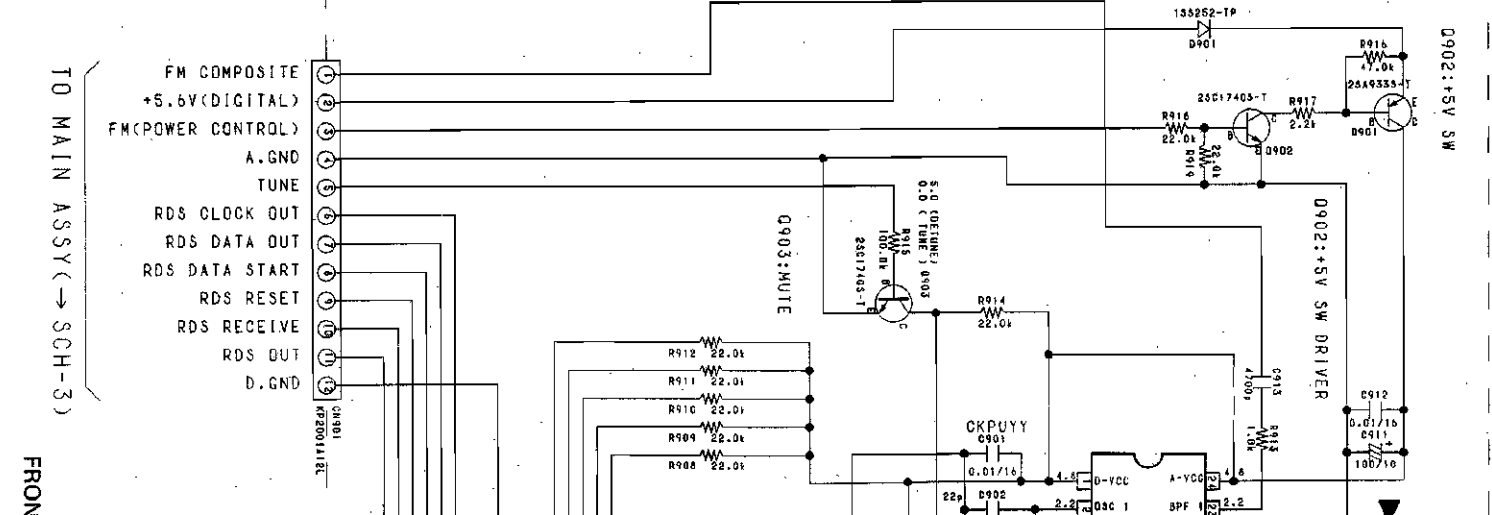


SX-403RDS ONLY
 SX-303RDS ONLY

To AF ASSY J4C → SCH-3)
 To AF ASSY J3C → SCH-3)

↗ :Audio signal route
 ↘ :Audio signal route(Direct)

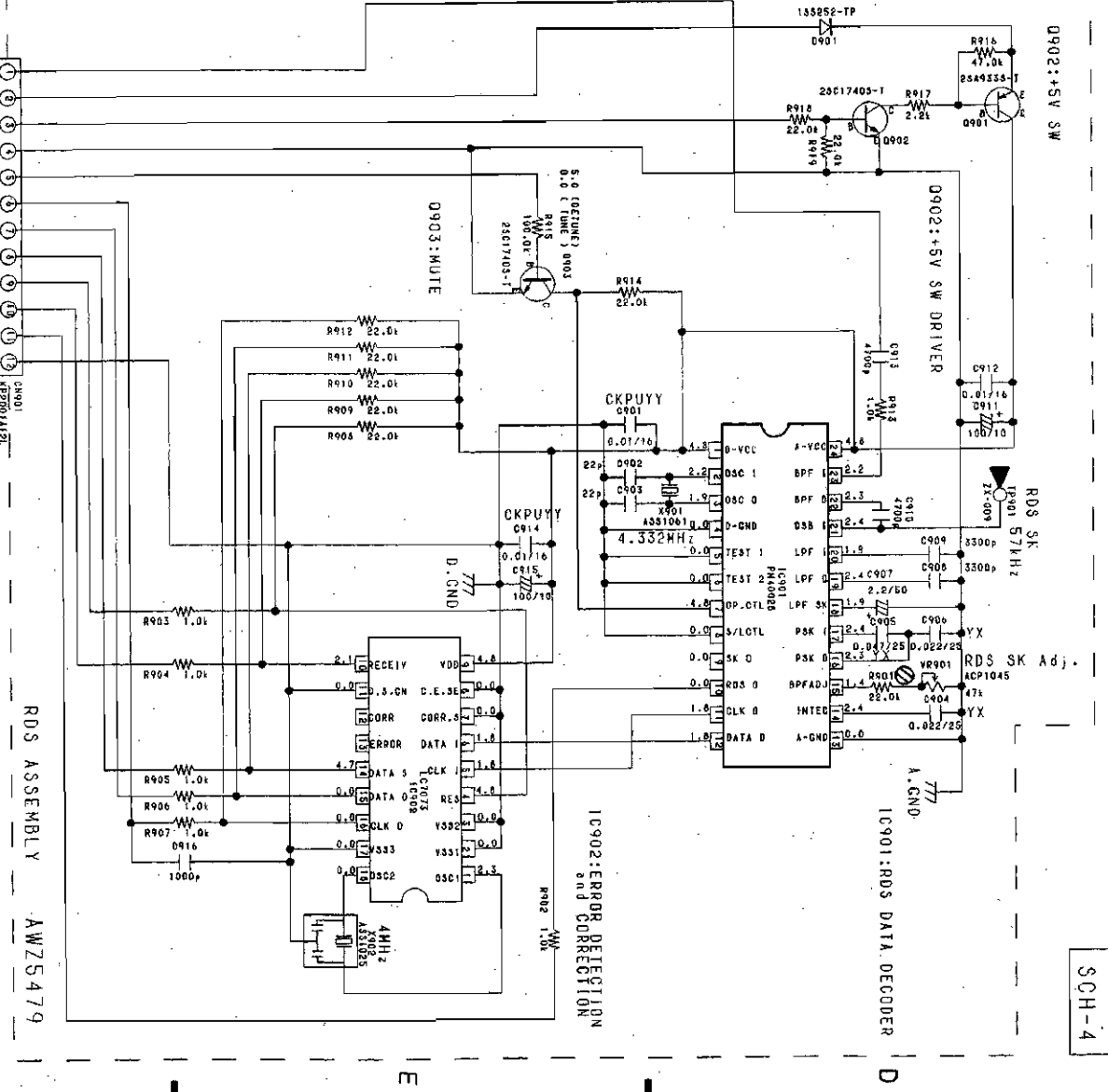
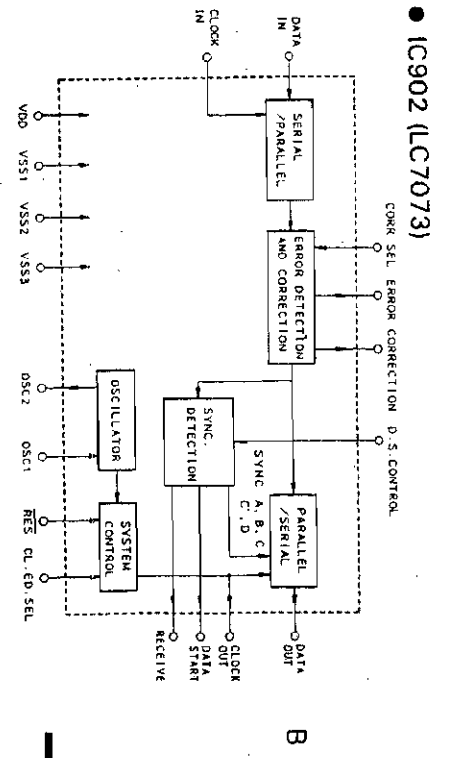
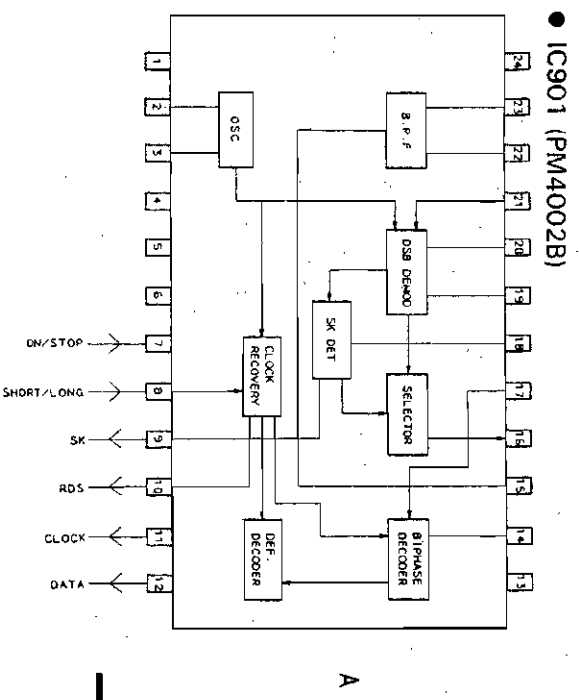
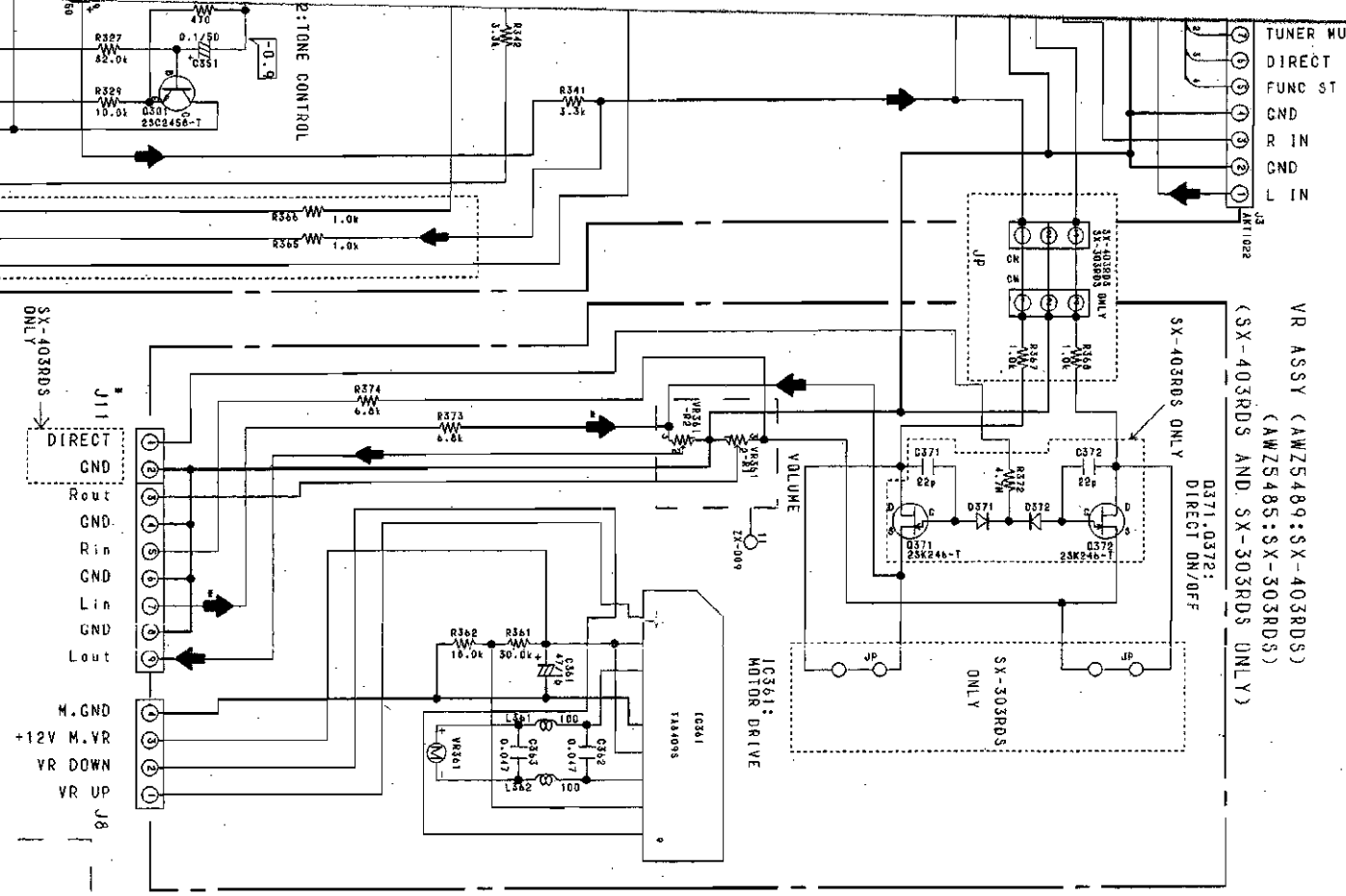
SCH-4



