

TA-FB720R/FB820R

SERVICE MANUAL

AEP Model



Photo : TA-FB820R

SPECIFICATIONS

Amplifier section

DIN power output

TA-FB820R: 100 W + 100 W (4 ohms at 1 kHz)
65 W + 65 W (8 ohms at 1 kHz)
TA-FB720R: 90 W + 90 W (4 ohms at 1 kHz)
60 W + 60 W (8 ohms at 1 kHz)

Total harmonic distortion

Less than 0.008% (at 10 W output)

Frequency response

PHONO (20 Hz - 20 kHz): RIAA equalization curve
 ± 0.5 dB
TUNER, CD, AUX, TAPE1/DAT, TAPE2/MD:
7 Hz - 100 kHz ± 3 dB

S/N (network A)

PHONO
TA-FB820R: 94 dB
TA-FB720R: 90 dB
TUNER, CD, AUX, TAPE1/DAT, TAPE2/MD:
105 dB

Output voltage / impedance

REC OUT 1, 2: 150 mV, 1 kilohm
PHONES: 10 mW (at 8 ohms)

Speakers impedance

4 - 16 ohms, 8 - 16 ohms (SPEAKERS A+B)

Damping factor

100 (8 ohms, 1 kHz)

General

System

Power amplifier: Pure-complementary SEPP OCL
power amplifier with all stages directly coupled
Preamplifier: Low-noise, equalizer amplifier

Power requirements

230 V AC, 50/60 Hz

Power consumption

TA-FB820R: 180 W
TA-FB720R: 170 W

Dimensions (approx.) (w/h/d)

430 × 150 × 405 mm incl.
projecting parts and controls

Mass (approx.)

TA-FB820R: 9.3 kg
TA-FB720R: 8.6 kg

Supplied accessories

- Remote commander (remote) (1) RM-S316
- Sony batteries R6 (size-AA) (2)

Design and specifications are subject to change without notice.

INTEGRATED STEREO AMPLIFIER



SONY®

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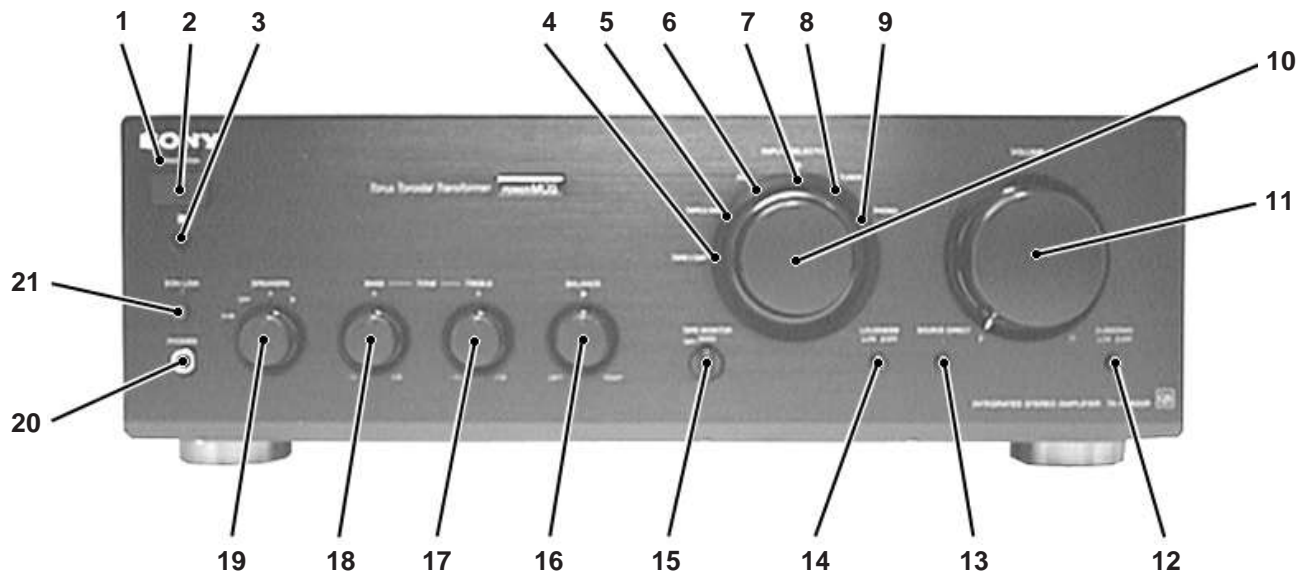
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SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK \triangle OR DOTTED LINE WITH MARK \triangle ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SECTION 1 GENERAL

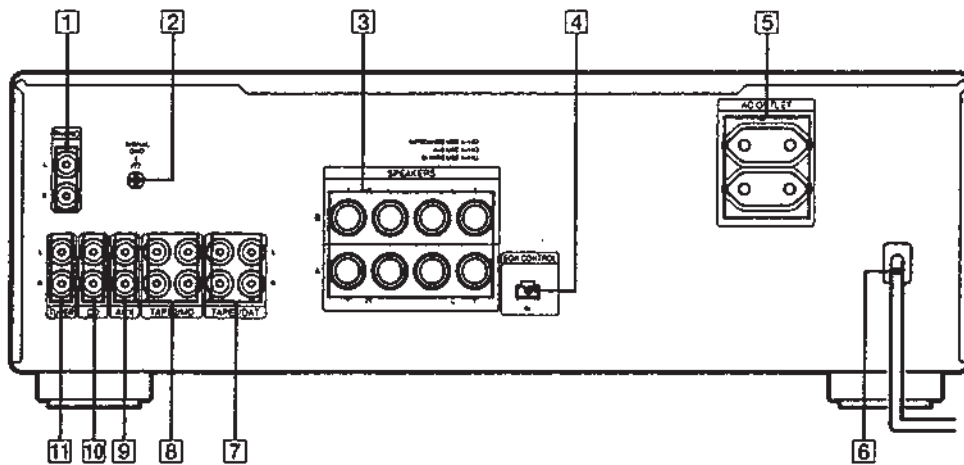
Front Panel Descriptions



- | | |
|------------------------|---------------------------------------|
| 1 PROTECTION indicator | 12 SUBSONIC button |
| 2 Ⓟ (Power) button | 13 SOURCE DIRECT button and indicator |
| 3 Remote sensor | 14 LOUDNESS button |
| 4 TAPE 1/DAT indicator | 15 TAPE MONITOR knob |
| 5 TAPE 2/MD indicator | 16 BALANCE knob |
| 6 AUX indicator | 17 TREBLE knob |
| 7 CD indicator | 18 BASS knob |
| 8 TUNER indicator | 19 SPEAKERS knob |
| 9 PHONO indicator | 20 PHONE jack |
| 10 INPUT SELECTOR knob | 21 EON LINK button |
| 11 VOLUME knob | |

This section is extracted from instruction manual.

Rear Panel Descriptions



- | | |
|------------------|--------------|
| 1 PHONO | 6 Mains lead |
| 2 Ⓜ (SIGNAL GND) | 7 TAPE1/DAT |
| 3 SPEAKERS A/B | 8 TAPE2/MD |
| 4 EON CONTROL IN | 9 AUX |
| 5 AC OUTLET | 10 CD |
| | 11 TUNER |

SECTION 2 ELECTRICAL ADJUSTMENT

Bias Adjustment



NOTE:

1. Perform the adjustment after the unit has warmed up sufficiently.
2. Perform the bias adjustment if the power transistor has been replaced.

Procedure:

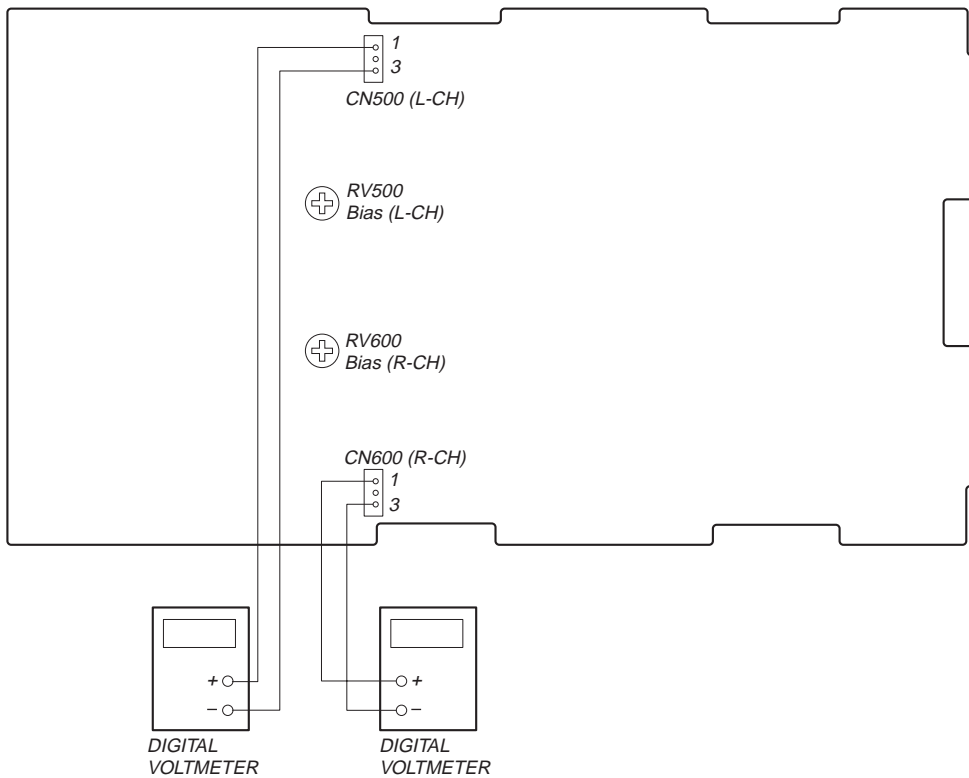
1. Rotate fully the bias adjusting semi-fixed resistors (RV500, RV600) to the MIN position (counterclockwise).
2. Connect a digital voltmeter to the CN500 and CN600.

	1 pin	3 pin
CN500 (L-CH)	+	-
CN600 (R-CH)	+	-

3. Set the slide regulator to 0V, and press the  button (ON) on the set.
4. Raise gradually the slide regulator voltage up to the rated voltage.
5. At this time, confirm that the SP relay is turned on (it will click).
6. Adjust the RV500 and RV600 so that a reading of digital voltmeter is 10 ± 0.1 mV.
7. Return the slidack to 0 V, and press the  button (OFF) on the set.

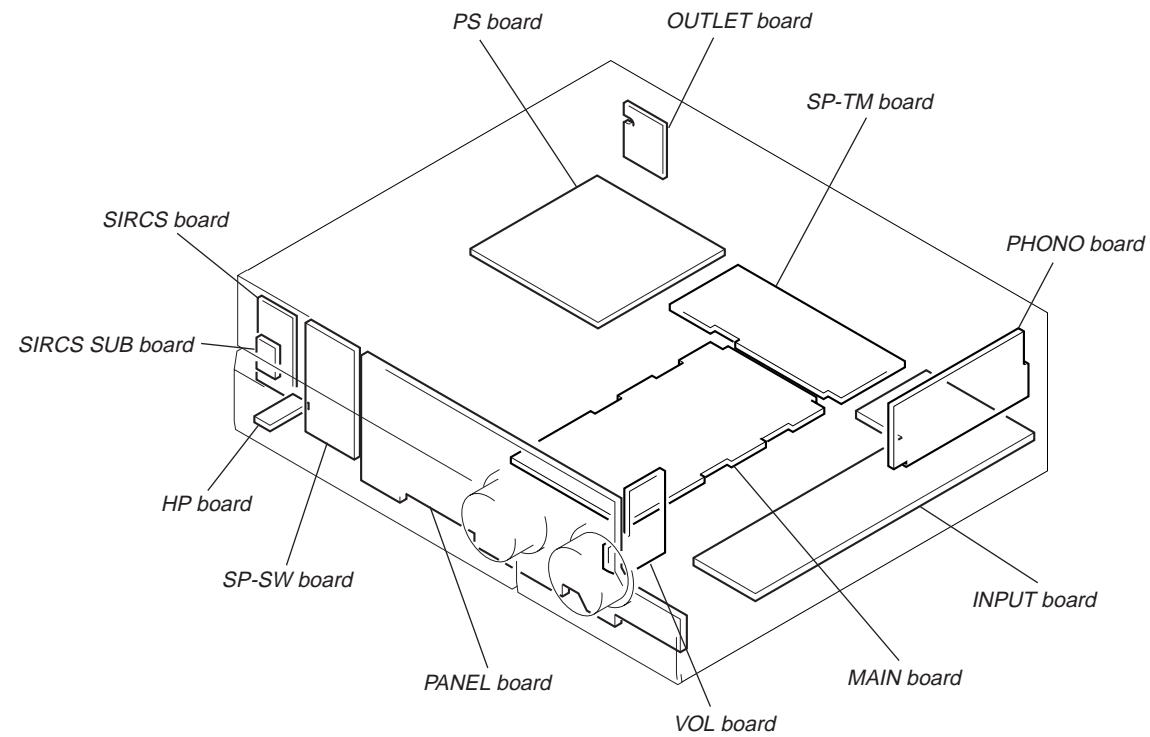
Adjustment Location :

[MAIN BOARD] – COMPONENT SIDE –



SECTION 3 DIAGRAMS




3-1. CIRCUIT BOARDS LOCATION







THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

For schematic diagrams.

