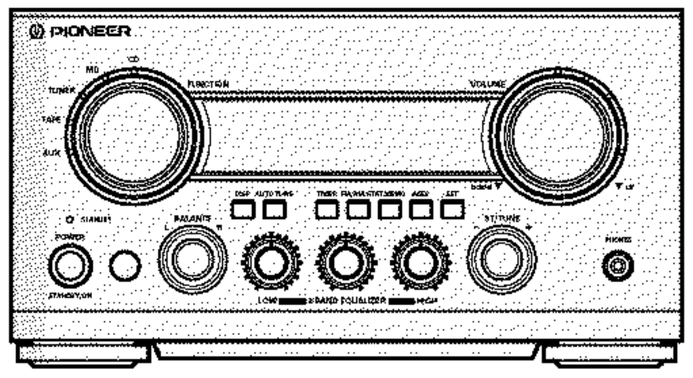
Service Manual

PIONEER®
The Art of Entertainment



ORDER NO.
RRV1937

STEREO TUNER AMPLIFIER
SX-R9

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

Type	Model	Power Requirement	Remarks
	SX-R9		
MY	○	AC220–230V	

- **This product is a system(s) component.**
  This product does not function properly when independent; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.

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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 MODÈLE 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.

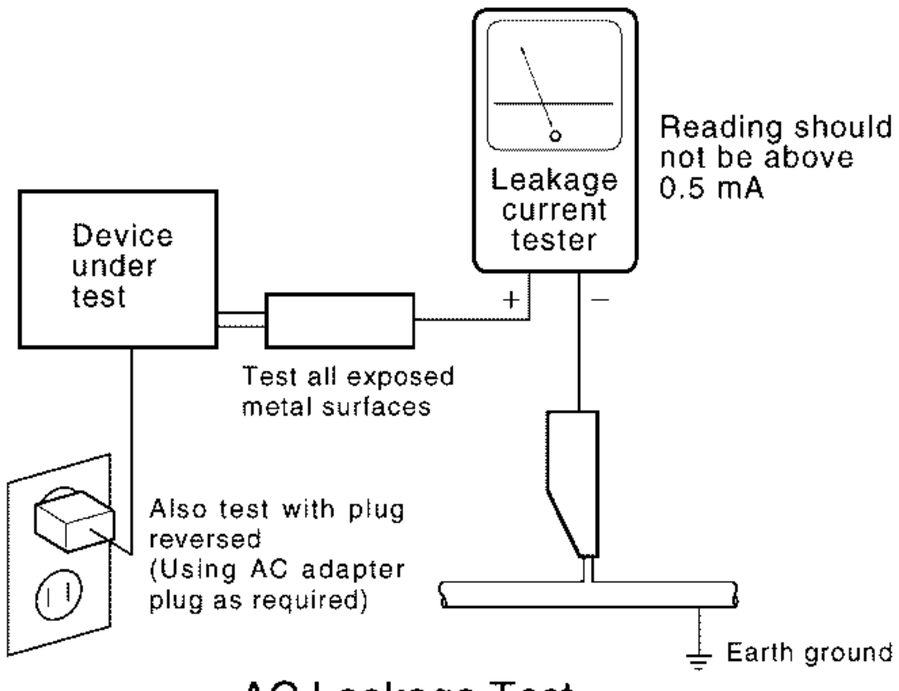
(FOR USA MODEL ONLY)

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.

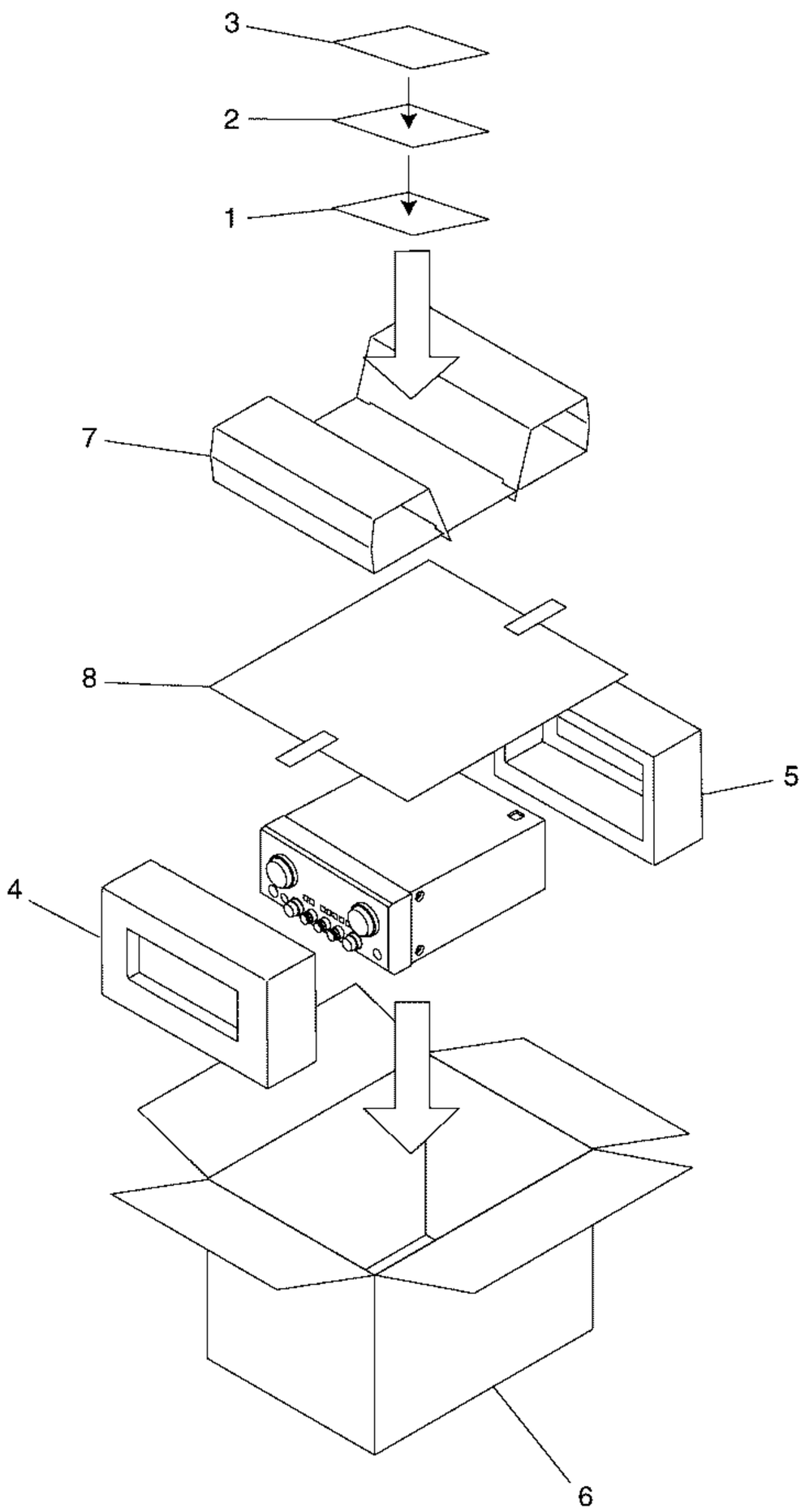
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts 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 ⚠ 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.*
- *Screw adjacent to ▼ mark on the product are used for disassembly.*

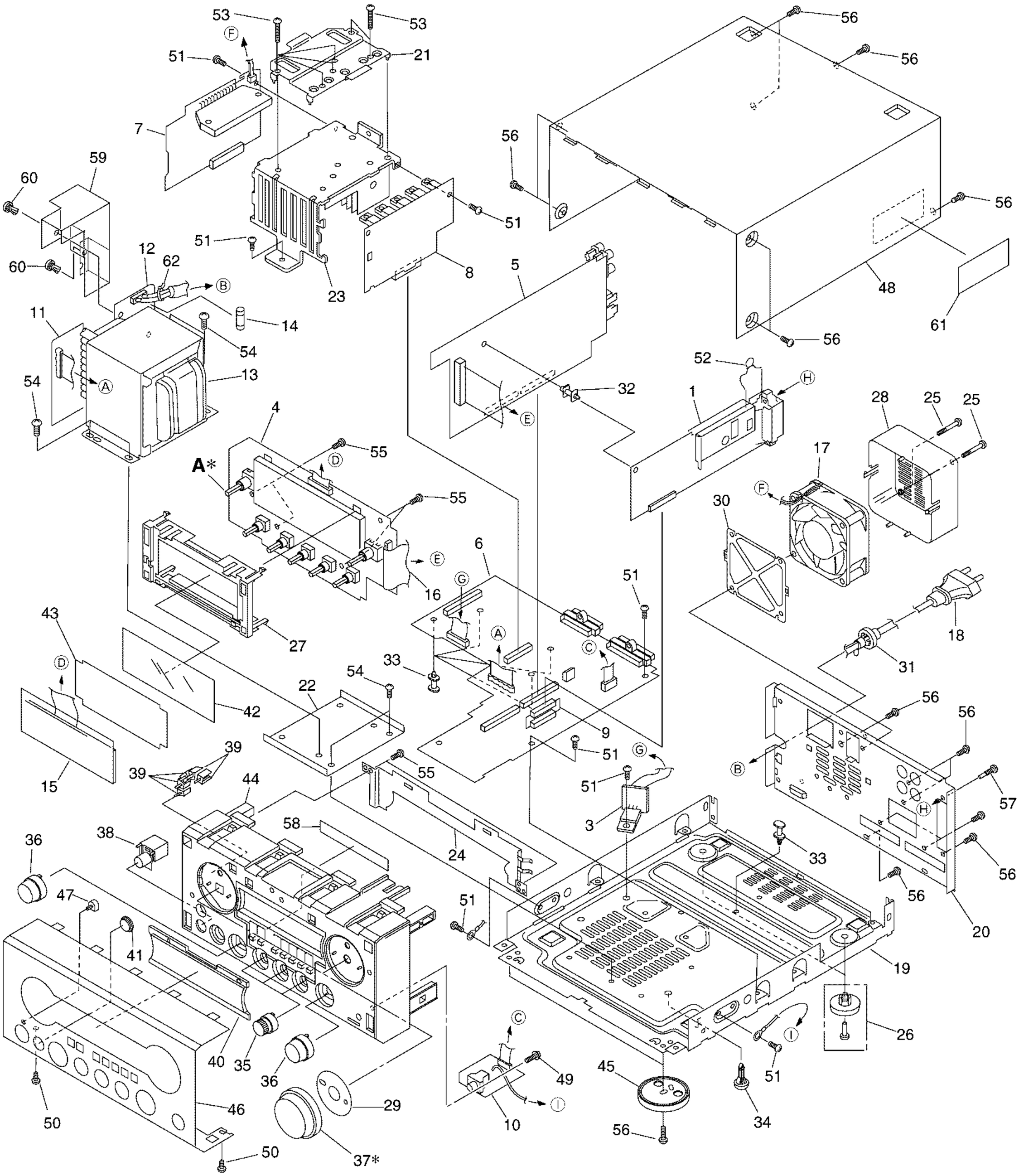
2.1 PACKING



PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	Operating Instructions (English/French/German/Italian Dutch/Spanish)	ARE7178
	2	Caution Sheet	ARM7034
NSP	3	Warranty Card	ARY7008
	4	Pad F SX	AHA7185
	5	Pad R SX	AHA7186
	6	Packing Case SX	AHD7610
	7	Spacer SX	AHD7617
	8	Sheet (500×650×0.5)	AHG7050

2.2 EXTERIOR



Note*) When installing 37, support the plate behind the No. 4 DISPLAY assy function volume (A in the middle of the diagram) with your finger.

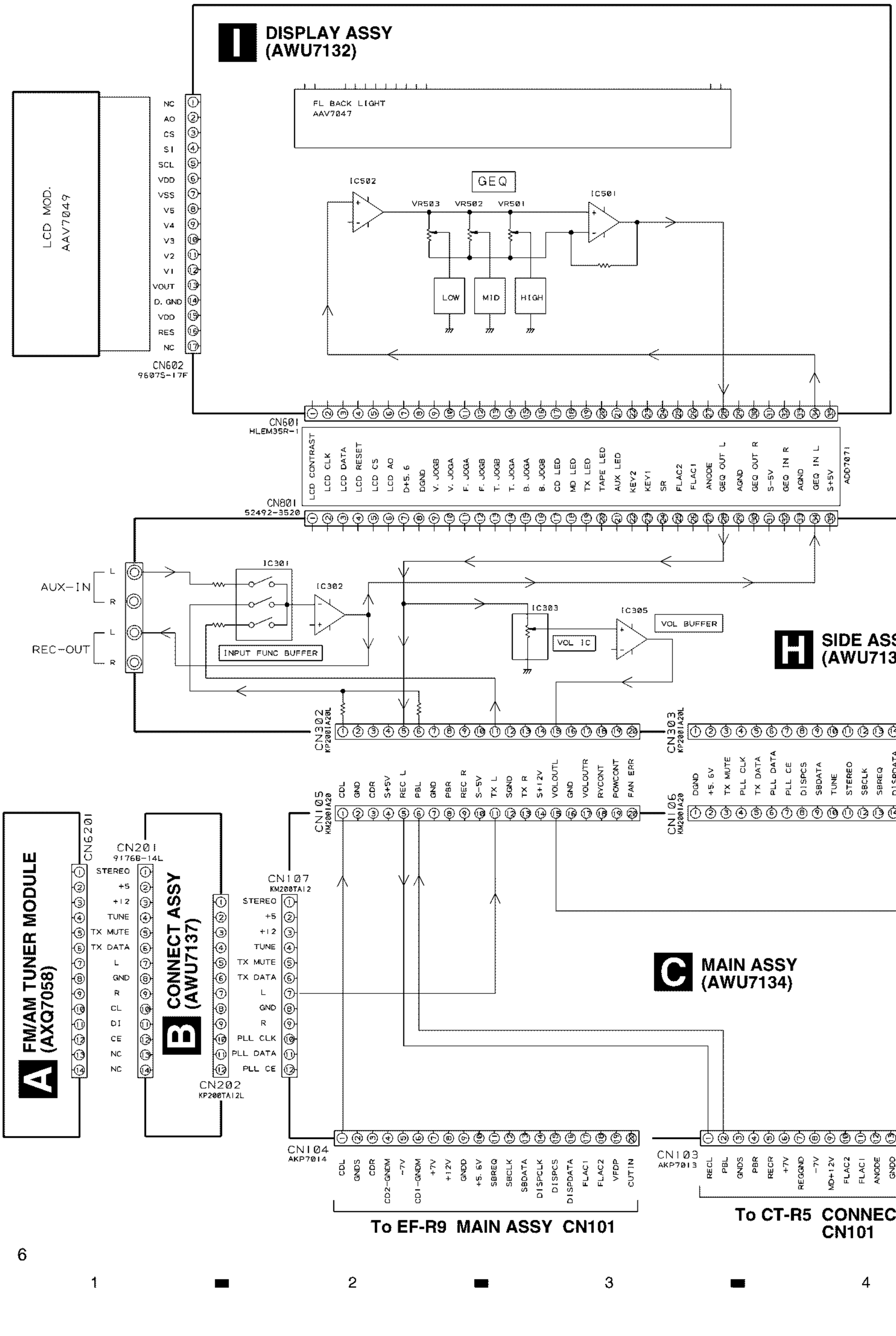
EXTERIOR PARTS LIST

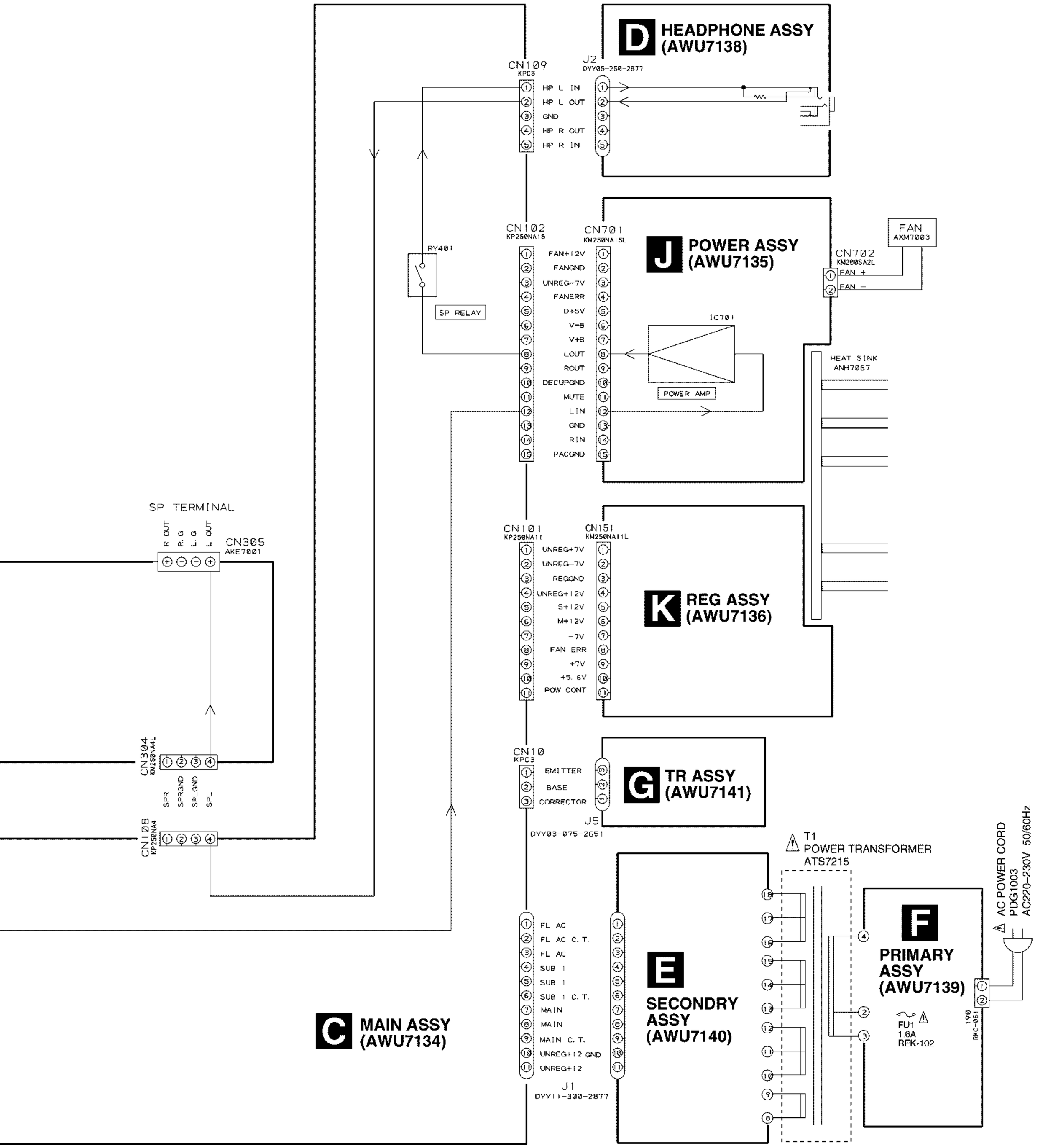
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	FM/AM TUNER MODULE	AXQ7058		36	Tuning Knob	AAB7136
	2	.....			37	VOL.Knob Assy	AAC7015
	3	TR ASSY	AWU7141		38	Power Button	AAD7410
	4	DISPLAY ASSY	AWU7132		39	Function Lens SX	AAK7462
	5	SIDE ASSY	AWU7133		40	Display Window SX	AAK7463
	6	MAIN ASSY	AWU7134		41	Remocon Lens	AAK7465
	7	POWER ASSY	AWU7135		42	Display Filter SX	AAK7466
	8	REG ASSY	AWU7136		43	Spread Sheet	AAK7526
	9	CONNECT ASSY	AWU7137		44	Panel Base SX	AMB7459
NSP	10	HEADPHONE ASSY	AWU7138		45	Insulator Assy	AMR7189
NSP	11	PRIMARY ASSY	AWU7139		46	AL Panel SX	ANB7129
NSP	12	SECONDRY ASSY	AWU7140		47	LED Lens	PNW2019
⚠	13	Power Transformer	ATS7215		48	Bonnet SX	AZN7700
⚠	14	Fuse 1.6A (FU1)	REK–102		49	Screw With Washer	ABA1005
	15	LCD Display	AAV7049		50	Screw	BBT30P080FZK
	16	Lead Card 35P	ADD7071		51	Screw	BBZ30P060FCC
	17	DC Fan Motor	AXM7003		52	Ceramic Capacitor	CKDYB102K50
⚠	18	AC Power Cord	PDG1003		53	Screw	BBZ30P180FMC
NSP	19	Chassis SX,EF,RC	ANA7062		54	Screw	BCZ40P080FMC
	20	Rear Panel SX	ANC7690		55	Screw	PPZ30P080FMC
	21	Holder Plate SX	ANG7154		56	Screw	VBZ30P080FZK
	22	Trans Holder	ANG7182		57	Screw	ABA–115
NSP	23	Heat Sink	ANH7067		58	Blind Sheet	AWL7031
	24	Shield Plate SX	ANK7039		59	Shield Plate	AAK7577
	25	Screw	ABA7003		60	Nylon Rivet	AEC–525
	26	Leg Assy SX	AEC7113		61	Caution Label	ARW7036
	27	LCD Stay Mold	AMR7185		62	Binder	Z09–056
	28	Fan Cover	AMR7193				
	29	Ring Spacer	AWL7032				
	30	Fan Spacer	AMR7195				
	31	Cord Stopper	CM–22B				
	32	Panel Spacer	DEC1388				
NSP	33	Card Spacer	REC1156				
	34	Locking Card Spacer	VEC1596				
	35	Equalizer Knob	AAB7135				

3. SCHEMATIC DIAGRAM

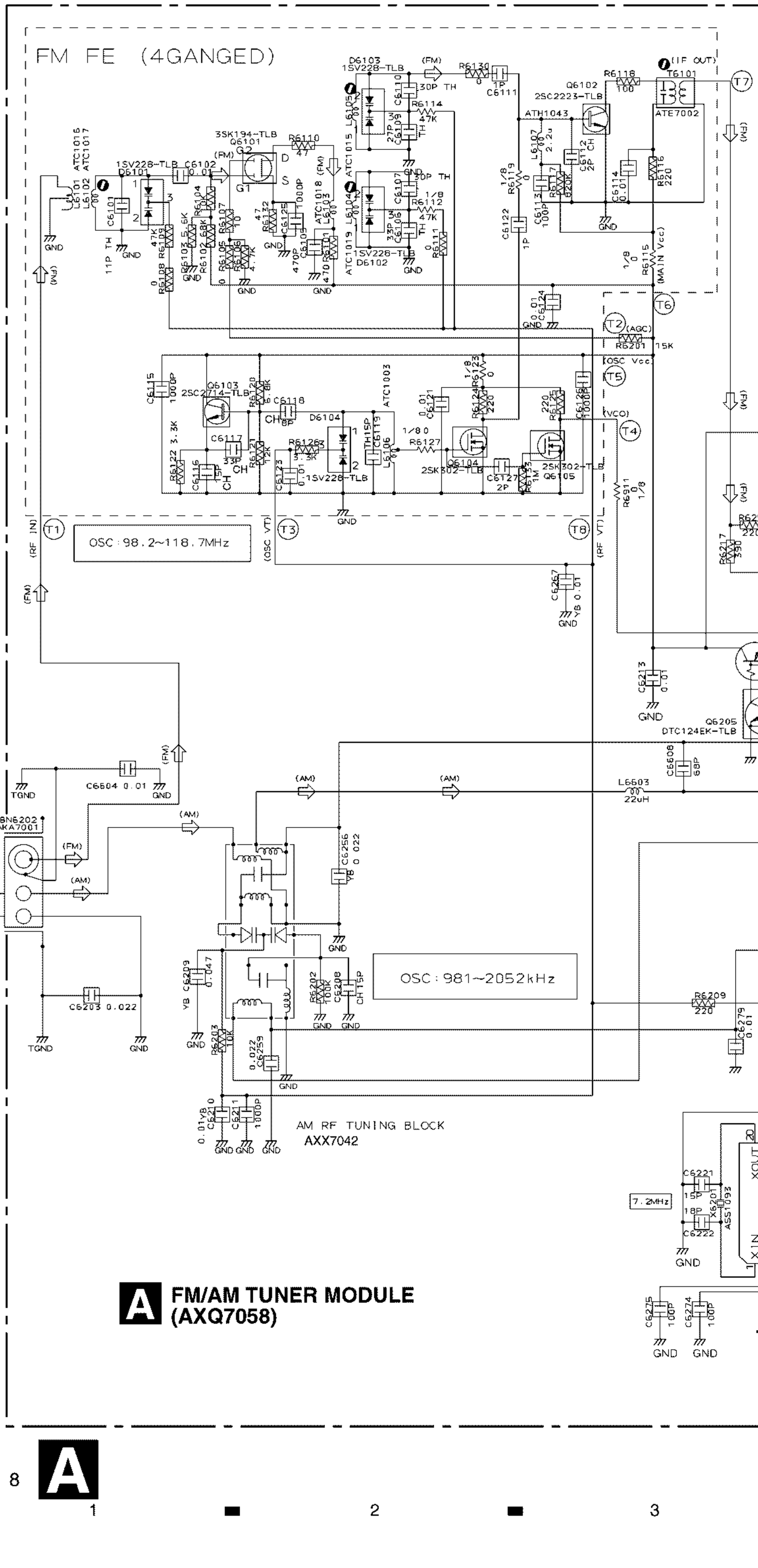
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS and PARTS LIST" or "PCB PARTS LIST".

