

Service Manual

ORDER NO.
RRZ1050

SOUND FIELD PROCESSOR

SP-J720K

SP-J420

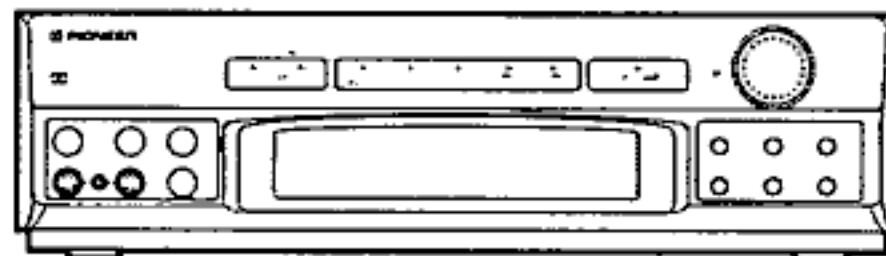
SOUND IMAGE CONTROLLER

GR-J320

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Service Manual



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SOUND FIELD PROCESSOR

SP-J720K

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SOUND IMAGE CONTROLLER

GR-J320

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

Type	Model			Power Requirement	Remarks
	SP-J720K	SP-J420	GR-J320		
ADL	○	○	○	AC power supplied from power transformer's secondary of other system component	_____
AEIW	○	—	—		
AEZIW	—	○	○		
AB	—	○	○		

● 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.

These products' instructions are contained within the instruction manual of the related system component(s).

The manual is packed with those component(s).

These products' accessories etc. are packed with their related component(s).

● When SP-J720K is operated independently, connect AC26V to MAIN ASSY TP terminals AC1 and AC2, and connect input/output signals to TP terminals of L IN, R IN, L OUT, R OUT, C OUT, and S OUT.

At this time, since communication between SX-J720 and CLD-J720 is terminated, all operations cannot be confirmed. (KARAOKE MPX cannot be switched to Hi-Fi MPX.) Also, keep in mind that, after SCENE SELECTOR changeover and other keys are operated, there is a 2-second delay before they operate.

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5). When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

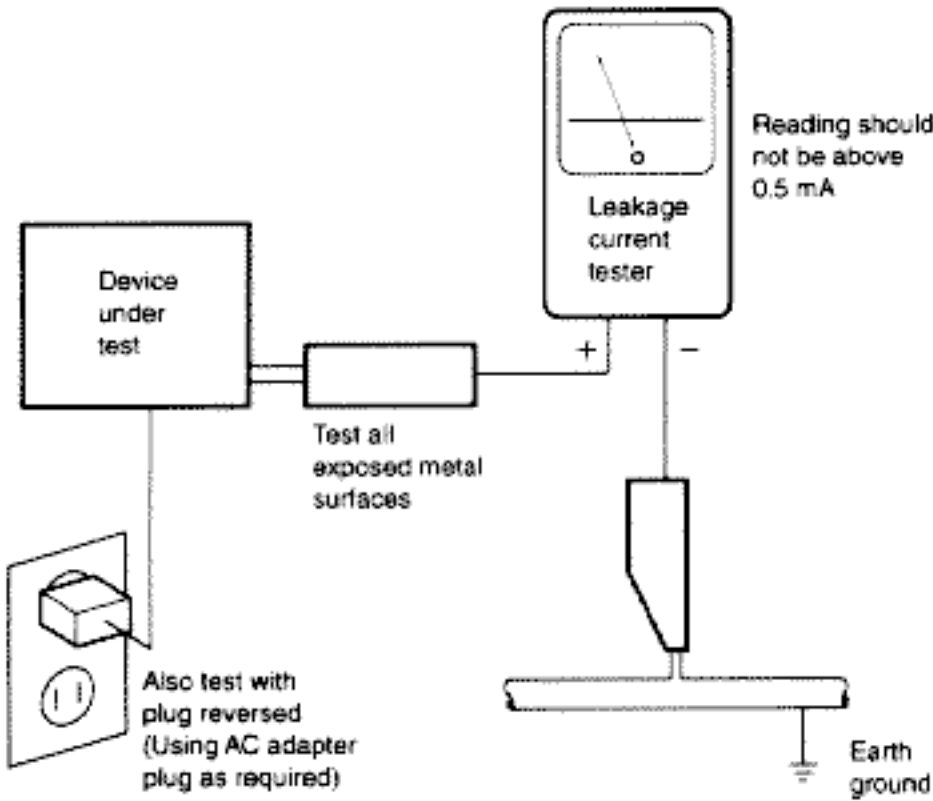
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

2. PACKING, EXPLODED VIEWS AND PARTS LIST

NOTES:

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

2.1 PACKING

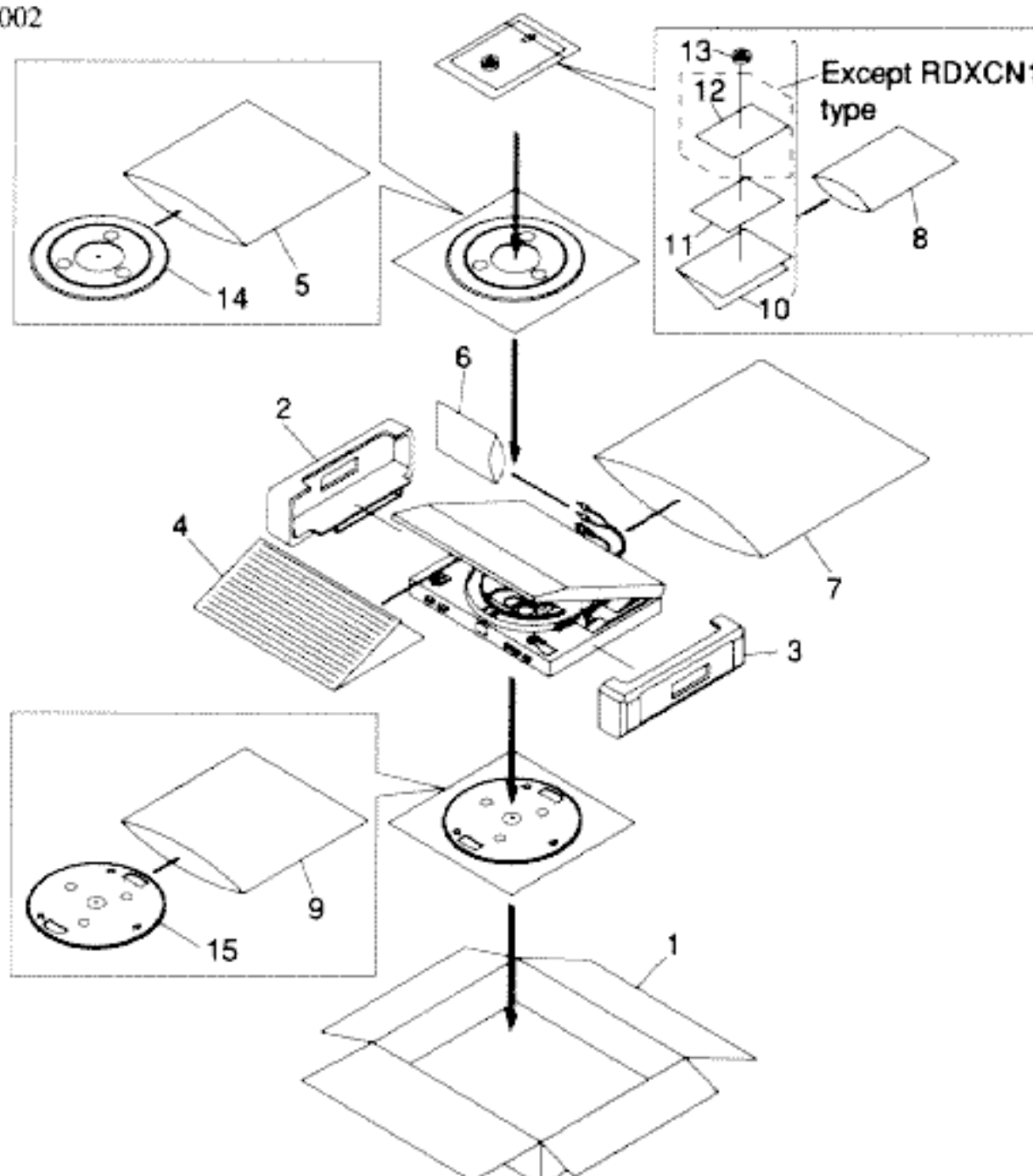
■ CONTRAST OF PL-990/KUCXCN1, WYXCN1, WVXCN1, WPWXCN1 AND RDXCN1

PL-990/KUCXCN1, WYXCN1, WVXCN1, WPWXCN1 and RDXCN1 have the same construction except for the following:

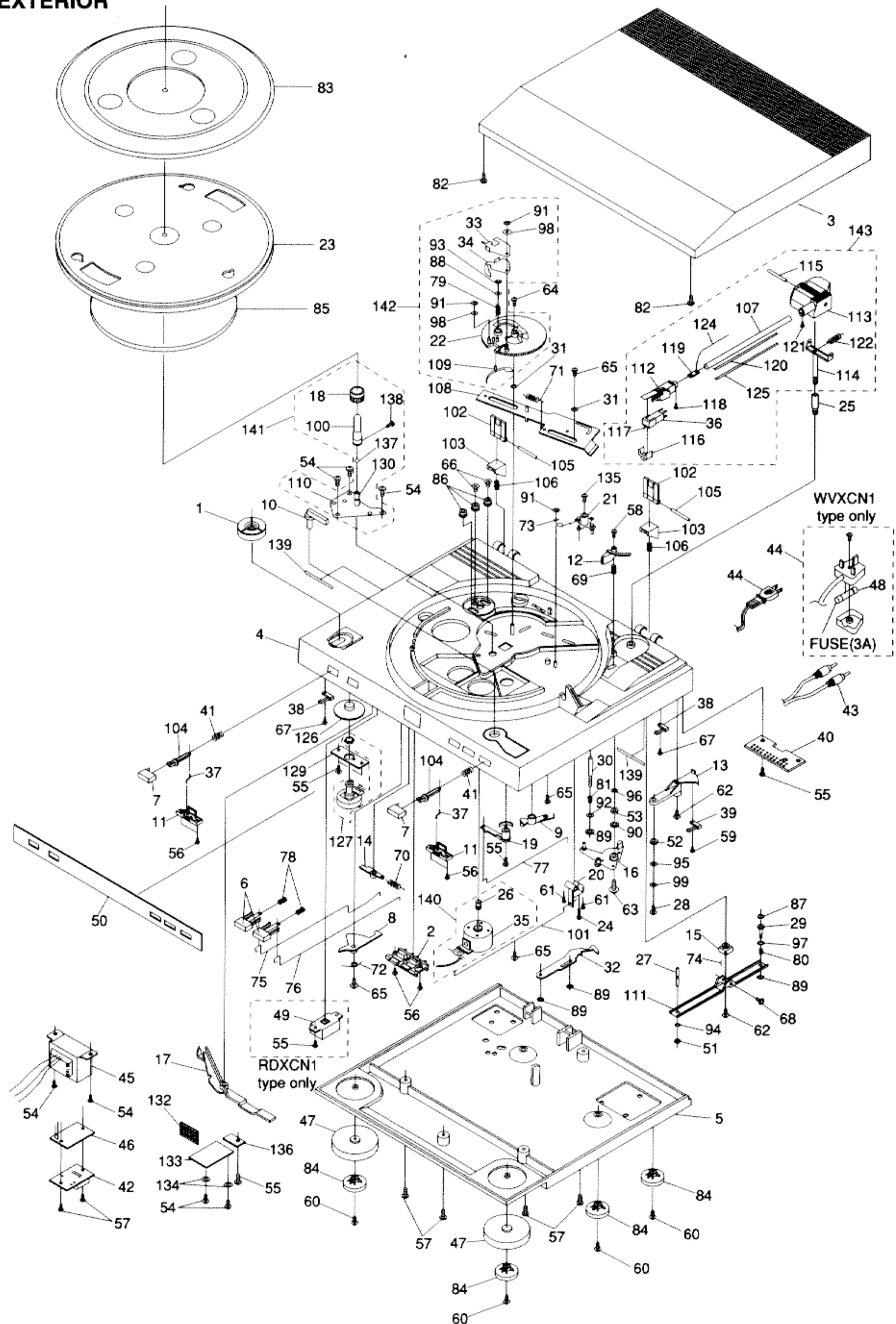
Mark	No.	Symbol & Description	Part No.					Remarks
			KUCXCN1 TYPE	WYXCN1 TYPE	WVXCN1 TYPE	WPWXCN1 TYPE	RDXCN1 TYPE	
NSP	1	PACKING CASE	PZH1010	PZH1007	PZH1006	PZH1009	PZH1008	
	10	OPERATING INSTRUCTIONS (English/French/Spanish/Chinese)	PZR1002	Not used	PZR1002	PZR1002	PZR1002	
	10	OPERATING INSTRUCTIONS (English/French/German/Italian/ Dutch/Swedish/Spanish/Portuguese)	Not used	PZR1001	Not used	Not used	Not used	
NSP	12	WARRANTY CARD	PZR1007	PZR1005	PZR1005	PZR1006	Not used	

■ PARTS LIST FOR PL-990/KUCXCN1

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
	1	PACKING CASE	PZH1010	NSP	11	EQ CAUTION	PZR1004
	2	POLYFORM(L)	PZH1011	NSP	12	WARRANTY CARD	PZR1007
	3	POLYFORM(R)	PZH1012		13	EP ADAPTOR	PZE1001
	4	POLYSTYRENE BAG	PZH1015		14	PLATTER MAT	PZN1062
	5	PE BAG	PZH1019		15	PLATTER	PZN1082
	6	PE BAG	PZH1020				
	7	PE BAG	PZH1022				
	8	PE BAG	PZH1023				
	9	PE BAG	PZH1024				
	10	OPERATING INSTRUCTIONS (English/French/Spanish/Chinese)	PZR1002				

