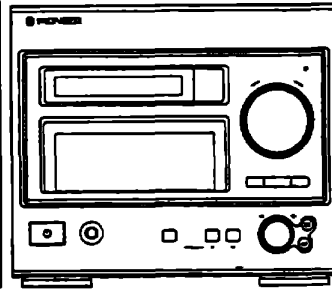


Service Manual

PIONEER
The Art of Entertainment



ORDER NO.
RRV 1726

STEREO RECEIVER SX-F21

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

Type	Model	Power Requirement	Remarks
	SX-F21		
MY	O	AC220 - 230V	
NV	O	AC230V	

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PIONEER ELECTRONICS SERVICE, INC. P.O.Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER ELECTRONIC [EUROPE] N.V. Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 501 Orchard Road, #10-00 Lane Crawford Place, Singapore 0923

1. SAFETY INFORMATION



This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.



NOTICE

(FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE

(POUR MOD+LE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

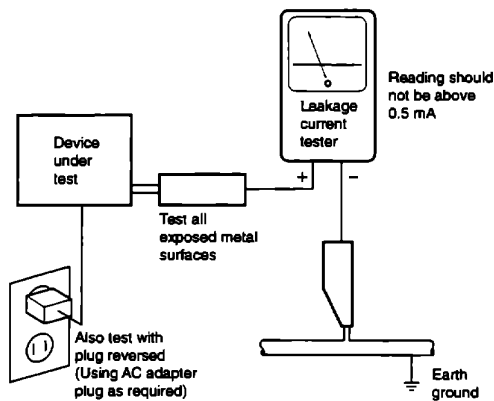
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.




AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

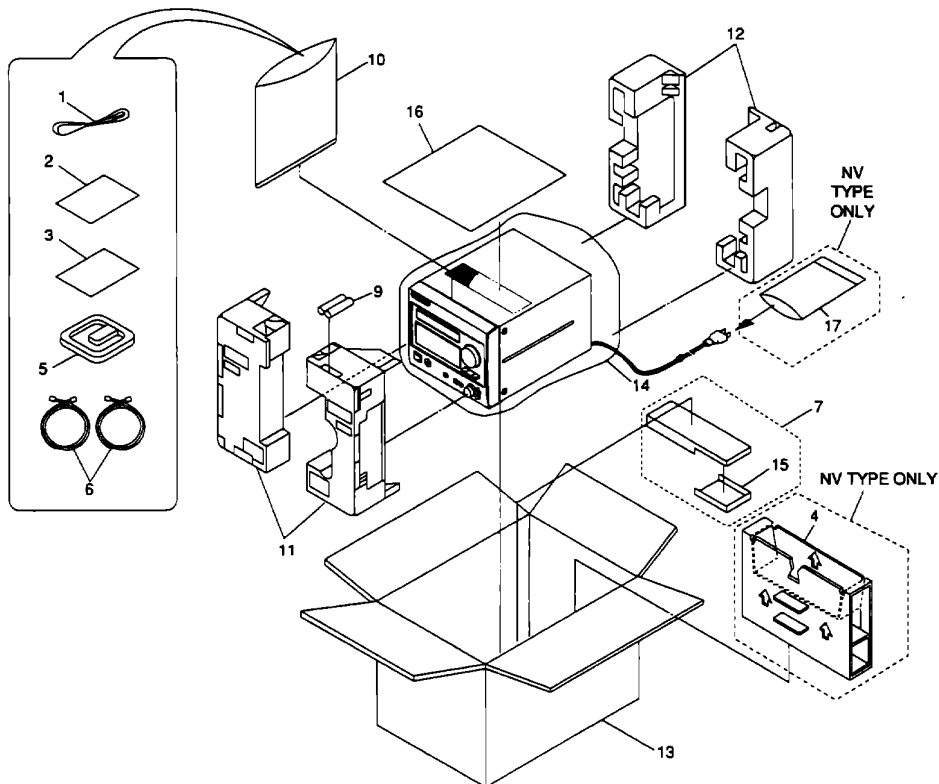
Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. EXPLODED VIEWS 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.
- Screws adjacent to \blacktriangledown mark on product are used for disassembly.

2.1 PACKING



(1) Parts List

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	FM T-type Antenna	ADH7010		11	Pad F SX	RHA1220
	2	Operating Instructions	See Contrast table (2)		12	Pad R SX	RHA1221
	3	Operating Instructions	See Contrast table (2)		13	Packing Case	See Contrast table (2)
	4	Spacer	See Contrast table (2)		14	Mirror Mat Sheet 750×600×0.5	Z23 - 007
	5	AM Loop Antenna	ATB7009		15	Battery Cover	RZN1131
	6	Optical Fiber Cables (L = 0.5m)	RKX1031	NSP	16	Warranty Card	ARY7008
	7	Remote Control Unit (CU - SX112)	RPX1121	NSP	17	Polyethylene Bag	See Contrast table (2)
	8	.....				
NSP	9	AAA/R03 Dry Cell Batteries	VEM - 022				
	10	Polyethylene Bag 0.03×230×340	Z21 - 038				

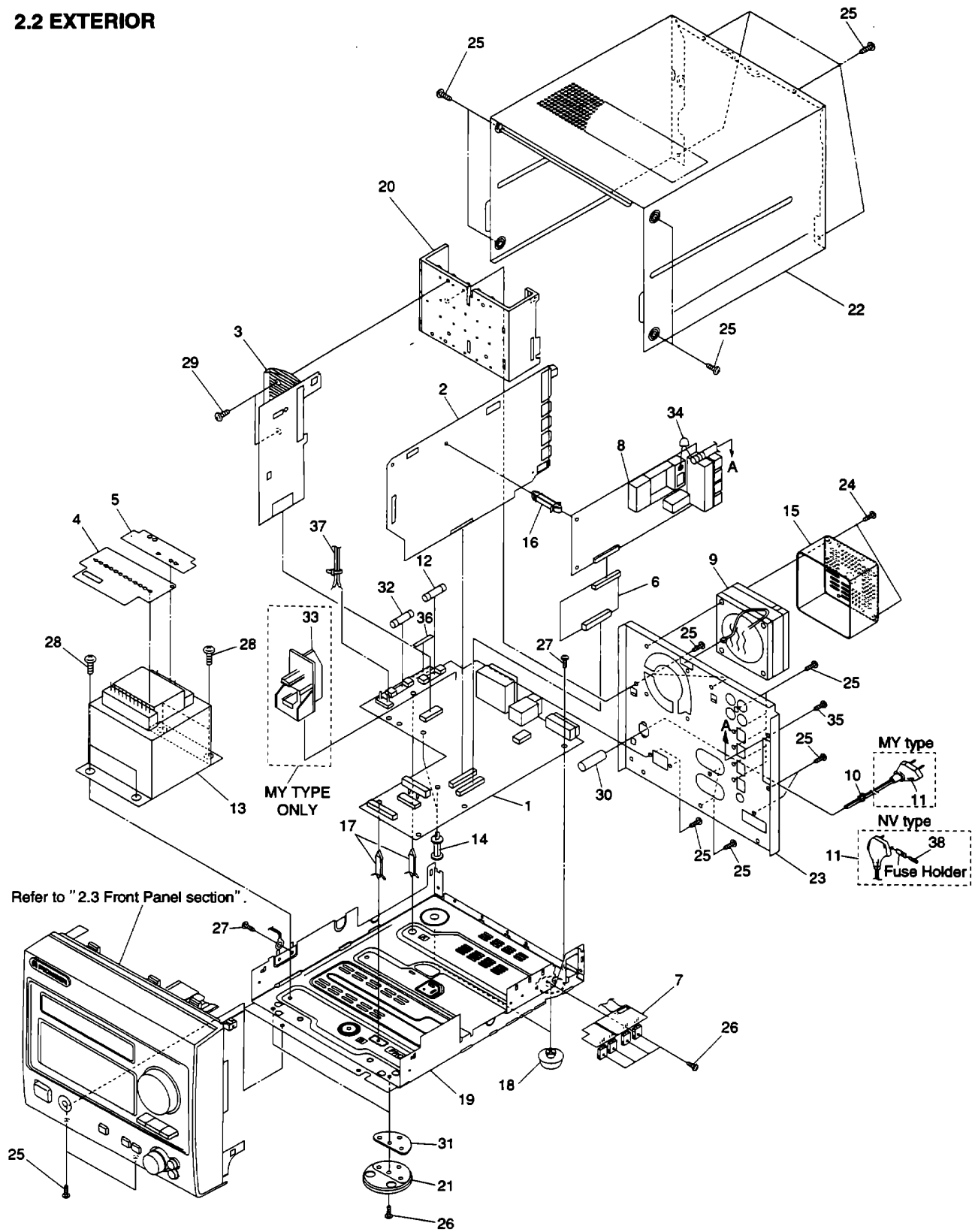
(2) Contrast Table

MY and NV types have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.		Remarks
			MY TYPE	NV TYPE	
	2	Operating instructions (English/French/German/Italian)	RRE1156	Not used	
	2	Operating instructions (English)	Not used	RRB1181	
	3	Operating instructions (Dutch/Swedish/Spanish/Portuguese)	RRD1191	Not used	
	4	Spacer	Not used	RHG1835	
	13	Packing Case	RHG1796	RHG1831	
NSP	17	Polyethylene Bag	Not used	RHL1021	

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2.2 EXTERIOR



(1) Parts List

Mark	No.	Description	Parts No.
	1	BASE-AF ASSY	RWZ4043
	2	SIDE-AF ASSY	RWZ4046
	3	F-POWER ASSY	RWZ4048
	4	TRANS ASSY	RWZ4051
	5	PRIMARY ASSY	RWZ4052
	6	RDS ASSY	RWZ4054
	7	REG ASSY	RWZ4055
	8	FM/AM TUNER MODULE	AXQ7058
	9	DC Fan Motor	AXM7003
	10	AC Cord Stopper	CM - 22B
△	11	AC Power Cord	See Contrast table (2)
△	12	FU1 Fuse (T800mA)	REK - 099
△	13	T1 Power Transformer	RTT1319
NSP	14	PCB Spacer	AEC1372
	15	Fan Cover	AMR7013
	16	Board Spacer	DEC1388
NSP	17	PCB Holder	PNW2100
	18	Foot	REC - 434
NSP	19	Chassis SX	RNB1122
NSP	20	Heat Sink	RNE1898
	21	Insulator F ASSY	RNK2231
	22	Bonnet SX	REA1265
	23	Rear Panel SX	See Contrast table (2)
	24	Screw	ABA7003
	25	Screw	BBT30P080FNI
	26	Screw	BBZ30P080FMC
	27	Screw	ABA7017
	28	Screw	BBZ40P060FCU
	29	Screw	ABA1024
	30	UL Tube	Z09 - 019
	31	Plate	RNM1050
△	32	FU2 Fuse (T2.5A)	AEK1058
△	33	CN11 AC Outlet 1P	See Contrast table (2)
△	34	C1 Ceramic Capasitor	CKDYB102K50
	35	Screw	ABA1047
NSP	36	Fuse Card	AAX1572
	37	Binder	ZCA - SKB90BK
△	38	Fuse (T5A)	See Contrast table (2)

(2) Contrast Table

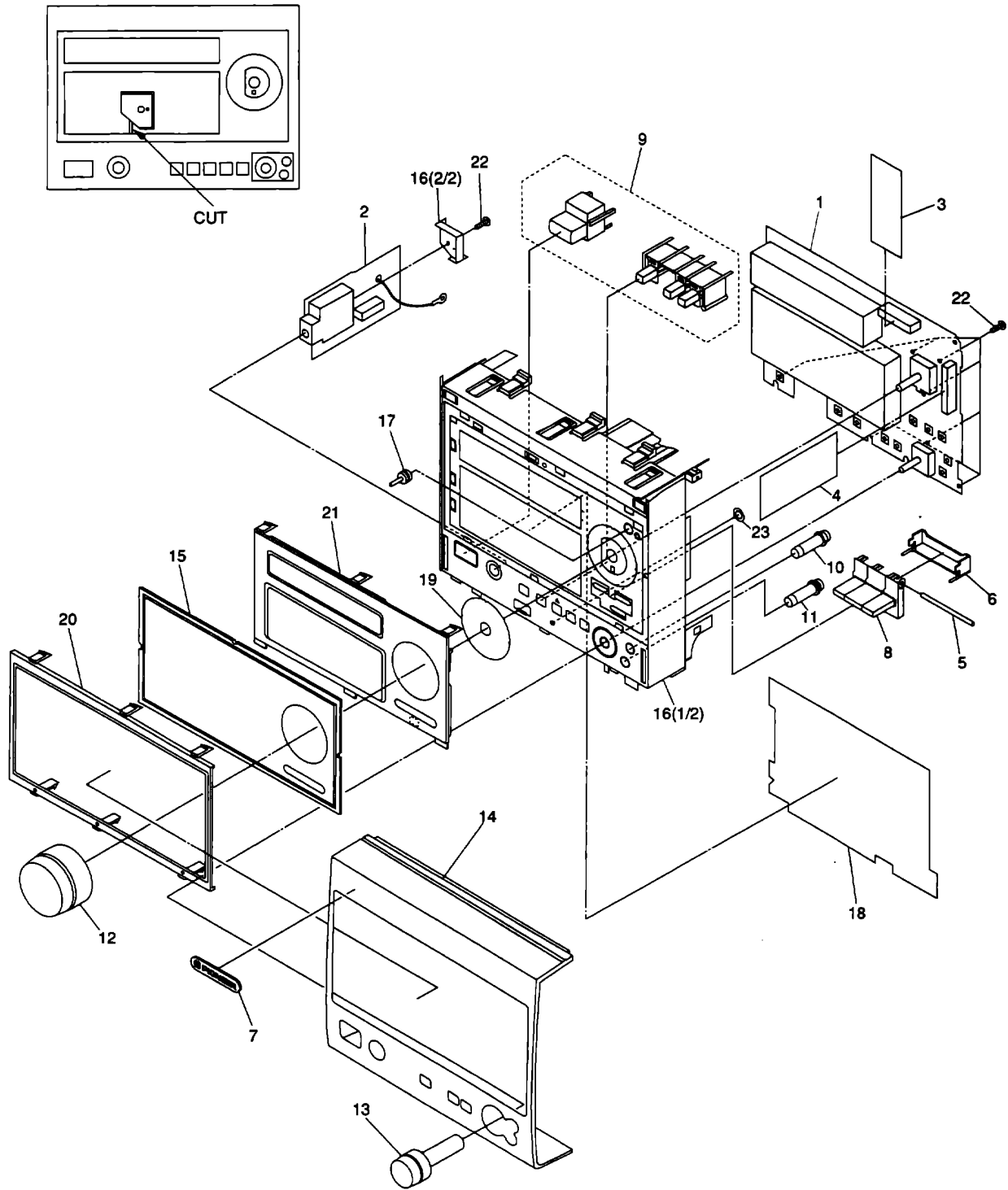
MY and NV types have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.		Remarks
			MY TYPE	NV TYPE	
△	11	AC Power Cord	PDG1003	PDG1055	
△	38	Fuse (T5A)	Not used	PEK1003	
	23	Rear Panel SX	RNA2140	RNA2141	
△	33	CN11 AC Outlet 1P	AKP1034	Not used	

SX-F21

2.3 FRONT PANEL SECTION

Note : Cutting Position
No.16 Panel Base SX



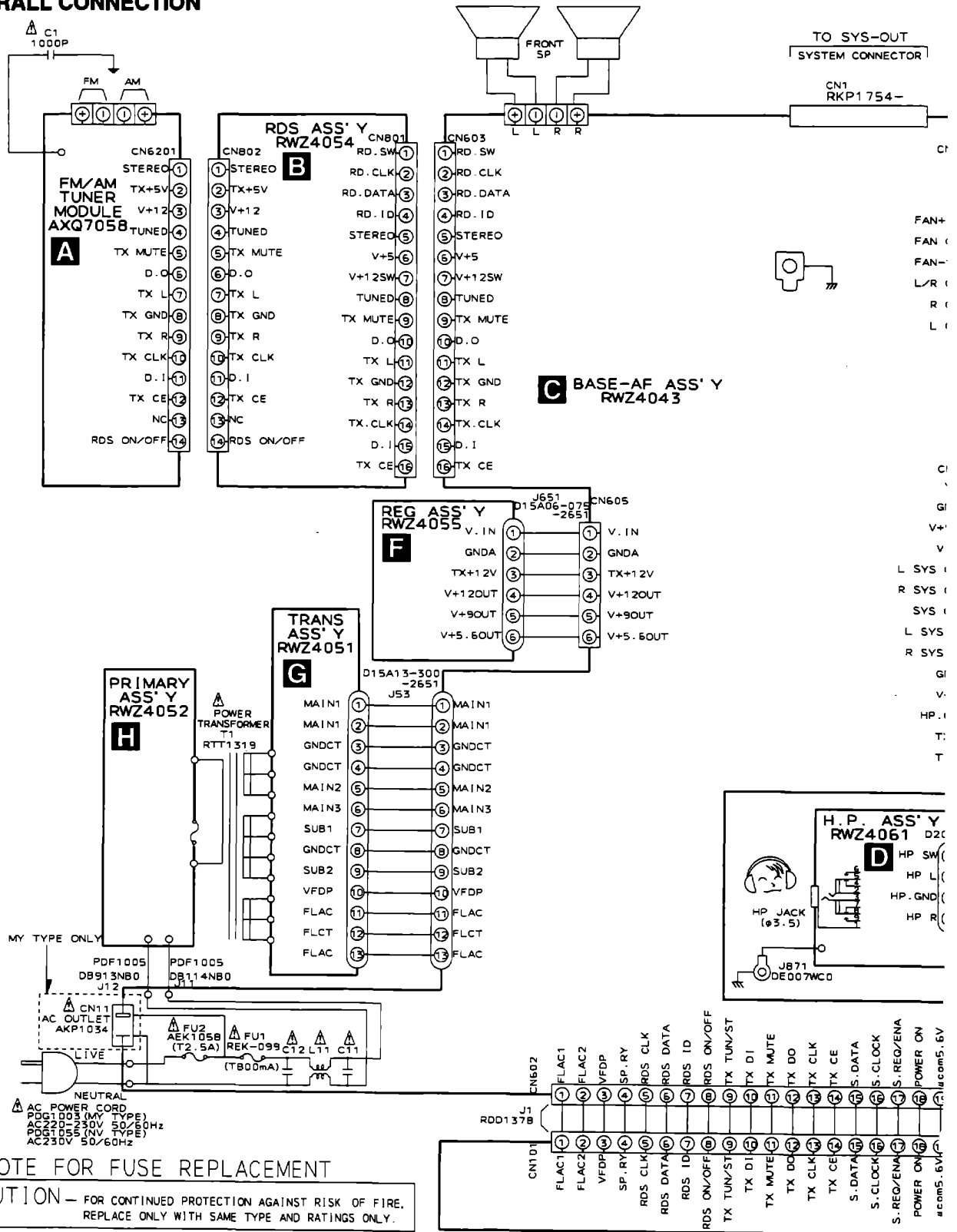
Parts List

Mark	No.	Description	Parts No.
NSP	1	SXDISP ASSY	RWM1973
	2	H.P. ASSY	RWZ4061
	3	J1 Lead Card 20P	RDD1378
	4	J2 Lead Card 24P	RDD1379
	5	Shaft	RLA1309
	6	Shaft Holder	RNK2264
	7	Name Plate	AAM1002
	8	Function Button A	RAC2136
	9	Function Button B	RAC2137
	10	MENU Button	RAC2138
	11	SET Button	RAC2139
	12	VOL Knob ASSY	RAC2140
	13	JOG Knob SX	RAC2141
	14	Front Panel SX	RAH2813
	15	Display Lens SX	RAH2761
	16	Panel Base SX	RAH2762
	17	Indicator Lens SX	RAH2763
	18	FL Filter SX	REC1282
	19	VOL Spacer	REC1295
	20	Disply Frame	RNK2228
	21	Display Panel	RNK2275
	22	Screw	BBZ30P080FMC
	23	Washer	VEC1254

