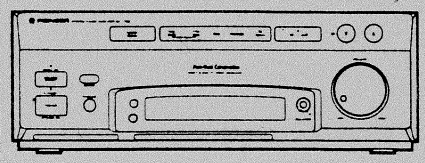
PIONEER®
The Art of Entertainment

Service Manual



ORDER NO.
RRV1019

STEREO TUNER AMPLIFIER

SX-J720

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-J720		
SD	○	AC110−115V/120−127V/220−230V/240V	With the voltage selector
HL	○	AC220−230V/240V	With the voltage selector
S/DF	○	AC110−115V/120−127V/220−230V/240V	With the voltage selector

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

CONTENTS

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CHAPTER 1

1.1 SPECIFICATIONS

FM Tuner Section

Frequency range ..... 87.5 MHz to 108 MHz
Usable Sensitivity..... Mono: 12.8 dBf, IHF (1.2 µV/75 Ω)
Signal-to-Noise Ratio (IHF, 85 dBf Input)..... Mono: 77 dB
Stereo: 73 dB
Distortion ..... Stereo: 0.5 % (1 kHz)
Antenna Input..... 75 Ω unbalanced
Output..... 650 mV (100 % MOD.)

MW (AM) Tuner Section

Frequency range
9 kHz step..... 531 kHz to 1,602 kHz
10 kHz step..... 530 kHz to 1,700 kHz
Sensitivity (IHF, Loop antenna) ..... 350 µV/m
Output..... 150 mV (30 % MOD.)

Amplifier Section

[SX-J720]

Continuous Power Output (RMS)
Front ..... 110 W + 110 W (1 kHz, T.H.D 10 %, 8 Ω)
Rear ..... 12.5 + 12.5 W (1 kHz, T.H.D 10 %, 16 Ω)
Center..... 25 W (1 kHz, T.H.D 10 %, 8 Ω)
Peak music power .....1100 W
Total Harmonic Distortion (1 kHz, 55 W, 8 Ω) ..... 0.1 %**

Power Supply/Miscellaneous

Power requirements
Flat blade 2-pin AC plug model
..... AC 110 – 115/120 – 127/220 – 230/240 V (switchable), 50/60 Hz
Round 2-pin AC plug model..... AC 220 – 230/240 V (switchable), 50/60 Hz
Power consumption
SX-J720..... 430 W
AC outlets
SX-J720
unswitched (x 1)..... 100 W MAX

Dimensions ..... 360 (W) x 361.5 (D) x 120.5 (H) mm
Weight
SX-J720 ..... 7.7 kg

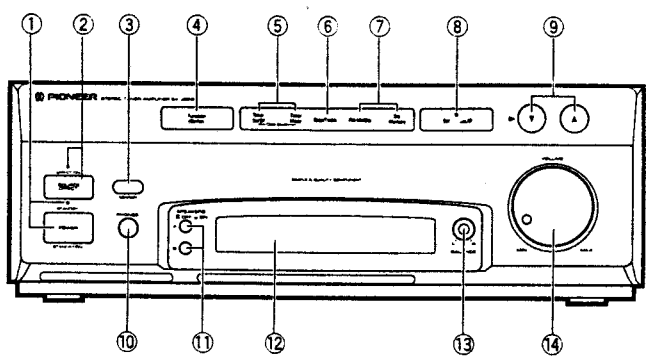
Accessories

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

** Measured By Audio Spectrum Analyzer.

1.2 PANEL FACILITIES

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



TUNER AMPLIFIER: SX-J720

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:

→ PHONO → TUNER → TAPE → DAT →
AUX ← VIDEO ← CD.LD ←
(CD)

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 Sleep button
Use with sleep timer.

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.

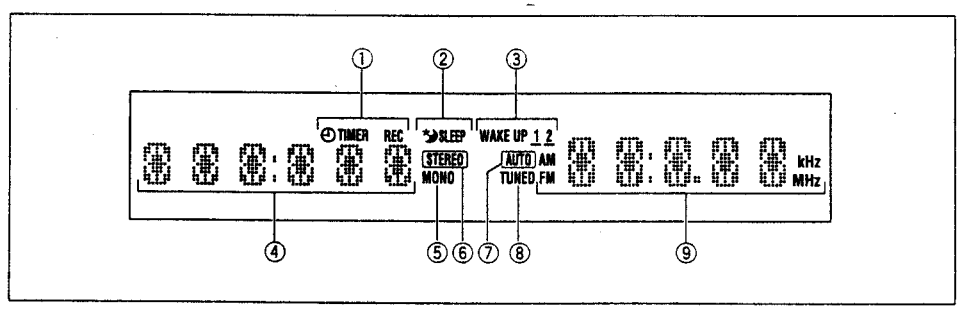
⑩ PHONES jack
For stereo headphones.
NOTE:
There is no output from the speakers when headphones are plugged into PHONES jack.

⑪ SPEAKERS buttons
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
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.

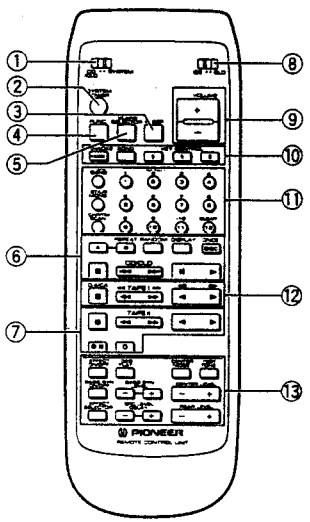
⑤ MONO indicator
Lights when the remote control FM MONO button is ON during stereo FM broadcast reception.

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-J720]

① CD/CLD/SYSTEM switch
Set this switch to the CD/CLD side when you wish to operate the CD player or CD CDV LD player. Set the switch to the SYSTEM side when you wish to operate any other components.

② SYSTEM POWER button

③ SLEEP button
Sets the sleep timer. Each time you press this button, the setting changes as shown here. The current setting is shown on the tuner display.
Power turns off when your set time has elapsed.

→ 90 → 60 → 30 →
(Approx. 90 minutes) (Approx. 60 minutes) (Approx. 30 minutes)
← (AUTO: during playback of ← 0 (OFF) ←
CD, CDV, or LD, or
deck recording/playback).

If you press the SLEEP button again during SLEEP operation, the timer will operate from the new setting displayed.

④ FUNC. (function) button
Each time you press this button, the tuner amplifier function (input selector) changes.
The tuner amplifier function (input selector) automatically switches to the music source being operated when you press the CD playback (►), cassette deck playback (◄, ►), or tuner station controls.

⑤ SCENE SELECTOR button
Operates the same as the Scene Selector button on the sound field processor.

⑥ CD/CLD operation buttons

When the CD/CLD switch ⑧ is on the CD side.

REPEAT:
Use for Repeat playback.
RANDOM:
Use this to enjoy random CD play.
DISPLAY:
Use to switch CD player display.
DISC:
Disc selection.
■: Stop
|◄◄, ►►|: Track search
II: Pause
►: Play

When the CD/CLD switch ⑧ is on the CLD side.

REPEAT – A, B:
Use for Repeat playback.
RANDOM:
Starts Random playback.
DISPLAY:
Use to switch CD CDV LD player display.
ONCE:
Each time this button is pressed, the sound and image are returned to a point about five seconds earlier.
■: Stop
|◄◄, ►►|: Track/Chapter search
II: Pause
►: Play

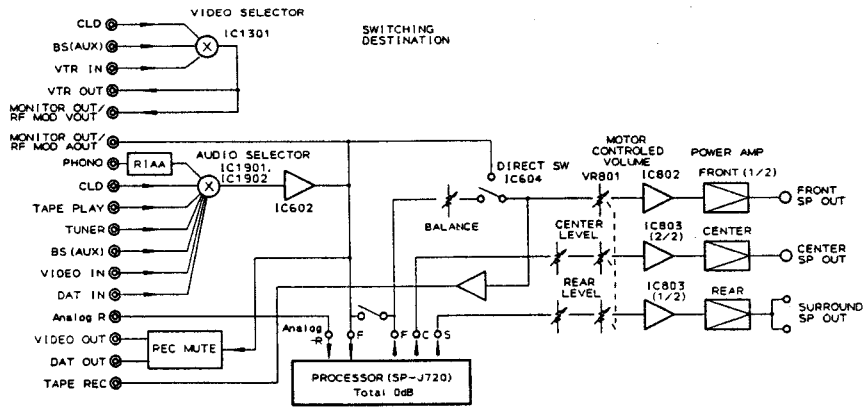
⑦ TAPE II operation buttons
■: Stop
◄◄, ►►: Fast
◄, ►: Play back
●II (rec pause): When this button is pressed, the player enters the recording pause (standby) mode.
O (mute): Use for creating a blank during recording.

⑧ CD/CLD switch
Set this switch to the CD side when using the PD-J920M.
Set to the CLD side when using the CLD-J720.

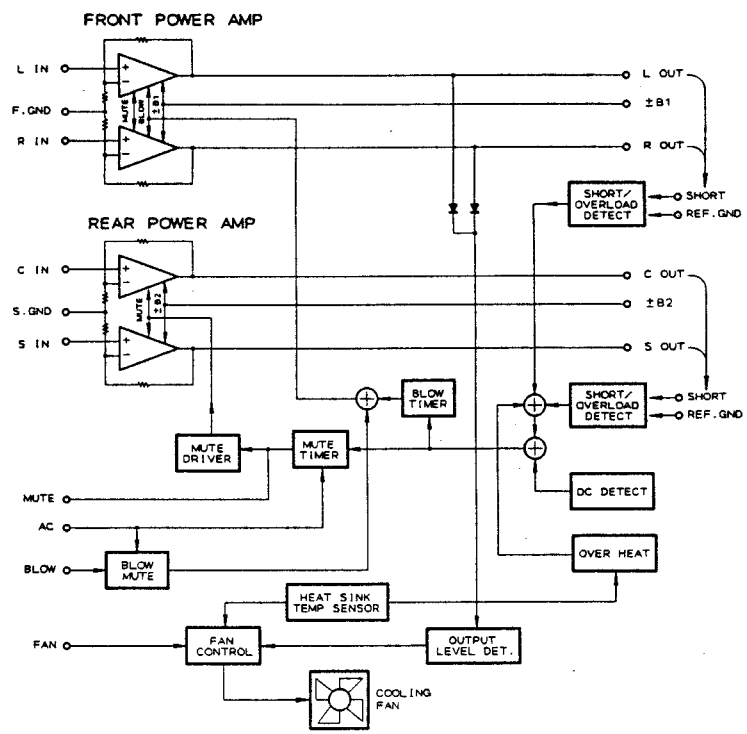
⑨ VOLUME + (up)/– (down) button

⑩ Karaoke operation buttons
KARAOKE MODE:
Operates the same as the KARAOKE MODE button on the sound field processor.
ECHO:
Operates the same as the ECHO TONE button on the sound field processor.
KEY CONTROL:
Use to change the key pitch of music playback.
♭: Lowers the pitch
♮: Returns pitch to normal
♯: Raises the pitch

1.3 BLOCK DIAGRAM



● POWER AMP MODULE SECTION



● Pin Function of Power Amp 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 ±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

1.4 TEST MODE

(1) INDEPENDENT OPERATIONAL CHECK OF THE SX−J720.

The SX−J720 is a part of the system product. For this reason it is not normally operated independently.
To check the independent operation of the SX−J720, 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

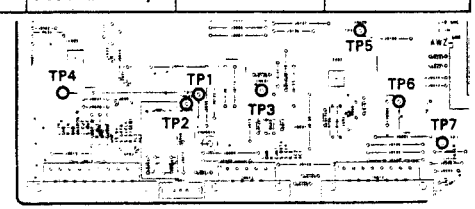
1. • Short between terminals TP1 and TP2 and TP3 and TP4 in the MAIN assy.
   • Short terminals TP5, TP6, and TP7 with a solid wire. In this way the SX−J720 can be operated and checked independently.
2. Insert the SX−J720 power cord into an AC outlet.
3. Send the "A65F power" code to the SX−J720.
4. Once Test Mode has been entered, the following procedure will start.

Check	AMP (Receiver)	TAPE	CD	GEQ
	Once "A65F" code signal has been received, OEFC (all-round test) command bus is output.	REC MUTE PLAY 4.5 seconds REC PAUSE	PLAY • PAUSE	LED scroll is illuminated
LED, FL check	STANDBY → DIRECT → TUNING → ENTER → STANDBY			
	The above LED is illuminated for 0.5 second.			
	※ Ignore REC LOCK data from TAPE.			
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 ←		CD AUTO FUNCTION BUS command output	
	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		
	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.

FL all illuminated → FL all extinguished → Normal display → FL all illuminated

⇧ Front



MAIN assy

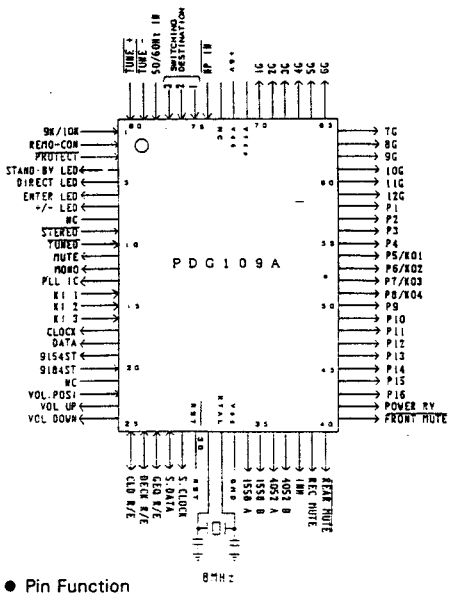
1.5 IC INFORMATION

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

■ PDG109A (IC1101 : FRONT ASSY)

● System Control Microcomputer, CMOS IC

- Pin Assignment (Top View)



- Pin Function

No.	Name	I/O	Description	ACT
1	9k/10k	I	Switching channel step frequency (Refer to table 1)	H: 10k
2	REMO-CON	I	Remote control signal input	
3	$\overline{\text{PROTECT}}$	I	Forced power off input	L
4	STAND.BY LED	O	Driving for STAND-BY LED	H
5	DIRECT LED	O	Control for IC switching SW, DIRECT LED	H
6	ENTER LED	O	Driving for ENTER LED	H
7	+/− LED	O	Driving for +/− LED	H
8	NC	O		
9	$\overline{\text{STEREO}}$	I	Distinguish to receiving condition for TUNER	L
10	$\overline{\text{TUNED}}$	I	Tuning distinguish for TUNER	L
11	MUTE	O	LINE MUTE control	H
12	MONO	O	Tuner AUTO/MONO switching	H
13	PLL CE	O	PLL IC (LM7001) chip enable	H
14	KI 1	I	Key scan input	H
15	KI 2			
16	KI 3			
17	CLOCK	O	LM7001, TC9154, TC9184 control CLOCK output	
18	DATA	O	LM7001, TC9154, TC9184 control DATA output	
19	9154ST	O	Rear, center VR IC (TC9154) strobe output	
20	9184ST	O	Tone VR IC (TC9184) strobe output	
21	NC	O		
22	VOL. POSI	I	A/D input for volume position detection	
23	VOL UP	O	Volume (TC8409S) up control	H
24	VOL DOWN	O	Volume (TC8409S) down control	H
25	CLD R/E	I/O	Communication Request/Enable for communication CLD system bus	L
26	DECK R/E	I/O	Communication Request/Enable for communication DECK system bus	L
27	GEQ R/E	I/O	Communication Request/Enable for communication GEQ system bus	L
28	S. DATA	I/O	DATA input/output for system bus communication	
29	S. CLOCK	O	CLOCK output for system bus communication	
30	RST	I	RESET	L
31	EXTAL		Connected to ceramic oscillator (8MHz)	
32	XTAL			
33	Vss	I	Connected to GND	
34	1558A	O	V-SEL IC (CXA1558L) control	
35	A558B			
36	4052A	O	FUNCTION IC (MC14052) control	
37	4052B			
38	INH			
39	REC MUTE	O	Control MUTE for output voice REC OUT	H
40	$\overline{\text{REAR MUTE}}$	O	Control port for rear, center signal mute	L
41	$\overline{\text{FRONT MUTE}}$	O	Control port for front signal mute	
42	POWER RY	O	POWER RY driving control port	H: ON
43	P16	O	FDP control • segment output	
44				
45				
46				
47				
48				
49				
50	P9			
51	P8/KO4	O	FDP conrol • segment / key scan strobe output	
52	P7/KO3			
53	P6/KO2			
54	P5/KO1			
55	P4	O	FDP control • segment output	
56	P1			
59	12G	O	FDP control • timing output	
60				
61				
62				
63				
64				
65				
66				
67				
68				
69				
70	1G			
71	VFDP	−	Bias voltage (−30V) for FDP	
72	VDD	−	Power supply terminal	
73	NC	O	Connected to VDD	
74	$\overline{\text{HP. IN}}$	I	Input port for H. P connected detection	L
75	SWITCHING DESTINATION 3	I	Switching destination input (Refer to table 2)	
76	SWITCHING DESTINATION 2			
77	SWITCHING DESTINATION 1			
78	50/60MHz IN			
79	TUNE −	I	Tuning • time • level (−) key input	H
80	TUNE +	I	Tuning • time • level (+) key input	H

Table 1 : TUNER received frequency SX−J720/S/DF

9k/10k	MW	FM
9k	522−1629kHz (9kHz step)	76.0−108.0MHz (50kHz step)
10k	530−1700kHz (10kHz step)	76.0−108.0MHz (100kHz step)

Table 2 : SX−J720/S/DF

P77	P76	P75	REAR, CENTER VR	TONE VR	AM STEREO, WIDE BAND
L	L	L	○	×	○

Table 1 : TUNER received frequency SX−J720/SD, HL

9k/10k	MW	FM
9k	531−1602kHz (9kHz step)	87.5−108.0MHz (50kHz step)
10k	530−1700kHz (10kHz step)	87.5−108.0MHz (100kHz step)

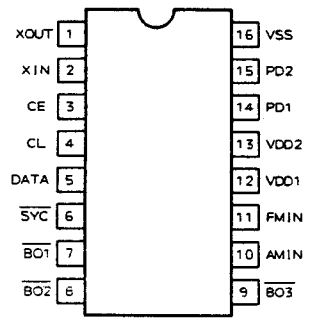
Table 2 : SX−J720/SD, HL

P77	P76	P75	REAR, CENTER VR	TONE VR	AM STEREO, WIDE BAND
L	H	H	○	×	×

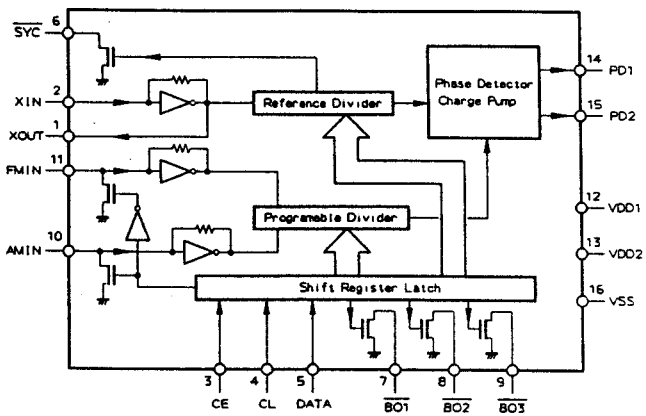
■ LM7001J (IC6102, IC6202 : FM/AM TUNER MODULE)

