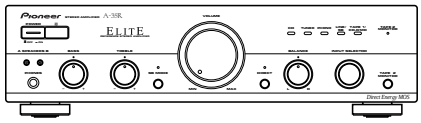
Service Manual



ORDER NO.
RRV2292

STEREO AMPLIFIER

A-35R

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

Type	Model	Power Requirement	Remarks
	A-35R		
KUXJ/CA	○	AC120V	

CONTENTS

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

T- ZZA MAY 2000 Printed in Japan

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
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

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.

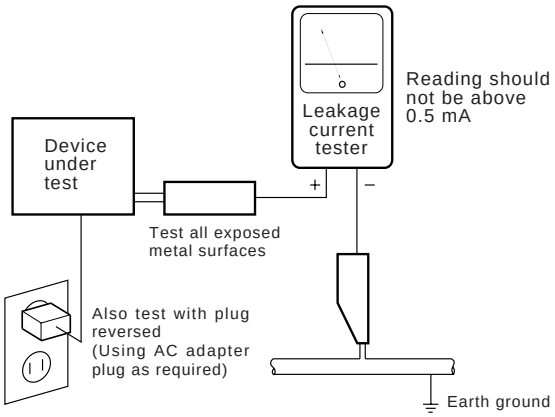
(FOR USA MODEL ONLY)

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.

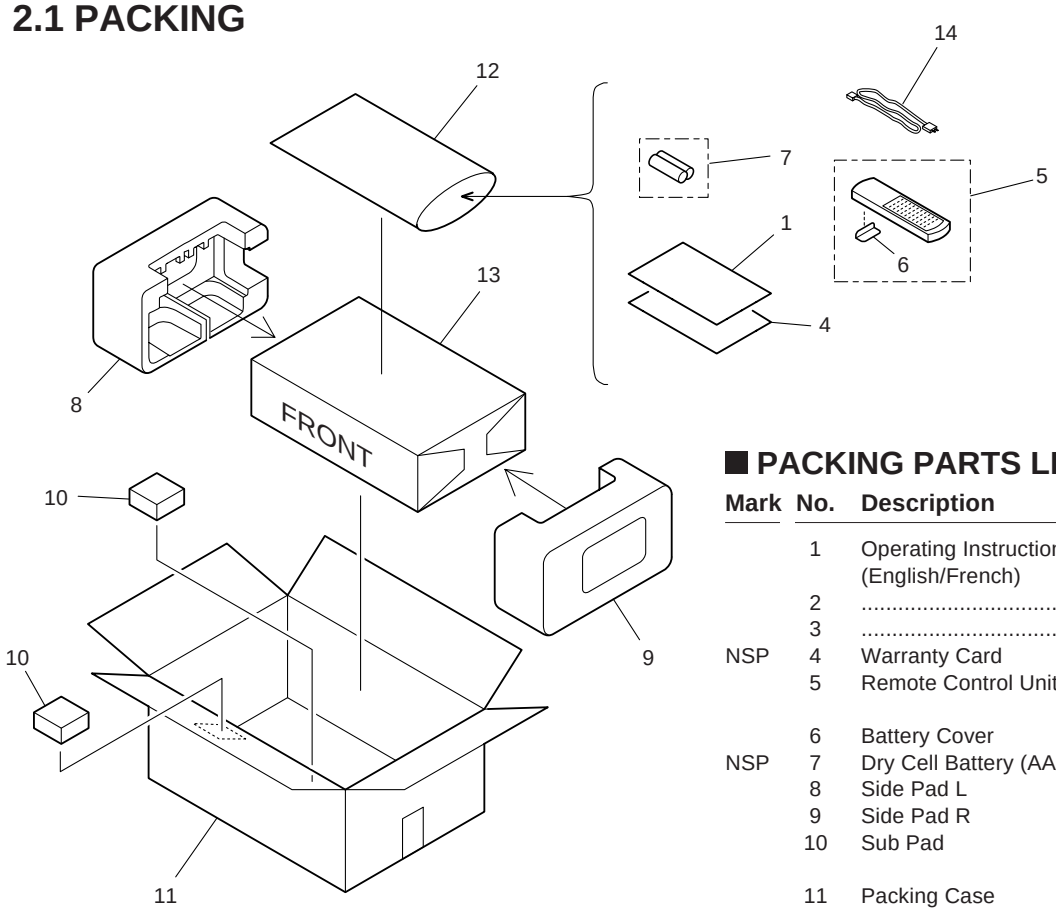
Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.
The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts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

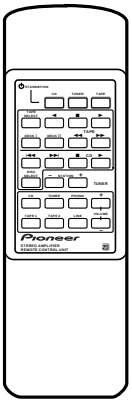
2.1 PACKING



■ PACKING PARTS LIST

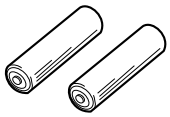
Mark	No.	Description	Part No.
	1	Operating Instructions (English/French)	ARE7263
	2	.....	
	3	.....	
NSP	4	Warranty Card	ARY7007
	5	Remote Control Unit (CU-A019)	AXD7193
	6	Battery Cover	AZN2249
NSP	7	Dry Cell Battery (AA/R6P)	VEM–013
	8	Side Pad L	AHA7205
	9	Side Pad R	AHA7206
	10	Sub Pad	AHA7218
	11	Packing Case	AHD7897
NSP	12	Literature Bag	AHG1180
	13	Packing Sheet	AHG7015
⚠	14	Power Cord	ADG7022

Accessories

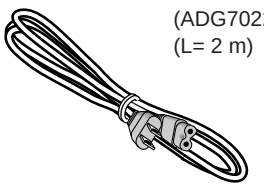


Remote control unit
CU-A019 (AXD7193)

● AA size IEC R6P batteries (×2)



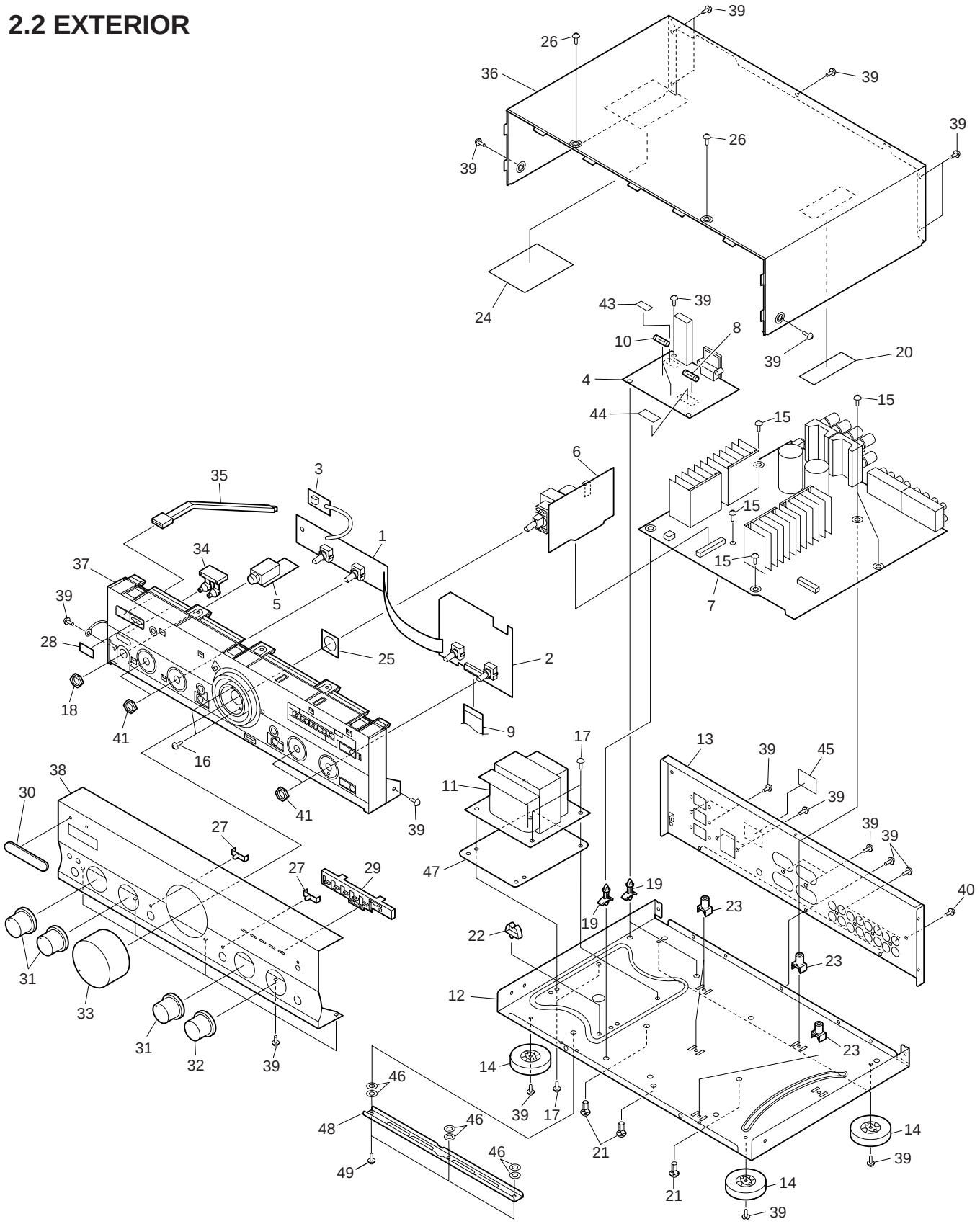
● Power cord
(ADG7022)
(L= 2 m)



● Operating instructions
(ARE7263)

● Warranty card

2.2 EXTERIOR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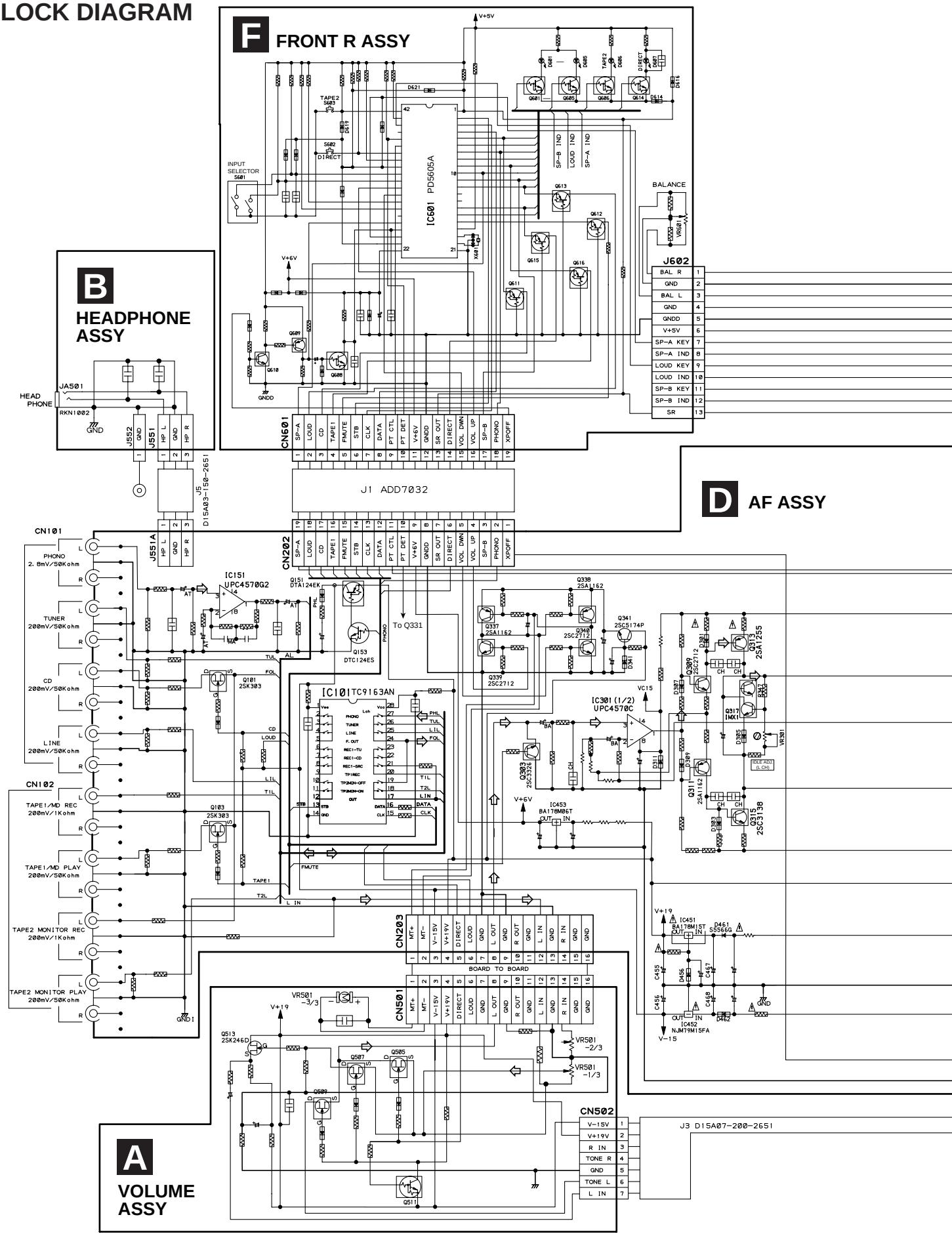
■ EXTERIOR PARTS LIST

