

Service Manual



ORDER NO.
RRV1051

STEREO TUNER AMPLIFIER

SX-J520

SX-J420

SX-J320

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

Type	Model			Power Requirement	The voltage can be converted by the following method.
	SX-J520	SX-J420	SX-J320		
HE	○	○	○	AC220-230V	AC240V, *
HB	○	○	○	AC240V	AC220-230V, *
HL	—	○	○	AC220-230V/240V	With the voltage selector
SD	—	○	○	AC110-115V/120-127V/220-230V/240V	With the voltage selector
HEWZI	○	○	○	AC220-230V	AC240V, *

*: Alter the wiring of the Power-supply block at the primary winding of Power transformer referring to the "Line Voltage Selection" described in Service Manual.

● **These products are systems components.**

Each of these products does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.

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1. EXPLODED VIEWS, PACKING AND PARTS LIST

NOTES :

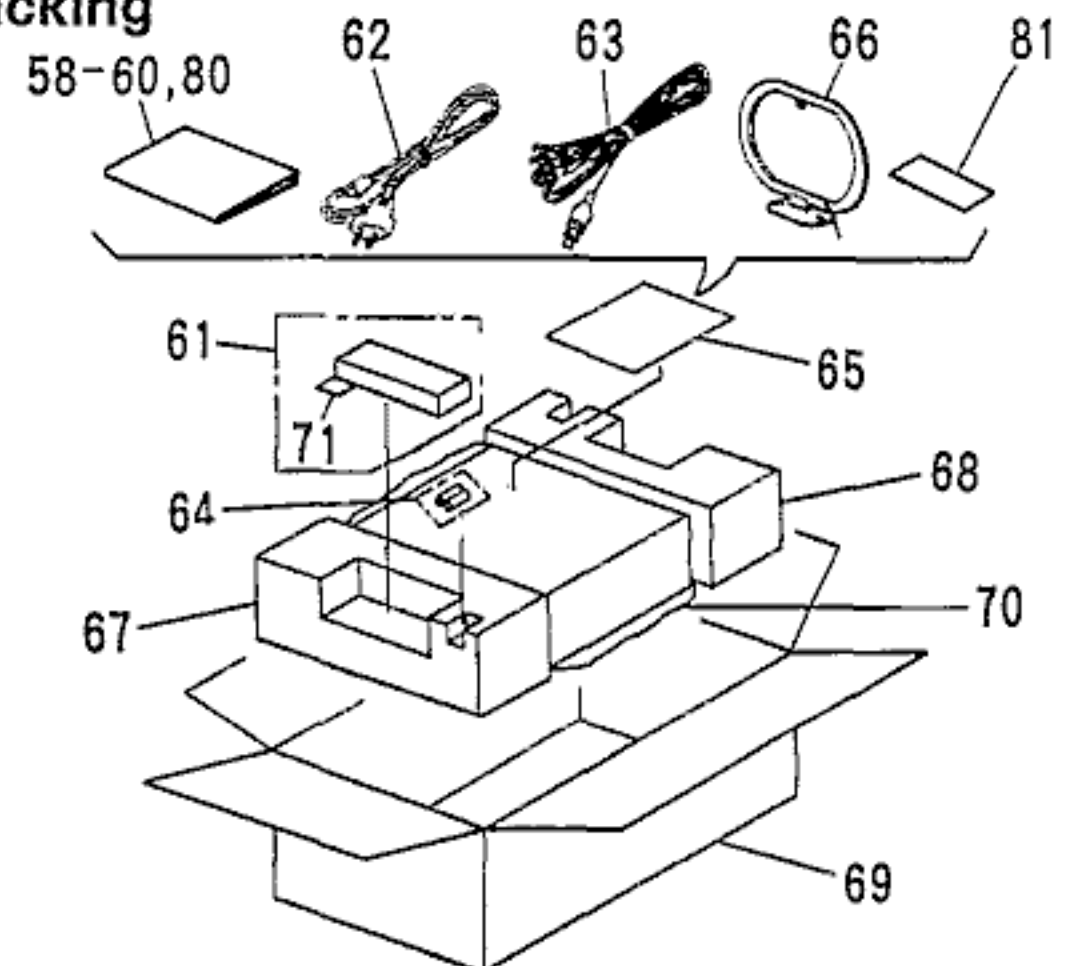
- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙"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

1.1 EXTERIOR AND PACKING

● **Parts List**

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	FRONT PANEL (PLS)	AMB2195		46	FUNC ASSY	AWZ5195
Δ	2	POWER TRANSFORMER (T1)	ATS1508	NSP	47	SUPPORT ASSY	AWZ5291
	3	TERMINAL SCREW	AKE-031		48	FRONT ASSY	AWZ5203
Δ	4	AC INLET (1P) (CN1)	AKP1132		49	BARRIER (PVC)	AEC7005
Δ	5	FUSE (T2A/250V, FU2)	AEK-511	NSP	50	H. P. ASSY	AWZ5208
	6	FLEXIBLE CABLE (J101)	ADD1112	NSP	51	SP ASSY	AWZ5261
NSP	7	CHASSIS (MTL)	ANA1193	NSP	52	TACT SW ASSY	AWZ5230
	8	REAR PANEL	ANC2130		53	FM/AM TUNER MODULE	AXQ1013
	9	RUBBER SHEET	AEB1247		54	POWER MODULE (F100)	AXQ1017
	10	LEG ASSY (S)	AMR1937		55	SCREW	ABA-115
	11	NYLON BINDER	AEC-093		56	SP CHANGE BUTTON (PLS)	AAD2527
	12	NYLON RIVET	AEC1160	NSP	57	SW ASSY	AWZ5214
NSP	13	PCB SPACER	AEC1188		58	OPERATING INSTRUCTIONS	ARC1446
NSP	14	PCB SUPPORT	AEC1217			(German, Italian)	
	15	RIVET (PLASTIC)	AEC1359		59	OPERATING INSTRUCTIONS	ARC1447
						(Dutch, Swedish, Spanish,	
NSP	16	PCB SPACER	AEC1371			Portuguese)	
	17	PCB SPACER	AEC1372		60	OPERATING INSTRUCTIONS	ARE1292
NSP	18	REINFORCED BRACKET	ANG1635			(English, French)	
	19	PCB CONNECTOR (PVC)	AEC1500		61	REMOTE CONTROL UNIT	AXD1376
	20	BARRIER	AEC7002			(CU-SX075)	
	21	BINDER	AEP-215	Δ	62	AC POWER CORD	ADG1127
NSP	22	PCB MOULD	AMR1525		63	FM ANTENNA	ADH1019
NSP	23	PCB MOULD	AMR2115	NSP	64	BATTERIES (R03, AAA)	AEX-021
	24	REFLEX PLATE	ANK1259	NSP	65	VINYL BAG	AHG-117
	25	SCREW	ABA1024				
	26	SCREW (STEEL)	ABA1095		66	AM LOOP ANTENNA ASSY	ATB1012
	27	SCREW (STEEL)	ABA1184		67	FRONT PAD	AHA1652
	28	SCREW	BBZ30P080FZK		68	REAR PAD	AHA1653
	29	SCREW	BBZ30P180FMC		69	PACKING CASE	AHD2654
	30	SCREW	BPZ26P080FMC		70	SHEET	AHG1016
	31	SCREW	VPZ30P080FZK		71	BATTERY COVER	AZN2235
	32	REMOTE CONT. FILTER	AAK2261				
	33	LENS (POWER IND)	AAK2343				
	34	KNOB SHEET (PLS)	AAK2522				
	35	DISPLAY PANEL (PLS)	AAK2527				
	36	SUB PANEL (PLS)	AMR2597				
	37	NAME PLATE	PAM1407				
	38	MIC KNOB (PLS)	AAB1379				
	39	VOL KNOB	AAB1322				
	40	POWER BUTTON	AAD2497				
	41	SELECT BUTTON	AAD2499				
	42	BONNET (MTL)	ANE1448				
	43	MAIN ASSY	AWZ5192				
	44	VOLUME ASSY	AWZ5198				
NSP	45	TRANS ASSY	AWZ5593				

● **Packing**



Note: Concerning No. 80 and 81, refer to pages 67 and 68.

Step	Measurement	Item	Remarks
11	—	If the idle current is below 3mA, perform the following procedure.	
12	Lch side	Short between the Point C pattern in Fig. 4-2-3 using solder.	Connect R7551 to R7519 in a parallel circuit.
13	Rch side	Short between the Point D pattern in Fig. 4-2-3 using solder.	Connect R7552 to R7520 in a parallel circuit.
14	—	After performing Step C and D, remeasure the idle current and confirm that it is greater than 3mA (within 3-50mA).	

NOTE: 1. If the idle current is below 3mA, support a resistor (33kΩ) between the emitter and the Q7501 (Lch) and Q7502 (Rch) bias transistor base, and confirm that the idle current is within 3-50mA.
 2. The above step 1 is applied to AWZ5391 of SX-J420 only.

■ Rear Amp Side (REAR, PWR, PRTEC ASSY) Applied to SX-J420 Only.

Step	Measurement	Item	Remarks
1	Center amp side	Short both sides of C7523 and C7524 on the Front Amp side.	Do not operate the Front Amp side.
2		Insert a resistor (0.22Ω, 2W or more) in series in the connector CN7102 +B2 (or -B2) line (terminal No. 5 or 6). (Refer to Fig. 4-2-4.)	For measuring voltage at both sides of resistor
3		Short both sides of C7124 on the Surround Amp side.	Do not operate the Surround Amp.
4		Turn the power ON, wait 6 seconds, and then measure the resistance voltage in Step 2.	Idle current: $I = V/0.22 (\Omega)$
5	Surround amp side	<ul style="list-style-type: none"> ● Same as Steps 1 and 2 above. ● Short both sides of C7123 on Surround Amp side. 	Do not operate Surround Amp.
6		Turn the power ON under the conditions in Steps 1 and 2, and after 6 seconds measure the resistance voltage in Step 2.	
7	—	If the measured idle current is greater than 50mA, perform the following procedure.	
8	Center amp side	Short between the Point E pattern in Fig. 4-2-5 using solder.	Connect R7117 to R7115 in a parallel circuit.
9	Surround amp side	Short between the Point F pattern in Fig. 4-2-5 using solder.	Connect R7118 to R7116 in a parallel circuit.
10	—	After performing Steps 8 and 9, remeasure the idle current and confirm that it is below 50mA.	
11	—	If the idle current is below 3mA, perform the following procedure.	
12	Center amp side	Short between the Point G pattern in Fig. 4-2-5 using solder.	Connect R7151 to R7119 in a parallel circuit.
13	Surround amp side	Short between the Point H pattern in Fig. 4-2-5 using solder.	Connect R7152 to R7120 in a parallel circuit.
14	—	After performing Step G and H, remeasure the idle current and confirm that it is greater than 3mA (within 3-50mA).	

NOTE:

If the idle current is below 3mA, support a resistor (15kΩ) between the emitter and the Q7101 (Center-ch) and Q7102 (Surround-ch) base, and confirm that the idle current is within 3-50mA.

3. Adjusting the Operating Temperature Setting of the Fan Motor (VR7701)

This adjustment is necessary when IC7403 (+12V regulator), Q7301 and Q7302 (temperature sensors), which are mounted on REAR, PWR, PRTEC ASSY or PWR, PRTEC ASSY, or VR7701, which is mounted on PCB of FRONT ASSY FOR 100W or FRONT ASSY FOR 50W, have been replaced.

■ Adjustment-Related Cautions

- Make sure the heat sink has sufficiently cooled (is the same as room temperature Ta.)
- Once the power has been turned ON, make measurements and adjustments as quickly as possible. (If too much time is taken, the heat sink temperature will rise, and the measurements will deviate from the Ta measurement point.)

■ Adjustment

1. Connect a voltmeter between TEMP and TP (or between IC7702 terminals No.3 and 2). (Refer to Figs. 4-2-3 and 4-2-6.)
2. Determine the fan motor operating temperature setting by means of the following formula. (Tolerance is within $\pm 30\text{mV}$.)
Formula: $(85^\circ\text{C} - \text{Ta}) \times 19 \text{ (mV)}$
Ta: ambient temperature ($^\circ\text{C}$)
3. Adjust the VR7701 so that the voltage between TEMP and TP is the value obtained from the above formula.

For example:

when the room temperature is 25°C ,
 set value = $(85 - 25) \times 19 \text{ (mV)}$
 = 1140mV (tolerance within $\pm 30\text{mV}$).

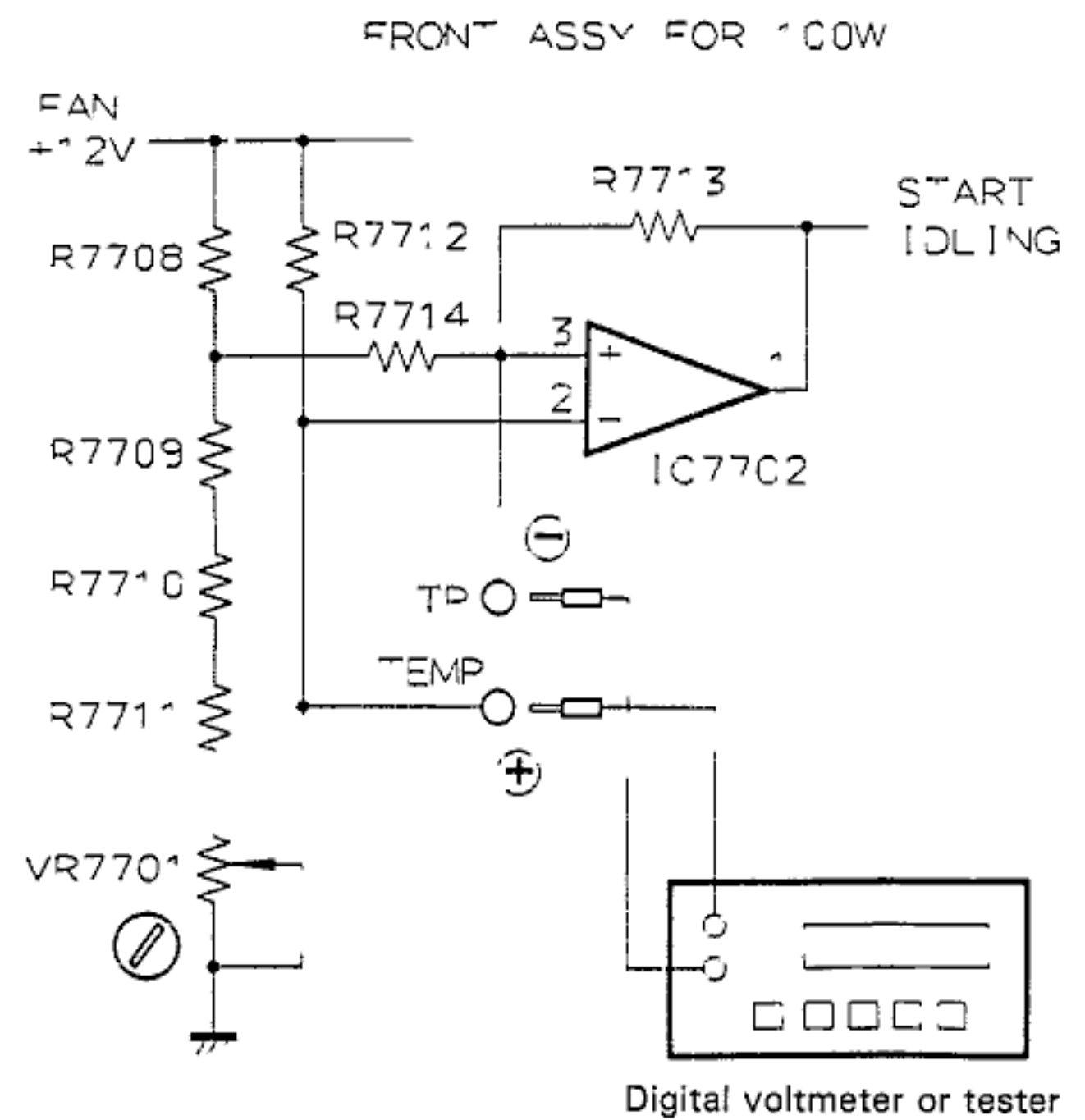
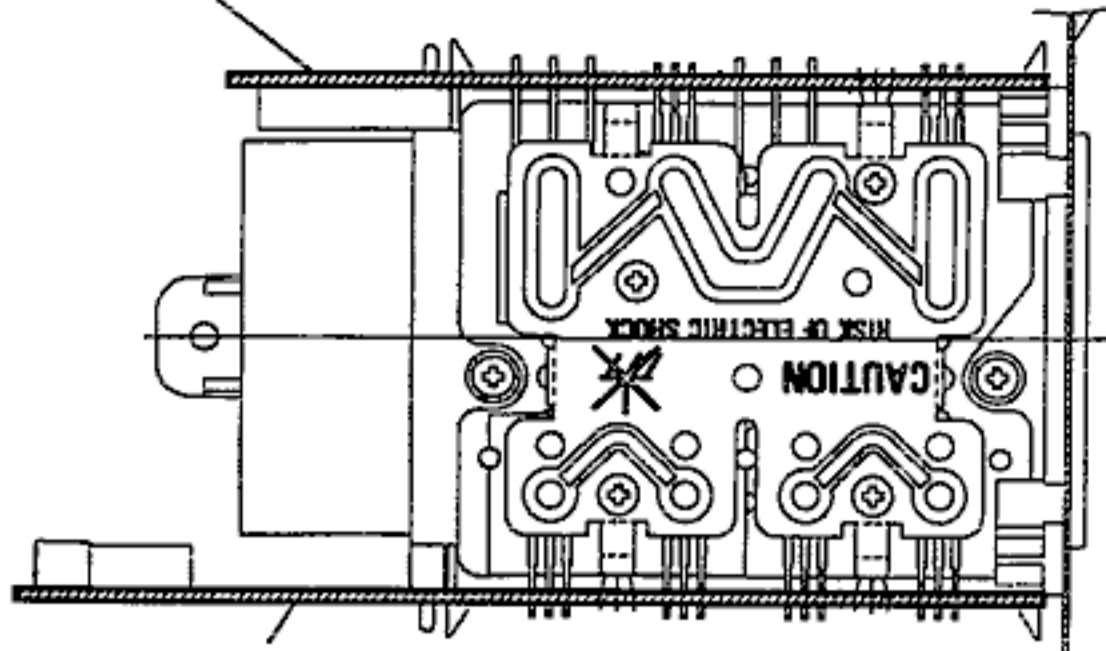


Fig. 4-2-6 Adjustment of Operating Temperature Setting of Fan Motor

FRONT ASSY FOR 100W (Front Amp Side)
FRONT ASSY FOR 50W



REAR, PWR, PRTEC ASSY (Rear Amp Side)

Fig. 4-2-1 Power Amp Module

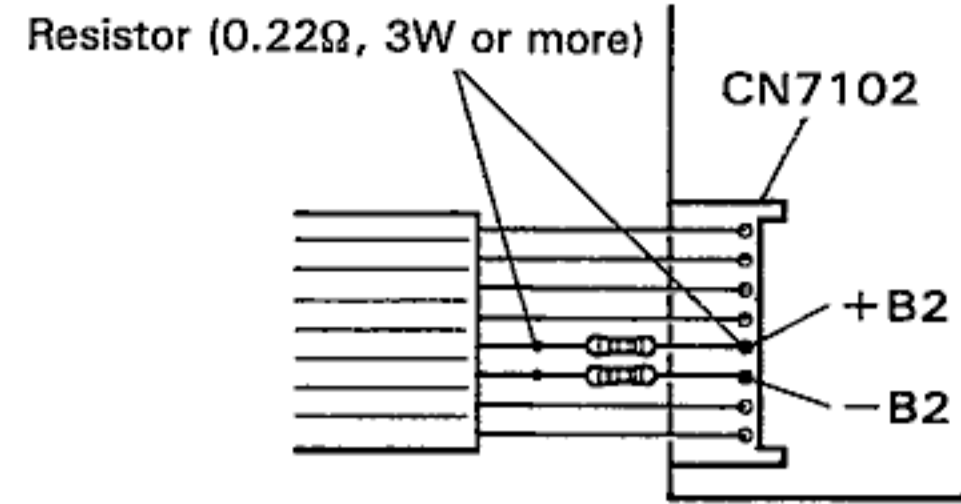


Fig. 4-2-4 REAR, PWR, PRTEC ASSY

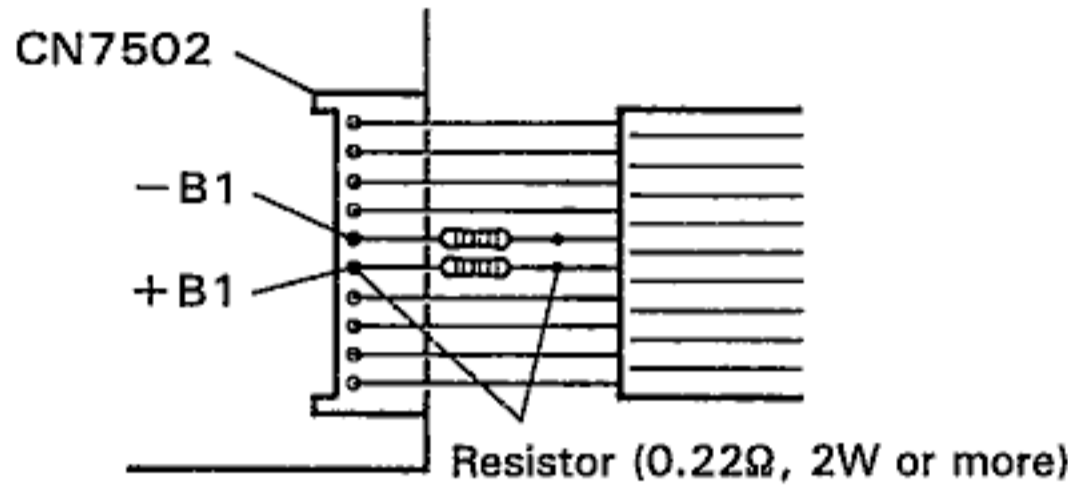


Fig. 4-2-2 FRONT ASSY FOR 100W
FRONT ASSY FOR 50W

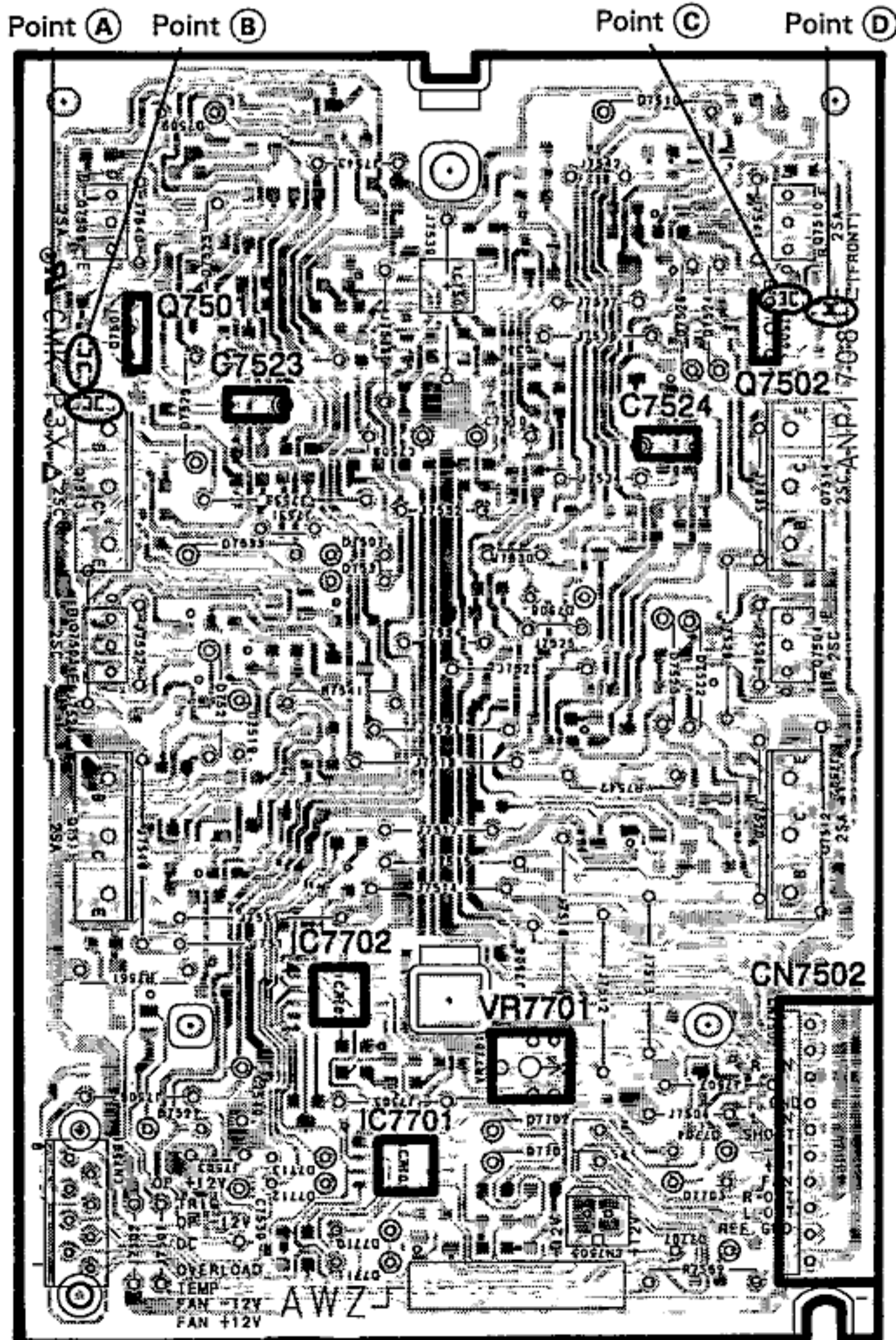


Fig. 4-2-3 FRONT ASSY FOR 100W
FRONT ASSY FOR 50W
(This diagram is viewed from the foil side)

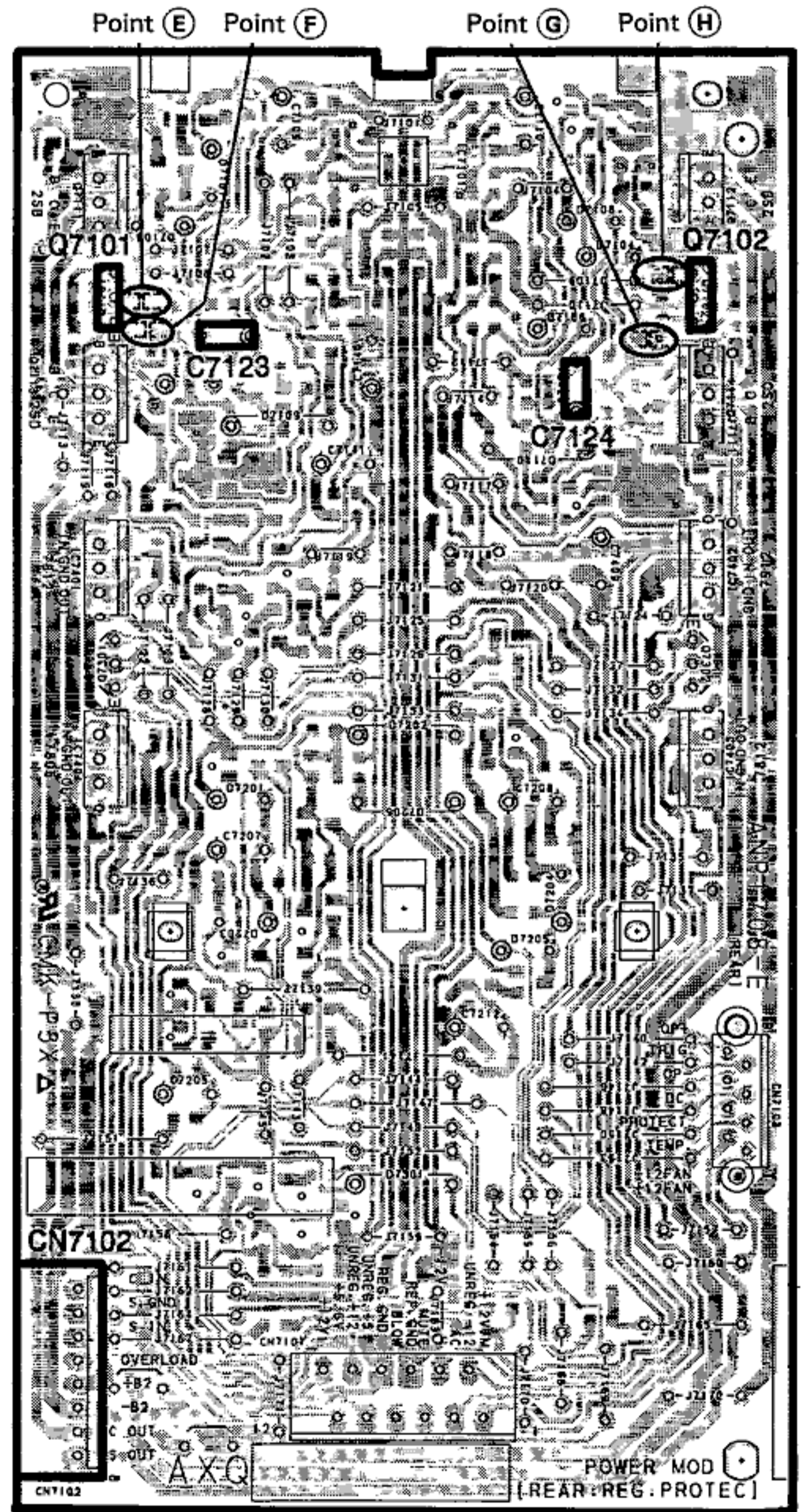
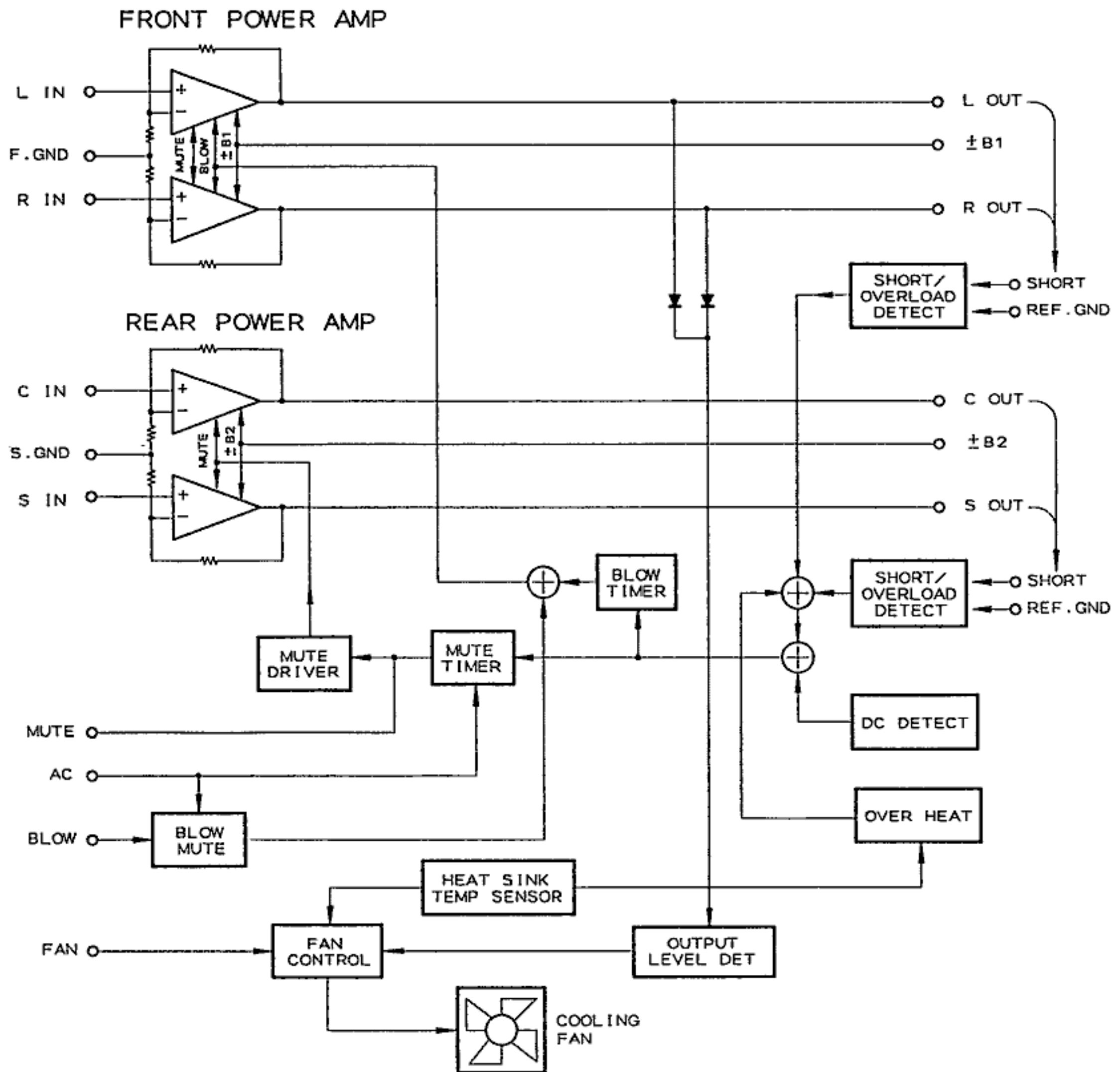
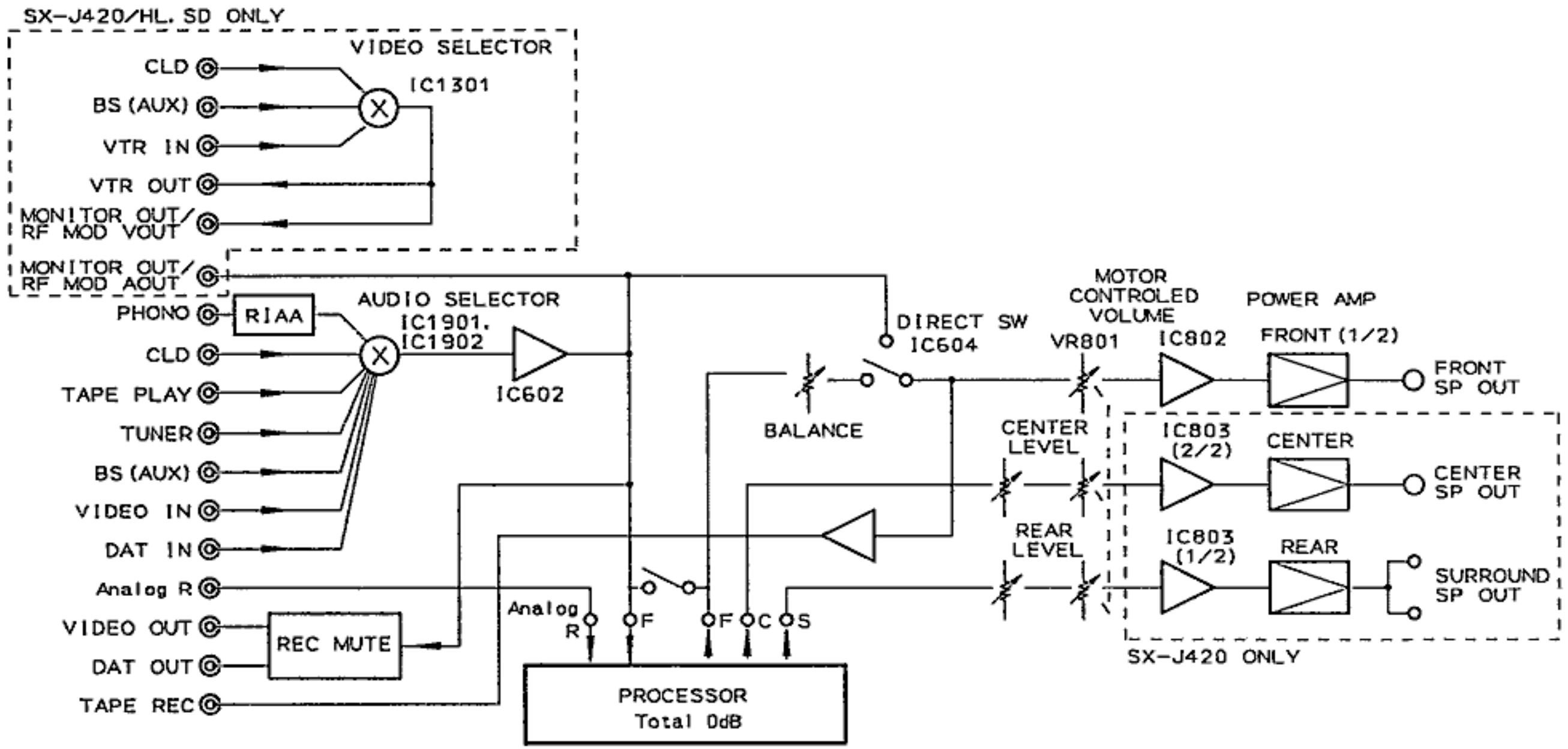


Fig. 4-2-5 REAR, PWR, PRTEC ASSY
(This diagram is viewed from the foil side)

6. BLOCK DIAGRAM

● POWER MODULE



● Pin Function of Power Module

Connector	No.	Name	I/O	Description
CN7101	1	+12V. M	O	+12V separate system stabilized output
	2	UNREG -12	I	Unstabilized power input for -12V
	3	AC	I	AC detection input; for power ON/OFF and MUTE.
	4	-12V	O	Stabilized power output for -12V
	5	MUTE	I/O	Mute external input; outputs internal mute conditions; cancels forced mute.
	6	REF. GND	I	GND for protective circuit; reference GND for short detection
	7	BLOW	I	BLOW circuit external output; ON at $\pm 0.5V$ or more.
	8	REG. GND	I	Reference GND for stabilized power source
	9	UNREG +5	I	Unstabilized power input for +5.6V
	10	UNREG +12	I	Unstabilized power input for +12V and +12V. M
	11	+5.6V	O	+5.6V stabilized output
	12	+12V	O	+12V stabilized output
CN7102	1	C IN	I	Center signal input
	2	S. GND	I	Signal input GND; floating interior type
	3	S IN	I	Surround signal input
	4	OVERLOAD	I	Short detection input for Surround and Center channels
	5	+B2	I	Power supply (+) for Surround and Center channels
	6	-B2	I	Power supply (-) for Surround and Center channels
	7	C OUT	O	Center speaker output
	8	S OUT	O	Surround speaker output
CN7502	1	REF. GND	I	Reference GND for short detection
	2	L OUT	O	Left speaker output
	3	R OUT	O	Right speaker output
	4	FAN	I	Forced fan circuit input (LOW speed)
	5	+B1	I	Power supply (+) for L/R channels
	6	-B1	I	Power supply (-) for L/R channels
	7	SHORT	I	Short detection input for L/R channels
	8	L IN	I	Left signal input
	9	F. GND	I	Signal input GND; floating interior type
	10	R IN	I	Right signal input

7. TEST MODE

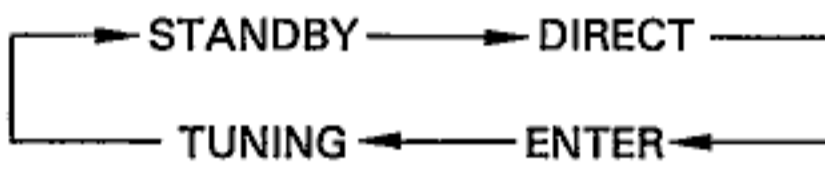
(1) INDEPENDENT OPERATIONAL CHECK OF THE PRODUCTS.

The products (SX-J520, SX-J420 and SX-J320) are components of the system products. For this reason they are not normally operated independently.

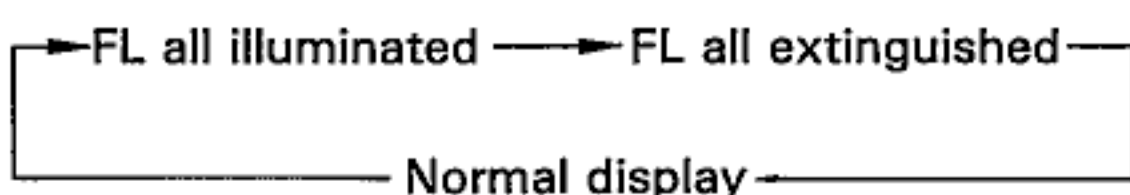
To check them independently, carry out step 1,2 in "(2) HOW TO ENTER TEST MODE," and then turn the power switch ON.

(2) HOW TO ENTER TEST MODE

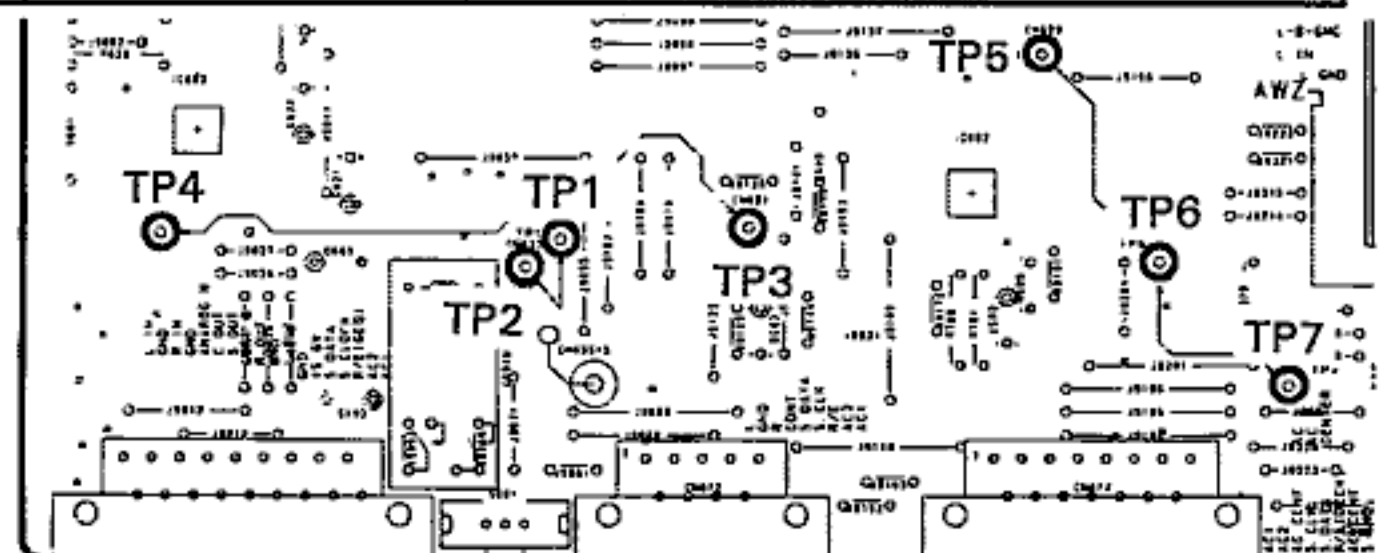
- Short between terminals TP1 and TP2 and TP3 and TP4 in the MAIN assy.
• Short terminals TP5, TP6, and TP7 with a solid wire. In this way the products can be operated and checked independently.
- Insert the products power cord into an AC outlet.
- Send the "A65F power" code to the products.
- Once Test Mode has been entered, the following procedure will start.