3.1 OVERALL SCHEMATIC DIAGRAM




D HEADPHONE ASSY (AWU7138)
CN109
KPC5
J2
DYY05-250-2677
HP L IN
HP L OUT
GND
HP R OUT
HP R IN
CN102
KP250NA15
CN701
KM250NA15L
RY401
SP RELAY
FAN+12V
FANGND
UNREG-7V
FANERR
D+5V
V-B
V+B
LOUT
ROUT
DECUPGND
MUTE
LIN
GND
RIN
PACGND
J POWER ASSY (AWU7135)
1C701
POWER AMP
FAN
AXM7003
CN702
KM200SA2L
FAN +
FAN -
HEAT SINK
ANH7067
SP TERMINAL
R OUT
R G
L G
L OUT
CN305
AKE7001
CN304
KM250NA4L
SPR
SPRGND
SPLGND
SPL
CN108
KP250NA4
CN101
KP250NA11
CN151
KM250NA11L
UNREG+7V
UNREG-7V
REGGND
UNREG+12V
S+12V
M+12V
-7V
FAN ERR
+7V
+5.6V
POW CONT
K REG ASSY (AWU7136)
CN10
KPC3
EMITTER
BASE
CORRECTOR
J5
DYY03-075-2651
G TR ASSY (AWU7141)
T1
POWER TRANSFORMER
ATS7215
AC POWER CORD
PDG1003
AC220-230V 50/60Hz
F PRIMARY ASSY (AWU7139)
FU1
1.6A
REK-102
E SECONDRY ASSY (AWU7140)
FL AC
FL AC C.T.
FL AC
SUB 1
SUB 1
SUB 1 C.T.
MAIN
MAIN
MAIN C.T.
UNREG+12 GND
UNREG+12
J1
DYY11-300-2877
C MAIN ASSY (AWU7134)

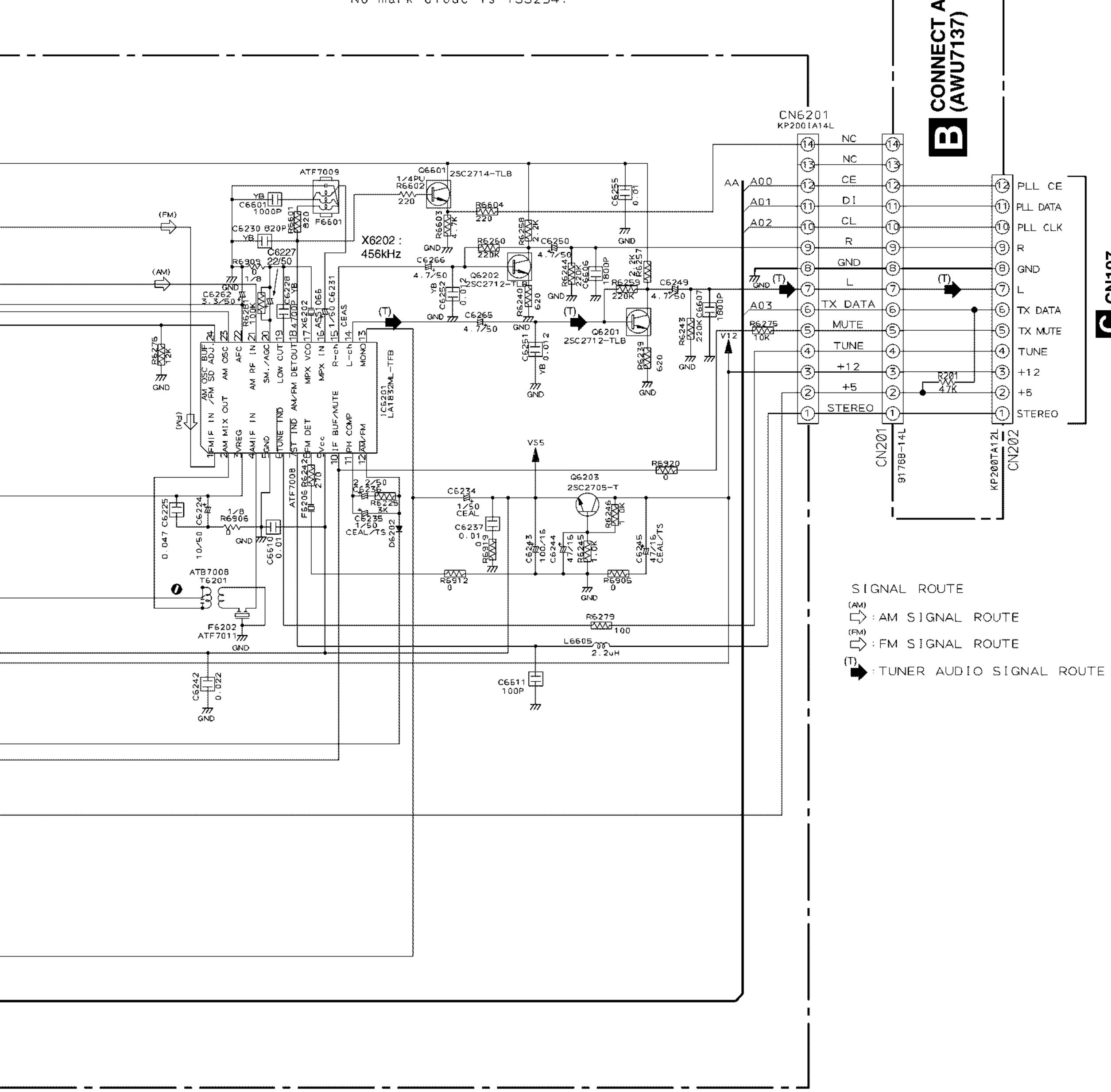
3.2 FM/AM TUNER MODULE AND CONNECT ASSY



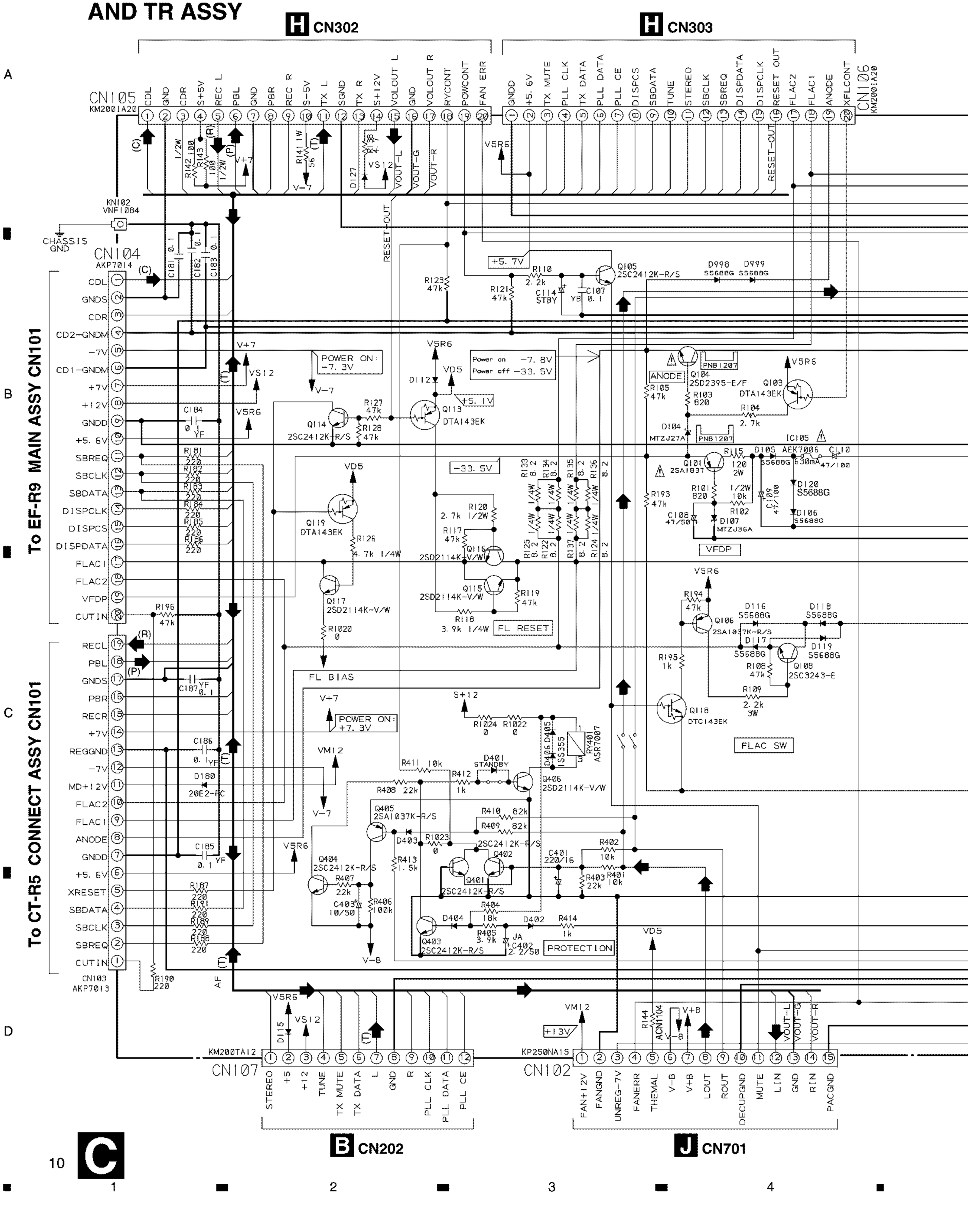
A FM/AM TUNER MODULE (AXQ7058)

Notes

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



3.3 MAIN ASSY, HEADPHONE ASSY, SECONDRY ASSY, PRIMARY ASSY AND TR ASSY



SIGNAL ROUTE
- ➡: AUDIO SIGNAL
- (R) ➡: DECK or MD RECORDING SIGNAL
- (P) ➡: DECK or MD PLAYBACK SIGNAL
- (C) ➡: CD AUDIO SIGNAL
- (T) ➡: TUNER AUDIO SIGNAL

NOTE

RESISTORS Ω
- RS1/10S

CAPACITORS μF
- CEAT
- CEJA
- CEHAQ
- CKSQYF
- CKSQYB
- CQMA

DIODES
- 1SS254

H CN304
SPR, SPRGND, SPLGND, SPL

CN108 KP250NA4

D HEADPHONE ASSY (AWU7138)
J2 DYY05-250-2877
CN109 KPC5
HP L IN, HP L OUT, GND, HP R OUT, HP R IN
51052-0500
R391 330 2W, R392 330 2W
JA391 AKN7013
C392 560P, C391 560P, C393 0.1
J3 DE010WC0
CHASSIS GND

KN101 VNF1084
CHASSIS GND

D101 D3SBA20(B)
V+B, C113 0.01/250 M
C101 ACH7079 4700/42
R131 (2W) 0.22
C102 ACH7079 4700/42
R132 0.22 (2W)
ANH1021
V-B, D5SBA20 DI02
IC112
C103 4700/25
C104 2200/25

D191 1SS355, D193 1SS355, V5R6
Q181 DTC143EK, C193 47/50
DTC143TK Q182, R199 4.7k, D192 1SS355, Q183 DTC143EK

5152-1100
FL AC, FL AC C.T., FL AC, SUBI, SUBI, SUB1 C.T., MAIN, MAIN, MAIN C.T., UNREG+12GND, UNREG+12
J1 DYY11-300-2877

IC101 AEK7021 7A
IC102 AEK7021 7A
IC110 AEK7022 10A
IC111 AEK7022 10A
C121 YB 0.1, C122 YB 0.1

D2SBA20(B) D103
IC103 AEK7018 4A
C105 2200/35
IC104 AEK7018 4A

T1 POWER TRANSFORMER ATS7215
FU1: 1.6A REK-102
AKR1003
H101, H102, FU1
C191 ACG7020, C192 ACG7020
L101 ATF-151
CN190 RKC-061
AC POWER CORD PDG1003 AC220-230V 50/60Hz
LIVE, NEUTRAL

F PRIMARY ASSY (AWU7139)

E SECONDRY ASSY (AWU7140)

● NOTE FOR FUSE REPLACEMENT

● CAUTION: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TIME AND RATINGS ONLY.

R192 10k
R1021 0
DB010NT0

VS12
Power on +12V
S+12
Q109 2SB1237X-Q/R
R111 47k
+12V
D110
R112 2.2k
Q110 DTC143EK

IC105 AEK7020 125mA

-22V
FL BIAS
R107 820
D108 MTZJ11C
D109 MTZJ11C
C106 47/50ZZ HAQ
R106 1k 1/8W
IC107 AEK7002 250mA
V-B

CN10 KPC3
EMITTER, COLLECTOR, BASE
J5 DYY03-075-2651
Q107 2SB1566-E/F
51052-0300
G TR ASSY (AWU7141)

VM12, V+7, S+12, V-7, V5R6

C MAIN ASSY (AWU7134)

KP250NA11
CN101
UNREG+7V, UNREG-7V, REGGND, UNREG+12V, S+12V, M+12V, -7V, FAN ERR, +7V, +5.6V, POW CONT

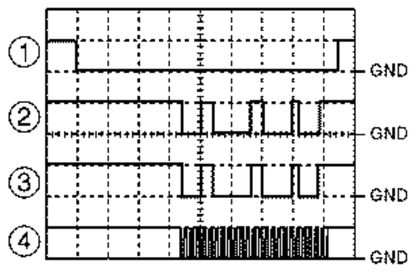
K CN151

3.4 SIDE ASSY

Waveforms of SIDE Assy

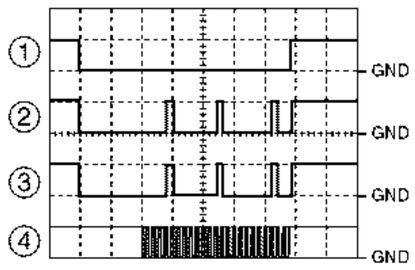
① IC801-Pin50 (SB REQ)
② IC801-Pin77 (SB DATA IN)
③ IC801-Pin78 (SB DATA OUT)
④ IC801-Pin52 (SB CLK)

When FED is pressed with the CT-R5 in another mode (data output from CT-R5):
5V/div, 10ms/div.



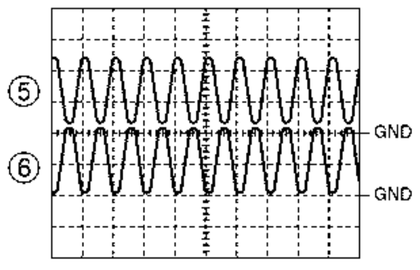
① IC801-Pin50 (SB REQ)
② IC801-Pin77 (SB DATA IN)
③ IC801-Pin78 (SB DATA OUT)
④ IC801-Pin52 (SB CLK)

When function is switched with the SX-R9 in another mode (data output from SX-R9):
5V/div, 10ms/div.



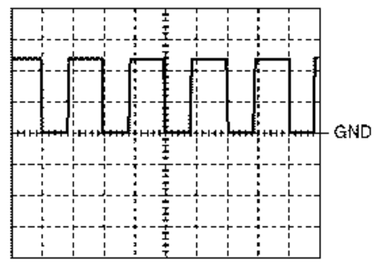
⑤ IC801-Pin31 (EXTAL)
⑥ IC801-Pin32 (XTAL)

2V/div, 10ns/div.



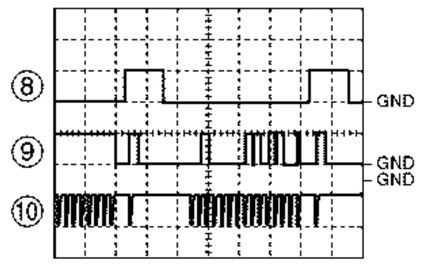
⑦ IC801-Pin60 (AC CLOCK)

2V/div, 10ms/div.



⑧ IC801-Pin64 (DISP CS)
⑨ IC801-Pin49 (DISP SL)
⑩ IC801-Pin48 (DISPCLK)

5V/div, 2ms/div.



SIGNAL ROUTE
➡: AUDIO SIGNAL
(A)➡: AUX AUDIO SIGNAL
(R)➡: DECK RECORDING SIGNAL
(P)➡: DECK PLAYBACK SIGNAL
(C)➡: CD AUDIO SIGNAL
(T)➡: TUNER AUDIO SIGNAL

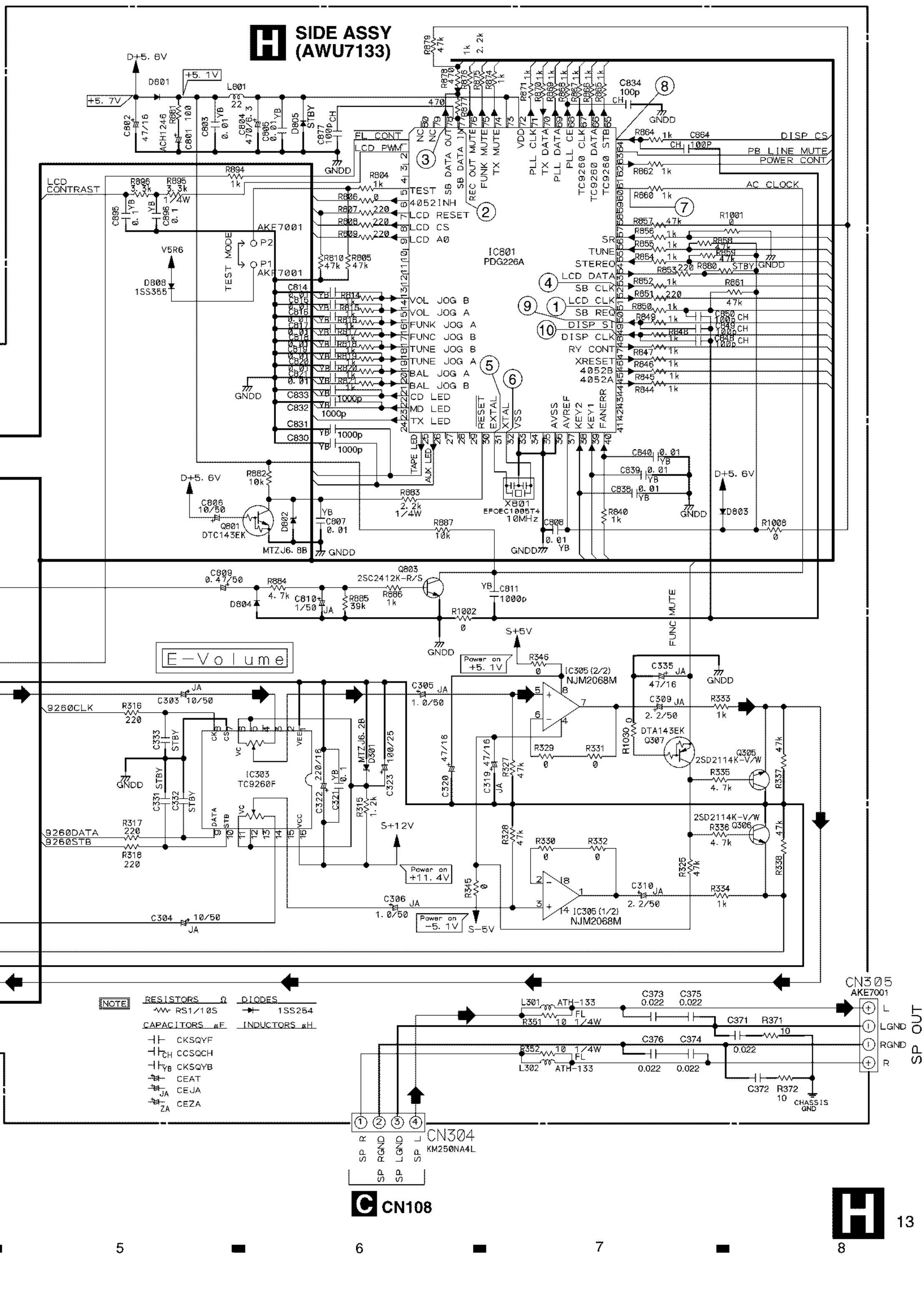
A	B	INH	INPUT SELECT
H	H	L	TUNER
H	L	L	AUX
L	H	L	PLAY (CDorMDorTC)
L	L	L	NONE
–	–	H	MUTE

CN601
CN801 52492-3520
CN301 (1/2) AKB7015
CN301 (2/2) AKB7015
CN302 KP200IA20L
CN303 KP200IA20L
IC301 BU4052BCF
IC302 (1/2) BA4558F-HT
IC302 (2/2) BA4558F-HT
Q301 2SD2114K-V/W
Q302 2SD2114K-V/W
Q303 DTA143EK
Q308 DTA143EK
Q309 2SC2412K-R/S
Q310 2SC2412K-R/S
D113 MTZJ5.1B
D114 MTZJ5.1B
D302
INPUT SELECT
REC-OUT MUTE
PB LINE MUTE
AUX IN
REC OUT
CHASSIS GND
S+5V
S-5V
S+12V
D+5.6V
GNDD

CN105: CD L, CD GND, CD R, S+5V, REC L, PB L, SYSTEM GND, PB R, REC R, S-5V, TX L, MASTER GND, TX R, S+12V, VOL OUT L, VOL GND, VOL OUT R, RY CONT, POW CONT, FAN ERR

CN106: GNDD, +5.6V, TX MUTE, PLL CLK, TX DATA, PLL DATA, PLL CE, DISP CS, SB DATA, TUNE, STEREO, SB CLK, SB REQ, DISP DATA, DISP CLK, RESETOUT, FLAC2, FLAC1, ANODE, FL CONT

SIDE ASSY (AWU7133)



NOTE

RESISTORS Ω — RS1/10S

DIODES — 1SS254

CAPACITORS μF — CKSQYF, CCSQCH, CKSQYB, CEAT, CEJA, CEZA

INDUCTORS μH

C CN108

3.5 DISPLAY ASSY

DISPLAY ASSY (AWU7132)

