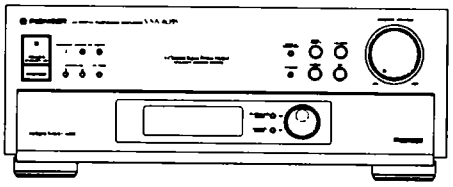
PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
RRV1473

AV DIGITAL-SURROUND AMPLIFIER

VSA-805S

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

Type	Model	Power Requirement	Remarks
	VSA-805S		
HVXJ	○	AC220-230V	
HYXJ	○	AC220-230V	

CONTENTS

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
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

T-IFG APR. 1996 Printed in Japan

1. DISASSEMBLY

CAUTION !

You will get an electric shock if you touch the Radiator (Heat-sink) when the AC power cord is connected to the power source. Also, the Electrolytic Capacitor contains a charge even when the AC power cord is unplugged, so the charge must be removed when the bonnet has been taken off.

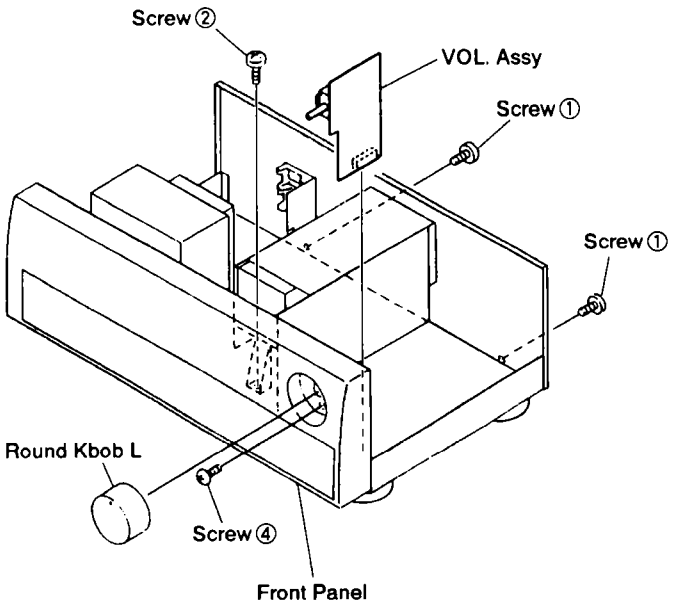
<Removing the Charge>

①Connect the Radiator (top side) and either the Chassis or the Rear panel for 2 to 3 seconds with a Resistor of more than 5W/10 Ω .

②Connect the +B lead on the J2 and either the Chassis or the Rear panel for 2 to 3 seconds with a Resistor of more than 5W/10 Ω .

1.1 PS & FUNC ASSY

1. Remove the Bonnet case.
2. Remove the two screws ① .
3. Remove the screw ② .
4. Remove the four screws ③ holding the PS & FUNC assy.
5. Remove the Round knob L and remove the screw ④ between the volume and the front panel.
6. Remove the Vol. assy from the PS & FUNC assy.
7. Remove the rear panel, and power block from the chassis at the same time, according to the Fig. 1.



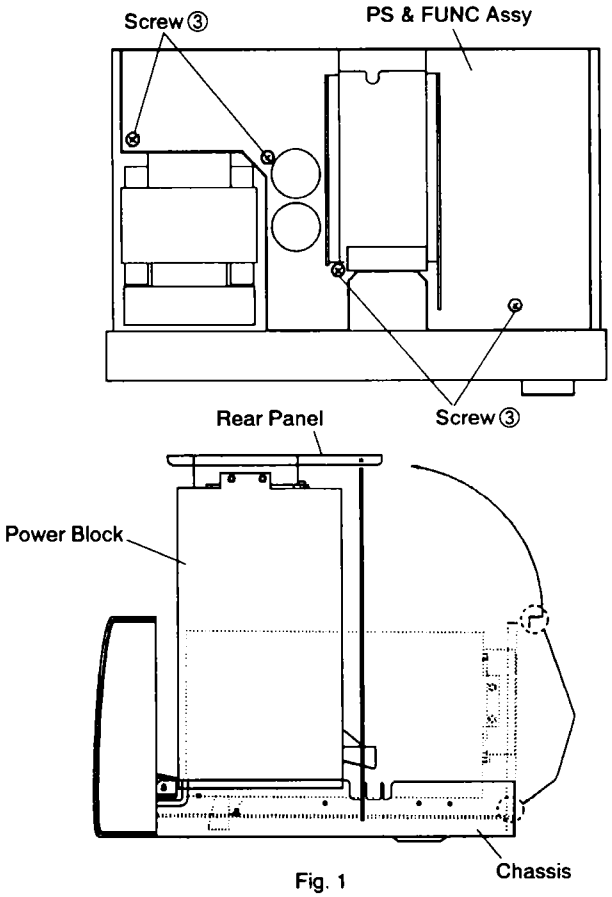
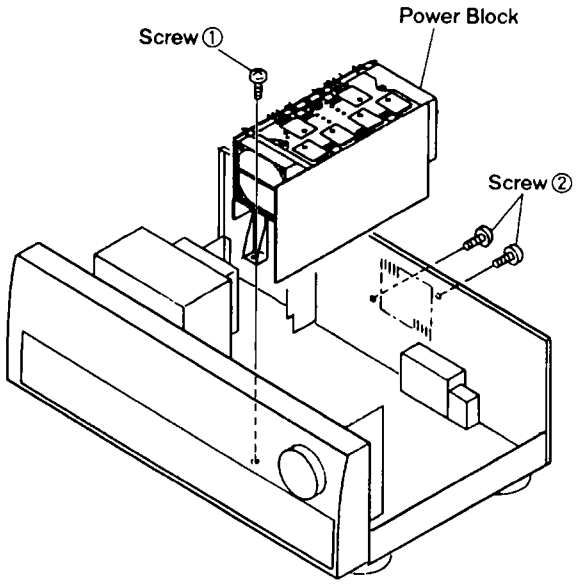


Fig. 1

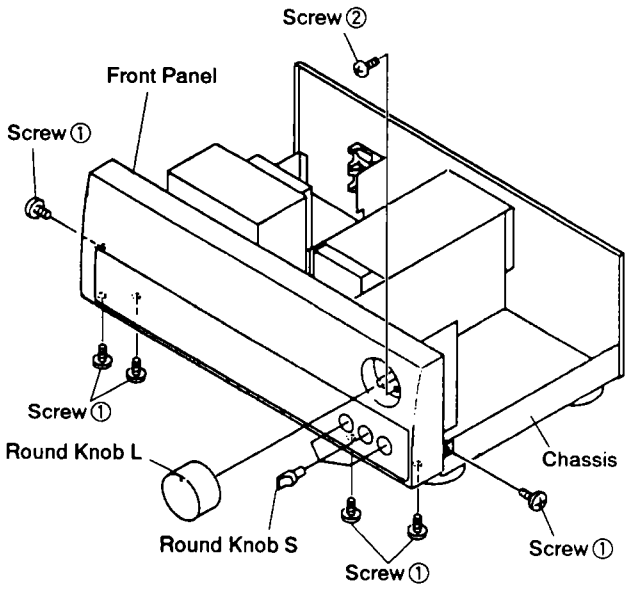
1.2 POWER BLOCK

1. Remove the Bonnet case.
2. Remove the screw ①.
3. Remove the two screws ②.



1.3 FL & UCOM ASSY

1. Remove the Bonnet case.
2. Remove the six screws ①.
3. Remove the Round knob L and remove the screw ② between the volume and the front panel.
4. Remove the front panel from the chassis (watching out for the claw on the front panel bottom).
5. Remove the three round knob S (BASS, TREBLE, BALANCE).
6. Remove the screws in Fig. 2 and remove the FL & UCOM assy.



<Location of the FL & UCOM Assy Fixing Screws>

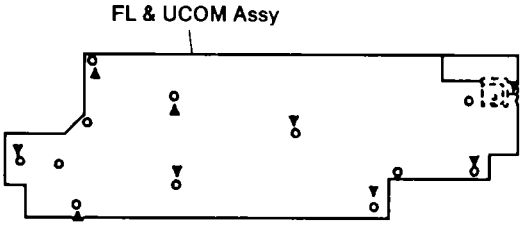


Fig. 2

2. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES:
- *Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Parts marked by " ◉ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

2.1 EXTERIOR SECTION

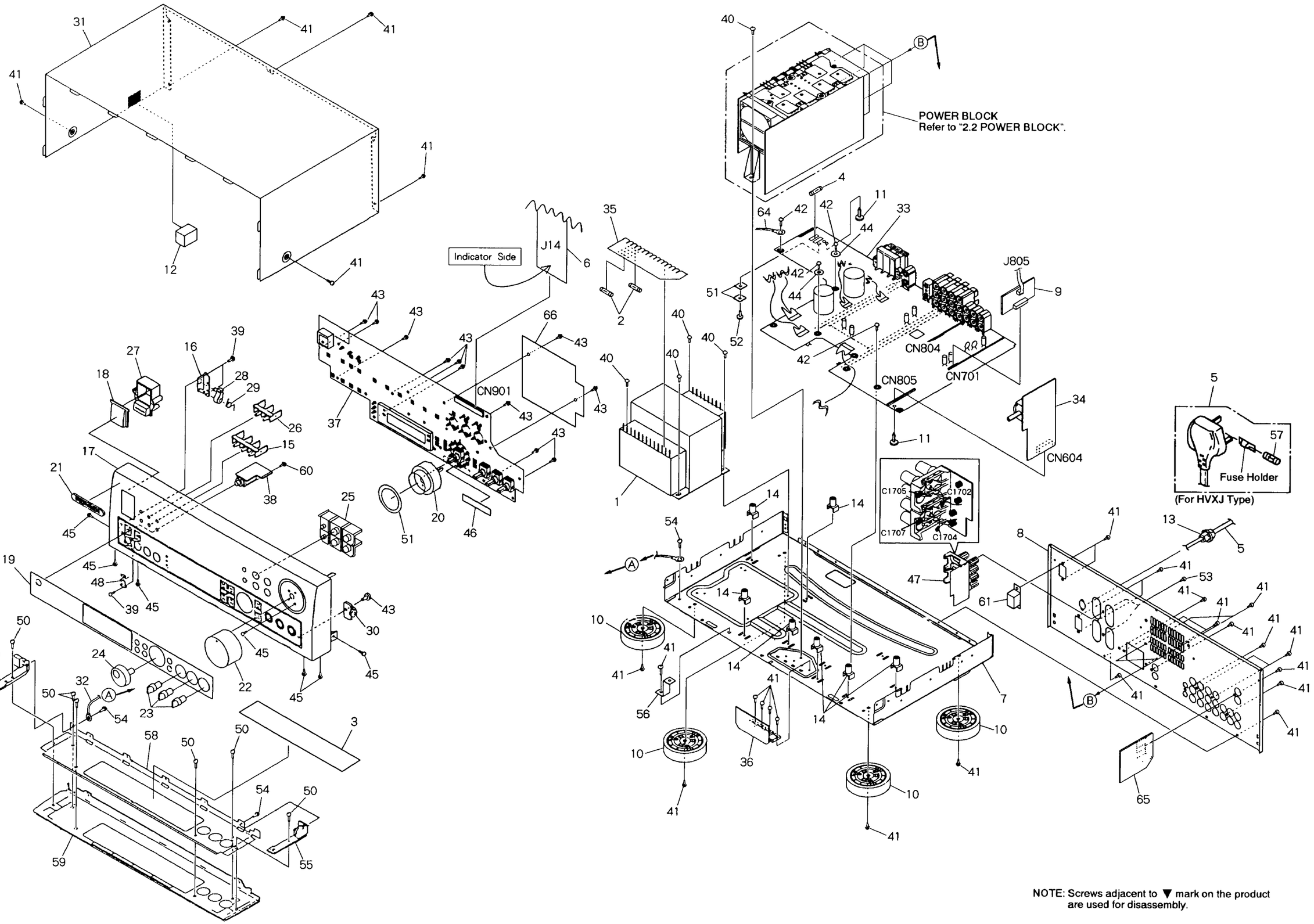
(1) CONTRAST OF VSA-805S/HVXJ AND HYXJ

VSA-805S/HVXJ and HYXJ have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.		Remarks
			VSA-805S/HVXJ	VSA-805S/HYXJ	
⚠	5	AC Power Cord	PDG1055	ADG1131	
⚠	57	Fuse (T5A/250V)	PEK1003	Not used	For AC Power Cord

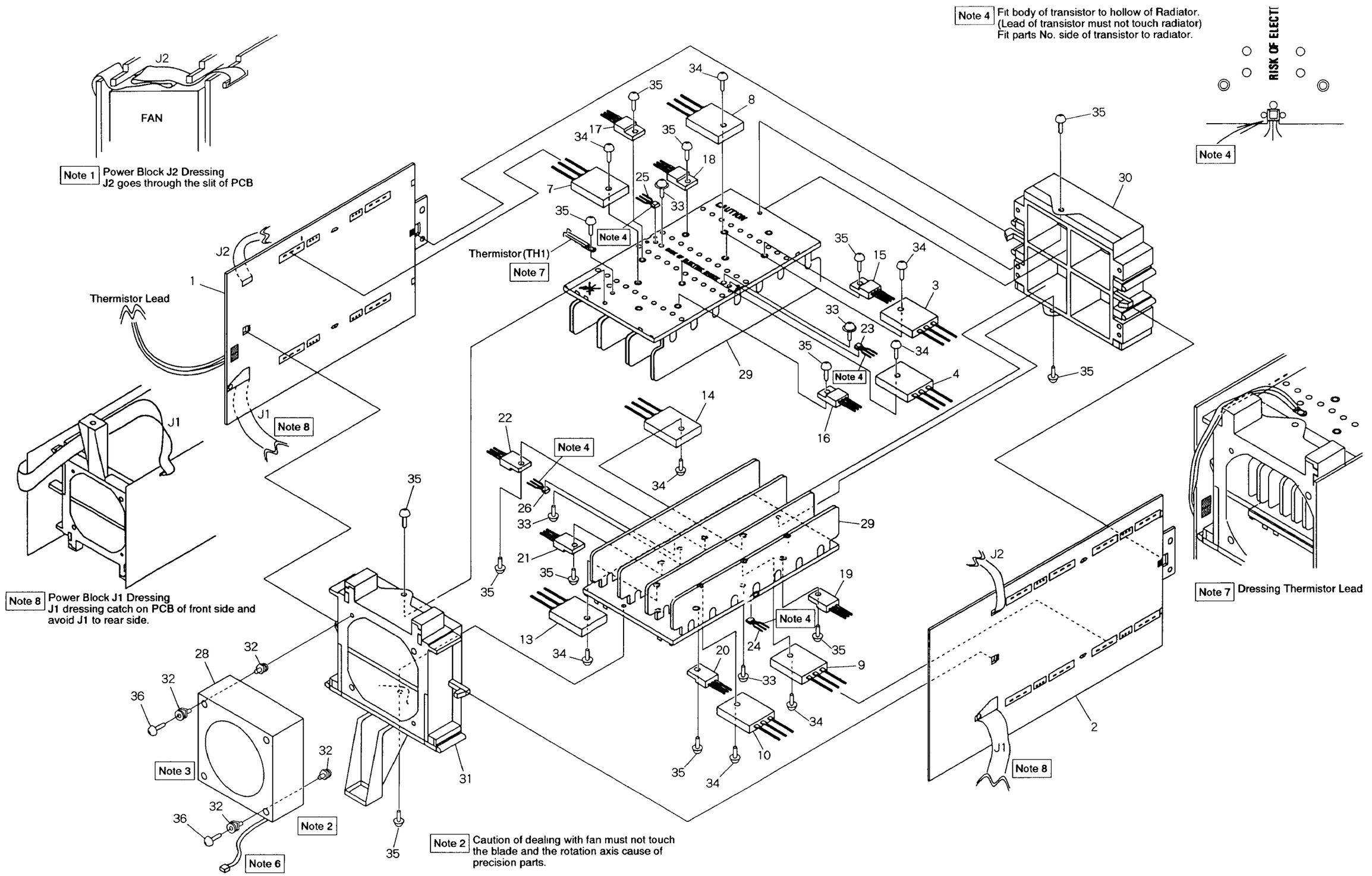
(2) PARTS LIST FOR VSA-805S/HVXJ

Mark	No.	Description	Part No.
⚠	1	Power Transformer (T1)	ATS7069
⚠	2	Fuse (T1.25A : FU3, FU4)	AEK1055
	3	Protection Sheet	AHG7016
⚠	4	Fuse (T5A : FU1)	AEK1061
⚠	5	AC Power Cord	PDG1055
	6	Flexible Cable (J14)	ADD7018
NSP	7	Chassis	ANA7016
	8	Rear Panel	ANC7390
	9	TUNER CONECT Assy	AWZ8403
	10	Leg Assy	AMR1159
	11	PCB Support	AEC1581
	12	Rubber Spacer	AEC7034
	13	Cord Stopper	AEC-882
	14	PCB Mold	AMR2533
	15	Hinge Button	AAD7181
	16	Door Holder Assy	ANG1855
	17	Front Panel	AMB7349
	18	IR Filter	AAK7123
	19	Display Sheet	AAK7253
	20	G.U.I. Lens	AAK7154
	21	Name Plate	PAM1608
	22	Round Knob L	AAB1390
	23	Round Knob S	AAB1389
	24	Jog Knob	AAB7048
	25	Function Button	AAD7178
	26	Illumi. Button	AAD7179
	27	Power Button	AAD7180
	28	Pocket Lock	AMR2587
	29	Coil Spring	ABH7048
	30	Damper Assy	AXA7025
	31	Bonnet Case	ANE7047
NSP	32	Lead Wire (J15)	ADX7065
	33	PS & FUNC Assy	AWZ8386
	34	VOL. Assy	AWZ7612
	35	TRANS Assy	AWZ7924
	36	REG. Assy	AWZ8412
	37	FL & UCOM Assy	AWZ8319
NSP	38	H.P. Assy	AWZ7615
	39	Screw	BPZ26P060FMC
	40	Screw	ABA1147
	41	Screw	BBZ30P080FZK
	42	Screw	BBZ30P200FMC
	43	Screw	BPZ26P080FMC
NSP	44	Washer	AEE7002
	45	Screw	BBZ30P080FMC
NSP	46	Adhesive Double Coated Tape	AEH1025
NSP	47	SP Assy	AWZ7613
	48	Pocket Holder Assy	ANG7043
	49	Door Hinge Arm L	AMR7063
	50	Screw	ABA7007
	51	PVC Sheet	AEC7024
	52	Push Rivet	AEC7025
	53	Screw (for GND)	ABA1047
	54	Screw	BBZ30P060FMC
	55	Door Hinge Arm R	AMR7064
NSP	56	PCB Holder	ANG7040
⚠	57	Fuse (T5A/250V)	PEK1003
	58	Door Plate	ANG7032
	59	Door Panel	AAK7153
	60	Screw	ABA-283
	61	Slide Switch (S3)	ASH-501
	62	• • • • •	
	63	• • • • •	
NSP	64	Binder	RNE1277
	65	TUNER TERMINAL Assy	AWZ8321
	66	Shield Plate	AEC7064