Check	AMP (Receiver)	TAPE	CD	GEQ
LED, FL check	Once "A65F" code signal has been received, OEFC (all-round test) command bus is output.  The above LED is illuminated for 0.5 second. ※ Ignore REC LOCK data from TAPE.	REC MUTE PLAY ↓ 4.5 seconds REC PAUSE	PLAY • PAUSE	LED scroll is illuminated
Volume check	Volume (TA8409S) 3 seconds up ↓ 2 seconds DOWN ↓ STOP During the above volume operation the microcomputer checks if the A/D value of the volume position input is normal UP/DOWN. If it is not normal, power will be turned OFF.			
10 seconds	DIRECT ON (LED is illuminated) Output bus command to deck II → REC PLAY Output bus command to CD → CD PLAY FUNCTION changes to CD ← If AUTO FUNCTION command is not received within 1 second after the CD has transmitted a command, power will be turned OFF.	↓ 5 seconds STOP MS REW PLAY	CD AUTO FUNCTION BUS command output	
	FUNCTION changes to TAPE ←	TAPE AUTO FUNCTION BUS command output		

- Once the "A413"(BAND) remote control code has been input during TEST mode, carry out the following procedure.



↑
Front



MAIN assy

8. FOR SX-J520/HB, HEWZI, SX-J420/HE, HB, HEWZI, HL, SD, SX-J320/HE, HB, HEWZI, HL AND SD

NOTES :

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The numbers in "No." column correspond to the numbers on the exploded views and packing.
Refer to "EXPLODED VIEWS, PACKING AND PARTS LIST".

● 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 RD1/8PM 5 6 1 J
 47kΩ → 47 × 10³ → 473 RD1/4PS 4 7 3 J
 0.5Ω → 0R5 RN2H 0 R 5 K
 1Ω → 010 RS1P 0 1 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).
 5.62kΩ → 562 × 10¹ → 5621 RM1/4PC 5 6 2 1 F

CONTRAST OF MISCELLANEOUS PARTS

SX-J520/HB, HEWZI, SX-J420/HE, HB, HEWZI, HL, SD, SX-J320/HE, HB, HEWZI, HL, SD and SX-J520/HE have the same construction except for the following :

Mark	No.	Symbol & Description	Part No.												Remarks
			SX-J520			SX-J420			SX-J320						
			HE	HB	HEWZI	HE	HB	HEWZI	HL	SD	HE	HB	HEWZI	HL		SD
	43	MAIN assy	AWZ5192	AWZ5192	AWZ5193	AWZ5188	AWZ5188	AWZ5189	AWZ5240	AWZ5190	AWZ5185	AWZ5185	AWZ5186	AWZ5238	AWZ5187
	46	FUNC assy	AWZ5195	AWZ5195	AWZ5197	AWZ5195	AWZ5195	AWZ5197	AWZ5290	AWZ5290	AWZ5195	AWZ5195	AWZ5197	AWZ5195	AWZ5195
	44	VOLUME assy	AWZ5198	AWZ5198	AWZ5198	AWZ5201	AWZ5201	AWZ5201	AWZ5200	AWZ5200	AWZ5199	AWZ5199	AWZ5199	AWZ5198	AWZ5198
	48	FRONT assy	AWZ5203	AWZ5203	AWZ5203	AWZ5203	AWZ5203	AWZ5203	AWZ5203	AWZ5203	AWZ5204	AWZ5204	AWZ5204	AWZ5204	AWZ5204
	72	V SEL assy	.....	.....	.....	.....	.....	.....	AWZ5207	AWZ5207	.....	.....	.....	.....	.....
NSP	50	H. P. assy	AWZ5208	AWZ5208	AWZ5209	AWZ5208	AWZ5208	AWZ5209	AWZ5208	AWZ5208	AWZ5208	AWZ5208	AWZ5209	AWZ5208	AWZ5208
NSP	57	SW assy	AWZ5214	AWZ5214	AWZ5214	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
NSP	51	SP assy	AWZ5261	AWZ5261	AWZ5262	AWZ5210	AWZ5210	AWZ5211	AWZ5210	AWZ5210	AWZ5212	AWZ5212	AWZ5213	AWZ5212	AWZ5212
	53	FM/AM TUNER MODULE	AXQ1013	AXQ1013	AXQ1014	AXQ1013	AXQ1013	AXQ1014	AXQ1012	AXQ1012	AXQ1013	AXQ1013	AXQ1014	AXQ1012	AXQ1012
	54	POWER MODULE (F100)	AXQ1017	AXQ1017	AXQ1017	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	54	POWER MODULE (F50 + R20)	.....	.....	.....	AXQ1020	AXQ1020	AXQ1020	AXQ1020	AXQ1020	.....	.....	.....	.....	.....
	54	POWER MODULE (F50)	.....	.....	.....	.....	.....	.....	.....	.....	AXQ1018	AXQ1018	AXQ1018	AXQ1018	AXQ1018
Δ	2	T1 Power transformer	ATS1508	ATS1508	ATS1508	ATS1505	ATS1505	ATS1505	.....	.....	ATS1503	ATS1503	ATS1503	.....	.....
Δ	2	T1 Power transformer	.....	.....	.....	.....	.....	.....	ATS1506	ATS1506	.....	.....	.....	ATS1504	ATS1504
Δ	73	S8001 Voltage selector (AC110-115V/120-127V/220-230V/240V)	.....	.....	.....	.....	.....	.....	.....	AKX-507	.....	.....	.....	.....	AKX-507
Δ	74	S8002 Voltage selector (AC220-230V/240V for HL) (AC110-127V/220-240V for SD)	.....	.....	.....	.....	.....	.....	AKX1004	AKX1004	.....	.....	.....	AKX1004	AKX1004
Δ	4	1P AC inlet	AKP1132	AKP1133	AKP1132	AKP1132	AKP1133	AKP1132	AKP1132	AKP1123	AKP1132	AKP1133	AKP1132	AKP1132	AKP1132
Δ	77	1P AC outlet	.....	.....	.....	AKP1034	AKP1035	AKP1034	AKP1034	.....	.....	.....	.....	.....	.....
Δ	62	AC power cord	ADG1127	ADG1143	ADG1127	ADG1127	ADG1143	ADG1127	ADG1127	ADG1129	ADG1127	ADG1143	ADG1127	ADG1127	ADG1129
Δ	75	FU1 Fuse (T2A/250V)	.....	.....	.....	AEK-511	AEK-511	AEK-511	AEK-511	.....	.....	.....	.....	.....	.....
Δ	5	FU2 Fuse (T2A/250V)	AEK-511	AEK-511	AEK-511	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Δ	5	FU2 Fuse (T1.6A/250V)	.....	.....	.....	AEK-510	AEK-510	AEK-510	AEK-510	AEK-510	AEK-510	AEK-510	AEK-510	AEK-510	AEK-510
Δ	76	FU3 Fuse (T1.6A/250V)	.....	.....	.....	.....	.....	.....	.....	AEK-510	.....	.....	.....	.....	AEK-510

Mark	No.	Symbol & Description	Part No.												Remarks
			SX-J520			SX-J420					SX-J320				
			HE	HB	HEWZI	HE	HB	HEWZI	HL	SD	HE	HB	HEWZI	HL		SD
NSP	34	Knob sheet (PLS)	AAK2522	AAK2522	AAK2522	AAK2522	AAK2522	AAK2522	AAK2520	AAK2520	AAK2522	AAK2522	AAK2522	AAK2520	AAK2520
	8	Rear panel	ANC2130	ANC2129	ANC2131	ANC2125	ANC2124	ANC2126	ANC2128	ANC2127	ANC2120	ANC2119	ANC2121	ANC2123	ANC2122
	18	Reinforced bracket	ANG1635	ANG1635	ANG1635	ANG1635	ANG1635	ANG1635	ANG1635	ANG1635	.....	.....	.....	.....	.....
	56	SP change button (PLS)	AAD2527	AAD2527	AAD2527	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
	35	Display panel (PLS)	AAK2527	AAK2527	AAK2527	AAK2525	AAK2525	AAK2525	AAK2525	AAK2525	AAK2528	AAK2528	AAK2528	AAK2528	AAK2528
	1	Front panel (PLS)	AMB2195	AMB2195	AMB2195	AMB2194	AMB2194	AMB2194	AMB2194	AMB2194	AMB2193	AMB2193	AMB2193	AMB2193	AMB2193
	38	Mic knob (PLS)	AAB1379	AAB1379	AAB1379	AAB1379	AAB1379	AAB1379	AAB1379	AAB1379	.....	.....	.....	.....	.....
	78	Spacer (PLS)	.....	.....	.....	.....	.....	.....	AEC1463	AEC1463	.....	.....	.....	.....	.....
	79	Earth plate	.....	.....	ANK1120	.....	.....	.....	ANK1120	.....	.....	.....	ANK1120	.....	.....
	58	Operating instructions (German, Italian)	ARC1446	.....	ARC1446	ARC1446	.....	.....	ARC1446	.....	ARC1446	.....	ARC1446	.....	.....
	59	Operating instructions (Dutch, Swedish, Spanish, Portuguese)	ARC1447	.....	.....	ARC1447	.....	.....	.....	.....	ARC1447	.....	.....	.....	.....
	60	Operating instructions (English, French)	ARE1292	ARE1292	.....	ARE1292	ARE1292	.....	.....	.....	ARE1292	ARE1292	.....	.....	.....
	80	Operating instructions (English, Spanish, Chinese)	.....	.....	.....	.....	.....	.....	ARE1293	ARE1293	.....	.....	.....	ARE1293	ARE1293
	61	Remote control unit (CU-SX075)	AXD1376	AXD1376	AXD1376	.....	.....	.....	.....	.....	AXD1376	AXD1376	AXD1376	AXD1376	AXD1376
	61	Remote control unit (CU-SX076)	.....	.....	.....	AXD1378	AXD1378	AXD1378	AXD1378	AXD1378	.....	.....	.....	.....	.....
71	Battery cover	AZN2235	AZN2235	AZN2235	AZN2237	AZN2237	AZN2237	AZN2237	AZN2237	AZN2235	AZN2235	AZN2235	AZN2235	AZN2235	
63	FM antenna	ADH1019	ADH1019	ADH1019	ADH1019	ADH1019	ADH1019	ADH1016	ADH1016	ADH1019	ADH1019	ADH1019	ADH1016	ADH1016	
81	Caution card (220-230V)	.....	.....	.....	.....	.....	.....	ARR7001	ARR7001	.....	.....	.....	ARR7001	ARR7001	
69	Packing case	AHD2654	AHD2654	AHD2654	AHD2651	AHD2651	AHD2651	AHD2652	AHD2652	AHD2648	AHD2648	AHD2648	AHD2649	AHD2649	

● List of PCB assemblies for SX-J420/HL and SD

	DISP ASSY	AWM1485
	—FRONT ASSY	AWZ5203
	—V SEL ASSY	AWZ5207
NSP	—H. P. ASSY	AWZ5208
NSP	—SP ASSY	AWZ5210
NSP	—TACT SW ASSY	AWZ5230

● PCB PARTS LIST

Mark	No.	Description	Parts No.
MAIN ASSY (AWZ5193)			
SEMICONDUCTORS			
	IC604		LC4966
	IC601		MC14052BF
	IC608		TC9184P
	IC602, IC603, IC610		XRA4558F-P
	Q615, Q619, Q620		2SA1162
	Q611		2SB1274
	Q612		2SC2458
	Q616, Q618		2SC2712
	Q601, Q602		2SK246
	Q603, Q608, Q613		XDA124EK
	Q606		XDA143EK
	Q604, Q605, Q607, Q609, Q614		XDC124EK
	Q621		XDC143EK
	D607, D620		1SS184
	D632, D634, D636-D639		1SS226
	D619		D3SBA20 (A)
	D617		D5SB20F
	D605, D606, D614, D621		HSS104-02
	D623-D629, D640, D641		HSS104-02
	D616		RD10ESB
	D615		RD30ESB
	D609, D610		RD5.1EB
	D603, D604		RD8.2ESB2
	D611-D613, D622, D630, D631		S5688G
COILS AND FILTERS			
△	L601		ATF1006
TRANSFORMERS			
△	T601		ATT1239
RELAYS			
	RY602		ASR1035
△	RY601		ASR1036
CAPACITORS			
△	C651, C669 (0.01/400)		ACG1003
	C627, C628 (6800/63)		ACH1137
	C695, C696		CCSQCH101J50
	C637-C640, C643, C644		CCSQCH391J50
	C665, C666		CCSQCH391J50
	C603, C604, C687, C688		CCSQCH470J50
	C685, C686		CCSQCH471J50
	C607, C608		CCSQCH560J50
	C647		CEANP4R7M50
	C605, C606, C697		CEAS010M50
	C657, C658		CEAS101M10
	C646		CEAS101M50
	C634		CEAS102M25
	C632		CEAS102M35
	C650		CEAS331M50
	C631		CEAS332M35
	C671		CEAS3R3M50
	C621, C622		CEAS470M35
	C648, C649		CEAS470M50
	C617, C618		CFTXA823J50
	C641, C642		CKSQYB102K50
	C663, C664, C705		CKSQYB103K50
	C698, C699		CKSQYB152K50
	C613-C616		CKSQYB153K50
	C619, C620		CKSQYB332K50

Mark	No.	Description	Parts No.
	C609, C610		CKSQYB473K50
	C689-C693		CKSQYB561K50
	C676-C679		CKSQYF104Z50
	C633		CQMA103J50
	C672, C673		CQMA104J50
	C674, C675		CQMA223J50
RESISTORS			
	R662		RD1/2PM182J
	R660, R661		RD1/2PM221J
	R706		RD1/2PM472J
	R665		RD1/2PM622J
	R633, R634		RD1/4PM151J
	R667		RD1/4PM470J
	R679, R703		RD1/8PM102J
	R666		RD1/8PM203J
	R693-R695, R699-R701		RD1/8PM222J
	R1410		RD1/8PM332J
	R625, R626, R635, R636		RD1/8PM471J
	R1407, R1408		RD1/8PM472J
	R656		RD1/8PM623J
	R664		RFA1/4PS4R7J
△	R651, R652		RS3LMFR22J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN607 PLUG 14-P		AKM1110
	PLUG (9P)		AKM1112
	SOCKET (15P)		AKP1049
	CN612 SOCKET (9P)		AKP1072
	CN604 40P SOCKET		AKP1085
	SOCKET (18P)		AKP1131
	CN609, CN611 11P PLUG		KM200LA11
	CN605 12P SOCKET		KP250NA12
	CN603 CONNECTOR (12P)		KPC12
	CN608 JUMPER CONNECTOR		KPC8
	CN617 CONNECTOR (3P)		KPE3

MAIN ASSY (AWZ5188 and AWZ5189)

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	IC604		LC4966
	IC601		MC14052BF
	IC605		TC9154AP
	IC608		TC9184P
	IC602, IC603, IC606, IC607, IC610		XRA4558F-P
	Q615, Q619, Q620		2SA1162
	Q611		2SB1274
	Q612		2SC2458
	Q616, Q618		2SC2712
	Q608		XDA124EK
	Q606		XDA143EK
	Q604, Q605, Q607, Q609, Q614		XDC124EK
	Q617		XDC124EK
	Q621		XDC143EK
	D620		1SS184
	D601, D602, D632, D634		1SS226
	D636-D639		1SS226
	D617, D619		D3SBA20 (A)
	D605, D606, D614, D621		HSS104-02
	D623-D629, D640, D641		HSS104-02

Mark	No.	Description	Parts No.
	D616		RD10ESB
	D615		RD30ESB
	D609, D610		RD5.1EB
	D603, D604		RD8.2ESB2
	D611-D613, D622, D630, D631		S5688G
COILS AND FILTERS			
△	L601		ATF1006
TRANSFORMERS			
△	T601		ATT1239
RELAYS			
△	RY602		ASR1035
	RY601		ASR1036
CAPACITORS			
△	C651, C669 (0.01/400)		ACG1003
	C627, C628 (5600/50)		ACH1145
	C695, C696		CCSQCH101J50
	C639, C640, C643, C644		CCSQCH391J50
	C637, C638, C665, C666 (AWZ5189 only)		CCSQCH391J50
	C603, C604, C687, C688 (AWZ5189 only)		CCSQCH470J50
	C685, C686 (AWZ5189 only)		CCSQCH471J50
	C607, C608		CCSQCH560J50
	C667, C668 (AWZ5189 only)		CCSQCH820J50
	C605, C606, C697		CEAS010M50
	C657, C658		CEAS101M10
	C646		CEAS101M50
	C634		CEAS102M25
	C645		CEAS2R2M50
	C650		CEAS331M50
	C631, C632		CEAS332M35
	C671		CEAS3R3M50
	C621, C622		CEAS470M35
	C648, C649		CEAS470M50
	C617, C618		CPTXA823J50
	C641, C642		CKSQYB102K50
	C701, C702 (AWZ5189 only)		CKSQYB102K50
	C663, C664		CKSQYB103K50
	C700, C705 (AWZ5189 only)		CKSQYB103K50
	C698, C699		CKSQYB152K50
	C613-C616		CKSQYB153K50
	C619, C620		CKSQYB332K50
	C609, C610, C623, C624		CKSQYB473K50
	C655, C656		CKSQYB473K50
	C689-C693		CKSQYB561K50
	C676-C683		CKSQYF104Z50
	C633		CQMA103J50
	C672, C673		CQMA104J50
	C674, C675		CQMA223J50
RESISTORS			
	R662		RD1/2PM122J
	R660, R661		RD1/2PM221J
	R706		RD1/2PM472J
	R665		RD1/2PM622J
	R633, R634		RD1/4PM151J
	R667		RD1/4PM470J
	R679, R703		RD1/8PM102J
	R666		RD1/8PM203J
	R693-R695, R699-R701		RD1/8PM222J
	R1410		RD1/8PM332J
	R625, R626, R635, R636		RD1/8PM471J
	R1407, R1408		RD1/8PM472J
	R656		RD1/8PM623J

Mark	No.	Description	Parts No.
	R664		RFA1 4PS4R7J
△	R653, R654		RS1LMFR22J
△	R651, R652		RS3LMFR22J
	R1413-R1415 (AWZ5189 only)		RS1/10S100J
	Other Resistors		RS1 '10S□□□J
OTHERS			
	CN607 PLUG 14-P		AKM1110
	PLUG (9P)		AKM1112
	SOCKET (15P)		AKP1049
	CN612 SOCKET (9P)		AKP1072
	CN604 40P SOCKET		AKP1085
	SOCKET (18P)		AKP1131
	CN609, CN611 11P PLUG		KM200IA11
	CN605 12P SOCKET		KP250NA12
	CN608 JUMPER CONNECTOR		KPC8
	CN617 CONNECTOR (3P)		KPE3
MAIN ASSY (AWZ5240 and AWZ5190)			
SEMICONDUCTORS			
	IC604		LC4966
	IC601		MC14052BF
	IC605		TC9154AP
	IC602, IC603, IC606, IC607, IC610		XRA4558F-P
	Q615, Q619, Q620		2SA1162
	Q611		2SB1274
	Q612		2SC2458
	Q616, Q618		2SC2712
	Q608		XDA124EK
	Q606		XDA143EK
	Q604, Q605, Q607, Q609, Q614		XDC124EK
	Q617		XDC124EK
	Q621		XDC143EK
	D620		1SS184
	D601, D602, D632, D634		1SS226
	D636-D639		1SS226
	D617, D619		D3SBA20 (A)
	D605, D606, D614, D621		HSS104-02
	D623-D629, D640, D641		HSS104-02
	D616		RD10ESB
	D615		RD30ESB
	D609, D610		RD5.1EB
	D611-D613, D622, D630, D631		S5688G
COILS AND FILTERS			
△	L601		ATF1006
TRANSFORMERS			
△	T601		ATT1239
SWITCH AND RELAYS			
	S601		ASH1027
	RY602		ASR1035
△	RY601		ASR1036
CAPACITORS			
△	C651, C669 (0.01/400)		ACG1003
	C627, C628 (5600/50)		ACH1145
	C695, C696		CCSQCH101J50
	C639, C640, C643, C644		CCSQCH391J50
	C697		CEAS010M50
	C657, C658		CEAS101M10
	C646		CEAS101M50
	C634		CEAS102M25
	C645		CEAS2R2M50
	C650		CEAS331M50

Mark	No.	Description	Parts No.
	C631, C632 C671 C621, C622 C648, C649 C641, C642		CEAS332M35 CEAS3R3M50 CEAS470M35 CEAS470M50 CKSQYB102K50
	C663, C664 C698, C699 C609, C610, C623, C624 C655, C656 C689-C693		CKSQYB103K50 CKSQYB152K50 CKSQYB473K50 CKSQYB473K50 CKSQYB561K50
	C676-C683 C633 C672, C673 C674, C675		CKSQYF104Z50 CQMA103J50 CQMA104J50 CQMA223J50

RESISTORS

	R662 R661 R706 R665 R633, R634		RD1/2PM122J RD1/2PM221J RD1/2PM472J RD1/2PM622J RD1/4PM151J
	R667 R679, R703 R666 R699-R701 R1410		RD1/4PM470J RD1/8PM102J RD1/8PM203J RD1/8PM222J RD1/8PM332J
	R625, R626, R635, R636 R1407, R1408 R656 R664 R660		RD1/8PM471J RD1/8PM472J RD1/8PM623J RFA1/4PS4R7J RS1LMF121J
△	R653, R654		RS1LMFR22J
△	R651, R652		RS3LMFR22J
	Other Resistors		RS1/10S□□□J

OTHERS

	CN607 PLUG 14-P PLUG (9P) SOCKET (15P) CN612 SOCKET (9P) CN604 40P SOCKET		AKM1110 AKM1112 AKP1049 AKP1072 AKP1085
	SOCKET (18P) CN609, CN611 11P PLUG CN605 12P SOCKET CN608 JUMPER CONNECTOR CN617 CONNECTOR (3P)		AKP1131 KM200IA11 KP250NA12 KPC8 KPE3

MAIN ASSY (AWZ5185 and AWZ5186)

SEMICONDUCTORS

	IC604 IC601 IC608 IC602, IC603, IC610 Q615, Q619, Q620		LC4966 MC14052BF TC9184P XRA4558F-P 2SA1162
	Q611 Q612 Q616, Q618 Q601, Q602 Q603, Q608, Q613		2SB1274 2SC2458 2SC2712 2SK246 XDA124EK
	Q606 Q604, Q605, Q607, Q609, Q614 Q621 D607, D620 D632, D634, D636-D639		XDA143EK XDC124EK XDC143EK 1SS184 1SS226

Mark	No.	Description	Parts No.
	D617, D619 D605, D606, D614, D621 D623-D629, D640, D641 D616 D615		D3SBA20 (A) HSS104-02 HSS104-02 RD10ESB RD30ESB
	D609, D610 D603, D604 D611-D613, D622, D630, D631		RD5.1EB RD8.2ESB2 S5688G

COILS AND FILTERS

△	L601		ATF1006
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TRANSFORMERS

△	T601		ATT1239
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RELAYS

	RY602		ASR1035
△	RY601		ASR1036

CAPACITORS

△	C651, C669 (0.01/400) C627, C628 (5600/50) C695, C696 C639, C640, C643, C644 C637, C638, C665, C666(AWZ5186 only)		ACG1003 ACH1145 CCSQCH101J50 CCSQCH391J50 CCSQCH391J50
	C603, C604, C687, C688 (AWZ5186 only) C685, C686 (AWZ5186 only) C607, C608 C647 C605, C606, C697		CCSQCH470J50 CCSQCH471J50 CCSQCH560J50 CEANP4R7M50 CEAS010M50
	C657, C658 C646 C634 C632 C650		CEAS101M10 CEAS101M50 CEAS102M25 CEAS102M35 CEAS331M50

	C631 C671 C621, C622 C648, C649 C617, C618		CEAS332M35 CEAS3R3M50 CEAS470M35 CEAS470M50 CFTXA823J50
	C641, C642 C663, C664 C705 (AWZ5186 only) C698, C699 C613-C616		CKSQYB102K50 CKSQYB103K50 CKSQYB103K50 CKSQYB152K50 CKSQYB153K50
	C619, C620 C609, C610 C689-C693 C676-C679 C633		CKSQYB332K50 CKSQYB473K50 CKSQYB561K50 CKSQYF104Z50 CQMA103J50

	C672, C673 C674, C675		CQMA104J50 CQMA223J50
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RESISTORS

	R662 R660, R661 R706 R665 R633, R634		RD1/2PM122J RD1/2PM221J RD1/2PM472J RD1/2PM622J RD1/4PM151J
	R667 R679, R703 R666 R693-R695, R699-R701 R1410		RD1/4PM470J RD1/8PM102J RD1/8PM203J RD1/8PM222J RD1/8PM332J

Mark	No.	Description	Parts No.
	R625, R626, R635, R636 R1407, R1408 R656 R664 △ R651, R652		RD1 8PM471J RD1/8PM472J RD1/8PM623J RFA1/4PS4R7J RS3LMFR22J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN607 PLUG 14-P PLUG (9P) SOCKET (15P) CN612 SOCKET (9P) CN604 40P SOCKET		AKM1110 AKM1112 AKP1049 AKP1072 AKP1085
	SOCKET (18P) CN609, CN611 11P PLUG CN605 12P SOCKET CN608 JUMPER CONNECTOR		AKP1131 KM200IA11 KP250NA12 KPC8
MAIN ASSY (AWZ5238 and AWZ5187)			
SEMICONDUCTORS			
	IC604 IC601 IC602, IC603, IC610 Q615, Q619, Q620 Q611		LC4966 MC14052BF XRA4558F-P 2SA1162 2SB1274
	Q612 Q616, Q618 Q608 Q606 Q604, Q605, Q607, Q609, Q614		2SC2458 2SC2712 XDA124EK XDA143EK XDC124EK
	Q621 D620 D632, D634, D636-D639 D617, D619 D605, D606, D614, D621		XDC143EK 1SS184 1SS226 D3SBA20 (A) HSS104-02
	D623-D629, D640, D641 D616 D615 D609, D610 D611-D613, D622, D630, D631		HSS104-02 RD10ESB RD30ESB RD5.1EB S5688G
COILS AND FILTERS			
△	L601		ATF1006
TRANSFORMERS			
△	T601		ATT1239
SWITCH AND RELAYS			
	S601 RY602 △ RY601		ASH1027 ASR1035 ASR1036
CAPACITORS			
△	C651, C669 (0.01/400) C627, C628 (5600/50) C695, C696 C639, C640, C643, C644 C647		ACG1003 ACH1145 CCSQCH101J50 CCSQCH391J50 CEANP4R7M50
	C697 C657, C658 C646 C634 C632		CEAS010M50 CEAS101M10 CEAS101M50 CEAS102M25 CEAS102M35
	C650 C631 C671		CEAS331M50 CEAS332M35 CEAS3R3M50

Mark	No.	Description	Parts No.
	C621, C622 C648, C649 C641, C642 C663, C664 C698, C699		CEAS470M35 CEAS470M50 CKSQYB102K50 CKSQYB103K50 CKSQYB152K50
	C609, C610 C689-C693 C676-C679 C633 C672, C673		CKSQYB473K50 CKSQYB561K50 CKSQYF104Z50 CQMA103J50 CQMA104J50
	C674, C675		CQMA223J50
RESISTORS			
	R662 R660, R661 R706 R665 R633, R634		RD1 2PM122J RD1 2PM221J RD1 2PM472J RD1 2PM622J RD1 4PM151J
	R667 R679, R703 R666 R699-R701 R1410		RD1 4PM470J RD1/8PM102J RD1/8PM203J RD1/8PM222J RD1/8PM332J
	R625, R626, R635, R636 R1407, R1408 R656 R664 △ R651, R652		RD1/8PM471J RD1/8PM472J RD1/8PM623J RFA1 4PS4R7J RS3LMFR22J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN607 PLUG 14-P PLUG (9P) SOCKET (15P) CN612 SOCKET (9P) CN604 40P SOCKET		AKM1110 AKM1112 AKP1049 AKP1072 AKP1085
	SOCKET (18P) CN609, CN611 11P PLUG CN605 12P SOCKET CN608 JUMPER CONNECTOR		AKP1131 KM200IA11 KP250NA12 KPC8
FUNC ASSY (AWZ5197)			
SEMICONDUCTORS			
	IC901 IC902 IC903 Q901 Q907		MC14052BF MC14066BF UPC4570G2 2SA1162 2SC2878
	Q902-Q906 D902 D901, D903, D904		XDA124EK 1SS181 1SS252
CAPACITORS			
	C913, C914 C917-C928 C901, C902, C915, C916 C929-C932 C940		CCSQCH101J50 CCSQCH391J50 CCSQCH471J50 CCSQCH681J50 CEAS100M50
	C935, C936 C909, C910 C903, C904 C939 C905, C906		CEAS101M10 CEAS470M10 CEAS4R7M50 CKSQYB103K50 CKSQYB152K50
	C907, C908		CKSQYB562K50

Mark	No.	Description	Parts No.
RESISTORS			
△	R949-R952 R918 R904, R955, R956 Other Resistors	RD1/2PMFL100J RD1/8PM103J RD1/8PM222J RS1/10S□□□J	
OTHERS			
	PIN JACK (6P) CN905 PIN JACK (6P) JACK SOCKET 9-P	AKB1121 AKB1129 AKN-203 AKP-076	
FUNC ASSY (AWZ5290)			
SEMICONDUCTORS			
	IC901 IC902 IC903 Q901 Q907	MC14052BF MC14066BF UPC4570G2 2SA1162 2SC2878	
	Q902-Q906 D902 D901, D903, D904	XDA124EK 1SS181 1SS252	
CAPACITORS			
	C940 C935, C936 C909, C910 C903, C904 C939	CEAS100M50 CEAS101M10 CEAS470M10 CEAS4R7M50 CKSQYB103K50	
	C905, C906 C907, C908	CKSQYB152K50 CKSQYB562K50	
RESISTORS			
△	R949-R952 R918 R904, R955, R956 Other Resistors	RD1/2PMFL100J RD1/8PM103J RD1/8PM222J RS1/10S□□□J	
OTHERS			
	PIN JACK (6P) CN905 PIN JACK (6P) JACK SOCKET 9-P CN903 9P SOCKET	AKB1121 AKB1129 AKN-203 AKP-076 AKM1040	
VOLUME ASSY (AWZ5201 and AWZ5200)			
SEMICONDUCTORS			
	IC801 IC802, IC803 Q801, Q802, Q805, Q806 Q803, Q804	TA8409S UPC4570G2 2SC3327 XDA124ES	
COILS AND FILTERS			
	L801	LAU221K	
CAPACITORS			
	C819, C820, C823, C824 C813, C814 C828 C811, C812 C807, C808	CCSQCH470J50 CEAS100M50 CEAS101M25 CEAS2R2M50 CEXA470M25	
	C801-C804 C815, C816 C805, C806 (For AWZ5201) C805, C806 (For AWZ5200) C821, C822 (AWZ5201 only)	CEYA100M50 CEYA2R2M50 CEYAR47M50 CEYA2R2M50 CKSQYB473K50	

Mark	No.	Description	Parts No.
	C831, C832 C809, C810 C827		CKSQYB473K50 CKSQYF104Z50 CKSQYF473Z50
RESISTORS			
	R809, R810 (For AWZ5200) R809, R810 (For AWZ5201) R835, R836 R803, R804 R817		RS1/10S432J RS1/10S133J RD1/8PM101J RD1/8PM104J RD1/8PM272J
	R818 R849, R850 (AWZ5201 only) VR801 (100k-4B*4, 50k-6B) Other Resistors		RD1/8PM472J RS1/10S622J ACX1077 RS1/10S□□□J
OTHERS			
	CN801, CN802 11P SOCKET		KP200IA11L
VOLUME ASSY (AWZ5199)			
SEMICONDUCTORS			
	IC801 IC802 Q801, Q802 Q803		TA8409S UPC4570G2 2SC3327 XDA124ES
COILS AND FILTERS			
	L801		LAU221K
CAPACITORS			
	C819, C820 C828 C807, C808 C801-C804 C805, C806		CCSQCH470J50 CEAS101M25 CEXA470M25 CEYA100M50 CEYA2R2M50
	C831, C832 C809, C810 C827		CKSQYB473K50 CKSQYF104Z50 CKSQYF473Z50
RESISTORS			
	R835, R836 R803, R804 R817 R818 VR801 (100k-4B*2, 50k-6B)		RD1/8PM101J RD1/8PM104J RD1/8PM272J RD1/8PM472J ACX1067
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN801, CN802 11P SOCKET		KP200IA11L
FRONT ASSY (AWZ5204)			
SEMICONDUCTORS			
	IC1101 Q1101 Q1102-Q1106 D1118 D1119		PDG109A 2SC2458 XDC143ES AEL1065 AEL1128
	D1120, D1121 D1101-D1104, D1106-D1109, D1114 D1105		AEL1144 HSS104-02 RD6.2ESB
COILS AND FILTERS			
	L1101		LAU220J
SWITCHES			
	S1101-S1109		ASG1034

SX-J520, SX-J420, SX-J320

Mark	No.	Description	Parts No.
CAPACITORS			
	C1101		ACH1135
	C1106, C1111		CCCSL101J50
	C1104, C1115		CEAS010M50
	C1107		CEAS100M50
	C1105		CEAS2R2M50
	C1103, C1112		CEAS470M16
	C1108-C1110		CFTXA103J50
	C1102		CFTXA473J50
	C1113		CKCYB222K50
	C1114		CKDYB102K50
	C1116		CKDYB152K50
	C1118		CKMYB102K50
	C1117		CKMYB152K50

RESISTORS			
	Other Resistors		RD1/8PM□□□J

OTHERS			
	V1101		AAV1186
	CN1101 40P SOCKET		AKP1087
	X1101 CRYSTAL RESONATOR		ASS1015
	REMOTE RECEIVER UNIT		AXX1033

H.P. ASSY (AWZ5209)

CAPACITORS			
	C1003, C1004		CQPA103J100

RESISTORS			
	R1001, R1002		RS2LMF331J

OTHERS			
	CN1002 JACK		AKN1025

SP ASSY (AWZ5262)

COILS AND FILTERS			
	L1001, L1002 (5.3 μ H)		ATH-059
	L1003-L1006 (53 μ H)		ATH1009

CAPACITORS			
	C1005-C1014		CQPA333J100

RESISTORS			
	R1003-R1008		RFA1'4PS101J

OTHERS			
	PIN JACK (2P)		AKB1126
	SPEAKER TERMINAL 8-P		AKE-111
	CN1001 12P PLUG		KM250NA12L

SP ASSY (AWZ5210)

OTHERS			
	PIN JACK (3P)		AKB1213
	SPEAKER TERMINAL 4-P		AKE-109
	CN1001 12P PLUG		KM250NA12L

SP ASSY (AWZ5211)

COILS AND FILTERS			
	L1001, L1002 (5.3 μ H)		ATH-059
	L1003, L1004 (53 μ H)		ATH1009

CAPACITORS			
	C1001, C1002, C1005, C1006		CQPA333J100
	C1009-C1012		CQPA333J100

Mark	No.	Description	Parts No.
RESISTORS			
	R1003-R1006		RFA1 4PS101J

OTHERS			
	PIN JACK (3P)		AKB1213
	SPEAKER TERMINAL 4-P		AKE-109
	CN1001 12P PLUG		KM250NA12L

SP ASSY (AWZ5212)

OTHERS			
	PIN JACK (2P)		AKB1126
	SPEAKER TERMINAL 4-P		AKE-109
	CN1001 12P PLUG		KM250NA12L

SP ASSY (AWZ5123)

COILS AND FILTERS			
	L1001, L1002 (5.3 μ H)		ATH-059
	L1003, L1004 (53 μ H)		ATH1009

CAPACITORS			
	C1005, C1006, C1009-C1012		CQPA333J100

RESISTORS			
	R1003-R1006		RFA1/4PS101J

OTHERS			
	PIN JACK (2P)		AKB1126
	SPEAKER TERMINAL 4-P		AKE-109
	CN1001 12P PLUG		KM250NA12L

V SEL ASSY (AWZ5207)

SEMICONDUCTORS			
	IC1301		CXA1558L
	Q1301		2SA1515
	Q1302		XDC143ES
	D1301-D1305		1SS252

COILS AND FILTERS			
	L1301		LAU2R2J
	L1302		LAU680K

CAPACITORS			
	C1309		CEAS101M10
	C1306, C1307, C1311		CEAS331M6
	C1301-C1303		CEAS470M16
	C1316		CKCYB152K50
	C1308, C1310		CKCYX104M16

	C1315		CKDYB152K50
	C1304, C1305		CKMYB102K50

RESISTORS			
	R1318, R1319		RD1 4PM180J
	Other Resistors		RD1 8PM□□□J

OTHERS			
	PHONO JACK 2-P		AKB1134

FM/AM TUNER MODULE (AXQ1014)

SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202, Q6218		2SC2712
	Q6103, Q6214		2SC2714

Mark	No.	Description	Parts No.
	Q6201		2SK208
	Q6104, Q6105		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101-D6104		1SV228
COILS AND FILTERS			
	L6106		ATC1003
	L6105		ATC1015
	L6101		ATC1016
	L6102		ATC1017
	L6103		ATC1018
	L6104		ATC1019
	T6101		ATE-063
	L6207		ATE1013
	F6204 (SFE10.7MA8)		ATF-107
	F6203 (SFE10.7MS3G)		ATF-119
	F6202 (450kHz)		ATF1145
	F6205		ATF1152
	L6107		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
	L6205		LCTA680J3225
CAPACITORS			
	C6204, C6234, C6236, C6269		ACG1051
	C6235		ACG1052
	C6120		CCSCH060D50
	C6229		CCSCH821J50
	C6111, C6122		CCSQCH010C50
	C6112		CCSQCH020C50
	C6118		CCSQCH080D50
	C6113		CCSQCH101J50
	C6116, C6208, C6221, C6222		CCSQCH150J50
	C6117		CCSQCH330J50
	C6272		CCSQSL470J50
	C6105		CCSQSL471J50
	C6101		CCSQTH110J50
	C6119		CCSQTH150J50
	C6109		CCSQTH270J50
	C6107, C6110		CCSQTH300J50
	C6106		CCSQTH330J50
	C6261		CEAS010M50
	C6224, C6231, C6233, C6246, C6262		CEAS100M50
	C6216, C6217		CEAS330M16
	C6219		CEAS470M10
	C6243-C6245		CEAS470M16
	C6227		CEAS470M25
	C6238, C6248		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6115, C6125, C6126, C6207		CKSQYB102K50
	C6102, C6114, C6121, C6124, C6210		CKSQYB103K50
	C6264		CKSQYB103K50
	C6247		CKSQYB122K50
	C6213		CKSQYB223K50
	C6230		CKSQYB273K50
	C6228		CKSQYB472K50
	C6209, C6237, C6267		CKSQYB473K50
	C6251, C6252		CKSQYB562K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242		CKSQYF223Z50
	C6255, C6256		CKSQYF223Z50
	C6225, C6241		CKSQYF473Z50

Mark	No.	Description	Parts No.
	C6123		CKSYB103K50
	C6232		CKSYB273K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
RESISTORS			
	R6299, R6300		RD1/8PM102J
	R6115, R6119, R6123, R6127, R6129		RS1/8S000J
	R6268-R6271, R6275, R6276, R6278		RS1/8S000J
	R6283, R6284, R6293, R6294, R6297		RS1/8S000J
	R6302, R6303		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211, R6239		RS1/8S103J
	R6237		RS1/8S122J
	R6209		RS1/8S221J
	R6112		RS1/8S473J
	VR6201		ACP1055
	VR6202		VRTB6VS223
	Other Resistors		RS1/10S□□□J
OTHERS			
	BN6201 2P TERMINAL WITH PAL		AKA1017
	X6203 CRYSTAL RESONATOR		ASS1042
	X6201 CRYSTAL RESONATOR		ASS1066
	X6202 CERAMIC RESONATOR		ATF1027
	AM RF TUNING BLOCK		AXX1041
FM/AM TUNER MODULE (AXQ1012)			
SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101, D6102		1T33
COILS AND FILTERS			
	L6104		ATC1003
	L6101		ATC1020
	L6102		ATC1021
	T6101		ATE-063
	L6207		ATE1013
	F6203, F6204 (SFE10.7MS3G)		ATF-119
	F6101		ATF-155
	F6202 (450kHz)		ATF1145
	L6103		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
CAPACITORS			
	C6202, C6234, C6236		ACG1051
	C6235		ACG1052
	C6107		CCSCH010C50
	C6229		CCSCH821J50
	C6110		CCSQCH020C50
	C6101		CCSQCH050C50
	C6108, C6203, C6268		CCSQCH101J50
	C6111, C6116, C6208, C6221, C6222		CCSQCH150J50
	C6115		CCSQCH330J50
	C6114		CCSQRH080D50

SX-J520, SX-J420, SX-J320

Mark	No.	Description	Parts No.
	C6113		CCSQRH180J50
	C6105		CCSQTH150J50
	C6261		CEAS010M50
	C6224, C6231, C6233, C6246, C6262		CEAS100M50
	C6216, C6217		CEAS330M16
	C6219		CEAS470M10
	C6243-C6245		CEAS470M16
	C6227		CEAS470M25
	C6238		CEJA100M16
	C6249, C6250		CEJA4R7M35
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6103, C6106, C6112, C6204		CKSQYB102K50
	C6102, C6109, C6117, C6210, C6264		CKSQYB103K50
	C6213		CKSQYB223K50
	C6230		CKSQYB333K50
	C6228, C6252		CKSQYB472K50
	C6209, C6237, C6265, C6267		CKSQYB473K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50
	C6225, C6241, C6266		CKSQYF473Z50
	C6232		CKSYB333K50
	C6251		CKSYB472K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50

Mark	No.	Description	Parts No.
RESISTORS			
	R6299, R6300		RD1 8PM102J
	R6113, R6116, R6118, R6268-R6271		RS1/8S000J
	R6275, R6276, R6278, R6283, R6284		RS1/8S000J
	R6290, R6293, R6294, R6297		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211		RS1/8S103J
	R6237		RS1/8S182J
	R6209		RS1/8S221J
	R6239		RS1/8S332J
	R6101		RS1/8S470J
	VR6201		ACP1055
	VR6202		VRTB6VS223
	Other Resistors		RS1/10S□□□J
OTHERS			
	BN6201 TERMINAL 4-P		AKA1016
	X6203 CRYSTAL RESONATOR		ASS1042
	X6201 CRYSTAL RESONATOR		ASS1066
	X6202 CERAMIC RESONATOR		ATF1027
	AM RF TUNING BLOCK		AXX1041

POWER MODULE

POWER MODULE (F50+R20) (AXQ1020), POWER MODULE (F50) (AXQ1018) and POWER MODULE (F100) (AXQ1017) have the same construction except for the following:

Mark	No.	Symbol & Description	Part No.			Remarks
			POWER MODULE			
			AXQ1017	AXQ1020	AXQ1018	
	1	FRONT ASSY FOR 100W	AWZ5389	.....	.....
	1	FRONT ASSY FOR 50W	.....	AWZ5390	AWZ5390	
	2	PWR, PRTEC assy	AWZ5392	.....	AWZ5392	
	2	REAR, PWR, PRTEC assy	.....	AWZ5391	.....
	16	Q7503	2SC4793	.....	.....
	17	Q7504	2SC4793	.....	.....
	18	Q7509	2SA1837	.....	.....
	19	Q7510	2SA1837	.....	.....
△	20	Q7511	2SA1264N	2SA1263N	2SA1263N	
△	21	Q7512	2SA1264N	2SA1263N	2SA1263N	
△	22	Q7513	2SC3181N	2SC3180N	2SC3180N	
△	23	Q7514	2SC3181N	2SC3180N	2SC3180N	
△	24	Q7111	.....	2SB1274	.....
△	25	Q7112	.....	2SB1274	.....
△	26	Q7113	.....	2SD1913	.....
△	27	Q7114	.....	2SD1913	.....