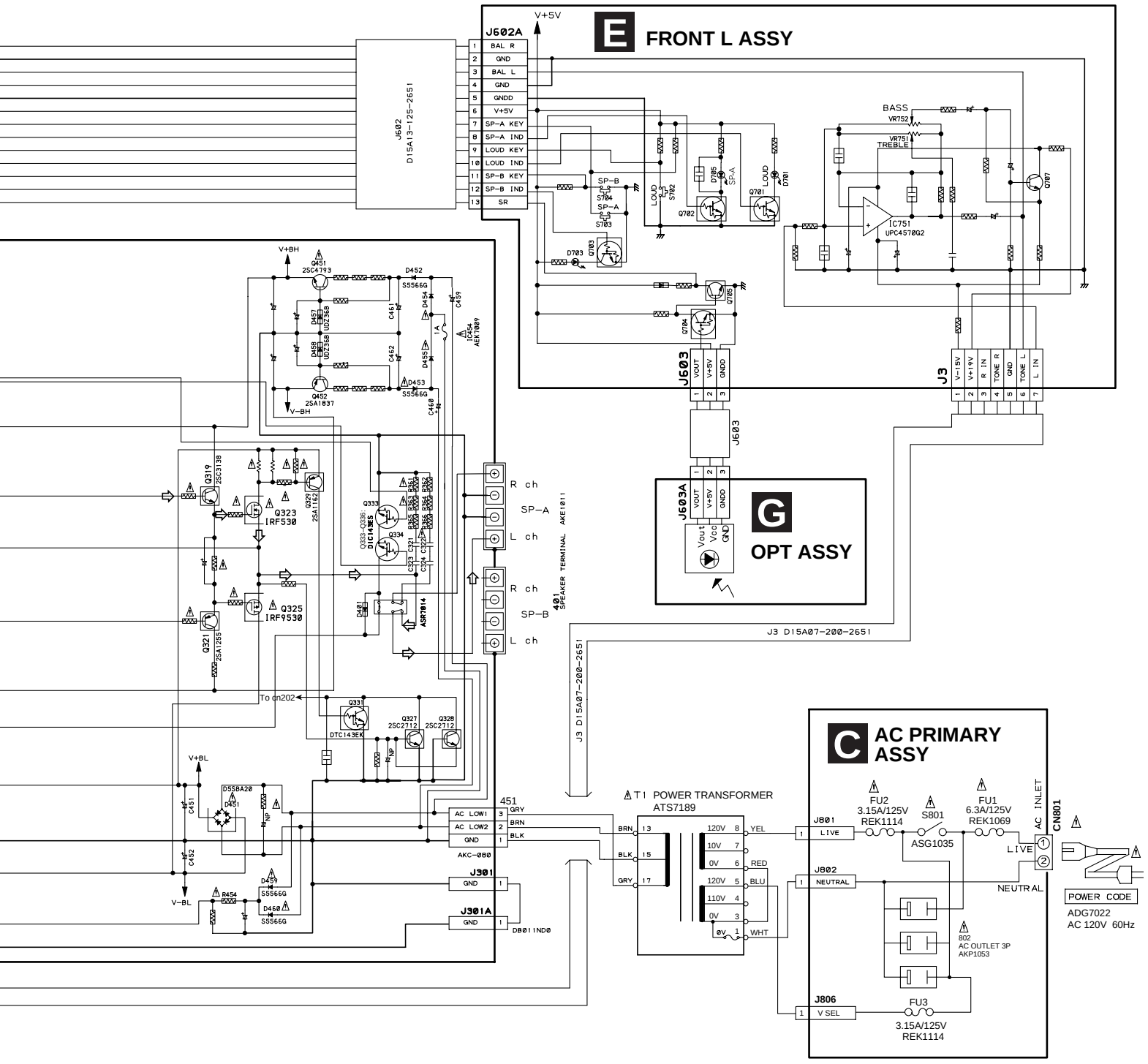
Mark	No.	Description	Part No.
	1	FRONT L Assy	AWX7123
	2	FRONT R Assy	AWX7666
	3	OPT Assy	AWX7125
	4	AC PRIMARY Assy	AWX7715
NSP	5	HEADPHONE Assy	AWX7114
	6	VOLUME Assy	AWX7719
	7	AF Assy	AWX7668
⚠	8	Fuse (6.3A/125V, FU1)	REK1069
	9	Flexible Cable (19P) (AF CN202–FRONT R CN601)	ADD7032
	10	Fuse (3.15A/125V, FU2, FU3)	REK1114
⚠	11	Power Transformer (T1)	ATS7189
NSP	12	Chassis	ANA7064
	13	Rear Panel	ANC7929
	14	Insulator	PNW2766
	15	Screw (3 × 18)	ABA1018
	16	Screw (3 × 8)	ABA1027
	17	Screw (4 × 10)	ABA7047
	18	Nut	ABN–065
	19	PCB Support	AEC7006
	20	65 Label	ARW7050
NSP	21	PCB Holder	AEC7057
NSP	22	Cord Clamp F	AEC7134
	23	PCB Mold	AMR2533
NSP	24	Damping Plate	AMR7216
NSP	25	Shield Plate	ANK7043
	26	Screw (3 × 8)	PBA1096
	27	LED Lens	AAK2459
	28	IR Filter	AAK7532
	29	LED Lens A	AAK7537
	30	Name Plate	PAM1776
	31	Rotary Knob A	AAB7148
	32	Rotary Knob B	AAB7149
	33	Volume Knob	AAB7150
	34	Speaker Button	AAD7435
	35	Power Joint	AAD7439
	36	Bonnet Case	ANE7183
	37	Panel Base	AMB7723
	38	Front Panel	AMB7708
	39	Screw	BBZ30P080FZK
	40	Screw	BCZ30P060FCC
	41	Nut	NK90FUC
	42	.....	
NSP	43	Fuse Card	AAX2347
NSP	44	Fuse Card	AAX2374
	45	Micro Fuse Caution Label	ARW7116
	46	Spacer	ABF7004
	47	Transformer Plate	ANG7312
NSP	48	Sub Frame	ANG7313
	49	Screw	IBZ30P120FCC

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

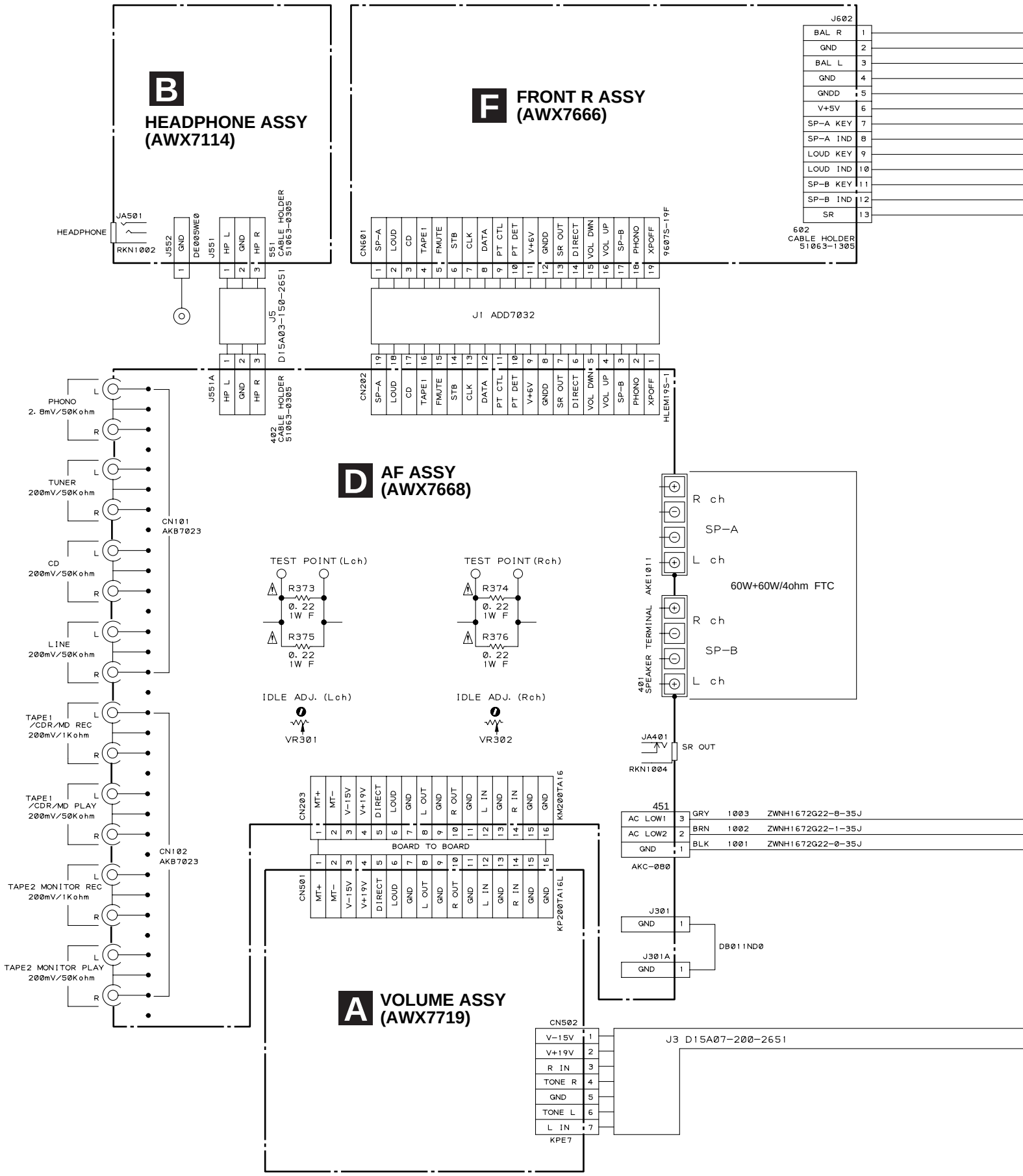
3.1 BLOCK DIAGRAM



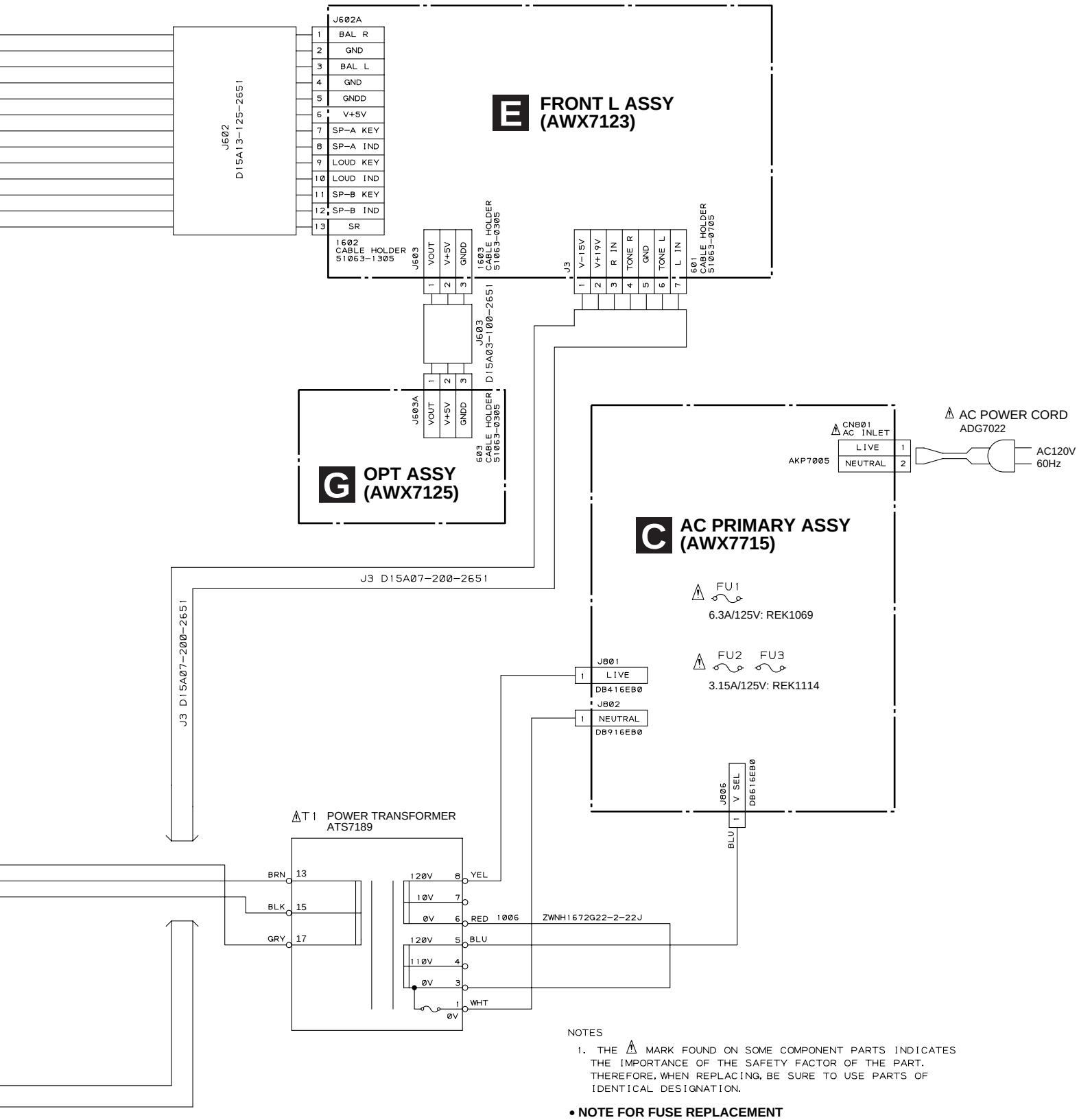
: AUDIO SIGNAL ROUTE



3.2 OVERALL CONNECTION DIAGRAM



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



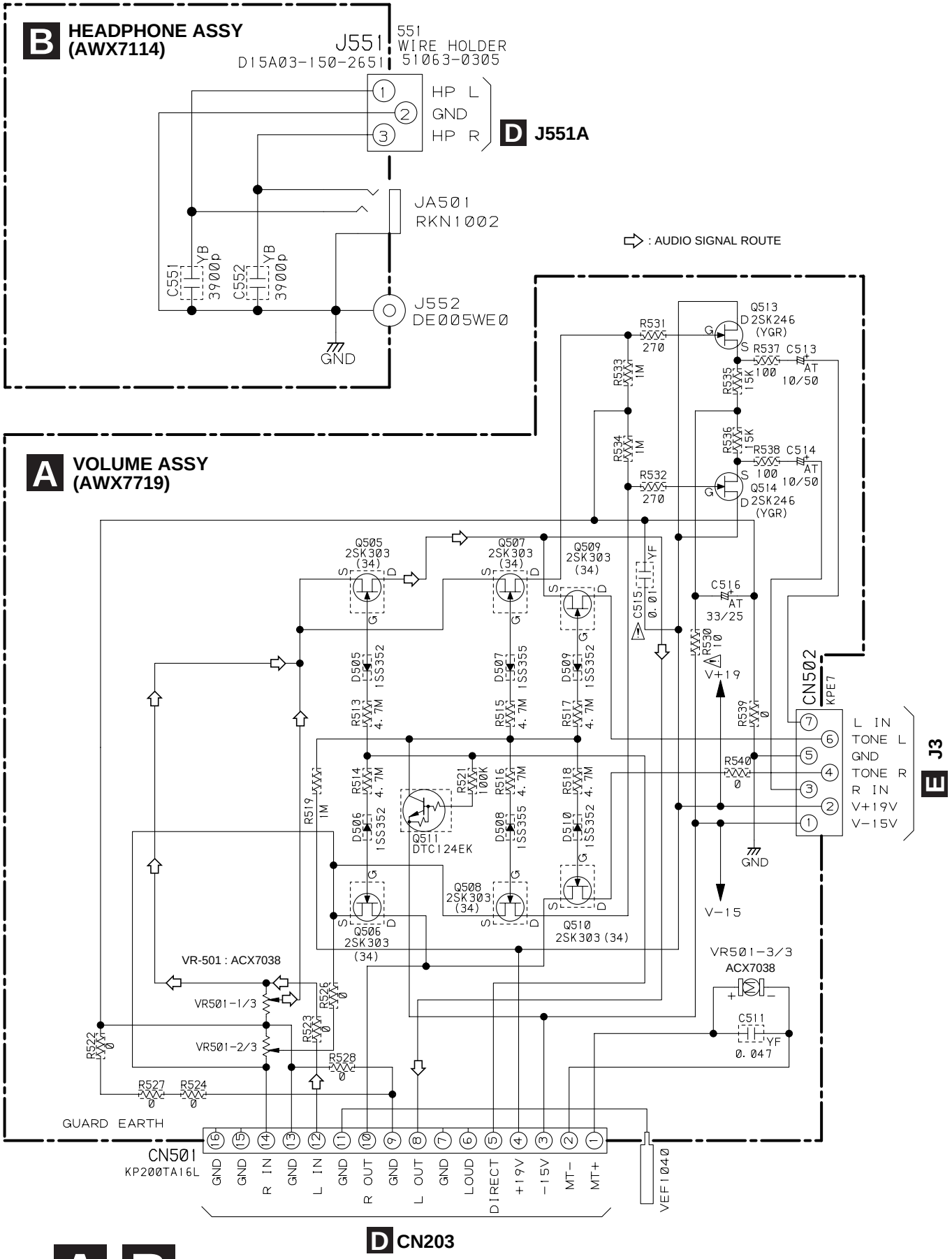
NOTES

1. 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.