CN602 9607S-17F

NC AO CS SI SCL VDD VSS V5 V4 V3 V2 V1 VOUT D. GND VDD RES NC

C624 0.1 C625 0.1 C603 0.1 C604 0.1 C605 0.1 C606 0.1 C607 0.1 L603 22

R619 470 R620 470 R621 470 R622 470 R623 470 LCDRESET R641 1.5K C614 0.1

VD+5V

LCDAO LCDCS LCDDATA LCDCLK

601 GP1U26X

R639 1.5K R637 1.5K R635 1.5K R633 1.5K 220P YB C622 C621 C620 C619

C623 0.1 +3V D631 MTZJ3.0B C601 0.01 YB C602 0.01 GNDD

Q606 LCDCONTRAST D632 MTZJ4.7B R625 220 Power on +1.9V R626 1.2k S-5V

R627 10 R631 470 VD+5V

R601 10k R602 2.7k R603 5.6k R604 18k R605 10k R606 2.7k R607 5.6k R608 18k

C609 0.01 YB

S601 TIMER S602 AUTO TUNE S603 DISP S604 POWER S605 SET S606 ASES S607 ST/MEMORY S608 FM/AM/ST

KEY1 GNDD KEY2 S601~S608:ASG1034

VD+5V D608 C626 0.1 GNDD +5.7V GNDD

CN801

LCD CONTRAST 1 LCDCONTRAST
LCD CLK 2 LCDCLK
LCD DATA 3 LCDDATA
LCD RESET 4 LCDRESET
LCD CS 5 LCDCS
LCD AO 6 LCDAO
D+5.6 7
DGND 8
V. JOGB 9 V. JOGB
V. JOGA 10 V. JOGA
F. JOGA 11 F. JOGA
F. JOGB 12 F. JOGB
T. JOGB 13 T. JOGB
T. JOGA 14 T. JOGA
B. JOGA 15 B. JOGA
B. JOGB 16 B. JOGB
CD LED 17 CD
MD LED 18 MD
TX LED 19 TX
TAPE LED 20 TAPE
AUX LED 21 AUX
KEY2 22 KEY2
KEY1 23 KEY1
SR 24
FLAC2 25
FLAC1 26
ANODE 27
GEQ OUT L 28
AGND 29
GEQ OUT R 30
S-5V 31
GEQ IN R 32
AGND 33
GEQ IN L 34
S+5V 35

C631 1000p YB GNDD

CN601 HLEM35S-1

SIGNAL ROUTE
➡ : AUDIO SIGNAL

S601 : TIMER
S602 : AUTO TUNE
S603 : DISP
S604 : POWER
S605 : SET
S606 : ASES
S607 : ST/MEMORY
S608 : FM/AM/ST
S609 : FUNCTION JOG
S610 : VOL.JOG
S611 : BLANCE JOG
S612 : TUNING JOG

C629 0.1 S+5V GNDA S-5V

S+5V Power on +5.1V C501 100/16 GNDA

R525 10K R527 8.2K [C502 (2/2) BA4558F-HT R501 4.7K R1009 0

S+5V GNDA

[C502 (1/2) BA4558F-HT R526 10K R528 8.2K S-5V

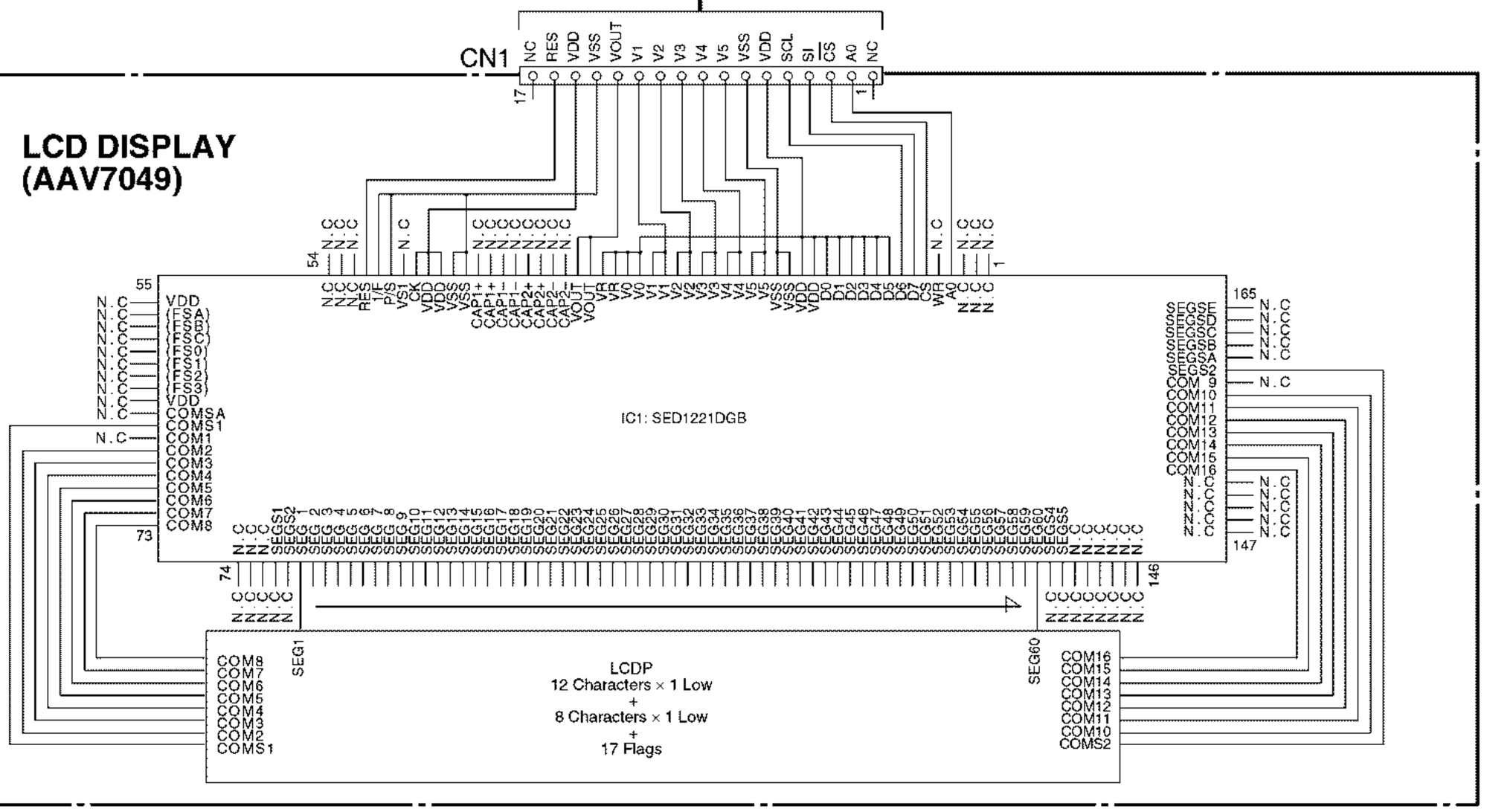
Power on -5.1V S-5V C502 100/16 GNDA R502 4.7K R1003 0

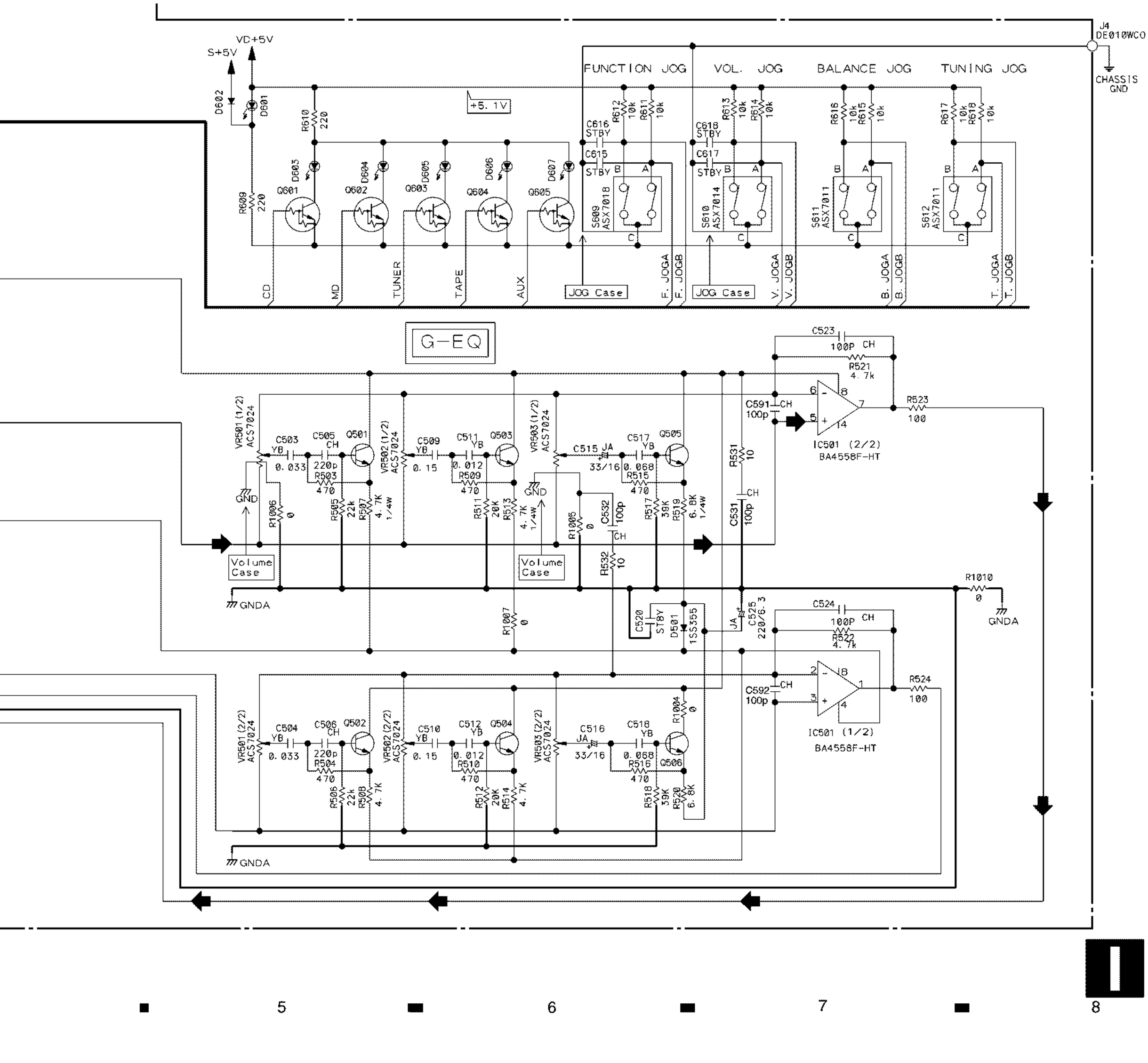
42 41 15 12 11 10 9 8 7 6 5 2 1

V501 AAV7047-

FL

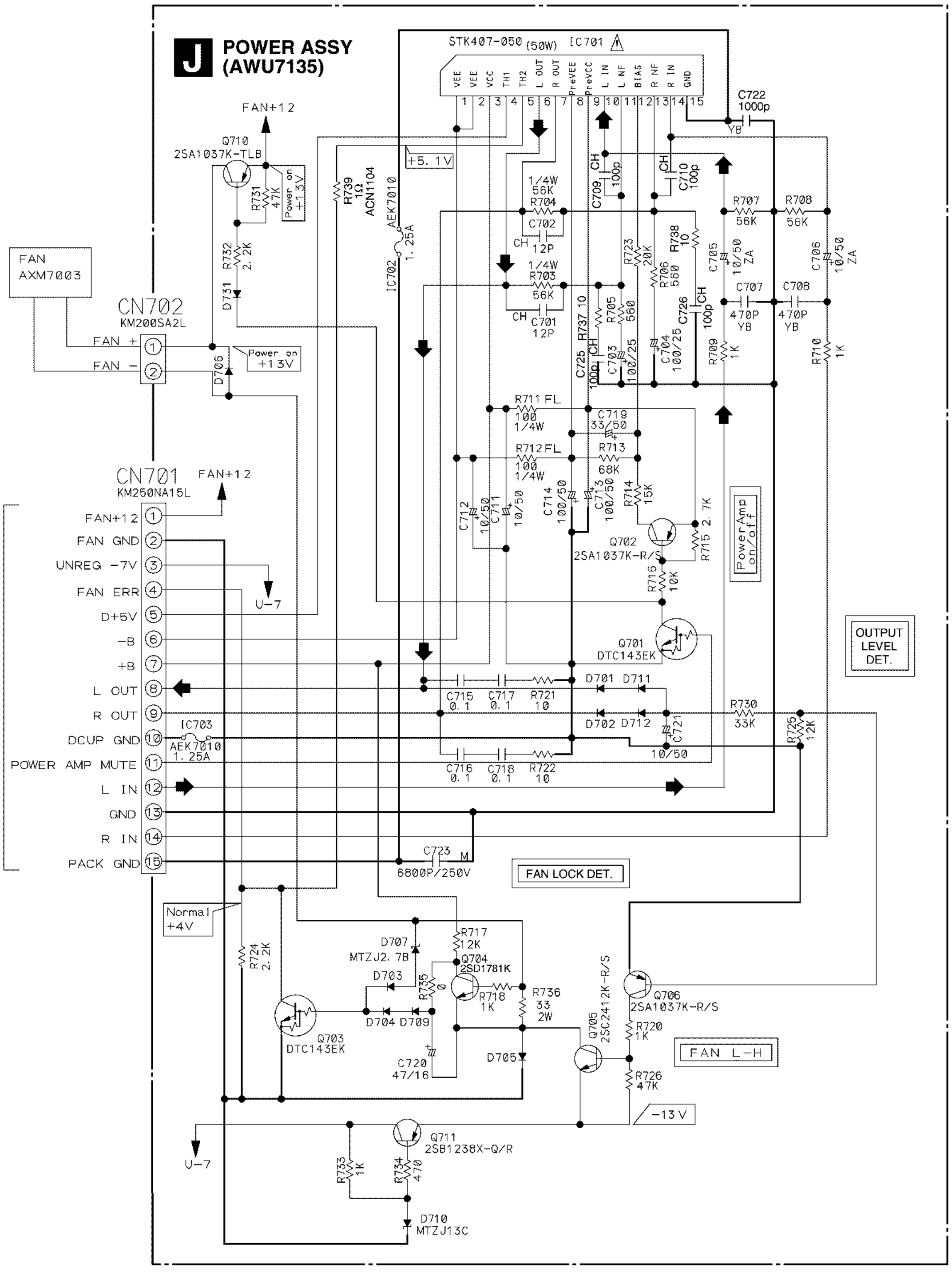
LCD DISPLAY (AAV7049)



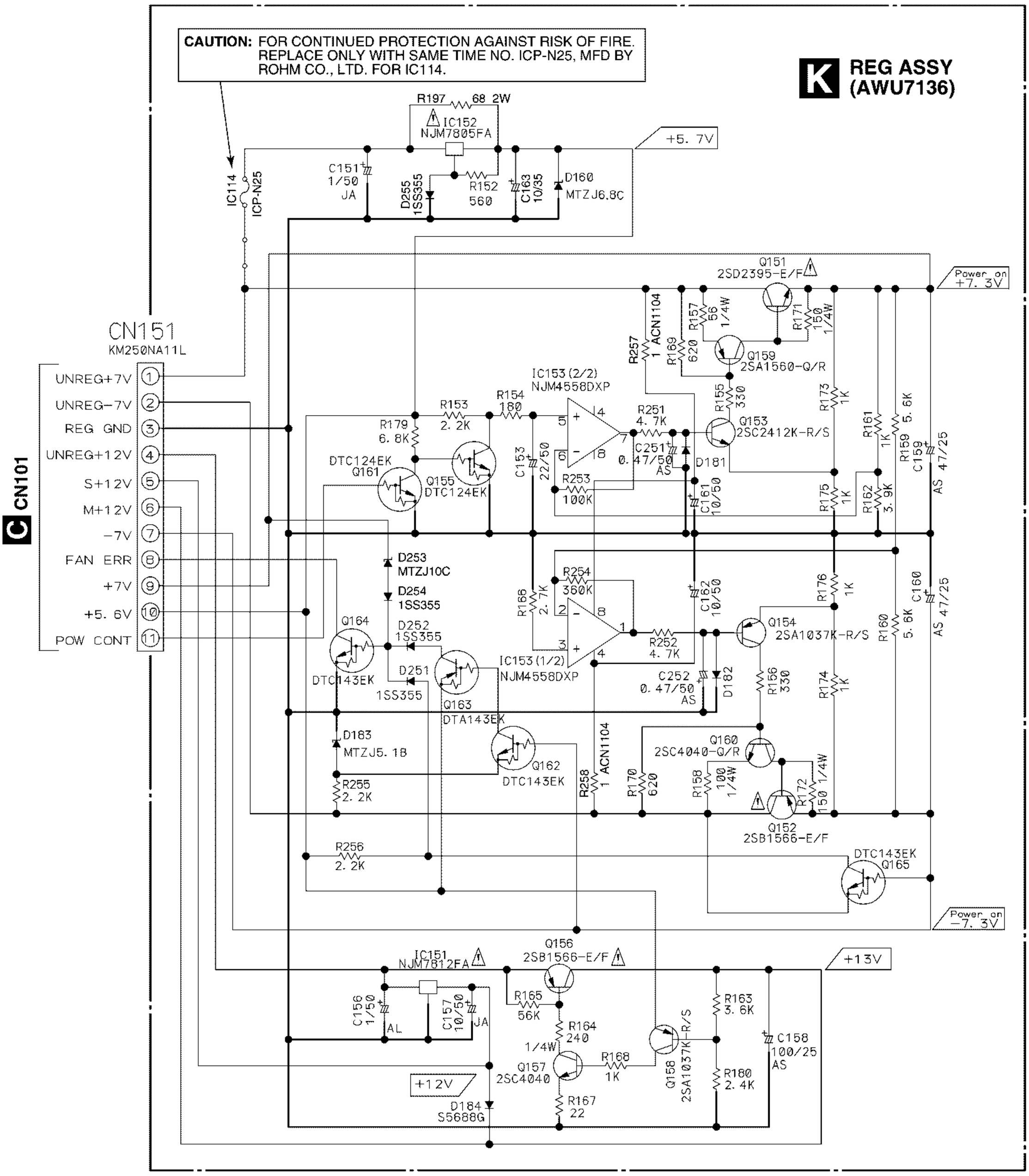


3.6 POWER ASSY

SIGNAL ROUTE
➡: AUDIO SIGNAL



3.7 REG ASSY



NOTE

RESISTORS Ω

RS1/10S

1/4WFL=RD1/4LMF

DIODES

1SS254-T

CAPACITORS μF

CKSQYF

CKSQYB (YB)

CCSQCH (CH)

CQMA (M)

CEAT

CEZA (ZA)

CEAS (AS)

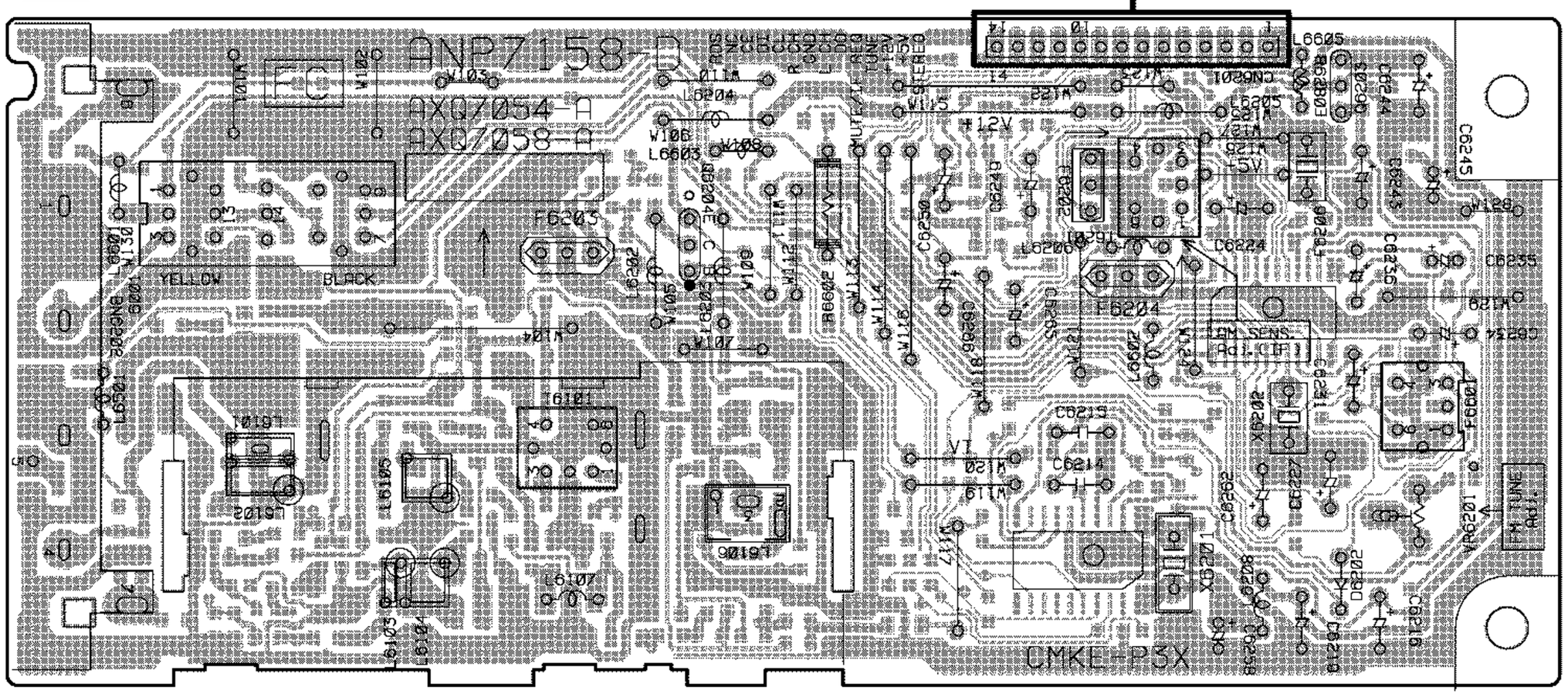
4. PCB CONNECTION DIAGRAM

4.1 FM/AM TUNER MODULE

A FM/AM TUNER MODULE

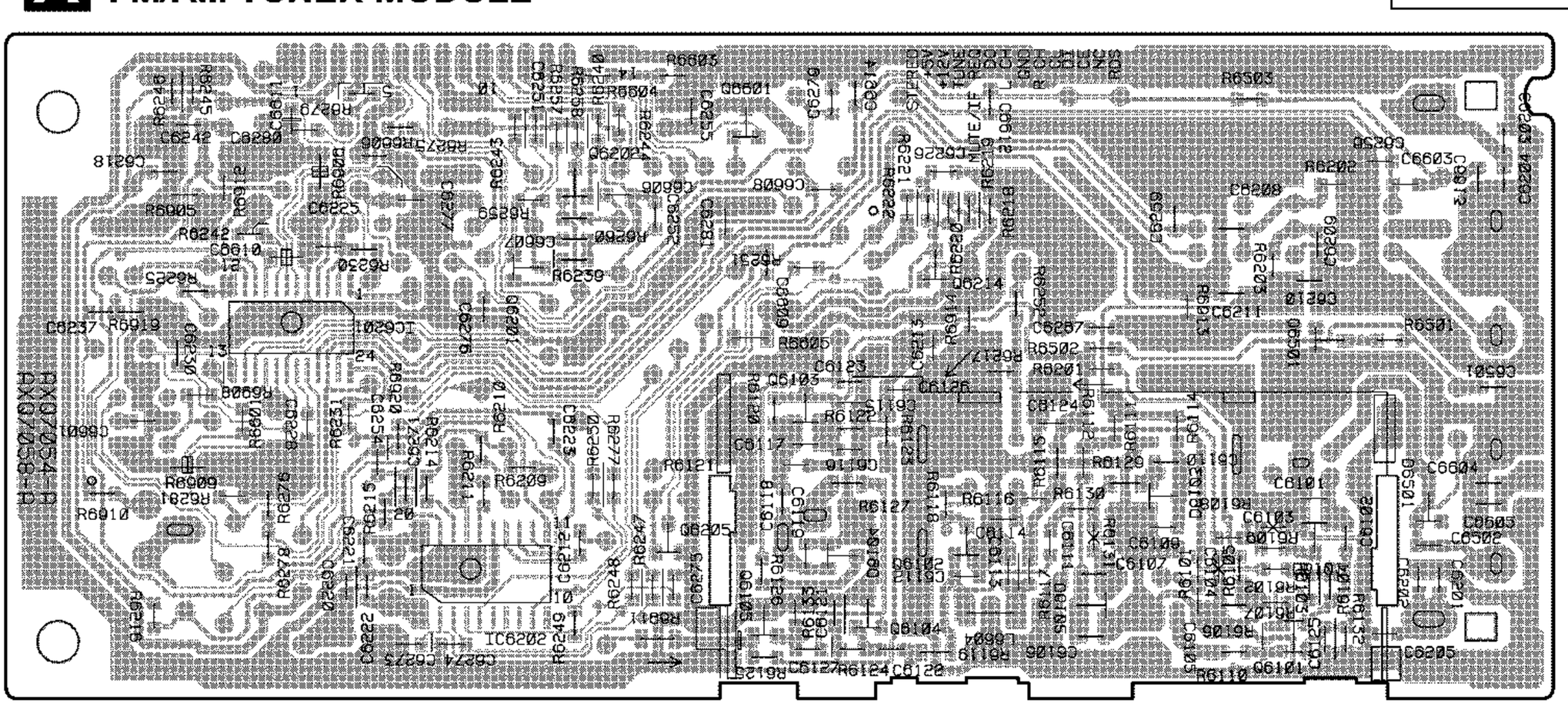
B CN201

SIDE A



A FM/AM TUNER MODULE

SIDE B



(ANP7158-D)