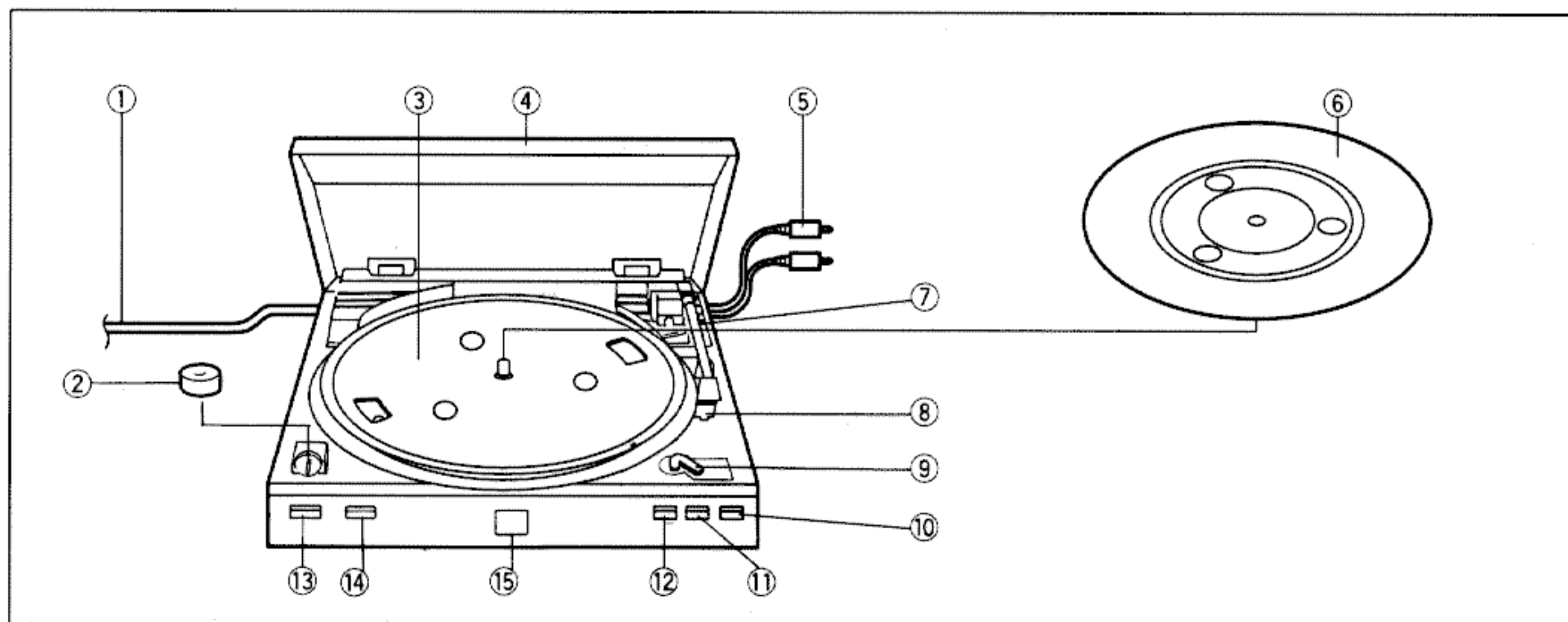


2.2 EXTERIOR



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

6. PANEL FACILITIES



- ① AC power cord
- ② 17cm (7") EP record adaptor
- ③ Turntable platter
- ④ Dust cover
- ⑤ Output cord
- ⑥ Platter mat
- ⑦ Tonearm
- ⑧ Cartridge
- ⑨ SIZE selector (30/17)
- ⑩ Arm-elevation button (▲UP/▼DOWN)
- ⑪ STOP button
- ⑫ START or PLAY button
- ⑬ SPEED button (■33/▲45)
- ⑭ SPEED ADJUST knob
- ⑮ Stroboscope window

7. SPECIFICATIONS

Motor type	DC servo motor
Drive system	Belt drive system
Speed of rotation	2 speeds: 33-1/3, 45 rpm
Wow and Flutter	No more than 0.25% WRMS
S/N ratio	More than 50 dB (DIN-B)
Platter	Diameter ø295 mm
Tonearm	Dynamic balance straight pipe arm
Cartridge type	MM type
Replacement stylus	PZP1004
Stylus	0.6 mil diamond
Output voltage (with equalizer amplifier)	112-270 mV
Stylus pressure	3.5 g ± 1 g
Power requirements	
U.K., Australian models	AC 220 – 240 V, 50/60 Hz
U.S., Canadian models	AC 120 V, 50/60 Hz
Other destination models	AC 110 – 127 V/220 – 240 V (switchable) 50/60 Hz

Power consumption	2 W
External dimensions	420(W) x 100(H) x 342(D) mm
	16-9/16(W) x 3-15/16(H) x 13-7/16(D) in.
Net weight	2.65 kg (5 lb 13 oz)
Supplied accessories	
EP adaptor	1
Operating instructions	1

NOTE:

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

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CHAPTER 2

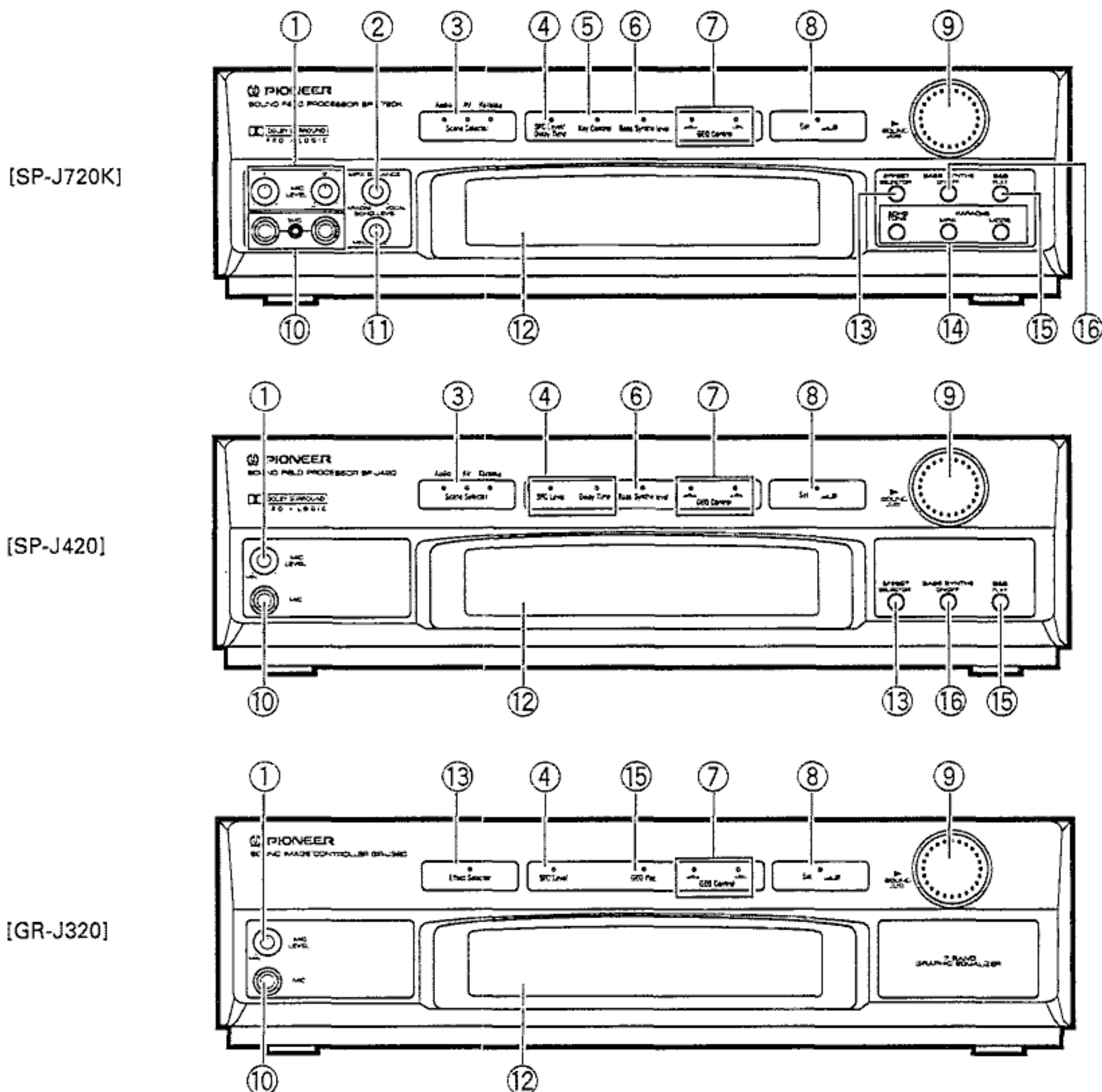
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CHAPTER 1

1.1 PANEL FACILITIES

FRONT PANEL FACILITIES

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



① **MIC LEVEL control(s)**

Used for adjusting the volume of microphone.

② **MPX BALANCE control (SP-J720K only)**

Used for adjusting the sound balance when the KARAOKE MPX button is set to MPX or HiFi MPX. Rotating the dial to the KARAOKE side de-emphasizes the playback vocal frequencies, thus producing sound suitable for karaoke-type sing-along; turning the dial to the VOCAL side restores the playback sound with its original vocals.

NOTE:

The MPX BALANCE control does not operate when the Scene Selector is set to any position other than KARAOKE, or when the KARAOKE MPX button is set to STEREO.

③ **Scene Selector button/indicator (SP-J720K and SP-J420 only)**

Each time this button is pressed, the scene changes as follows:

→ **Audio scene:** for audio playback

↓
→ **AV scene:** for audio and video playback

↓
→ **Karaoke scene:** for karaoke sing-along

Set this selector in accordance with your purpose.

④ **SFC Level/Delay Time button/indicator**

SFC Level: Set to ON to adjust the sound field control level.

Delay Time
(except GR-J320): Set to ON to adjust the DOLBY PRO LOGIC SURROUND delay time.

⑤ **Key Control button/indicator (SP-J720K only)**

When this button is set to ON with the Scene Selector button set to KARAOKE, the pitch of the musical accompaniment can be modified to suit your own vocal range.

⑥ **Bass Synthe Level button/indicator (SP-J720K and SP-J420 only)**

Set to ON to adjust the bass synthe level.

⑦ **GEQ Control buttons/indicator**

Use to select frequencies to be boosted or attenuated with the graphic equalizer.

⑧ **Set button**

Use when adjusting the sound effect and tone.

⑨ **SOUND JOG dial**

Use when adjusting the sound effect and tone.

⑩ **MIC (microphone) jack(s)**

This standard jack can be used for connecting a microphone. MC jack (SP-J720K only): When using a microphone equipped with a key controller, the microphone is connected to the key control jack.

⑪ **ECHO LEVEL control (SP-J720K only)**

This function operates only when the Scene Selector is set to the KARAOKE position.

After using the ECHO TONE button to select the echo mode, this dial can be used to vary the amount of echo applied.

⑫ **Display section**

⑬ **EFFECT SELECTOR button**

[SP-J720K or SP-J420]

Used to select a desired sound field in correspondence to the scene selected with the Scene Selector button ③.

Each time the button is pressed, the sound field changes as follows, in accordance with the "scene" chosen:

Audio scene:

→ DISCO → HALL → STADIUM → OFF

AV scene:

→ DOLBY PRO LOGIC SURROUND → DOLBY 3CH LOGIC
OFF ← MOVIE ←

Karaoke scene:

→ HALL → STADIUM → STAGE → OFF

[GR-J320]

Used to select the kind of desired sound field.

Each time the button is pressed, the sound field changes as follows.

→ DISCO → HALL → STADIUM → OFF

⑭ **KARAOKE selector buttons (SP-J720K only)**

This function operates only when the Scene Selector is set to the KARAOKE position.

ECHO TONE: Each time this button is pressed, the echo mode changes as follows:
Pops ↔ Ballad

MPX:

Changes the audio mode as follows:

→ Stereo → MPX → HiFi MPX

- This function cannot be set to stereo when using multiplex discs.
- HiFi MPX can be set only when using digital multiplex multi-audio discs.

MODE:

Changes the mode as follows:

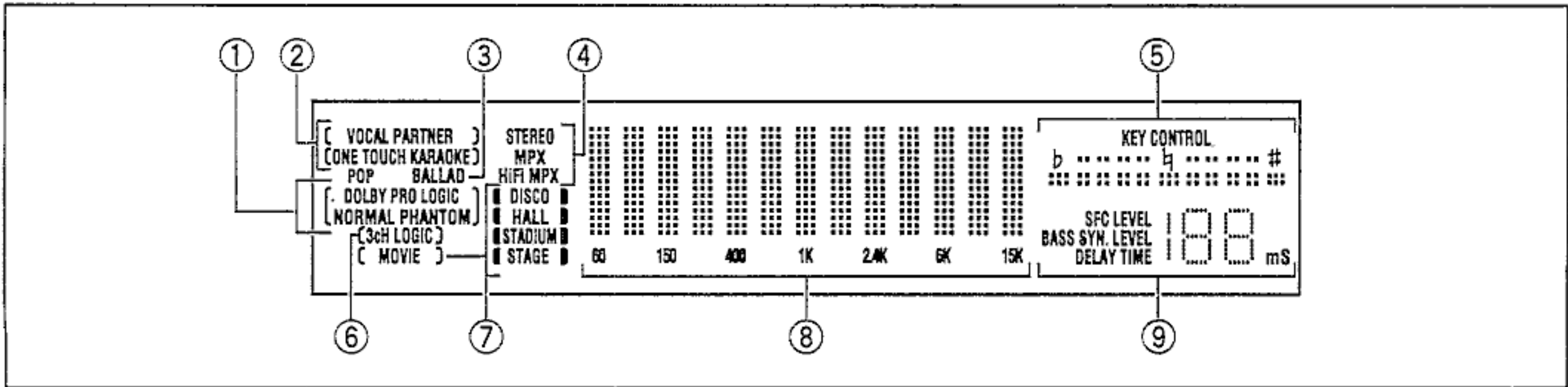
→ One-Touch KARAOKE → Vocal Partner
OFF ←

⑮ **GEQ FLAT button/indicator**

When this button is pressed, the graphic equalizer tone patterns are reset to their flat (normal) position.

⑯ **BASS SYNTH ON/OFF button (SP-J720K and SP-J420 only)**

Use to switch the bass emphasis circuit ON and OFF.



Display section

- ① Lights when DOLBY PRO LOGIC SURROUND is ON.
The lamp for the type of surround (NORMAL or PHANTOM) also lights as appropriate (on SP-J720K and SP-J420 only).
- ② Lights in accordance with setting of KARAOKE MODE button (SP-J720K only).
- ③ Lights in accordance with the setting of the ECHO TONE button (SP-J720K only).
- ④ Lights in accordance with the setting of the KARAOKE MPX button (SP-J720K only).
- ⑤ Displays key-control status (SP-J720K).
- ⑥ When DOLBY 3CH Logic is ON, displays ().
- ⑦ Indicates selected SFC with () (or ()) display.
- ⑧ Displays spectrum analyzer patterns and operation messages.
- ⑨ Displays the SFC level. With the SP-J720K and SP-J420, it also displays the Bass Synthe level and Delay Time.