Note:




- All capacitors are in μF unless otherwise noted. pF: $\mu\mu\text{F}$ 50 W or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $1/4\text{W}$ or less unless otherwise specified.
- Δ : internal component.
-  : nonflammable resistor.
-  : fusible resistor.
-  : panel designation.

Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety.
Replace only with part number specified.

-  : B+ Line.
-  : B- Line.
-  : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
no mark : POWER ON
- Voltages are taken with a VOM (Input impedance $10\text{M}\Omega$).
Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
 : TUNER

For printed wiring boards.

Note:

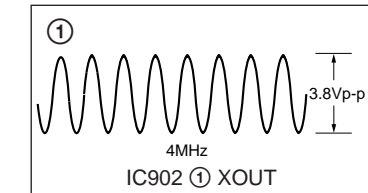
-  : parts extracted from the component side.
-  : parts extracted from the conductor side.
-  : Pattern from the side which enables seeing.

Indication of transistor

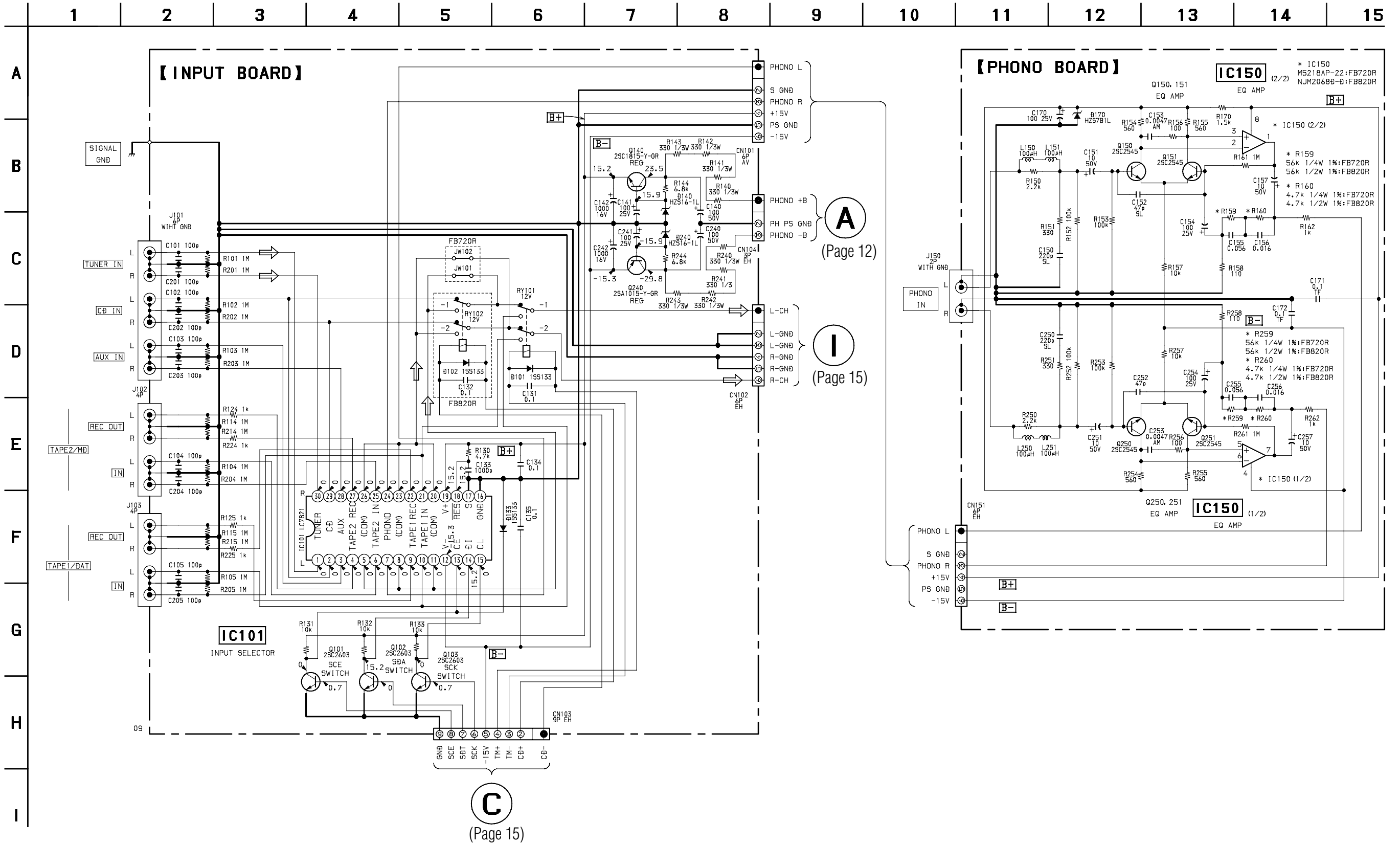


These are omitted

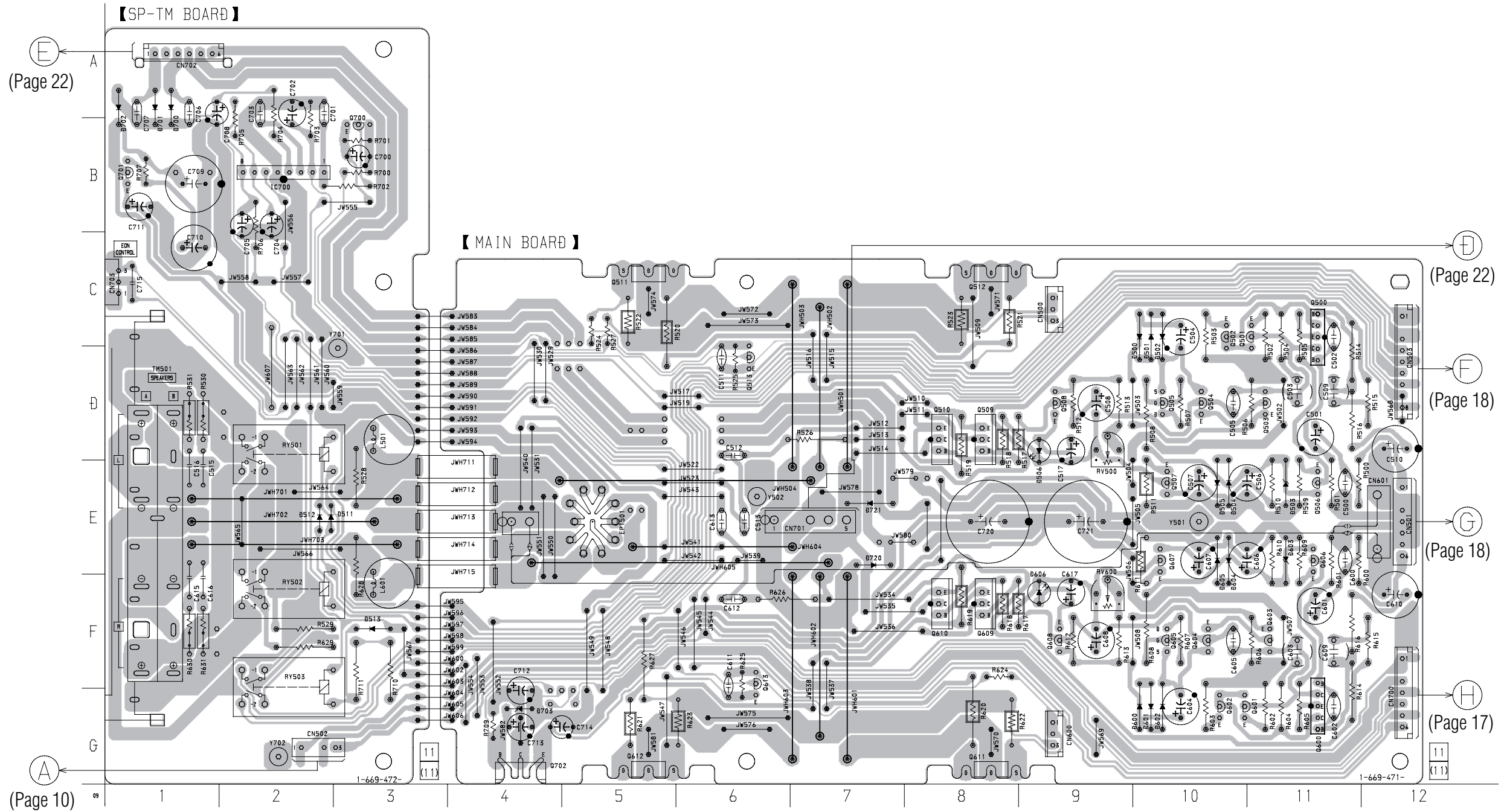
WAVEFORM



3-2. SCHEMATIC DIAGRAM – INPUT SECTION –
 • See page 23 for IC Block Diagrams.



3-5. PRINTED WIRING BOARD – MAIN SECTION –
 • See page 5 for Circuit Boards Location.