● **ELECTRONIC TUNING DIRECT PLL SYNTHESIZER IC, SILICON MONOLITHIC N MOS**

● Pin Assignment (Top View)



● Block Diagram



● Pin Function

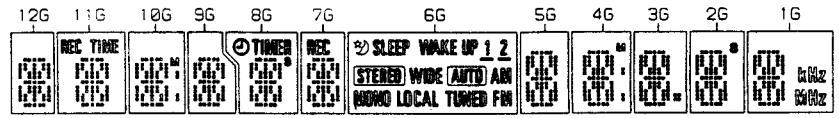
No.	Function	Description
1	X OUT	X tal OSC (7.2MHz)
2	X IN	
3	CE	Data input
4	CL	
5	DATA	
6	$\overline{SYC}$	Clock (400kHz) for controller
7	$\overline{BO1}$	Band data output $\overline{BO1}$ can be treated as time base output (8Hz)
8	$\overline{BO2}$	
9	$\overline{BO3}$	
10	AM IN	Local oscillation signal input
11	FM IN	
12	VDD1	Power supply (power supply for back-up to VDD2)
13	VDD2	
14	PD1	Charge pump output
15	PD2	
16	VSS	Power supply

1.6 FL INFORMATION

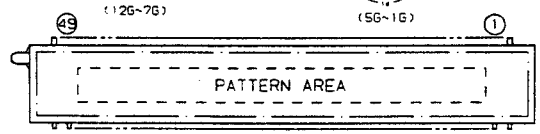
■ AAV1186 (V1101 : FRONT ASSY)

● **FL Tube**

● Grid Assignment



● Pin Assignment



● Pin Connection

PIN CONNECTION

PIN NO.	44 43 42 41 40 39 38 37 36 35 34 33 32 31 30 29 28 27 26 25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1
CONNECTION	F1 F2 NP NC 1 2 3 4 5 6 7 8 9 10 11 12 NC NC NC NC NC NC NC NC NC NC NC NC NC NC NC NC NC NC NC NC 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 NP DL F1 F2

NOTE 1) F1,F2 --- Filament
2) NP ------ No pin
3) NC ------ No connection
4) 1G~12G --- Grid
5) DL ------ Datum Line

● Anode Connection

ANODE CONNECTION

	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	2a	2a	2a	2a	2a	2a	SLEEP	1a	1a	1a	1a	1a
P2	2j	2j	2j	2j	2j	2j	WAKE UP 1 2	1j	1j	1j	1j	1j
P3	2h	2h	2h	2h	2h	2h	-(1)	1h	1h	1h	1h	1h
P4	2k	2k	2k	2k	2k	2k	-(2)	1k	1k	1k	1k	1k
P5	2b	2b	2b	2b	2b	2b	STEREO	1b	1b	1b	1b	1b
P6	2f	2f	2f	2f	2f	2f	WIDE	1f	1f	1f	1f	1f
P7	2m	2m	2m	2m	2m	2m	AUTO	1m	1m	1m	1m	1m
P8	2g	2g	2g	2g	2g	2g	AM	1g	1g	1g	1g	1g
P9	2c	2c	2c	2c	2p	2c	MONO	1c	1c	1c	1c	1c
P10	2e	2e	2e	2e	2e	2e	LOCAL	1e	1e	1e	1e	1e
P11	2r	2r	2r	2r	2r	2r	TUNED	1r	1r	1r	1r	1r
P12	2n	2n	2n	2n	2n	2n	FM	1n	1n	1n	1n	1n
P13	2p	2p	2p	2p	2p	2p	-	1p	1p	1p	1p	1p
P14	2d	2d	2d	2d	2d	2d	-	1d	1d	1d	1d	1d
P15	-	REC	∞	-	TIMER	REC	-	-	∞	-	-	8Hz
P16	-	TIME	:	-	8	-	-	-	:	∞	8	8Hz

1.7 ADJUSTMENTS

1. TUMER SECTION

■ FM Tuner Section

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

- For SD and HL types (AXQ1012)

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
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±50mV.
2	Front End Sencitivity	98	0−30	98MHz	L6102 T6101	Adjust so that the DC voltage of the Pin12 of IC6201 (S-meter) becomes at maximum level.
3	TUNED IND. Lighting Level	98	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 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 → FM.*

- For S/DF type (AXQ1016)

Step No.	Adjustment Title	FM SG (1kHz, ±75kHz dev.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (MHz)	Level (dBμV)			
1	Center Adjustment	83 Non modulation	80 or more	83MHz	L6109	Adjust so that the DC voltage between Pin 4 and Pin 28 of IC6101 becomes 0V±50mV. (Both ends of R6141)
2	Front End Sencitivity	83	10−30	83MHz	L6104 L6102 T6101	Adjust so that the DC voltage of the Pin12 of IC6101 (S-meter) becomes at maximum level.
3	TUNED IND. Lighting Level	83	15±2	83MHz	VR6101	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 → FM.*

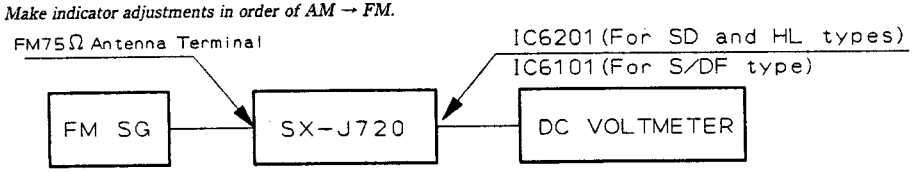


Fig. 1−1 FM Adjustment Connection Diagram

■ AM Tuner Section

- Set the mode selector to AM BAND.
- Connect the wiring as shown in Fig. 1−2.
- For SD and HL types (AXQ1012)

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47±2	999kHz	VR6202	Adjust so that the indicators of TUNED IND. start to light up.

- For S/DF type (AXQ1016)

Step No.	Adjustment Title	AM SG (400Hz, 30% Mod.)		Reception Frequency Display	Adjustment Location	Specifications
		Frequency (kHz)	Level (dBμV/m)			
1	TUNED IND. Lighting Level	999	47±2	999kHz	VR6102	Adjust so that the indicators of TUNED IND. start to light up.

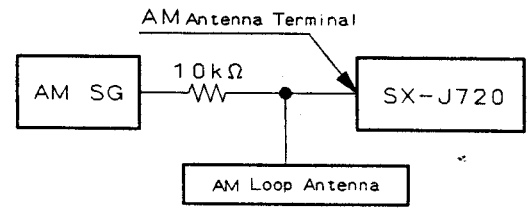
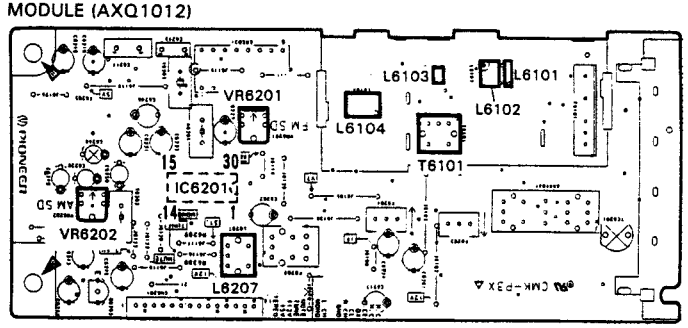


Fig. 1−2 AM (MW) Adjustment Connection Diagram

FM/AM TUNER MODULE (AXQ1012)



FM/AM TUNER MODULE (AXQ1016)

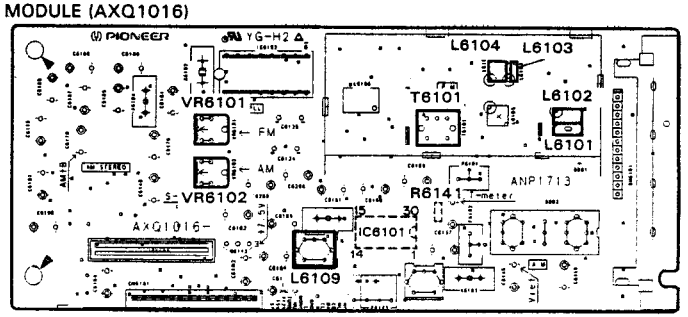


Fig. 1−3 Adjustment Point

2. POWER AMP MODULE SECTION (Refer to Fig. 2−1.)

1. Handling Precautions

- Since the heat sink and transistor metallic parts are connected to the Front Amp output, make sure they do not contact the GND (chassis) or other circuits.
- Since there is residual high voltage in the Power Amp Module Assy ±B1 (FRONT ASSY FOR 100W) 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 entire split board Assy of the Power Amp Module Assy has 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)

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. 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 (Ω)
5	Rch side	• 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 Ⓐ pattern in Fig. 2−3 using solder.	Connect R7517 to R7515 in a parallel circuit.
9	Rch side	Short between the Point Ⓑ pattern in Fig. 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.	
11	——	If the idle current is below 3mA, perform the following procedure.	
12	Lch side	Short between the Point Ⓒ pattern in Fig.2−3 using solder.	Connect R7551 to R7519 in a parallel circuit.
13	Rch side	Short between the Point Ⓓ pattern in Fig.2−3 using solder.	Connect R7552 to R7520 in a parallel circuit.
14	——	After performing Step Ⓒ and Ⓓ, remeasure the idle current and confirm that it is greater than 3mA (within 3−50mA).	

■ Rear Amp Side (REAR, PWR, PRTEC ASSY)

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. 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 (Ω)
5	Surround amp side	• 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 Ⓔ pattern in Fig. 2−5 using solder.	Connect R7117 to R7115 in a parallel circuit.
9	Surround amp side	Short between the Point Ⓕ pattern in Fig. 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 Ⓒ pattern in Fig.2−5 using solder.	Connect R7151 to R7119 in a parallel circuit.
13	Surround amp side	Short between the Point Ⓗ pattern in Fig.2−5 using solder.	Connect R7152 to R7120 in a parallel circuit.
14	——	After performing Step Ⓒ and Ⓗ, remeasure the idle current and confirm that it is greater than 3mA (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), or VR7701 has been replaced, or when the entire split board Assy of the Power Amp Module Assy has 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. 2−3 and 2−6.)
2. Determine the fan motor operating temperature setting by means of the following formula. (Tolerance is within ±30mV.)
   Formula: (85°C − Ta) × 19 (mV)
   Ta: ambient temperature (°C)
3. Adjust 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) × 19 (mV)
   = 1140mV (tolerance within ±30mV).

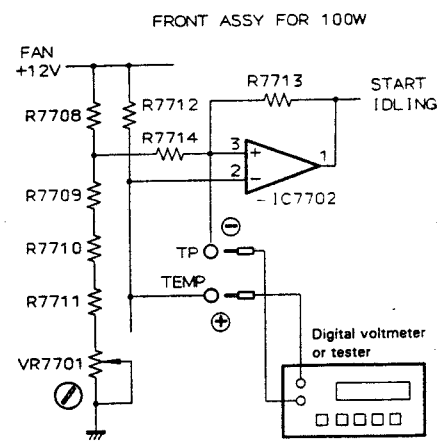


Fig. 2−6 Adjustment of Operating Temperature Setting of Fan Motor

NOTE:
Adjustment during service should be ±30mV, but if this value cannot be obtained with the measuring instruments used for adjustment, ±50mV is acceptable.

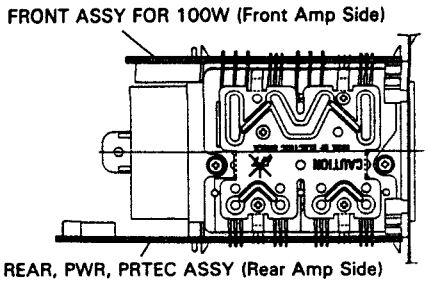


Fig. 2-1 Power Amp Module
(POWER MOD. F100+R20)

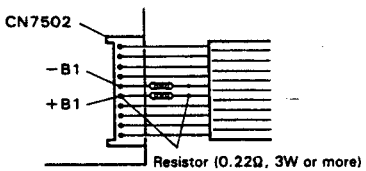


Fig. 2-2 FRONT ASSY FOR 100W

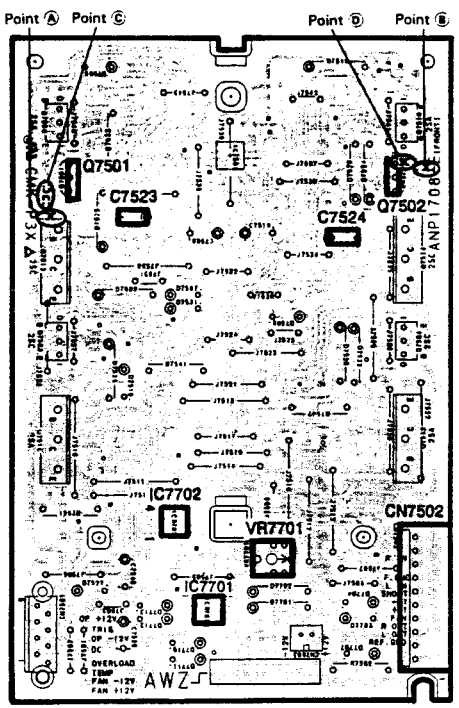


Fig. 2-3 FRONT ASSY FOR 100W
(This diagram is viewed from the foil side)

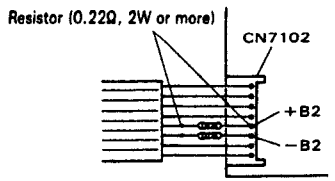


Fig. 2-4 REAR, PWR, PRTEC ASSY

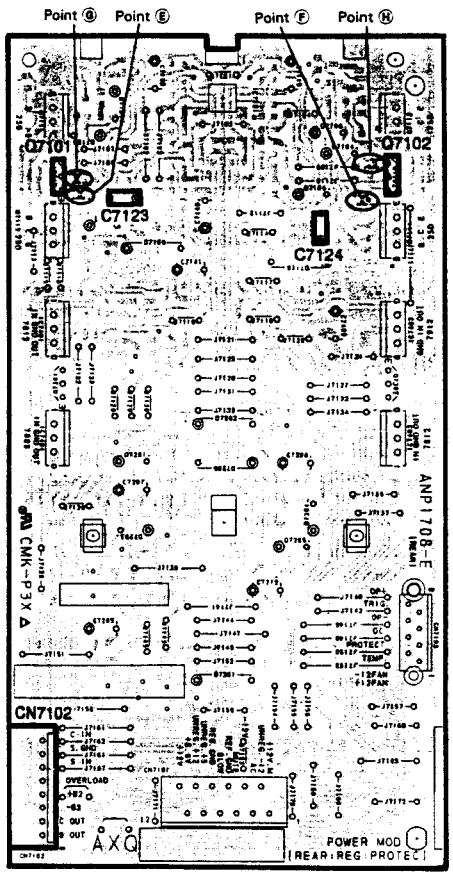


Fig. 2-5 REAR, PWR, PRTEC ASSY
(This diagram is viewed from the foil side)

1.8 PARTS LIST FOR EXPLODED VIEWS AND PACKING

NOTES :

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

1. EXTERIOR

(1) Part Number Differences Between HL, S/DF and SD

Mark	No.	Description	Part No. SX-J720 SD type	Part No. SX-J720 HL type	Part No. SX-J720 S/DF type	Remarks
⚠	4	1P AC INLET WITH OUTLET	AKP1123	.....	AKP1123	
⚠	4	1P AC INLET	.....	AKP1132	.....	
	8	REAR PANEL (MTL)	ANC2117	ANC2118	ANC7093	
	43	MAIN ASSY	AWZ5194	AWZ5242	AWZ5448	
	53	FM/AM TUNER MODULE	AXQ1012	AXQ1012	AXQ1016	
⚠	57	FU3 FUSE (T2A/250V)	AEK-511	.....	AEK-511	
⚠	58	S8001 VOLTAGE SELECTOR (AC110-115V/120-127V/220-230V/240V)	AKX-507	.....	AKX-507	
⚠	63	1P AC OUTLET	.....	AKP1034	.....	
	64	INSULATION RUBBER (RUB)	.....	.....	AEZ7000	
⚠	65	FU1 FUSE (T2A/250V)	.....	AEK-511	.....	