1.2 SPECIFICATIONS

Central frequencies..... 60 Hz, 150 Hz, 400 Hz,
1 kHz, 2.4 kHz, 6 kHz, 15 kHz

Maximum range of variation ± 10dB

Spectrum Analyzer Section

Central frequencies..... 60 Hz, 150 Hz, 400 Hz,
1 kHz, 2.4 kHz, 6 kHz, 15 kHz

External dimensions..... 360 (W) x 348 (D) x 90.5 (H) mm

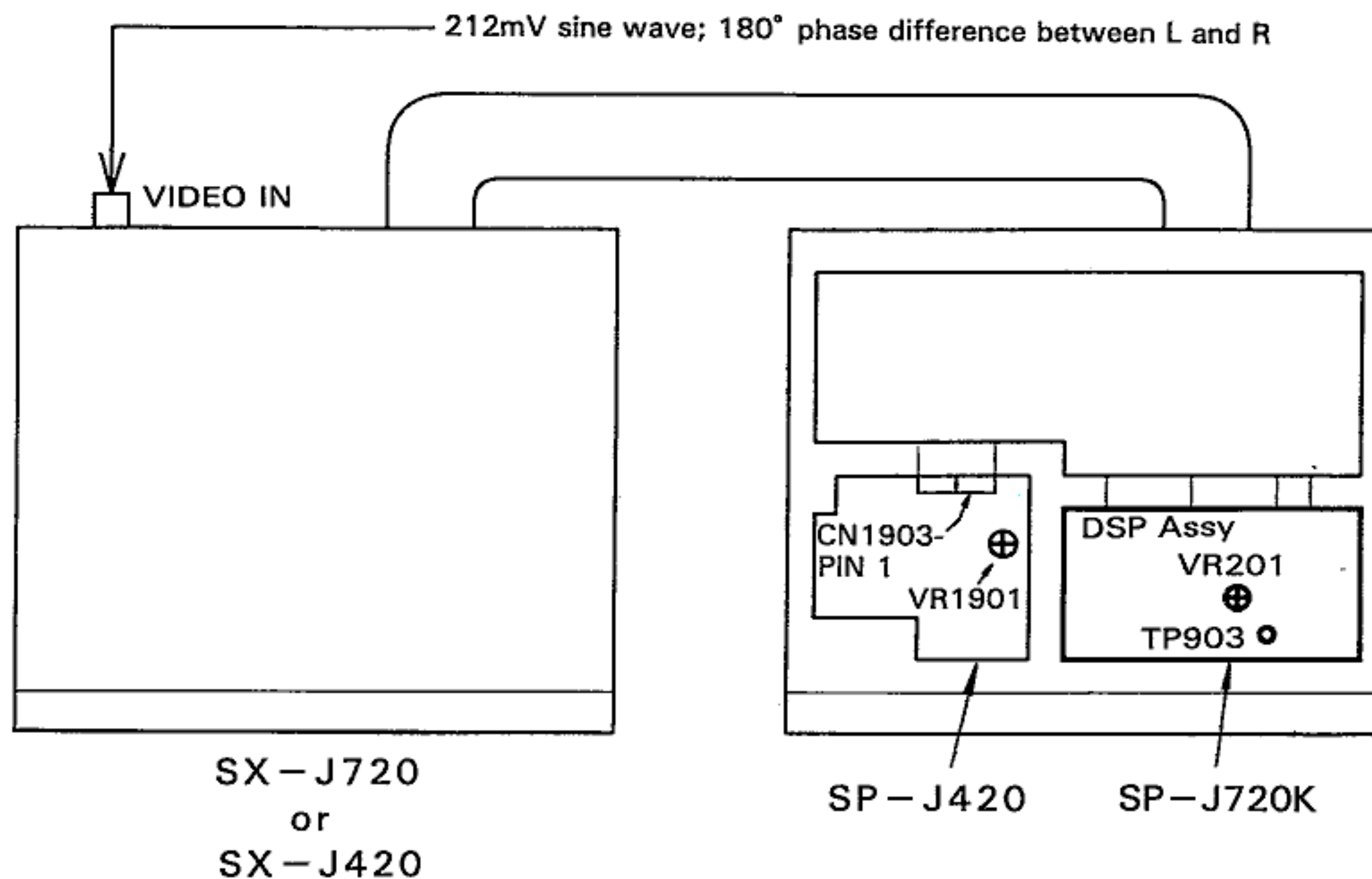
Weight..... 3.7 kg

1.3 ADJUSTMENTS

■ DOLBY PRO-LOGIC ADJUSTMENT METHOD (SP-J720K AND SP-J420 ONLY)

1. Connect SP-J720K (SP-J420) and SX-J720 (SX-J420).
2. Turn SX-J720 (SX-J420) SOURCE DIRECT to OFF, FUNCTION to VIDEO, and SP-J720K (SP-J420) SCENE SELECTOR to AV (DOLBY PRO-LOGIC) mode.
3. Input a 212mV sine wave to the VIDEO IN (L/R) terminals. (But the input signal for R should be 180° inverse of the input signal for L.)
4. Adjust VR201 so that TP903 in the DSP assy is 300mV. (SP-J720K ONLY)
4. Adjust VR1901 so that CN1903-PIN 1 in the PRO-LOGIC assy is 300mV. (SP-J420 ONLY)

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1.4 IC INFORMATION

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

■ PDC013A (IC1201 : U-COM ASSY)

● System Control Microcomputer

● Pin Functions

No.	Name	Function	I/O	Description
1	P35	$\overline{\text{KEYCON UP}}$	I	Keycon Up by MIC control
2	P36	S. DATA	I/O	Communication with receiver microcomputer
3	P37	GEQ R/E	I/O	
4	PWM1	N.C	O	OPEN
5	TEST1	N.C	O	OPEN
6	$\overline{\text{RES}}$	RESET	I	Processor microcomputer reset signal
7	X11	X11	O	Connects to VDD
8	X12	N.C	I	OPEN
9	VSS	GND	—	GND terminal
10	CF1	CF 1	I	Microcomputer clock input
11	CF2	CF 2	O	Microcomputer clock output
12	VDD	VDD	—	+5V
13	P80/AN0	SPA IN	I	XRA3826 output signal input
14	P81/AN1	$\overline{\text{WARICOMI}}$	I	MIC input signal detection
15	P82/AN2	COUNTRY A	I	Destination changeover
16	P83/AN3	COUNTRY B	I	
17	P84/AN4	KI4	I	KEY MATRIX input
20	P87/AN7	KI1		
21	P70/INT0	S. CLOCK	I	Communication with receiver microcomputer
22	P71/INT1	AC IN	I	POWER ON/OFF detection circuit
23	P72/INT2	JOG B	I	Signal from JOG
24	P73/INT3	JOG A	I	
25	S0/T0	1G	O	FL grid operating signal
40	S15/T15	16G		
41	VDDVPP	—	—	+5V

No.	Name	Function	I/O	Description
42	VP	—	—	−30V
43	S16	1S	O	FL segment operating signal
58	S31	16S		
59	P00	17G	O	FL grid operating signal
60	P01	MUTE	O	MUTE signal output
61	P02	N. C	O	OPEN
62	P03	ST	O	M66311 operation (LED DRIVER)
63	P04	CLOCK	O	
64	P05	DATA	O	XRA3826 control
65	P06	3826C	O	
66	P07	3826B	O	XRA3826 control
67	VSS	VSS	—	
68	P10/SO0	3826A	O	XRA3826 control
69	P11/SI0/SB0	3826 RESET	O	
70	P12/SCK0	001 ST	O	Karaoke processor PDQ001A control
71	P13/SO1	001 CLOCK	O	
72	P14/SI1/SB1	001 DATA	O	
73	P15/SCK1	CLOCK	O	Joint CLOCK and DATA for M66320 (inside PRO-LOGIC assy). MULTIPLEX CONTROL (M66320) and B. SYN- THE LEVEL (TC9154)
74	P16/BUZ	DATA	O	
75	P17/PWM0	M66320 STA	O	M66320 (inside PRO-LOGIC assy) ST
76	P30	TC9154 ST	O	TC9154 ST
77	P31	M66320 ST B	O	M66320 (inside MAIN assy) ST
78	P32	7522 DATA	O	G. EQ IC (LC7522) control
79	P33	7522 CLOCK	O	
80	P34	$\overline{\text{KEYCON DOWN}}$	I	Keycon DOWN by MIC control

1.5 PARTS LIST FOR EXPLODED VIEWS

- 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.

Part number differs between SP-J720K/AEIW, SP-J420/ADL, AEZIW, AB, GR-J320/ADL, AEZIW, AB and SP-J720K/ADL

Mark	No.	Symbol & Description	Part No.							
			SP-J720K		SP-J420			GR-J320		
			ADL	AEIW	ADL	AEZIW	AB	ADL	AEZIW	AB
NSP	33	PRO-LOGIC assy	AWX1063	AWX1063	AWX1067	AWX1067	AWX1067	.....	.....	.....
	34	DSP assy	AWX1066	AWX1066	.....	.....	.....	.....	.....	.....
	35	MAIN assy	AWZ5215	AWZ5595	AWZ5216	AWZ5216	AWZ5216	AWZ5217	AWZ5217	AWZ5217
	36	FRONT assy	AWZ5218	AWZ5218	AWZ5219	AWZ5219	AWZ5219	AWZ5220	AWZ5220	AWZ5220
	38	MIC assy	AWZ5222	AWZ5222	AWZ5223	AWZ5223	AWZ5223	AWZ5223	AWZ5223	AWZ5223
	5	J5 Flexible cable	ADD1126	ADD1126	.....	.....	.....	.....	.....	.....
	1	Front panel (PLS)	AMB2197	AMB2197	AMB2199	AMB2199	AMB2199	AMB2198	AMB2198	AMB2198
	8	Rear panel (MTL)	ANC2134	ANC2133	ANC2140	ANC2139	ANC2138	ANC2137	ANC2136	ANC2135
	12	Binder	AEC-219	AEC-219	.....	.....	.....	.....	.....	.....
	13	PCB support	AEC1006	AEC1006	.....	.....	.....	.....	.....	.....
	17	PCB mould	AMR2115	AMR2115	AMR2115	AMR2115	AMR2115	.....	.....	.....
	19	PCB mould	AMR2603	AMR2603	.....	.....	.....	.....	.....	.....
	22	Screw	BBZ30P140FMC	BBZ30P140FMC	BBZ30P140FMC	BBZ30P140FMC	BBZ30P140FMC	.....	.....	.....
	24	Knob sheet (PLS)	AAK2521	AAK2521	AAK2524	AAK2524	AAK2524	AAK2523	AAK2523	AAK2523
	26	Sub panel (PLS)	AMR2597	AMR2597	AMR2597	AMR2597	AMR2597	AMR2598	AMR2598	AMR2598
	30	Effect button A (PLS)	AAD2500	AAD2500	AAD2500	AAD2500	AAD2500	.....	.....	.....
	31	Effect button B (PLS)	AAD2501	AAD2501	.....	.....	.....	.....	.....	.....
	43	Ground plate	ANK1120	.....	ANK1120	.....	.....	ANK1120	.....	.....

■ FOR SP-J720K/ADL

Mark	No.	Description	Parts No.	Mark	No.	Description	Parts No.
NSP	1	FRONT PANEL (PLS)	AMB2197	23	SCREW	BPZ26P080FMC	
	2	FLEXIBLE CABLE (J1)	ADD1123	24	KNOB SHEET (PLS)	AAK2521	
	3	FLEXIBLE CABLE (J2)	ADD1124	25	DISPLAY PANEL (PLS)	AAK2526	
	4	FLEXIBLE CABLE (J3)	ADD1125				
	5	FLEXIBLE CABLE (J5)	ADD1126	26	SUB PANEL (PLS)	AMR2597	
NSP	6	CORD WITH PLUG (J4)	ADE1138	27	NAME PLATE	PAM1407	
	7	CHASSIS (MTL)	ANA1193	28	JOG KNOB (PLS)	AAB1371	
	8	REAR PANEL (MTL)	ANC2134	29	MIC KNOB (PLS)	AAB1339	
	9	RUBBER SHEET	AEB1247	30	EFFECT BUTTON A (PLS)	AAD2500	
	10	LEG ASSY (S)	AMR1937	31	EFFECT BUTTON B (PLS)	AAD2501	
NSP	11	MIC PRESS CLASP	ANG1871	32	METAL BONNET (MTL)	ANE1379	
	12	BINDER	AEC-219	33	PRO-LOGIC ASSY	AWX1063	
	13	PCB SUPPORT	AEC1006	34	DSP ASSY	AWX1066	
	14	PCB SUPPORT	AEC1216	35	MAIN ASSY	AWZ5215	
	15	PCB SPACER	AEC1371	36	FRONT ASSY	AWZ5218	
NSP	16	PCB SPACER	AEC1372	37	U-COM ASSY	AWZ5221	
	17	PCB MOULD	AMR2115	38	MIC ASSY	AWZ5222	
	18	PCB MOULD	AMR1525	39	JOG ASSY	AWZ5224	
	19	PCB MOULD	AMR2603	40	TRANS ASSY	AWZ5225	
	20	SCREW	ABA1018	41	BINDER	AEP-215	
NSP	21	SCREW	BBZ30P060FZK	42	NYLON BINDER	AEC-093	
	22	SCREW	BBZ30P140FMC	43	GROUND PLATE	ANK1120	

1.6 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%).

560 Ω $\rightarrow$ 56 $\times$ 10¹ $\rightarrow$ 561 RD1/8PM $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 1 \\ J \end{bmatrix}$

47k Ω $\rightarrow$ 47 $\times$ 10³ $\rightarrow$ 473 RD1/4PS $\begin{bmatrix} 4 \\ 7 \end{bmatrix} \begin{bmatrix} 3 \\ J \end{bmatrix}$

0.5 Ω $\rightarrow$ 0R5 RN2H $\begin{bmatrix} 0 \\ R \end{bmatrix} \begin{bmatrix} 5 \\ K \end{bmatrix}$

1 Ω $\rightarrow$ 010 RS1P $\begin{bmatrix} 0 \\ 1 \end{bmatrix} \begin{bmatrix} 0 \\ K \end{bmatrix}$

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

5.62k Ω $\rightarrow$ 562 $\times$ 10¹ $\rightarrow$ 5621 RM1/4PC $\begin{bmatrix} 5 \\ 6 \end{bmatrix} \begin{bmatrix} 2 \\ 1 \end{bmatrix} F$

● LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol & Description	Part No.								Remarks
		SP-J720K		SP-J420			GR-J320			
		ADL	AEIW	ADL	AEZIW	AB	ADL	AEZIW	AB	
NSP	PROCESSOR assy	AWM1486	AWM4064	AWM1495	AWM1495	AWM1495	AWM1496	AWM1496	AWM1496	
	└ FRONT assy	AWZ5218	AWZ5218	AWZ5219	AWZ5219	AWZ5219	AWZ5220	AWZ5220	AWZ5220	
	└ U-COM assy	AWZ5221	AWZ5221	AWZ5221	AWZ5221	AWZ5221	AWZ5221	AWZ5221	AWZ5221	
	└ MIC assy	AWZ5222	AWZ5222	AWZ5223	AWZ5223	AWZ5223	AWZ5223	AWZ5223	AWZ5223	
	└ JOG assy	AWZ5224	AWZ5224	AWZ5224	AWZ5224	AWZ5224	AWZ5224	AWZ5224	AWZ5224	
	└ TRANS assy	AWZ5225	AWZ5225	AWZ5225	AWZ5225	AWZ5225	AWZ5225	AWZ5225	AWZ5225	
	└ MAIN assy	AWZ5215	AWZ5595	AWZ5216	AWZ5216	AWZ5216	AWZ5217	AWZ5217	AWZ5217	
	PRO-LOGIC assy	AWX1063	AWX1063	AWX1067	AWX1067	AWX1067	.....	.....	.....	
	DSP assy	AWX1066	AWX1066	.....	.....	.....	.....	.....	.....	

