

HCD-GR8000

SERVICE MANUAL

E Model

HCD-GR8000 is the compact disc deck receiver.

The mechanical and electrical specifications of HCD-GR8000 is almost same as HCD-GR7 E model.

So, this manual contains only the points which differ from HCD-GR7 E model.

For the informations not contained in this manual, please refer to the HCD-D60/GR7/GR7J/RX70 service manual (9-960-853-□□) previously issued.

- HCD-GR8000 is the tuner, deck, CD and amplifier section in MHC-GR8000.

SPECIFICATIONS

Amplifier section

Rates RMS power output

Thai and Argentine models:
120 + 120 watts
(6 ohms at 1 kHz,
1% THD, AC 240V)
115 + 115 watts
(6 ohms at 1kHz,
1% THD,
AC 120V/AC 230V)
105 + 105 watts
(6 ohms at 1kHz,
1% THD, AC 110V)
Other models:
120 + 120 watts
(6 ohms at 1 kHz,
1% THD, AC 240V)
115 + 115 watts
(6 ohms at 1kHz,
1% THD, AC 120V)
105 + 105 watts
(6 ohms at 1kHz,
1% THD,
AC 220V/AC 110V)

Reference RMS power output

Singaporean and
Malaysian models:
145 + 145 watts
(6 ohms at 1kHz,
10% THD,
AC 230V/AC 120V)
Other models:
145 + 145 watts
(6 ohms at 1 kHz,
10% THD,
AC 220V/AC 110V)

Peak music power output: 2800 watts

General

Power requirements

Thai and Argentine models:
110 - 120V or 220 - 230V or
240V AC, 50/60 Hz
Adjustable with voltage
selector

Other models:
110 - 120V or 220 - 240V
AC, 50/60 Hz Adjustable
with voltage selector

Power consumption:

330 watts

Dimensions (w/h/d)

Approx. 280 × 330 × 366
mm

Mass

Approx. 12kg

COMPACT DISC DECK RECEIVER



SONY®

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7. EXPLODED VIEWS

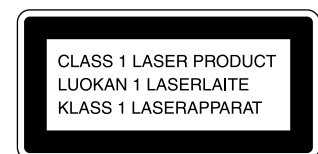
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8. ELECTRICAL PARTS LIST

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CAUTION
Use of control or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.



Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

The following caution label is located inside the unit.

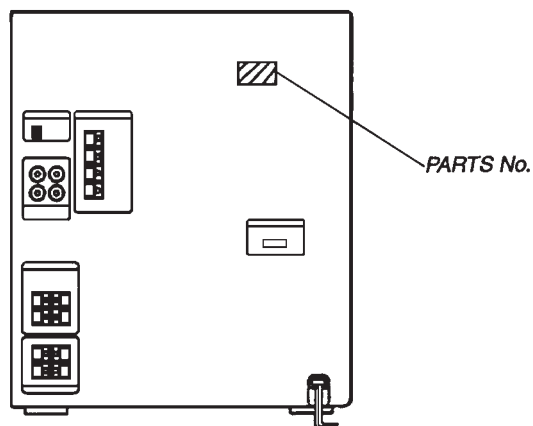
CAUTION	; INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	; USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	; AVATTAESSA JA SUOJALLIUTUS OHITETTAESSA DIET AITTIINA LASERSÄTEILYLLE.
VARNING	; LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URKOPPLAD.
ADVARSEL	; USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNGÅ EKSPONERING FOR STRÅLEN.

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.

MODEL IDENTIFICATION

— BACK PANEL —



MODEL	PART NO.
E	4-993-650-01
SP, MY, TH, AR	4-993-650-21
EA	4-993-650-31

- Abbreviation
EA : Saudi Arabia
MY : Malaysia
SP : Singapore
TH : Thailand
AR : Argentine

SERVICING NOTES

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body. During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts. The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

Note on chip component replacement

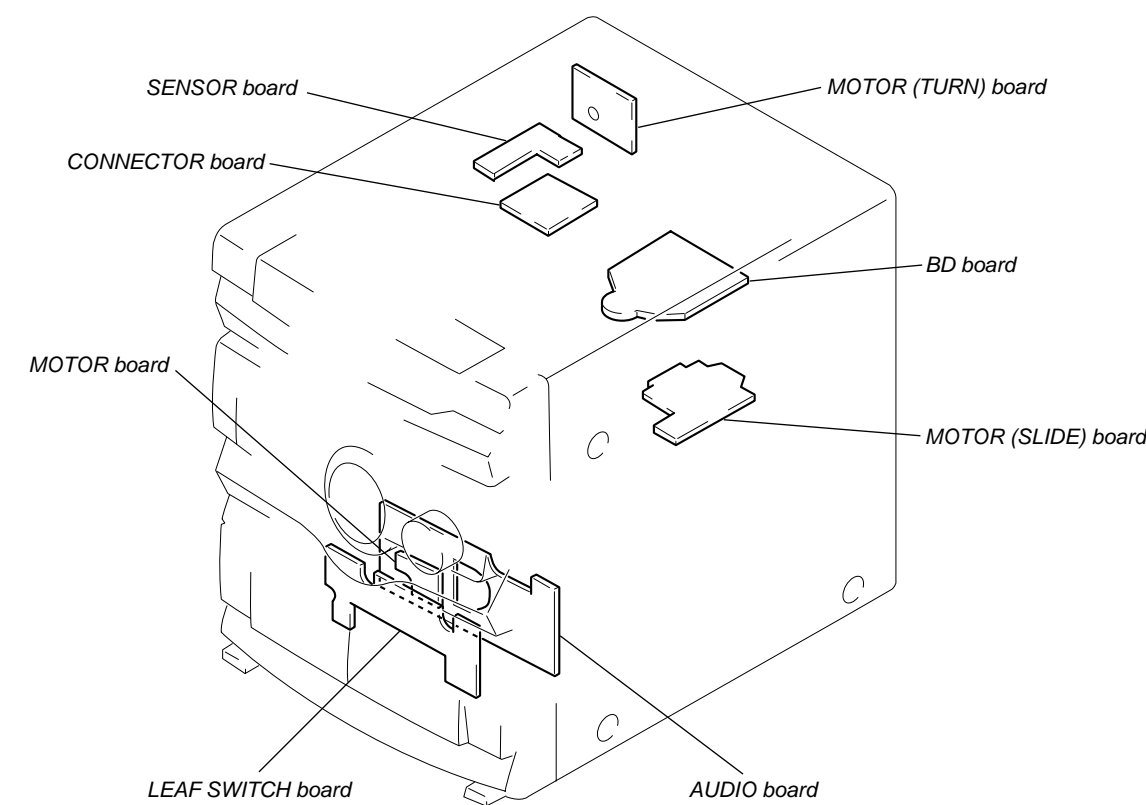
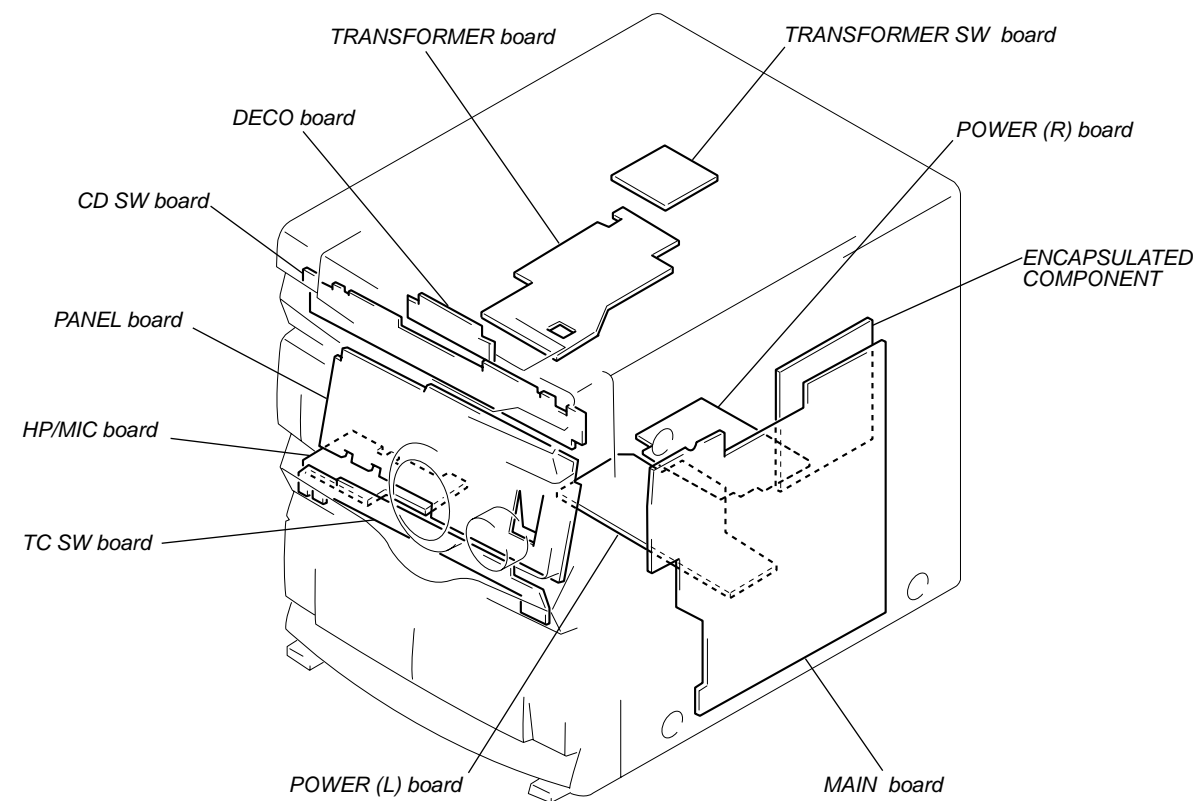
- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