TO MAIN ASSY(→ SCH-3)
 FROM

Audio signal route
 Audio signal route(Direct)

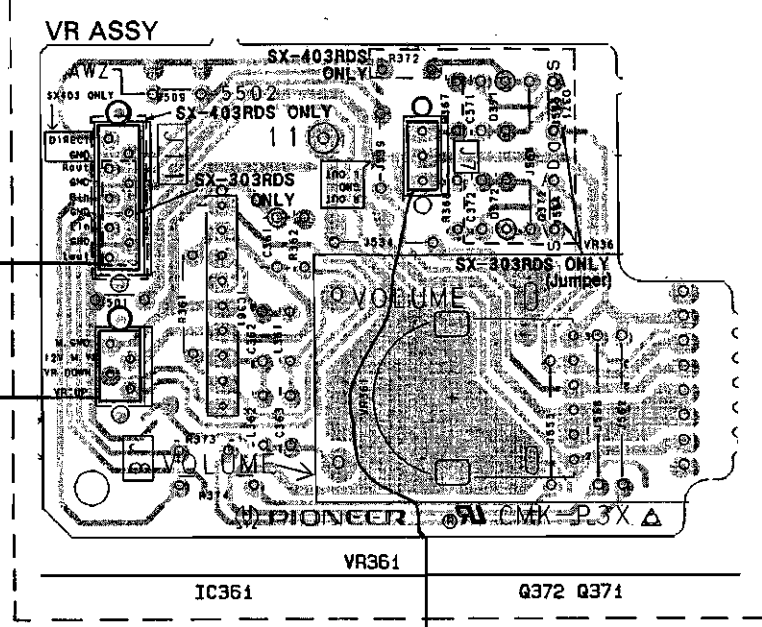
SCH-4



SCH-4

SCH-4

SX-403RDS AND SX-303RDS ONLY

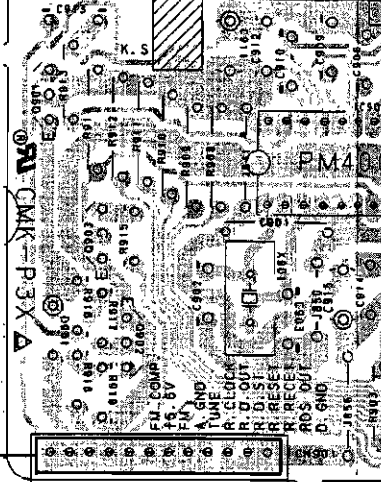


To AF assy J11

To AF assy J8

To AF assy J3

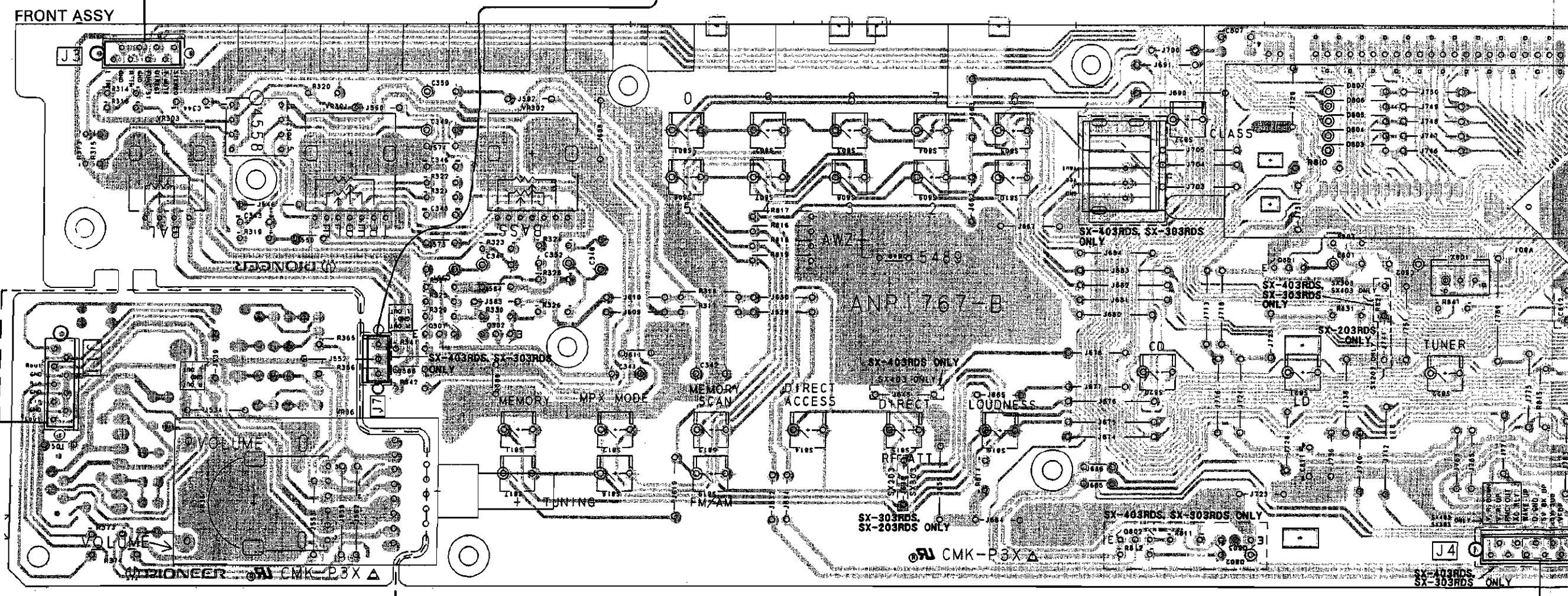
RDS ASSY



To AF assy

A

B



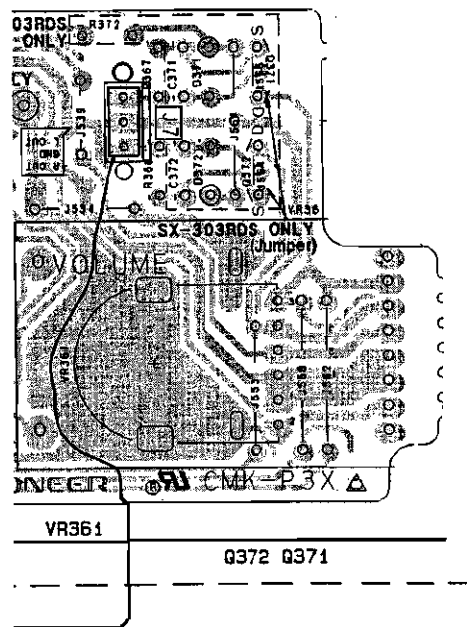
To AF assy J11

C

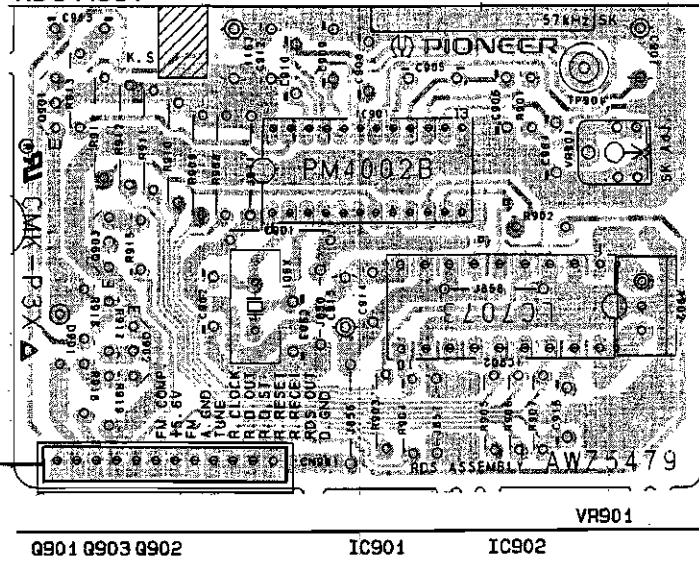
D