• NOTE FOR FUSE REPLACEMENT

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

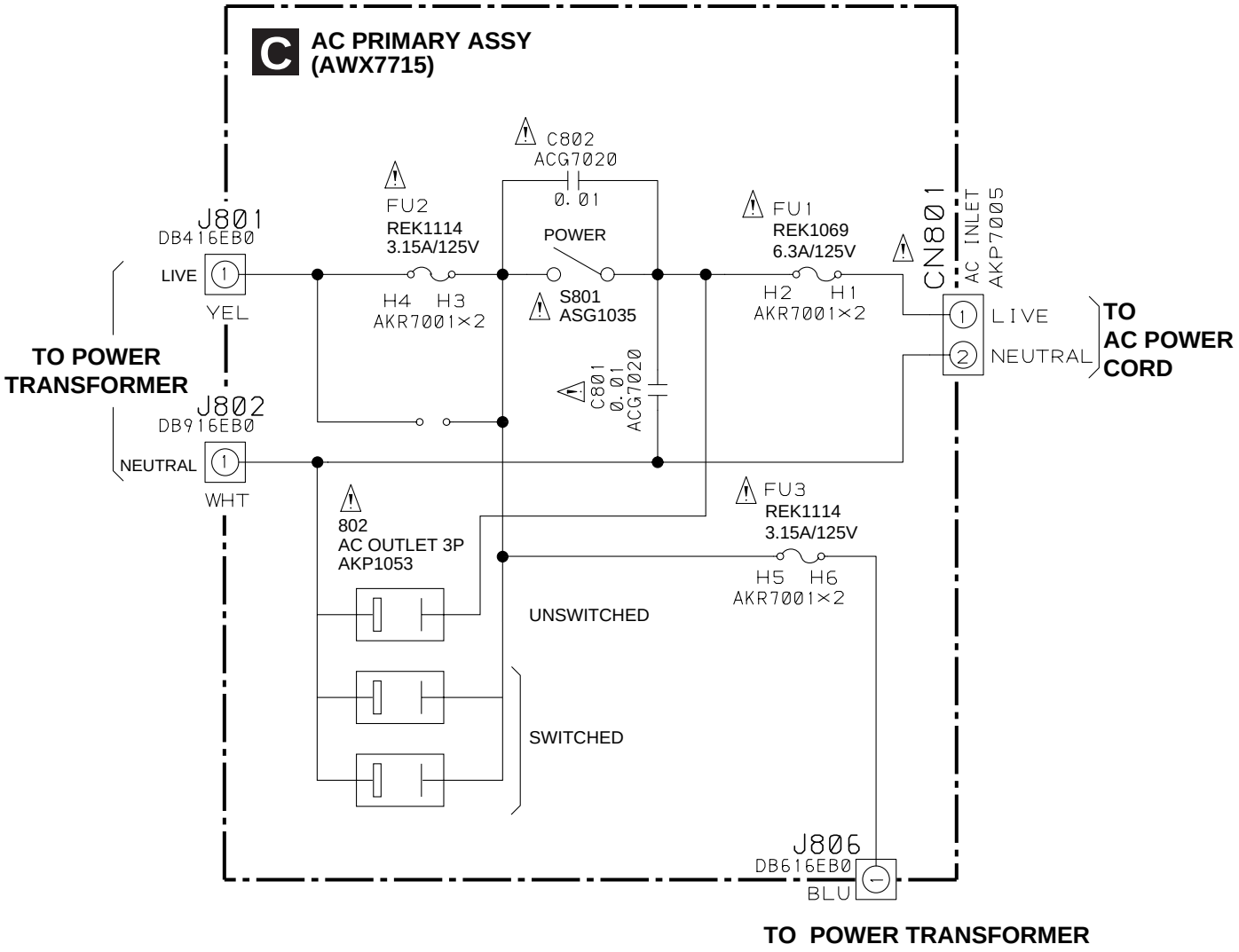
3.3 VOLUME and HEADPHONE ASSYS



3.4 AC PRIMARY ASSY

• NOTE FOR FUSE REPLACEMENT

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



NOTES

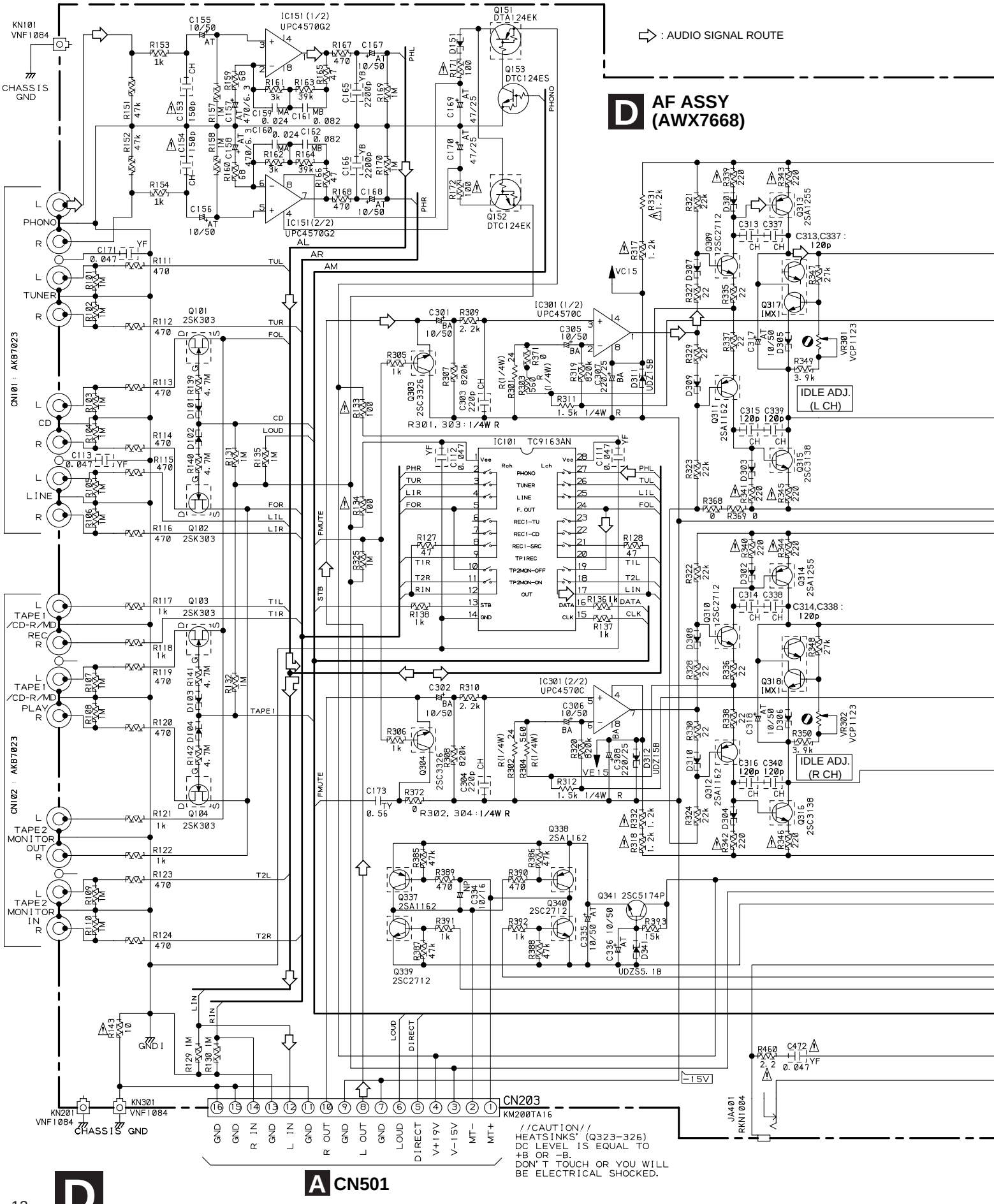
1. RESISTORS
INDICATED IN Ohm 1/10W 5% TOLERANCE UNLESS OTHERWISE NOTED
k : kOhm, M : MOhm

2. CAPACITORS
INDICATED IN CAPACITY(uF)/VOLTAGE(V) UNLESS OTHERWISE NOTED p : pF
INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
TY : CFTYA, CH : CCSQCH, YB : CKSQYB, YF : CKSQYF

3. 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.

A-35R

3.5 AF ASSY



NOTES

1. RESISTORS
   INDICATED IN Ohm 1/10W ±5% TOLERANCE UNLESS OTHERWISE NOTED
   k : kOhm, M : MOhm, F : NON-FRAMABLE TYPE, R : RDR TYPE
2. CAPACITORS
   INDICATED IN CAPACITY(uF)/VOLTAGE(V) UNLESS OTHERWISE NOTED p : pF
   INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
   MA : CQMA, MB : CQMBA, TY : CFTYA, CH : CCSQCH, SL : CCSQSL, YB : CKSQYB, YF : CKSQYF
   BA : CEBA
3. INDUCTORS
   INDICATED IN H ± 5%
4. DIODES
   NO MARK DIODES ARE 1SS355
5. VOLTAGE
   INDICATED IN DC VOLTAGE : NO SIGNAL/DIN POWER OUTPUT
   (A-D3 : NO SIGNAL/80W*2ch 4ohm)
6. 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.
7. TRNSISTOR'S RANK
   2SC3138 : (OY) 2SC2712 : (OY) 2SC3326 : (AB)
   2SA1255 : (OY) 2SA1162 : (OY) 2SK303 : (34)

CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE ONLY WITH SAME TYPE NO. 491001 MFD, BY LITTELFUSE INC. FOR IC454 (AEK7009).

C451	ACH7048 (10000/42)
C452	ACH7049 (10000/42)

TO POWER TRANSFORMER

CN202 HLEM19S-1
XPOFF PHONO SP-B VOL UP VOL DWN DIRECT SR OUT GND D V+6V PT DET PT CTL DATA CLK STB F MUTE TAPE1 CD LOUD SP-A