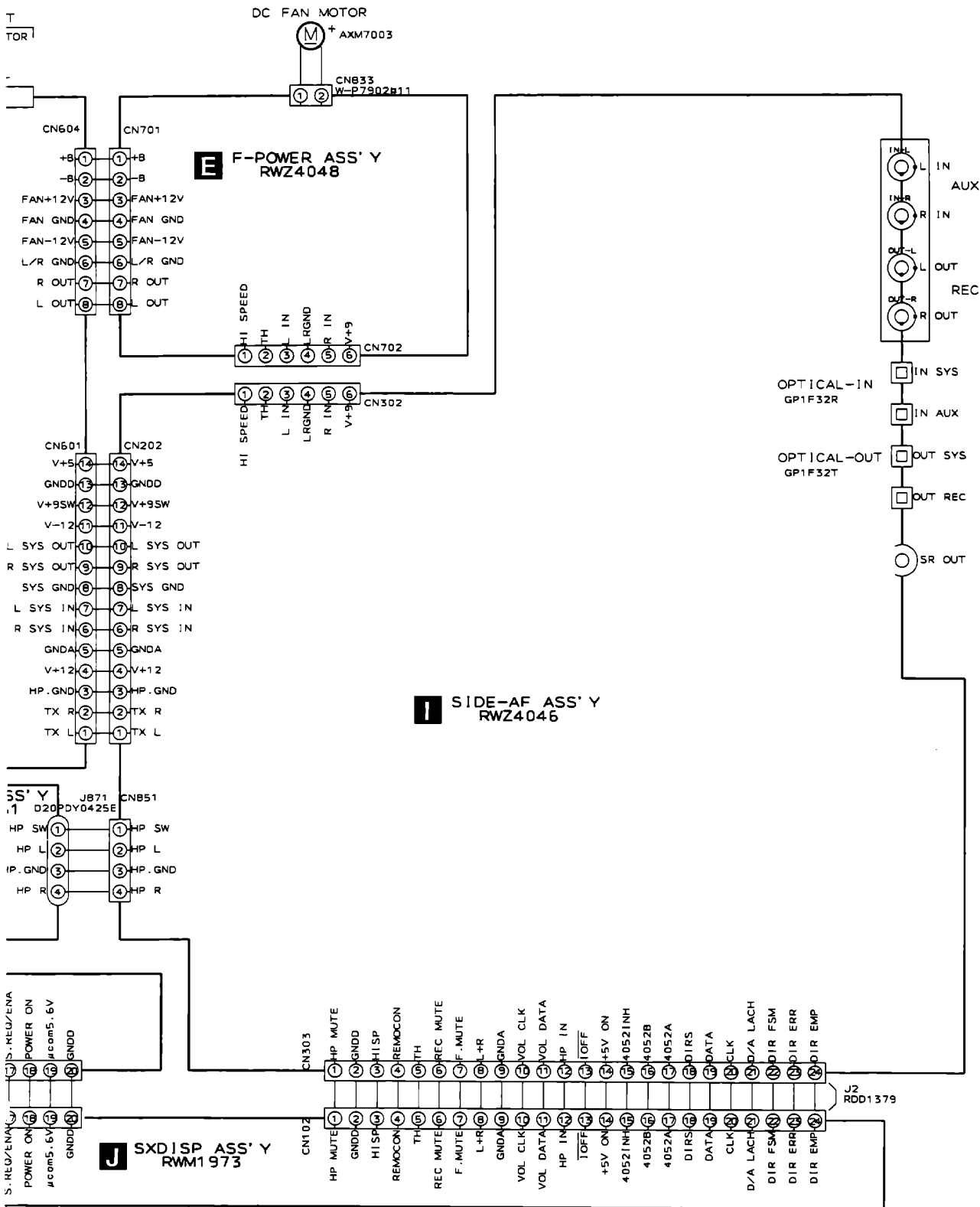
3. SCHEMATIC DIAGRAM

Note : When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST"

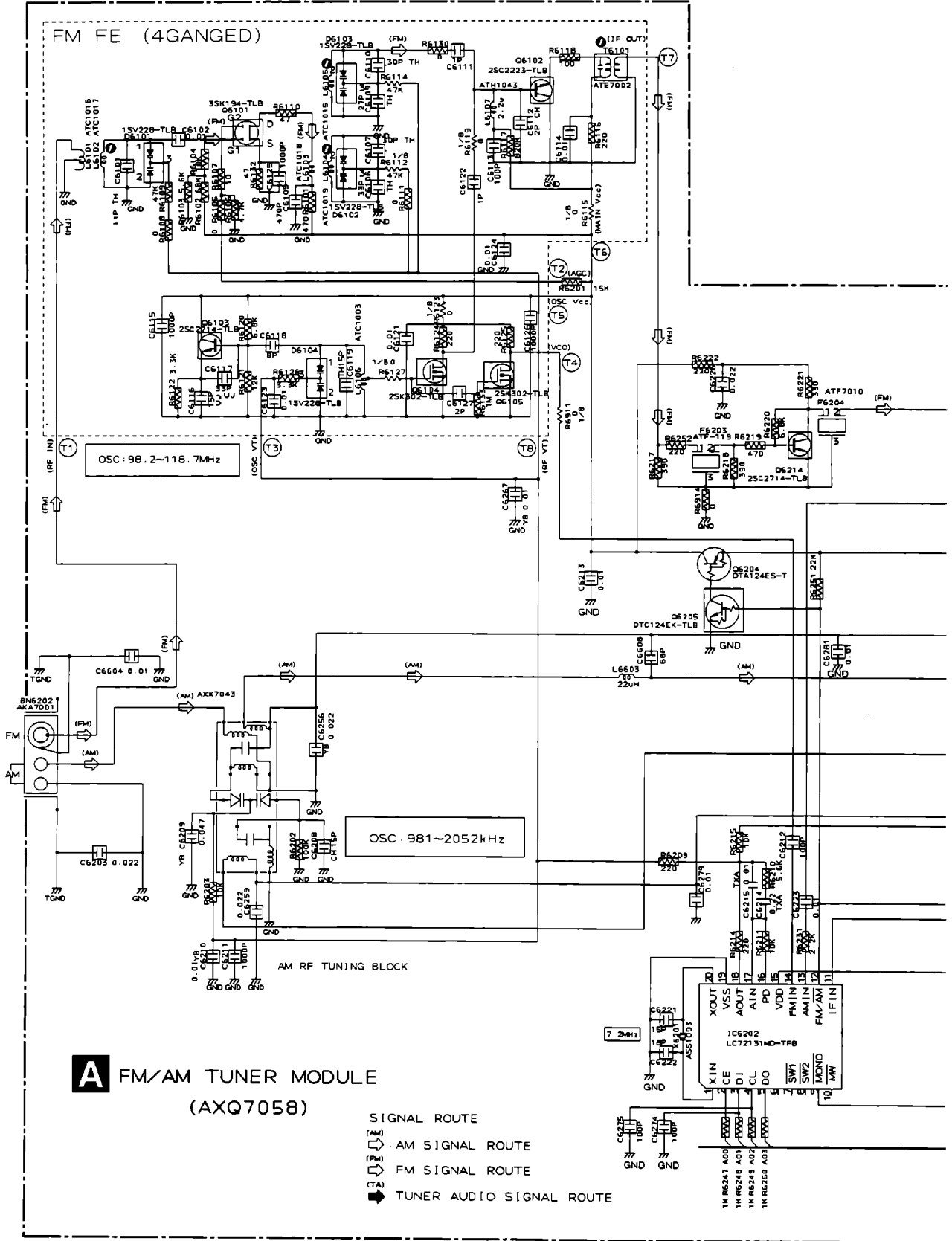
3.1 OVERALL CONNECTION



● NOTE FOR FUSE REPLACEMENT
CAUTION — FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.

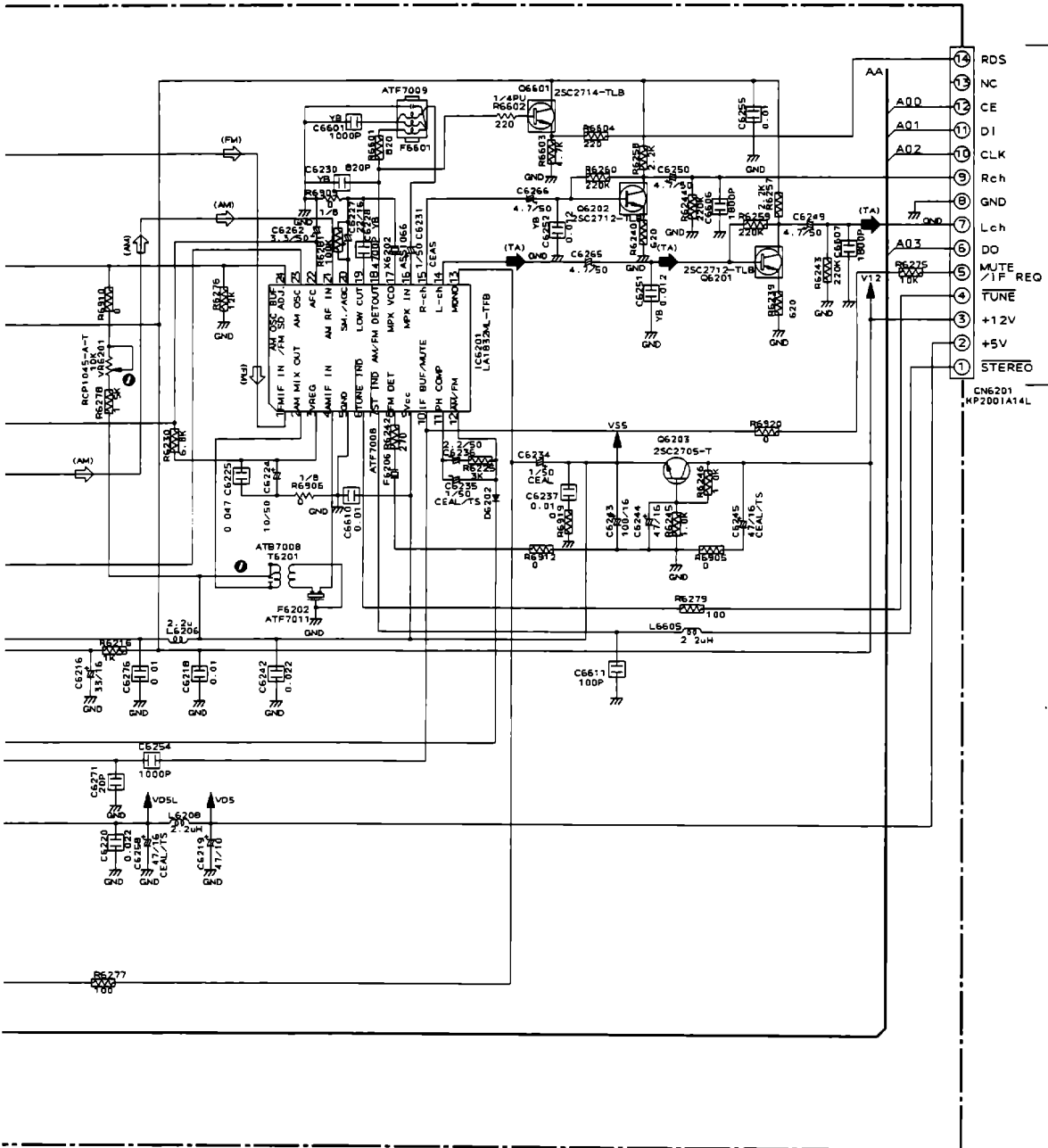


3.2 FM/AM TUNER MODULE



Notes

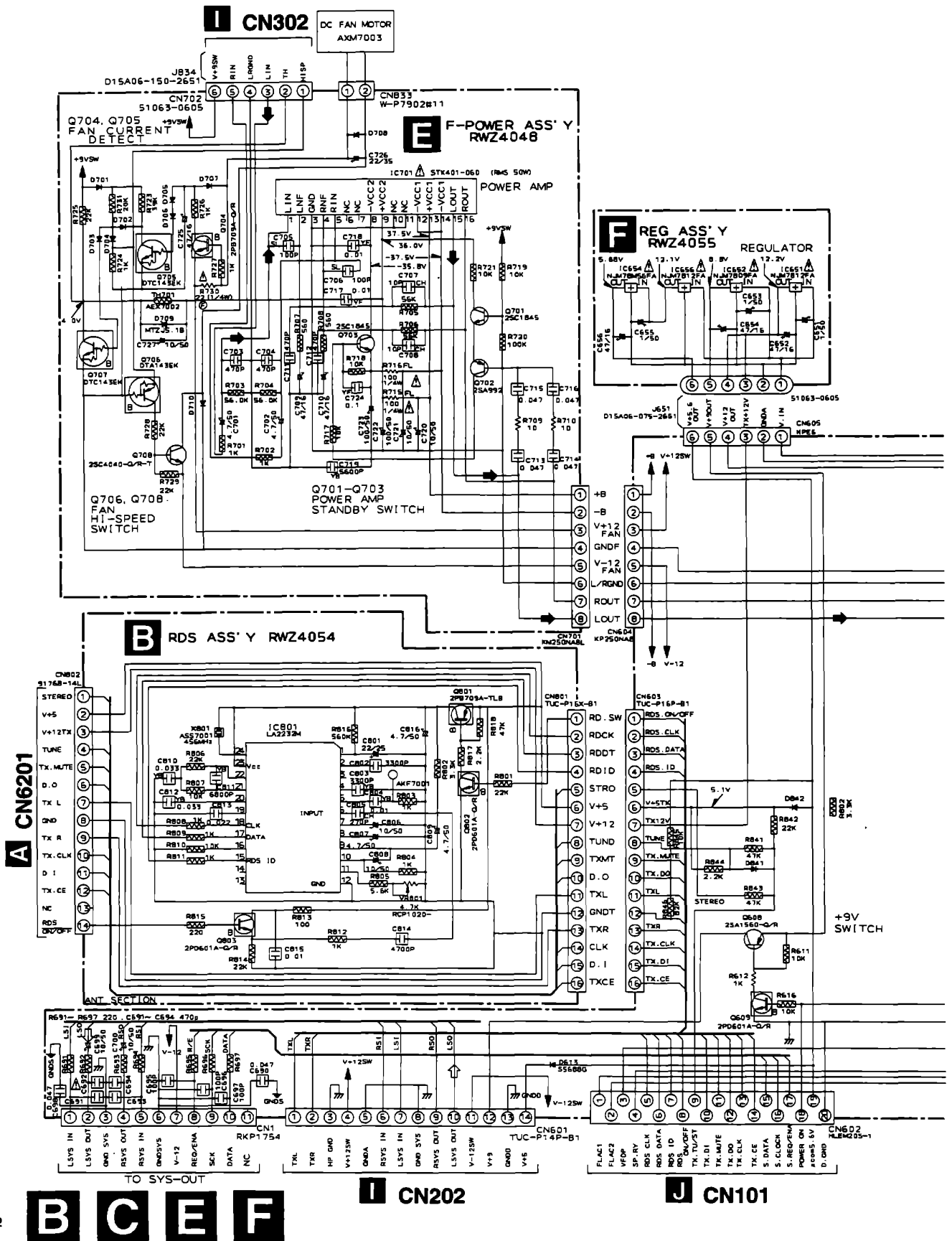
1. RESISTORS
Indicated in Ω , 1/10W \pm 5% Tolerance unless otherwise noted K:K Ω , M:M Ω .
2. CAPACITORS
Indicated in Capacity (μ F)/VOLTAGE (V) unless otherwise noted P:PF.
3. DIODES
No mark diode is 1SS254.