(2) For SX-J720/SD Type

Mark	No.	Description	Parts No.
	1	FRONT PANEL (PLS)	AMB2192
⚠	2	POWER TRANSFORMER (T1)	ATS1509
	3	GND TERMINAL	AKE-031
⚠	4	1P AC INLET WITH OUTLET (CN1)	AKP1123
⚠	5	FUSE (T2A/250V, FU2)	AEK-511
	6	FLEXIBLE FLAT CABLE (J101)	ADD1112
NSP	7	CHASSIS (MTL)	ANA1193
	8	REAR PANEL (MTL)	ANC2117
	9	RUBBER SHEET	AEB1247
	10	LEG ASSY (S)	AMR1937
	11	BINDER	AEC-093
	12	NYLON RIVET	AEC1160
NSP	13	PCB SPACER	AEC1188
NSP	14	PCB SUPPORT	AEC1217
	15	PLASTIC RIVET (PLS)	AEC1359
NSP	16	PCB SPACER (3×8)	AEC1371
	17	PCB SPACER (3×12)	AEC1372
NSP	18	SPACER (PLS)	AEC1463
	19	PCB HINGE (PVC)	AEC1500
	20	BARRIER (PLS)	AEC7002
	21	BINDER	AEP-215
NSP	22	PCB MOLD	AMR1525
NSP	23	PCB MOLD	AMR2115
	24	REFLECTION PLATE	ANK1259
	25	SCREW (3×14)	ABA1024
	26	SCREW (2.6×8)	ABA1095
	27	SCREW (4×8)	ABA1184
	28	SCREW	BBZ30P080FZK
	29	SCREW	BBZ30P180FMC
	30	SCREW	BPZ26P080FMC
	31	SCREW	VPZ30P080FZK
	32	REMOTE SENSOR FILTER	AAK2261
	33	POWER LENS (PLS)	AAK2343
	34	KNOB SHEET (PLS)	AAK2520
	35	DISPLAY PANEL (PLS)	AAK2527
	36	SUB PANEL (PLS)	AMR2597
	37	NAME PLATE (ABS)	PAM1407
	38	MIC KNOB (PLS)	AAB1379
	39	VOL KNOB (PLS)	AAB1322
	40	POWER BUTTON (PLS)	AAD2497

Mark	No.	Description	Parts No.
	41	SELECT BUTTON (PLS)	AAD2499
	42	BONNET (MTL)	ANE1448
	43	MAIN ASSY	AWZ5194
	44	VOLUME ASSY	AWZ5200
NSP	45	TRANS ASSY	AWZ5202
	46	FUNC ASSY	AWZ5290
NSP	47	SUPPORT ASSY	AWZ5291
	48	FRONT ASSY	AWZ5203
	49	V SEL ASSY	AWZ5207
NSP	50	H.P. ASSY	AWZ5208
NSP	51	SP ASSY	AWZ5263
NSP	52	TACT SW ASSY	AWZ5230
	53	FM/AM TUNER MODULE	AXQ1012
	54	POWER MOD. F100+R20	AXQ1019
	55	SCREW	ABA-115
	56	BARRIER (PVC)	AEC7005
⚠	57	FUSE (T2A/250V, FU3)	AEK-511
⚠	58	VOLTAGE SELECTOR (S8001)	AKX-507
⚠	59	VOLTAGE SELECTOR (S8002)	AKX1004
NSP	60	BRACKET	ANG1635
NSP	61	SW ASSY	AWZ5214
	62	SP SELECT SWITCH (PLS)	AAD2527

2. POWER AMP MODULE SECTION (FOR ALL MODELS)

Mark	No.	Description	Parts No.
	1	FRONT ASSY FOR 100W	AWZ5389
	2	REAR, PWR, PRTEC ASSY	AWZ5391
	3	HEAT SINK (AL)	ANH7007
	4	BRACKET (MTL)	ANG1868
	5	SHEET	AEB1256
	6	MOLD A (PLS)	AMR2594
	7	MOLD B (PLS)	AMR2595
	8	SCREW (3×10)	ABA1021
	9	SCREW	BBZ30P140FZK
	10	SCREW	BPZ30P350FZK
	11	FAN MOTOR	AXM1019
	12	REGULATOR IC (IC7401)	MC7812CT
	13	REGULATOR IC (IC7402)	NJM7912A
	14	REGULATOR IC (IC7403)	MC7812CT
	15	REGULATOR IC (IC7404)	MC7805CT
⚠	16	TRANSISTOR (Q7111)	2SB1274
⚠	17	TRANSISTOR (Q7112)	2SB1274
⚠	18	TRANSISTOR (Q7113)	2SD1913
⚠	19	TRANSISTOR (Q7114)	2SD1913
	20	TRANSISTOR (Q7503)	2SC4793
	21	TRANSISTOR (Q7504)	2SC4793
	22	TRANSISTOR (Q7509)	2SA1837
	23	TRANSISTOR (Q7510)	2SA1837
⚠	24	TRANSISTOR (Q7511)	2SA1264N
⚠	25	TRANSISTOR (Q7512)	2SA1264N
⚠	26	TRANSISTOR (Q7513)	2SC3181N
⚠	27	TRANSISTOR (Q7514)	2SC3181N

3. PACKING

(1) Part Number Differences Between HL, S/DF and D

Mark	No.	Description	Part No. SX-J720 SD type	Part No. SX-J720 HL type	Part No. SX-J720 S/DF type	Remarks
⚠	2	AC POWER CORD	ADG1129	ADG1127	ADG1129	
	13	SUB OPERATING INSTRUCTIONS (ENGLISH, SPANISH, CHINESE)	.....	.....	ARH7002	

(2) For SX-J720/SD Type

Mark	No.	Description	Parts No.
	1	OPERATING INSTRUCTIONS (ENGLISH/SPANISH/CHINESE)	ARE1293
⚠	2	AC POWER CORD	ADG1129
	3	FM ANTENNA	ADH1016
	4	CAUTION CARD (220-230V)	ARR7001
NSP	5	VINYL BAG	AHG-117
	6	AM LOOP ANTENNA ASSY	ATB1012
	7	REMOTE CONTROL UNIT (CU-SX077)	AXD1377
	8	BATTERY COVER	AZN2237
	9	FRONT PAD	AHA1652
	10	REAR PAD	AHA1653
	11	PACKING CASE	AHD2655
	12	SHEET	AHG1016
	13	SUB OPERATING INSTRUCTIONS (ENGLISH/SPANISH/CHINESE)	ARH7002
NSP	14	BATTERIES (R03, AAA)	AEX-021

1.9 PCB PARTS LIST

NOTES :

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

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

560Ω → 56 × 10¹ → 561 ..... RD1/8PM 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

LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No. SD type	Part No. HL type	Part No. S/DF type	Remarks
	AF assy	AWK1758	AWK1766	AWK1808	
	├ MAIN assy	AWZ5194	AWZ5242	AWZ5448	
	├ FUNC assy	AWZ5290	AWZ5290	AWZ5290	
	├ VOLUME assy	AWZ5200	AWZ5200	AWZ5200	
NSP	├ TRANS assy	AWZ5202	AWZ5202	AWZ5202	
NSP	└ SUPPORT assy	AWZ5291	AWZ5291	AWZ5291	
	DISP assy	AWM1494	AWM1494	AWM1494	
	├ FRONT assy	AWZ5203	AWZ5203	AWZ5203	
NSP	├ TACT SW assy	AWZ5230	AWZ5230	AWZ5230	
	├ V SEL assy	AWZ5207	AWZ5207	AWZ5207	
NSP	├ H.P assy	AWZ5208	AWZ5208	AWZ5208	
NSP	├ SP assy	AWZ5263	AWZ5263	AWZ5263	
NSP	└ SW assy	AWZ5214	AWZ5214	AWZ5214	
	FM/AM TUNER MODULE	AXQ1012	AXQ1012	AXQ1016	
	POWER MOD. F100 + R20	AXQ1019	AXQ1019	AXQ1019	
	├ FRONT ASSY FOR 100W	AWZ5389	AWZ5389	AWZ5389	
	└ REAR, PWR, PRTEC assy	AWZ5391	AWZ5391	AWZ5391	

PART NUMBER DIFFERENCES BETWEEN SD, HL AND S/DF TYPES

Main Assembly

AWZ5242, AWZ5448 and AWZ5194 have the same construction except for the following :

Mark	Symbol & Description	Part No. AWZ5194	Part No. AWZ5242	Part No. AWZ5448	Remarks
	R603,R605	.....	.....	RS1/10S473J	
	R604,R606	RS1/10S473J	RS1/10S473J	.....	

FOR SX-J720/SD TYPE

Mark	No.	Description	Parts No.
MAIN ASSY			
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
	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
	D611-D613, D622, D630, D631		S5688G
COILS AND FILTERS			
⚠	L601		ATF1006
TRANSFORMERS			
⚠	T601		ATT1239
SWITCHES AND RELAYS			
	S601		ASH1027
	RY602		ASR1035
⚠	RY601		ASR1036
CAPACITORS			
⚠	C651, C669 (0.01/400)		ACG1003
	C627, C628 (6800/63)		ACH1137
	C695, C696		CCSQCH101J50
	C639, C640, C643, C644		CCSQCH391J50
	C697		CEAS010M50
	C657, C658		CEAS101M10
	C646		CEAS101M50
	C634		CEAS102M25
	C645		CEAS2R2M50
	C650		CEAS331M50
	C631, C632		CEAS332M35
	C671		CEAS3R3M50
	C621, C622		CEAS470M35
	C648, C649		CEAS470M50
	C641, C642		CKSQYB102K50
	C663, C664		CKSQYB103K50
	C698, C699		CKSQYB152K50
	C609, C610, C623, C624		CKSQYB473K50
	C655, C656		CKSQYB473K50
	C689-C693		CKSQYB561K50
	C676-C683		CKSQYF104Z50
	C633		CQMA103J50
	C672, C673		CQMA104J50
	C674, C675		CQMA223J50

Mark	No.	Description	Parts No.
RESISTORS			
	R662		RD1/2PM182J
	R661		RD1/2PM221J
	R706		RD1/2PM472J
	R665		RD1/2PM622J
	R633, R634		RD1/4PM151J
	R667		RD1/4PM470J
	R679, R703		RD1/8PM102J
	R666		RD1/8PM203J
	R699-R701		RD1/8PM222J
	R1410		RD1/8PM332J
	R625, R626, R635, R636		RD1/8PM471J
	R1407, R1408		RD1/8PM472J
	R656		RD1/8PM623J
	R664		RFA1/4PS4R7J
	R660		RS1LMF121J
⚠	R653, R654		RS1LMFR22J
⚠	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		KM200IA11
	CN605 12P SOCKET		KP250NA12
	CN603 CONNECTOR (12P)		KPC12
	CN608 JUMPER CONNECTOR		KPC8
	CN617 CONNECTOR (3P)		KPE3
VOLUME ASSY			
SEMICONDUCTORS			
	IC801		TA8409S
	IC802, IC803		UPC4570G2
	Q801, Q802, Q805, Q806		2SC3327
	Q803, Q804		XDA124ES
COILS AND FILTERS			
	L801		LAU221K
CAPACITORS			
	C819, C820, C823, C824		CCSQCH470J50
	C813, C814		CEAS100M50
	C828		CEAS101M25
	C811, C812		CEAS2R2M50
	C807, C808		CEXA470M25
	C801-C804		CEYA100M50
	C805, C806, C815, C816		CEYA2R2M50
	C831, C832		CKSQYB473K50
	C809, C810		CKSQYF104Z50
	C827		CKSQYF473Z50
RESISTORS			
	R835, R836		RD1/8PM101J
	R803, R804		RD1/8PM104J
	R817		RD1/8PM272J
	R818		RD1/8PM472J
	VR801 (100k-4B*4, 50k-6B)		ACX1077
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN801, CN802 11P SOCKET		KP200IA11L

Mark	No.	Description	Parts No.
TRANS ASSY			
SEMICONDUCTORS			
⚠	IC651-IC660		ICP-N75
FUNC ASSY			
SEMICONDUCTORS			
	IC901		MC14052BF
	IC902		MC14066BF
	IC903		UPC4570G2
	Q901		2SA1162
	Q907		2SC2878
	Q902-Q906		XDA124EK
	D902		1SS181
	D901, D903, D904		1SS252
CAPACITORS			
	C940		CEAS100M50
	C935, C936		CEAS101M10
	C909, C910		CEAS470M10
	C903, C904		CEAS4R7M50
	C939		CKSQYB103K50
	C905, C906		CKSQYB152K50
	C907, C908		CKSQYB562K50
RESISTORS			
⚠	R949-R952		RD1/2PMFL100J
	R918		RD1/8PM103J
	R904, R955, R956		RD1/8PM222J
	Other Resistors		RS1/10S□□□J
OTHERS			
	PIN JACK (6P)		AKB1121
	CN905 PIN JACK (6P)		AKB1129
	PLUG (9P)		AKM1040
	JACK		AKN-203
	SOCKET 9-P		AKP-076
SUPPORT ASSY			
	No service part		
FRONT ASSY			
SEMICONDUCTORS			
	IC1101		PDG109A
	Q1101		2SC2458
	Q1102-Q1106		XDC143ES
	D1118		AEL1065
	D1119		AEL1128
	D1120, D1121		AEL1144
	D1101-D1104, D1106-D1109, D1114		HSS104-02
	D1105		RD6.2ESB
COILS AND FILTERS			
	L1101		LAU220J
SWITCHES AND RELAYS			
	S1101-S1109		ASG1034
CAPACITORS			
	C1101		ACH1135
	C1106, C1111		CCCSL101J50
	C1104, C1115		CEAS010M50
	C1107		CEAS100M50
	C1105		CEAS2R2M50

Mark	No.	Description	Parts No.
	C1103, C1112		CEAS470M16
	C1108-C1110		CFTXA103J50
	C1102		CFTXA473J50
	C1116		CKCYB152K50
	C1113		CKCYB222K50
	C1114		CKDYB102K50
	C1118		CKMYB102K50
	C1117		CKMYB152K50
RESISTORS			
	VR1101 (100kB)		ACS1102
	Other Resistors		RD1/8PM□□□J
OTHERS			
	V1101		AAV1186
	CN1101 40P SOCKET		AKP1087
	X1101 CRYSTAL RESONATOR		ASS1015
	REMOTE RECEIVER UNIT		AXX1033
V SEL ASSY			
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
	C1308, C1310		CKCYX104M16
	C1315, C1316		CKDYB152K50
	C1304, C1305		CKMYB102K50
RESISTORS			
	R1318, R1319		RD1/4PM180J
	Other Resistors		RD1/8PM□□□J
OTHERS			
	PHONO JACK 2-P		AKB1134
H.P. ASSY			
RESISTORS			
	R1001, R1002		RS2LMF331J
OTHERS			
	CN1002 JACK		AKN1025
SW ASSY			
SWITCHES AND RELAYS			
	S1001		ASG1057
TACT SW ASSY			
SWITCHES AND RELAYS			
	S1003, S1004		ASG1034
SP ASSY			
OTHERS			
	PIN JACK (3P)		AKB1213
	SPEAKER TERMINAL 8-P		AKE-111
	CN1001 12P PLUG		KM250NA12L

Mark	No.	Description	Parts No.

FM/AM TUNER MODULE for SD type

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 (10.7MHz)	ATE1013
	F6204 (SFE10.7MA8)	ATF−107
	F6203 (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
	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	ACP1043
	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

FM/AM TUNER MODULE for S/DF type

SEMICONDUCTORS

	IC6101	LA1836M
	IC6102	LM7001J
	IC6103	MC13020M
	Q6117	2SA1162
	Q6102	2SC2223
	Q6113	2SC2235
	Q6110, Q6115, Q6116, Q6121−Q6124	2SC2712
	Q6103, Q6107, Q6119, Q6120	2SC2714
	Q6111	2SK208
	Q6104, Q6105	2SK302
	Q6101	3SK194
	Q6106, Q6109	XDA124EK
	Q6112, Q6118	XDC124EK
	Q6108, Q6114	XDC143EK
	D6106	1SS181
	D6101, D6102, D6104	1SV228

COILS AND FILTERS

	T6101	ATE−063
	T6102	ATB1010
	L6106	ATC1008
	L6101	ATC1025
	L6102	ATC1026
	L6103	ATC1027
	L6104	ATC1028
	L6109	ATE1013
	L6107	ATH1043
	L6108, L6110	LCTA2R2J3225
	F6102	ATF−107
	F6101	ATF−119
	F6103	ATF1144

CAPACITORS

	C6191−C6194 (0.082/25)	ACG1050
	C6129, C6153, C6154, C6199, C6200 (105/16)	ACG1051
	C6152 (474/25)	ACG1052
	C6120	CCSCH150J50
	C6111	CCSQCH010C50

Mark	No.	Description	Parts No.
	C6112, C6122	CCSQCH020C50
	C6113	CCSQCH101J50
	C6157, C6177	CCSQCH102J50
	C6133, C6141, C6142	CCSQCH150J50
	C6183	CCSQCH470J50
	C6119	CCSQUJ060D50
	C6118	CCSQUJ080D50
	C6101, C6116	CCSQUJ150J50
	C6106	CCSQUJ270J50
	C6107, C6117	CCSQUJ330J50
	C6165, C6166, C6190	CEAS010M50
	C6137, C6145, C6169, C6205	CEAS100M50
	C6164, C6197, C6198	CEAS101M25
	C6179, C6188	CEAS2R2M50
	C6206	CEAS330M16
	C6140, C6155, C6162, C6163, C6178, C6187	CEAS470M25
	C6189	CEAS4R7M50
	C6160, C6161, C6176	CEJA100M16
	C6181	CEJA470M16
	C6185, C6186	CEJAR47M50
	C6135	CFTXA103J50
	C6134	CFTXA394J50
	C6105, C6115, C6125, C6126, C6128, C6167, C6168	CKSQYB102K50
	C6102, C6103, C6114, C6121, C6124, C6136, C6139, C6144, C6170, C6172, C6182, C6184	CKSQYB103K50
	C6195, C6196	CKSQYB222K50
	C6131, C6143	CKSQYB223K50
	C6173−C6175, C6180	CKSQYB332K50
	C6158, C6159	CKSQYB333K50
	C6156	CKSQYB472K50
	C6201	CKSQYF104Z50
	C6138, C6146−C6150, C6171	CKSQYF473Z50
	C6123	CKSYB103K50
	C6207	CKSYF103Z50
	C6132	CKDYX473M25

RESISTORS

	VR6101 (10k)	ACP1043
	VR6102 (22k)	ACP1044
	R6115, R6119, R6123, R6127, R6217, R6218	RS1/8S000J
	R6137	RS1/8S331J
	R6112	RS1/8S473J
	R6141	RS1/8S563J
	R6228	RD1/8PM104J
	Other Resistors	RS1/10S□□□J

OTHERS

	X6102 (7.200MHz)	ASS1042
	X6101 (456kHz)	ASS1066
	X6104 (3.60MHz)	ASS1086
	X6103	ATF1027
	BN6101 4P ANTENNA TERMINAL	AKA1016
	AM RF TUNING BLOCK	AXX1041
	AG PCB	ANP1713

Mark	No.	Description	Parts No.