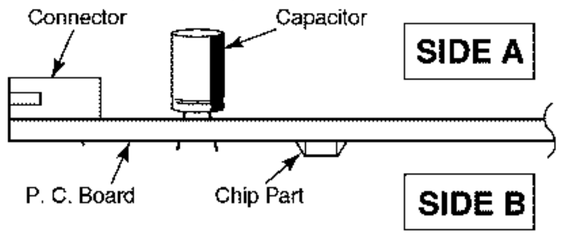
NOTE FOR PCB DIAGRAMS:

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

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
D G S	D G S D G S	Field effect transistor
		Resistor array
		3-terminal regulator

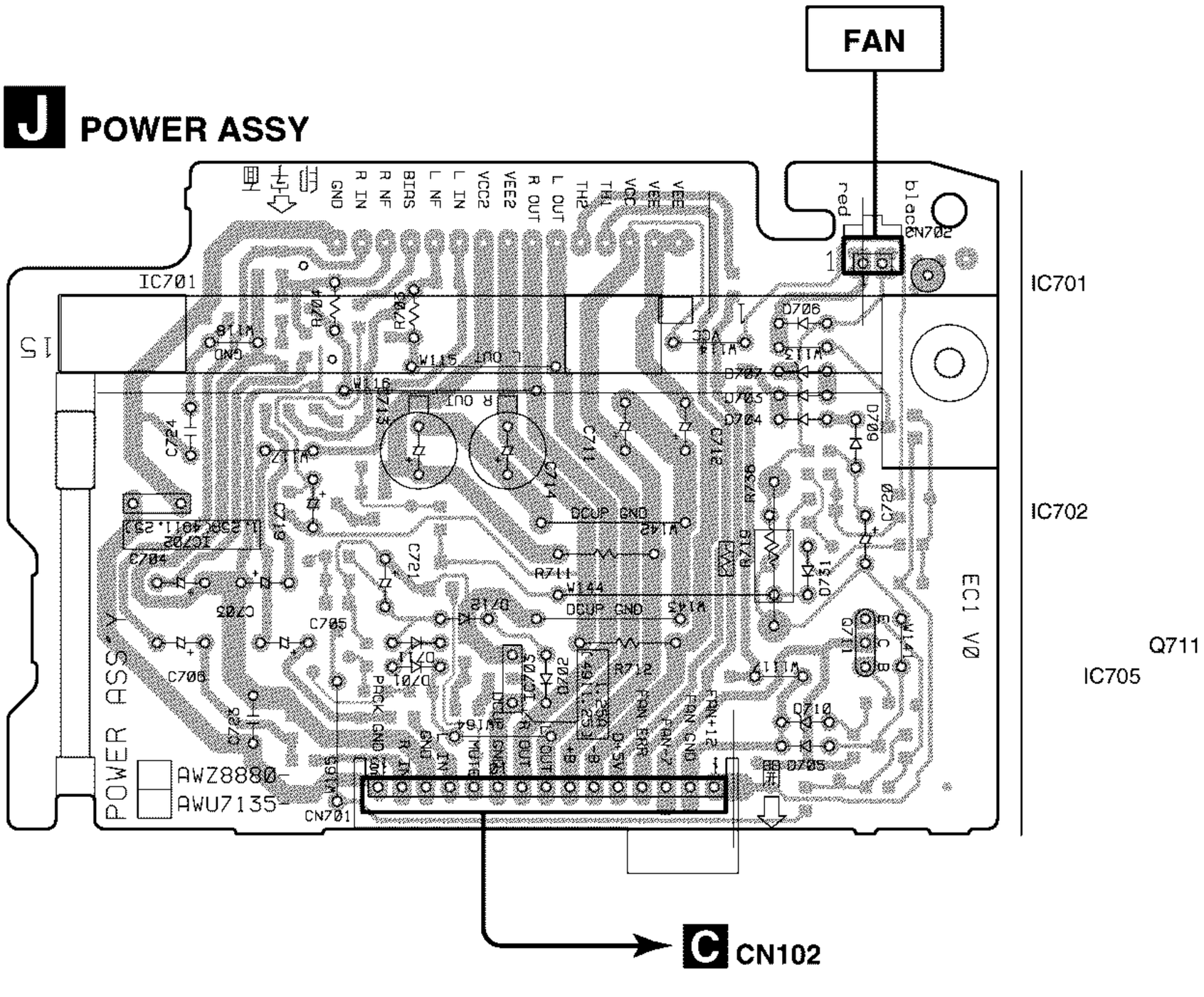
3. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. Viewpoint of PCB diagrams



4.2 POWER ASSY

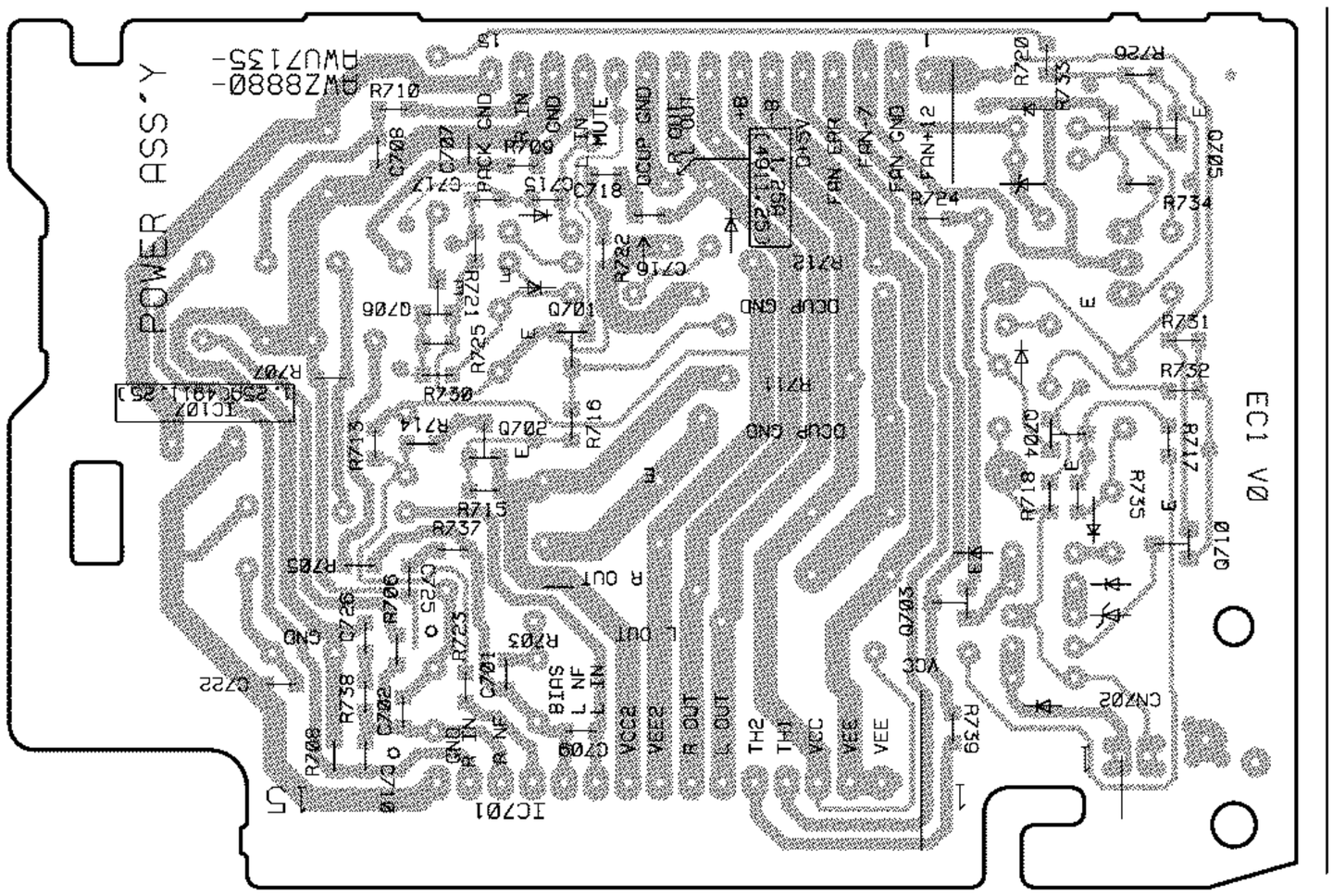
SIDE A

J POWER ASSY



SIDE B

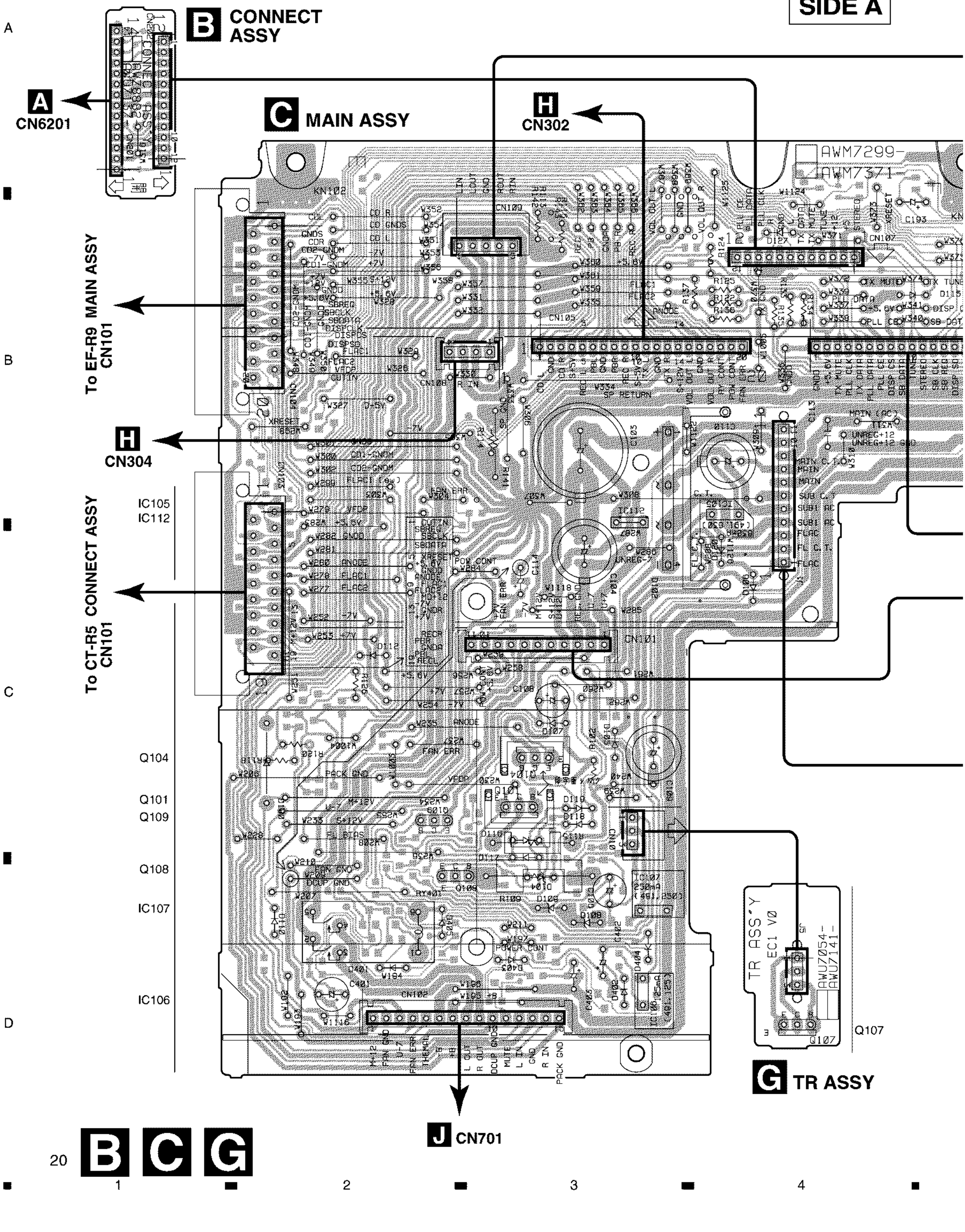
J POWER ASSY



(ANP7202–C)