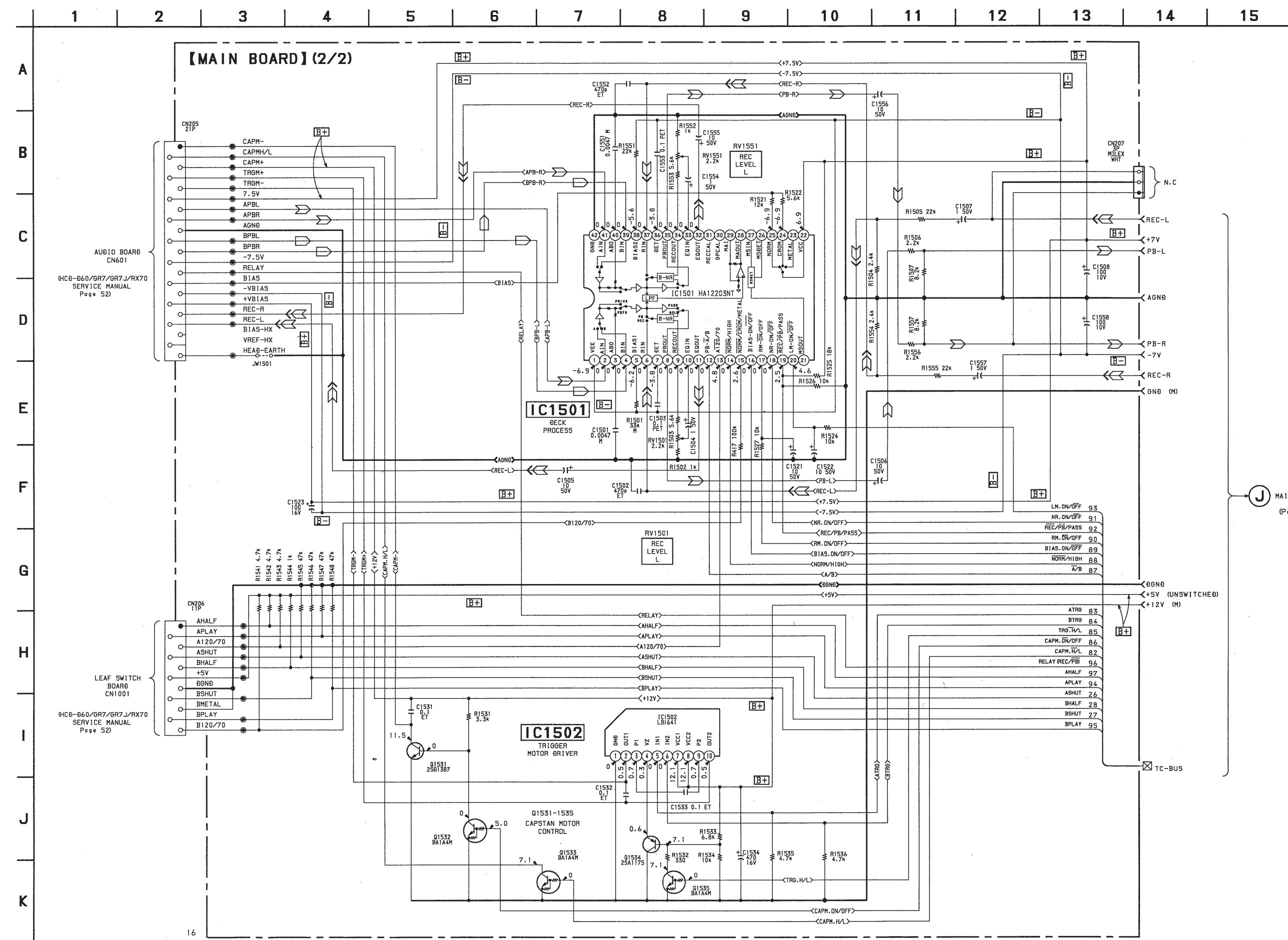
- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

SECTION 6
DIAGRAMS

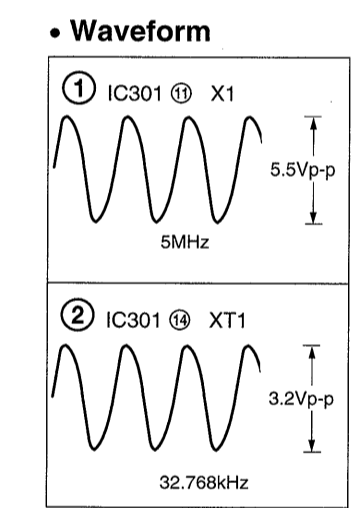
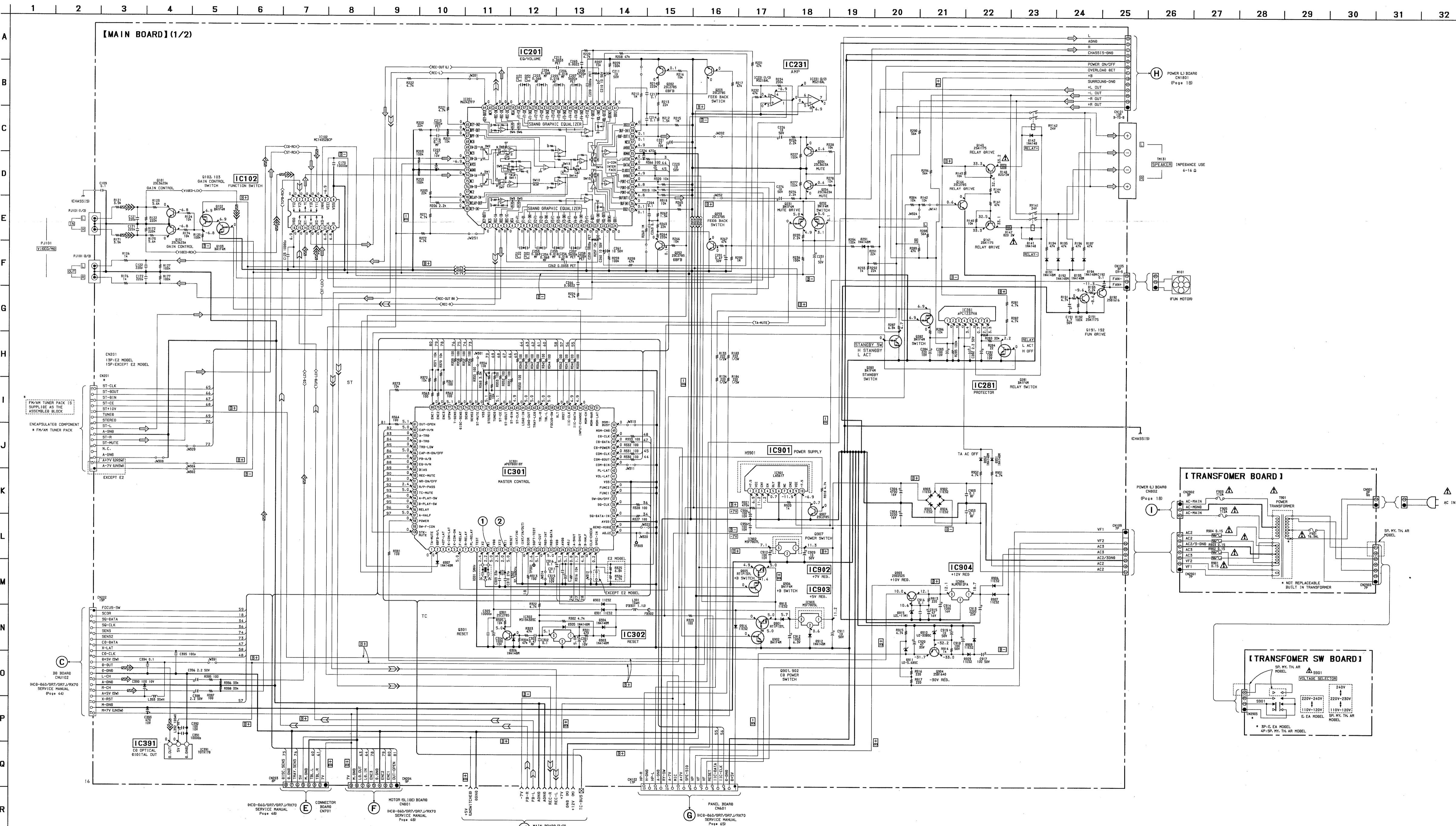
• Circuit Boards Location



6-8. SCHEMATIC DIAGRAM — MAIN (2/2) SECTION — (Refer to the HCD-D60/GR7/GR7J/RX70 service manual page 51.) • Refer to page 11 for Printed Wiring Board (MAIN BOARD)



- Note:**
- All capacitors are in μF unless otherwise noted. pF; μF 50VV or less are not indicated except for electrolytics and tantalums.
 - All resistors are in Ω and 1/4W or less unless otherwise specified.
 - [B+] : B+ Line.
 - [B-] : B- Line.
 - [] : adjustment for repair.
 - Voltages are dc with respect to ground under no-signal conditions.
 - Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
 - Signal path
 - ▷ : PB (DECK A)
 - ▷ : PB (DECK B)
 - ▷ : PB (DECK B)