• This diagram is viewed from the mounted parts side.

3RDS ONLY

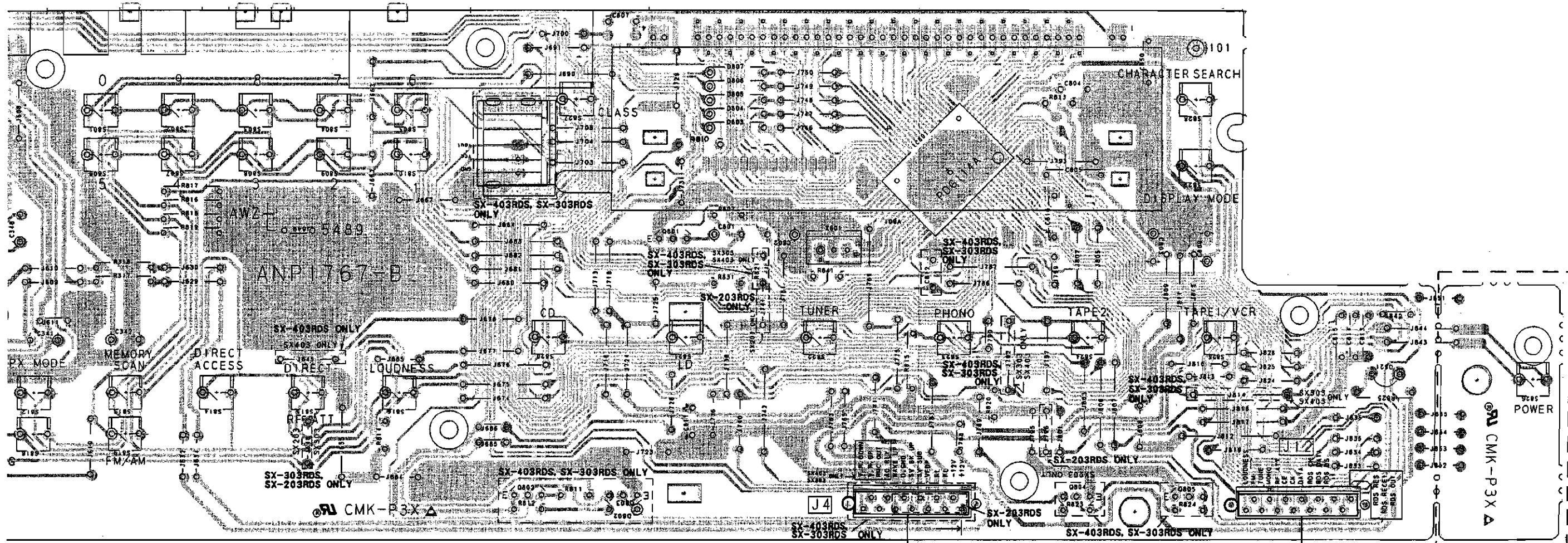


RDS ASSY



To AF assy

Q901 Q903 Q902 IC901 IC902 VR901



Q802 Q803 Q801 IC801 Q804 Q805

SX-403RDS AND SX-303RDS ONLY

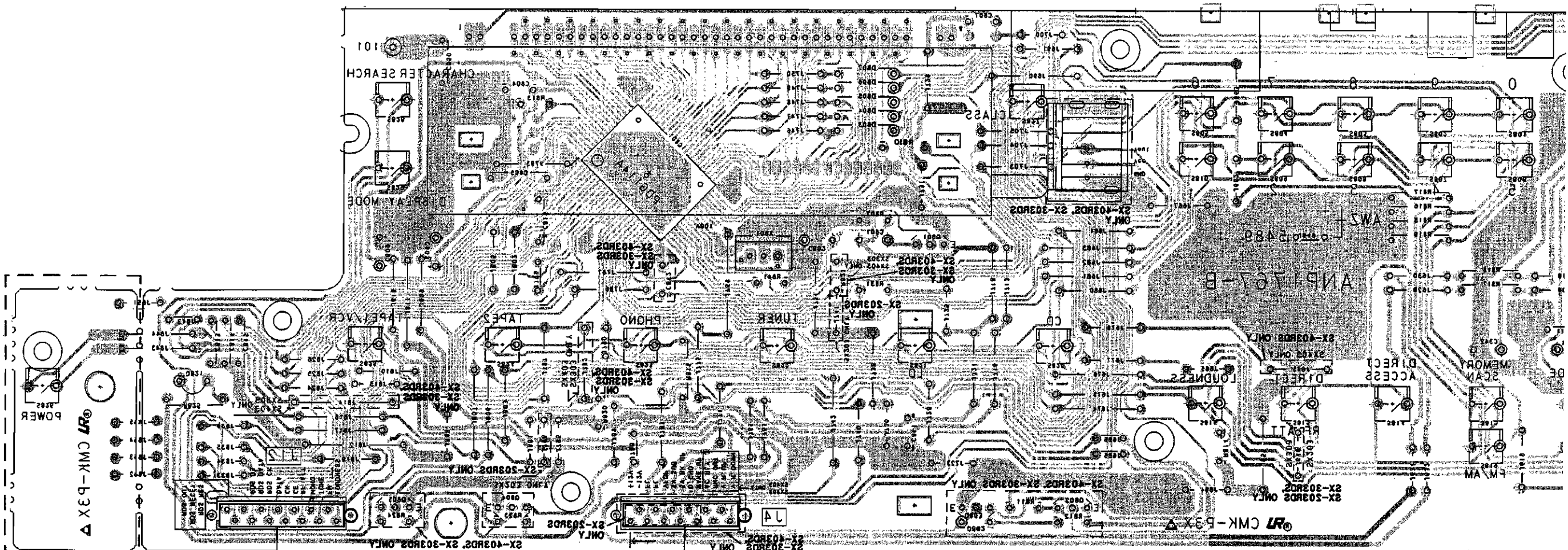
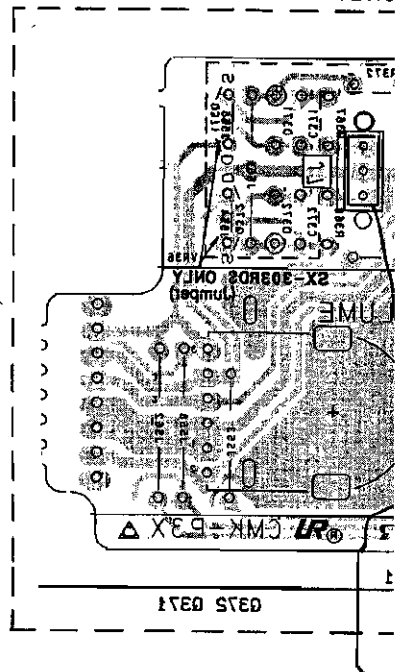
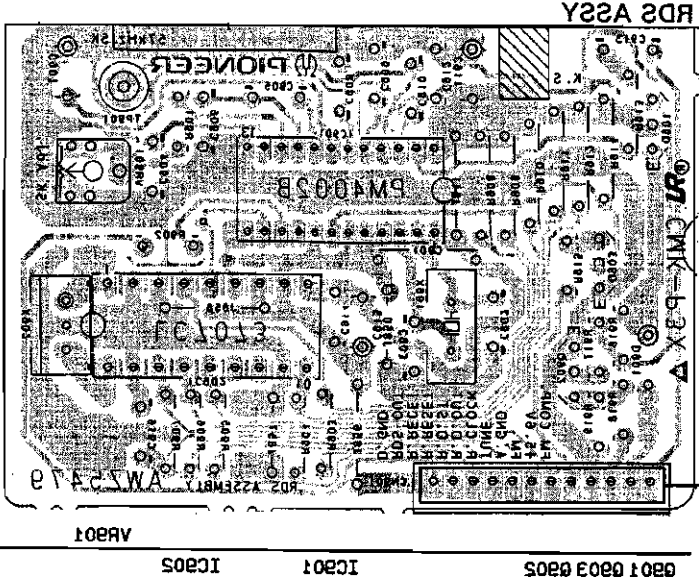
To AF assy J4

To AF assy J2

• This diagram is viewed from the mounted parts side.