Mark No. Description Parts No.

FRONT ASSY (AWZ5218)

SEMICONDUCTORS

IC1251	M66311P
IC951	UPC4570G2
IC981	XRA4558F-P
Q952	2SC2712
D1271-D1274, D951, D952	1SS252
D1253-D1255	AEL1100
D1252, D1261-D1264, D1266	AEL1128
D1251, D1256-D1260, D1265	AEL1144

COILS AND FILTERS

L951	ATX1008
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SWITCHES AND RELAYS

S1251-S1262, S1264	ASG1034
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Mark No. Description Parts No.

CAPACITORS

C1253	CCSQSL101J50
C1251	CCSQSL102J50
C953	CCSQSL330J50
C959, C981	CEAS010M50
C954, C960, C983, C984	CEAS100M50
C951, C958	CEAS101M16
C982	CEJA010M50
C952	CEJA100M50
C1254	CKSQYB103K50
C957	CKSQYF683Z50

RESISTORS

R951, R962	RD1/4PM181J
R991, R992	RD1/8PM101J
R1251-R1254	RD1/8PM102J
VR981 (100k- $\times$ 2)	ACS1054
VR951, VR952 (20k-B)	ACS1101

Other Resistors	RS1/10S $\begin{bmatrix} \square \\ \square \end{bmatrix} \begin{bmatrix} \square \\ \square \end{bmatrix} J$
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Mark	No.	Description	Parts No.
OTHERS			
	V1251	FL TUBE	AAV1187
	CN1252	1P SOCKET	AKP1086
	CN1251	30P SOCKET	AKP1095

FRONT ASSY (AWZ5219 and AWZ5220)

SEMICONDUCTORS

IC1251	M66311P
IC951	UPC4570G2
D1271-D1274	1SS252
D1251, D1257-D1260, D1265	AEL1144
D1256 (AWZ5219 only)	AEL1144
D1254 (AWZ5220 only)	AEL1144
D1253-D1255 (AWZ5219 only)	AEL1100
D1261-D1263 (AWZ5219 only)	AEL1128

SWITCHES AND RELAYS

S1252, S1255, S1258-S1260, S1264	ASG1034
S1251, S1253, S1257, S1261 (AWZ5219 only)	ASG1034

CAPACITORS

C1253	CCSQSL101J50
C1251	CCSQSL102J50
C953	CCSQSL330J50
C954	CEAS100M50
C951, C958	CEAS101M16
C952	CEJA100M50
C1254	CKSQYB103K50

RESISTORS

R951, R962	RD1/4PM181J
R1251-R1254	RD1/8PM102J
VR951 (20k-B)	ACS1101
Other Resistors	RS1/10S□□□J

OTHERS

V1251	FL TUBE	AAV1187
CN1252	21P SOCKET	AKP1086
CN1251	30P SOCKET	AKP1095

U-COM ASSY (AWZ5221)

SEMICONDUCTORS

IC1201	PDC013A
IC1202	XRA3826S
Q1202	2SC2712
Q1204	XDA124EK
Q1201, Q1203	XDC143EK

D1208	1SS252
D1201, D1202	RD5.1ESB3
D1205	RD6.2ESB

COILS AND FILTERS

L1201	ATX1008
L1204	LAU010J
L1205	LAU100J
L1206	LAU120J
L1203	LAU220K

CAPACITORS

C1209	CEAS010M50
C1202	CEAS100M50
C1218	CEAS220M50
C1216	CEAS221M10
C1208	CEAS2R2M50

Mark	No.	Description	Parts No.
	C1204, C1206, C1210, C1211		CEAS470M16
	C1221		CKSQYB102K50
	C1203, C1205, C1207, C1212-C1215		CKSQYB103K50
	C1219		CKSQYB103K50
	C1220		CKSQYB473K50

C1201	CKSQYF104Z50
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RESISTORS

R1201	RD1/2PMF221J
R1202	RD1/2PMF271J
R1208-R1211, R1214-R1219, R1226	RD1/8PM102J
R1241, R1243-R1245, R1271, R1272	RD1/8PM102J
R1275-R1277	RD1/8PM102J

Other Resistors	RS1/10S□□□J
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OTHERS

X1201 (12MHz)	ASS1062
CN1203 21P SOCKET	AKP1084
CN1201, CN1202 30P SOCKET	AKP1094

MIC ASSY (AWZ5222)

SEMICONDUCTORS

IC901	UPC4570G2
Q921	2SC2712

CAPACITORS

C909, C910, C922	CEAS010M50
C905, C906	CEAS4R7M50
C913	CKCYX104M25
C914	CKSQYB103K50
C907, C908	CKSQYB182K50

C901, C902	CKSQYB222K50
C903, C904, C911, C912, C921	CKSQYF104Z50

RESISTORS

R915, R916	RD1/4PM181J
R924	RD1/8PM103J
VR921 (20k-B)	ACS1100
Other Resistors	RS1/10S□□□J

OTHERS

PHONE JACK (MIC)	AKN1019
JACK	AKN1023
CN902 15P SOCKET	AKP1130

MIC ASSY (AWZ5223)

SEMICONDUCTORS

IC901	UPC4570G2
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CAPACITORS

C909	CEAS010M50
C905	CEAS4R7M50
C913	CKCYX104M25
C907	CKSQYB182K50
C901	CKSQYB222K50

C903, C911, C912	CKSQYF104Z50
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RESISTORS

R915, R916	RD1/4PM181J
Other Resistors	RS1/10S□□□J

OTHERS

PHONE JACK (MIC)	AKN1019
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Mark	No.	Description	Parts No.
JOG ASSY (AWZ5224)			
SWITCHES AND RELAYS			
	S1301		ASX1015
TRANS ASSY (AWZ5225)			
SEMICONDUCTORS			
	D105		RB152
	D101, D102		RD16ESB
	D100		RD10ESB1
	D103, D104		S5688G
TRANSFORMER			
	T101		ATT1237
CAPACITORS			
	C105		CEAS220M50
	C106		CEAS471M50
RESISTORS			
△	R101		RS2LMF681J
	Other Resistors		RD1/8PM□□□J
MAIN ASSY (AWZ5215 and AWZ5595)			
SEMICONDUCTORS			
	IC751, IC752		LA3607
	IC753		LC7522
	IC1022		M66320FP
	IC1041, IC601, IC603, IC604		MC14053BF
	IC100		NJM7805AS
	IC101		NJM7812AS
	IC103		NJM7812FAS
	IC102		NJM7912A
	IC454		TC9154AP
	IC851		UPC4570G2
	IC1021		UPC78L05J
	IC451, IC453, IC602, IC801, IC891		XRA4558F-P
	Q452, Q453		2SA1162
	Q451		2SC2712
	Q851, Q852, Q871, Q872		2SC3327
	Q454		2SK246
	Q455, Q853, Q873		XDA124EK
	D452, D453		1SS226
	D454, D456		1SS252
	D106-D109, D873		HSS104-02
	D601, D602		RD5.1ESB
	D451, D455, D701, D702		RD5.1ESB1
COILS			
	L1021, L1022 (AWZ5215 only)		LAU330J
	L1023 (AWZ5215 only)		LAU220J
CAPACITORS			
	C755, C769		ACG1049
	C758, C770		ACG1050
	C2001-C2003		CCSQCH102J50
	C751, C752		CCSQCH680J50
	C1023, C602, C603		CCSQSL101J50
	C2006-C2008		CCSQSL221J50
	C508, C605, C606, C803, C804		CCSQSL470J50
	C853-C856		CCSQSL470J50
	C507		CCSQSL471J50
	C455, C456		CEAS100M50

Mark	No.	Description	Parts No.
	C457, C703, C704		CEAS101M10
	C467		CEAS220M16
	C801, C802		CEAS220M25
	C103, C104, C462		CEAS220M50
	C107		CEAS222M35
	C781-C784		CEAS2R2M50
	C805, C806, C851, C852		CEAS330M25
	C871, C872		CEAS330M25
	C108		CEAS332M35
	C1022, C701, C702		CEAS470M10
	C601, C604		CEAS470M16
	C458		CEAS470M25
	C756, C785		CEASR22M50
	C460, C463, C754		CEASR68M50
	C101, C102		CEHAQ220M50
	C768		CEJAR68M50
	C753, C767		CFTXA124J50
	C465 (For AWZ5215)		CFTXA394J50
	C465 (For AWZ5595)		CFTXA274J50
	C464 (For AWZ5215)		CFTXA683J50
	C464 (For AWZ5595)		CFTXA473J50
	C451 (For AWZ5215)		CFTXA823J50
	C451 (For AWZ5595)		CFTXA683J50
	C2010		CKCYF473Z50
	C2004, C2005, C459, C461, C759		CKSQYB103K50
	C773		CKSQYB103K50
	C762, C776		CKSQYB123K50
	C763, C777		CKSQYB152K50
	C466 (For AWZ5215)		CKSQYB273K50
	C466 (For AWZ5595)		CKSQYB183K50
	C452 (For AWZ5215)		CKSQYB272K50
	C452 (For AWZ5595)		CKSQYB222K50
	C766, C780		CKSQYB222K50
	C757, C771		CKSQYB223K50
	C760, C772		CKSQYB333K50
	C761, C775		CKSQYB392K50
	C1024, C470		CKSQYB472K50
	C2009, C705, C706		CKSQYB473K50
	C765, C779		CKSQYB561K50
	C764, C778		CKSQYB562K50
	C873, C874		CKSQYF104Z50
	C1021, C453, C454, C468, C469		CKSQYF473Z50
RESISTORS			
	R701, R702		RD1/2PM271J
	R869		RD1/8PM182J
	R1043		RD1/8PM393J
	R607, R618		RD1/8PM751J
	R102, R103		RFA1/4PS100J
	R773, R774, R780, R781		RS1/8S000J
	R1021		RS1PMF820J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN1002 30P SOCKET		AKP1094
	CN1023 6P SOCKET		AKP1096
	CN1042 8P SOCKET		AKP1097
	CN1021, CN1041 10P SOCKET		AKP1098
	CN1022 7P SOCKET		AKP1127
	CN1001 CONNECTOR (18P)		AKP1128
	CN1003 15P SOCKET		AKP1129
	HEAT SINK		ANH-575
	SCREW		BBZ30P080FZK

SP-J720K, SP-J420, GR-J320

Mark	No.	Description	Parts No.
MAIN ASSY (AWZ5216)			
SEMICONDUCTORS			
	IC751, IC752		LA3607
	IC753		LC7522
	IC1041		MC14053BF
	IC100		NJM7805AS
	IC101		NJM7812AS
	IC103		NJM7812FAS
	IC102		NJM7912A
	IC454		TC9154AP
	IC851		UPC4570G2
	IC401-IC404, IC451-IC453		XRA4558F-P
	IC501, IC502, IC801, IC891		XRA4558F-P
	Q452, Q453		2SA1162
	Q451		2SC2712
	Q851, Q852, Q871, Q872		2SC3327
	Q454, Q501, Q502		2SK246
	Q455, Q503, Q504, Q853, Q873		XDA124EK
	D452, D453		1SS226
	D454, D456		1SS252
	D106-D109, D501, D502, D873		HSS104-02
	D451, D455, D701, D702		RD5.1ESB1
CAPACITORS			
	C755, C769		ACG1049
	C758, C770		ACG1050
	C2001-C2003		CCSQCH102J50
	C751, C752		CCSQCH680J50
	C413		CCSQSL101J50
	C2006-C2008		CCSQSL221J50
	C508, C803, C804, C853-C856		CCSQSL470J50
	C507		CCSQSL471J50
	C455, C456, C501, C502		CEAS100M50
	C457, C703, C704		CEAS101M10
	C467		CEAS220M16
	C801, C802		CEAS220M25
	C103, C104, C462		CEAS220M50
	C107		CEAS222M35
	C781-C784		CEAS2R2M50
	C805, C806, C851, C852		CEAS330M25
	C871, C872		CEAS330M25
	C108		CEAS332M35
	C701, C702		CEAS470M10
	C458		CEAS470M25
	C756, C785		CEASR22M50
	C403, C404		CEASR33M50
	C460, C463, C754		CEASR68M50
	C101, C102		CEHAQ220M50
	C768		CEJAR68M50
	C753, C767		CFTXA124J50
	C465		CFTXA274J50
	C464		CFTXA473J50
	C451		CFTXA683J50
	C2010		CKCYF473Z50
	C2004, C2005, C459, C461, C759		CKSQYB103K50
	C773		CKSQYB103K50
	C762, C776		CKSQYB123K50
	C763, C777		CKSQYB152K50
	C414-C416, C466		CKSQYB183K50

Mark	No.	Description	Parts No.
	C452, C766, C780		CKSQYB222K50
	C757, C771		CKSQYB223K50
	C405, C406		CKSQYB272K50
	C760, C772		CKSQYB333K50
	C761, C775		CKSQYB392K50
	C503, C504, C506		CKSQYB471K50
	C470		CKSQYB472K50
	C2009, C705, C706		CKSQYB473K50
	C407-C412, C765, C779		CKSQYB561K50
	C764, C778		CKSQYB562K50
	C505		CKSQYB681K50
	C873, C874		CKSQYF104Z50
	C453, C454, C468, C469		CKSQYF473Z50
	C401, C402		CKSQYF683Z50
RESISTORS			
	R701, R702		RD1'2PM271J
	R869		RD1/8PM182J
	R1043		RD1/8PM393J
	R102, R103		RFA1/4PS100J
	R773, R774, R780, R781		RS1/8S000J
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN1002 30P SOCKET		AKP1094
	CN1042 8P SOCKET		AKP1097
	CN1041 10P SOCKET		AKP1098
	CN1001 CONNECTOR (18P)		AKP1128
	HEAT SINK		ANH-575
	SCREW		BBZ30P080FZK
	CN1004 CONNECTOR (4P)		KPE4
MAIN ASSY (AWZ5217)			
SEMICONDUCTORS			
	IC751, IC752		LA3607
	IC753		LC7522
	IC100		NJM7805AS
	IC101		NJM7812AS
	IC102		NJM7912A
	IC851		UPC4570G2
	IC501, IC801, IC891		XRA4558F-P
	Q851, Q852		2SC3327
	Q501, Q502		2SK246
	Q503, Q504, Q853		XDA124EK
	D106-D109, D501, D502		HSS104-02
	D701, D702		RD5.1ESB1
CAPACITORS			
	C755, C769		ACG1049
	C758, C770		ACG1050
	C2001-C2003		CCSQCH102J50
	C751, C752		CCSQCH680J50
	C2006-C2008		CCSQSL221J50
	C508, C803, C804 C853-C856		CCSQSL470J50
	C507		CCSQSL471J50
	C501, C502		CEAS100M50
	C703, C704		CEAS101M10
	C801, C802		CEAS220M25
	C103, C104		CEAS220M50
	C107		CEAS222M35
	C781-C784		CEAS2R2M50
	C805, C806, C851, C852		CEAS330M25
	C108		CEAS332M35