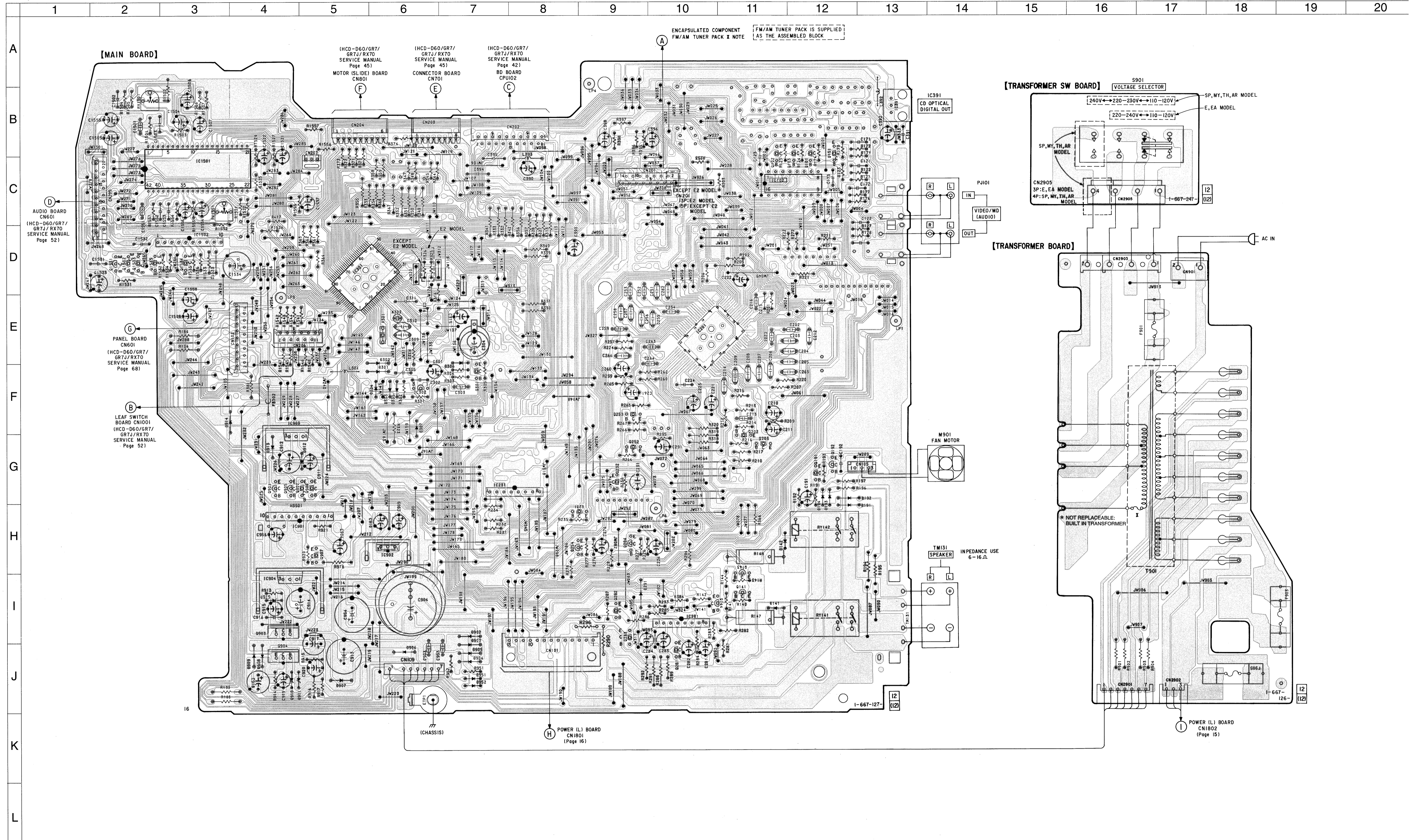
Note:

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- Δ : Internal component.
- \square : nonflammable resistor.
- \sim : fusible resistor.

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

• \square : B+ Line.
• \square : B- Line.
• Voltages are waveforms are dc with respect to ground under no-signal (detuned) conditions.
• no mark: FM TUNER
• Impossible to measure
• Voltages are taken with a VOM (input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
• Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.
• Circled numbers refer to waveforms.
• Signal path
• Abbreviation
• E2 : 120V AC Area in E model
• E3 : 220V AC Area in E model
• EA : Saudi Arabia
• MY : Malaysia
• SP : Singapore
• TH : Thai
• AR : Argentine

6-10. PRINTED WIRING BOARDS — MAIN / POWER SECTION —
(Refer to the HCD-D60/GR7/RX70 service manual page 59.)



• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D141	I-11	IC902	H-6
D142	H-11	IC903	F-4
D191	G-12	IC904	I-4
D192	G-12	IC1501	C-3
D193	G-12	IC1502	D-3
D194	G-12		
D291	I-9	Q101	B-12
D301	F-6	Q102	B-11
D302	E-6	Q103	B-12
D303	F-6	Q141	I-11
D304	F-6	Q143	H-11
D305	F-6	Q144	I-11
D306	E-7	Q151	B-12
D307	F-6	Q191	G-12
D902	I-7	Q192	G-12
D903	I-7	Q202	F-11
D904	I-7	Q203	G-11
D905	I-7	Q204	H-9
D906	J-6	Q231	H-9
D907	J-5	Q232	G-9
D908	J-4	Q252	G-9
D909	J-4	Q253	F-9
D910	J-4	Q254	H-9
D911	J-4	Q281	J-10
D912	G-5	Q282	I-9
D913	G-4	Q283	I-9
D914	F-4	Q301	F-7
D915	I-4	Q901	G-4
D951	J-7	Q902	G-4
D952	J-7	Q903	I-4
		Q904	J-4
IC102	C-11	Q905	G-4
IC201	E-10	Q906	G-5
IC231	G-7	Q907	H-5
IC281	I-10	Q1531	D-2
IC301	D-5	Q1532	D-2
IC302	F-6	Q1533	D-2
IC391	B-13	Q1534	D-3
IC901	H-4	Q1535	D-2

Note:

- Parts extracted from the component side.
- Internal component.
- Parts on the side which is seen.

Abbreviation

E2	: 120V AC Area in E model	SP	: Singapore
E3	: 220V AC Area in E model	TH	: Thai
EA	: Saudi Arabia	AR	: Argentine
MY	: Malaysia		

SECTION 7 EXPLODED VIEWS

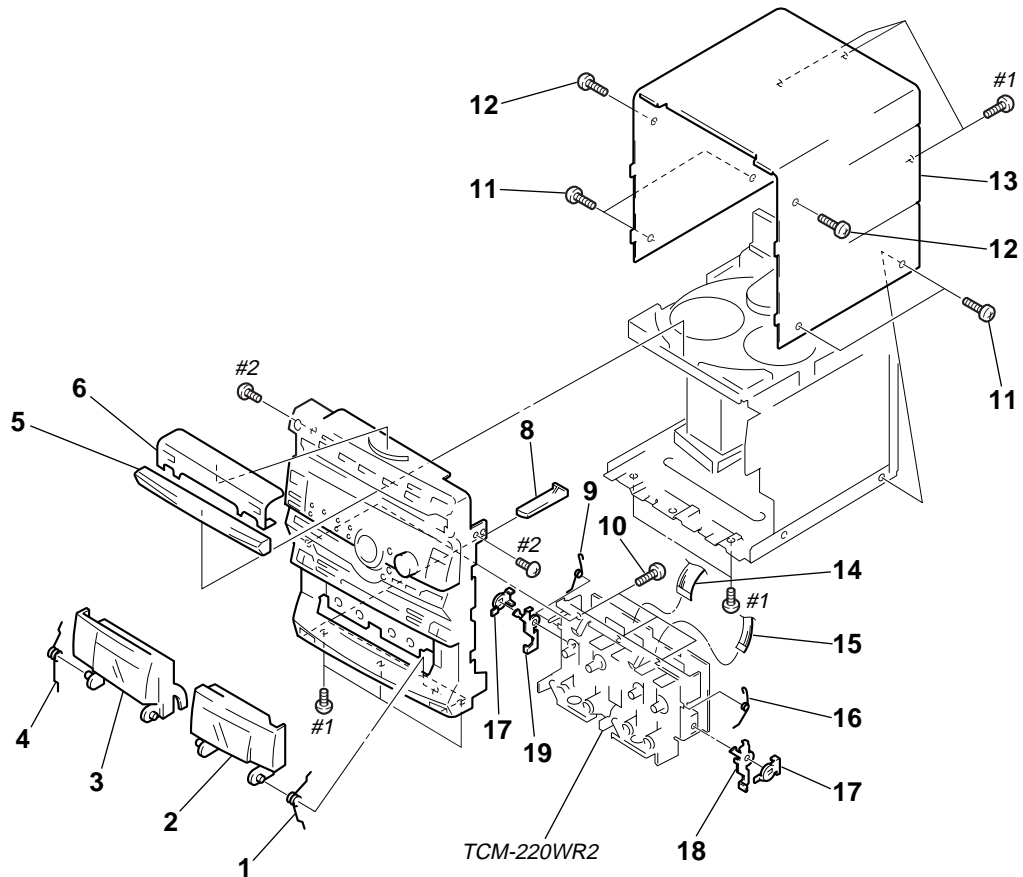
Note:

