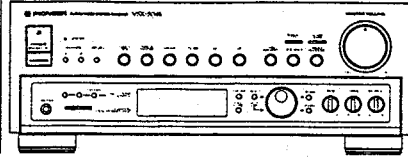


# Service Manual



ORDER NO.  
RRV1248

AUDIO/VIDEO STEREO RECEIVER

# VSX-504S

## VSX-464S

## VSX-454

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

Type	Model			Power Requirement	Remarks
	VSX-504S	VSX-464S	VSX-454		
KUXJ	○	—	○	AC120V	
KCXJ	○	○	○	AC120V	

- The "S" at the end of the model number indicates that a programmable remote control unit is supplied.

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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.

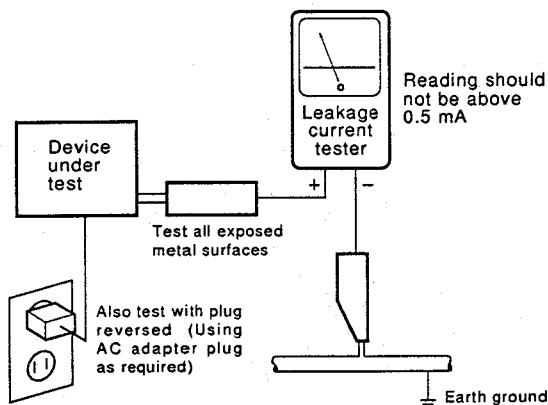
(FOR USA MODEL ONLY)

### 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  $\Delta$  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, PACKING AND PARTS LIST

**NOTES :**

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  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 PACKING

**■ CONTRAST OF VSX-504S/KUXJ, KCXJ, VSX-454/KUXJ, KCXJ AND VSX-464S/KCXJ**

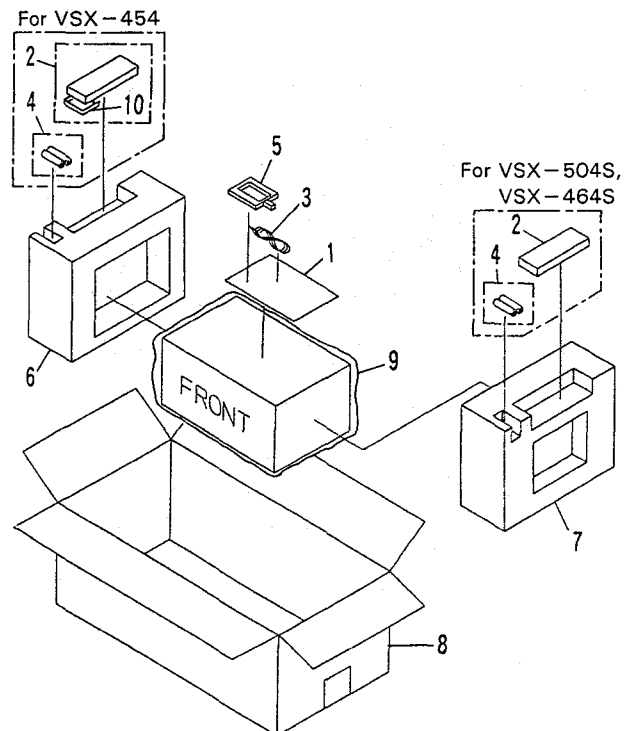
VSX-504S/KUXJ, KCXJ, VSX-454/KUXJ, KCXJ and VSX-464S/KCXJ have the same construction except for the following:

Mark	No.	Description	Part No.					Remarks
			VSX-504S		VSX-454		VSX-464S	
			KUXJ	KCXJ	KUXJ	KCXJ	KCXJ	
	1	Operating instructions (English)	ARB7023	ARB7023	ARB7024	Not used	Not used	
	1	Operating instructions (French)	Not used	ARC7033	Not used	Not used	Not used	
	1	Operating instructions (English/French)	Not used	Not used	Not used	ARE7022	ARE7022	
	2	Remote control unit (CU-VSX095)	AXD7045	AXD7045	Not used	Not used	Not used	*
	2	Remote control unit (CU-VSX098)	Not used	Not used	Not used	Not used	AXD7056	*
	2	Remote control unit (CU-VSX093)	Not used	Not used	AXD7046	AXD7046	Not used	
	10	Battery cover	Not used	Not used	AZA7031	AZA7031	Not used	
NSP	4	Battery (LR03, AAA)	AEX1006	AEX1006	Not used	Not used	AEX1006	
NSP	4	Battery (R6P, AA)	Not used	Not used	VEM-013	VEM-013	Not used	
	8	Packing case	AHD7110	AHD7110	AHD7113	AHD7113	AHD7114	

Note \*: Refer to "10. REMOTE CONTROL UNIT".

**■ PARTS LIST FOR VSX-504S/KUXJ**

Mark	No.	Description	Parts No.
	1	OPERATING INSTRUCTIONS (English)	ARB7023
	2	REMOTE CONTROL UNIT (CU-VSX095)	AXD7045
	3	FM ANTENNA	ADH1017
NSP	4	BATTERY (LR03 ,AAA)	AEX1006
	5	LOOP ANTENNA	ATB7004
	6	SIDE PAD L	AHA7044
	7	SIDE PAD R	AHA7045
	8	PACKING CASE	AHD7110
	9	PACKING SHEET	AHG7010



# VSX-504S, VSX-464S, VSX-454

## 2.2 EXTERIOR

### ■ CONTRAST OF VSX-504S/KUXJ, KCXJ, VSX-454/KUXJ, KCXJ AND VSX-464S/KCXJ

VSX-504S/KUXJ, KCXJ, VSX-454/KUXJ, KCXJ and VSX-464S/KCXJ have the same construction except for the following:

Mark	No.	Description	Part No.					Remarks
			VSX-504S		VSX-454		VSX-464S	
			KUXJ	KCXJ	KUXJ	KCXJ	KCXJ	
△	33	PS AND FUNC assy	AWZ7597	AWZ7597	AWZ7601	AWZ7601	AWZ7601	
	37	FL AND UCOM assy	AWZ7599	AWZ7599	AWZ7603	AWZ7603	AWZ7603	
	1	Power transformer (AC120V, T1)	ATS7049	ATS7049	ATS7048	ATS7052	ATS7052	
△	4	Fuse (10A, FU1)	REK1087	REK1087	Not used	Not used	Not used	
△	4	Fuse (8A, FU1)	Not used	Not used	REK1086	REK1086	REK1086	
	8	Rear panel	ANC7172	ANC7172	ANC7200	ANC7199	ANC7202	
	16	Sub panel	AAP7011	AAP7011	AAP7012	AAP7012	AAP7012	
	17	Front panel	AMB7177	AMB7177	AMB7179	AMB7179	AMB7180	
	19	FL panel	AAK7125	AAK7125	AAK7126	AAK7126	AAK7126	
	28	Hinge button A	AAD7159	AAD7159	Not used	Not used	Not used	

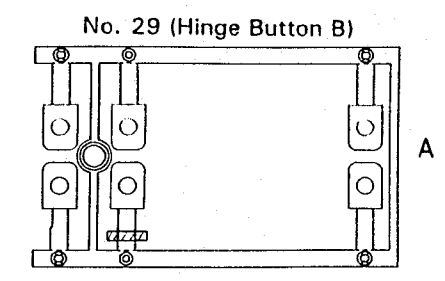
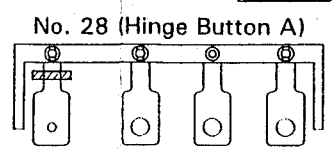
### ■ PARTS LIST FOR VSX-504S/KUXJ

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
△	1	POWER TRANSFORMER (T1)	ATS7049		26	ILLUMI BUTTON	AAD7157
△	2	FUSE (1.25A, FU3)	REK1076		27	POWER BUTTON	AAD7158
△	3	FUSE (1.25A, FU4)	REK1076		28	HINGE BUTTON A	AAD7159
△	4	FUSE (10A, FU1)	REK1087		29	HINGE BUTTON B	AAD7160
△	5	AC POWER CORD	PDG1015		30	SURROUND BUTTON	AAD7161
NSP	6	FLEXIBLE CABLE (J14)	ADD7005		31	BONNET CASE	ANE7047
	7	CHASSIS	ANA7016		32	FM/AM TUNER MODULE	AXQ3112
	8	REAR PANEL	ANC7172		33	PS AND FUNC ASSY	AWZ7597
	9	INSULATOR ASSY	DXA1490		34	VOL. ASSY	AWZ7602
	10	INSULATOR	PNW1912	NSP	35	TRANS ASSY	AWZ7591
	11	PCB SUPPORT	AEC1581		36	REG. ASSY	AWZ7592
	12	RUBBER SPACER	AEC7034		37	FL AND UCOM ASSY	AWZ7599
	13	CORD STOPPER	AEP-113	NSP	38	H.P. ASSY	AWZ7594
	14	PCB MOLD	AMR2533		39	SCREW	ABA7009
	15	.....			40	SCREW	ABA1147
	16	SUB PANEL	AAP7011		41	SCREW	BBZ30P080FZK
	17	FRONT PANEL	AMB7177		42	SCREW	BBZ30P200FMC
	18	IR FILTER	AAK7123		43	SCREW	BPZ26P080FMC
	19	FL PANEL	AAK7125	NSP	44	WASHER	AEE7002
	20	JOG RING	AAK7129		45	SCREW	BBZ30P080FMC
	21	NAME PLATE	PAM1608	NSP	46	ADHESIVE DOUBLE COATED TAPE	AEH1025
	22	ROUND KNOB L	AAB1390				
	23	ROUND KNOB S	AAB7047				
	24	JOG KNOB	AAB7048				
	25	FUNCTION BUTTON	AAD7156				

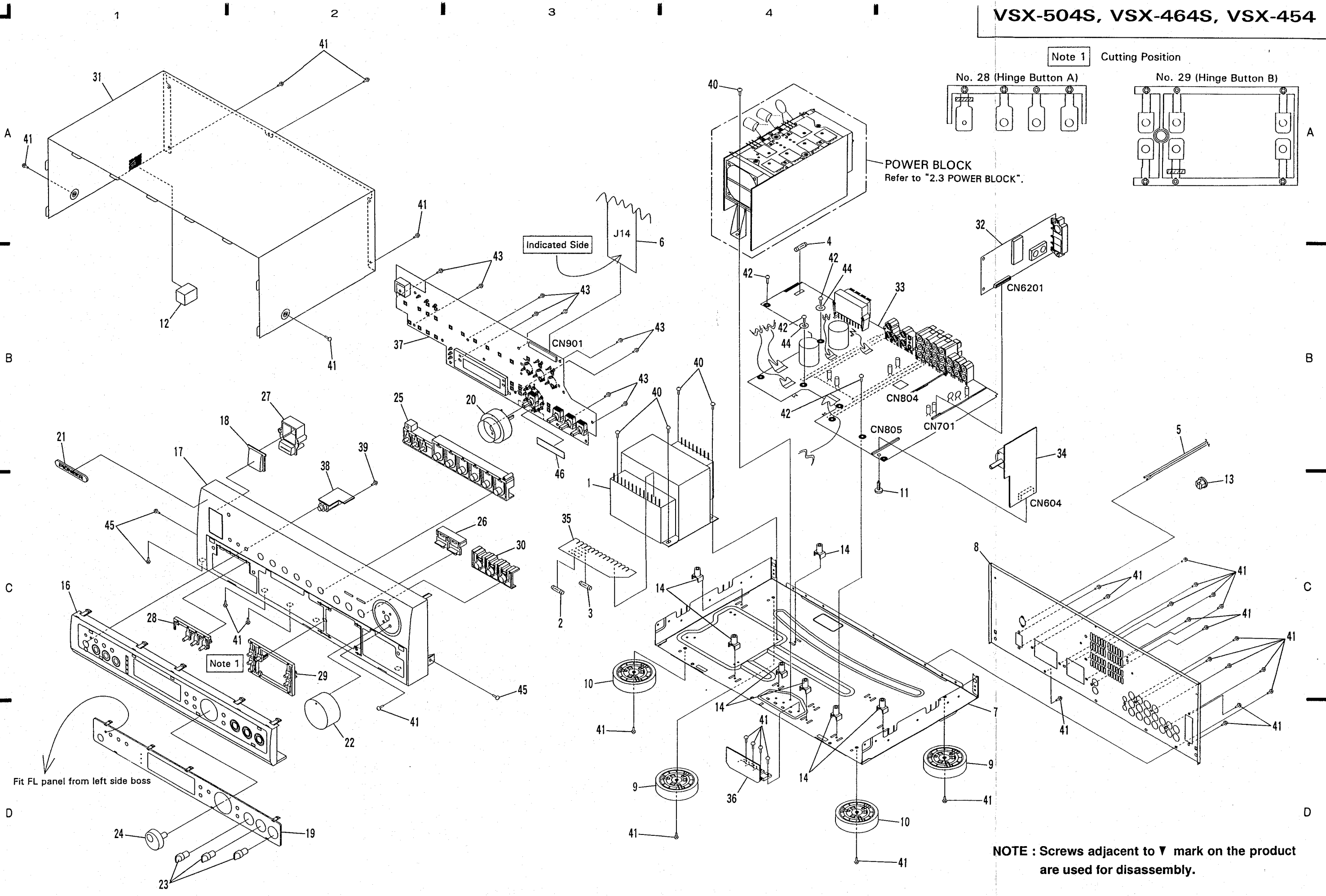
# VSX-504S, VSX-464S, VSX-454

Note 1

Cutting Position



POWER BLOCK  
Refer to "2.3 POWER BLOCK".



1

2

3

4

1

2

3

4

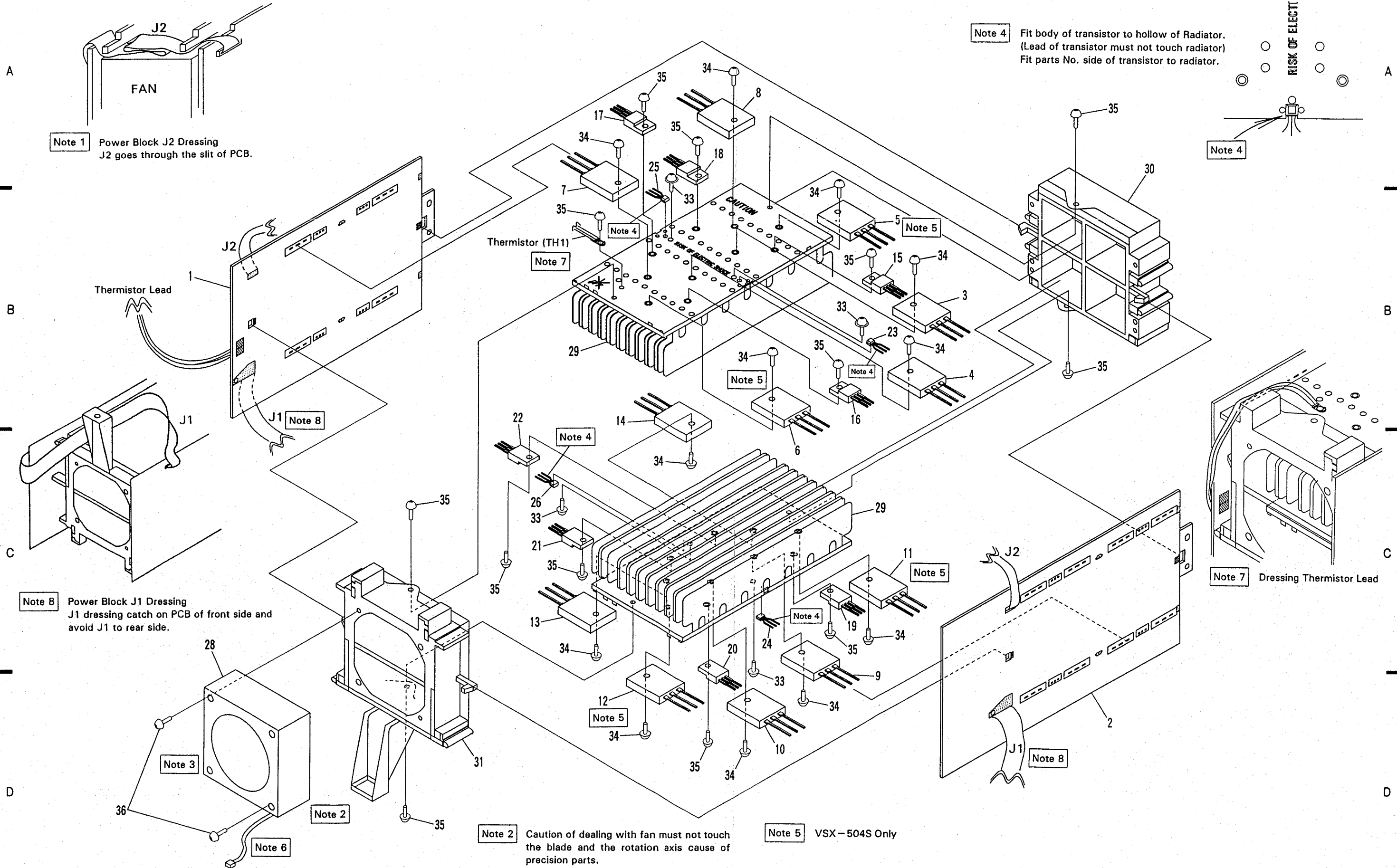
5

6

6

# VSX-504S, VSX-464S, VSX-454

## 2.3 POWER BLOCK



**Note 3** Set side without fan guard facing out side (The other side of parts No. side).

**Note 6** Install fan motor to do right-down fan lead.

**Note 2** Caution of dealing with fan must not touch the blade and the rotation axis cause of precision parts.

**Note 5** VSX-504S Only

**Note 7** Dressing Thermistor Lead

**Note 8** Power Block J1 Dressing  
J1 dressing catch on PCB of front side and avoid J1 to rear side.

**Note 4** Fit body of transistor to hollow of Radiator. (Lead of transistor must not touch radiator) Fit parts No. side of transistor to radiator.

# VSX-504S, VSX-464S, VSX-454

## ■ CONTRAST OF VSX-504S/KUXJ, KCXJ, VSX-454/KUXJ, KCXJ AND VSX-464S/KCXJ

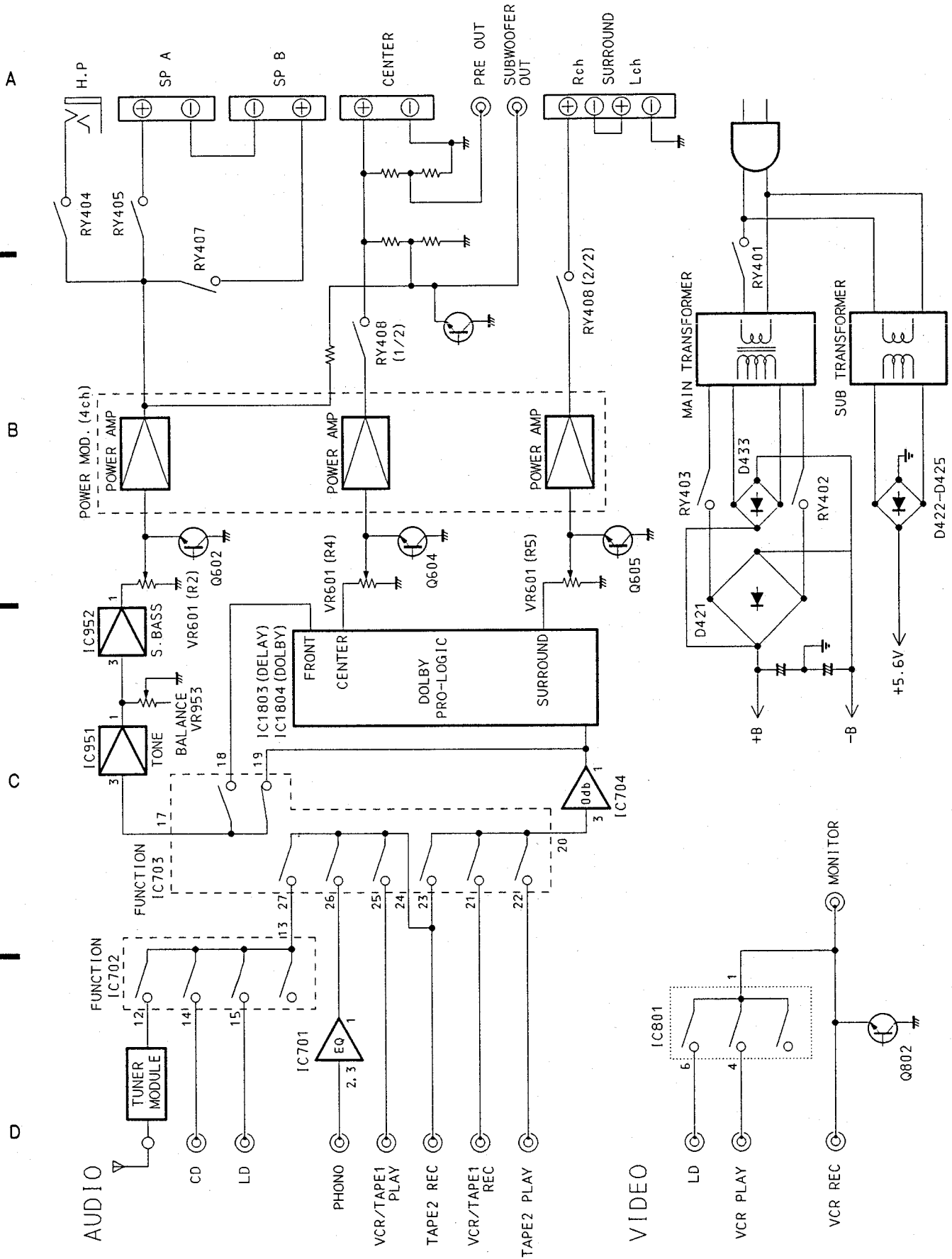
VSX-504S/KUXJ, KCXJ, VSX-454/KUXJ, KCXJ and VSX-464S/KCXJ have the same construction except for the following:

Mark	No.	Description	Part No.					Remarks
			VSX-504S		VSX-454		VSX-464S	
			KUXJ	KCXJ	KUXJ	KCXJ	KCXJ	
	2	AMP assy 200W	AWZ7581	AWZ7581	Not used	Not used	Not used	
	2	AMP assy 120W	Not used	Not used	AWZ7580	AWZ7580	AWZ7580	
△	5	Transistor (Q7)	2SA1302	2SA1302	Not used	Not used	Not used	
△	6	Transistor (Q8)	2SA1302	2SA1302	Not used	Not used	Not used	
△	11	Transistor (Q5)	2SC3281	2SC3281	Not used	Not used	Not used	
△	12	Transistor (Q6)	2SC3281	2SC3281	Not used	Not used	Not used	
NSP	29	Radiator	ANH7012	ANH7012	ANH7011	ANH7011	ANH7011	

## ■ PARTS LIST FOR VSX-504S/KUXJ

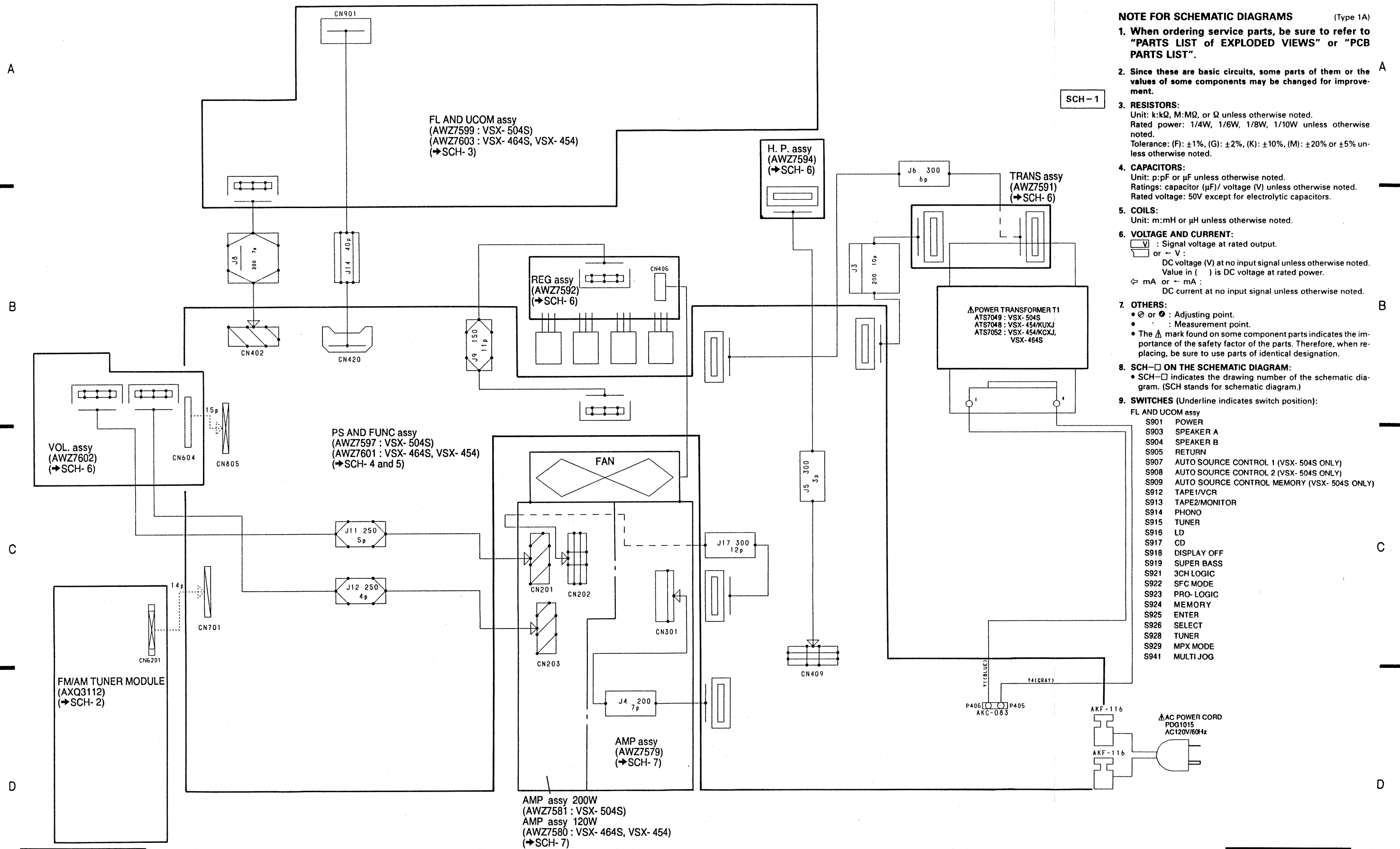
Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	AMP ASSY	AWZ7579		31	RADIATOR MOLD	AMR7036
	2	AMP ASSY 200W	AWZ7581		32	.....	
△	3	TRANSISTOR (Q3)	2SA1302		33	SCREW	ABA-283
△	4	TRANSISTOR (Q4)	2SA1302		34	SCREW	ABA1037
△	5	TRANSISTOR (Q7)	2SA1302		35	SCREW	BBZ30P080FZK
△	6	TRANSISTOR (Q8)	2SA1302		36	SCREW	BPZ30P350FZK
△	7	TRANSISTOR (Q11)	2SA1302				
△	8	TRANSISTOR (Q12)	2SA1302				
△	9	TRANSISTOR (Q1)	2SC3281				
△	10	TRANSISTOR (Q2)	2SC3281				
△	11	TRANSISTOR (Q5)	2SC3281				
△	12	TRANSISTOR (Q6)	2SC3281				
△	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	ANH7012				
	30	EXHAUST MOLD	AMR7035				