SX-403RDS, SX-303RDS, SX-203RDS

ONLY



SX-303RDS ONLY
SX-403RDS AND

• This diagram is viewed from the foil side.

SX-403RDS, SX-303RDS, SX-203RDS

Mark	No.	Description	Parts No.
	Q523, Q524		2SC2705
	Q551, Q552		2SC4793
	Q411, Q412 (SX-403RDS only)		2SK246
	Q413, Q414		2SK246
	Q402		DTA124ES
	Q404 (SX-403RDS only)		DTA124ES
	Q261, Q262, Q401		DTC124ES
	Q403, Q405 (SX-403RDS only)		DTC124ES
	Q605		DTC124ES
	Q606		DTC143ES
	Q751 (SX-403RDS and SX-303RDS only)		DTC143ES
	D411, D412 (SX-403RDS only)		1SS252
	D413, D414, D521-D524, D561		1SS252
	D621-D624, D708-D710		1SS252
	D707, D751, D754		1SS252
	(SX-403RDS and SX-303RDS only)		
	D701 (For SX-403RDS)		D5SB20F
	D701 (For SX-303RDS and SX-203RDS)		D3SBA20 (A)
	D601		MTZJ12C
	D705		MTZJ24D
	D711		MTZJ5.6C
	D706		MTZJ5.6C
	D753 (SX-403RDS and SX-303RDS only)		MTZJ5.6C
	D702, D703, D713-D715		S5566
	D752 (SX-403RDS and SX-303RDS only)		S5566
COILS AND FILTERS			
	L251		LAU2R2J
	L561, L562 (0.7uH)		ATH1004
	L701, L702 (SX-403RDS only)		LAU010J
TRANSFORMERS			
	T751 (SX-403RDS and SX-303RDS only)		ATT1254
SWITCHES AND RELAYS			
	RY561 (For SX-403RDS)		ASR-112
	RY561 (For SX-303RDS and SX-203RDS)		ASR1035
	RY751 (SX-403RDS and SX-303RDS only)		ASR1044
CAPACITORS			
△	C708 (0.01/AC400V)		ACG1002
△	C754 (0.01/AC400V)		ACG1002
	(SX-403RDS and SX-303RDS only)		
	C709 (0.01/AC150V)		ACG1005
	C707 (0.047F/5.5)		ACH1135
	C701, C702 (8200/50) (For SX-403RDS)		ACH1265
	C701, C702 (6800/50) (For SX-303RDS)		ACH1105
	C701, C702 (5600/50) (For SX-203RDS)		ACH1266
	C542 (SX-403RDS and SX-303RDS only)		CCCSL100C50
	C525, C526		CCCSL050C500
	C551-C554		CCCSL101K500
	C523, C524		CCCSL120K500
	C503, C504		CCCSL151J50
	C403, C404		CCCSL271J50
	C411, C412 (SX-403RDS only)		CCPUSL220J50
	C541 (SX-403RDS and SX-303RDS only)		CCPUSL470J50
	C200		CEAS010M50
	C231, C232		CEAS100M50
	C235, C236, C603, C711		CEAS101M16
	C703		CEAS102M35
	C713		CEAS220M50
	C241, C242, C251, C252		CEAS2R2M50
	C543, C544 (SX-403RDS only)		CEAS2R2M50
	C621, C622		CEAS2R2M50
	C753 (SX-403RDS and SX-303RDS only)		CEAS470M10

Mark	No.	Description	Parts No.
	C752 (SX-403RDS and SX-303RDS only)		CEAS471M25
	C705		CEAS471M35
	C601		CEAS471M6
	C253, C254, C605		CEAS4R7M50
	C521, C522 (For SX-403RDS)		CEEA101M16
	C521, C522 (For SX-303RDS)		CEAS101M16
	C521, C522 (For SX-203RDS)		CEAS470M16
	C501, C502 (For SX-403RDS)		CEEA2R2M50
	C501, C502 (For SX-303RDS and SX-203RDS)		CEAS2R2M50
	C704		CEHAQ220M25
	C712		CBHAQ930M25
	C710		CEHAQ470M10
	C706		CBHAQ470M35
	C520 (For SX-403RDS)		CEXA101M25
	C520 (For SX-303RDS and SX-203RDS)		CEAS101M16
	C561-C564		CFTXA104J50
	C405, C406		CFTXA473J50
	C243-C246, C602		CKCYF103Z50
	C714		CKCYF473Z50
	C751, C755 (For SX-403RDS and SX-303RDS only)		CKCYX104M25
	C505, C506		CKDYB681K50
	C951		CKDYF103Z50
	C250		CKDYX104M25
	C952		CKDYX473M25
	C233, C234, C247, C248		CKPUYB331K50
	C249		CKPUYB471K50
	C239, C240		CQMA242J50
	C237, C238		CQMA822J50
RESISTORS			
△	R561, R562 (0.33/5W)		ACN-139
	R525, R526		RD1/2PM104J
	R726		RD1/2PM222J
	R752 (SX-403RDS and SX-303RDS only)		RD1/2PM470J
	R631		RD1/4PM100J
	R523, R524		RD1/4PM104J
	R609		RD1/4PM123J
	R701		RD1/4PM302J
	R521, R522 (For SX-403RDS)		RD1/4PM911J
	R521, R522 (For SX-303RDS)		RD1/4PM102J
	R521, R522 (For SX-203RDS)		RD1/4PM122J
△	R563-R566		RD1/4PMF100J
△	R555-R558, R625		RD1/4PMF101J
△	R621, R622		RD1/4PMF472J
△	R527, R528		RD1/4PMF680J
△	R535, R536, R551-R554		RFA1/4PS101J
△	R723		RFA1/4PS151J
△	R724		RFA1/4PS220J
△	R509-R512		RFA1/4PS4R7J
△	R703, R704, R725		RS2LMP102J
△	R751 (SX-403RDS and SX-303RDS only)		RS2LMP221J
	R706, R707		RS2LMP272J
	(For SX-403RDS and SX-303RDS)		
	R706, R707 (For SX-203RDS)		RS2LMP222J
	R412 (SX-403RDS only)		RD1/8PM473J
	R414 (SX-403RDS only)		RD1/8PM475J
	R541, R542		RD1/8PM104J
	(SX-403RDS and SX-303RDS only)		
	R543, R544 (For SX-403RDS)		RD1/8PM911J
	R543, R544 (For SX-303RDS)		RD1/8PM102J
	Other Resistors		RD1/8PM□□□J

SX-403RDS, SX-303RDS, SX-203RDS

Mark	No.	Description	Parts No.
OTHERS			
		PIN JACK 6P (PHONO, CD, VCR)	AKB1121
		PIN JACK 8P (TAPE1 PLAY/REC, TAPE2 PLAY/REC)	AKB1127
		SPEAKER TERMINAL 8-P JACK (CONTROL OUT) (SX-403RDS and SX-303RDS only)	AKB-111 AKN-207
CN700		AC INLET (1P)	AKP1132
		CABLE HOLDER (9P)	AKT1082
		HEAT SINK	ANH-575
		SCREW	BBZ30P080FMC
CN302		I2P PLUG	KM2001A12

FRONT ASSY

SEMICONDUCTORS

IC300	NJM4558DXP
IC801	PDG114A
Q301, Q302	2SC2458
Q805 (SX-403RDS and SX-303RDS only)	2SC2458
Q802 (SX-403RDS and SX-303RDS only)	DTA143ES
Q801	DTC124ES
Q804 (SX-403RDS and SX-303RDS only)	DTC124ES
Q803 (SX-403RDS and SX-303RDS only)	DTC143ES
D802 (SX-403RDS and SX-303RDS only)	1SS252
D803-D807	1SS252
D821 (RED)	AEL1148

SWITCHES AND RELAYS

S801-S825, S827-S829	ASG1029
S826 (SX-403RDS and SX-303RDS only)	ASG1029

CAPACITORS

C343, C344	CCDSL151J50
C349, C350	CEAS100M50
C351, C352, C802	CEJA0R1M50
C809	CEJA100M50
C803	CEJA221M10
C341, C342	CEJA470M16
C347, C348, C801	CEJAR47M50
C345, C346	CFTXA153J50
C811	CKDYX104M25
C813-C815	CKPUYB101K50
C807	CKPUYB102K50
C804, C850	CKPUYF103Z25
C805, C816	CKPUYF473Z16
C812 (SX-403RDS and SX-303RDS only)	CKPUYF473Z16