- -XX, -X mean standardized parts, so they may have some differences 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.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Abbreviation
 E2 : 120V AC Area in E model
 E3 : 220V AC Area in E model
 EA : Saudi Arabia TH : Thai
 MY : Malaysia AR : Argentine
 SP : Singapore

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

(1) CASE, MD ASSY SECTION

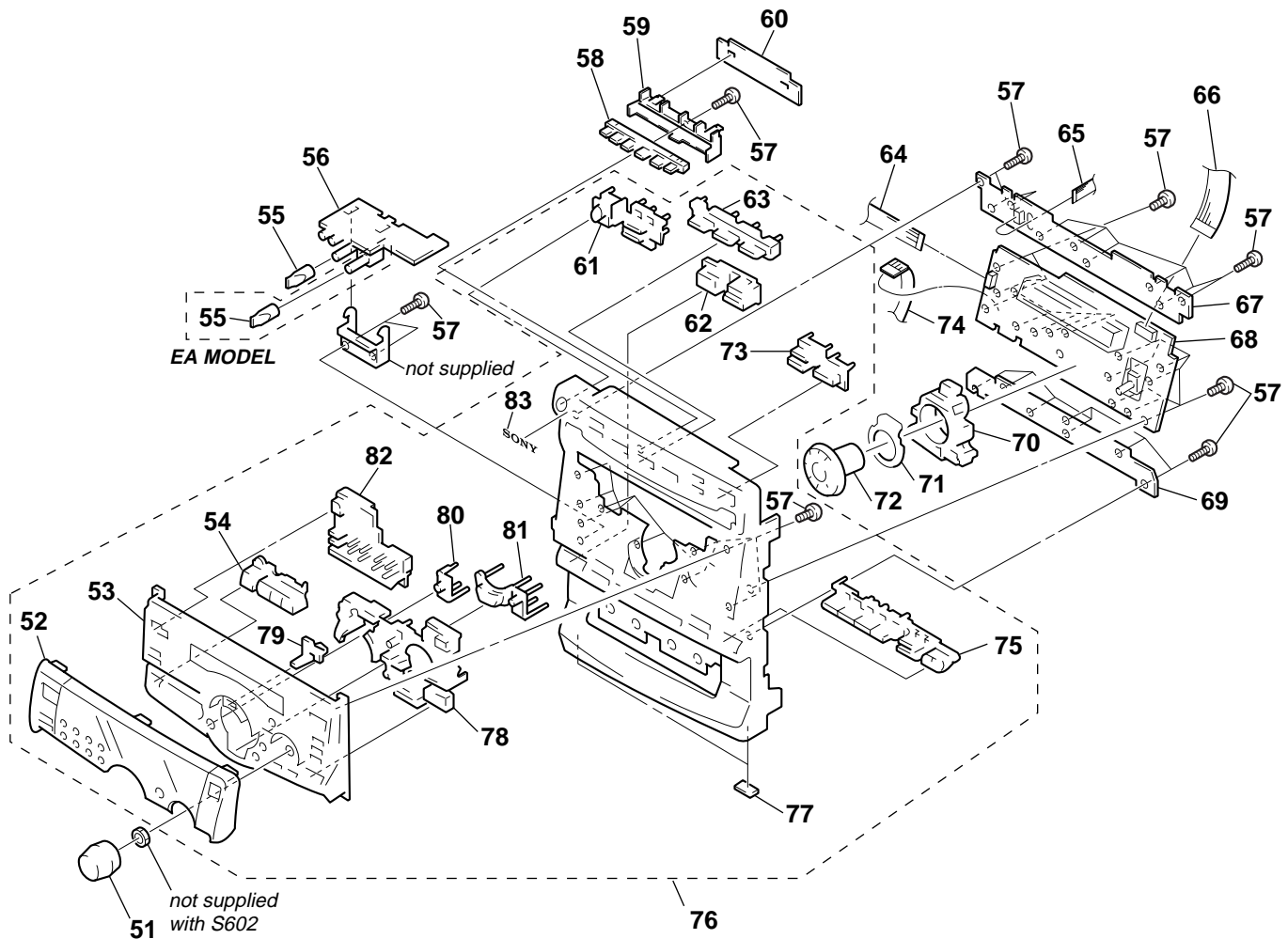
(Refer to the HCD-D60/GR7/GR7J/RX70 service manual page 83)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-989-904-01	SPRING (B DECK)		11	3-363-099-01	SCREW (CASE 3 TP2)	
2	X-4948-117-1	LID (B) ASSY, CASSETTE		12	3-363-099-41	SCREW (CASE 3 TP2)	
3	X-4948-116-1	LID (A) ASSY, CASSETTE		* 13	4-988-767-11	CASE	
4	4-989-903-01	SPRING (A DECK)		14	1-773-160-11	WIRE (FLAT TYPE) (21 CORE)	
5	4-991-701-51	PANEL, LOADING		15	1-769-947-11	WIRE (FLAT TYPE) (11 CORE)	
6	4-986-859-31	WINDOW (CD)		16	4-990-130-01	SPRING (OPEN B)	
8	4-986-843-21	BUTTON (EJECT)		17	3-354-957-01	JOINT (LOCK LEVER)	
9	4-990-129-01	SPRING (OPEN A)		* 18	3-354-954-01	LEVER (LOCK LEVER R)	
10	4-951-620-01	SCREW (2.6X8), +BVTP		* 19	3-354-953-01	LEVER (LOCK LEVER L)	

(2) FRONT PANEL SECTION

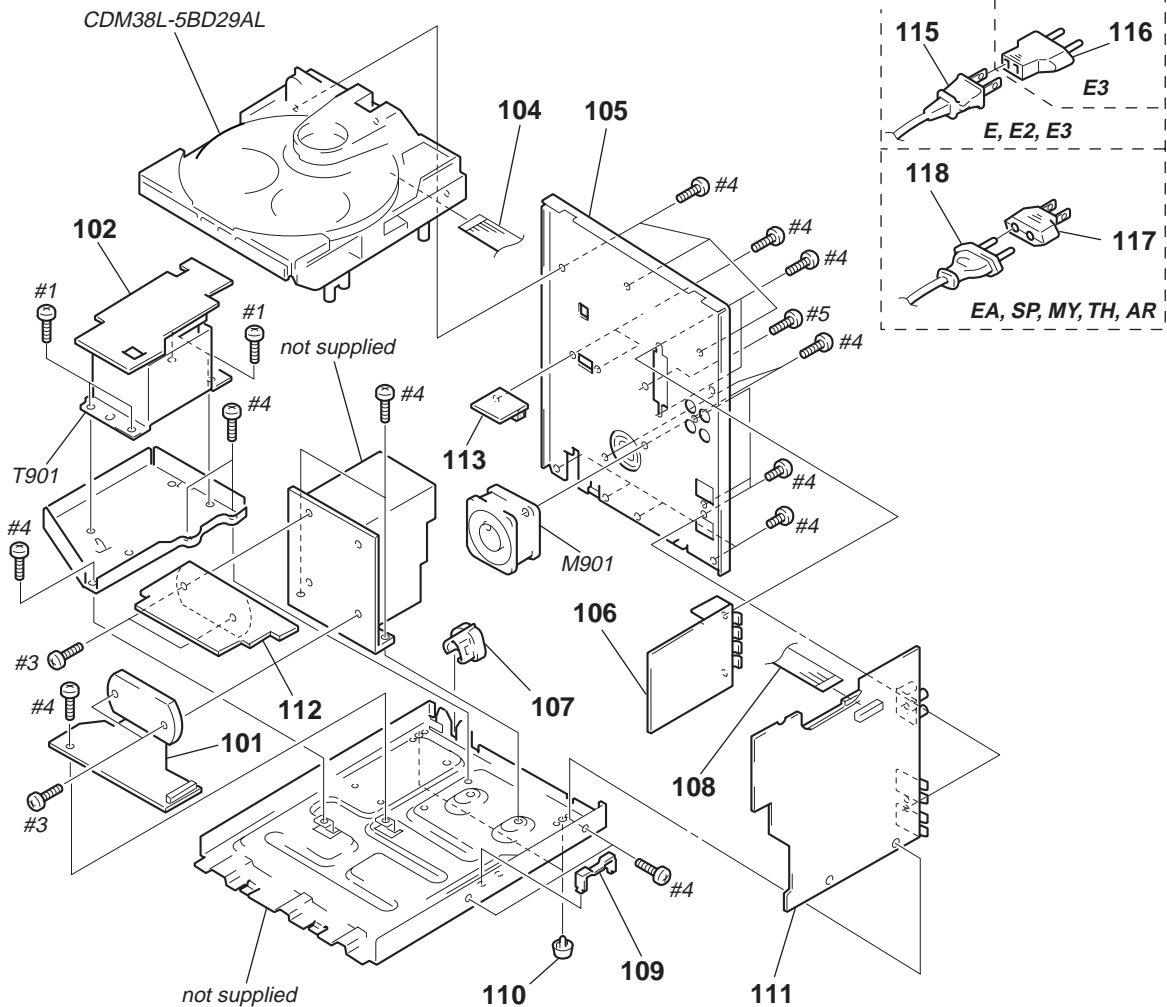
(Refer to the HCD-D60/GR7/GR7J/RX70 service manual page 84,85)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-986-877-21	KNOB (VOL)		* 67	A-4392-348-A	CD SW BOARD, COMPLETE	
52	4-986-869-61	WINDOW (STR)		* 68	A-4392-341-A	PANEL BOARD, COMPLETE	
53	4-986-866-21	PANEL, SUB		* 69	A-4392-350-A	TC SW BOARD, COMPLETE	
54	X-4948-111-1	BUTTON (DJ) ASSY		70	4-986-880-01	HOLDER (JOG)	
55	4-986-893-21	KNOB (MICROPHONE)		71	4-986-881-01	JOG (PLATE)	
* 56	A-4392-351-A	HP/MIC BOARD, COMPLETE (EXCEPT EA)		72	X-4948-114-1	KNOB (JOG-T5) ASSY	
* 56	A-4392-857-A	HP/MIC BOARD, COMPLETE (EA)		73	4-986-861-21	BUTTON (PLAY)	
57	4-951-620-01	SCREW (2.6X8), +BVTP		74	1-769-909-11	WIRE (FLAT TYPE) (9 CORE)	
58	4-986-863-01	INDICATOR (CD)		75	4-986-902-21	BUTTON (B DECK)	
* 59	4-986-865-01	HOLDER (LED)		76	X-4948-104-1	PANEL ASSY, FRONT (E2,E3,SP,MY,TH,AR)	
* 60	1-664-007-11	DECO BOARD		77	4-930-336-61	FOOT (FELT)	
61	4-986-860-21	BUTTON (POWER)		78	X-4948-107-1	BUTTON (T/B) ASSY	
62	4-986-901-21	BUTTON (A DECK)		79	4-986-883-01	INDICATOR (JOG)	
63	4-986-862-01	BUTTON (CD)		80	4-986-894-01	BUTTON (GROOVE)	
64	1-777-869-11	WIRE (FLAT TYPE) (10 CORE)		81	X-4948-110-1	BUTTON (E/S) ASSY	
65	1-777-936-11	WIRE (FLAT TYPE) (5 CORE)		82	4-986-872-31	BUTTON (TIMER)	
66	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)		83	4-962-708-11	EMBLEM (4-A), SONY	