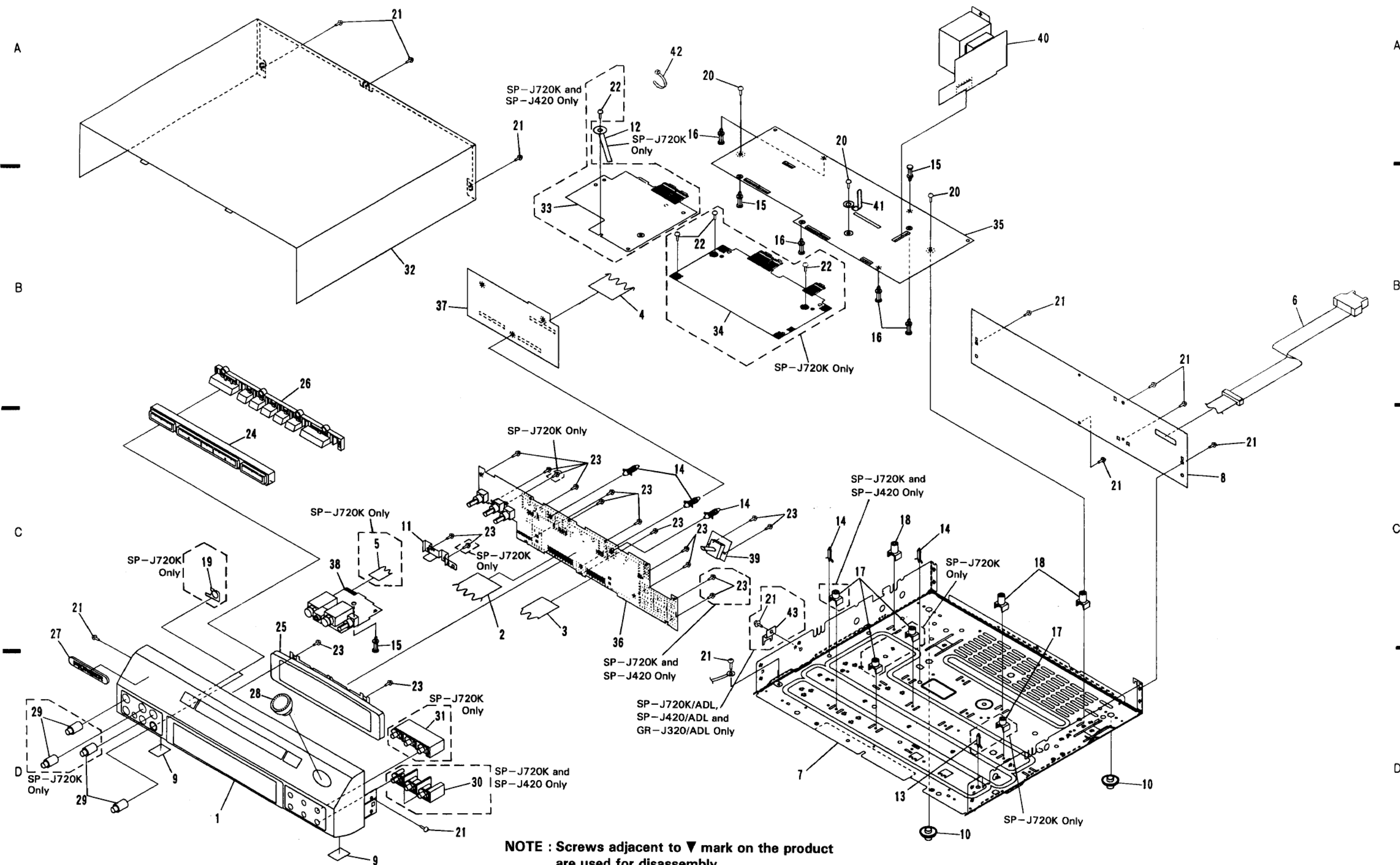
Mark	No.	Description	Parts No.
	C701, C702 C756, C785 C754 C102 C768		CEAS470M10 CEASR22M50 CEASR68M50 CEHAQ220M50 CEJAR68M50
	C753, C767 C2010 C2004, C2005, C759, C773 C762, C776 C763, C777		CFTXA124J50 CKCYF473Z50 CKSQYB103K50 CKSQYB123K50 CKSQYB152K50
	C766, C780 C757, C771 C760, C772 C761, C775 C503, C504, C506		CKSQYB222K50 CKSQYB223K50 CKSQYB333K50 CKSQYB392K50 CKSQYB471K50
	C2009, C705, C706 C765, C779 C764, C778 C505 C874		CKSQYB473K50 CKSQYB561K50 CKSQYB562K50 CKSQYB681K50 CKSQYF104Z50
RESISTORS			
	R701, R702 R102, R103 R773, R774, R780, R781 Other Resistors		RD1/2PM271J RFA1/4PS100J RS1/8S000J RS1/10S□□□J
OTHERS			
	CN1002 30P SOCKET CN1001 CONNECTOR (18P) HEAT SINK SCREW CN1004 CONNECTOR (4P)		AKP1094 AKP1128 ANH-575 BBZ30P080FZK KPE4
PRO-LOGIC ASSY (AWZ1063)			
SEMICONDUCTORS			
	IC1901 IC1906 IC1904, IC1905 Q1904, Q1905 Q1906, Q1907 D1901, D1903		LA2780N M66320FP NJM4558M-D 2SC1740S RN2203 RD6.2ESB
CAPACITORS			
	C1970 C1906, C1922, C1934 C1909, C1910, C1917, C1918 C1903, C1904, C1926, C1927 C1902 C1930, C1931 C1901 C1911, C1916 C1912, C1915 C1905, C1925 C1933 C1907, C1908, C1920, C1923, C1924 C1935 C1932 C1913, C1914, C1961 C1939, C1963 C1949 C1921 C1919 C1946 C1967 C1972 C1969 C1966 C1947 C1948 C1954 C1955		CCSQCH330J50 CCSQCH681J50 CEANL4R7M50 CEAS100M50 CEAS101M16 CEAS2R2M50 CEAS470M25 CEASR15M50 CEYA3R3M50 CEYAR33M50 CFTXA103J50 CFTXA104J50 CFTXA104J50 CFTXA153J50 CFTXA154J50 CFTXA334J50 CFTXA473J50 CFTXA683J50 CKSQYB103K50 CKSQYB472K50 CKSQYB562K50 CKSQYF104Z50 CQMA392J50 CQMA472J50 CQMA562J50 CQMA682J50
RESISTORS			
	Other Resistors		RS1/10S□□□J

Mark	No.	Description	Parts No.
OTHERS			
	CN1903 8P PLUG CN1904 10P PLUG		AKM1084 AKM1085
PRO-LOGIC ASSY (AWX1067)			
SEMICONDUCTORS			
	IC1901 IC1903 IC1902 IC1906 IC1904, IC1905 Q1904, Q1905 Q1903 Q1906, Q1907 D1901, D1903		LA2780N LM3364K-15 LV1001M-A M66320FP NJM4558M-D 2SC1740S 2SD438 RN2203 RD6.2ESB
CAPACITORS			
	C1938, C1964 C1940, C1962 C1970 C1953 C1906, C1922, C1934, C1959 C1909, C1910, C1917, C1918 C1950 C1956 C1951 C1903, C1904, C1926, C1927, C1952 C1957, C1958, C1960 C1902 C1968 C1941-C1943 C1930, C1931 C1901 C1936 C1965 C1911, C1916 C1945 C1937 C1912, C1915 C1905, C1925 C1933 C1907, C1908, C1920, C1923, C1924 C1935 C1932 C1913, C1914, C1961 C1939, C1963 C1949 C1921 C1919 C1946 C1967 C1972 C1969 C1966 C1947 C1948 C1954 C1955		CCSCH102J50 CCSQCH151J50 CCSQCH330J50 CCSQCH471J50 CCSQCH681J50 CEANL4R7M50 CEANP100M35 CEANPR33M50 CEAS010M50 CEAS100M50 CEAS100M50 CEAS101M16 CEAS221M10 CEAS221M16 CEAS2R2M50 CEAS470M25 CEAS471M16 CEAS4R7M50 CEASR15M50 CEASR22M50 CEJA4R7M50 CEYA3R3M50 CEYAR33M50 CFTXA103J50 CFTXA104J50 CFTXA104J50 CFTXA153J50 CFTXA154J50 CFTXA223J50 CFTXA333J50 CFTXA334J50 CFTXA473J50 CFTXA683J50 CKSQYB103K50 CKSQYB472K50 CKSQYB562K50 CKSQYF104Z50 CQMA392J50 CQMA472J50 CQMA562J50 CQMA682J50
RESISTORS			
	VR1901 Other Resistors		VRTB6VS473 RS1/10S□□□J

Mark	No.	Description	Parts No.
OTHERS			
	CN1903	8P PLUG	AKM1084
	CN1904	10P PLUG	AKM1085
	X1901	(8.00MHz)	ASS1015
DSP ASSY (AWX1066)			
SEMICONDUCTORS			
	IC216		LA2730
	IC213		LH5P832D-10T
	IC214		M5238PF
	IC207, IC208		MC14053BCP
	IC201-IC205		NJM4558DXP
	IC209, IC210, IC215		NJM4558LD
	IC212		PDQ001A
	IC206		UPC4570C
	D201-D206		HSS104-02
	D291, D292		RD5.1ESB1
COILS AND FILTERS			
	X201 (11.2MHz)		ASS1031
	F201-F203		ATF1011
CAPACITORS			
	C253-C255, C268, C270, C272		CCSQCH101J50
	C274-C279, C281, C283		CCSQCH101J50
	C304, C305		CCSQCH101J50
	C256		CCSQCH102J50
	C225, C226		CCSQCH181J50
	C209, C210, C246		CCSQCH221J50
	C257, C258		CCSQCH390J50
	C205, C206		CCSQCH391J50
	C244		CCSQCH561J50
	C229, C230		CCSQCH680J50
	C213, C214		CCSQSL470J50
	C361		CEAS010M50
	C306, C307, C357, C367-C369		CEAS100M50
	C263, C265, C267, C364		CEAS101M10
	C235, C236, C250, C251		CEAS101M16
	C363		CEAS220M50
	C302		CEAS2R2M50
	C312, C313		CEAS470M16
	C358		CEAS470M25
	C215, C216, C219, C220		CEAS4R7M50
	C231, C232, C247		CEAS4R7M50
	C359		CEASR33M50
	C223, C224, C227, C228		CKSQYB103K50
	C291, C292		CKSQYB103K50
	C356		CKSQYB122K50
	C245		CKSQYB123K50
	C211, C212		CKSQYB153K50
	C354, C370		CKSQYB273K50
	C362		CKSQYB333K50
	C201, C202, C221, C222		CKSQYB392K50
	C241, C296, C297, C365		CKSQYB472K50
	C217, C218, C233, C234		CKSQYB473K50
	C248, C249, C262, C264, C266		CKSQYB473K50
	C351, C352		CKSQYB473K50
	C207, C208, C355		CKSQYB562K50
	C243		CKSQYB681K50
	C203, C204, C371		CKSQYB682K50
	C242, C366		CKSQYB822K50
	C303, C308, C360		CKSQYF104Z50
	C259-C261		CQPA332G100

Mark	No.	Description	Parts No.
RESISTORS			
	R310		RD1 8PM101J
	R351, R364		RD1/8PM102J
	R362		RD1 8PM123J
	R245		RD1 8PM153J
	R291		RD1/8PM162J
	R355		RD1/8PM181J
	VR201		VRTB6VS103
	Other Resistors		RS1/10S□□□J
OTHERS			
	CN5	6P PLUG	AKM1083
	CN4	10P PLUG	AKM1085
	CN3	7P PLUG	AKM1109

2.1 EXPLODED VIEWS



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

2.2 SCHEMATIC AND PCB CONNECTION DIAGRAMS

1. OVERALL SCHEMATIC DIAGRAM

NOTE FOR SCHEMATIC DIAGRAMS

(Type 2A)

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

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

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

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

5. COILS:
Unit: m: mH or μH unless otherwise noted.
6. VOLTAGE AND CURRENT:
□ or - V :
DC voltage (V) at no input signal unless otherwise noted.
□ mA or - mA :
DC current at no input signal unless otherwise noted.
7. OTHERS:
• ○ or ● : Adjusting point.
• □ : Measurement point.
• The 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):

FRONT assy (FOR SP-J720K)

- S1251 KEY CONTROL
- S1252 BASS SYNTH LEVEL
- S1253 KARAOKE ECHO TONE
- S1254 EFFECT SELECTOR
- S1255 SFC LEVEL/DELAY LEVEL
- S1256 BASS ON/OFF
- S1257 KARAOKE MPX
- S1258 GEQ CONTROL ➡
- S1259 GEQ CONTROL ➡
- S1260 SET
- S1261 KARAOKE MODE (VOCAL)
- S1262 GEQ FLAT
- S1264 SCENE SELECTOR

FRONT assy (FOR SP-J420)