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

2.2 POWER BLOCK



Parts List

Mark	No.	Description	Part No.
	1	AMP Assy	AWZ7756
	2	AMP Assy 120W	AWZ8426
⚠	3	Transistor (Q3)	2SA1302
⚠	4	Transistor (Q4)	2SA1302
	5	• • • • •	
	6	• • • • •	
⚠	7	Transistor (Q11)	2SA1302
⚠	8	Transistor (Q12)	2SA1302
⚠	9	Transistor (Q1)	2SC3281
⚠	10	Transistor (Q2)	2SC3281
	11	• • • • •	
	12	• • • • •	
⚠	13	Transistor (Q9)	2SC3281
⚠	14	Transistor (Q10)	2SC3281
⚠	15	Transistor (Q23)	2SA1837
⚠	16	Transistor (Q24)	2SA1837
⚠	17	Transistor (Q33)	2SA1837
⚠	18	Transistor (Q34)	2SA1837
⚠	19	Transistor (Q21)	2SC4793
⚠	20	Transistor (Q22)	2SC4793
⚠	21	Transistor (Q31)	2SC4793
⚠	22	Transistor (Q32)	2SC4793
⚠	23	Transistor (Q209)	2SC1740S
⚠	24	Transistor (Q210)	2SC1740S
⚠	25	Transistor (Q309)	2SC1740S
⚠	26	Transistor (Q310)	2SC1740S
	27	• • • • •	
	28	Fan Motor	AXM7005
NSP	29	Radiator	ANH7011
	30	Exhaust Mold	AMR7035
	31	Radiator Mold	AMR7036
	32	Floating Rubber	AEB7060
	33	Screw	ABA-283
	34	Screw	ABA1037
	35	Screw	BBZ30P080FZK
	36	Screw	ABA7026

2.3 PACKING

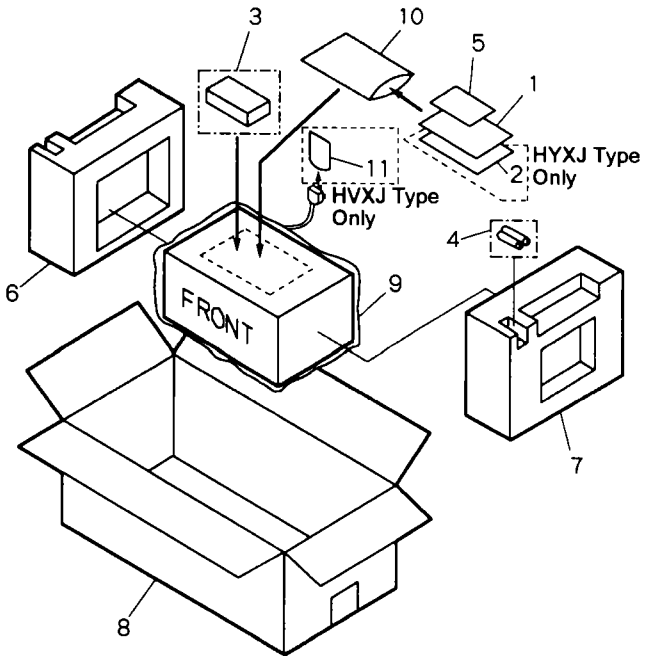
(1) CONTRAST OF VSA-805S/HVXJ AND HYXJ

VSA-805S/HVXJ and HYXJ have the same construction except for the following:

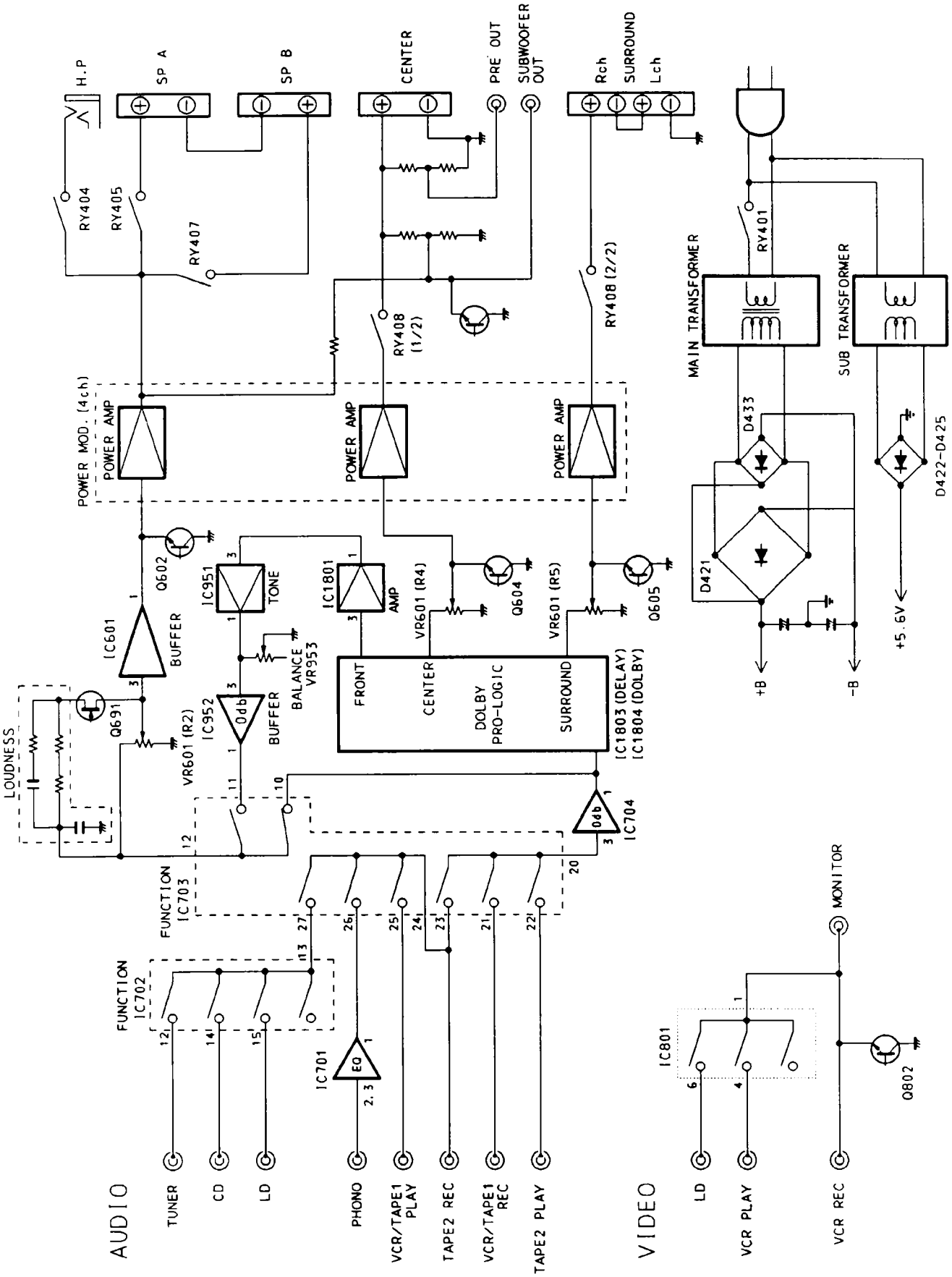
Mark	No.	Symbol & Description	Part No. VSA-805S /HVXJ	Part No. VSA-805S /HYXJ	Remarks
	2	Operating Instructions (French/German/Italian/ Dutch/Swedish/Spanish/ Portuguese)	Not used	ARC7114	
	11	Plug Sheet	AHG7012	Not used	

(2) PARTS LIST FOR HVXJ TYPE

Mark	No.	Description	Part No.
	1	Operating Instructions (English)	ARB7074
	2	• • • • •	
	3	Remote Control Unit (CU-VSA027)	AXD7091
NSP	4	Alkaline Dry Cell Battery (LR6, AA)	AEX1007
NSP	5	Waranty Card	ARY7009
	6	Pad L	AHA7060
	7	Pad R	AHA7059
	8	Packing Case	AHD7286
	9	Packing Sheet	AHG7010
NSP	10	Poly. Bag	AHG1217
	11	Plug Sheet	AHG7012



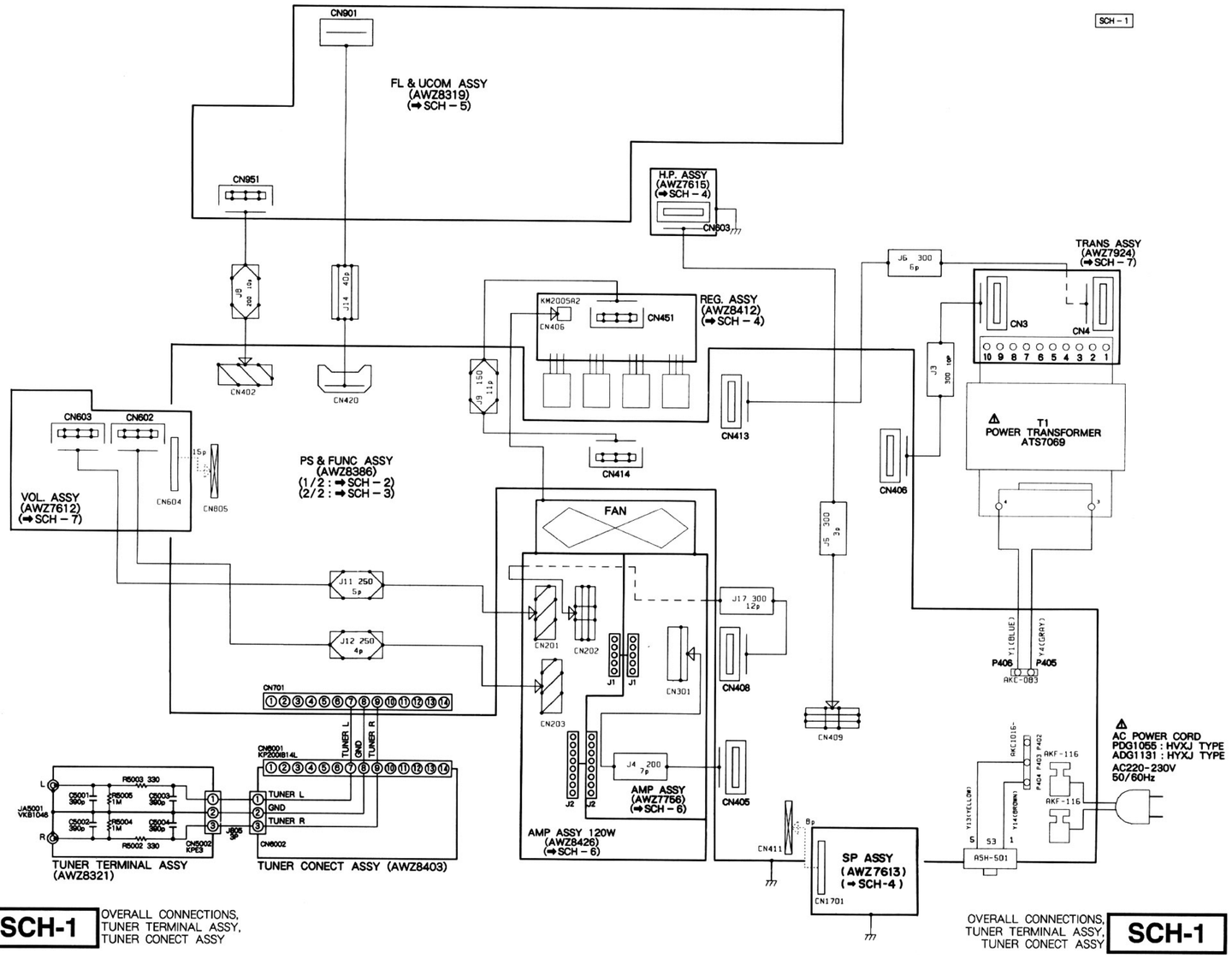
3. BLOCK DIAGRAM



4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

4.1 OVERALL CONNECTIONS, TUNER TERMINAL AND TUNER CONECT ASSEMBLIES

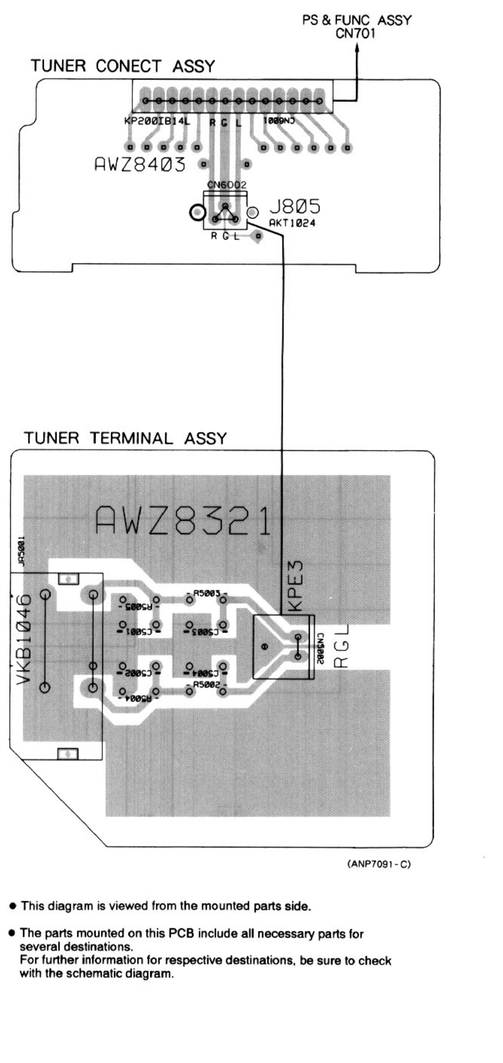
SCH – 1



SCH-1 OVERALL CONNECTIONS, TUNER TERMINAL ASSY, TUNER CONECT ASSY

OVERALL CONNECTIONS, TUNER TERMINAL ASSY, TUNER CONECT ASSY **SCH-1**

PCB – 1



TUNER TERMINAL ASSY

(ANP7091-C)

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

NOTE FOR SCHEMATIC DIAGRAM (Type 1A)