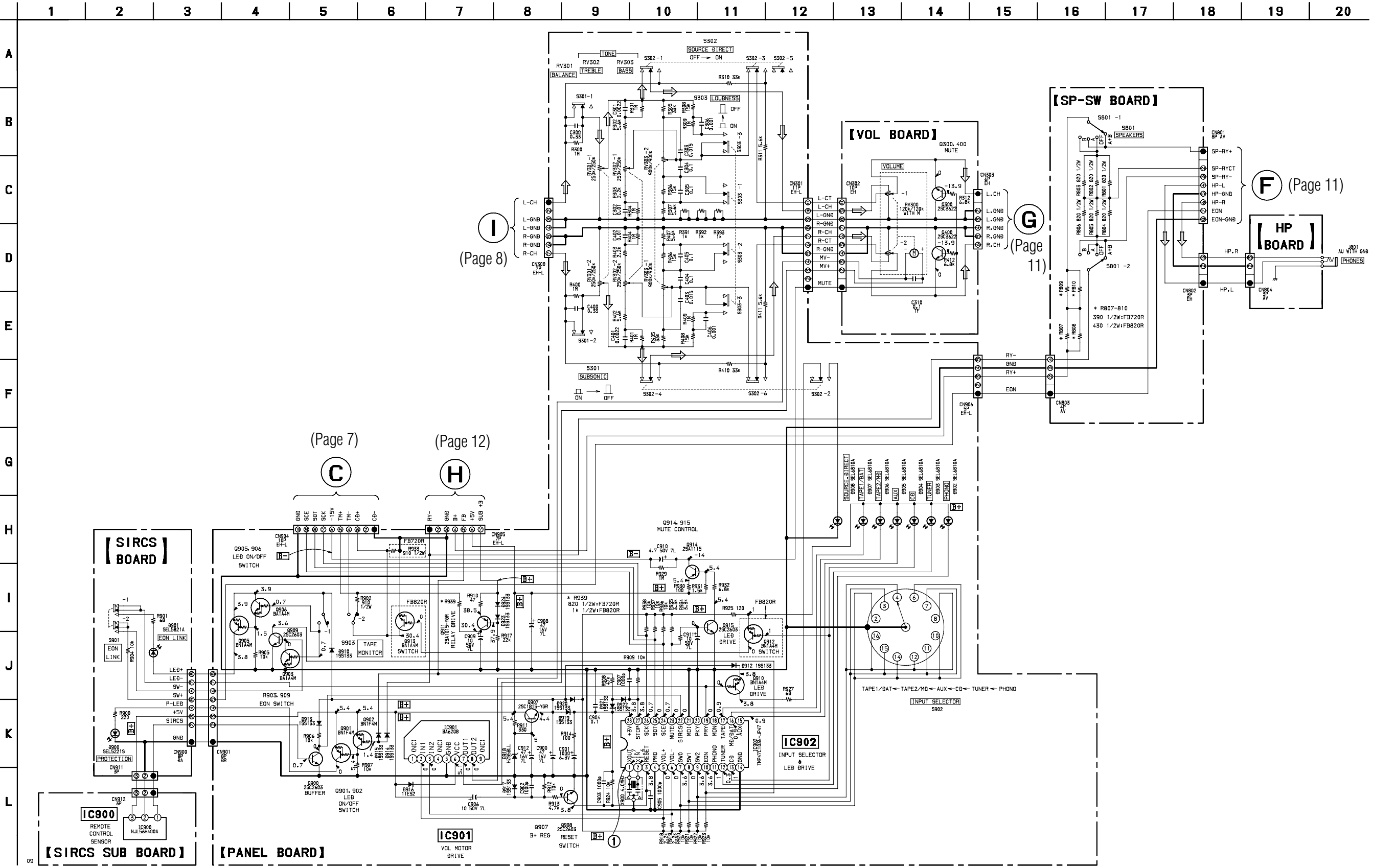


• Semiconductor Location

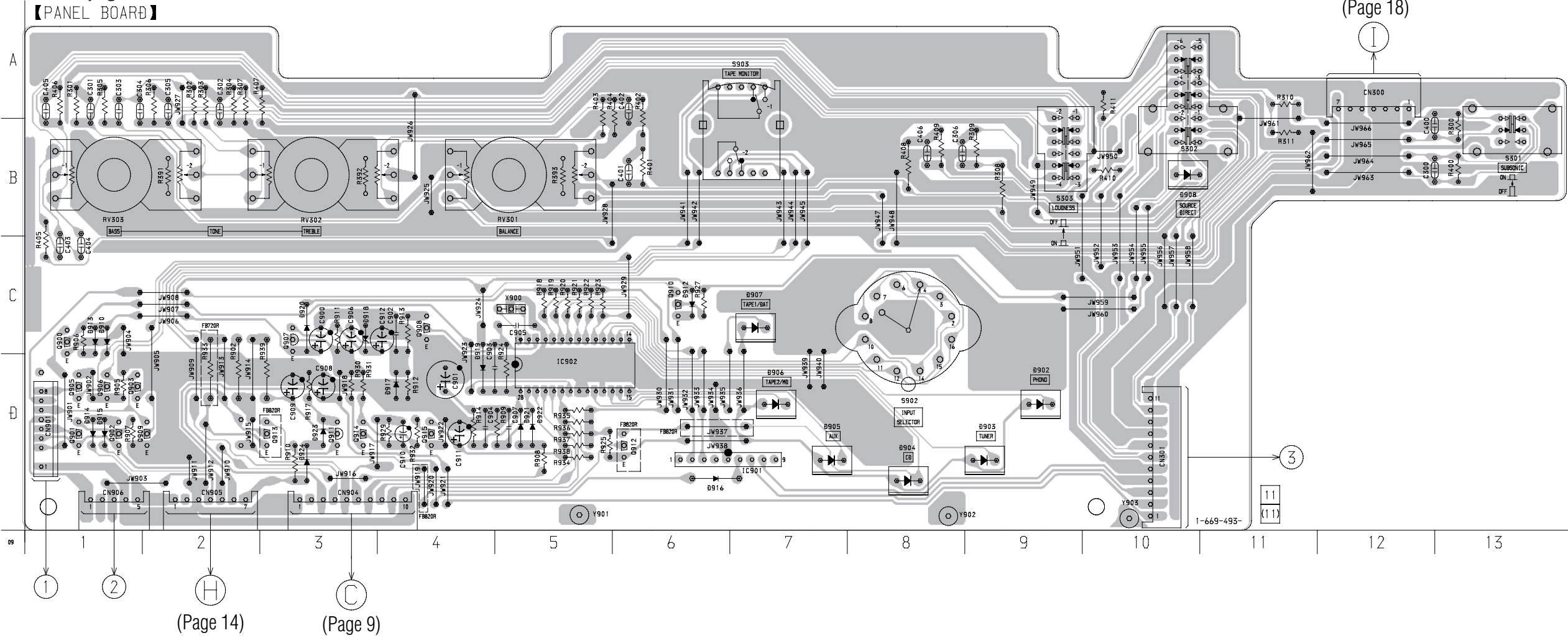
Ref. No.	Location
D500	C-10
D501	C-10
D502	C-10
D503	E-11
D504	E-10
D505	E-10
D506	D-9
D511	E-2
D512	E-2
D513	F-3
D600	G-10
D601	G-10
D602	G-10
D603	E-11
D604	E-10
D605	E-10
D606	F-9
D700	A-1
D701	A-1
D702	A-1
D703	G-4
D720	E-7
D721	E-7
IC700	B-2
Q500	C-11
Q501	C-11
Q502	C-10
Q503	D-11
Q504	D-10
Q505	D-10
Q506	E-11
Q507	E-10
Q508	D-9
Q509	D-8
Q510	D-8
Q511	C-5
Q512	C-8
Q513	D-6
Q600	G-11
Q601	G-11
Q602	G-10
Q603	F-11
Q604	F-10
Q605	F-10
Q606	E-11
Q607	E-10
Q608	F-9
Q609	F-8
Q610	F-10
Q611	G-8
Q612	G-5
Q613	F-6
Q700	B-3
Q701	B-1
Q702	G-4

3-6. SCHEMATIC DIAGRAM – PANEL SECTION –

- See page 5 for Waveforms.
- See page 23 for IC Block Diagram.
- See page 24 for IC Pin Function.

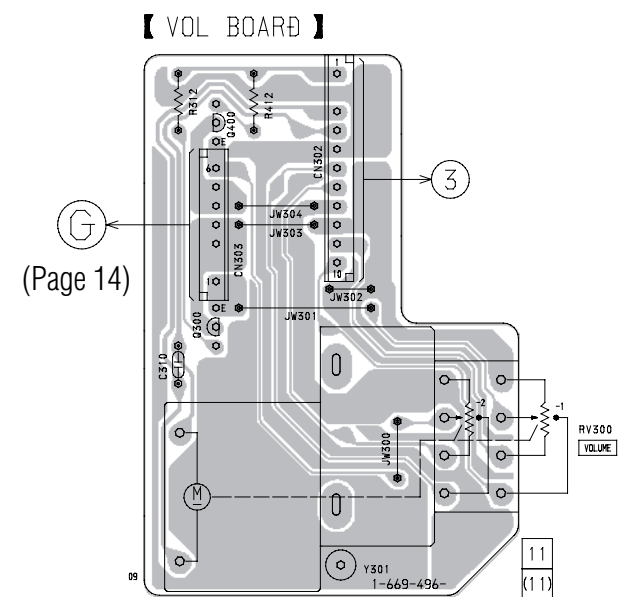
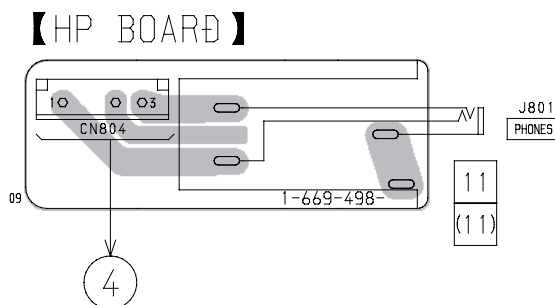
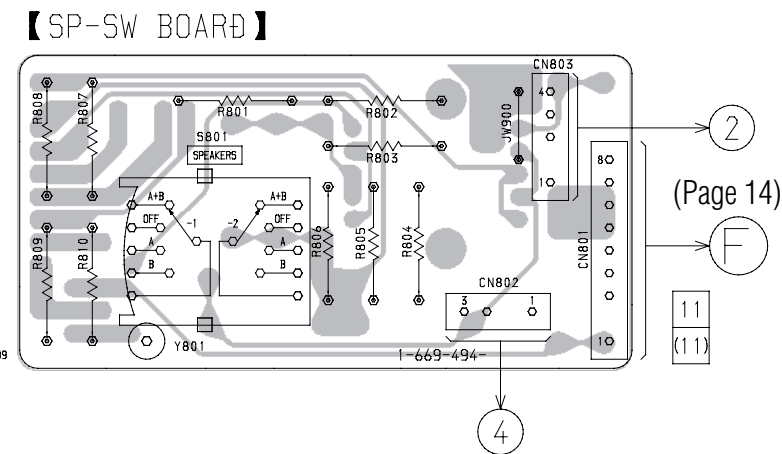
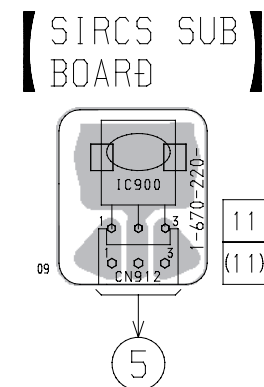
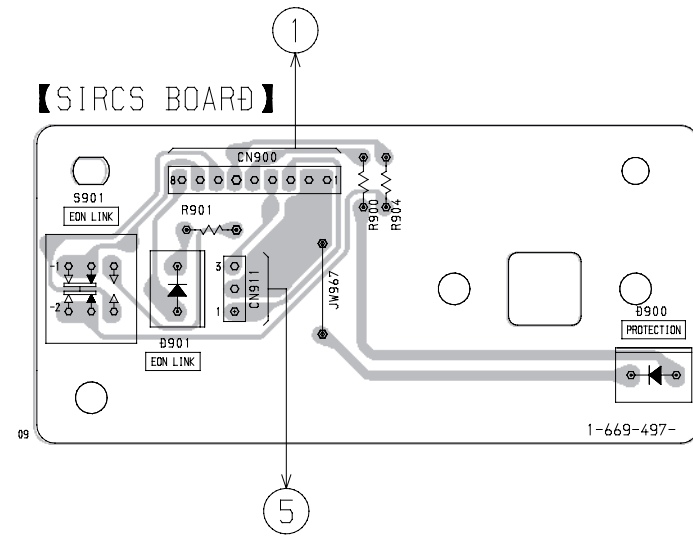


3-7. PRINTED WIRING BOARD – PANEL SECTION –
 • See page 5 for Circuit Boards Location.

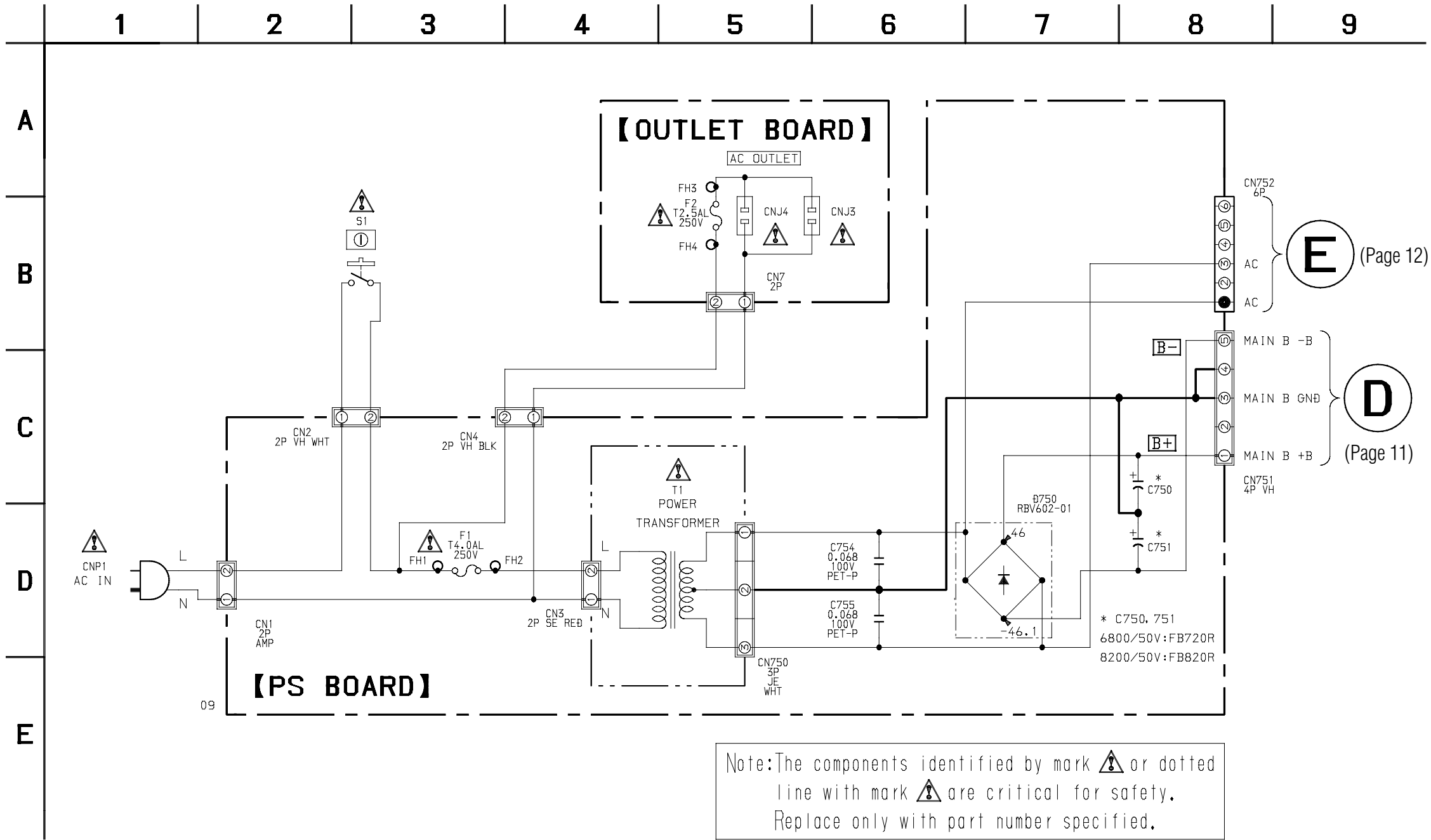


• Semiconductor Location

Ref. No.	Location
D902	D-9
D903	D-9
D904	E-8
D905	D-7
D906	D-7
D907	C-7
D908	B-10
D910	C-1
D912	C-6
D913	C-1
D914	D-1
D915	D-1
D916	E-6
D917	D-4
D918	C-3
D919	D-4
D920	C-3
D921	D-5
D922	D-5
D923	D-3
D924	D-3
IC901	D-7
IC902	D-5
Q900	C-1
Q901	D-1
Q902	D-1
Q903	D-1
Q905	D-1
Q906	D-1
Q907	C-3
Q908	C-4
Q909	D-2
Q910	C-6
Q911	D-3
Q912	D-6
Q913	D-3
Q914	D-3
Q915	D-4