3. BLOCK DIAGRAM



# 4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

## 4.1 OVERALL SCHEMATIC DIAGRAM



SCH-1

OVERALL SCHEMATIC DIAGRAM

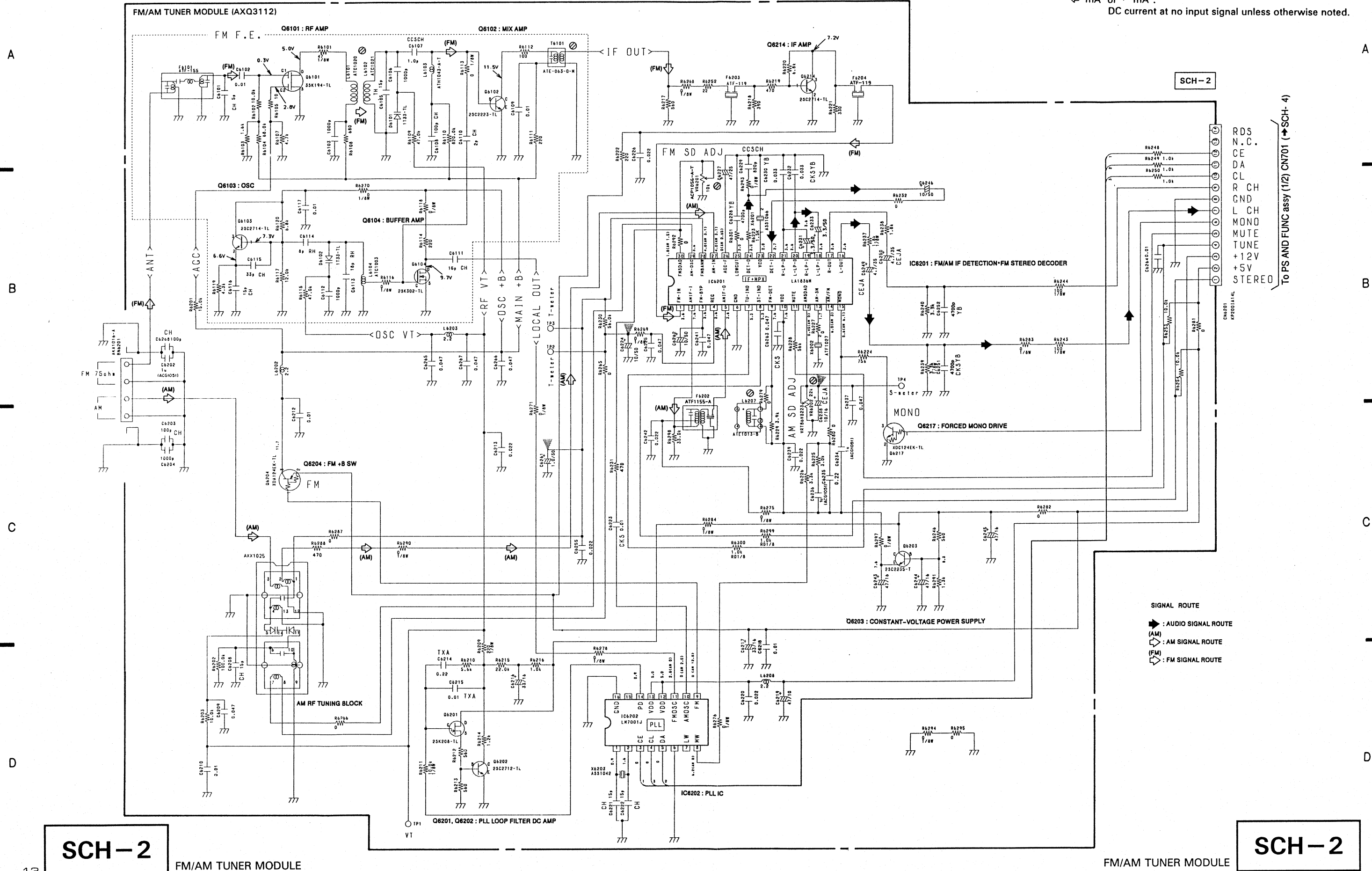
SCH-1

OVERALL SCHEMATIC DIAGRAM

4.2 FM/AM TUNER MODULE

NOTE: VOLTAGE AND CURRENT

- mV : Signal voltage at FM 1kHz, 100% MOD.
- or  $\pm$  V : DC voltage (V) at no input signal unless otherwise noted. Value in ( ) is DC voltage at rated power.
- $\leftarrow$  mA or  $\pm$  mA : DC current at no input signal unless otherwise noted.



SCH-2

SCH-2

FM/AM TUNER MODULE

FM/AM TUNER MODULE

RDS  
N.C.  
CE  
DA  
CL  
R CH  
L CH  
MONO  
MUTE  
TUNE  
+12V  
+5V  
STEREO

To PS AND FUNC assy (1/2) CN701 (→SCH-4)

SIGNAL ROUTE  
▶ : AUDIO SIGNAL ROUTE  
▶ : AM SIGNAL ROUTE  
▶ : FM SIGNAL ROUTE



## FM/AM TUNER MODULE

A

B

C

D

Q6101

Q6204

Q6102 Q6214

Q6103

Q6104

IC6202

IC6201

Q6217

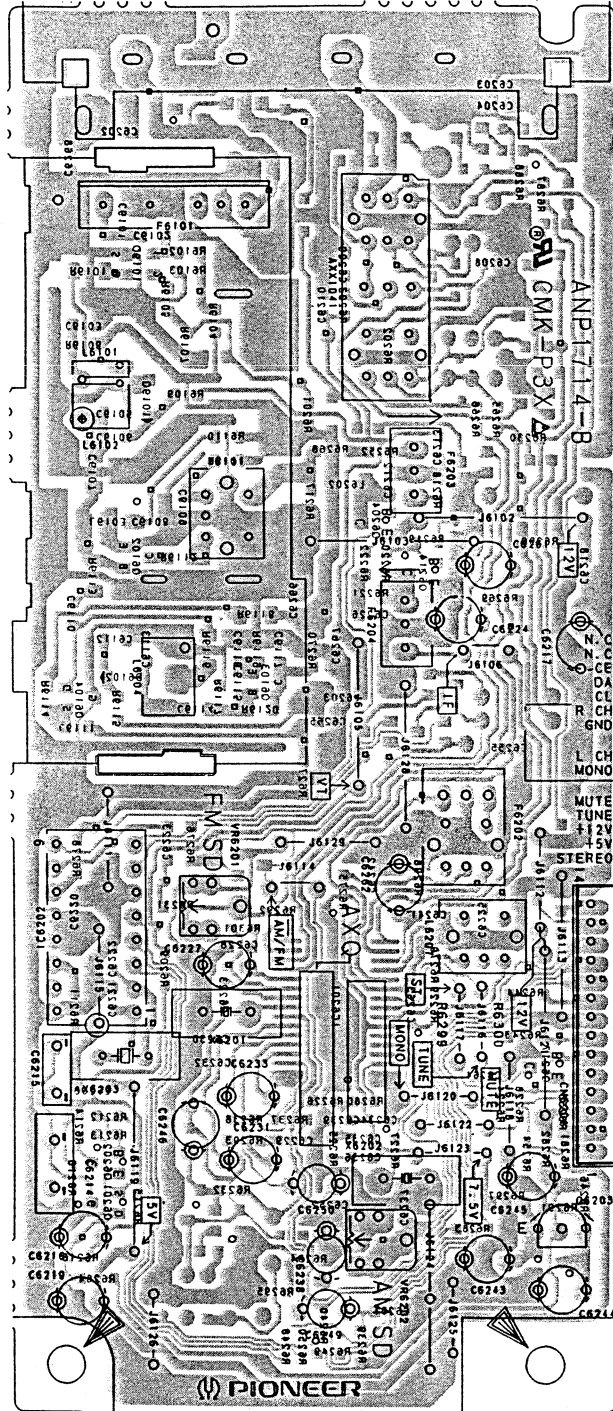
Q6202

Q6201

Q6203

VR6201

VR6202



### 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
<p>Q504</p>	<p>Q504</p> <p>Q504</p>	Transistor
<p>D203</p> <p>D203</p>	<p>D203</p>	Diode
<p>C513</p> <p>C513</p>	<p>C513</p>	Capacitor (Polarized)

3. The transistor terminal marked with E or  $\square$  shows the emitter.
4. The diode terminal marked with  $\odot$  or  $\ominus$  shows cathode side.
5. The capacitor terminal marked with  $\oplus$  or  $\ominus$  shows negative terminal.

To PS AND FUNC assy CN701

- This diagram is viewed from the mounted parts side.

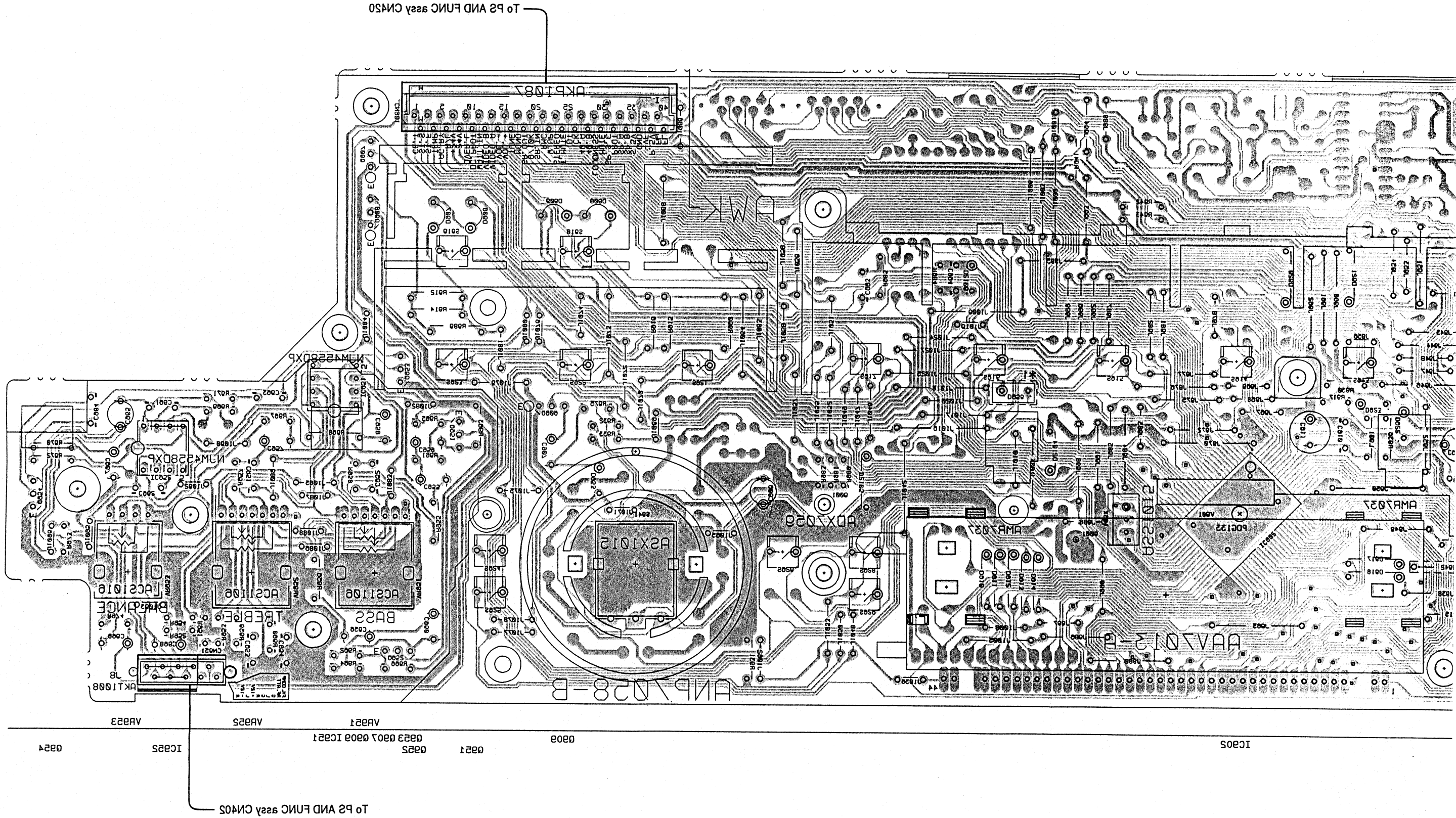


A

B

C

D



• This diagram is viewed from the foil side.





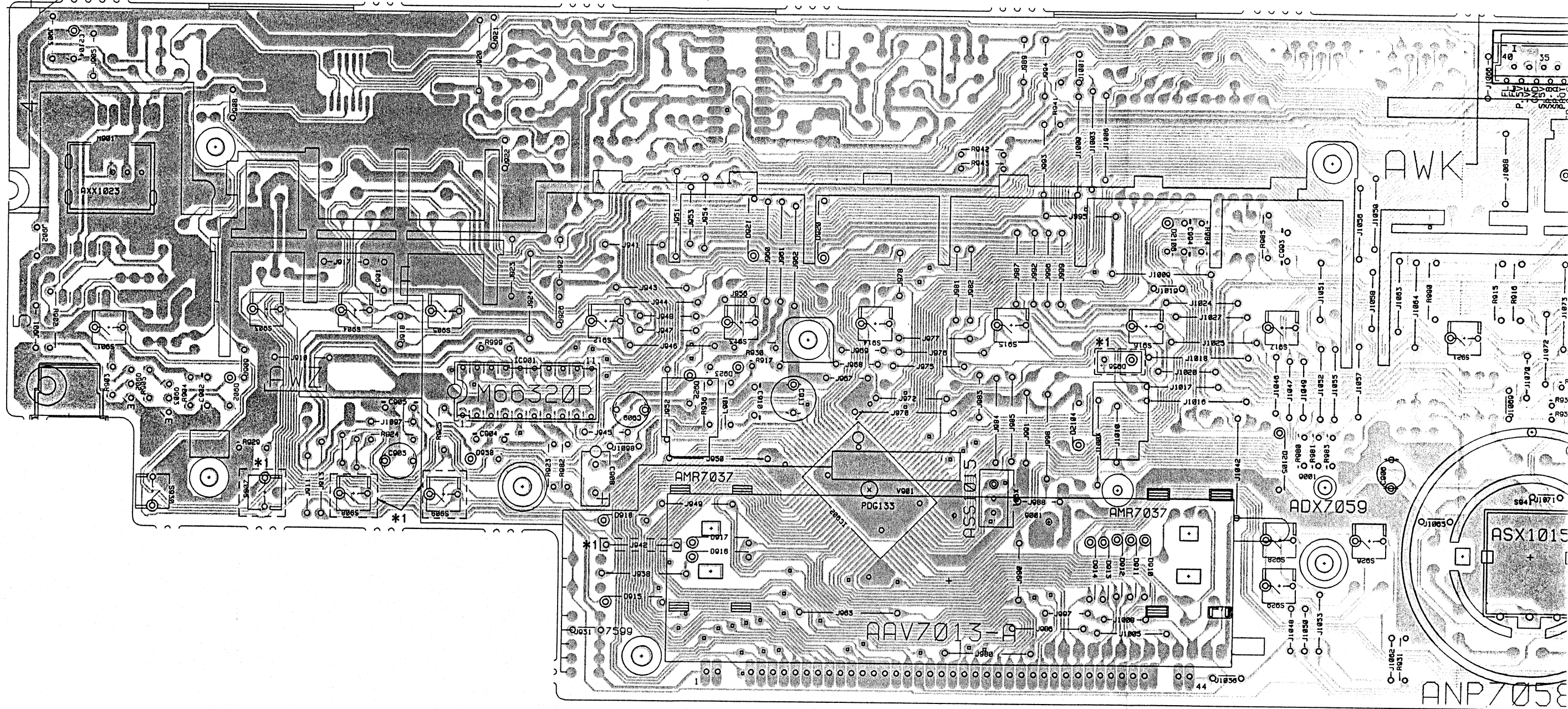


4.3 FL AND UCOM ASSY

\*1: VSX-504S/KUXJ, KCXJ ONLY

A

FL AND UCOM assy



Q902 Q903

IC901

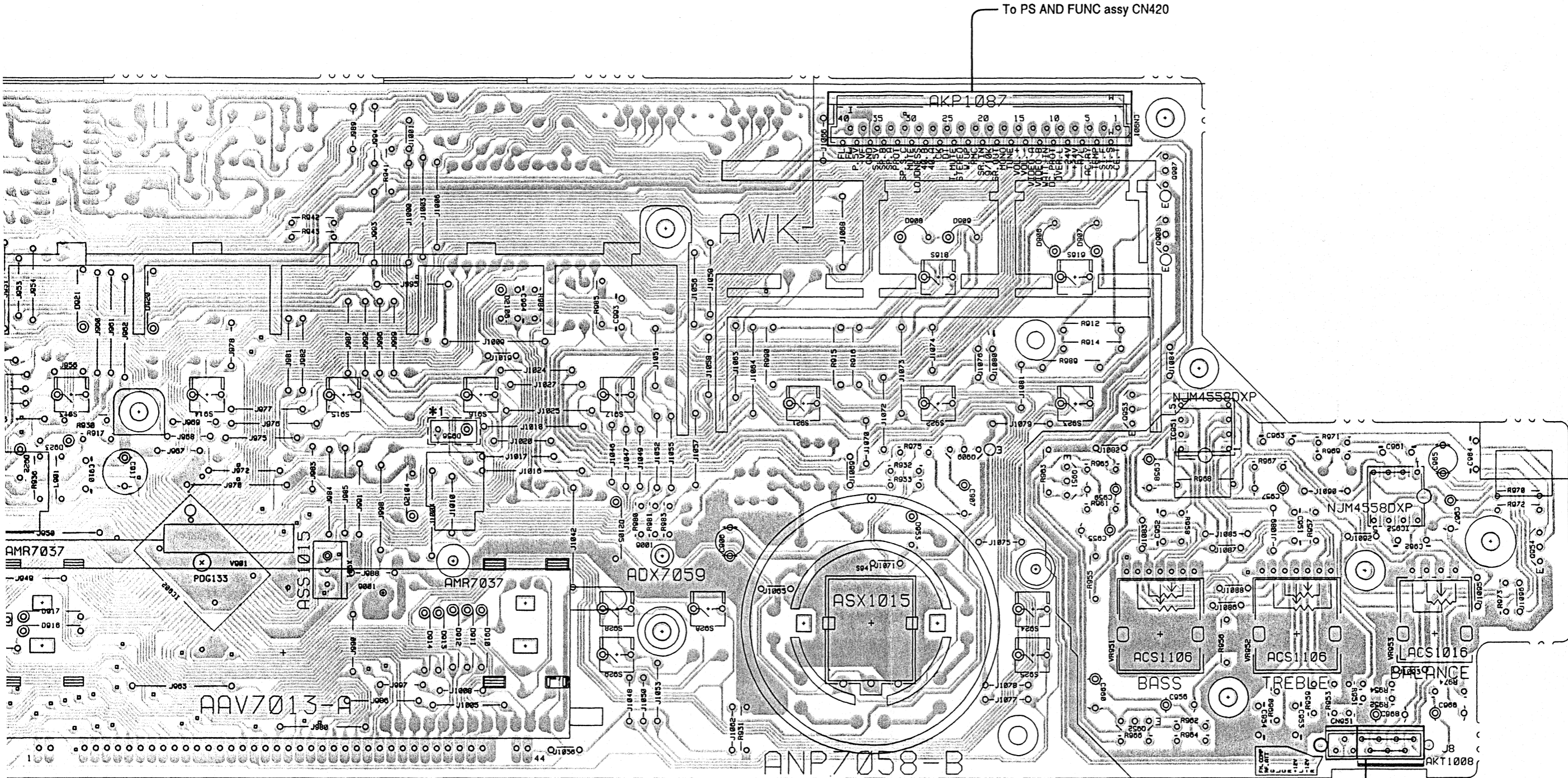
IC902

D

• This diagram is viewed from the mounted parts side.

\*1: VSX-504S/KUXJ, KCXJ ONLY

To PS AND FUNC assy CN420



A

B

C

D

IC902

Q909

VR951

VR952

VR953

Q951 Q952 Q953 Q907 Q909 IC951

IC952

Q954

To PS AND FUNC assy CN402

• This diagram is viewed from the mounted parts side.



4.3 FL AND UCOM ASSY

To PS AND FUNC assy (1/2) CN420 (→SCH- 4)