1. **When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".**
2. **Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
3. **RESISTORS:**
   Unit: kΩ, MΩ, or Ω unless otherwise noted.
   Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
   Tolerance:(F):±1%, (G):±2%, (K):±10%, (M):±20% or ±5% unless otherwise noted.
4. **CAPACITORS:**
   Unit : pF or μF unless otherwise noted.
   Ratings : capacitor (μF) /voltage (V) unless otherwise noted.
   Rated voltage : 50V except for electrolytic capacitors.
5. **COILS:**
   Unit : mH or μH unless otherwise noted.
6. **VOLTAGE AND CURRENT:**
   : Signal voltage at rated output.
   ▭ or ←V :
   DC voltage (V) at no input signal unless otherwise noted.
   Value in ( ) is DC voltage at rated power.
   ⇨mA or ←mA :
   DC current at no input signal unless otherwise noted.
7. **OTHERS:**
   - ⊘ or ◉ : Adjusting point.
   - ◀ : Measurement point.
   - The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
8. **SCH – □ ON THE SCHEMATIC DIAGRAM:**
   - SCH– □ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
9. **SWITCHES** (Underline indicates switch position):
   FL & UCOM ASSY
   S901 : POWER STANDBY/ON
   S902 : LOUDNESS
   S903 : A
   S904 : B SPEAKERS
   S905 : MUTING
   S911 : DIRECT
   S918 : VCR/TAPE 1
   S919 : LD/DVD
   S921 : PHONO
   S922 : TUNER
   S923 : CD
   S926 : SURROUND MODE
   S927 : CENTER MODE
   S941 : JOG DIAL
   S942 : TAPE 2 MONITOR

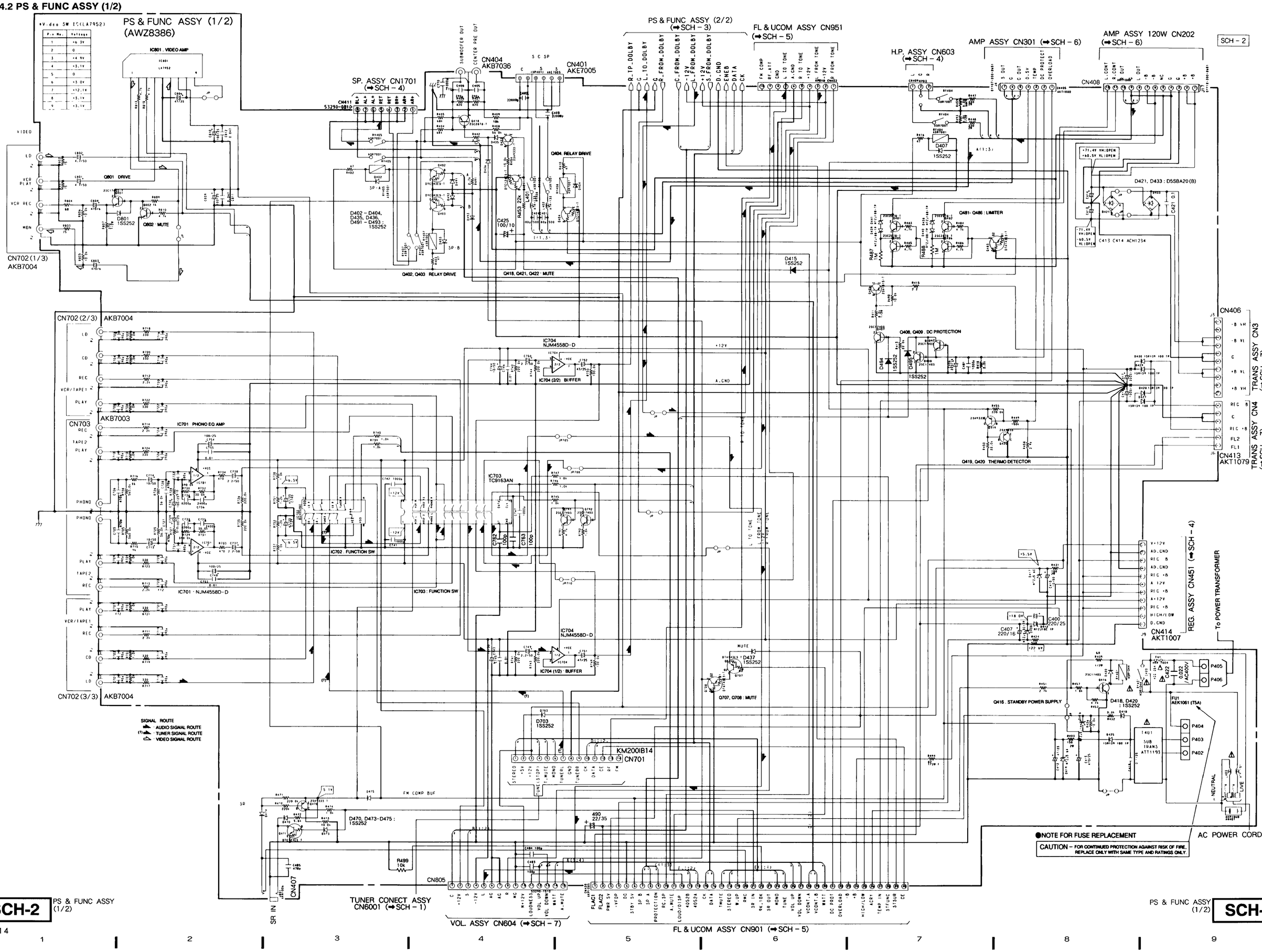
NOTE FOR PCB DIAGRAMS:
1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
Q504 (E B C) Q504	Q504 Q504	Transistor
D203 D203	D203	Diode
C513 C513	C513	Capacitor (Polarized)

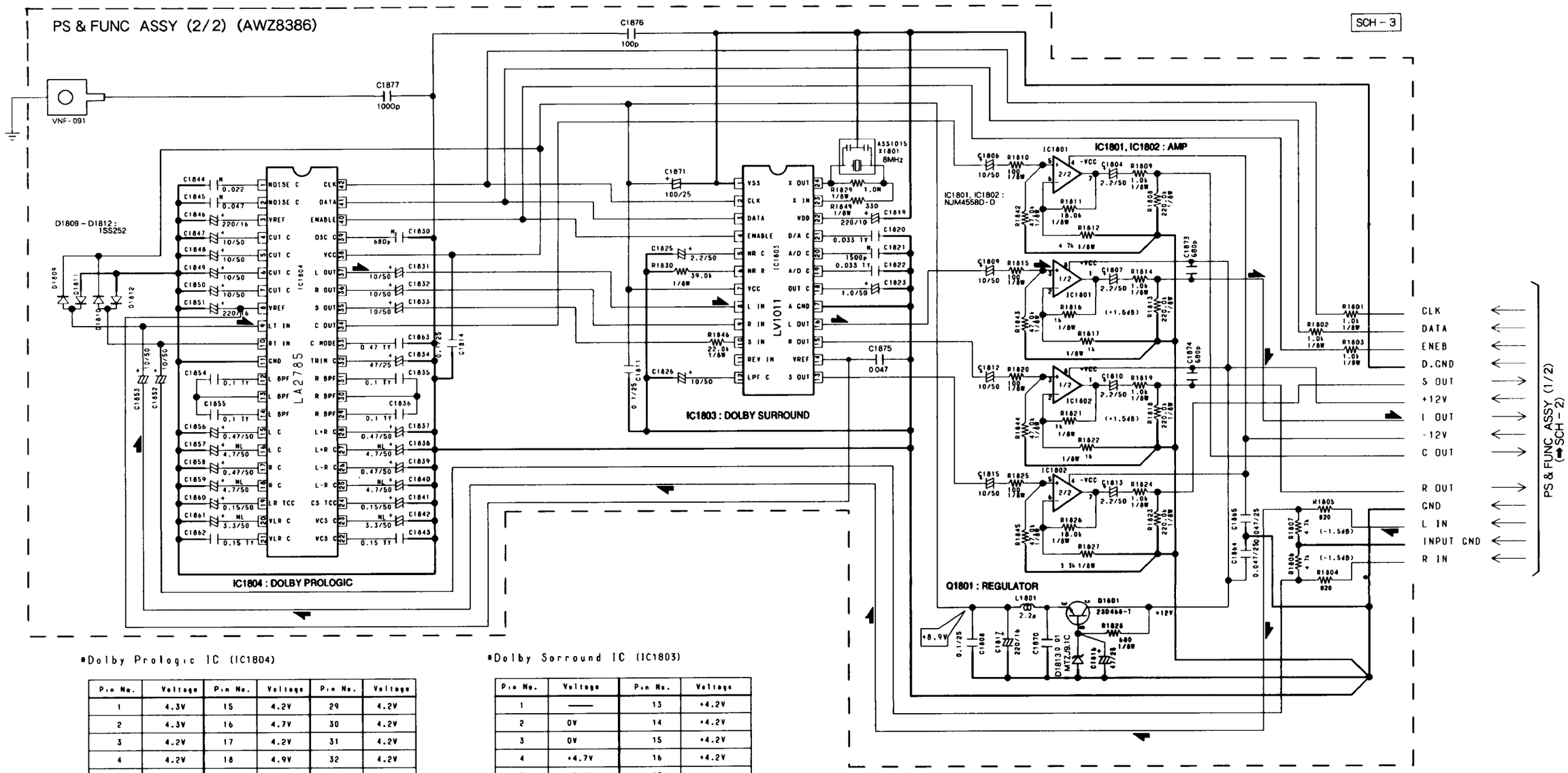
3. The transistor terminal marked with E or ▯ shows the emitter.
4. The diode terminal marked with ⊕ or ◯ shows cathode side.
5. The capacitor terminal marked with ⊕ or ▯ shows negative terminal.

VSA-805S

4.2 PS & FUNC ASSY (1/2)



4.3 PS & FUNC ASSY (2/2)



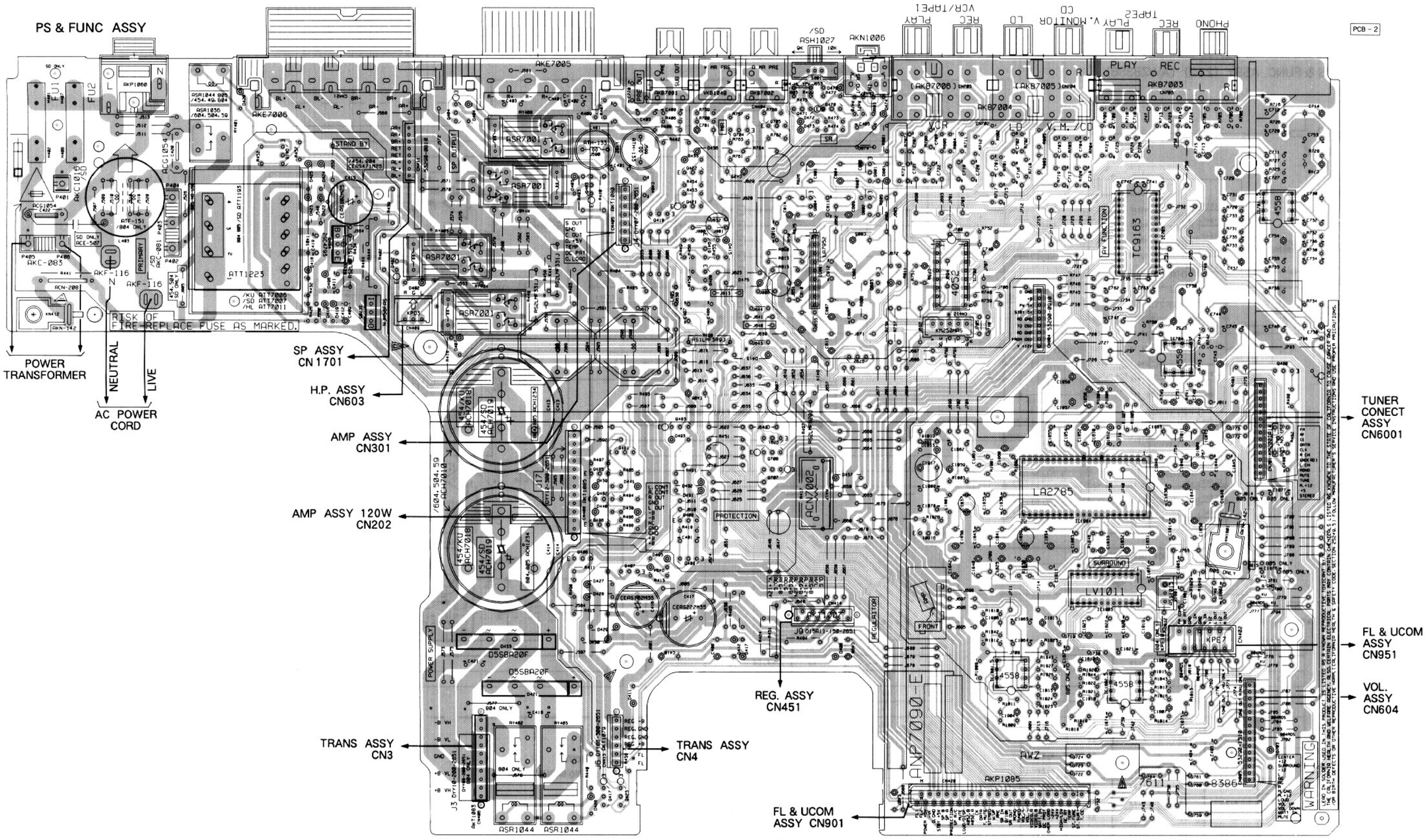
*Dolby Prologic IC (IC1804)

Pin No.	Voltage	Pin No.	Voltage	Pin No.	Voltage
1	4.3V	15	4.2V	29	4.2V
2	4.3V	16	4.7V	30	4.2V
3	4.2V	17	4.2V	31	4.2V
4	4.2V	18	4.9V	32	4.2V
5	4.2V	19	4.2V	33	4.2V
6	4.2V	20	4.2V	34	4.2V
7	4.2V	21	4.2V	35	4.2V
8	4.2V	22	4.2V	36	4.2V
9	4.2V	23	4.2V	37	4.2V
10	4.2V	24	4.2V	38	8.4V
11	0V	25	4.9V	39	——
12	4.2V	26	4.2V	40	4.7V
13	4.2V	27	4.7V	41	0V
14	4.2V	28	4.2V	42	0V

*Dolby Sorround IC (IC1803)

Pin No.	Voltage	Pin No.	Voltage
1	——	13	+4.2V
2	0V	14	+4.2V
3	0V	15	+4.2V
4	+4.7V	16	+4.2V
5	+2.4V	17	——
6	+0.7V	18	+4.2V
7	+8.4V	19	+4.2V
8	+4.2V	20	+4.2V
9	+4.2V	21	+4.2V
10	+4.2V	22	+4.8V
11	+4.2V	23	——
12	+4.2V	24	——