3-8. SCHEMATIC DIAGRAM – POWER SECTION –

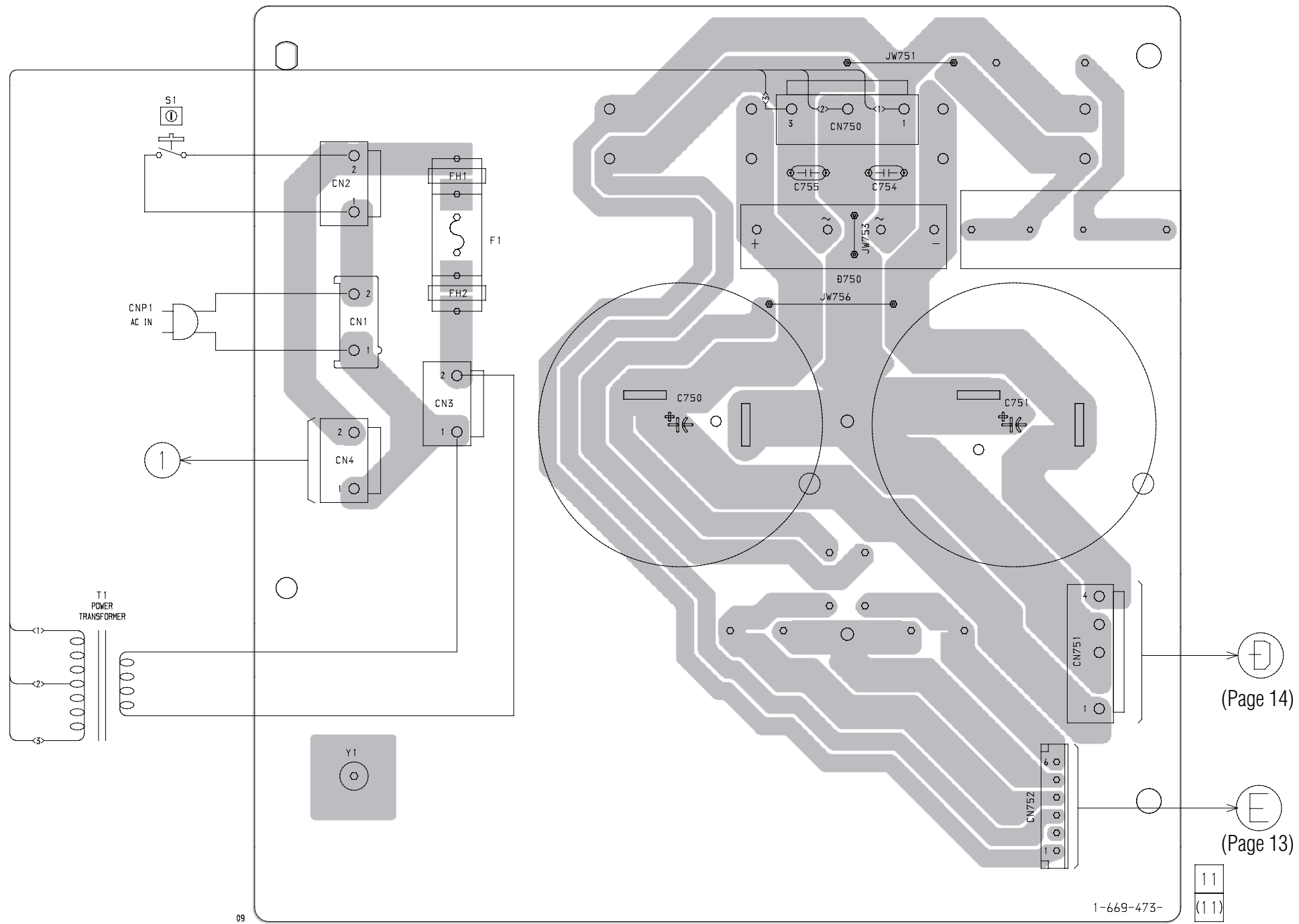


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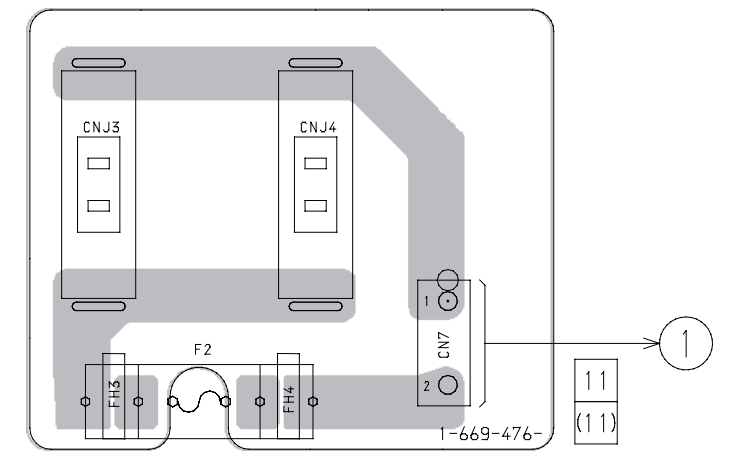
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3-9. PRINTED WIRING BOARD – POWER SECTION –
 • See page 5 for Circuit Boards Location.

【 PS BOARD 】



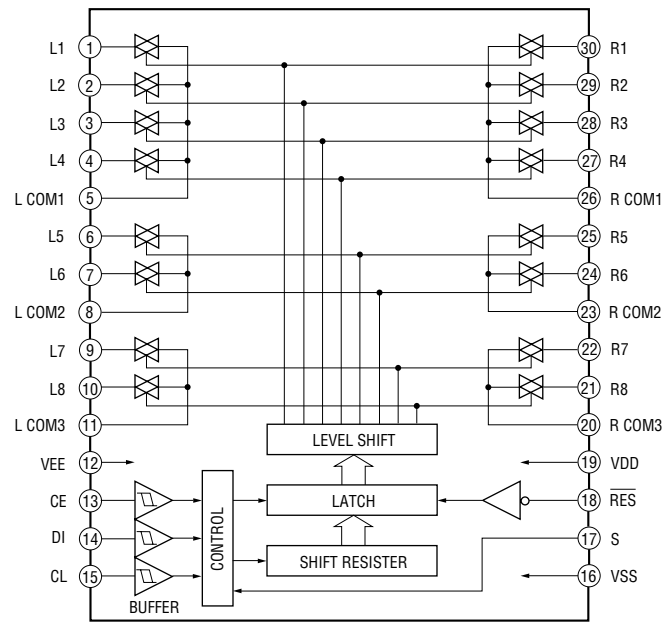
【 OUTLET BOARD 】



3-10. IC BLOCK DIAGRAMS

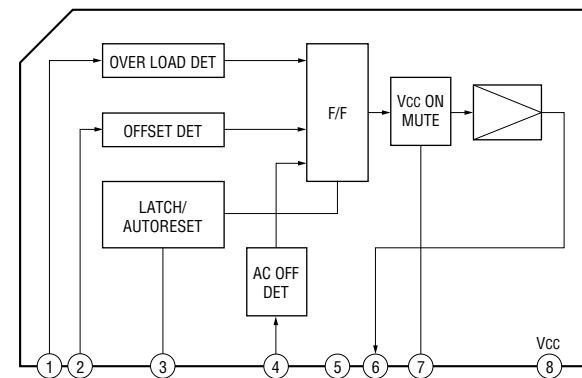
• Input section

IC101 LC7821



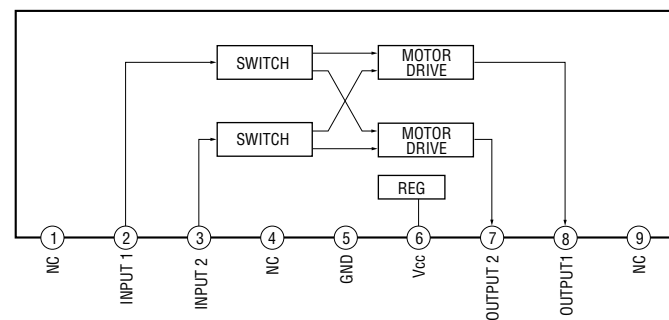
• Main section

IC700 uPC1237HA



• Panel section

IC901 BA6208



3-11. IC PIN FUNCTION

• IC902 Input Control & LED Drive (TMP47C103N-JP47)

Pin No.	Pin Name	I/O	Function
1	X OUT	O	System clock (4MHz)
2	X IN	I	
3	RESET	I	Reset input
4	PMD	I	Mode select input
5	VOL +	O	Motor drive output (+)
6	VOL -	O	Motor drive output (-)
7	SW 0	I	Rotary switch input (CD)
8	SW 1	I	Rotary switch input (TUNER)
9	SW 2	I	Rotary switch input (PHONO)
10	EON	I	EON signal input
11	PHONO	O	PHONO LED drive output
12	TUNER	O	TUNER LED drive output
13	CD	O	CD LED drive output
14	GND	—	Ground
15	AUX	O	AUX LED drive output
16	MD/DAT	O	TAPE "2" LED drive output
17	TAPE	O	TAPE "1" LED drive output
18	MON	O	MONITOR output
19	PRY	O	Power relay output
20	PKY	I	Power key input
21	MOI	I	MONITOR input
22	SIRCS	I	SIRCS input
23	MUTE	O	Muting output
24	SCE	O	Chip enable output
25	SDT	O	Serial data output
26	SCK	O	Serial clock output
27	STOP	I	STOP input
28	+3V	—	+3V Power supply

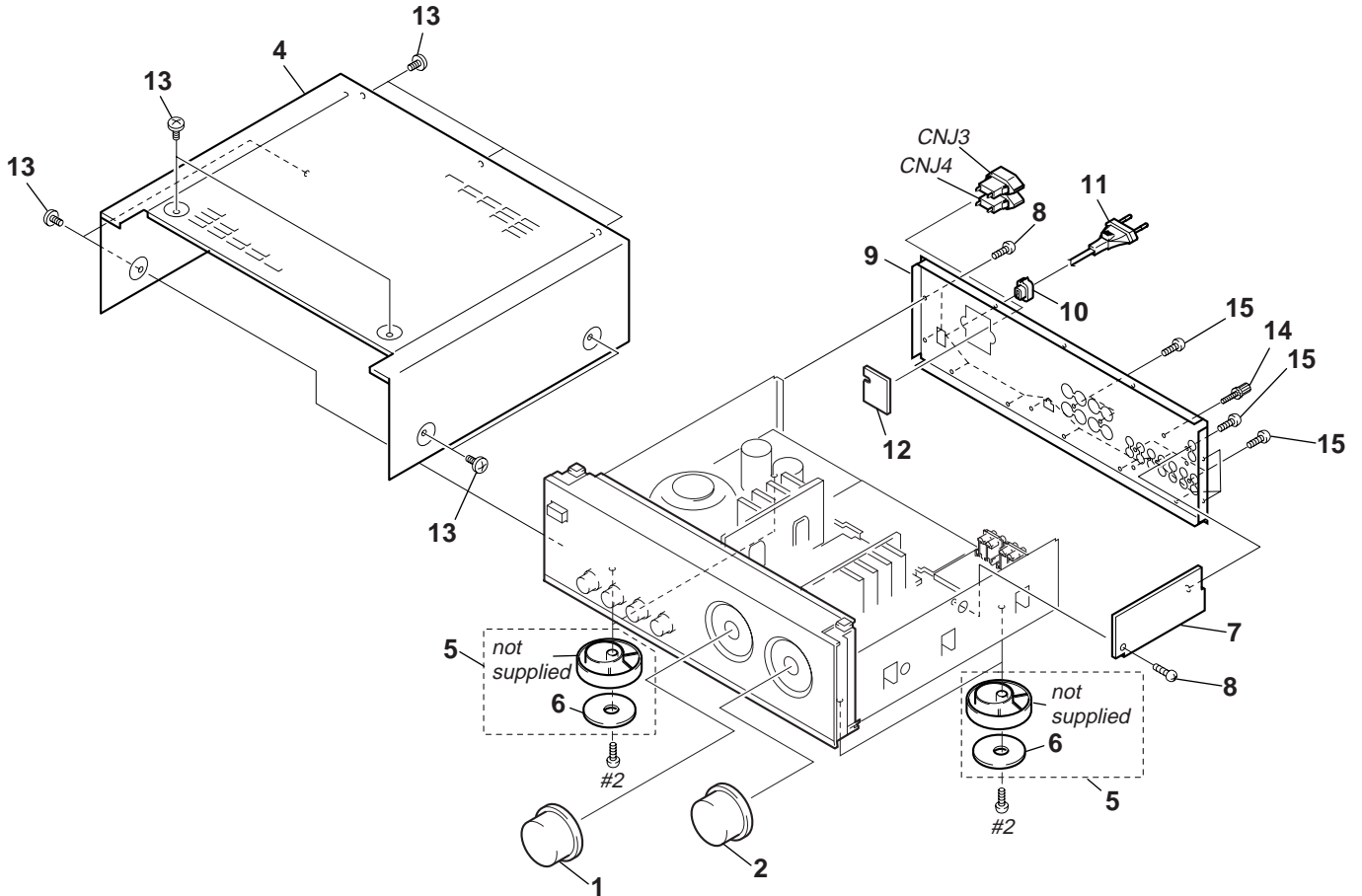
SECTION 4 EXPLODED VIEW

NOTE:

- Items marked “*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.