● **PCB PARTS LIST**

Mark	No.	Description	Parts No.
FRONT ASSY FOR 50W (AWZ5390)			
SEMICONDUCTORS			
	IC7501		UPC4570G2
	IC7701, IC7702		XRA4558F-P
	Q7507, Q7508		2SA1182
	Q7601		2SA1255
	Q7517, Q7518		2SB1115
	Q7501, Q7502		2SC2240
	Q7605, Q7606, Q7703		2SC2712
	Q7505, Q7506		2SC2859
	Q7603		2SC3138
	Q7515, Q7516		2SD1615
	Q7704		XDC143EK
	D7505, D7506, D7517, D7518		1SS181
	D7503, D7504, D7516		1SS184
	D7521-D7524		1SS244
	D7115, D7519, D7520, D7525, D7526		HSS104-02
	D7531, D7533, D7701-D7704, D7707		HSS104-02
	D7710-D7714		HSS104-02
	D7507-D7510		RD3.3ESB2
CAPACITORS			
	C7703		ACG1051
	C7523, C7524		ACH1150
	C7509, C7510		ACH1151
	C7539, C7540		ACH1248
	C7519-C7522, C7545-C7552		CCSQCH101J50
	C7525-C7528		CCSQCH271J50
	C7503, C7504		CCSQCH331J50
	C7541, C7542		CCSQCH470J50
	C7529-C7532		CKSQYB333K50
	C7543, C7544		CKSQYB472K50
	C7602		CKSQYF103Z50
	C7601, C7603, C7702		CKSQYF104Z50
	C7537		CKSQYF473Z50
RESISTORS			
	R7519, R7520		ACN1106
	R7515, R7516		ACN1107
△	R7541, R7542		RD1/4PMF100J
	R7711		RS1/10S1001F
△	R7547-R7550		RS1/10S2200F
	R7709		RS1/10S39R0F
	R7710		RS1/10S56R0F
	R7708		RS1/10S7500F
	R7753		RS1/8S000J
△	R7537-R7540		RS1/8S100J
	R7553		RS1/8S101J
△	R7543, R7544		RS1/8S7R5J
	VR7701		ACP1076
	Other Resistors		RS1/10S□□□J

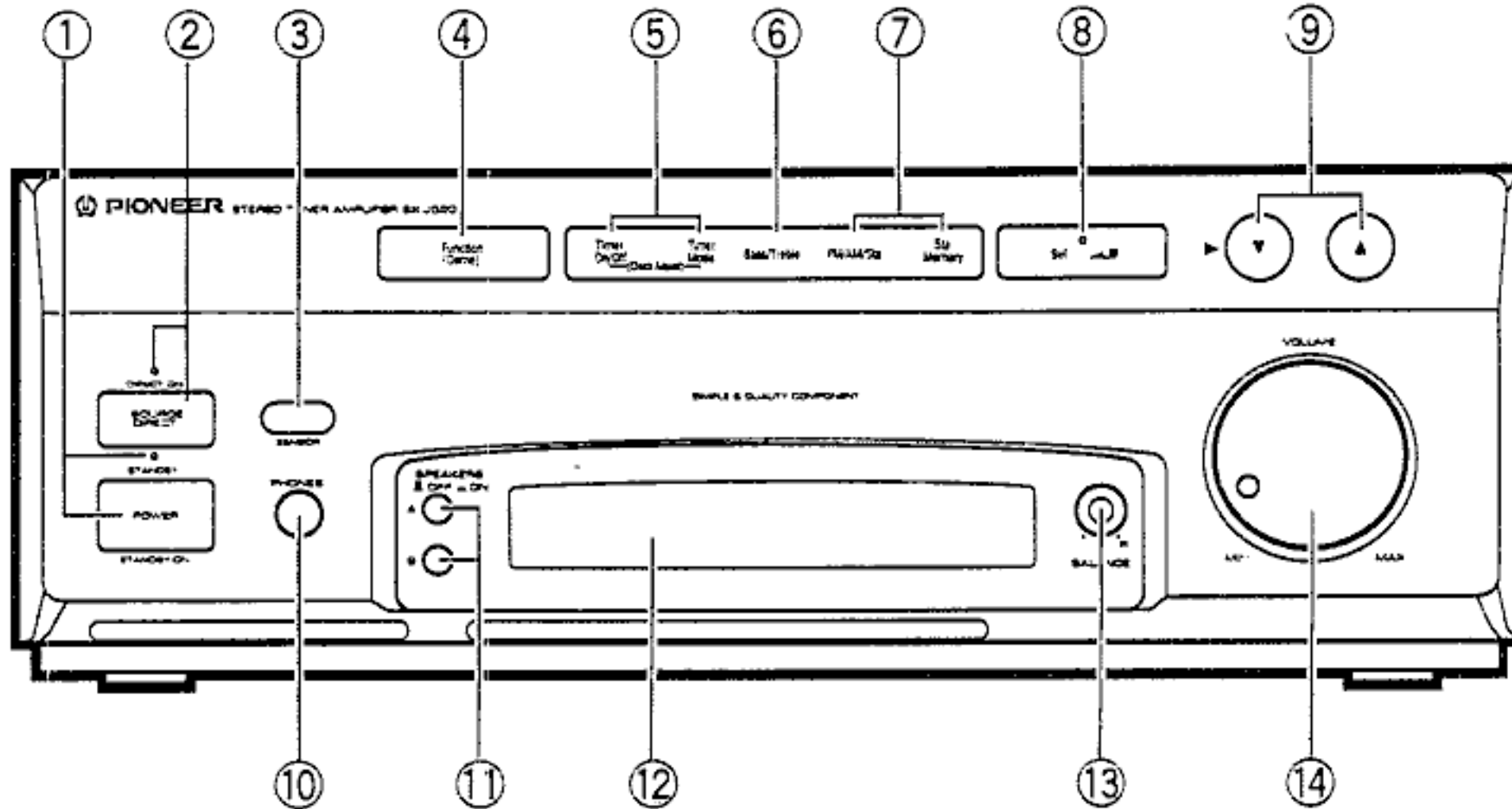
REAR, PWR, PRTEC ASSY (AWZ5391)

Mark	No.	Description	Parts No.
SEMICONDUCTORS			
	IC7101		UPC4570G2
	Q7107, Q7108, Q7208, Q7215, Q7219		2SA1162
	Q7213		2SA1182
	Q7109, Q7110		2SB1115
	Q7301, Q7302		2SC1815
	Q7101, Q7102		2SC2240
	Q7105, Q7106, Q7205-Q7207, Q7209		2SC2712
	Q7212, Q7214, Q7218, Q7220, Q7221		2SC2712
	Q7216		2SC2859
	Q7211, Q7217		2SC3138

Mark	No.	Description	Parts No.
	Q7103, Q7104		2SD1615
	Q7210, Q7222		XDA124EK
	D7113, D7114		1SS181
	D7111, D7112		1SS184
	D7201, D7205		HSS104-02
	D7204, D7206		HZS6C3L
	D7203		HZS9A2L
	D7107-D7110		RD2.2ESB2
CAPACITORS			
	C7402, C7406, C7408		ACG1050
	C7401, C7405, C7407		ACG1053
	C7123, C7124, C7212		ACH1056
	C7409		ACH1150
	C7109, C7110, C7207, C7208		ACH1151
	C7140, C7141		ACH1248
	C7119-C7122		CCSQCH101J50
	C7133-C7136		CCSQCH221J50
	C7125-C7128		CCSQCH271J50
	C7103, C7104		CCSQCH331J50
	C7142, C7143		CCSQCH470J50
	C7205		CEJA101M10
	C7301		CKSQYB332K50
	C7129-C7132		CKSQYB333K50
	C7213, C7214		CKSQYF103Z50
	C7206, C7404		CKSQYF104Z50
	C7137, C7138		CKSQYF472Z50
	C7139		CKSQYF473Z50
	C7801, C7802		CKDYX473M25
RESISTORS			
	R7403, R7404		ACN1104
	R7119, R7120		ACN1105
	R7115, R7116		ACN1107
△	R7137-R7140		RS1/10S0100F
	R7303		RS1/10S1002F
△	R7147-R7150		RS1/10S2200F
	R7304		RS1/10S8200F
△	R7141-R7144		RS1/8S100J
	R7153		RS1/8S101J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN7101	CONNECTOR (12P)	KPE12

9. PANEL FACILITIES

This unit features an "illumination guide function" which uses flashing indicators to show which controls should be manipulated next.



* The model shown in the illustration is the SX-J520.

TUNER AMPLIFIER: SX-J520/SX-J420/SX-J320

① POWER STANDBY/ON switch/STANDBY indicator

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. When only the time is indicated in the display section, the unit is in STANDBY.

② SOURCE DIRECT button/DIRECT ON indicator

When this button is pressed ON, the indicator lights, and input sources are played back without passing through the sound field processor or sound image controller (only the spectrum analyzer display lights).

③ REMOTE SENSOR

④ Function (Demo) button

Each time the Function (Demo) button is pressed, the amplifier function changes in the following order:

[SX-J520, SX-J320]

→ PHONO → TUNER → TAPE → MD:DCC
← LD ← VIDEO ← CD ←

[SX-J420]

→ PHONO → TUNER → TAPE → MD:DCC
← AUX ← VIDEO ← CD:LD ←

If this is pressed from power off, it goes into demonstration mode.

⑤ Timer control buttons

Timer On/Off: Used to activate timer operation at the time set. Each time the button is pressed, the operation changes as follows:

→ REC → WAKE-UP
← OFF ←

Timer Mode: Used when setting the time on the timer; when the button is pressed, the function changes in the following order:

→ REC → WAKE-UP1
← OFF ← WAKE-UP2 ←

Also, the clock adjustment mode can be selected by pressing the On/Off and Mode buttons simultaneously.

⑥ Bass/Treble button

Press this button when you wish to adjust bass or treble tone emphasis. Each time the button is pressed, the function switches between BASS ↔ TREBLE.

⑦ Tuner control buttons

FM/AM/Sta: When this button is pressed, the reception band function changes in the following order:

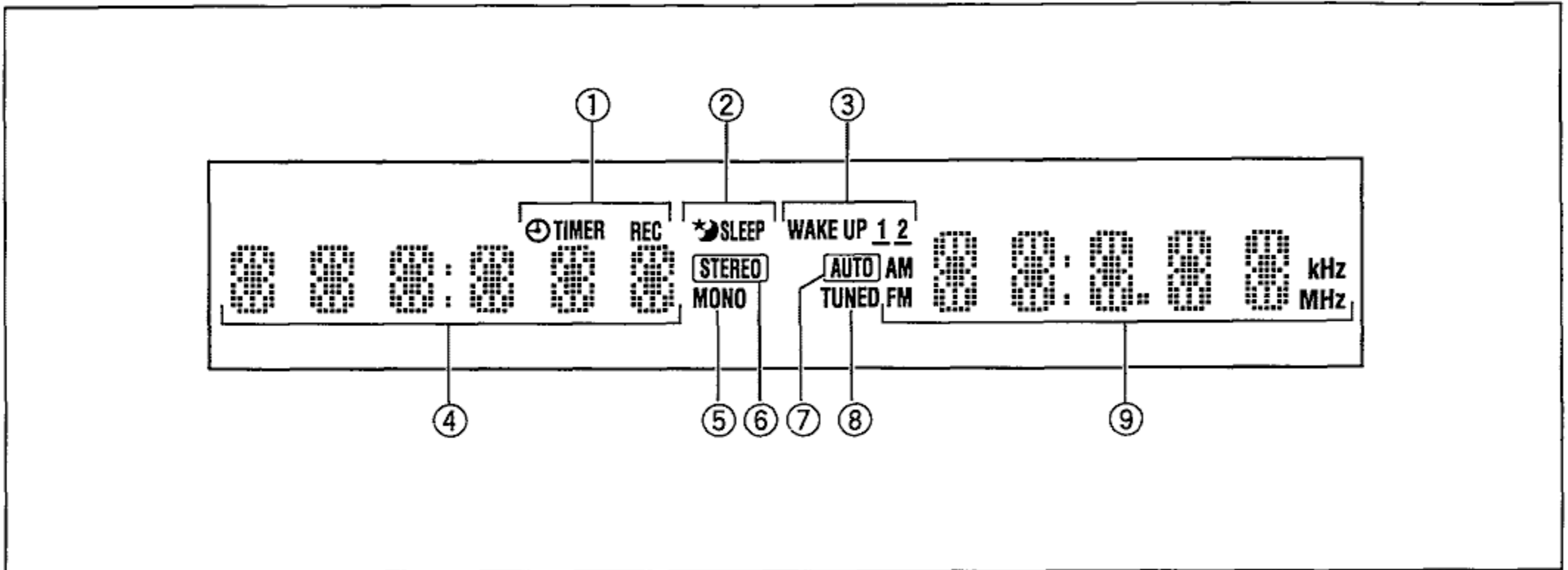
→ FM broadcasts → AM broadcasts
← Sta (station mode) ←

Sta Memory: Used when recording broadcast stations in the station memory. When the button is pressed, the function changes in the following order:

→ MEMORY FM? (or AM?)
← OFF ← MEMORY AUTO? ←

- ⑧ **Set button**
Used when setting the timer, and for operating the tuner's station memory.
- ⑨ **Up-down buttons**
Used when setting the timer, and when performing station tuning and memory operations.
- ⑩ **PHONES jack**
For stereo headphones.
NOTE:
There is no output from the speakers when headphones are plugged into PHONES jack.

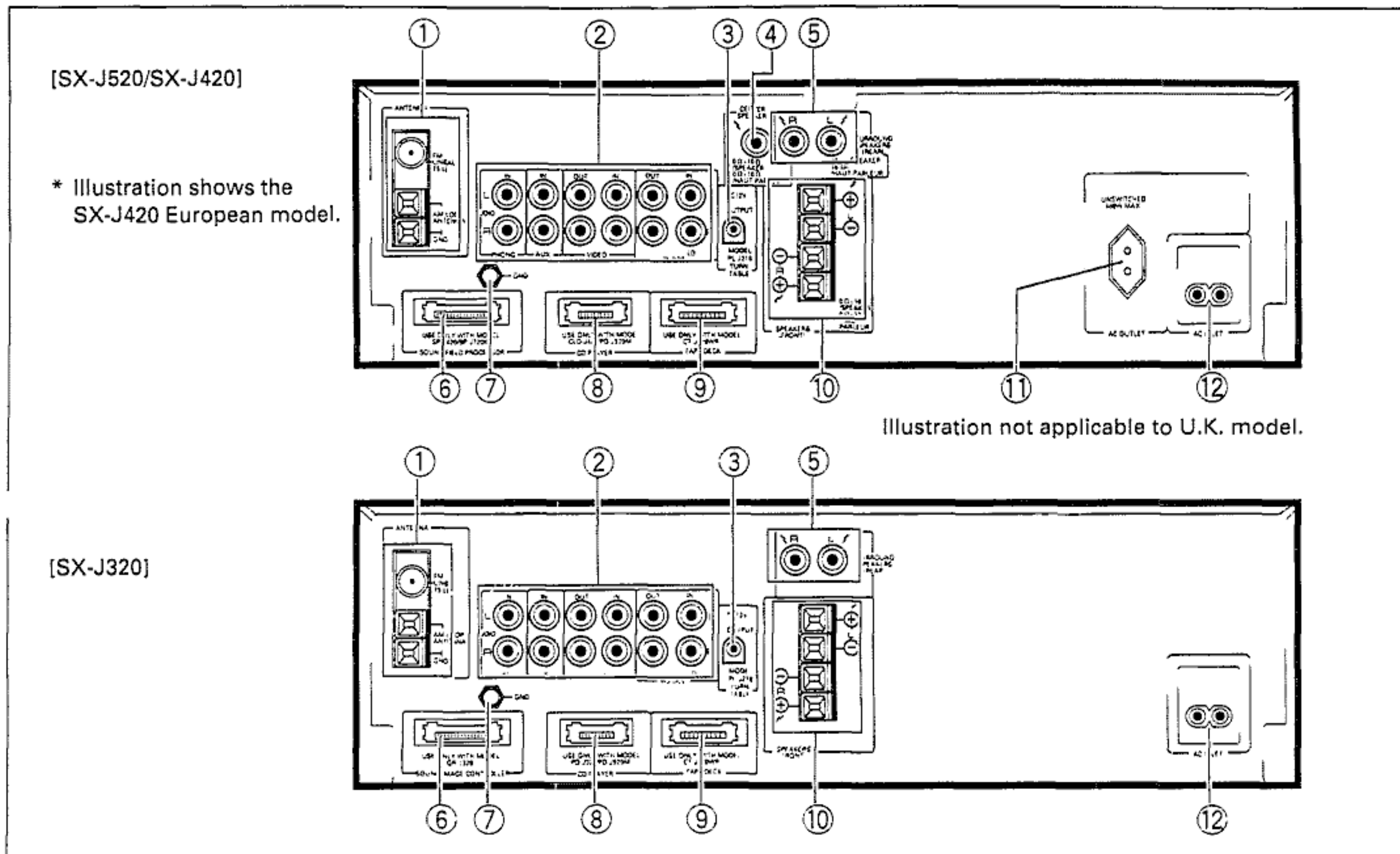
- ⑪ **SPEAKERS buttons (SX-J520 only)**
Speakers connected to the rear panel SPEAKERS A, B terminals can be switched ON/OFF independently.
NOTE:
When the speaker system is connected to only one speaker terminal (A or B) and both A and B buttons are ON, there will be no sound. Turn ON only the selector to which the speaker system is connected.
- ⑫ **Display section**
- ⑬ **BALANCE control (SX-J520 and SX-J420 only)**
Use to adjust front left and right speaker balance.
- ⑭ **VOLUME control**



Display Section

- ① **TIMER REC indicator**
Lights during recording timer setting.
- ② **SLEEP indicator**
Lights when the sleep timer is ON.
- ③ **WAKE UP 1, 2 indicator**
Lights to indicate the selected timer during wake up timer setting.
- ④ Displays station frequencies, time, and operating status.
- ⑤ **MONO indicator**
Lights when the remote control FM MONO button is ON during stereo FM broadcast reception.
- ⑥ **STEREO indicator**
Lights during FM stereo broadcast reception.
- ⑦ **AUTO indicator**
Lights during automatic tuning.
- ⑧ **TUNED indicator**
Lights when a broadcast station is received.
- ⑨ Displays station frequencies and operating status.

SX-J520, SX-J420, SX-J320



TUNER AMPLIFIER: SX-J520/SX-J420/SX-J320

① FM/AM ANTENNA terminals

Antennas must be connected to these terminals: otherwise you will not be able to receive stations.

② Input/Output jacks

PHONO IN: Connect the output cord of the turntable to these jacks.

VIDEO:

IN: Connect to the audio output jacks of VCR.

OUT: Connect to the audio input jacks of VCR.

MD:DCC:

IN: Connect to the analog audio output jacks of the Mini Disc player or Digital Compact Cassette deck.

OUT: Connect to the analog audio input jacks of the Mini Disc player or Digital Compact Cassette deck.

[SX-J420]

AUX IN: Enables connection to the output jacks of audio components such as a second CD player.

[SX-J320/SX-J520]

LD IN: Connect to an LD player's audio output jacks.

③ TURNTABLE (DC 12 V OUTPUT) jack

This jack supplies power to turntable PL-J210.

④ CENTER SPEAKER terminal (SX-J420 only)

Connect to the center speaker.

NOTE:

Connect a speaker system having a nominal impedance ranging from 8 Ω to 16 Ω or more.

⑤ SURROUND SPEAKERS jacks

Connect to the Surround speaker system.

NOTE:

Connect a speaker system having a nominal impedance of 16 Ω or more.

⑥ SOUND FIELD PROCESSOR jack (SX-J420 only)

Connect the sound field processor (SP-J720K/SP-J420) cable here.

SOUND IMAGE CONTROLLER jack (SX-J520 and SX-J320 only)

Connect the sound image controller (GR-J320) cable here.

⑦ Ground terminal (GND)

Connect the ground lead of the turntable here (except for PL-J210).

⑧ CLD/CD jack

Connect the compact disc player (PD-J920M/PD-J520/PD-J320) or CD CDV LD player (CLD-J420) system cable here.

⑨ TAPE DECK jack

Connect the cassette deck (CT-J520WR/CT-J320WR) system cable here.

⑩ SPEAKERS terminals**[SX-J520]****A:** Connect to a first set of speakers.**B:** Connect to a second set of speakers.

The SX-J420 and SX-J320 are furnished with only one set of speaker terminals.

NOTE:

Connect a speaker system having a nominal impedance ranging from 8Ω to 16Ω.

**⑪ AC OUTLET (SX-J420 only)
UNSWITCHED 100 W MAX**

Power supplied through this outlet is turned on and off by the tuner amplifier's POWER switch. Total electrical power consumption of connected equipment should not exceed 100 W. CLD-J420 CD CDV LD player cord can be connected.

NOTE:

*Do not connect appliances with high power consumption such as heaters, irons, monitors, or television sets to the AC OUTLET in order to avoid overheating or fire risk.
This can cause the amplifier to malfunction.*

⑫ AC INLET

Connect the accessory power cord to a household power outlet.

10. SPECIFICATIONS

TUNER AMPLIFIER: SX-J520/SX-J420/SX-J320

FM Tuner Section

Frequency range	87.5 MHz to 108 MHz
Usable Sensitivity.....	Mono: 12.8 dBf, IHF (1.2 μ V/75 Ω)
Sensitivity (DIN).....	Mono S/N 26 dB: 1 μ V/75 Ω Stereo S/N 46 dB: 50 μ V/75 Ω
Signal-to-Noise Ratio (IHF, 85 dBf Input).....	Mono: 77 dB Stereo: 73 dB
Signal-to-Noise Ratio (DIN).....	Mono: 66 dB Stereo: 60 dB
Distortion	Stereo: 0.5 % (1 kHz)
Antenna Input.....	75 Ω unbalanced
Output.....	650 mV (100 % MOD.)

MW (AM) Tuner Section

Frequency range.....	531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna)	350 μ V/m
Output.....	150 mV (30 % MOD.)

Amplifier Section

[SX-J320]

Continuous Power Output (RMS)	..... 65 W + 65 W (1 kHz, T.H.D 10 %, 8 Ω)
Continuous Power Output (DIN)	..... 55 W + 55 W (1 kHz, T.H.D 1 %, 8 Ω)
Total Harmonic Distortion (1 kHz, 30 W, 8 Ω)	0.1 % **

[SX-J420]

Continuous Power Output (RMS)	
Front	65 W + 65 W (1 kHz, T.H.D 10 %, 8 Ω)
Rear.....	11 W + 11 W (1 kHz, T.H.D 10 %, 16 Ω)
Center	22 W (1 kHz, T.H.D 10 %, 8 Ω)
Continuous Power Output (DIN)	
Front	55 W + 55 W (1 kHz, T.H.D 1 %, 8 Ω)
Rear.....	8 W + 8 W (1 kHz, T.H.D 1 %, 16 Ω)
Center	16 W (1 kHz, T.H.D 1 %, 8 Ω)
Total Harmonic Distortion (1 kHz, 30 W, 8 Ω)	0.1 %**

[SX-J520]

Continuous Power Output (RMS)	..... 115 W + 115 W (1 kHz, T.H.D 10 %, 8 Ω)
Continuous Power Output (DIN)	..... 95 W + 95 W (1 kHz, T.H.D 1 %, 8 Ω)
Total Harmonic Distortion (1 kHz, 50 W, 8 Ω)	0.1 % **

Power Supply/Miscellaneous

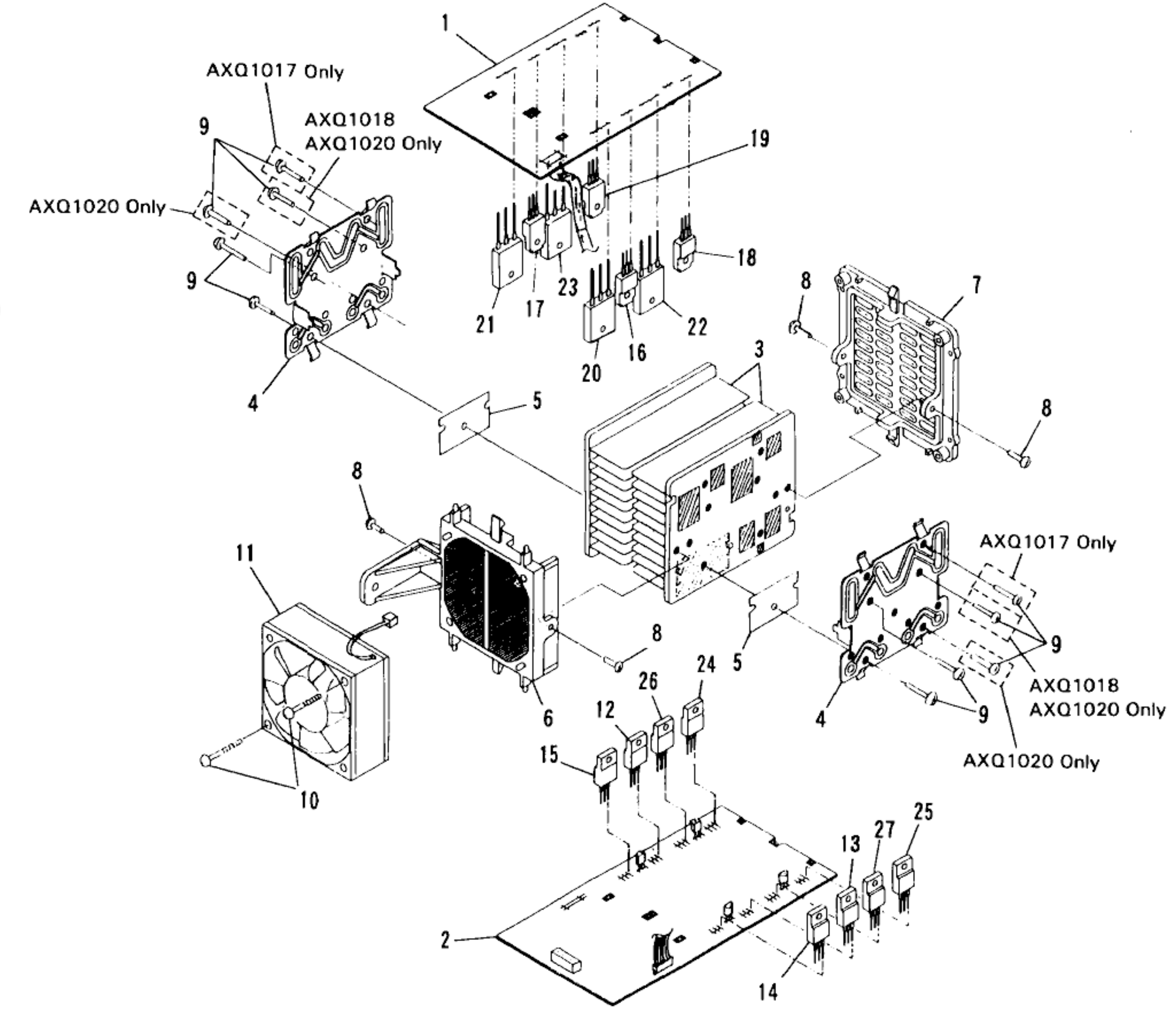
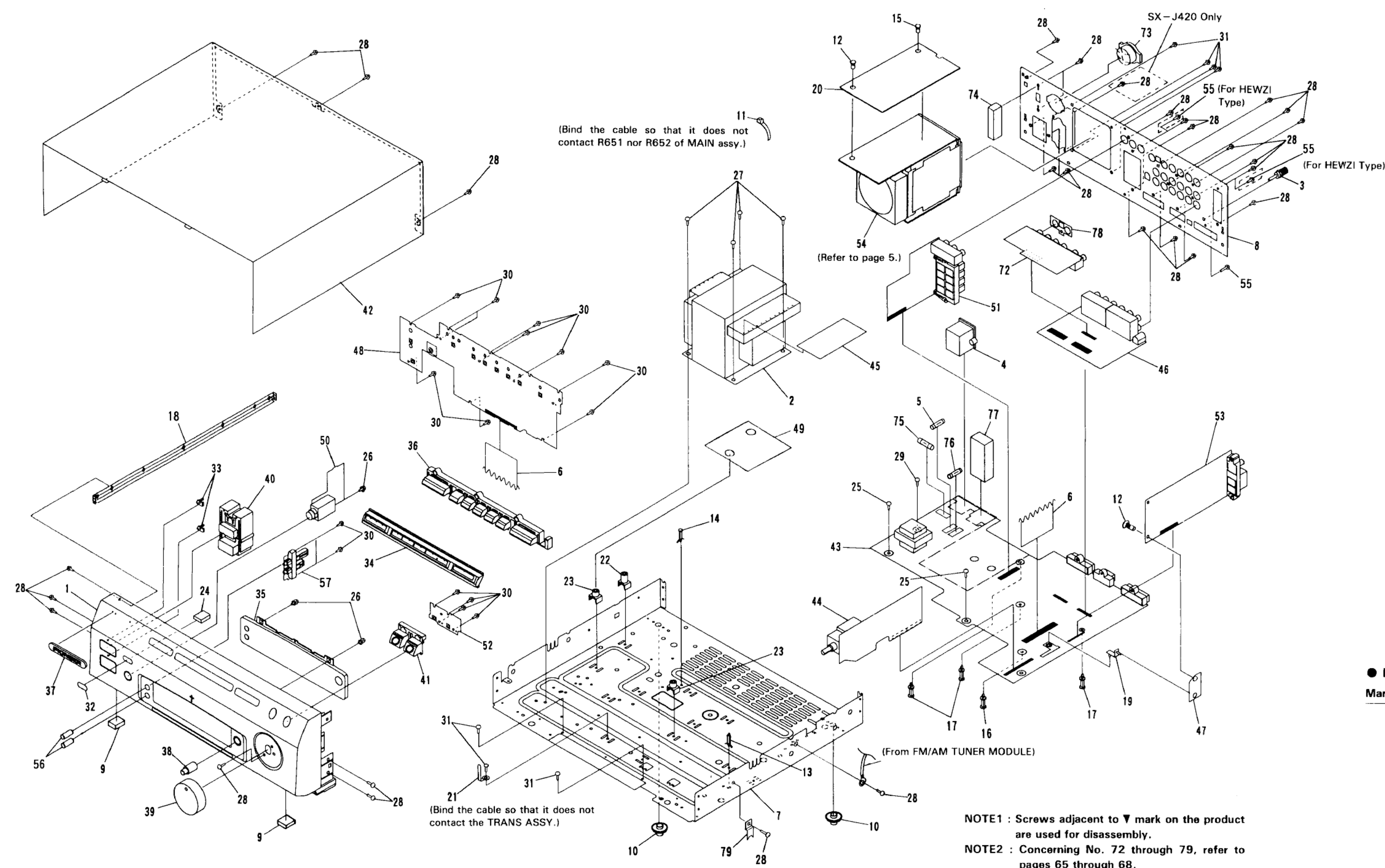
Power requirements	
U.K. model	a.c. 240 Volts ~, 50 Hz
European model	a.c. 220 – 230 Volts ~, 50/60 Hz
Power consumption	
SX-J520.....	440 W
SX-J420.....	340 W
SX-J320.....	300 W
AC outlets	
SX-J420 only	
unswitched (x 1).....	100 W MAX
Dimensions	360 (W) x 361.5 (D) x 120.5 (H) mm
Weight	
SX-J520	7.7 kg
SX-J420	7.3 kg
SX-J320	6.9 kg

Accessories

Operating instructions.....	1
Remote control unit.....	1
Dry cell batteries "AAA" (IEC R03/UM-4)	2
FM T-type Antenna	1
AM Loop Antenna.....	1
Power cord	1
Speaker cords (furnished with speakers)	2
** Measured By Audio Spectrum Analyzer.	

● Exterior

1.2 POWER MODULE (F100)



● Parts List

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	FRONT ASSY FOR 100W	AWZ5389		13	REGULATOR IC (IC7402)	NJM7912A
	2	PWR, PRTEC ASSY	AWZ5392		14	REGULATOR IC (IC7403)	MC7812CT
	3	HEAT SINK (AL)	ANH1446		15	REGULATOR IC (IC7404)	MC7805CT
	4	BRACKET (MTL)	ANG1868		16	TRANSISTOR (Q7503)	2SC4793
	5	SHEET	AEB1256		17	TRANSISTOR (Q7504)	2SC4793
	6	MOLD A (PLS)	AMR2594		18	TRANSISTOR (Q7509)	2SA1837
	7	MOLD B (PLS)	AMR2595		19	TRANSISTOR (Q7510)	2SA1837
	8	SCREW (3×10)	ABA1021		20	TRANSISTOR (Q7511)	2SA1264N
	9	SCREW	BBZ30P140FZK		21	TRANSISTOR (Q7512)	2SA1264N
	10	SCREW	BPZ30P350FZK		22	TRANSISTOR (Q7513)	2SC3181N
	11	FAN MOTOR	AXM1019		23	TRANSISTOR (Q7514)	2SC3181N
	12	REGULATOR IC (IC7401)	MC7812CT				

2. SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.1 OVERALL SCHEMATIC DIAGRAM

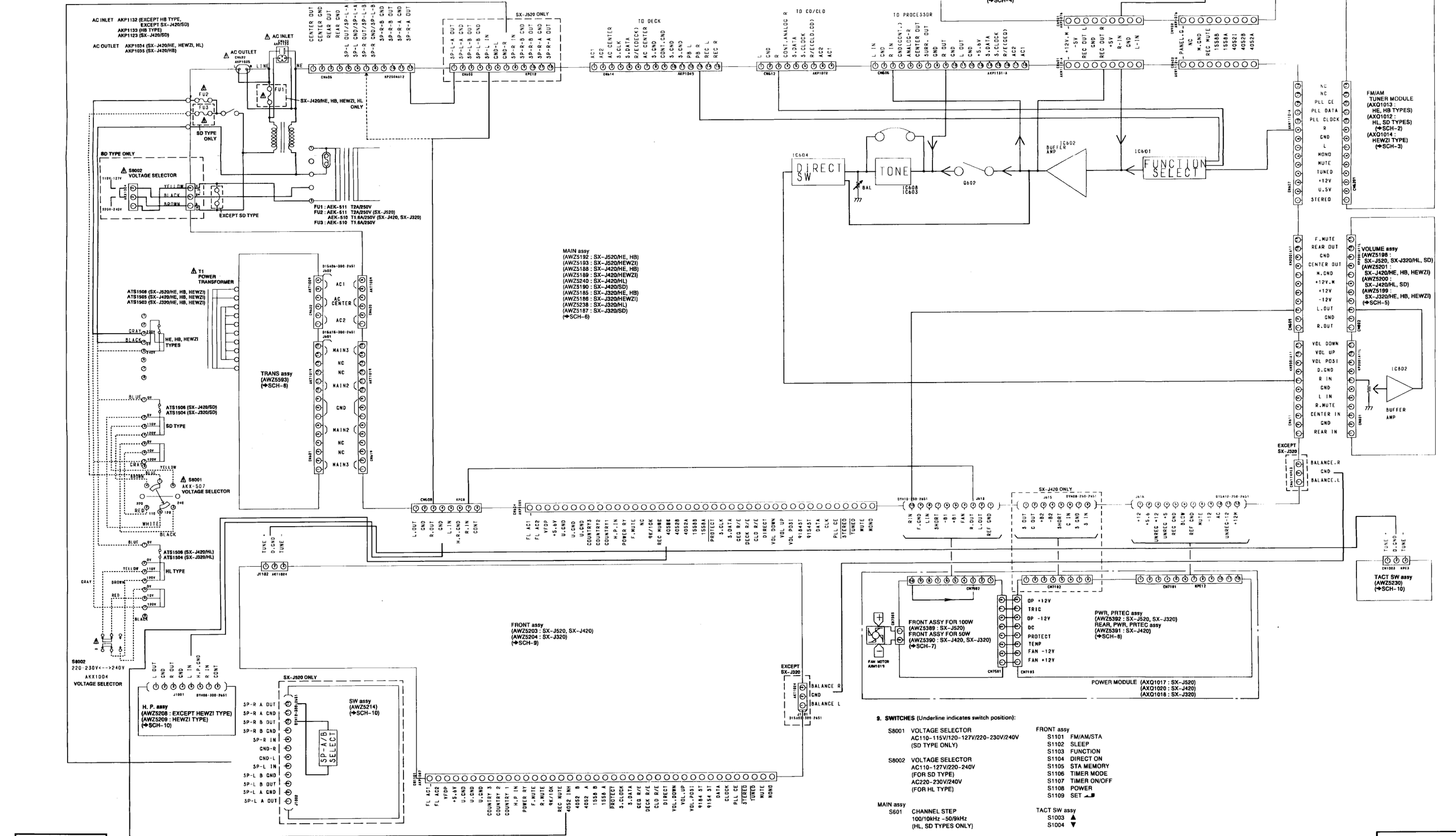
Line Voltage Selection

- Line Voltage can be changed by the following modification:
1. Disconnect the AC power cord.
 2. Remove the cover.
 3. Change the connection of the power transformer primary taps.

Part No.	Description
AAX-193	220V label
AAX-192	240V label

NOTE FOR SCHEMATIC DIAGRAMS (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: 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:
V: 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 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.
8. SCH-□ ON THE SCHEMATIC DIAGRAM:
• SCH-□ indicates the drawing number of the schematic diagram. (SCH stands for schematic diagram).