RESISTORS

VR303 (500k-B)	ACS1016
VR301, VR302 (30k-B5x2)	ACS1106
VR361 (SX-203RDS only)	ACT1071
R825	RD1/4PM221J
R365, R366 (SX-203RDS only)	RD1/8PM102J
R373, R374 (SX-203RDS only)	RD1/8PM682J
R811, R812, R824 (SX-403RDS and SX-303RDS only)	RD1/8PM472J
R821 (SX-403RDS and SX-303RDS only)	RD1/8PM473J
R823 (SX-403RDS and SX-303RDS only)	RD1/8PM562J
Other Resistors	RD1/8PM□□□□

Mark	No.	Description	Parts No.
OTHERS			
V801		FL TUBE CABLE HOLDER (3P) (For SX-403RDS and SX-303RDS)	AAV1195 AKT1076
X801		(7.70MHZ) REMOTE RECEIVER UNIT (SX-403RDS and SX-303RDS only)	ASS1055 AXX1023

VR ASSY (SX-403RDS and SX-303RDS only)

SEMICONDUCTORS

IC361	TA8409S
Q371, Q372 (SX-403RDS only)	2SK246
D371, D372 (SX-403RDS only)	1SS252

COILS AND FILTERS

L361, L362	LAU101K
------------	---------

CAPACITORS

C371, C372 (SX-403RDS only)	CCPUSL220J50
C361	CEAS470M16
C362, C363	CKPUYF473Z16

RESISTORS

VR361 (100k-A5x2)	ACX1069
R372 (SX-403RDS only)	RD1/8PM475J
Other Resistors	RD1/8PM□□□□

OTHERS

CABLE HOLDER (3P)	AKT1076
-------------------	---------

POWER SW ASSY (SX-203RDS only)

CAPACITORS

C651 (0.01/AC400V)	ACG1003
--------------------	---------

SWITCHES AND RELAYS

S651	ASG1035
------	---------

FM/AM TUNER MODULE

SEMICONDUCTORS

IC6201	LA1836M
IC6202	LM7001J
Q6102	2SC2223
Q6203	2SC2235
Q6202	2SC2712
Q6103, Q6214	2SC2714
Q6201	2SK208
Q6104, Q6105	2SK302
Q6101	3SK194
Q6204	XDA124EK
Q6215, Q6217	XDC124EK
D6101, D6102, D6104	1SV228
D6201	HVU187

COILS AND FILTERS

L6106	ATC1003
L6101	ATC1016
L6102	ATC1017
L6103	ATC1018
L6104	ATC1019

SX-403RDS, SX-303RDS, SX-203RDS

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	T6101		ATE-063		R6237		RS1/8S182J
	L6207 (F=10.7MHZ)		ATE1013		R6209		RS1/8S221J
	F6204		ATF-107		R6239		RS1/8S332J
	F6203		ATF-119		R6112		RS1/8S473J
	F6202 (F=450KHZ)		ATF1155		Other Resistors		RS1/10S□□□J
	L6107		ATH1043	OTHERS			
	L6209		LCTA221J3225			2P TERMINAL WITH PAL	AKA1017
	L6201, L6202, L6203, L6208		LCTA2R2J3225	X6203 (7.200MHZ)			ASS1042
CAPACITORS				X6201 (456kHZ)			ASS1066
	C6234, C6236, C6254, C6269		ACG1051	X6202 (450kHZ)		AM RF TUNING BLOCK	ATF1027
	C6235		ACG1052				AXX1041
	C6120		CCSCH060D50				
	C6229		CCSCH821J50				
	C6111		CCSQCH010C50				
	C6112, C6122		CCSQCH020C50				
	C6118		CCSQCH080D50				
	C6113, C6203		CCSQCH101J50				
	C6116, C6208, C6221, C6222		CCSQCH150J50				
	C6117		CCSQCH330J50				
	C6105		CCSQSL471J50				
	C6101		CCSQTH110J50				
	C6119		CCSQTH150J50				
	C6106, C6107		CCSQTH270J50				
	C6262		CEAS100M50				
	C6231, C6233		CEAS3R3M50				
	C6216, C6217		CEAS330M16				
	C6219		CEAS470M10				
	C6243, C6244, C6245		CEAS470M16				
	C6227		CEAS470M25				
	C6246		CEEA100M50				
	C6224		CEEA101M25				
	C6261		CEJA010M50				
	C6238		CEJA100M16				
	C6249, C6250		CEJA4R7M35				
	C6215		CFTXA103J50				
	C6214		CFTXA224J50				
	C6125, C6204, C6207		CKSQYB102K50				
	C6102, C6114, C6115, C6121, C6124		CKSQYB103K50				
	C6210, C6253, C6264		CKSQYB103K50				
	C6213		CKSQYB223K50				
	C6230		CKSQYB273K50				
	C6228		CKSQYB472K50				
	C6209, C6237		CKSQYB473K50				
	C6251, C6252		CKSQYB682K50				
	C6212, C6218		CKSQYF103Z50				
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50				
	C6241		CKSQYF473Z50				
	C6123		CKSYB103K50				
	C6232		CKSYB273K50				
	C6223		CKSYF103Z50				
	C6263		CKSYF473Z50				
RESISTORS							
	VR6201 (10k)		ACP1056				
	VR6202		VRTB6VS223				
	R6299, R6300		RD1/8PM102J				
	R6115, R6119, R6123, R6127, R6268		RS1/8S000J				
	R6269-R6273, R6275, R6276, R6278		RS1/8S000J				
	R6283, R6284, R6289, R6290, R6293		RS1/8S000J				
	R6294, R6297, R6303		RS1/8S000J				
	R6243, R6244		RS1/8S101J				
	R6211		RS1/8S103J				
	R6247		RS1/8S152J				

5. ADJUSTMENTS

■ FM TUNER SECTION

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	FM SG (1kHz, ± 75 kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dB μ V)			
1	Center Adjustment	98 Non modulation	80 or more	98MHz	L6207	Adjust so that the DC voltage between Pin 4 and Pin 28 (or \oplus leads of C6224 and C6261) of IC6201 becomes $0V \pm 50mV$.
2	Front End Sensitivity	98	10-30	98MHz	L6104 L6105*1 L6102 T6101	Adjust so that the DC voltage between Pin12 (or \oplus leads of C6238) of IC6201 (S-meter) and GND becomes at maximum level.
3	TUNED IND. Lighting Level	98	15 ± 2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.
4	SK Level Adjustment	88 EXTERNAL *2 (RDS SG)	60	88MHz NORMAL (RF ATT ON)	VR901	Adjust so that the output level 57kHz between TP901 and GND becomes maximum.

*1 : HEWZK type only

*2 : RDS SG (AUDIO, PILOT, RDS, BK and DK: OFF, SK: ON)

Notes:

- Before adjusting, make sure there is no gap between L6101 and L6102. If there is a gap between them, bring them into contact with each other first, and then make adjustments.
- Make indicator adjustments in order of AM \rightarrow FM.

■ AM TUNER SECTION

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dB μ V/m)			
1	TUNED IND. Lighting Level	999	47 ± 2	999kHz	VR6202	Adjust so that the indicator of TUNED IND. starts to light up.

SX-403RDS, SX-303RDS, SX-203RDS

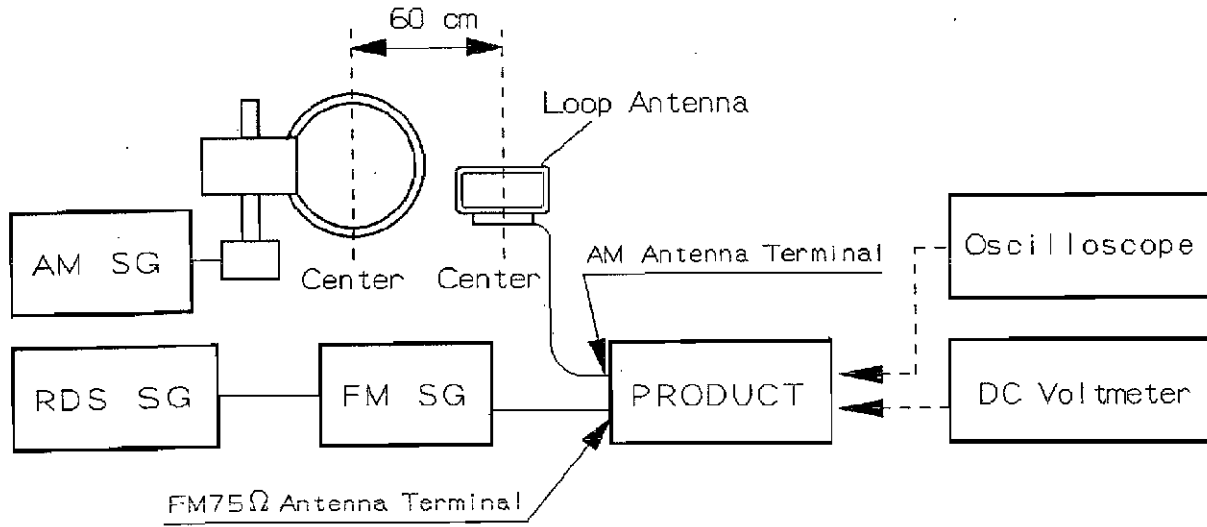
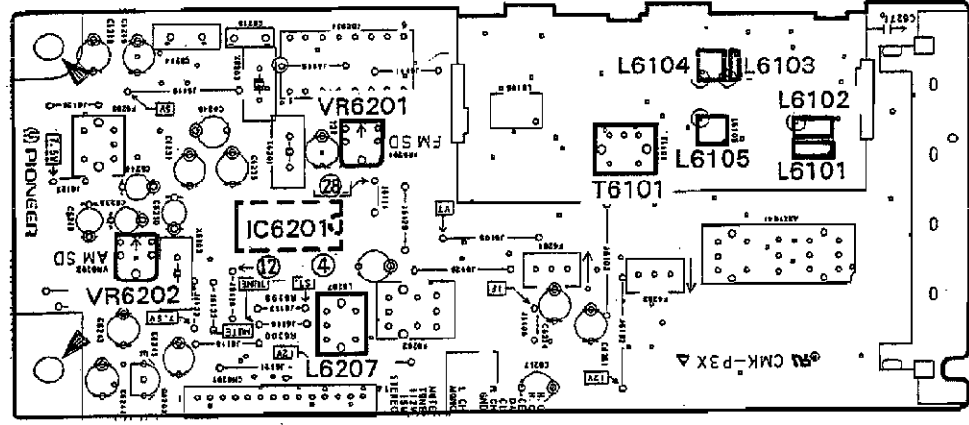