(3) CHASSIS SECTION

(Refer to the HCD-D60/GR7/GR7J/RX70 service manual page 86,87)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
* 101	A-4403-329-A	POWER (L) BOARD, COMPLETE		110	4-965-822-01	FOOT	
* 102	1-667-126-12	TRANSFORMER BOARD		* 111	A-4403-335-A	MAIN BOARD, COMPLETE (EXCEPT E2)	
104	1-777-870-11	WIRE (FLAT TYPE) (19 CORE)		* 111	A-4403-344-A	MAIN BOARD, COMPLETE (E2)	
* 105	4-993-650-01	PANEL (T5 HI-POWER), BACK (E)		* 112	A-4403-334-A	POWER (R) BOARD, COMPLETE	
* 105	4-993-650-21	PANEL (T5 HI-POWER), BACK (SP,MY,TH,AR)		* 113	1-667-247-12	TRANSFORMER SW BOARD	
* 105	4-993-650-31	PANEL (T5 HI-POWER), BACK (EA)		△ 115	1-575-653-11	CORD, POWER (E)	
106	1-233-545-11	ENCAPSULATED COMPONENT (E2)		△ 116	1-569-007-11	ADAPTOR, CONVERSION 2P (E3)	
106	1-233-546-11	ENCAPSULATED COMPONENT (EXCEPT E2)		△ 117	1-569-008-11	ADAPTOR, CONVERSION 2P (EA,SP,MY,TH,AR)	
* 107	3-703-244-00	BUSHING (2104), CORD (EA,SP,MY,TH,AR)		△ 118	1-575-651-11	CORD, POWER (EA,SP,MY,TH,AR)	
107	3-703-571-11	BUSHING (S) (4516), CORD (E)		M901	1-698-792-11	FAN, DC	
108	1-751-086-11	WIRE (FLAT TYPE) (13 CORE) (E2)		△ T901	1-431-504-11	TRANSFORMER, POWER (E,EA)	
108	1-773-012-11	WIRE (FLAT TYPE) (15 CORE) (EXCEPT E2)		△ T901	1-431-619-11	TRANSFORMER, POWER (SP,MY,TH,AR)	
* 109	4-988-533-01	HOLDER, PCB					

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

SECTION 8 ELECTRICAL PARTS LIST

(Refer to the HCD-D60/GR7/GR7J/RX70 service manual page 93)

Note:

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

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

- Abbreviation
E2 : 120V AC Area in E model
E3 : 220V AC Area in E model
EA : Saudi Arabia
MY : Malaysia
SP : Singapore
TH : Thai
AR : Argentine

- 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.
- CAPACITORS:
uF: μ F
- RESISTORS
All resistors are in ohms.
METAL: metal-film resistor
METAL OXIDE: Metal Oxide-film resistor
F: nonflammable
- COILS
uH: μ H
- SEMICONDUCTORS
In each case, u: μ , for example:
uA...: μ A..., uPA..., μ PA...,
uPB..., μ PB..., uPC..., μ PC...,
uPD..., μ PD...

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4403-344-A	MAIN BOARD, COMPLETE (E2) *****		C260	1-126-964-11	ELECT	10uF 20% 50V
*	A-4403-335-A	MAIN BOARD, COMPLETE (EXCEPT E2) *****		C261	1-126-964-11	ELECT	10uF 20% 50V
	7-685-646-79	SCREW +BVT 3X8 TYPE2 N-S < CAPACITOR >		C262	1-130-477-00	MYLAR	0.0033uF 5% 50V
C109	1-164-159-11	CERAMIC	0.1uF 50V	C263	1-136-165-00	FILM	0.1uF 5% 50V
C121	1-162-286-31	CERAMIC	220PF 10% 50V	C264	1-136-165-00	FILM	0.1uF 5% 50V
C122	1-162-286-31	CERAMIC	220PF 10% 50V	C265	1-130-475-00	MYLAR	0.0022uF 5% 50V
C123	1-162-306-11	CERAMIC	0.01uF 20% 16V	C266	1-130-475-00	MYLAR	0.0022uF 5% 50V
C171	1-162-286-31	CERAMIC	220PF 10% 50V	C276	1-126-964-11	ELECT	10uF 20% 50V
C172	1-162-286-31	CERAMIC	220PF 10% 50V	C281	1-126-933-11	ELECT	100uF 20% 10V
C173	1-162-306-11	CERAMIC	0.01uF 20% 16V	C282	1-126-961-11	ELECT	2.2uF 20% 50V
C191	1-126-963-11	ELECT	4.7uF 20% 50V	C283	1-126-933-11	ELECT	100uF 20% 10V
C192	1-164-159-11	CERAMIC	0.1uF 50V	C284	1-126-923-11	ELECT	220uF 20% 10V
C201	1-136-169-00	FILM	0.22uF 5% 50V	C291	1-126-959-11	ELECT	0.47uF 20% 50V
C202	1-136-169-00	FILM	0.22uF 5% 50V	C301	1-126-967-11	ELECT	47uF 20% 10V
C203	1-130-493-00	MYLAR	0.068uF 5% 50V	C302	1-164-159-11	CERAMIC	0.1uF 50V
C204	1-130-493-00	MYLAR	0.068uF 5% 50V	C303	1-136-173-00	FILM	0.47uF 5% 50V
C205	1-130-486-00	MYLAR	0.018uF 10% 50V	C304	1-126-926-11	ELECT	1000uF 20% 10V
C206	1-130-486-00	MYLAR	0.018uF 10% 50V	C305	1-162-306-11	CERAMIC	0.01uF 20% 16V
C207	1-130-480-00	MYLAR	0.0056uF 5% 50V	C309	1-102-518-11	CERAMIC	33PF 5% 50V
C208	1-130-479-00	MYLAR	0.0047uF 5% 50V	C310	1-102-516-11	CERAMIC	27PF 5% 50V
C209	1-130-474-00	MYLAR	0.0018uF 5% 50V	C311	1-164-159-11	CERAMIC	0.1uF 50V
C210	1-126-964-11	ELECT	10uF 20% 50V	C315	1-126-933-11	ELECT	100uF 20% 10V
C211	1-126-964-11	ELECT	10uF 20% 50V	C316	1-136-165-00	FILM	0.1uF 5% 50V
C212	1-130-477-00	MYLAR	0.0033uF 5% 50V	C390	1-126-933-11	ELECT	100uF 20% 10V
C213	1-136-165-00	FILM	0.1uF 5% 50V	C391	1-162-306-11	CERAMIC	0.01uF 20% 16V
C214	1-136-165-00	FILM	0.1uF 5% 50V	C392	1-126-933-11	ELECT	100uF 20% 10V
C215	1-162-294-31	CERAMIC	0.001uF 10% 50V	C393	1-126-925-11	ELECT	470uF 20% 10V
C216	1-136-167-00	FILM	0.15uF 5% 50V	C394	1-164-159-11	CERAMIC	0.1uF 50V
C221	1-126-967-11	ELECT	47uF 20% 10V	C395	1-162-282-31	CERAMIC	100PF 10% 50V
C222	1-126-967-11	ELECT	47uF 20% 10V	C396	1-126-961-11	ELECT	2.2uF 20% 50V
C223	1-126-964-11	ELECT	10uF 20% 50V	C398	1-126-961-11	ELECT	2.2uF 20% 50V
C224	1-162-290-31	CERAMIC	470PF 10% 50V	C903	1-136-165-00	FILM	0.1uF 5% 50V
C226	1-126-964-11	ELECT	10uF 20% 50V	C904	1-126-937-11	ELECT	4700uF 20% 16V
C231	1-109-889-11	ELECT	1uF 20% 50V	C906	1-126-933-11	ELECT	100uF 20% 10V
C251	1-136-169-00	FILM	0.22uF 5% 50V	C909	1-126-964-11	ELECT	10uF 20% 50V
C252	1-136-169-00	FILM	0.22uF 5% 50V	C910	1-126-933-11	ELECT	100uF 20% 10V
C253	1-130-493-00	MYLAR	0.068uF 5% 50V	C911	1-126-964-11	ELECT	10uF 20% 50V
C254	1-130-493-00	MYLAR	0.068uF 5% 50V	C912	1-126-916-11	ELECT	1000uF 20% 6.3V
C255	1-130-486-00	MYLAR	0.018uF 10% 50V	C913	1-126-943-11	ELECT	2200uF 20% 25V
C256	1-130-486-00	MYLAR	0.018uF 10% 50V	C914	1-126-767-11	ELECT	1000uF 20% 16V
C257	1-130-480-00	MYLAR	0.0056uF 5% 50V	C915	1-126-967-11	ELECT	47uF 20% 16V
C258	1-130-479-00	MYLAR	0.0047uF 5% 50V	C916	1-164-159-11	CERAMIC	0.1uF 50V
C259	1-130-474-00	MYLAR	0.0018uF 5% 50V	C917	1-126-968-11	ELECT	100uF 20% 50V
				C918	1-126-968-11	ELECT	100uF 20% 50V
				C919	1-126-964-11	ELECT	10uF 20% 50V