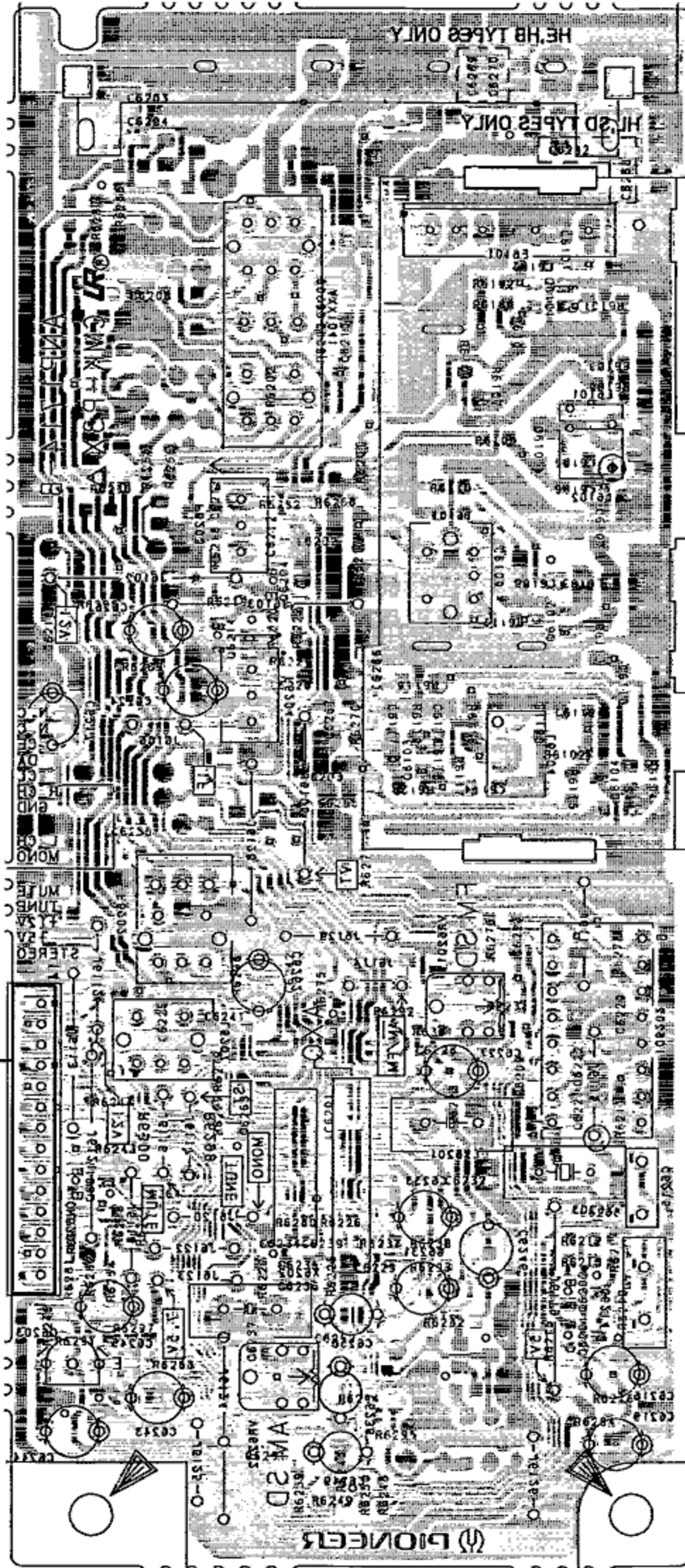


9. SWITCHES (Underline indicates switch position):

- | | | | | |
|-------|--|------------------------|-------|--------------|
| S8001 | VOLTAGE SELECTOR
AC110-115V/120-127V/220-230V/240V
(SD TYPE ONLY) | FRONT assy | S1101 | FM/AM/STA |
| S8002 | VOLTAGE SELECTOR
AC110-127V/220-240V
(FOR SD TYPE)
AC220-230V/240V
(FOR HL TYPE) | FRONT assy | S1102 | SLEEP |
| | | FRONT assy | S1103 | FUNCTION |
| | | FRONT assy | S1104 | DIRECT ON |
| | | FRONT assy | S1105 | STA MEMORY |
| | | FRONT assy | S1106 | TIMER MODE |
| | | FRONT assy | S1107 | TIMER ON/OFF |
| | | FRONT assy | S1108 | POWER |
| | | FRONT assy | S1109 | SET |
| | | TACT SW assy | S1003 | ▲ |
| | | TACT SW assy | S1004 | ▼ |
| | | SW assy (SX-J520 ONLY) | S1001 | SP-A ON/OFF |
| | | SW assy (SX-J520 ONLY) | S1002 | SP-B ON/OFF |

● For HE, HB, HL and SD Types
S.S FM\AM TUNER MODULE

FM\AM TUNER MODULE



To MAIN Assy CN01

- 8E101
- 8E103
- 8E104
- 8E105
- 8E114
- 8E120
- 8E121
- 8E122
- 8E123
- 8E124
- 8E125
- 8E126
- 8E127
- 8E128
- 8E129
- 8E130
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- 8E191
- 8E192
- 8E193
- 8E194
- 8E195
- 8E196
- 8E197
- 8E198
- 8E199
- 8E200

● This diagram is viewed from the foil

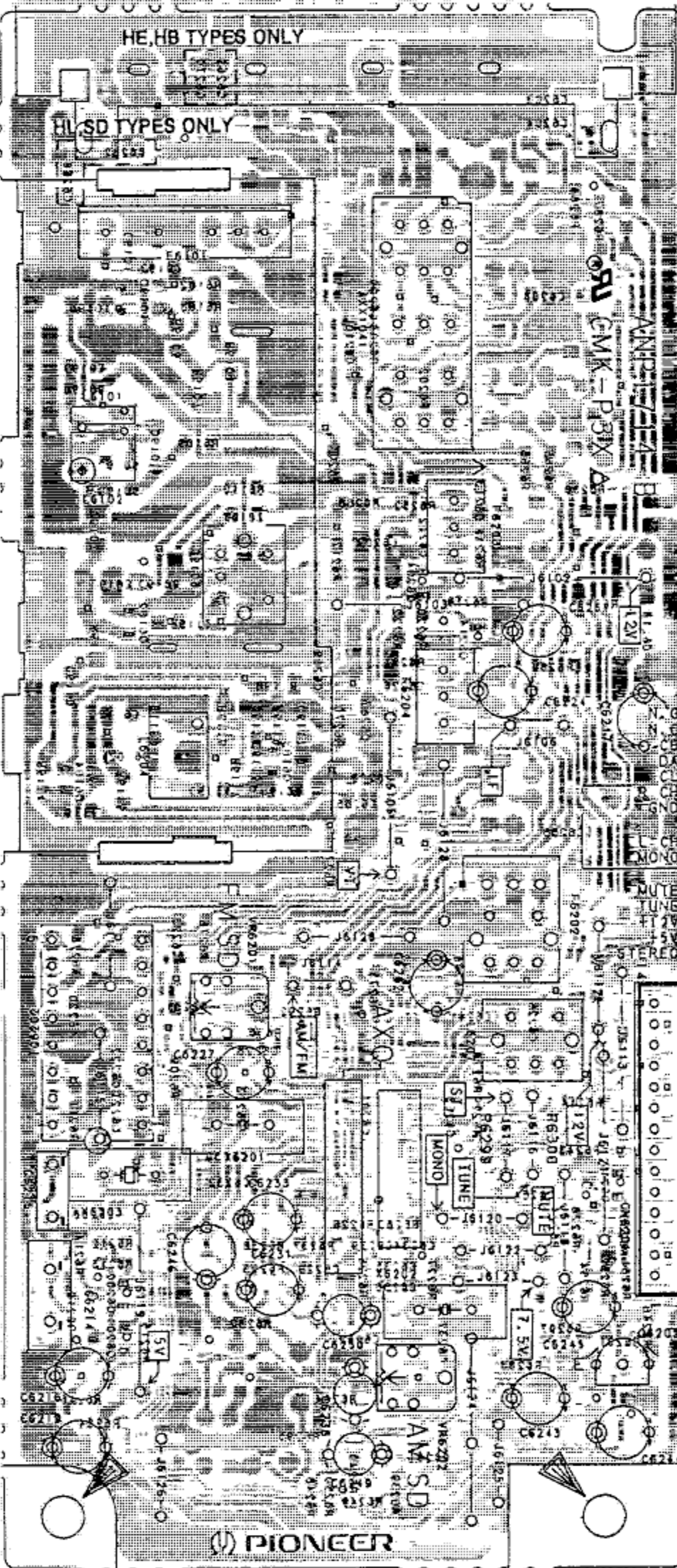
2.2 FM/AM TUNER MODULE

● For HE, HB, HL and SD Types

A

A

FM/AM TUNER MODULE



Q6101

Q6204

Q6102 Q6214

Q6103
Q6104

VR6201

IC6202

IC6201

Q6217

Q6202

Q6201

Q6203 VR6202

To MAIN assy CN607

NOTE FOR PCB DIAGRAMS:

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

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Transistor
		Diode
		Capacitor (Polarized)

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

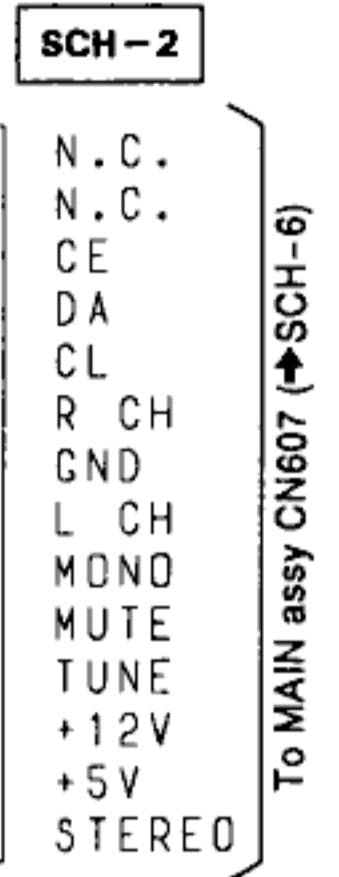
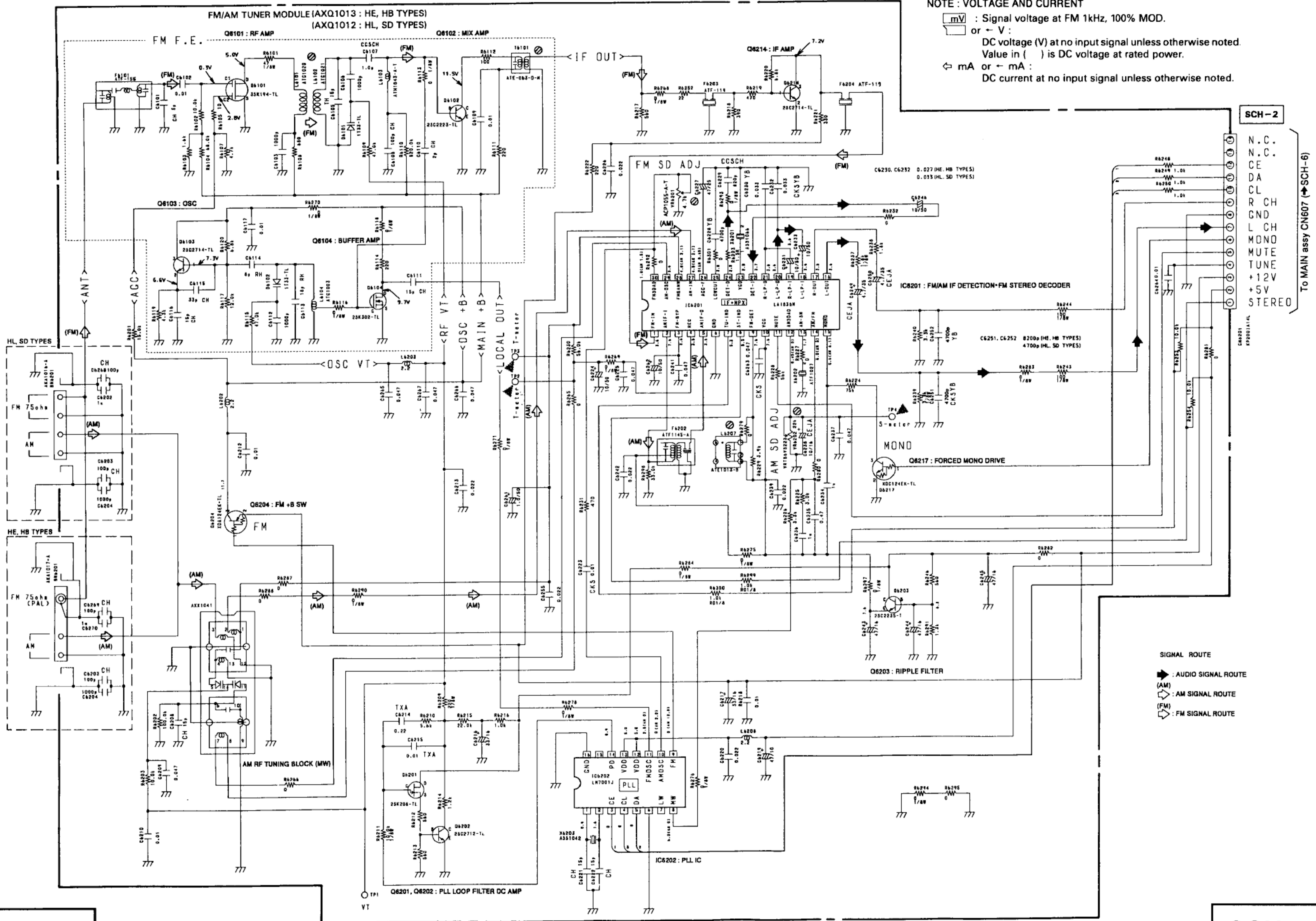
● This diagram is viewed from the mounted parts side.

D

D

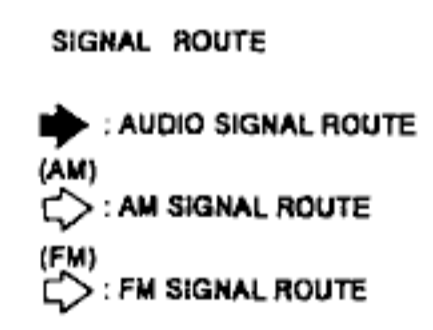
NOTE: VOLTAGE AND CURRENT

- 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.
- $\leftarrow mA$: DC current at no input signal unless otherwise noted.

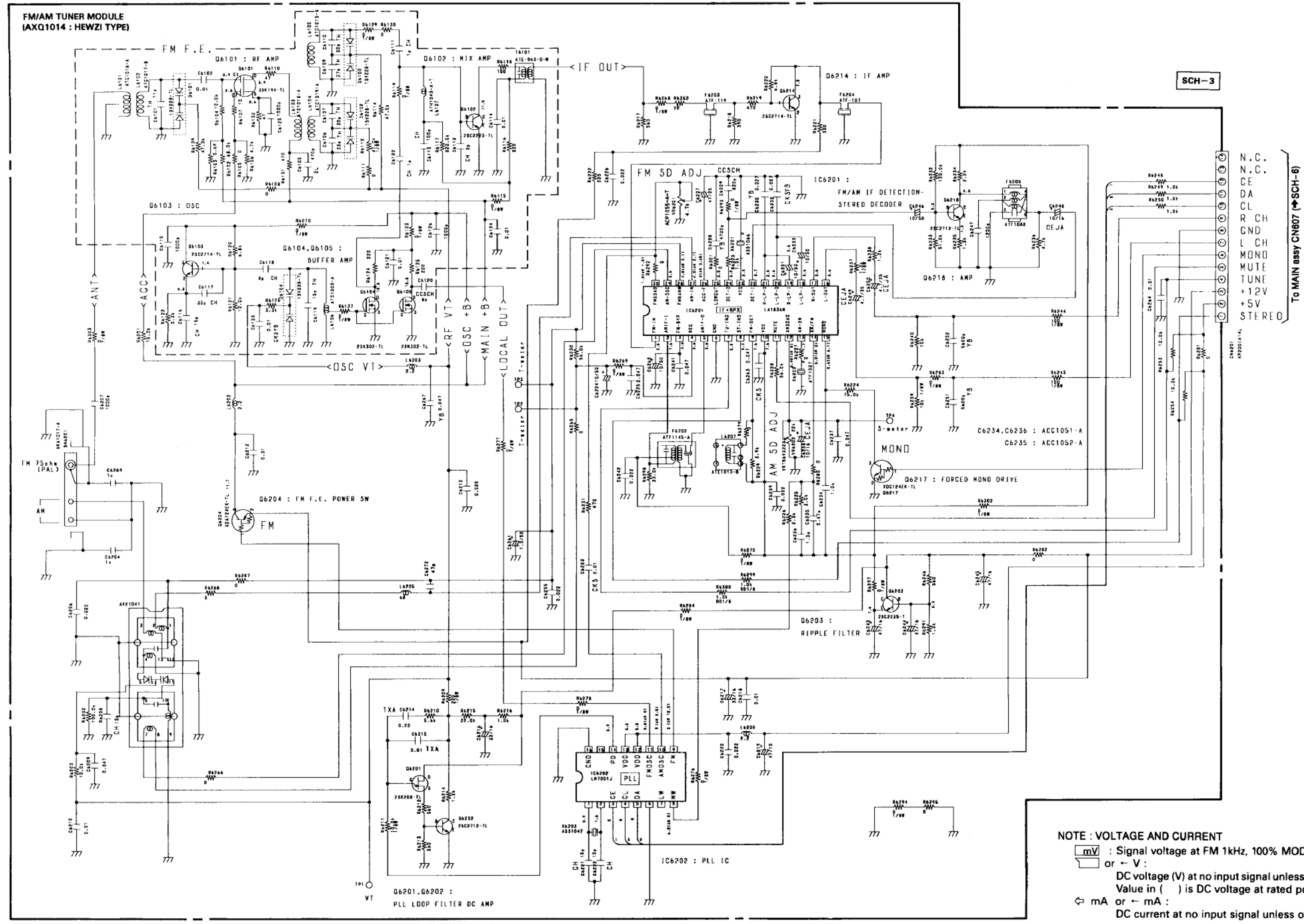


SCH-2 FM/AM TUNER MODULE (For HE, HB, HL and SD types)

FM/AM TUNER MODULE (For HE, HB, HL and SD types) **SCH-2**



● For HEWZI Type



NOTE : VOLTAGE AND CURRENT

mV : Signal voltage at FM 1kHz, 100% MOD.
 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.

SCH-3 FM/AM TUNER MODULE (For HEWZI type)

FM/AM TUNER MODULE (For HEWZI type) **SCH-3**

FM/AM TUNER MODULE

Q6101

Q6102

Q6104

Q6103
Q6105

IC6202

Q6202
Q6201
Q6218

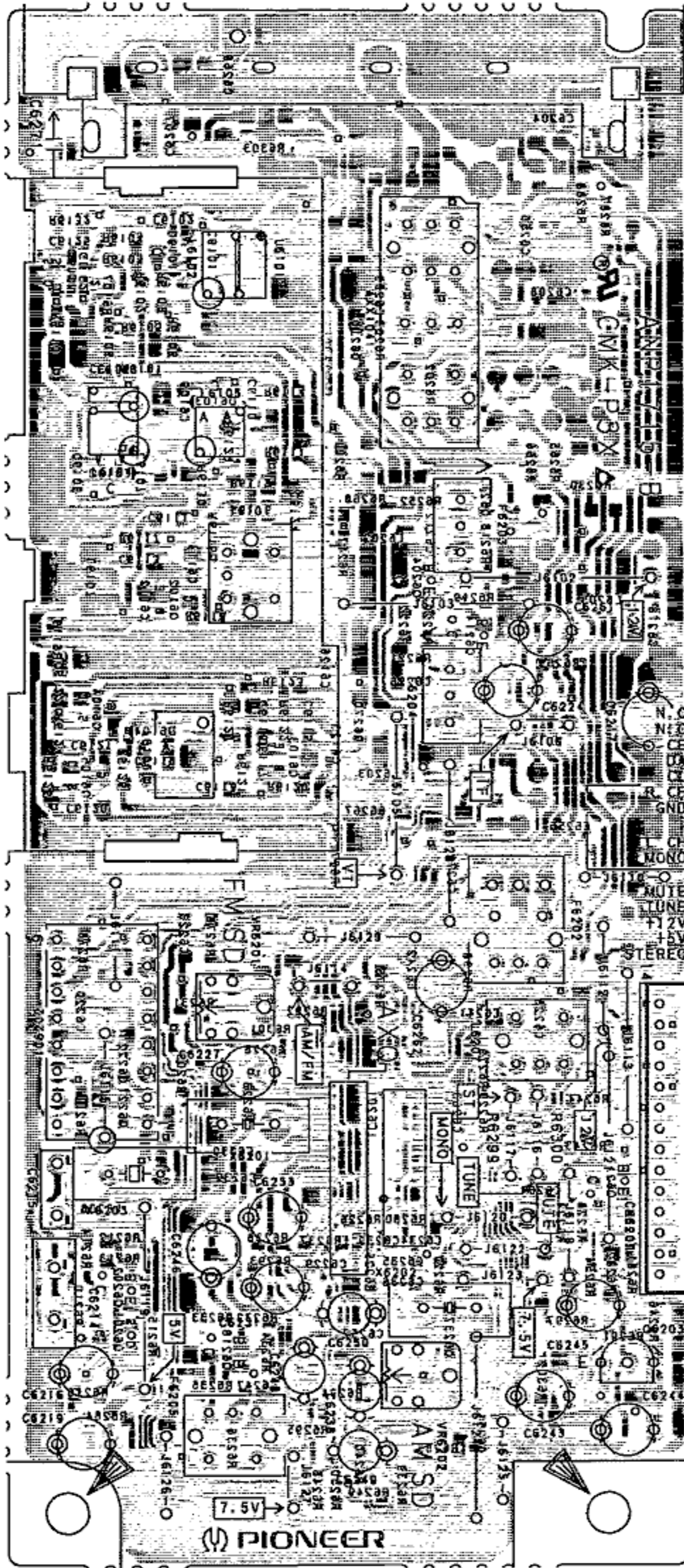
Q6204
Q6214

IC6201
Q6217

Q6203

VR6201

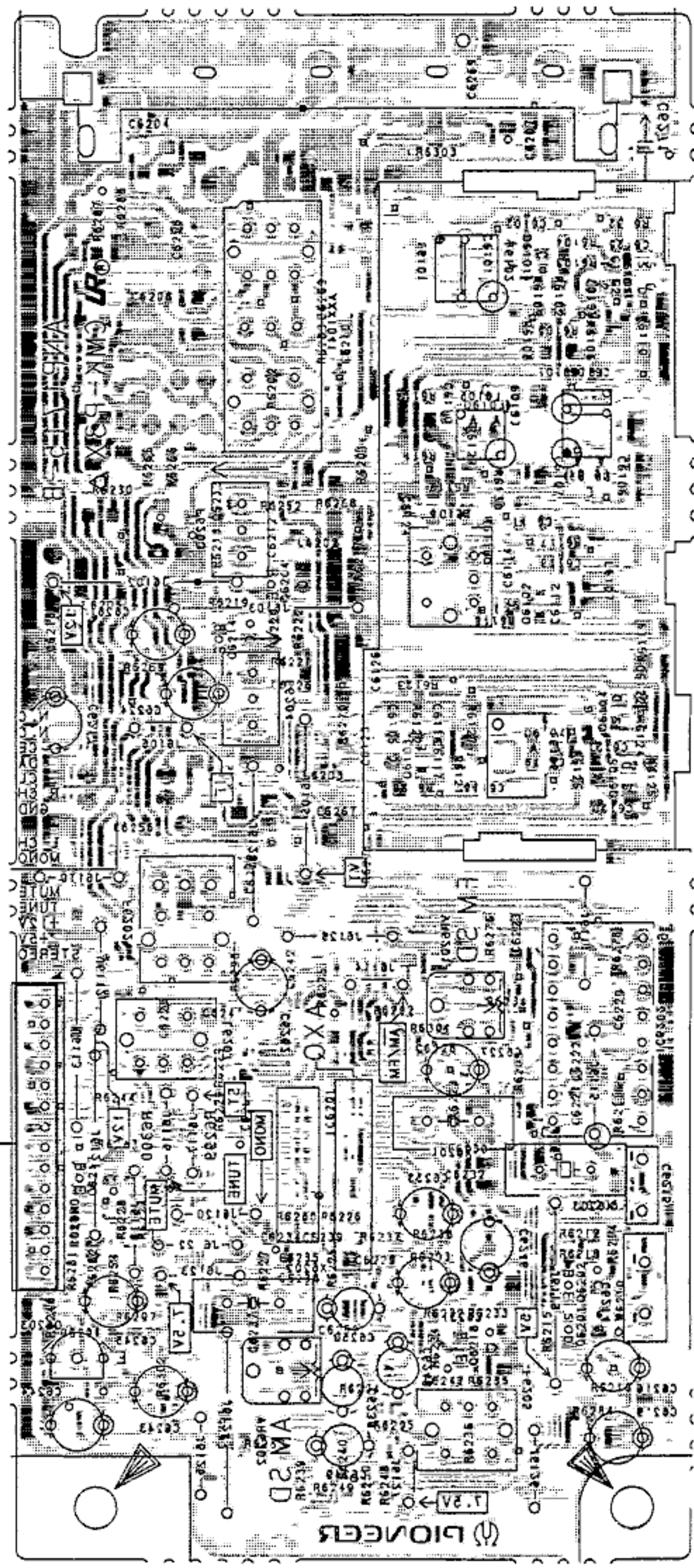
VR6202



To MAIN assy CN607

• This diagram is viewed from the mounted parts side.

FM/AM TUNER MODULE

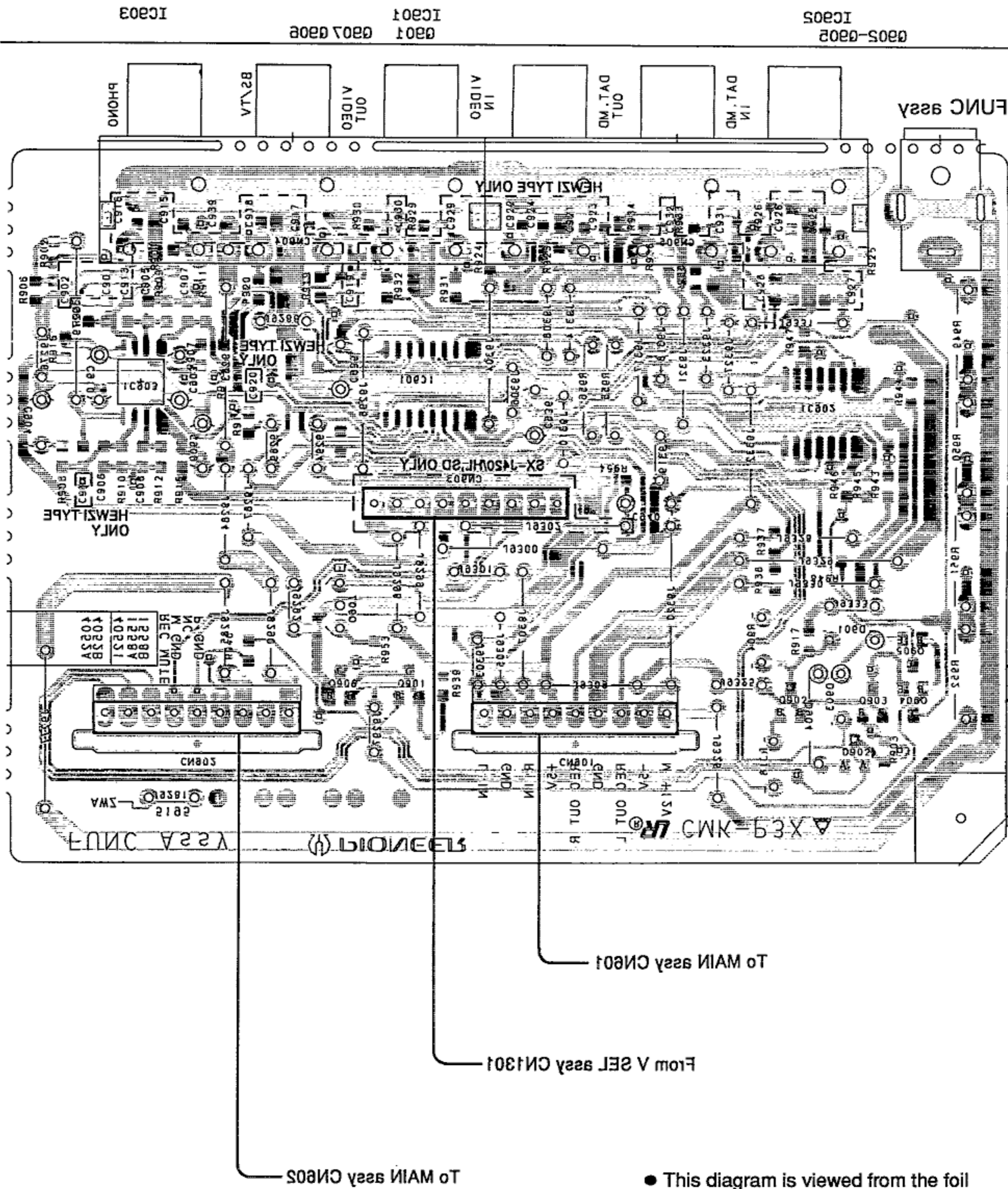


- Q8102
- Q8103
- Q8104
- Q8514
- Q8505
- Q8504
- Q8101
- Q8518
- Q8501
- Q8505
- Q8517
- IC8501
- IC8505
- VR8503
- VR8505
- VR8501

TO MAIN ASSY CR80

• This diagram is viewed from the foil side.

2.3 FUNC ASSY



IC903

IC901 IC902
IC901 IC902

IC905

PHONO VT\2B OUT AIDEO IN AIDEO DM.TAD OUT DM.TAD IN FUNC assy

HEWLETT
PACKARD
ONLY

HEWLETT
PACKARD
ONLY

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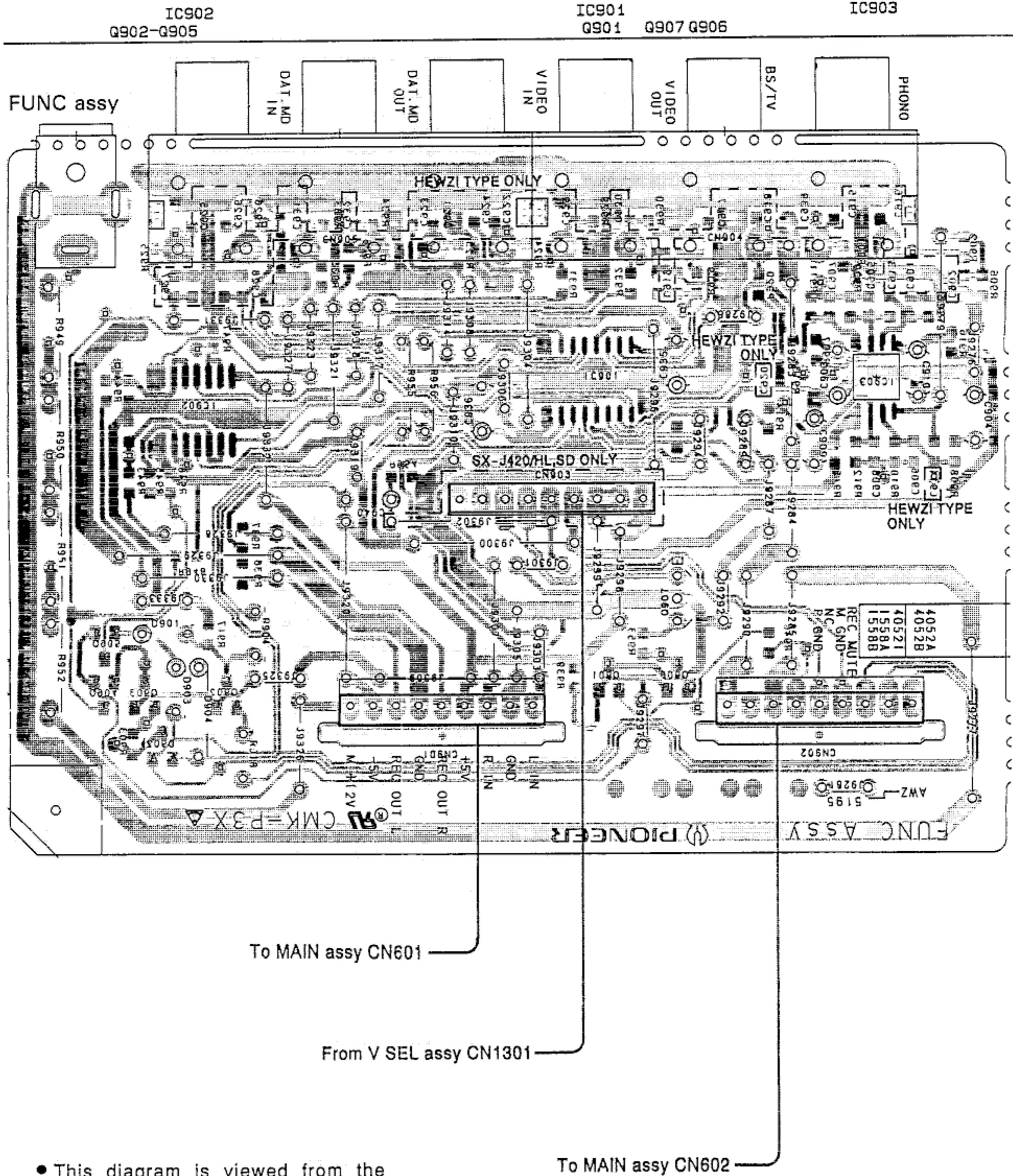
To MAIN assy CN801

From V SEL assy CN1301

To MAIN assy CN805

● This diagram is viewed from the foil side.

2.3 FUNC ASSY



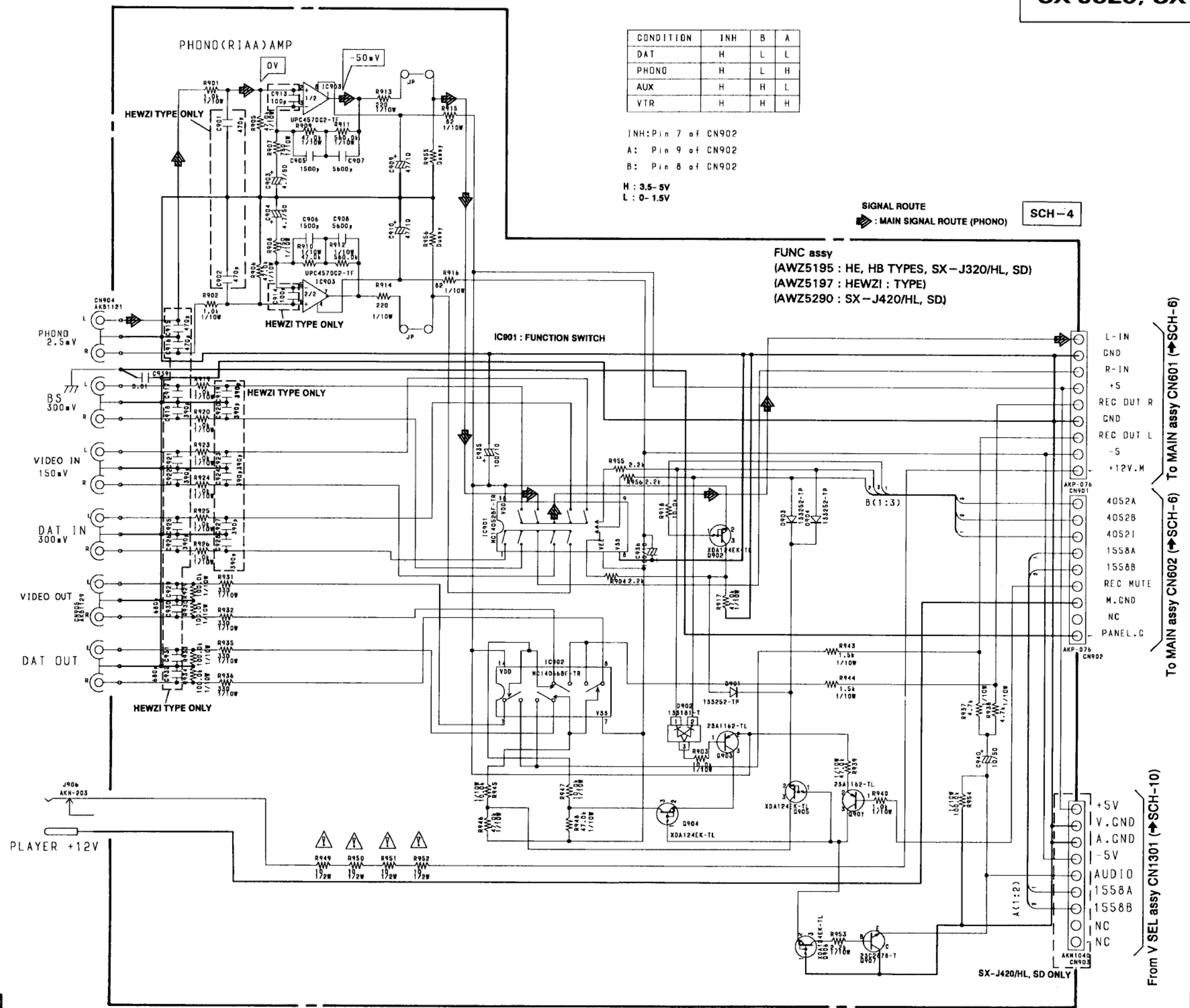
• This diagram is viewed from the mounted parts side.

CONDITION	INH	B	A
DAT	H	L	L
PHONO	H	L	H
AUX	H	H	L
VTR	H	H	H

INH: Pin 7 of CN902
 A: Pin 9 of CN902
 B: Pin 8 of CN902
 H: 3.5-5V
 L: 0-1.5V

SIGNAL ROUTE
 ◆ : MAIN SIGNAL ROUTE (PHONO) SCH-4

FUNC assy
 (AWZ5195 : HE, HB TYPES, SX-J320/HL, SD)
 (AWZ5197 : HEWZI : TYPE)
 (AWZ5290 : SX-J420/HL, SD)



To MAIN assy CN601 (→SCH-6)
 To MAIN assy CN602 (→SCH-6)

From V SEL assy CN1301 (→SCH-10)

SX-J420/HL, SD ONLY

SCH-4
 FUNC ASSY

SCH-4
 FUNC ASSY

2.4 VOLUME ASSY

VOLUME assy

(AWZ5198 : SX-J520, SX-J320/HL, SD)
(AWZ5201 : SX-J420/HE, HB, HEWZ1)
(AWZ5200 : SX-J420/HL, SD)
(AWZ5199 : SX-J320/HE, HB, HEWZ1)

VR801 : ACX1067 (SX-J520, SX-J320)
ACX1077 (SX-J420)

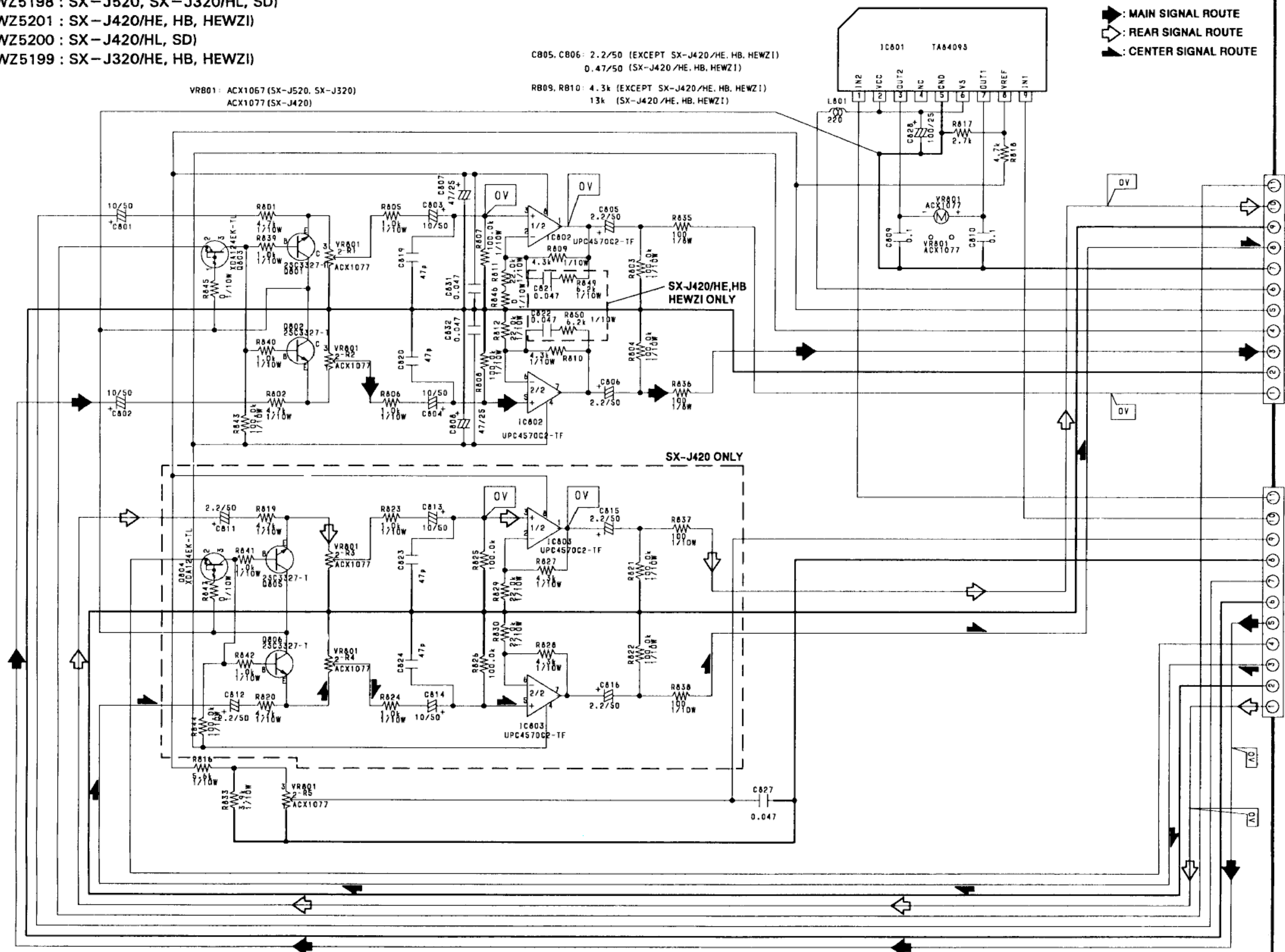
C805, C806 : 2.2/50 (EXCEPT SX-J420/HE, HB, HEWZ1)
0.47/50 (SX-J420/HE, HB, HEWZ1)

RB09, RB10 : 4.3k (EXCEPT SX-J420/HE, HB, HEWZ1)
13k (SX-J420/HE, HB, HEWZ1)

SIGNAL ROUTE

- ➔ : MAIN SIGNAL ROUTE
- ⇨ : REAR SIGNAL ROUTE
- ⇩ : CENTER SIGNAL ROUTE

SCH-5



- To MAIN assy CN609 (➔SCH-6)
- 1 F. MUTE
 - 2 REAR OUT
 - 3 GND
 - 4 CENTER OUT
 - 5 M. GND
 - 6 +12V.M
 - 7 +12V
 - 8 -12V
 - 9 L. OUT
 - 10 GND
 - 11 R. OUT

- To MAIN assy CN611 (➔SCH-6)
- 1 VOL DOWN
 - 2 VOL UP
 - 3 VOL POSI
 - 4 D. GND
 - 5 R IN
 - 6 GND
 - 7 L IN
 - 8 R. MUTE
 - 9 CENTER IN
 - 10 GND
 - 11 REAR IN

SCH-5

VOLUME ASSY

SCH-5

VOLUME ASSY

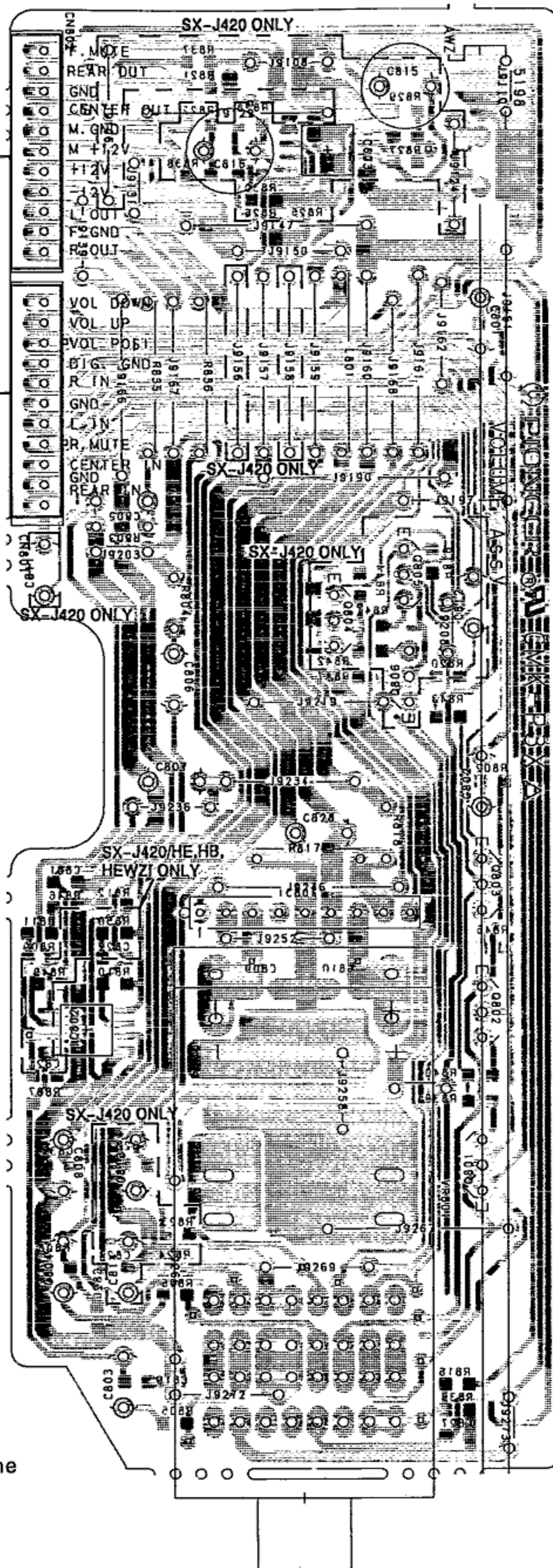
VOLUME assy

A

A

To MAIN assy CN609

To MAIN assy CN611



IC803

QB05

QB04

QB06

QB03
IC801

QB02
IC802

QB01

VRB01

B

B

C

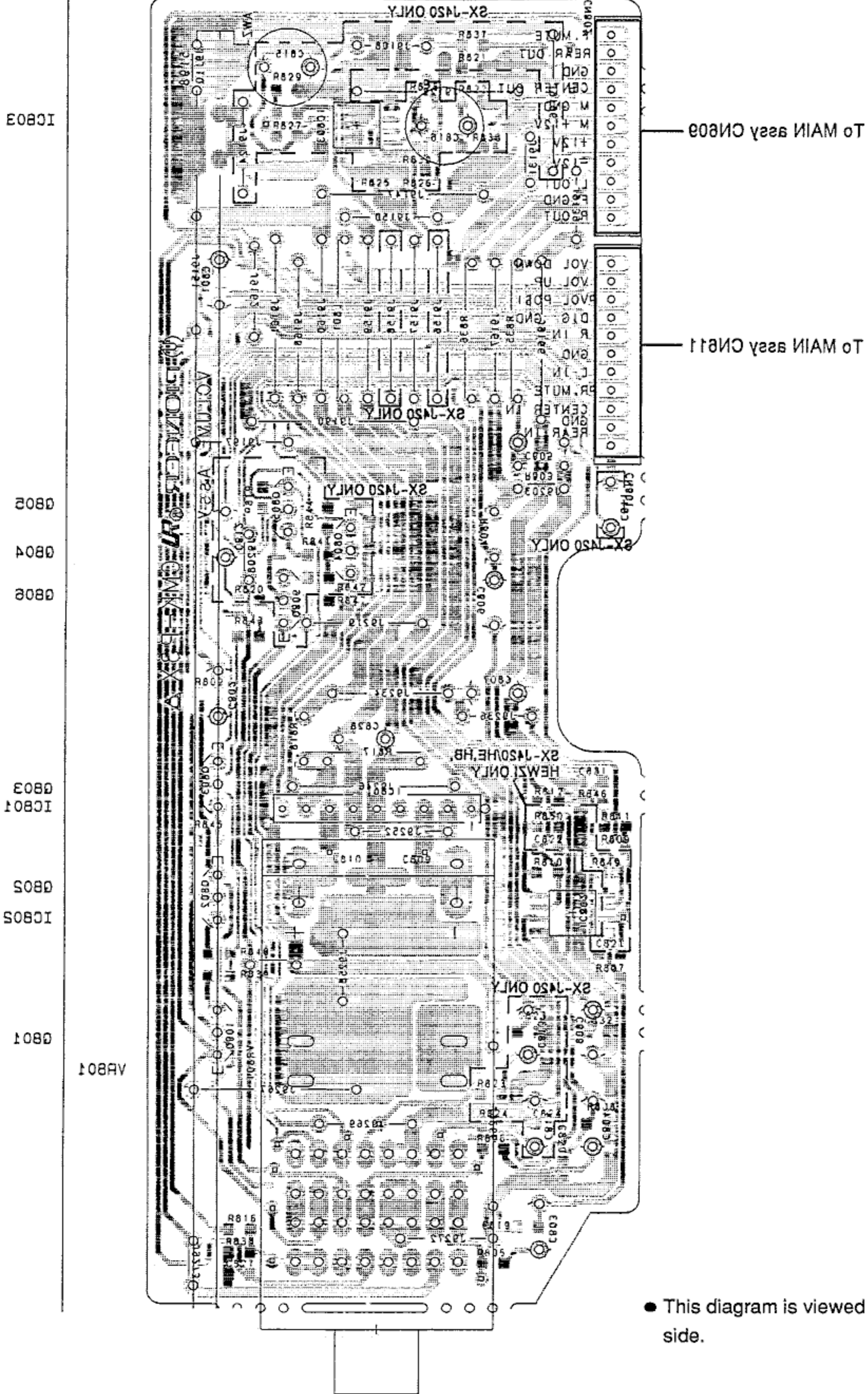
C

D

D

• This diagram is viewed from the mounted parts side.