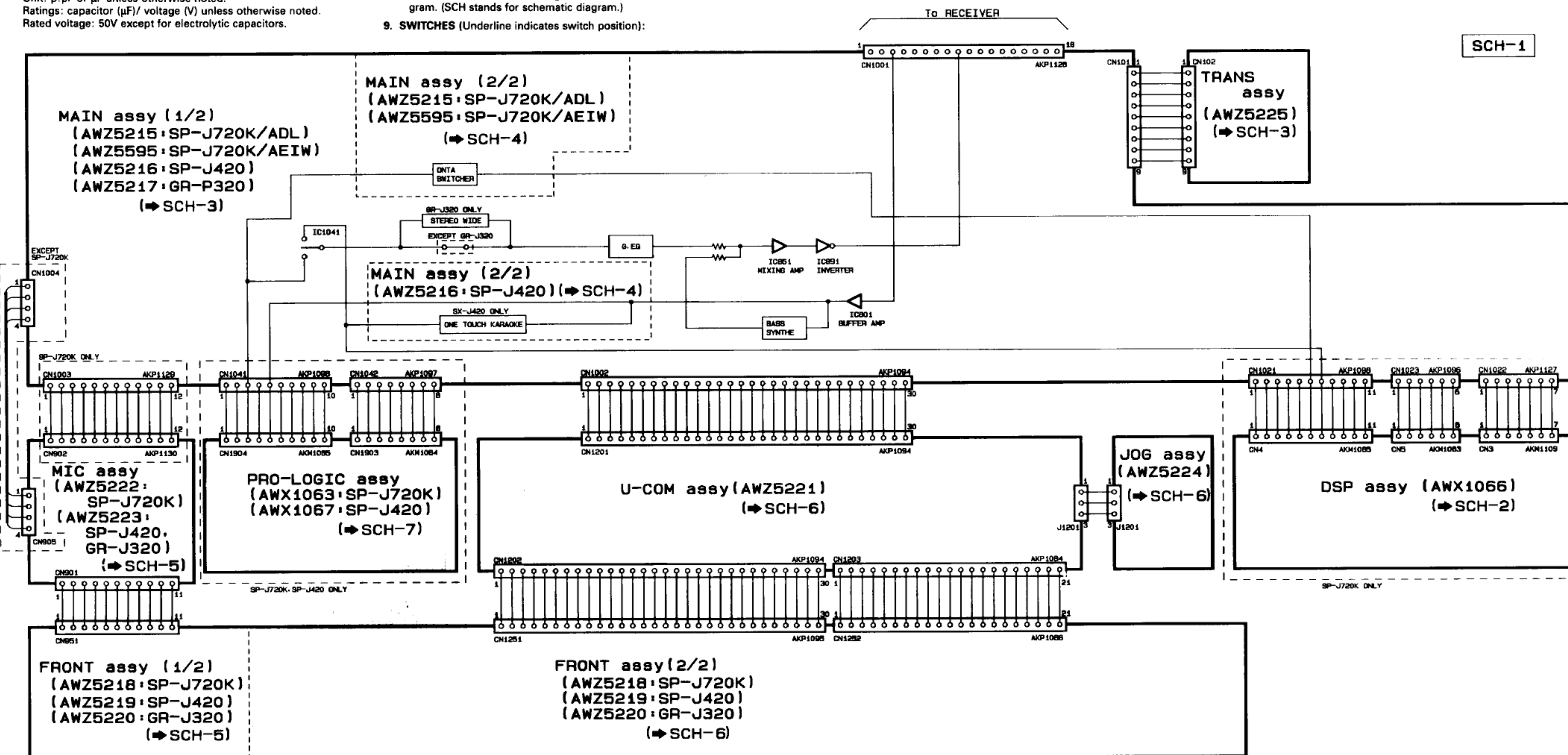
- S1251 DELAY
- S1252 BASS SYNTH LEVEL
- S1254 EFFECT SELECTOR
- S1255 SFC LEVEL
- S1256 BASS ON/OFF
- S1258 GEQ CONTROL ➡
- S1259 GEQ CONTROL ➡
- S1260 SET
- S1262 GEQ FLAT
- S1264 SCENE SELECTOR

FRONT assy (FOR GR-J320)

- S1252 GEQ FLAT
- S1255 SFC LEVEL
- S1258 GEQ CONTROL ➡
- S1259 GEQ CONTROL ➡
- S1260 SET
- S1264 EFFECT SELECTOR

JOG assy

- S1301 SOUND JOG



SCH-1

OVERALL SCHEMATIC DIAGRAM

SCH-1

OVERALL SCHEMATIC DIAGRAM

—To MAIN assay CN1051

(YJNO KOSTL-92) yssas 92D

To MAIN assay C11053

- To MAIN assay CN1055

ANP 1715-E

IC505 IC506 IC507 IC508 IC509 IC504 IC501 IC512 IC516 IC515 IC513

MEMORANDUM

— X V V A

IC512 IC516

10581

IC515

ENCLOSURE

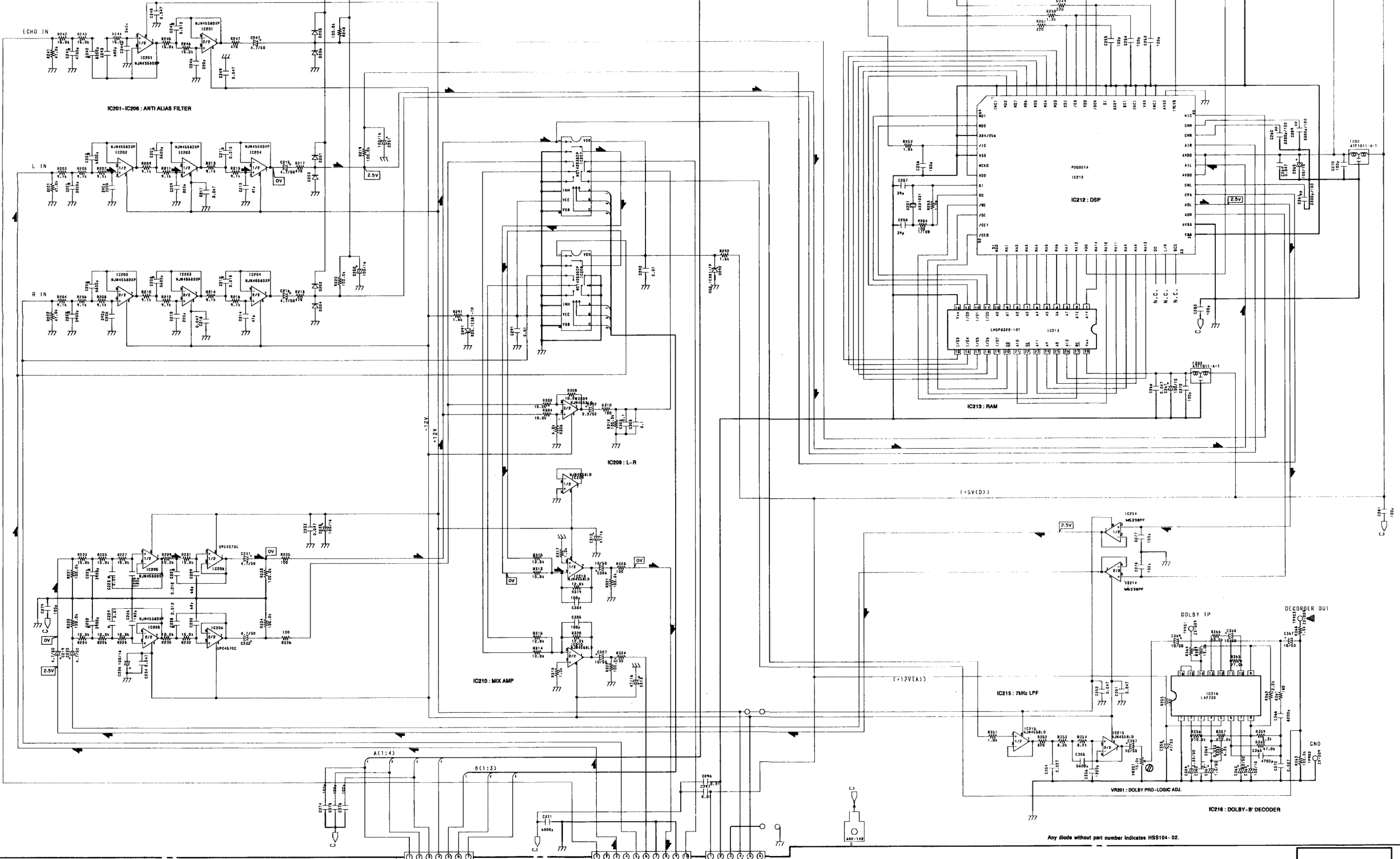
2-8

SP-J720K ONLY

DSP assy (AWX1066)

	SW COM1	SW COM2	SW COM3
HIFI	H	L	H
MOVIE	H	H	H
KARAOKE	H	H	L
DOLBY	L	L	L

SIGNAL ROUTE
▲ : AUDIO SCENE (EFFECT ON)



SCH-2

DSP ASSY

To MAIN assy (1/2) CN1022 (SCH-3)

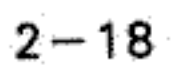
To MAIN assy (1/2) CN1021 (SCH-3)

To MAIN assy (1/2) CN1023 (SCH-3)