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
C920	1-126-947-11	ELECT	47uF 20% 35V	D908	8-719-024-99	DIODE 11ES2-NTA2B	
C953	1-136-165-00	FILM	0.1uF 5% 50V	D909	8-719-024-99	DIODE 11ES2-NTA2B	
C954	1-126-768-11	ELECT	2200uF 20% 16V	D910	8-719-011-18	DIODE UZ-33BSC-TP	
C956	1-126-933-11	ELECT	100uF 20% 10V	D911	8-719-010-43	DIODE UZ-5.6BSC	
C1501	1-130-479-00	MYLAR	0.0047uF 5% 50V	D912	8-719-987-63	DIODE 1N4148M	
C1502	1-162-290-31	CERAMIC	470PF 10% 50V	D913	8-719-024-99	DIODE 11ES2-NTA2B	
C1503	1-164-159-11	CERAMIC	0.1uF 50V	D914	8-719-024-99	DIODE 11ES2-NTA2B	
C1504	1-126-160-11	ELECT	1uF 20% 50V	D915	8-719-001-42	DIODE UZL-11M1	
C1505	1-126-964-11	ELECT	10uF 20% 50V	D951	8-719-987-63	DIODE 1N4148M	
C1506	1-126-157-11	ELECT	10uF 20% 16V	D952	8-719-987-63	DIODE 1N4148M	
C1507	1-126-160-11	ELECT	1uF 20% 50V			< PLATE >	
C1508	1-126-933-11	ELECT	100uF 20% 10V	* EPT101	4-870-539-11	PLATE, GROUND	
C1523	1-126-933-11	ELECT	100uF 20% 16V			< FERRITE BEAD >	
C1531	1-164-159-11	CERAMIC	0.1uF 50V	FB302	1-412-473-21	INDUCTOR 0UH	
C1532	1-164-159-11	CERAMIC	0.1uF 50V			< IC >	
C1533	1-164-159-11	CERAMIC	0.1uF 50V	IC102	8-759-000-48	IC MC14052BCP	
C1534	1-126-935-11	ELECT	470uF 20% 16V	IC201	8-759-460-02	IC M62427FP-A	
C1551	1-130-479-00	MYLAR	0.0047uF 5% 50V	IC231	8-759-634-50	IC M5218AL	
C1552	1-162-290-31	CERAMIC	470PF 10% 50V	IC281	8-759-111-68	IC uPC1237HA	
C1553	1-164-159-11	CERAMIC	0.1uF 50V	IC301	8-759-481-99	IC uPD780018YGF-021-3BA	
C1554	1-126-960-11	ELECT	1uF 20% 50V	IC302	8-759-635-63	IC M51943BSL	
C1555	1-126-964-11	ELECT	10uF 20% 50V	IC391	8-749-923-04	IC TOTX178 (CD OPTICAL DIGITAL OUT)	
C1556	1-126-964-11	ELECT	10uF 20% 50V	IC901	8-759-288-53	IC LA5617	
C1557	1-126-960-11	ELECT	1uF 20% 50V	IC902	8-759-604-86	IC M5F7807L	
C1558	1-126-933-11	ELECT	100uF 20% 10V	IC903	8-759-231-53	IC TA7805S	
		< CONNECTOR >		IC904	8-759-231-58	IC TA7812S	
CN101	1-778-982-11	CONNECTOR, BOARD TO BOARD 13P		IC1501	8-759-363-21	IC HA12203NT	
* CN102	1-568-836-11	SOCKET, CONNECTOR 17P		IC1502	8-759-822-09	IC LB1641	
CN105	1-564-506-11	PLUG, CONNECTOR 3P				< COIL >	
* CN201	1-568-832-11	SOCKET, CONNECTOR 13P (E2)		L301	1-410-509-11	INDUCTOR 10uH	
* CN201	1-568-834-11	SOCKET, CONNECTOR 15P (EXCEPT E2)		L392	1-410-521-11	INDUCTOR 100uH	
* CN202	1-568-862-11	SOCKET, CONNECTOR 19P		L393	1-410-515-11	INDUCTOR 33uH	
* CN203	1-568-946-11	PIN, CONNECTOR 8P				< JACK >	
* CN204	1-568-947-11	PIN, CONNECTOR 9P		PJ101	1-695-188-31	JACK, PIN 4P (VIDEO/MD)	
CN205	1-568-838-11	SOCKET, CONNECTOR 21P				< TRANSISTOR >	
* CN206	1-568-830-11	SOCKET, CONNECTOR 11P		Q101	8-729-141-30	TRANSISTOR 2SC3623A-LK	
* CN207	1-568-449-11	HOUSING, CONNECTOR(PC BOARD)3P		Q102	8-729-900-63	TRANSISTOR DTA124ES	
		< DIODE >		Q103	8-729-900-36	TRANSISTOR DTC124ES	
D141	8-719-987-63	DIODE 1N4148M		Q141	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D142	8-719-987-63	DIODE 1N4148M		Q143	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D191	8-719-987-63	DIODE 1N4148M		Q144	8-729-119-78	TRANSISTOR 2SC403SP-51	
D192	8-719-987-63	DIODE 1N4148M		Q151	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D193	8-719-987-63	DIODE 1N4148M		Q191	8-729-119-76	TRANSISTOR 2SA1175-HFE	
D194	8-719-987-63	DIODE 1N4148M		Q192	8-729-111-29	TRANSISTOR 2SD1616A-K	
D291	8-719-987-63	DIODE 1N4148M		Q202	8-729-119-78	TRANSISTOR 2SC403SP-51	
D301	8-719-024-99	DIODE 11ES2-NTA2B		Q203	8-729-119-78	TRANSISTOR 2SC403SP-51	
D302	8-719-024-99	DIODE 11ES2-NTA2B		Q204	8-729-141-30	TRANSISTOR 2SC3623A-LK	
D303	8-719-987-63	DIODE 1N4148M		Q231	8-729-900-63	TRANSISTOR DTA124ES	
D304	8-719-987-63	DIODE 1N4148M		Q232	8-729-900-63	TRANSISTOR DTA124ES	
D305	8-719-987-63	DIODE 1N4148M		Q252	8-729-119-78	TRANSISTOR 2SC403SP-51	
D306	8-719-987-63	DIODE 1N4148M					
D307	8-719-987-63	DIODE 1N4148M					
D902	8-719-024-99	DIODE 11ES2-NTA2B					
D903	8-719-024-99	DIODE 11ES2-NTA2B					
D904	8-719-024-99	DIODE 11ES2-NTA2B					
D905	8-719-024-99	DIODE 11ES2-NTA2B					
D906	8-719-024-99	DIODE 11ES2-NTA2B					
D907	8-719-024-99	DIODE 11ES2-NTA2B					