VOLUME assy



ICB03

Q802

Q804

Q808

Q803

ICB01

Q805

ICB05

Q801

VR801

A

B

C

D

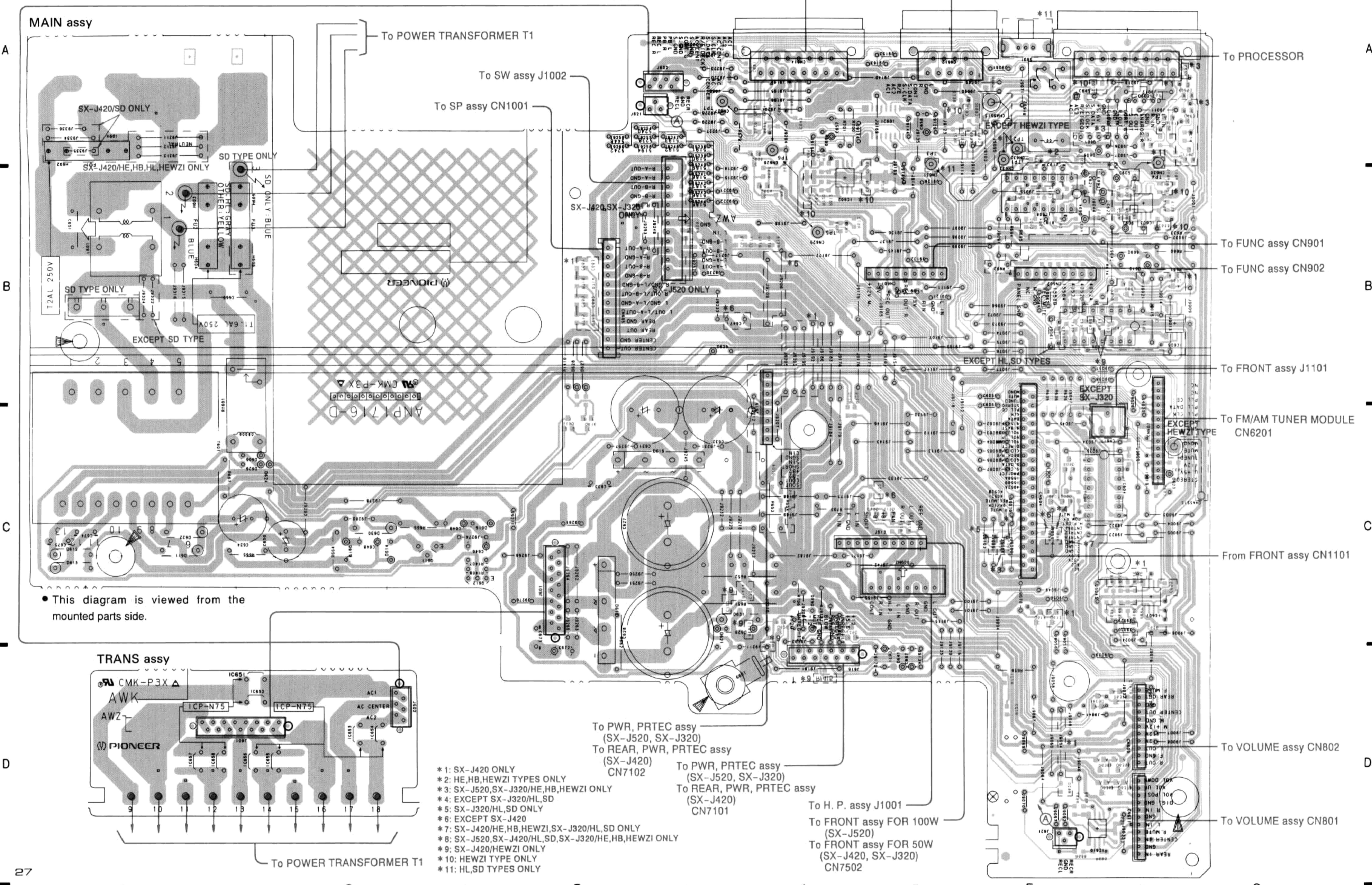
A

B

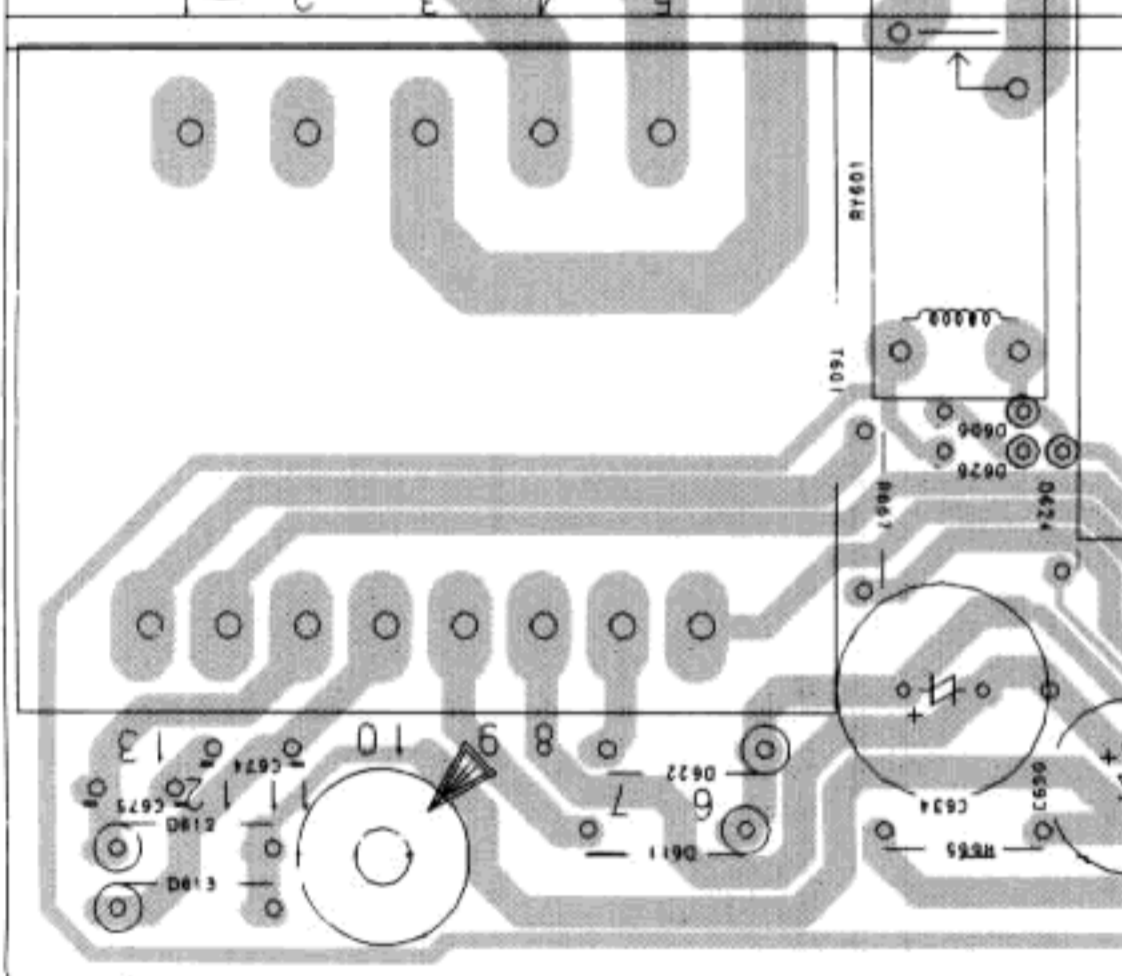
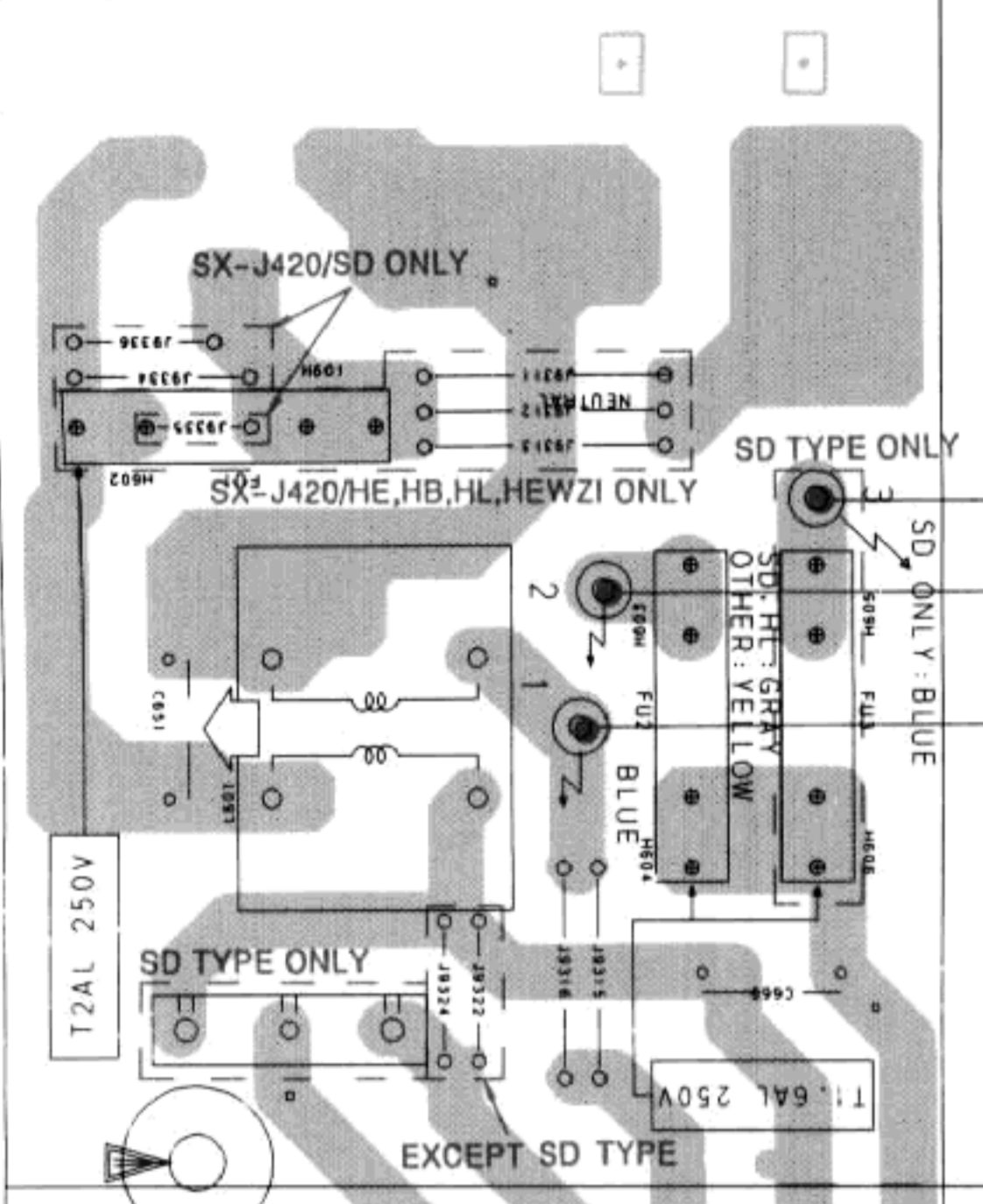
C

D

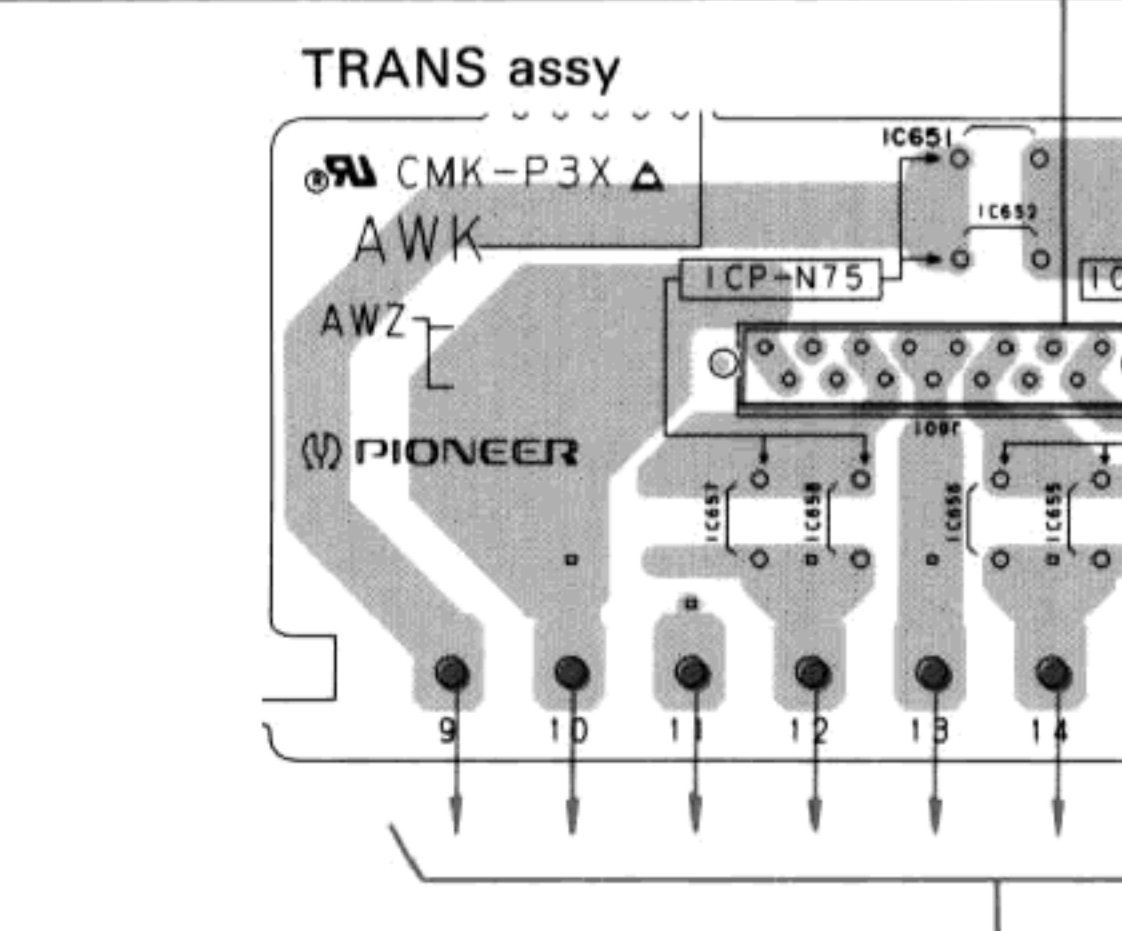
2.5 MAIN ASSY AND TRANS ASSY



MAIN assy



This diagram is viewed from the mounted parts side.

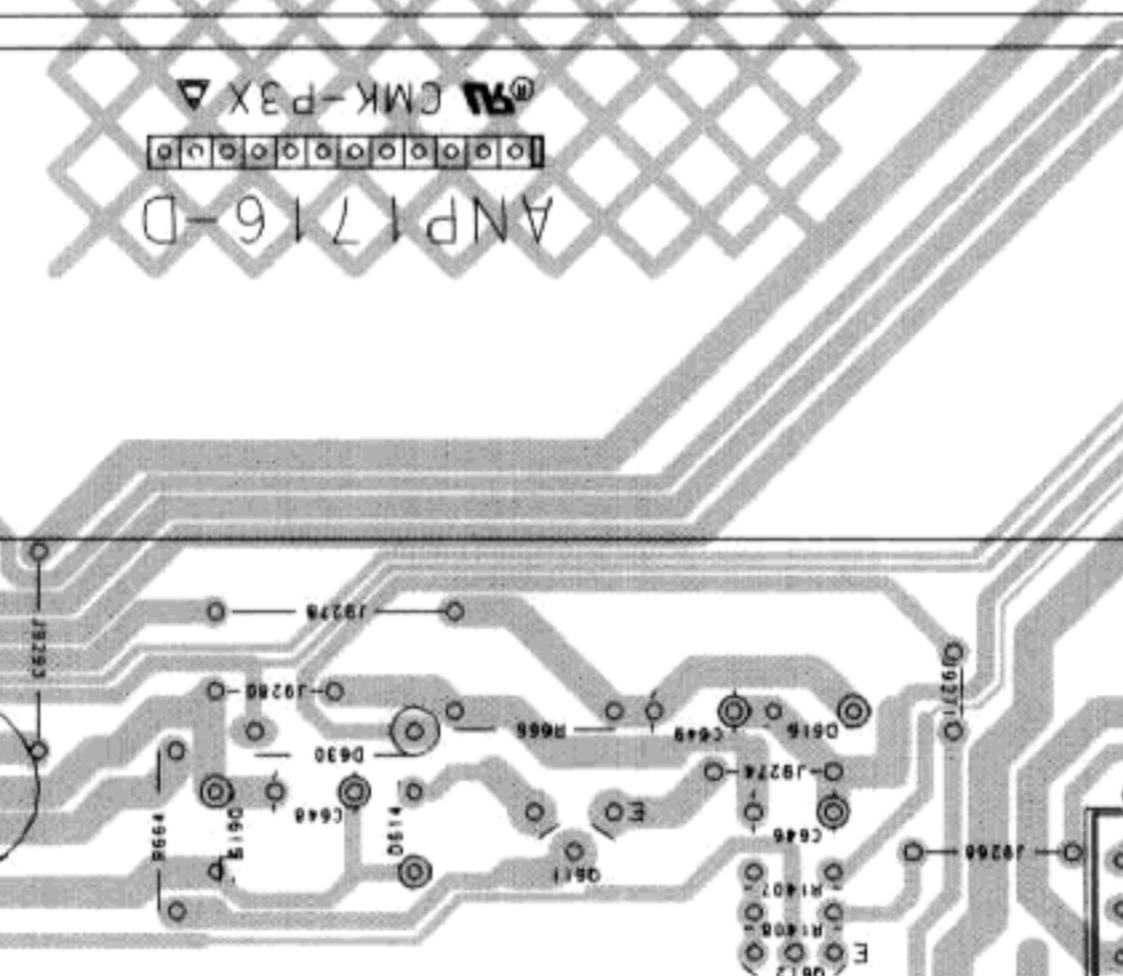
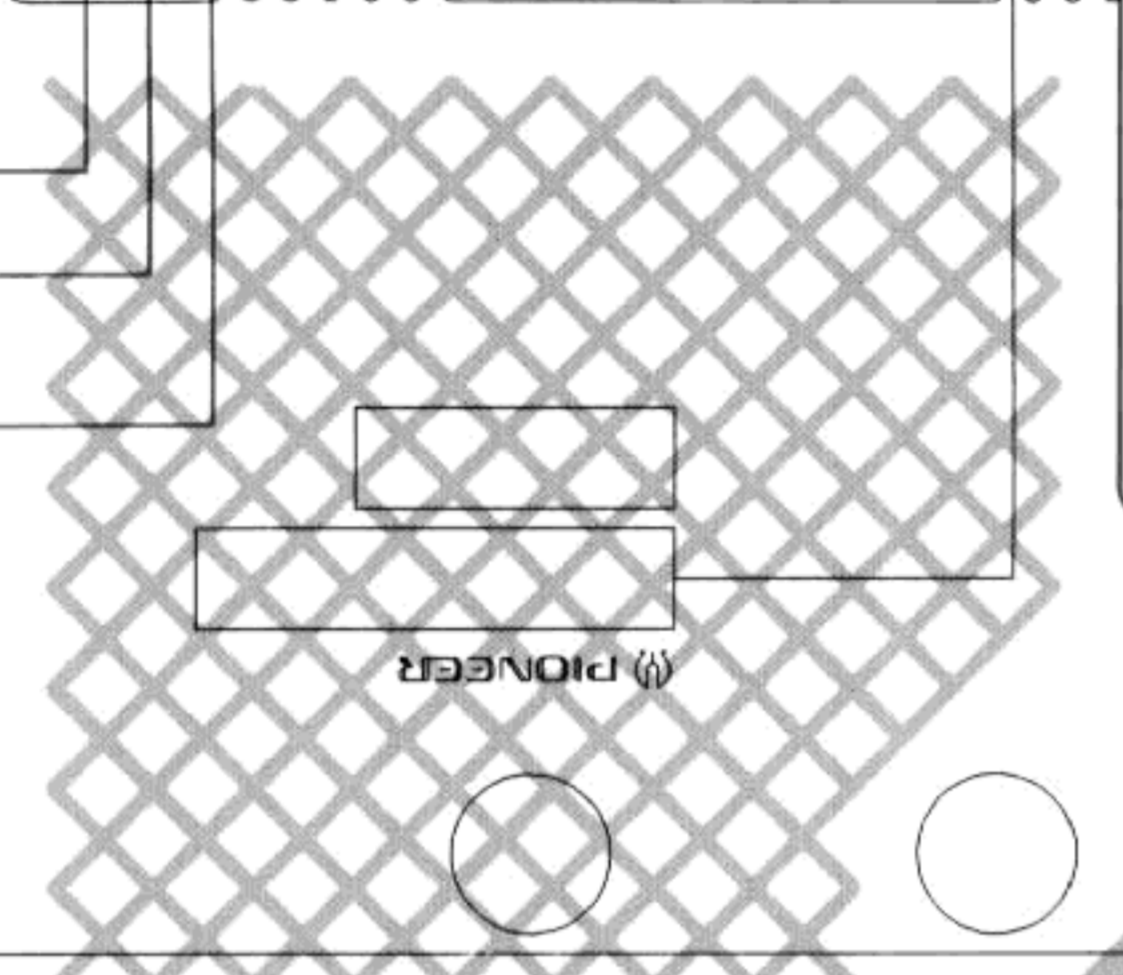


To POWER TRANSFORMER T1

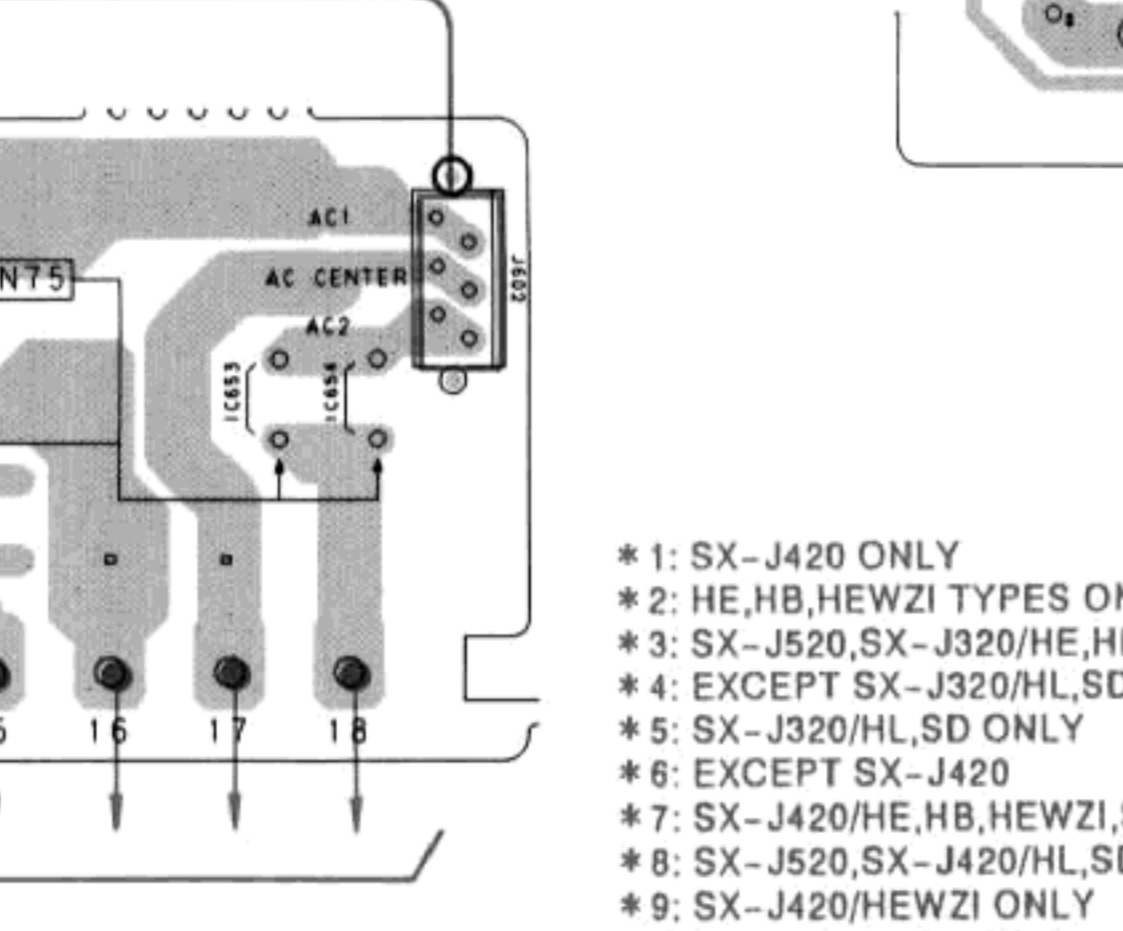
To POWER TRANSFORMER T1

To SW assy J1002

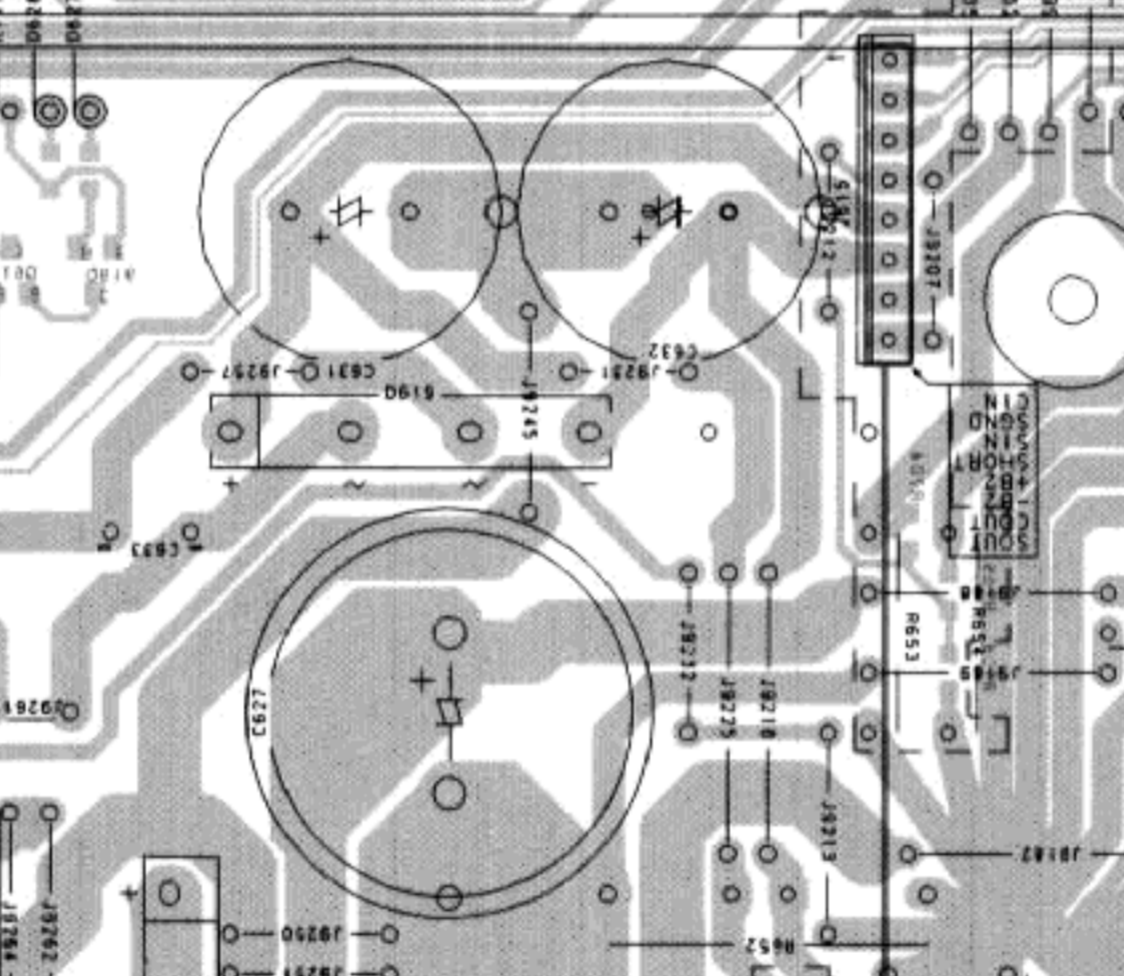
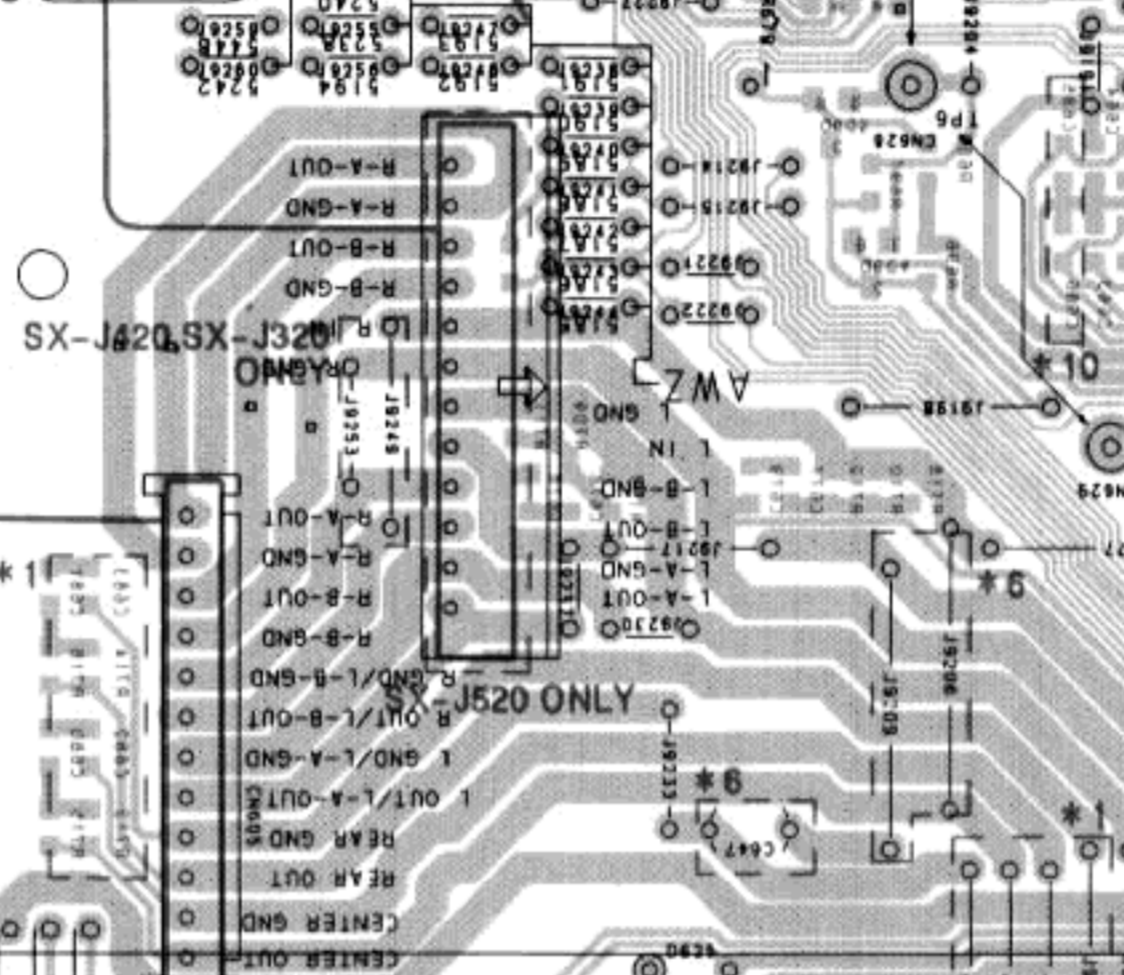
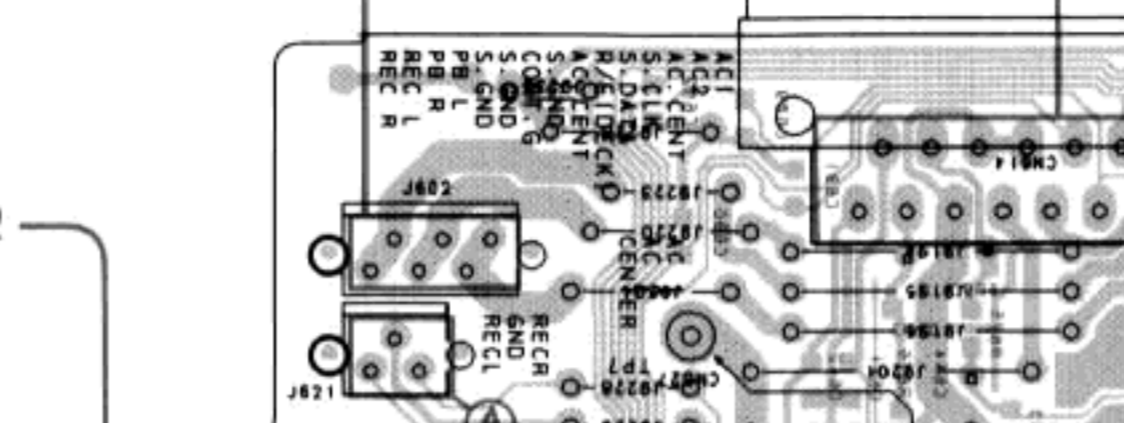
To SP assy CN1001