F CN601

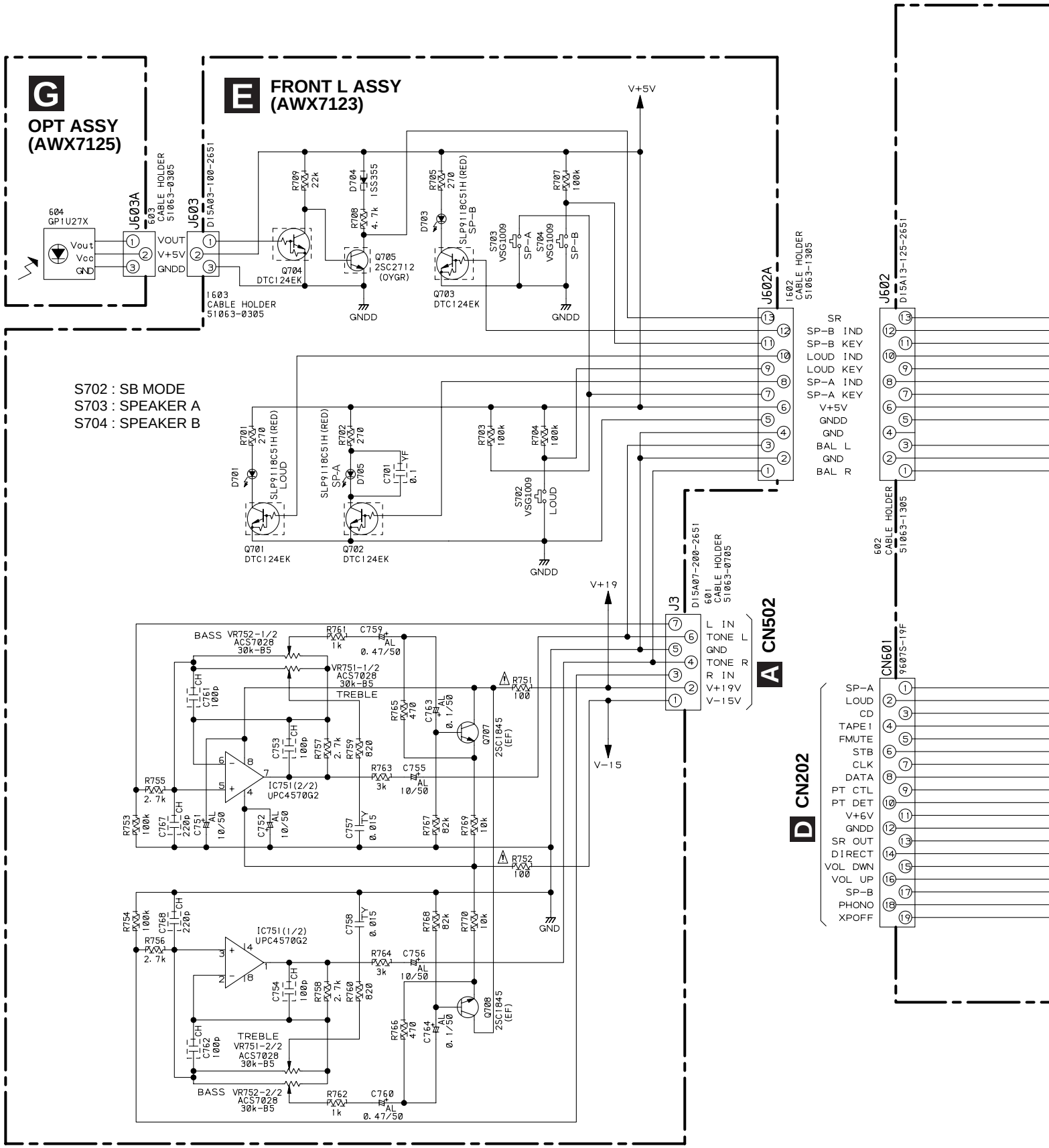
B J551
HP L GND HP R

J551A 402 WIRE HOLDER 51063-0305

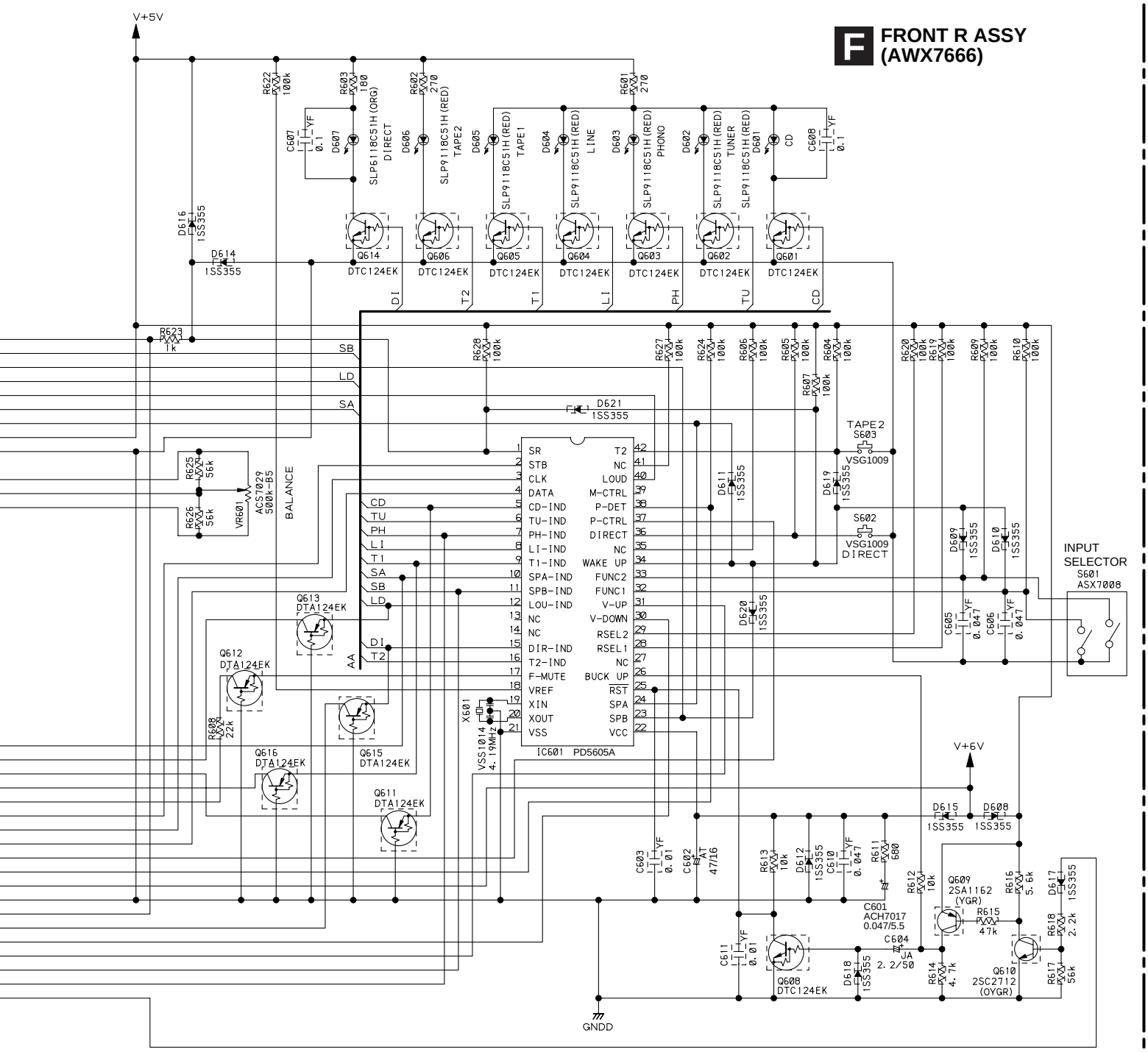
401 AKE1011(8P) SP TERMINAL
L R SP-B
L R SP-A

SP-A : OFF/ON 0V/5V
SP-B : OFF/ON 0V/5V

3.6 FRONT L, FRONT R and OPT ASSYS



F FRONT R ASSY (AWX7666)



FRONT R ASSY
- S601 : INPUT SELECTOR
  - CD
  - TUNER
  - PHONE
  - LINE
  - TAPE1/CD-R/MD
- S602 : DIRECT
- S603 : TAPE2 MONITOR

NOTES
1. RESISTORS
INDICATED IN Ohm 1/10W± 5% TOLERANCE UNLESS OTHERWISE NOTED
k : kOhm

2. CAPACITORS
INDICATED IN CAPACITY(uF)/VOLTAGE(V) UNLESS OTHERWISE NOTED p : pF
INDICATED WITHOUT VOLTAGE IS 50V EXCEPT ELECTROLYTIC CAPACITOR.
AL : CEAL, AT : CEAT, JA : CEJA, TY : CFTYA, CH : CCSQCH, YF : CKSQYF

3. 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.

4. PCB CONNECTION DIAGRAM

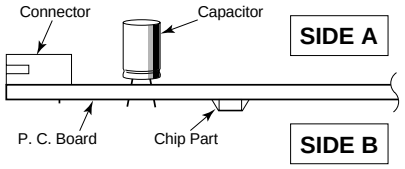
NOTE FOR PCB DIAGRAMS:

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
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor

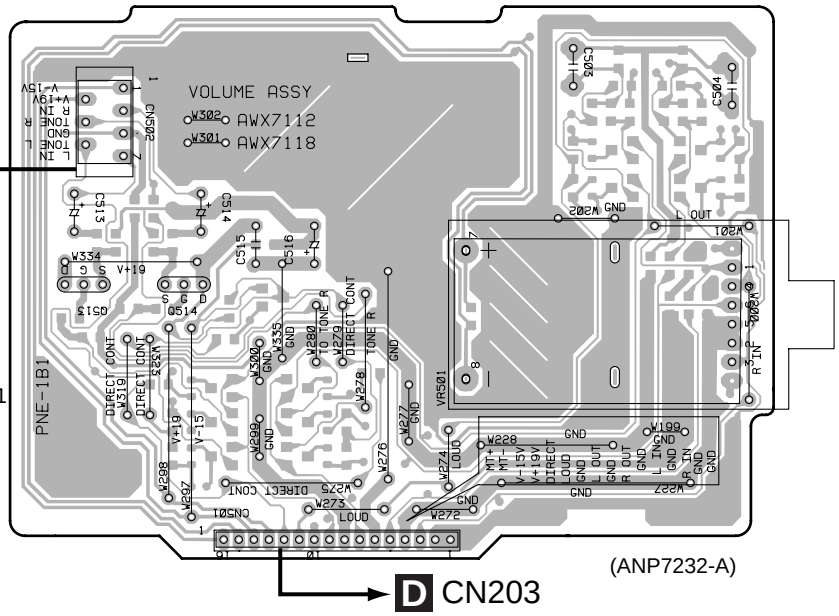
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Resistor array
		3-terminal regulator

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 VOLUME ASSY

A VOLUME ASSY



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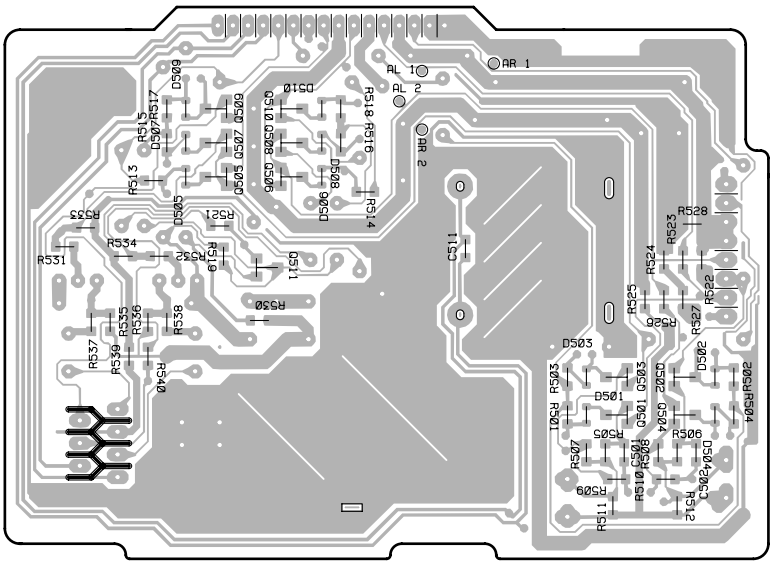
A VOLUME ASSY



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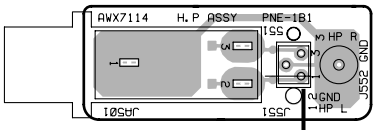
4.2 HEADPHONE and AC PRIMARY ASSYS

B HEADPHONE ASSY



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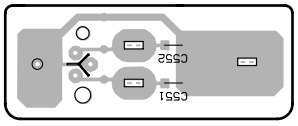
SIDE A

B HEADPHONE ASSY

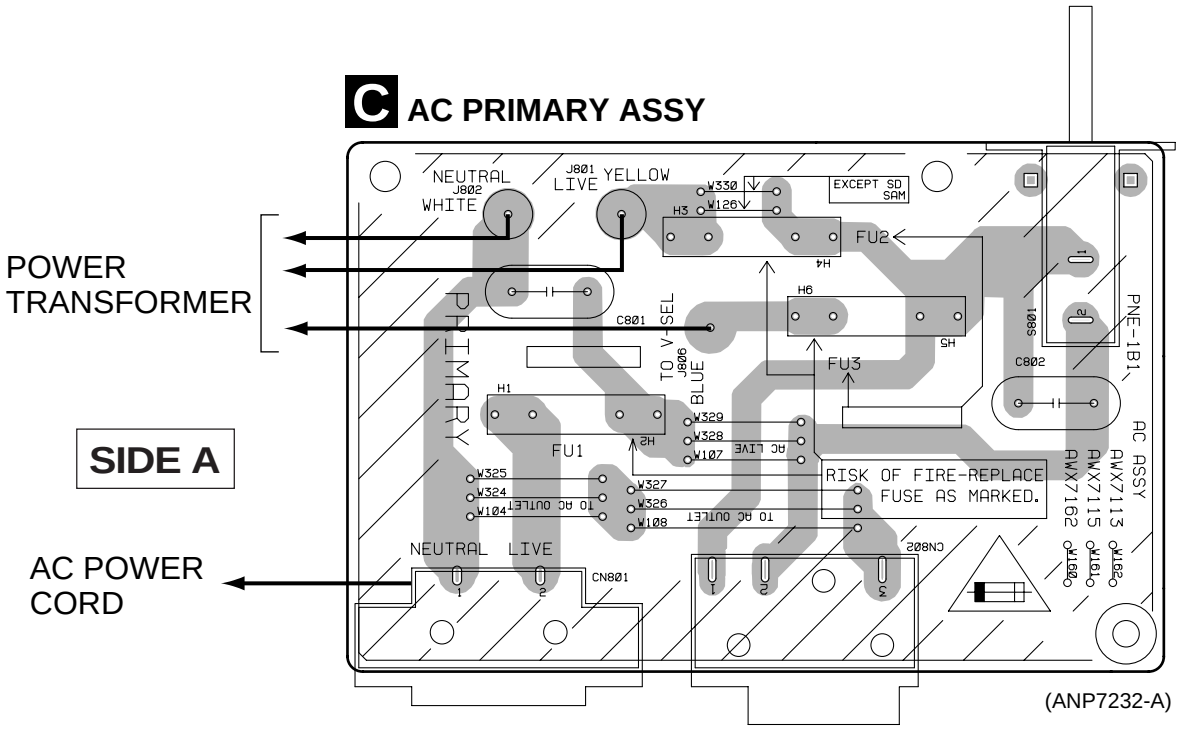


(ANP7232-A)

SIDE B

C AC PRIMARY ASSY

POWER TRANSFORMER

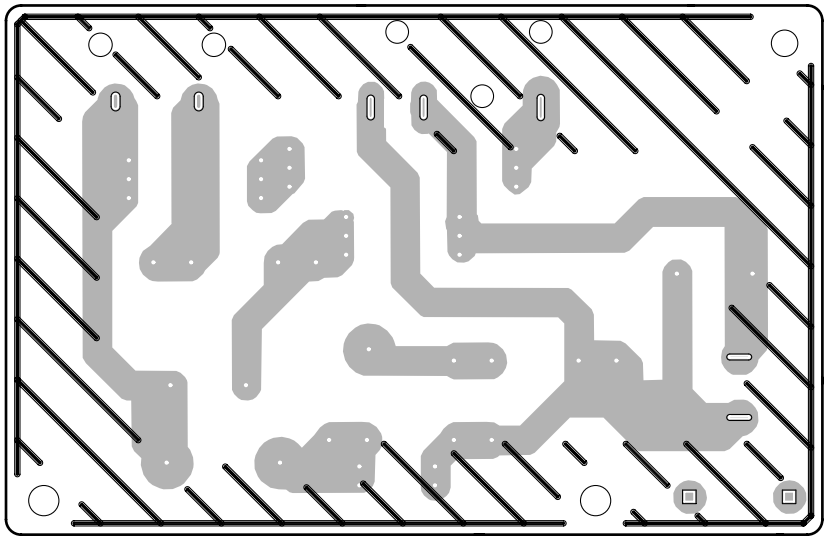


AC POWER CORD

SIDE A

(ANP7232-A)