A

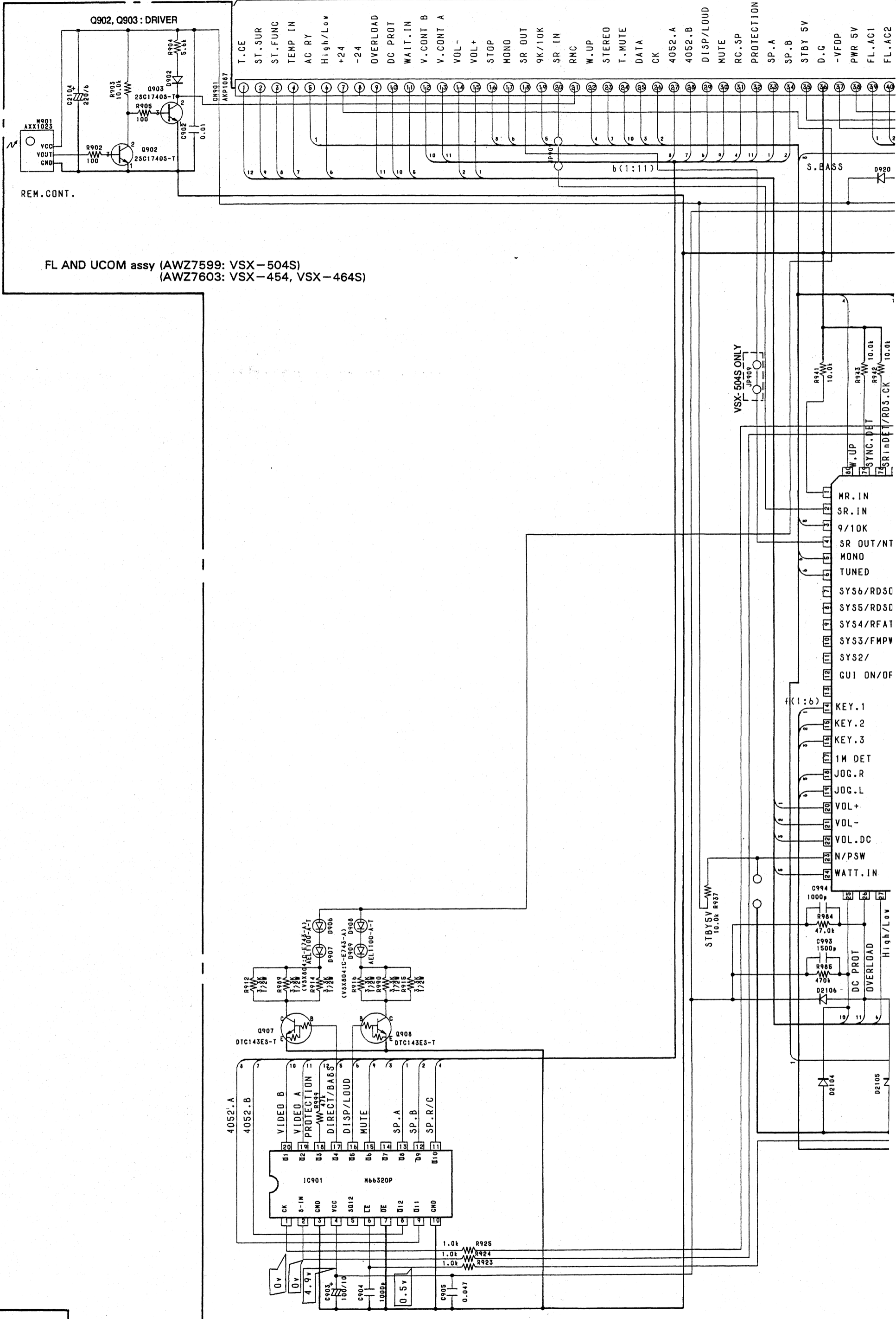
B

C

D

E

F



SCH-3

FL AND UCOM ASSY

1

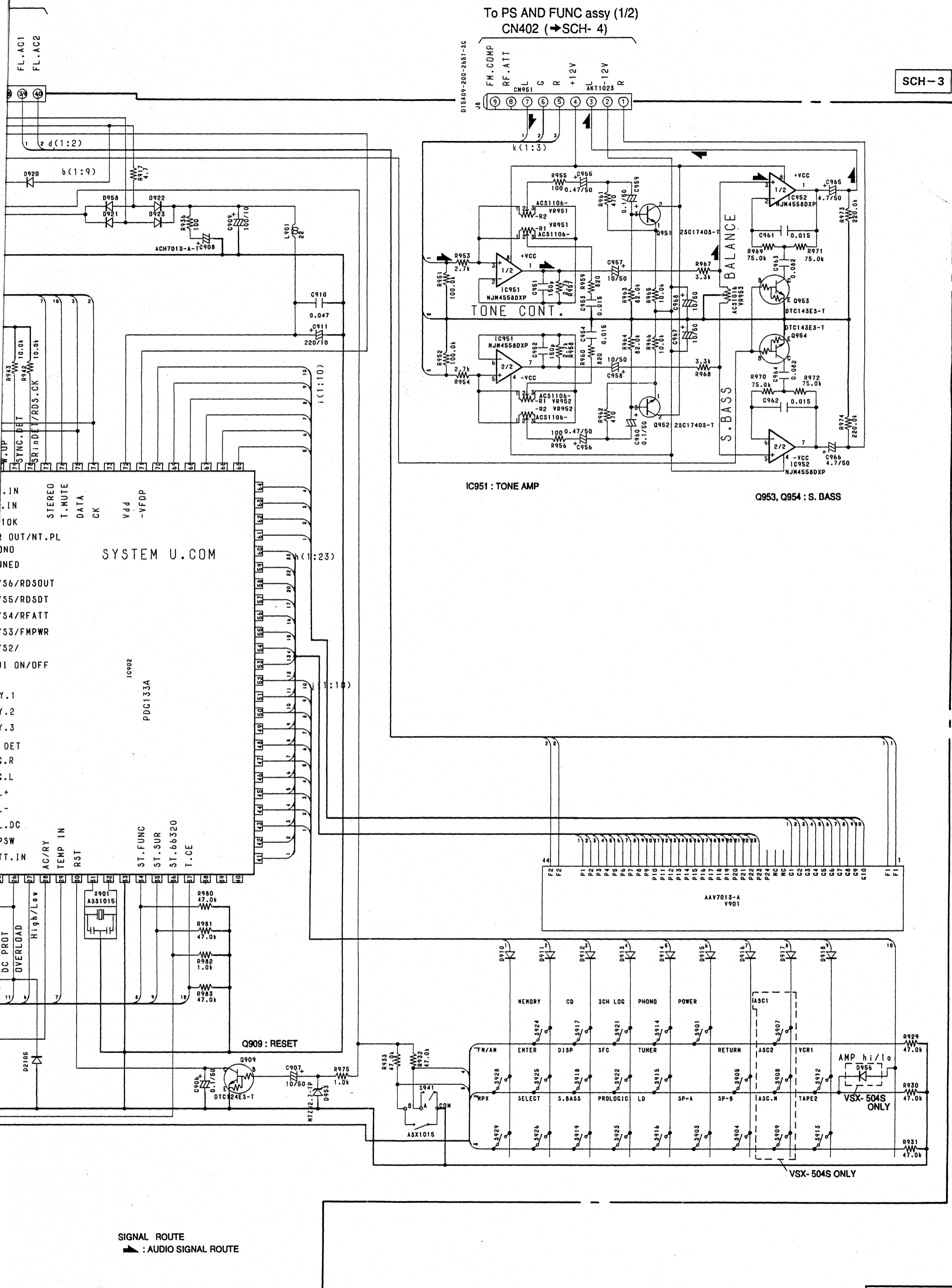
2

3

4

Y812

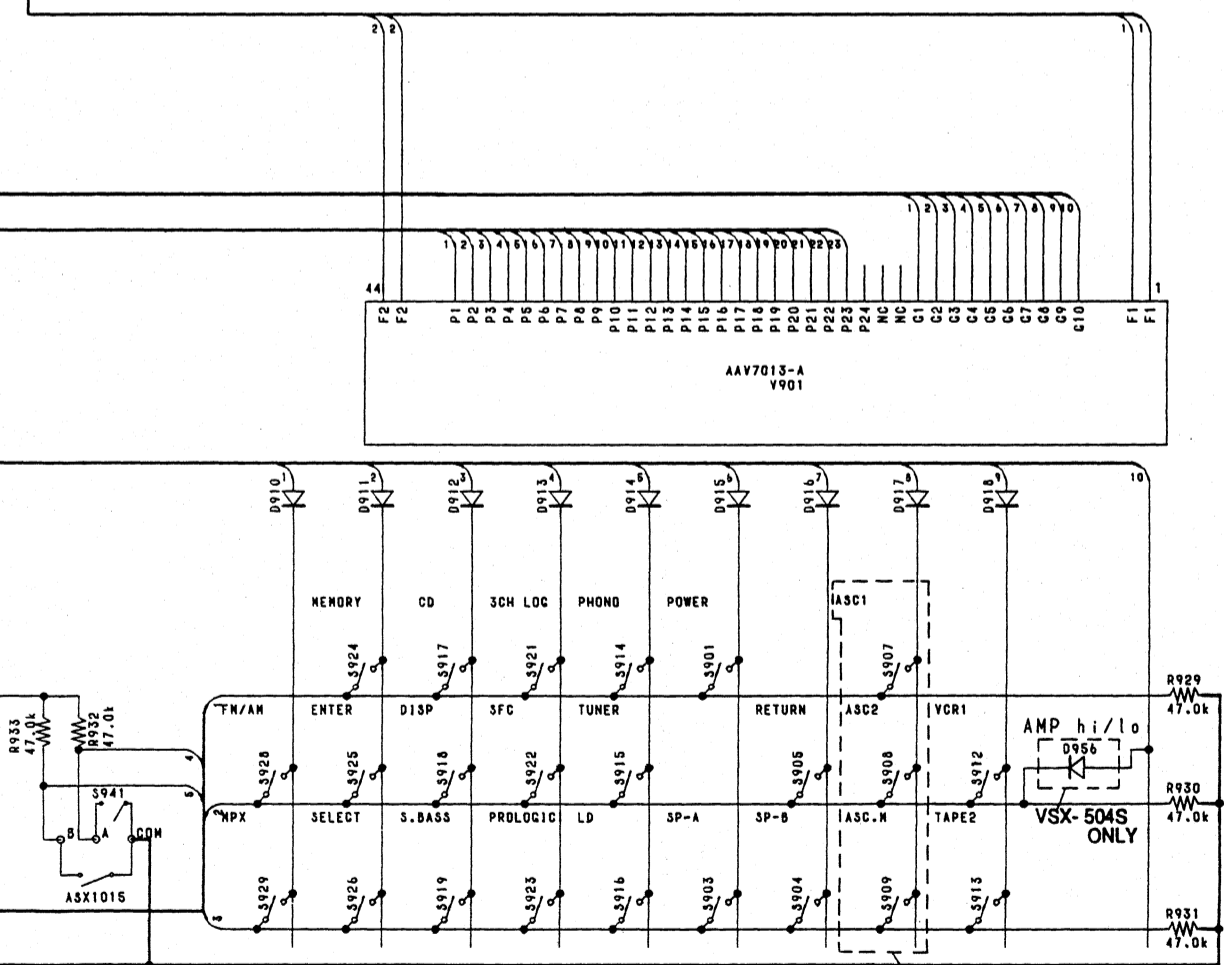
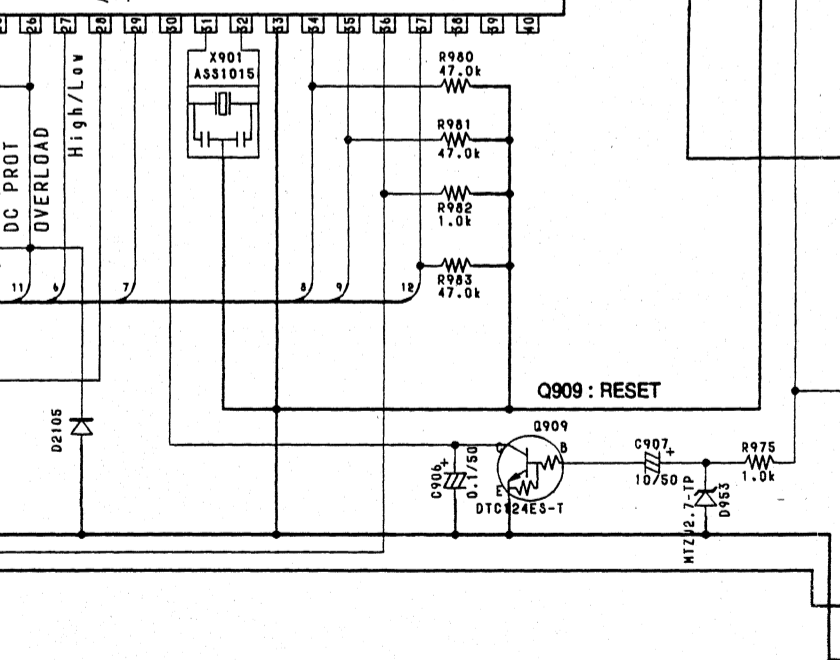
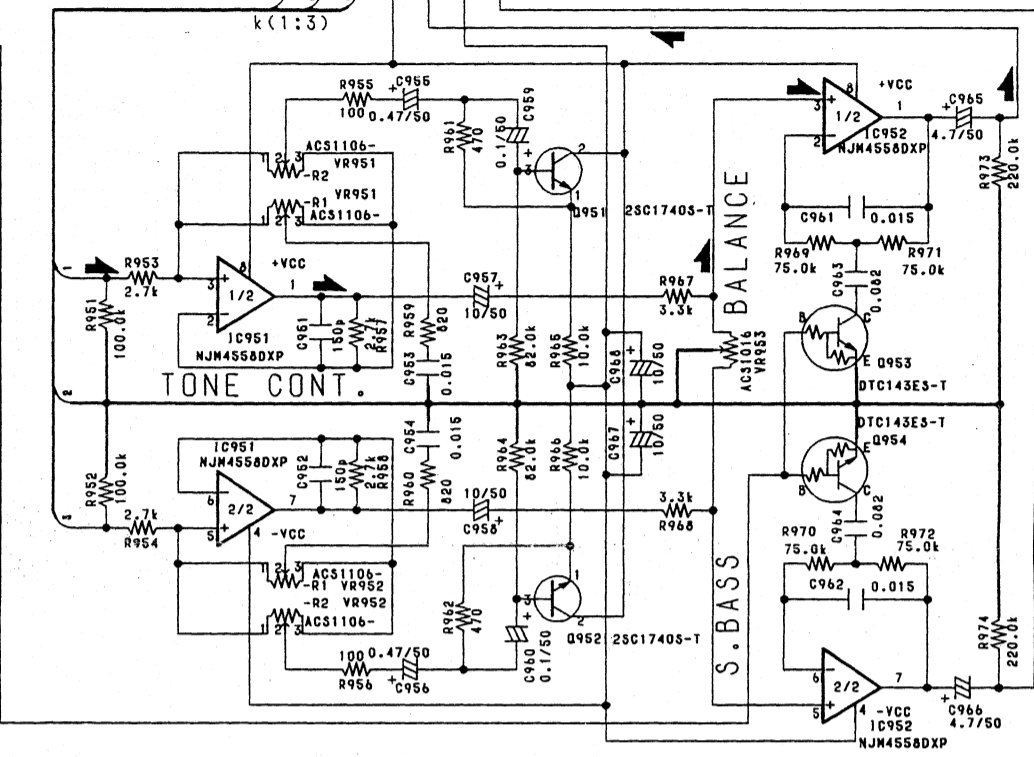
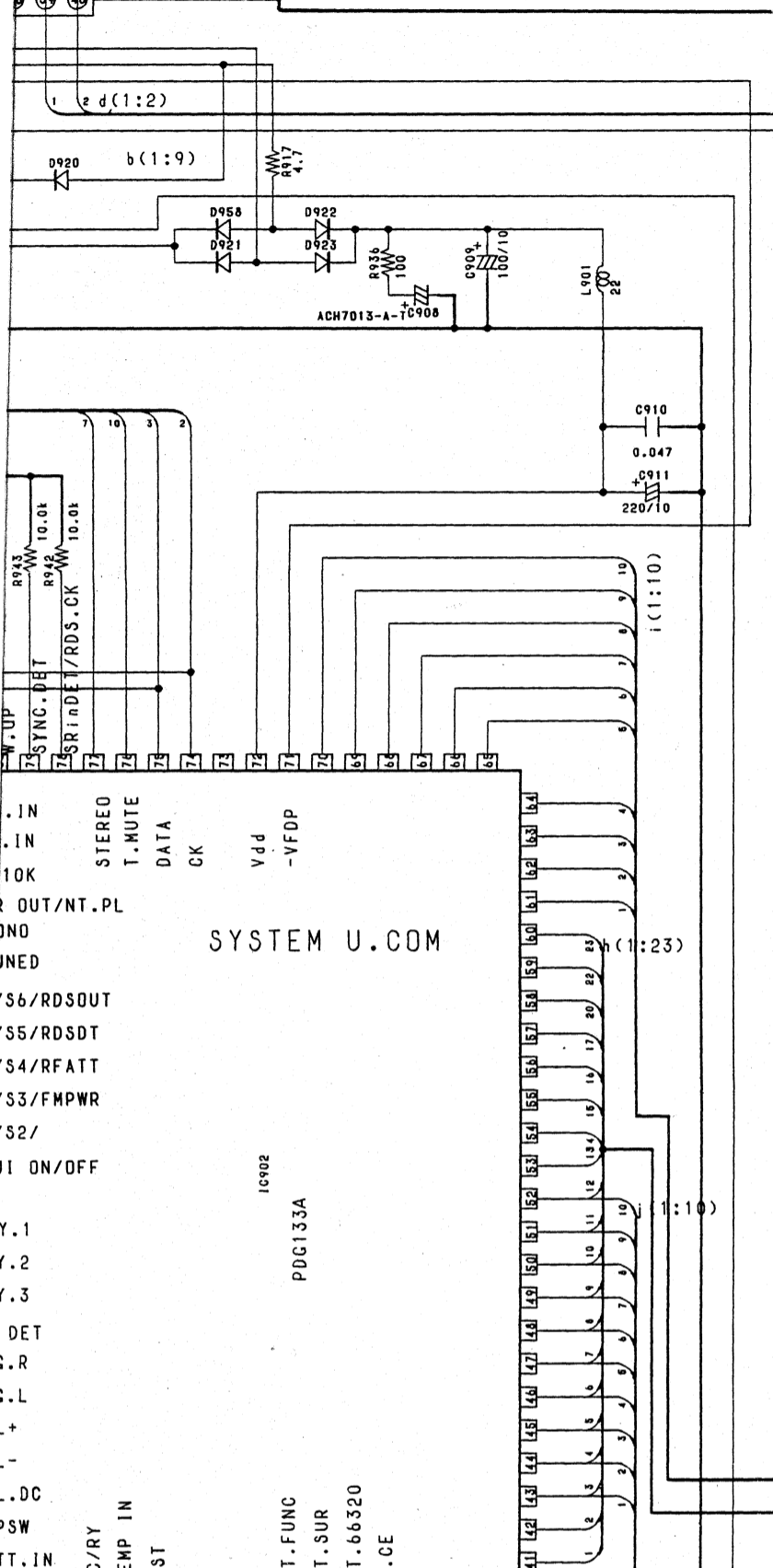
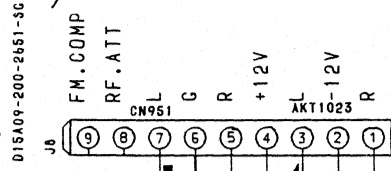
To PS AND FUNC assy (1/2)  
CN402 (→SCH- 4)



SIGNAL ROUTE  
▶ : AUDIO SIGNAL ROUTE



To PS AND FUNC assy (1/2)  
CN402 (→SCH- 4)



SIGNAL ROUTE  
▶ : AUDIO SIGNAL ROUTE

4.4 PS AND FUNC ASSY

A

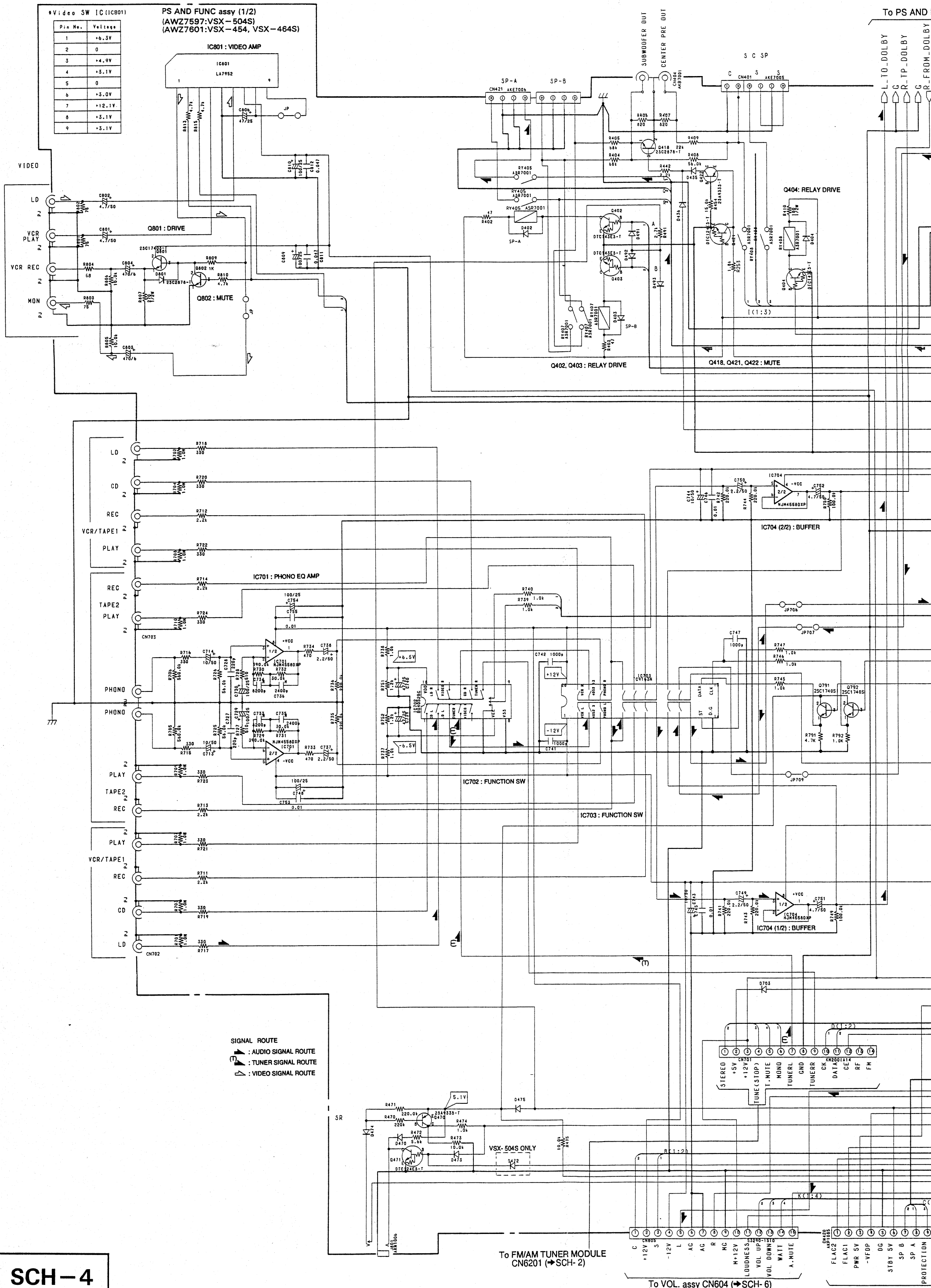
B

C

D

E

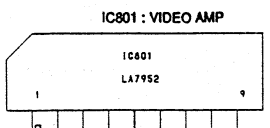
F



Video SW IC (IC801)

Pin No.	Voltage
1	+6.3V
2	0
3	+4.9V
4	+5.1V
5	0
6	+3.0V
7	+12.1V
8	+3.1V
9	+3.1V

PS AND FUNC assy (1/2)  
(AWZ7597:VSX-504S)  
(AWZ7601:VSX-454, VSX-464S)



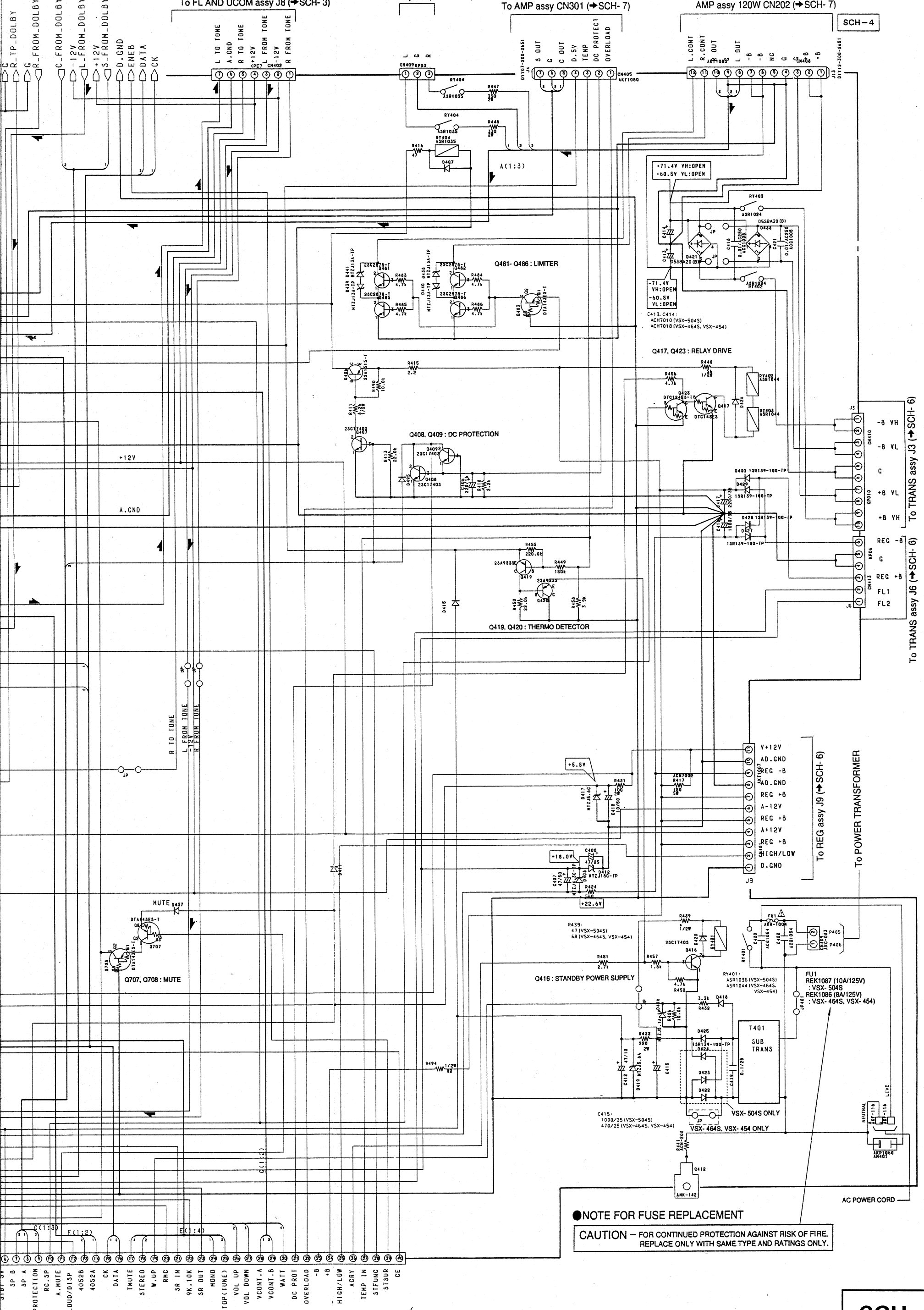
SIGNAL ROUTE  
 (▶) : AUDIO SIGNAL ROUTE  
 (◀) : TUNER SIGNAL ROUTE  
 (◁) : VIDEO SIGNAL ROUTE

SCH-4

PS AND FUNC ASSY (1/2)

To FM/AM TUNER MODULE  
CN6201 (→SCH-2)

To VOL. assy CN604 (→SCH-6)



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

To TRANS assy J3 (SCH- 6)  
 To TRANS assy J6 (SCH- 6)

A  
 B  
 C  
 D  
 E  
 F



PS AND FUNC assy

A

B

C

D

● This diagram is viewed from the mounted parts side.

\*1: VSX-504S/KUXJ, KCXJ ONLY  
\*2: VSX-454/KUXJ, KCXJ, VSX-464S/KCXJ ONLY

RISK OF FIRE—REPLACE FUSE AS MARKED.