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
	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 (1/16V)	ACG1051
	C7523, C7524 (10/35V)	ACH1150
	C7509, C7510 (47/16V)	ACH1151
	C7539, C7540 (22/16V)	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

	VR7701 (1kΩ)	ACP1053
	R7519, R7520 (630kΩ)	ACN1106
	R7515, R7516 (1.8kΩ)	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
	R7551, R7552	RD1/8PM333J
	R7553	RS1/8S101J
	R7543, R7544	RS1/8S7R5J
	Other Resistors	RS1/10S□□□J

REAR, PWR, PRTEC ASSY

SEMICONDUCTORS

	IC7101	UPC4570G2
	Q7107, Q7108, Q7208, Q7215, Q7219	2SA1162
	Q7213	2SA1182
	Q7109, Q7110	2SB1115
	Q7301, Q7302	2SC1815
	Q7101, Q7102	2SC1815
	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
	Q7219, 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 (0.082/25V)		ACG1050
	C7401, C7405, C7407 (0.33/50V)		ACG1053
	C7123, C7124, C7212 (1/50V)		ACH1056
	C7409 (10/35V)		ACH1150
	C7109, C7110, C7205, C7207, C7208 (47/16V)		ACH1151
	C7140, C7141		ACH1248
	C7119-C7122		CCSQCH101J50
	C7133-C7136		CCSQCH221J50
	C7125-C7128		CCSQCH271J50
	C7103, C7104		CCSQCH331J50
	C7142, C7143		CCSQCH470J50
	C7301		CKSQYB332K50
	C7129-C7132		CKSQYB333K50
	C7213, C7214		CKSQYF103Z50
	C7206, C7404		CKSQYF104Z50
	C7137, C7138		CKSQYF472Z50
	C7139		CKSQYF473Z50
RESISTORS			
	R7403, R7404 (1.0Ω)		ACN1104
	R7119, R7120		ACN1105
	R7115, R7116 (1.8kΩ)		ACN1107
	R7137-R7140		RS1/10S0100F
	R7303		RS1/10S1002F
	R7151, R7152		RD1/8PM153J
	R7147-R7150		RS1/10S2200F
	R7304		RS1/10S8200F
	R7141-R7144		RS1/8S100J
	R7153		RS1/8S101J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN7101 CONNECTOR (12P)		KPE12

Mark	No.	Description	Parts No.
OTHER ELECTRICAL PARTS			
FRONT ASSY FOR 100W			
SEMICONDUCTORS			
	IC7404		MC7805CT
	IC7401, IC7403		MC7812CT
	IC7402		NJM7912A
⚠	Q7111, Q7112		2SB1274
⚠	Q7113, Q7114		2SD1913
REAR, PWR, PRTEC ASSY			
SEMICONDUCTORS			
⚠	Q7511, Q7512		2SA1264N
	Q7509, Q7510		2SA1837
⚠	Q7513, Q7514		2SC3181N
	Q7503, Q7504		2SC4793
OTHERS			
	POWER MOD. PCB		ANP1708
	FAN MOTOR		AXM1019

PIONEER
The Art of Entertainment

Service Manual

ORDER NO.
RRZ1019

STEREO TUNER AMPLIFIER

SX-J720

CONTENTS

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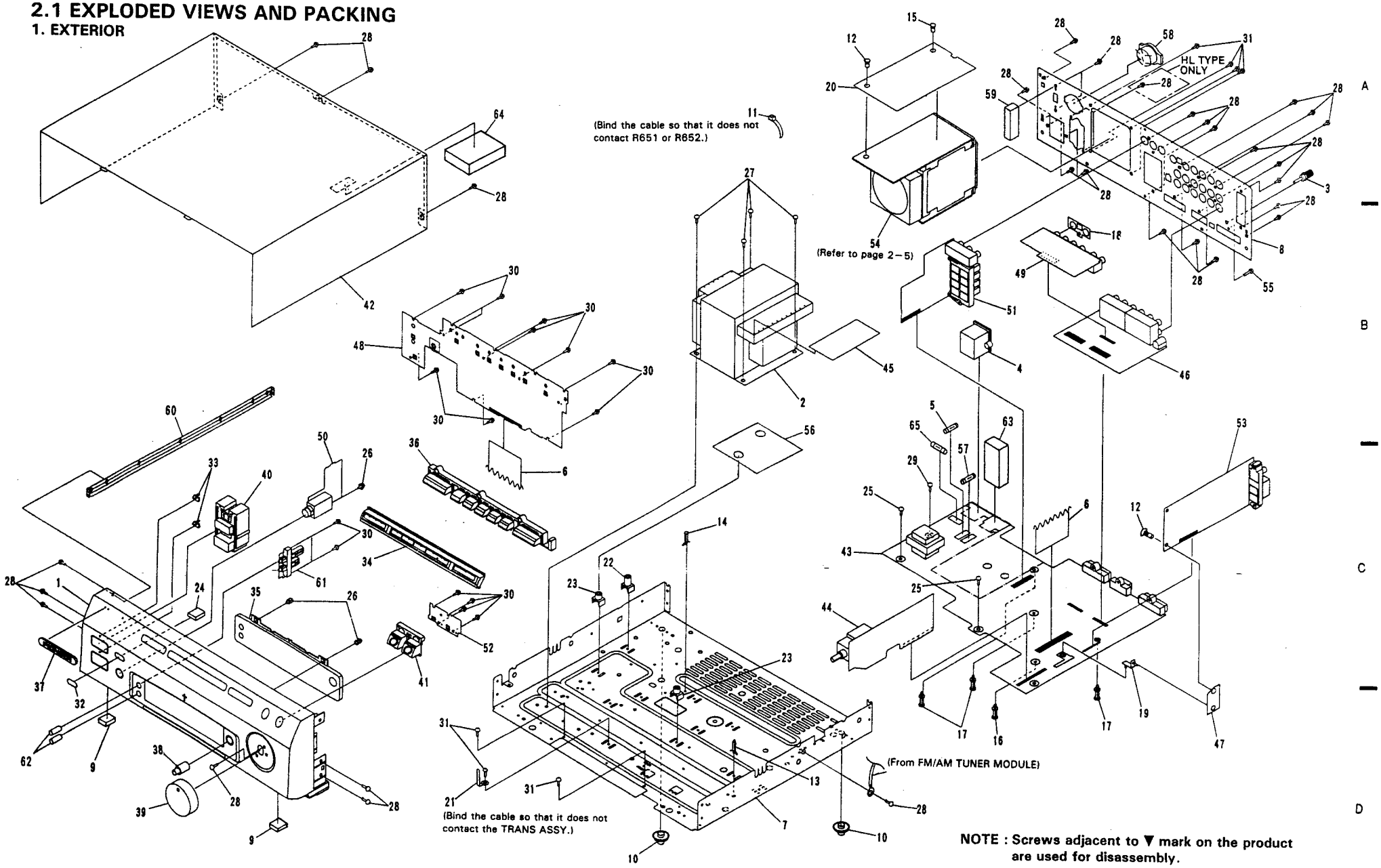
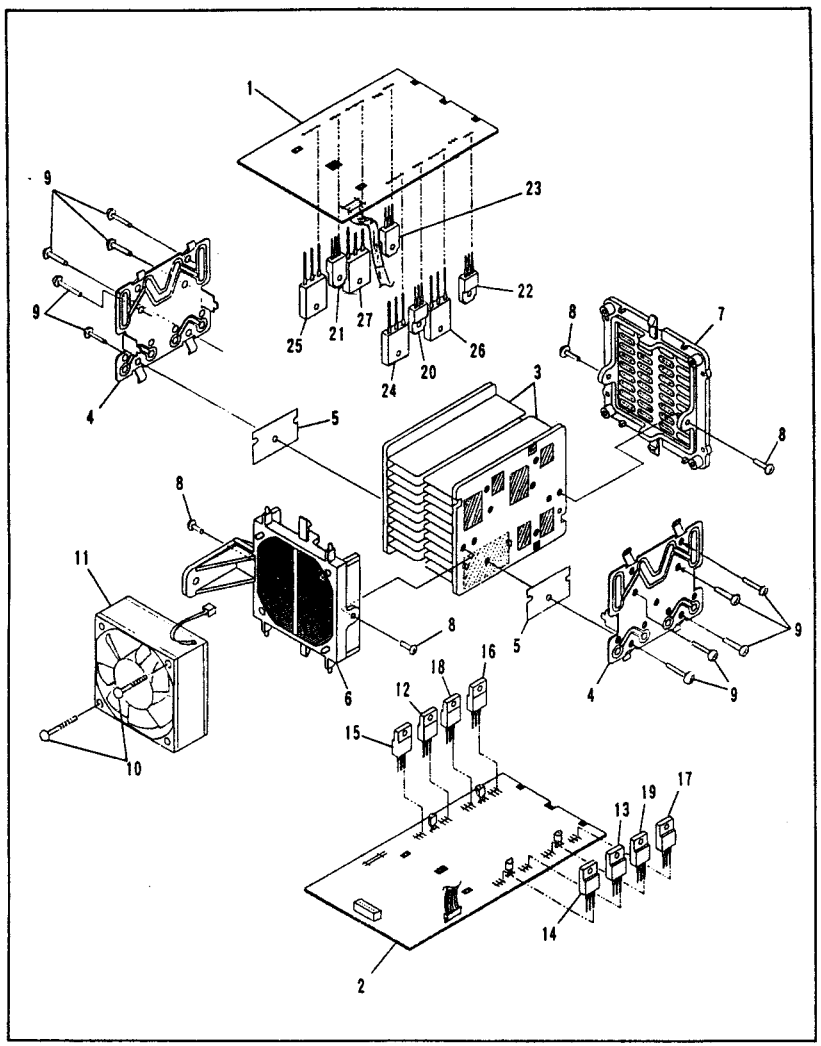
CHAPTER 2
2.1 EXPLODED VIEWS AND PACKING
1. EXTERIOR



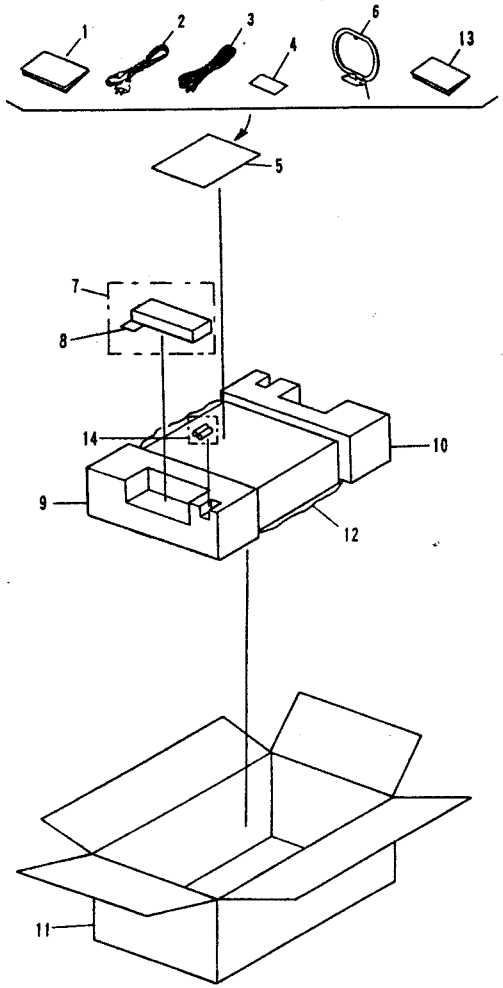
NOTE : Screws adjacent to ▼ mark on the product are used for disassembly.

2. POWER AMP MODULE SECTION



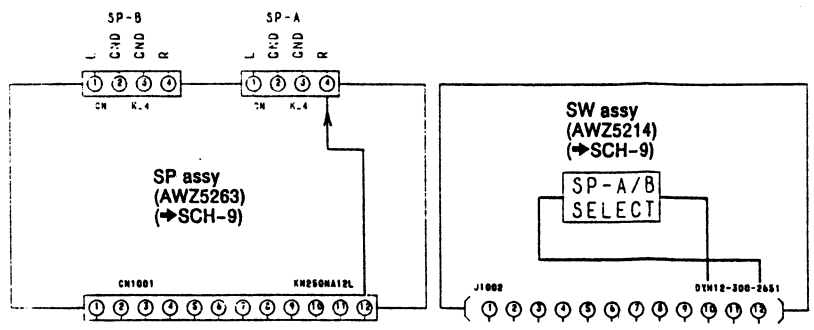
Note: Ensure that silicon grease does not adhere to the MOLD A (No. 6) and MOLD B (No. 7).

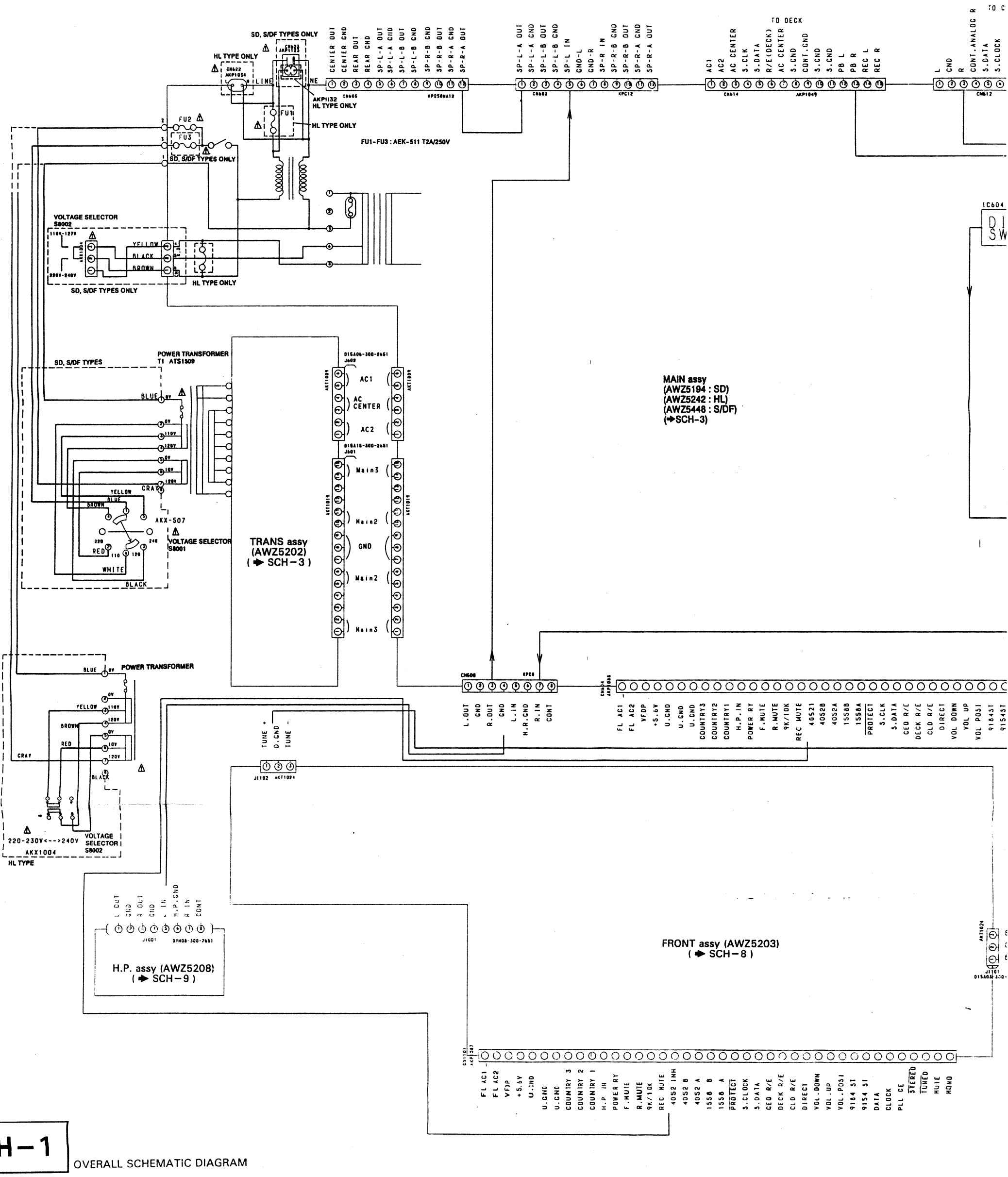
3. PACKING



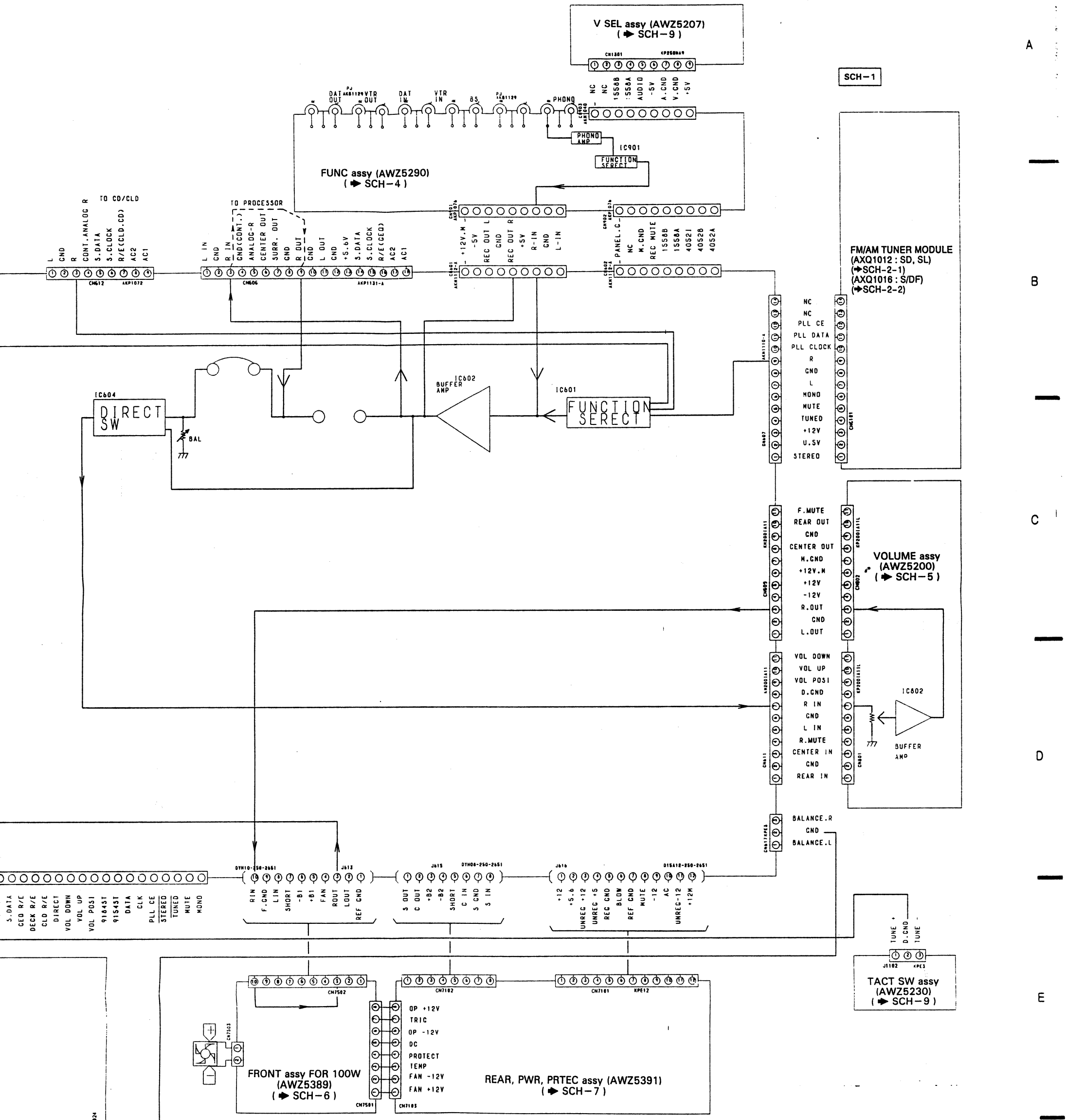
2.2 SCHEMATIC AND PCB CONNECTION DIAGRAMS

2.2.1 OVERALL SCHEMATIC DIAGRAM





SCH-1 OVERALL SCHEMATIC DIAGRAM



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 ⚠ mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

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

9. **SWITCHES** (Underline indicates switch position):

S8001 VOLTAGE SELECTOR
AC110V/120-127V/220V/240V
(SD, S/DF ONLY)

S8002 VOLTAGE SELECTOR
AC110-127V/220-240V
(SD, S/DF)
AC220-230V/240V
(HL)