C AC PRIMARY ASSY

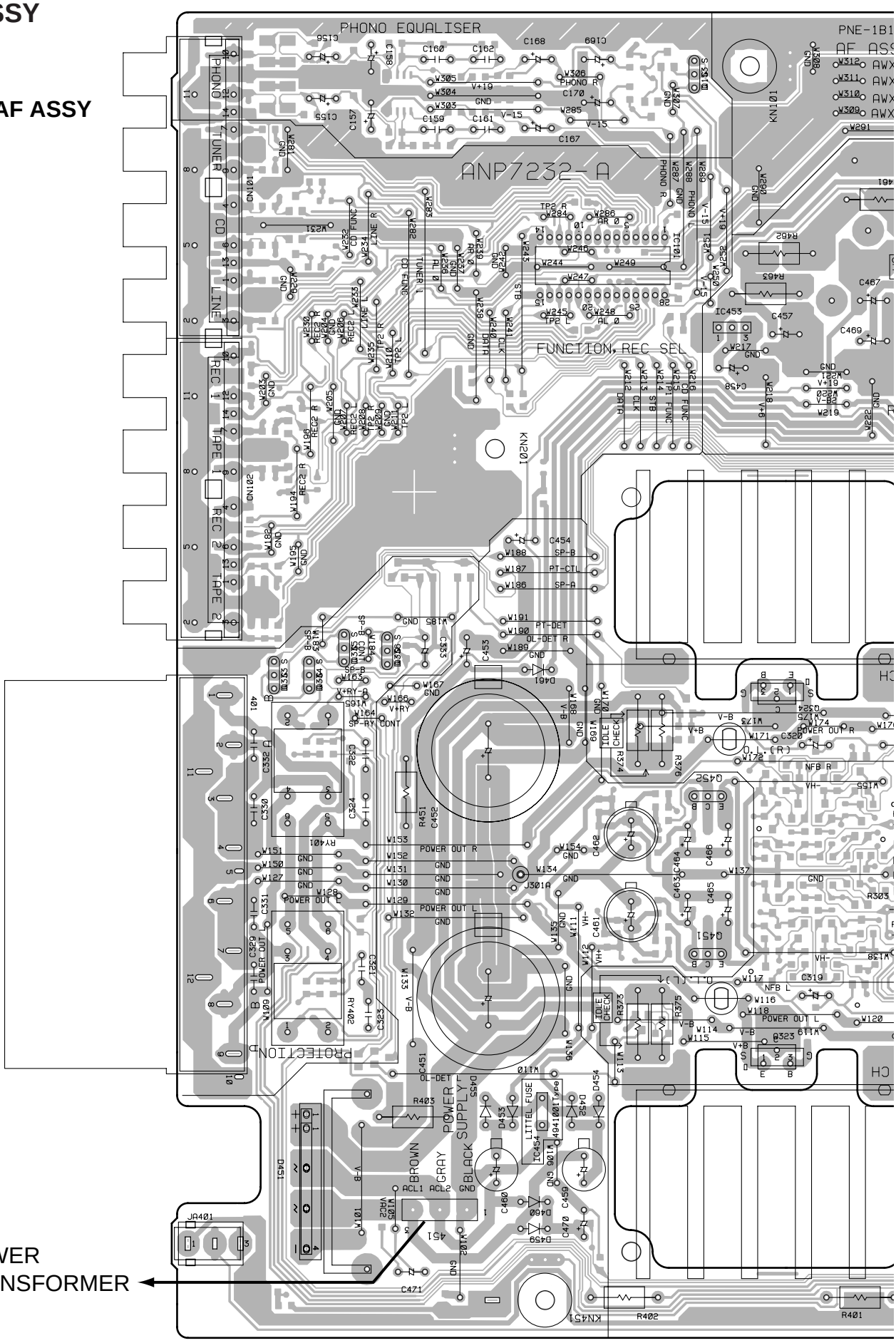


SIDE B

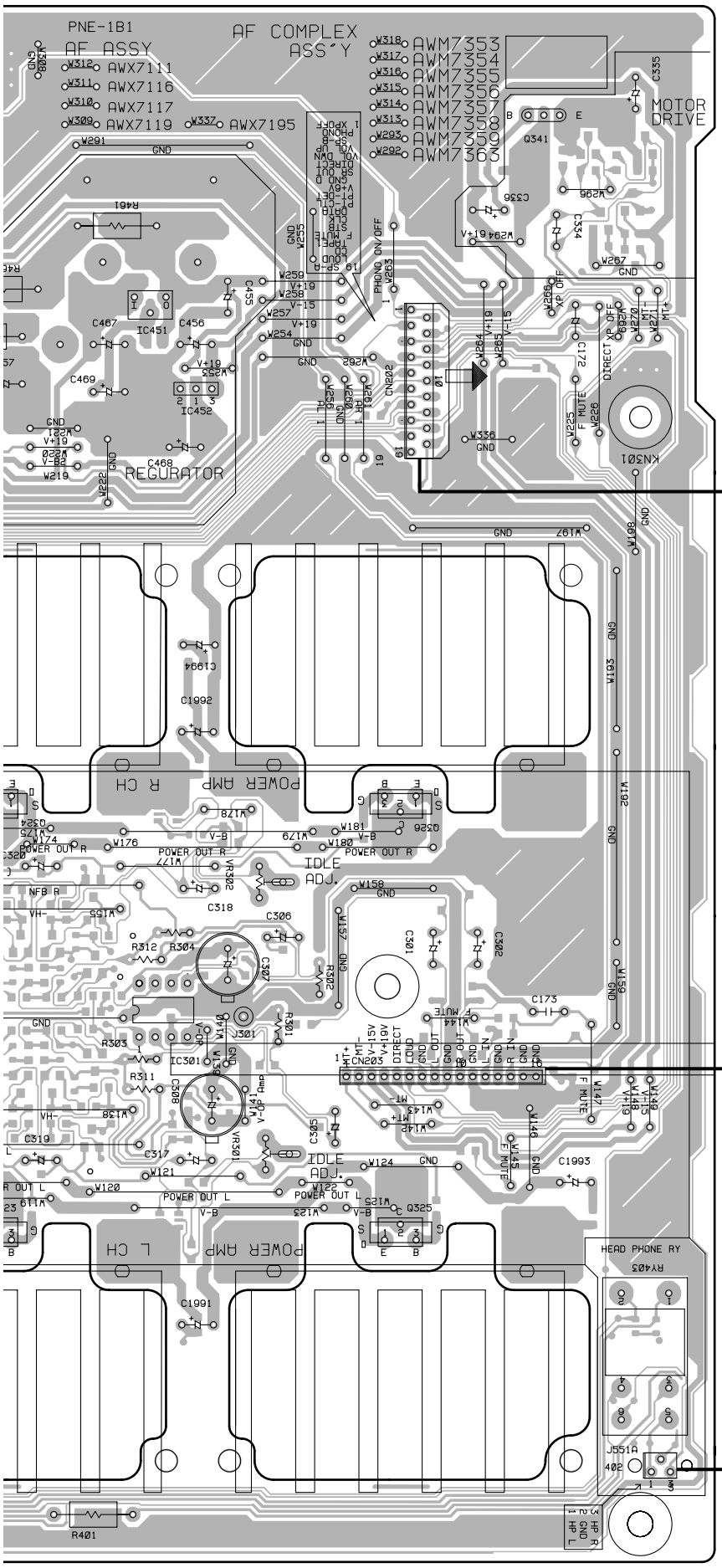
(ANP7232-A)

4.3 AF ASSY

D AF ASSY



SIDE A



Q153

Q341

IC101

IC451-IC453

Q333-Q336

Q324,Q326

VR302

Q452

IC301

Q451

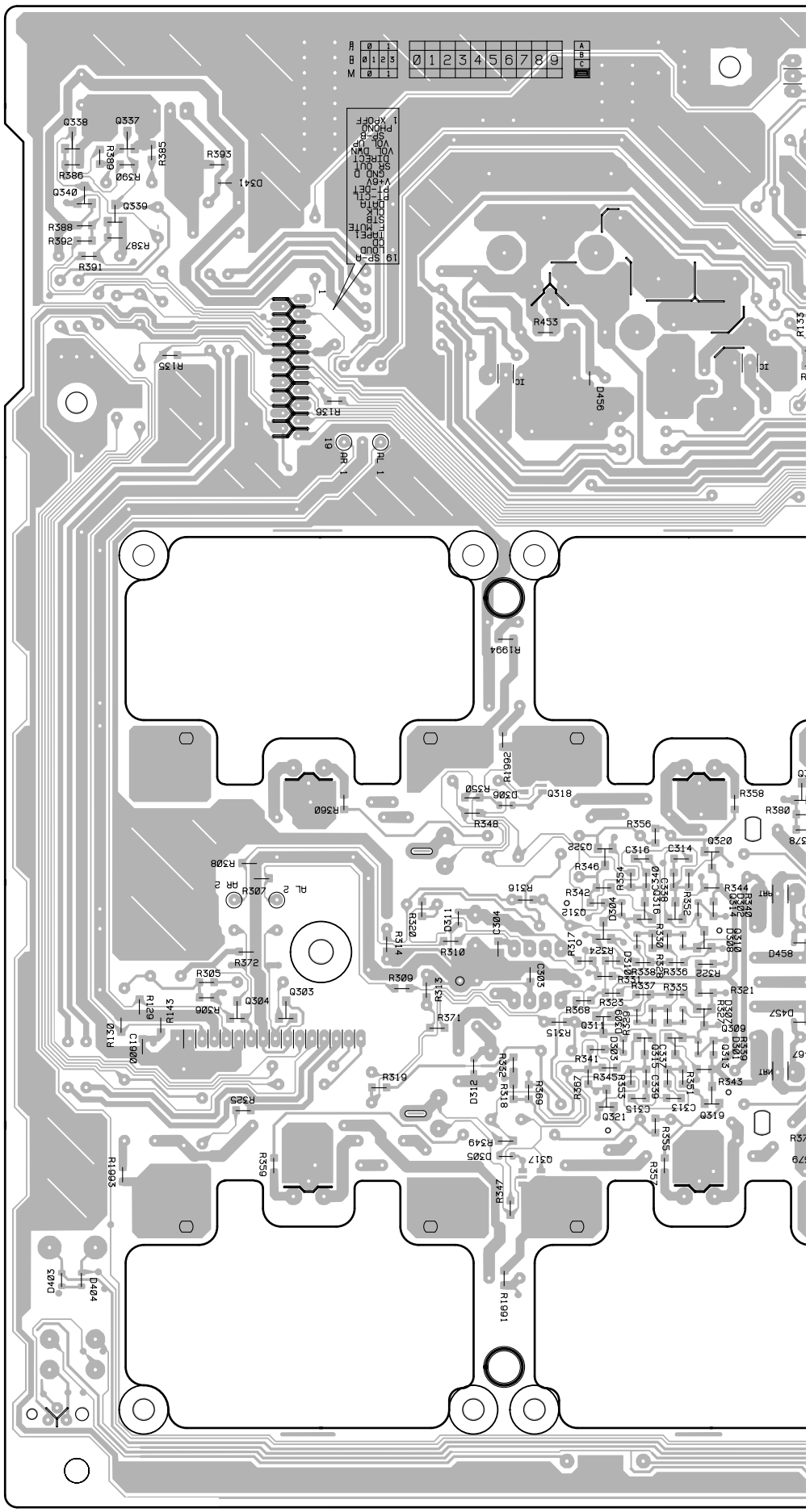
VR301

Q323,Q325

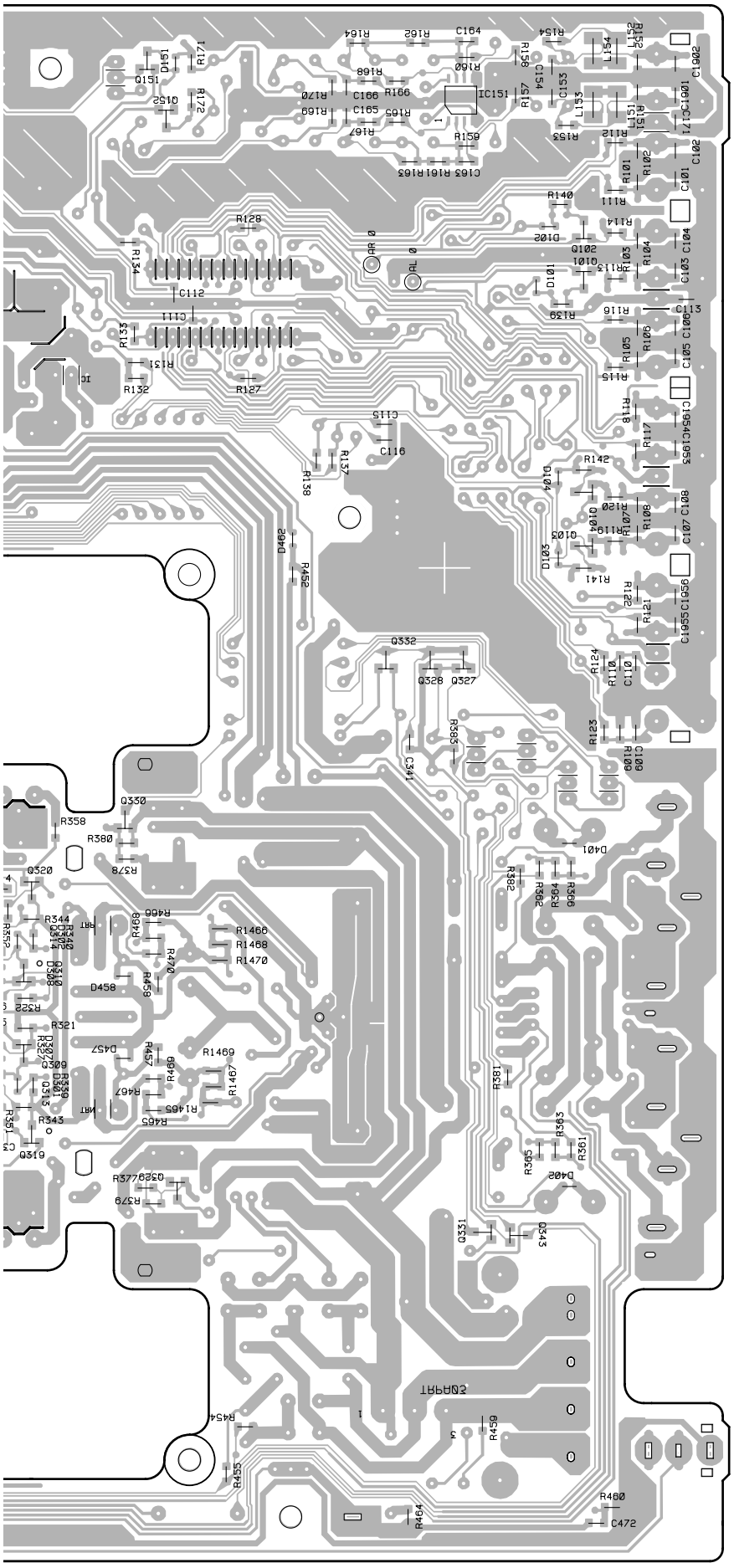
IC454

(ANP7232-A)

D AF ASSY



SIDE B



(ANP7232-A)

Q151
IC151
Q152
Q338,Q337

Q340,Q339

Q102

Q101

Q104

Q103

Q332
Q328,Q327

Q318,Q330

Q322,Q320

Q316,Q314

Q312,Q310

Q304,Q303
Q311,Q309
Q315,Q313

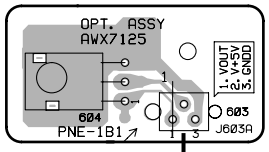
Q321,Q319

Q317,Q329

Q331,Q343

4.4 FRONT L and OPT ASSYS

G OPT ASSY



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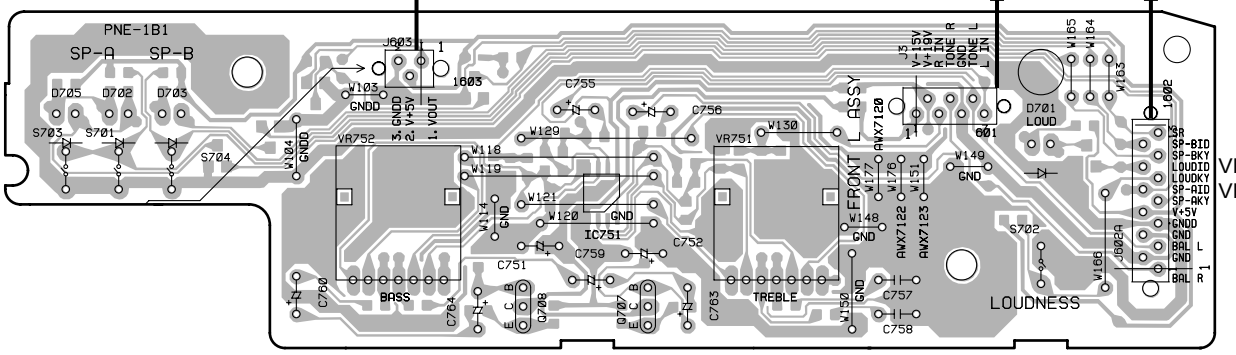
SIDE A

E FRONT L ASSY

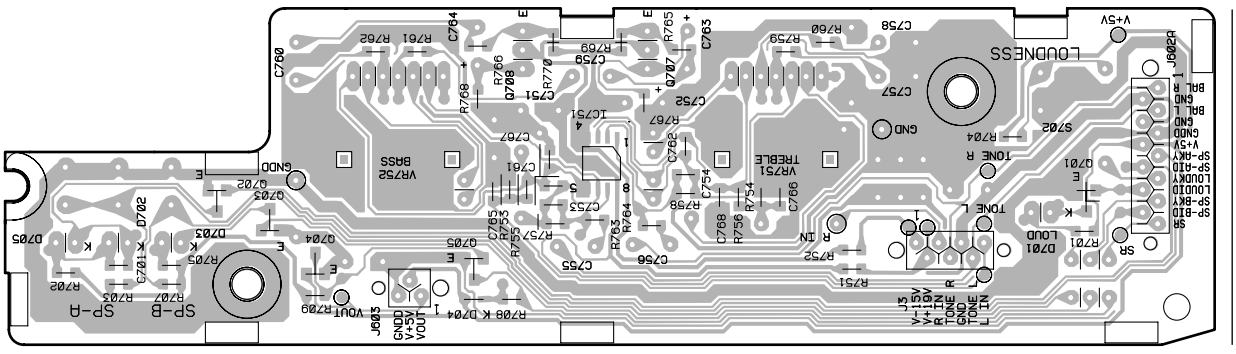
A CN502 **F** J602



(ANP7231-A)