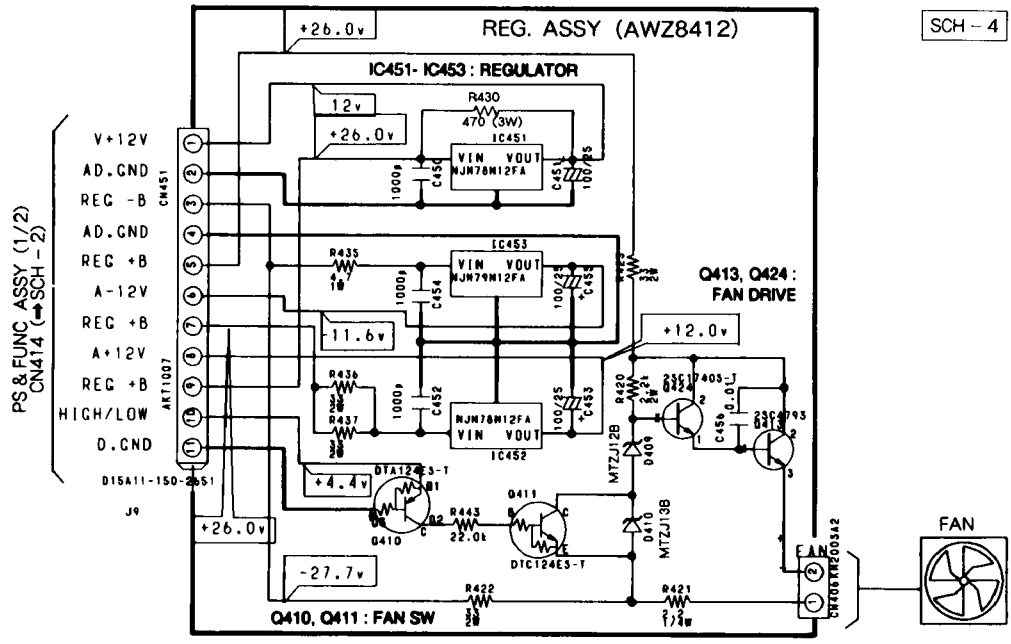
SIGNAL ROUTE
: AUDIO SIGNAL ROUTE

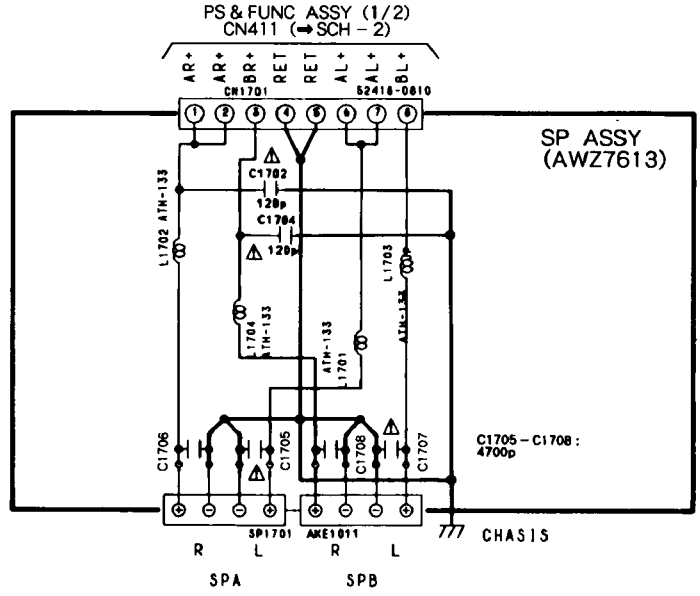


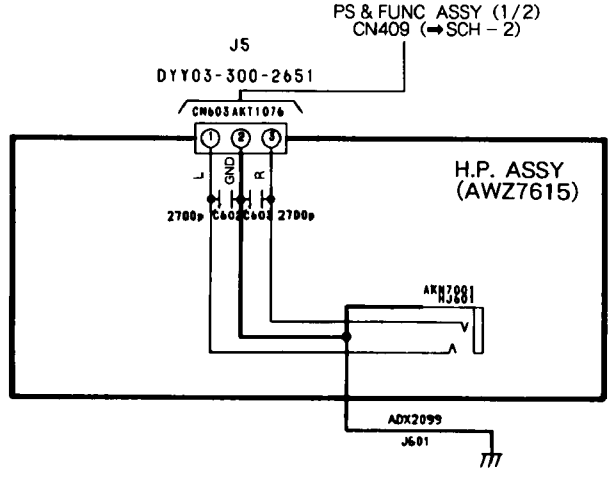
Q416 Q484 IC705 Q402 Q404 Q403 Q485 Q481 Q406 Q482 Q407 Q486 Q417 Q423 Q418 Q419–Q422 Q704 Q483 Q409 Q408 Q705 Q471 Q470 Q791 IC801 Q801–Q804 Q708 Q792 Q707 IC702 Q1801 IC1801 IC1804 IC703 IC1803 IC1802 IC704 IC701 Q480