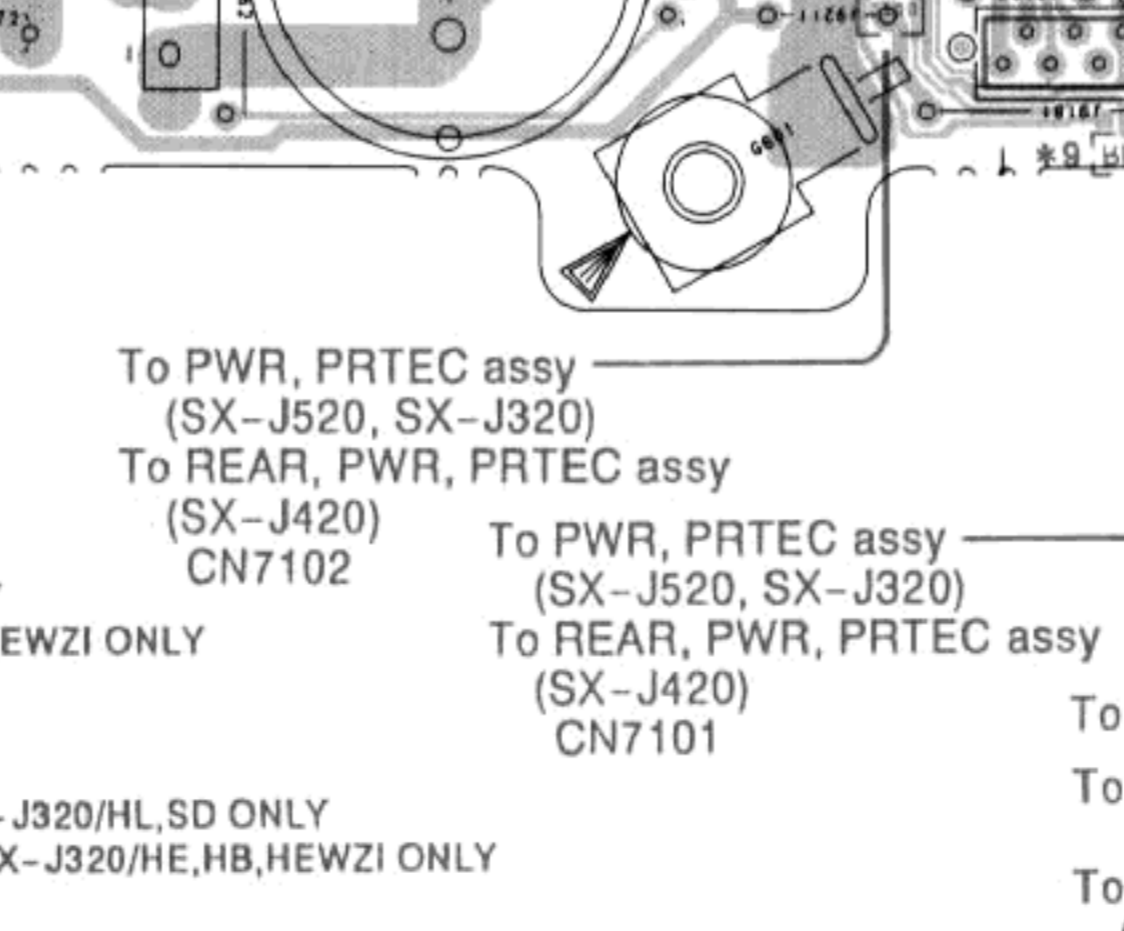
To POWER TRANSFORMER T1



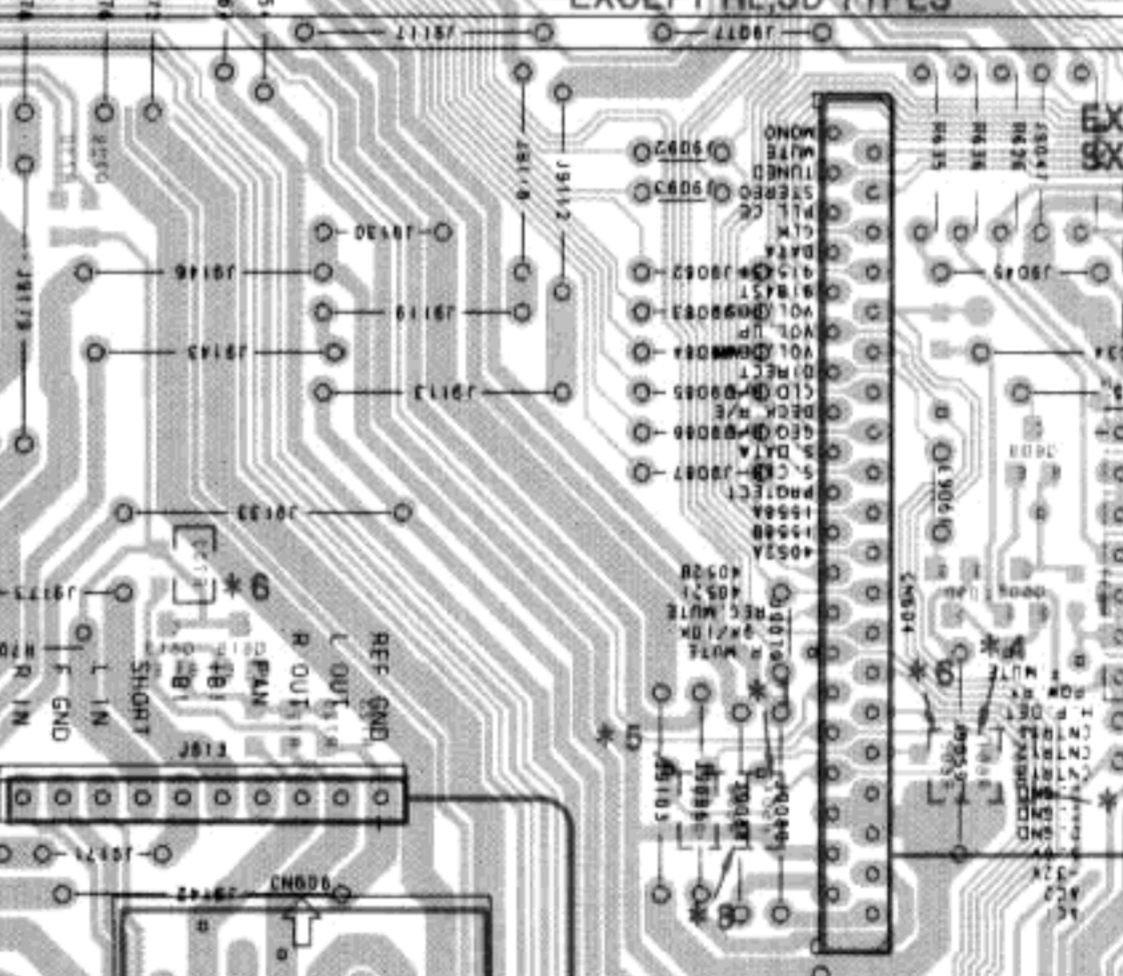
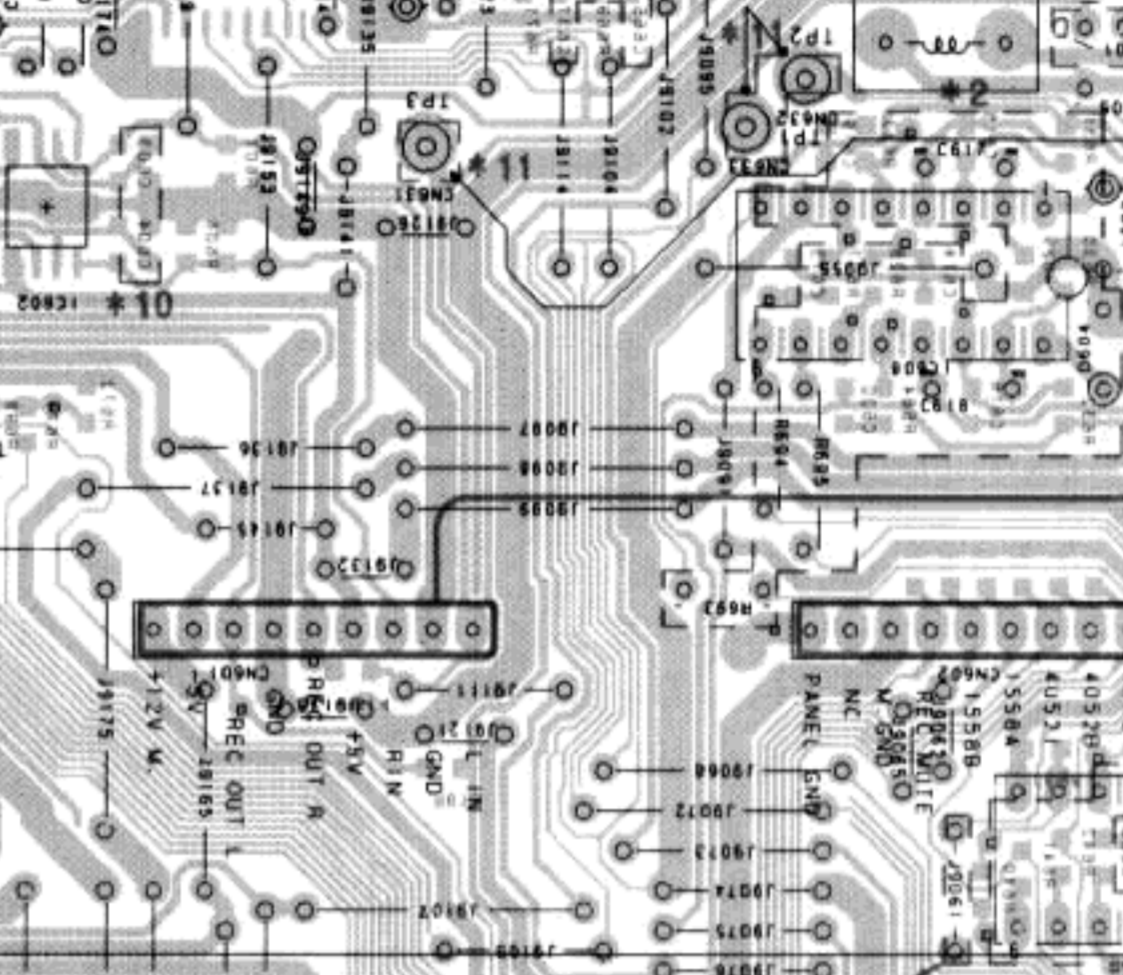
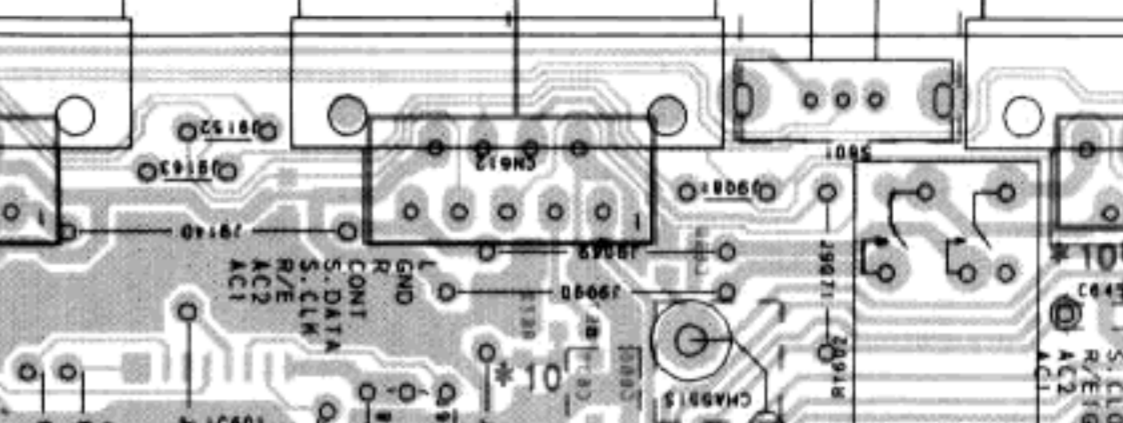
To POWER TRANSFORMER T1



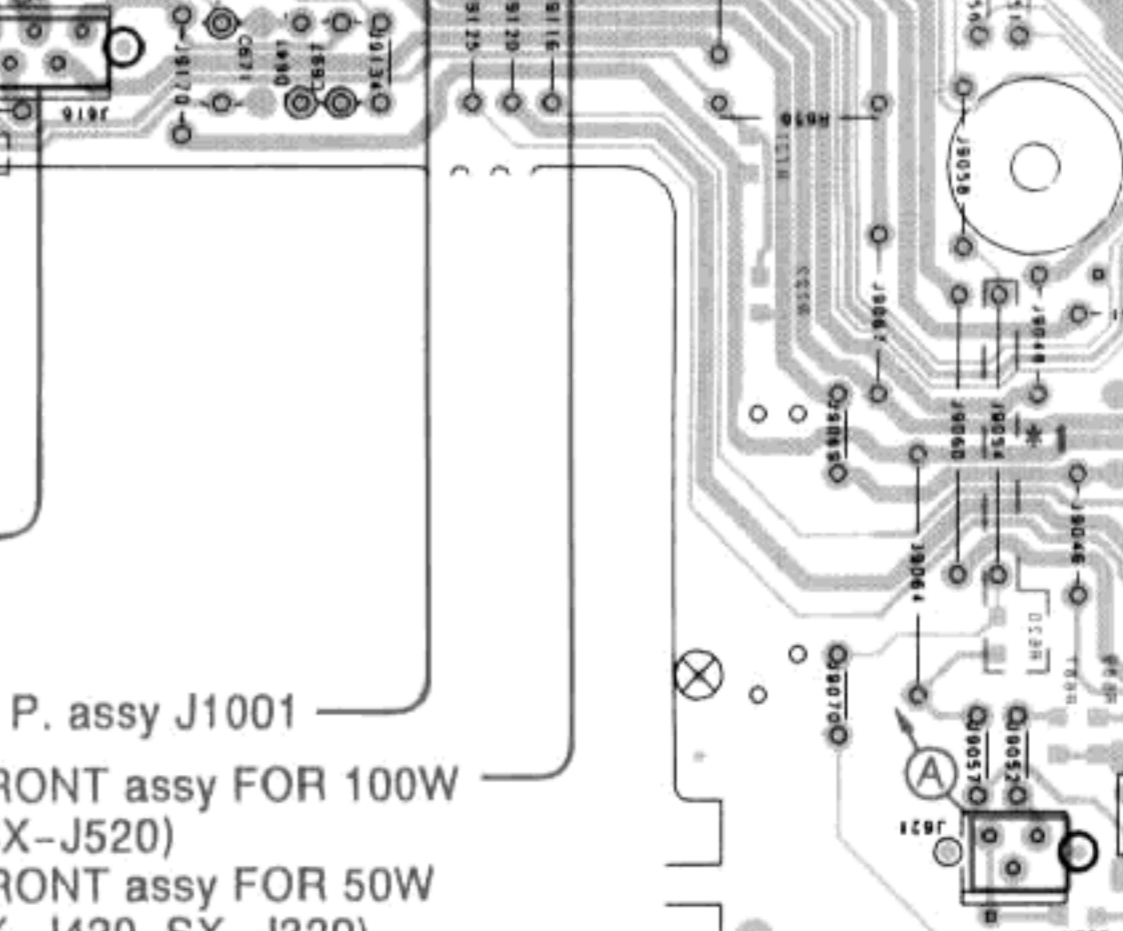
To POWER TRANSFORMER T1



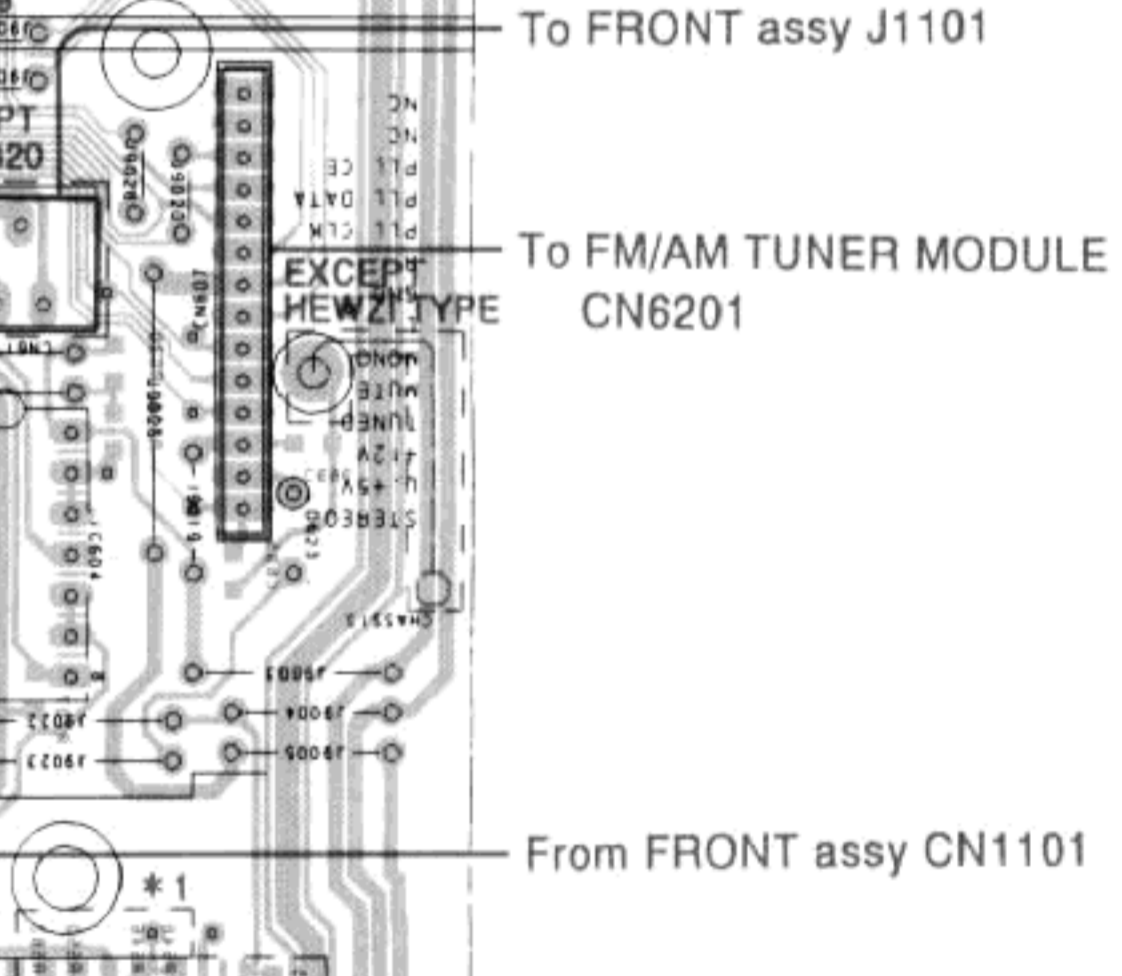
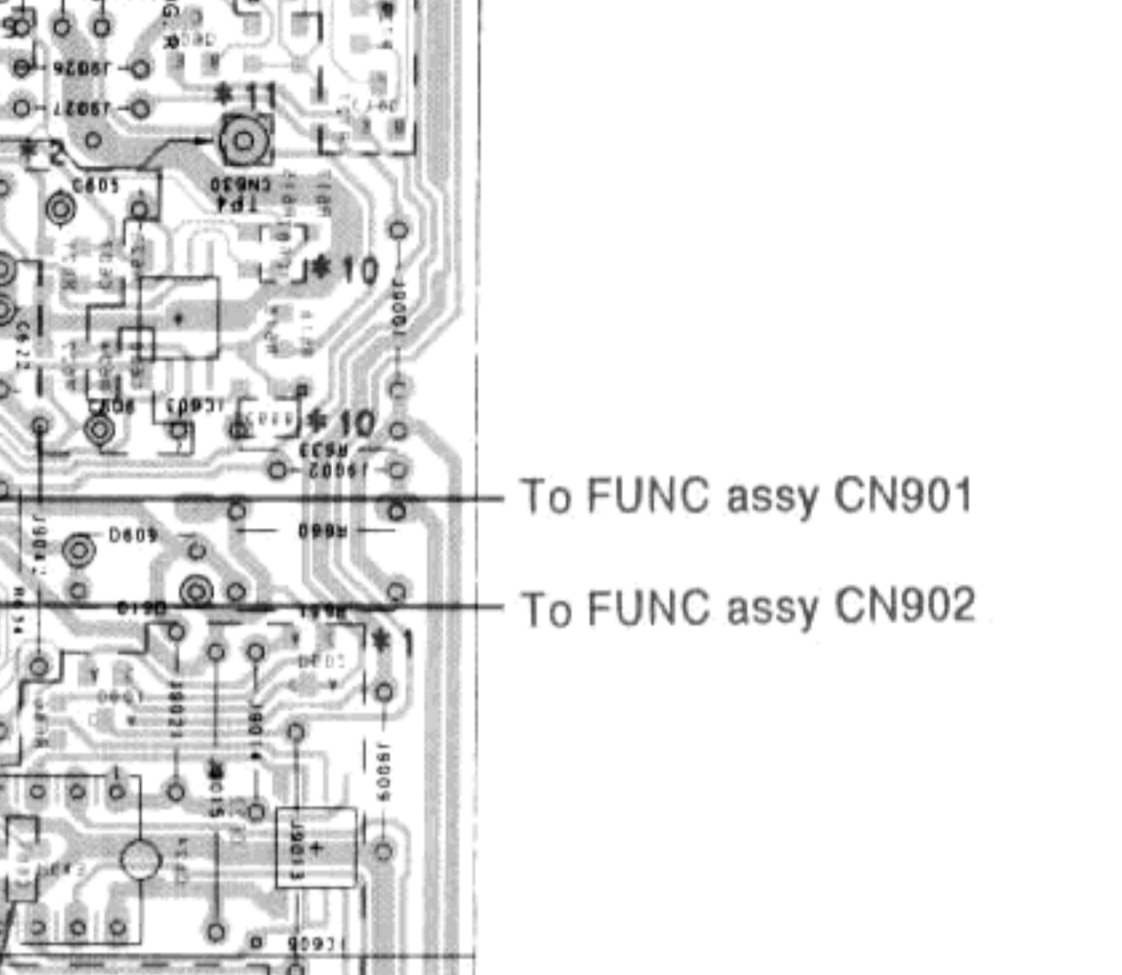
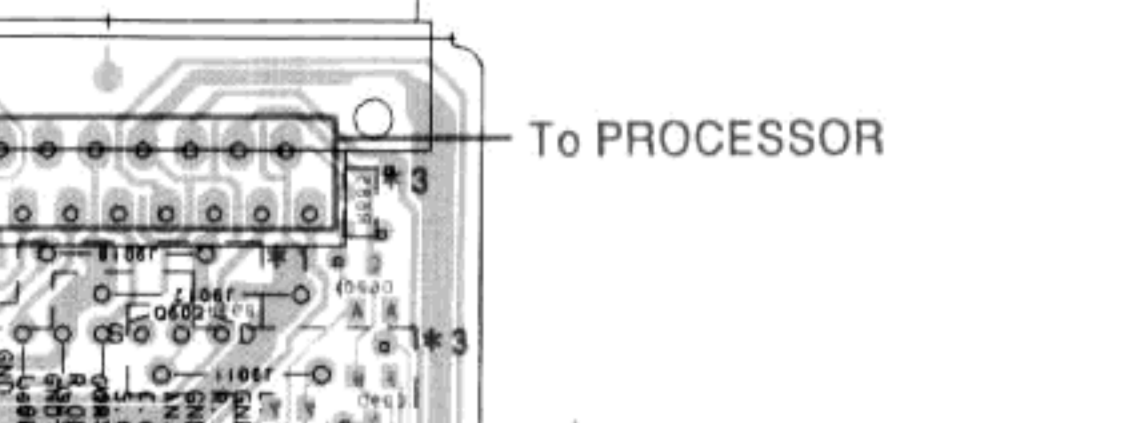
To POWER TRANSFORMER T1



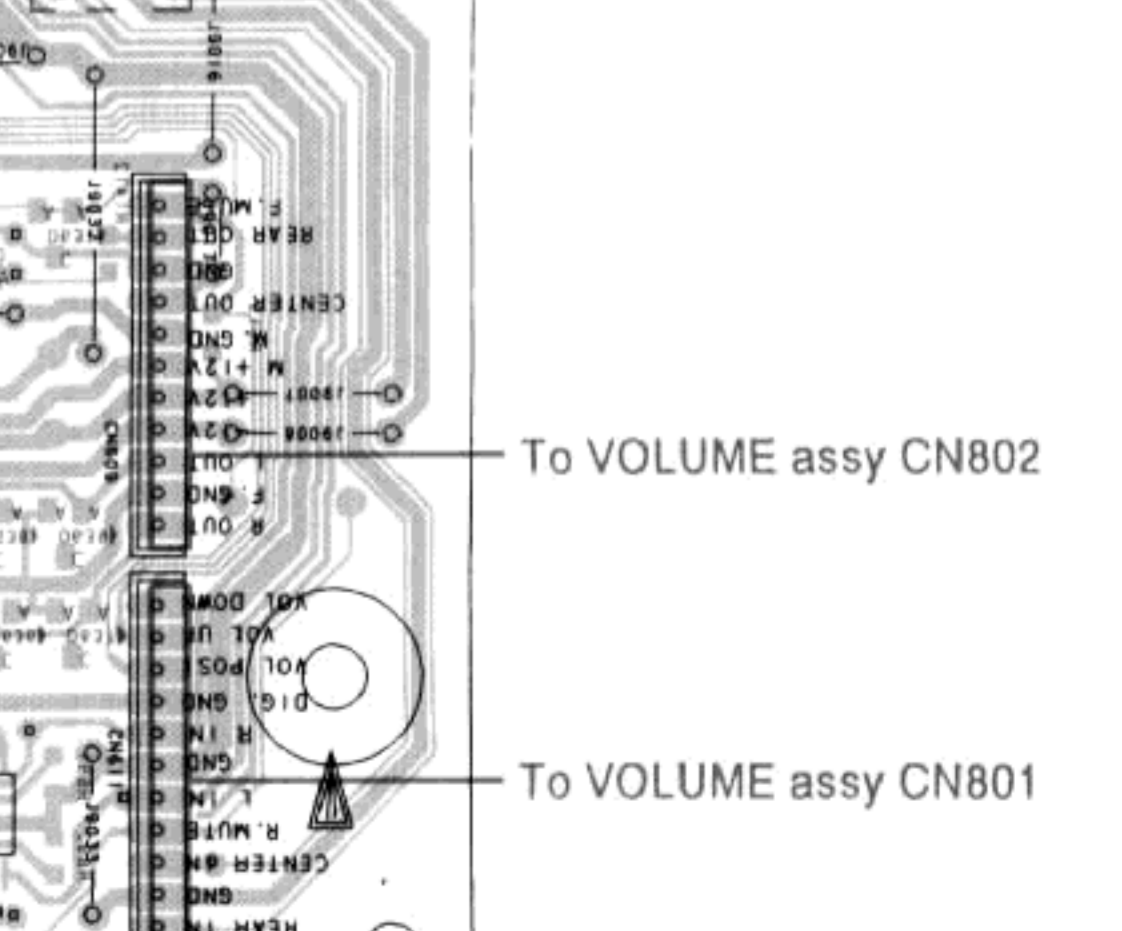
To POWER TRANSFORMER T1



To POWER TRANSFORMER T1



To POWER TRANSFORMER T1



To POWER TRANSFORMER T1

- * 1: SX-J420 ONLY
- * 2: HE,HB,HEWZI TYPES ONLY
- * 3: SX-J520,SX-J320/HE,HB,HEWZI ONLY
- * 4: EXCEPT SX-J320/HL,SD
- * 5: SX-J320/HL,SD ONLY
- * 6: EXCEPT SX-J420
- * 7: SX-J420/HE,HB,HEWZI,SX-J320/HL,SD ONLY
- * 8: SX-J520,SX-J420/HL,SD,SX-J320/HE,HB,HEWZI ONLY
- * 9: SX-J420/HEWZI ONLY
- * 10: HEWZI TYPE ONLY
- * 11: HL,SD TYPES ONLY

To PWR, PRTEC assy
(SX-J520, SX-J320)
To REAR, PWR, PRTEC assy
(SX-J420)
CN7102

To PWR, PRTEC assy
(SX-J520, SX-J320)
To REAR, PWR, PRTEC assy
(SX-J420)
CN7101

To H. P. assy J1001
To FRONT assy FOR 100W
(SX-J520)
To FRONT assy FOR 50W
(SX-J420, SX-J320)
CN7502

To PROCESSOR

To FUNC assy CN901

To FUNC assy CN902

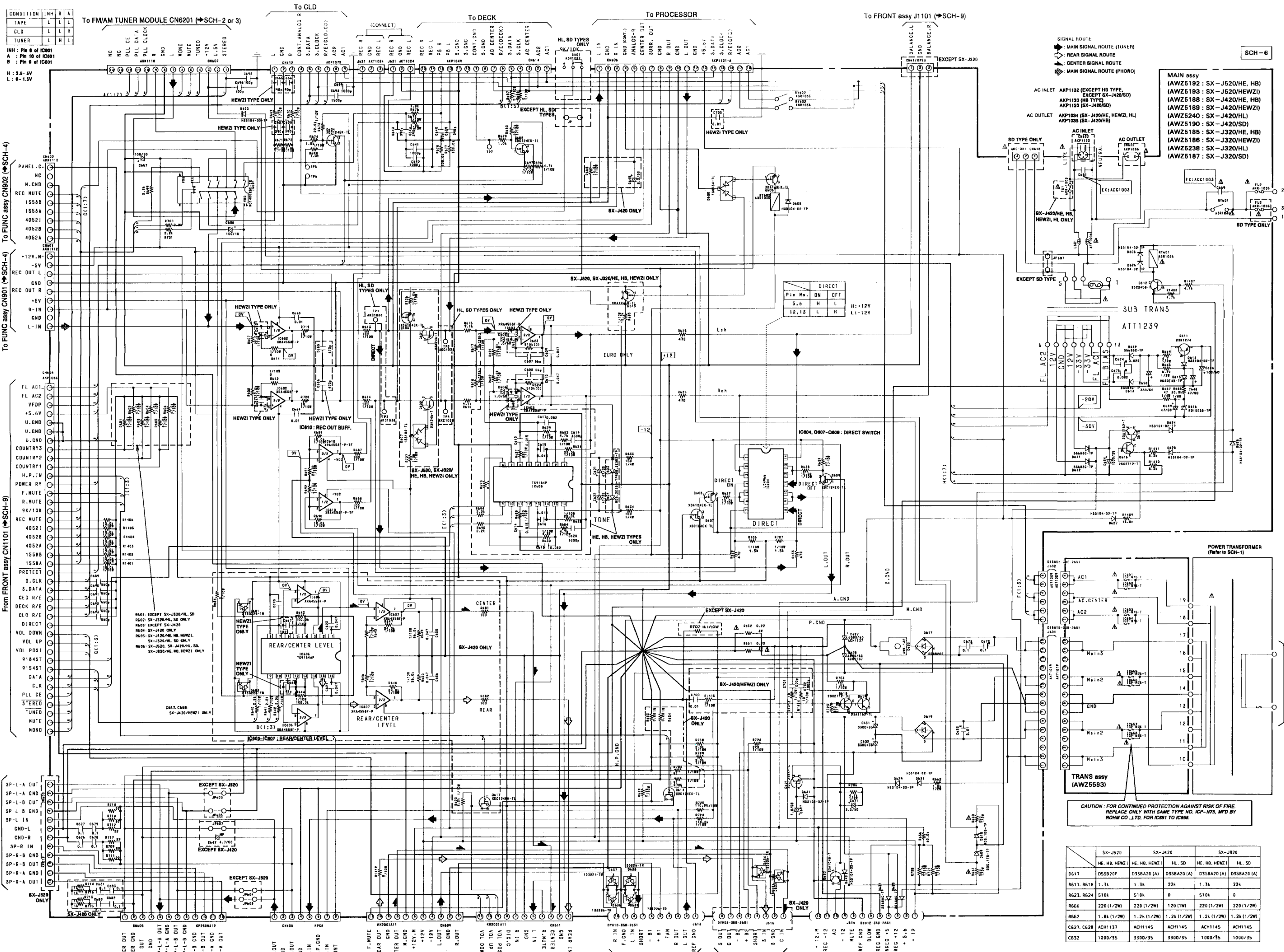
To FRONT assy J1101

To FM/AM TUNER MODULE
CN6201

From FRONT assy CN1101

To VOLUME assy CN802

To VOLUME assy CN801



SCH-6

SCH-6

To SP assy CN1001 (SCH-10)
 MAIN ASSY, TRANS ASSY

To H. P. assy J1001 (SCH-10)

To VOLUME assy CN802 (SCH-5)

To VOLUME assy CN801 (SCH-5)

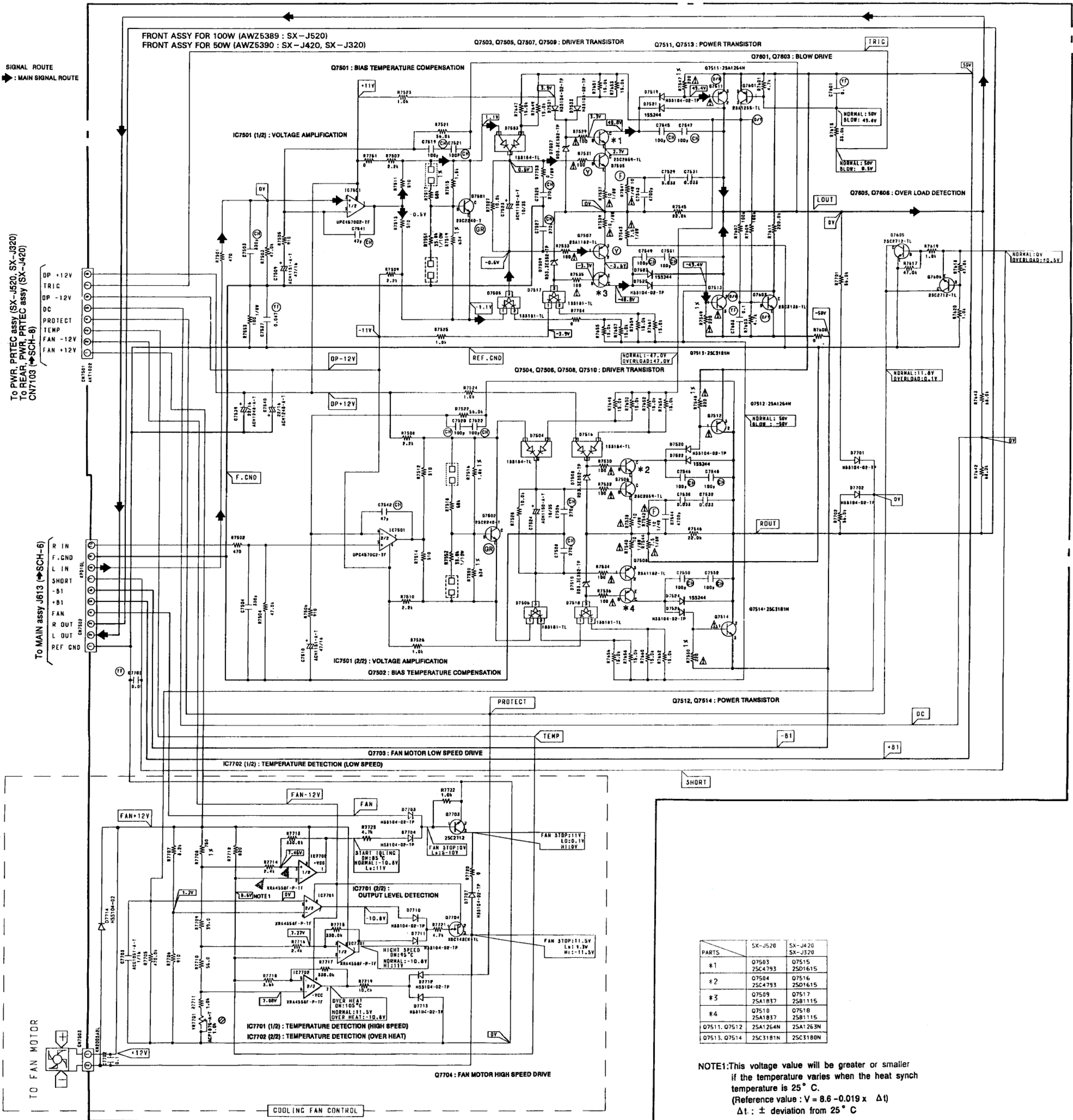
To FRONT assy FOR 100W (SX-J520)
 To FRONT assy FOR 50W (SX-J420, SX-J320)
 CN7502 (SCH-7)

To PWR, PRTEC assy (SX-J520, SX-J320)
 To REAR, PWR, PRTEC assy (SX-J420)
 CN7102 (SCH-8)

To PWR, PRTEC assy (SX-J520, SX-J320)
 To REAR, PWR, PRTEC assy (SX-J420)
 CN7101 (SCH-8)

MAIN ASSY, TRANS ASSY

2.6 FRONT ASSY FOR 100W
FRONT ASSY FOR 50W



PARTS	SX-J520	SX-J420 SX-J320
*1	Q7503 25C4793	Q7515 25D1615
*2	Q7504 25C4793	Q7516 25D1615
*3	Q7509 25A1837	Q7517 25B1115
*4	Q7510 25A1837	Q7518 25B1115
Q7511, Q7512	25A1264N	25A1263N
Q7513, Q7514	25C3181N	25C3180N

NOTE1: This voltage value will be greater or smaller if the temperature varies when the heat synch temperature is 25° C.
(Reference value : $V = 8.6 - 0.019 \times \Delta t$)
 Δt : ± deviation from 25° C

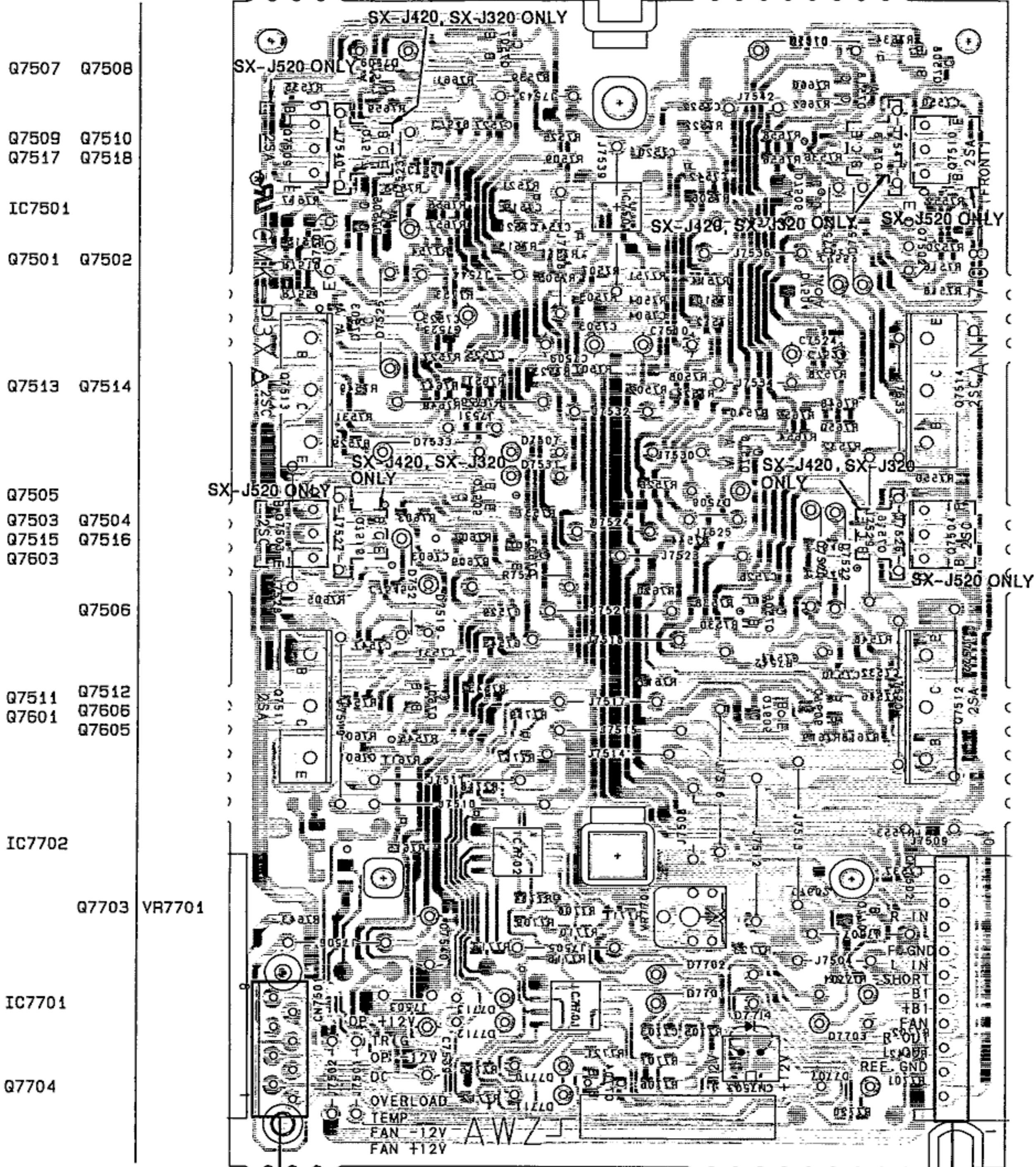
SCH-7

FRONT ASSY FOR 100W
FRONT ASSY FOR 50W

FRONT ASSY FOR 100W
FRONT ASSY FOR 50W

SCH-7

FRONT ASSY FOR 100W (SX-J520)
FRONT ASSY FOR 50W (SX-J420, SX-J320)

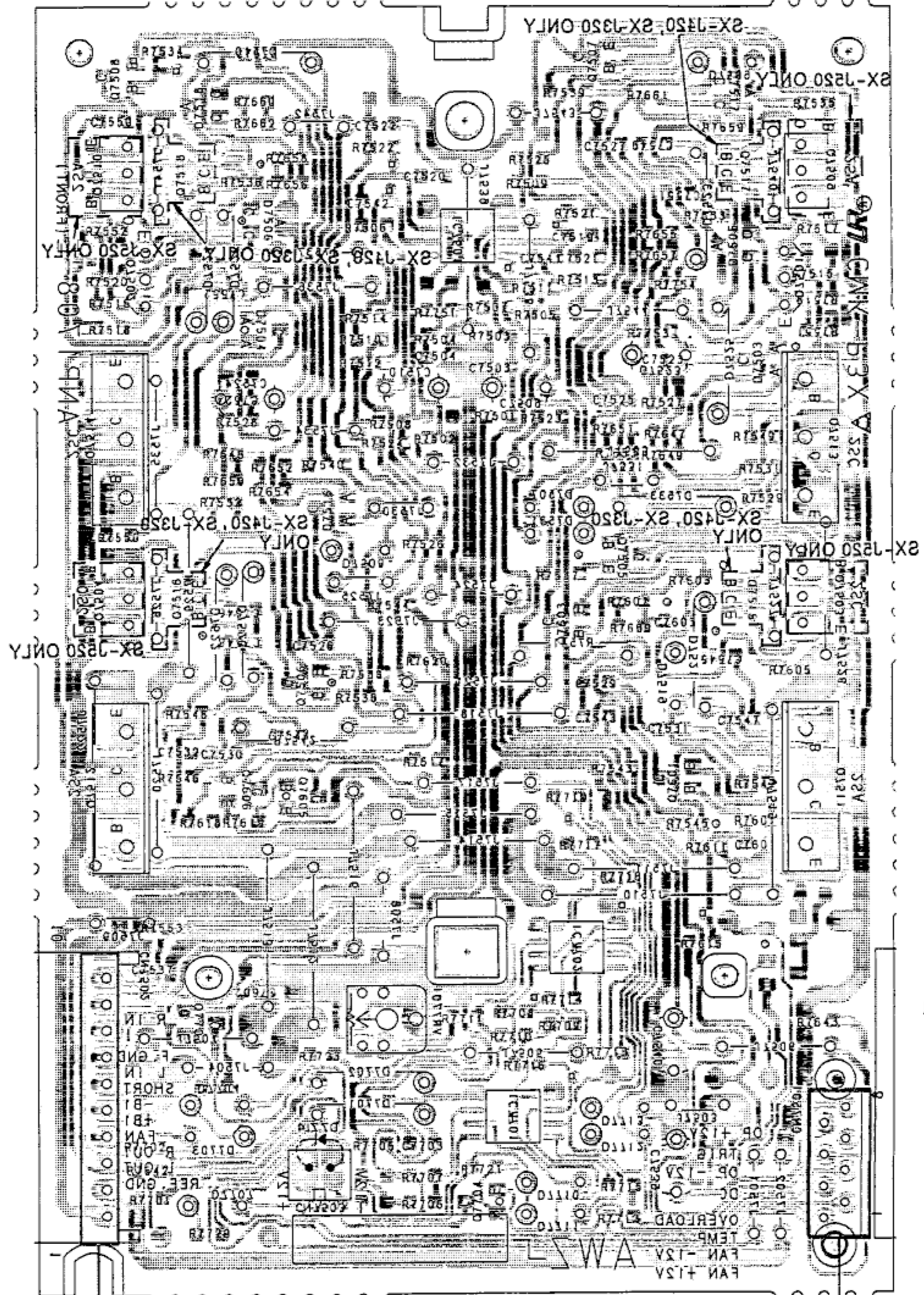


To PWR, PRTEC assy
(SX-J520, SX-J320)
To REAR, PWR, PRTEC assy
(SX-J420)
CN7103

To MAIN assy J613

• This diagram is viewed from the mounted parts side.