MAIN assy
S601 CHANNEL STEP
100/10kHz -50/9kHz

SW assy
S1001 SP-A ON/OFF
SP-B ON/OFF

FRONT assy
S1101 FM/AM/STA
S1102 SLEEP
S1103 FUNCTION
S1104 DIRECT ON
S1105 STA MEMORY
S1106 TIMER MODE
S1107 TIMER ON/OFF
S1108 POWER
S1109 SET

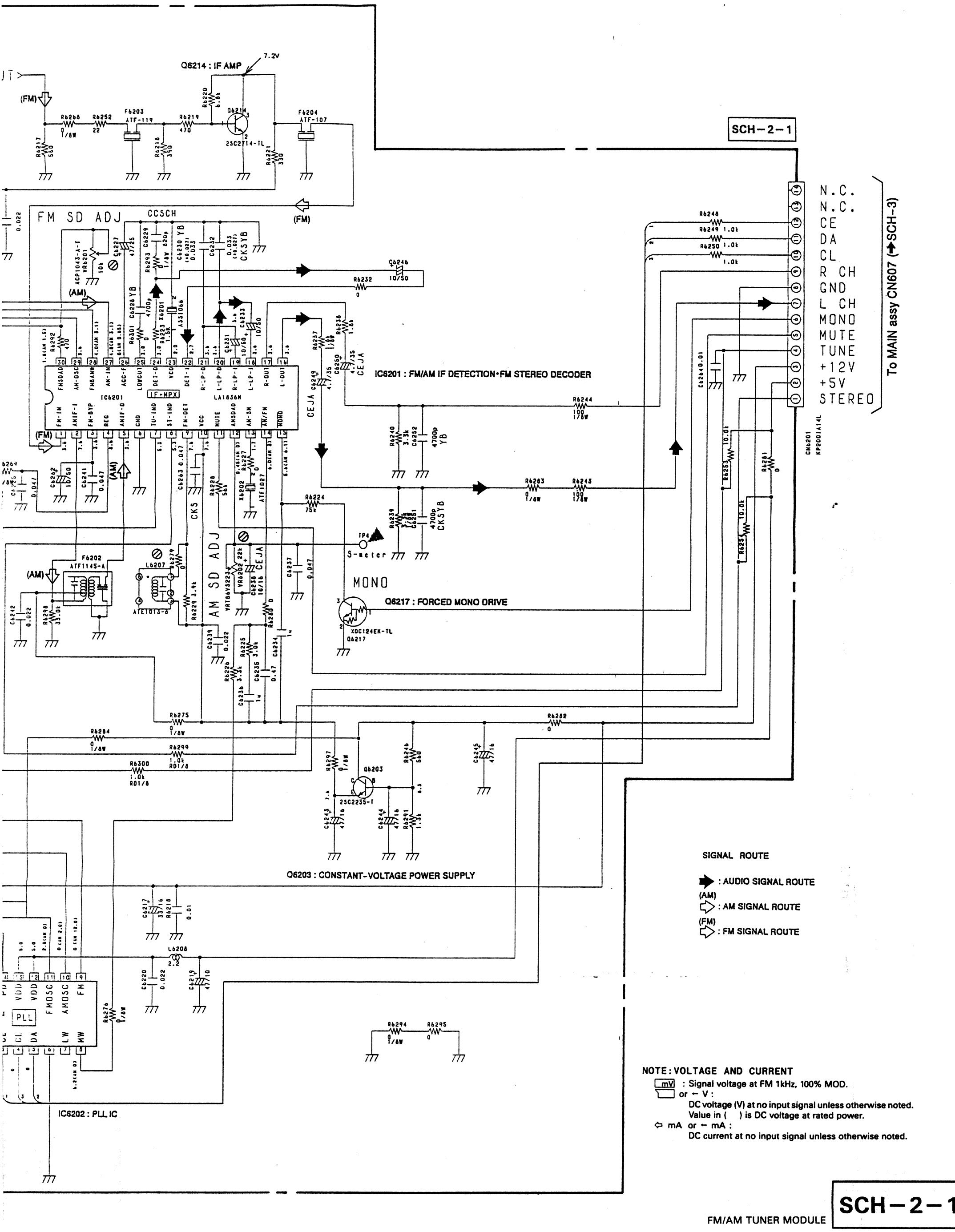
TACT SW assy
S1003 ▲
S1004 ▼

OVERALL SCHEMATIC DIAGRAM **SCH−1**

2.2.2 FM/AM TUNER MODULE

● For SD and HL Types

FM/AM TUNER MODULE (AXQ1012)



SIGNAL ROUTE

➡ : AUDIO SIGNAL ROUTE

(AM)
⇨ : AM SIGNAL ROUTE

(FM)
⇨ : FM SIGNAL ROUTE

NOTE: VOLTAGE AND CURRENT

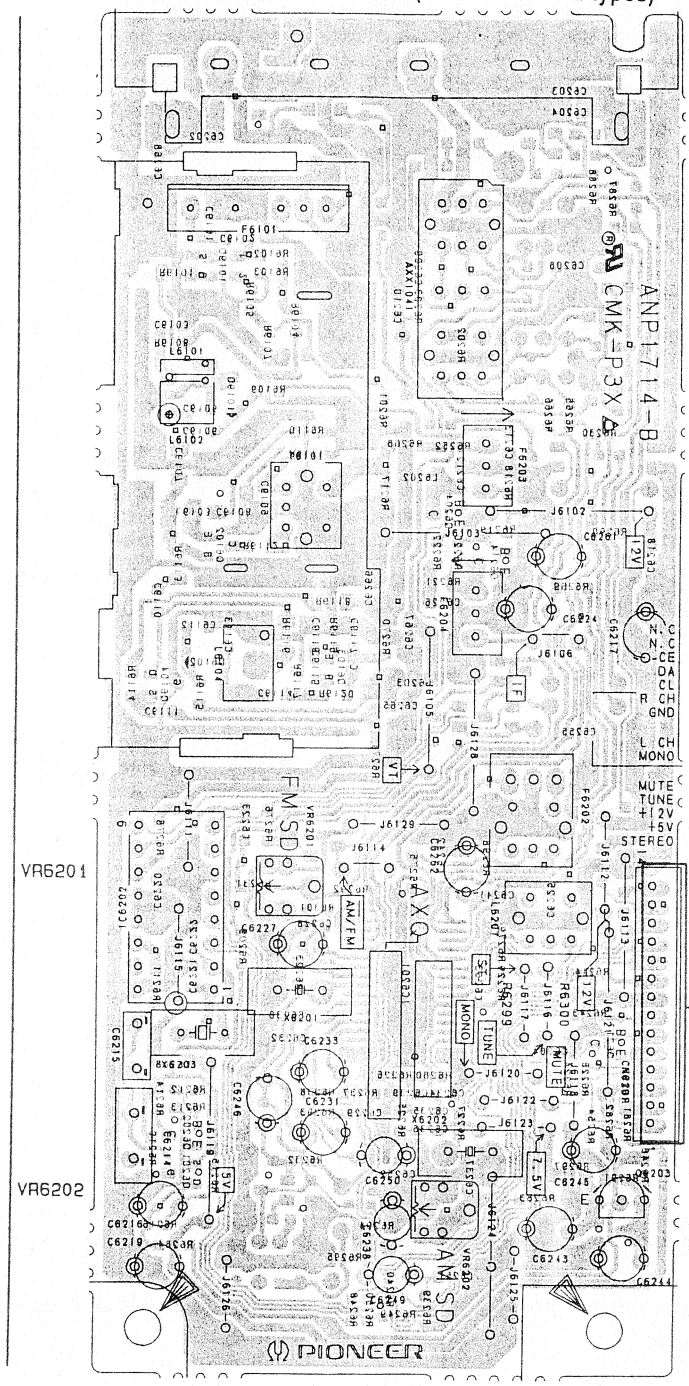
mV : Signal voltage at FM 1kHz, 100% MOD.

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.

FM/AM TUNER MODULE **SCH-2-1**

FM/AM TUNER MODULE (For SD and HL types)



NOTE FOR PCB DIAGRAMS:

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

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

3. The transistor terminal marked with E or ⊏ shows the emitter.
4. The diode terminal marked with ⓒ or ⊐ shows cathode side.
5. The capacitor terminal marked with ⓝ or ⊏ shows negative terminal.

• This diagram is viewed from the mounted parts side.

FM/AM TUNER MODULE (For SD and HL types)

● This diagram is viewed from the foil side.

● For S\DF Type

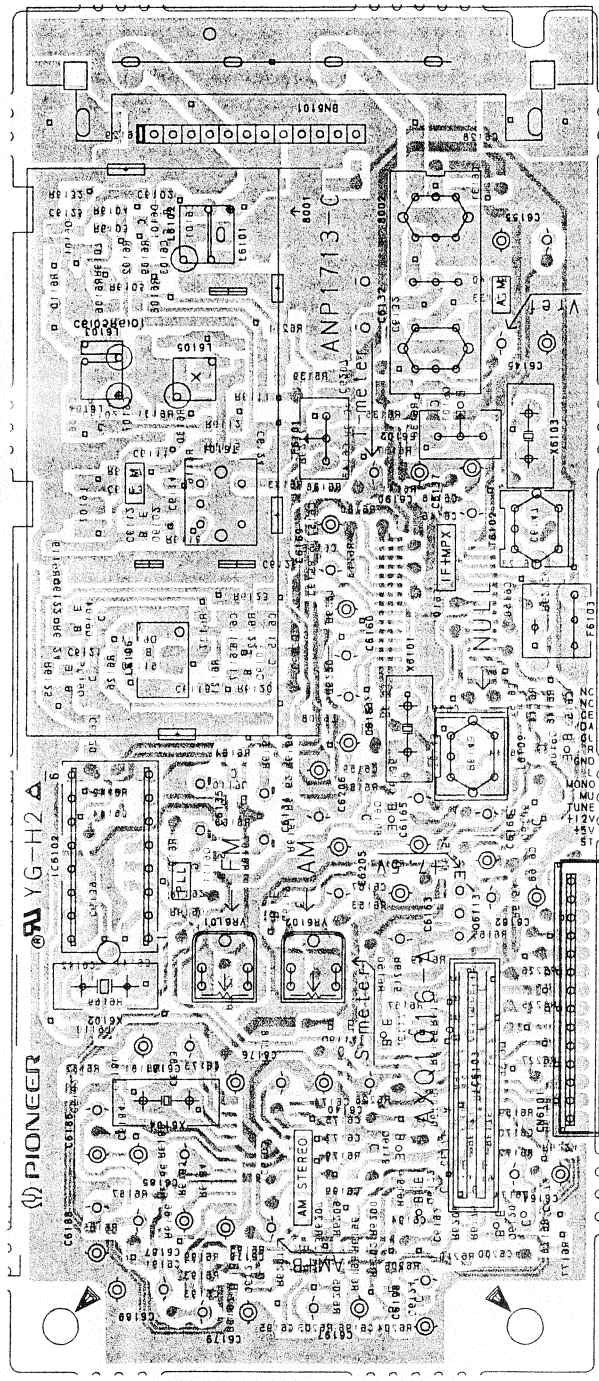
FM\AM TUNER MODULE

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

PCB – 2

● For S/DF Type

FM/AM TUNER MODULE



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

FM/AM TUNER MODULE (AXQ1016)

SIGNAL ROUTE

: AUDIO SIGNAL ROUTE

(AM) : AM SIGNAL ROUTE

(FM) : FM SIGNAL ROUTE

Q6114 : AM MI

Q6106 : AM +B SW

Q6107 : IF AMP

L6109 : T- METER ADJ.

Q6108 : AM/FM BAND SW

Q6110, Q6111 : PLL LOOP FILTER DC AMP

L6102, L6104, T6101 : FRONT END ADJ.

FM F.E.

Q6101 : RF AMP

Q6102 : MIX AMP

Q6103 : OSC

Q6104, Q6105 : BUFFER AMP

Q6109 : FM +B SW

AM RF TUNING BLOCK (MW)

D6101-D6104:1SV228-TL

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-2-2

FM/AM TUNER MODULE

SCH-2-2

AM ST +B

Q6114 : AM MUTE (when AM)

Q6114 AM MUTE XDC143EK-TL

IC6101 : FM/AM IF DETECTION•FM STEREO DECODER

C6152 : ACG1052-A-T

C6153, 6154 : ACG1051-A-T

Q6115, Q6116 : MUTE

Q6112 : FORCED MONO DRIVE (FM)

Q6117 : MUTE DRIVE

Q6113 : CONSTANT-VOLTAGE POWER SUPPLY

Q6118 : FORCED MONO DRIVE (AM)

IC6102 : PLL IC

IC6103 : AM STEREO DECODER IC

AM STEREO

Q6119, Q6120 : AM IF AMP

Q6121, Q6122 : H. P. F

Q6123, Q6124 : AM OUTPUT AMP

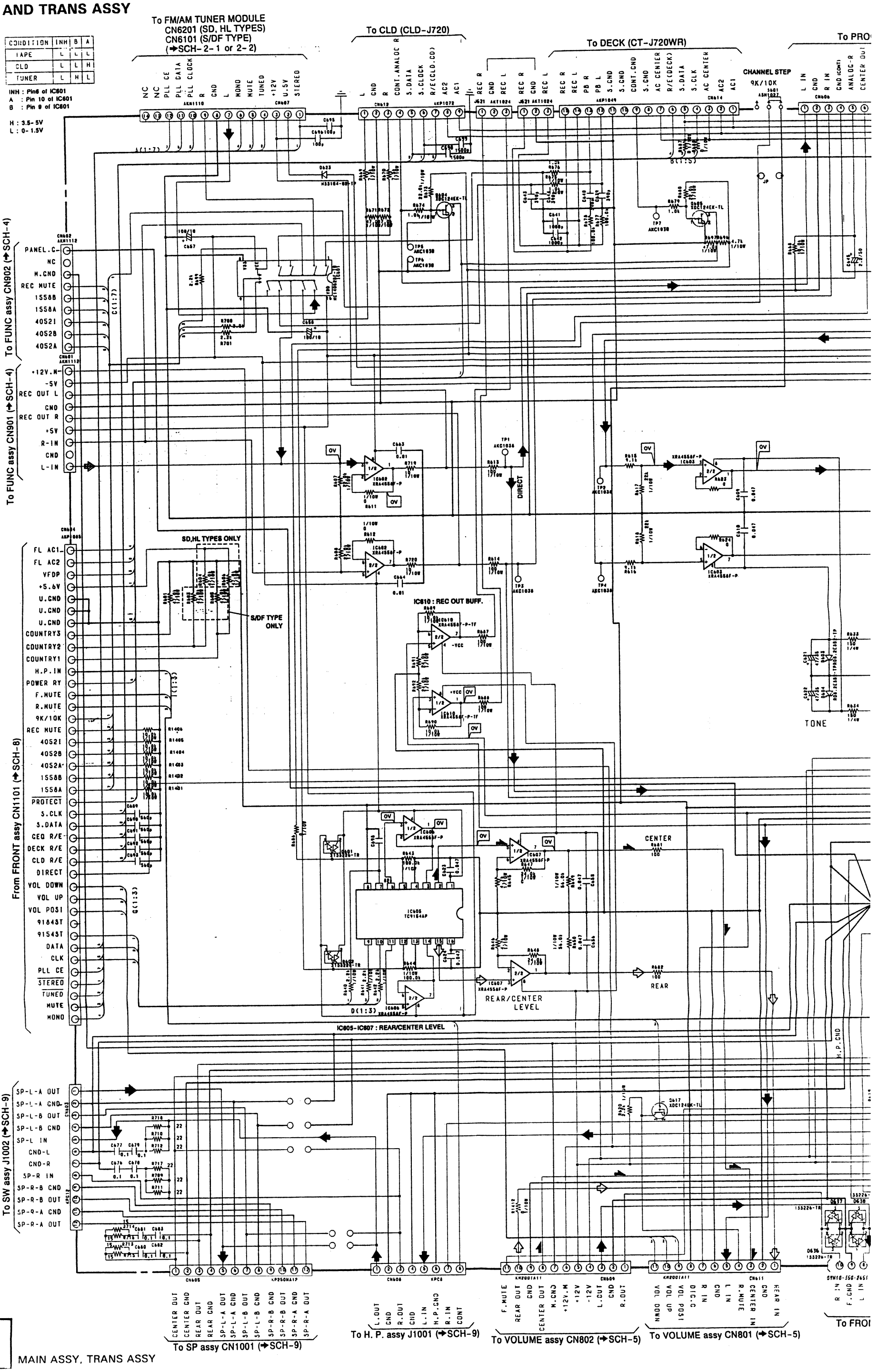
C6199,6200 :ACG1051-A-T

C6191-C6194 :ACG1050-A-T

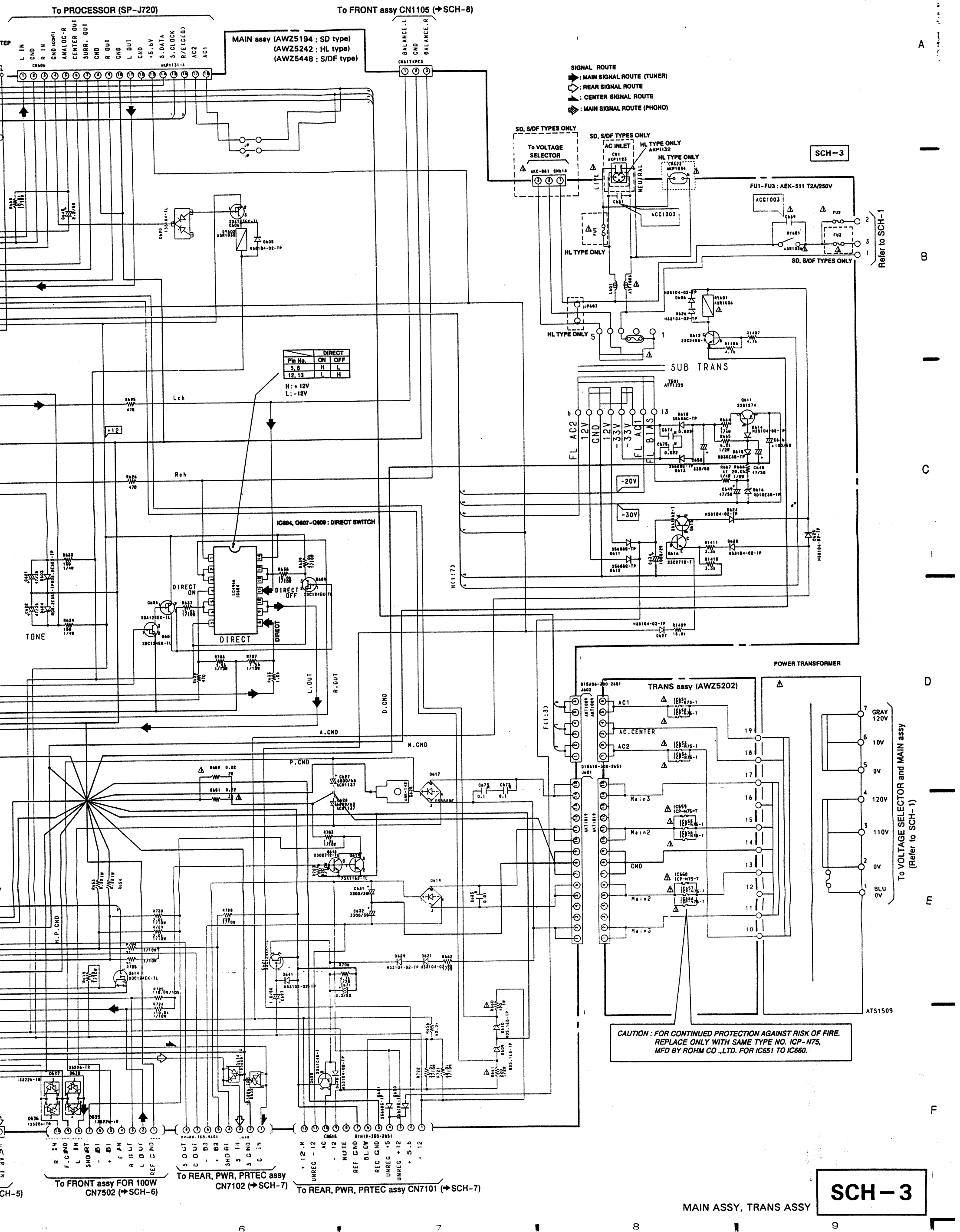
CN6101
- NC
- NC
- CE
- DA
- CL
- R CH
- GND
- L CH
- MONO
- MUTE
- TUNE IND.
- +12V
- +5V
- STEREO IND.