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
Q253	8-729-119-78	TRANSISTOR 2SC403SP-51		R212	1-249-419-11	CARBON 1.5K 5%	1/4W F
Q254	8-729-141-30	TRANSISTOR 2SC3623A-LK		R213	1-249-433-11	CARBON 22K 5%	1/4W
Q281	8-729-900-36	TRANSISTOR DTC124ES		R214	1-247-887-00	CARBON 220K 5%	1/4W
Q282	8-729-900-63	TRANSISTOR DTA124ES		R215	1-247-903-00	CARBON 1M 5%	1/4W
Q283	8-729-900-36	TRANSISTOR DTC124ES		R216	1-249-429-11	CARBON 10K 5%	1/4W
Q301	8-729-119-78	TRANSISTOR 2SC403SP-51		R217	1-249-437-11	CARBON 47K 5%	1/4W
Q901	8-729-040-20	TRANSISTOR RT1P137L-TP		R220	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q902	8-729-900-36	TRANSISTOR DTC124ES		R221	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q903	8-729-030-18	TRANSISTOR 2SD2525		R222	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q904	8-729-030-19	TRANSISTOR 2SB1640		R224	1-249-425-11	CARBON 4.7K 5%	1/4W F
Q905	8-729-040-20	TRANSISTOR RT1P137L-TP		R226	1-249-421-11	CARBON 2.2K 5%	1/4W F
Q906	8-729-900-63	TRANSISTOR DTA124ES		R227	1-249-441-11	CARBON 100K 5%	1/4W
Q907	8-729-119-78	TRANSISTOR 2SC403SP-51		R228	1-249-429-11	CARBON 10K 5%	1/4W
Q1531	8-729-801-93	TRANSISTOR 2SD1387		R231	1-249-437-11	CARBON 47K 5%	1/4W
Q1532	8-729-900-80	TRANSISTOR DTC114ES		R232	1-249-437-11	CARBON 47K 5%	1/4W
Q1533	8-729-900-80	TRANSISTOR DTC114ES		R234	1-247-886-11	CARBON 200K 5%	1/4W
Q1534	8-729-119-77	TRANSISTOR 2SA1175-FEK		R235	1-249-421-11	CARBON 2.2K 5%	1/4W F
Q1535	8-729-900-80	TRANSISTOR DTC114ES		R236	1-249-441-11	CARBON 100K 5%	1/4W
		< RESISTOR >		R253	1-249-441-11	CARBON 100K 5%	1/4W
				R257	1-249-431-11	CARBON 15K 5%	1/4W
R121	1-249-424-11	CARBON 3.9K 5%	1/4W F	R258	1-249-437-11	CARBON 47K 5%	1/4W
R122	1-247-887-00	CARBON 220K 5%	1/4W	R259	1-249-441-11	CARBON 100K 5%	1/4W
R123	1-249-426-11	CARBON 5.6K 5%	1/4W	R260	1-247-903-00	CARBON 1M 5%	1/4W
R124	1-249-429-11	CARBON 10K 5%	1/4W	R262	1-249-419-11	CARBON 1.5K 5%	1/4W F
R125	1-249-441-11	CARBON 100K 5%	1/4W	R263	1-249-433-11	CARBON 22K 5%	1/4W
R126	1-249-417-11	CARBON 1K 5%	1/4W F	R264	1-247-887-00	CARBON 220K 5%	1/4W
R127	1-249-441-11	CARBON 100K 5%	1/4W	R265	1-247-903-00	CARBON 1M 5%	1/4W
R133	1-260-091-11	CARBON 220 5%	1/2W	R266	1-249-429-11	CARBON 10K 5%	1/4W
R134	1-260-091-11	CARBON 220 5%	1/2W	R267	1-249-437-11	CARBON 47K 5%	1/4W
R140	1-249-429-11	CARBON 10K 5%	1/4W	R271	1-249-425-11	CARBON 4.7K 5%	1/4W F
R141	1-249-437-11	CARBON 47K 5%	1/4W	R272	1-249-425-11	CARBON 4.7K 5%	1/4W F
R142	1-249-429-11	CARBON 10K 5%	1/4W	R276	1-249-421-11	CARBON 2.2K 5%	1/4W F
R143	1-249-429-11	CARBON 10K 5%	1/4W	R277	1-249-441-11	CARBON 100K 5%	1/4W
R144	1-249-437-11	CARBON 47K 5%	1/4W	R278	1-249-429-11	CARBON 10K 5%	1/4W
△R147	1-216-456-00	METAL OXIDE 820 5%	2W F	R281	1-249-425-11	CARBON 4.7K 5%	1/4W F
△R148	1-216-456-00	METAL OXIDE 820 5%	2W F	R282	1-249-425-11	CARBON 4.7K 5%	1/4W F
R171	1-249-424-11	CARBON 3.9K 5%	1/4W F	R283	1-249-435-11	CARBON 33K 5%	1/4W
R172	1-247-887-00	CARBON 220K 5%	1/4W	R284	1-249-397-11	CARBON 22 5%	1/4W F
R173	1-249-426-11	CARBON 5.6K 5%	1/4W	R285	1-249-441-11	CARBON 100K 5%	1/4W
R174	1-249-429-11	CARBON 10K 5%	1/4W	R286	1-249-429-11	CARBON 10K 5%	1/4W
R176	1-249-417-11	CARBON 1K 5%	1/4W F	R287	1-249-427-11	CARBON 6.8K 5%	1/4W F
R177	1-249-441-11	CARBON 100K 5%	1/4W	R288	1-249-438-11	CARBON 56K 5%	1/4W
R183	1-260-091-11	CARBON 220 5%	1/2W	R289	1-249-437-11	CARBON 47K 5%	1/4W
R184	1-260-091-11	CARBON 220 5%	1/2W	R290	1-249-438-11	CARBON 56K 5%	1/4W
R191	1-249-425-11	CARBON 4.7K 5%	1/4W F	R291	1-249-433-11	CARBON 22K 5%	1/4W
R192	1-249-441-11	CARBON 100K 5%	1/4W	R292	1-249-433-11	CARBON 22K 5%	1/4W
R193	1-249-421-11	CARBON 2.2K 5%	1/4W F	R293	1-249-417-11	CARBON 1K 5%	1/4W F
R194	1-249-437-11	CARBON 47K 5%	1/4W	R294	1-249-441-11	CARBON 100K 5%	1/4W
R195	1-249-437-11	CARBON 47K 5%	1/4W	R295	1-247-903-00	CARBON 1M 5%	1/4W
R196	1-249-437-11	CARBON 47K 5%	1/4W	R296	1-249-438-11	CARBON 56K 5%	1/4W
R197	1-249-437-11	CARBON 47K 5%	1/4W	R301	1-249-413-11	CARBON 470 5%	1/4W F
R201	1-249-429-11	CARBON 10K 5%	1/4W	R302	1-249-425-11	CARBON 4.7K 5%	1/4W F
R202	1-249-433-11	CARBON 22K 5%	1/4W	R303	1-249-437-11	CARBON 47K 5%	1/4W
R203	1-249-441-11	CARBON 100K 5%	1/4W	R304	1-249-437-11	CARBON 47K 5%	1/4W
R205	1-249-433-11	CARBON 22K 5%	1/4W	R305	1-249-429-11	CARBON 10K 5%	1/4W
R206	1-249-421-11	CARBON 2.2K 5%	1/4W F				
R207	1-249-431-11	CARBON 15K 5%	1/4W				
R208	1-249-437-11	CARBON 47K 5%	1/4W				
R209	1-249-441-11	CARBON 100K 5%	1/4W				
R210	1-247-903-00	CARBON 1M 5%	1/4W				