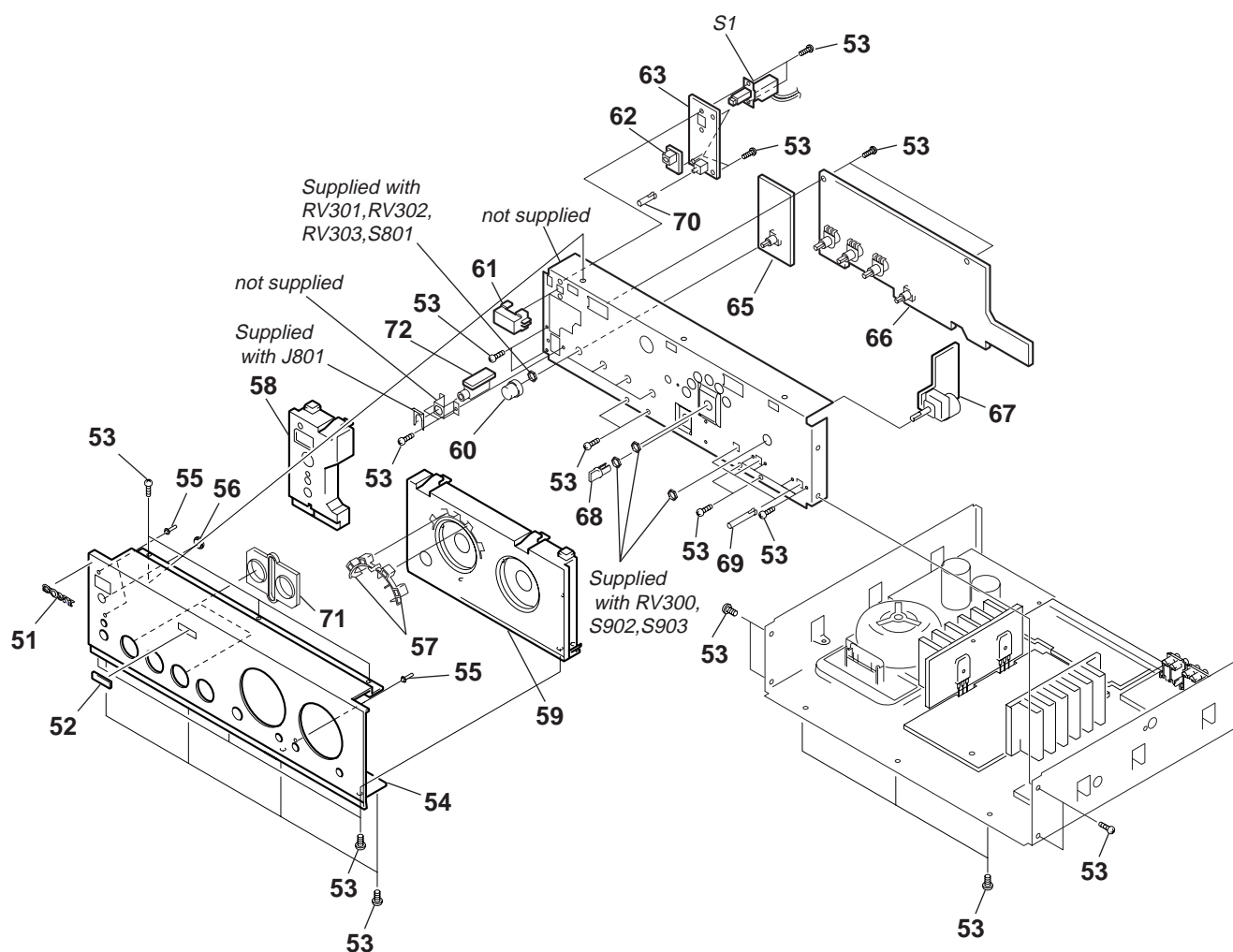
The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

4-1. CASE AND BACK PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-4949-780-1	KNOB (SELECTOR) ASSY		* 10	3-703-244-00	BUSHING (2104), CORD	
2	X-4949-781-1	KNOB (VOLUME) ASSY		\triangle 11	1-777-185-11	CORD, POWER	
* 4	4-999-439-01	CASE (413235)		* 12	1-669-476-11	OUTLET BOARD	
5	X-4949-760-1	FOOT ASSY		13	3-710-901-11	SCREW, TAPPING	
6	4-970-124-01	CUSHION (F50180S)		14	4-947-010-01	SCREW, FEEDER FIXED	
* 7	A-4407-621-A	PHONO BOARD, COMPLETE (FB720R)		15	3-704-515-41	SCREW (BV/RING)	
* 7	A-4407-640-A	PHONO BOARD, COMPLETE (FB820R)		\triangle CNJ3	1-526-794-11	OUTLET, AC	
8	4-967-961-01	SCREW (3X8)		\triangle CNJ4	1-526-794-11	OUTLET, AC	
* 9	4-999-451-11	PANEL, BACK (FB820R)					
* 9	4-999-451-21	PANEL, BACK (FB720R)					

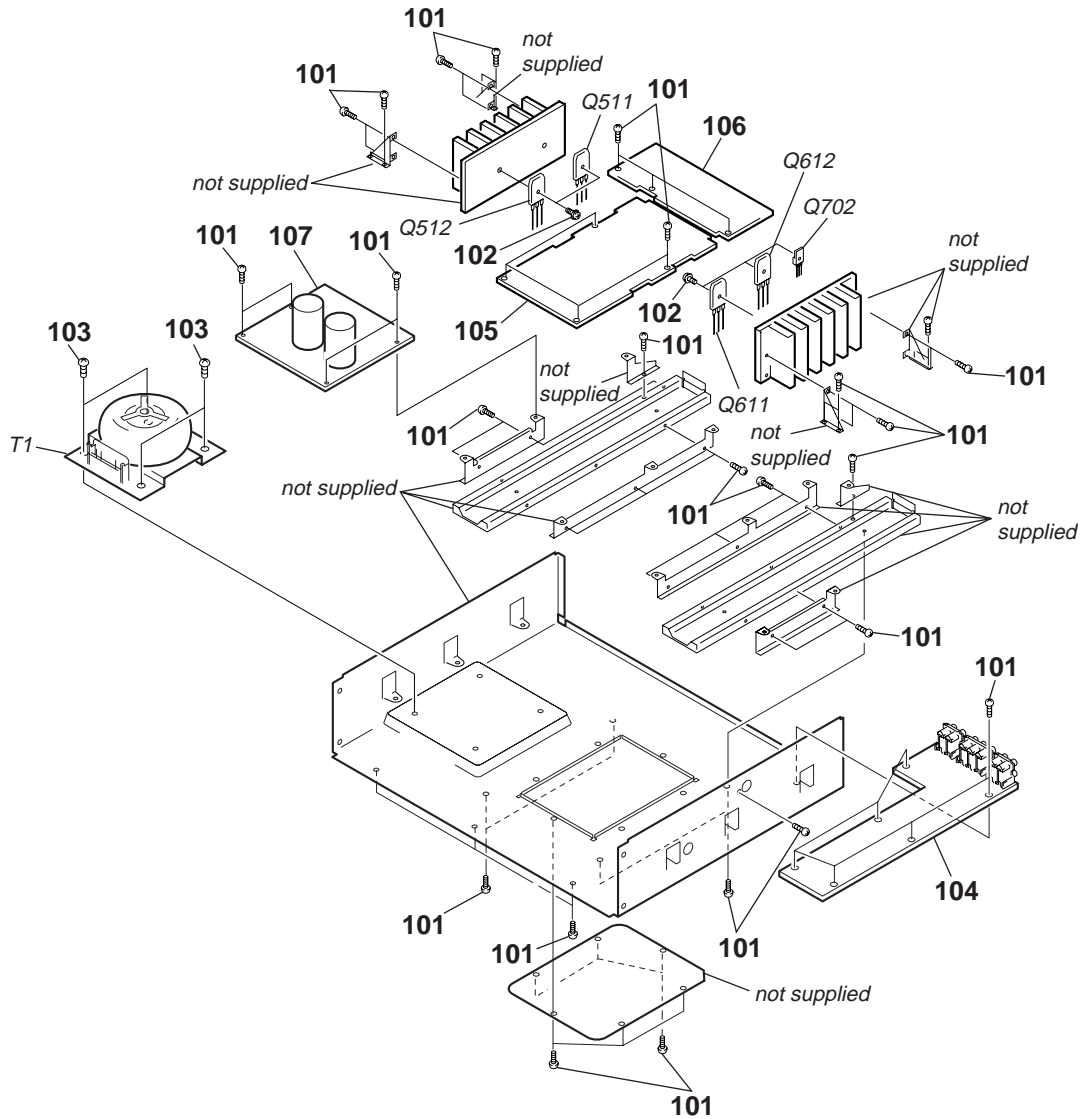
4-2. FRONT PANEL SECTION



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
51	4-942-568-41	EMBLEM (NO.5), SONY		* 62	1-670-220-11	SIRCS SUB BOARD	
52	4-965-651-01	EMBLEM (MOS)		* 63	1-669-497-11	SIRCS BOARD	
53	4-967-961-01	SCREW (3X8)		* 65	1-669-494-11	SP-SW BOARD	
54	4-999-415-01	PANEL, FRONT (FB820R)		* 66	A-4407-623-A	PANEL BOARD, COMPLETE (FB720R)	
54	4-999-415-11	PANEL, FRONT (FB720R)		* 66	A-4407-632-A	PANEL BOARD, COMPLETE (FB820R)	
55	4-999-413-01	INDICATOR (PROTECTION)		* 67	1-669-496-11	VOL BOARD	
56	4-980-776-01	WINDOW, REMOTE CONTROL		68	4-950-189-01	KNOB (A) (VOL)	
* 57	4-999-418-01	INDICATOR (SELECTOR)		69	4-970-146-01	BUTTON	
58	4-999-416-01	BASE (L), PANEL		70	4-980-189-01	KNOB (DIA. 6)	
59	4-999-417-01	BASE (R), PANEL		71	4-999-420-01	ESCUTCHEON (TONE)	
60	4-999-419-01	KNOB (D23)		* 72	1-669-498-11	HP BOARD	
61	3-024-055-01	BUTTON (POWER)		\triangle S1	1-554-920-61	SWITCH, PUSH (AC POWER)(1 KEY)(\odot)	

4-3. CHASSIS SECTION



The components identified by mark \triangle or dotted line with mark \triangle are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
101	4-967-961-01	SCREW (3X8)		* 107	1-669-473-11	PS BOARD	
102	3-905-609-11	SCREW (TRANSISTOR)		Q511	8-729-232-45	TRANSISTOR 2SK1529-Y	
103	4-967-960-01	SCREW (4X8)		Q512	8-729-232-46	TRANSISTOR 2SJ200-Y	
* 104	A-4407-624-A	INPUT BOARD, COMPLETE (FB720R)		Q611	8-729-232-45	TRANSISTOR 2SK1529-Y	
* 104	A-4407-636-A	INPUT BOARD, COMPLETE (FB820R)		Q612	8-729-232-46	TRANSISTOR 2SJ200-Y	
* 105	A-4407-618-A	MAIN BOARD, COMPLETE (FB720R)		Q702	8-729-209-15	TRANSISTOR 2SD2012	
* 105	A-4407-637-A	MAIN BOARD, COMPLETE (FB820R)		\triangle T1	1-431-870-11	TRANSFORMER, POWER (FB720R)	
* 106	A-4407-619-A	SP-TM BOARD, COMPLETE (FB720R)		\triangle T1	1-431-872-11	TRANSFORMER, POWER (FB820R)	
* 106	A-4407-638-A	SP-TM BOARD, COMPLETE (FB820R)					

HP INPUT

**SECTION 5
ELECTRICAL PARTS LIST**

Note:

The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
All resistors are in ohms
METAL: Metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F : nonflammable
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA...: μ PA..., uPB...: μ PB...,
uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
uF : μ F
- COILS
uH : μ H