LIVE  
NEUTRAL  
To AC POWER CORD  
To POWER TRANSFORMER

To H. P. assy J5

To AMP assy 200W CN202  
AMP assy 120W CN202

To TRANS assy J3

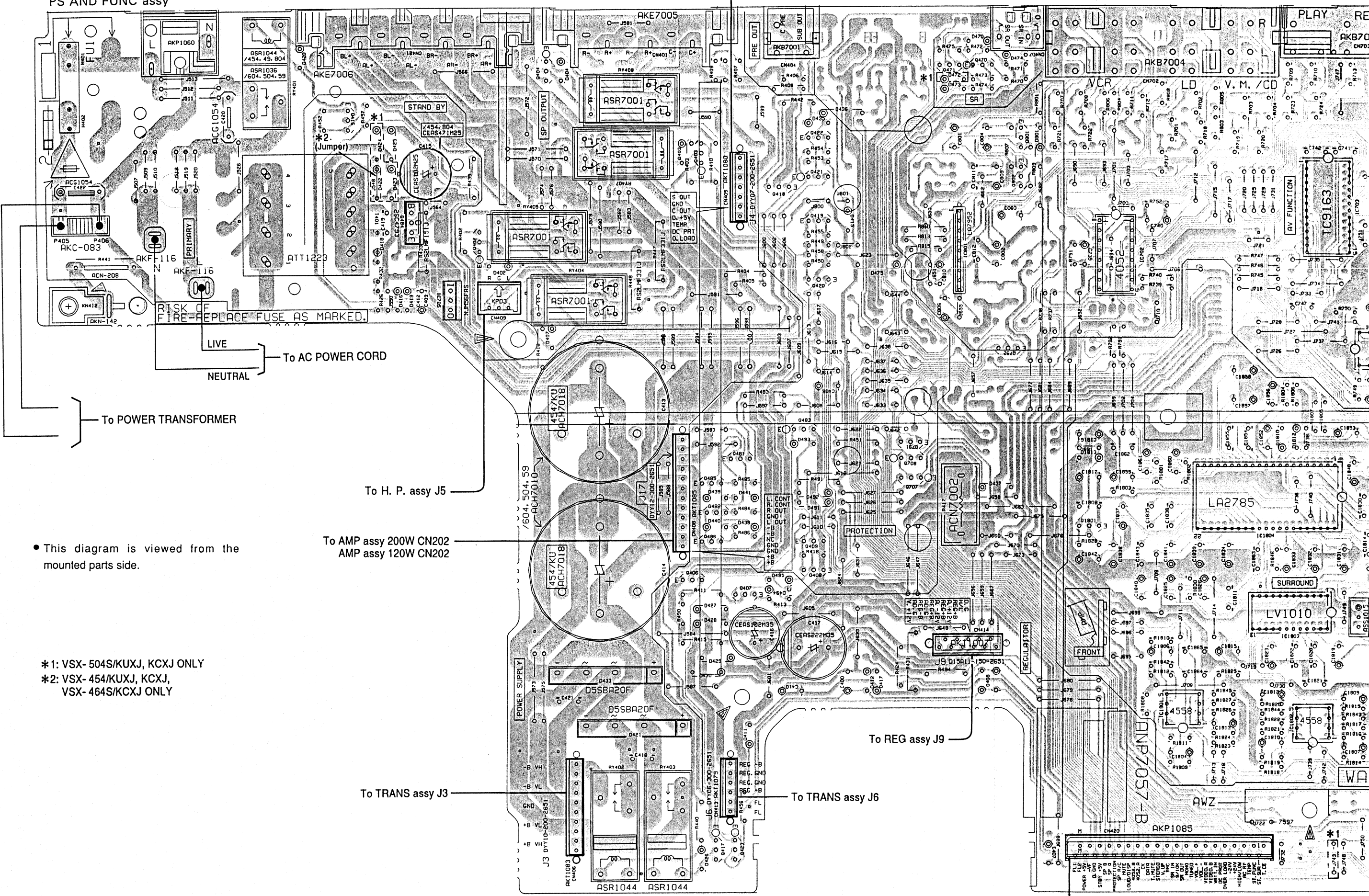
To TRANS assy J6

To REG assy J9

To FL AND UCOM assy CN901

To VOL.

To AMP assy CN301



1

2

3

4

5

6

1

2

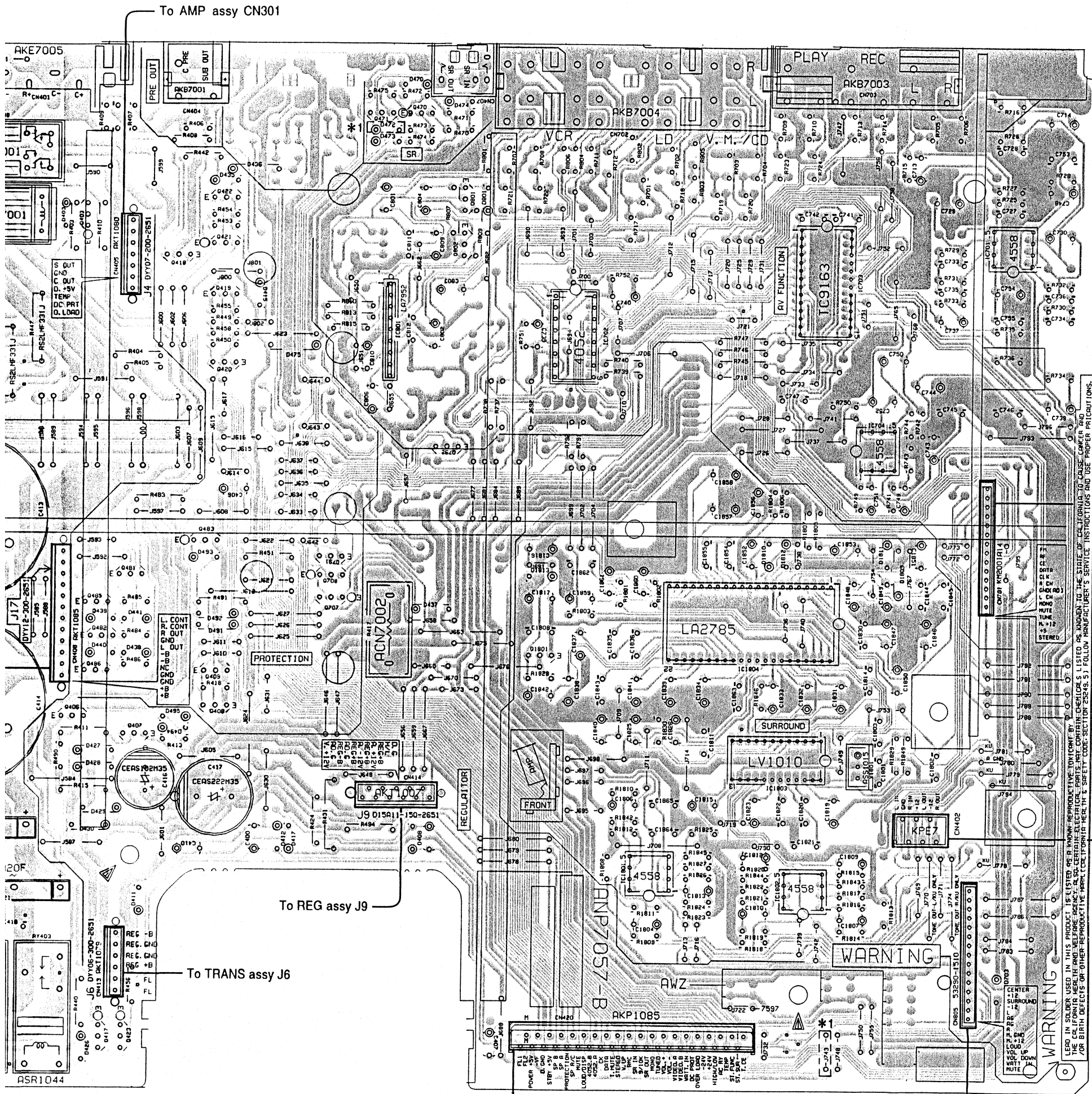
3

4

5

6





- Q404 Q470
- Q471
- Q416
- Q422 Q801
- Q403 Q802
- Q421 IC701
- Q418 Q802
- IC703
- Q419
- Q402 IC801
- IC702
- Q420
- IC704

To FM/AM TUNER MODULE CN6201

- Q483
- Q481 Q708
- Q485 Q707
- Q482 IC804
- Q1801
- Q486
- Q406
- Q409
- IC803

To FL AND UCOM assy J8

- IC801
- IC802

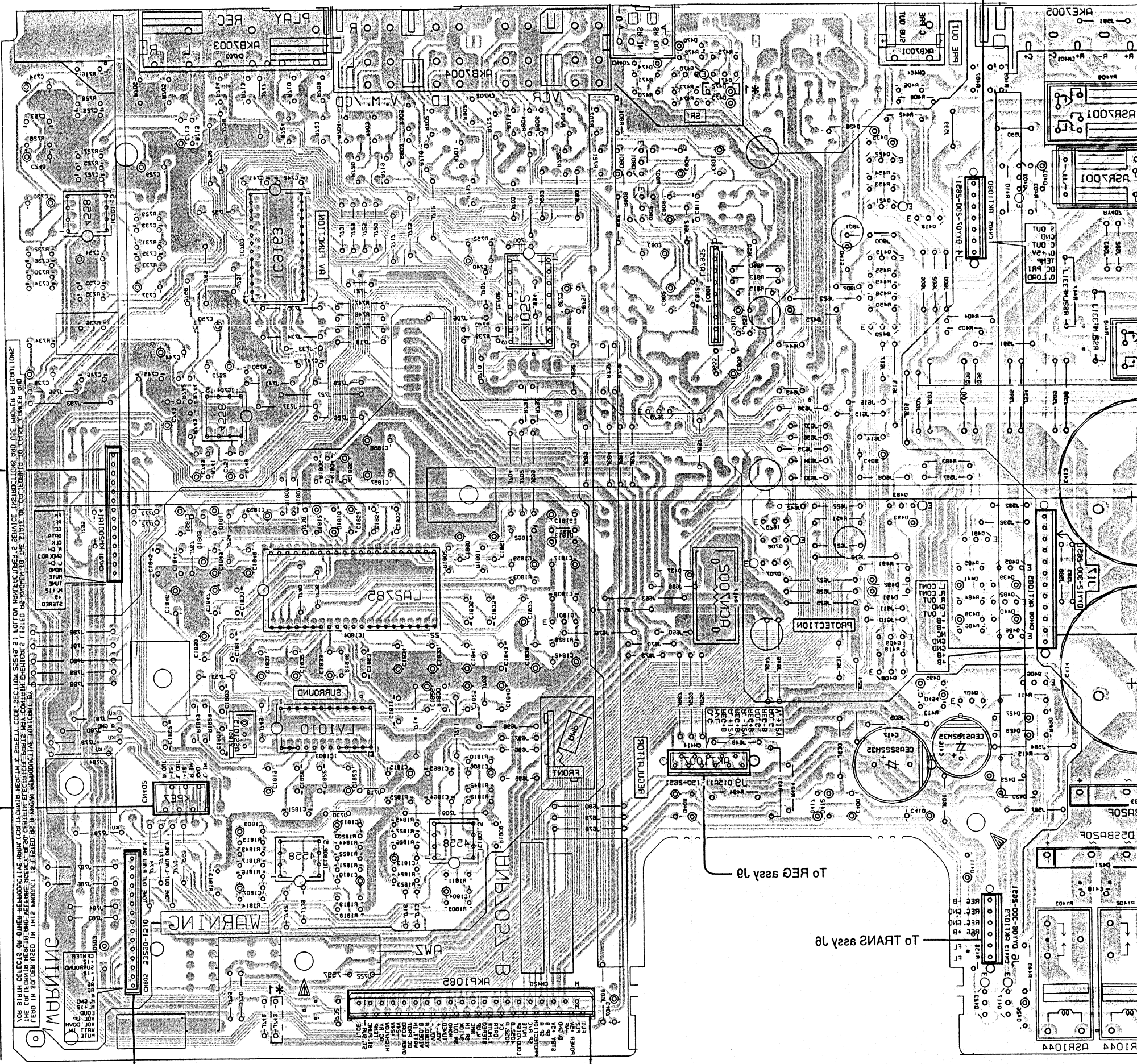
- Q417
- Q423

A  
B  
C  
D

To FL AND UCOM assy CN901

To VOL. assy CN604





Q453  
Q417  
Q404  
Q418  
Q455  
Q801  
Q403  
Q451  
Q805  
Q418  
Q805  
IC203  
Q418  
IC205  
IC801  
Q450  
IC204

Q483  
Q481  
Q482  
Q485  
Q488  
Q488  
Q408  
Q408  
IC803  
IC801  
IC805

Q453  
Q417  
Q404  
Q418  
Q455  
Q801  
Q403  
Q451  
Q805  
Q418  
Q805  
IC203  
Q418  
IC205  
IC801  
Q450  
IC204

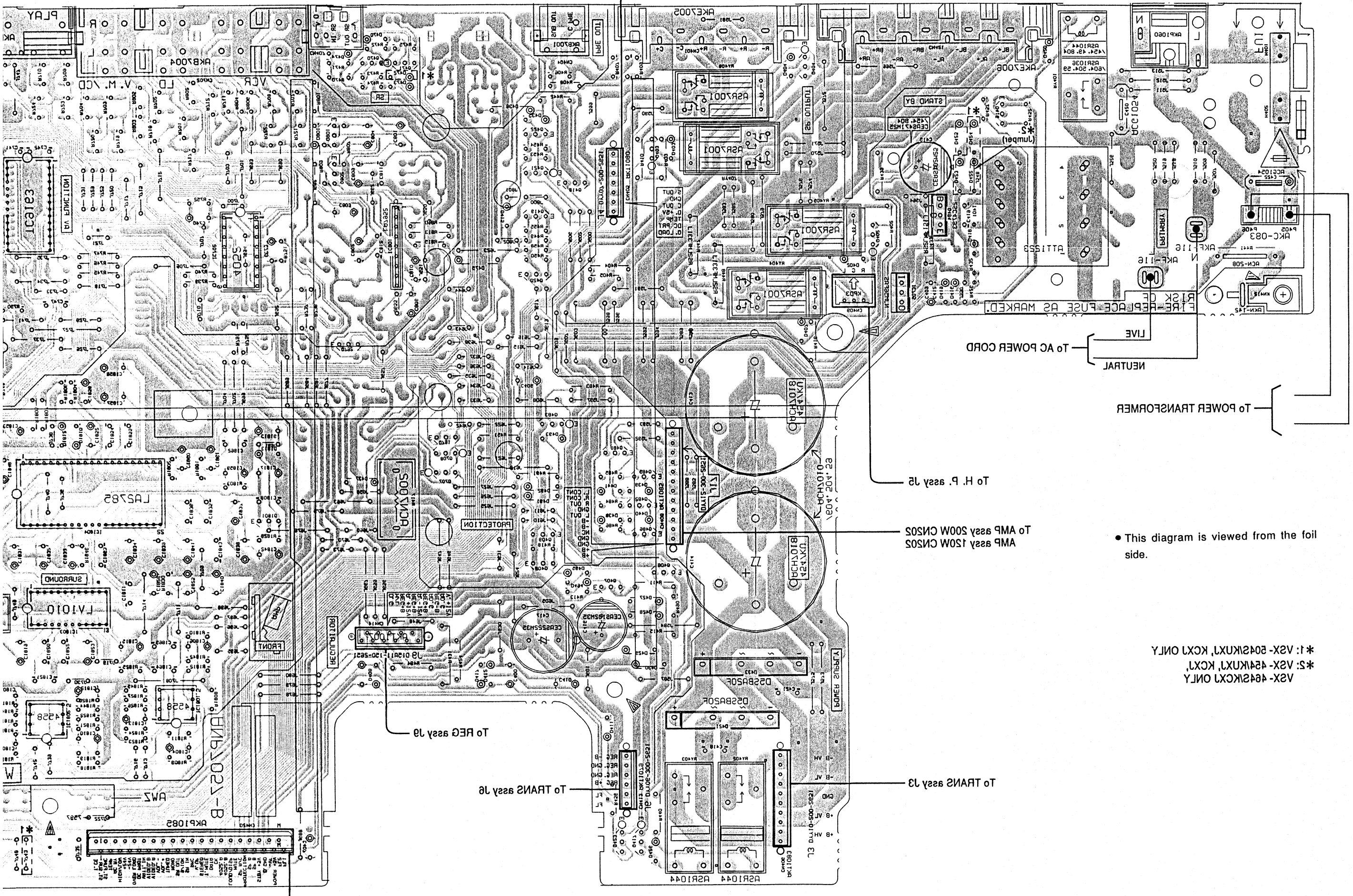
Q453  
Q417  
Q404  
Q418  
Q455  
Q801  
Q403  
Q451  
Q805  
Q418  
Q805  
IC203  
Q418  
IC205  
IC801  
Q450  
IC204

A  
B  
C  
D

V2X-5042, V2X-4642, V2X-454

PCB-3





• This diagram is viewed from the foil side.

A2X-484KX1 ONLY  
 \*S: A2X-484KX17, KCX1  
 \*1: A2X-2042KX17, KCX1 ONLY

To TRANS assy 13

To AMP assy 500W C1305

To H.P. assy 12

To POWER TRANSFORMER

NEUTRAL

LIVE

To AC POWER CORD

PS AND FUNC assy

To REG assy 18

To TRANS assy 16

To AMP assy C1301

A

B

C

D

1

2

3

4

5

1

1

2

3

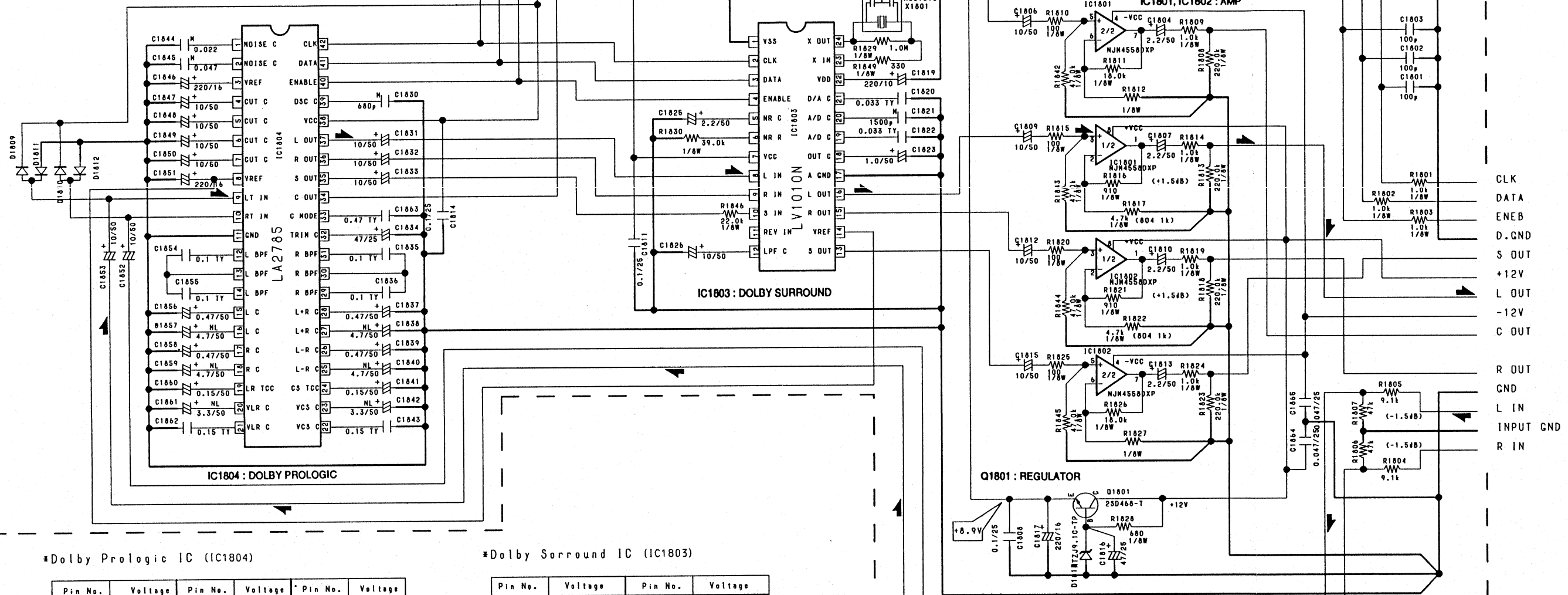
4

5

1

SCH-5

PS AND FUNC assy (2/2) (AWZ7597:VSX-504S)  
(AWZ7601:VSX-454, VSX-464S)



\*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 Surround 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

R1812, R1827:  
3.9k (VSX-504S)  
5.6k (VSX-464S, VSX-454)

To PS AND FUNC assy (1/2) (SCH-4)

SCH-5

PS AND FUNC ASSY (2/2)

SCH-5

PS AND FUNC ASSY (2/2)



VSX-504S, VSX-464S, VSX-454

4.5 VOL. ASSY, TRANS ASSY, REG ASSY AND H. P. ASSY

A

B

C

D

A

B

C

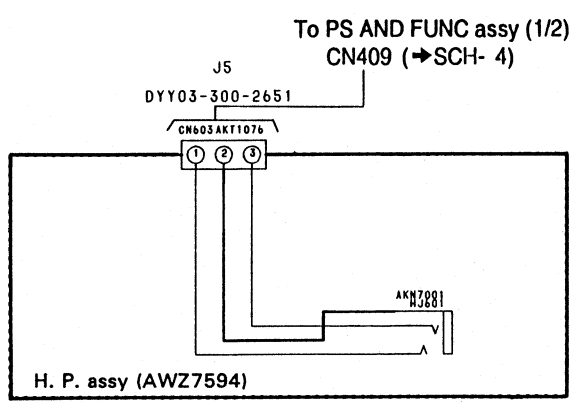
D

3

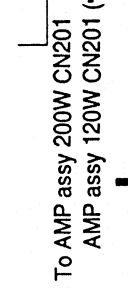
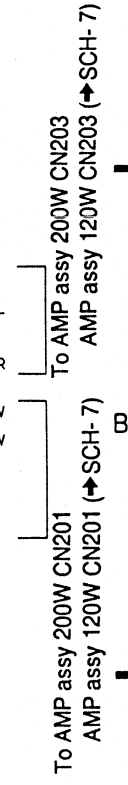
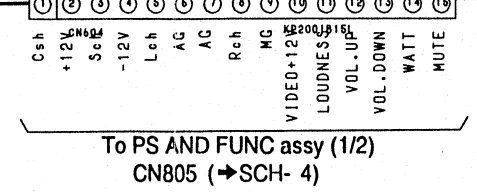
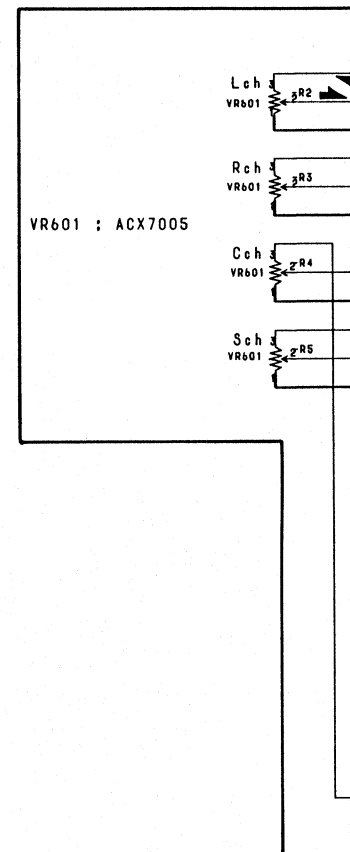
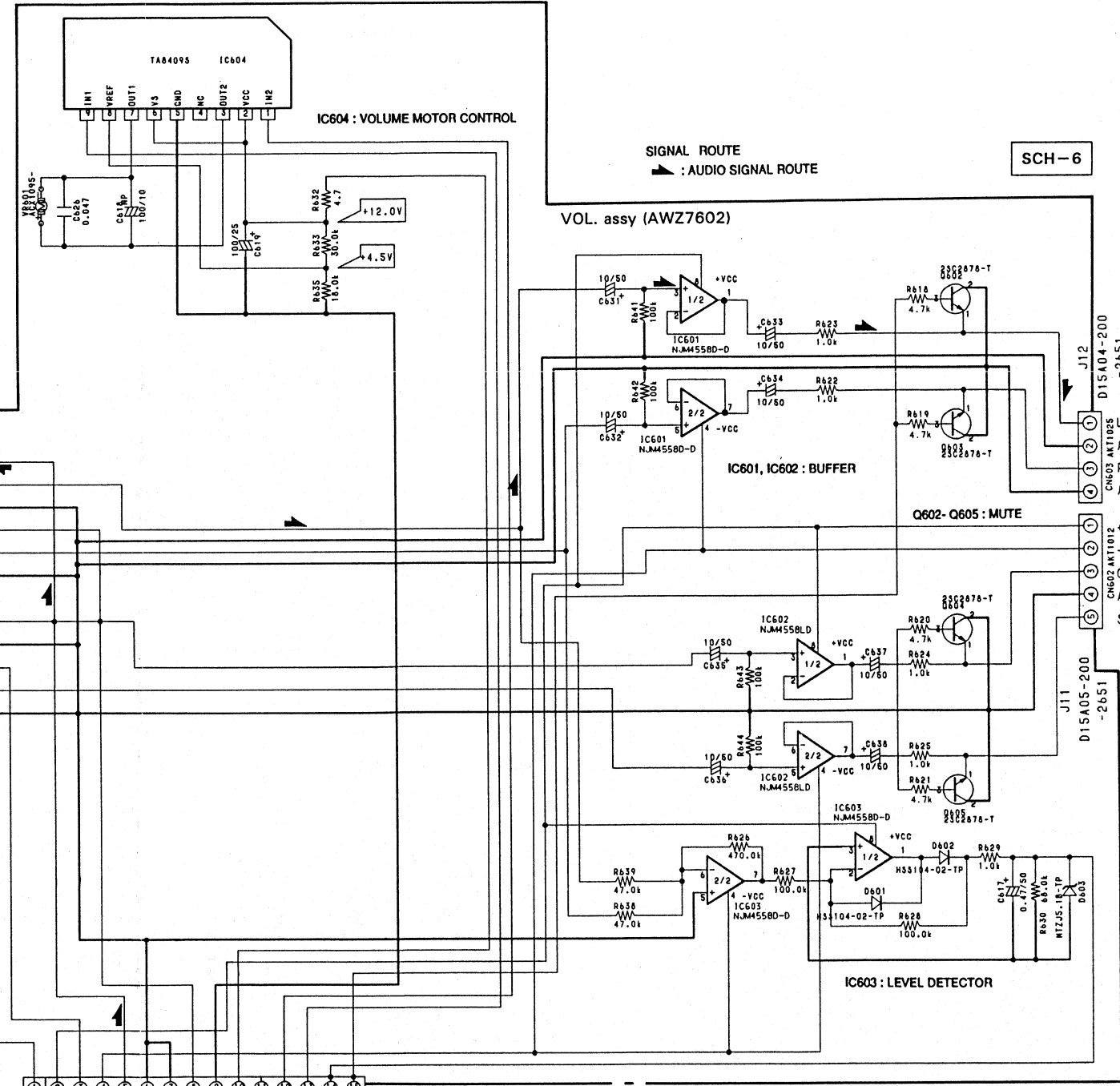
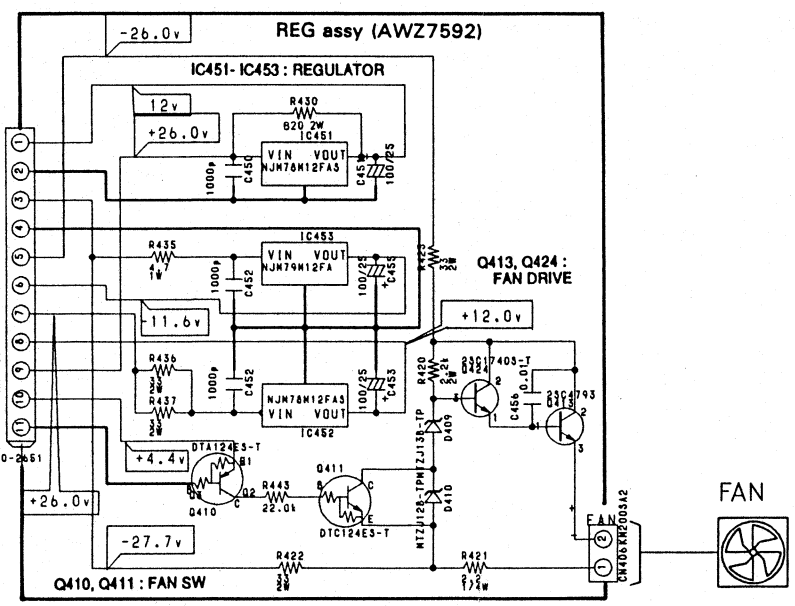
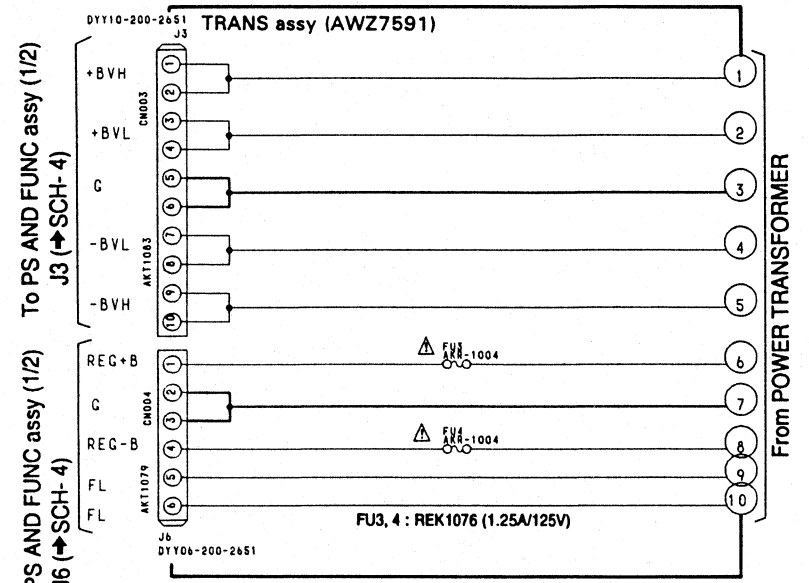
4