Fig. 1 FM and AM Adjustment Wiring Diagram

FM/AM TUNER MODULE



RDS Assy

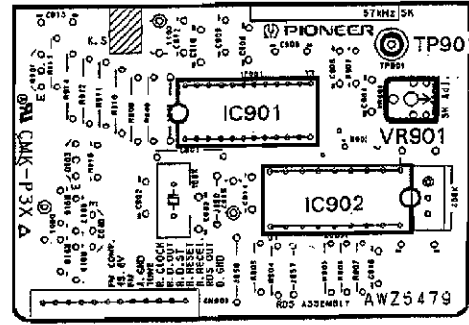
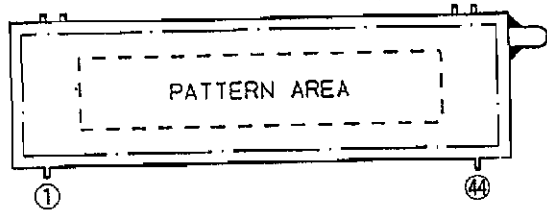


Fig. 2 Adjustment Points

6. FL INFORMATION

● AAV1195(V801)

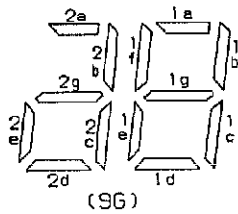
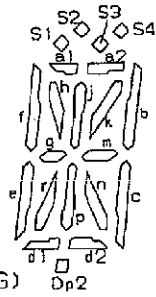
PIN LOCATION



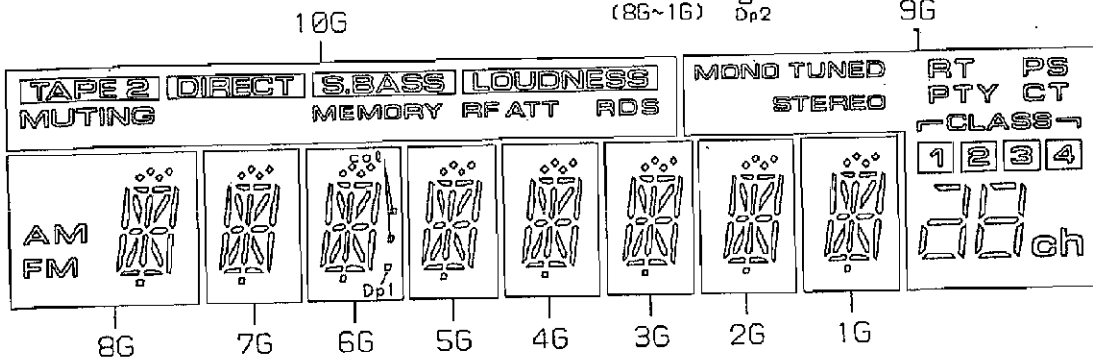
PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44							
CONNECTION	F	F	N	N	0	9	8	7	6	5	4	3	2	1	N	N	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

- NOTE
- 1) F1, F2 --- Filament
 - 2) NP ----- No pin
 - 3) NC ----- No connection
 - 4) DL ----- Datum Line
 - 5) 1G~10G --- Grid



GRID ASSIGNMENT



ANODE CONNECTION


	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	-	TUNED	S1	S1	S1	S1	S1	S1	S1	S1
P2	-	STEREO	S2	S2	S2	S2	S2	S2	S2	S2
P3	-	2	S4	S4	S4	S4	S4	S4	S4	S4
P4	-	3	S3	S3	S3	S3	S3	S3	S3	S3
P5	MEMORY	MONO	a1	a1	a1	a1	a1	a1	a1	a1
P6	RFATT	4	a2	a2	a2	a2	a2	a2	a2	a2
P7	-	-CLASS-	h	h	h	h	h	h	h	h
P8	-	1	j	j	j	j	j	j	j	j
P9	TAPE 2	2b	b	b	b	b	b	b	b	b
P10	-	RT	k	k	k	k	k	k	k	k
P11	MUTING	1a	g	g	g	g	g	g	g	g
P12	LOUDNESS	1b	f	f	f	f	f	f	f	f
P13	-	2c	m	m	m	m	m	m	m	m
P14	-	CT	c	c	c	c	c	c	c	c
P15	-	PTY	p	p	p	p	p	p	p	p
P16	-	PS	r	r	r	r	r	r	r	r
P17	-	1g	n	n	n	n	n	n	n	n
P18	S.BASS	1e	d1	d1	d1	d1	d1	d1	d1	d1
P19	DIRECT	1c	e	e	e	e	e	e	e	e
P20	RDS	1d	d2	d2	d2	d2	d2	d2	d2	d2
P21	-	1f	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2	Dp2
P22	-	ch	AM	-	col	-	-	-	-	-
P23	-	2a, 2d, 2g	FM	-	Dp1	-	-	-	-	-
P24	-	2e	-	-	-	-	-	-	-	-



7. IC INFORMATION

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

■ PDG114A (IC801) CONTROL MICROCOMPUTER

● Pin Function

No.	NAME	I/O	FUNCTION	ACT
1	RDS DATA	I	Data from LC7073 input	—
2	REMOCON	I	Remote control signal input	—
3	RDS DATA START	I	Synchronizing signal of each block from LC7073 input	—
4	RDS RESET	O	Reset signal output to LC7073 when receiving frequency converted	
5	FM	O	FM BAND select output	H
6	RF ATT	O	RF ATT ON/OFF output	H
7	MONO	O	FM MONO output	H
8	TUNE	I	TUNE indicator signal input	L
9	STEREO	I	STEREO indicator signal input	L
10	RDS RECEIVE	I	Signal showing RDS station or not input	L
11	DIRECT	O	DIRECT ON/OFF (Receiver only) *1	H
12	LW be or not	I	L: LW not being H: LW being (Tuner only) *1	—
13	LOUDNESS	O	LOUDNESS ON/OFF (Receiver only) *1	H
14	K10	I	KEYSCAN input 0	H
15	K11	I	KEYSCAN input 1	H
16	K12	I	KEYSCAN input 2	H
17	K13	I	KEYSCAN input 3	H
18	K14	I	KEYSCAN input 4	H
19	RECEIVER/ TUNER	I	Change-over of RECEIVER/ TUNER (L: Tuner H: Receiver)	—
20	K15	I	KEYSCAN input 5 (Receiver only) *1	H
21	K16	I	KEYSCAN input 6 (Receiver only) *1	H
22	REMOCON be or not	I	Change-over of destination (Receiver only) *1	H

No.	NAME	I/O	FUNCTION	ACT
23	NC		Not used	H
24	FUNCTION ST	O	Change-over of FUNCTION IC (TC9164N) Strobe (Receiver only) *1	
25	MUTE	O	TUNER, MUTE control output	H
26	VOL UP	O	VOLUME UP output	H
27	VOL DOWN	O	VOLUME DOWN output	H
28	Rotary input	O	Rotary encoder input A (Tuner only) *1	H
29	Rotary input	O	Rotary encoder input B (Tuner only) *1	H
30	RST	I	Reset input	
31	EX' TAL		Connecting 7.7 MHz oscillation crystal between pins	—
32	X' TAL			—
33	Vss		GND standard electric potential	—
34	NC		Not used	—
35	FL AC	O	FL AC ON/OFF	L
36	POWER	O	POWER ON/OFF	H
37	Seg 17	O	Segment indication output	H
38	Seg 18	O		
39	Seg 20	O		
40	Seg 19	O		
41	Seg 1	O		
42	Seg 2	O		
43	Seg 10	O		
44	Seg 11	O		
45	Seg 3	O		
46	Seg 12	O		
47	K00/S9	O	Segment indication output / KEYSCAN output	H

SX-403RDS, SX-303RDS, SX-203RDS

No.	NAME	I/O	FUNCTION	ACT
48	K01/S8	O	Segment indication output / KEYSCAN output	H
49	K02/S13	O		
50	K03/S4	O		
51	K04/S15	O		
52	Seg 16	O	Segment indication output	H
53	Seg 14	O		
54	Seg 6	O		
55	Seg 7	O		
56	Seg 5	O		
57	Seg 21	O		
58	Seg 22	O		
59	Seg 23	O	Segment Indication output (Receiver only) *1	H
60	Seg 24	O		
61	R: G 1 T: G 10	O	Grid FL indication output	H
62	R: G 2 T: G 9	O		
63	R: G 3 T: G 8	O		
64	R: G 4 T: G 7	O		
65	R: G 5 T: G 6	O		
66	R: G 6 T: G 1	O		
67	R: G 7 T: G 2	O		
68	R: G 8 T: G 3	O		
69	R: G 9 T: G 4	O		
70	R: G 10 T: G 5	O		

No.	NAME	I/O	FUNCTION	ACT
71	-VFDP		Electric potential for FL display (-30 V)	—
72	VDD		+5 V Power source input	—
73	NC		+5 V Power source input	—
74	TEST	I	TEST MODE judgement input	H
75	PLL_DT	O	PLL communication data output (LM7001) and change-over function (TC9164N)	—
76	PLL_CK	O	PLL communication clock output (LM7001) and change-over function (TC9164N)	—
77	PLL_CE	O	PLL communication chip enable output (LM7001)	H
78	RDS_CK	I	Each bit from LC7073 synchronizing clock input	—
79	AC	I	WAKE • UP AC pulse input	—
80	RDS_OUT	I	Judging RDS signals output or not	L

*1 : Functions will be changed according to setting (L or H) of Pin 19.