FRONT ASSY FOR 50W (SX-1450, SX-1350)
 FRONT ASSY FOR 100W (SX-1250)



- Q7507 07508
- Q7508 07510
- Q7517 07518
- IC7501
- Q7501 07505
- Q7513 07514
- Q7502 07502
- Q7503 07504
- Q7516 07518
- Q7503 07503
- Q7508 07508
- Q7501 07502
- Q7511 07515
- Q7508 07508
- Q7502 07502
- IC7505
- Q7503 07503
- IC7501
- Q7504 07504

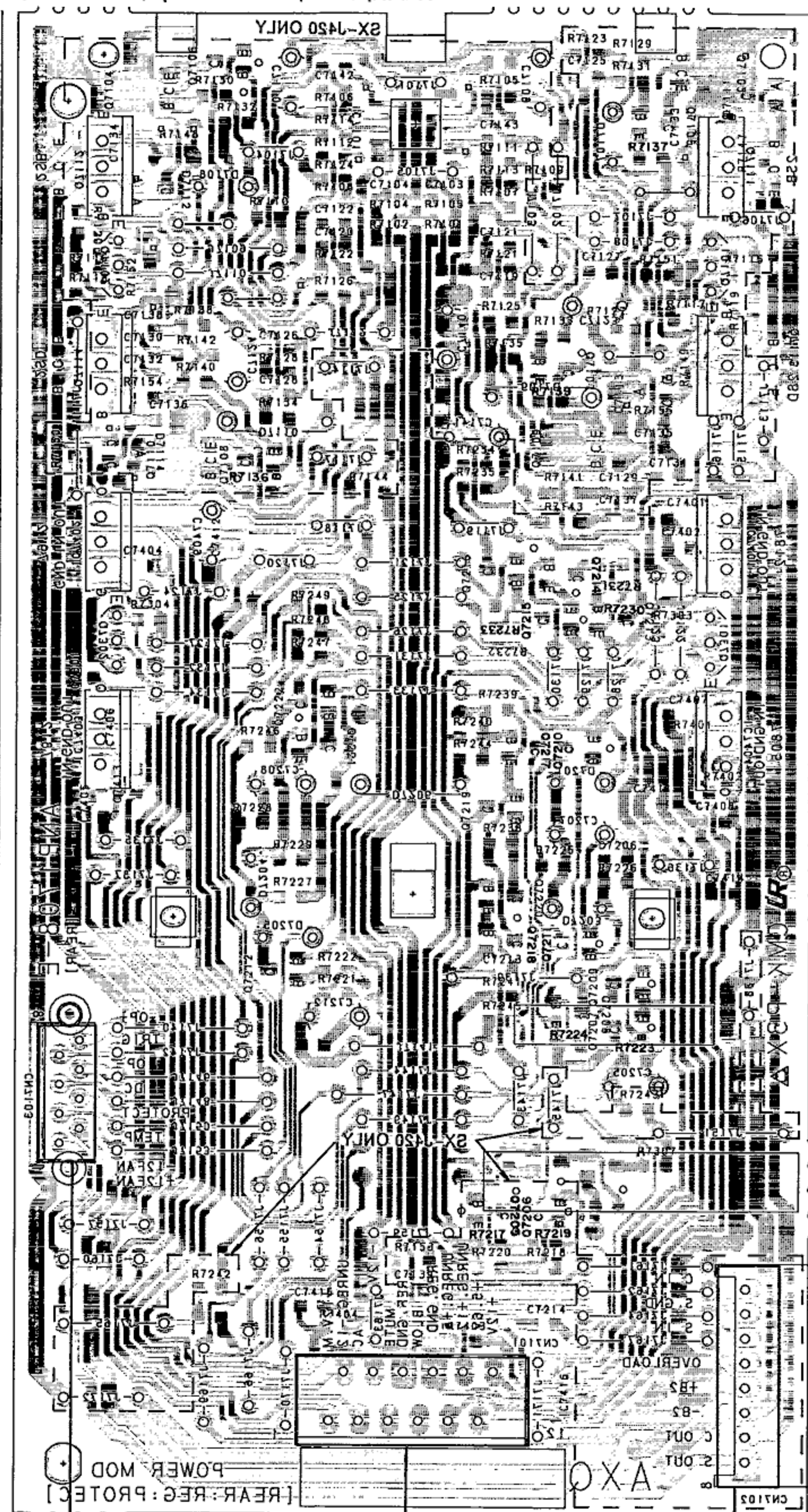
Q75103
 (SX-1450)
 TO REAR, PWR, PRTCC Assy
 (SX-1250, SX-1350)
 TO PWR, PRTCC Assy

TO MAIN ASSY 1813

● This diagram is viewed from the foil side.

REAR, PWR, PRTEC ASSY
5.7 PWR, PRTEC ASSY

REAR, PWR, PRTEC assy (2X-1450)
PWR, PRTEC assy (2X-1520, 2X-1350)



- Q7108
- Q7104
- Q7103
- IC7101
- Q7111
- Q7102
- Q7105
- Q7113
- Q7107
- Q7108
- Q7110
- IC7405B
- Q7514
- Q7516
- Q7301
- Q7513
- Q7512
- Q7555
- IC7403
- Q7551
- Q7510
- Q7517
- Q7518
- Q7511
- Q7519
- Q7508
- Q7507
- Q7506
- Q7502
- Q7509

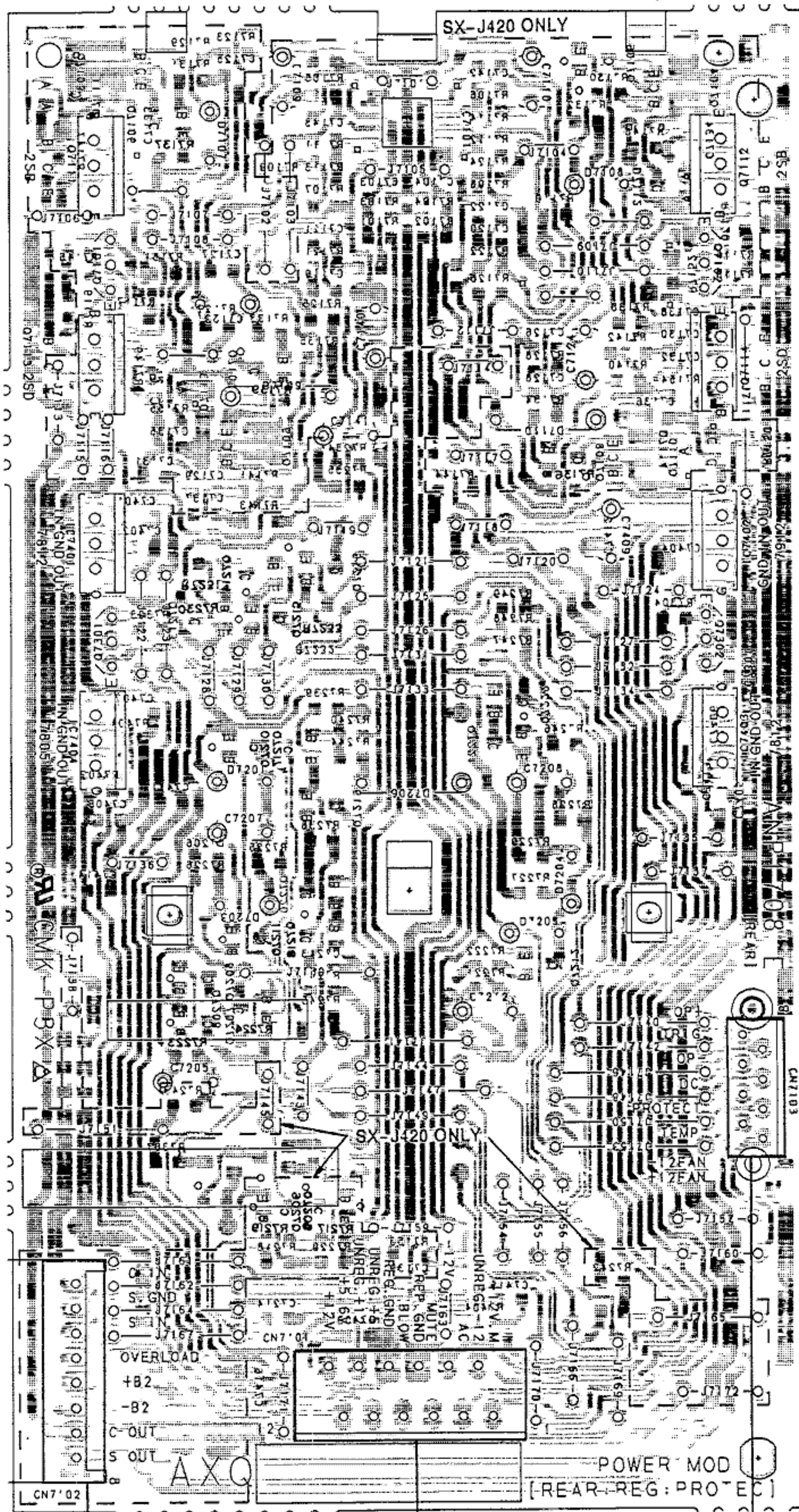
This diagram is viewed from the foil side.

To MAIN assy 1616
To FRONT assy FOR 50W (2X-1450, 2X-1350)
To FRONT assy FOR 100W (2X-1520)

AXQ

2.7 PWR, PRTEC ASSY
REAR, PWR, PRTEC ASSY

PWR, PRTEC assy (SX-J520, SX-J320)
REAR, PWR, PRTEC assy (SX-J420)



Q7103	Q7106	
	Q7104	A
Q7105	IC7401	
Q7111	Q7112	
Q7101	Q7102	
Q7113	Q7114	
Q7107	Q7108	
	Q7110	
Q7109	Q7108	
	Q7110	
IC7401	IC7402 B	
Q7214	Q7216	
Q7213	Q7215	
Q7301	Q7302	
	Q7222	
IC7404	Q7221	IC7403
Q7210	Q7217	
	Q7219	
	Q7220	
Q7211	Q7218	
Q7207	Q7212	C
Q7209		
	Q7205	
	Q7206	

From MAIN assy J616
To MAIN assy J615
To FRONT assy FOR 100W (SX-J520)
To FRONT assy FOR 50W (SX-J420, SX-J320)
CN7501

This diagram is viewed from the mounted parts side.

A

B

C

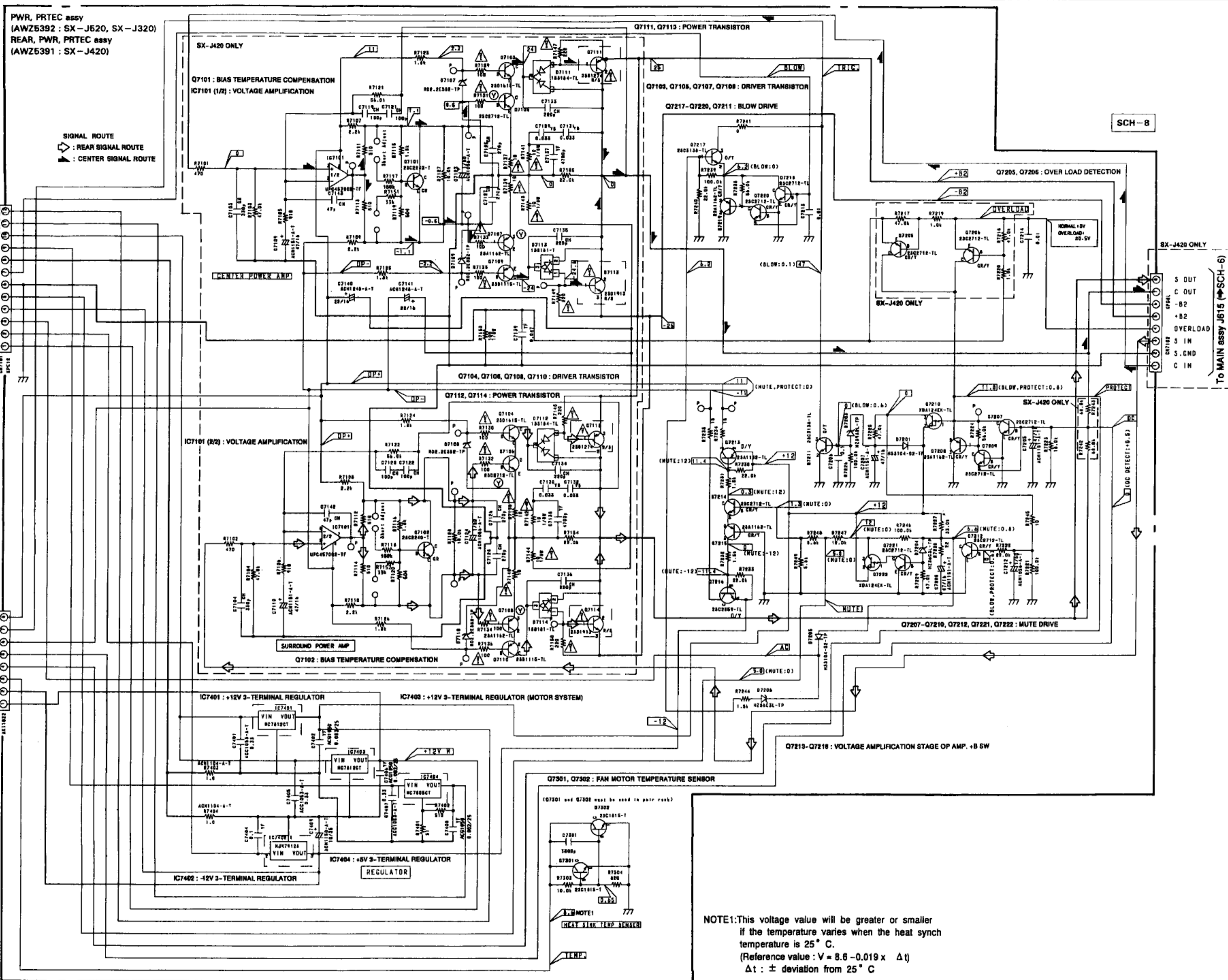
D

A

B

C

D



PWR, PRTEC assy
 (AWZ5392 : SX-J520, SX-J320)
 REAR, PWR, PRTEC assy
 (AWZ5391 : SX-J420)

SIGNAL ROUTE
 ◀ : REAR SIGNAL ROUTE
 ▶ : CENTER SIGNAL ROUTE

From MAIN assy J616 (SCH-6)
 +12V
 +5.6V
 UNREC+12
 REC.GND
 BLOW
 REF.GND
 MUTE
 -12V
 AC
 UNREC-12
 +12V.N.

SCH-8

SX-J420 ONLY
 5 OUT
 C OUT
 -B2
 +B2
 OVERLOAD
 5 IN
 S.CND
 C IN

To MAIN assy J615 (SCH-6)

To FRONT assy FOR 100W (SX-J520)
 To FRONT assy FOR 50W (SX-J420, SX-J320)
 CN7501 (SCH-7)
 QP+
 TRIC.
 QP-
 DC
 PROTECT
 TEMP.
 -12FAN
 +12FAN

NOTE1: This voltage value will be greater or smaller if the temperature varies when the heat synch temperature is 25° C.
 (Reference value : $V = 8.8 - 0.019 \times \Delta t$)
 Δt : \pm deviation from 25° C

SCH-8

PWR, PRTEC ASSY
 REAR, PWR, PRTEC ASSY

PWR, PRTEC ASSY
 REAR, PWR, PRTEC ASSY

SCH-8

2.8 FRONT ASSY

A

B

C

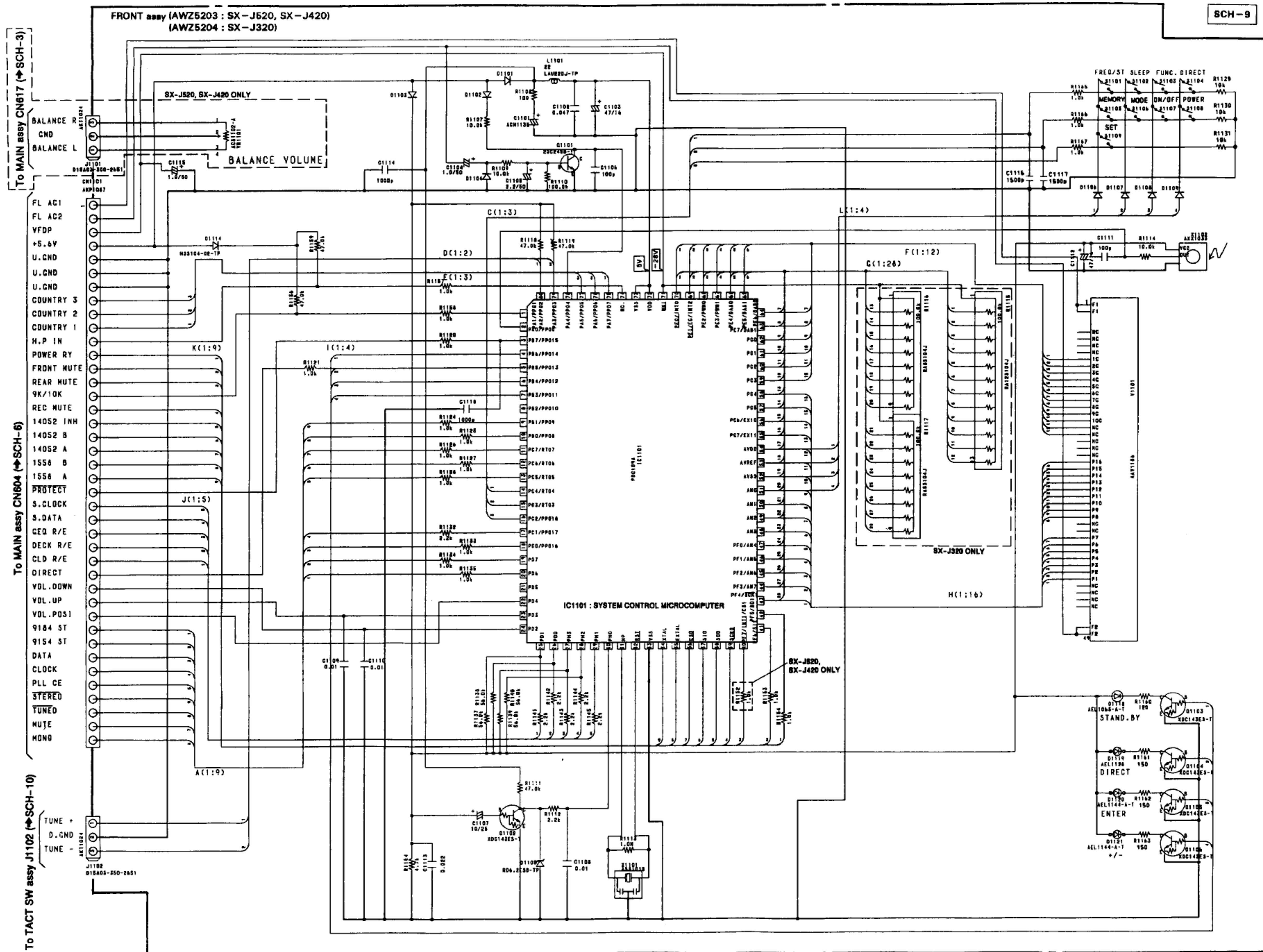
D

A

B

C

D



SCH-9

SCH-9

FRONT ASSY

FRONT ASSY

A

A

B

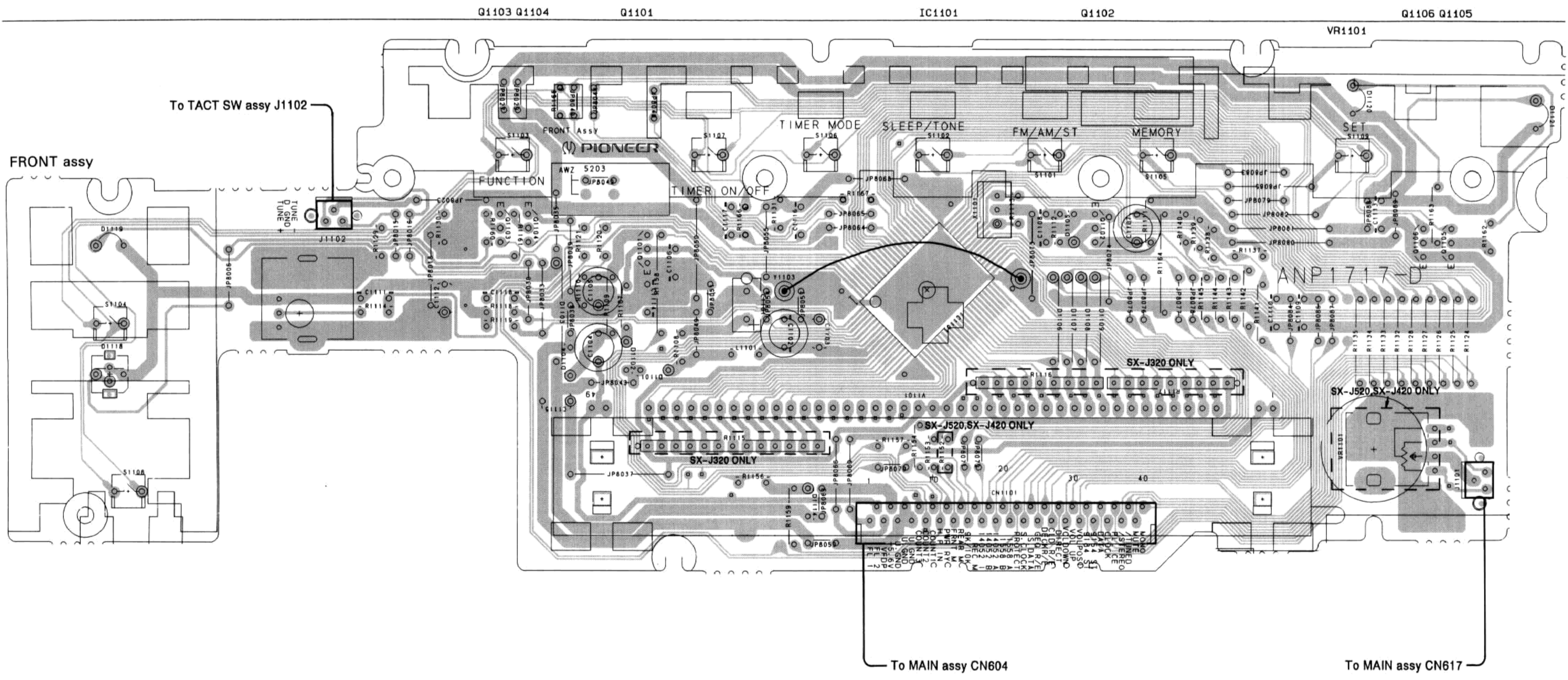
B

C

C

D

D



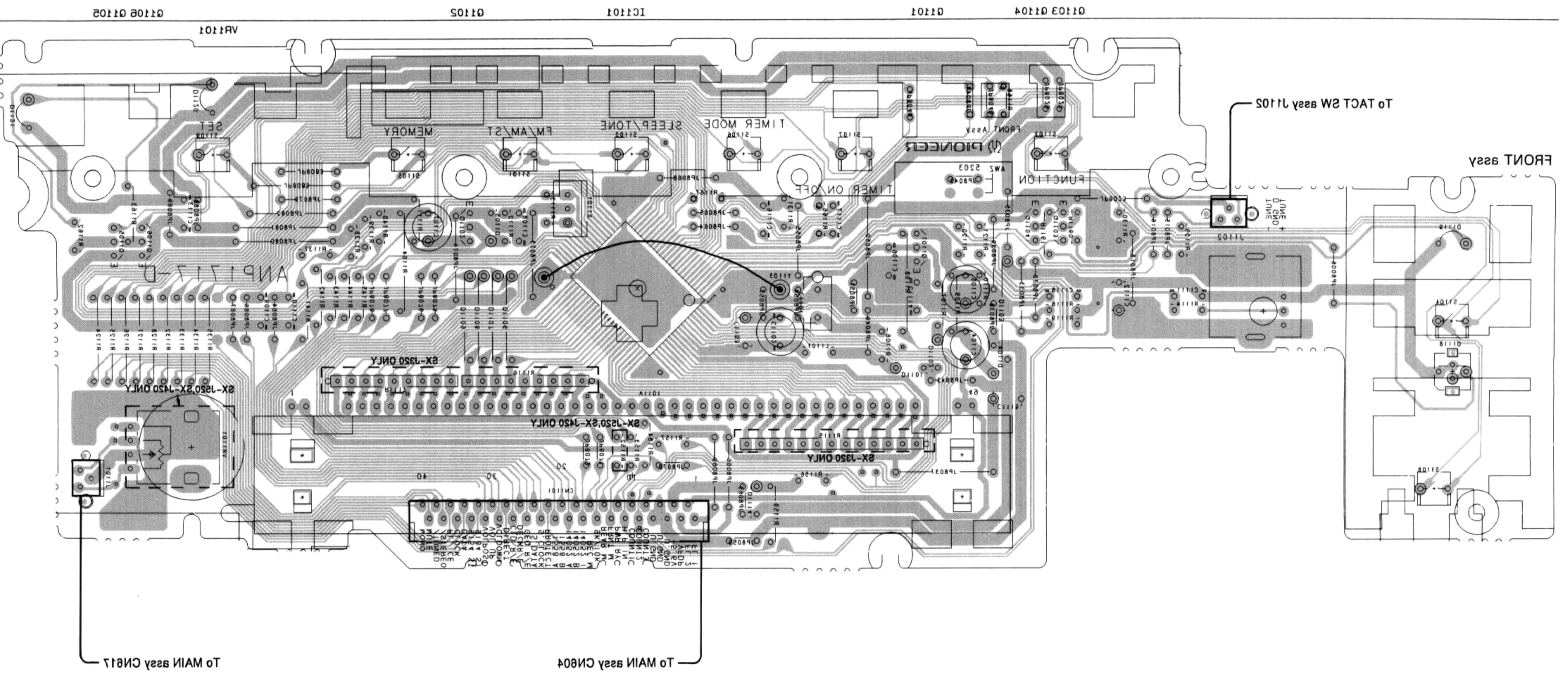
• This diagram is viewed from the mounted parts side.

A

B

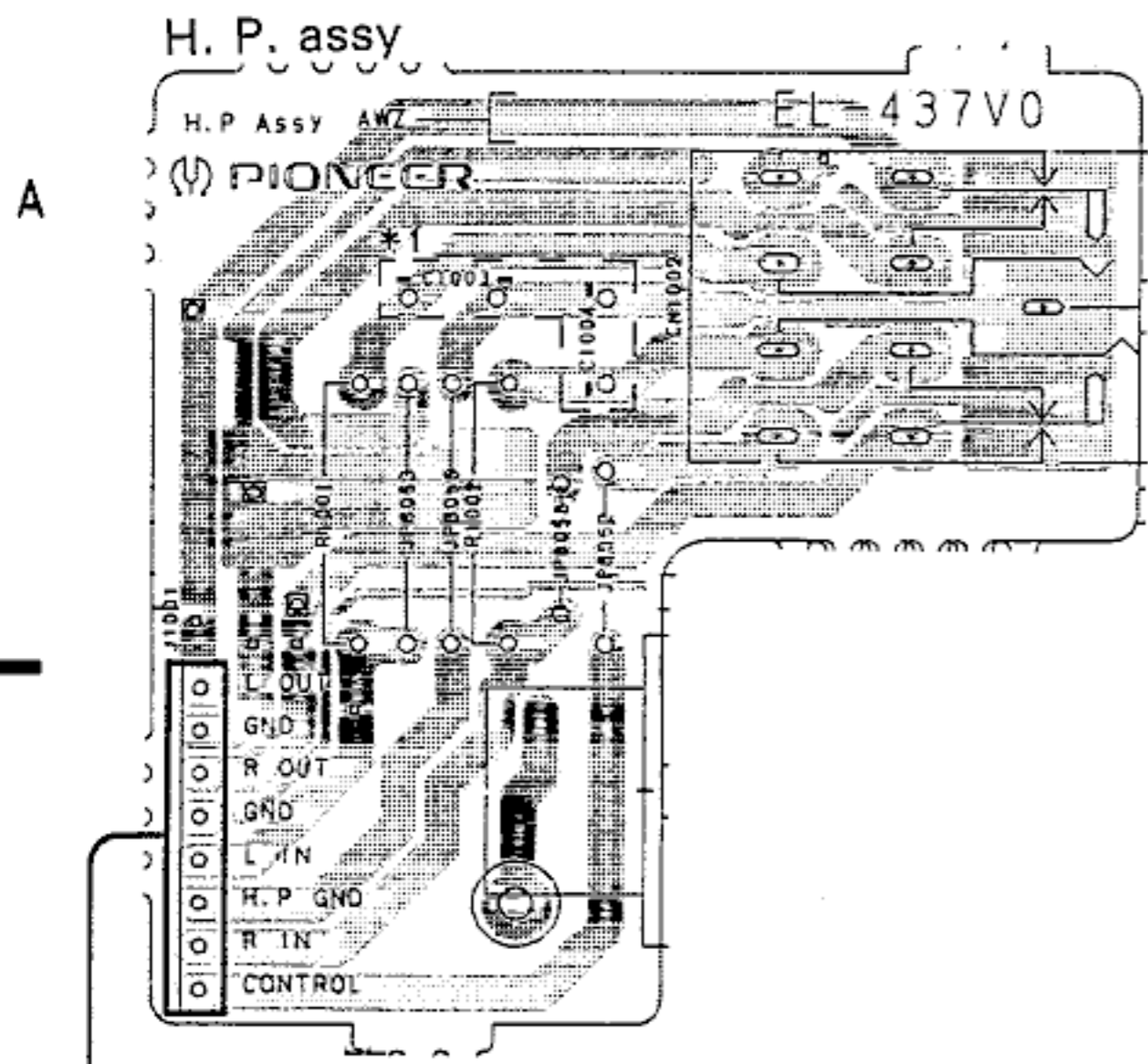
C

D



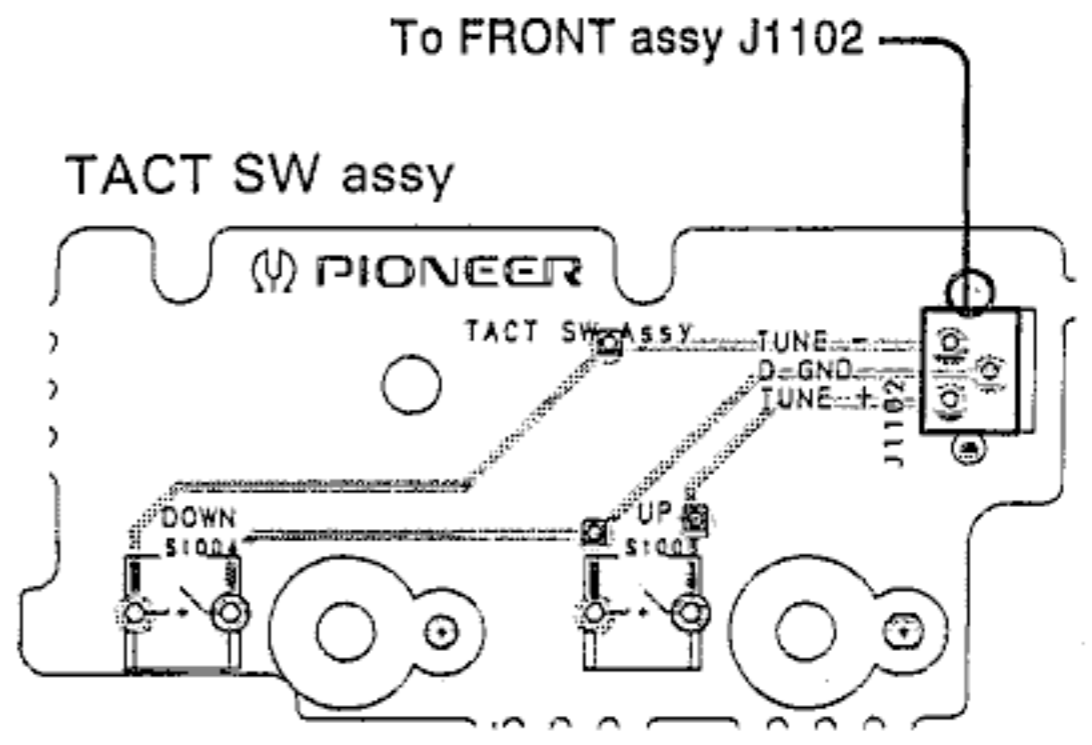
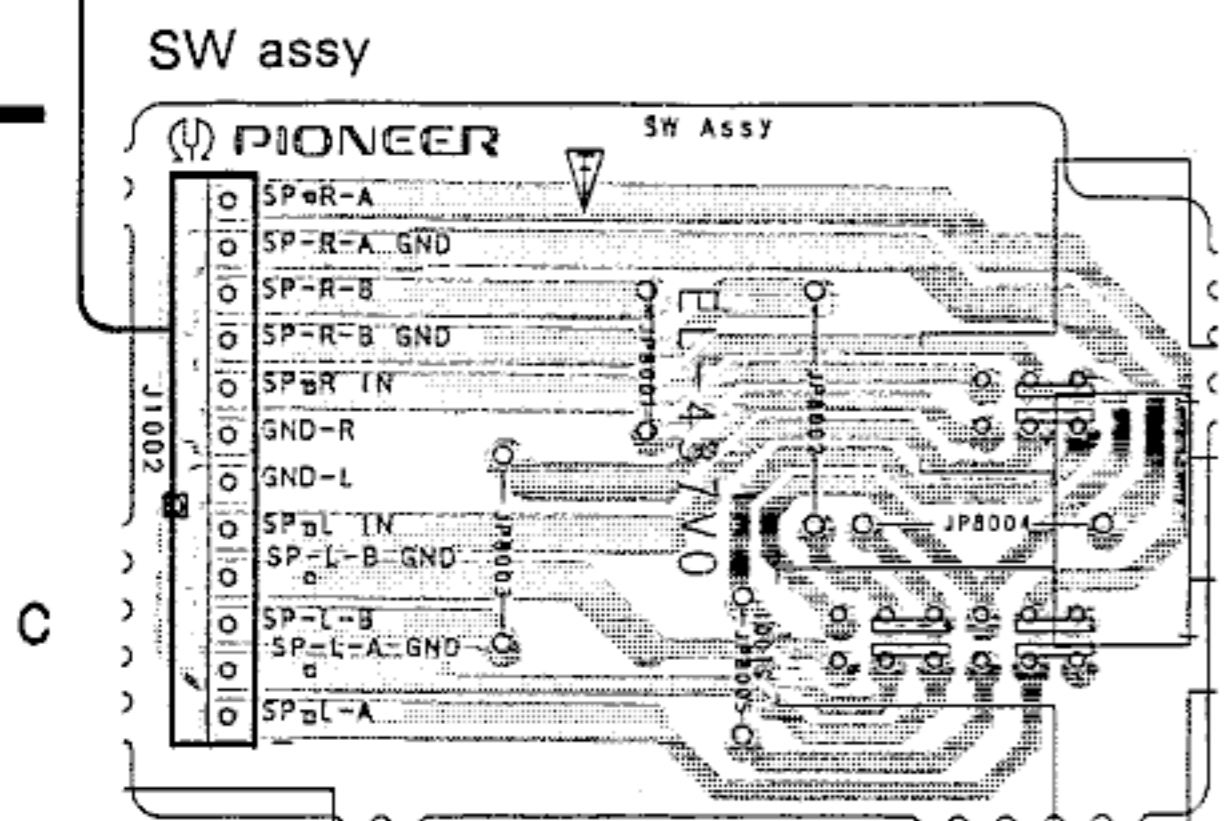
● This diagram is viewed from the foil side.