To MAIN assy CN607 (➡SCH-3)

2.2.3 MAIN ASSY AND TRANS ASSY

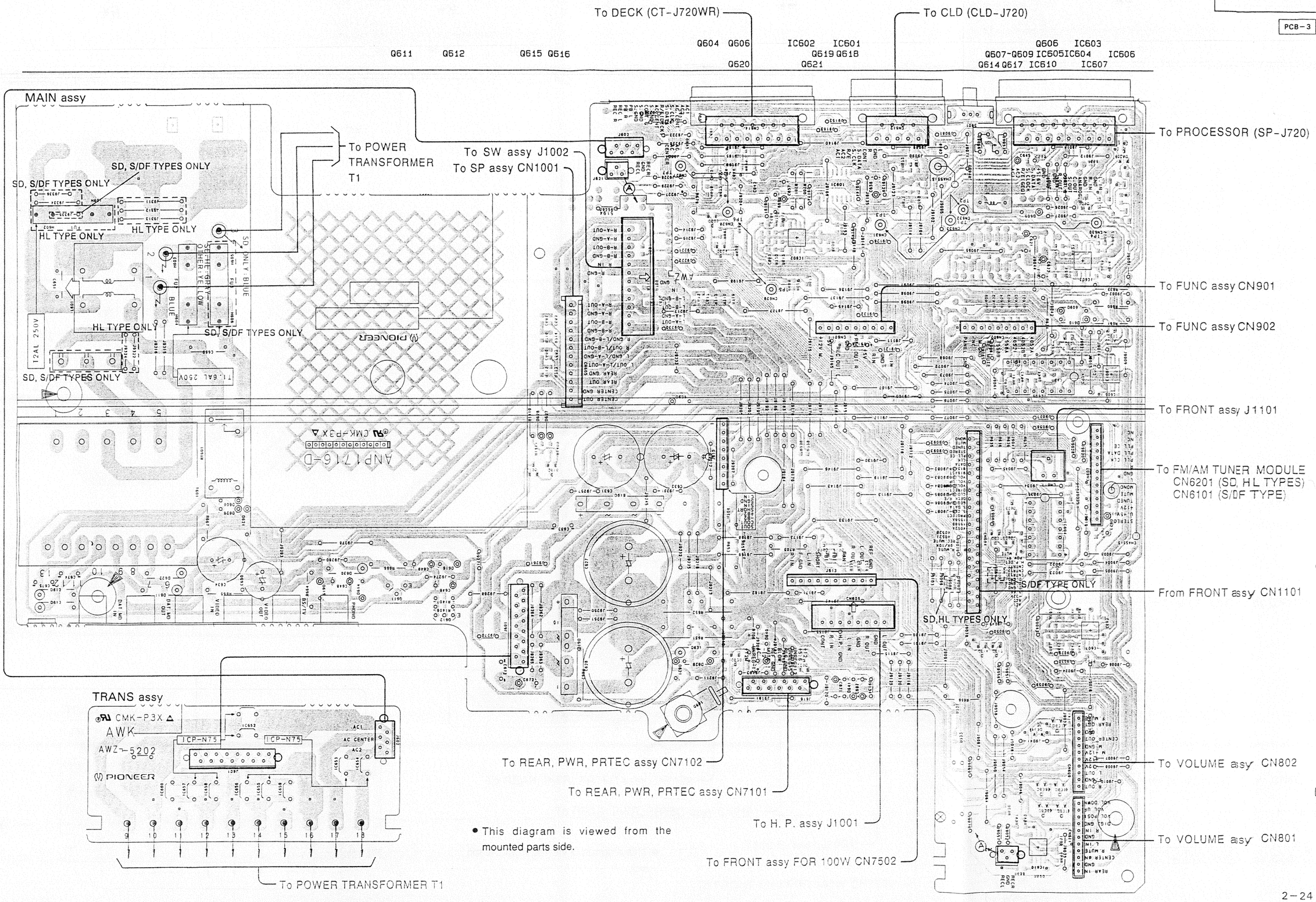


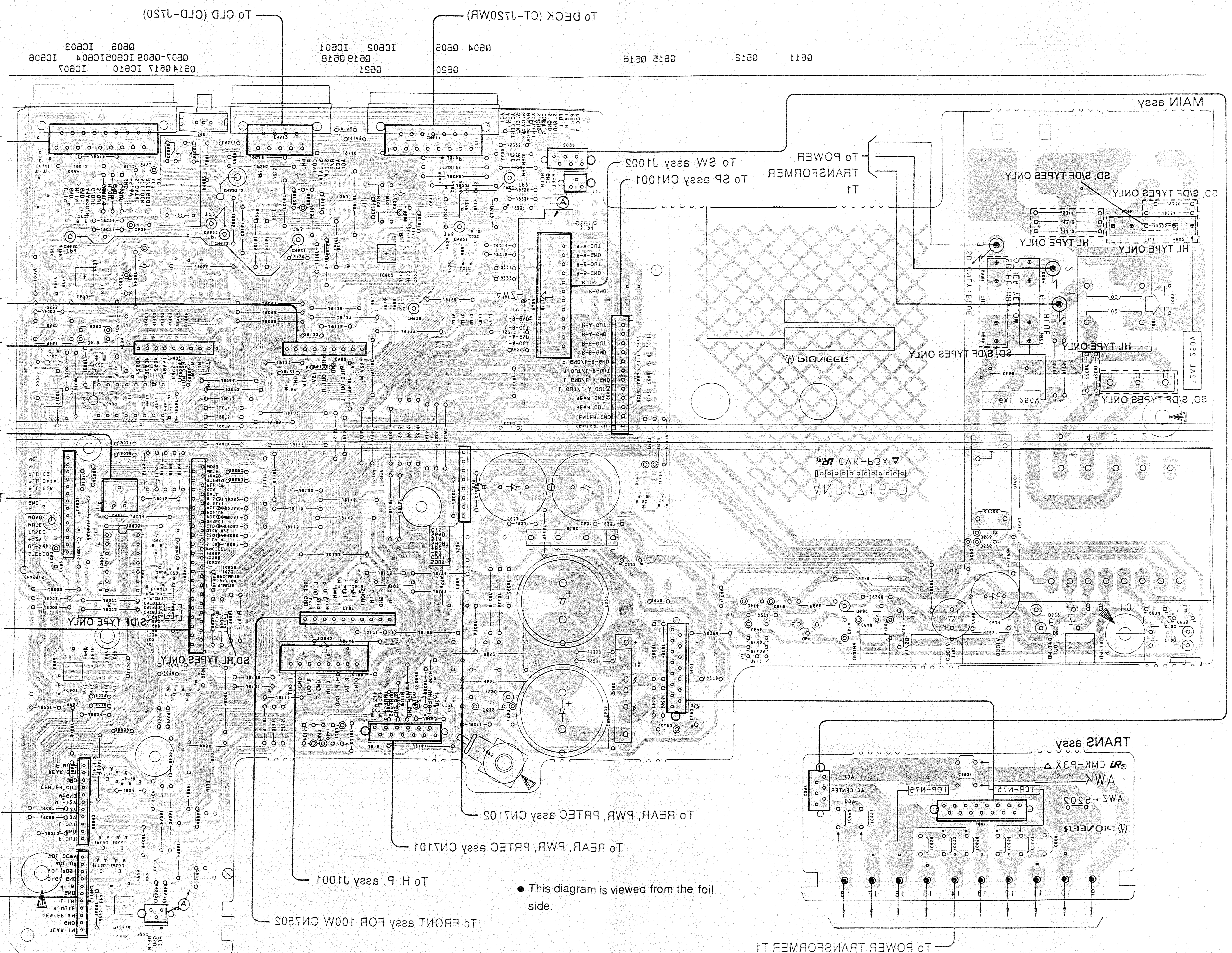
SCH-3 MAIN ASSY, TRANS ASSY



MAIN ASSY, TRANS ASSY

SCH-3


MAIN assy
To DECK (CT-J720WR)
To CLD (CLD-J720)
To PROCESSOR (SP-J720)
To POWER TRANSFORMER T1
To SW assy J1002
To SP assy CN1001
To FUNC assy CN901
To FUNC assy CN902
To FRONT assy J1101
To FM/AM TUNER MODULE CN6201 (SD, HL TYPES) CN6101 (S/DF TYPE)
From FRONT assy CN1101
To VOLUME assy CN802
To VOLUME assy CN801
SD, S/DF TYPES ONLY
HL TYPE ONLY
SD ONLY BLUE
OTHER YELLOW
BLUE
12AL 250V
T1 6AL 250V
S/DF TYPE ONLY
SD, HL TYPES ONLY
Q611 Q612 Q615 Q616
Q604 Q606 Q620
IC602 IC601 Q619 Q618 Q621
Q606 IC603 Q607-Q609 IC605 IC604 IC606 Q614 Q617 IC610 IC607
TRANS assy
CMK-P3X
AWK
AWZ-5202
ICP-N75
PIONEER
To REAR, PWR, PRTEC assy CN7102
To REAR, PWR, PRTEC assy CN7101
To H. P. assy J1001
To FRONT assy FOR 100W CN7502
To POWER TRANSFORMER T1
• This diagram is viewed from the mounted parts side.

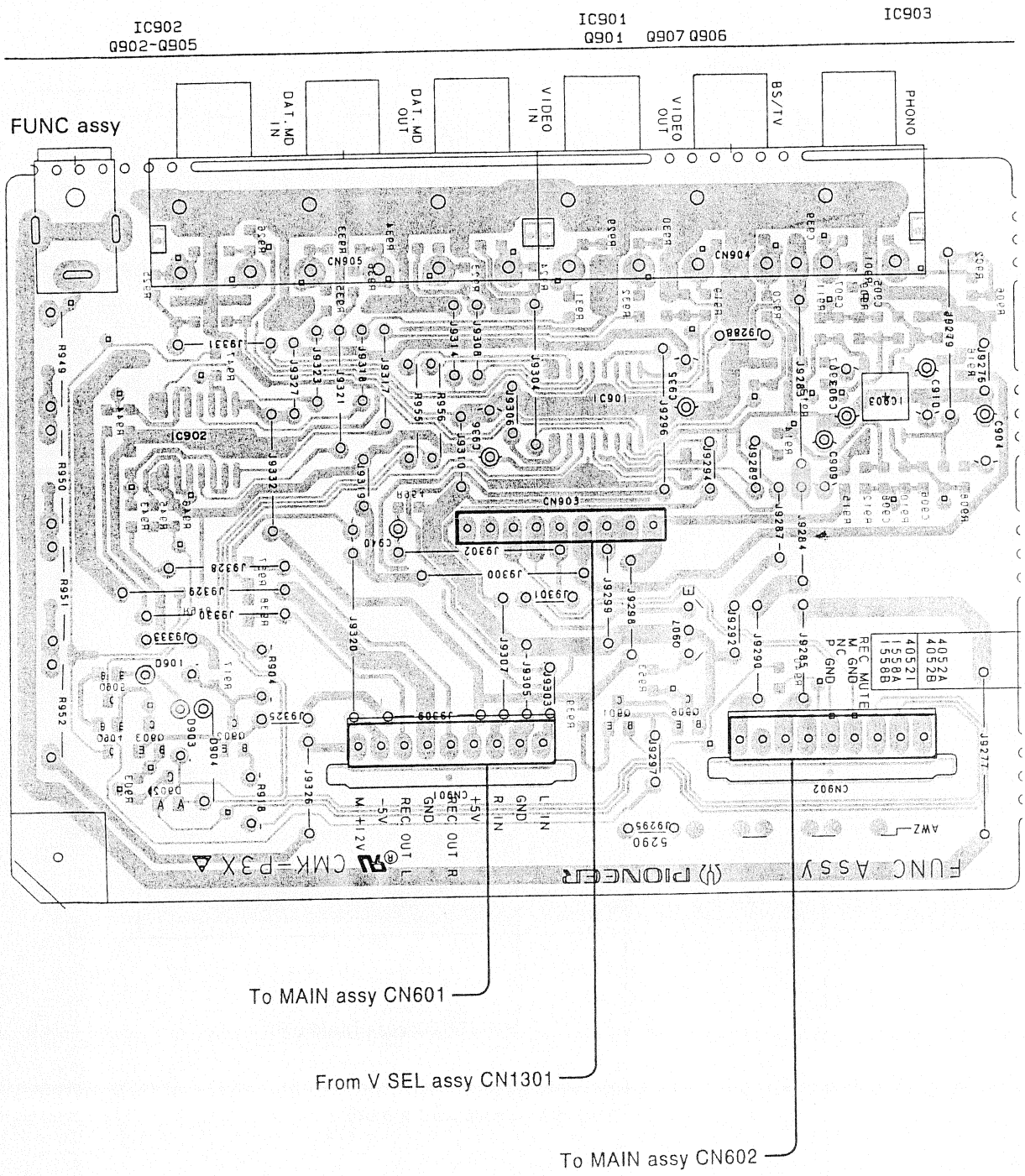


- This diagram is viewed from the foil side.

2.2.4 FUNC ASSY

● This diagram is viewed from the foil side.

2.2.4 FUNC ASSY



• This diagram is viewed from the mounted parts side.

CONDITION	INH	B	A
DAT	H	L	L
PHONO	H	L	H
AUX (BS)	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 (AWZ5290)

PHONO(RIAA)AMP

IC901 : FUNCTION SWITCH

PHONO 2.5mV
BS 300mV
VTR IN 150mV
DAT IN 300mV
VTR OUT
DAT OUT
PLAYER +12V

L-IN
GND
R-IN
+5
REC OUT R
GND
REC OUT L
-5
+12V.M

To MAIN assy CN601 (➡SCH-3)
To MAIN assy CN602 (➡SCH-3)

4052A
4052B
4052I
1558A
1558B
REC MUTE
M.GND
NC
PANEL.C

+5V
V.GND
A.GND
-5V
AUDIO
1558A
1558B
NC
NC

From V SEL assy CN1301 (➡SCH-9)

2.2.5 VOLUME ASSY

VOLUME assy (AWZ5200)

SCH-5

SIGNAL ROUTE
: MAIN SIGNAL ROUTE
: REAR SIGNAL ROUTE
: CENTER SIGNAL ROUTE

IC801 TA84093
IN2 VCC OUT2 NC GND V3 OUT1 VREF IN1

ACX1077 VR801

IC808 UPC4570C2-TF
IC802 UPC4570C2-TF
IC805 UPC4570C2-TF
IC803 UPC4570C2-TF

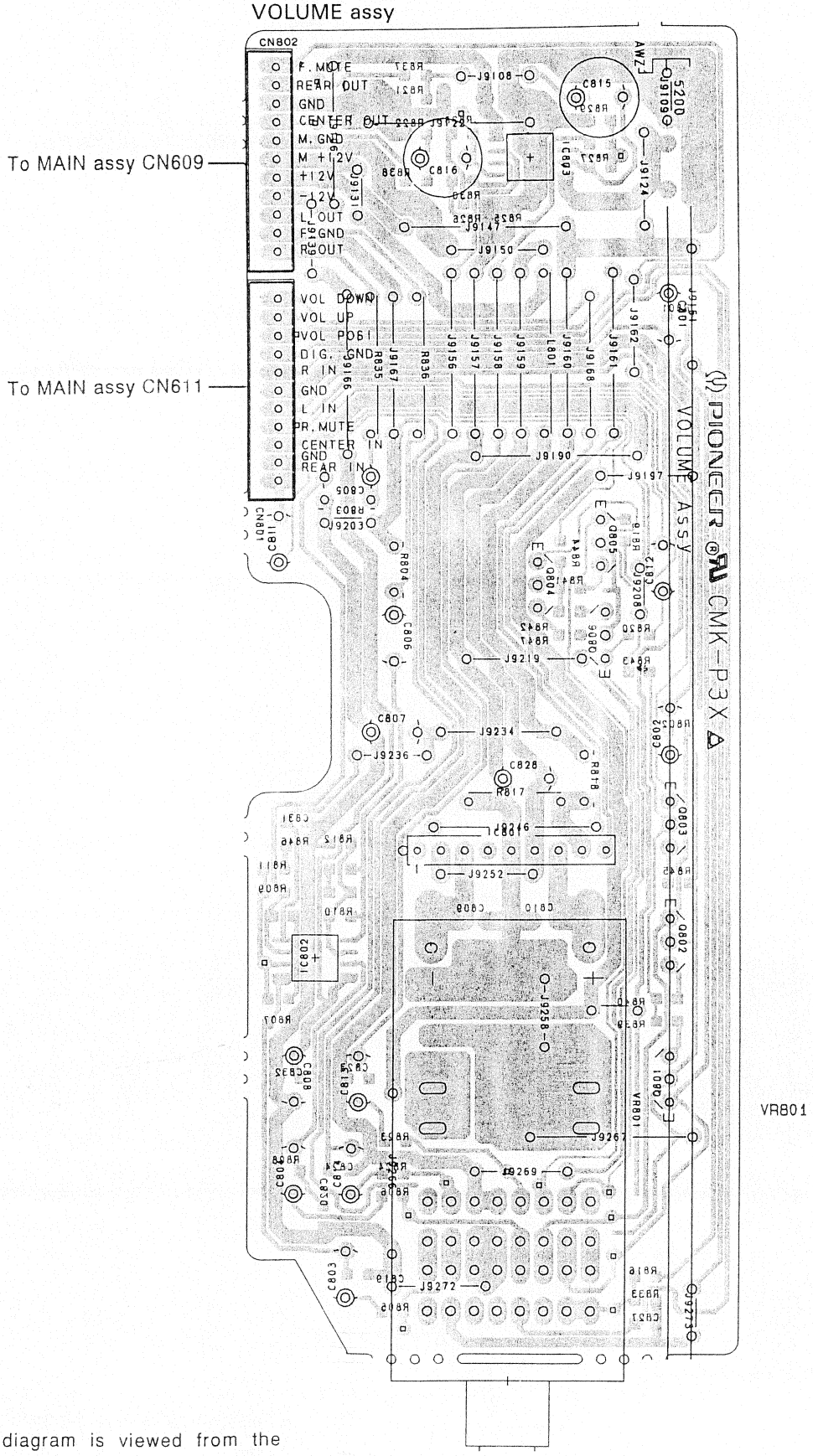
CN602 KP2001A11L
F.MUTE
REAR OUT
GND
CENTER OUT
M.GND
+12V.M
+12V
-12V
L.OUT
GND
R.OUT

To MAIN assy CN609 (→SCH-3)

CN801 KP2001A11L
VOL DOWN
VOL UP
VOL POSI
D.GND
R IN
GND
L IN
R.MUTE
CENTER IN
GND
REAR IN

To MAIN assy CN611 (→SCH-3)

VOLUME assy



• This diagram is viewed from the mounted parts side.