4.3 CONNECT ASSY, MAIN ASSY, HEADPHONE ASSY, SECONDRY ASSY, PRIMARY ASSY, TR ASSY AND REG ASSY

SIDE A

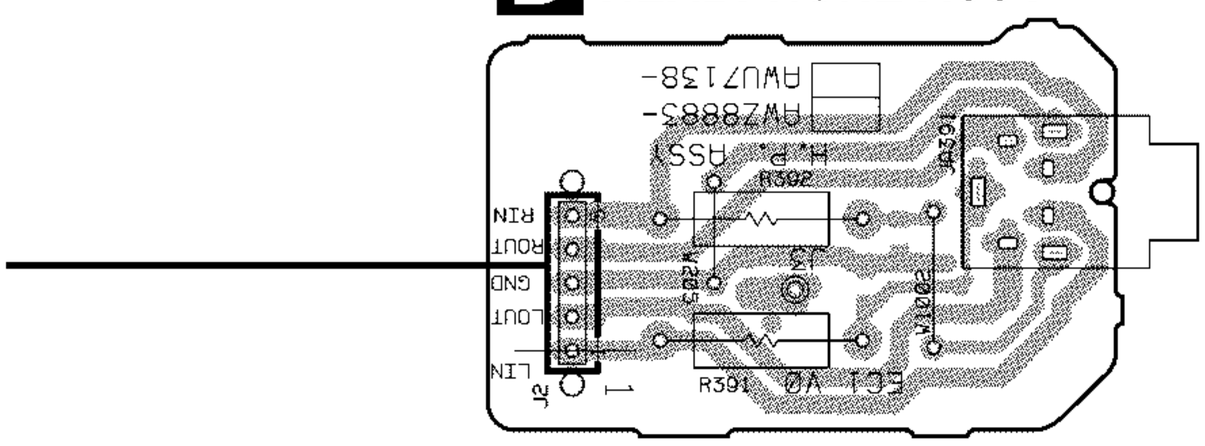


20 B C G

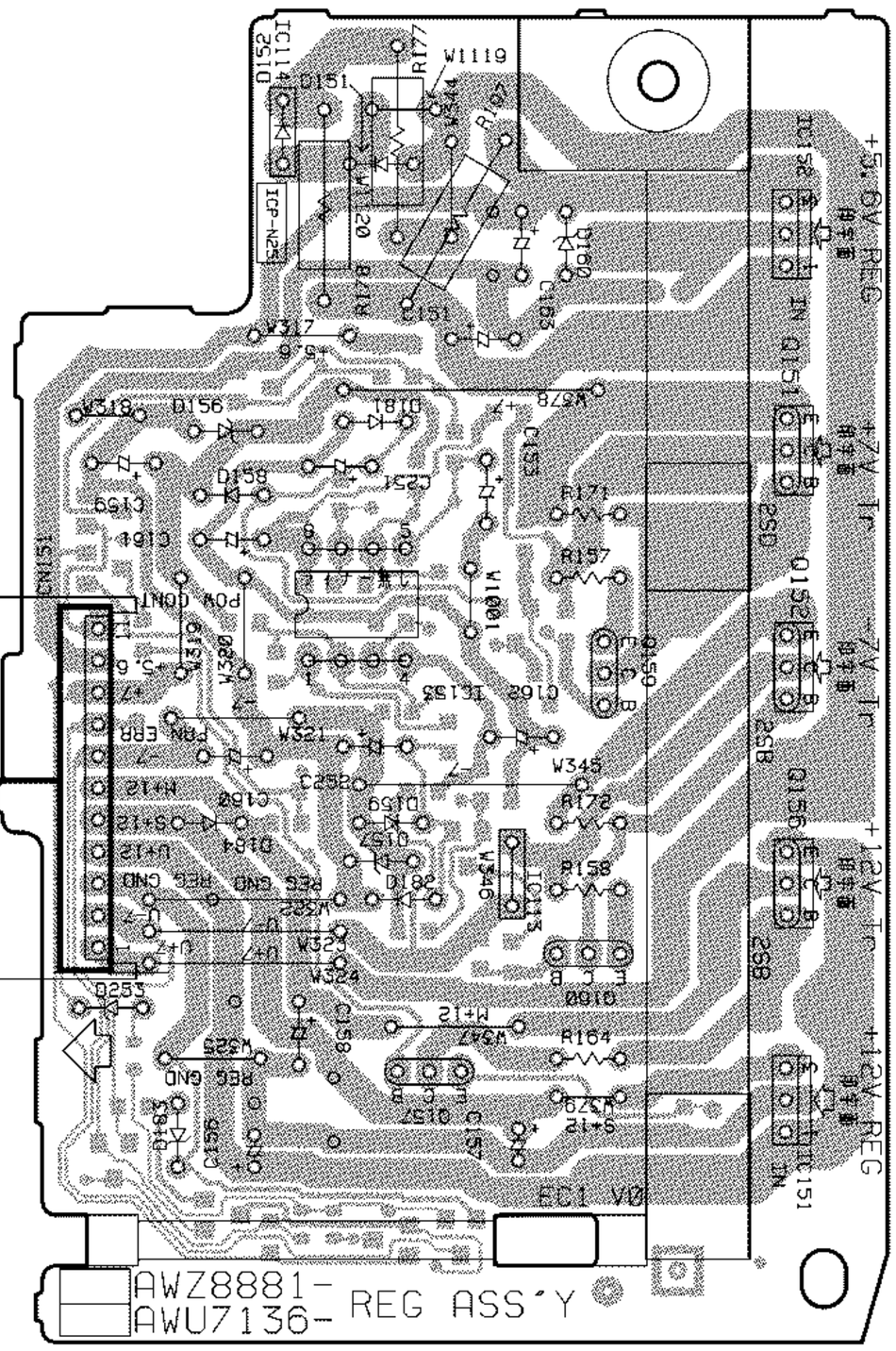
SX-R9

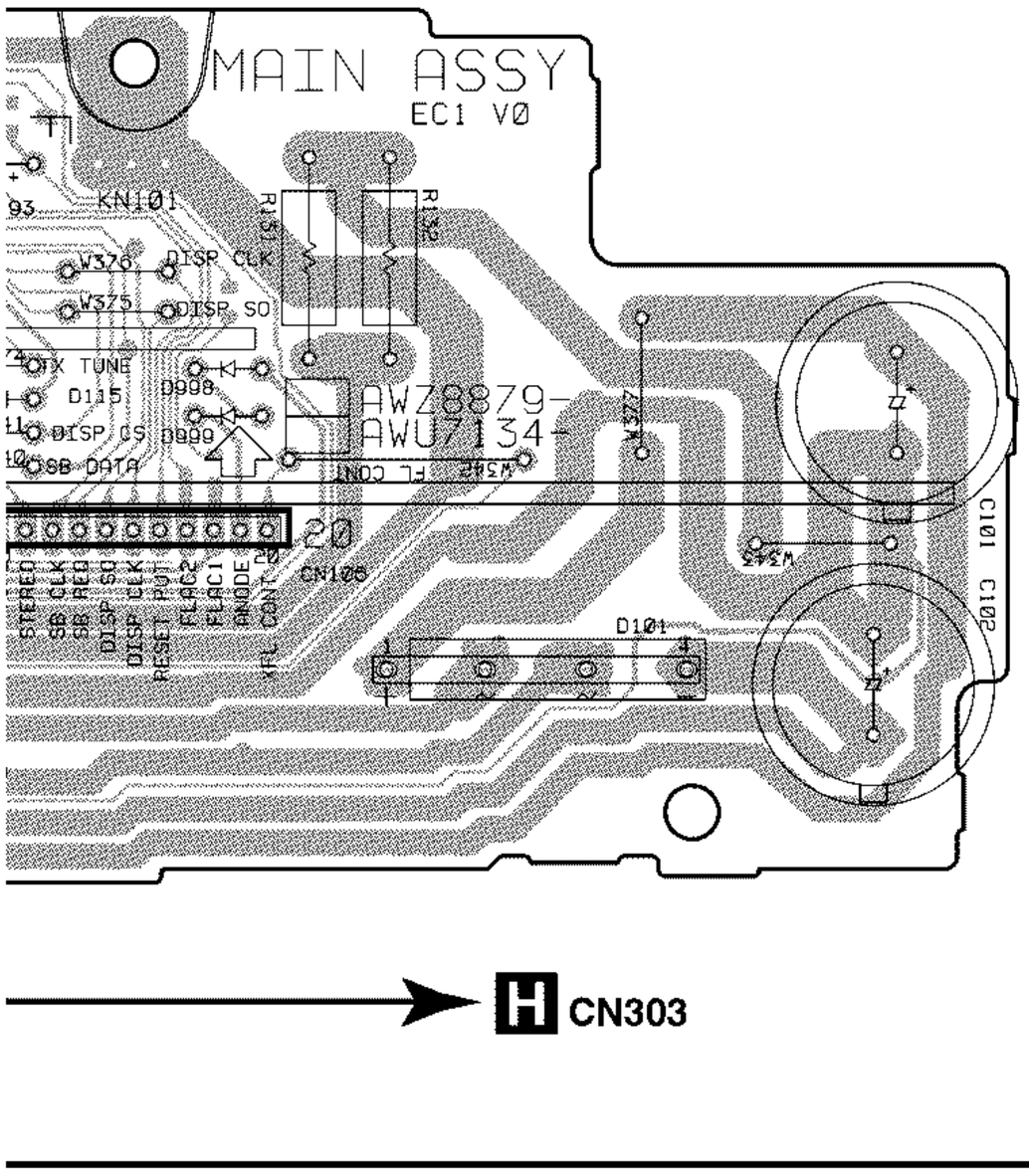
SIDE A

D HEADPHONE ASSY



K REG ASSY

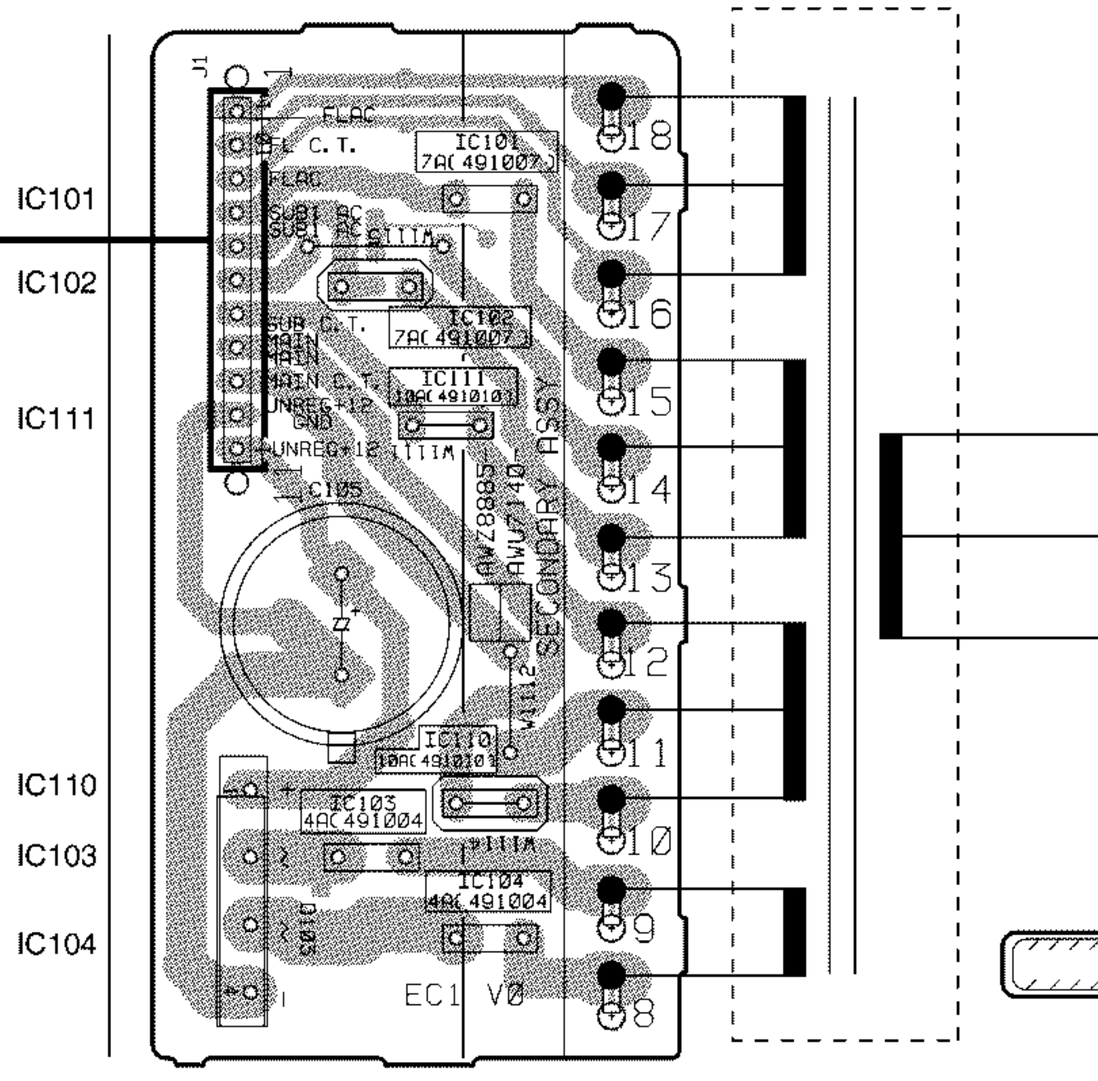


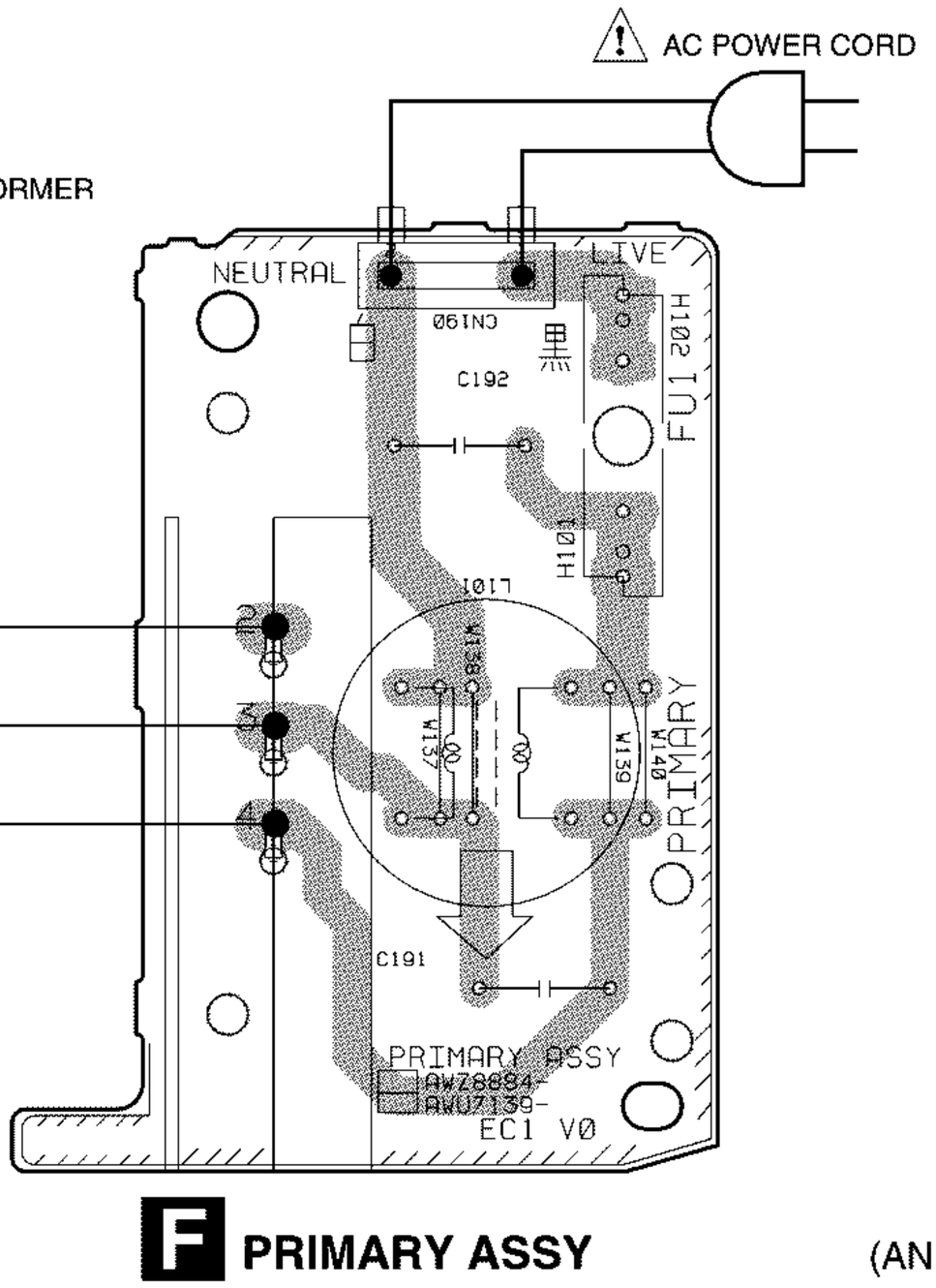


H CN303

E SECONDRY ASSY

T1
POWER TRANSFORMER



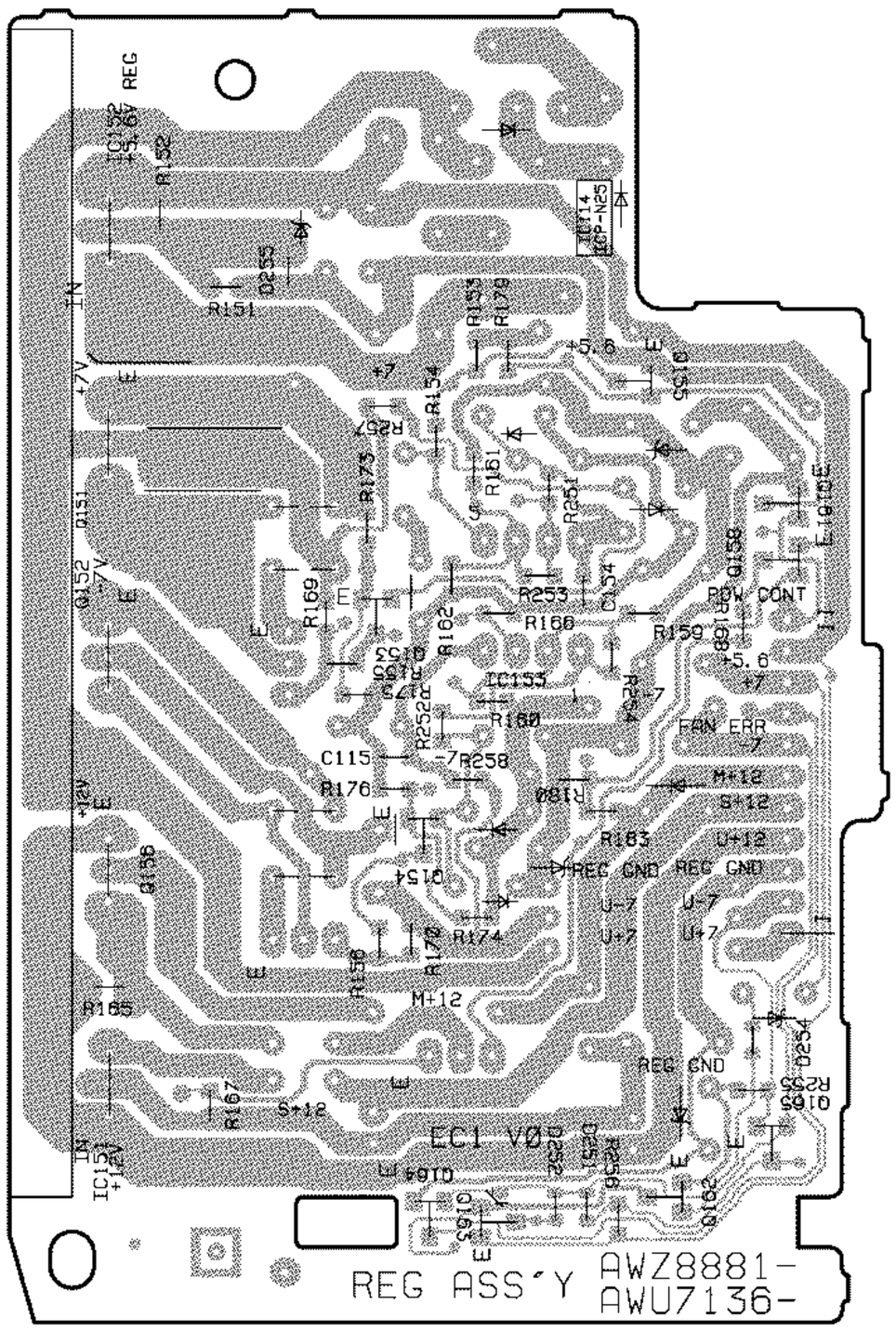


F PRIMARY ASSY

(ANP7202-C)

C D E F K

K REG ASSY


REG ASS'Y AWZ8881-
AWU7136-
EC1 V0
REG GND
POW CONT
FAN ERR
REG GND
R151
R152
R153
R154
R157
R158
R159
R160
R161
R162
R163
R165
R166
R167
R169
R170
R171
R172
R173
R174
R176
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R253
R254
R255
R256
R257
R258
C115
C154
C155
C156
C157
C158
C159
C160
C161
C162
C163
C164
C165
C166
C167
C168
C169
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C176
C177
C178
C179
C180
C181
C182
C183
C184
C185
C186
C187
C188
C189
C190
C191
C192
C193

SIDE B

B CONNECT ASSY

C MAIN ASSY

G TR ASSY

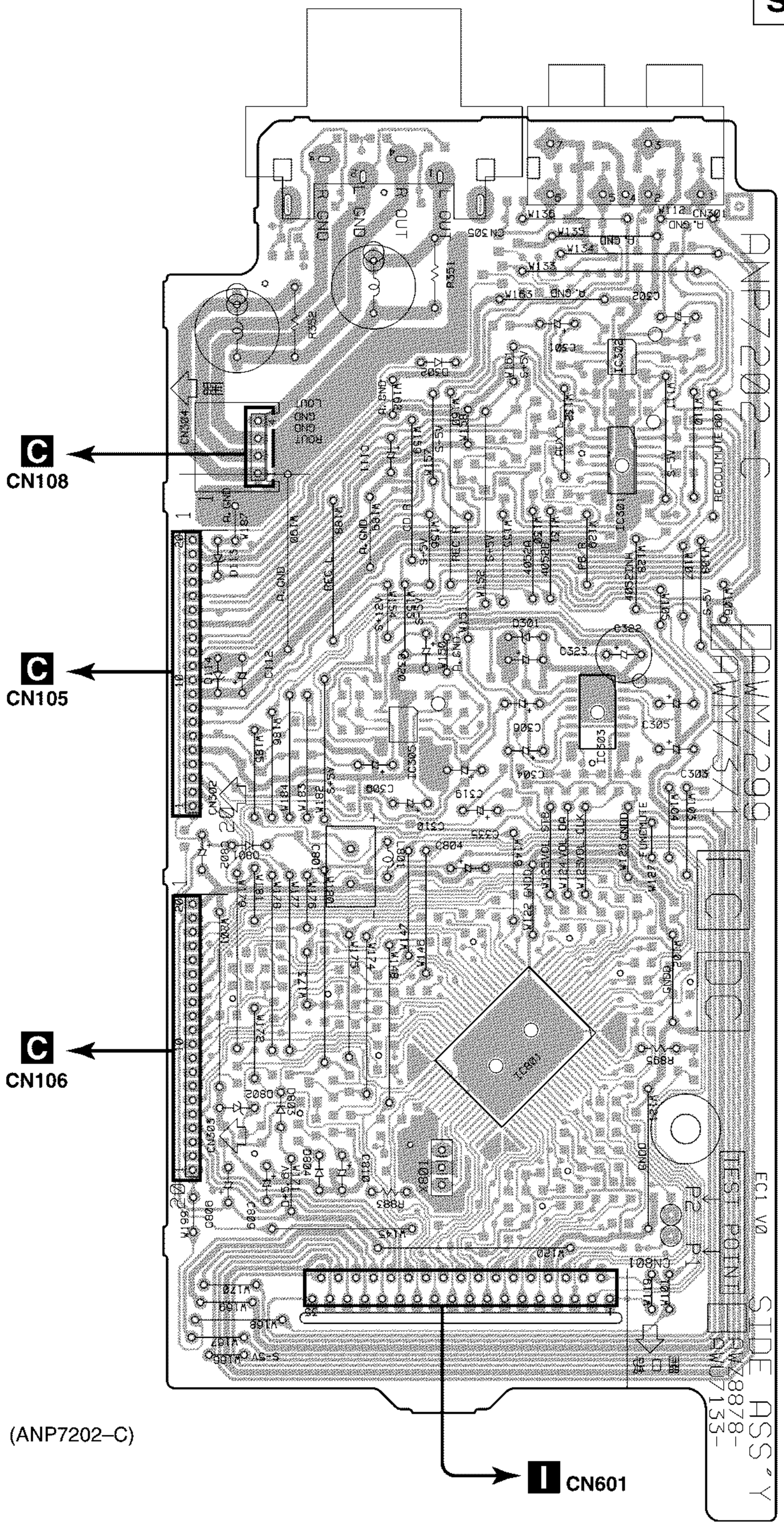
Q181
Q183
Q182
Q114
Q112
Q105
Q119
Q117
Q103
Q115
Q116
Q110
Q106
Q118
Q402
Q406
Q403
Q401
Q404
Q405

(ANP7202–C)

4.4 SIDE ASSY

H SIDE ASSY

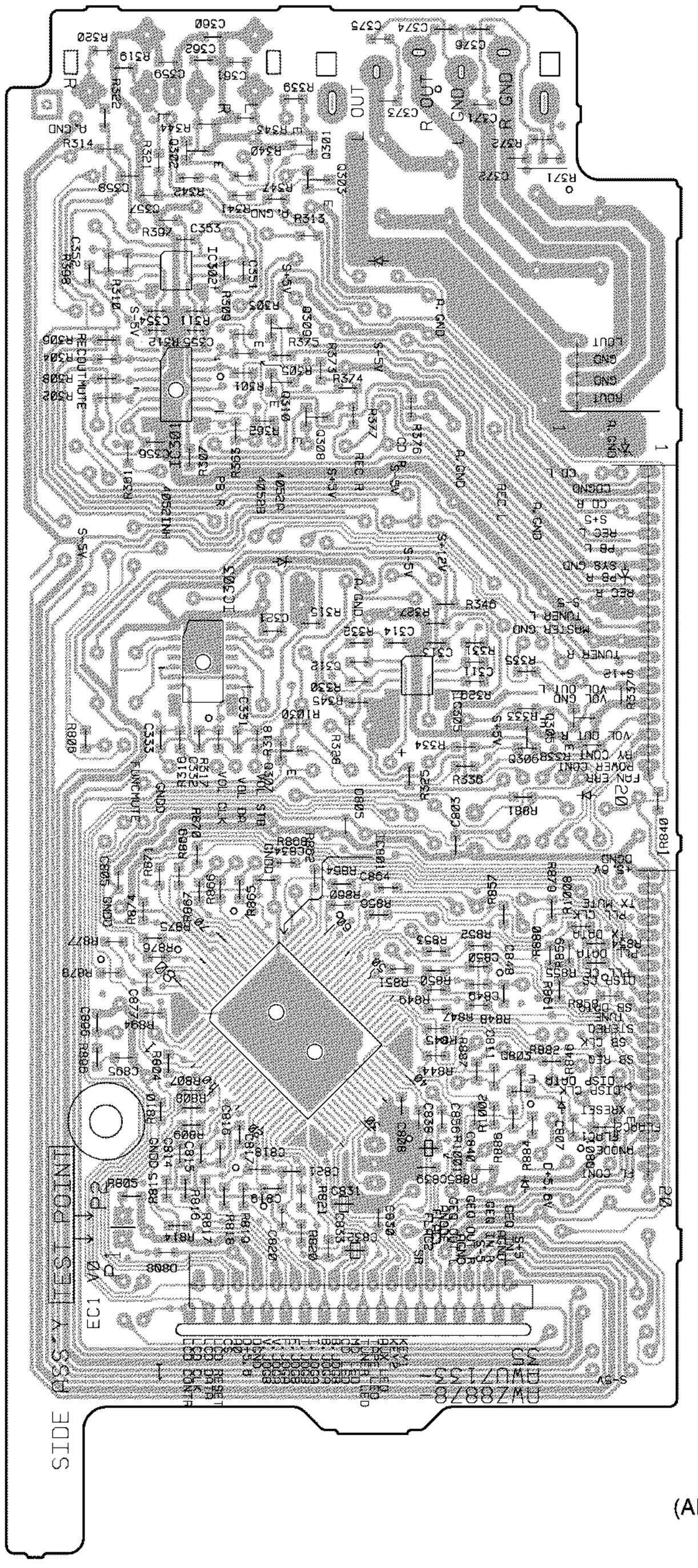
SIDE A



(ANP7202–C)

SIDE B

H SIDE ASSY



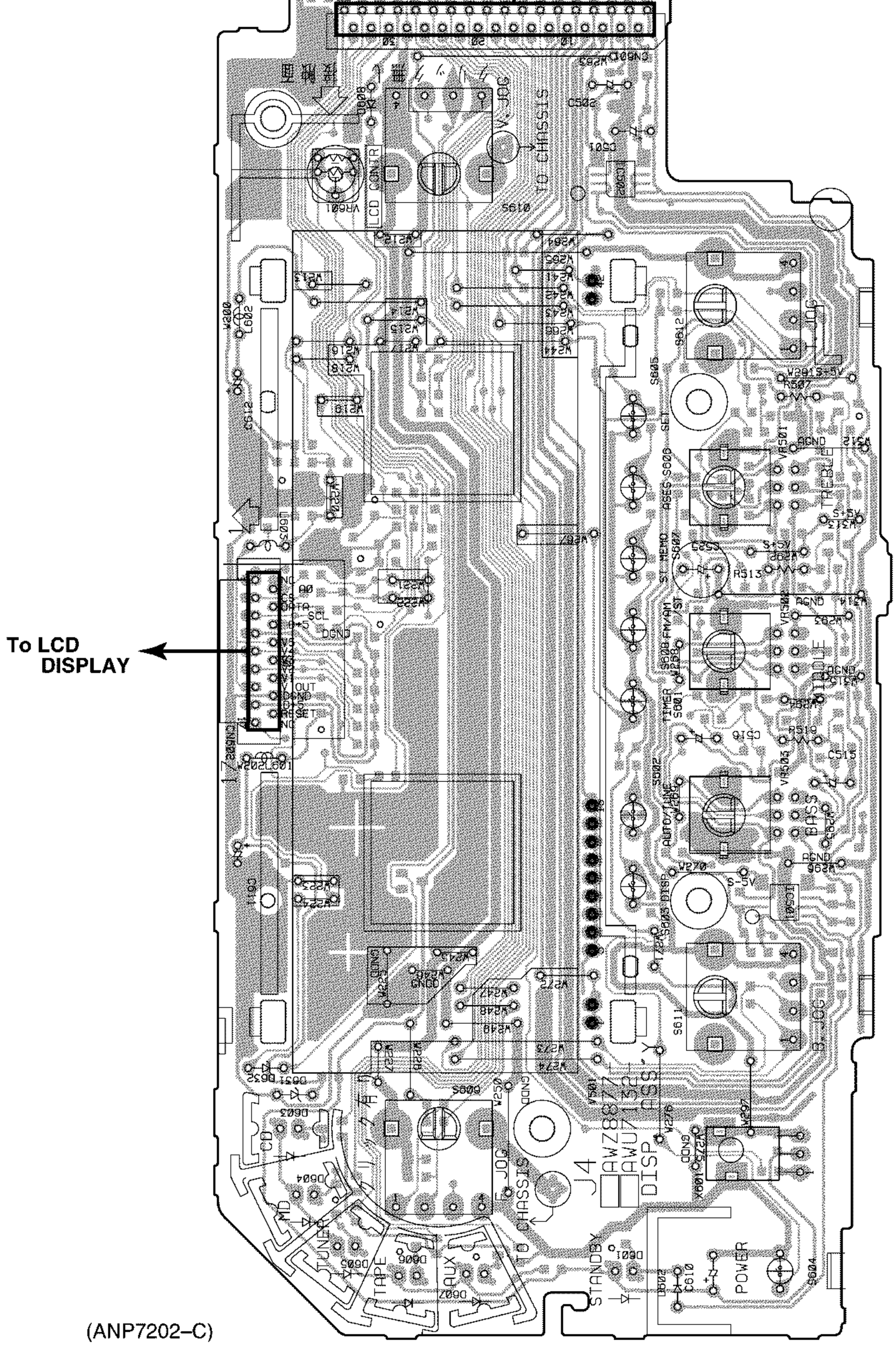
(ANP7202-C)