5

6



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



SCH-6

VOL. ASSY, TRANS ASSY,  
REG ASSY, H. P. ASSY

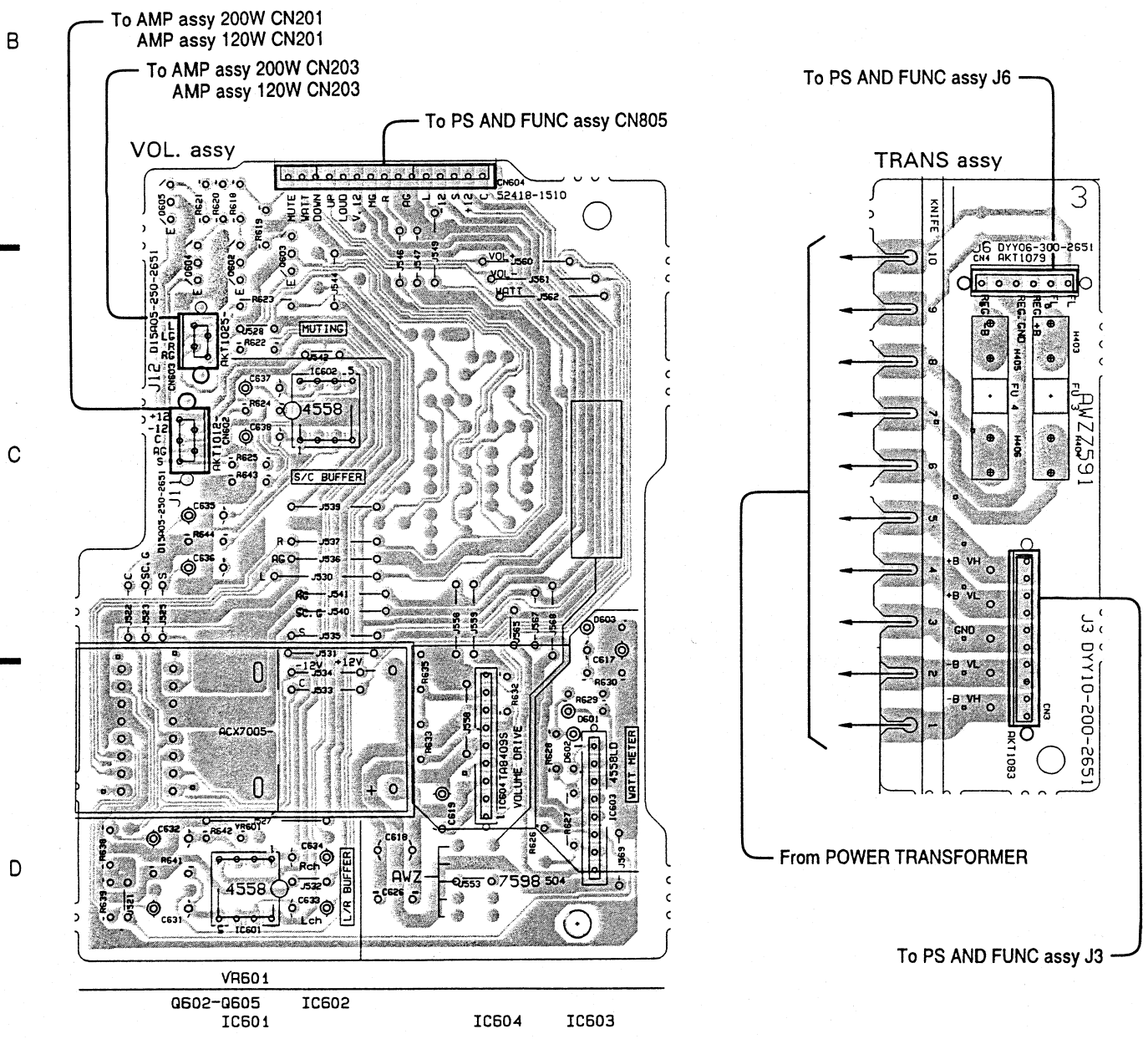
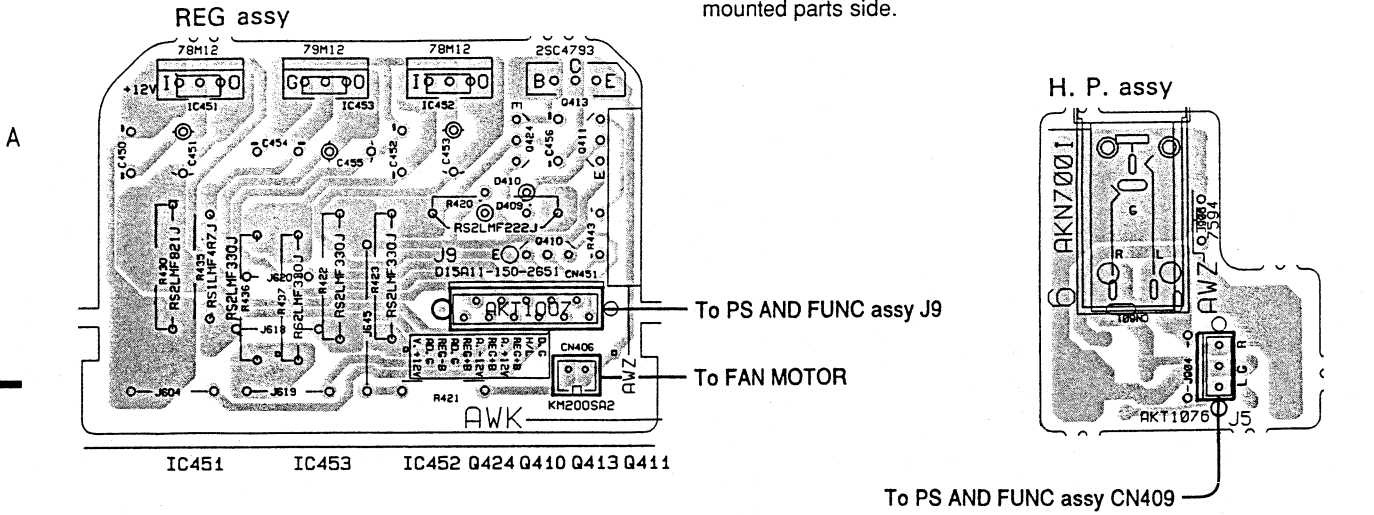
VOL. ASSY, TRANS ASSY,  
REG ASSY, H. P. ASSY

SCH-6

# VSX-504S, VSX-464S, VSX-454

PCB-4

• This diagram is viewed from the mounted parts side.

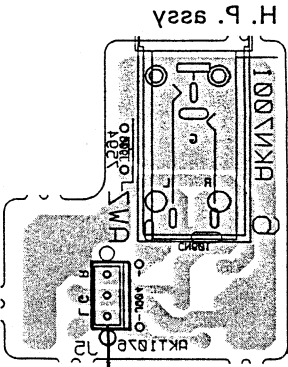


PCB-4

• This diagram is viewed from the foil side.

A

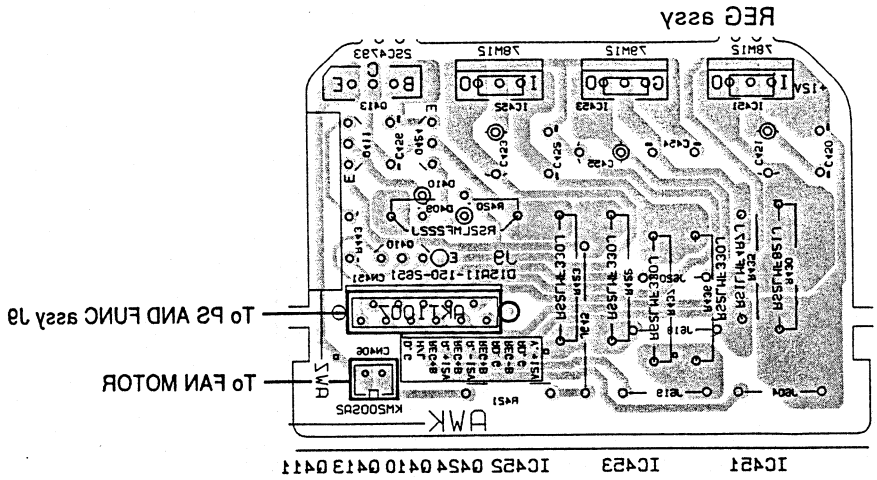
A



To PS AND FUNC assy CN408

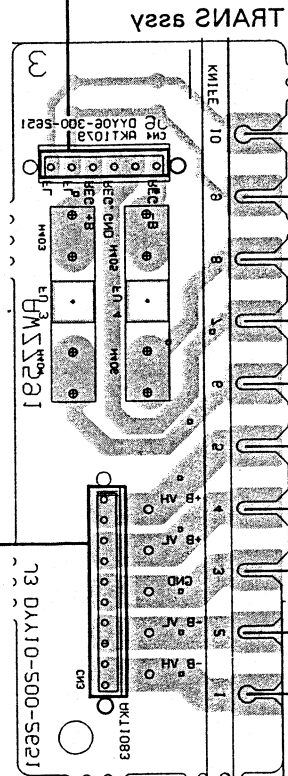
To PS AND FUNC assy 1a

TO FAN MOTOR

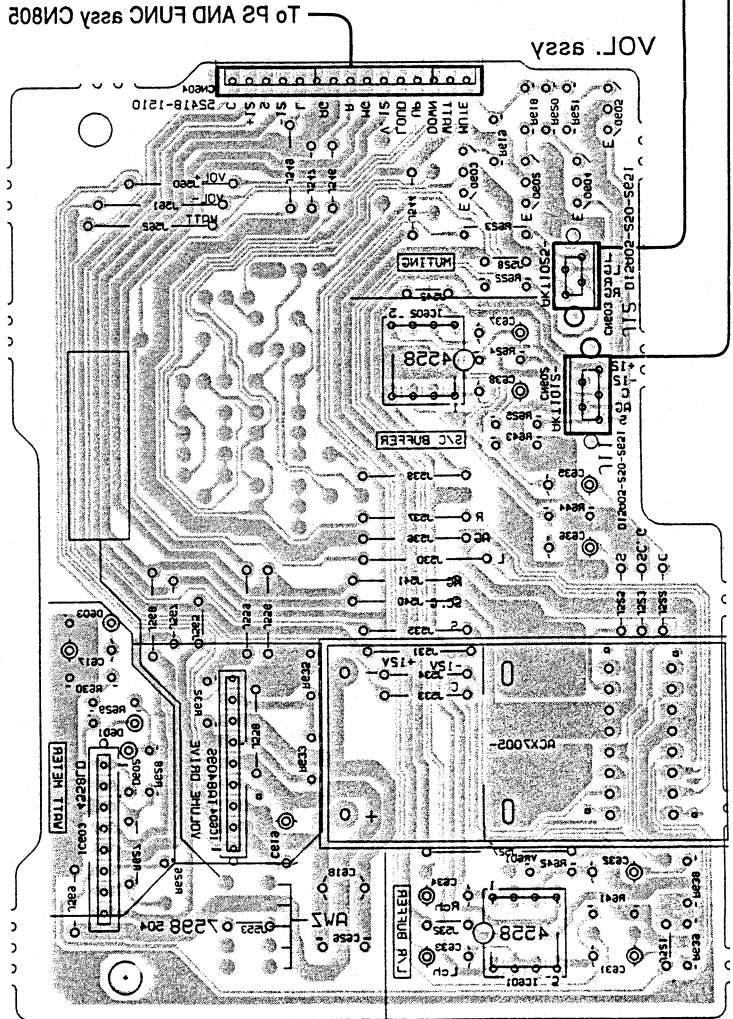


B

B



Flow POWER TRANSFORMER



D

D

To PS AND FUNC assy 13

To PS AND FUNC assy CN805

AMP assy 150W CN503  
To AMP assy 500W CN503

AMP assy 150W CN501  
To AMP assy 500W CN501

04

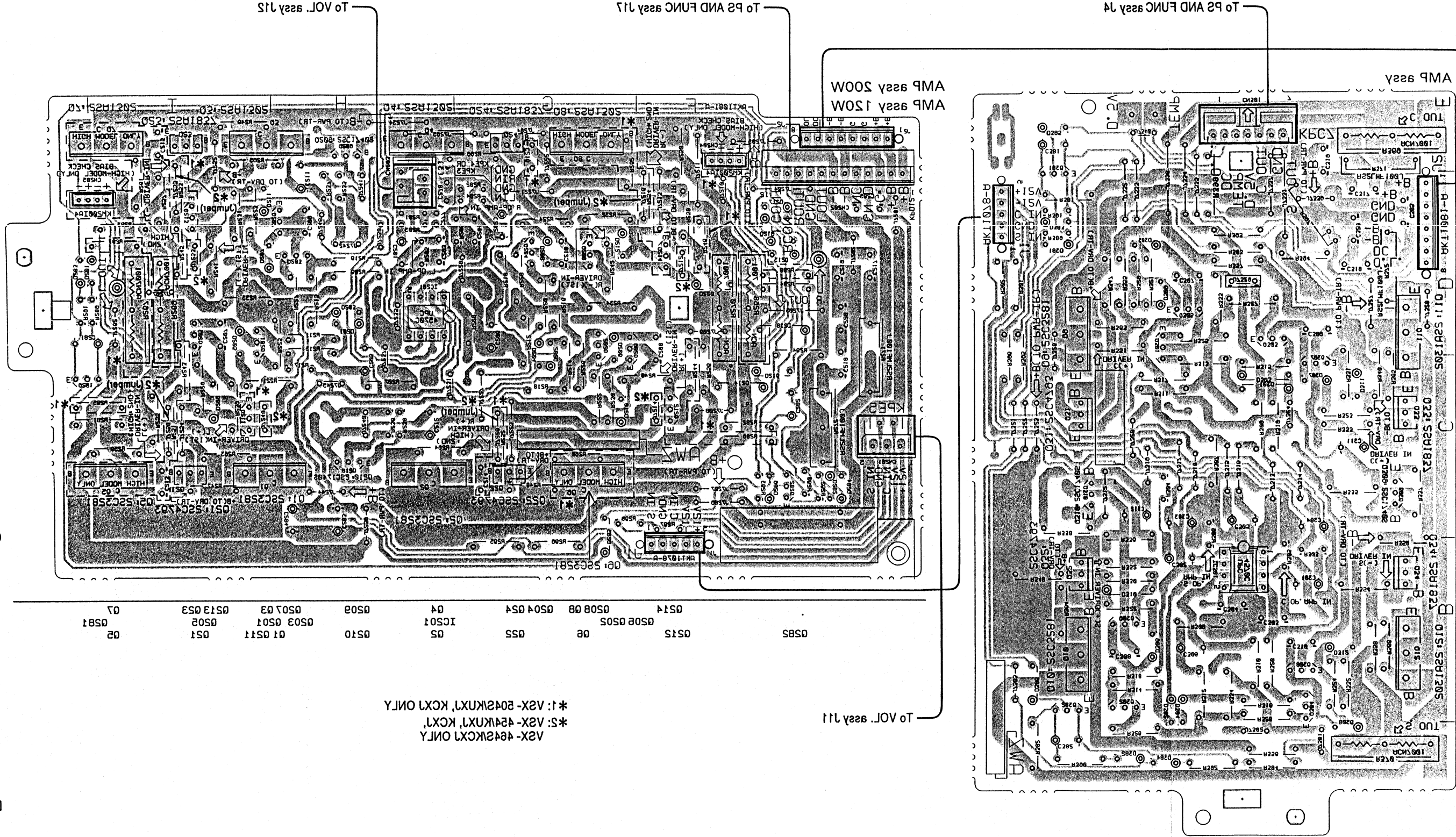
3

5

1



This diagram is viewed from the foil side.



V2X-4642KX1 ONLY  
 V2X-5042KX1, KCX1 ONLY

- 0585
- 0515
- 0508 0505
- 0514
- 0508 08
- 0504 054
- 055
- 0510
- 0510
- 0503 0501
- 0502
- 0513 053
- 0581
- 02

A B C D 1 2 3 4 5





AMP Assy 200W(AWZ7581: VSX-504S)  
AMP Assy 120W(AWZ7580: VSX-454, VSX-464S)

\*1: VSX-504S ONLY  
\*2: VSX-464S, VSX-454 ONLY

To VOL. Assy J11 (SCH-6)  
To VOL. Assy J12 (SCH-6)

To PS AND FUNC Assy (1/2)  
J17 (SCH-4)

	VSX-504S	VSX-464S	VSX-454
R211, R212	B20 1/4W	B20 1/4W	B20 1/4W
R213-R216	27 1/4W	27 1/4W	27 1/4W
R233, R234	5 6A	3 9A	
R235, R236	3 0A	1 5A	
R237, R238	B20	680	
R239-R242	100	47	

A  
B  
C  
D

A  
B  
C  
D

AMP Assy (AWZ7579)

CENTER POWER AMP

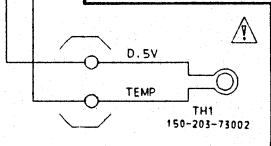
SURROUND POWER AMP

SIGNAL ROUTE  
▲ : AUDIO SIGNAL ROUTE

AMP ASSY, AMP ASSY 200W,  
AMP ASSY 120W

To PS AND FUNC Assy (1/2)  
J4 (SCH-4)

- OVER LOAD
- DC PROTECT
- D.5V
- TEMP
- Cch OUT
- GND
- Sch OUT



SCH-7

AMP ASSY, AMP ASSY 200W,  
AMP ASSY 120W

SCH-7

**5. PCB PARTS LIST**

**NOTES :**

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  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 $\Omega$   $\rightarrow$  56  $\times$  10<sup>1</sup>  $\rightarrow$  561 ..... RD1/8PM 5 6 1 J  
 47k $\Omega$   $\rightarrow$  47  $\times$  10<sup>3</sup>  $\rightarrow$  473 ..... RD1/4PS 4 7 3 J  
 0.5 $\Omega$   $\rightarrow$  0R5 ..... RN2H 0 R 5 K  
 1 $\Omega$   $\rightarrow$  010 ..... RS1P 0 1 0 K

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

5.62k $\Omega$   $\rightarrow$  562  $\times$  10<sup>1</sup>  $\rightarrow$  5621 ..... RM1/4PC 5 6 2 1 F

**LIST OF WHOLE PCB ASSEMBLIES**

Mark	Symbol and Description	Part No.					Remarks
		VSX-504S		VSX-454		VSX-464S	
		KUXJ	KCXJ	KUXJ	KCXJ	KCXJ	
NSP	FM/AM TUNER MODULE	AXQ3112	AXQ3112	AXQ3112	AXQ3112	AXQ3112	
	MOTHER assy	AWK7124	AWK7124	AWK7127	AWK7127	AWK7127	
	PS AND FUNC assy	AWZ7597	AWZ7597	AWZ7601	AWZ7601	AWZ7601	
NSP	VOL. assy	AWZ7602	AWZ7602	AWZ7602	AWZ7602	AWZ7602	
	TRANS assy	AWZ7591	AWZ7591	AWZ7591	AWZ7591	AWZ7591	
	REG assy	AWZ7592	AWZ7592	AWZ7592	AWZ7592	AWZ7592	
NSP	FL AND AMP assy	AWK7125	AWK7125	AWK7128	AWK7128	AWK7128	
FL AND UCOM assy	AWZ7599	AWZ7599	AWZ7603	AWZ7603	AWZ7603		
H. P. assy	AWZ7594	AWZ7594	AWZ7594	AWZ7594	AWZ7594		
NSP	AMP assy	AWZ7579	AWZ7579	AWZ7579	AWZ7579	AWZ7579	
	AMP assy 200W	AWZ7581	AWZ7581	Not used	Not used	Not used	
	AMP assy 120W	Not used	Not used	AWZ7580	AWZ7580	AWZ7580	

**CONTRAST OF PCB ASSEMBLIES**

**PS AND FUNC ASSY**

AWZ7597 and AWZ7601 have the same construction except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWZ7597	AWZ7601	
	D422-D424	1SR139-100	Not used	
	D472	1SS252	Not used	
	C413, C414 (12000 $\mu$ F/80V)	ACH7010	Not used	
	C413, C414 (8200 $\mu$ F/71V)	Not used	ACH7018	
	C415	CEAS102M25	CEAS471M25	
	RY401	ASR1036	ASR1044	
	R439	RD1/2PM470J	RD1/2PM680J	
	R1812, R1827	RD1/8PM392J	RD1/8PM562J	

**FL AND UCOM ASSY**

AWZ7599 and AWZ7603 have the same construction except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWZ7599	AWZ7603	
	D956 S907-S909	1SS252 ASG1034	Not used Not used	

**AMP ASSY 200W (AWZ7581) AND AMP ASSY 120W (AWZ7580)**

AWZ7581 and AWZ7580 have the same construction except for the following :

Mark	Symbol and Description	Part No.		Remarks
		AWZ7581	AWZ7580	
	Q211, Q212	2SC2705	Not used	
	Q213, Q214	2SA1145	Not used	
	C213-C216	CCCSL151K500	Not used	
	VR201, VR202	VRTS6HS102	Not used	
	R211, R212	RD1/4PMF821J	RD1/8PM821J	
	R213-R216	RD1/4PMF270J	RD1/8PM270J	
	R233, R234	RD1/2PM562J	RD1/2PM392J	
	R235, R236	RN1/4PC3001F	RN1/4PC1501F	
	R237, R238	RN1/4PC8200F	RN1/4PC6800F	
	R239-R242	RF1/4PS101J	RF1/4PS470J	
	R243-R246	RD1/4PMF271J	Not used	
	R251-R254	RD1/4PMF470J	Not used	
	R259-R262	RF1/4PS4R7J	Not used	
	R267, R268 (0.33 $\Omega$ /5W)	ACN7001	Not used	
	R281-R284	RD1/4PMFL222J	RD1/4PMF222J	
	R285-R288	RD1/4PMFL222J	Not used	

**PARTS LIST FOR VSX-504S/KUXJ**

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
<b>FM/AM TUNER MODULE</b>			<b>COILS AND FILTERS</b>		
<b>SEMICONDUCTORS</b>			F6101	CERAMIC FILTER	ATF-155
IC6201	AM/FM +MPX IC	LA1836M	F6202	AM CERAMIC FILTER	ATF1155
IC6202	PLL IC	LM7001J	F6203, 6204	CERAMIC FILTER	ATF-119
Q6101	DUALGATE-FETA (CHIP)	3SK194	L6101	COIL	ATC1020
Q6102	TRANSISTOR	2SC2223	L6102	COIL	ATC1021
Q6103	TRANSISTOR	2SC2714	L6103	TIP COIL	ATH1043
Q6104	MOS-FET	2SK302	L6104	COIL	ATC1003
Q6201	NCH-FET (SMD)	2SK208	L6202, 6203	CHIP COIL	LCTA2R2J3225
Q6202	TRANSISTOR	2SC2712	L6207	FM DETECTION COIL	ATE1013
Q6203	TRANSISTOR	2SC2235	L6208	CHIP COIL	LCTA2R2J3225
Q6204	TRANSISTOR	XDA124EK	<b>TRANSFORMER</b>		
Q6214	TRANSISTOR	2SC2714	T6101	FM IF TRANS.	ATE-063
Q6217	TRANSISTOR	XDC124EK	<b>OTHERS</b>		
D6101, 6102	VARI-CAP DIODE	1T33	CN6201	14P SOCKET	KP200IA14L