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	1-669-498-11	HP BOARD *****		D102	8-719-911-19	DIODE 1SS119-25 (FB820R)	
		< CONNECTOR >		D133	8-719-911-19	DIODE 1SS119-25	
CN804	1-691-765-11	PLUG (MICRO CONNECTOR) 3P		D140	8-719-986-38	DIODE HZS16-1LTA	
		< JACK >		D240	8-719-986-38	DIODE HZS16-1LTA	
J801	1-770-307-11	JACK (LARGE TYPE)(PHONES)		IC101	8-759-805-13	IC LC7821	
*****				J101	1-774-411-11	JACK, PIN 6P (TUNER, CD, AUX IN)	
*	A-4407-624-A	INPUT BOARD, COMPLETE (FB720R) *****		J102	1-573-028-31	JACK, PIN 4P (TAPE2/MD)	
		< CAPACITOR >		J103	1-573-028-31	JACK, PIN 4P (TAPE1/DAT)	
*	A-4407-636-A	INPUT BOARD, COMPLETE (FB820R) *****		< TRANSISTOR >			
C101	1-162-282-31	CERAMIC	100PF 10% 50V	Q101	8-729-620-05	TRANSISTOR 2SC2603-EF	
C102	1-162-282-31	CERAMIC	100PF 10% 50V	Q102	8-729-620-05	TRANSISTOR 2SC2603-EF	
C103	1-162-282-31	CERAMIC	100PF 10% 50V	Q103	8-729-620-05	TRANSISTOR 2SC2603-EF	
C104	1-162-282-31	CERAMIC	100PF 10% 50V	Q140	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C105	1-162-282-31	CERAMIC	100PF 10% 50V	Q240	8-729-201-53	TRANSISTOR 2SA1015-GR	
C131	1-164-159-11	CERAMIC	0.1uF 50V	< RESISTOR >			
C132	1-164-159-11	CERAMIC	0.1uF 50V (FB820R)	R101	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C133	1-162-294-31	CERAMIC	0.001uF 10% 50V	R101	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C134	1-164-159-11	CERAMIC	0.1uF 50V	R102	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C135	1-164-159-11	CERAMIC	0.1uF 50V	R102	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C140	1-126-052-11	ELECT	100uF 20% 50V	R103	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C141	1-126-023-11	ELECT	100uF 20% 25V	R103	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C142	1-126-013-11	ELECT	1000uF 20% 16V	R104	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C201	1-162-282-31	CERAMIC	100PF 10% 50V	R104	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C202	1-162-282-31	CERAMIC	100PF 10% 50V	R105	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C203	1-162-282-31	CERAMIC	100PF 10% 50V	R105	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C204	1-162-282-31	CERAMIC	100PF 10% 50V	R114	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C205	1-162-282-31	CERAMIC	100PF 10% 50V	R114	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C240	1-126-052-11	ELECT	100uF 20% 50V	R115	1-259-239-11	CARBON 1M 5% 1/4W (FB820R)	
C241	1-126-023-11	ELECT	100uF 20% 25V	R115	1-259-500-91	CARBON 1M 5% 1/6W (FB720R)	
C242	1-126-013-11	ELECT	1000uF 20% 16V	R124	1-259-167-21	CARBON 1K 5% 1/4W (FB820R)	
		< CONNECTOR >					
CN102	1-691-768-11	PLUG (MICRO CONNECTOR) 6P					
CN103	1-691-771-11	PLUG (MICRO CONNECTOR) 9P					
CN104	1-691-765-11	PLUG (MICRO CONNECTOR) 3P					
		< DIODE >					
D101	8-719-911-19	DIODE 1SS119-25					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R124	1-259-428-11	CARBON	1K 5% 1/6W (FB720R)	*	A-4407-618-A	MAIN BOARD, COMPLETE (FB720R) *****	
R125	1-259-167-21	CARBON	1K 5% 1/4W (FB820R)	*	A-4407-637-A	MAIN BOARD, COMPLETE (FB820R) *****	
R125	1-259-428-11	CARBON	1K 5% 1/6W (FB720R)			< CAPACITOR >	
R130	1-249-425-11	CARBON	4.7K 5% 1/4W F		C500	1-102-973-00 CERAMIC	100PF 5% 50V
R131	1-249-429-11	CARBON	10K 5% 1/4W		C501	1-124-721-11 ELECT	10uF 20% 50V
R132	1-249-429-11	CARBON	10K 5% 1/4W		C502	1-101-880-00 CERAMIC	47PF 5% 50V
R133	1-249-429-11	CARBON	10K 5% 1/4W		C503	1-102-820-00 CERAMIC	330PF 5% 50V
R140	1-249-198-11	CARBON	330 5% 1/3W		C504	1-126-023-11 ELECT	100uF 20% 16V
R141	1-249-198-11	CARBON	330 5% 1/3W				
R142	1-249-198-11	CARBON	330 5% 1/3W		C505	1-107-587-11 CERAMIC	7PF 0.5PF 500V
R143	1-249-198-11	CARBON	330 5% 1/3W		C506	1-126-023-11 ELECT	100uF 20% 16V
R144	1-259-187-11	CARBON	6.8K 5% 1/4W		C507	1-126-023-11 ELECT	100uF 20% 16V
R201	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C508	1-126-023-11 ELECT	100uF 20% 16V
R201	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C509	1-102-937-00 CERAMIC	4.0PF ±0.25PF 50V
R202	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C510	1-126-365-51 ELECT	100uF 20% 63V
R202	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C511	1-102-978-00 CERAMIC	220PF 5% 50V
					C512	1-136-163-00 FILM	0.068uF 5% 50V
					C513	1-136-163-00 FILM	0.068uF 5% 50V
					C517	1-126-023-11 ELECT	100uF 20% 16V
					C600	1-102-973-00 CERAMIC	100PF 5% 50V
R203	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C601	1-124-721-11 ELECT	10uF 20% 50V
R203	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C602	1-101-880-00 CERAMIC	47PF 5% 50V
					C603	1-102-820-00 CERAMIC	330PF 5% 50V
					C604	1-126-023-11 ELECT	100uF 20% 16V
R204	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C605	1-107-587-11 CERAMIC	7PF 0.5PF 500V
R204	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C606	1-126-023-11 ELECT	100uF 20% 16V
					C607	1-126-023-11 ELECT	100uF 20% 16V
					C608	1-126-023-11 ELECT	100uF 20% 16V
R205	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C609	1-102-937-00 CERAMIC	4.0PF ±0.25PF 50V
R205	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C610	1-126-365-51 ELECT	100uF 20% 63V
					C611	1-102-978-00 CERAMIC	220PF 5% 50V
R214	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C612	1-136-163-00 FILM	0.068uF 5% 50V
R214	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C613	1-136-163-00 FILM	0.068uF 5% 50V
					C617	1-126-023-11 ELECT	100uF 20% 16V
R215	1-259-500-91	CARBON	1M 5% 1/6W (FB720R)		C712	1-126-967-11 ELECT	47uF 20% 50V
R215	1-259-239-11	CARBON	1M 5% 1/4W (FB820R)		C713	1-126-933-11 ELECT	100uF 20% 16V
					C714	1-126-964-11 ELECT	10uF 20% 50V
					C720	1-126-056-11 ELECT	1000uF 20% 50V (FB720R)
R224	1-259-428-11	CARBON	1K 5% 1/6W (FB720R)		C720	1-126-170-11 ELECT	1000uF 20% 50V (FB820R)
R224	1-259-167-21	CARBON	1K 5% 1/4W (FB820R)				
R225	1-259-428-11	CARBON	1K 5% 1/6W (FB720R)		C721	1-126-056-11 ELECT	1000uF 20% 50V (FB720R)
R225	1-259-167-21	CARBON	1K 5% 1/4W (FB820R)		C721	1-126-170-11 ELECT	1000uF 20% 50V (FB820R)
R240	1-249-198-11	CARBON	330 5% 1/3W			< CONNECTOR >	
R241	1-249-198-11	CARBON	330 5% 1/3W		CN500	1-564-506-11 PLUG, CONNECTOR 3P	
R242	1-249-198-11	CARBON	330 5% 1/3W		CN503	1-691-770-11 PLUG (MICRO CONNECTOR) 8P	
R243	1-249-198-11	CARBON	330 5% 1/3W		CN600	1-564-506-11 PLUG, CONNECTOR 3P	
R244	1-259-187-11	CARBON	6.8K 5% 1/4W		CN700	1-691-768-11 PLUG (MICRO CONNECTOR) 6P	
		< RELAY >				< DIODE >	
RY101	1-515-614-11	RELAY			D500	8-719-911-19 DIODE 1SS119-25	
RY102	1-515-614-11	RELAY (FB820R)			D501	8-719-911-19 DIODE 1SS119-25	

MAIN

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
D502	8-719-911-19	DIODE 1SS119-25		R502	1-259-151-21	CARBON 220 5%	1/4W
D503	8-719-933-39	DIODE HZS6C1L		R503	1-259-151-21	CARBON 220 5%	1/4W
D504	8-719-911-19	DIODE 1SS119-25		R504	1-259-151-21	CARBON 220 5%	1/4W
D505	8-719-911-19	DIODE 1SS119-25		R505	1-259-179-21	CARBON 3.3K 5%	1/4W
D506	8-719-310-61	DIODE SEL1510C-D		R506	1-259-151-21	CARBON 220 5%	1/4W
D600	8-719-911-19	DIODE 1SS119-25		R507	1-259-151-21	CARBON 220 5%	1/4W
D601	8-719-911-19	DIODE 1SS119-25		R508	1-249-244-11	CARBON 27K 5%	1/3W
D602	8-719-911-19	DIODE 1SS119-25		R509	1-259-175-11	CARBON 2.2K 5%	1/4W
D603	8-719-933-39	DIODE HZS6C1L		R510	1-259-183-11	CARBON 4.7K 5%	1/4W
D604	8-719-911-19	DIODE 1SS119-25		△ R511	1-249-899-11	CARBON 100 5%	1/4W F
D605	8-719-911-19	DIODE 1SS119-25		R512	1-259-171-21	CARBON 1.5K 5%	1/4W
D606	8-719-310-61	DIODE SEL1510C-D		R513	1-259-167-21	CARBON 1K 5%	1/4W
D703	8-719-933-39	DIODE HZS6C1L		R514	1-249-258-11	CARBON 100K 5%	1/3W
D720	8-719-024-99	DIODE 11ES2-NTA2B		R515	1-259-143-21	CARBON 100 5%	1/4W
D721	8-719-024-99	DIODE 11ES2-NTA2B		R516	1-249-204-11	CARBON 560 5%	1/3W
		< BRIDGE >		△ R517	1-247-688-11	CARBON 10 5%	1/4W F
JWH711	4-999-918-01	BRIDGE (PC-BOARD)		△ R518	1-247-688-11	CARBON 10 5%	1/4W F
JWH712	4-999-918-01	BRIDGE (PC-BOARD)		△ R519	1-247-745-11	CARBON 330 5%	1/2W F
JWH713	4-999-918-01	BRIDGE (PC-BOARD)		△ R520	1-249-899-11	CARBON 100 5%	1/4W F
JWH714	4-999-918-01	BRIDGE (PC-BOARD)		△ R521	1-249-899-11	CARBON 100 5%	1/4W F
JWH715	4-999-918-01	BRIDGE (PC-BOARD)		△ R522	1-208-601-11	REGISTER 0.1 10%	2W F
		< TRANSISTOR >		△ R523	1-208-601-11	REGISTER 0.1 10%	2W F
Q500	8-729-045-15	TRANSISTOR 2SC5169-FG		R524	1-259-436-11	CARBON 2.2K 5%	1/6W
Q501	8-729-201-53	TRANSISTOR 2SA1015-GR		R525	1-259-432-11	CARBON 1.5K 5%	1/6W
Q502	8-729-201-53	TRANSISTOR 2SA1015-GR		R526	1-249-162-11	CARBON 10 5%	1/3W
Q503	8-729-201-53	TRANSISTOR 2SA1015-GR		R527	1-259-484-11	CARBON 220K 5%	1/6W
Q504	8-729-021-74	TRANSISTOR 2SA949-OY-TPE6		R600	1-259-167-21	CARBON 1K 5%	1/4W
Q505	8-729-202-67	TRANSISTOR 2SK246-GR3		R601	1-259-215-21	CARBON 100K 5%	1/4W
Q506	8-729-119-78	TRANSISTOR 2SC2785-HFE		R602	1-259-151-21	CARBON 220 5%	1/4W
Q507	8-729-021-73	TRANSISTOR 2SC2229-OY-TPE6		R603	1-259-151-21	CARBON 220 5%	1/4W
Q508	8-729-119-78	TRANSISTOR 2SC2785-HFE		R604	1-259-151-21	CARBON 220 5%	1/4W
Q509	8-729-104-18	TRANSISTOR 2SC3514		R605	1-259-179-21	CARBON 3.3K 5%	1/4W
Q510	8-729-104-91	TRANSISTOR 2SA1383		R606	1-259-151-21	CARBON 220 5%	1/4W
Q511	8-729-232-45	TRANSISTOR 2SK1529-Y		R607	1-259-151-21	CARBON 220 5%	1/4W
Q512	8-729-232-46	TRANSISTOR 2SJ200-Y		R608	1-249-244-11	CARBON 27K 5%	1/3W
Q513	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		R609	1-259-175-11	CARBON 2.2K 5%	1/4W
Q600	8-729-045-15	TRANSISTOR 2SC5169-FG		R610	1-259-183-11	CARBON 4.7K 5%	1/4W
Q601	8-729-201-53	TRANSISTOR 2SA1015-GR		△ R611	1-249-899-11	CARBON 100 5%	1/4W F
Q602	8-729-201-53	TRANSISTOR 2SA1015-GR		R612	1-259-171-21	CARBON 1.5K 5%	1/4W
Q603	8-729-201-53	TRANSISTOR 2SA1015-GR		R613	1-259-167-21	CARBON 1K 5%	1/4W
Q604	8-729-021-74	TRANSISTOR 2SA949-OY-TPE6		R614	1-249-258-11	CARBON 100K 5%	1/3W
Q605	8-729-202-67	TRANSISTOR 2SK246-GR3		R615	1-259-143-21	CARBON 100 5%	1/4W
Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE		R616	1-249-204-11	CARBON 560 5%	1/3W
Q607	8-729-021-73	TRANSISTOR 2SC2229-OY-TPE6		△ R617	1-247-688-11	CARBON 10 5%	1/4W F
Q608	8-729-119-78	TRANSISTOR 2SC2785-HFE		△ R618	1-247-688-11	CARBON 10 5%	1/4W F
Q609	8-729-104-18	TRANSISTOR 2SC3514		△ R619	1-247-745-11	CARBON 330 5%	1/2W F
Q610	8-729-104-91	TRANSISTOR 2SA1383		△ R620	1-249-899-11	CARBON 100 5%	1/4W F
Q611	8-729-232-45	TRANSISTOR 2SK1529-Y		△ R621	1-249-899-11	CARBON 100 5%	1/4W F
Q612	8-729-232-46	TRANSISTOR 2SJ200-Y		△ R622	1-208-601-11	REGISTER 0.1 10%	2W F
Q613	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		△ R623	1-208-601-11	REGISTER 0.1 10%	2W F
Q702	8-729-209-15	TRANSISTOR 2SD2012		R624	1-259-436-11	CARBON 2.2K 5%	1/6W
		< RESISTOR >		R625	1-259-432-11	CARBON 1.5K 5%	1/6W
R500	1-259-167-21	CARBON 1K 5%	1/4W	R626	1-249-162-11	CARBON 10 5%	1/3W
R501	1-259-215-21	CARBON 100K 5%	1/4W	R627	1-259-484-11	CARBON 220K 5%	1/6W
				R709	1-249-425-11	CARBON 4.7K 5%	1/4W F

The components identified by mark △ or dotted line with mark △ are critical for safety.
Replace only with part number specified.