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

4.4 H.P., SP AND REG. ASSEMBLIES





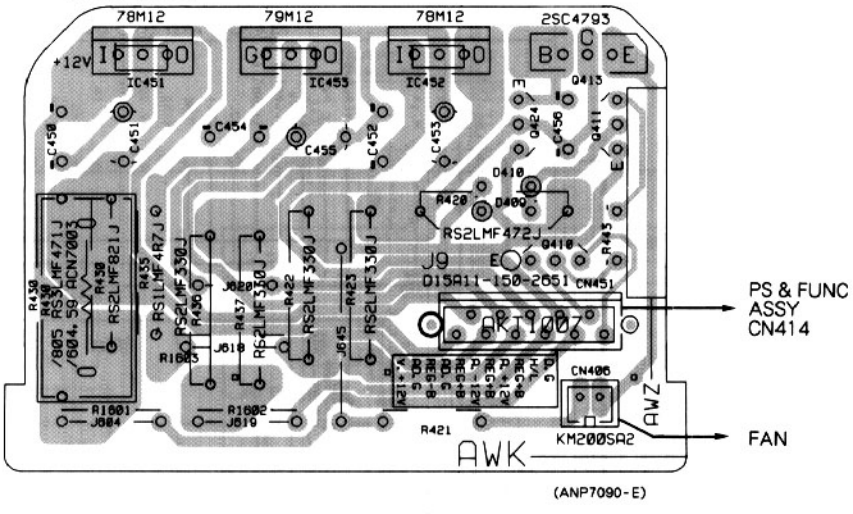


H.P. ASSY,
SP ASSY,
REG ASSY

SCH-4

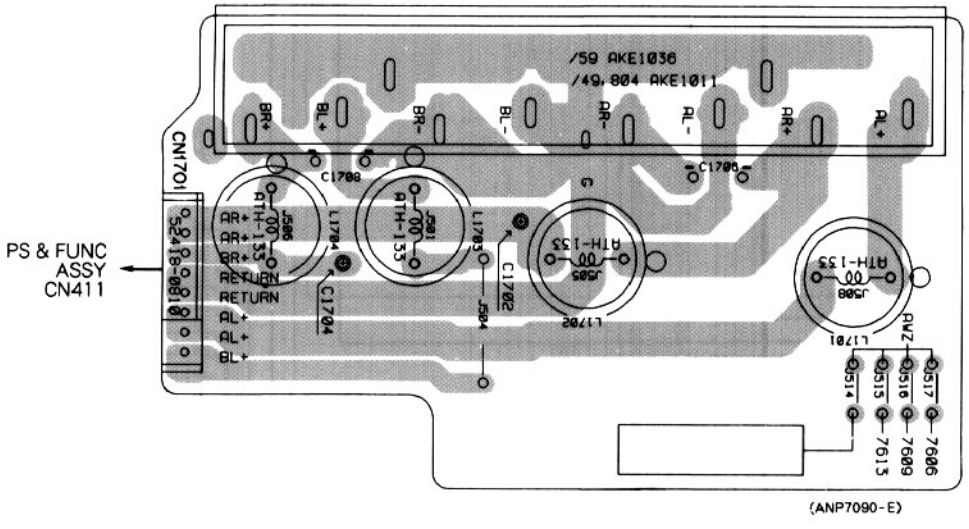
PCB - 3

REG. ASSY

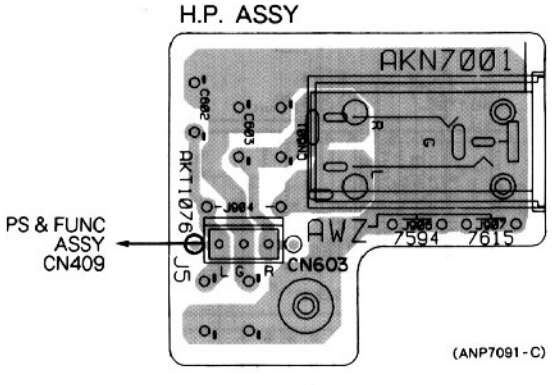


IC451 IC453 IC452 Q413 Q424 Q411 Q410

SP ASSY

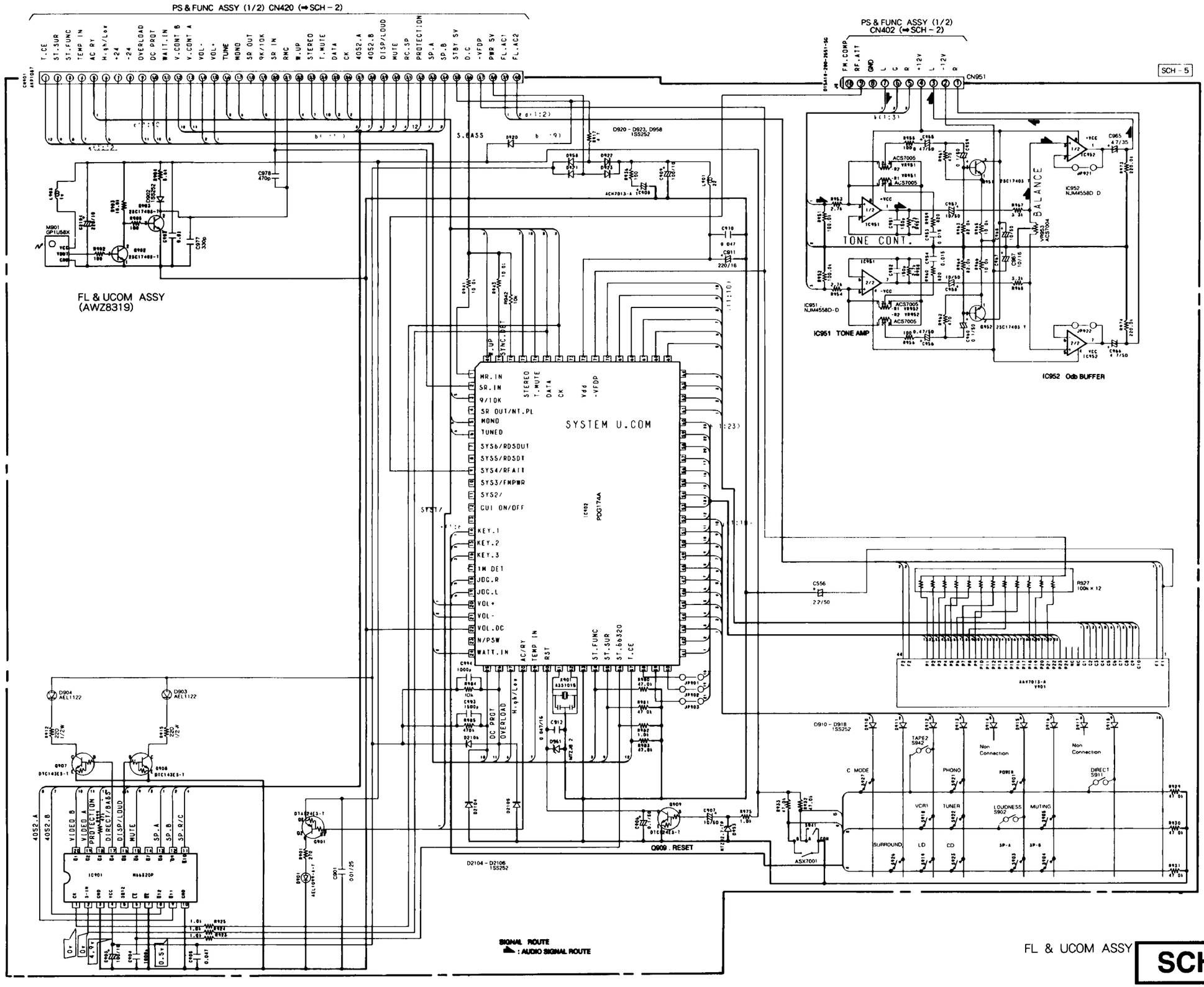


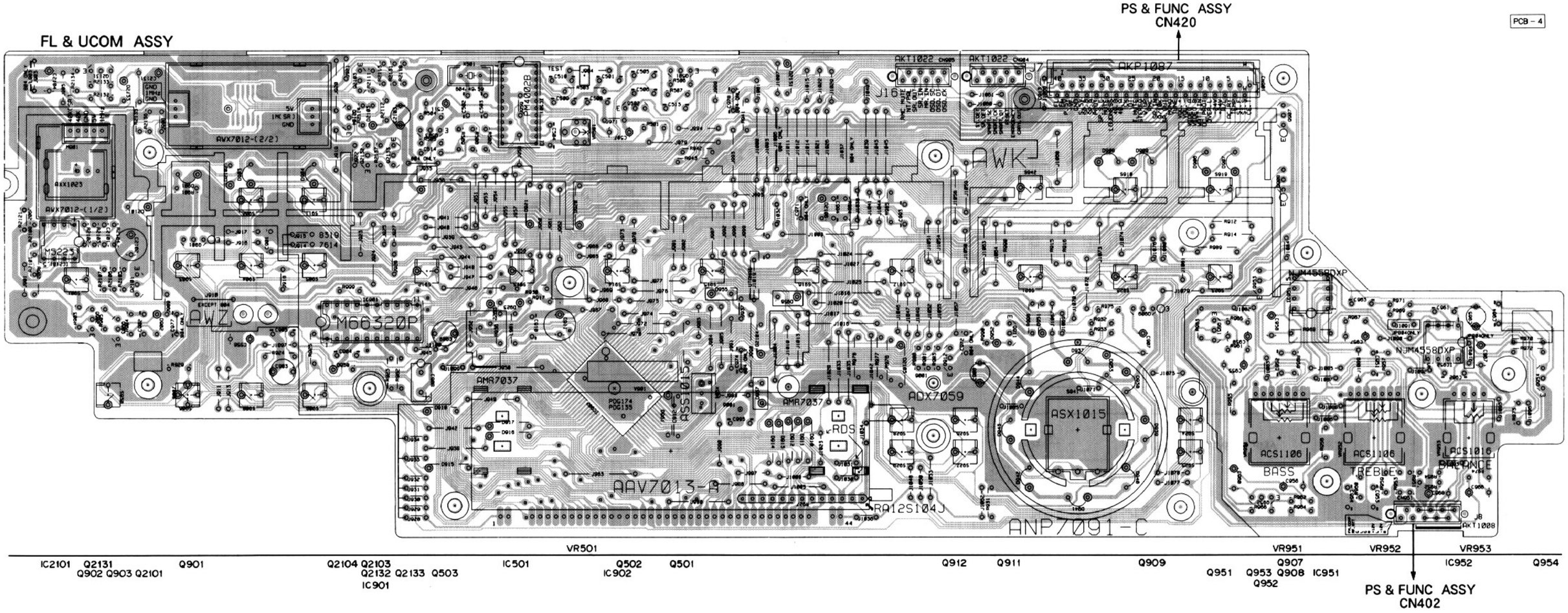
H.P. ASSY



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

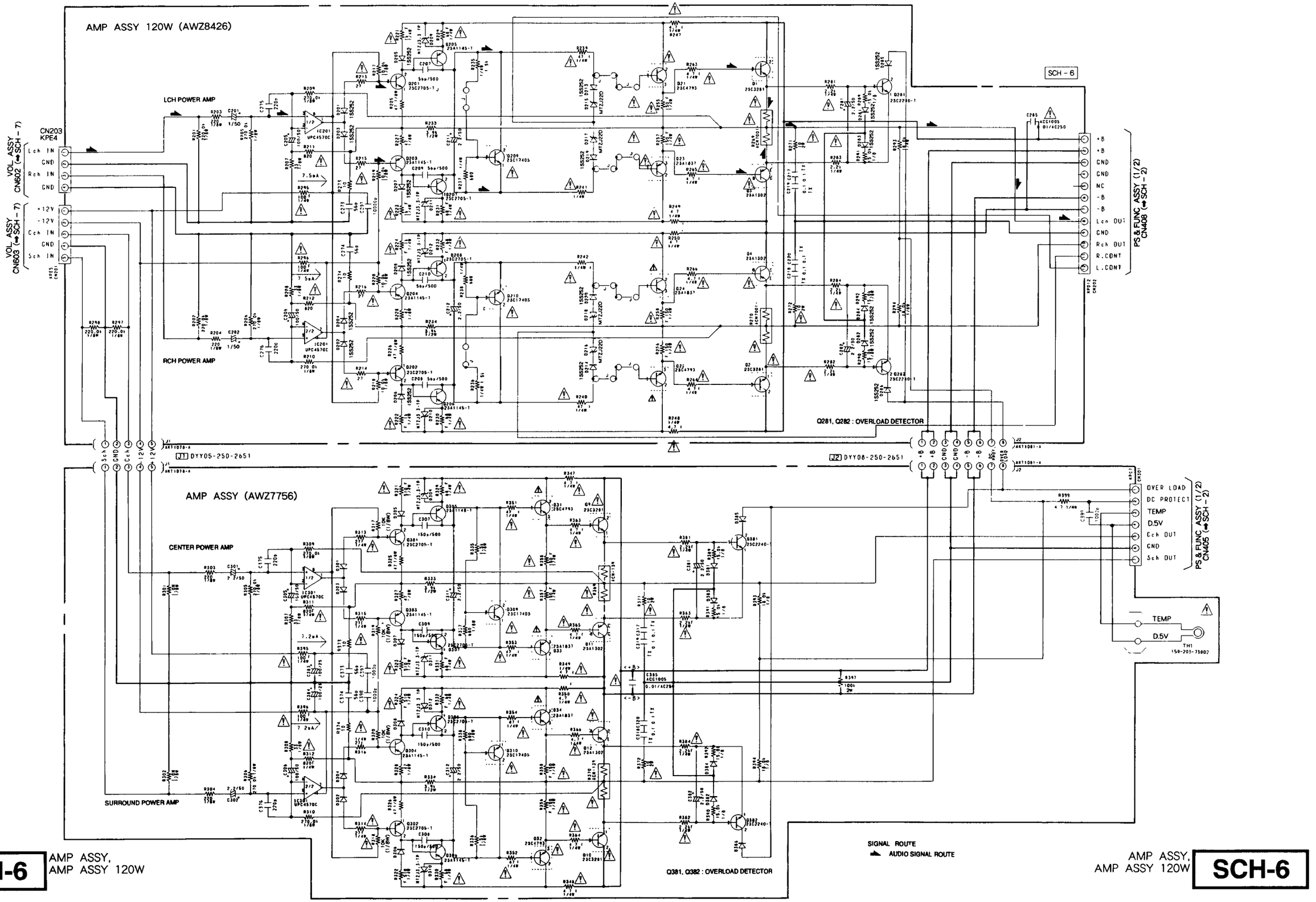
4.5 FL & UCOM ASSY





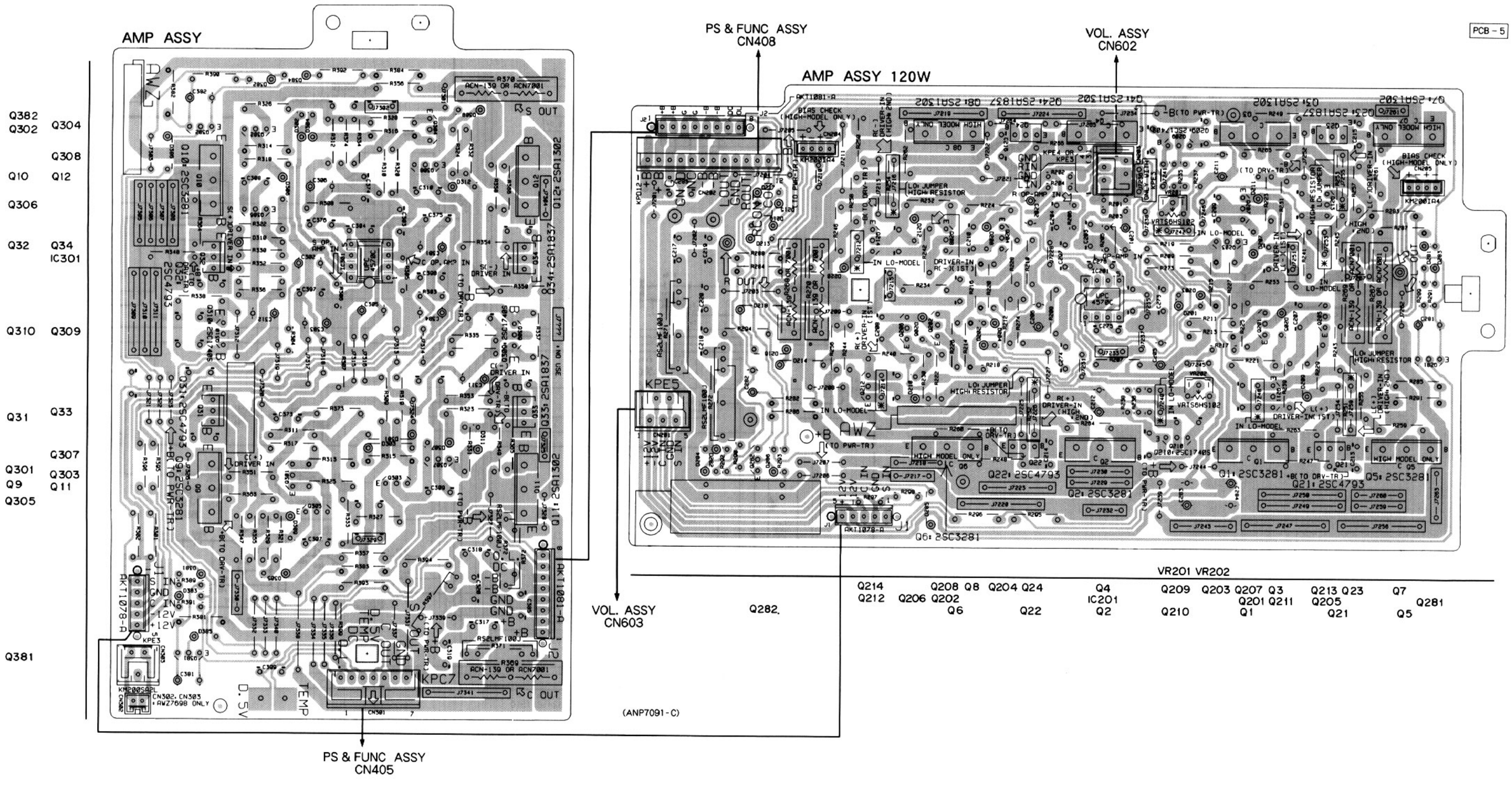
- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations.
  For further information for respective destinations, be sure to check with the schematic diagram.

4.6 AMP ASSY AND AMP ASSY 120W



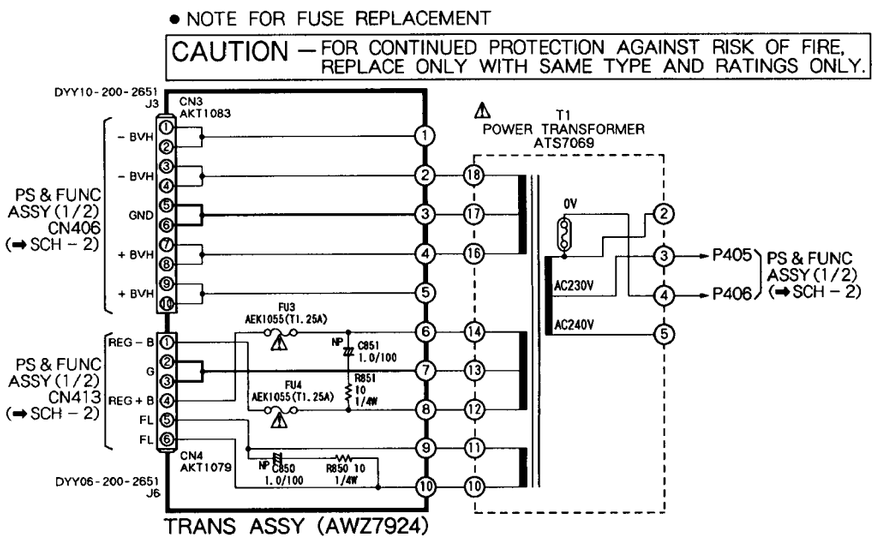
SCH-6 AMP ASSY, AMP ASSY 120W

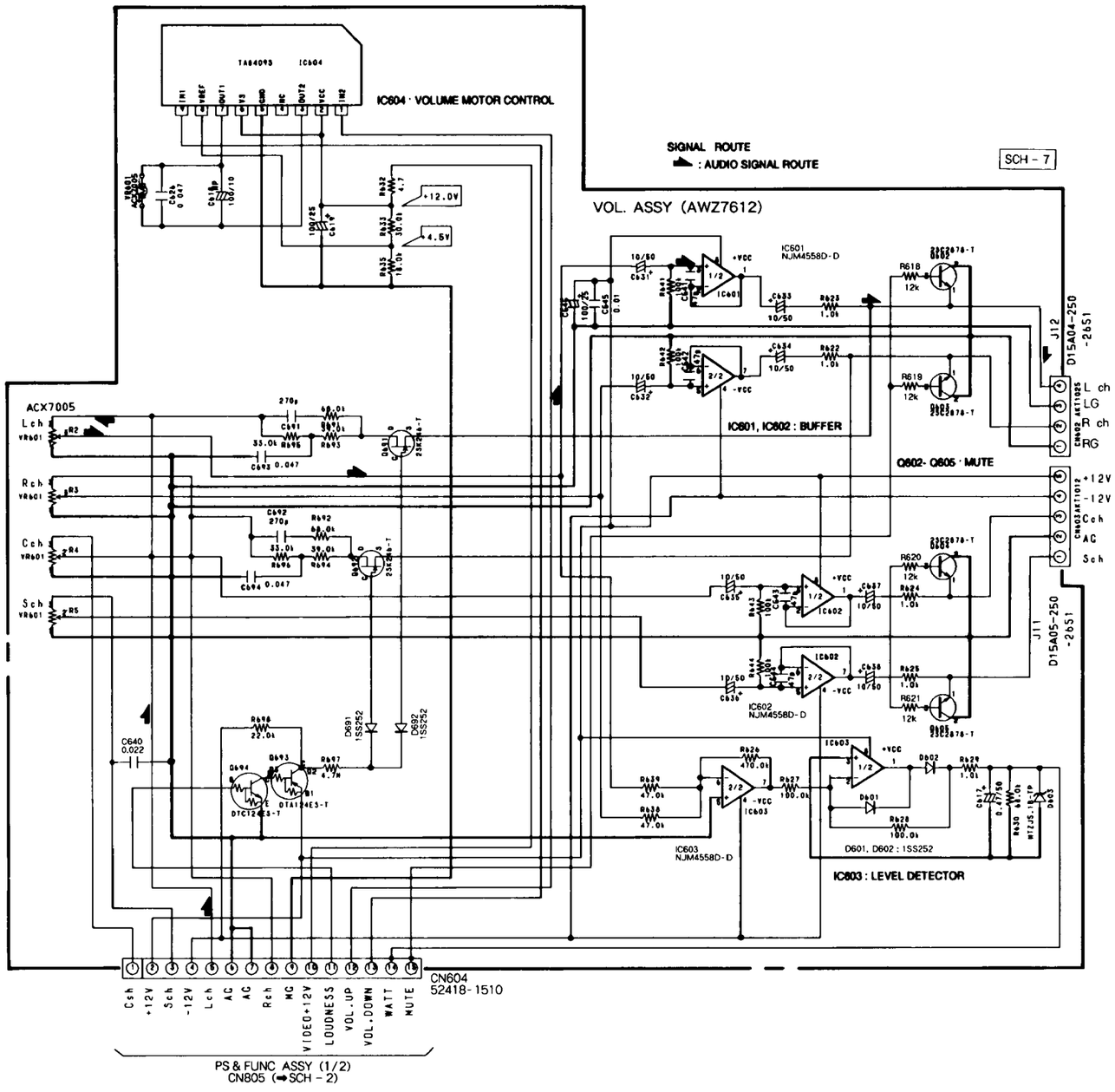
AMP ASSY, AMP ASSY 120W **SCH-6**



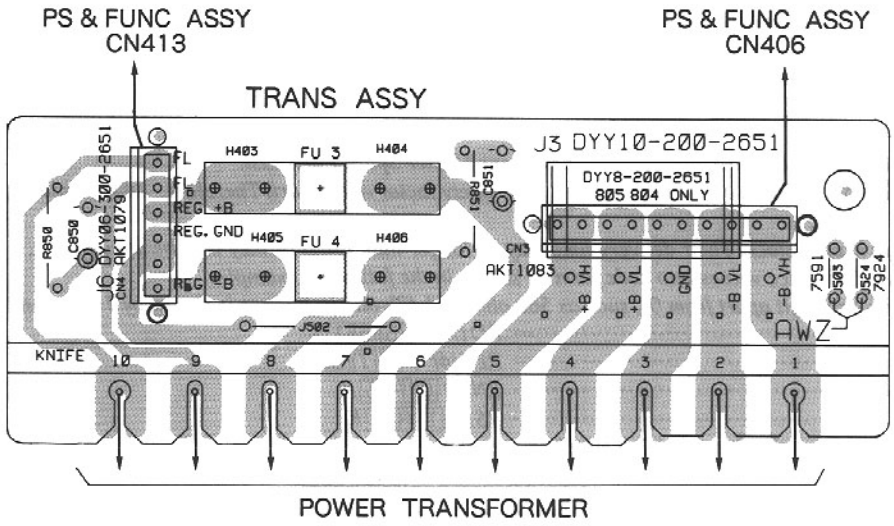
- This diagram is viewed from the mounted parts side.
- The parts mounted on this PCB include all necessary parts for several destinations.
  For further information for respective destinations, be sure to check with the schematic diagram.

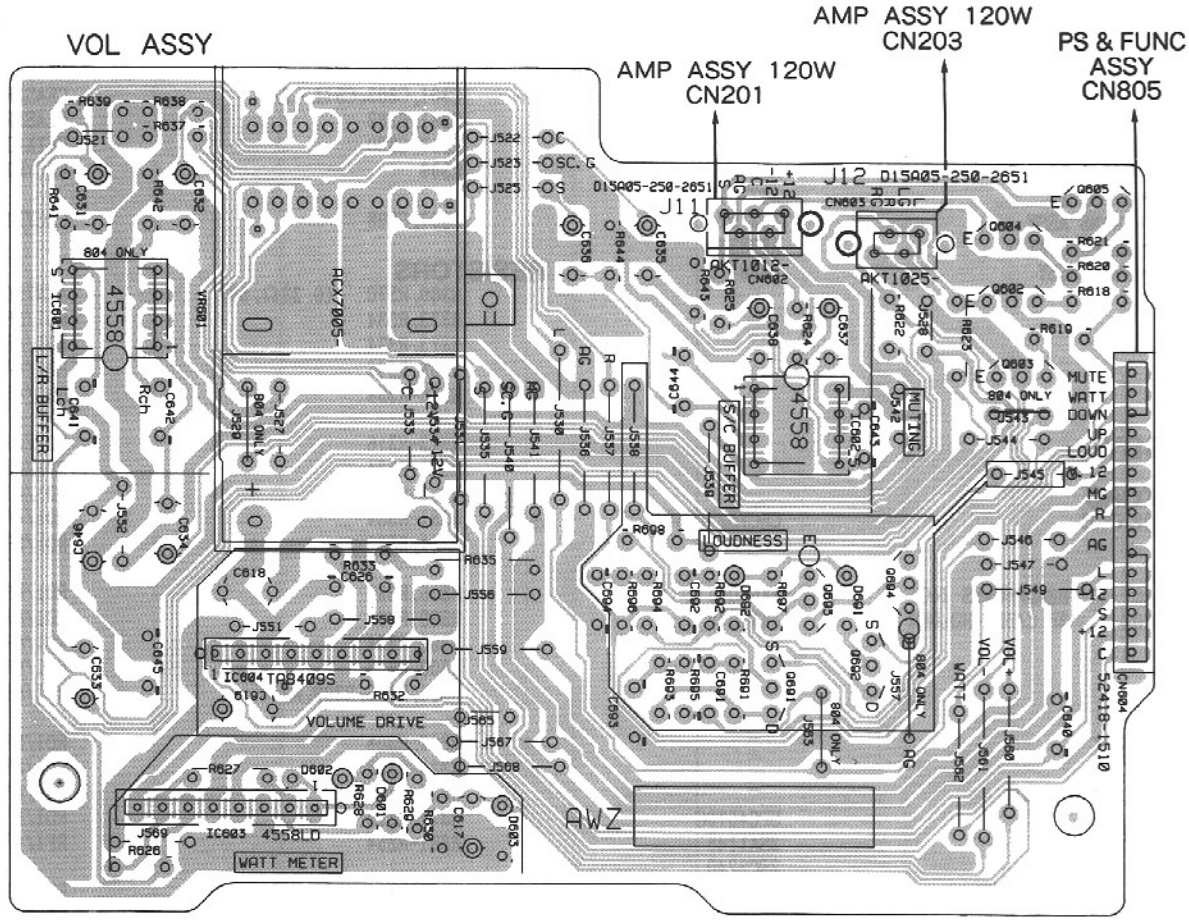
4.7 TRANS AND VOL. ASSEMBLIES





PCB – 6





VR601

IC601 IC603 IC604 IC602 Q691 – Q693 Q602 – Q605

(ANP7090-E)

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

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.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

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

560Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47kΩ → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5Ω → 0R5 ..... RN2H 0 R 5 K
1Ω → 1R0 ..... RS1P 1 R 0 K

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

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

Mark	No.	Description	Part No.
LIST OF ASSEMBLIES			
NSP		FL&AMP ASSY	AWK7299
NSP		├ H. P. ASSY	AWZ7615
		├ AMP ASSY	AWZ7756
		├ AMP ASSY 120W	AWZ8426
		├ FL&UCOM ASSY	AWZ8319
		├ TUNER TERMINAL ASSY	AWZ8321
		└ TUNER CONECT ASSY	AWZ8403
NSP		MOTHER ASSY	AWK7311
		├ VOL. ASSY	AWZ7612
NSP		├ SP ASSY	AWZ7613
NSP		├ TRANS ASSY	AWZ7924
		├ PS&FUNC ASSY	AWZ8386
		└ REG. ASSY	AWZ8412
H.P. ASSY			
CAPACITORS			
	C602, C603		CKCYB272K50
OTHERS			
	HJ601	HEADPHONES JACK	AKN7001
	CN603	3P CABLE HOLDER	AKT1076
AMP ASSY			
SEMICONDUCTORS			
	IC301		UPC4570C
	Q303-Q306		2SA1145
	Q381, Q382		2SC2240
	Q301, Q302, Q307, Q308		2SC2705
	D301-D308, D381-D386		1SS252
	D309-D312		MTZJ3.3
⚠	TH1		150-203-73002

Mark	No.	Description	Part No.
CAPACITORS			
	C385	(0.01μF/AC150V)	ACG1005
	C307-C310		CCCSL151K500
	C375, C376		CCCSL221J50
	C373, C374		CCCSL560J50
	C383, C384		CEAS101M25
	C305, C306		CEAS101M50
	C301, C302, C311, C312		CEAS2R2M50
	C381, C382		CEAS2R2M50
	C317-C320		CFTXA104J50
	C399		CKCYB102K50
	C397, C398		CKCYF102Z50
RESISTORS			
	R369, R370	(0.33Ω, 5W)	ACN7001
	R333, R334		RD1/2PM392J
	R373, R374		RD1/4PMF100J
	R395, R396		RD1/4PMF101J
	R355-R358		RD1/4PMF151J
	R313-R316		RD1/4PMF270J
	R321-R324		RD1/4PMF511J
	R329-R332		RD1/4PMF680J
⚠	R381-R384		RD1/4PMFL222J
	R301, R302		RD1/8PM105J
	R335, R336		RD1/8PM152J
	R389-R392		RD1/8PM153J
	R393, R394		RD1/8PM183J
	R303, R304		RD1/8PM221J
	R305, R306, R309, R310		RD1/8PM274J
	R307, R308		RD1/8PM330J
	R325-R328		RD1/8PM470J
	R337, R338		RD1/8PM681J
	R311, R312		RD1/8PM821J
	R351-R354		RF1/4PS470J
	R347-R350, R363-R366, R399		RF1/4PS4R7J
	R371, R372		RS2LMF100J
	R397		RS2LMF104J
	Other Resistors		RD1/4PU□□□J
OTHERS			
	J2	8P CABLE HOLDER	AKT1081

Mark	No.	Description	Part No.