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
<b>CAPACITORS</b>			<b>RESISTORS</b>		
C6101	CHIP CAPACITOR	CCSQCH050C50	VR6201	VARIABLE RESISTOR (10kΩ)	ACP1056
C6102	CERAMIC CAPACITOR	CKSQYB103K50	VR6202	VARIABLE RESISTOR	VRTB6VS223
C6103	CHIP CAPACITOR	CKSQYB102K50	R6101	CHIP RESISTOR	RS1/8S470J
C6105	CHIP CAPACITOR	CCSQTH150J50	R6113, 6116	CHIP RESISTOR	RS1/8S000J
C6106	CHIP CAPACITOR	CKSQYB102K50	R6118	CHIP RESISTOR	RS1/8S000J
C6107	CHIP CPAPCITOR	CCSCH010C50	R6209	CHIP RESISTOR	RS1/8S221J
C6108	CHIP CAPACITOR	CCSQCH101J50	R6211	CHIP RESISTOR	RS1/8S103J
C6109	CERAMIC CAPACITOR	CKSQYB103K50	R6237	CHIP RESISTOR	RS1/8S182J
C6110	CHIP CAPACITOR	CCSQCH020C50	R6239	CHIP RESISTOR	RS1/8S332J
C6111	CHIP CERAMIC C.	CCSQCH150J50	R6243, 6244	CHIP RESISTOR	RS1/8S101J
C6112	CHIP CAPACITOR	CKSQYB102K50	R6268-6271	CHIP RESISTOR	RS1/8S000J
C6113	CHIP CAPACITOR	CCSQRH180J50	R6275, 6276	CHIP RESISTOR	RS1/8S000J
C6114	CHIP CAPACITOR	CCSQRH080D50	R6278, 6283	CHIP RESISTOR	RS1/8S000J
C6115	CHIP CAPACITOR	CCSQCH330J50	R6284, 6290	CHIP RESISTOR	RS1/8S000J
C6116	CHIP CERAMIC C.	CCSQCH150J50	R6293, 6294	CHIP RESISTOR	RS1/8S000J
C6117	CERAMIC CAPACITOR	CKSQYB103K50	R6297	CHIP RESISTOR	RS1/8S000J
C6202	CAPACITOR (CERAMIC)	ACG1051	R6299, 6300	CARBON FILM RESISTOR	RD1/8PM102J
C6203	CHIP CAPACITOR	CCSQCH101J50	Other Resistors		
C6204	CHIP CAPACITOR	CKSQYB102K50			
C6208	CHIP CERAMIC C.	CCSQCH150J50			
C6209	CERAMIC CAPACITOR	CKSQYB473K50			
C6210	CERAMIC CAPACITOR	CKSQYB103K50			
C6212	CHIP CAPACITOR	CKSQYF103Z50			
C6213	CHIP CAPACITOR	CKSQYB223K50			
C6214	AUDIO FILM CAPACITOR	CFTXA224J50			
C6215	AUDIO FILM CAPACITOR	CFTXA103J50			
C6216, 6217	ELECT. CAPACITOR	CEAS330M16			
C6218	CHIP CAPACITOR	CKSQYF103Z50			
C6219	ELECT. CAPACITOR	CEAS470M10			
C6220	CHIP CAPACITOR	CKSQYF223Z50			
C6221, 6222	CHIP CERAMIC C.	CCSQCH150J50			
C6223	CHIP CAPACITOR	CKSQYF103Z50			
C6224	ELECT. CAPACITOR	CEAS100M50			
C6225	CERAMIC CAPACITOR	CKSQYF473Z50			
C6226	CHIP CAPACITOR	CKSQYF223Z50			
C6227	ELECT. CAPACITOR	CEAS470M25			
C6228	CERAMIC CAPACITOR	CKSQYB472K50			
C6229	CERAMIC CHIP C.	CCSCH821J50			
C6230	CERAMIC CAPACITOR	CKSQYB333K50			
C6231	ELECT. CAPACITOR	CEAS3R3M50			
C6232	CERAMIC CAPACITOR	CKSYB333K50			
C6233	ELECT. CAPACITOR	CEAS3R3M50			
C6234	CAPACITOR (CERAMIC)	ACG1051			
C6235	CERAMIC CAPACITOR	CKSQYF224Z25			
C6236	CAPACITOR (CERAMIC)	ACG1051			
C6237	CERAMIC CAPACITOR	CKSQYB473K50			
C6238	ELECT. CAPACITOR	CEJA100M16			
C6239	CHIP CAPACITOR	CKSQYF223Z50			
C6241	CERAMIC CAPACITOR	CKSQYF473Z50			
C6242	CHIP CAPACITOR	CKSQYF223Z50			
C6243-6245	ELECT. CAPACITOR	CEAS470M16			
C6246	ELECT. CAPACITOR	CEAS100M50			
C6249, 6250	ELECT. CAPACITOR	CEJA4R7M35			
C6251	CHIP CAPACITOR	CKSYB472K50			
C6252	CERAMIC CAPACITOR	CKSQYB472K50			
C6255	CHIP CAPACITOR	CKSQYF223Z50			
C6261	ELECT. CAPACITOR	CEAS010M50			
C6262	ELECT. CAPACITOR	CEAS100M50			
C6263	CHIP CAPACITOR	CKSYF473Z50			
C6264	CERAMIC CAPACITOR	CKSQYB103K50			
C6265	CERAMIC CAPACITOR	CKSQYB473K50			
C6266	CERAMIC CAPACITOR	CKSQYF473Z50			
C6267	CERAMIC CAPACITOR	CKSQYB473K50			
C6268	CHIP CAPACITOR	CCSQCH101J50			
			<b>OTHERS</b>		
			AM RF TUNING BLOCK		
			AXX1025		
			BN6201		
			TERMINAL 4-P		
			AKA1016		
			X6201		
			CRYSTAL RESONATOR		
			ASS1066		
			X6202		
			CERAMIC RESONATOR		
			ATF1027		
			X6203		
			CRYSTAL RESONATOR		
			ASS1042		
			<b>PS AND FUNC ASSY</b>		
			<b>SEMICONDUCTORS</b>		
			IC1801, 1802	OP-AMP IC	NJM4558D-D
			IC1803	IC	LV1010N
			IC1804	IC	LA2785
			IC701	OP-AMP IC	NJM4558D-D
			IC702	LOGIC IC	BU4052BC
			IC703	E-SW IC	TC9163AN
			IC704	OP-AMP IC	NJM4558D-D
			IC801	VIDEO SEITCH	LA7952
			Q1801	TRANSISTOR	2SD468
			Q402-404	TRANSISTOR	DTC143ES
			Q406	TRANSISTOR	2SA1515
			Q407-409	TRANSISTOR	2SC1740S
			Q416	TRANSISTOR	2SC1740S
			Q417	TRANSISTOR	DTC143ES
			Q418	TRANSISTOR	2SC2878
			Q419, 420	TRANSISTOR	2SA933S
			Q421	TRANSISTOR	DTC124ES
			Q422	TRANSISTOR	2SA933S
			Q423	TRANSISTOR	DTC124ES
			Q470	TRANSISTOR	2SA933S
			Q471	TRANSISTOR	DTC124ES
			Q481, 482	TRANSISTOR	2SC2878
			Q483	TRANSISTOR	DTA143ES
			Q485, 486	TRANSISTOR	2SC2878
			Q707, 708	TRANSISTOR	DTA143ES
			Q791, 792	TRANSISTOR	2SC1740S
			Q801	TRANSISTOR	2SC1740S
			Q802	TRANSISTOR	2SC2878
			D1809-1812	DIODE	1SS252
			D1813	ZENER DIODE	MTZJ9.1C
			D402-404	DIODE	1SS252
			D407	DIODE	1SS252
			D408	ZENER DIODE	MTZJ4.3C
			D411	DIODE	1SS252
			D412	ZENER DIODE	MTZJ18C
			D415	DIODE	1SS252



# VSX-504S, VSX-464S, VSX-454

Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
D416	ZENER DIODE	MTZJ5.1A	C1857	ELECT. CAPACITOR	CEANL4R7M50
D417	ZENER DIODE	MTZJ5.6C	C1858	ELECT. CAPACITOR	CEASR47M50
D418	DIODE	1SS252	C1859	ELECT. CAPACITOR	CEANL4R7M50
D419	ZENER DIODE	MTZJ5.6A	C1860	ELECT. CAPACITOR	CEASR15M50
D420	DIODE	1SS252	C1861	ELECT. CAPACITOR	CEANL3R3M50
D421	DIODE	D5SBA20 (B)	C1862	AUDIO FILM CAPACITOR	CFTXA154J50
D422-425	DIODE	1SR139-100	C1863	AUDIO FILM CAPACITOR	CFTXA474J50
D426	DIODE	1SS252	C1864, 1865	CERAMIC CAPACITOR	CKCYX473M25
D427-430	DIODE	1SR139-100	C400	ELECT. CAPACITOR	CEAS470M25
D433	DIODE	D5SBA20 (B)	C406	ELECT. CAPACITOR	CEAS221M16
D435-437	DIODE	1SS252	C407	ELECT. CAPACITOR	CEAS470M50
D438-441	ZENER DIODE	MTZJ18B	C410	ELECT. CAPACITOR	CEAS100M50
D470, 472	DIODE	1SS252	C412	ELECT. CAPACITOR	CEAS470M25
D473-475	DIODE	1SS252	C413, 414	ELECT. CAPACITOR (12000 $\mu$ F/80V)	ACH7010
D491-495	DIODE	1SS252	C415	ELECT. CAPACITOR	CEAS102M25
D703, 801	DIODE	1SS252	C416	ELECT. CAPACITOR	CEAS102M35
<b>RELAYS</b>			C417	ELECT. CAPACITOR	CEAS222M35
RY401	RELAY	ASR1036	C418	CKA (0.01 $\mu$ F/AC250V)	ACG1005
RY402, 403	RELAY	ASR1044	C419	CERAMIC CAPACITOR	CKCYX104M25
RY404, 405	RELAY	ASR7001	C420	CKA (0.01 $\mu$ F/AC400V)	ACG1054
RY407, 408	RELAY	ASR7001	C421	CKA (0.01 $\mu$ F/AC250V)	ACG1005
<b>TRANSFORMER</b>			C422	CKA (0.01 $\mu$ F/AC400V)	ACG1054
T401	POWER TRANSFORMER	ATT1223	C713, 714	ELECT. CAPACITOR	CEAS100M50
<b>CAPACITORS</b>			C727, 728	CERAMIC CAPACITOR	CCCSL221J50
C1801-1803	CERAMIC CAPACITOR	CCCCH101J50	C729, 730	ELECT. CAPACITOR	CEAS101M25
C1804	ELECT. CAPACITOR	CEAS2R2M50	C733, 734	PLASTIC FILM CAPACITOR	CQMA822J50
C1806	ELECT. CAPACITOR	CEAS100M50	C735, 736	PLASTIC FILM CAPACITOR	CQMA242J50
C1807	ELECT. CAPACITOR	CEAS2R2M50	C737, 738	ELECT. CAPACITOR	CEAS2R2M50
C1808	CERAMIC CAPACITOR	CKCYX104M25	C739, 740	ELECT. CAPACITOR	CEAS470M25
C1809	ELECT. CAPACITOR	CEAS100M50	C741, 742	CERAMIC CAPACITOR	CKCYB102K50
C1810	ELECT. CAPACITOR	CEAS2R2M50	C743, 744	ELECT. CAPACITOR	CEAS100M50
C1811	CERAMIC CAPACITOR	CKCYX104M25	C745, 746	CERAMIC CAPACITOR	CKCYF103Z50
C1812	ELECT. CAPACITOR	CEAS100M50	C747	CERAMIC CAPACITOR	CKCYB102K50
C1813	ELECT. CAPACITOR	CEAS2R2M50	C748	ELECT. CAPACITOR	CEAS101M25
C1814	CERAMIC CAPACITOR	CKCYX104M25	C749, 750	ELECT. CAPACITOR	CEAS2R2M50
C1815	ELECT. CAPACITOR	CEAS100M50	C751, 752	ELECT. CAPACITOR	CEAS4R7M50
C1816	ELECT. CAPACITOR	CEAS470M25	C753	CERAMIC CAPACITOR	CKCYF103Z50
C1817	ELECT. CAPACITOR	CEAS221M16	C754	ELECT. CAPACITOR	CEAS101M25
C1819	ELECT. CAPACITOR	CEAS221M10	C755	CERAMIC CAPACITOR	CKCYF103Z50
C1820	AUDIO FILM CAPACITOR	CFTXA333J50	C801, 802	ELECT. CAPACITOR	CEAS4R7M50
C1821	PLASTIC FILM CAPACITOR	CQMA152J50	C803, 804	ELECT. CAPACITOR	CEAS471M6
C1822	AUDIO FILM CAPACITOR	CFTXA333J50	C806	ELECT. CAPACITOR	CEAS470M25
C1823	ELECT. CAPACITOR	CEAS010M50	C809, 810	ELECT. CAPACITOR	CEAS101M25
C1825	ELECT. CAPACITOR	CEAS2R2M50	C811, 812	CERAMIC CAPACITOR	CKCYF473Z50
C1826	ELECT. CAPACITOR	CEAS100M50	<b>RESISTORS</b>		
C1830	PLASTIC FILM CAPACITOR	CQMA681J50	R417	RESISTOR (150 $\Omega$ , 5W)	ACN7002
C1831-1833	ELECT. CAPACITOR	CEAS100M50	R431	METAL OXIDE RESISTOR	RS2LMF101J
C1834	ELECT. CAPACITOR	CEAS470M25	R433	METAL OXIDE RESISTOR	RS2LMF151J
C1835, 1836	AUDIO FILM CAPACITOR	CFTXA104J50	R439	CARBON FILM RESISTOR	RD1/2PM470J
C1837	ELECT. CAPACITOR	CEASR47M50	R440	CARBON FILM RESISTOR	RD1/2PM560J
C1838	ELECT. CAPACITOR	CEANL4R7M50	R441	RESISTOR (2.2M $\Omega$ , 1/2W)	ACN-208
C1839	ELECT. CAPACITOR	CEASR47M50	R447, 448	METAL OXIDE RESISTOR	RS2LMF331J
C1840	ELECT. CAPACITOR	CEANL4R7M50	R494	CARBON FILM RESISTOR	RD1/2PMF820J
C1841	ELECT. CAPACITOR	CEASR15M50	R807	CARBON FILM RESISTOR	RD1/2PM271J
C1842	ELECT. CAPACITOR	CEANL3R3M50	Other Resistors		
C1843	AUDIO FILM CAPACITOR	CFTXA154J50	<b>OTHERS</b>		
C1844	PLASTIC FILM CAPACITOR	CQMA223J50	CABLE HOLDER (7P)		
C1845	PLASTIC FILM CAPACITOR	CQMA473J50	CABLE HOLDER (12P)		
C1846	ELECT. CAPACITOR	CEAS221M16	CABLE HOLDER (6P)		
C1847-1850	ELECT. CAPACITOR	CEAS100M50	CABLE HOLDER		
C1851	ELECT. CAPACITOR	CEAS221M16	AC SOCKET 1-P		
C1852, 1853	ELECT. CAPACITOR	CEAS100M50	CN401	SPEAKER TERMINAL 6-P	AKE7005
C1854, 1855	AUDIO FILM CAPACITOR	CFTXA104J50	CN402	CONNECTOR (7P)	KPE7
C1856	ELECT. CAPACITOR	CEASR47M50			

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Mark No.	Description	Parts No.	Mark No.	Description	Parts No.
CN404	2P PIN JACK	AKB7001	R436, 437	METAL OXIDE RESISTOR	RS2LMF330J
CN407	JACK	AKN1006	R443	CARBON FILM RESISTOR	RD1/8PM223J
CN420	40P SOCKET	AKP1085			
CN421	SPEAKER TERMINAL 8-P	AKE7006			
			OTHERS		
CN701	14P PLUG	KM200IA14		CABLE HOLDER	AKT1007
CN702	PIN JACK (12P)	AKB7004			
CN703	6P PIN JACK (TAPE2)	AKB7003			
CN805	15P PLUG	53290-1510			
X1801	CERAMIC RESONATOR	ASS1015			
<b>VOL. ASSY</b>			<b>FL AND UCOM ASSY</b>		
<b>SEMICONDUCTORS</b>			<b>SEMICONDUCTORS</b>		
IC601	OP-AMP IC	NJM4558D-D	IC901	PORT-EXPANDER IC	M66320P
IC602	OP-AMP IC	NJM4558LD	IC902	CONTROL MCU	PDG133A
IC603	OP-AMP IC	NJM4558D-D	IC951, 952	OP-AMP IC	NJM4558D-D
IC604	MECHANISM DRIVER IC	TA8409S	Q902, 903	TRANSISTOR	2SC1740S
Q602-605	TRANSISTOR	2SC2878	Q907, 908	TRANSISTOR	DTC143ES
D601, 602	DIODE	1SS252	Q909	TRANSISTOR	DTC124ES
D603	ZENER DIODE	MTZJ5.1B	Q951, 952	TRANSISTOR	2SC1740S
			Q953, 954	TRANSISTOR	DTC143ES
			D2104-2106	DIODE	1SS252
			D902	DIODE	1SS252
			D906-909	LED	AEL1100
			D910-918	DIODE	1SS252
			D920-923	DIODE	1SS252
			D953	ZENER DIODE	MTZJ2.7
			D956, 958	DIODE	1SS252
<b>CAPACITORS</b>			<b>SWITCHES</b>		
C617	ELECT. CAPACITOR	CEASR47M50	S901	SWITCH	ASG1034
C618	ELECT. CAPACITOR	CEANP101M10	S903-905	SWITCH	ASG1034
C619	ELECT. CAPACITOR	CEAS101M25	S907-909	SWITCH	ASG1034
C626	CERAMIC CAPACITOR	CKCYF473Z50	S912-919	SWITCH	ASG1034
C631-638	ELECT. CAPACITOR	CEAS100M50	S921-926	SWITCH	ASG1034
<b>RESISTORS</b>			S928, 929	SWITCH	ASG1034
VR601	VARIABLE RESISTOR	ACX7005	S941	ROTARY ENCODER	ASX1015
	Other Resistors	RD1/8PM□□□□J			
<b>OTHERS</b>			<b>COIL</b>		
CN604	CABLE HOLDER	AKT1012	L901	AXIAL INDUCTOR	LAU220K
	15P SOCKET	52418-1510			
<b>TRANS ASSY</b>			<b>CAPACITORS</b>		
<b>OTHERS</b>			C2104	ELECT. CAPACITOR	CEAS221M10
	CABLE HOLDER (6P)	AKT1079	C901	CERAMIC CAPACITOR	CKPUYF103Z25
			C902	CERAMIC CAPACITOR	CKCYX103M25
			C903	ELECT. CAPACITOR	CEAS101M10
			C904	CERAMIC CAPACITOR	CKDYF102Z50
			C905	CERAMIC CAPACITOR	CKCYF473Z50
			C906	ELECT. CAPACITOR	CEAS0R1M50
			C907	ELECT. CAPACITOR	CEAS100M50
			C908	CAPACITOR	ACH7013
			C909	ELECT. CAPACITOR	CEJA101M10
			C910	CERAMIC CAPACITOR	CKCYF473Z50
			C911	ELECT. CAPACITOR	CEJA221M6
			C951, 952	CERAMIC CAPACITOR	CCCSL151J50
			C953, 954	AUDIO FILM CAPACITOR	CFTXA153J50
			C955, 956	ELECT. CAPACITOR	CEJAR47M50
			C957, 958	ELECT. CAPACITOR	CEJA100M50
			C959, 960	ELECT. CAPACITOR	CEJA0R1M50
			C961, 962	AUDIO FILM CAPACITOR	CFTXA153J50
			C963, 964	AUDIO FILM CAPACITOR	CFTXA823J50
			C965	ELECT. CAPACITOR	CEJA4R7M35
			C966	ELECT. CAPACITOR	CEAS4R7M50
			C967	ELECT. CAPACITOR	CEJA100M16
			C968	ELECT. CAPACITOR	CEAS100M50
			C993	CERAMIC CAPACITOR	CKCYB152K50
			C994	CERAMIC CAPACITOR	CKCYB102K50
<b>REG. ASSY</b>			<b>SEMICONDUCTORS</b>		
<b>SEMICONDUCTORS</b>			IC451, 452	REGULATOR IC	NJM78M12FAS
IC453	REGULATOR IC	NJM79M12FA	Q410	TRANSISTOR	DTA124ES
Q411	TRANSISTOR	DTC124ES	Q411	TRANSISTOR	DTC124ES
Q413	TRANSISTOR	2SC4793	Q413	TRANSISTOR	2SC4793
Q424	TRANSISTOR	2SC1740S			
D409	ZENER DIODE	MTZJ13B			
D410	ZENER DIODE	MTZJ12B			
<b>CAPACITORS</b>					
C450	CERAMIC CAPACITOR	CKCYF102Z50			
C451	ELECT. CAPACITOR	CEAS101M25			
C452	CERAMIC CAPACITOR	CKCYF102Z50			
C453	ELECT. CAPACITOR	CEAS101M25			
C454	CERAMIC CAPACITOR	CKCYF102Z50			
C455	ELECT. CAPACITOR	CEAS101M25			
C456	CERAMIC CAPACITOR	CKCYF103Z50			
<b>RESISTORS</b>					
R420	METAL OXIDE RESISTOR	RS2LMF222J			
R421	CARBON FILM RESISTOR	RD1/4PMF2R2J			
R422, 423	METAL OXIDE RESISTOR	RS2LMF330J			
R430	METAL OXIDE RESISTOR	RS2LMF821J			
R435	METAL OXIDE RESISTOR	RS1LMF4R7J			

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Mark No.	Description	Parts No.
<b>RESISTORS</b>		
VR951, 952	VARIABLE RESISTOR	ACS1106
VR953	VARIABLE RESISTOR (500K - X1)	ACS1016
R912-916	CARBON FILM RESISTOR	RD1/2PM332J
R989, 990	CARBON FILM RESISTOR	RD1/2PM332J
	Other Resistors	RD1/8PM□□□J
<b>OTHERS</b>		
CN901	REMOTE RECEIVER UNIT	AXX1023
V901	40P SOCKET	AKP1087
X901	FL TUBE	AAV7013
	CERAMIC RESONATOR	ASS1015
<b>H. P. ASSY</b>		
<b>OTHERS</b>		
	JACK	AKN7001
	CABLE HOLDER (3P)	AKT1076
<b>AMP ASSY</b>		
<b>SEMICONDUCTORS</b>		
IC301	IC	UPC4570C
Q301, 302	TRANSISTOR	2SC2705
Q303-306	TRANSISTOR	2SA1145
Q307, 308	TRANSISTOR	2SC2705
Q381, 382	TRANSISTOR	2SC2240
D301-308	DIODE	1SS252
D309-312	ZENER DIODE	MTZJ3.3
D381-386	DIODE	1SS252
<b>CAPACITORS</b>		
C301, 302	ELECT. CAPACITOR	CEAS2R2M50
C303, 304	CERAMIC CAPACITOR	CKCYB471K50
C305, 306	ELECT. CAPACITOR	CEAS101M50
C307-310	CERAMIC CAPACITOR	CCCSL151K500
C311, C312	ELECT. CAPACITOR	CEAS2R2M50
C317-320	AUDIO FILM CAPACITOR	CFTXA104J50
C381, 382	ELECT. CAPACITOR	CEAS2R2M50
C383, 384	ELECT. CAPACITOR	CEAS101M25
C385	CKA (0.01 $\mu$ F/AC250V)	ACG1005
<b>RESISTORS</b>		
R313-316	CARBON FILM RESISTOR	RD1/4PMF270J
R321-324	CARBON FILM RESISTOR	RD1/4PMF511J
R329-332	CARBON FILM RESISTOR	RD1/4PMF680J
R333, 334	CARBON FILM RESISTOR	RD1/2PM392J
R347-350	FUSIBLE RESISTOR	RF1/4PS4R7J
R351-354	FUSIBLE RESISTOR	RF1/4PS470J
R355-358	CARBON FILM RESISTOR	RD1/4PMF151J
R363-366	FUSIBLE RESISTOR	RF1/4PS4R7J
R369, 370	RESISTOR (0.33 $\Omega$ , 5W)	ACN7001
R371, 372	METAL OXIDE RESISTOR	RS2LMF100J
R381-384	CARBON FILM RESISTOR	RD1/4PMF222J
R395, 396	CARBON FILM RESISTOR	RD1/4PMF101J
R397	METAL OXIDE RESISTOR	RS2LMF104J
R399	FUSIBLE RESISTOR	RF1/4PS4R7J
	Other Resistors	RD1/8PM□□□J
<b>OTHERS</b>		
△ TH1	CABLE HOLDER (8P)	AKT1081
	THERMISTOR	150-203-73002

Mark No.	Description	Parts No.
<b>AMP ASSY 200W</b>		
<b>SEMICONDUCTORS</b>		
IC201	IC	UPC4570C
Q201, 202	TRANSISTOR	2SC2705
Q203-206	TRANSISTOR	2SA1145
Q207, 208	TRANSISTOR	2SC2705
Q211, 212	TRANSISTOR	2SC2705
Q213, 214	TRANSISTOR	2SA1145
Q281, 282	TRANSISTOR	2SC2240
D201-208	DIODE	1SS252
D209-212	ZENER DIODE	MTZJ3.3
D213, 214	DIODE	1SS252
D215-218	ZENER DIODE	MTZJ22D
D219, 220	DIODE	1SS252
D281-286	DIODE	1SS252
<b>CAPACITORS</b>		
C201, 202	ELECT. CAPACITOR	CEAS2R2M50
C203, 204	CERAMIC CAPACITOR	CKCYB471K50
C205, 206	ELECT. CAPACITOR	CEAS101M50
C207-210	CERAMIC CAPACITOR	CCCSL560K500
C211, 212	ELECT. CAPACITOR	CEAS2R2M50
C213-216	CERAMIC CAPACITOR	CCCSL151K500
C217-220	AUDIO FILM CAPACITOR	CFTXA104J50
C281, 282	ELECT. CAPACITOR	CEAS2R2M50
C283, 284	ELECT. CAPACITOR	CEAS101M25
C285	CKA (0.01 $\mu$ F/AC250V)	ACG1005
<b>RESISTORS</b>		
R211, 212	CARBON FILM RESISTOR	RD1/4PMF821J
R213-216	CARBON FILM RESISTOR	RD1/4PMF270J
R221-224	CARBON FILM RESISTOR	RD1/4PMF102J
R229-232	CARBON FILM RESISTOR	RD1/4PMF680J
R233, 234	CARBON FILM RESISTOR	RD1/2PM562J
R235, 236	METALFILM RESISTOR	RN1/4PC3001F
R237, 238	METALFILM RESISTOR	RN1/4PC8200F
R239-242	FUSIBLE RESISTOR	RF1/4PS101J
R243-246	CARBON FILM RESISTOR	RD1/4PMF271J
R247-250	FUSIBLE RESISTOR	RF1/4PS4R7J
R251-254	CARBON FILM RESISTOR	RD1/4PMF470J
R255-258	CARBON FILM RESISTOR	RD1/4PMF151J
R259-266	FUSIBLE RESISTOR	RF1/4PS4R7J
R267-270	RESISTOR (0.33 $\Omega$ , 5W)	ACN7001
R271, 272	METAL OXIDE RESISTOR	RS2LMF100J
R281-288	CARBON FILM RESISTOR	RD1/4PMFL222J
R295, 296	CARBON FILM RESISTOR	RD1/4PMF101J
	Other Resistors	RD1/8PM□□□J
<b>OTHERS</b>		
CN201	CABLE HOLDER (8P)	AKT1081
CN203	CONNECTOR (5P)	KPE5
CN204, 205	CONNECTOR (4P)	KPE4
	4P PLUG	KM200IA4

## 6. ADJUSTMENTS

### ADJUSTMENT OF FM TUNER SECTION

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

Step No.	Adjustment Title	FM SG (1kHz, $\pm 75$ kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dB $\mu$ V)			
1	Center Adjustment	98	80	98.0 MHz	L6207	Adjust so that the DC voltage between IC6201-Pin 4 and Pin 28 (or $\oplus$ leads of C6224 and C6261) becomes $0V \pm 50mV$ .
2	Front-end Sensitivity Adjustment	98	Low input (0 to 30)	98 MHz	L6102 T6101	Adjust so that the DC voltage between IC6201-Pin 12 and GND (or $\oplus$ leads of C6238 and GND) becomes at maximum level.
3	Stereo Distortion	98	80	98 MHz	T6101	Minimize the distortion with 1/8 rotation of the core.
4	TUNED IND. Lighting Level	98	15 ( $\pm 2$ dB)	98.0 MHz	VR6201	Adjust so that the indicator of TUNED IND. starts to light up.