B CN802

A

3.3 RDS ASSY, BASE-AF ASSY, H.PASSY, F-POWER ASSY, REG ASSY, TRANS ASSY AND PRIMARY ASSY



NOTE

CAPACITORS #F

- YB Ceramic CKCYB
- YX Ceramic CKCYX
- SL Ceramic CCCC
- TY CFTYA
- TX CFTXA
- M CQMA
- NL CEANL
- NP CEANP
- JA CEJA
- YB CKSQYB
- SL CCSQSL
- Un Marked Type
- † Ceramic CKCYF
- CEAS
- CKSQYF

RESISTORS #

- Un Marked Type 1/4W
- Type 1/10W
- ⊗ Flameproof Type (RD1/4PMP)

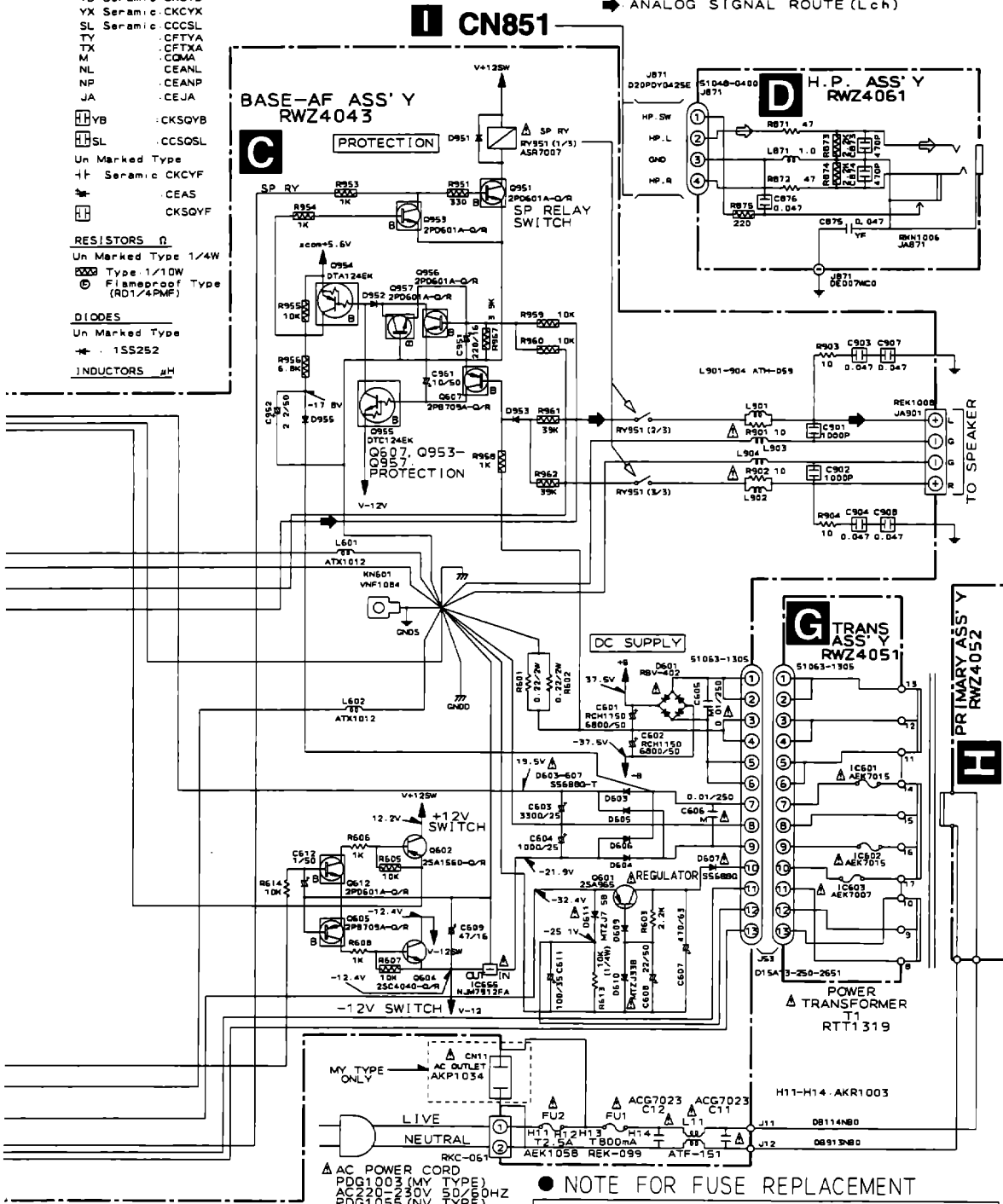
DIODES

- Un Marked Type
- † 1SS252

INDUCTORS #H

⇨ AUDIO SIGNAL ROUTE (AUX INPUT Lch)

➔ ANALOG SIGNAL ROUTE (Lch)



● NOTE FOR FUSE REPLACEMENT

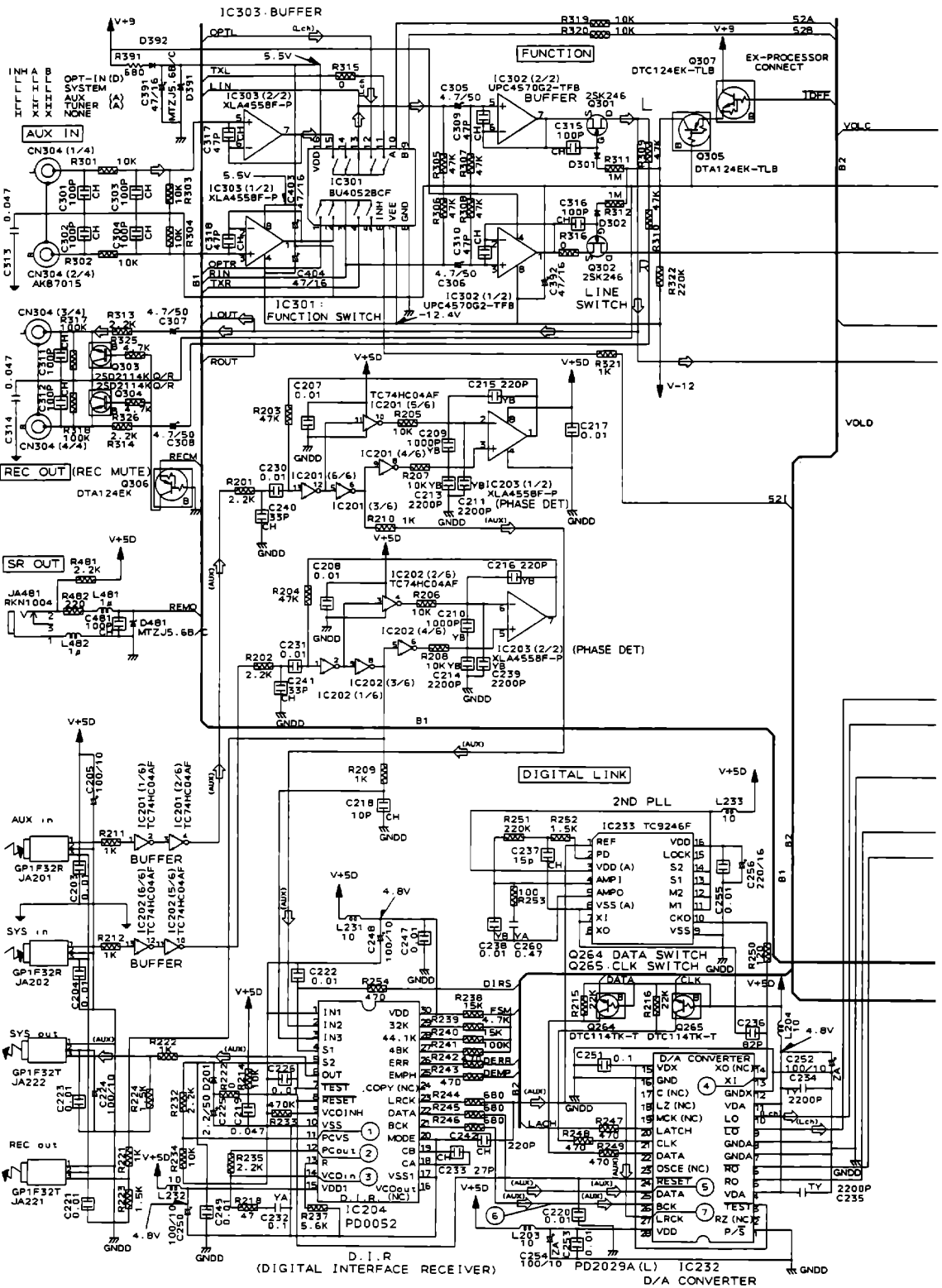
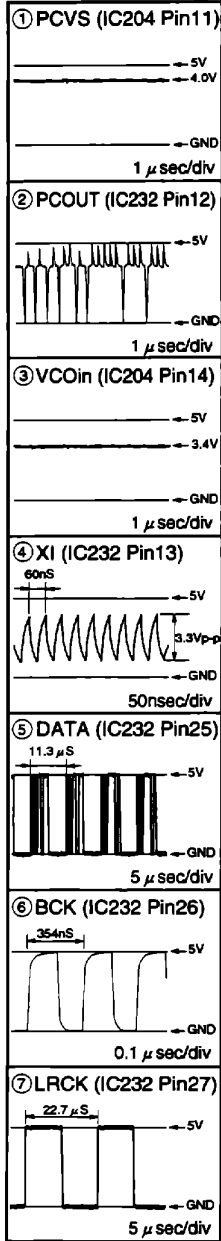
CAUTION - FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE AND RATINGS ONLY.



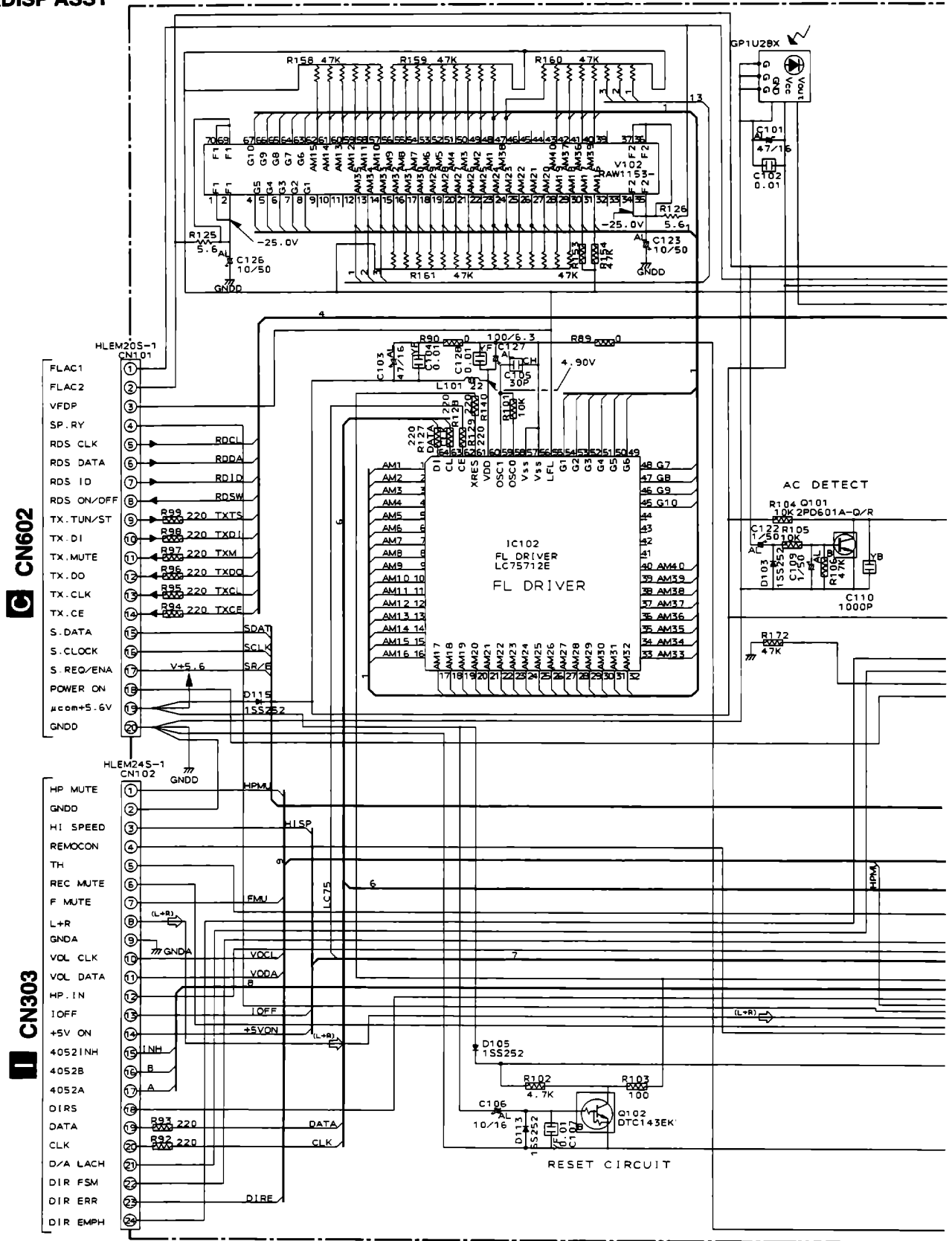
3.4 SIDE-AF ASSY

WAVEFORMS OF PARTS

The signal waveform shown below appears when optical signal is input. ($f_s=44.1\text{kHz}$)



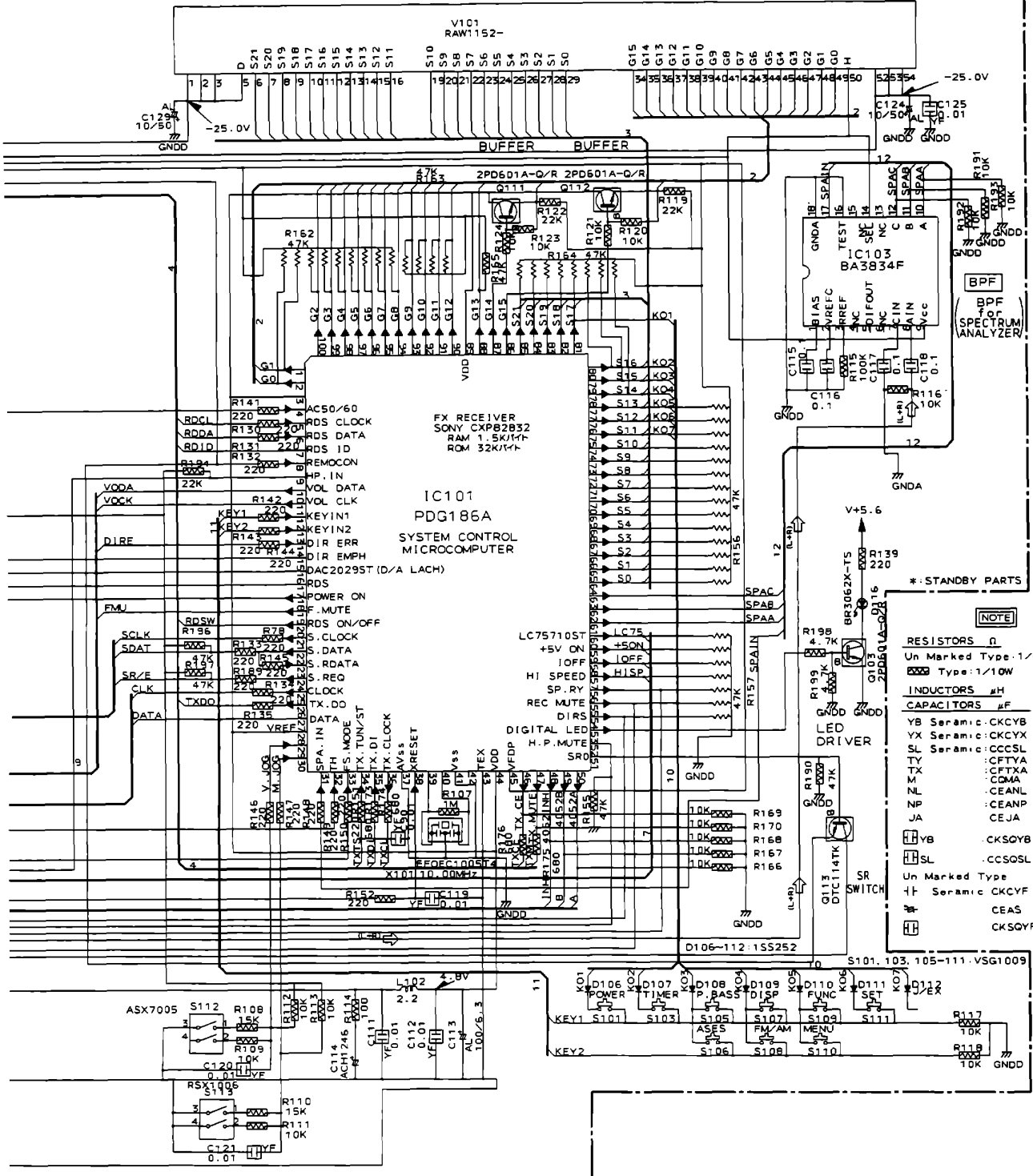
3.5 SXDISP ASSY



J SXDISP ASS'Y
RWM1973

- SXDISP ASSY
S101. POWER STANDBY/ON S109:FUNCTION
S103. TIMER S110. MENU
S105. P. BASS S111. SET
S106. ASES S112. VOLUME (DOWN/UP)
S107. DISPLAY S113. MULTI JOG (-/+)
S108. FM/AM/STATION

ANALOG SIGNAL ROUTE (L+R)


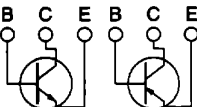

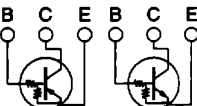

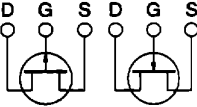
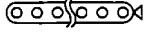
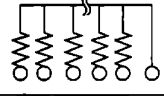




- NOTE**
- RESISTORS \square
Un Marked Type: 1/4W
 \square Type: 1/10W
- INDUCTORS $\#H$
- CAPACITORS $\#F$
- YB Ceramic: CKCYB
YX Ceramic: CKCYX
SL Ceramic: CCCSL
TY : CFTYA
TX : CFTXA
CM : CMA
NL : CEANL
NP : CEANP
JA : CEJA
- \square YB CKSOYB
 \square SL .CCSOL
- Un Marked Type
+ Ceramic CKCYF
CEAS
 \square CKSOYF

4. PCB CONNECTION DIAGRAM

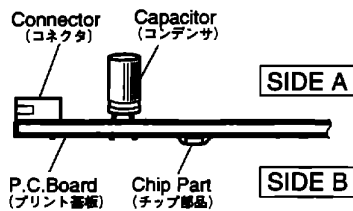
NOTE FOR PCB DIAGRAMS

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.