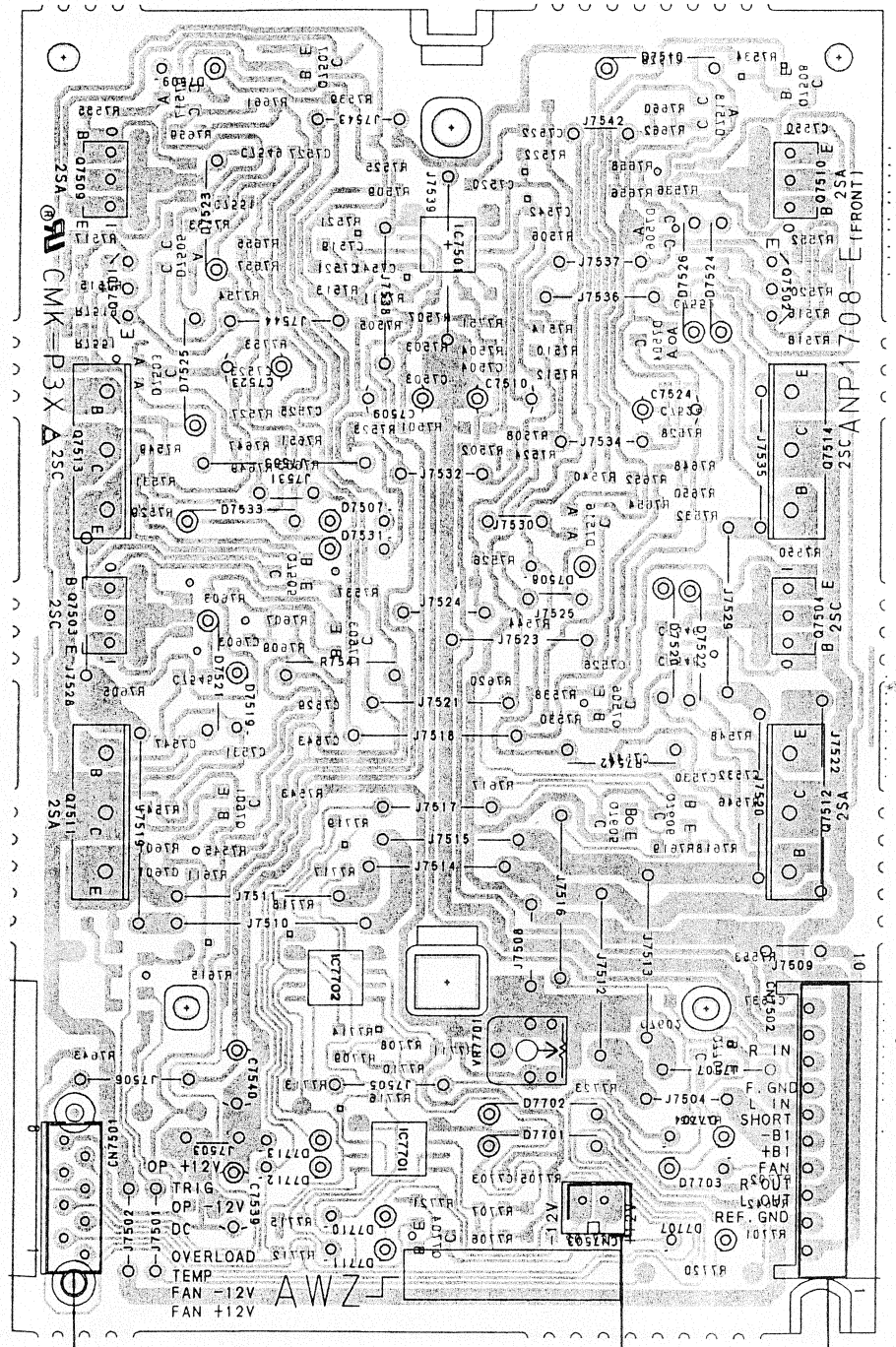
● This diagram is viewed from the foil side.

2.2.6 FRONT ASSY FOR 100W

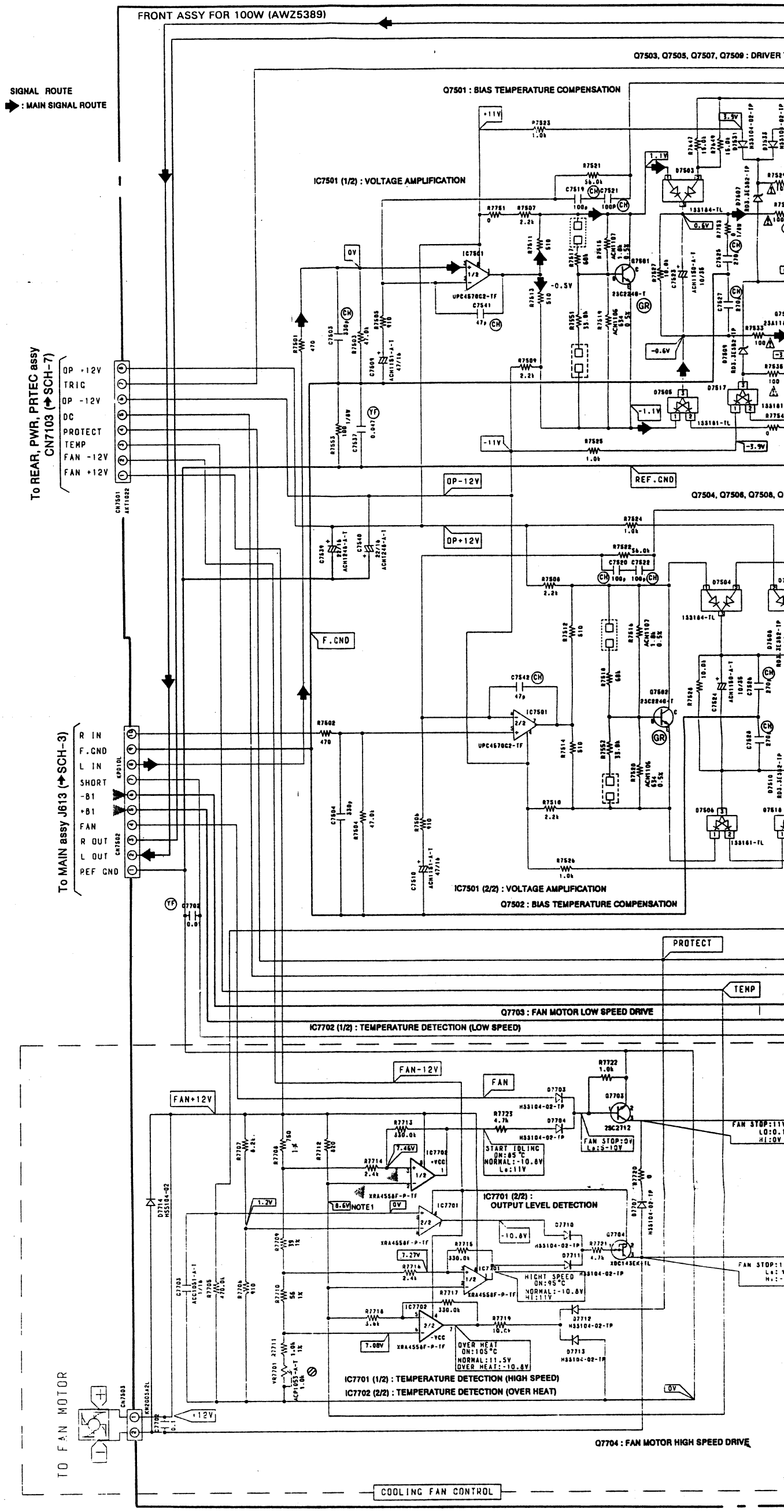
● This diagram is viewed from the foil side.

2.2.6 FRONT ASSY FOR 100W

FRONT ASSY FOR 100W



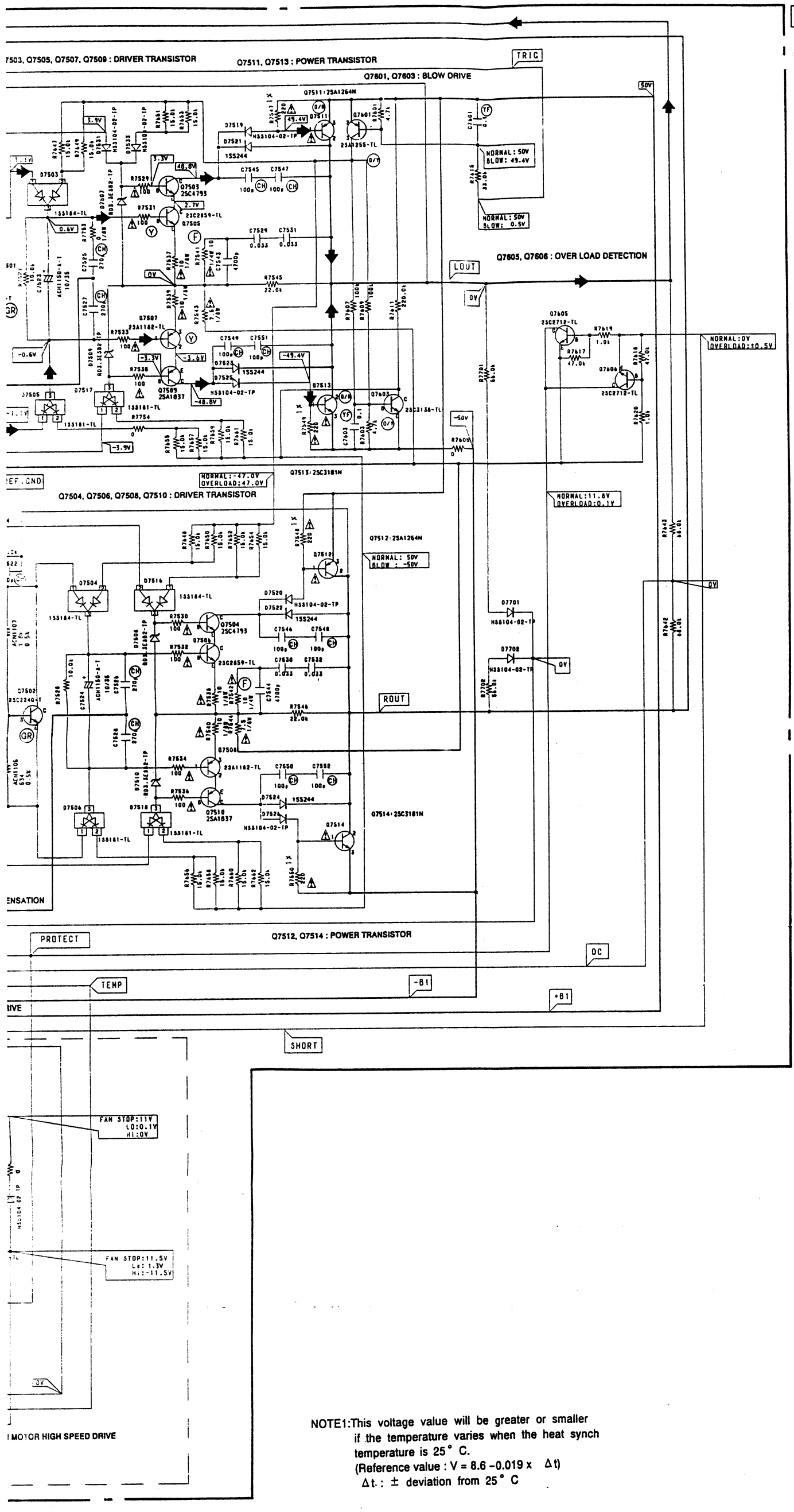
- This diagram is viewed from the mounted parts side.



SCH-6

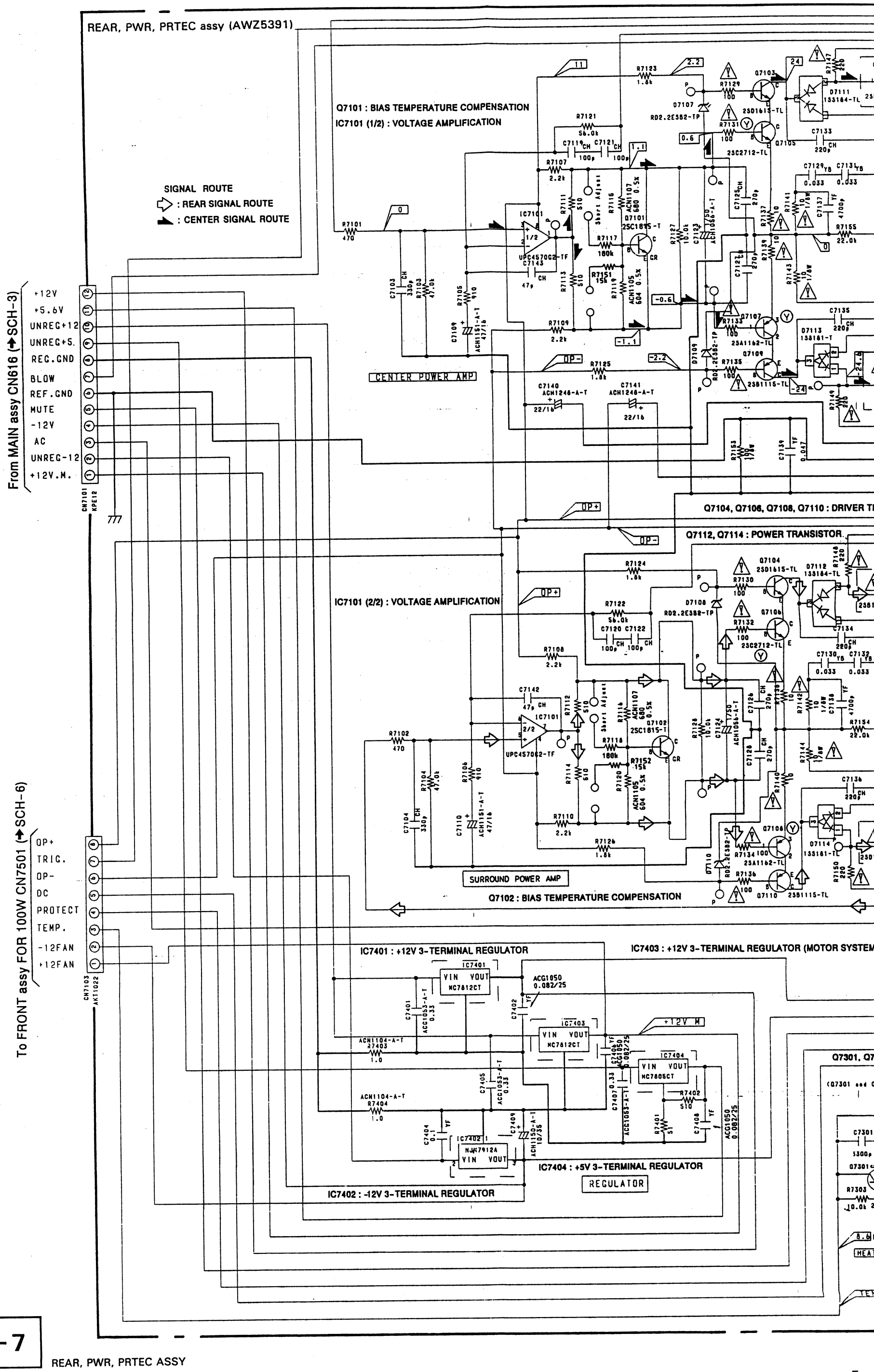
FRONT ASSY FOR 100W

SCH—6



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 x Δt)
Δt : ± deviation from 25° C

2.2.7 REAR, PWR, PRTEC ASSY



SCH-7

Q7111, Q7113 : POWER TRANSISTOR

Q7103, Q7105, Q7107, Q7109 : DRIVER TRANSISTOR

Q7217-Q7220, Q7211 : BLOW DRIVE

Q7205, Q7206 : OVER LOAD DETECTION

SCH-7

To MAIN assy J615 (→SCH-3)

CN7102 KP08L

S OUT
C OUT
-B2
+B2
OVERLOAD
S IN
S.GND
C IN

Q7108, Q7110 : DRIVER TRANSISTOR

Q7207-Q7210, Q7212, Q7221, Q7222 : MUTE DRIVE

Q7213-Q7216 : VOLTAGE AMPLIFICATION STAGE OP AMP. +B SW

Q7301, Q7302 : FAN MOTOR TEMPERATURE SENSOR

(Q7301 and Q7302 must be used in pair rank)