2.9 V SEL ASSY, H. P. ASSY, SP ASSY, TACT SW ASSY AND SW ASSY

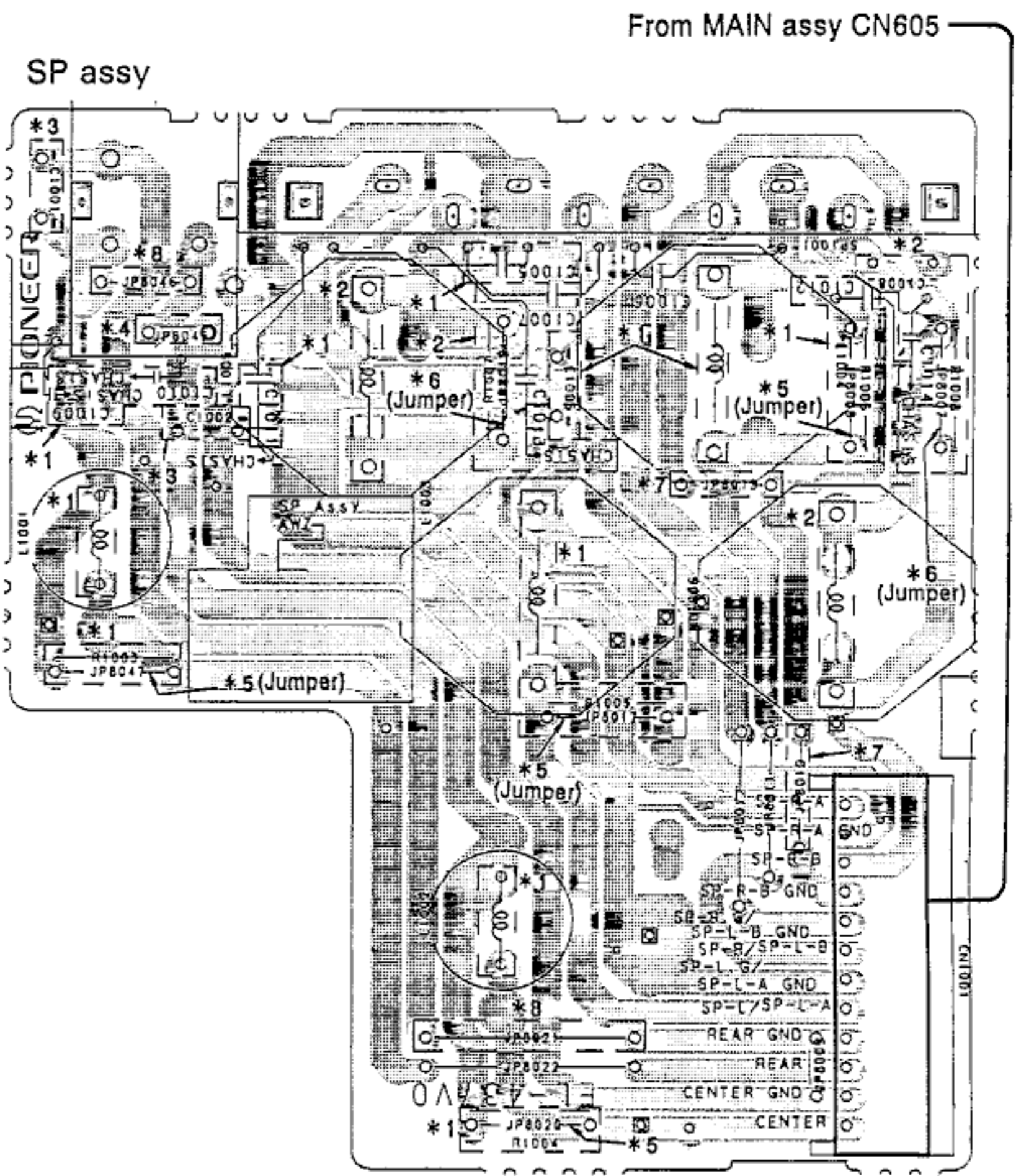


To MAIN assy CN608

To MAIN assy CN603



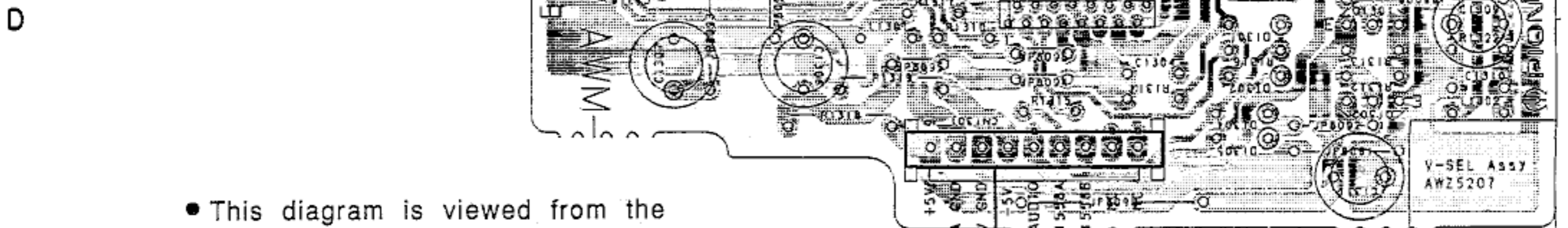
To FRONT assy J1102



From MAIN assy CN605

IC1301 Q1301 Q1302

- * 1: HEWZI TYPE ONLY
- * 2: SX-J520/HEWZI ONLY
- * 3: SX-J420/HEWZI ONLY
- * 4: EXCEPT SX-J420
- * 5: EXCEPT HEWZI TYPE
- * 6: SX-J520/HE,HB ONLY
- * 7: SX-J520 ONLY
- * 8: SX-J420 ONLY

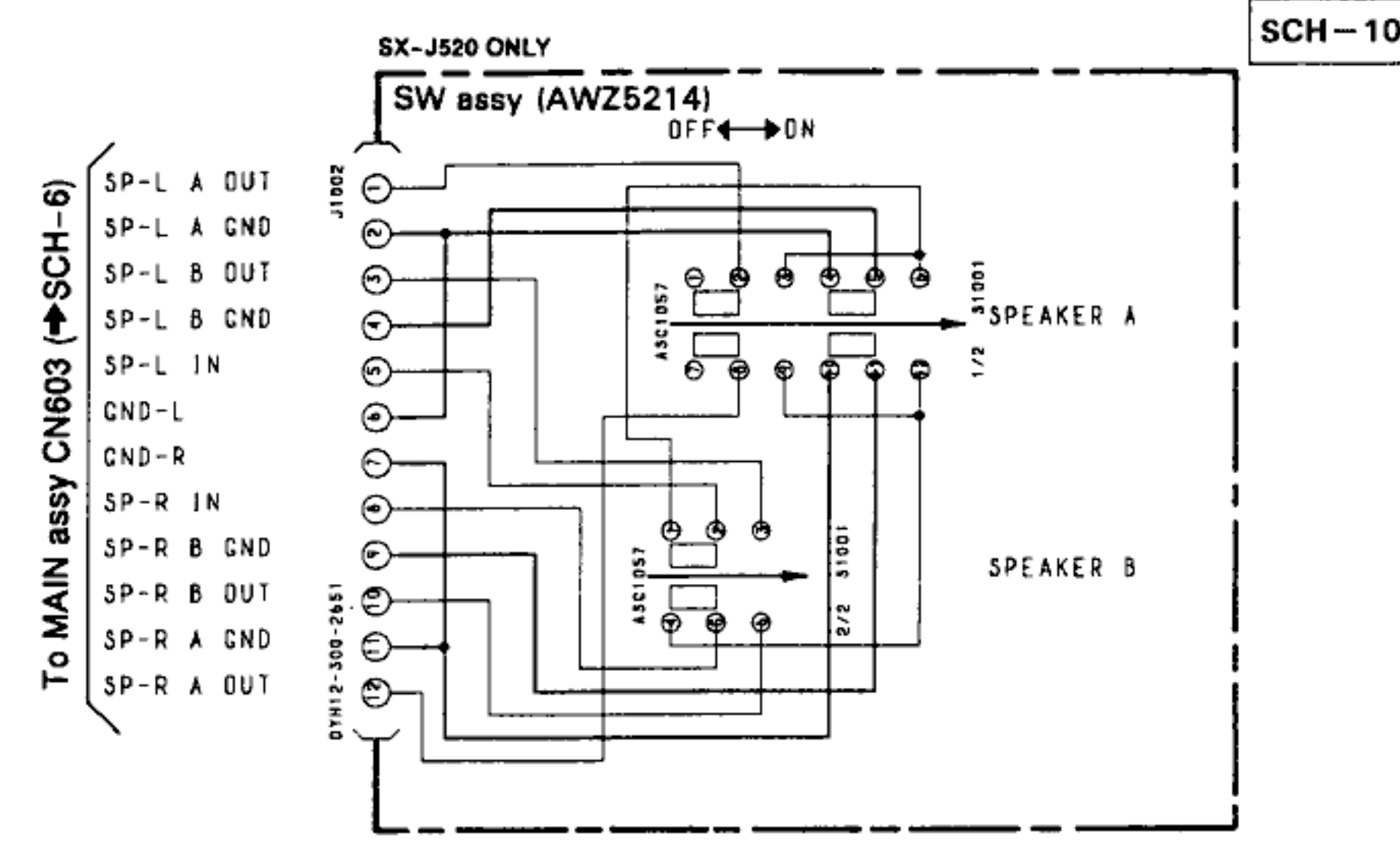
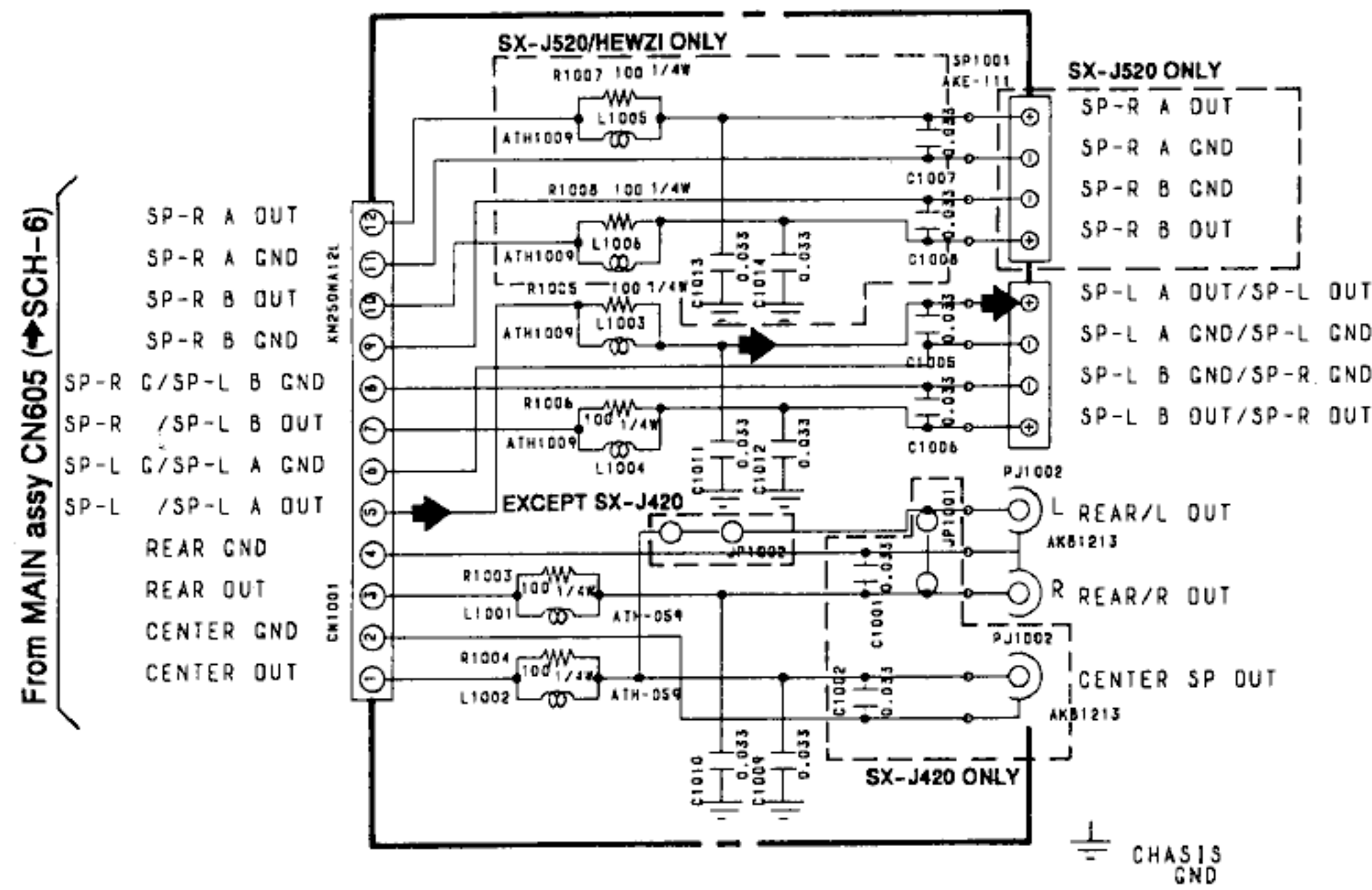


To FUNC assy CN903

• This diagram is viewed from the mounted parts side.

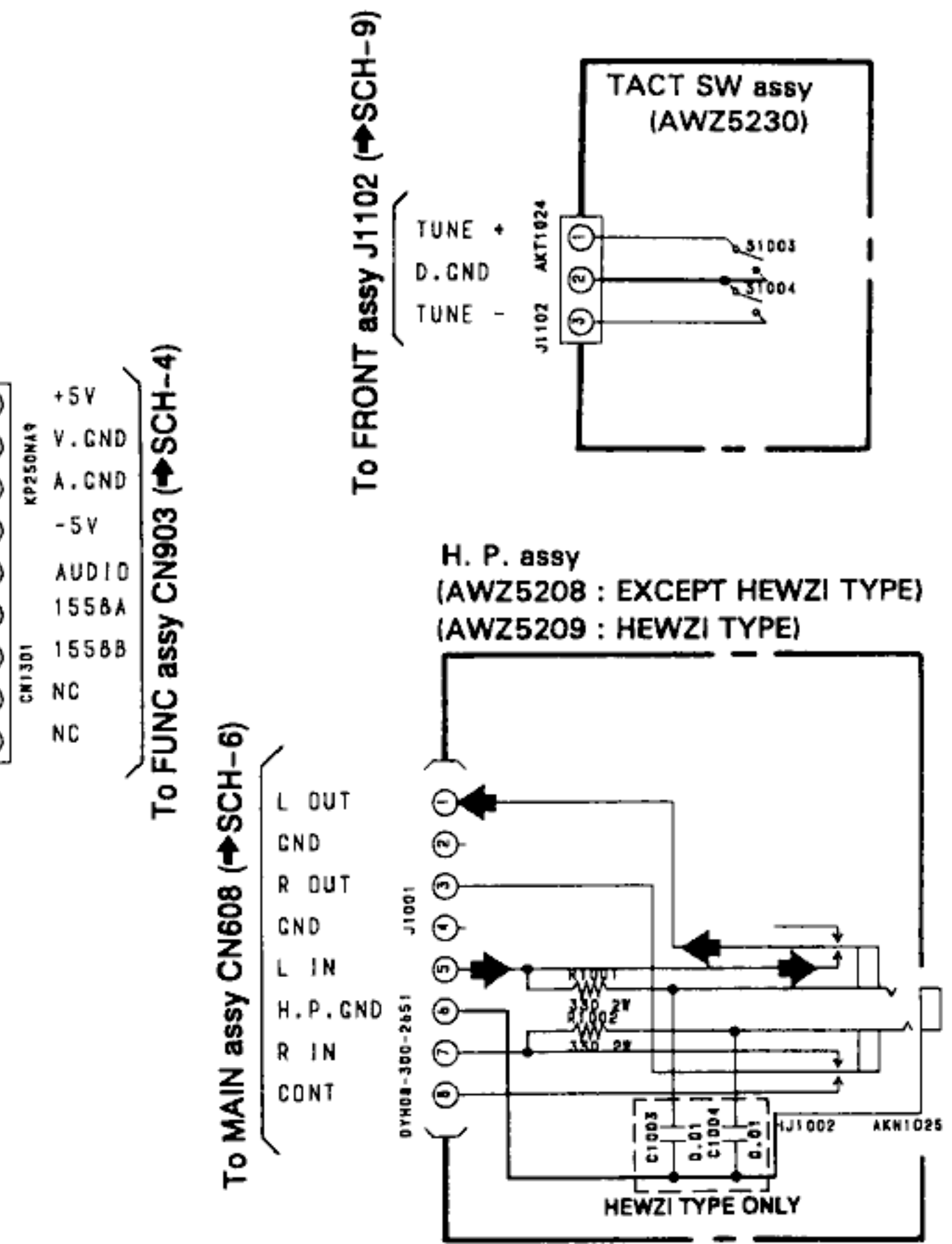
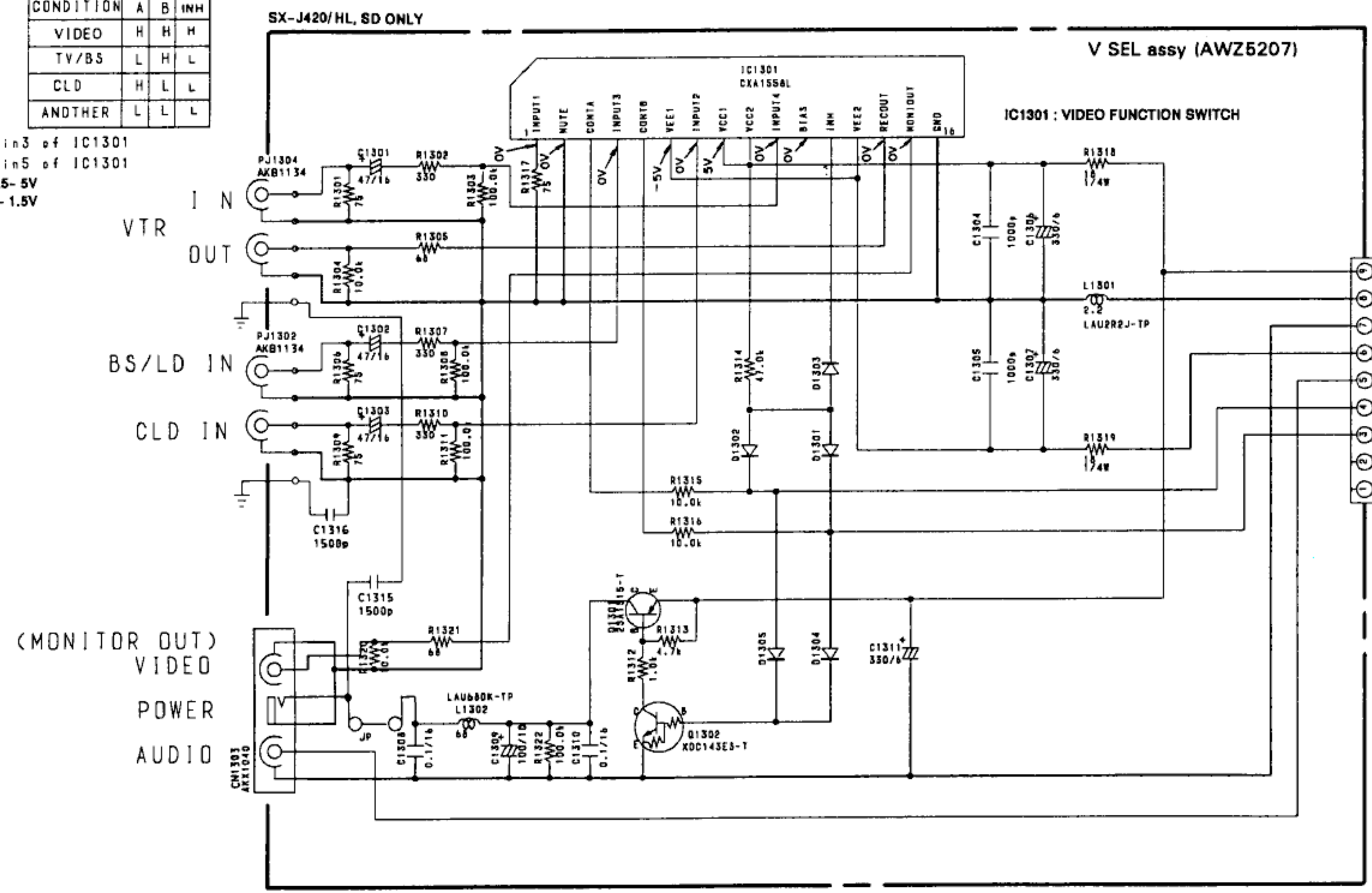
SP Assy
 (AWZ5261 : SX-J520/HE, HB)
 (AWZ5262 : SX-J520/HEWZI)
 (AWZ5210 : SX-J420/HE, HB, HL, SD)
 (AWZ5211 : SX-J420/HEWZI)
 (AWZ5212 : SX-J320/HE, HB, HL, SD)
 (AWZ5213 : SX-J320/HEWZI)

	R1003-R1008	C1001-C1014	L1001-L1006
HEWZI TYPE	USED	USED	USED
EXCEPT HEWZI	JP	NOT USED	NOT USED



CONDITION	A	B	INH
VIDEO	H	H	H
TV/BS	L	H	L
CLD	H	L	L
ANDTHER	L	L	L

A: Pin3 of IC1301
 B: Pin5 of IC1301
 H: 3.5-5V
 L: 0-1.5V



SCH-10

V SEL ASSY, H. P. ASSY,
 SP ASSY, TACT SW ASSY,
 SW ASSY

V SEL ASSY, H. P. ASSY,
 SP ASSY, TACT SW ASSY,
 SW ASSY

SCH-10

3. PCB PARTS LIST

NOTES :

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The Δ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- 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 RD1/8PM 5 6 1 J

47kΩ → 47 × 10³ → 473 RD1/4PS 4 7 3 J

0.5Ω → 0R5 RN2H 0 R 5 K

1Ω → 010 RS1P 0 1 0 K

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

5.62kΩ → 562 × 10¹ → 5621 RM1/4PC 5 6 2 1 F

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
LIST OF ASSEMBLIES				COILS AND FILTERS			
	AF ASSY		AWK1756	Δ	L601		ATF1006
	— MAIN ASSY		AWZ5192	TRANSFORMERS			
	— FUNC ASSY		AWZ5195	Δ	T601		ATT1239
	— VOLUME ASSY		AWZ5198	RELAYS			
NSP	— SUPPORT ASSY		AWZ5291		RY602		ASR1035
NSP	— TRANS ASSY		AWZ5593	Δ	RY601		ASR1036
	DISP ASSY		AWM1492	CAPACITORS			
	— FRONT ASSY		AWZ5203	Δ	C651, C669 (0.01/400V)		ACG1003
NSP	— H.P. ASSY		AWZ5208		C627, C628 (6800/63V)		ACH1137
NSP	— SW ASSY		AWZ5214		C695, C696		CCSQCH101J50
NSP	— TACT SW ASSY		AWZ5230		C639, C640, C643, C644		CCSQCH391J50
NSP	— SP ASSY		AWZ5261		C607, C608		CCSQCH560J50
	FM/AM TUNER MODULE		AXQ1013		C647		CEANP4R7M50
	POWER MODULE (F100)		AXQ1017		C605, C606, C697		CEAS010M50
	— FRONT ASSY FOR 100W		AWZ5389		C657, C658		CEAS101M10
	— PWR, PRTEC ASSY		AWZ5392		C646		CEAS101M50
					C634		CEAS102M25
MAIN ASSY					C632		CEAS102M35
SEMICONDUCTORS					C650		CEAS331M50
	IC604		LC4966		C631		CEAS332M35
	IC601		MC14052BF		C671		CEAS3R3M50
	IC608		TC9184P		C621, C622		CEAS470M35
	IC602, IC603, IC610		XRA4558F-P		C648, C649		CEAS470M50
	Q615, Q619, Q620		2SA1162		C617, C618		CFTXA823J50
	Q611		2SB1274		C641, C642		CKSQYB102K50
	Q612		2SC2458		C663, C664		CKSQYB103K50
	Q616, Q618		2SC2712		C698, C699		CKSQYB152K50
	Q601, Q602		2SK246		C613-C616		CKSQYB153K50
	Q603, Q608, Q613		XDA124EK		C619, C620		CKSQYB332K50
	Q606		XDA143EK		C609, C610		CKSQYB473K50
	Q604, Q605, Q607, Q609, Q614		XDC124EK		C689-C693		CKSQYF104Z50
	Q621		XDC143EK		C676-C679		CQMA103J50
	D607, D620		1SS184		C633		CQMA104J50
	D632, D634, D636-D639		1SS226		C672, C673		CQMA223J50
	D619		D3SBA20 (A)		C674, C675		
	D617		D5SB20F	RESISTORS			
	D605, D606, D614, D621		HSS104-02		R662		RD1/2PM182J
	D623-D629, D640, D641		HSS104-02		R660, R661		RD1/2PM221J
	D616		RD10ESB		R706		RD1/2PM472J
	D615		RD30ESB		R665		RD1/2PM622J
	D609, D610		RD5.1EB		R633, R634		RD1/4PM151J
	D603, D604		RD8.2ESB2				
	D611-D613, D622, D630, D631		S5688G				

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	R667		RD1/4PM470J		C831, C832		CKSQYB473K50
	R679, R703		RD1/8PM102J		C809, C810		CKSQYF104Z50
	R666		RD1/8PM203J		C827		CKSQYF473Z50
	R693-R695, R699-R701		RD1/8PM222J	RESISTORS			
	R1410		RD1/8PM332J		R835, R836		RD1/8PM101J
	R625, R626, R635, R636		RD1/8PM471J		R803, R804		RD1/8PM104J
	R1407, R1408		RD1/8PM472J		R817		RD1/8PM272J
	R656		RD1/8PM623J		R818		RD1/8PM472J
	R664		RFA1/4PS4R7J		VR801 (100k-4B*2, 50k-6B)		ACX1067
Δ	R651, R652		RS3LMFR22J		Other Resistors		RS1/10S□□□J
	Other Resistors		RS1/10S□□□J	SUPPORT ASSY			
OTHERS					No service part		
	SOCKET (15P)		AKP1049	TRANS ASSY			
	CN612 SOCKET (9P)		AKP1072	SEMICONDUCTORS			
	CN604 40P SOCKET		AKP1085	Δ	IC651-IC658		ICP-N75
	SOCKET (18P)		AKP1131	FRONT ASSY			
	CN603 CONNECTOR (12P)		KPC12	SEMICONDUCTORS			
	CN608 JUMPER CONNECTOR		KPC8		IC1101		PDG109A
	CN617 CONNECTOR (3P)		KPE3		Q1101		2SC2458
FUNC ASSY					Q1102-Q1106		XDC143ES
SEMICONDUCTORS					D1118		AEL1065
	IC901		MC14052BF		D1119		AEL1128
	IC902		MC14066BF		D1120, D1121		AEL1144
	IC903		UPC4570G2		D1101-D1104, D1106-D1109, D1114		HSS104-02
	Q901		2SA1162		D1105		RD6.2ESB
	Q907		2SC2878	COILS AND FILTERS			
	Q902-Q906		XDA124EK		L1101		LAU220J
	D902		1SS181	SWITCHES			
	D901, D903, D904		1SS252		S1101-S1109		ASG1034
CAPACITORS				CAPACITORS			
	C940		CEAS100M50		C1101		ACH1135
	C935, C936		CEAS101M10		C1106, C1111		CCCSL101J50
	C909, C910		CEAS470M10		C1104, C1115		CEAS010M50
	C903, C904		CEAS4R7M50		C1107		CEAS100M50
	C939		CKSQYB103K50		C1105		CEAS2R2M50
	C905, C906		CKSQYB152K50		C1103, C1112		CEAS470M16
	C907, C908		CKSQYB562K50		C1108-C1110		CFTXA103J50
RESISTORS					C1102		CFTXA473J50
Δ	R949-R952		RD1/2PMFL100J		C1116		CKCYB152K50
	R918		RD1/8PM103J		C1113		CKCYB222K50
	R904, R955, R956		RD1/8PM222J		C1114		CKDYB102K50
	Other Resistors		RS1/10S□□□J		C1118		CKMYB102K50
OTHERS					C1117		CKMYB152K50
	PIN JACK (6P)		AKB1121	RESISTORS			
	CN905 PIN JACK (6P)		AKB1129		VR1101 (100kB)		ACS1102
	JACK		AKN-203		Other Resistors		RD1/8PM□□□J
	SOCKET 9-P		AKP-076	OTHERS			
VOLUME ASSY					X1101 (8.00MHz)		ASS1015
SEMICONDUCTORS					V1101		AAV1186
	IC801		TA8409S		CN1101 40P SOCKET		AKP1087
	IC802		UPC4570G2		REMOTE RECEIVER UNIT		AXX1033
	Q801, Q802		2SC3327	H.P. ASSY			
	Q803		XDA124ES	RESISTORS			
COILS AND FILTERS					R1001, R1002		RS2LMF331J
	L801		LAU221K	OTHERS			
CAPACITORS					CN1002 JACK		AKN1025
	C819, C820		CCSQCH470J50				
	C828		CEAS101M25				
	C807, C808		CEXA470M25				
	C801-C804		CEYA100M50				
	C805, C806		CEYA2R2M50				

Mark	No.	Description	Parts No.
SW ASSY			
SWITCH			
	S1001		ASG1057
TACT SW ASSY			
SWITCHES			
	S1003, S1004		ASG1034
SP ASSY			
OTHERS			
	PIN JACK (2P)		AKB1126
	SPEAKER TERMINAL 8-P		AKE-111
FM/AM TUNER MODULE/HE			
SEMICONDUCTORS			
	IC6201		LA1836M
	IC6202		LM7001J
	Q6102		2SC2223
	Q6203		2SC2235
	Q6202		2SC2712
	Q6103, Q6214		2SC2714
	Q6201		2SK208
	Q6104		2SK302
	Q6101		3SK194
	Q6204		XDA124EK
	Q6217		XDC124EK
	D6101, D6102		1T33
COILS AND FILTERS			
	L6104		ATC1003
	L6101		ATC1020
	L6102		ATC1021
	T6101		ATE-063
	L6207		ATE1013
	F6203, F6204 (SFE10.7MS3G)		ATF-119
	F6101		ATF-155
	F6202 (450KHz)		ATF1145
	L6103		ATH1043
	L6202, L6203, L6208		LCTA2R2J3225
CAPACITORS			
	C6234, C6236, C6270		ACG1051
	C6235		ACG1052
	C6107		CCSCH010C50
	C6229		CCSCH821J50
	C6110		CCSQCH020C50
	C6101		CCSQCH050C50
	C6108, C6203, C6269		CCSQCH101J50
	C6111, C6116, C6208, C6221, C6222		CCSQCH150J50
	C6115		CCSQCH330J50
	C6114		CCSQRH080D50
	C6113		CCSQRH180J50
	C6105		CCSQTH150J50
	C6261		CEAS010M50
	C6224, C6231, C6233, C6246, C6262		CEAS100M50
	C6216, C6217		CEAS330M16
	C6219		CEAS470M10
	C6243-C6245		CEAS470M16
	C6227		CEAS470M25
	C6238		CEJA100M16
	C6249, C6250		CEJA4R7M35

Mark	No.	Description	Parts No.
	C6215		CFTXA103J50
	C6214		CFTXA224J50
	C6103, C6106, C6112, C6204		CKSQYB102K50
	C6102, C6109, C6117, C6210, C6264		CKSQYB103K50
	C6213		CKSQYB223K50
	C6230		CKSQYB273K50
	C6228		CKSQYB472K50
	C6209, C6237, C6265, C6267		CKSQYB473K50
	C6252		CKSQYB822K50
	C6212, C6218		CKSQYF103Z50
	C6220, C6226, C6239, C6242, C6255		CKSQYF223Z50
	C6225, C6241, C6266		CKSQYF473Z50
	C6232		CKSYB273K50
	C6251		CKSYB822K50
	C6223		CKSYF103Z50
	C6263		CKSYF473Z50
RESISTORS			
	R6299, R6300		RD1/8PM102J
	R6113, R6116, R6118, R6268-R6271		RS1/8S000J
	R6275, R6276, R6278, R6283, R6284		RS1/8S000J
	R6290, R6293, R6294, R6297		RS1/8S000J
	R6243, R6244		RS1/8S101J
	R6211		RS1/8S103J
	R6237		RS1/8S182J
	R6209		RS1/8S221J
	R6239		RS1/8S332J
	R6101		RS1/8S470J
	VR6201		ACP1055
	VR6202		VRTB6VS223
	Other Resistors		RS1/10S□□□□
OTHERS			
	X6203 (7.200MHz)		ASS1042
	X6201 (456KHz)		ASS1066
	X6202 (450KHz)		ATF1027
	BN6201 2P TERMINAL WITH PAL		AKA1017
	AM RF TUNING BLOCK		AXX1041
POWER MODULE (F100)			
SEMICONDUCTORS			
	IC7404		MC7805CT
	IC7401, IC7403		MC7812CT
	IC7402		NJM7912A
△	Q7511, Q7512		2SA1264N
	Q7509, Q7510		2SA1837
△	Q7513, Q7514		2SC3181N
	Q7503, Q7504		2SC4793
FRONT ASSY FOR 100W			
SEMICONDUCTORS			
	IC7501		UPC4570G2
	IC7701, IC7702		XRA4558F-P
	Q7507, Q7508		2SA1182
	Q7601		2SA1255
	Q7501, Q7502		2SC2240
	Q7605, Q7606, Q7703		2SC2712
	Q7505, Q7506		2SC2859
	Q7603		2SC3138
	Q7704		XDC143EK
	D7505, D7506, D7517, D7518		1SS181

Mark	No.	Description	Parts No.
	D7503, D7504, D7516		1SS184
	D7521-D7524		1SS244
	D7519, D7520, D7525, D7526, D7531		HSS104-02
	D7533, D7701-D7704, D7707		HSS104-02
	D7710-D7714		HSS104-02
	D7507-D7510		RD3.3ESB2
CAPACITORS			
	C7703		ACG1051
	C7523, C7524		ACH1150
	C7509, C7510		ACH1151
	C7539, C7540		ACH1248
	C7519-C7522, C7545-C7552		CCSQCH101J50
	C7525-C7528		CCSQCH271J50
	C7503, C7504		CCSQCH331J50
	C7541, C7542		CCSQCH470J50
	C7529-C7532		CKSQYB333K50
	C7543, C7544		CKSQYB472K50
	C7602		CKSQYF103Z50
	C7601, C7603, C7702		CKSQYF104Z50
	C7537		CKSQYF473Z50
RESISTORS			
	R7519, R7520		ACN1106
	R7515, R7516		ACN1107
	R7541, R7542		RD1/4PMF100J
	R7547-R7550		RS1 10S2200F
	R7709		RS1/10S39R0F
	R7710		RS1/10S56R0F
	R7708		RS1 10S7500F
	R7753		RS1 /8S000J
	R7537-R7540		RS1 '8S100J
	R7553		RS1/8S101J
	R7543, R7544		RS1/8S7R5J
	VR7701		ACP1076
	Other Resistors		RS1/10S□□□J
PWR, PRTEC ASSY			
SEMICONDUCTORS			
	Q7208, Q7215, Q7219		2SA1162
	Q7213		2SA1182
	Q7301, Q7302		2SC1815
	Q7207, Q7209, Q7212, Q7214, Q7218		2SC2712
	Q7220, Q7221		2SC2712
	Q7216		2SC2859
	Q7211, Q7217		2SC3138
	Q7210, Q7222		XDA124EK
	D7201, D7205		HSS104-02
	D7204, D7206		HZS6C3L
	D7203		HZS9A2L
CAPACITORS			
	C7402, C7406, C7408		ACG1050
	C7401, C7405, C7407		ACG1053
	C7212		ACH1056
	C7409		ACH1150
	C7205, C7207, C7208		ACH1151
	C7301		CKSQYB332K50
	C7213, C7214		CKSQYF103Z50
	C7206, C7404		CKSQYF104Z50
	C7801, C7802		CKDYX473M25

Mark	No.	Description	Parts No.
RESISTORS			
	R7403, R7404		ACN1104
	R7303		RS1 10S1002F
	R7304		RS1/10S8200F
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN7101	CONNECTOR (12P)	KPE12

4. ADJUSTMENTS

4.1 TUNER SECTION

■ FM Tuner Section

- Set the mode selector to FM BAND.
- Connect the wiring as shown in Fig. 4-1-1.

Step No.	Adjustment Title	FM SG (1kHz, ± 75 kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dB μ V)			
1	Center Adjustment	98 Non modulation	80 or more	98MHz	L6207	Adjust so that the DC voltage between Pin 4 and Pin 28 of IC6201 becomes $0V \pm 50mV$.
2	Front End Sencitivity	98 (106)	0-30	98MHz	L6104 (L6105) T6101 (L6102)	After adjusting L6104 (L6105) so that the DC voltage of the Pin 12 of IC6201 (S-meter) becomes at maximum level, adjust T6101 (L6102).
3	TUNED IND. Lighting Level	98 (106)	15 ± 2	98MHz	VR6201	Adjust so that the indicators of TUNED IND. start to light up.

Notes:

- Before adjusting, make sure there is no gap between L6101 and L6102 and between L6103 and L6104. 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.
- (): SX-J520/HEWZI, SX-J420/HEWZI and SX-J320/HEWZI only.

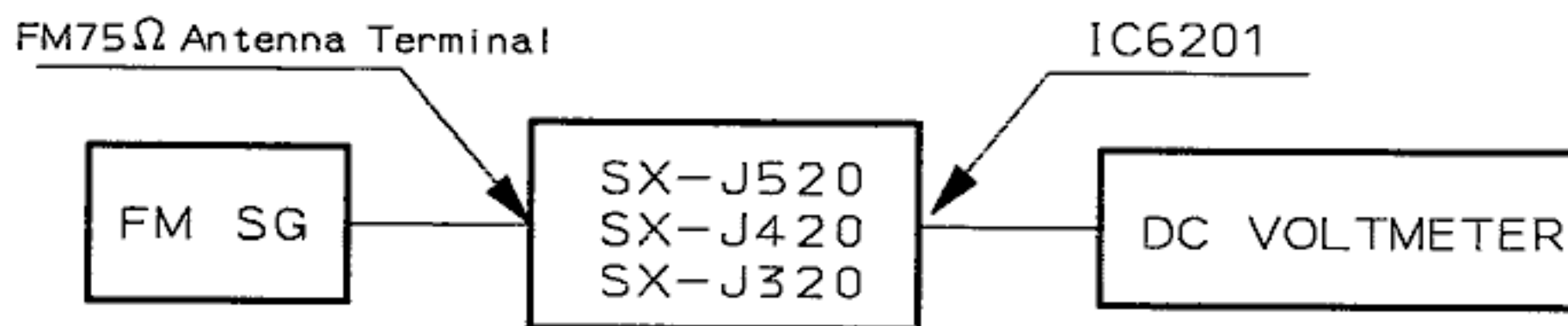


Fig. 4-1-1 FM Adjustment Connection Diagram

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 4-1-2.

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dB μ V/m)			
1	TUNED IND. Lighting Level	999	47 ± 2	999kHz	VR6202	After adjusting VR6202 so that it is illuminated when the ANT. input level is within 45 ± 3 dB μ V/m, confirm that it is extinguished at or below 40dB μ V/m.

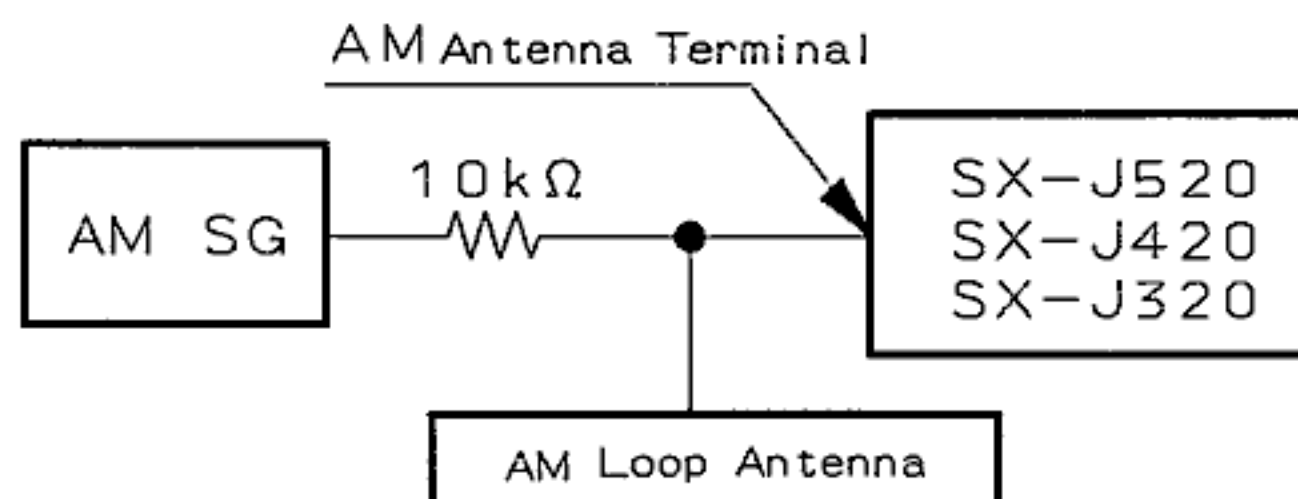


Fig. 4-1-2 AM (MW) Adjustment Connection Diagram

FM/AM TUNER MODULE

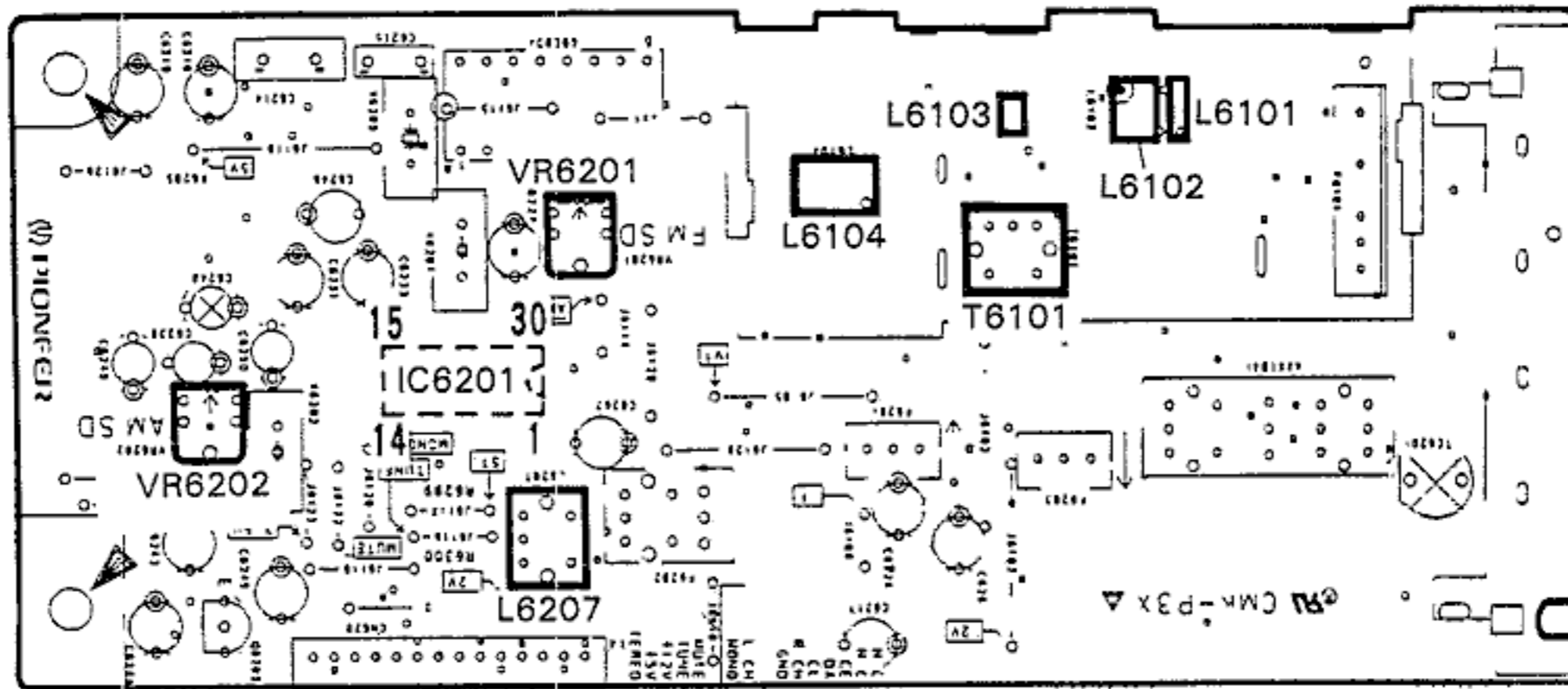


Fig. 4-1-3 Adjustment Points

4.2 POWER AMP MODULE SECTION (Refer to Fig. 4-2-1.)

1. Handling Precautions

- Since the heat sink and transistor metallic parts are connected to output terminals, make sure they do not contact the GND (chassis) or other circuits.
- Since there are residual high voltage lines +B1 (FRONT ASSY FOR 100W and FRONT ASSY FOR 50W) and ±B2 (REAR, PWR, PRTEC ASSY) even when the power is OFF, caution should be exercised. (If necessary, the voltage should be discharged.)
- When handling the Power Amp Module Assy, make sure you do not touch the fan motor blade.

2. Adjustment and Confirmation of Idle Current

- Basically, the idle current needs to be confirmed when replacing a power transistor, driver transistor, or bias transistor, or when the FRONT ASSY FOR 100W, FRONT ASSY FOR 50W or REAR, PWR, PRTEC ASSY have been replaced.
- Make sure the heat sink has cooled sufficiently before measuring the idle current. (Temperature should be the same as room temperature; 25°C is ideal, if possible.)
- Idle current stipulated value: 3-50mA.

■ Front Amp Side (FRONT ASSY FOR 100W and FRONT ASSY FOR 50W)

Step	Measurement	Item	Remarks
1	Lch side	Short both sides of C7123 and C7124 on the Rear Amp side.	Do not operate the Rear Amp side.
2		Insert a resistor (0.22Ω, 3W or more) in series in the connector CN7502 +B1 (or -B1) line (terminal No. 5 or 6). (Refer to Fig. 4-2-2.)	For measuring voltage at both sides of resistor
3		Short both sides of C7524.	Do not operate Rch side.
4		Turn the power ON, wait 6 seconds, and then measure the resistance voltage in Step 2.	Lch Idle current $I = V / 0.22 (\Omega)$
5	Rch side	<ul style="list-style-type: none"> ● Same as Steps 1 and 2 above. ● Short both sides of C7523. 	Do not operate Lch side.
6		Turn the power ON under the above conditions, and after 6 seconds measure the resistance voltage in Step 2.	
7	—	If the measured idle current is greater than 50mA, perform the following procedure.	
8	Lch side	Short between the Point A pattern in Fig. 4-2-3 using solder.	Connect R7517 to R7515 in a parallel circuit.
9	Rch side	Short between the Point B pattern in Fig. 4-2-3 using solder.	Connect R7518 to R7516 in a parallel circuit.
10	—	After performing Steps 8 and 9, remeasure the idle current and confirm that it is below 50mA.	

NOTE: 1. If the idle current is below 3mA, support a resistor (33kΩ) between the emitter and the Q7501 (Lch) and Q7502 (Rch) bias transistor base, and confirm that the idle current is within 3-50mA.
 2. The above step 1 is applied to AWZ5391 of SX-J420 only.