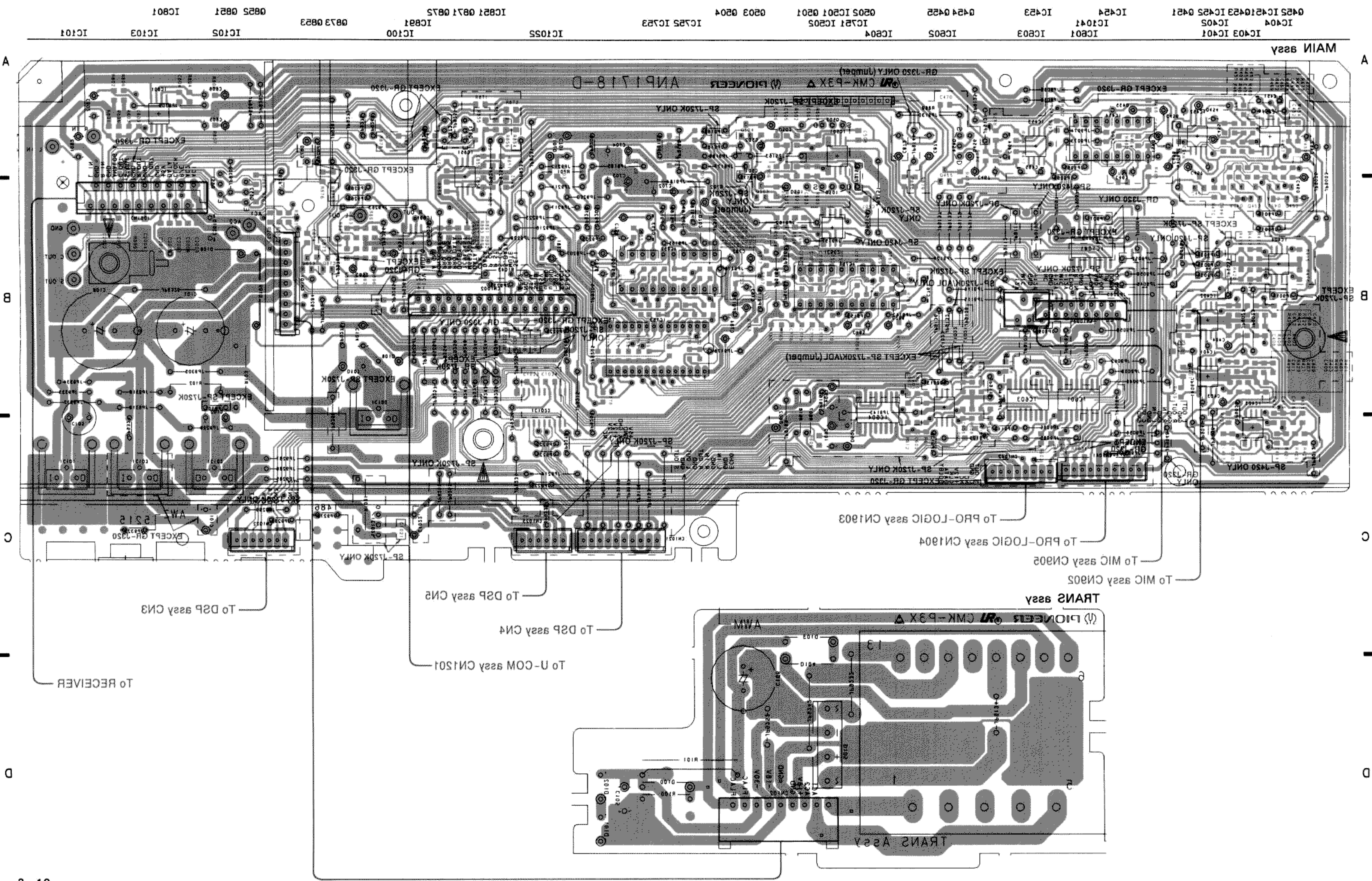
DSP ASSY

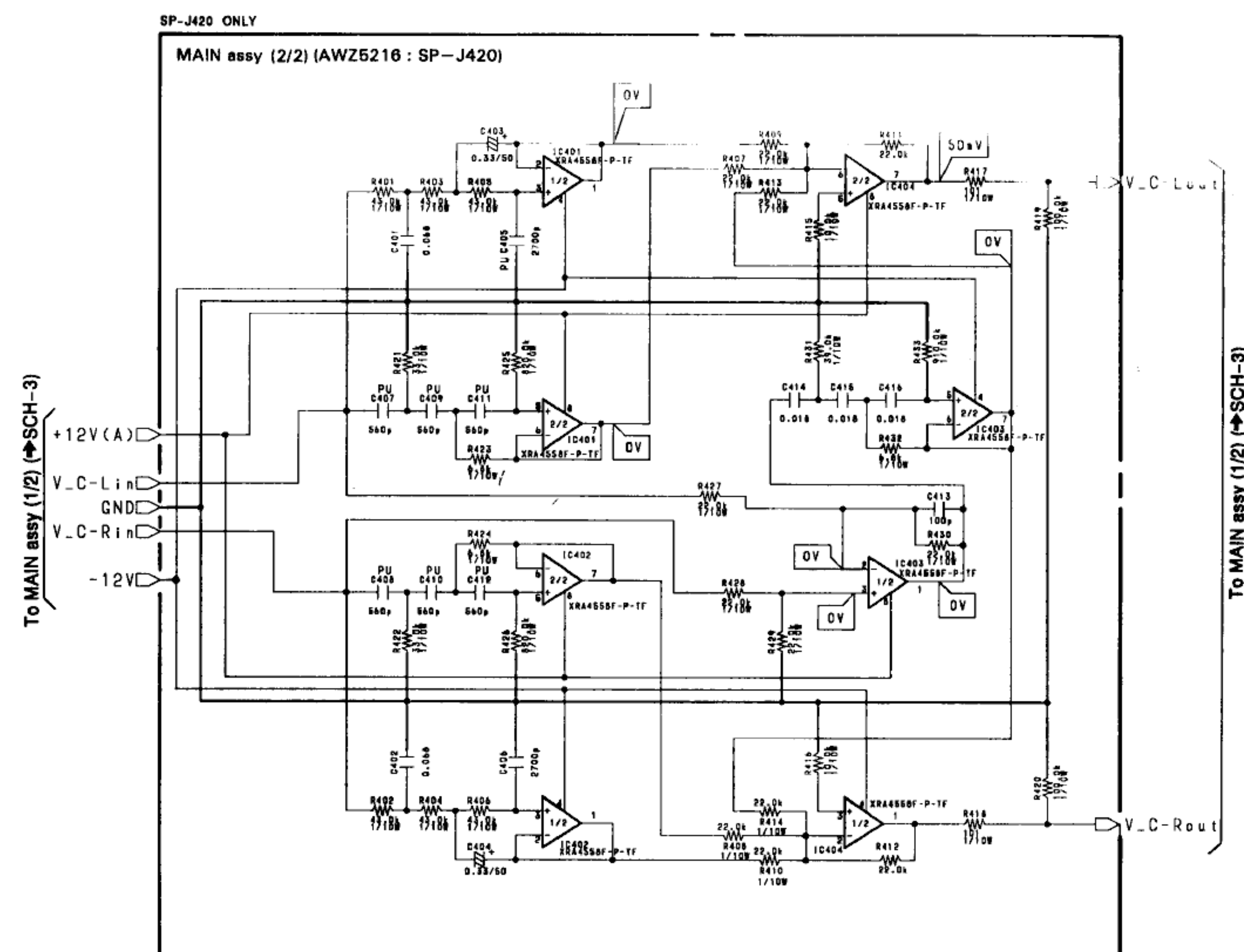
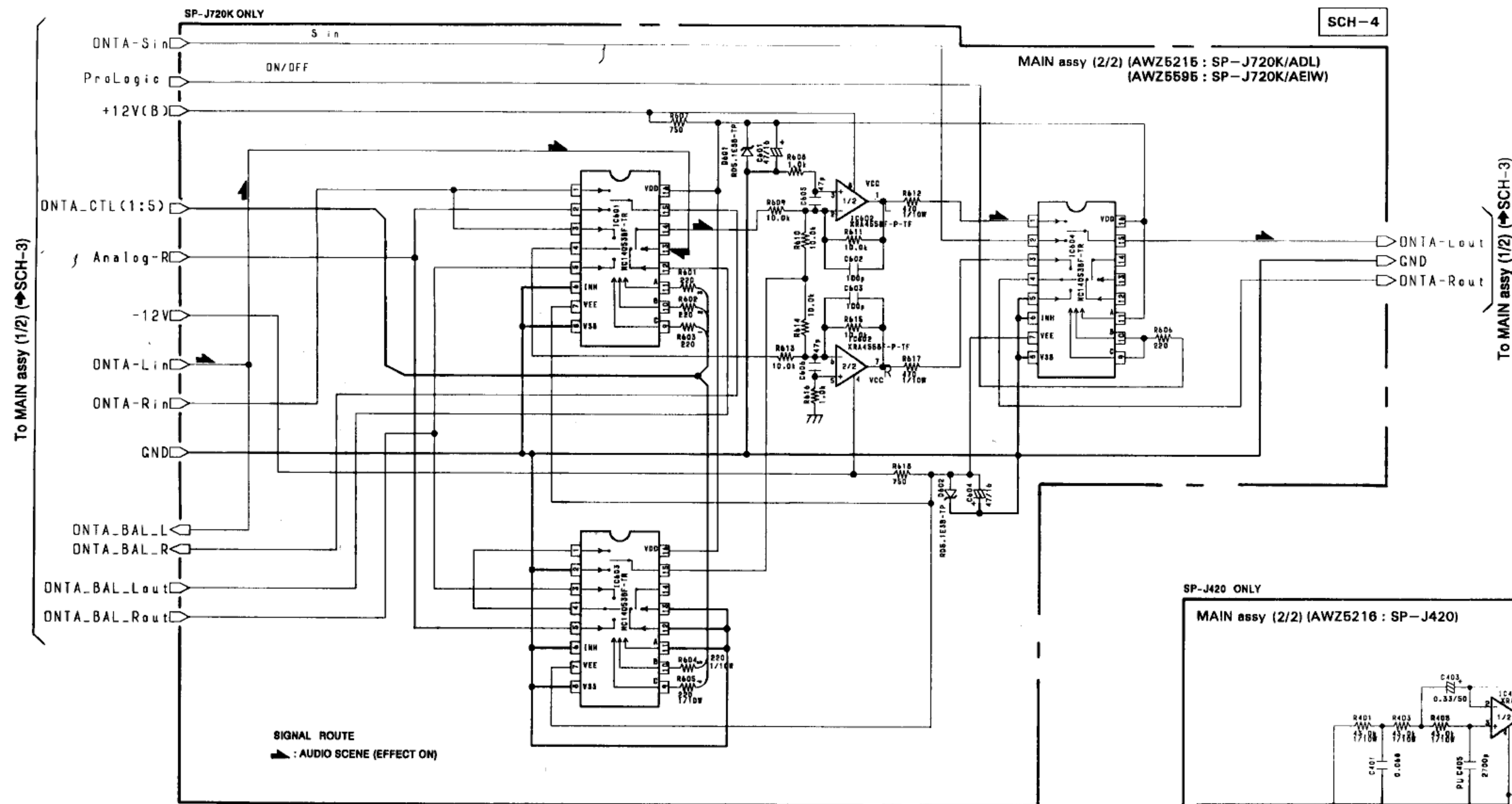
SCH-2

2-18



● This diagram is viewed from the foil side.





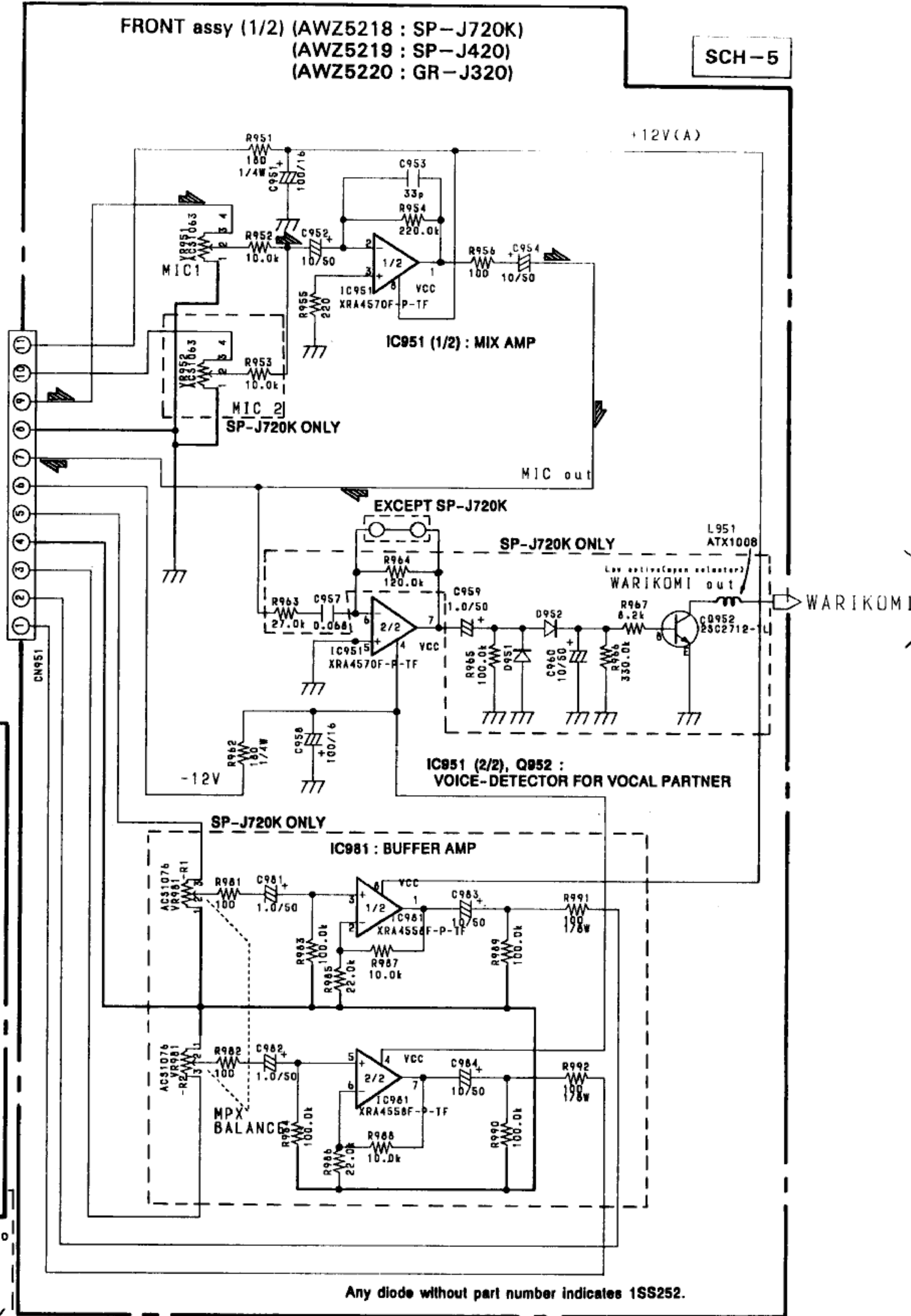
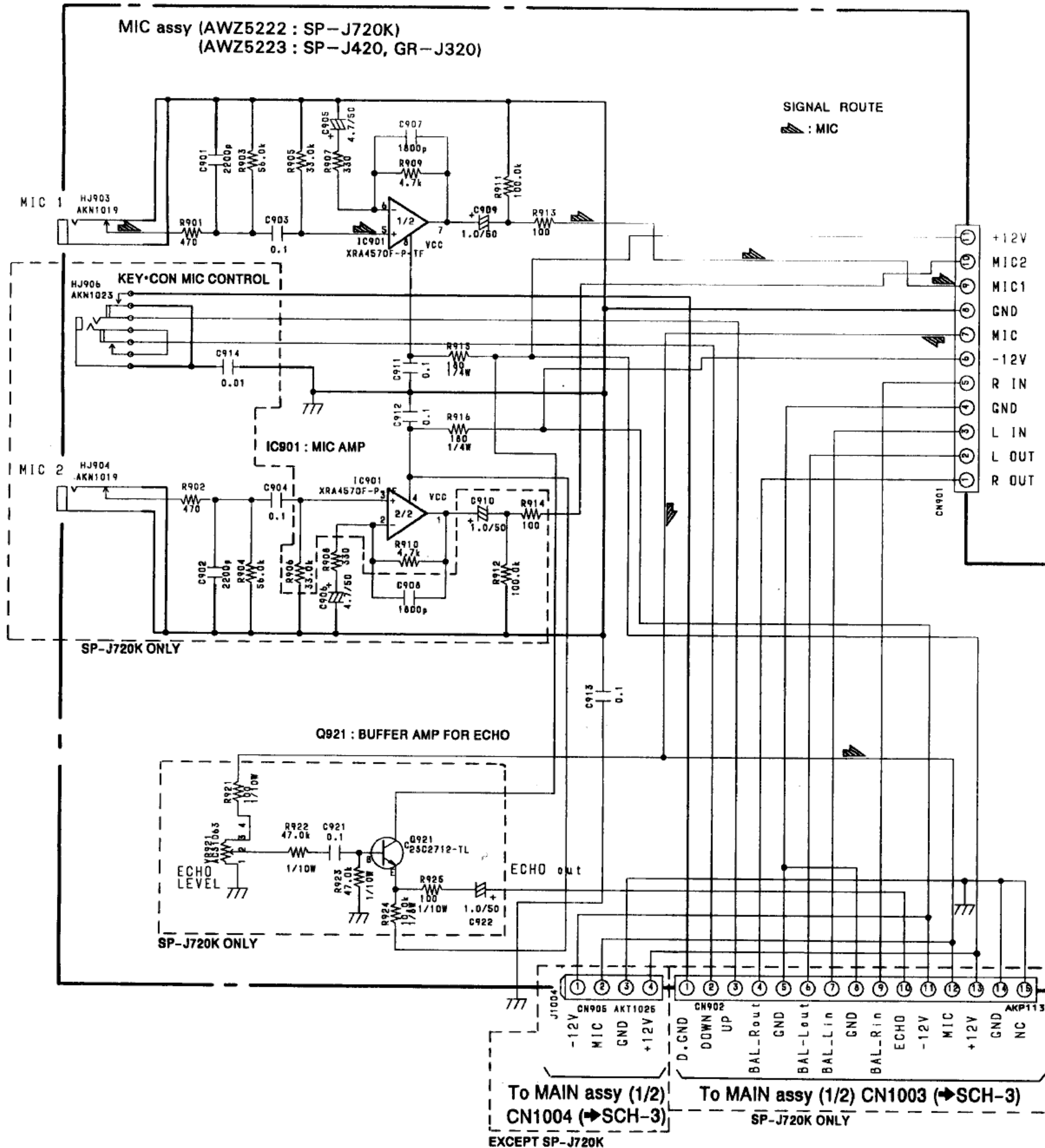
SCH-4

MAIN ASSY (2/2)