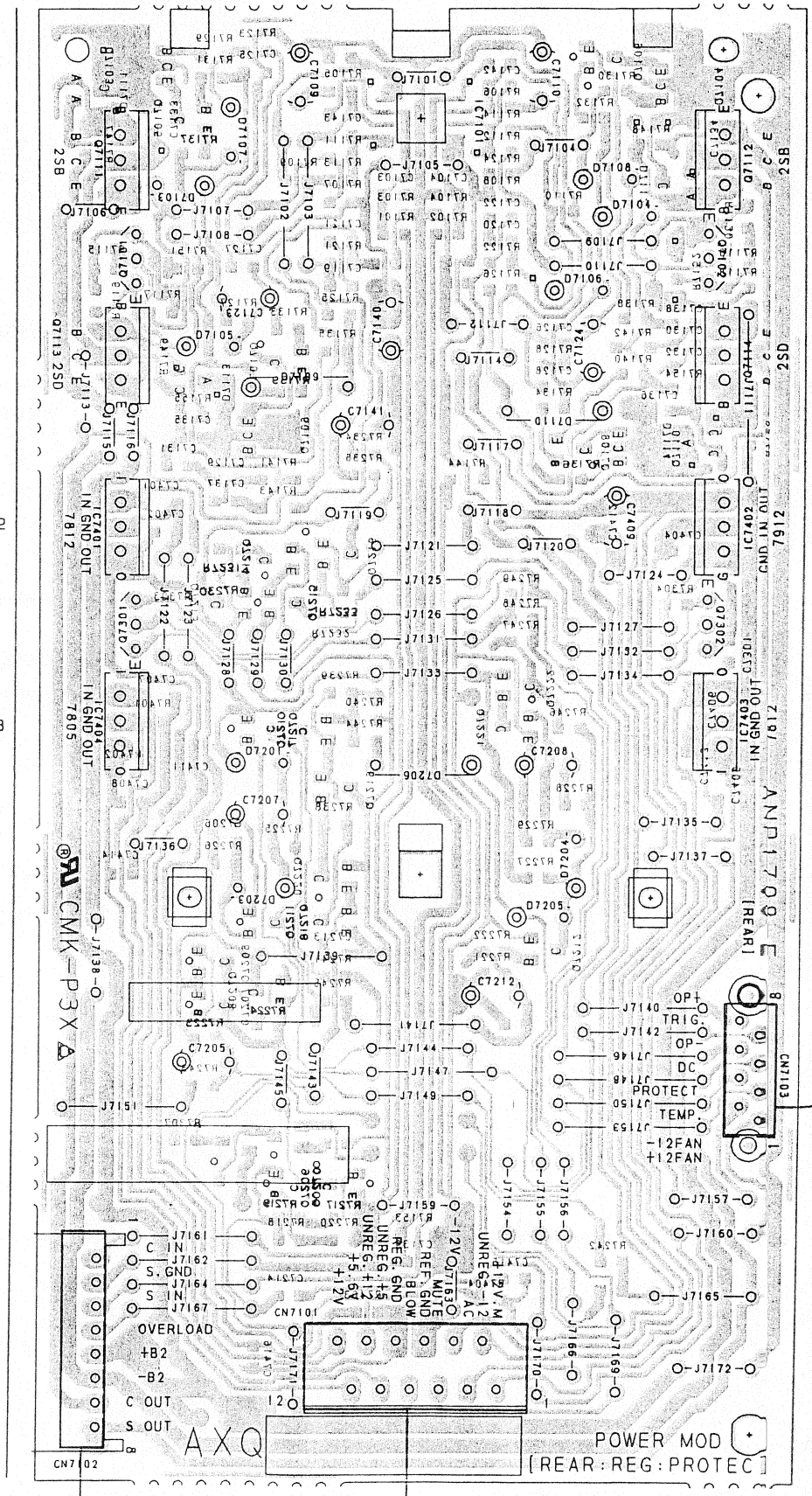
NOTE1:This voltage value will be greater or smaller if the temperature varies when the heat synch temperature is 25° C.
(Reference value : V = 8.6 −0.019 x Δt)
Δt : ± deviation from 25° C

REAR, PWR, PRTEC ASSY

SCH-7

• This diagram is viewed from the mounted parts side.

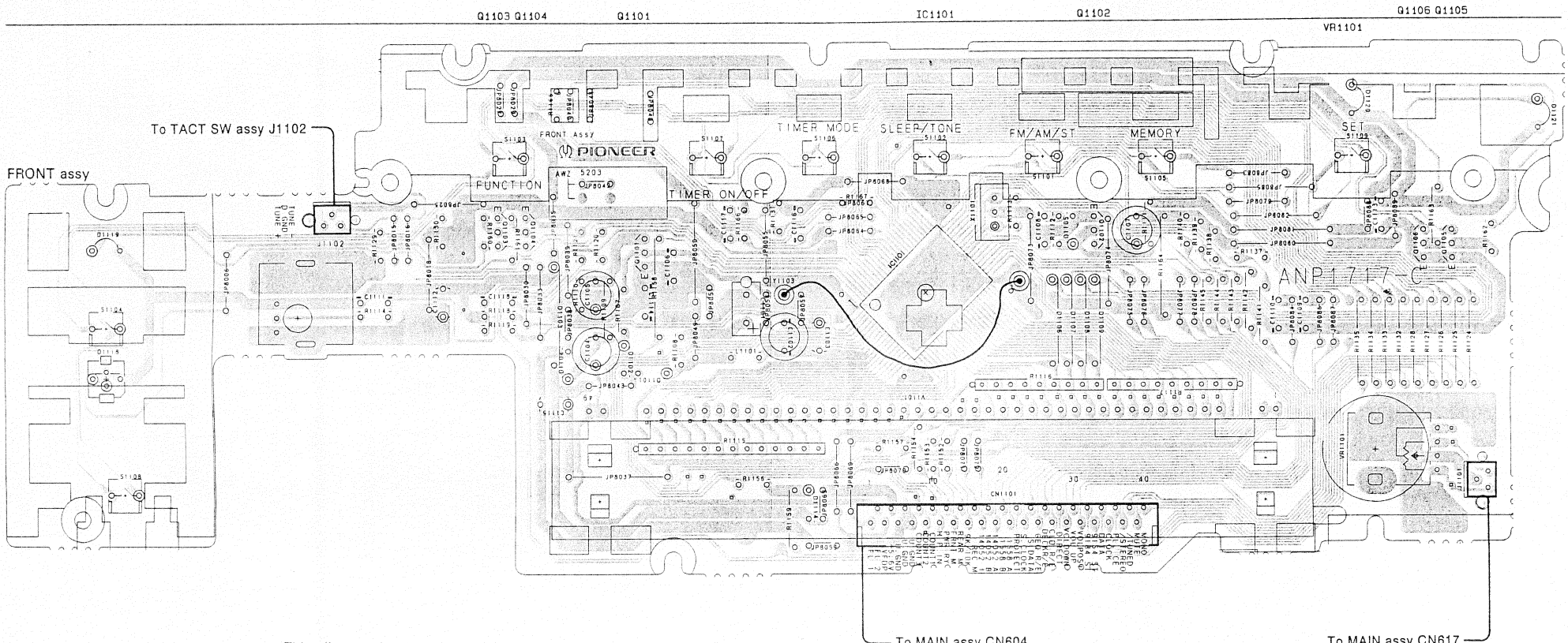
REAR, PWR, PRTEC assy



● This diagram is viewed from the foil side.

● This diagram is viewed from the foil side.

2.2.8 FRONT ASSY



• This diagram is viewed from the mounted parts side.

FRONT assy (AWZ5203)

SCH-8

IC1101 : SYSTEM CONTROL MICROCOMPUTER

BALANCE VOLUME

FREQ/ST SLEEP FUNC. DIRECT

MEMORY MODE ON/OFF POWER

SET

STAND.BY

DIRECT

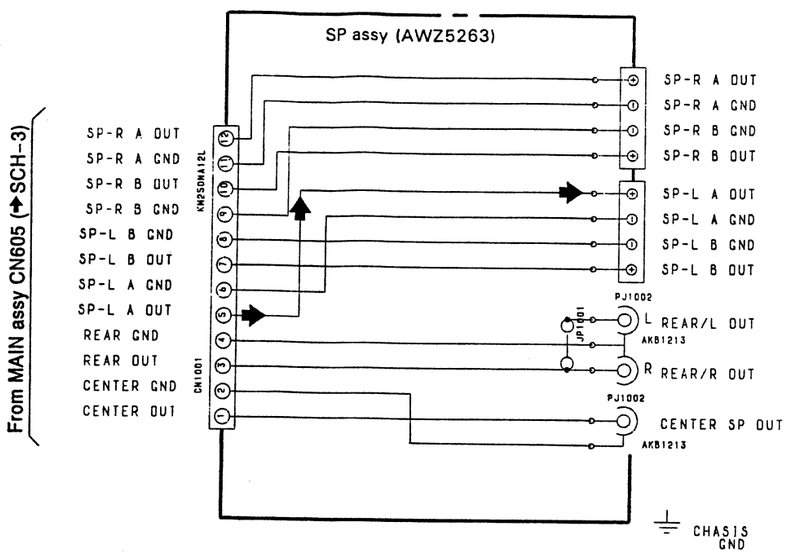
ENTER

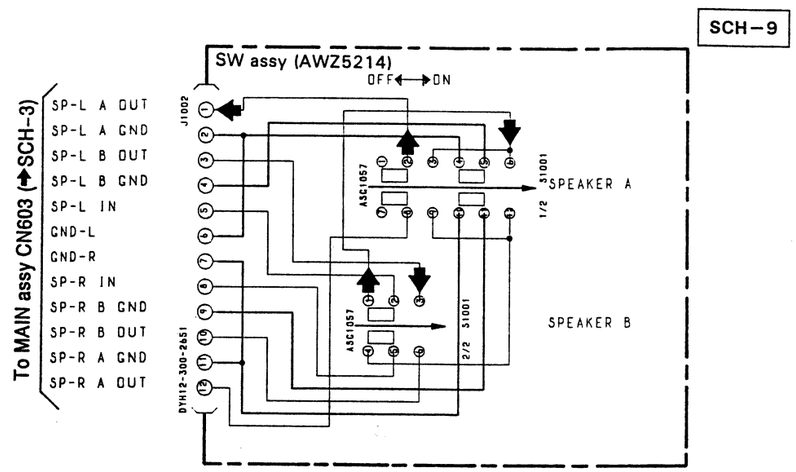
To MAIN assy CN617 (➔SCH-3)

To MAIN assy CN604 (➔SCH-3)

To TACT SW assy J1102 (➔SCH-9)

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



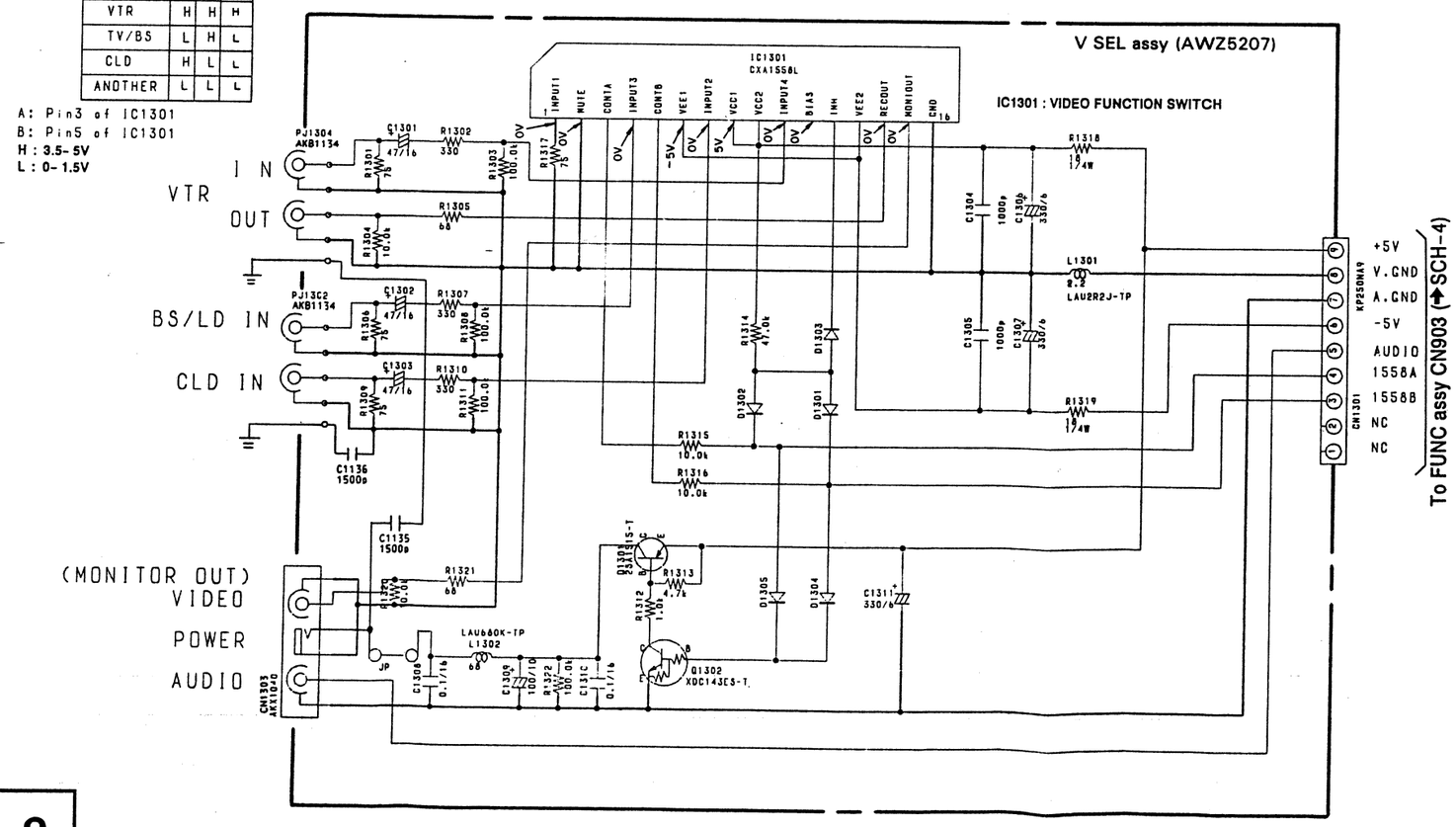


SIGNAL ROUTE

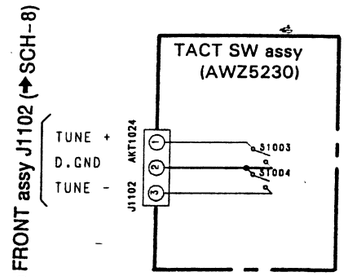
➡ : MAIN SIGNAL ROUTE

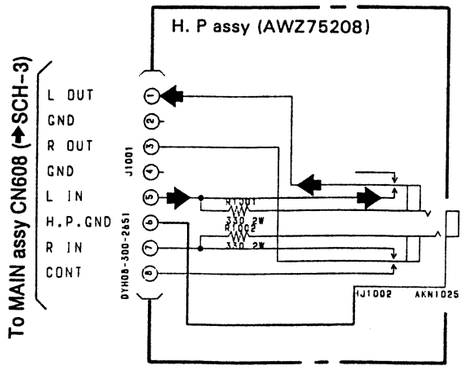
CONDITION	A	B	INH
VTR	H	H	H
TV/BS	L	H	L
CLD	H	L	L
ANOTHER	L	L	L

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

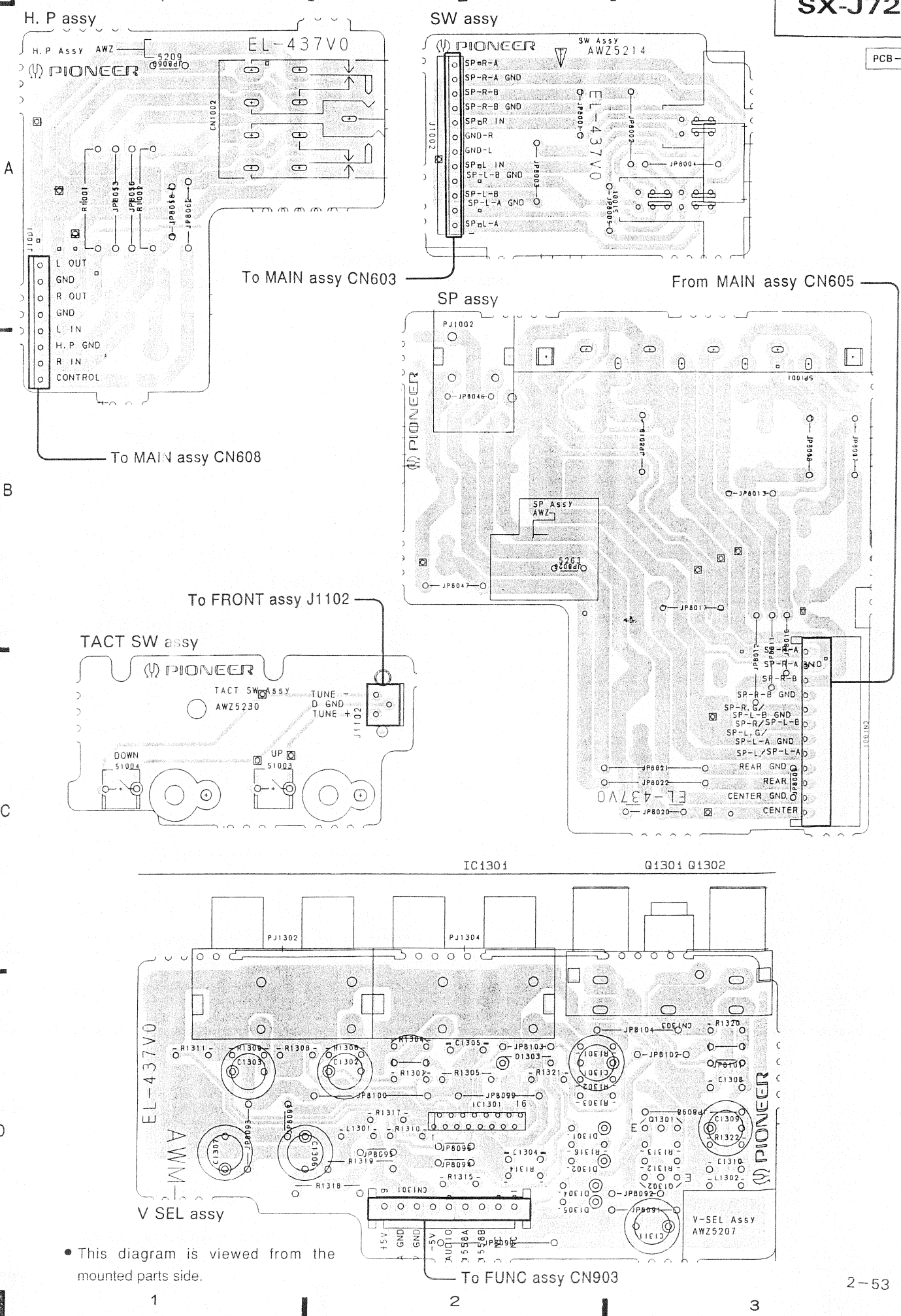


To FUNC assy CN903 (➡SCH-4)





SCH-9
V SEL ASSY, H. P ASSY, SP ASSY,
TACT SW ASSY, SW ASSY



- This diagram is viewed from the mounted parts side.

● This diagram is viewed from the foil side.