4.5 DISPLAY ASSY

SIDE A

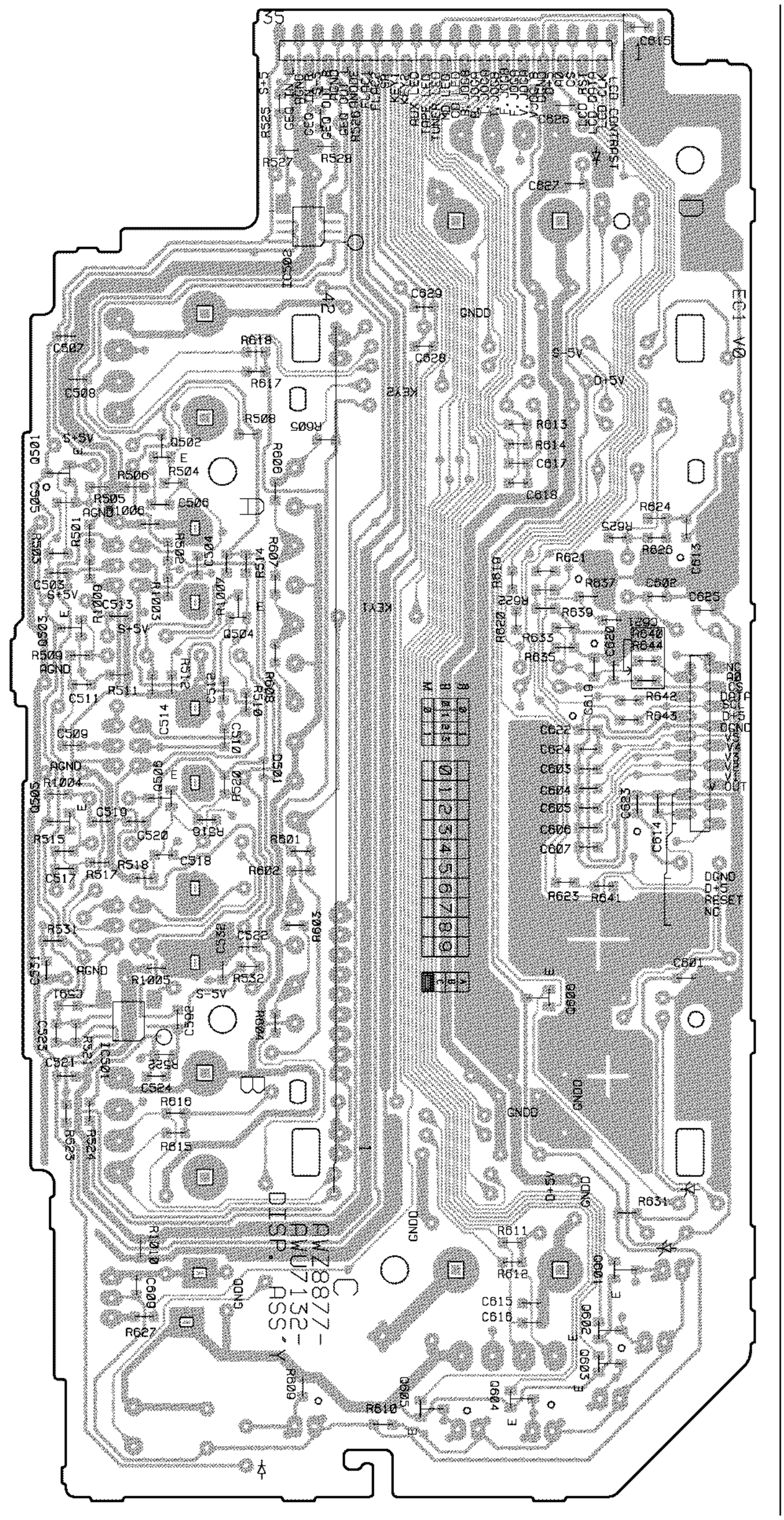
I DISPLAY ASSY

H CN801



SIDE B

I DISPLAY ASSY



(ANP7202–C)

5. PCB PARTS LIST

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

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

560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

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

5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

LIST OF PCB ASSEMBLIES

Mark	No.	Description	Part No.
		FM/AM TUNER MODULE	AXQ7058
NSP		SXMAIN ASSY	AWM7371
		├ DISPLAY ASSY	AWU7132
		├ SIDE ASSY	AWU7133
		├ MAIN ASSY	AWU7134
		├ POWER ASSY	AWU7135
		├ REG ASSY	AWU7136
		├ CONNECT ASSY	AWU7137
NSP		├ HEADPHONE ASSY	AWU7138
NSP		├ PRIMARY ASSY	AWU7139
NSP		├ SECONDRY ASSY	AWU7140
		└ TR ASSY	AWU7141

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	1SS254
D6101–D6104	1SV228

COILS AND FILTERS

L6106	ATC1003
L6105	ATC1015
L6101	ATC1016
L6102	ATC1017
L6103	ATC1018
L6104	ATC1019
F6203	ATF-119
F6206	ATF7008
F6601	ATF7009
F6204	ATF7010
F6202 (455kHz)	ATF7011
L6107 (2.2µH)	ATH1043
L6603	LAU220J
L6206, L6208, L6605	LAU2R2J

TRANSFORMERS

T6201	ATB7008
T6101 (20µH)	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	CFTLA103J50
C6214	CFTLA224J50
C6115, C6125, C6126, C6211, C6254	CKSQYB102K50
C6601	CKSQYB102K50
C6102, C6114, C6121, C6123, C6124	CKSQYB103K50
C6210, C6213, C6237, C6267, C6276	CKSQYB103K50
C6279, C6281, C6604	CKSQYB103K50
C6251, C6252	CKSQYB123K50
C6606, C6607	CKSQYB182K50
C6203, C6259	CKSQYB223K50
C6228	CKSQYB472K50
C6209	CKSQYB473K50

Mark	No.	Description	Part No.
	C6230		CKSQYB821K50
	C6218, C6223, C6255		CKSQYF103Z50
	C6220, C6226, C6242, C6256		CKSQYF223Z50
	C6225		CKSQYF473Z50
	C6610		CKSYB103K50

RESISTORS

R6602		RD1/4PU221J
R6115, R6119, R6123, R6127, R6129		RS1/8S0R0J
R6906, R6909, R6911		RS1/8S0R0J
R6112		RS1/8S473J
VR6201 (10kΩ)		RCP1045
Other Resistors		RS1/10S□□□J

OTHERS

BN6202	2P TERMINAL WITH PAL	AKA7001
X6202	(456kHz)	ASS1066
X6201	(7.2000MHz)	ASS1093
CN6201	14P SOCKET	KP200IA14L
	AM RF TUNING BLOCK	AXX7042

I DISPLAY ASSY

SEMICONDUCTORS

IC501, IC502	BA4558F-HT
Q501–Q506, Q606	2SC2412K
Q601–Q605	DTC143EK
D602, D608	1SS254
D501	1SS355
D631	MTZJ3.0B
D632	MTZJ4.7B
D601, D603–D607	SLR-342VCT31

COILS AND FILTERS

L603	LAU220J

SWITCHES AND RELAYS

S601–S608	ASG1034
S611, S612	ASX7011
S610	ASX7014
S609	ASX7018

CAPACITORS

C523, C524, C531, C532	CCSQCH101J50
C591, C592	CCSQCH101J50
C505, C506	CCSQCH221J50
C501, C502	CEAT101M16
C525	CEJA221M6R3
C515, C516	CEJA330M16
C631	CKSQYB102K50
C601, C602, C609	CKSQYB103K50
C511, C512	CKSQYB123K50
C509, C510	CKSQYB154K16
C619–C622	CKSQYB221K50
C503, C504	CKSQYB333K50
C517, C518	CKSQYB683K25
C603–C607, C614, C623–C626	CKSQYF104Z50
C629	CKSQYF104Z50

Mark	No.	Description	Part No.

RESISTORS

R507, R513		RD1/4PU472J
R519		RD1/4PU682J
VR501–VR503 (10kΩ–B5×2)		ACS7024
Other Resistors		RS1/10S□□□J

OTHERS

CN602	FFC CONNECTOR 17P	9607S-17F
V501	FL TUBE	AAV7047
	FL SPACER	AEB7094
	REMOTE RECEIVER UNIT	GP1U28X
CN601	FFC CONNECTOR 35P	HLEM35S-1

H SIDE ASSY

SEMICONDUCTORS

IC302	BA4558F-HT
IC301	BU4052BCF
IC305	NJM2068M
IC801	PDG226A
IC303	TC9260F
Q309, Q310, Q803	2SC2412K
Q301, Q302, Q305, Q306	2SD2114K
Q303, Q307, Q308	DTA143EK
Q801	DTC143EK
D302, D801, D803, D804	1SS254
D808	1SS355
D113, D114	MTZJ5.1B
D301	MTZJ6.2B
D802	MTZJ6.8B

COILS AND FILTERS

L301, L302 (1μH)	ATH-133
L801	LAU220J

CAPACITORS

C801 (0.047F/5V)	ACH1246
C357, C358, C834, C848–C850	CCSQCH101J50
C864, C877	CCSQCH101J50
C351, C352	CCSQCH470J50
C361, C362	CCSQCH471J50
C323	CEAS101M25
C809	CEASR47M50
C301, C302, C806	CEAT100M50
C322	CEAT221M16
C320, C802	CEAT470M16
C804	CEAT471M6R3
C303, C304	CEJA100M50
C305, C306, C810	CEJA1R0M50
C309, C310	CEJA2R2M50
C319, C335	CEJA470M16
C111, C112	CEZA470M25
C811, C830–C833	CKSQYB102K50
C359, C360, C803, C805	CKSQYB103K50
C807, C808, C814–C821	CKSQYB103K50
C838–C840	CKSQYB103K50
C321, C895, C896	CKSQYB104K25
C371–C376	CKSQYB223K50

Mark	No.	Description	Part No.
RESISTORS			
	R351, R352		RD1/4LMF100J
	R883		RD1/4PU222J
	R895		RD1/4PU332J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN801	FFC CONNECTOR 31P	52492-3520
	CN301	PIN JACK(4P)	AKB7015
	CN305	SPEAKER TERMINAL 4-P	AKE7001
	CN304	4-P PLUG	KM250NA4L
	CN302, CN303	20P SOCKET	KP200IA20L
	X801	(10MHz)	EFOEC1005T4

C MAIN ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC107	(250mA)	AEK7002
⚠	IC105	(630mA)	AEK7006
⚠	IC106	(125mA)	AEK7020
	Q106, Q405		2SA1037K
⚠	Q101		2SA1837
	Q109		2SB1237X
	Q105, Q114, Q401–Q404		2SC2412K
	Q108		2SC3243
	Q115–Q117, Q406		2SD2114K
⚠	Q104		2SD2395
	Q103, Q113, Q119		DTA143EK
	Q110, Q118, Q181, Q183		DTC143EK
	Q182		DTC143TK
	D110, D112, D115, D127		1SS254
	D402–D405		1SS254
	D191–D193, D406		1SS355
	D180		20E2-FC
⚠	D101		D3SBA20 (B)
⚠	D102		D5SBA20
	D108, D109		MTZJ11C
	D104		MTZJ27A
	D107		MTZJ36A
	D105, D106, D116–D120		S5688G
	D998, D999		S5688G
SWITCHES AND RELAYS			
	RY401		ASR7007
CAPACITORS			
	C101, C102	(4700µF/42V)	ACH7079
	C403		CEAT100M50
	C401		CEAT221M16
	C104		CEAT222M25
	C109, C110		CEAT470M2A
	C108, C193		CEAT470M50
	C103		CEAT472M25
	C106		CEHAQ470M25
	C402		CEJA2R2M50
	C107		CKSQYB104K25
	C181–C187		CKSQYF104Z50
	C113		CQMA103K2E

Mark	No.	Description	Part No.
RESISTORS			
	R144	(1.0Ω)	ACN1104
	R142, R143		RD1/2VM101J
	R102		RD1/2VM103J
	R120		RD1/2VM272J
	R118		RD1/4PU392J
	R126		RD1/4PU472J
	R122, R124, R125, R133–R137		RD1/4PU8R2J
	R106		RS1/8S102J
	R141		RS1LMF560J
	R115		RS2LMF121J
	R131, R132		RS2LMFR22J
	R109		RS3LMF222J
	Other Resistors		RS1/10S□□□J
OTHERS			
		CABLE HOLDER (11P)	51052-1100
	CN103	SOCKET (19P)	AKP7013
	CN104	SOCKET (20P)	AKP7014
		HEAT SINK B	ANH1021
		SCREW	BBZ30P080FZK
	CN105, CN106	20P PLUG	KM200IA20
	CN107	17P PLUG	KM200TA12
	CN101	11P SOCKET	KP250NA11
	CN102	SOCKET 15-P	KP250NA15
	CN108	SOCKET 4-P	KP250NA4
	CN10	JUMPER CONNECTOR 3-P	KPC3
	CN109	CONNECTOR (5P)	KPC5
	KN101, KN102	EARTH METAL FITTING	VNF1084

J POWER ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC702, IC703		AEK7010
⚠	IC701		STK407-050
	Q702, Q706, Q710		2SA1037K
	Q711		2SB1238X
	Q705		2SC2412K
	Q704		2SD1781K
	Q701, Q703		DTC143EK
	D701–D706, D709, D711, D712		1SS254
	D731		1SS254
	D710		MTZJ13C
	D707		MTZJ2.7B
CAPACITORS			
	C709, C710, C725, C726		CCSQCH101J50
	C701, C702		CCSQCH120J50
	C703, C704		CEAS101M25
	C711, C712, C721		CEAT100M50
	C713, C714		CEAT101M50
	C719		CEAT330M50
	C720		CEAT470M16
	C705, C706		CEZA100M50
	C722		CKSQYB102K50
	C707, C708		CKSQYB471K50
	C715–C718		CKSQYF104Z50
	C723		CQMA682K2E

Mark	No.	Description	Part No.
RESISTORS			
	R739 (1.0Ω)		ACN1104
	R711, R712		RD1/4LMF101J
	R703, R704		RD1/4PU563J
	R736		RS2LMF330J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN701	PLUG 15-P	KM250NA15L

K REG ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC114		ICP-N25
	IC153		NJM4558DX
⚠	IC152		NJM7805FA
⚠	IC151		NJM7812FA
	Q154, Q158		2SA1037K
	Q159		2SA1560
⚠	Q152, Q156		2SB1566
	Q153		2SC2412K
	Q157, Q160		2SC4040
⚠	Q151		2SD2395
	Q163		DTA143EK
	Q155, Q161		DTC124EK
	Q162, Q164, Q165		DTC143EK
	D181, D182		1SS254
	D251, D252, D254, D255		1SS355
	D253		MTZJ10C
	D183		MTZJ5.1B
	D160		MTZJ6.8C
	D184		S5688G
CAPACITORS			
	C156		CEAL1R0M50
	C158		CEAS101M25
	C159, C160		CEAS470M25
	C251, C252		CEASR47M50
	C161, C162		CEAT100M50
	C153		CEAT220M50
	C163		CEJA100M35
	C157		CEJA100M50
	C151		CEJA1R0M50
RESISTORS			
	R257, R258 (1.0Ω)		ACN1104
	R158		RD1/4PU101J
	R171, R172		RD1/4PU151J
	R164		RD1/4PU241J
	R157		RD1/4PU560J
	R197		RS2LMF680J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN151	11P PLUG	KM250NA11L

B CONNECT ASSY

Mark	No.	Description	Part No.
RESISTORS			
	All Resistors		RS1/10S□□□J
OTHERS			
	CN201	CONNECTOR (14P)	9176B-14L
	CN202	12P SOCKET	KP200TA12L

D HEADPHONE ASSY

Mark	No.	Description	Part No.
CAPACITORS			
	C391, C392		CCSQCH561J50
	C393		CKSQYF104Z25
RESISTORS			
	R391, R392		RS2LMF331J
OTHERS			
		CABLE HOLDER (5P)	51052-0500
	JA391	MINI JACK	AKN7013

F PRIMARY ASSY

Mark	No.	Description	Part No.
COILS AND FILTERS			
⚠	L101		ATF-151
CAPACITORS			
⚠	C191, C192 (10000pF/AC250V)		ACG7020
OTHERS			
⚠	H101, H102	FUSE CLIP	AKR1003
⚠	CN190	TERMINAL	RKC-061

E SECONDRY ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
⚠	IC103, IC104 (4A)		AEK7018
⚠	IC101, IC102 (7A)		AEK7021
⚠	IC110, IC111 (10A)		AEK7022
⚠	D103		D2SBA20 (B)
CAPACITORS			
	C105		CEAT222M35
	C121, C122		CKSQYB104K25
OTHERS			
		CABLE HOLDER (11P)	51052-1100

G TR ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	Q107		2SB1566
OTHERS			
		CABLE HOLDER (3P)	51052-0300

6. ADJUSTMENT

6.1 TUNER SECTION

■ 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, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Front End Sensitivity	106	0–30	106 MHz	L6104 L6105 L6102 T6101	Adjust so that the DC voltage between the IC6201-Pin 20 and GND becomes at maximum level.
2	Stereo Distortion	98 (ON STEREO)	80	98 MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
3	TUNED IND. Lighting Level	98	18 ± 2	98 MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

Note: 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.

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 and GND becomes at maximum level.

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

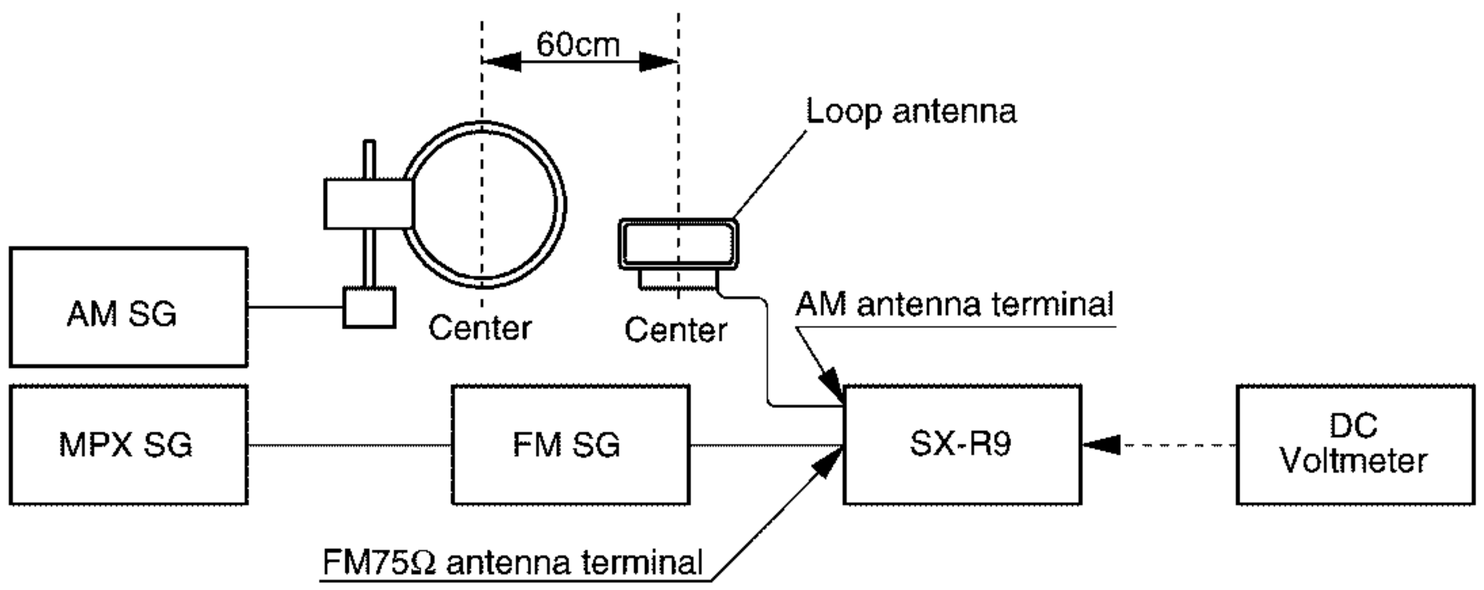


Fig. 1 AM and FM Adjustment Wiring Diagram

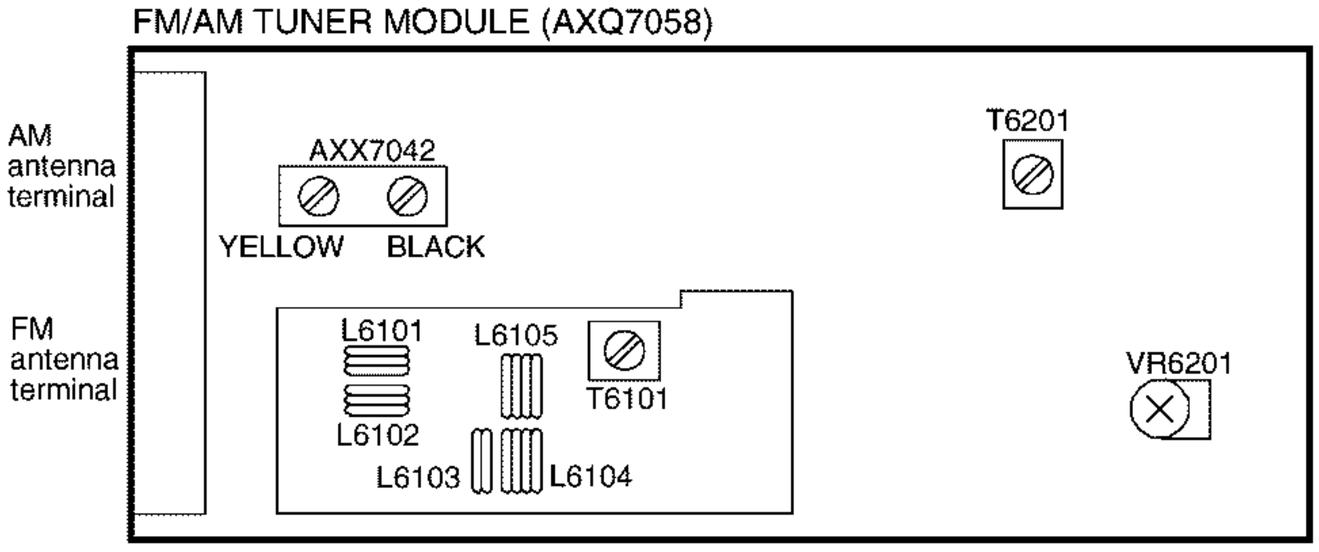


Fig. 2 Adjustment Point

7. GENERAL INFORMATION

7.1 PARTS

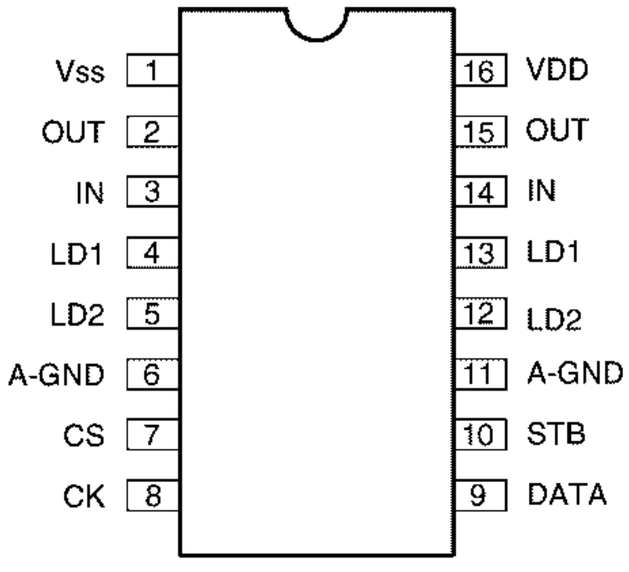
7.1.1 IC

■ TC9260F (IC303: SIDE ASSY)