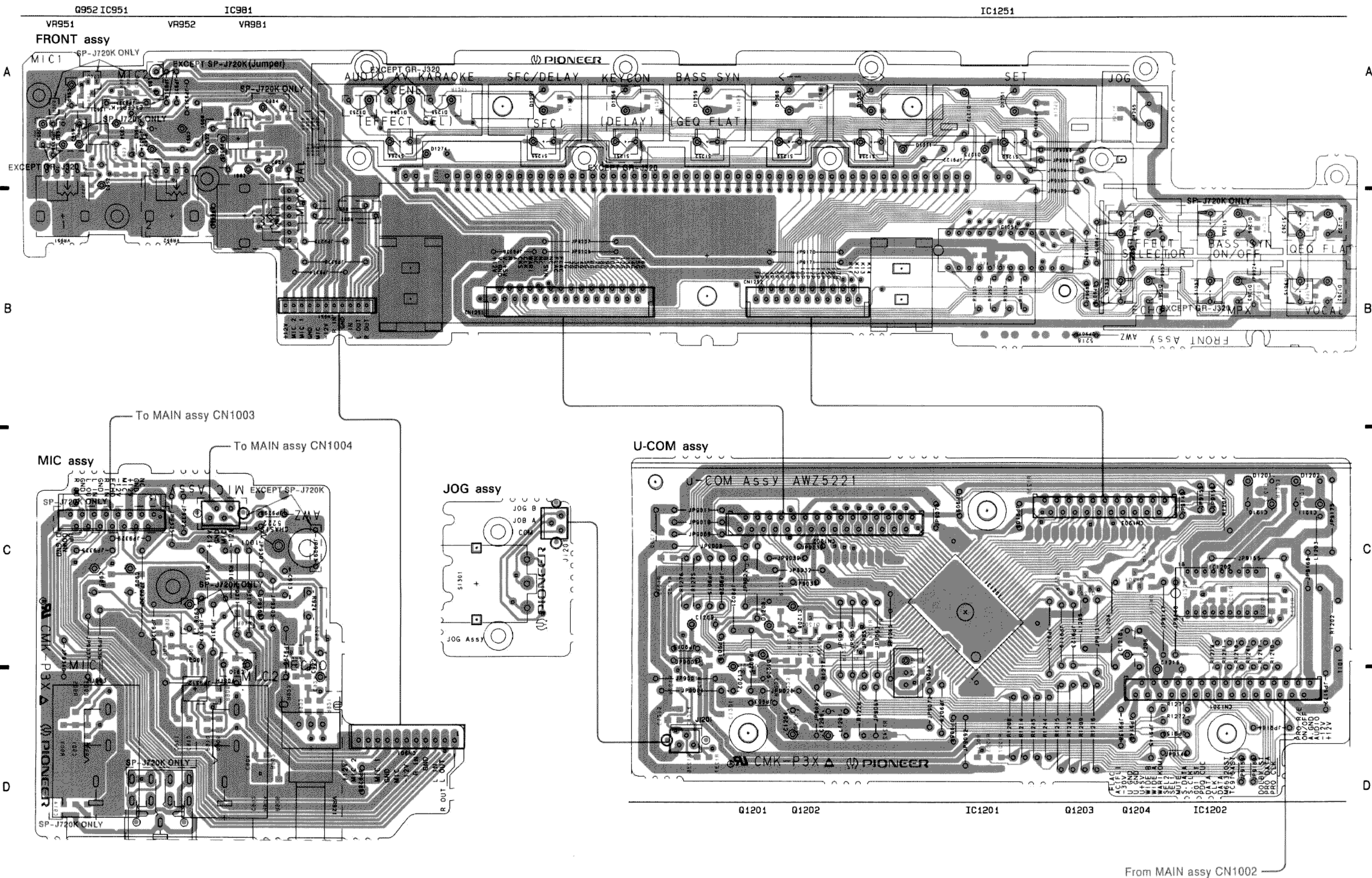
SCH-4

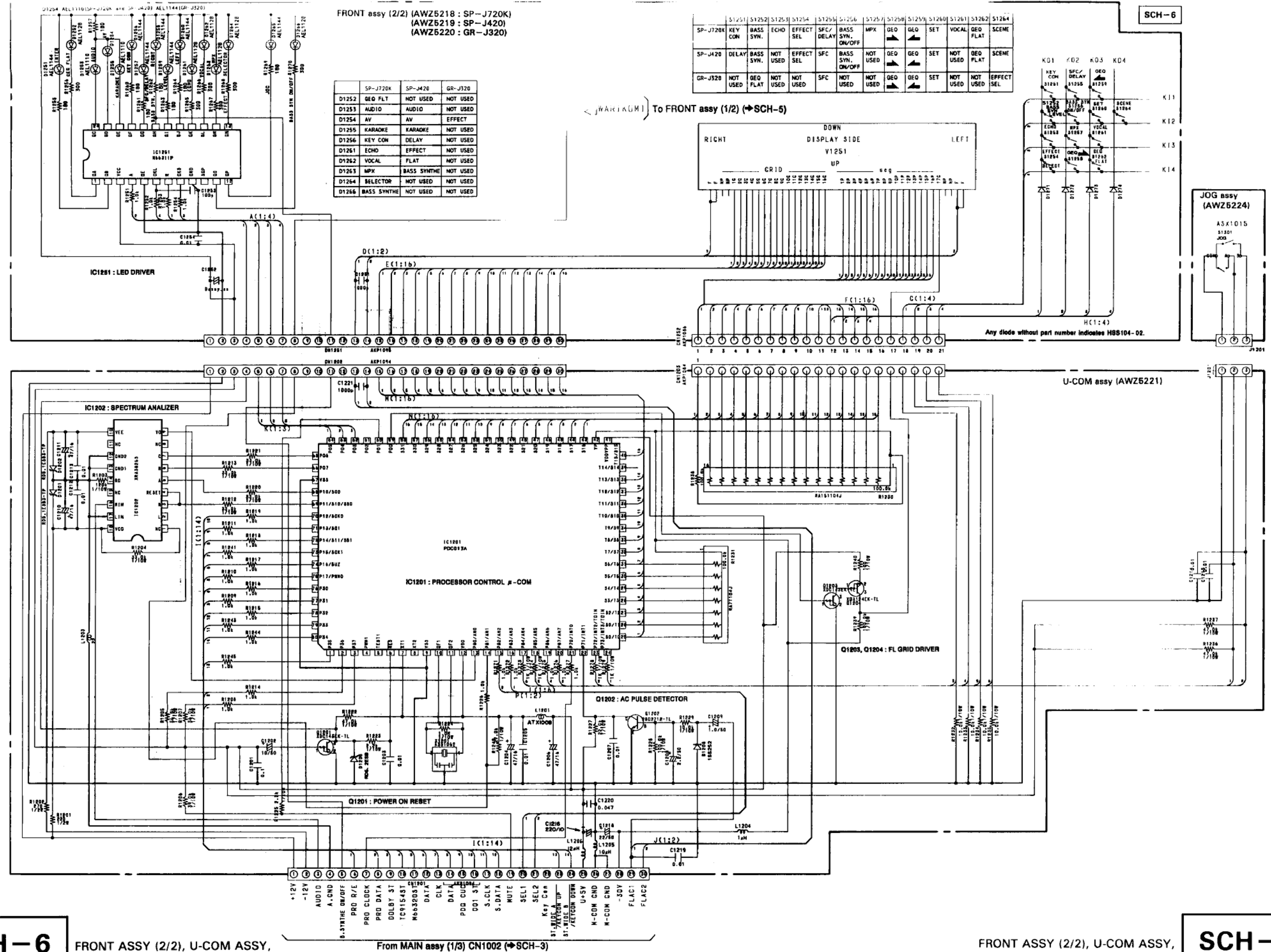
MAIN ASSY (2/2)

4. FRONT ASSY, U-COM ASSY, JOG ASSY, MIC ASSY



This diagram is viewed from the mounted parts side.





SCH-6

FRONT ASSY (2/2), U-COM ASSY,
JOG ASSY

SCH-6

FRONT ASSY (2/2), U-COM ASSY,
JOG ASSY

5. PRO-LOGIC ASSY

A

B

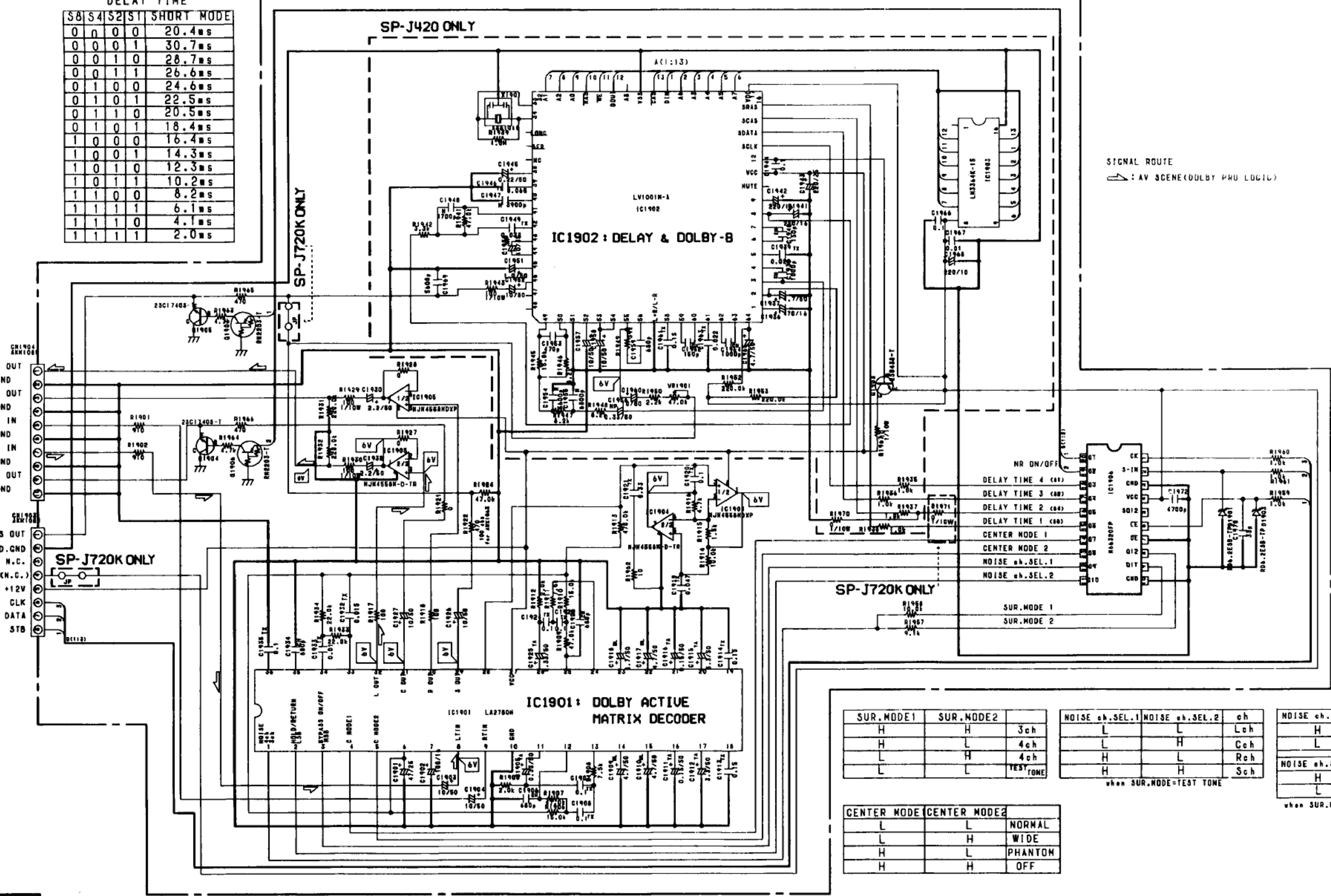
C

D

LV1001
DELAY TIME

S8	S4	S2	S1	SHORT MODE
0	0	0	0	20.4ms
0	0	0	1	30.7ms
0	0	1	0	28.7ms
0	0	1	1	26.6ms
0	1	0	0	24.6ms
0	1	0	1	22.5ms
0	1	1	0	20.5ms
0	1	1	1	18.4ms
1	0	0	0	16.4ms
1	0	0	1	14.3ms
1	0	1	0	12.3ms
1	0	1	1	10.2ms
1	1	1	1	6.1ms
1	1	1	0	4.1ms
1	1	1	1	2.0ms

PRO-LOGIC ASSY (AWX1063:SP-J720K)
(AWX1067:SP-J420)



SIGNAL ROUTE
: AV SCENE(DOLBY PRO LOGIC)

SUR.MODE1	SUR.MODE2	
H	H	3ch
H	L	4ch
L	L	TEST TONE

NOISE ch.SEL.1	NOISE ch.SEL.2	ch
L	L	Lch
L	H	Cch
H	L	Rch
H	H	Sch

when SUR.MODE=TEST TONE

NOISE ch.SEL.1	
H	BYPASS OFF
L	BYPASS ON

NOISE ch.SEL.2	
H	RETURN
L	HOLD

when SUR.MODE=3ch or 4ch

CENTER MODE	CENTER MODE2	
L	L	NORMAL
L	H	WIDE
H	L	PHANTOM
H	H	OFF

SCH-7

PRO-LOGIC ASSY

SCH-7

PRO-LOGIC ASSY

A

A

B

B

C

C

D

D

To MAIN assy CN1042

To MAIN assy CN1041

PRO-LOGIC assy

SP-J720K ONLY

SP-J720K ONLY

SP-J420 ONLY

SP-J720K ONLY

VR1901

Q1904-Q1907

IC1906

IC1904

IC1905 IC1901

IC1902

IC1903

Q1903

- This diagram is viewed from the mounted parts side.

A

A

B

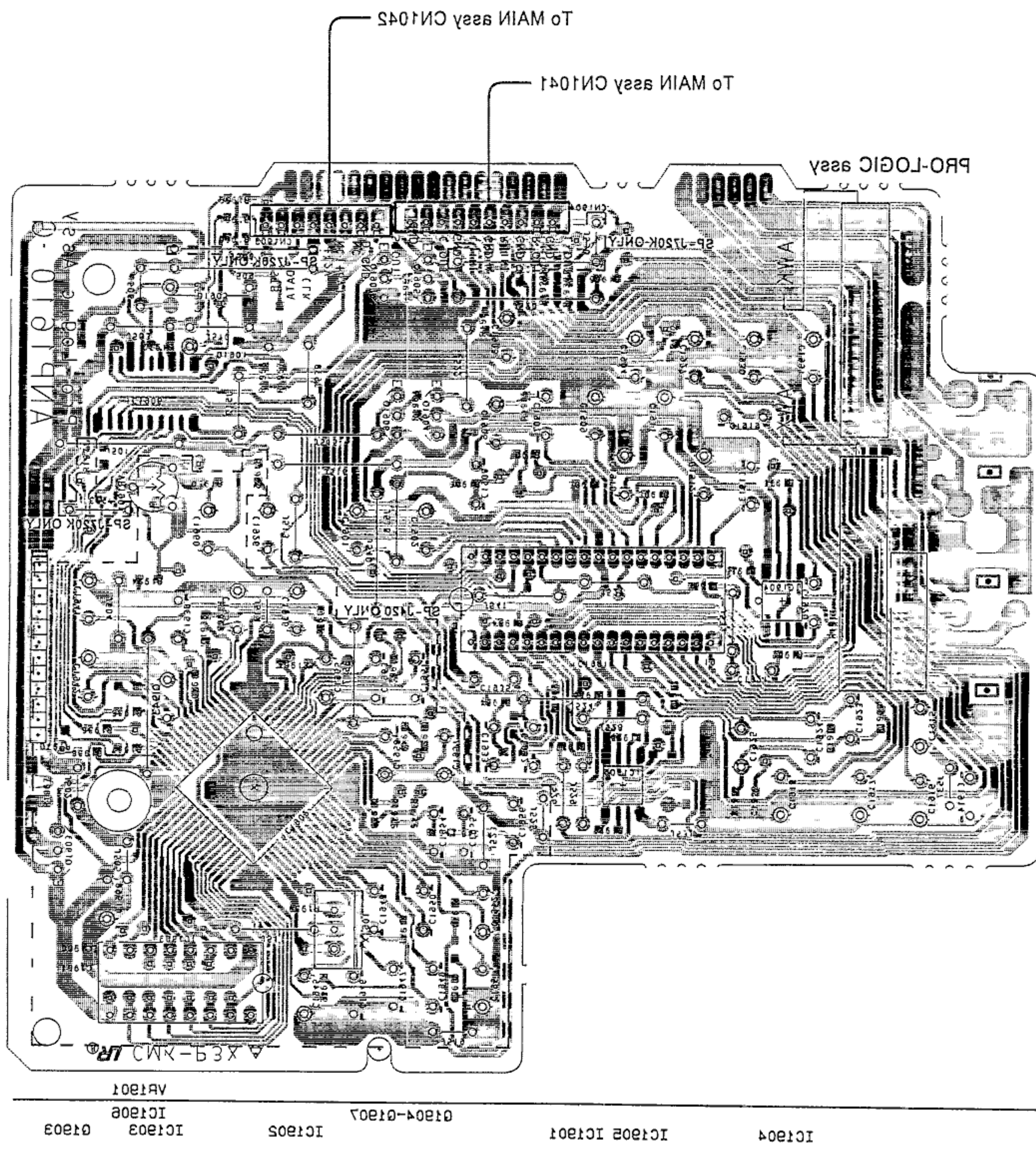
B

C

C

D

D



• This diagram is viewed from the foil side.