SX-403RDS, SX-303RDS, SX-203RDS

AF ASSY (For SX-303RDS)

AWZ5623, AWZ5487 and AWZ5484 have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		AWZ5484	AWZ5623	AWZ5487	
△	RY751	ASR1044	ASR1027	ASR1044	
△	L751	.....	.....	ATF-151	
	L981-L984	.....	.....	ATH-133	
	C201, C202	.....	.....	CKPUYB181K50	
	C203-C210, C213-C224	.....	.....	CKPUYB391K50	
	C211, C212	.....	.....	CKPUYB821K50	
	C527, C528	.....	.....	CKPUYB331K50	
	C555, C556	.....	.....	CKDYB103K500	
	C981, C982	.....	.....	CKDYB471K50	
	C983, C984, C987, C988	.....	.....	CFTXA473J50	
	C985, C986	.....	.....	CKDYF103Z50	
	C991-C994	.....	.....	CCDSL560J50	
△	R211, R212	RD1/8PM331J	RD1/8PM331J	RD1/8PM102J	
	R563, R564	RD1/4PMF100J	RD1/4PMF100J	RD1/4PMF101J	
	R983, R984, R987, R988	.....	.....	RD1/4PMF100J	
	CN700 AC inlet (1P)	AKP1132	AKP1133	AKP1132	

AF ASSY (For SX-203RDS)

AWZ5622, AWZ5482 and AWZ5476 have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		AWZ5476	AWZ5622	AWZ5482	
△	L751	.....	.....	ATF-151	
	L981-L984	.....	.....	ATH-133	
	C201, C202	.....	.....	CKPUYB181K50	
	C203-C210, C213-C224	.....	.....	CKPUYB391K50	
	C211, C212	.....	.....	CKPUYB821K50	
	C527, C528	.....	.....	CKPUYB331K50	
	C555, C556	.....	.....	CKDYB103K500	
	C981, C982	.....	.....	CKDYB471K50	
	C983, C984, C987, C988	.....	.....	CFTXA473J50	
	C985, C986	.....	.....	CKDYF103Z50	
	C991-C994	.....	.....	CCDSL560J50	
△	R211, R212	RD1/8PM331J	RD1/8PM331J	RD1/8PM102J	
	R563, R564	RD1/4PMF100J	RD1/4PMF100J	RD1/4PMF101J	
	R983, R984, R987, R988	.....	.....	RD1/4PMF100J	
	CN700 AC inlet (1P)	AKP1132	AKP1133	AKP1132	

SX-403RDS, SX-303RDS, SX-203RDS

FM/AM TUNER MODULE

AXQ3228 and AXQ3227 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AXQ3227	AXQ3228	
Q6218		2SC2712	
D6103		1SV228	
F6205		ATF1152	
L6105		ATC1015	
L6205		LCTA680J3225	
C6106		CCSQTH270J50	CCSQTH330J50	
C6107		CCSQTH270J50	CCSQTH300J50	
C6109		CCSQTH270J50	
C6110		CCSQTH300J50	
C6115		CKSQYB103K50	CKSQYB102K50	
C6122		CCSQCH020C50	CCSQCH010C50	
C6126		CKSQYB102K50	
C6203		CCSQCH101J50	.....
C6204		CKSQYB102K50	ACG1051	
C6229		CCSCH821J50	CCSCH102J50	
C6247		CKSQYB122K50	
C6248		CBEA100M50	
C6251, C6252		CKSQYB682K50	CKSQYB562K50	
C6256		CKSQYF223Z50	
C6267		CKSQYB473K50	
C6272		CCSQL330J50	
R6114		RS1/10S473J	
R6122		RS1/10S472J	RS1/10S332J	
R6129, R6302		RS1/8S000J	
R6131, R6308		RS1/10S000J	.....
R6232		RS1/10S134J	
R6233		RS1/10S513J	
R6234		RS1/10S222J	
R6235		RS1/10S132J	
R6236		RS1/10S472J	
R6237		RS1/8S182J	RS1/8S122J	
R6238		RS1/10S182J	RS1/10S122J	
R6239		RS1/8S332J	RS1/8S103J	
R6240		RS1/10S332J	RS1/10S103J	
R6251		RS1/10S620J	RS1/10S680J	
R6290		RS1/8S000J	.....

SX-403RDS, SX-303RDS, SX-203RDS

TRANS ASSY

AWZ5490 and AWZ5480 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ5480	AWZ5490	
C101		CQMXA103J100	CQMXA473J100	

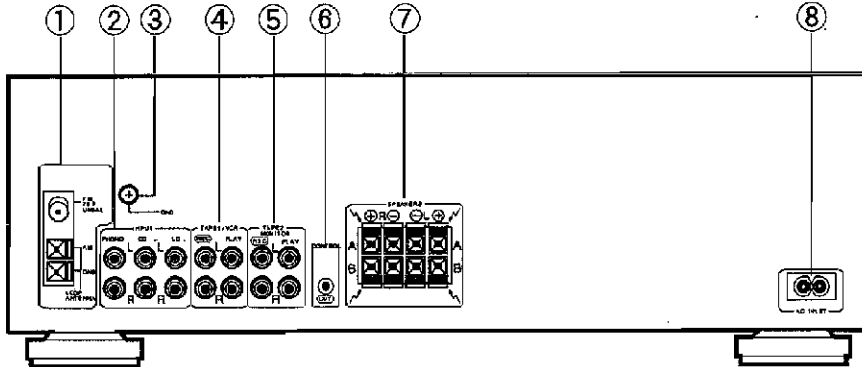
SP SW ASSY

AWZ5483 and AWZ5478 have the same construction except for the following :

Mark	Symbol & Description	Part No.		Remarks
		AWZ5478	AWZ5483	
C571, C572 C573, C574		CKDYB222K50 CCDSL101J50	

9. PANEL FACILITIES

9.1 REAR PANEL FACILITIES



• The illustration shows SX-403RDS.

① FM/AM ANTENNA terminals

Use these antenna terminals for receiving FM and AM broadcasts.

② INPUT jacks

PHONO Connect to the output cables from a turntable.
CD Connect to the output jacks of a compact disc player.
LD Connect to the output jacks of a LD player.

③ GND terminal

Connect to the ground lead of a turntable.
 Use a screwdriver to connect with the ground terminal.

④ TAPE 1/VCR jacks

Connect these jacks to the cassette deck or video cassette recorder.

⑤ TAPE 2 MONITOR jacks

Connect these jacks to the cassette deck.

⑥ CONTROL OUT jacks (SX-403RDS and SX-303RDS)

Connect this jack to other Pioneer components bearing the **SR** mark when using the remote control of this unit to control the other components.

- ① To the CONTROL IN jack of other component.
- ② Receiver
- ③ Pioneer component bearing the **SR** mark.
- ④ Remote control unit.

⑦ SPEAKERS terminals

A: Connect to a first set speakers.
B: Connect to a second set of speakers.

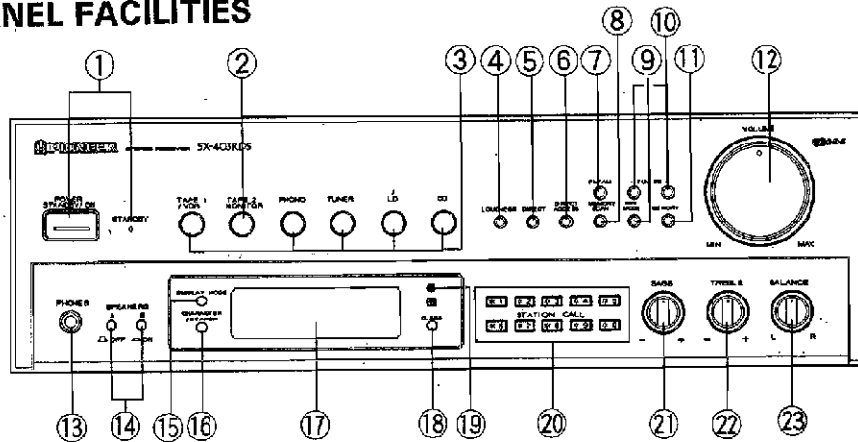
NOTE:

No sound will be heard through the speakers when both A and B buttons are depressed if only one set of speakers has been connected to either A or B SPEAKERS terminals.