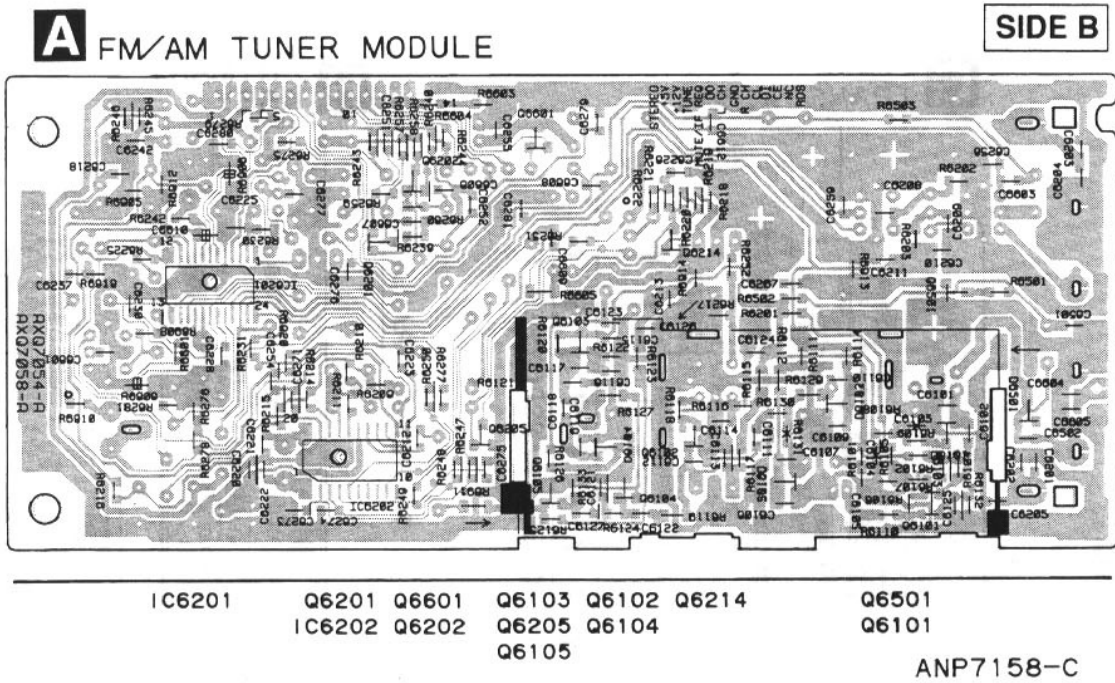
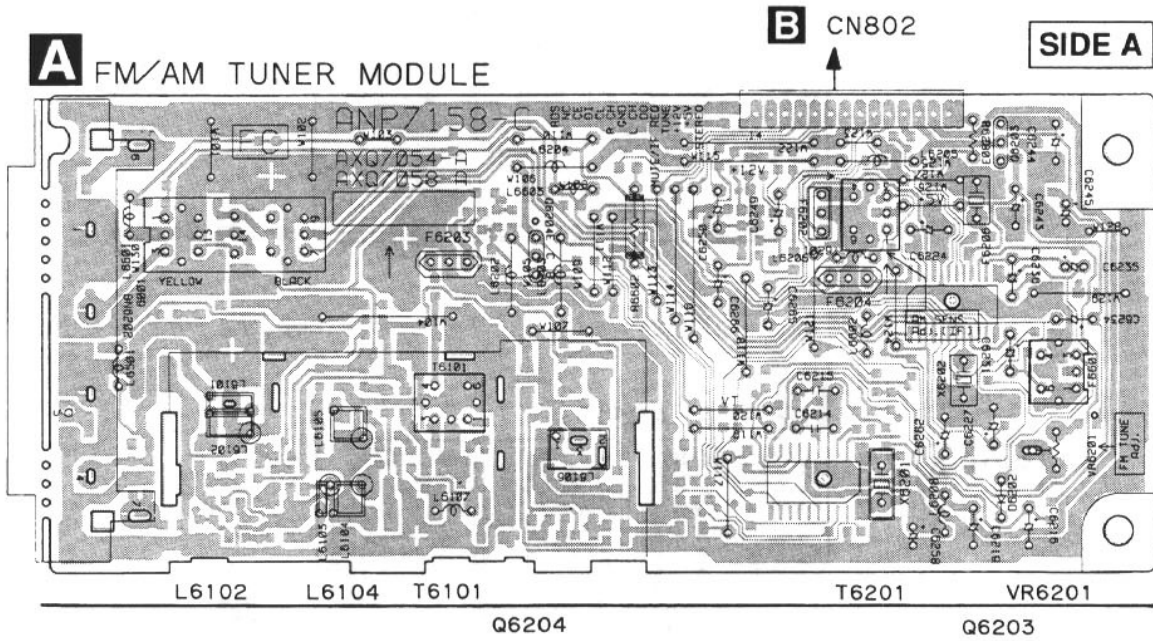
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Transistor with resistor
		Field effect transistor
		Resistor array
		3-terminal regulator

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

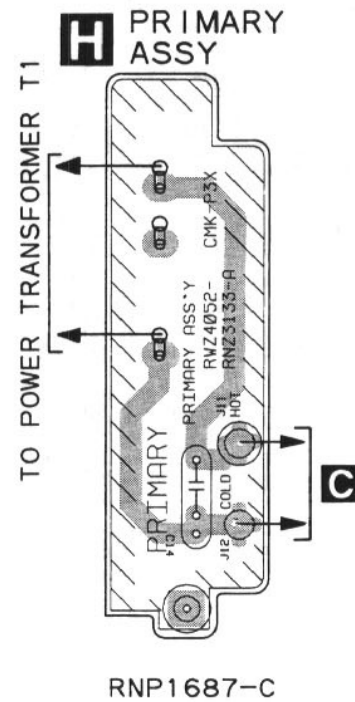
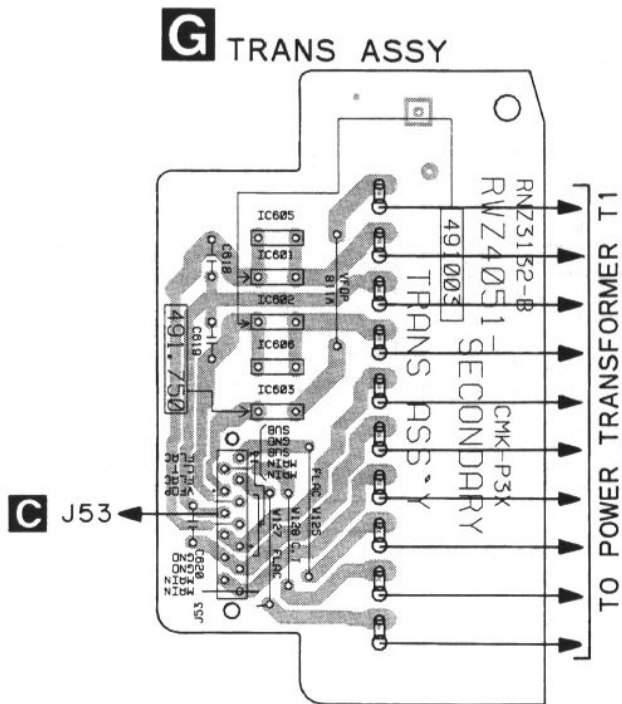
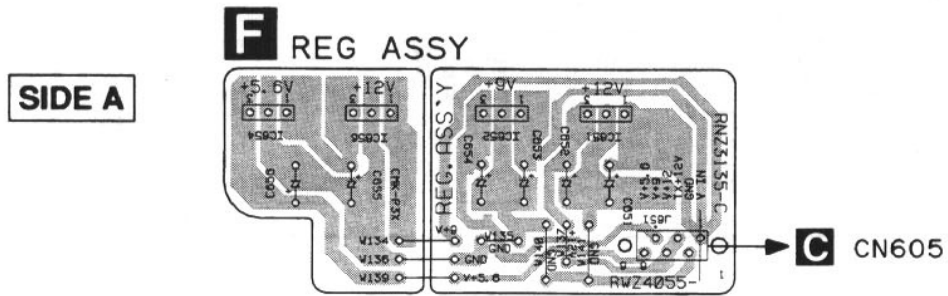
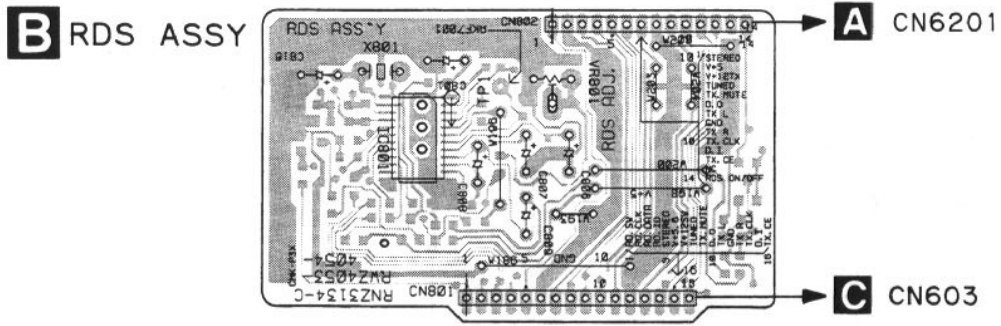
4. Viewpoint of PCB diagrams



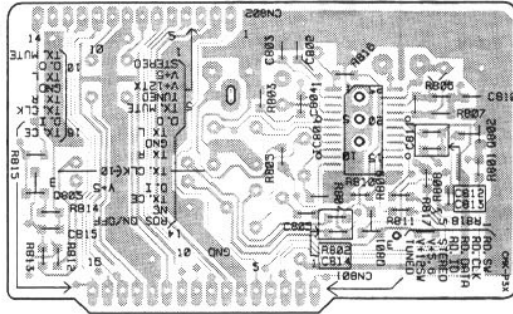
4.1 FM/AM TUNER MODULE



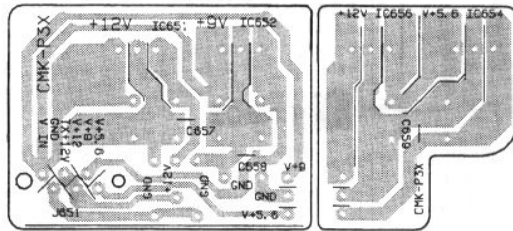
4.2 RDS ASSY, REG ASSY, TRANS ASSY AND PRIMARY ASSY