SIDE B

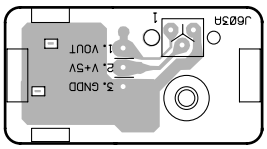
E FRONT L ASSY



IC751,Q701
Q703,Q702
Q705,Q704

(ANP7231-A)

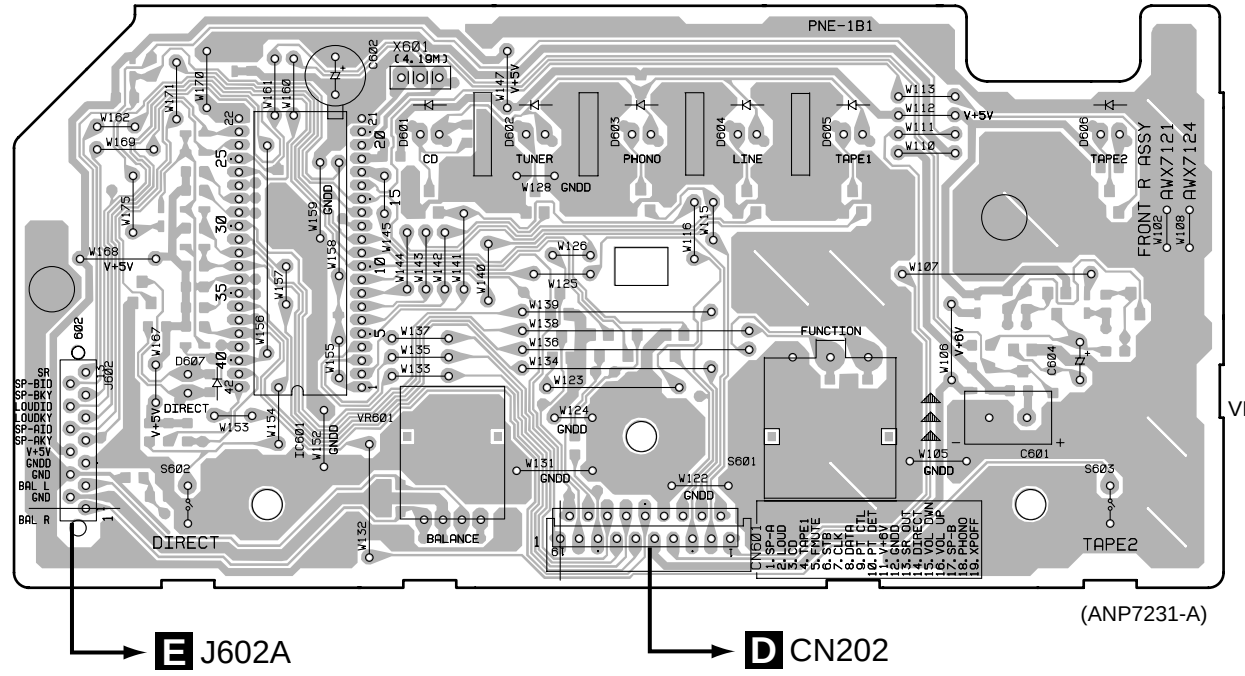
G OPT ASSY



(ANP7231-A)

4.5 FRONT R ASSY

F FRONT R ASSY — **SIDE A**

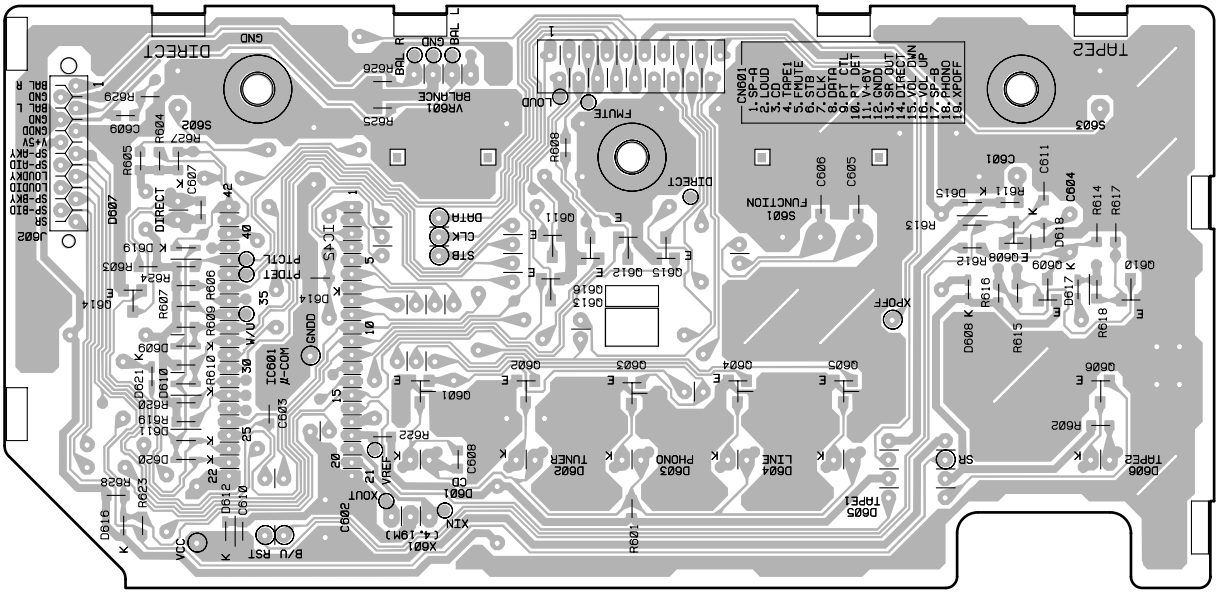


(ANP7231-A)

E J602A

D CN202

F FRONT R ASSY — **SIDE B**



Q608-Q613
Q614-Q616
Q601-Q606

(ANP7231-A)

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 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 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 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.

LIST OF PCB ASSEMBLIES

NSP	AF COMPLEX ASSY		AWM7513
	├ VOLUME ASSY		AWX7719
NSP	├ HEADPHONE ASSY		AWX7114
	├ AC PRIMARY ASSY		AWX7715
	└ AF ASSY		AWX7668
NSP	CONTROL ASSY		AWG7020
	├ FRONT L ASSY		AWX7123
	├ FRONT R ASSY		AWX7666
	└ OPT ASSY		AWX7125

A VOLUME ASSY

SEMICONDUCTORS

	Q513, Q514		2SK246
	Q505–Q510		2SK303
	Q511		DTC124EK
	D505, D506, D509, D510		1SS352
	D507, D508		1SS355

CAPACITORS

	C513, C514		CEAT100M50
	C516		CEAT330M25
⚠	C515		CKCYF103Z50
	C511		CKSQYF473Z50

RESISTORS

⚠	R530		RS1/10S100J
	VR501		ACX7038
	Other Resistors		RS1/10S□□□J

OTHERS

	CN501	16P SOCKET	KP200TA16L
	CN502	CONNECTOR 7P	KPE7
		PCB BINDER	VEF1040

B HEADPHONE ASSY

CAPACITORS

	C551, C552		CKSQYB392K50

OTHERS

		3P CABLE HOLDER	51063-0305
	J552	CORD WITH PLUG	DE005WE0
	JA501	HEADPHONE JACK	RKN1002
	J551	JUMPER WIRE	D15A03-150-2651

C AC PRIMARY ASSY

SWITCH

⚠	S801		ASG1035

CAPACITORS

⚠	C801, C802 (0.01µF/AC250V)		ACG7020

OTHERS

⚠	CN801	AC INLET	AKP7025
	H1–H6	FUSE CLIP	AKR7001
⚠		AC OUTLET (3P)	AKP1053

D AF ASSY

SEMICONDUCTORS

⚠	IC454 (1A)		AEK7009
⚠	IC453		BA178M06T
⚠	IC451		BA178M15T
⚠	IC452		NJM79M15FA
	IC101		TC9163AN
	IC301		UPC4570C
	IC151		UPC4570G2
	Q311, Q312, Q329, Q330		2SA1162
	Q337, Q338		2SA1162
	Q313, Q314, Q321, Q322		2SA1255
⚠	Q452		2SA1837
	Q309, Q310, Q327, Q328		2SC2712
	Q339, Q340		2SC2712
	Q315, Q316, Q319, Q320		2SC3138
	Q303, Q304		2SC3326

Mark	No.	Description	Part No.
⚠	Q451		2SC4793
	Q341		2SC5174P
	Q101–Q104		2SK303
	Q151		DTA124EK
	Q152		DTC124EK
	Q153		DTC124ES
	Q331, Q332, Q343		DTC143EK
	Q333–Q336		DTC143ES
	Q317, Q318		IMX1
⚠	Q323, Q324		IRF530 (S)
⚠	Q325, Q326		IRF9530 (S)
	D101–D104, D151, D301–D310		1SS355
	D401–D404		1SS355
⚠	D451		D5SBA20
⚠	D452–D455, D459, D460		S5566G (TPB2)
	D461		S5566G (TPB2)
	D311, D312		UDZ15B
	D457, D458		UDZ36B
	D456		UDZ4.7B
	D341		UDZS5.1B
	D462		UDZS5.6B

RELAYS

	RY401–RY403	ASR7014

CAPACITORS

	C451 (10000µF/42V)	ACH7048
	C452 (10000µF/42V)	ACH7049
	C313–C316, C337–C340	CCSQCH121J50
⚠	C153, C154	CCSQCH151J50
	C303, C304	CCSQCH221J50
	C334	CEANP100M16
	C471	CEANP1R0M2A
	C172	CEANP1R0M50
	C333	CEANP470M10
	C155, C156, C167, C168	CEAT100M50
	C317–C320, C335, C336	CEAT100M50
	C453–C458, C465, C466, C469	CEAT100M50
	C461, C462	CEAT101M2A
	C467, C468	CEAT1R0M50
	C470	CEAT3R3M50
	C169, C170	CEAT470M25
	C459, C460, C463, C464	CEAT470M50
	C157, C158	CEAT471M6R3
	C301, C302, C305, C306	CEBA100M50
	C307, C308	CEBA221M25
	C321–C324	CFTYA224J50
	C173	CFTYA564J50
	C165, C166	CKSQYB222K50
	C111–C113, C171, C341	CKSQYF473Z50
⚠	C472	CKSQYF473Z50
	C159, C160	CQMA243J50
	C161, C162	CQMBA823J50

Mark	No.	Description	Part No.

RESISTORS

	R311, R312	RDR1/4VM152J
	R301, R302	RDR1/4VM240J
	R303, R304	RDR1/4VM561J
⚠	R143	RS1/10S100J
⚠	R133, R134, R171, R172	RS1/10S101J
⚠	R351–R354, R452	RS1/10S101J
⚠	R317, R318, R331, R332	RS1/10S122J
⚠	R357–R360	RS1/10S151J
⚠	R377, R378, R453	RS1/10S153J
⚠	R465–R470	RS1/10S161J
⚠	R361–R366	RS1/10S1R5J
⚠	R339–R346	RS1/10S221J
⚠	R454	RS1/10S273J
⚠	R460	RS1/10S2R2J
⚠	R355, R356	RS1/10S432J
⚠	R459	RS1/10S470J
⚠	R464	RS1/10S4R7J
⚠	R379, R380	RS1/10S682J
⚠	R451	RS1LMF270J
⚠	R401, R402	RS1LMF331J
⚠	R461–R463	RS1LMF390J
⚠	R403	RS1LMF821J
⚠	R373–R376	RS1LMFR22J
	VR301, VR302 (2.2 kΩ)	VCP1123
	Other Resistors	RS1/10S□□□J

OTHERS

	3P CABLE HOLDER	51063-0305
	SCREW	ABA1007
	SCREW	ABA1052
CN101, CN102	8P PIN JACK	AKB7023
	8P SPEAKER TERMINAL	AKE1011
	HEAT SINK M	ANH-813
	HEAT SINK B	ANH1021
CN202	FFC CONNECTOR 19P	HLEM19S-1
CN203	16P PLUG	KM200TA16
JA401	REMOTE CONTROL JACK	RKN1004
	PCB BINDER	VEF1040
KN101, KN201, KN301, KN451	EARTH METAL FITTING	VNF1084

E FRONT L ASSY

SEMICONDUCTORS

IC751	UPC4570G2
Q707, Q708	2SC1845
Q705	2SC2712
Q701–Q704	DTC124EK
D704	1SS355
D701, D703, D705	SLP9118C51H

SWITCHES

S702–S704	VSG1009

Mark	No.	Description	Part No.
CAPACITORS			
	C753, C754, C761, C762		CCSQCH101J50
	C767, C768		CCSQCH221J50
	C751, C752, C755, C756		CEAL100M50
	C763, C764		CEALR10M50
	C759, C760		CEALR47M50
	C757, C758		CFTYA153J50
	C701		CKSQYF104Z25
RESISTORS			
⚠	R751, R752		RS1/10S101J
	VR751, VR752 (30 kΩ)		ACS7028
	Other Resistors		RS1/10S□□□J
OTHERS			
		3P CABLE HOLDER	51063-0305
		7P CABLE HOLDER	51063-0705
		13P CABLE HOLDER	51063-1305
	J603	JUMPER WIRE	D15A03-100-2651
	J3	JUMPER WIRE	D15A07-200-2651

F FRONT R ASSY

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC601		PD5605A
	Q609		2SA1162
	Q610		2SC2712
	Q611–Q613, Q615, Q616		DTA124EK
	Q601–Q606, Q608, Q614		DTC124EK
	D608–D612, D614–D621		1SS355
	D607		SLP6118C51H
	D601–D606		SLP9118C51H
SWITCHES			
	S602, S603		VSG1009
	S601		ASX7008
CAPACITORS			
	C601 (0.047µF/5.5V)		ACH7017
	C602		CEAT470M16
	C604		CEJA2R2M50
	C603, C611		CKSQYF103Z50
	C607, C608		CKSQYF104Z25
	C605, C606, C610		CKSQYF473Z50
RESISTORS			
	VR601 (500 kΩ)		ACS7029
	Other Resistors		RS1/10S□□□J
OTHERS			
	X601	CERAMIC RESONATOR (4.19MHz)	VSS1014
		13P CABLE HOLDER	51063-1305
	CN601	19P FFC CONNECTOR	9607S-19F
	J602	JUMPER WIRE	D15A13-125-2651

G OPT ASSY

Mark	No.	Description	Part No.
OTHERS			
		3P CABLE HOLDER	51063-0305
		REMOTE RECEIVER UNIT	GP1U27X

6. ADJUSTMENT

6.1 IDLE CURRENT ADJUSTMENT

● **CAUTION**: Heatsinks' (Q323–Q326) DC level is equal to +B or -B.
Don't touch them or you will be electric shocked.