#### Notes:

- Before adjusting, make sure there is no gap between L6101 and L6102. If there is a gap between them, bring them into contact with each other first, and then make adjustments.
- Make indicator adjustments in order of AM  $\rightarrow$  FM.
- Adjustment sequence: L6102 T6101

### ADJUSTMENT OF MW TUNER SECTION

- Set the FM/AM selector to AM (MW) BAND.
- Connect the wiring as shown in Fig. 1-1.

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

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

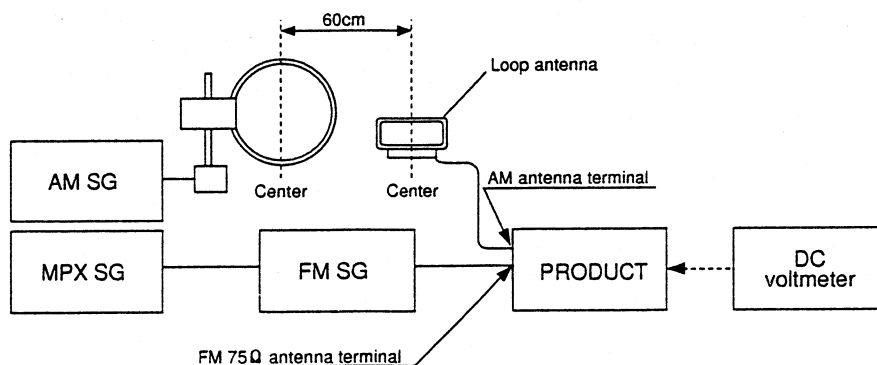


Fig. 1-1 AM and FM Adjustment Wiring Diagram

# VSX-504S, VSX-464S, VSX-454

## FM/AM TUNER MODULE

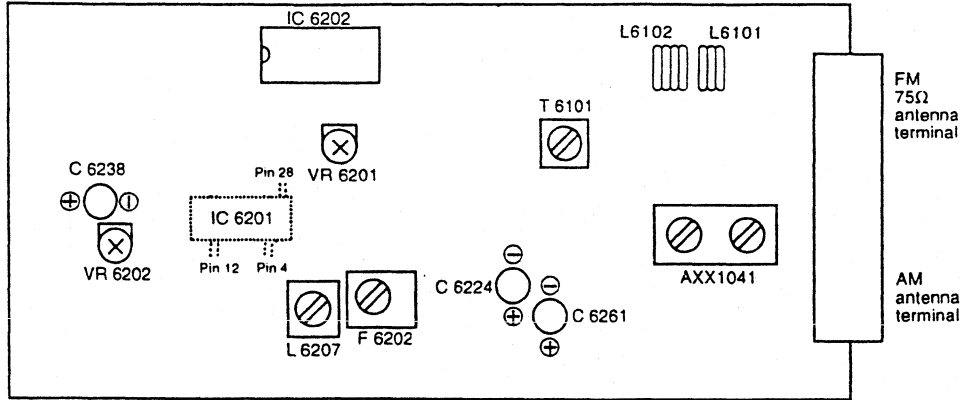


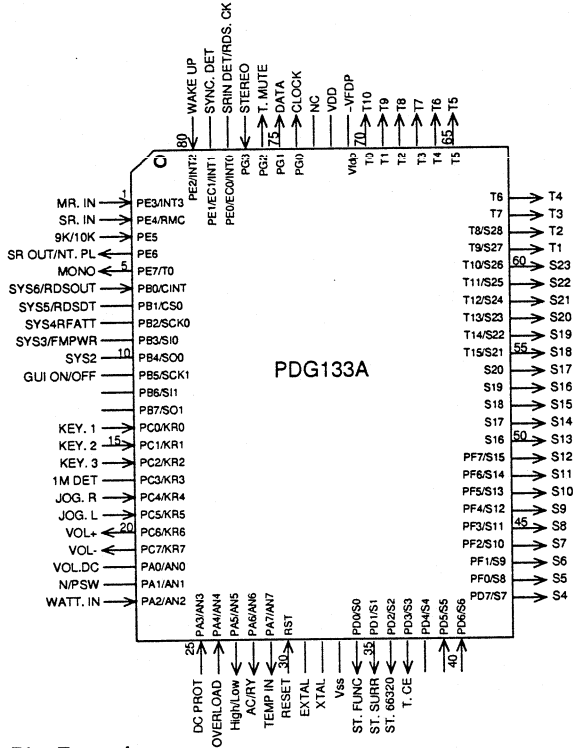
Fig. 1-2 Adjustment Points

## 7. IC INFORMATION

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

### ■ PDG133A (IC902: FL AND UCOM ASSY)

- System Micro-computer
- Pin Assignment (Top View)



#### ● Pin Function

No.	Pin Name	I/O	Description	Act.
1	MR. IN PE3/INT3	I	Remote control signal input from Multi-room	H
2	SR. IN PE4/RMC	I	Remote control signal input	H
3	9k/10k PE5	I	Switching destination (9k/10k) H: 10k, L: 9k	—
4	SR OUT/NT. PL PE6	O	Remote control signal output	—
5	MONO PE7/T0	O	TUNER: Execution MONO output	H
6	TUNED PB0/CINT	I	TUNER: TUNED input	L
7	SYS6/RDSOUT PB1/CS0	—	—	—
8	SYS5/RSDSDT PB2/SCK0	—	—	—
9	SYS4/RFATT PB3/SI0	—	—	—
10	SYS3/FMPWR PB4/SO0	—	—	—

No.	Pin Name	I/O	Description	Act.
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 DOWN: JOG2	—
19	JOG. L PC5/KR5	I	JOG input UP: JOG1 DOWN: JOG2	—
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 LV1010 (DSP)	L
36	ST. 66320 PD2/S2	I	Chip/Enable output for M66320	H
37	T. CE PD3/S3	I	Chip/Enable output for LM7001 (PLL)	L
38	PD4/S4	—	—	—
39	PD5/S5	I	—	—
40	PD6/S6	I	—	—
41	S4 PD7/S7	O	FL segment output 4	—
42	S5 PF0/S8	O	FL segment output 5/Key scan output 1	—
49	S12 PF7/S15		FL segment output 12/Key scan output 8	
50	S13	O	FL segment output 13/Key scan output 9	—
52	S15		FL segment output 15/Key scan output 11	
53	S16	O	FL segment output 16	—
54	S17	O	FL segment output 17	—
55	S18 T15/S21	O	FL segment output 18	—
60	S23 T10/S26		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	T3	O	FL timing output 3	—
70	T10		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/LV1010	—
75	DATA PG1	O	DATA output for TC9163/M66320/LM7001/LV1010	—
76	T. MUTE PG2	O	TUNER: MUTE	H
77	STEREO PG3	I	TUNER: STEREO input	H
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	—

● Key Matrix

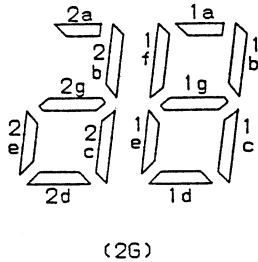
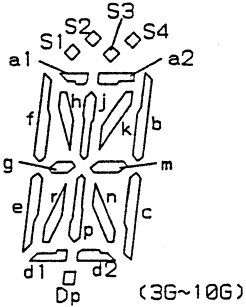
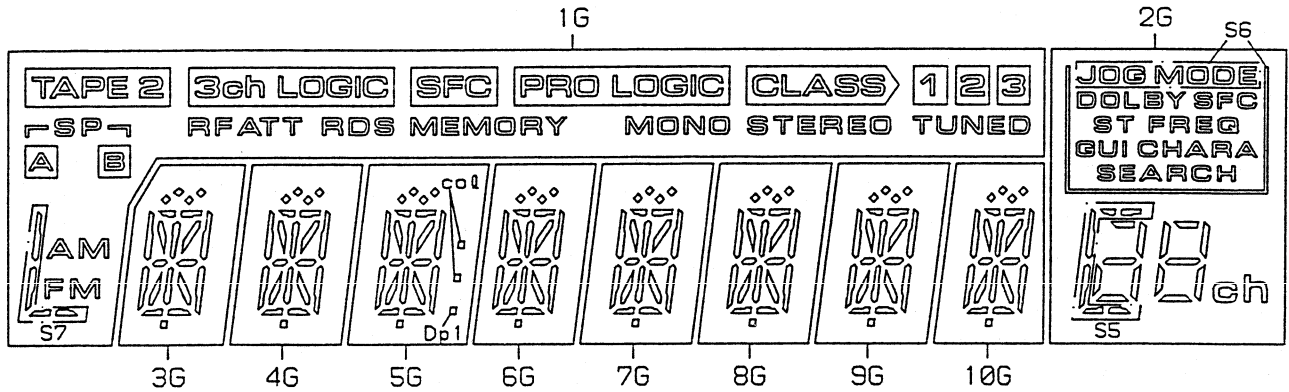
	KO1	KO2	KO3	KO4	KO5	KO6	KO7	KO8	KO9	KO10
KI1	—	TUNER MEMORY	CD	3CH	PHONO	POWER	VIDEO	ASC1	—	DESTINATION 1
KI2	BAND	ENTER	DISP	SFC	TUNER	—	RETURN	ASC2	VCR1	DESTINATION 2
KI3	MPX	SELECT	SBASS	DOLBY	LD	SPEAKER A	SPEAKER B	ASC MONO	TAPE 2	DESTINATION 3

	VSX-454, VSX-464S	VSX-504S
Destination 1	OFF	OTHER
Destination 2	OFF	
Destination 3	OFF	

## 8. FL INFORMATION

### AAV7013 (V901: FL AND UCOM ASSY)

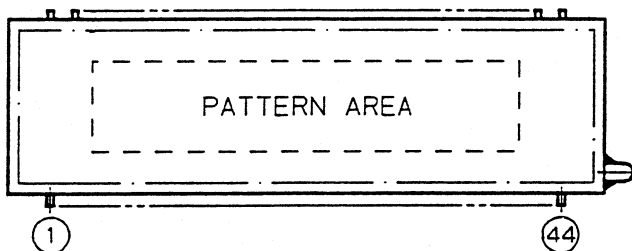
- FL TUBE
- Grid Assignment



#### ● 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	B	2c	k	k	k
P6	RSP	2e	b	b	b
P7	TAPE 2	1a	f	f	f
P8	RFATT	1b	m	m	m
P9	3gh 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	gh	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	F	F	N	N	0	9	8	7	6	5	4	3	2	1	N	N	N	2	2	2	1	1	1	1	1	1	1	1	1	1	P	P	P	P	P	P	P	P	P	N	N	F	F	
	1	1	P	P	G	G	G	G	G	G	G	G	G	C	C	C	3	2	1	0	9	8	7	6	5	4	3	2	1	0	9	8	7	6	5	4	3	2	1	P	P	2	2	

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



## 9. DISASSEMBLY

### CAUTION !

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

#### < Removing the Charge >

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

### 9.1 PS AND 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 AND 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 AND FUNC assy.
7. Remove the rear panel, and power block from the chassis at the same time, according to the Fig. 1

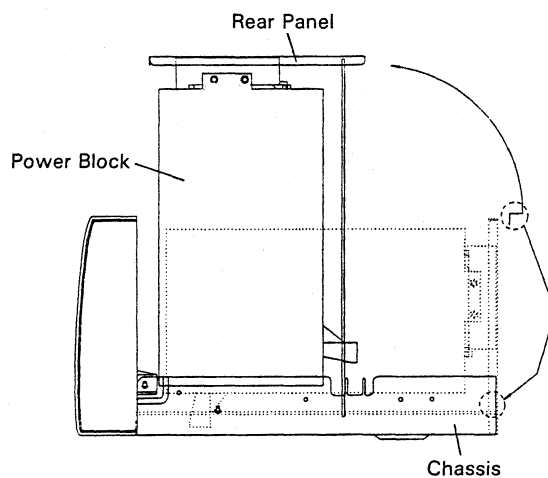
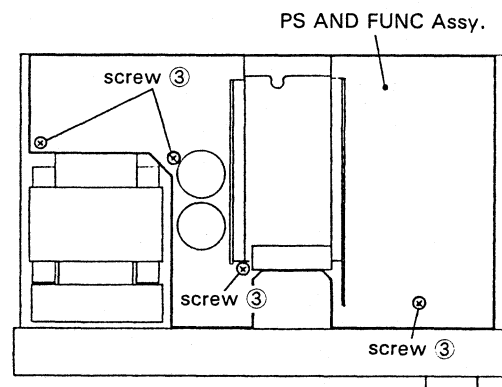
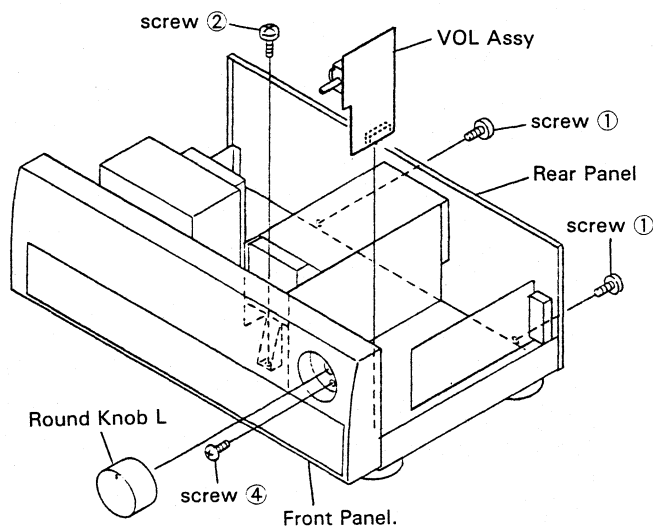
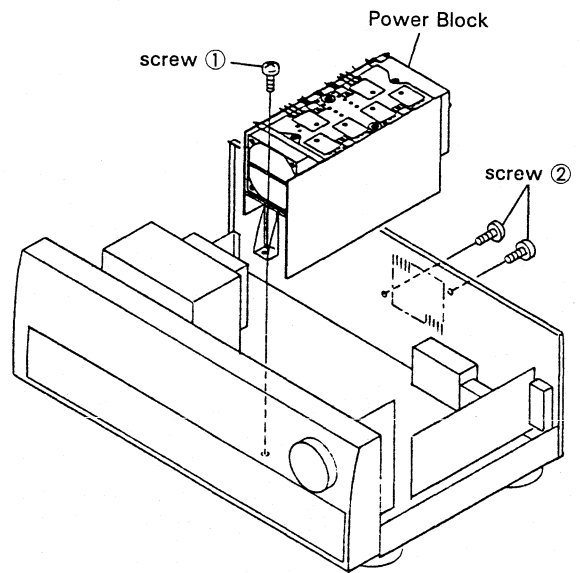


Fig. 1

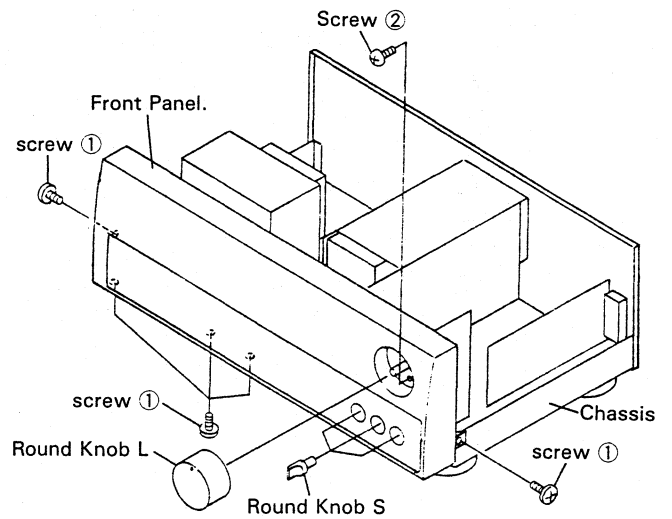
**9.2 POWER BLOCK**

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



**9.3 FL AND UCOM ASSY**

1. Remove the Bonnet case.
2. Remove the five 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 AND UCOM assy.



<Location of the FL AND UCOM assy Fixing Screws>

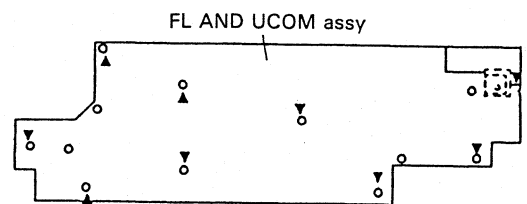


Fig. 2

Points where the PCB Mold (AMR2533) is attached to the chassis: 7 points stamped on the chassis as Nos. 0, 1, 2, 3, 4, 7, and 10.

**10. REMOTE CONTROL UNIT [CU-VSX095 (AXD7045)]  
[CU-VSX098 (AXD7056)]**

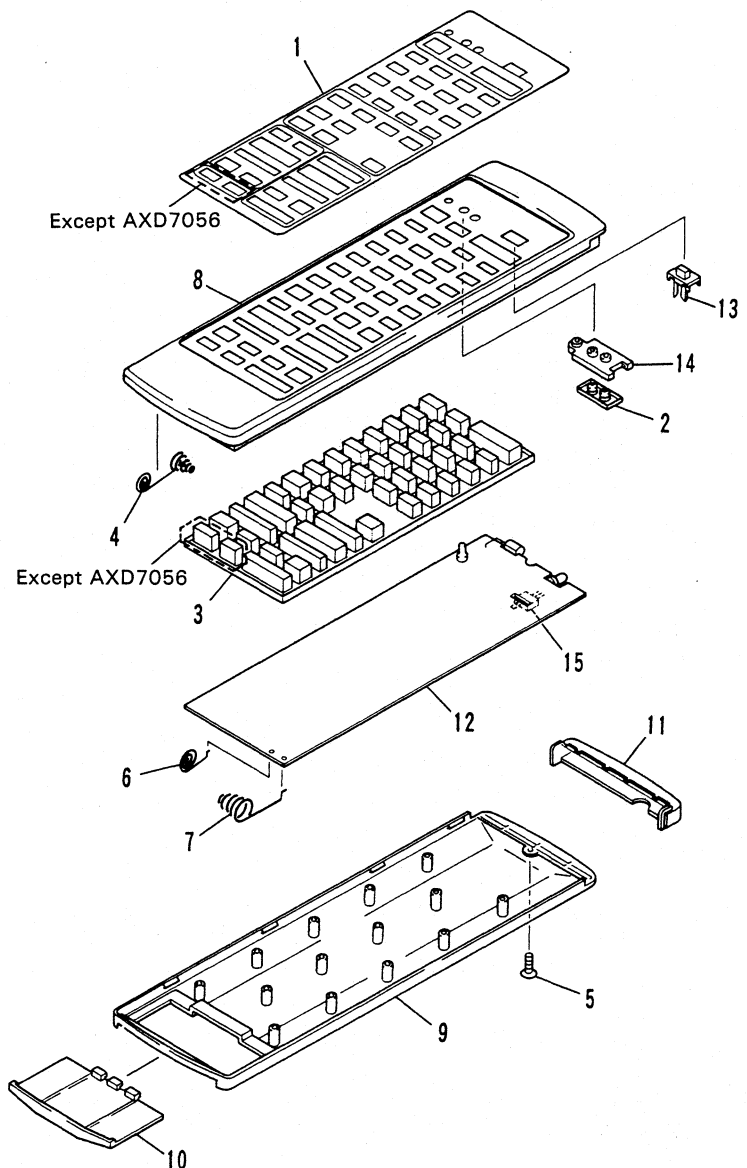
**10.1 EXPLODED VIEW AND PARTS LIST**

**NOTES :**

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\triangle$  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	Parts No.
	1	PLATE (For AXD7045)	AZA2005
	1	PLATE (For AXD7056)	AZA7099
	2	RUBBER SHEET (A) (S102)	AZA1985
	3	RUBBER SHEET (B) (S103) (For AXD7045)	AZA2006
	3	RUBBER SHEET (B) (S103) (For AXD7056)	AZA7098
	4	TERMINAL	AZB1334
	5	SCREW	AZB1335
	6	TERMINAL (A)	AZB1379
	7	TERMINAL (B)	AZB1380
	8	CASE (A)	AZN2254
	9	CASE (B)	AZN2255
	10	BATTERY COVER	AZN2256
	11	FILTER	AZN2257
	12	P. C. BOARD	AZN2258
NSP	13	KNOB (VIDEO/AUDIO)	AZN2259
	14	FRAME	AZN2260
	15	SLIDE SW (S101)	AZS1134





**10.2 PCB PARTS LIST**

**NOTES :**

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  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 $\Omega$   $\rightarrow$  56  $\times$  10<sup>1</sup>  $\rightarrow$  561 ..... RD1/8PM  $\begin{matrix} \square & \square & \square & \square \\ 5 & 6 & 1 & J \end{matrix}$   
 47k $\Omega$   $\rightarrow$  47  $\times$  10<sup>3</sup>  $\rightarrow$  473 ..... RD1/4PS  $\begin{matrix} \square & \square & \square & \square \\ 4 & 7 & 3 & J \end{matrix}$   
 0.5 $\Omega$   $\rightarrow$  0R5 ..... RN2H  $\begin{matrix} \square & \square & \square & \square \\ 0 & R & 5 & K \end{matrix}$   
 1 $\Omega$   $\rightarrow$  010 ..... RS1P  $\begin{matrix} \square & \square & \square & \square \\ 0 & 1 & 0 & K \end{matrix}$