B RDS ASSY

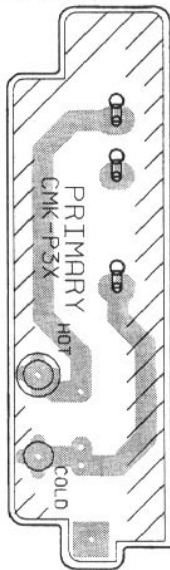


F REG ASSY

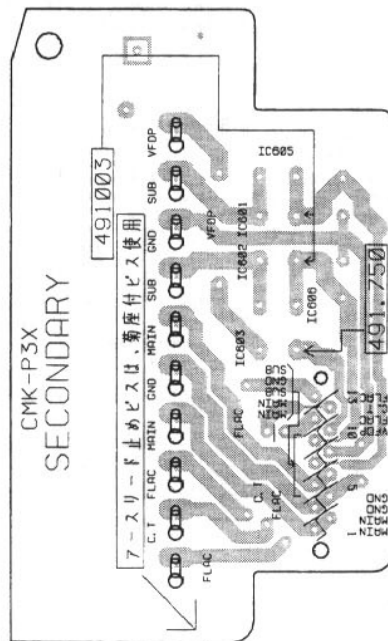


SIDE B

H PRIMARY ASSY

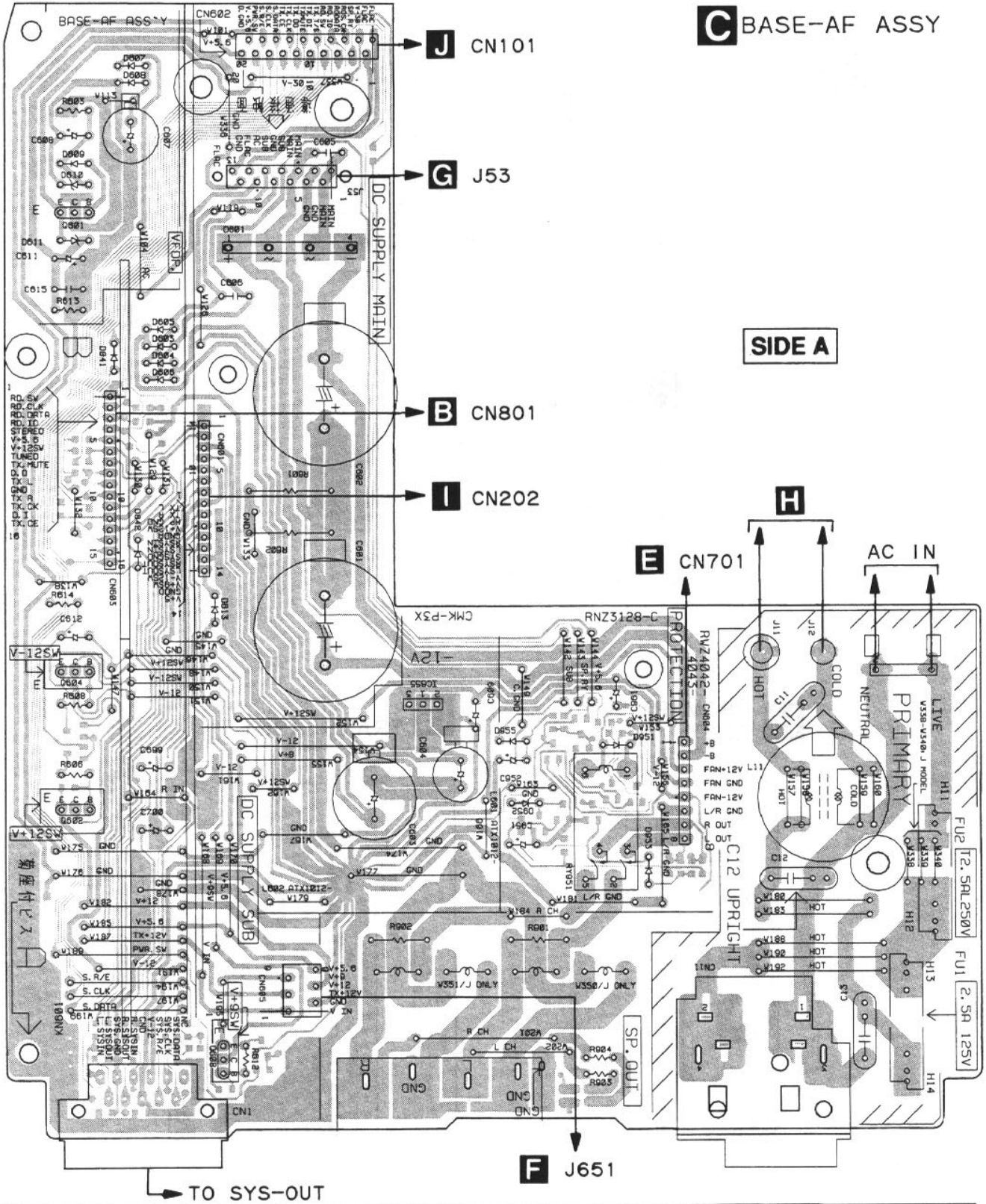


G TRANS ASSY



RNP1687-C

4.3 BASE-AF ASSY



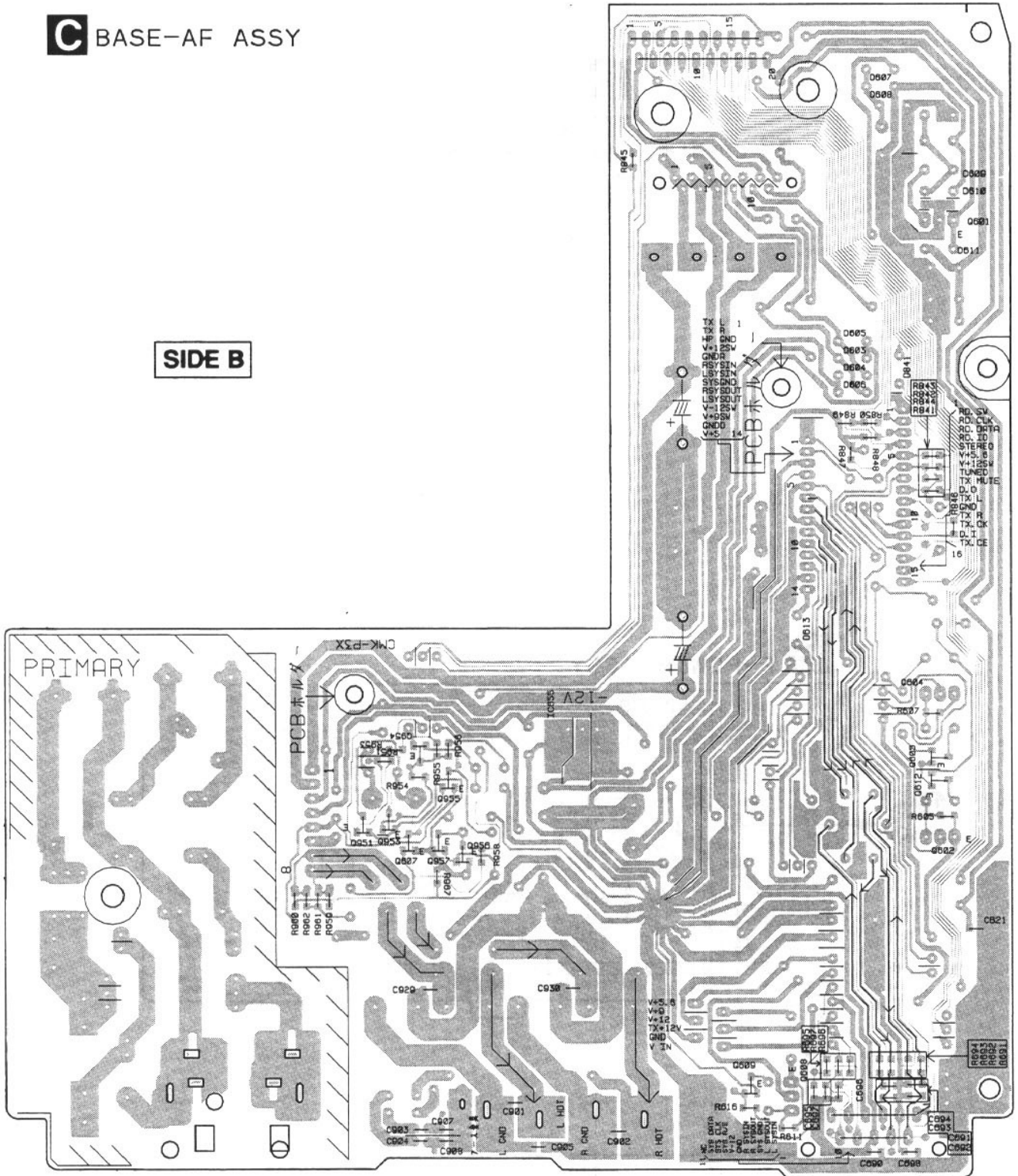
Q601 Q608 IC655
 Q604
 Q602

RNP1687-C



C BASE-AF ASSY

SIDE B

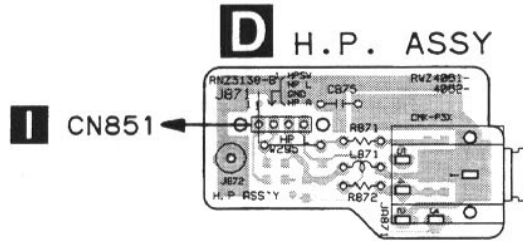


Q951 Q954 Q955 Q956
 Q953 Q957
 Q607

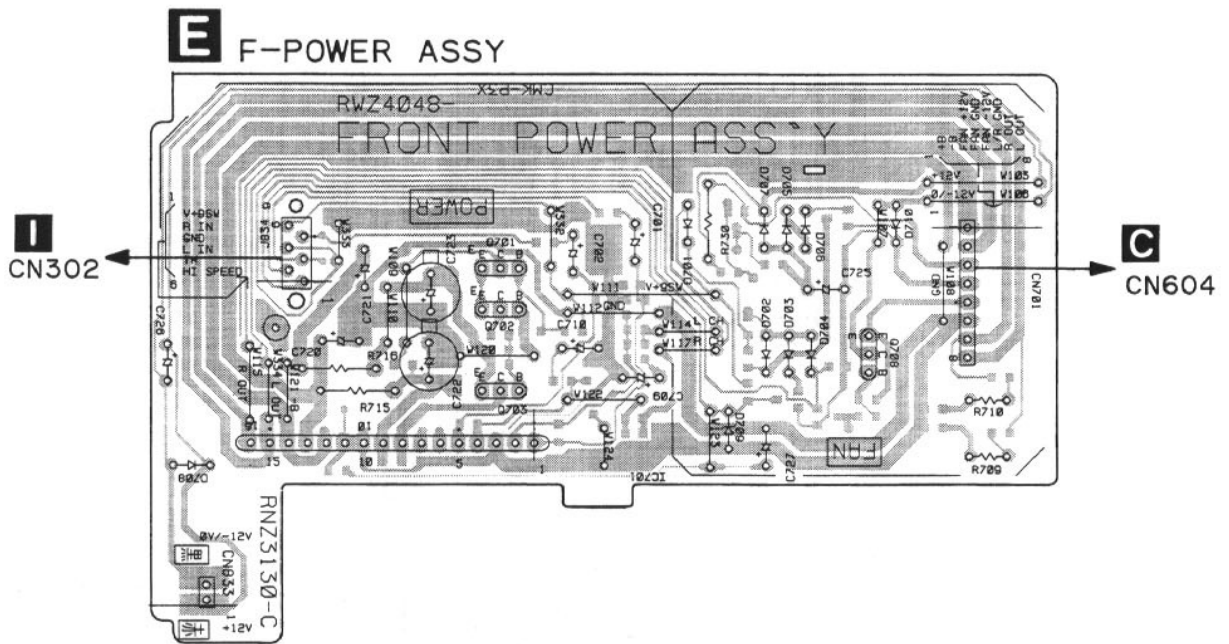
Q609 Q604 Q602 Q601
 Q605
 Q612

RNP1687-C

4.4 H.P.ASSY AND F-POWER ASSY



SIDE A

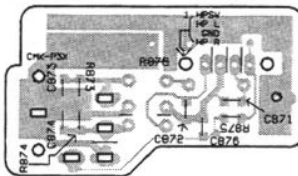


Q701
Q702
Q703

Q708

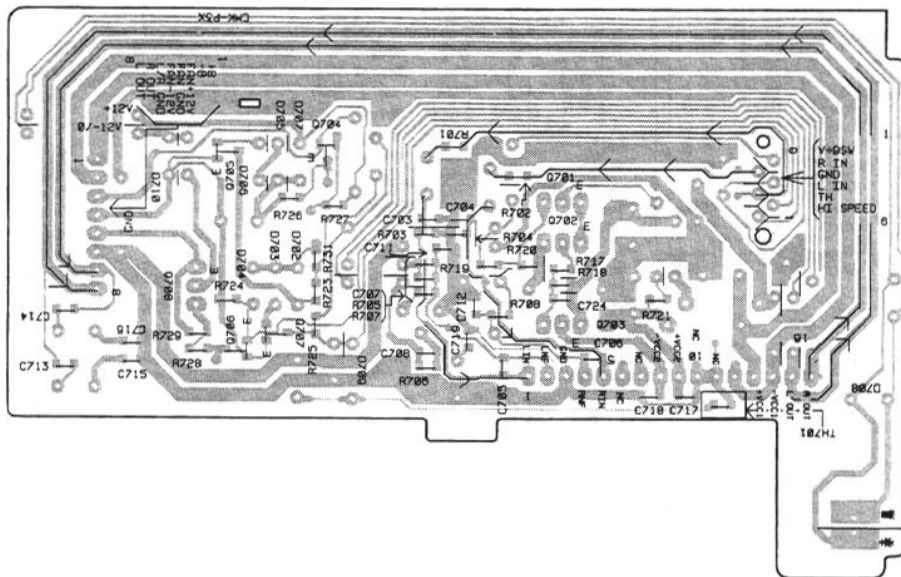
RNP1687-C

D H.P. ASSY



SIDE B

E F-POWER ASSY



Q708 Q705 Q707 Q704
Q706

Q701 Q703
Q702

RNP1687-C

4.5 SIDE-AF ASSY

I
SIDE-AF
ASSY

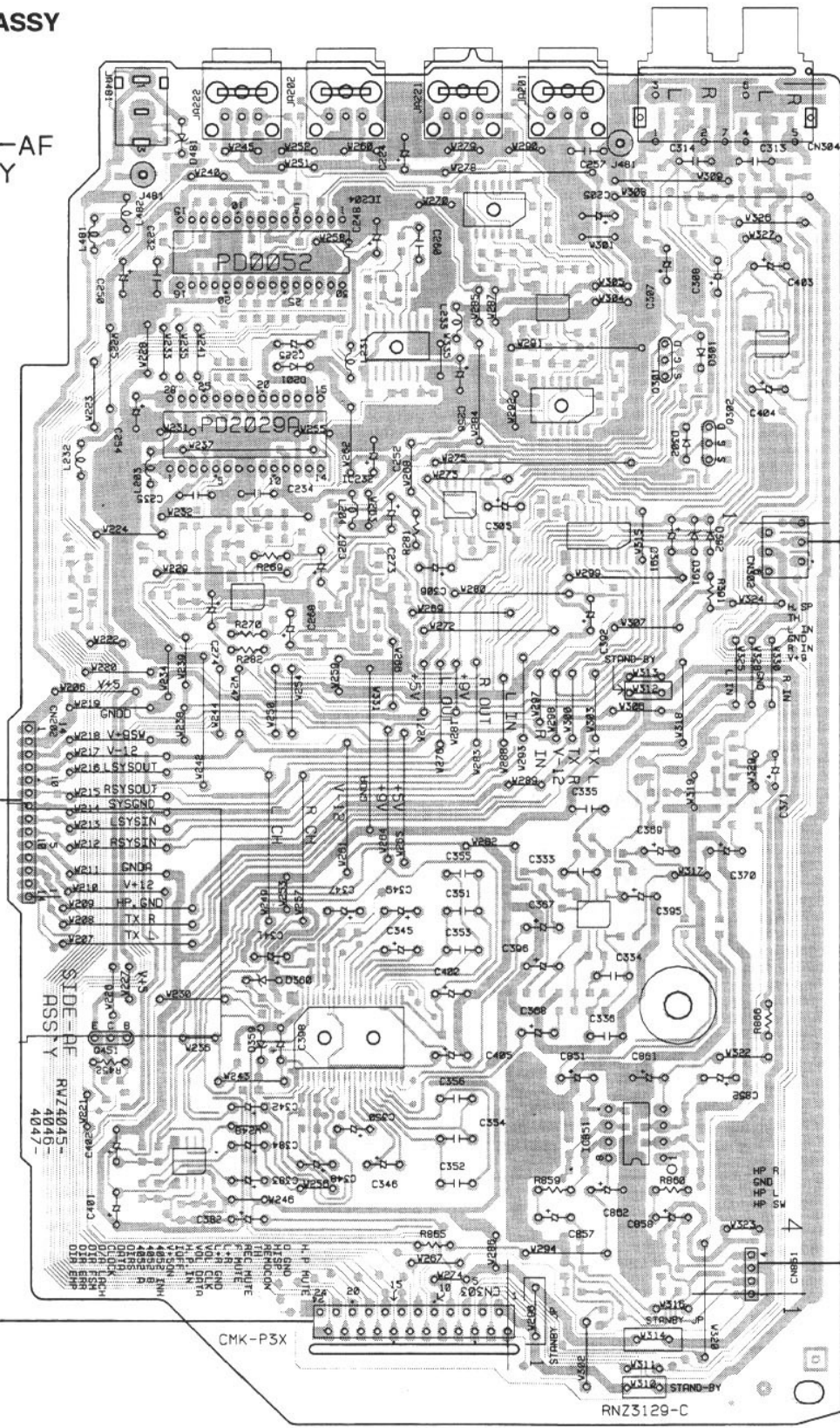
A SIDE

E CN702

C
CN601

J
CN102

D J871



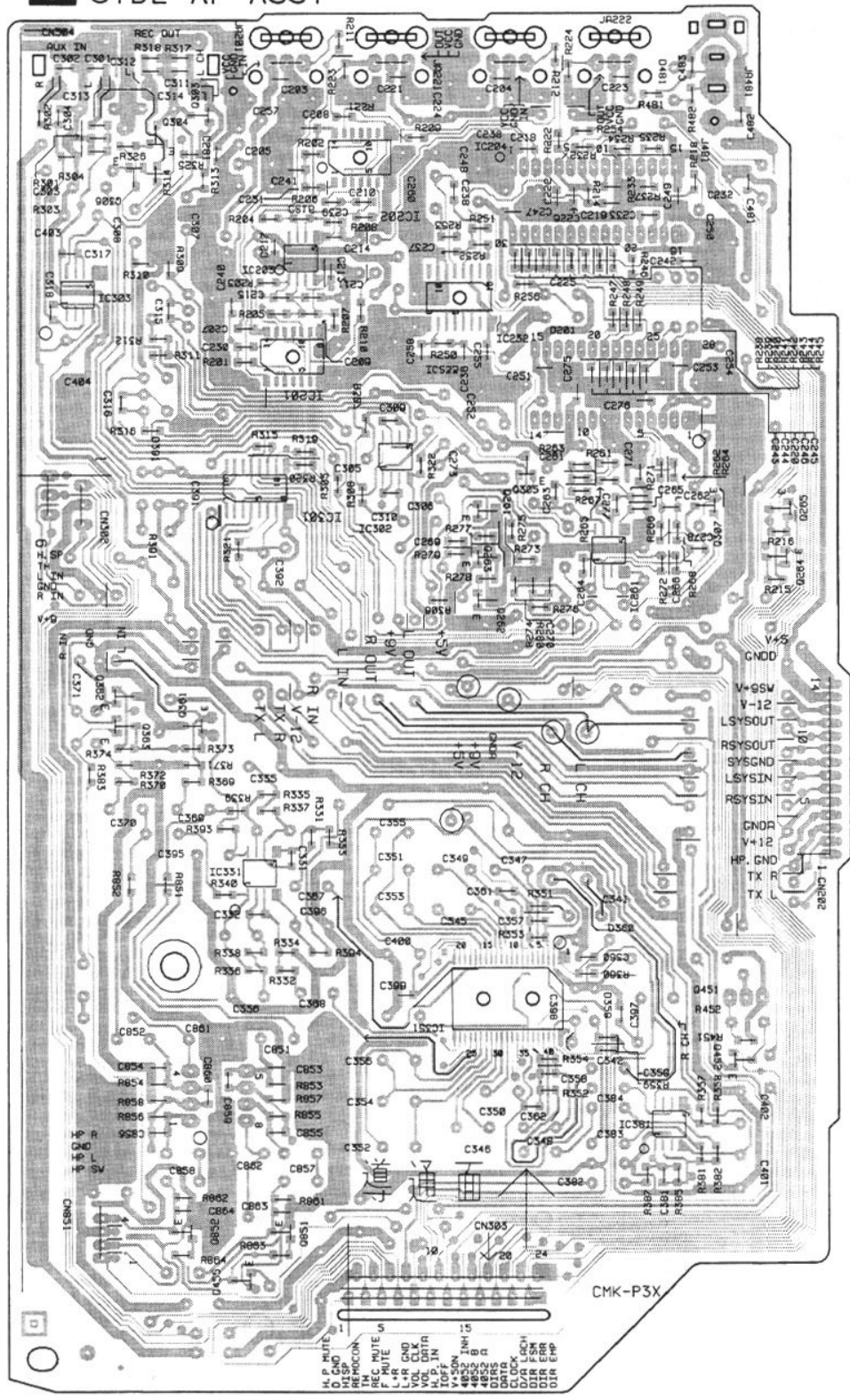
Q451 IC204 IC232

Q301 Q302
IC851

RNP1687-C



I SIDE-AF ASSY



SIDE B

Q306	Q363	Q303	IC301	IC202	IC233	Q305	IC261	Q307	Q265
IC303	Q304	IC331	IC203	Q263	Q261	Q451	Q264		
Q362	Q361	IC201	Q262			Q452			
	Q852	IC302	IC351			IC381			
	Q455	Q851							

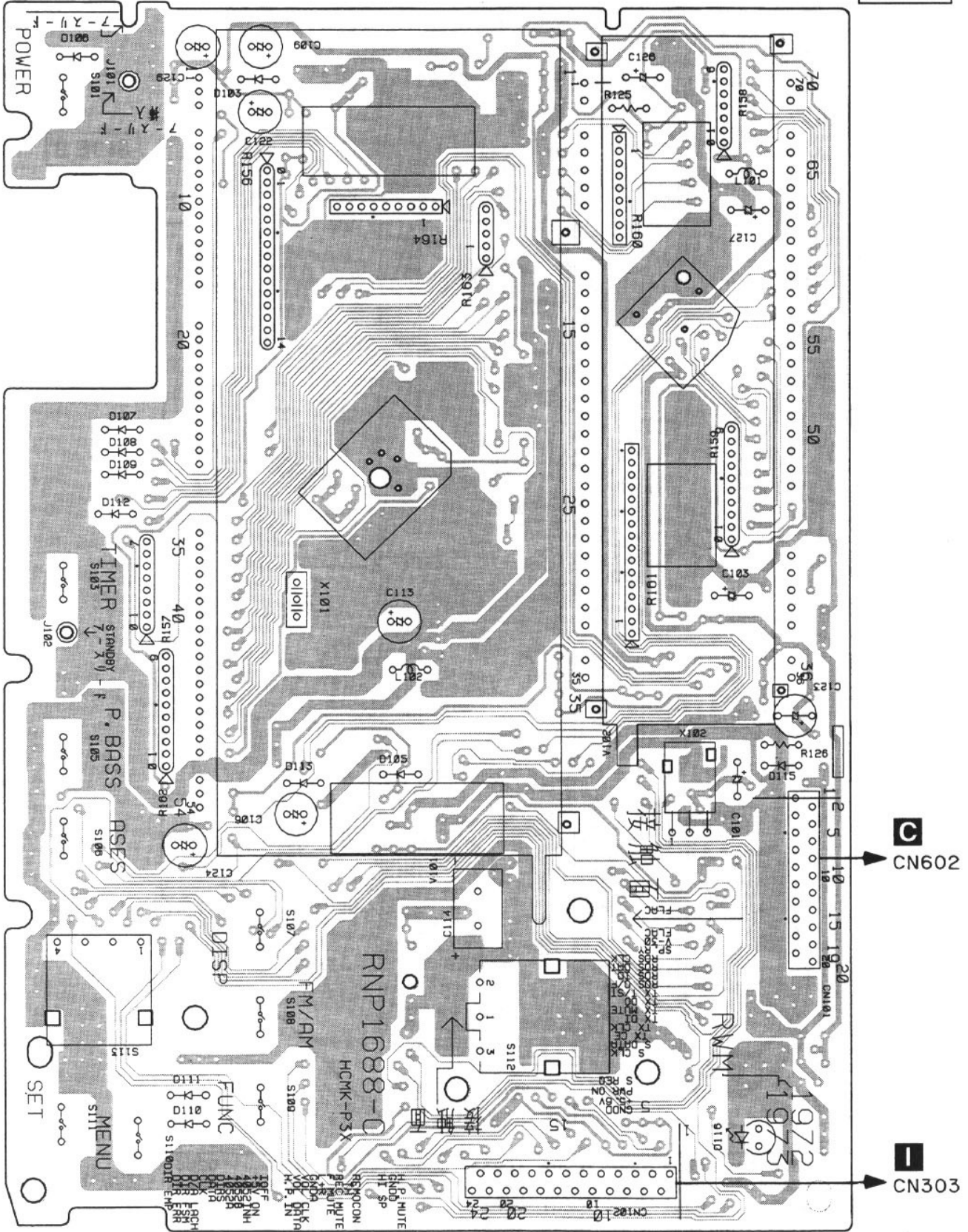
RNP1687-C



4.6 SXDISP ASSY

J SXDISP ASSY

SIDE A

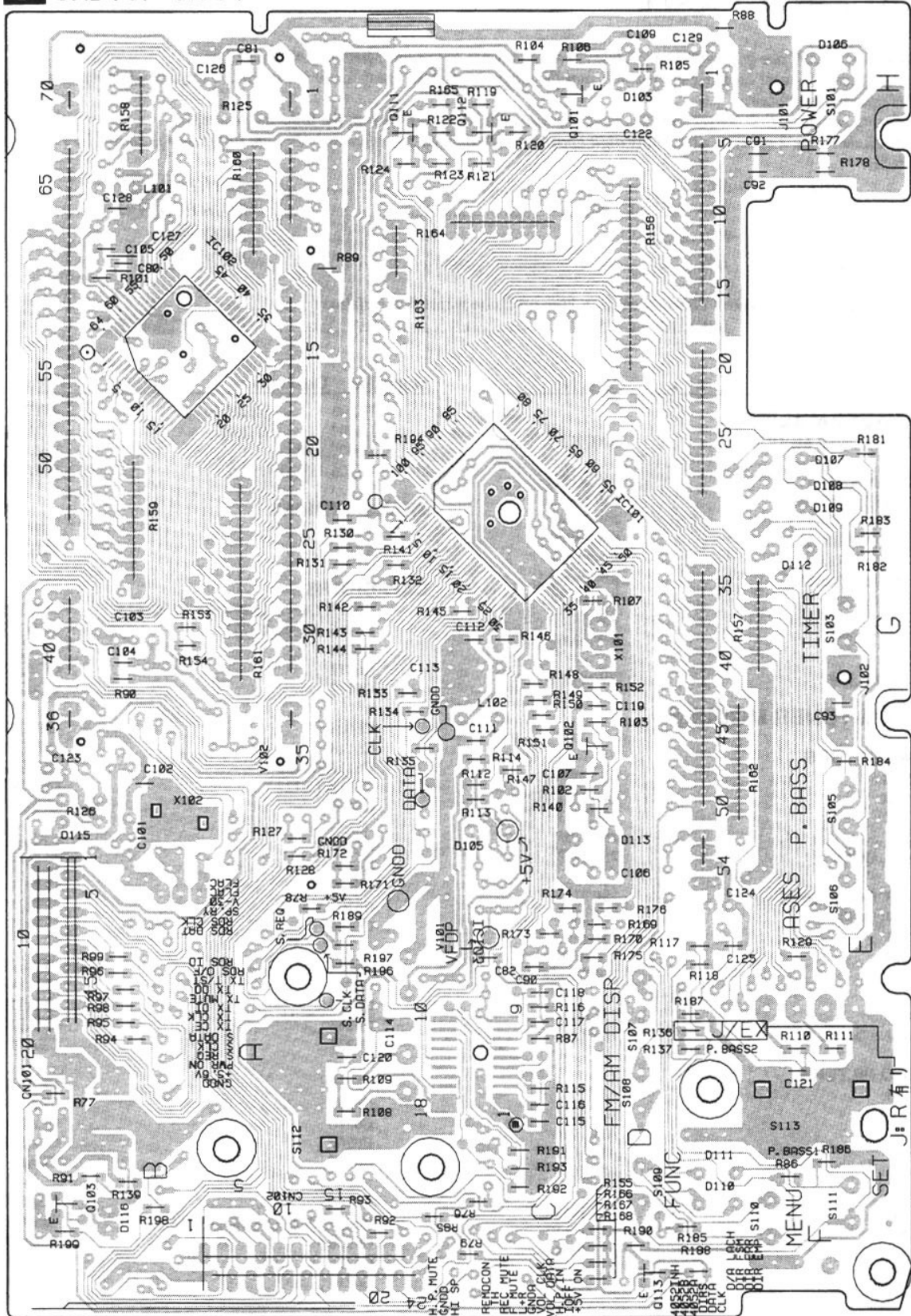


RNP1688-C



J SXDISP ASSY

SIDE B



Q103 IC102 Q111 Q112 Q101 Q113 RNP1688-C
 IC101 IC103

J

5. PCB 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.
- 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 × 10 ¹	→	561	.....	RD1/4PU	$\overline{561}$ J
47k Ω	→	47 × 10 ³	→	473	.....	RD1/4PU	$\overline{473}$ J
0.5 Ω	→	R50	.....			RN2H	$\overline{R50}$
1 Ω	→	1R0	.....			RS1P	$\overline{1R0}$ K

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

5.62k Ω	→	562 × 10 ¹	→	5621	RN1/4PC	$\overline{5621}$ F
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Mark No. Description Parts No.