⑧ AC INLET

Connect the power cord first to the unit, then plug it into the AC wall outlet.

9.2 FRONT PANEL FACILITIES



- The illustration shows SX-403RDS.

① POWER (STANDBY/ON) switch/STANDBY indicator (SX-403RDS, SX-303RDS)

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.

- 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.

① POWER switch/indicator (SX-203RDS)

When this switch is pressed, the indicator showing power is being supplied lights up.

Press the switch again to turn power OFF.

[Timer ON/OFF possible]

When the unit is switched ON, ON/OFF control can be performed by means of the optional timer.

NOTE:

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

② TAPE 2 MONITOR button

Press when listening to tape playback with the cassette deck 2.

③ Function buttons

Use to select playback source.

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

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

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

[LD] — Press when listening to laser disc with a laser disc player.

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

④ 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:

This button does not operate when the DIRECT button is in the ON position (SX-403RDS).

⑤ DIRECT button (SX-403RDS)

Use this button when you do not wish to pass the output from input terminal through the various frequency adjusting circuits (TREBLE, BASS and LOUDNESS). When this button is on, the BALANCE control does not operate.

⑤ RF ATT button (SX-303RDS/SX-203RDS)

Set this button to ON when receiving strong FM signals (near-by stations) to reduce sound distortion.

Normally, this button should be set to OFF.

This button has no effect on reception of AM broadcasts.

NOTE:

This button's status is preset for each station in station memory.

⑥ DIRECT ACCESS tuning button

When this button is pressed, the STATION CALL buttons function as ten-key number buttons for direct input of the desired reception frequency. Press again to cancel this mode.

⑦ FM/AM selector button

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

⑧ MEMORY SCAN button

This button is used for station memory scan.

MEMORY SCAN is not executed at the time of SLEEP timer operation.

⑨ MPX MODE selector button

Use to select the auto stereo mode or monaural mode when listening to FM broadcasts. The monaural mode has been selected when the FM MONO indicator is lighted.

Auto stereo mode:

Normally leave in this mode for reception. When a stereo FM broadcast is received, it will be automatically reproduced in stereo sound.

Monaural mode:

When receiving distant stations or stations with weak broadcast signals, the input signal may be weak, thus resulting in increased noise during FM stereo broadcasts. In this event, setting the receiver to the monaural mode will reduce the noise. In this case, however, FM stereo broadcasts will be reproduced in monaural sound.

NOTE:

This button has no effect on reception of AM broadcasts.

SX-403RDS, SX-303RDS, SX-203RDS

⑩ TUNING buttons (-, +)

Use for tuning. Press the buttons to change the frequency display (3-speed Accel Tuning)

In the Manual Name input mode and PTY search mode, use to select characters and program types.

⑪ MEMORY button

When the unit is in the frequency display mode, pressing this button will result in the memorization of the current broadcast band, reception frequency, and FM AUTO/MONO mode.

NOTE:

The MEMORY button does not function during SLEEP timer operation.

⑫ VOLUME control

Use to adjust volume level.

⑬ 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.

⑭ SPEAKERS (OFF, ON) buttons

These are used to select the speaker through which you wish to listen.

A: When the speakers connected to A terminals are in use.

B: When the speakers connected to B terminals are in use.

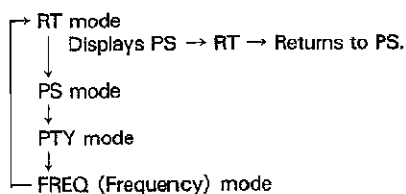
- Turn both A and B speakers to OFF position when only the headphones are in use.

NOTE:

No sound will be heard through the speakers when both A and B buttons are pressed if only one set of speakers has been connected to either A or B SPEAKERS terminals.

⑮ DISPLAY MODE button

Use only during FM reception. Use this to switch between display modes. Each time you press it, the display changes as follows.



- This button does not function when the SLEEP button of the remote control unit is ON.

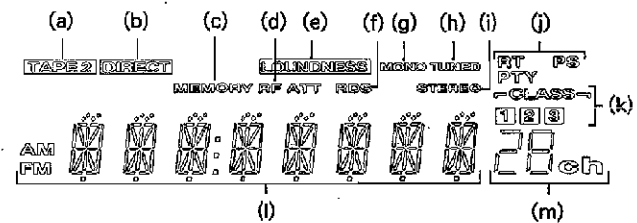
⑯ CHARACTER/SEARCH button

When receiving an AM broadcast, or when in the FM RT, 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 SLEEP button of the remote control unit is ON. This button does not function at the time of frequency mode.



⑰ OPERATION DISPLAY panel

- (a) TAPE 2 monitor indicator
- (b) DIRECT indicator (SX-403RDS)
- (c) MEMORY indicator
- (d) RF ATT indicator
- (e) LOUDNESS indicator
- (f) RDS indicator
- (g) MONO indicator
- (h) TUNED indicator
- (i) STEREO indicator
- (j) RT, PS, PTY indicator
- (k) CLASS indicator
- (l) Frequency, function, character display
- (m) Channel display

⑱ 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.

⑲ Remote sensor

⑳ STATION CALL buttons

These buttons are used to preset and recall desired broadcasting stations and direct access tuning.

㉑ BASS tone control

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When tuned to the right, low-frequency tones are emphasized.

NOTE:

This control does not operate when the DIRECT button is in the ON position. (SX-403RDS)

㉒ TREBLE tone control

Use to adjust high-frequency tone. The center position is the flat (normal) position. When tuned to the right, high-frequency tones are emphasized.

NOTE:

This control does not operate when the DIRECT button is in the ON position. (SX-403RDS)

㉓ 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 the DIRECT button is in the ON position. (SX-403RDS)

10. SPECIFICATIONS

Amplifier Section

Continuous Power Output (DIN)	
(SX-403RDS) 1 kHz, T.H.D. 1%, 4 Ω	85 W + 85 W
(SX-303RDS) 1 kHz, T.H.D. 1%, 4 Ω	60 W + 60 W
(SX-203RDS) 1 kHz, T.H.D. 1%, 4 Ω	40 W + 40 W
Continuous Power Output (both channel driven)*	
(SX-403RDS) 20 Hz - 20 kHz, T.H.D. 0.07%, 8 Ω ...	80 W + 60 W
(SX-303RDS) 40 Hz - 20 kHz, T.H.D. 0.09%, 8 Ω ...	50 W + 50 W
(SX-203RDS) 40 Hz - 20 kHz, T.H.D. 0.09%, 8 Ω ...	35 W + 35 W
Dynamic power output (with EIA test signal)	
(SX-403RDS) 2/4/8 Ω	120 W/110 W/80 W
(SX-303RDS) 4/8 Ω	90 W/70 W
(SX-203RDS) 4/8 Ω	60 W/50 W
Input (Sensitivity/Impedance)	
PHONO	2.5 mV/47 k Ω
CD, LD, TAPE 1/VCR, TAPE 2	200 mV/22 k Ω
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/2.2 k Ω
Frequency Response	
PHONO (RIAA Equalization)	20 Hz to 20,000 Hz ± 0.5 dB
CD, LD, TAPE 1/VCR, TAPE 2	10 Hz to 70,000 Hz ± 0.5 dB
Signal-to-Noise Ratio (IHF, short circuited, A network)	
(SX-403RDS),	
PHONO MM	81 dB
(SX-303RDS/SX-203RDS)	
PHONO	72 dB
(SX-403RDS)	
CD, LD, TAPE 1/VCR, TAPE 2 (DIRECT ON)	105 dB
TAPE 2 (DIRECT OFF)	100 dB
(SX-303RDS/SX-203RDS)	
CD, LD, TAPE 1/VCR, TAPE 2	96 dB
Tone control	
BASS	± 10 dB (100 Hz)
TREBLE	± 10 dB (10 kHz)
LOUDNESS	+6 dB (100 Hz at -40dB)
	+4 dB (10 kHz at -40dB)

FM Tuner Section

Frequency range	87.5 MHz to 108 MHz
Usable Sensitivity	14.2 dBf, IHF (1.4 μ V/75 Ω)
Sensitivity (DIN)	
MONO	1.0 μ V/75 Ω
STEREO	50 μ V/75 Ω
Signal-to-Noise Ratio	
MONO	74 dB (at 80 dBf)
STEREO	72 dB (at 80 dBf)
Signal-to-Noise Ratio (DIN)	
MONO	60 dB
STEREO	58 dB
Distortion	
STEREO	0.6% (1 kHz)
Alternate Channel Selectivity	65 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 μ V/m
Selectivity	25 dB
Signal-to-Noise Ratio	45 dB
Antenna	AM Loop Antenna

Miscellaneous

Power Requirements	a.c. 220-230 Volts, 50 Hz
Power Consumption (SX-403RDS)	480 W
(SX-303RDS)	290 W
(SX-203RDS)	190 W
Dimensions	420 (W) X 140 (H) X 297.5 (D) mm
Weight (without package) (SX-403RDS)	6.8 kg
(SX-303RDS)	5.6 kg
(SX-203RDS)	4.9 kg

Furnished Parts

FM Antenna	1
AM Loop Antenna	1
Remote control unit (except for SX-203RDS)	1
Dry cell batteries (size "AA" (R6P)) (except for SX-203RDS)	2
Power cord	1
Operating Instructions	1

NOTE:

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

* Measured By Audio Spectrum Analyzer.