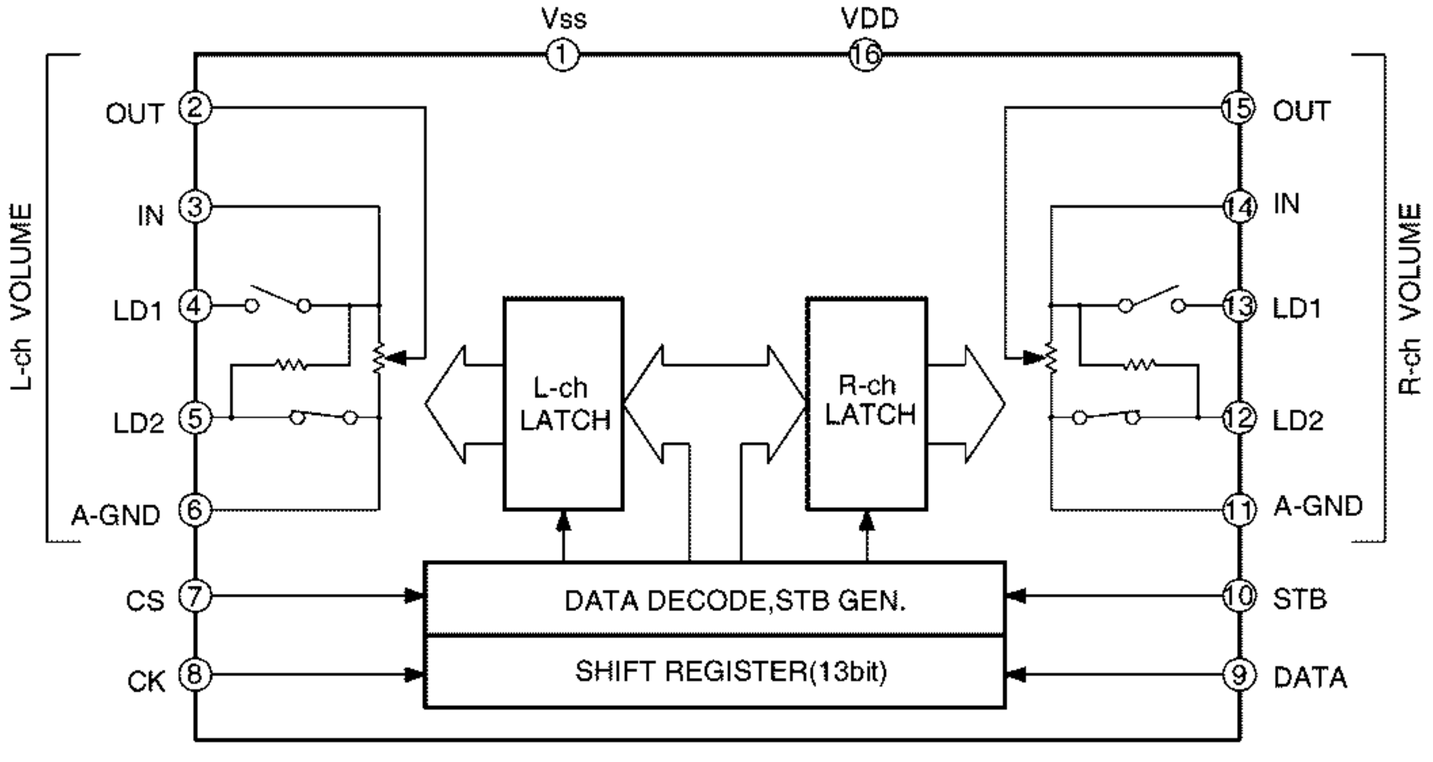
● Electrical Volume IC

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

● Pin Assignment (Top view)



● Block Diagram



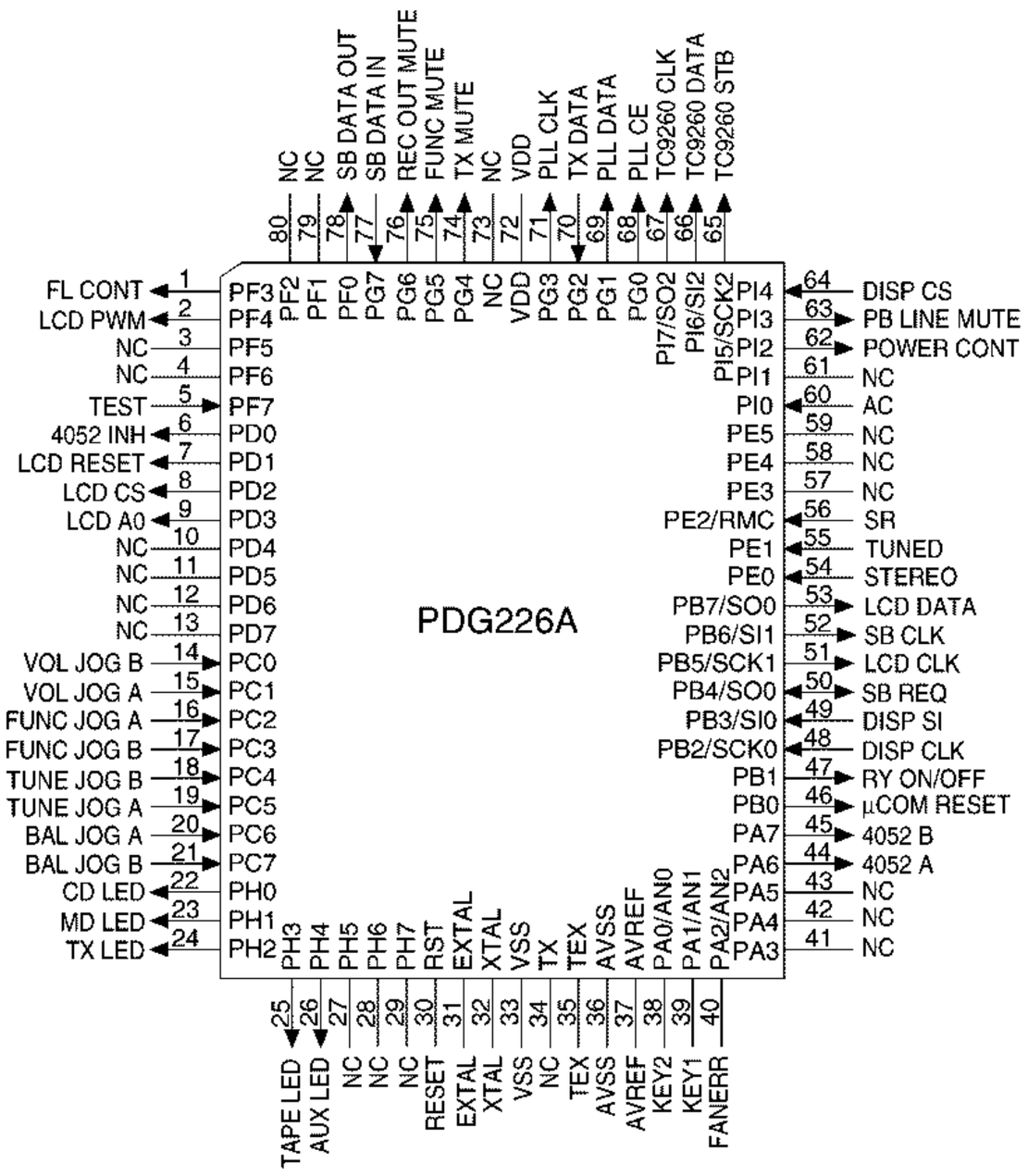
● Pin Function

No.	Pin Name	Description
1	Vss	Power-supply voltage terminal
2	L–OUT	Volume output terminal
3	L–IN	Volume input terminal
4	L–LD1	Loudness terminal (1)
5	L–LD2	Loudness terminal (2)
6	L–GND	Analog GND terminal
7	CS	Corresponds to chip select bit " C1 " in serial data for input terminal volume control for designating chip select code. When CS=" 1 ", C1=" 1 " data are received; when CS=" 0 ", C1=" 0 " data are received.
8	CK	Clock input terminal for serial data transmission
9	DATA	Volume control data input terminal. Inputs synchronized data to CK.
10	STB	Srobe terminal for writing data. Data are written with “H” level.
11	R–GND	Analog GND terminal
12	R–LD2	Loudness terminal (2)
13	R–LD1	Loudness terminal (1)
14	R–IN	Volume input terminal
15	R–OUT	Volume output terminal
16	VDD	Power-supply voltage terminal

■ PDG226A (IC801: SIDE ASSY)

● System Micro-computer

● Pin Assignment (Top view)



● Pin Function

No.	Function	Name	I/O	Description
1	PF3/SDA1	FL CONT	I/O	LCD BACKLIGHT ON/OFF
2	PF4/PWM0	LCD PWM	O	LCD CONTRAST (PWM)
3	PF5/PWM1	NC	–	———
4	PF6/TxD	NC	–	———
5	PF7	TEST	I	TEST TERMINAL
6	PD0	4052INH	I/O	4052INH
7	PD1	LCD RESET	I/O	LCD RESET
8	PD2	LCD CS	I/O	LCD CHIP SELECT
9	PD3	LCD A0	I/O	LCD A0
10 | 13	PD4 | PD7	NC	I/O	———
14	PC0	VOL JOGB	I/O	VOLUME JOGB
15	PC1	VOL JOGA	I/O	VOLUME JOGA
16	PC2	FUNC JOGA	I/O	FUNCTION JOGA
17	PC3	FUNC JOGB	I/O	FUNCTION JOGB
18	PC4	TUNE JOGB	I/O	TUNER JOGB
19	PC5	TUNE JOGA	I/O	TUNER JOGA
20	PC6	BAL JOGA	I/O	BALANCE JOGA
21	PC7	BAL JOGB	I/O	BALANCE JOGB
22	PH0	CD LED	I/O	CD LED
23	PH1	MD LED	I/O	MD LED
24	PH2	TX LED	I/O	TUNER LED
25	PH3	TAPE LED	I/O	TAPE LED
26	PH4	AUX LED	I/O	AUX LED
27 | 29	PH5 | PH7	NC	I/O	———
30	RST	RESET	I	RESET TERMINAL
31	EXTAL	EXTAL	I	10MHz OSCILLATOR CONNECTION
32	XTAL	XTAL	O	10MHz OSCILLATOR CONNECTION
33	Vss	Vss		GND TERMINAL
34	TX	NC	–	———
35	TEX	TEX	I	(GND TERMINAL)
36	AVss	AVss		A/D CONVERTER GND
37	AVref	AVref	I	A/D CONVERTER STANDARD VOLTAGE
38	PA0/AN0	KEY2	I/O	KEY2 INPUT (A/D CONVERSION)
39	PA1/AN1	KEY1	I/O	KEY1 INPUT (A/D CONVERSION)
40	PA2/AN2	FANERR	I/O	FAN ERROR DETECTION (A/D CONVERSION)
41 | 43	PA3/AN3 | PA5/AN5	NC	I/O	———
44	PA6/AN6	4052B	I/O	4052B
45	PA7/AN7	4052A	I/O	4052A
46	PB0/CINT	XRESET	I/O	OTHER µ-COM RESET OUT
47	PB1/CS0	RY CONT	I/O	SPEAKER RELAY
48	PB2/CSK0	DISP CLK	I/O	CLOCK FOR CD DISPLAY DATA
49	PB3/SI0	DISP SI	I/O	DATA FOR CD DISPLAY DATA
50	PB4/SO0	SB REQ	I/O	SYSTEM BUS REQUEST
51	PB5/SCK1	LCD CLK	I/O	LCD CLOCK
52	PB6/SI1	SB CLK	I/O	SYSTEM BUS CLOCK
53	PB7/SO1	LCD DATA	I/O	LCD DATA
54	PE0/EC0	STEREO	I	STEREO
55	PE1/EC1	TUNE	I	TUNE (SD)
56	PE2/RMC	SR	I	REMOTE CONTROL INPUT (RMC)
57	PE3/NMI	NC	I	———
58	PE4	NC	O	———
59	PE5/TO	NC	O	———
60	PI0/INT0	AC	I/O	AC PULSE INPUT (INT0)
61	PI1/INT1	NC	I/O	———
62	PI2/INT2	POWER	I/O	POWER CONT
63	PI3/INT3	PB MUTE	I/O	ON WHEN NO TC, MD
64	PI4/INT4	DISP CS	I/O	CD DISPLAY DATA CHIP SELECT

PDG226A

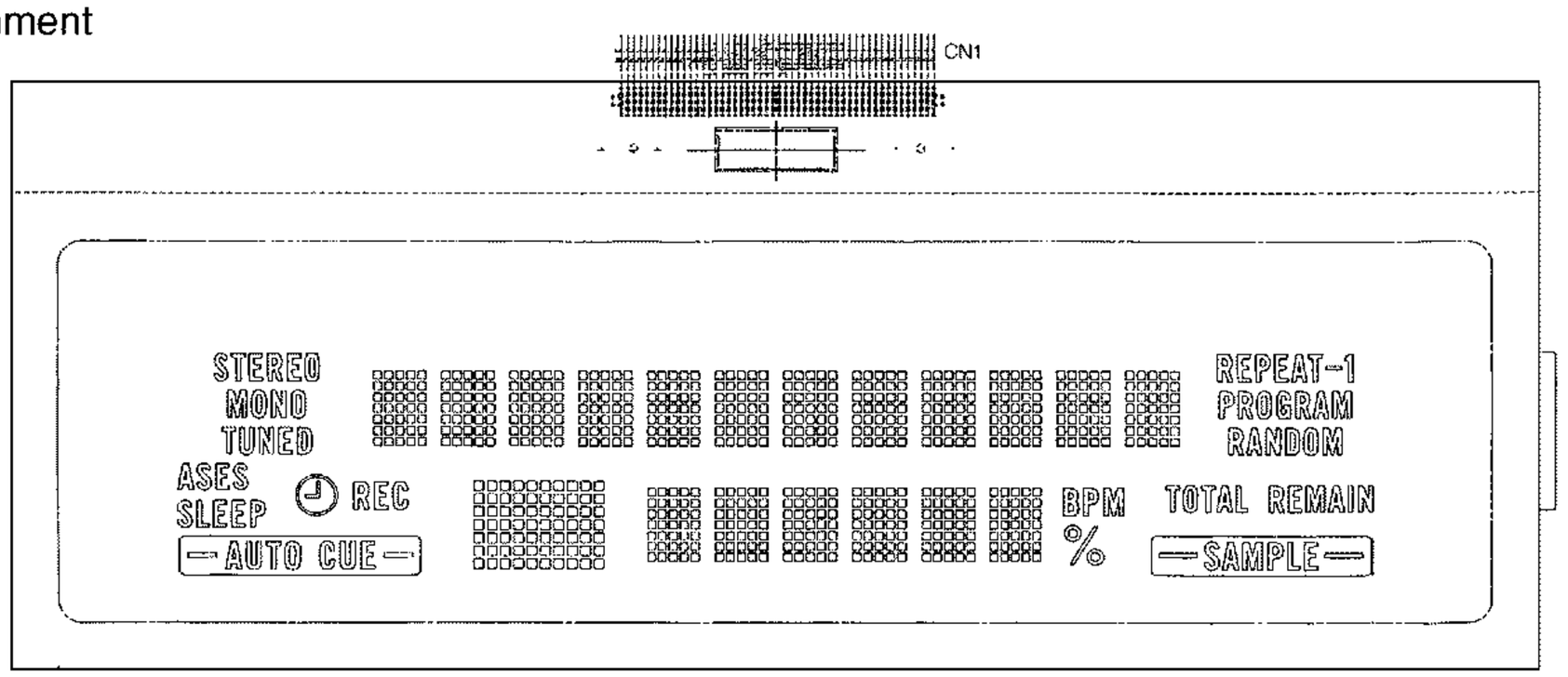
No.	Function	Name	I/O	Description
65	PI5/SCK2	TC9260 STB	I/O	VOLUME IC STROBE
66	PI6/SI2	TC9260 DAT	I/O	VOLUME IC DATA
67	PI7/SO2	TC9260 CLK	I/O	VOLUME IC CLOCK
68	PG0	PLL CE	I/O	LC72131 CE
69	PG1	PLL DATA	I/O	LC72131 DATA
70	PG2	TX DATA	I/O	LC72131 DO TERMINAL
71	PG3	PLL CLK	I/O	LC72131 CLOCK
72	Vdd	Vdd	–	POSITIVE POWER SUPPLY TERMINAL
73	NC	———	–	(VDD CONNECTION)
74	PG4	TX MUTE	I/O	IF BUF/MUTE
75	PG5	FUNC MUTE	I/O	FUNCTION MUTE
76	PG6	REC MUTE	I/O	RECORD OUT MUTE
77	PG7	SB DATA IN	I/O	SYSTEM BUS DATA IN
78	PF0/SCL0	SB DATA OUT	I/O	SYSTEM BUS DATA OUT
79	PF1/SCL1	NC	I/O	———
80	PF2/SDA0	NC	I/O	———

7.1.2 DISPLAY

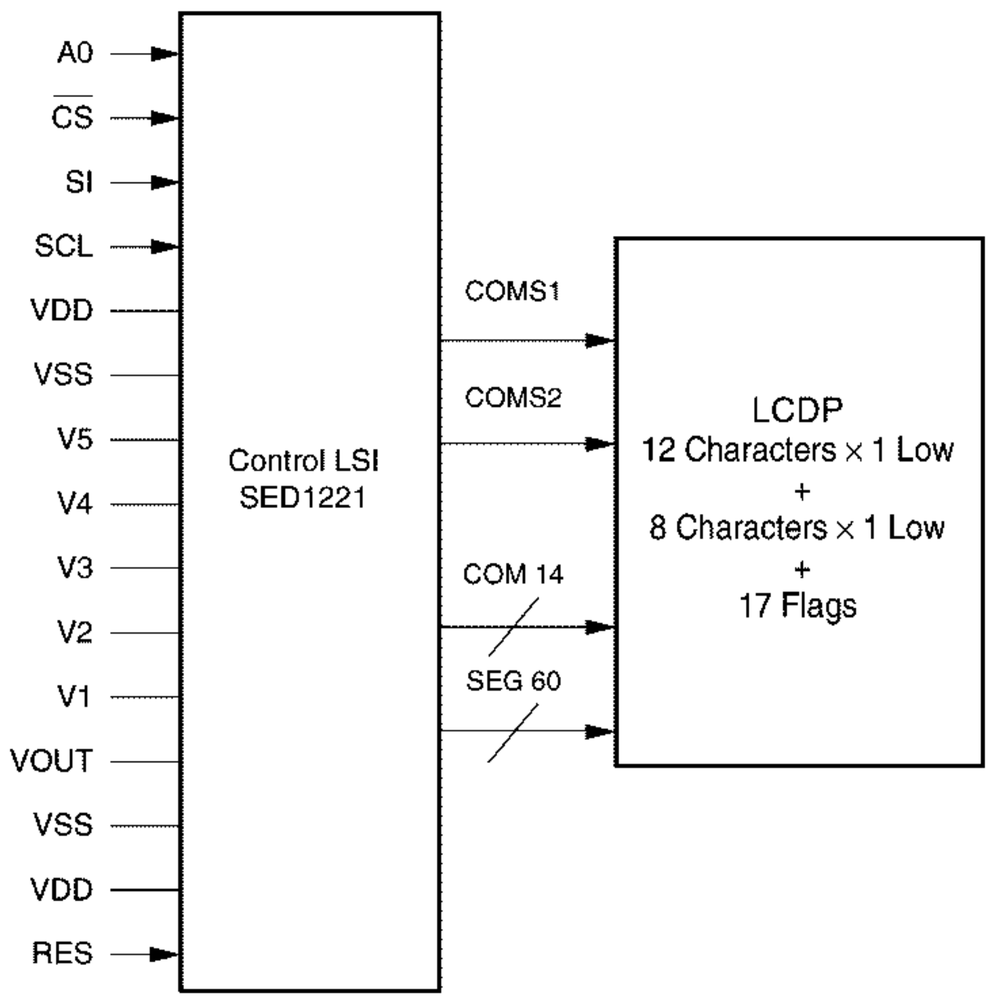
■ AAV7049

● LCD Assy

● Pin Assignment



● Block Diagram



● Pin Function

No.	Name	Level	Description
1	NC	–	Not used
2	A0	H/L	H: D0 – D7 are display data. L: D0 – d7 are instructions.
3	CS	H/L	Chip select signal L: select
4	SI	H/L	Serial data input
5	SCL	H/L	Serial clock input
6	VDD	–	Power for logic
7	Vss	–	Power for logic (GND)
8	V5	–	Power for driving crystal V5 ≧ VOUT
9	V4	–	Power for driving crystal V4=4/5 · V5
10	V3	–	Power for driving crystal V3=3/5 · V5
11	V2	–	Power for driving crystal V2=2/5 · V5
12	V1	–	Power for driving crystal V1=1/5 · V5
13	VOUT	–	Output terminal during pressure rise
14	Vss	–	Power for logic (GND)
15	VDD	–	Power for logic
16	RES	H/L	Reset terminal
17	NC	–	Not used

7.2 DIAGNOSIS

7.2.1 DISASSEMBLY

1. Removing the Fan Motor (Fig. 1)

(1) Remove the bonnet (4 rear screws and 2 screws each on left and right sides).
(2) Remove the 2 screws Ⓐ holding the fan cover in place.
(3) Pull the fan lead Ⓑ out of the connector.
(4) Remove the fan cover and fan while pressing in the fan cover hook Ⓒ.

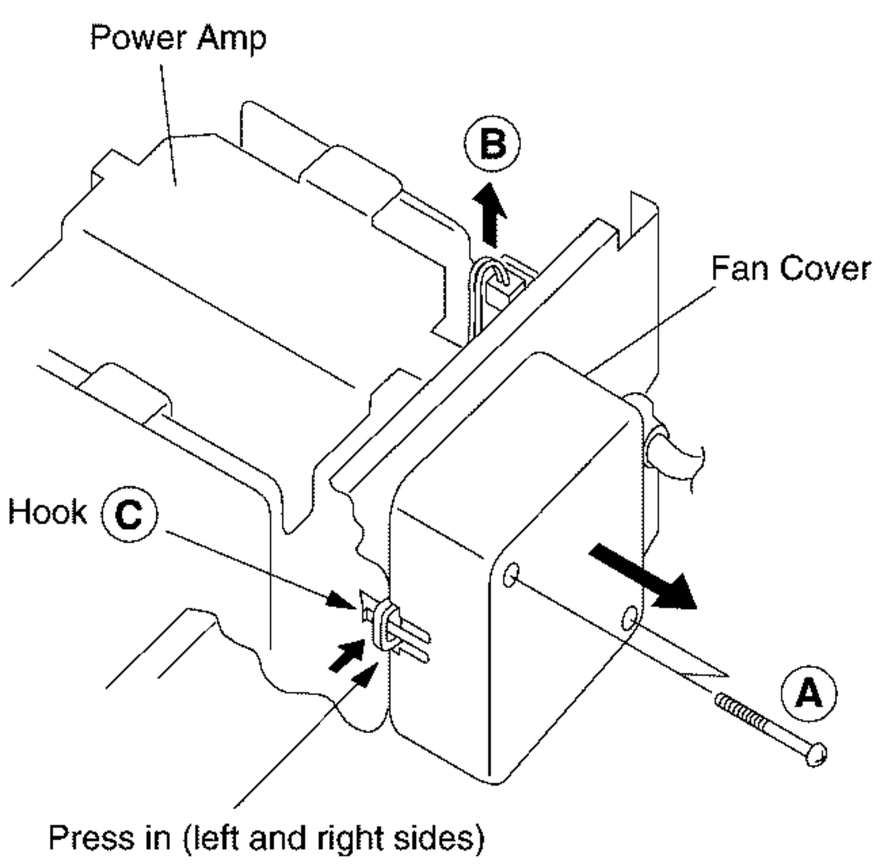


Fig. 1

2. Setting the MAIN Assy Upright (Fig. 2, Fig. 3)

(1) Remove the bonnet (4 rear screws and 2 screws each on left and right sides).
(2) Remove the screw (●) Ⓓ holding the rear panel in place.
(3) Remove the screw Ⓔ holding the power amp in place.
(4) Remove the 2 screws Ⓕ and hook Ⓖ holding the main assy in place.
(5) Set the MAIN assy on its back together with the rear panel.