LIST OF ASSEMBLIES

FM/AM TUNER MODULE AXQ7058

NSP	SXMAIN ASSY	RWM1971
	- BASE - AF ASSY	RWZ4043
	- SIDE - AF ASSY	RWZ4046
	- F - POWER ASSY	RWZ4048
	- TRANS ASSY	RWZ4051
	- PRIMARY ASSY	RWZ4052
	- RDS ASSY	RWZ4054
	- REG ASSY	RWZ4055
	- H.P. ASSY	RWZ4061

NSP SXDISP ASSY RWM1973

A FM/AM TUNER MODULE

SEMICONDUCTORS

IC6201	LA1832ML
IC6202	LC72131MD
Q6102	2SC2223
Q6203	2SC2705
Q6201, Q6202	2SC2712
Q6103, Q6214, Q6601	2SC2714
Q6104, Q6105	2SK302
Q6101	3SK194
Q6204	DTA124ES
Q6205	DTC124EK
D6202	ISS254
D6101 - D6104	ISV228

COILS AND FILTERS

L6106	ATC1003
L6105	ATC1015
L6101	ATC1016
L6102	ATC1017
L6103	ATC1018
L6104	ATC1019
F6203	ATF - 119
F6206	ATF7008
F6601	ATF7009
F6204	ATF7010

Mark No. Description Parts No.

F6202	(455kHz)	ATF7011
L6107	(2.2 μ H)	ATH1043
L6602, L6603		LAU220J
L6206, L6208, L6605		LAU2R2J

TRANSFORMERS

T6201	ATB7008
T6101	ATE7002

CAPACITORS

C6113, C6212, C6274, C6275, C6611	CCSQCH101J50
C6116, C6208, C6221	CCSQCH150J50
C6222	CCSQCH180J50
C6271	CCSQCH200J50
C6117	CCSQCH330J50
C6608	CCSQCH680J50
C6118	CCSQCH8R0D50
C6111, C6122	CCSQCK1R0C50
C6112, C6127	CCSQCK2R0C50
C6105	CCSQSL471J50
C6101	CCSQTH110J50
C6119	CCSQTH150J50
C6109	CCSQTH270J50
C6107, C6110	CCSQTH300J50
C6106	CCSQTH330J50
C6234, C6235	CEAL1R0M50
C6245	CEAL470M16
C6224	CEAS100M50
C6243	CEAS101M16
C6231	CEAS1R0M50
C6227	CEAS220M16
C6236	CEAS2R2M50
C6216	CEAS330M16
C6262	CEAS3R3M50
C6219	CEAS470M10
C6244	CEAS470M16
C6249, C6250, C6265, C6266	CEAS4R7M50
C6258	CEJA470M16
C6215	CFTXA103J50
C6214	CFTXA224J50

Mark	No.	Description	Parts No.
	C6115, C6125, C6126, C6211, C6254 C6601		CKSQYB102K50 CKSQYB102K50
	C6102, C6114, C6121, C6123, C6124 C6210, C6213, C6237, C6267, C6276 C6279, C6281, C6604		CKSQYB103K50 CKSQYB103K50 CKSQYB103K50
	C6251, C6252 C6606, C6607 C6203, C6259 C6228 C6209		CKSQYB123K50 CKSQYB182K50 CKSQYB223K50 CKSQYB472K50 CKSQYB473K50
	C6230 C6218, C6223, C6255 C6220, C6226, C6242, C6256 C6225 C6610		CKSQYB821K50 CKSQYF103Z50 CKSQYF223Z50 CKSQYF473Z50 CKSYB103K50

RESISTORS

R6602		RD1/4PU221J
R6115, R6119, R6123, R6127, R6129 R6906, R6909, R6911 R6112 VR6201 (10kΩ/0.1W)		RS1/8SOR0J RS1/8SOR0J RS1/8S473J RCPI045
Other Resistors		RS1/10S□□□J

OTHERS

BN6202	2P TERMINAL WITH PAL	AKA7001
X6202	CRYSTAL RESONATOR(456kHz)	ASS1066
X6201	CRYSTAL RESONATOR(7.2000MHz)	ASS1093
CN6201	14P SOCKET	KP200IA14L

C BASE - AF ASSY

SEMICONDUCTORS

△ IC655		NJM7912FA
Q605, Q607 Q609, Q612, Q951, Q953 Q956, Q957 Q602, Q608		2PB709A 2PD601A 2PD601A 2SA1560
△ Q601 Q604 Q954 Q955 D609, D841, D842, D951 - D953		2SA965 2SC4040 DTA124EK DTC124EK 1SS252
D955 D610 D611		1SS252 MTZJ33B MTZJ7.5B
△ D601 △ D603 - D607		RBV - 402 S5688G
D613		S5688G

COILS AND FILTERS

△ L11 (0.8mH/AC250V)		ATF - 151
L901 - L904 (5.3μH)		ATH - 059
△ L601 L602		ATX1012 ATX1012

SWITCHES AND RELAYS

△ RY951 (12V)		ASR7007
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CAPACITORS

△ C11, C12 (10000pF/AC250V)		ACG7023
C695 - C697 C699, C700, C961 C611 C604		CCSQSL101J50 CEAS100M50 CEAS101M35 CEAS102M25

Mark	No.	Description	Parts No.
	C612 C608 C951 C952 C603		CEAS1ROM50 CEAS220M50 CEAS221M16 CEAS2R2M50 CEAS332M25
	C609 C607 C901, C902 C691 - C694 C690, C698, C903, C904		CEAS470M16 CEAS471M63 CKSQYB102K50 CKSQYB471K50 CKSQYF473Z50
△	C907, C908 C605, C606 C601, C602 (6800pF/50V)		CKSQYF473Z50 CQMA103K2E RCH1150

RESISTORS

△ R901, R902 R903, R904 R606, R608, R612 R613, R614 R603		RD1/4LMF100J RD1/4PU100J RD1/4PU102J RD1/4PU103J RD1/4PU222J
R601, R602		RS2LMFR22J
Other Resistors		RS1/10S□□□J

OTHERS

H11 - H14 CN602 CN604 CN605	CABLE HOLDER(13P) FUSE CLIP CONNECTOR 20P 8P SOCKET CONNECTOR(6P)	51063 - 1305 AKR1003 HLEM20S - 1 KP250NA8 KPE6
JA901 CN1 CN601 CN603	TERMINAL SPEAKER TERMINAL 4 - P SOCKET(11P) CONNECTOR(14P) CONNECTOR(16P)	RKC - 061 RKE1008 RKP1754 TUC - P14P - B1 TUC - P16P - B1
KN601	EARTH METAL FITTING	VNF1084

I SIDE - AF ASSY

SEMICONDUCTORS

IC301 IC351 IC851 IC204 IC232		BU4052BCF M62419FP NJM4560D PD0052 PD2029A(L)
IC201, IC202 IC233 IC261, IC302, IC331 IC203, IC303, IC381 Q451		TC74HC04AF TC9246F UPC4570G2 XLA4558F - P 2SA1560
Q261, Q262, Q303, Q304 Q361, Q362, Q851, Q852 Q301, Q302 Q263, Q305, Q306, Q363, Q455 Q264, Q265		2SD2114K 2SD2114K 2SK246 DTA124EK DTC114TK
Q307, Q452 D201, D301, D302, D392 D359, D360, D391, D481		DTC124EK 1SS252 MTZJ5.6B/C

SX-F21

Mark No.	Description	Parts No.
COILS AND FILTERS		
L203, L204, L231 - L233 L481, L482		LAU100J LAU1R0J
CAPACITORS		
C218 C301 - C304, C311, C312 C315, C316, C359, C360, C481 C855, C856 C237		CCSQCH100D50 CCSQCH101J50 CCSQCH101J50 CCSQCH101J50 CCSQCH150J50
C242 C233 C240, C241 C261 - C266 C277, C278, C309, C310		CCSQCH221J50 CCSQCH270J50 CCSQCH330J50 CCSQCH390J50 CCSQCH470J50
C317, C318, C331, C332 C357, C358, C859, C860 C236 C342, C347 - C350, C857, C858 C205, C224, C248, C250, C398		CCSQCH470J50 CCSQCH470J50 CCSQCH820J50 CEAS100M50 CEAS101M10
C273, C400, C861, C862 C256 C225 C371 C391, C392, C395, C396		CEAS101M16 CEAS221M16 CEAS2R2M50 CEAS330M16 CEAS470M16
C403 - C405 C367, C368 C305 - C308, C345, C346 C382 - C384, C851, C852 C341		CEAS470M16 CEAS470M25 CEAS4R7M50 CEAS4R7M50 CEJA100M50
C274 C401, C402 C267, C268, C369, C370 C252, C254 C232		CEJA101M16 CEJA470M16 CEZA100M50 CEZA101M10 CFTYA104J50
C335, C336 C333, C334 C260 C353, C354 C313, C314		CFTYA333J50 CFTYA393J50 CFTYA474J50 CFTYA683J50 CKCYF473Z50
C209, C210, C863, C864 C238 C215, C216 C211, C213, C214, C239 C381		CKSQYB102K50 CKSQYB103K50 CKSQYB221K50 CKSQYB222K50 CKSQYB471K50
C203, C204, C207, C208, C217 C220 - C223, C226, C230, C231 C247, C249, C253, C255, C397 C251 C219		CKSQYF103Z50 CKSQYF103Z50 CKSQYF103Z50 CKSQYF104Z25 CKSQYF473Z50
C234, C235 C351, C352, C355, C356		QQMZA222J50 QQMZA682J50
RESISTORS		
R281, R282, R865, R866 R452 R269, R270 R859, R860 R391		RD1/4PU101J RD1/4PU102J RD1/4PU433J RD1/4PU470J RD1/4PU681J
Other Resistors		RS1/10S□□□J

Mark No.	Description	Parts No.
OTHERS		
CN851 CN303 CN304 JA201, JA202 JA221, JA222	3PJUMPER CONNECTOR CONNECTOR 24P PIN JACK(4P) OPTICAL LINK IN OPTICAL LINK OUT	52151 - 0410 52492 - 2420 AKB7015 GPIF32R GPIF32T
CN302 JA481 CN202	CONNECTOR(6P) JACK CONNECTOR(14P)	KPE6 RKN1004 TUC - P14X - B1



F - POWER ASSY

SEMICONDUCTORS



IC701 Q704 Q702 Q701, Q703 Q708		STK401 - 060 2PB709A 2SA992 2SC1845 2SC4040
---	--	---

Q706 Q705, Q707 D701 - D708 D710 D709		DTA143EK DTC143EK 1SS252 1SS254 MTZJ5.1B
---	--	--

TH701		AEX7002
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CAPACITORS

C707, C708 C705, C706 C720, C721, C727 C722, C723 C726		CCSQCH100D50 CCSQSL101J50 CEAS100M50 CEAS101M50 CEAS220M35
--	--	--

C709, C710, C725 C701, C702 C703, C704, C711, C712 C719 C717, C718		CEAS470M16 CEAS4R7M50 CKSQYB471K50 CKSQYB562K50 CKSQYF103Z50
--	--	--

C724 C713 - C716		CKSQYF104Z50 CKSQYF473Z50
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RESISTORS



R715, R716 R709, R710 R730		RD1/4LMF101J RD1/4PU100J RFA1/4PL220J
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Other Resistors		RS1/10S□□□J
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OTHERS

CN701 CN833	CABLE HOLDER(6P) 8P PLUG UP CONNECTOR	51063 - 0605 KM250NA8L W - P7902#11
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TRANS ASSY

SEMICONDUCTORS



IC603 IC601, IC602	(750mA/125V) (3A/125V)	AEK7007 AEK7015
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OTHERS

CABLE HOLDER(13P)		51063 - 1305
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Mark No. Description Parts No.

H PRIMARY ASSY

OTHERS

J11	LEAD WIRE UNIT	DB114NB0
J12	LEAD WIRE UNIT PCB BINDER	DB913NB0 VEF1008

B RDS ASSY

SEMICONDUCTORS

IC801	LA2232M
Q801	2PB709A
Q802, Q803	2PD601A

CAPACITORS

C805	CCSQCH271J50
C806, C808	CEAS100M50
C801	CEAS220M25
C807, C809, C816	CEAS4R7M50
C804	CKSQYB103K50

C813	CKSQYB223K50
C802, C803	CKSQYB332K50
C810, C812	CKSQYB333K50
C814	CKSQYB472K50
C811	CKSQYB682K50

C815	CKSQYF103Z50
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RESISTORS

VR801	(4.7kΩ/0.1W)	RCP1020
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Other Resistors RS1/10S□□□□

OTHERS

CN802	CONNECTOR(14P)	9176B - 14L
X801	CERAMIC RESONATOR(456kHz)	ASS7001
CN801	CONNECTOR(16P)	TUC - P16X - B1

F REG ASSY

SEMICONDUCTORS

△ IC652	NJM7809FA
△ IC651, IC656	NJM7812FA
△ IC654	NJM78M56FA

CAPACITORS

C651, C653, C655	CEAS1R0M50
C652, C654, C656	CEAS470M16

OTHERS

CABLE HOLDER(6P) 51063 - 0605

D H.P. ASSY

COILS AND FILTERS

L871	LAU1R0J
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CAPACITORS

C875	CKCYF473Z50
C873, C874	CKSQYB471K50
C876	CKSQYF473Z50

RESISTORS

R871, R872	RD1/4PU470J
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Other Resistors RS1/10S□□□□

Mark No. Description Parts No.

OTHERS

JA871	CABLE HOLDER(4P) HEADPHONE JACK	51048 - 0400 RKN1006
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J SXDISP ASSY

SEMICONDUCTORS

IC103	BA3834F
IC102	LC75712E
IC101	PDG186A
Q101, Q103, Q111, Q112	2PD601A
Q113	DTC114TK
Q102	DTC143EK
D103, D105 - D113, D115	1SS252
D116	BR3062X

COILS AND FILTERS

L101	LAU220J
L102	LAU2R2J

SWITCHES AND RELAYS

S112	ASX7005
S113	RSX1006
S101, S103, S105 - S111	VSG1009

CAPACITORS

C114	ACH1246
C105	CCSQCH300J50
C106	CEAL100M16
C123, C124, C126, C129	CEAL100M50
C113, C127	CEAL101M6R3

C109, C122	CEAL1R0M50
C101, C103	CEAL470M16
C110	CKSQYB102K50
C102, C104, C107, C111, C112	CKSQYF103Z50
C119 - C121, C125, C128, C90	CKSQYF103Z50

C115 - C118 CKSQYF104Z50

RESISTORS

R156	RA14T473J
R161	RA15T473J
R163	RA4T473J
R158	RA6T473J
R157	RA7T473J

R160, R164	RA8T473J
R159, R162	RA9T473J
R125, R126	RD1/4PU5R6J

Other Resistors RS1/10S□□□□

OTHERS

X101	CERAMIC RESONATOR	EFOEC1005T4
	REMOTE RECEIVER UNIT	GP1U28X
CN101	CONNECTOR 20P	HLEM20S - 1
CN102	CONNECTOR	HLEM24S - 1
V101	FL TUBE	RAW1152

V102	FL TUBE	RAW1153
	SPACER T10(CR)	REB1305
	SPACER T7(CR)	REB1306

6. ADJUSTMENT

6.1 TUNER SECTION

■ FM Tuner Section

- Set the mode 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	Front End Sensitivity	106	0-30	106MHz	L6104 L6105 L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 20 becomes at maximum level.
2	Stereo Distortion	98 (ON STEREO)	80	98MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
3	TUNED IND. Lighting Level	98	18±2	98MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Notes:

- Before adjusting, make sure there is no gap between L6101 and L6102 as well as between L6103 and L6104. If there is a gap between them, bring them into contact with each other first, and then make adjustments.

■ AM Tuner Section

- Set the mode selector to AM 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	Front End Sensitivity	999*1	35-45	999kHz*1	T6201	Adjust so that the DC voltage between the IC6201-Pin 20 becomes at maximum level.

*1: For the area using 10kHz step, frequencies should be 1000kHz

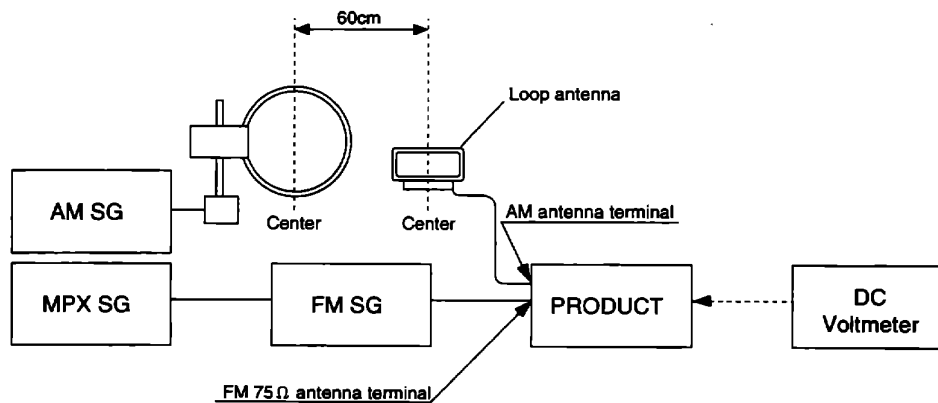


Fig. 1-1 AM and FM Adjustment Wiring Diagram

FM/AM TUNER MODULE (AXQ7058)

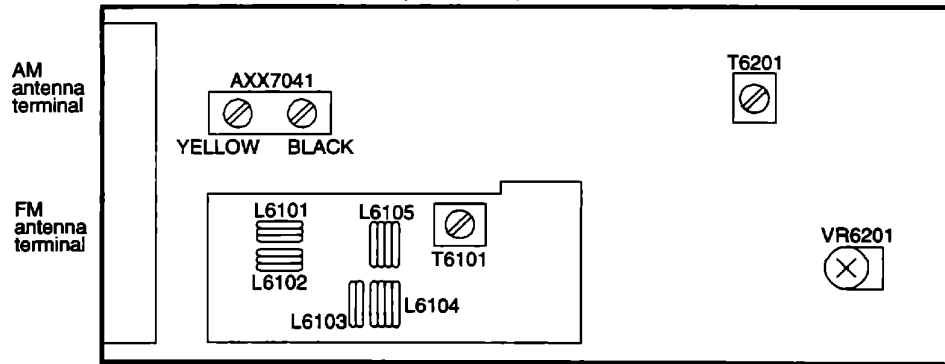


Fig. 1-2 Adjustment Points

7. GENERAL INFORMATION

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

7.1 PARTS

7.1.1 IC

■ PDG186A (IC101 : SXDISP ASSY)