AMP ASSY 120W

SEMICONDUCTORS

	IC201		UPC4570C
	Q203-Q206		2SA1145
	Q281, Q282		2SC2240
	Q201, Q202, Q207, Q208		2SC2705
	D201-D208, D213, D214		1SS252
	D219, D220, D281-D286		1SS252
	D215-D218		MTZJ22D
	D209-D212		MTZJ3.3

CAPACITORS

	C285	(0.01μF/AC150V)	ACG1005
	C275, C276		CCCSL221J50
	C273, C274		CCCSL560J50
	C207-C210		CCCSL560K500
	C205, C206		CEAS101M50
	C201, C202		CEAS1R0M50
	C211, C212		CEAS2R2M50
	C281, C282		CEAS2R2M50
	C217-C220		CFTXA104J50
	C297		CKCYF103Z50

RESISTORS

	R269, R270	(0.33Ω, 5W)	ACN7001
	R233, R234		RD1/2PM392J
	R273, R274		RD1/4PMF100J
	R295, R296		RD1/4PMF101J
	R221-R224		RD1/4PMF102J
	R255-R258		RD1/4PMF151J
	R229-R232		RD1/4PMF680J
⚠	R281-R284		RD1/4PMFL222J
	R239-R242		RF1/4PS470J
	R247-R250, R263-R266		RF1/4PS4R7J
	R235, R236		RN1/4PC1501F
	R237, R238		RN1/4PC6800F
	R271, R272		RS2LMF100J
	Other Resistors		RD1/8PM□□□J

OTHERS

	J2	8P CABLE HOLDER	AKT1081
	CN203	4P JUMPER CONNECTOR	KPE4
	CN201	5P JUMPER CONNECTOR	KPE5

FL&UCOM ASSY

SEMICONDUCTORS

	IC901		M66320P
	IC951, IC952		NJM4558D-D
	IC902		PDG174A
	Q902, Q903, Q951, Q952		2SC1740S
	Q901		DTA124ES
	Q909		DTC124ES
	Q907, Q908		DTC143ES
	D2104-D2106, D902, D910-D918		1SS252
	D920-D923, D958		1SS252
	D901		AEL1099
	D903, D904		AEL1122
	D953		MTZJ2.7
	D961		MTZJ8.2

Mark	No.	Description	Part No.

COILS

	L903		LAU010J
	L901		LAU220J

SWITCHES

	S901-S905, S911, S918, S919		ASG1034
	S921-S923, S926, S927, S942		ASG1034
	S941		ASX7001

CAPACITORS

	C908		ACH7013
	C951, C952		CCCSL151J50
	C906		CEAS0R1M50
	C907, C968		CEAS100M50
	C903		CEAS101M10
	C2104		CEAS221M10
	C966		CEAS4R7M50
	C959, C960		CEJA0R1M50
	C967		CEJA100M16
	C957, C958		CEJA100M50
	C909		CEJA101M10
	C911		CEJA221M6
	C556		CEJA2R2M50
	C965		CEJA4R7M35
	C955, C956		CEJAR47M50
	C953, C954		CFTXA153J50
	C994		CKCYB102K50
	C993		CKCYB152K50
	C977		CKCYB331K50
	C978		CKCYB471K50
	C904		CKCYF102Z50
	C905, C910		CKCYF473Z50
	C902		CKCYX103M25
	C901		CKPUYF103Z25
	C912		CKPUYF473Z16

RESISTORS

	R902, R905, R936, R955, R956		RD1/8PM101J
	R923-R925, R975, R982		RD1/8PM102J
	R903, R941, R943, R965, R966		RD1/8PM103J
	R984		RD1/8PM103J
	R951, R952		RD1/8PM104J
	R912, R915		RD1/8PM221J
	R973, R974		RD1/8PM224J
	R901		RD1/8PM271J
	R953, R954, R957, R958		RD1/8PM272J
	R967, R968		RD1/8PM332J
	R961, R962		RD1/8PM471J
	R929-R933, R980, R981, R983		RD1/8PM473J
	R999		RD1/8PM473J
	R985		RD1/8PM474J
	R917		RD1/8PM4R7J
	R904		RD1/8PM562J
	R959, R960		RD1/8PM821J
	R963, R964		RD1/8PM823J
	VR953	VARIABLE RESISTOR	ACS7004
	VR951, VR952	VARIABLE RESISTOR	ACS7005
	Other Resistors		RD1/4PU□□□J

Mark	No.	Description	Part No.
OTHERS			
	V901	FL TUBE	AAV7013
	CN901	40P L TYPE SOCKET	AKP1087
		FL HOLDER	AMR7037
	X901	CERAMIC RESONATOR(8.00MHz)	ASS1015
	M901	REMOTE SENSOR UNIT	GP1U58X

TUNER TERMINAL ASSY

CAPACITORS			
	C5001-C5004		CKDYB391K50
RESISTORS			
	All Resistors		RD1/8PM□□□J
OTHERS			
	CN5002	3P JUMPER CONNECTOR	KPE3
	JA5001	2P PIN JACK	VKB1046

TUNER CONECT ASSY

OTHERS			
	CN6001	14P SOCKET	KP2001B14L

VOL. ASSY

SEMICONDUCTORS			
	IC601, IC603		NJM4558D-D
	IC602		NJM4558LD
	IC604		TA8409S
	Q602-Q605		2SC2878
	Q691, Q692		2SK246
	Q693		DTA124ES
	Q694		DTC124ES
	D601, D602, D691, D692		1SS252
	D603		MTZJ5.1B
CAPACITORS			
	C691, C692		CCCSL271J50
	C641-C644		CCCSL470J50
	C618		CEANP101M10
	C631-C638		CEAS100M50
	C619, C646		CEAS101M25
	C617		CEASR47M50
	C640		CFTXA223J50
	C693, C694		CFTXA473J50
	C645		CKCYF103Z50
	C626		CKCYF473Z50
RESISTORS			
	R622-R625, R629		RD1/8PM102J
	R627, R628, R641-R644		RD1/8PM104J
	R635		RD1/8PM183J
	R698		RD1/8PM223J
	R633		RD1/8PM303J
	R695, R696		RD1/8PM333J
	R693, R694		RD1/8PM393J
	R638, R639		RD1/8PM473J
	R626		RD1/8PM474J
	R697		RD1/8PM475J
	R632		RD1/8PM4R7J
	R630, R691, R692		RD1/8PM683J
	VR601	(100kΩ)	ACX7005
	Other Resistors		RD1/4PU□□□J
OTHERS			
	CN604	15P SOCKET	52418-1510
	CN603	CABLE HOLDER	AKT1012

SP ASSY

COILS			
	L1701-L1704	(1μH)	ATH-133
CAPACITORS			
⚠	C1702, C1704		CCDSL121K500
	C1706, C1708		CKCYF472Z500
⚠	C1705, C1707		CKDYB472K500
OTHERS			
	CN1701	8P SOCKET	52418-0810
	SP1701	8P SPEAKER TERMINAL	AKE1011

TRANS ASSY

CAPACITORS			
	C850, C851		CEANP010M100
RESISTORS			
	R850, R851		RFA1/4PS100J
OTHERS			
	CN004	6P CABLE HOLDER	AKT1079

PS&FUNC ASSY

SEMICONDUCTORS			
	IC702		BU4052BC
	IC1804		LA2785
	IC801		LA7952
	IC1803		LV1011
	IC1801, IC1802, IC701, IC704		NJM4558D-D
	IC703		TC9163AN
	Q406		2SA1515
	Q419, Q420, Q422, Q470		2SA933S
	Q407-Q409, Q416, Q791, Q792		2SC1740S
	Q801		2SC1740S
	Q418, Q481, Q482, Q485, Q486		2SC2878
	Q802		2SC2878
	Q1801		2SD468
	Q483, Q707, Q708		DTA143ES
	Q421, Q471		DTC124ES

Mark	No.	Description	Part No.
	Q402-Q404		DTC143ES
	D425, D427-D430		1SR139-100
	D1809-D1812, D402-D404, D407		1SS252
	D415, D418, D420, D435-D437		1SS252
	D470, D473-D475, D491-D495		1SS252
	D703, D801		1SS252
	D421, D433		D5SBA20(B)
	D438-D441		MTZJ18B
	D412		MTZJ18C
	D408		MTZJ4.3C
	D416		MTZJ5.1A
	D419		MTZJ5.6A
	D417		MTZJ5.6C
	D1813		MTZJ9.1C

COILS

⚠	L403	(0.8mH/AC250V)	ATF-151
	L401, L402	(1μH)	ATH-133
	L1801		LAU2R2K

TRANSFORMER

⚠	T401	POWER TRANSFORMER(SUB)	ATT1193

RELAYS

⚠	RY401	ASR1044
	RY404, RY405, RY407, RY408	ASR7001

CAPACITORS

⚠	C422	(0.022μF/AC400V)	ACG1030
⚠	C420	(0.01μF/AC400V)	ACG1054
	C413, C414	(10000pF/DC56V)	ACH1234
	C1876		CCCCH101J50
	C483, C484, C762, C763		CCCSL101J50
	C401, C404		CCCSL181K500
	C1842, C1861		CEANL3R3M50
	C1838, C1840, C1857, C1859		CEANL4R7M50
	C1823		CEAS010M50
	C1806, C1809, C1812, C1815, C1826		CEAS100M50
	C1831-C1833, C1847-C1850		CEAS100M50
	C1852, C1853, C410, C713, C714		CEAS100M50
	C743, C744		CEAS100M50
	C425		CEAS101M10
	C1871, C729, C730, C748, C754		CEAS101M25
	C809, C810		CEAS101M25
	C416		CEAS102M35
	C1819		CEAS221M10
	C1817, C1846, C1851, C406, C407		CEAS221M16
	C400		CEAS221M25
	C417		CEAS222M35
	C1804, C1807, C1810, C1813, C1825		CEAS2R2M50
	C737, C738, C749, C750		CEAS2R2M50
	C1816, C1834, C412		CEAS470M25
	C739, C740, C751, C752, C806		CEAS470M25
	C415		CEAS471M25
	C803, C804		CEAS471M6
	C801, C802		CEAS4R7M50
	C1841, C1860		CEASR15M50
	C1837, C1839, C1856, C1858		CEASR47M50

Mark	No.	Description	Part No.
	C490		CEJA220M35
	C1835, C1836, C1854, C1855		CFTXA104J50
	C1843, C1862		CFTXA154J50
	C1820, C1822		CFTXA333J50
	C1863		CFTXA474J50
	C1875		CGCYX473M25
	C1877, C481, C741, C742, C747		CKCYB102K50
	C770		CKCYB102K50
	C485, C705, C706, C727, C728		CKCYB471K50
	C1873, C1874		CKCYB681K50
	C1870, C745, C746, C753, C755		CKCYF103Z50
	C811, C812		CKCYF473Z50
	C1808, C1811, C1814, C419		CKCYX104M25
	C1864, C1865		CKCYX473M25
	C405, C408, C701-C704		CKDYB391K50
	C707-C710, C715-C726		CKDYB391K50
	C731, C732		CKDYB681K50
	C1821		CQMA152J50
	C1844		CQMA223J50
	C735, C736		CQMA242J50
	C1845		CQMA473J50
	C1830		CQMA681J50
	C733, C734		CQMA822J50
	C421		CQMXA104J100
	C402, C403		CQPA223F100

RESISTORS

	R807	RD1/2PM271J
	R439	RD1/2PM680J
	R459, R493	RD1/2PM682J
	R494	RD1/2PMF820J
	R1810, R1815, R1820, R1825	RD1/8PM101J
	R1801-R1803, R1809, R1814, R1816	RD1/8PM102J
	R1819, R1821, R1824, R474	RD1/8PM102J
	R715, R716, R737-R740	RD1/8PM102J
	R745-R747, R792, R809	RD1/8PM102J
	R426, R473, R490, R805, R806	RD1/8PM103J
	R749, R750	RD1/8PM104J
	R1829, R701-R704, R707-R710	RD1/8PM105J
	R751, R752	RD1/8PM122J
	R454	RD1/8PM153J
	R449	RD1/8PM154J
	R457	RD1/8PM182J
	R1811, R1826, R409	RD1/8PM183J
	R418, R442, R711-R714	RD1/8PM222J
	R1846, R413, R450	RD1/8PM223J
	R1808, R1813, R1818, R1823, R455	RD1/8PM224J
	R470, R471, R735, R736	RD1/8PM224J
	R741-R744	RD1/8PM224J
	R451, R491	RD1/8PM272J
	R415	RD1/8PM2R2J
	R731, R732	RD1/8PM303J
	R1849, R717-R724	RD1/8PM331J
	R1827, R432	RD1/8PM332J
	R458	RD1/8PM392J
	R1830	RD1/8PM393J
	R729, R730	RD1/8PM394J

Mark	No.	Description	Part No.
	R402, R403, R410, R416		RD1/8PM470J
	R733, R734		RD1/8PM471J
	R1806, R1807, R1812, R1817, R1822		RD1/8PM472J
	R452, R483-R486, R791, R810		RD1/8PM472J
	R813, R815		RD1/8PM472J
	R1842-R1845		RD1/8PM473J
	R727, R728		RD1/8PM511J
	R424		RD1/8PM561J
	R472		RD1/8PM562J
	R408, R725, R726		RD1/8PM563J
	R705, R706		RD1/8PM564J
	R804		RD1/8PM680J
	R1828		RD1/8PM681J
	R404, R405		RD1/8PM683J
	R801-R803		RD1/8PM750J
	R1804, R1805, R406, R407		RD1/8PM821J
	R411		RD1/8PM822J
	R431		RS2LMF101J
	R433		RS2LMF151J
	R447, R448		RS2LMF331J
	Other Resistors		RD1/4PU□□□J
OTHERS			
	CN411	8P PLUG	53290-0810
	CN805	15P PLUG	53290-1510
	CN703	6P PIN JACK	AKB7003
	CN702	12P PIN JACK	AKB7004
	CN404	2P PIN JACK	AKB7036
	SP401	6P SPEAKER TERMINAL	AKE7005
	CN407	2P MINI JACK	AKN1006
	CN420	40P SOCKET	AKP1085
	CN401	CABLE HOLDER	AKT1007
	CN413	6P CABLE HOLDER	AKT1079
	CN405	7P CABLE HOLDER	AKT1080
	CN408	12P CABLE HOLDER	AKT1085
		EARTH METAL	ANK-142
	CN701	14P PLUG	KM200IB14
	CN402	10P JUMPER CONNECTOR	KPE10
	X1801	CERAMIC RESONATOR(8.00MHz)	ASS1015

Mark	No.	Description	Part No.
REG. ASSY			
SEMICONDUCTORS			
	IC451, IC452		NJM78M12FA
	IC453		NJM79M12FA
	Q424		2SC1740S
	Q413		2SC4793
	Q410		DTA124ES
	Q411		DTC124ES
	D409		MTZJ12B
	D410		MTZJ13B
CAPACITORS			
	C451, C453, C455		CEAS101M25
	C450, C452, C454		CKCYF102Z50
	C456		CKCYF103Z50
RESISTORS			
	R421		RD1/4PMF2R2J
	R435		RS1LMF4R7J
	R422, R423, R436, R437		RS2LMF330J
	R420		RS2LMF472J
	R430		RS3LMF471J
	Other Resistors		RD1/4PU□□□J
OTHERS			
	CN451	CABLE HOLDER	AKT1007