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

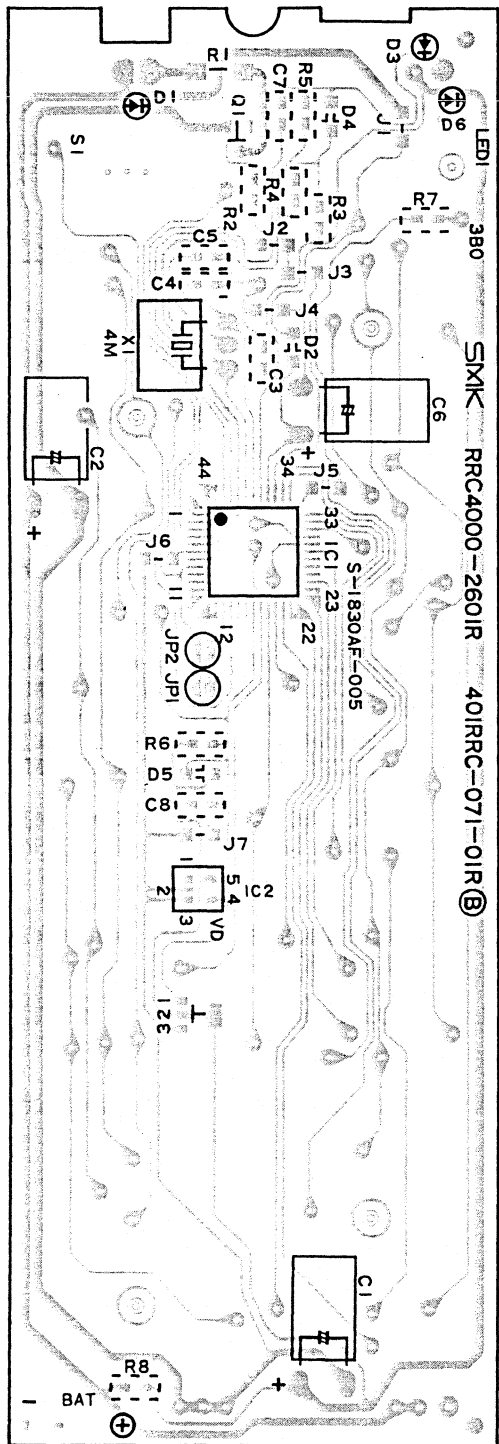
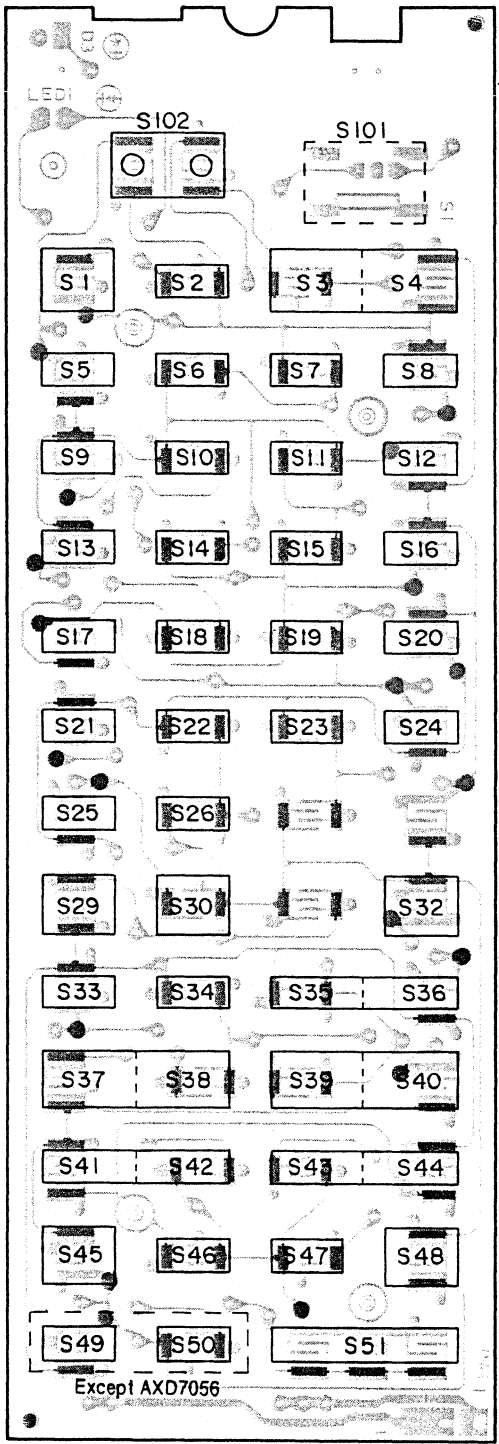
5.62k $\Omega$   $\rightarrow$  562  $\times$  10<sup>1</sup>  $\rightarrow$  5621 ..... RM1/4PC  $\begin{matrix} \square & \square & \square & \square \\ 5 & 6 & 2 & 1 \end{matrix}$  F

Mark No.	Description	Parts No.
<b>SEMICONDUCTORS</b>		
IC1	$\mu$ -COM	AZC1841
IC2	IC	PST9121N
Q1	CHIP TRANSISTOR	2SC3265
D1	LED	SE303A-C
D2	CHIP DIODE	RLS73
D3	DIODE	SPS-503C-3
D4, 5	CHIP DIODE	RLS73
D6	LED	SLC-22VR
<b>CAPACITORS</b>		
C1	ELECT. CAPACITOR	CEAS221M25
C2	ELECT. CAPACITOR	CEAS101M10
C3	ELECT. CAPACITOR	CEAS0R1M50
C4, 5	CERAMIC CAPACITOR	CCDSL330J50
C6	ELECT. CAPACITOR	CEAS101M10
C7	CERAMIC CAPACITOR	CCDSL101J50
C8	ELECT. CAPACITOR	CEAS0R1M50
<b>RESISTORS</b>		
R1	CARBON FILM RESISTOR	RD1/4PM020J
	Other resistors	RD1/8PM $\begin{matrix} \square & \square & \square & \square \\ & & & J \end{matrix}$
<b>OTHERS</b>		
X1	RESONATOR	FCR4.0MC3

10.3 PCB PATTERN

- A  : Indicates a chip resistor.
-  : Indicates a chip capacitor.
-  : Indicates a chip transistor.
-  : Indicates a chip diode.

A



B

C

D

10.4 SCHEMATIC DIAGRAM

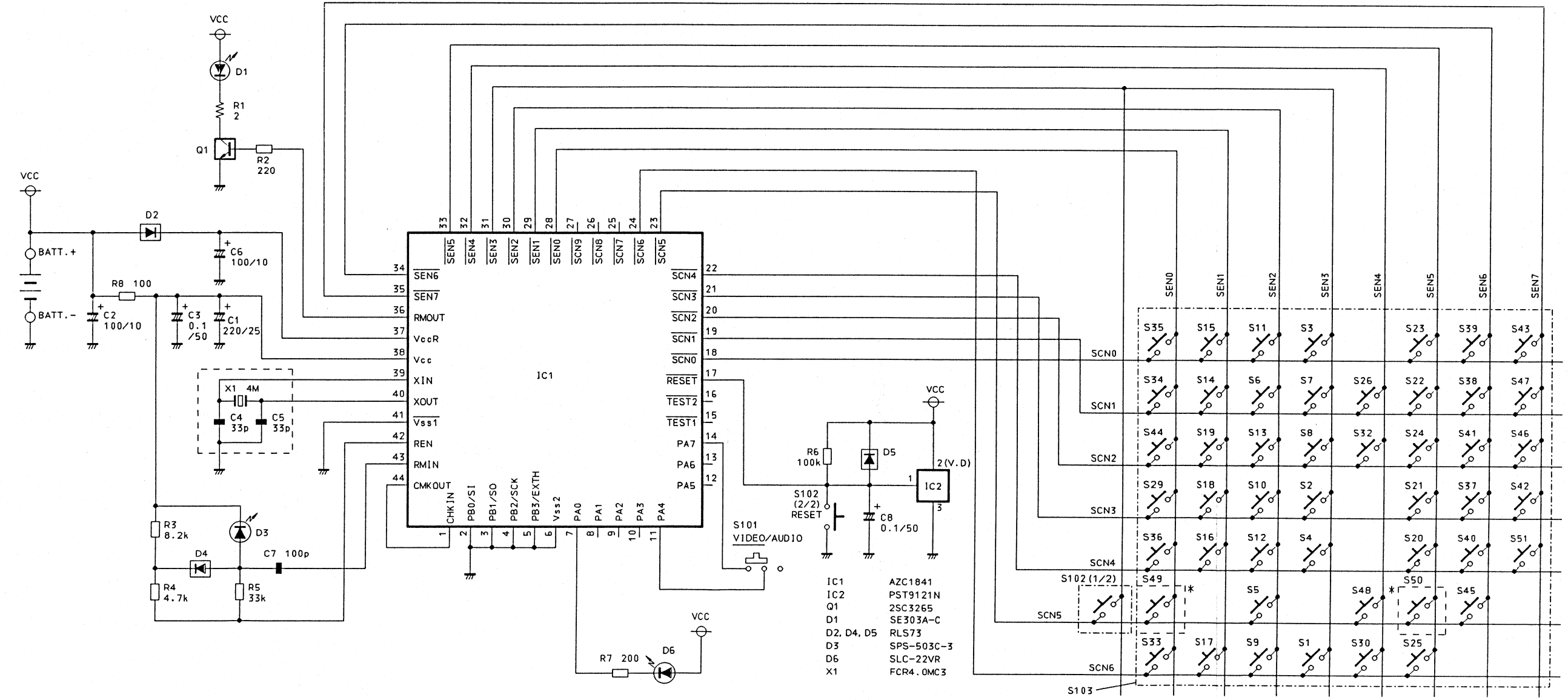
NOTE FOR SCHEMATIC DIAGRAMS (Type 2A)

- When ordering service parts, be sure to refer to "PARTS LIST OF EXPLODED VIEWS" or "PCB PARTS LIST".**
- Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.**
- RESISTORS:**  
Unit: k:kΩ, M:MΩ, or Ω unless otherwise noted.  
Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.  
Tolerance: (F): ±1%, (G): ±2%, (K): ±10%, (M): ±20% or ±5% unless otherwise noted.
- CAPACITORS:**  
Unit: p:pF or μ:μF unless otherwise noted.  
Ratings: capacitor (μF)/ voltage (V) unless otherwise noted.  
Rated voltage: 50V except for electrolytic capacitors.
- COILS:**  
Unit: m:mH or μ:μH unless otherwise noted.
- 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.

- OTHERS:**  
• ∅ or ○ : Adjusting point.  
• : Measurement point.  
• The Δ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.
- SCH-□ ON THE SCHEMATIC DIAGRAM:**  
• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram.)
- SWITCHES (Underline indicates switch position):**

- |                                |                                  |
|--------------------------------|----------------------------------|
| S101: AUDIO/VIDEO              | S26: CENTER LEVEL-REAR LEVEL +   |
| S102: LEARN-RESET              | S29: FUNCTION                    |
| S1: RECEIVER POWER             | S30: TAPE2 MONITOR               |
| S2: MUTING                     | S32: SLEEP RETURN                |
| S3: MUSTER VOLUME -            | S33: DISC SELECT - (DISC SIDE A) |
| S4: MUSTER VOLUME +            | S34: DISC SELECT + (DISC SIDE B) |
| S5: TV POWER                   | S35: DECK I (VCR CH -)           |
| S6: 1                          | S36: DECK II (VCR CH +)          |
| S7: 2                          | S37: CD/LD                       |
| S8: 3                          | S38: TAPE/VCR                    |
| S9: BAND TV FUNC               | S39: TAPE/VCR                    |
| S10: 4                         | S40: TAPE/VCR                    |
| S11: 5                         | S41: CD/LD                       |
| S12: 6                         | S42: CD/LD                       |
| S13: 0/10                      | S43: TAPE/VCR                    |
| S14: 7                         | S44: TAPE/VCR                    |
| S15: 8                         | S45: POWER                       |
| S16: 9                         | S46: CD/LD                       |
| S17: FREQUENCY TV VOLUME -     | S47: TAPE/VCR                    |
| S18: FREQUENCY TV VOLUME +     | S48: POWER                       |
| S19: STATION TV CHANNEL -      | S49: ASC1                        |
| S20: STATION TV CHANNEL +      | S50: ASC2                        |
| S21: SURR MODE                 | S51: TAPE SELECT TV/VCR          |
| S22: 3CH LOGIC                 |                                  |
| S23: TEST TONE                 |                                  |
| S24: CENTER MODE (DELAY TIME)  |                                  |
| S25: CENTER LEVEL-REAR LEVEL - |                                  |

- NOTE
- : Indicates a chip resistor.
  - : Indicates a chip capacitor.
  - : Indicates a chip transistor.
  - : Indicates a chip diode.



Note: \* Except AXD7056

SCH-8 SCHEMATIC DIAGRAM (AXD7045, AXD7056)

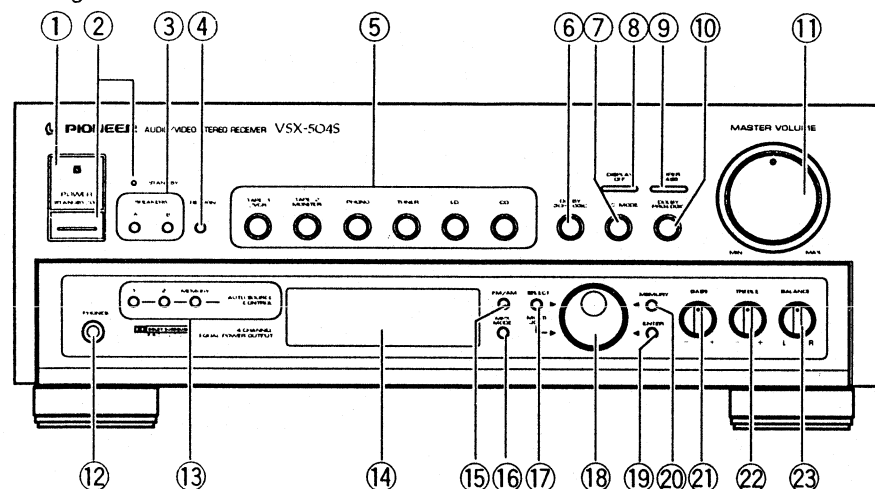
SCH-8 SCHEMATIC DIAGRAM (AXD7045, AXD7056)



## 11. PANEL FACILITIES

### FRONT PANEL FACILITIES (For VSX-504S)

Illustration shows multi-voltage model.



#### ① Remote sensor

#### ② POWER STANDBY/ON switch

##### STANDBY indicator (Multi-voltage model only)

This is the switch for electric power.

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

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

##### (Multi-voltage model only)

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

##### (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.

#### ③ SPEAKERS buttons (A,B)

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

#### ④ RETURN button

Press this button to return the receiver to its initial state. TUNER is selected at this initial state. Adjust the sound level by using the MASTER VOLUME control.

TAPE 2 MONITOR .... OFF    MUTING ..... OFF  
SFC MODE ..... OFF    FUNCTION ..... TUNER  
SUPER BASS ..... OFF

And SPEAKERS buttons switch as follows.

Before pressing the RETURN button	After pressing
Both A and B are off	→ Only A is on
Only A is on	→ No change
Only B is on	→ Both A and B are on
Both A and B are on	→ No change

##### NOTE:

Press the RETURN button, and the frequency last selected is received. If reception of the frequency last selected is not possible, the mode automatically switches to AUTO TUNING.

#### ⑤ Input selector buttons

##### TAPE 1/VCR

: 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** : Press when performing playback on an LD player.

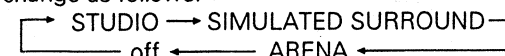
**CD** : Press when playing compact discs on a CD player.

#### ⑥ DOLBY 3CH LOGIC button

Select this setting when stereo-source regeneration and rear speakers are not connected and you wish to use the front L, front R, and center speakers to enjoy audio/visual material bearing the mark.

#### ⑦ SFC MODE button

Each time you press it, the mode and the display indications change as follows.



#### ⑧ DISPLAY OFF button

This switches the display OFF.

#### ⑨ SUPER BASS button

Press this button when you want to boost the bass.

#### ⑩ DOLBY PRO-LOGIC button

Switches DOLBY PRO-LOGIC SURROUND on and off.

#### ⑪ MASTER VOLUME control

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

#### ⑫ 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 the speakers and listen to it only through the headphones.

#### ⑬ AUTO SOURCE CONTROL buttons

##### 1, 2 buttons:

These buttons are for memorizing and recalling your current settings. Both 1 and 2 can be used to memorize settings. If you connect another component, such as a CD player, to the CONTROL OUT jack on the rear panel, the signals to switch power on and start play are also transmitted.

##### MEMORY:

Use when memorizing settings to a 1, 2 button.

#### ⑭ Display section

#### ⑮ FM/AM button

Use this to switch between FM and AM frequency band reception.

#### ⑯ MPX MODE button

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

##### Auto stereo mode

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

##### Monaural mode

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

##### NOTE:

This button has no effect on reception of AM broadcasts.

#### ⑰ SELECT button

Press this button to switch to the station mode. Then you can turn the MULTI-JOG to select a station.

When in the Frequency mode, tuning the MULTI-JOG raises or lowers the frequency.

#### ⑱ MULTI-JOG

Use during tuner operation to select frequencies and station numbers.

#### ⑲ ENTER button

Press this button when you are in the frequency preset mode, and the displayed frequency is memorized in the selected station. (Station indications stop flashing and stay lit.)

#### ⑳ MEMORY button

Press this button to switch to the frequency preset mode.

#### ㉑ BASS control

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

#### ㉒ TREBLE control

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

#### ㉓ BALANCE control

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

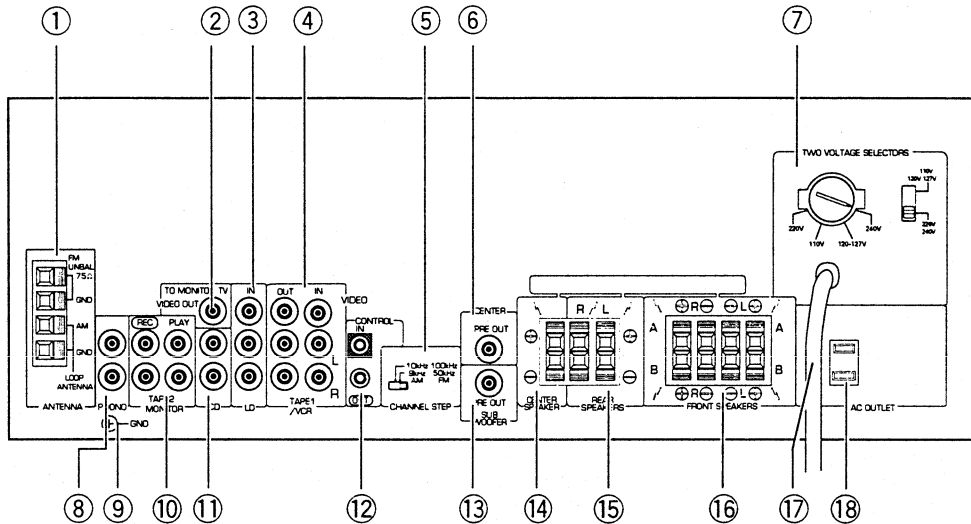
**L**: Decreases the sound on the right side.

**R**: Decreases the sound on the left side.

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

**REAR PANEL FACILITIES (For VSX – 504S)**

Illustration shows Multi-voltage model.



**① FM/AM ANTENNA terminals**

Use these antenna terminals for reception of normal FM and AM broadcasts.

**② VIDEO OUT (TO MONITOR TV) jack**

Connect to a monitor TV or to TV sets with video input terminals to watch program materials from a VCR or LD player connected to this unit.

**③ LD input jacks**

Connect to an LD player's output jacks (audio, video).

**④ TAPE 1/VCR jacks**

Connect to the first cassette deck or a VCR. With a VCR, also connect the video jacks.

**⑤ CHANNEL STEP switch**

**(Multi-voltage model only)**

**⑥ CENTER PRE OUT jack**

When a separate power amplifier is used to drive the surround center speaker, connect the power amplifier to this jack.

**⑦ TWO VOLTAGE SELECTORS switches**

**(Multi-voltage model only)**

**⑧ PHONO input jacks**

Connect to the output cables from a turntable.

**⑨ GND terminal**

Connect the turntable ground lead to this terminal.

**⑩ TAPE 2 MONITOR jacks**

Connect to audio components such as a second cassette deck or a graphic equalizer.

**⑪ CD input jacks**

Connect to the output jacks of a compact disc player.

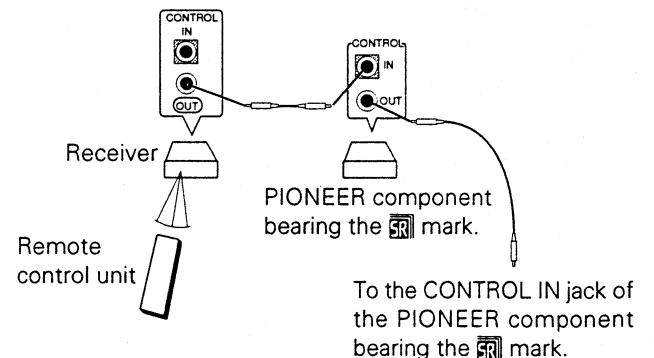
**⑫ CONTROL IN/OUT jacks**

**IN** :Connect this jack to other Pioneer components when using those components to control this unit.

**OUT** :Connect this jack to other Pioneer components when using the remote control of this unit to control the other components.

**NOTE :**

*The receiver's remote sensor does not function when a plug is inserted in the IN jack. To operate, point the remote control unit at the remote sensor on the component to which the receiver's IN jack is connected.*



## ⑬ SUB WOOFER PRE OUT jack

If you want to boost the low frequencies, connect to a subwoofer power amplifier.

## ⑭ CENTER SPEAKER terminals

Connect the center speaker to these terminals.

### NOTE:

*Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other. Use a center speaker with an impedance of 8  $\Omega$  to 16  $\Omega$ .*

## ⑮ REAR SPEAKERS terminals

Connect the rear speakers to these terminals.

### NOTES:

- *Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other. Use rear speakers with an impedance of 8  $\Omega$  to 16  $\Omega$ .*
- *Be sure to connect two speakers (L, R). There will be no sound if only one speaker is connected.*

## ⑯ FRONT SPEAKERS terminals

**A** :Connect to the first set of speakers.

**B** :Connect to the second set of speakers.

### NOTE:

*Do not allow any of the cord's conductors to protrude from the terminals or touch any other conductors. Malfunctions or breakdowns may occur when conductors come into contact with each other. Use front speakers with an impedance of 8  $\Omega$  to 16  $\Omega$ .*

## ⑰ Power cord

## ⑱ AC OUTLET

(U.S. and Canadian models)

**[SWITCHED 100 W (0.8 A) MAX]**

Power supplied through this outlet is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W (0.8 A).

(Multi-voltage model)

**[SWITCHED 100 W MAX]**

Power supplied through this outlet is turned on and off by the receiver's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W.

### NOTES:

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

### CAUTION:

**DO NOT CONNECT MONITOR OR TV SET.**

## 12. SPECIFICATIONS

### For VSX-504S

#### Amplifier Section

**Continuous average power output of 150 watts\* per channel, min., at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.09%\*\* total harmonic distortion (front).**

[Multi-voltage model only]

Continuous Power Output (DIN)

Front (1kHz, T.H.D. 1%, 8 Ω) ..... 165 W+165 W

Continuous Power Output

Front ..... 110 W + 110 W (1kHz, 0.8%, 8 Ω)

Center ..... 110 W (1kHz, 0.8%, 8 Ω)

Rear ..... 110W (1kHz, 0.8%, 8 Ω)

Dynamic Power (2 Ω /4 Ω/8 Ω) ..... 350 W/280 W/180 W

Input (Sensitivity/Impedance)

PHONO MM ..... 2.8 mV/47 kΩ

CD, TAPE 1/VCR, TAPE 2, LD ..... 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, TAPE 1/VCR,

TAPE 2, LD ..... 5 Hz to 100,000 Hz  $\pm 0.3$  dB

Output (Level/Impedance)

TAPE 1/VCR REC, TAPE 2 REC ..... 200 mV/2.2 kΩ

Tone Control

BASS ..... ± 8 dB (150 Hz)

TREBLE ..... ± 8 dB (10 kHz)

SUPER BASS ..... +8 dB (80 Hz)

Signal-to-Noise Ratio (IHF, short circuited, A network)

PHONO MM ..... 76 dB

CD, TAPE 1/VCR, TAPE 2, LD ..... 97 dB

Signal-to-Noise Ratio [EIA, at 1 W (1 kHz)]

PHONO MM ..... 77 dB

CD, TAPE 1/VCR, TAPE 2, LD ..... 80 dB

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

\*\* Measured by Audio Spectrum Analyzer.

#### VIDEO Section

Input (Sensitivity/Impedance)

VCR, LD ..... 1 Vp-p/75 Ω

Output (Level/Impedance)

VCR REC ..... 1 Vp-p/75 Ω

Frequency Response

VCR, LD → MONITOR ..... 5 Hz to 7 MHz  $\pm 0.3$  dB

Signal-to-Noise Ratio ..... 55 dB

Cross Talk ..... 55 dB

#### FM Tuner Section

Frequency Range ..... 87.5 MHz to 108 MHz

Usable Sensitivity ..... Mono: 11.2 dBf, IHF (1.0 μV/75 Ω)

50 dB Quieting Sensitivity ..... Mono: 16.8 dBf

Stereo: 38.6 dBf

Signal-to-Noise Ratio ..... Mono: 73 dB (at 85 dBf)

Stereo: 70 dB (at 85 dBf)

Distortion ..... Stereo: 0.5 % (1 kHz)

Alternate Channel Selectivity ..... 60 dB (400 kHz)

Stereo Separation ..... 40 dB (1 kHz)

Frequency Response ..... 30 Hz to 15 kHz (± 1) dB

Antenna Input ..... 75 Ω unbalanced

#### AM Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz (9 kHz step)

530 kHz to 1,700 kHz (10 kHz step)

Sensitivity (IHF, Loop antenna) ..... 350 μV/m

Selectivity ..... 25 dB

Signal-to-Noise Ratio ..... 50 dB

Antenna ..... Loop antenna

#### Miscellaneous

Power Requirements

U.S. and Canadian models ..... AC 120 V, 60 Hz

Multi-voltage model ... AC 110 V/120-127 V/220 V/240 V

(Switchable), 50/60 Hz

Power Consumption

U.S. and Canadian models ..... 340W, 500VA

Multi-voltage model ..... 905 W

In Standby Condition ..... 3W

AC Outlets

U.S. and Canadian models

SWITCHED ..... 100 W (0.8 A) MAX

Multi-voltage model

SWITCHED ..... 100 W MAX

Dimensions ..... 420 (W) × 155 (H) × 300 (D) mm

16-9/16 (W) × 6-1/8 (H) × 11-13/16 (D) in

Weight (without package) ..... 9.5 kg (20 lb 15 oz)

#### Furnished Parts

FM Antenna ..... 1

AM Loop Antenna ..... 1

Dry Cell Batteries

[size "AAA" (IEC LR03/AM-4)] ..... 2

Remote Control Unit ..... 1

Operating Instructions ..... 1

#### NOTE:

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