● SYSTEM CONTROL MICROCOMPUTER

● Pin Function

No.	Name	Pin Function	I/O	Function
1	G1/A1	G1	O	FDP control grid.
2	G0/A0	G0	O	
3	NC	NC	O	H
4	PE0/EC0/INT0	ACS0/60	I	AC pulse input.(for the clock and monitoring of the power source)
5	PE1/EC1/INT1	RDS CLOCK	I	RDS serial clock input.
6	PE2/INT2	RDS DATA	I	RDS serial data input.
7	PE3/INT3/NMI	RDS ID	I	RDS ID input.
8	PE4/RMC	REMOCON	I	Remote control signal input.
9	PE5	H.P.IN	I	Headphone connection detect. H : No detect L : Detect (audio mute)
10	PE6/PWM	VOL DATA	O	VOLUME IC M62419FP Serial data.
11	PE7/T0/ADJ	VOL CLK	O	VOLUME IC M62419FP Serial clock.
12	PC0/KR0	KEYIN1	I	Key scan return input.
13	PC1/KR1	KEYIN2	I	
14	PC2/KR2	DIR ERR	I	Digital lock detect. L : Digital lock H : Unlock
15	PC3/KR3	DIR EMPH	I	Emphasis information detect. H : Emphasis L : No emphasis
16	PC4/KR4	DAC2029ST	O	DAC IC PD2029 strobe.
17	PC5/KR5	RDS	I	Detection of existence of RDS. L : RDS H : None
18	PC6/KR6	POWER ON	O	POWER ON/OFF control. H : POWER ON L : POWER OFF
19	PC7/KR7	F.MUTE	O	FRONT mute control. H : MUTE L : -
20	PB0/CINT	RDS ON/OFF	O	RDS ON/OFF control. H : ON L : OFF
21	PB1/CS0	S.CLOCK	O	System bus serial clock output.
22	PB2/SCK0	S.DATA	O	System bus serial data output.
23	PB3/SI0	S.RDATA	I	System bus serial data input.
24	PB4/SO0	S.REQ	I/O	System bus request input/output.
25	PB5/SCK1	CLOCK	O	Serial clock output for controlling ICs. (FL DRIVER LC75712, DAC PD2029, DIR PD0052)
26	PB6/SCI	TX.D0	O	PLL IC LC72131M serial data output.
27	PB7/SO1	DATA	O	Serial clock output for controlling ICs. (FL DRIVER LC75712, DAC PD2029, DIR PD0052)
28	AVref	+5V	I	AD reference voltage input.
29	PA0/AN0	V.JOG	I	Pulse input for VOLUME JOG (ADC)
30	PA1/AN1	M.JOG	I	Pulse input for MULTI JOG (ADC)
31	PA2/AN2	SPA.IN	I	Spectrum analyzer data input. (ADC)
32	PA3/AN3	TH	I	FAN error data input. (ADC)
33	PA4/AN4	FS.MODE	I	Sampling frequency data input. (ADC)
34	PA5/AN5	TX.TUN/STO	I	TUNE/STEREO data input. (ADC)
35	PA6/AN6	TX.DI	I	PLL IC LC72131M serial data input.
36	PA7/AN7	TX.CLOCK	O	PLL IC LC72131M serial clock output.
37	AVss	D.GND	-	D.GND
38	RST	XRESET	I	CPU RESET input. L : RESET H : -
39	EXTAL	OSC	I	10MHz ceramic oscillator connect.
40	XTAL	OSC	O	
41	Vss	D.GND	-	D.GND
42	TX	NC	O	-
43	TEX	D.GND	I	D.GND
44	VDD	+5V	-	
45	Vfdp	-30V	-	

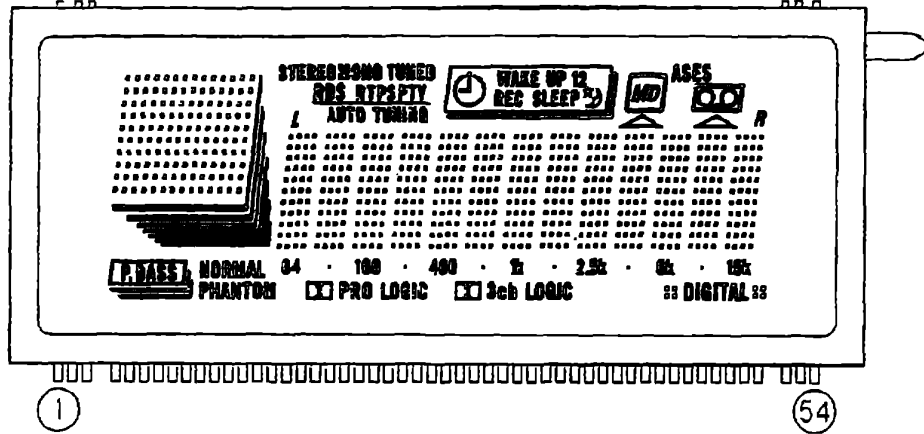
No.	Name	Pin Function	I/O	Function	
46	PD0/A55	TX.CE	I	PLL IC LC72131M chip enable output.	
47	PD1/A54	TX.MUTE	I	LA1832 IF BUFF control. H : IF count start L : -	
48	PD2/A53	4052 INH	O	AUDIO SELECTOR control.	
49	PD3/A52	4052 B	O		OPT IN AUX SYSTEM TUNER
50	PD4/A51	4052 A	O		4052 A L L H H
50	PD4/A50	SRO	O		4052 B L H L H 4052 INH L L L L
50	PD4/A50	SRO	O	Remote control external output control. H : Remote control through L : cut	
52	PD6/A49	H.PMUTE	O	Headphone mute control. H : MUTE L : -	
53	PD7/A48	DIGITAL LED	O	DIGITAL LED control. H : Lights up L : Goes off	
54	PF0/A47	DIRS	O	DIR output control. H : System A.AUX L : TUNER D.AUX POWER OFF	
55	PF1/A46	REC MUTE	O	REC mute control. H : MUTE L : -	
56	PF2/A45	SPRY	O	Speaker relay control. H : Relay ON L : Relay OFF	
57	PF3/A44	HI SPEED	O	FAN rotation control. H : High speed L : Low speed	
58	PF4/A43	IOFF	O	Processor connection control. L : With H : Without	
59	PF5/A42	D+5V ON	O	DIGITAL +5V ON/OFF control. H : ON L : OFF	
60	PF6/A41	LC75710ST	O	FL DRIVER IC LC75712 strove.	
61	PF7/A40	SPA A	O	Spectrum analyzer IC BA3834F control.	
62	PG0/A39	SPA B	O		
63	PG1/A38	SPA C	O		
64	PG2/A37	S0	O		
65	PG3/A36	S1	O		
66	PG4/A35	S2	O		
67	PG5/A34	S3	O		
68	PG6/A33	S4	O		
69	PG7/A32	S5	O		
70	PH0/A31	S6	O		
71	PH1/A30	S7	O	FDP control anode.	
72	PH2/A29	S8	O		
73	PH3/A28	S9	O		
74	PH4/A27	S10	O		
75	PH5/A26	S11	O		
76	PH6/A25	S12	O		
77	PH7/A24	S13	O		
78	A23	S14	O		
79	A22	S15	O		
80	A21	S16	O		
81	A20	S17	O	FDP control grid.	
82	A19	S18	O		
83	A18	S19	O		
84	A17	S20	O		
85	A16	S21	O		
86	G15/A15	G15	O		
87	G14/A14	G14	O		
88	G13/A13	G13	O		
89	V _{DD}	+5V	-		
90	G12/A12	G12	O		FDP control grid.
91	G11/A11	G11	O		
92	G10/A10	G10	O		
93	G9/A9	G9	O		
94	G8/A8	G8	O		
95	G7/A7	G7	O		
96	G6/A6	G6	O		
97	G5/A5	G5	O		
98	G4/A4	G4	O		
99	G3/A3	G3	O		
100	G2/A2	G2	O		

SX-F21

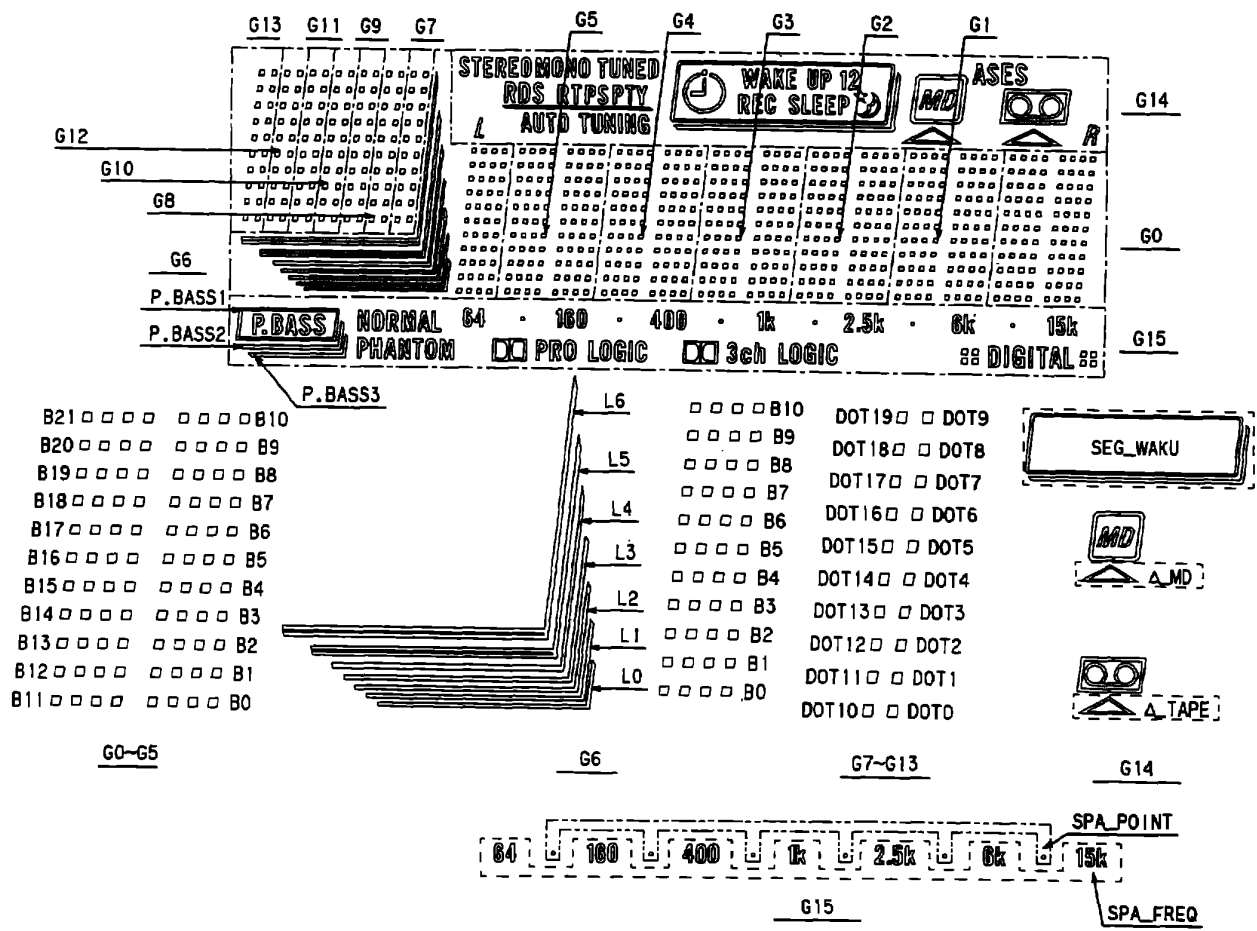
7.1.2 DISPLAY

■ RAW1152 (V101 : SXDISP ASSY)

- FL TUBE
- Pin Assignment



● Grid Assignment



● Anode Connection

	G0-G5	G6	G7-G13	G14	G15		G0-G5	G6	G7-G13	G14	G15
S0	B0	B0	DOT0		P.BASS	S11	B11	L0	DOT11		SPA_POINT
S1	B1	B1	DOT1	2	P.BASS1	S12	B12	L1	DOT12	1	
S2	B2	B2	DOT2	WAKE UP	P.BASS2	S13	B13	L2	DOT13	SLEEP	
S3	B3	B3	DOT3		P.BASS3	S14	B14	L3	DOT14	REC	
S4	B4	B4	DOT4	PTY	NORMAL	S15	B15	L4	DOT15	PS	
S5	B5	B5	DOT5	RT	PHANTOM	S16	B16	L5	DOT16	SEG_WAKU	
S6	B6	B6	DOT6	RDS		S17	B17	L6	DOT17	Δ_MD	
S7	B7	B7	DOT7	AUTO TUNING		S18	B18		DOT18	TUNED	
S8	B8	B8	DOT8	MONO	DIGITAL	S19	B19		DOT19	Δ_TAPE	
S9	B9	B9	DOT9	STEREO	DIGITAL	S20	B20			L	
S10	B10	B10	DOT10	ASES	SPA_FREQ	S21	B21			R	

● 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
Assignment	F1	F1	F1	NP	D	S21	S20	S19	S18	S17	S16	S15	S14	S13	S12	S11	NL	NL	S10	S9	S8	S7	S6	S5	S4	S3	S2

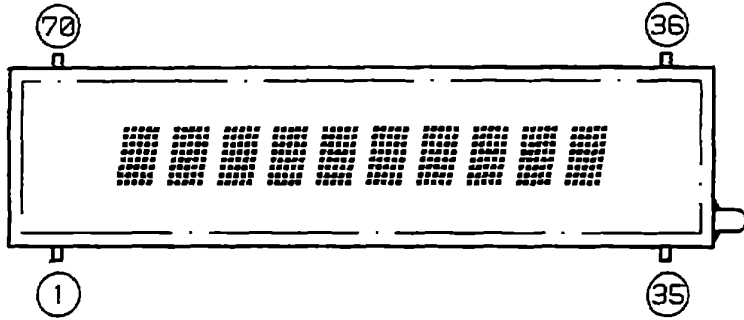
Pin No.	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
Assignment	S1	S0	NL	NL	NL	NL	G15	G14	G13	G12	G11	G10	G9	G8	G7	G6	G5	G4	G3	G2	G1	G0	H	NP	F2	F2	F2

F1, F2 : Filament G0-G15 : Grid S0-S21 : Anode D : Connect externally to F1. NP : No Pin NL : No Lead
 H : Continuous power supply grid. (Apply a voltage of Typ 30.0Vdc at ec level.)

SX-F21

■ RAW1153 (V102 : SXDISP ASSY)

- FL TUBE
- Pin Assignment



● Pin Connection

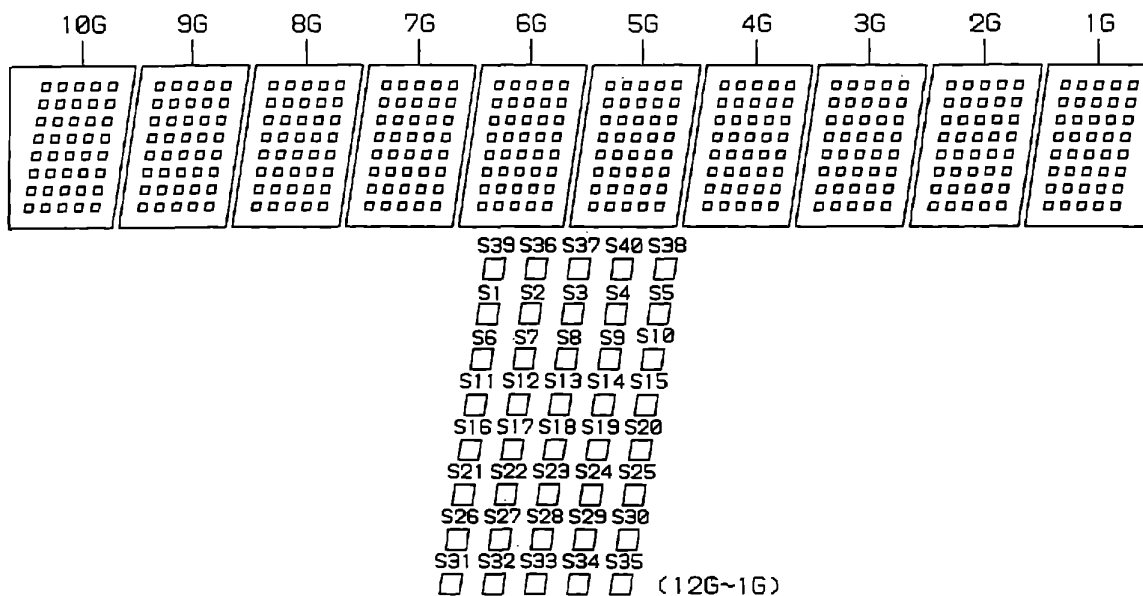
PIN NO.	7	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5	4	4	4	4	4	4	4	4	3	3	3	3					
CONNECTION	F	F	N	1				P	P	P	P	P	P	P	P	P	P	P	P	N	N	N	P	P	P	P	I	N	F	F				
	1	1	P	G	G	G	G	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	X	X	X	4	3	2	1	C	P	2	2

PIN NO.	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	3	3	3	3
CONNECTION	F	F	N					N	N	N	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	I	N	F	F	
	1	1	P	G	G	G	G	X	X	X	0	9	8	7	6	5	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	

NOTE

- 1) F1, F2 --- Filament
- 2) NP ----- No pin
- 3) NX ----- No extend pin
- 4) NC ----- No connection
- 5) DL ----- Datum Line
- 6) 1G~10G --- Grid
- 7) IC ----- Internal connection