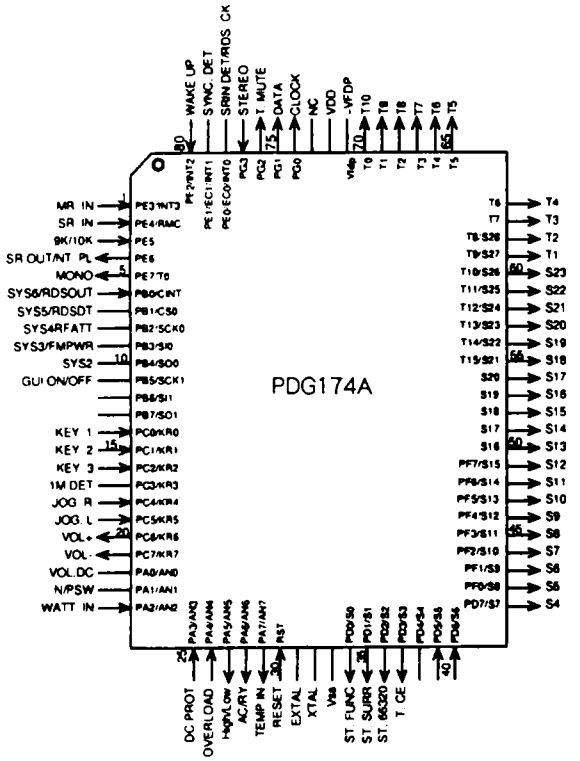
6. IC INFORMATION

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

■ PDG174A (IC902 : FL & UCOM ASSY)

• System Microcomputer

• Pin Assinment (Top View)



• Pin Function

No.	Pin Name	I/O	Description	Act.
1	MR. IN PE3/INT3	I	——	–
2	SR. IN PE4/RMC	I	Remote control signal input	H
3	9k/10k PE5	I	——	–
4	SR OUT/NT. PL PE6	O	Remote control signal output	–
5	MONO PE7/T0	O	——	–
6	TUNED PB0/CINT	I	——	–
7	SYS6/RDSOUT PB1/CS0	–	——	–
8	SYS5/RDSDT PB2/SCK0	–	——	–
9	SYS4/RFATT PB3/SI0	–	——	–
10	SYS3/FMPWR PB4/SO0	–	——	–
11	SYS2/ PB5/SCK1	–	——	–
12	GUI ON/OFF PB6/SI1	–	——	–
13	PB7/SO1	–	——	–
14	KEY. 1 PC0/KR0	I	KEY SCAN input 1	–
15	KEY. 2 PC1/KR1	I	KEY SCAN input 2	–
16	KEY. 3 PC2/KR2	I	KEY SCAN input 3	–
17	1M DET PC3/KR3	–	——	–
18	JOG. R PC4/KR4	I	JOG input UP: JOG1, JOG2 DOWN: JOG1, JOG2	–
19	JOG. L PC5/KR5	I		
20	VOL + PC6/KR6	O	MASTER VOLUME UP output	H
21	VOL – PC7/KR7	O	MASTER VOLUME DOWN output	H
22	VOL. DC PA0/AN0	–	——	–
23	N/PSW PA1/AN1	–	——	–
24	WATT. IN PA2/AN2	I	WATT input (A/D) for fan	–
25	DC PROT PA3/AN3	I	DC input (A/D) for protection	–
26	OVERLOAD PA4/AN4	I	OVER/LOAD input (A/D) for protection	–
27	High/Low PA5/AN5	O	Switching fan rotation L: High, H: Low	–
28	AC/RY PA6/AN6	O	POWER relay ON/OFF	H
29	TEMP IN PA7/AN7	O	TEMP input (A/D) for fan	–
30	RESET RST	I	RESET input	L
31	EXTAL	–	Oscillator (8MHz)	–
32	XTAL	–		–
33	Vss	–	GND	–
34	ST. FUNC PD0/S0	I	STROB output for TC9163	H

No.	Pin Name	I/O	Description	Act.
35	ST. SURR PD1/S1	I	Chip/Enable output for LV1011 (DSP)	L
36	ST. 66320 PD2/S2	I	Chip/Enable output for M66320	H
37	T. CE PD3/S3	I	——	–
38	PD4/S4	–	——	–
39	PD5/S5	I	——	–
40	PD6/S6	I	——	–
41	S4 PD7/S7	O	FL segment output 4	–
42 49	S5 PF0/S8 S12 PF7/S15	O	FL segment output 5/Key scan output 1 FL segment output 12/Key scan output 8	–
50 52	S13 S15	O	FL segment output 13/Key scan output 9 FL segment output 15/Key scan output 11	–
53	S16	O	FL segment output 16	–
54	S17	O	FL segment output 17	–
55 60	S18 T15/S21 S23 T10/S26	O	FL segment output 18 FL segment output 23	–

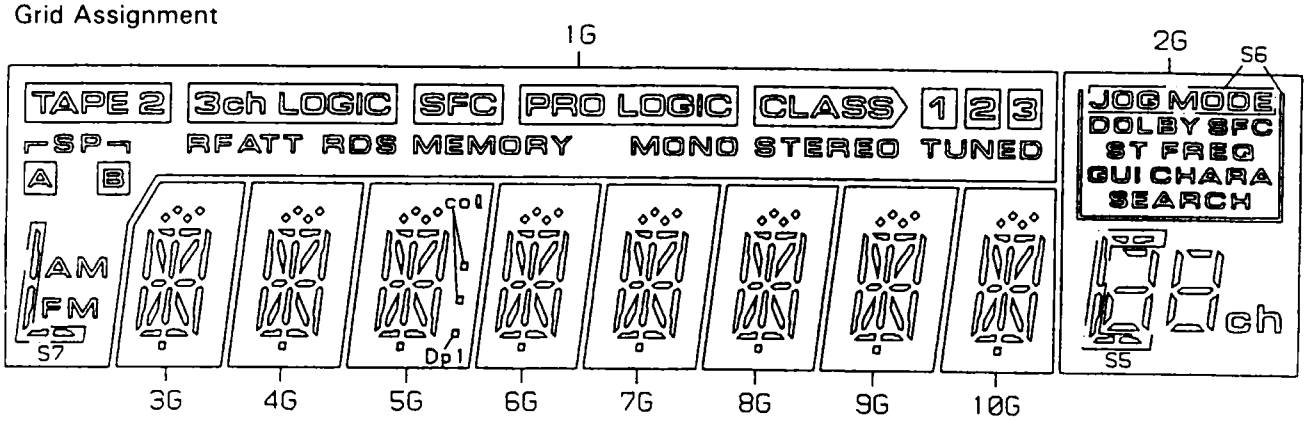
No.	Pin Name	I/O	Description	Act.
61	T1 T9/S27	O	FL timing output 1	–
62	T2 T8/S28	O	FL timing output 2	–
63 70	T3 T10	O	FL timing output 3 FL timing output 10	–
71	−VFDP Vfdp	–	FL driver power supply	–
72	VDD	–	+5V power supply	–
73	NC	–	——	–
74	CLOCK PG0	O	CLOCK output for TC9163/M66320/LM7001/LV1011	–
75	DATA PG1	O	DATA output for TC9163/M66320/LM7001/LV1011	–
76	T. MUTE PG2	O	——	–
77	STEREO PG3	I	——	–
78	SRin DET/RDS. CK PE0/EC0/INT0	–	——	–
79	SYNC. DET PE1/EC1/INT1	–	——	–
80	WAKE UP PE2/INT2	I	WAKE-UP (AC pulse for BACK-UP) input	–

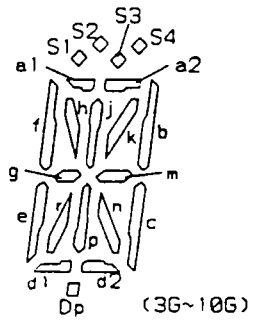
7. FL INFORMATION

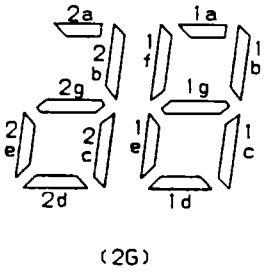
■ AAV7013 (V901 : FL & UCOM ASSY)

• FL TUBE

● Grid Assignment



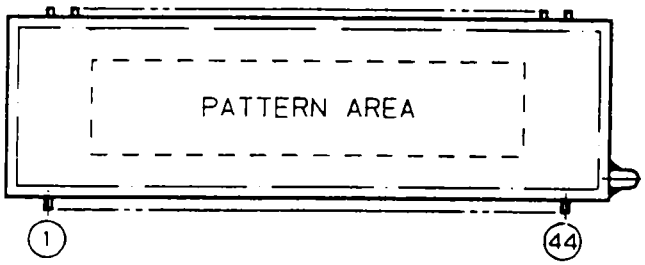




● Anode Connection

	1G	2G	3G,4G	5G	6G~10G
P1	S7	S5	a1	a1	a1
P2	FM	2a,2d	a2	a2	a2
P3	AM	2b	h	h	h
P4	A	2g	j	j	j
P5	■	2c	k	k	k
P6	SP	2e	b	b	b
P7	TAPE 2	1a	f	f	f
P8	RFATT	1b	m	m	m
P9	3ch LOGIC	1f	g	g	g
P10	RDS	1g	c	c	c
P11	SFC	1c	e	e	e
P12	MEMORY	1e	r	r	r
P13	PRO LOGIC	1d	p	p	p
P14	MONO	ch	n	n	n
P15	TUNED	S6	d1	d1	d1
P16	3	SFC	d2	d2	d2
P17	2	FREQ	Dp	Dp	Dp
P18	1	CHARA	S3	S3	S3
P19	CLASS	SEARCH	S1	S1	S1
P20	STEREO	GUI	S4	S4	S4
P21	-	-	S2	S2	S2
P22	-	DOLBY	-	col	-
P23	-	ST	-	Dp1	-

● Pin Assignment



● Pin Connection

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44
CONNECTION	F1	F1	NP	NP	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G	NC	NC	NC	P32	P31	P30	P29	P28	P27	P26	P25	P24	P23	P22	P21	P20	P19	P18	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	NP	NP	F2	F2

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

8. REMOTE CONTROL UNIT [CU-VSA027 (AXD7091)]

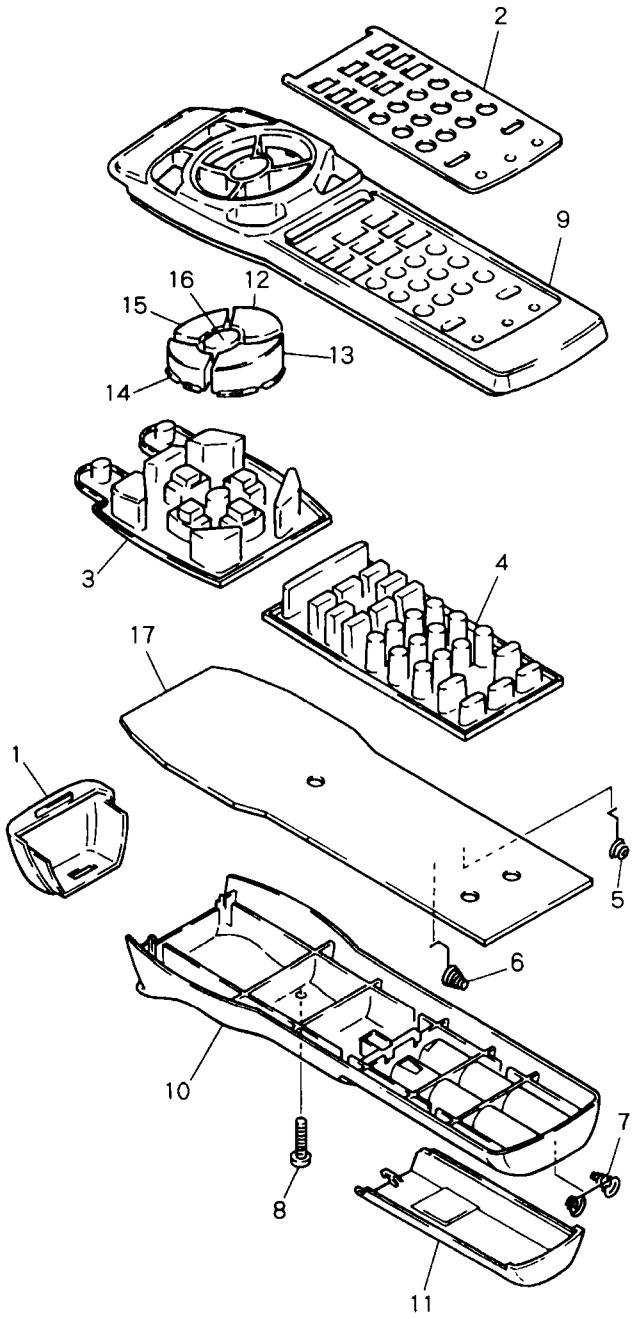
8.1 EXPLODED VIEW AND PARTS LIST

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.*
- *Parts marked by " ◉ " are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*

Parts List

Mark	No.	Description	Part No.
	1	Filter	AZA7152
	2	Name Plate	AZA7159
	3	Rubber Sheet (A)	AZA7154
	4	Rubber Sheet (B)	AZA7160
	5	Spring (+)	AZB7049
	6	Spring (−)	AZB7050
	7	Spring	AZB7051
	8	Screw	AZB7052
	9	Remo-con Case (A)	AZN7350
	10	Remo-con Case (B)	AZN7326
	11	Battery Cover	AZN7327
	12	Main Key (FF)	AZN7334
	13	Main Key (STOP)	AZN7329
	14	Main Key (REV)	AZN7335
	15	Main Key (PAUSE)	AZN7331
	16	Main Key (PLAY)	AZN7336
NSP	17	PCB	AZW7189



8.2 PCB PARTS LIST

NOTES:

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

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

560 Ω → 56 × 10¹ → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10³ → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → 0R5 ..... RN2H 0 R 5 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

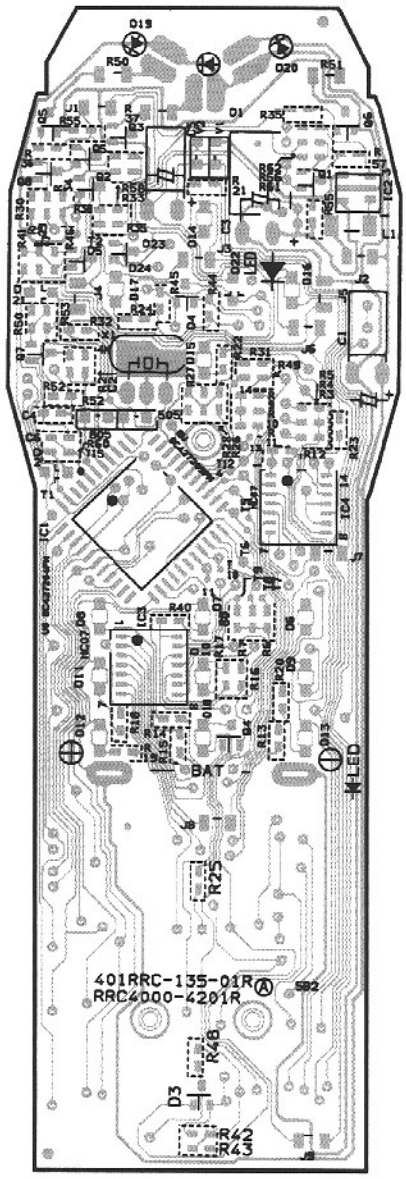
Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).