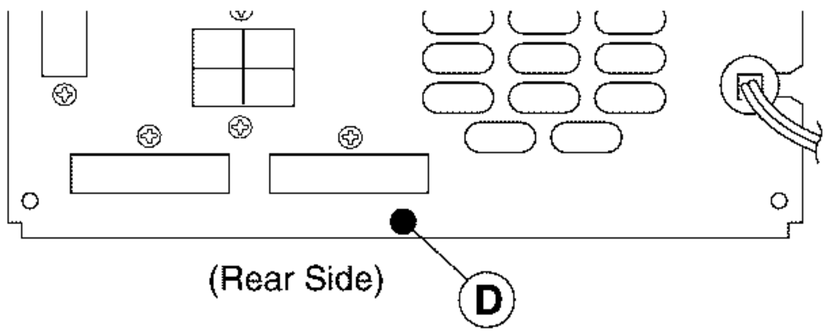


Fig. 2

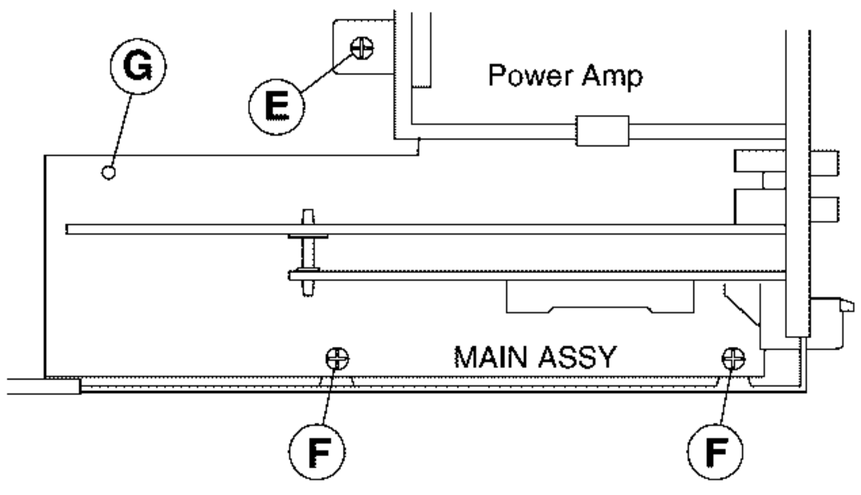


Fig. 3

3. Removing the Front Panel (Fig. 4)

(1) Remove the bonnet (4 rear screws and 2 screws each on left and right sides).
(2) Remove the 2 screws Ⓗ holding the front panel in place.
(3) Remove the 2 screws Ⓘ holding each on the left and right side ground lead in place.
(4) Remove the hook Ⓙ holding the front panel in place and slide out the panel and remove it.

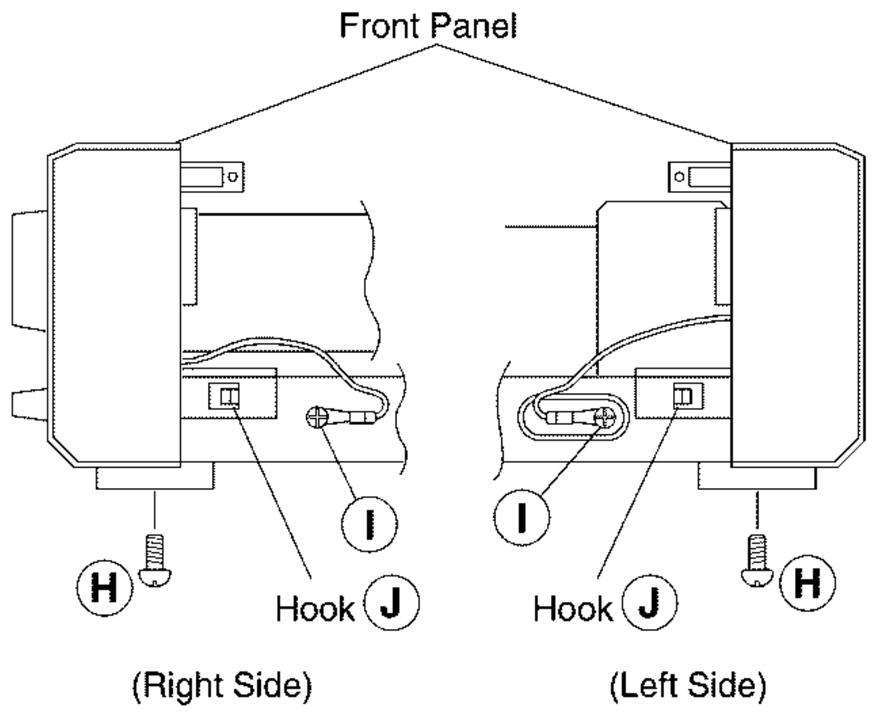


Fig. 4

4. Removing the Power Amp (Fig. 5)

(1) Remove the bonnet (4 rear screws and 2 screws each on left and right sides).
(2) Remove the 2 screws Ⓚ holding the fan cover in place.
(3) Pull the fan lead Ⓛ out of the connector.
(4) Remove the fan cover and fan while pressing in the fan cover hook Ⓜ.
(5) Remove the 2 screws Ⓝ, Ⓞ holding the power amp in place.
(6) Pull up on the power amp, lifting it away from the main assy connector. (lifting the power amp may cause the main board to bend, so lift it carefully.)

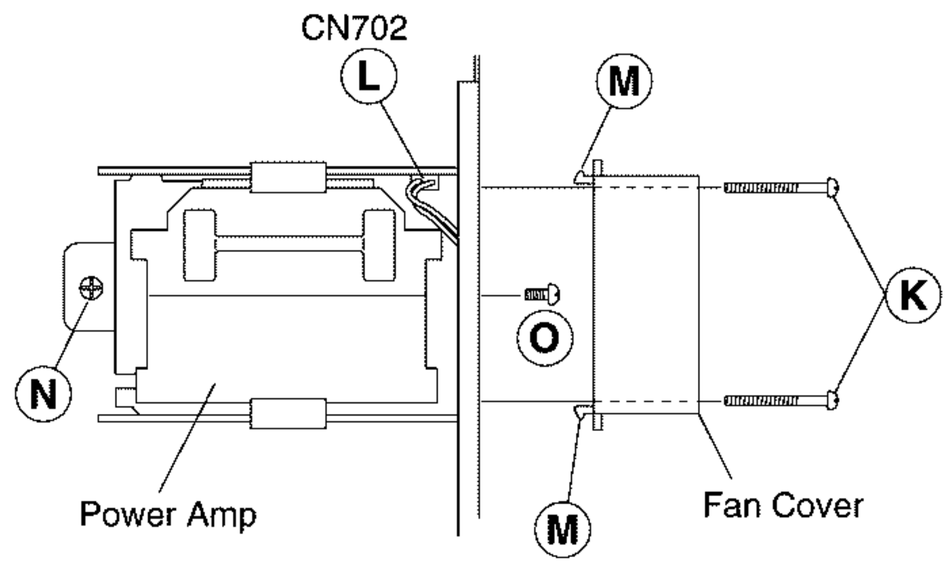


Fig. 5

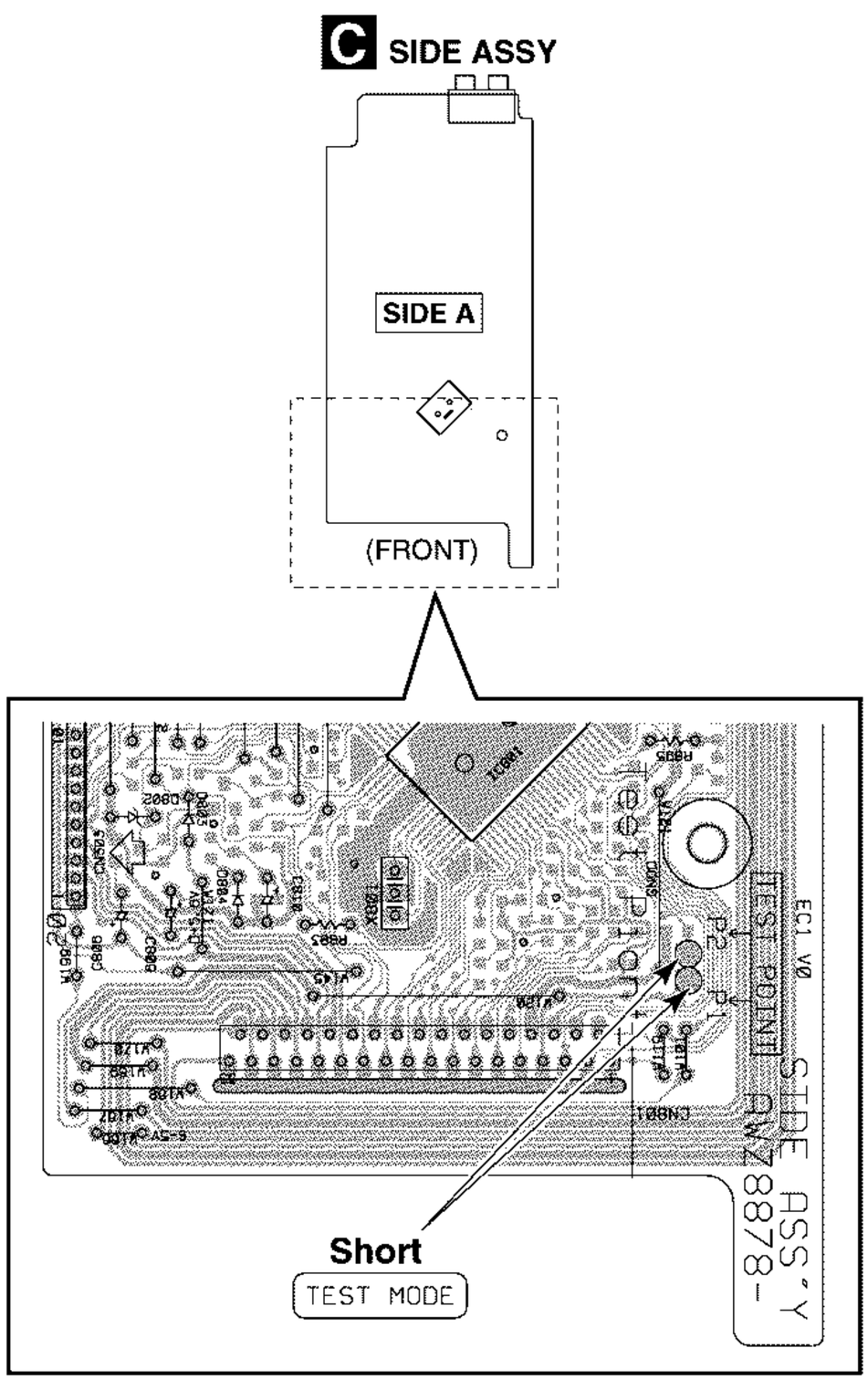
7.2.2 TEST MODE

TEST MODE : ON

Method: short terminal while power is on.

Notes)

- "TEST1" is displayed until there is a key input (including remote control).
- If the test terminal is shorted again under these conditions, the normal operation mode will be restored.



TEST MODE : CANCEL

Method 1: Engage power standby or turn AC off.
Method 2: short the test terminal while test mode is Engaged.

■ Test Mode Contents

● LCD Check

Changes the LCD pattern with key input and checks for faults in the LCD.

Ⓐ DISP Key

LCD all on / LED all on

Ⓑ TIMER Key

LCD all off / LED all off

Ⓒ ST MEMO Key

- "ABCDEFGHIJKL"
- "MNOPQR"
- STEREO
- TUNED
- SLEEP
- REC
- REPEAT
- RANDOM
- TOTAL
- %

Ⓓ ASES Key

- "STUVWXYZ1234"
- "567890"
- MONO
- ASES
- Timer Mark
- AUTO CUE
- –1
- PROGRAM
- BPM
- REMAIN
- SAMPLE

Ⓔ SET Key

LCD/LED normal display

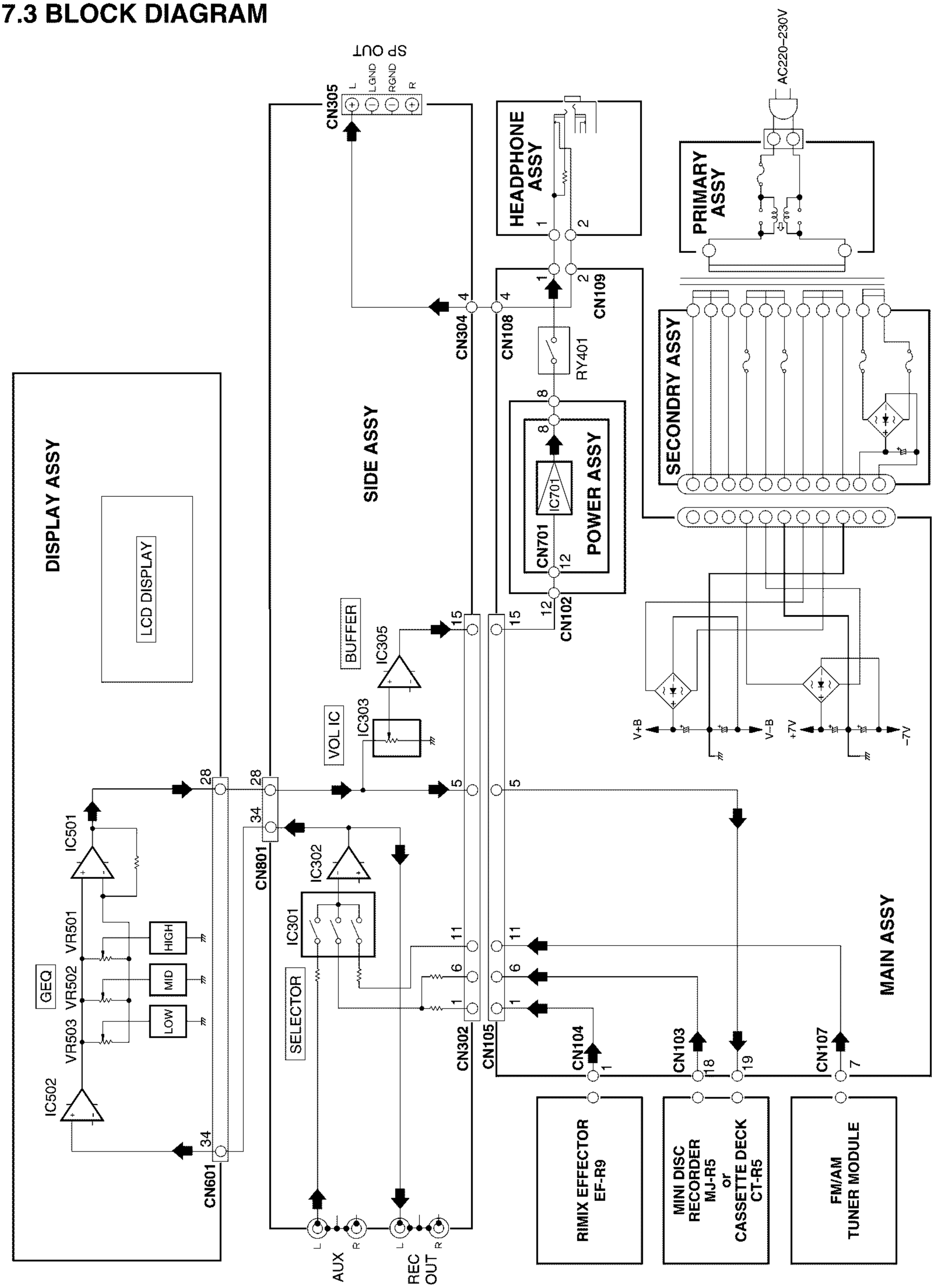
● Tuner Receiving Check

- Press the BAND key
  Function: CD → TUNER
- Press the AUTO TUNE key
  ST-1 is called (88, 50MHz, FM MONO off) and auto tuning is executed in UP direction.
- Press the AUTO TUNE key
  St-2 is called (89, 50MHz, FM MONO off) and auto tuning is executed in DN direction.
- Press the AUTO TUNE key
  St-3 is called (954kHz) and auto tuning is executed in UP direction.
- Press the AUTO TUNE key
  St-4 is called (1062kHz) and auto tuning is executed in DN direction.

● AUX IN/OUT Signal Check

Check the AUX input/output in test mode by outputting the AUX IN input signal to the AUX output, with the AUX output mute always off.

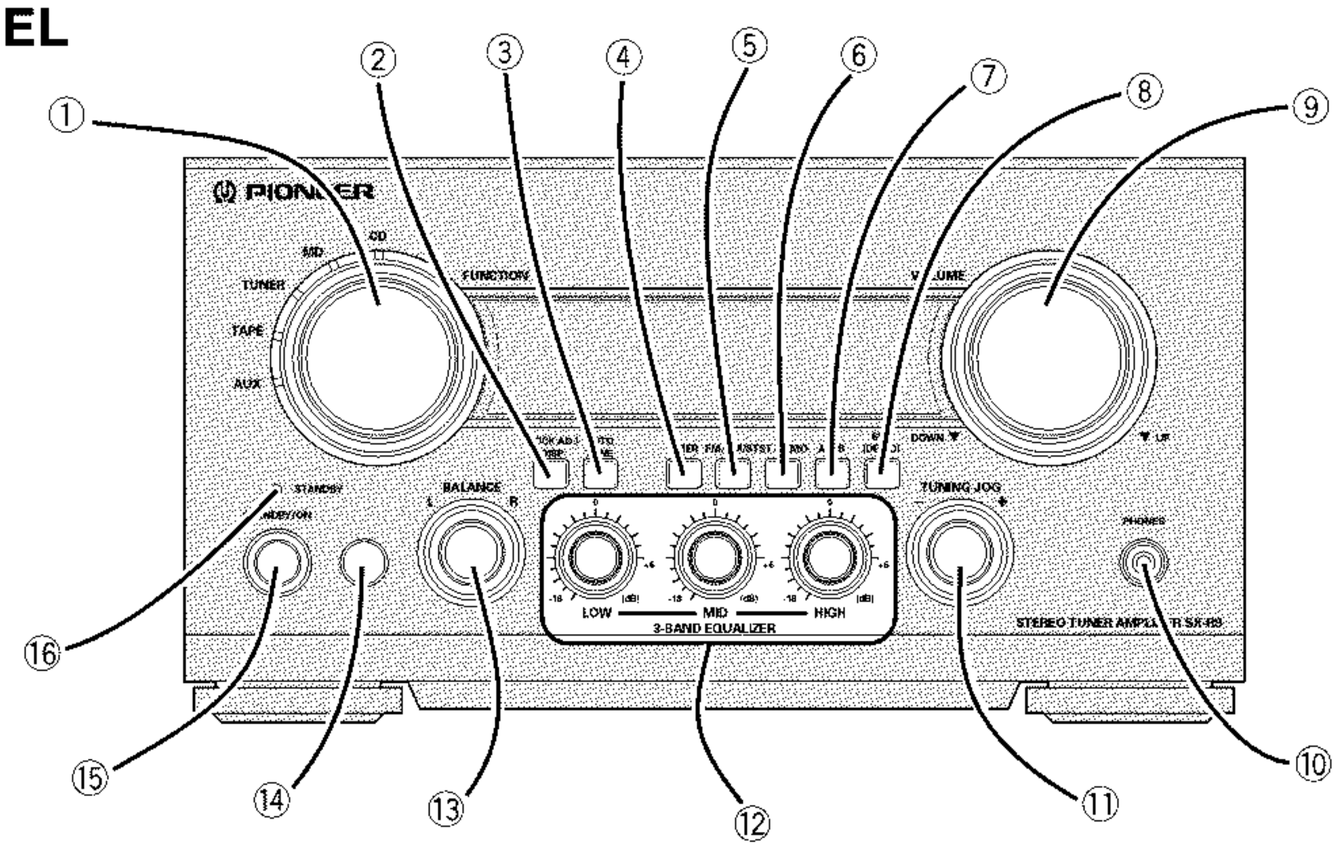
7.3 BLOCK DIAGRAM



8. PANEL FACILITIES AND SPECIFICATIONS

■ PANEL FACILITIES

● FRONT PANEL

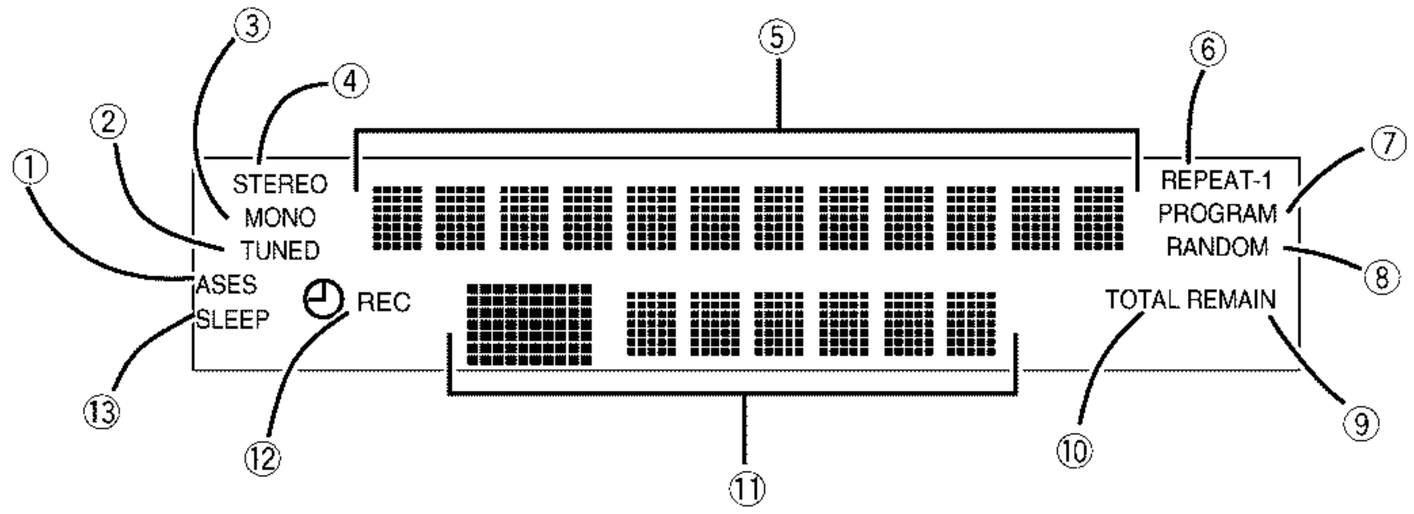


① **Function Knob**
② **CLOCK ADJ/DISPLAY button**
③ **AUTO TUNING button**
④ **TIMER button**
⑤ **FM/AM ST. (STATION) button**
⑥ **ST. (STATION) MEMO button**
⑦ **A.S.E.S. button**
⑧ **SET (DEMO) button**
⑨ **VOLUME level control adjustment knob**

⑩ **Headphone jack (PHONES)**
Use headphones with a stereo mini plug. There's no sound from the speakers when headphones are connected.

⑪ **TUNING JOG**
⑫ **3-BAND EQUALIZER**
⑬ **BALANCE adjustment knob**
⑭ **Remote sensor window**
⑮ **STANDBY/ON switch**
⑯ **STANDBY indicator**

● DISPLAY



① **Lights during A.S.E.S. operation.**
② **Lights during radio broadcast reception.**
③ **Lights when you press the remote control MONO button.**
④ **Lights during stereo radio broadcast reception.**
⑤ **Alphanumeric display**
⑥ **Lights during repeat play.**
During repeat play of all tracks: REPEAT.
During repeat play of 1 track: REPEAT-1.
⑦ **Lights during programing and program play.**
⑧ **Lights during random play.**

⑨ **Lights during display of remaining play time.**
⑩ **Lights during display of total number of tracks and total play time.**
⑪ **Alphanumeric display**
⑫ **Timer indicator**
⑬ **Lights during sleep timer operation.**

LCD display
The pixels in this unit's LCD display change color with changes in temperature. When the room temperature is high, or when playing at high volume levels for extended periods, display color may become purple. However, normal display color returns when the temperature drops.

■ SPECIFICATION

Stereo Tuner Amplifier: SX-R9

Amplifier Section

Continuous power output (RMS) ..... 50 W + 50 W
(1 kHz, T.H.D. 10%, 8 Ω)
Continuous power output (DIN) ..... 41 W + 41 W
(1 kHz, T.H.D. 1%, 8 Ω)
Music power (DIN) ..... 61 W + 61 W
(1 kHz, T.H.D. 1%, 8 Ω)

FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz
Antenna ..... 75 Ω, unbalanced

AM Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz
Antenna ..... Loop antenna
Power Requirements ..... AC 220-230 V, 50/60 Hz
Power Consumption ..... 157 W
Dimensions ..... 210 (W) x 112.5 (H) x 307 (D) mm
Weight ..... 5.2 kg

Accessories

Operating instructions 1
Warranty Card 1

NOTE:

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