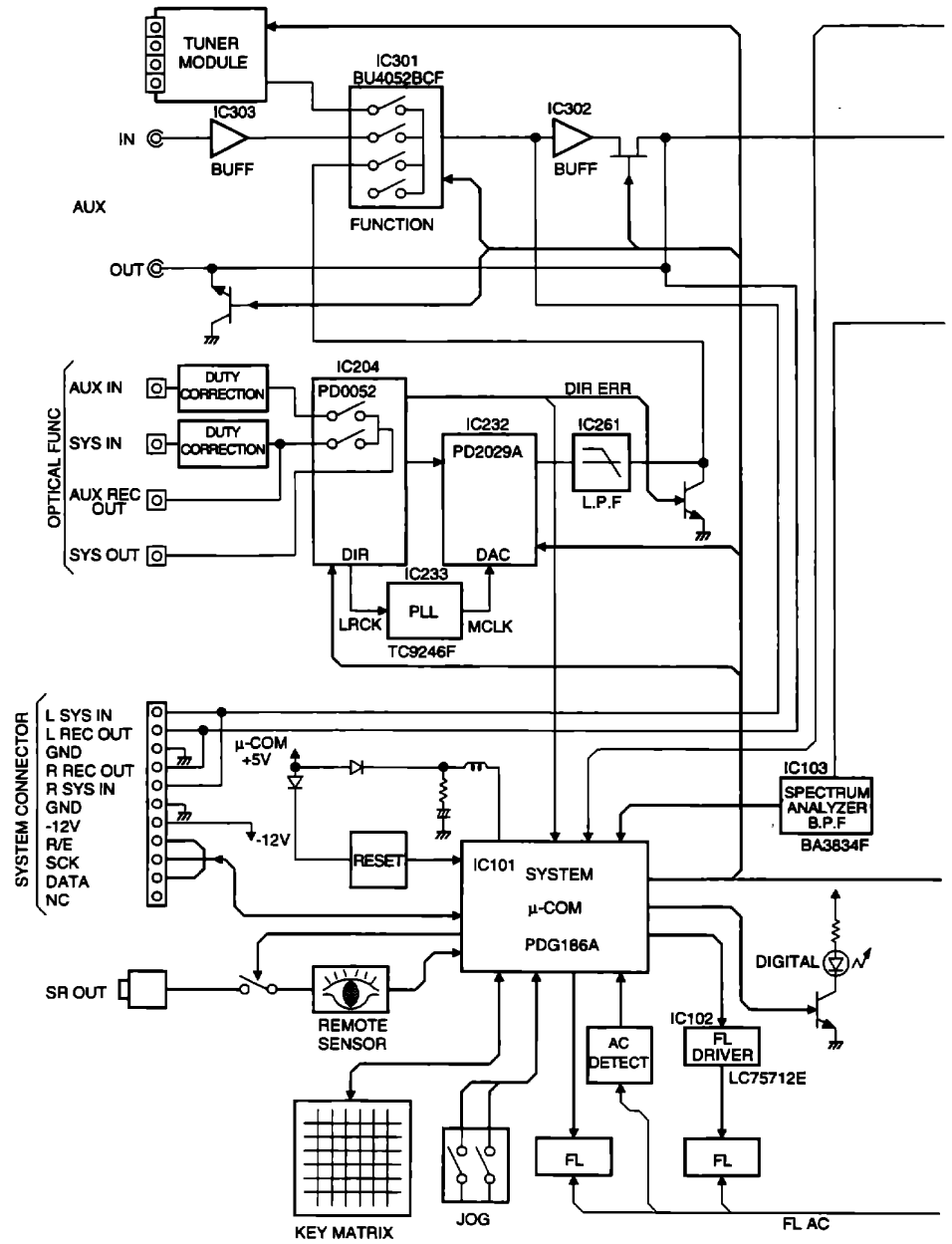
● Grid Assignment

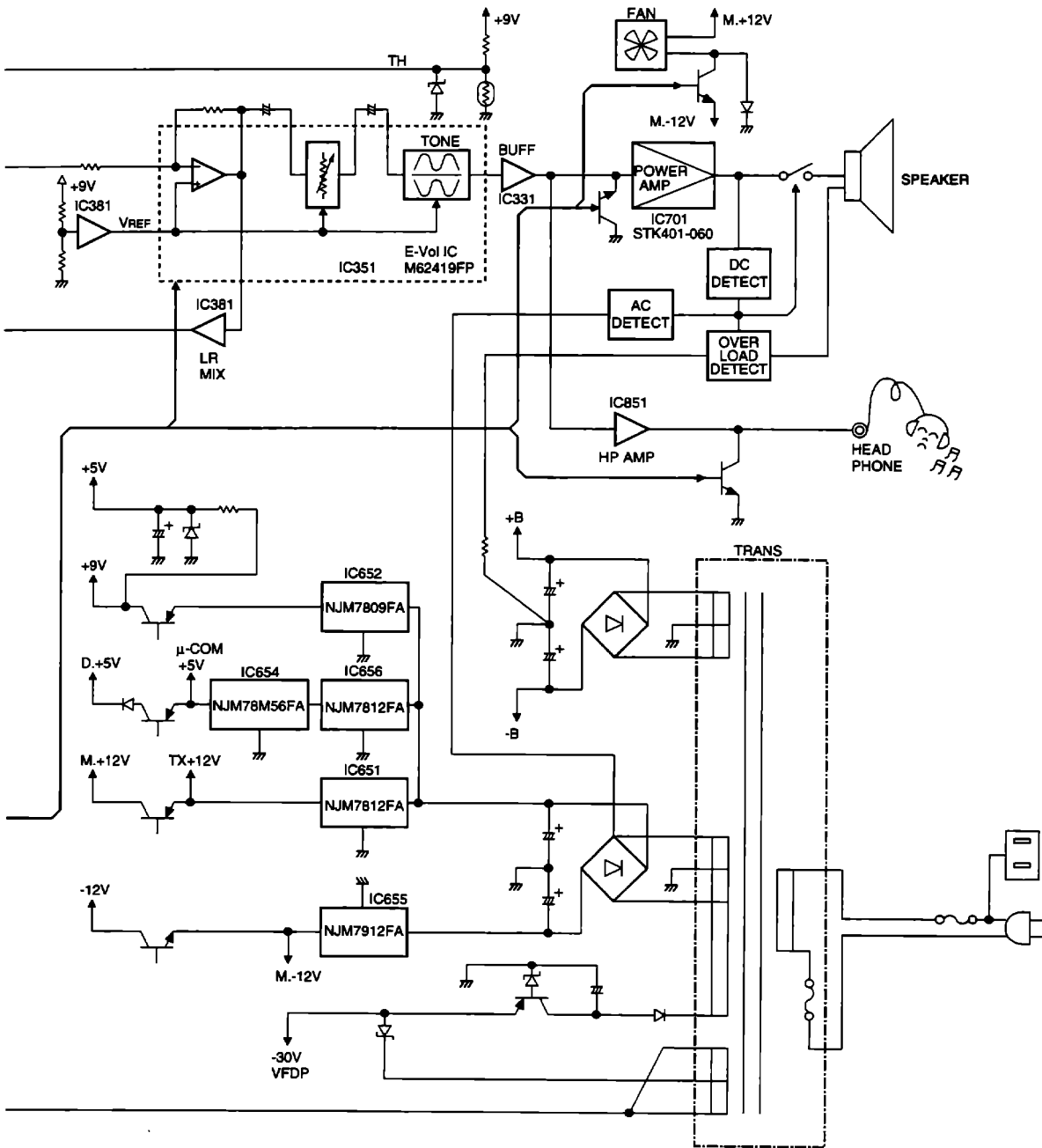


● Anode Connection

	10G~1G		10G~1G
P1	S39	P21	S16
P2	S36	P22	S17
P3	S37	P23	S18
P4	S40	P24	S19
P5	S38	P25	S20
P6	S1	P26	S21
P7	S2	P27	S22
P8	S3	P28	S23
P9	S4	P29	S24
P10	S5	P30	S25
P11	S6	P31	S26
P12	S7	P32	S27
P13	S8	P33	S28
P14	S9	P34	S29
P15	S10	P35	S30
P16	S11	P36	S31
P17	S12	P37	S32
P18	S13	P38	S33
P19	S14	P39	S34
P20	S15	P40	S35

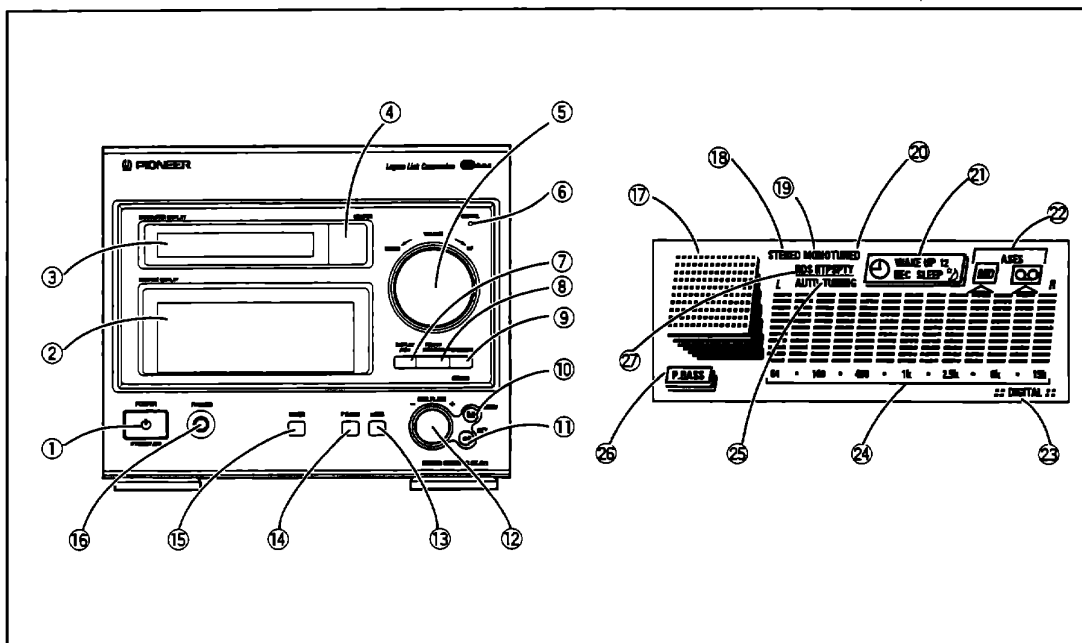
7.2 BLOCK DIAGRAM





8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES



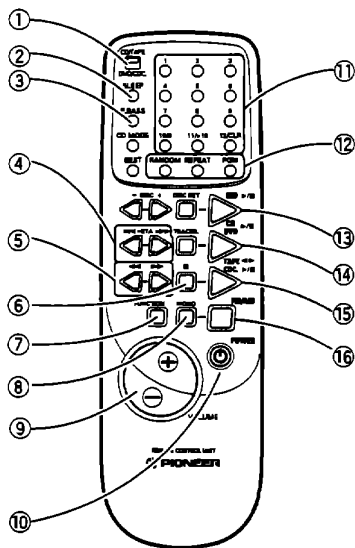
STEREO RECEIVER SX-F21

- ① **POWER, STANDBY/ON switch**
- ② **Graphic Display**
- ③ **Character Display**
- ④ **Remote sensor**
- ⑤ **VOLUME dial**
- ⑥ **DIGITAL indicator**
Lights when the component selected with the function selector is connected via digital cable.
- ⑦ **DISPLAY/RDS button**
- ⑧ **FM/AM/STATION button**
- ⑨ **FUNCTION button**
- ⑩ **MENU button**
- ⑪ **SET button**
- ⑫ **MULTI-JOG dial**
- ⑬ **ASSES button**
- ⑭ **P.BASS button**
- ⑮ **TIMER button**
- ⑯ **PHONES jack**
For use with headphones equipped with stereo miniplug. When headphones are connected, sound to the speakers is disabled.

[GRAPHIC DISPLAY]

- ⑰ Displays function
- ⑱ Lights during stereo radio reception
- ⑲ Lights when the MONO button is pressed.
- ⑳ Lights to indicate reception of radio broadcast
- ㉑ Timer indicator
- ㉒ ASSES indicator
- ㉓ DIGITAL indicator
- ㉔ Spectrum analyzer display
- ㉕ Lights during the AUTO TUNING mode
- ㉖ Lights when P. BASS is ON.
- ㉗ RDS indicator
 - RT: Lights during FM broadcast reception if RT is selected in the RDS mode.
 - PS: Lights during FM broadcast reception if PS is selected in the RDS mode.
 - PTY: Lights during FM broadcast reception if PTY or PTY SEARCH is selected in the RDS mode

The instructions given here describe functions available when the Component Select Switch is set to the "CD/TAPE" position.



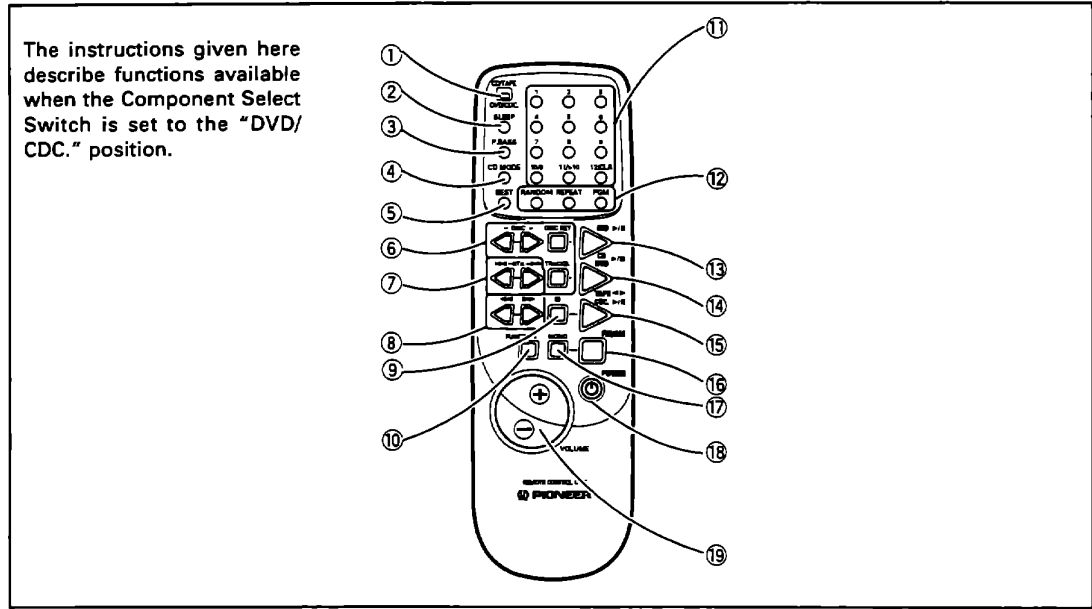
REMOTE CONTROL UNIT

■ white characters against a black background indicate functions of the stereo receiver selected with the function buttons.

NOTE:
This remote control unit cannot be used to control the optional PD-F25 CD player.

- ① **Component select switch**
Use this switch to select the component you wish to operate with the remote control unit. To operate a CD player, cassette deck or MD recorder, set the switch to the upper position. To operate an optional DVD player or CD changer, set the switch to the lower position.
- ② **SLEEP button**
- ③ **P.BASS button**
- ④ **TUNER**
- STA +: Press to receive broadcasting stations in the order stored in memory.
CD, MD
◀▶: Press to perform track search.
- ⑤ **CD, MD**
◀▶: Fast forward/fast reverse (manual search)
TAPE
◀▶: Fast forward/rewind
- ⑥ **CD, MD, TAPE**
■: Stop button

- ⑦ **FUNCTION button**
Press to select a desired playback component.
- ⑧ **MONO button**
Press to receive FM broadcasts in monaural mode.
- ⑨ **VOLUME buttons**
- ⑩ **POWER button**
- ⑪ **TUNER**
1-10, 11, 12: Use to select broadcast stations stored in memory.
Press once: stations 1-12.
Press twice: stations 13-24.
CD, MD
1-10, 11/>10: Press to select tracks.
12/CLR: Press to cancel program.
- ⑫ **CD**
RANDOM: Press for random playback
REPEAT: Press for repeat playback
PGM: Press to set programmed playback
MD
RANDOM: Press for random playback
REPEAT: Press for repeat playback
PGM: Press to set programmed playback
- ⑬ **MD playback/pause button (▶/||)**
- ⑭ **CD play/pause button (▶/||)**
- ⑮ **TAPE play button (◀▶)**
- ⑯ **Tuner band select button (FM/AM)**



■ white characters against a black background indicate functions of the stereo receiver selected with the function buttons.

NOTE:
This remote control unit cannot be used to control the optional PD-F25 CD player.

- ① **Component select switch**
Use this switch to select the component you wish to operate with the remote control unit. To operate a CD player, cassette deck or MD recorder, set the switch to the upper position. To operate an optional DVD player or CD changer, set the switch to the lower position.
- ② **SLEEP button**
- ③ **P.BASS button**
- ④ **CD MODE button**
Press to select CD changer play.
- ⑤ **BEST button**
Press to use the CD changer's "best selection" memory.
- ⑥ **CD CHANGER**
DISC (+, -): Press to select the desired disc.
DISC SET: Press to set the disc when selecting tracks and programs.
TRACK SET: Use to set the track number when selecting tracks and programs.
- ⑦ **DVD**
⏮, ⏭: Chapter skip
CD CHANGER
⏮, ⏭: Press for track search.

- ⑧ **DVD**
⏩, ⏪: Fast forward/fast reverse
CD CHANGER
⏩, ⏪: Fast forward/fast reverse (manual search)
- ⑨ **DVD, CD CHANGER**
■: Stop
- ⑩ **FUNCTION button**
Press to select a desired playback component (press successively to cycle between components).
- ⑪ **DVD**
1-10, 11/>10: Press to select chapter numbers.
12/CLR: Press to cancel program.
CD CHANGER
1-10, 11/>10: Press to select tracks.
12/CLR: Press to cancel program.
- ⑫ **DVD, CD CHANGER**
RANDOM: Press for random playback
REPEAT: Press for repeat playback
PGM: Press to set programmed playback
- ⑬ **MD playback/pause button (▶/||)**
- ⑭ **DVD playback/pause button (▶/||)**
- ⑮ **CD Changer playback/pause button (▶/||)**
- ⑯ **Tuner band (FM/AM) selector button**
- ⑰ **MONO button**
Press to receive FM broadcasts in monaural mode.
- ⑱ **POWER button**
- ⑲ **VOLUME buttons**

NOTE:
This remote control unit can be used to control an optional DVD player and CD changer.

■ SPECIFICATIONS

Stereo Receiver: SX-F21

Amplifier Section

Continuous power output (RMS)	50 W + 50 W
	(1 kHz, THD 10%, 6 Ω)
Continuous power output (DIN)	42 W + 42 W
	(1 kHz, THD 1%, 6 Ω)
Music power (DIN)	85 W + 85 W
	(1 kHz, THD 1%, 6 Ω)

FM Tuner Section

Frequency Range	87.5 - 108MHz
Antenna	75 Ω, unbalanced

AM Tuner Section

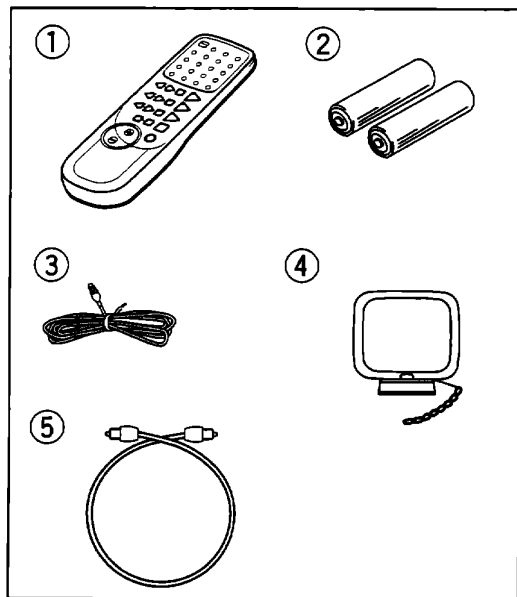
Frequency Range	531 kHz - 1,602 kHz
	(9 kHz step);
	530 kHz - 1,700 kHz (10 kHz step)
Antenna	Loop antenna
Power Requirements	AC 230 V, 50/60 Hz
Power Consumption	96 W
Dimensions	190 (W) x 160.5 (H) x 304 (D) mm
Weight	4.5 kg

Accessories

Operating Instructions	1
Warranty Card	1
FM T-type antenna	1
AM loop antenna	1
Remote control unit	1
AAA/R03 dry cell batteries	2
Optical fiber cables	2

NOTE:

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



- ① Remote control unit x 1
- ② AAA/R03 dry cell batteries x 2
- ③ FM T-type antenna x 1
- ④ AM loop antenna (Shown assembled) x 1
- ⑤ Optical fiber cables x 2

Precaution for handling the optical fiber cable

Do not bend the optical fiber cable at a sharp angle since this may damage the cable. Take particular care to avoid bending when installing in a rack, etc. When forming the cable into a loop for storage purposes, make sure that the diameter of the loop is at least 15 cm. When connecting the cable, ensure that the connectors are inserted as far as they will go to safeguard against incomplete connection.