MAIN

OUTLET

PANEL

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >				< CONNECTOR >	
RV500	1-241-762-11	RES, ADJ, CARBON 2.2K		* CN300	1-564-522-11	PLUG, CONNECTOR 7P	
RV600	1-241-762-11	RES, ADJ, CARBON 2.2K		* CN301	1-564-526-11	PLUG, CONNECTOR 11P	
*****				CN901	1-691-763-51	PIN, CONNECTOR 8P	
* 1-669-476-11	OUTLET BOARD	*****		* CN904	1-564-525-11	PLUG, CONNECTOR 10P	
	< CONNECTOR >			* CN905	1-564-522-11	PLUG, CONNECTOR 7P	
△ CNJ3	1-526-794-11	OUTLET, AC (AC OUTLET)		* CN906	1-564-520-11	PLUG, CONNECTOR 5P	
△ CNJ4	1-526-794-11	OUTLET, AC (AC OUTLET)				< DIODE >	
	< FUSE >			D902	8-719-313-50	DIODE SEL6810A-TH12 (PHONO)	
△ F2	1-532-464-51	FUSE, TIME LAG (T2.5AL 250V)		D903	8-719-313-50	DIODE SEL6810A-TH12 (TUNER)	
	< FUSE HOLDER >			D904	8-719-313-50	DIODE SEL6810A-TH12 (CD)	
FH3	1-533-233-11	HOLDER, FUSE		D905	8-719-313-50	DIODE SEL6810A-TH12 (AUX)	
FH4	1-533-233-11	HOLDER, FUSE		D906	8-719-313-50	DIODE SEL6810A-TH12 (TAPE2/MD)	
*****				D907	8-719-313-50	DIODE SEL6810A-TH12 (TAPE1/DAT)	
* A-4407-623-A	PANEL BOARD, COMPLETE (FB720R)	*****		D908	8-719-313-50	DIODE SEL6810A-TH12 (SOURCE DIRECT)	
* A-4407-632-A	PANEL BOARD, COMPLETE (FB820R)	*****		D910	8-719-911-19	DIODE 1SS119-25	
	< CAPACITOR >			D912	8-719-911-19	DIODE 1SS119-25	
C300	1-136-171-00	FILM	0.33uF 5% 50V	D913	8-719-911-19	DIODE 1SS119-25	
C301	1-130-475-00	MYLAR	0.0022uF 5% 50V	D914	8-719-911-19	DIODE 1SS119-25	
C302	1-136-153-00	FILM	0.01uF 5% 50V	D915	8-719-911-19	DIODE 1SS119-25	
C303	1-136-155-00	FILM	0.015uF 5% 50V	D916	8-719-024-99	DIODE 11ES2-NTA2B	
C304	1-136-165-00	FILM	0.1uF 5% 50V	D917	8-719-911-19	DIODE 1SS119-25	
C305	1-136-165-00	FILM	0.1uF 5% 50V	D918	8-719-985-66	DIODE HZS5BLL-TA	
C306	1-130-471-00	MYLAR	0.001uF 5% 50V	D919	8-719-911-19	DIODE 1SS119-25	
C400	1-136-171-00	FILM	0.33uF 5% 50V	D920	8-719-911-19	DIODE 1SS119-25	
C401	1-130-475-00	MYLAR	0.0022uF 5% 50V	D921	8-719-911-19	DIODE 1SS119-25	
C402	1-136-153-00	FILM	0.01uF 5% 50V	D922	8-719-911-19	DIODE 1SS119-25	
C403	1-136-155-00	FILM	0.015uF 5% 50V	D923	8-719-911-19	DIODE 1SS119-25	
C404	1-136-165-00	FILM	0.1uF 5% 50V	D924	8-719-911-19	DIODE 1SS119-25	
C405	1-136-165-00	FILM	0.1uF 5% 50V			< IC >	
C406	1-130-471-00	MYLAR	0.001uF 5% 50V	IC901	8-759-962-08	IC BA6208	
C900	1-126-786-11	ELECT	47uF 20% 16V	IC902	8-759-392-41	IC TMP47C103N-JP47	
C901	1-126-916-11	ELECT	1000uF 20% 6.3V			< TRANSISTOR >	
C902	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q900	8-729-620-05	TRANSISTOR 2SC2603-EF	
C903	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q901	8-729-900-63	TRANSISTOR DTA124ES	
C904	1-164-159-11	CERAMIC	0.1uF 50V	Q902	8-729-900-63	TRANSISTOR DTA124ES	
C905	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q903	8-729-900-80	TRANSISTOR DTC114ES	
C906	1-126-795-11	ELECT	10uF 20% 50V	Q905	8-729-422-57	TRANSISTOR UN4111	
C907	1-162-294-31	CERAMIC	0.001uF 10% 50V	Q906	8-729-900-80	TRANSISTOR DTC114ES	
C908	1-126-786-11	ELECT	47uF 20% 16V	Q907	8-729-119-78	TRANSISTOR 2SC2785-HFE	
C909	1-126-795-11	ELECT	10uF 20% 50V	Q908	8-729-620-05	TRANSISTOR 2SC2603-EF	
C910	1-126-794-11	ELECT	4.7uF 20% 50V	Q909	8-729-620-05	TRANSISTOR 2SC2603-EF	
C911	1-126-795-11	ELECT	10uF 20% 50V	Q910	8-729-422-57	TRANSISTOR UN4111	
C912	1-126-786-11	ELECT	47uF 20% 16V	Q911	8-729-201-53	TRANSISTOR 2SA1015-GR	
				Q912	8-729-422-57	TRANSISTOR UN4111 (FB820R)	
				Q913	8-729-900-80	TRANSISTOR DTC114ES (FB820R)	
				Q914	8-729-119-76	TRANSISTOR 2SA1175-HFE	
				Q915	8-729-620-05	TRANSISTOR 2SC2603-EF	
						< RESISTOR >	
				R300	1-259-500-11	CARBON 1M 5% 1/6W	
				R301	1-259-500-11	CARBON 1M 5% 1/6W	
				R302	1-259-446-11	CARBON 5.6K 5% 1/6W	

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

PANEL	PHONO
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Ref. No.	Part No.	Description	Remark
R303	1-259-436-11	CARBON	2.2K 5% 1/6W
R304	1-259-500-11	CARBON	1M 5% 1/6W
R305	1-259-464-11	CARBON	33K 5% 1/6W
R306	1-259-456-11	CARBON	15K 5% 1/6W
R307	1-259-446-11	CARBON	5.6K 5% 1/6W
R308	1-259-456-11	CARBON	15K 5% 1/6W
R309	1-259-500-11	CARBON	1M 5% 1/6W
R310	1-259-464-11	CARBON	33K 5% 1/6W
R311	1-259-446-11	CARBON	5.6K 5% 1/6W
R391	1-249-421-11	CARBON	1K 5% 1/4W F
R392	1-249-421-11	CARBON	1K 5% 1/4W F
R393	1-249-421-11	CARBON	1K 5% 1/4W F
R400	1-259-500-11	CARBON	1M 5% 1/6W
R401	1-259-500-11	CARBON	1M 5% 1/6W
R402	1-259-446-11	CARBON	5.6K 5% 1/6W
R403	1-259-436-11	CARBON	2.2K 5% 1/6W
R404	1-259-500-11	CARBON	1M 5% 1/6W
R405	1-259-464-11	CARBON	33K 5% 1/6W
R406	1-259-456-11	CARBON	15K 5% 1/6W
R407	1-259-446-11	CARBON	5.6K 5% 1/6W
R408	1-259-456-11	CARBON	15K 5% 1/6W
R409	1-259-500-11	CARBON	1M 5% 1/6W
R410	1-259-464-11	CARBON	33K 5% 1/6W
R411	1-259-446-11	CARBON	5.6K 5% 1/6W
R902	1-247-239-00	CARBON	910 5% 1/2W
R905	1-249-429-11	CARBON	10K 5% 1/4W
R906	1-249-429-11	CARBON	10K 5% 1/4W
R907	1-249-429-11	CARBON	10K 5% 1/4W
R908	1-249-437-11	CARBON	47K 5% 1/4W
R909	1-249-429-11	CARBON	10K 5% 1/4W
R910	1-249-401-11	CARBON	47 5% 1/4W F
R911	1-249-411-11	CARBON	330 5% 1/4W
R912	1-249-429-11	CARBON	10K 5% 1/4W
R913	1-249-425-11	CARBON	4.7K 5% 1/4W F
R914	1-247-807-31	CARBON	100 5% 1/4W
R917	1-249-433-11	CARBON	22K 5% 1/4W
R918	1-249-421-11	CARBON	2.2K 5% 1/4W F
R919	1-249-421-11	CARBON	2.2K 5% 1/4W F
R920	1-249-429-11	CARBON	10K 5% 1/4W
R921	1-249-429-11	CARBON	10K 5% 1/4W
R922	1-249-429-11	CARBON	10K 5% 1/4W
R923	1-249-429-11	CARBON	10K 5% 1/4W
R924	1-249-429-11	CARBON	10K 5% 1/4W
R925	1-249-406-11	CARBON	120 5% 1/4W F
R927	1-249-403-11	CARBON	68 5% 1/4W F
R929	1-247-903-00	CARBON	1M 5% 1/4W
R930	1-247-807-31	CARBON	100 5% 1/4W
R931	1-249-419-11	CARBON	1.5K 5% 1/4W F
R932	1-249-427-11	CARBON	6.8K 5% 1/4W F
R933	1-247-239-00	CARBON	910 5% 1/2W (FB720R)
R934	1-247-843-11	CARBON	3.3K 5% 1/4W
R935	1-247-843-11	CARBON	3.3K 5% 1/4W
R936	1-249-429-11	CARBON	10K 5% 1/4W
R937	1-249-429-11	CARBON	10K 5% 1/4W
R938	1-249-429-11	CARBON	10K 5% 1/4W
R939	1-247-751-11	CARBON	820 5% 1/2W (FB720R)

Ref. No.	Part No.	Description	Remark
R939	1-247-752-11	CARBON	1K 5% 1/2W (FB820R)
		< VARIABLE RESISTOR >	
RV301	1-223-789-11	RES, VAR, CARBON 250K/250K	(BALANCE)
RV302	1-223-768-11	RES, VAR, CARBON 250K/250K	(TONE TREBLE)
RV303	1-223-767-11	RES, VAR, CARBON 900K/900K	(TONE BASS)
		< SWITCH >	
S301	1-762-203-11	SWITCH, PUSH (1 KEY)	(SUBSONIC)
S302	1-762-393-11	SWITCH, PUSH	(SOURCE DIRECT)
S303	1-762-387-11	SWITCH, PUSH	(LOUDNESS)
S902	1-692-974-11	SWITCH, ROTARY	(INPUT SELECTOR)
S903	1-771-386-11	SWITCH, ROTARY	(TAPE MONITOR)
		< VIBRATOR >	
X900	1-577-358-21	VIBRATOR, CERAMIC	(4.0MHz)

*	A-4407-621-A	PHONO BOARD, COMPLETE	(FB720R) *****
*	A-4407-640-A	PHONO BOARD, COMPLETE	(FB820R) *****
		< CAPACITOR >	
C150	1-102-978-00	CERAMIC	220PF 5% 50V
C151	1-126-048-11	ELECT	10uF 20% 50V
C152	1-101-880-00	CERAMIC	47PF 5% 50V
C153	1-106-359-00	MYLAR	4700PF 5% 200V
C154	1-126-023-11	ELECT	100uF 20% 25V
C155	1-136-162-00	FILM	0.056uF 5% 50V
C156	1-137-471-11	FILM	0.016uF 5% 50V
C157	1-126-048-11	ELECT	10uF 20% 50V
C170	1-126-023-11	ELECT	100uF 20% 25V
C171	1-136-165-00	FILM	0.1uF 5% 50V
C172	1-136-165-00	FILM	0.1uF 5% 50V
C250	1-102-978-00	CERAMIC	220PF 5% 50V
C251	1-126-048-11	ELECT	10uF 20% 50V
C252	1-101-880-00	CERAMIC	47PF 5% 50V
C253	1-106-359-00	MYLAR	4700PF 5% 200V
C254	1-126-023-11	ELECT	100uF 20% 25V
C255	1-136-162-00	FILM	0.056uF 5% 50V
C256	1-137-471-11	FILM	0.016uF 5% 50V
C257	1-126-048-11	ELECT	10uF 20% 50V
		< CONNECTOR >	
CN151	1-691-768-11	PLUG (MICRO CONNECTOR)	6P
		< DIODE >	
D170	8-719-985-97	DIODE	HZS7B1LTA
		< IC >	
IC150	8-759-636-74	IC	M5218AP-22 (FB720R)
IC150	8-759-701-25	IC	NJM2068D-D (FB820R)