1. Connect the measuring instrument as shown in Fig.6-1. (R373 or R374)
2. Turn the POWER switch to ON.
3. Adjust VR301 (VR302) so that the voltage between both sides of R373 (R374) becomes 10mV ± 1mV.
4. Ages for 5 minutes.
5. Adjust VR301 (VR302) so that the voltage between both sides of R373 (R374) becomes 11mV ± 1mV.

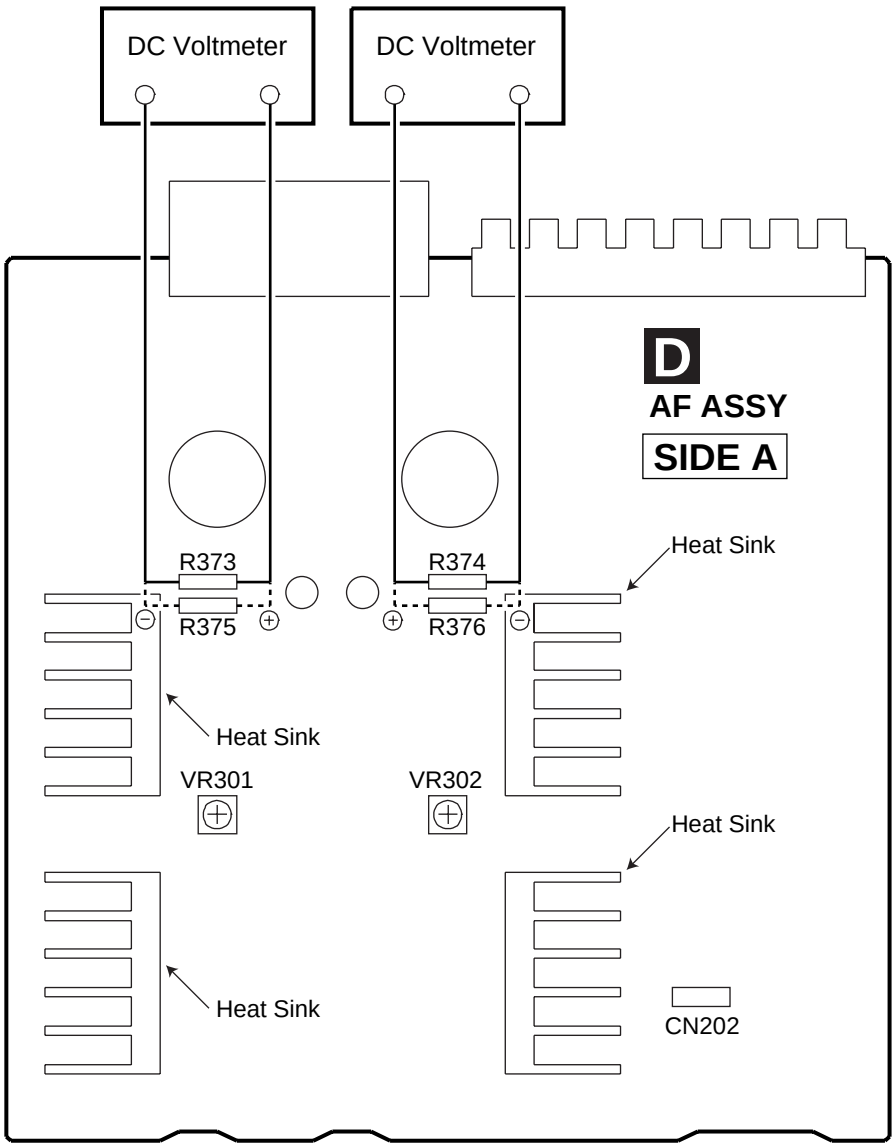
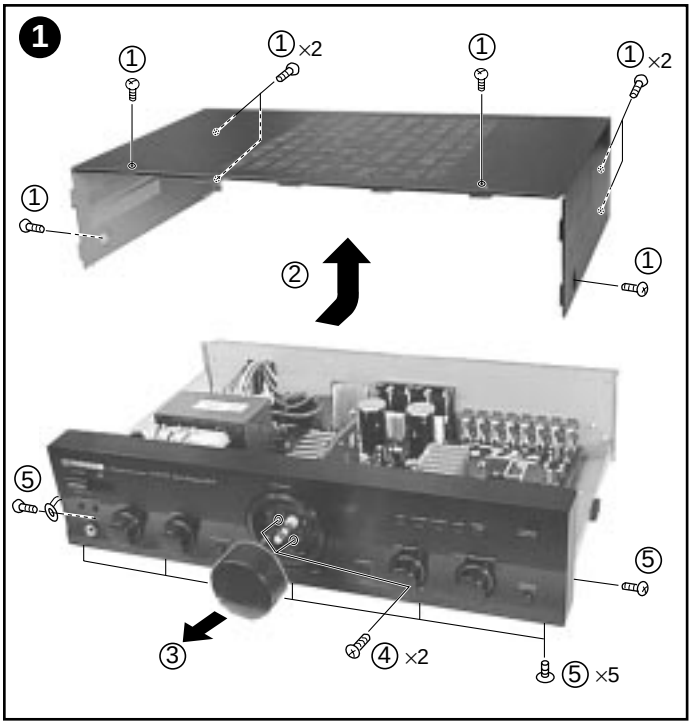
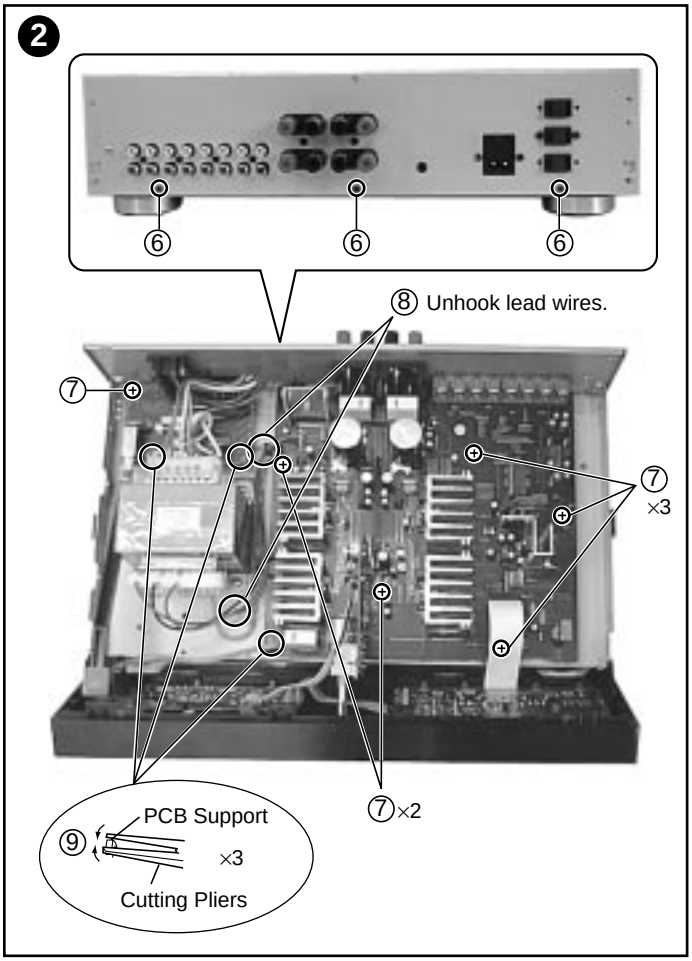


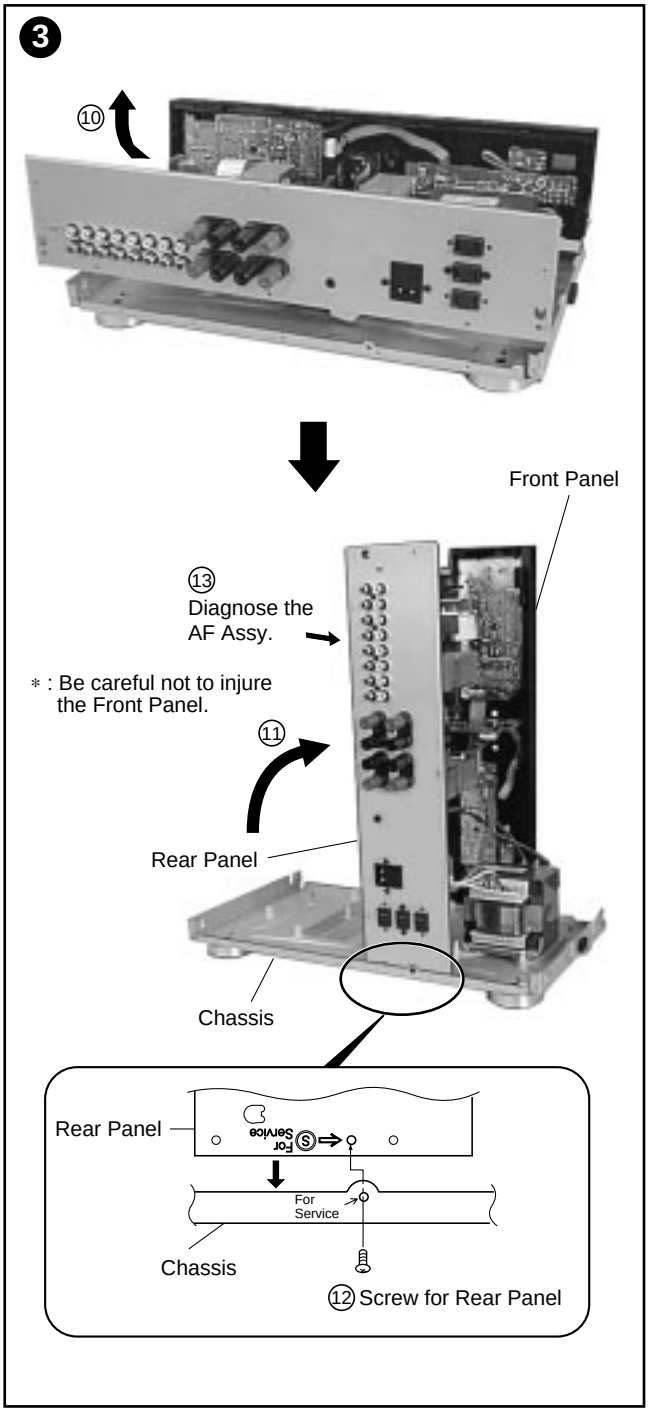
Fig. 6-1 Adjustment Method

7. GENERAL INFORMATION

7.1 DISASSEMBLY





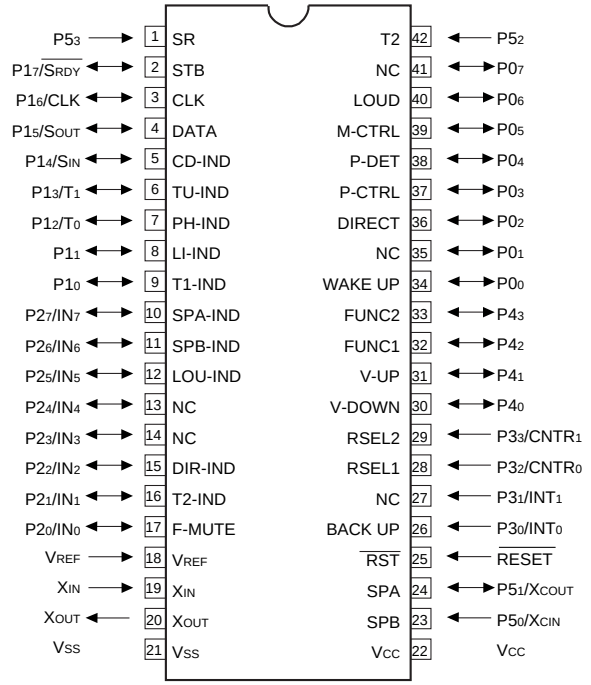


7.2 IC

■ PD5605A (IC601: FRONT R ASSY)

● Remote Control AmpMicrocomputer

● Pin Assignment (Top view)



● Pin Function

No.	Pin Name	I/O	Function
1	P53	I	Remote control signal input pin.
2	P17/$\overline{SRDY}$	O	STB for TC9163N.
3	P16/CLK	O	CLOCK for TC9163N.
4	P15/SOUT	O	DATA for TC9163N.
5	P14/SIN	O	CD INDICATOR.
6	P13/T1	O	TUNER INDICATOR.
7	P12/T0	O	PHONO INDICATOR.
8	P11	O	LINE INDICATOR.
9	P10	O	TAPE1 INDICATOR.
10	P27/IN7	O	SPEAKER-A INDICATOR.
11	P26/IN6	O	SPEAKER-B INDICATOR.
12	P25/IN5	O	LOUDNESS INDICATOR.
13	P24/IN4	O	Not used.
14	P23/IN3	O	Not used.
15	P22/IN2	O	DIRECT INDICATOR.
16	P21/IN1	O	TAPE2 INDICATOR.

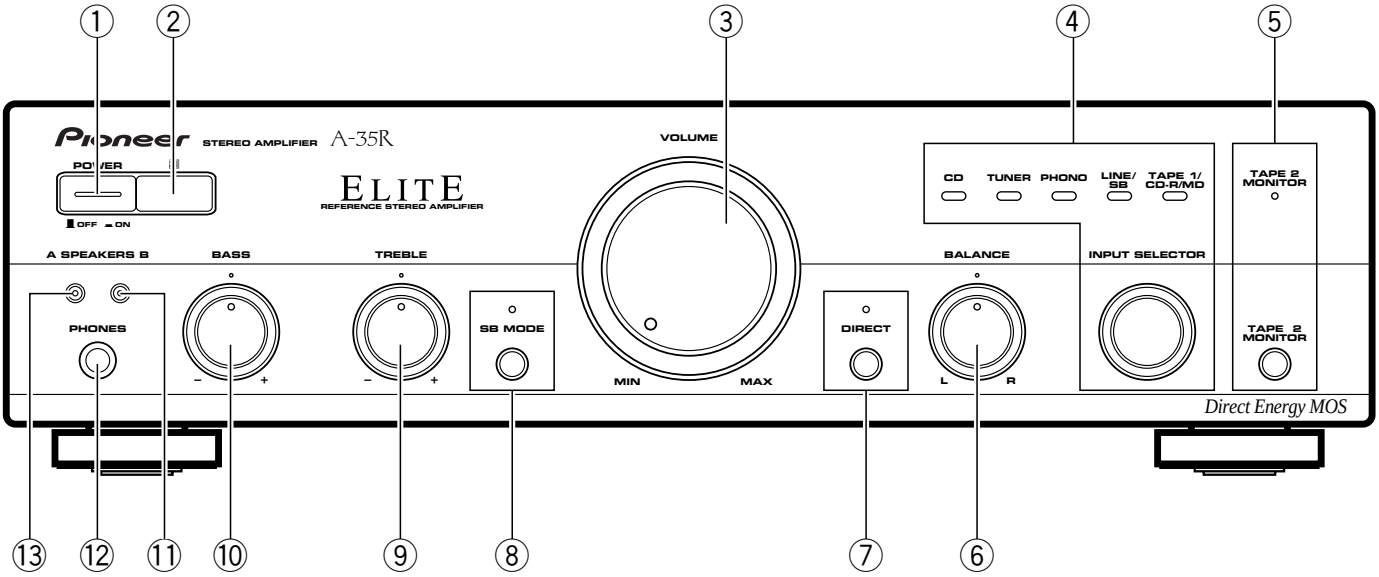
- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

No.	Pin Name	I/O	Function
17	P20/IN0	O	FUNCTION switch MUTE.
18	VREF	I	Pulls up to 5V.
19	XIN	I	4.19MHz . Ceramic vibrating and connecting terminal.
20	XOUT	O	
21	VSS	–	Digatal GND.
22	VCC	–	Power supply +5V.
23	P50/XCIN	I	SPEAKER-B KEY input.
24	P51/XCOUT	I	SPEAKER-A KEY input.
25	$\overline{RESET}$	I	Reset pin.
26	P30/INT0	I	BACK UP detection pin. interrupt specification.
27	P31/INT1	I	Not used.
28	P32/CNTR0	I	REC selector input 1.
29	P33/CNTR1	I	REC selector input 2. interrupt specification.
30	P40	O	Volume DOWN data output.
31	P41	O	Volume UP data output.
32	P42	I	FUNCTION selector input 1.
33	P43	I	FUNCTION selector input 2.
34	P00	I	WAKE UP input. Key on wake up specification.
35	P01	O	Not used.
36	P02	I	DIRECT KEY input. Key on wake up specification.
37	P03	O	Protection control pin.
38	P04	I	Output error detection pin.
39	P05	O	MUTING control pin.
40	P06	I	LOUDNESS KEY input. Key on wake up specification.
41	P07	O	Not used.
42	P52	I	TAPE2 KEY input.