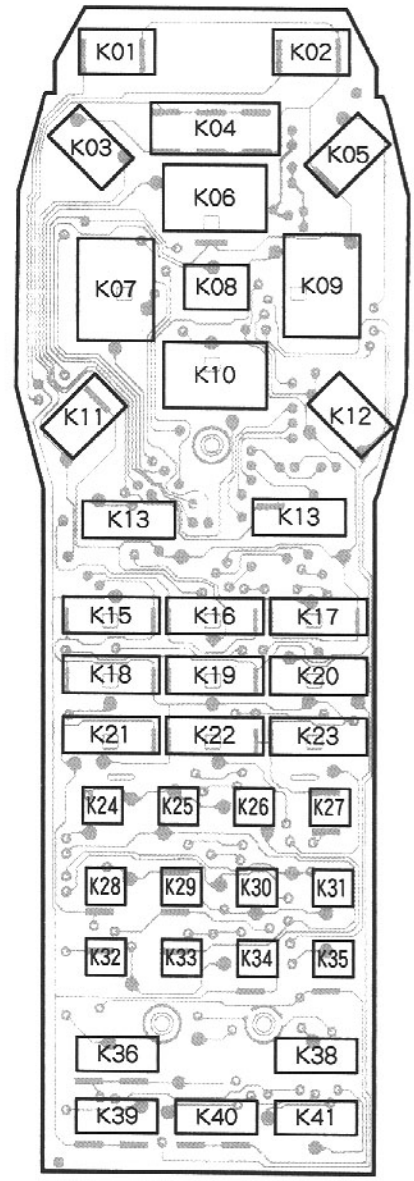
5.62k Ω → 562 × 10¹ → 5621 ..... RN1/4PC 5 6 2 1 F

Mark	No.	Description	Part No.
SEMICONDUCTORS			
	IC1		AZC7112
	IC3, IC4		TC74HC07AF
	Q2, Q8, Q9		2SA1037K
	Q3, Q5, Q6		2SC3265
	Q7		2SC2712
	D1, D19, D20		SE1003-C
	D3-D5		1SS181
	D6-D10, D13	LED	CL-230HR-CD
	D2, D21		RLS-73
CAPACITOS			
	C1, C5		CEAS470M10
	C2, C4		CKSQYB104K25
	C3		CEAS221M10
RESISTORS			
	R37, R50, R51		RD1/4PM3R9J
	Other Resistors		RS1/10S□□□J
OTHERS			
	X1	CERAMIC RESONATOR	FCR4.0MC3

8.3 PCB DIAGRAM

PCB – 7





- This diagram is viewed from the mounted parts side.
- This PCB is double sided.

- This diagram is viewed from the foil side.
- This PCB is double sided.

8.4 SCHEMATIC DIAGRAM

NOTE FOR SCHEMATIC DIAGRAM (Type 2A)

1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

3. RESISTORS:
Unit. k:kΩ, M:MΩ, or Ω unless otherwise noted.
Rated power. 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.
Tolerance.(F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.

4. CAPACITORS:
Unit : p:pF or μF unless otherwise noted.
Ratings : capacitor (μF) / voltage (V) unless otherwise noted.
Rated voltage . 50V except for electrolytic capacitors.

5. COILS:
Unit : m:mH or μH unless otherwise noted.

6. VOLTAGE AND CURRENT:
▭ or ←V· DC voltage (V) at no input signal unless otherwise noted.
⇦mA or ←mA : DC current at no input signal unless otherwise noted.

7. OTHERS:
- ●⊘ or ⊘ : Adjusting point.
- ● ◀ : Measurement point.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

8. SCH – □ ON THE SCHEMATIC DIAGRAM:
- SCH–□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)

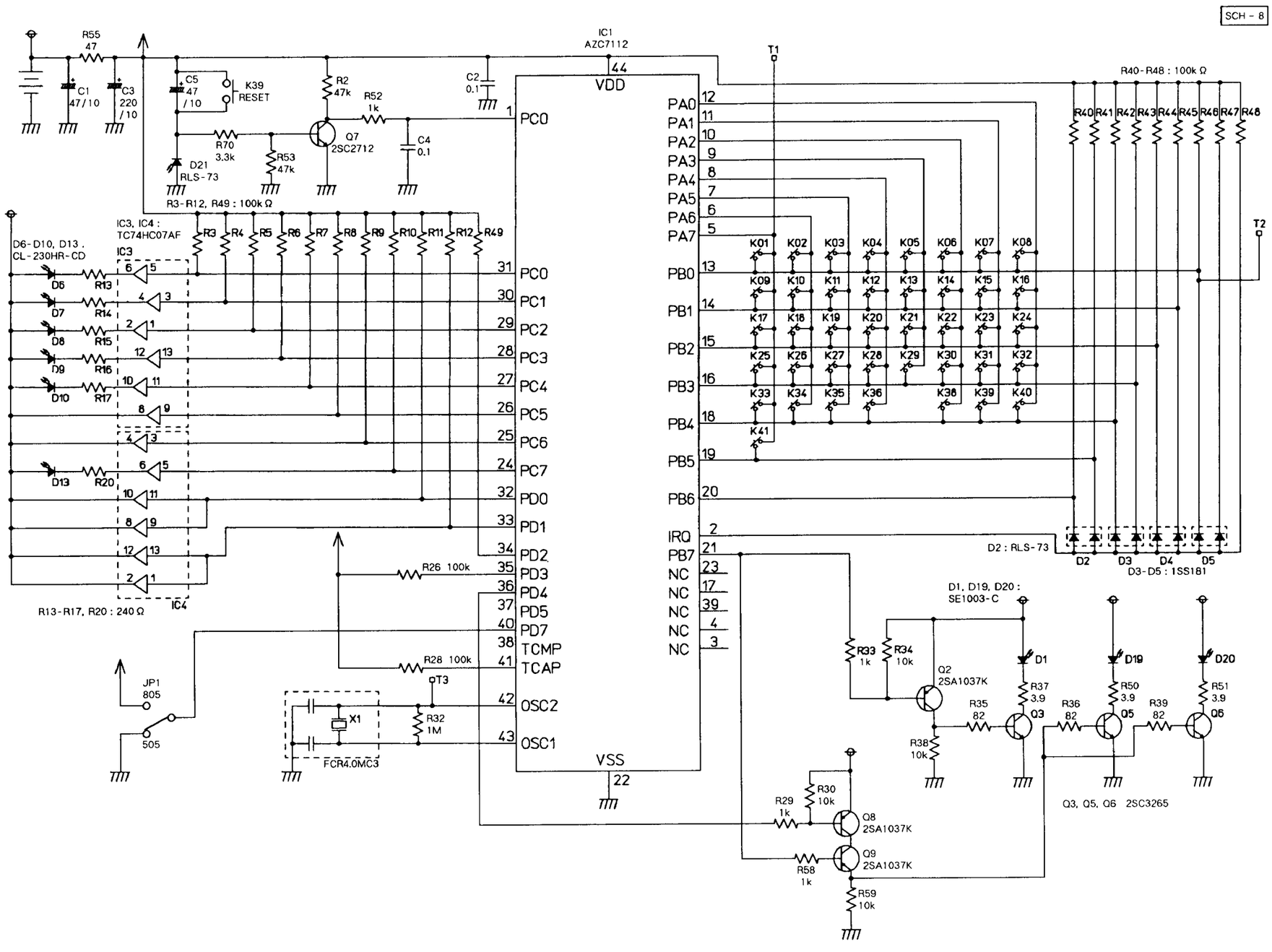
9. SWITCHES (Underline indicates switch position):
K01 : AMP POWER
K02: TV POWER
K03 : TV FUNC
K04 : POWER
K05 : MODE CHECK
K06 : ▮▮▲ FQ+
K07 : ◀◀ ◀ TV VOL –
K08 : ▶ FM/AM
K09 : ▶▶ ▶ TV VOL +
K10 : ■▼ FQ –

K11 : VOLUME –
K12 : VOLUME +
K13 : – (DISC/CH), DISP MODE, SIDE A
K14 : + (DISC/CH), MPX, SIDE B
K15 : VCR(ONETOUCH OPERATION)
K16 : CD(ONETOUCH OPERATION)
K17 : TV CONTROL
K18 . LD/DVD(ONETOUCH OPERATION)
K19 : TUNER(ONETOUCH OPERATION)
K20 : FUNCTION

K21 : SURROUND
K22 : ALL OFF
K23 : DIRECT
K24 : 1, – (CENTER)
K25 : 2, +(CENTER)
K26 : 3, – (REAR)
K27 : 4, + (REAR)
K28 : 5, TEST TONE
K29 : 6, CENTER MODE
K30 : 7, DELAY TIME

K31 : 8, SURR MODE
K32 : 9
K33 : 0, 10
K34 . +10, CLASS
K35 : DISC, TV/VCR, DIREST A
K36 : TAPE 2
K38 : MUTING
K39 : RESET
K40 O.T.O SETUP

K41 PRESET RECALL



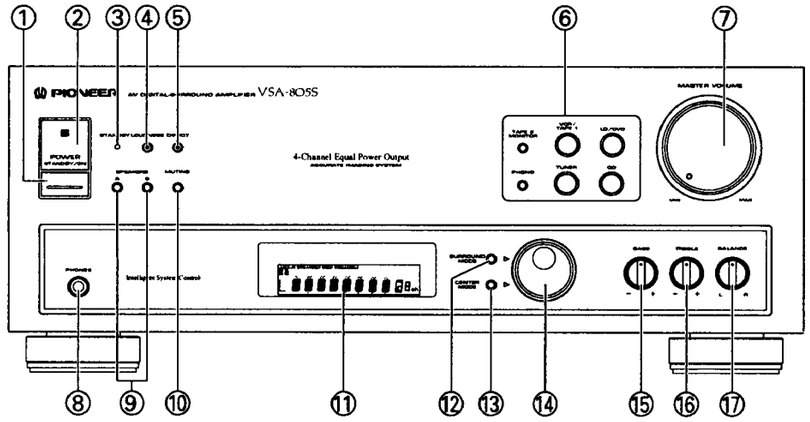
SCH-8 REMOTE CONTROL UNIT (AXD7091)

REMOTE CONTROL UNIT (AXD7091) **SCH-8**

9. PANEL FACILITIES

FRONT PANEL FACILITIES

●The illustration shows the hinged panel open.



① POWER STANDBY/ON switch

This is the switch for electric power. Before operating the unit, set the MAIN POWER switch on the rear panel to the ON position. If it is OFF, this POWER switch does not function.

ON: When set to the ON position, power is supplied and the unit becomes operational.

STANDBY: When set to the STANDBY position, the main power flow is cut and the unit is no longer fully operational. A minute flow of power feeds the unit to maintain operation readiness.

[Timer ON/OFF possible]

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

NOTE:

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

② Remote sensor

③ STANDBY indicator

The STANDBY indicator lights when the power is set to STANDBY, and goes out when set to ON.

④ LOUDNESS button/indicator

Use when listening at low volume levels.

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

OFF: Normal position.

⑤ DIRECT button/indicator

Press this to listen to source sound without passing the audio signal through sound quality and balance adjusting circuitry. The surround mode, LOUDNESS, rear and center speakers are automatically switched off.

⑥ Input selector buttons

VCR/TAPE 1: Press when performing playback on a VCR unit or cassette deck.

TAPE 2 MONITOR: Press when performing playback on a second cassette deck and when monitoring recording.

PHONO: Press when playing records on a turntable.

TUNER: Press when listening to radio broadcasts.

LD/DVD: Press when performing playback on an LD player or a DVD player.

CD: Press when playing compact discs on a CD player.

⑦ MASTER VOLUME control

Use to simultaneously adjust the sound volume from the front, center, and rear speakers.

⑧ PHONES jack

Connect the plug on your headphones to this jack. Set SPEAKERS A and B switches to OFF if you want to cut the sound from speakers and listen only through the headphones.

⑨ SPEAKERS buttons (A, B)

ON/OFF switches for the A and B speaker systems.

⑩ MUTING button

Press to temporarily reduce sound. When set to the on position, MUTING is displayed. Press again to return to the original volume level.

⑪ Display section

⑫ SURROUND MODE button

Press this button and "SURROUND" is indicated in the display section. Turning the jog dial (⑭) selects the surround mode as follows.

DOLBY PRO LOGIC ⟷ STUDIO
off ⟷ SIMULATED SURROUND

⑬ CENTER MODE button

If you press this button when the surround mode is DOLBY PRO LOGIC, "C• MODE" is indicated in the display section. Turning the jog dial (⑭) selects Dolby Pro Logic center mode settings and Dolby 3ch Logic as follows.

NORMAL ⟷ WIDE ⟷ PHANTOM
DOLBY 3CH LOGIC

⑭ Jog Dial

Use this to select surround settings. Refer to the sections on SURROUND MODE button (⑫) and CENTER MODE button (⑬). If you do not use the jog dial for about five seconds, the operation mode is canceled.

⑮ BASS control

Use to adjust the low-frequency level. Turn clockwise to boost bass, and counterclockwise to attenuate bass.

⑯ TREBLE control

Use to adjust the high-frequency level. Turn clockwise to boost treble, and counterclockwise to attenuate treble.

⑰ BALANCE control

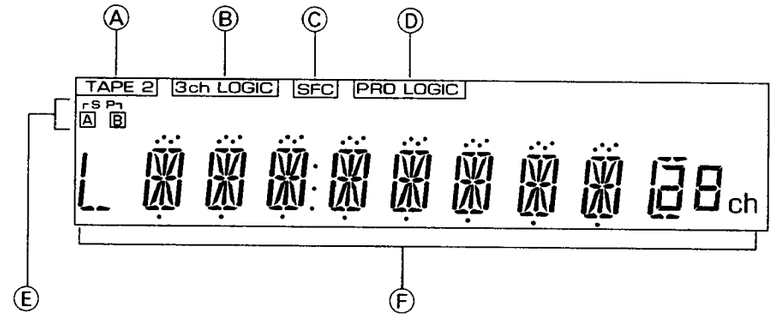
Use to adjust the sound volume balance between left and right speakers.

L: Decrease the sound on the right side.

R: Decrease the sound on the left side.

Usually, left and right volume levels should be the same.

DISPLAY SECTION



Ⓐ TAPE 2 indicator

Lights up when the input selector is set to TAPE 2 MONITOR on.

Ⓑ DOLBY 3CH LOGIC indicator

Ⓒ SFC indicator

This lights when an SFC mode (STUDIO, SIMULATED SURROUND) is selected.

Ⓓ DOLBY PRO LOGIC indicator

Ⓔ SP (SPEAKERS) A, B indicators

Indicates which speaker system (or systems) are switched on.

Ⓕ Character display

10. SPECIFICATIONS

Amplifier section

Continuous power output (DIN, 2 channels driven)*
  Front (1 kHz, T.H.D. 1 %, 4 Ω) ..... 120 W + 120 W
Continuous power output (DIN, 2 channels driven)*
  Front (20 Hz — 20,000 Hz, T.H.D. 0.09 %, 8 Ω) ..... 75 W + 75 W
Continuous power output (DIN, 4 channels driven)
  Front ..... 80 W + 80 W (1 kHz, 1 %, 4 Ω)
  Center ..... 80 W (1 kHz, 1 %, 4 Ω)
  Rear ..... 80 W (1 kHz, 1 %, 4 Ω)
Total Harmonic Distortion (both channels driven)*
  Front (20 Hz — 20,000 Hz, 8 Ω, 75 W OUTPUT) ..... 0.09 %
Dynamic Power (2 Ω/4 Ω/8 Ω) ..... 180 W/150 W/100 W

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

Input (Sensitivity/Impedance)
  PHONO MM ..... 2.8 mV/47 kΩ
  CD, VCR/TAPE 1, TAPE 2, LD/DVD ..... 200 mV/47 kΩ
Phono Overload Level (T.H.D. 0.1 %, 1 kHz)
  PHONO MM ..... 100 mV
Frequency Response
  PHONO MM ..... 20 Hz to 20,000 Hz ±0.3 dB
  CD, VCR/TAPE 1, TAPE 2, LD/DVD .. 5 Hz to 100,000 Hz $^{+0}_{-3}$ dB
Output (Level/Impedance)
  VCR/TAPE 1 OUT, TAPE 2 REC ..... 200 mV/2.2 kΩ
Tone Control
  BASS ..... ±8 dB (150 Hz)
  TREBLE ..... ±8 dB (10 kHz)
  LOUDNESS ..... +6 dB (100 Hz at –40 dB)
  +4 dB (10 kHz at –40 dB)
Signal-to-Noise Ratio (IHF, short circuited, A network)
  PHONO MM ..... 74 dB
  CD, VCR/TAPE 1, TAPE 2, LD/DVD ..... 96 dB
Signal-to-Noise Ratio
[DIN (Continuous rated power output/50 mW)]
  PHONO MM ..... 67/61 dB
  CD, VCR/TAPE 1, TAPE 2, LD/DVD ..... 82/62 dB

** Measured by Audio Spectrum Analyzer.*

VIDEO Section

Input (Sensitivity/Impedance)
  VCR, LD/DVD ..... 1 Vp-p/75 Ω
Output (Level/Impedance)
  VCR ..... 1 Vp-p/75 Ω
Frequency Response
  VCR, LD/DVD →MONITOR ..... 5 Hz to 7 MHz $^{+0}_{-3}$ dB
Signal-to-Noise Ratio ..... 55 dB
Cross Talk ..... 55 dB

Miscellaneous

Power requirements ..... a.c. 220 – 230 Volts, 50/60 Hz
Power consumption ..... 700 W
In Standby Condition ..... 3 W
Dimensions ..... 420 (W) x 162 (H) x 300 (D) mm
Weight (without package) ..... 9.6 kg

Furnished Parts

Dry cell batteries (LR6, Alkaline) 2
Remote control unit 1
Operating Instructions 1

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