Ref. No.	Part No.	Description	Remark
		< JACK >	
J150	1-764-593-21	JACK 2P (PHONO IN)	
		< COIL >	
L150	1-410-977-11	INDUCTOR 100uH	
L151	1-410-977-11	INDUCTOR 100uH	
L250	1-410-977-11	INDUCTOR 100uH	
L251	1-410-977-11	INDUCTOR 100uH	
		< TRANSISTOR >	
Q150	8-729-354-52	TRANSISTOR 2SC2545	
Q151	8-729-354-52	TRANSISTOR 2SC2545	
Q250	8-729-354-52	TRANSISTOR 2SC2545	
Q251	8-729-354-52	TRANSISTOR 2SC2545	
		< RESISTOR >	
R150	1-259-175-11	CARBON 2.2K 5%	1/4W
R151	1-249-911-11	CARBON 330 5%	1/4W
R152	1-259-215-21	CARBON 100K 5%	1/4W
R153	1-259-215-21	CARBON 100K 5%	1/4W
R154	1-259-161-21	CARBON 560 5%	1/4W
R155	1-259-161-21	CARBON 560 5%	1/4W
R156	1-259-143-21	CARBON 100 5%	1/4W
R157	1-259-191-21	CARBON 10K 5%	1/4W
R158	1-259-144-11	CARBON 110 5%	1/4W
R159	1-259-209-11	CARBON 56K 1%	1/4W (FB720R)
R159	1-259-346-81	CARBON 56K 1%	1/2W (FB820R)
R160	1-259-183-11	CARBON 4.7K 1%	1/4W (FB720R)
R160	1-259-320-11	CARBON 4.7K 1%	1/2W (FB820R)
R161	1-259-239-11	CARBON 1M 5%	1/4W
R162	1-259-167-21	CARBON 1K 5%	1/4W
R170	1-259-171-21	CARBON 1.5K 5%	1/4W
R250	1-259-175-11	CARBON 2.2K 5%	1/4W
R251	1-249-911-11	CARBON 330 5%	1/4W
R252	1-259-215-21	CARBON 100K 5%	1/4W
R253	1-259-215-21	CARBON 100K 5%	1/4W
R254	1-259-161-21	CARBON 560 5%	1/4W
R255	1-259-161-21	CARBON 560 5%	1/4W
R256	1-259-143-21	CARBON 100 5%	1/4W
R257	1-259-191-21	CARBON 10K 5%	1/4W
R258	1-259-144-11	CARBON 110 5%	1/4W
R259	1-259-209-11	CARBON 56K 1%	1/4W (FB720R)
R259	1-259-346-81	CARBON 56K 1%	1/2W (FB820R)
R260	1-259-183-11	CARBON 4.7K 1%	1/4W (FB720R)
R260	1-259-320-11	CARBON 4.7K 1%	1/2W (FB820R)
R261	1-259-239-11	CARBON 1M 5%	1/4W
R262	1-259-167-21	CARBON 1K 5%	1/4W

Ref. No.	Part No.	Description	Remark
*	1-669-473-11	PS BOARD *****	
		< CAPACITOR >	
C750	1-125-819-11	ELECT 6800uF	50V (FB720R)
C750	1-125-820-11	ELECT 8200uF	50V (FB820R)
C751	1-125-819-11	ELECT 6800uF	50V (FB720R)
C751	1-125-820-11	ELECT 8200uF	50V (FB820R)
C754	1-137-398-11	FILM 0.068uF 5%	100V
C755	1-137-398-11	FILM 0.068uF 5%	100V
		< CONNECTOR >	
CN1	1-774-108-11	PIN, CONNECTOR (PC BOARD)	
CN2	1-564-321-00	PIN, CONNECTOR 2P	
CN3	1-564-321-00	PIN, CONNECTOR 2P	
* CN4	1-564-321-21	PIN, CONNECTOR 2P	
* CN750	1-564-687-11	PIN, CONNECTOR 3P	
* CN751	1-766-920-11	PIN, CONNECTOR 4P	
CN752	1-770-832-11	CONNECTOR, BOARD TO BOARD 6P	
		< DIODE >	
D750	8-719-302-38	DIODE RBV-602-01	
		< FUSE >	
△F1	1-532-388-51	FUSE, TIME LAG (T2.0AL 250V)(FB720R)	
△F1	1-532-465-51	FUSE, TIME LAG (T3.15AL 250V)(FB820R)	
		< FUSE HOLDER >	
FH1	1-533-233-11	HOLDER, FUSE	
FH2	1-533-233-11	HOLDER, FUSE	

*	1-669-497-11	SIRCS BOARD *****	
		< CONNECTOR >	
* CN911	1-560-666-00	PIN, CONNECTOR 3P	
		< DIODE >	
D900	8-719-046-46	DIODE SEL5221S-TH8F (PROTECTION)	
D901	8-719-046-38	DIODE SEL5821A-TH8F (EON LINK)	
		< RESISTOR >	
R900	1-249-409-11	CARBON 220 5%	1/4W F
R901	1-249-403-11	CARBON 68 5%	1/4W F
R904	1-249-429-11	CARBON 10K 5%	1/4W
		< SWITCH >	
S901	1-571-112-21	SWITCH, PUSH (1 KEY)(EON LINK)	

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 Replace only with part number specified.

SIRCS SUB

SP-SW

SP-TM

Ref. No.	Part No.	Description	Remark		
*	1-670-220-11	SIRCS SUB BOARD *****			
		< CONNECTOR >			
* CN912	1-565-835-11	SOCKET, CONNECTOR 3P < IC >			
IC900	8-749-014-66	IC NJL64H400A			

*	1-669-494-11	SP-SW BOARD *****			
		< RESISTOR >			
R801	1-247-751-11	CARBON	820	5%	1/2W
R802	1-247-751-11	CARBON	820	5%	1/2W
R803	1-247-751-11	CARBON	820	5%	1/2W
R804	1-247-751-11	CARBON	820	5%	1/2W
R805	1-247-751-11	CARBON	820	5%	1/2W
R806	1-247-751-11	CARBON	820	5%	1/2W
R807	1-247-231-00	CARBON	430	5%	1/2W
R807	1-247-746-11	CARBON	390	5%	1/2W F (FB820R)
R808	1-247-231-00	CARBON	430	5%	1/2W (FB820R)
R808	1-247-746-11	CARBON	390	5%	1/2W F (FB720R)
R809	1-247-231-00	CARBON	430	5%	1/2W (FB820R)
R809	1-247-746-11	CARBON	390	5%	1/2W F (FB720R)
R810	1-247-231-00	CARBON	430	5%	1/2W (FB820R)
R810	1-247-746-11	CARBON	390	5%	1/2W F (FB720R)
		< SWITCH >			
S801	1-771-385-11	SWITCH, ROTARY (SPEAKERS)			

*	A-4407-619-A	SP-TM BOARD, COMPLETE (FB720R) *****			
*	A-4407-638-A	SP-TM BOARD, COMPLETE (FB820R) *****			
		< CAPACITOR >			
C515	1-101-880-00	CERAMIC	100P	5%	50V
C516	1-101-880-00	CERAMIC	100P	5%	50V
C615	1-101-880-00	CERAMIC	100P	5%	50V
C616	1-101-880-00	CERAMIC	100P	5%	50V
C700	1-126-965-11	ELECT	22uF	20%	50V
C701	1-136-163-00	FILM	0.068uF	5%	50V
C702	1-124-995-11	ELECT	220uF	20%	10V
C703	1-136-157-00	FILM	0.022uF	5%	50V
C704	1-126-967-11	ELECT	47uF	20%	16V
C705	1-126-967-11	ELECT	47uF	20%	16V

Ref. No.	Part No.	Description	Remark		
C706	1-137-150-11	MYLAR	0.01uF	10%	100V
C707	1-137-150-11	MYLAR	0.01uF	10%	100V
C708	1-128-578-11	ELECT	1uF	20%	100V
C709	1-126-972-11	ELECT	1000uF	20%	50V
C710	1-126-969-11	ELECT	220uF	20%	50V
C711	1-126-964-11	ELECT	10uF	20%	50V
C715	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
CN702	1-770-831-11	CONNECTOR, BOARD TO BOARD 6P			
CN703	1-566-212-11	PIN, CONNECTOR 3P (EON CONTROL)			
		< DIODE >			
D511	8-719-911-19	DIODE 1SS119-25			
D512	8-719-911-19	DIODE 1SS119-25			
D513	8-719-911-19	DIODE 1SS119-25			
D700	8-719-024-99	DIODE 11ES2-NTA2B			
D701	8-719-024-99	DIODE 11ES2-NTA2B			
D702	8-719-024-99	DIODE 11ES2-NTA2B			
		< IC >			
IC700	8-759-111-68	IC UPC1237HA			
		< COIL >			
L501	1-411-906-11	COIL, AIR-CORE			
L601	1-411-906-11	COIL, AIR-CORE			
		< TRANSISTOR >			
Q700	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		< RESISTOR >			
R528	1-249-162-11	CARBON	10	5%	1/3W
R529	1-249-206-11	CARBON	680	5%	1/3W
△ R530	1-212-857-00	FUSIBLE	10	5%	1/4W
△ R531	1-212-857-00	FUSIBLE	10	5%	1/4W
R628	1-249-162-11	CARBON	10	5%	1/3W
R629	1-249-206-11	CARBON	680	5%	1/3W
△ R630	1-212-857-00	FUSIBLE	10	5%	1/4W
△ R631	1-212-857-00	FUSIBLE	10	5%	1/4W
R700	1-249-431-11	CARBON	15K	5%	1/4W (FB720R)
R700	1-249-434-11	CARBON	27K	5%	1/4W (FB820R)
R701	1-249-429-11	CARBON	10K	5%	1/4W
R702	1-249-429-11	CARBON	10K	5%	1/4W
R703	1-259-476-11	CARBON	100K	5%	1/6W
R704	1-249-433-11	CARBON	22K	5%	1/4W
R705	1-247-883-00	CARBON	150K	5%	1/4W
R706	1-249-431-11	CARBON	15K	5%	1/4W
R707	1-249-429-11	CARBON	10K	5%	1/4W
R710	1-247-231-00	CARBON	430	5%	1/2W (FB820R)
R710	1-247-746-11	CARBON	390	5%	1/2W F (FB720R)
R711	1-247-231-00	CARBON	430	5%	1/2W (FB820R)

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Ref. No.	Part No.	Description	Remark
R711	1-247-746-11	CARBON	390 5% 1/2W F (FB720R)
		< RELAY >	
RY501	1-515-921-11	RELAY (12V)	
RY502	1-515-921-11	RELAY (12V)	
RY503	1-515-920-11	RELAY (24V)	
		< TERMINAL >	
* TM501	1-537-699-11	TERMINAL BOARD (SP)(SPEAKERS)	

*	1-669-496-11	VOL BOARD	*****
		< CAPACITOR >	
C310	1-136-165-00	FILM	0.1uF 5% 50V
		< CONNECTOR >	
CN302	1-691-772-11	PLUG (MICRO CONNECTOR) 10P	
CN303	1-691-768-11	PLUG (MICRO CONNECTOR) 6P	
		< TRANSISTOR >	
Q300	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q400	8-729-141-26	TRANSISTOR 2SC3622A-LK	
		< RESISTOR >	
R312	1-259-448-11	CARBON	6.8K 5% 1/6W
R412	1-259-448-11	CARBON	6.8K 5% 1/6W
		< VARIABLE RESISTOR >	
RV300	1-225-227-11	RES, VAR, CARBON 120K/120K (VOLUME)	

		MISCELLANEOUS	*****
△ 11	1-777-185-11	CORD, POWER	
△ CNJ3	1-526-794-11	OUTLET, AC	
△ CNJ4	1-526-794-11	OUTLET, AC	
Q511	8-729-232-45	TRANSISTOR 2SK1529-Y	
Q512	8-729-232-46	TRANSISTOR 2SJ200-Y	
Q611	8-729-232-45	TRANSISTOR 2SK1529-Y	
Q612	8-729-232-46	TRANSISTOR 2SJ200-Y	
Q702	8-729-209-15	TRANSISTOR 2SD2012	
△ S1	1-554-920-61	SWITCH, PUSH (AC POWER)(1 KEY)(Ⓞ)	
△ T1	1-431-870-11	TRANSFORMER, POWER (FB720R)	
△ T1	1-431-872-11	TRANSFORMER, POWER (FB820R)	

		ACCESSORIES & PACKING MATERIALS	*****
	1-473-656-11	REMOTE COMMANDER (RM-S316)	
	3-864-335-11	MANUAL, INSTRUCTION (ENGLISH,FRENCH,SPANISH,PORTUGUESE)	

Ref. No.	Part No.	Description	Remark
	3-864-335-21	MANUAL, INSTRUCTION (GERMAN,DUTCH,SWEDISH,ITALIAN)	
	4-981-643-01	COVER, BATTERY (FOR RM-S316)	

		HARDWARE LIST	*****
#1	7-682-548-09	SCREW (3X8)	
#2	7-685-885-09	SCREW +BVTT 4X16 (S)	

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