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

[FRONT PANEL]



① POWER (■ OFF/▂ ON) switch

Press to turn power to the unit ON and OFF.
This unit cannot be turned ON and OFF using the remote control unit.

② REMOTE CONTROL SENSOR window

③ VOLUME control

Use to adjust the volume level.

④ INPUT SELECTOR knob/indicators

Turn the knob clockwise or counterclockwise so that the indicator lights for your desired input source. Turning the knob clockwise causes the lit indicator to right. Turning counterclockwise causes it to left.

CD : For compact disc playback with a CD player.
TUNER : For AM or FM broadcast reception with a tuner.
PHONO : For record playback with a turntable.
LINE/SB : Set to this position when listening to the program from a component connected to the LINE/SURROUND BACK terminals.
TAPE 1/ CD-R/MD : For playback with a cassette deck, CD recorder or MD recorder connected to TAPE1/ CD-R/MD terminals.

⑤ TAPE 2 MONITOR button/indicator

Use when there is an adaptor component (graphic equalizer, etc.) or cassette deck connected to the TAPE2 MONITOR terminals.

On : Indicator lights when using the adaptor component or listening to the cassette deck.
Off : Indicator goes off when not in use.

NOTES:

- *When no connections are made to the TAPE2 MONITOR terminals, or when they are not in use, be sure to set this switch to the off position. (No sound will be heard if it is set to the on position.)*
- *When the TAPE2 MONITOR indicator is on and the INPUT SELECTOR knob is not set to TAPE1/CD-R/MD, the signals which are input through TAPE 2 MONITOR are then output at TAPE1/CD-R/MD REC OUT.*

⑥ BALANCE control

Should normally be left in the center position. Adjust balance if the sound is louder from one of the speakers. If the right side is louder, turn toward the L (left) position and if the left side is louder, turn toward the R (right) position.

NOTE:

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

⑦ DIRECT button/indicator

Use this button when you do not wish to pass the output from input terminal equipment through the various frequency adjusting circuits (BASS, TREBLE, BALANCE, LOUDNESS).

On : The indicator lights: The signals passing through the input terminals are reproduced without passing through the various frequency adjusting circuits. This results in flat, pure sound which is a more faithful reproduction of the input source.

Off : The indicator goes off: The signal passes through the various frequency adjusting circuits.

⑧ SB MODE button/indicator

The SB mode is a special mode in which the amplifier does not accept remote control (But all of the facilities can be controled by manual as same as SB mode OFF.). Fix the VOLUME control near the center position. In this mode, the set can be used as a power amplifier which amplifies the LINE/SURROUND BACK input (the function name is LINE/SB) with a input sensitivity of 1 V.

For example, when the set is combined with one of Pioneer's Surround Back compatible receiver, the set can be used as the Surround Back amplifier (For details, please refer to the instruction manual of the receiver.)

⑨ TREBLE tone control

Use to adjust the high-frequency tone. The center position is the flat (normal) position. When turned to the right, high-frequency tones are emphasized; when turned to the left, high-frequency tones are de-emphasized.

NOTE:

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

⑩ BASS tone control

Use to adjust the low-frequency tone. The center position is the flat (normal) position. When turned to the right, low-frequency tones are emphasized; when turned to the left, low-frequency tones are de-emphasized.

NOTE:

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

⑪ SPEAKERS B (ON/OFF) button/indicator

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

ON : The indicator lights. Sound is heard from the speaker system.

OFF : The indicator goes off. No sound is heard from the speaker system. Set to this position when listening with headphones.

⑫ PHONES jack

When using headphones, insert the plug into this jack.

NOTE:

The speakers continue to output sound even when headphones are plugged into this jack.

To mute the sound from the speakers, press the SPEAKERS button to OFF.

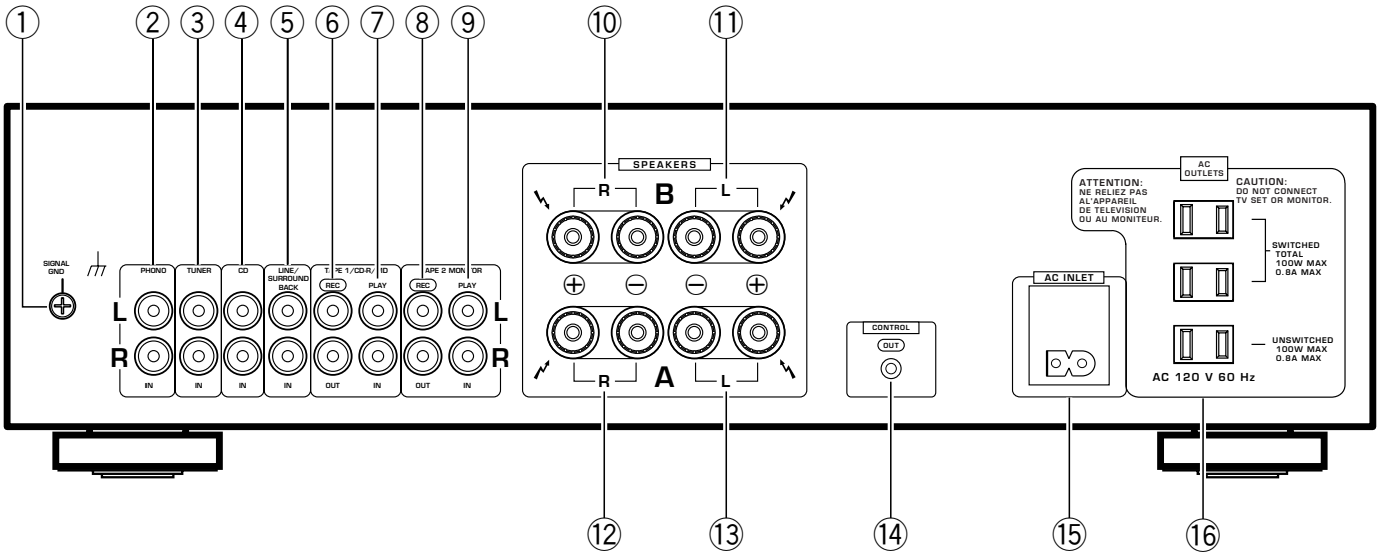
⑬ SPEAKERS A (ON/OFF) button/indicator

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

ON : The indicator lights. Sound is heard from the speaker system.

OFF : The indicator goes off. No sound is heard from the speaker system. Set to this position when listening with headphones.

[REAR PANEL]



① **GND (Turntable ground) terminal**

② **PHONO terminals**

③ **TUNER terminals**

④ **CD terminals**

⑤ **LINE/SURROUND BACK terminals**

⑥ **TAPE 1/CD-R/MD REC (OUT) terminals**

⑦ **TAPE 1/CD-R/MD PLAY (IN) terminals**

⑧ **TAPE 2 MONITOR REC (OUT) terminals**

⑨ **TAPE 2 MONITOR PLAY (IN) terminals**

⑩ **SPEAKERS B terminals (Right channel)**

⑪ **SPEAKERS B terminals (Left channel)**

⑫ **SPEAKERS A terminals (Right channel)**

⑬ **SPEAKERS A terminals (Left channel)**

⑭ **CONTROL OUT jack**

This jack is for output of control signals when operating other components bearing the 5R mark with the attached remote control unit.

⑮ **AC INLET jack**

Connect power cord to here and an AC wall socket, or the AC outlet of an audio timer.

If you are going to be away from home for a long period of time, disconnect the unit from the wall socket.

NOTES:

- *If you use an other power cord than provided, we cannot assume the liabilities in what may occur as a result of it.*
- *(The provided power cord has a current capacity of 7 A.)*

⑯ **AC OUTLETS**

[SWITCHED TOTAL 100 W MAX]

Power supplied through these outlets is turned on and off by the amplifier's POWER ON/OFF switch. Total electrical power consumption of connected equipment should not exceed 100 W.

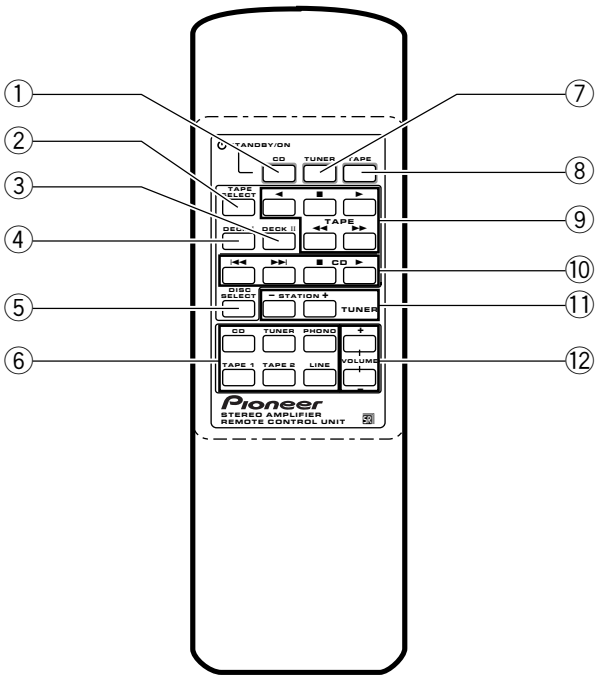
[UNSWITCHED 100 W MAX]

Power flows continually to this outlet, regardless of whether the amplifier is switched ON or OFF. Electrical power consumption of the connected equipment should not exceed 100 W.

NOTES:

- *Do not connect appliances with high power consumption such as heaters, irons, or television sets to the AC OUTLETS in order to avoid overheating or fire risk. This can cause the amplifier to malfunction.*
- *The equipment should be disconnected by removing the mains plug from the wall socket when not in regular use, e.g. when on vacation.*

[REMOTE CONTROL]



① CD POWER button
Switches CD player power ON/OFF.

② TAPE SELECT button
Selects the cassette No. (1 to 6) for multi-cassette changer.

③ DECK II button
To operate Deck II, press this button before pressing the operating buttons. Also, when using a single deck, press this button before pressing the operating buttons.

④ DECK I button
To operate Deck I, press this button before pressing the operating buttons.

⑤ DISC SELECT button
Press this to select discs on a multi or twin tray compact disc player.

⑥ Input selector button
Use to select the playback source.

CD : For compact disc playback with a CD player.
TUNER : For AM or FM broadcast reception with a tuner.
PHONO : For record playback with a turntable.
TAPE 1 : For playback with a cassette deck,CD recorder or MD recorder connected to TAPE1/CD-R/MD terminals.
TAPE 2 : For playback with a cassette deck or adaptor connected to TAPE 2 MONITOR terminals.
LINE : For playback with a component connected to the LINE/SURROUND BACK terminal.

⑦ TUNER POWER button
Switches TUNER power ON/OFF.

⑧ TAPE POWER button
Switches the cassette deck power ON/OFF.
(Can not turn ON/OFF some cassette decks.)

⑨ TAPE operation buttons
◄, ► : Playback in the direction of the arrows.
■ : Stop
◄◄, ►► : Tape fast forward/reverse.

⑩ CD player operation buttons
I◄◄ : Returns you to the start of the current track. (Track search)
►►I : Takes you to the start of the next track. (Track search)
■ : Stop
► : Play

⑪ STATION + (up), – (down) buttons
Calls each station number in sequence.

⑫ VOLUME + (up), – (down) buttons
+ ..... Increases the volume.
– ..... Decreases the volume.

NOTE:
When the accessory remote control unit is used to operate other Pioneer components with the mark, it cannot be used to operate functions which do not correspond to the functions listed on the remote control unit.

8.2 SPECIFICATIONS

Amplifier Section

Continuous rated power output of 60 watts* per channel, min., at 4 ohms, from 20 Hz to 20,000 Hz with no more than 0.3 % total harmonic distortion.**

Input sensitivity/impedance
- PHONO (MM) ..... 2.8 mV/50 kΩ
- CD, TUNER, LINE/SB, TAPE1/CD-R/MD, TAPE2 MONITOR ..... 200 mV/50 kΩ

PHONO (MM) overload level
- 1 kHz, T.H.D. 0.1 % ..... 150 mV

Output level/impedance
- TAPE1 REC, TAPE2 MONITOR REC ..... 200 mV/1 kΩ

Frequency response
- PHONO (MM) ..... 20 Hz to 20 kHz, ±0.5 dB
- CD, TUNER, LINE/SB, TAPE1/CD-R/MD, TAPE2 MONITOR ..... 5 Hz to 100 kHz, $^{+0}_{-3}$ dB***
- Tone control
- BASS ..... ±8 dB (100 Hz)
- TREBLE ..... ±8 dB (10 kHz)

Loudness contour (volume control set at –30 dB position) ..... +6 dB (100 Hz)/+4 dB (10 kHz)

Signal-to-Noise ratio (IHF short circuit, A network)
- PHONO (MM, 5 mV input) ..... 85 dB***
- CD, TUNER, LINE/SB, TAPE1/CD-R/MD, TAPE2 MONITOR ..... 106 dB***

Power Supply/Miscellaneous

Power requirements ..... AC 120 V, 60 Hz
Power consumption ..... 145 W
Dimensions (including knobs and other protruding parts) ..... 420 (W) x 114 (H) x 307 (D) mm
Weight (without package) ..... 5.9 kg

Accessories

Remote control unit 1
Batteries (AA/R6P) 2
Power cord (Rated current 7 A) 1
Operating instructions 1
Warranty card 1

NOTE:

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

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.*

** *Measured by Audio Spectrum Analyzer.*

*** *Measured with DIRECT button set to on.*