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

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R313	1-247-807-31	CARBON	100 5% 1/4W	R915	1-249-425-11	CARBON	4.7K 5% 1/4W F
R316	1-249-429-11	CARBON	10K 5% 1/4W	R916	1-249-409-11	CARBON	220 5% 1/4W F
R318	1-249-429-11	CARBON	10K 5% 1/4W	R917	1-249-409-11	CARBON	220 5% 1/4W F
R319	1-249-429-11	CARBON	10K 5% 1/4W	R918	1-249-425-11	CARBON	4.7K 5% 1/4W F
R320	1-249-429-11	CARBON	10K 5% 1/4W	R920	1-249-417-11	CARBON	1K 5% 1/4W F
R322	1-249-425-11	CARBON	4.7K 5% 1/4W F	R921	1-247-895-00	CARBON	470K 5% 1/4W
R323	1-247-807-31	CARBON	100 5% 1/4W	R951	1-249-425-11	CARBON	4.7K 5% 1/4W F
R325	1-249-427-11	CARBON	6.8K 5% 1/4W F (E2)	R952	1-249-425-11	CARBON	4.7K 5% 1/4W F
R326	1-249-425-11	CARBON	4.7K 5% 1/4W F (E2)	R1501	1-249-435-11	CARBON	33K 5% 1/4W
R327	1-247-807-31	CARBON	100 5% 1/4W	R1502	1-249-417-11	CARBON	1K 5% 1/4W F
R328	1-247-807-31	CARBON	100 5% 1/4W	R1503	1-249-426-11	CARBON	5.6K 5% 1/4W
R330	1-247-807-31	CARBON	100 5% 1/4W	R1504	1-247-840-00	CARBON	2.4K 5% 1/4W
R331	1-247-807-31	CARBON	100 5% 1/4W	R1505	1-249-433-11	CARBON	22K 5% 1/4W
R332	1-247-807-31	CARBON	100 5% 1/4W	R1506	1-249-421-11	CARBON	2.2K 5% 1/4W F
R333	1-247-807-31	CARBON	100 5% 1/4W	R1507	1-249-428-11	CARBON	8.2K 5% 1/4W F
R339	1-247-807-31	CARBON	100 5% 1/4W	R1521	1-249-430-11	CARBON	12K 5% 1/4W
R340	1-247-807-31	CARBON	100 5% 1/4W	R1522	1-249-426-11	CARBON	5.6K 5% 1/4W
R341	1-247-807-31	CARBON	100 5% 1/4W	R1524	1-249-429-11	CARBON	10K 5% 1/4W
R342	1-247-807-31	CARBON	100 5% 1/4W	R1525	1-249-432-11	CARBON	18K 5% 1/4W
R344	1-247-807-31	CARBON	100 5% 1/4W	R1526	1-249-429-11	CARBON	10K 5% 1/4W
R345	1-247-807-31	CARBON	100 5% 1/4W	R1527	1-249-429-11	CARBON	10K 5% 1/4W
R347	1-247-807-31	CARBON	100 5% 1/4W	R1531	1-247-843-11	CARBON	3.3K 5% 1/4W
R348	1-247-807-31	CARBON	100 5% 1/4W	R1532	1-249-411-11	CARBON	330 5% 1/4W
R349	1-247-807-31	CARBON	100 5% 1/4W	R1533	1-249-427-11	CARBON	6.8K 5% 1/4W F
R350	1-247-807-31	CARBON	100 5% 1/4W	R1534	1-249-429-11	CARBON	10K 5% 1/4W
R351	1-247-807-31	CARBON	100 5% 1/4W	R1535	1-249-425-11	CARBON	4.7K 5% 1/4W F
R352	1-247-807-31	CARBON	100 5% 1/4W	R1536	1-249-425-11	CARBON	4.7K 5% 1/4W F
R353	1-247-807-31	CARBON	100 5% 1/4W	R1541	1-249-425-11	CARBON	4.7K 5% 1/4W F
R354	1-247-807-31	CARBON	100 5% 1/4W	R1542	1-249-425-11	CARBON	4.7K 5% 1/4W F
R355	1-247-807-31	CARBON	100 5% 1/4W	R1543	1-249-425-11	CARBON	4.7K 5% 1/4W F
R356	1-247-807-31	CARBON	100 5% 1/4W	R1544	1-249-417-11	CARBON	1K 5% 1/4W F
R357	1-247-807-31	CARBON	100 5% 1/4W	R1545	1-249-437-11	CARBON	47K 5% 1/4W
R358	1-247-807-31	CARBON	100 5% 1/4W	R1546	1-249-437-11	CARBON	47K 5% 1/4W
R359	1-247-807-31	CARBON	100 5% 1/4W	R1547	1-249-437-11	CARBON	47K 5% 1/4W
R361	1-247-807-31	CARBON	100 5% 1/4W	R1548	1-249-437-11	CARBON	47K 5% 1/4W
R362	1-247-807-31	CARBON	100 5% 1/4W	R1551	1-249-433-11	CARBON	22K 5% 1/4W
R363	1-247-807-31	CARBON	100 5% 1/4W	R1552	1-249-417-11	CARBON	1K 5% 1/4W F
R364	1-247-807-31	CARBON	100 5% 1/4W	R1553	1-249-426-11	CARBON	5.6K 5% 1/4W
R366	1-247-807-31	CARBON	100 5% 1/4W	R1554	1-247-840-00	CARBON	2.4K 5% 1/4W
R367	1-249-429-11	CARBON	10K 5% 1/4W	R1555	1-249-433-11	CARBON	22K 5% 1/4W
R368	1-247-843-11	CARBON	3.3K 5% 1/4W	R1556	1-249-421-11	CARBON	2.2K 5% 1/4W F
R370	1-249-429-11	CARBON	10K 5% 1/4W	R1557	1-249-428-11	CARBON	8.2K 5% 1/4W F
R371	1-249-429-11	CARBON	10K 5% 1/4W			< VARIABLE RESISTOR >	
R372	1-249-429-11	CARBON	10K 5% 1/4W	RV1501	1-238-598-11	RES, ADJ, CARBON 2.2K	
R373	1-249-429-11	CARBON	10K 5% 1/4W	RV1551	1-238-598-11	RES, ADJ, CARBON 2.2K	
R374	1-249-393-11	CARBON	10 5% 1/4W F			< RELAY >	
R381	1-247-807-31	CARBON	100 5% 1/4W	RY141	1-515-920-11	RELAY (24V)	
R384	1-249-429-11	CARBON	10K 5% 1/4W	RY142	1-515-920-11	RELAY (24V)	
R395	1-247-807-31	CARBON	100 5% 1/4W			< TERMINAL >	
R396	1-249-435-11	CARBON	33K 5% 1/4W	TM131	1-537-240-31	TERMINAL BOARD (CHECKER PIN) (SPEAKER)	
R397	1-247-807-31	CARBON	100 5% 1/4W			< VIBRATOR >	
R398	1-249-435-11	CARBON	33K 5% 1/4W	X301	1-760-489-11	VIBRATOR, CERAMIC (5MHz)	
R417	1-249-441-11	CARBON	100K 5% 1/4W	X302	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)	
R913	1-249-409-11	CARBON	220 5% 1/4W F				
R914	1-249-417-11	CARBON	1K 5% 1/4W F				

POWER (L)

POWER (R)

Ref. No.	Part No.	Description	Remarks
*	A-4403-329-A	POWER (L) BOARD, COMPLETE *****	
	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
		< CAPACITOR >	
C1801	1-126-963-11	ELECT 4.7uF 20%	50V
C1802	1-162-286-31	CERAMIC 220PF 10%	50V
C1803	1-162-282-31	CERAMIC 100PF 10%	50V
C1804	1-126-967-11	ELECT 47uF 20%	10V
C1806	1-126-967-11	ELECT 47uF 20%	50V
C1807	1-126-965-11	ELECT 22uF 20%	50V
C1809	1-126-965-11	ELECT 22uF 20%	50V
C1810	1-164-159-11	CERAMIC 0.1uF	50V
C1811	1-130-493-00	MYLAR 0.068uF 5%	50V
C1812	1-130-493-00	MYLAR 0.068uF 5%	50V
C1814	1-162-306-11	CERAMIC 0.01uF 20%	16V
C1841	1-126-925-11	ELECT 470uF 20%	10V
C1851	1-126-963-11	ELECT 4.7uF 20%	50V
C1852	1-162-286-31	CERAMIC 220PF 10%	50V
C1853	1-162-282-31	CERAMIC 100PF 10%	50V
C1854	1-126-967-11	ELECT 47uF 20%	10V
C1856	1-126-967-11	ELECT 47uF 20%	50V
C1857	1-126-965-11	ELECT 22uF 20%	50V
C1861	1-130-493-00	MYLAR 0.068uF 5%	50V
C1862	1-130-493-00	MYLAR 0.068uF 5%	50V
C2001	1-117-691-11	ELECT 8200uF 20%	50V
C2002	1-117-691-11	ELECT 8200uF 20%	50V
C2003	1-136-165-00	FILM 0.1uF 5%	50V
C2004	1-136-165-00	FILM 0.1uF 5%	50V
C2005	1-126-963-11	ELECT 4.7uF 20%	50V
		< CONNECTOR >	
CN1801	1-778-981-11	CONNECTOR, BOARD TO BOARD 13P	
* CN1803	1-564-508-11	PLUG, CONNECTOR 5P	
CN1804	1-564-506-11	PLUG, CONNECTOR 3P	
CN1805	1-564-505-11	PLUG, CONNECTOR 2P	
		< DIODE >	
D1801	8-719-987-63	DIODE 1N4148M	
D1811	8-719-987-63	DIODE 1N4148M	
D1841	8-719-987-63	DIODE 1N4148M	
D1842	8-719-987-63	DIODE 1N4148M	
D1851	8-719-987-63	DIODE 1N4148M	
D2001	8-719-060-53	DIODE RBV-2506	
		< IC >	
IC1801	8-749-921-04	IC STK-4211MK-2	
		< TRANSISTOR >	
Q1801	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q1851	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
		< RESISTOR >	
R1801	1-249-417-11	CARBON 1K 5%	1/4W F
R1802	1-249-438-11	CARBON 56K 5%	1/4W
R1803	1-249-415-11	CARBON 680 5%	1/4W F
R1804	1-249-438-11	CARBON 56K 5%	1/4W
R1805	1-260-107-11	CARBON 4.7K 5%	1/2W

Ref. No.	Part No.	Description	Remarks
R1806	1-260-107-11	CARBON 4.7K 5%	1/2W
△ R1807	1-212-881-11	FUSIBLE 100 5%	1/4W F
△ R1808	1-217-156-00	WIREWOUND 0.22 10%	5W F
R1809	1-260-076-11	CARBON 10 5%	1/2W
R1811	1-249-417-11	CARBON 1K 5%	1/4W F
R1812	1-249-431-11	CARBON 15K 5%	1/4W
R1813	1-249-441-11	CARBON 100K 5%	1/4W
R1814	1-260-105-11	CARBON 3.3K 5%	1/2W
R1816	1-260-105-11	CARBON 3.3K 5%	1/2W
△ R1820	1-202-972-61	FUSIBLE 1 5%	1/4W F
R1841	1-249-429-11	CARBON 10K 5%	1/4W
R1842	1-247-887-00	CARBON 220K 5%	1/4W
R1843	1-249-421-11	CARBON 2.2K 5%	1/4W F
R1844	1-249-429-11	CARBON 10K 5%	1/4W
R1851	1-249-417-11	CARBON 1K 5%	1/4W F
R1852	1-249-438-11	CARBON 56K 5%	1/4W
R1853	1-249-415-11	CARBON 680 5%	1/4W F
R1854	1-249-438-11	CARBON 56K 5%	1/4W
R1855	1-260-107-11	CARBON 4.7K 5%	1/2W
R1856	1-260-107-11	CARBON 4.7K 5%	1/2W
△ R1857	1-212-881-11	FUSIBLE 100 5%	1/4W F
△ R1858	1-217-156-00	WIREWOUND 0.22 10%	5W F
R1859	1-260-076-11	CARBON 10 5%	1/2W
R1861	1-249-417-11	CARBON 1K 5%	1/4W F
R1862	1-249-431-11	CARBON 15K 5%	1/4W
R1863	1-249-441-11	CARBON 100K 5%	1/4W
R2001	1-249-438-11	CARBON 56K 5%	1/4W

*	A-4403-334-A	POWER (R) BOARD, COMPLETE *****	
		< CAPACITOR >	
C1901	1-126-963-11	ELECT 4.7uF 20%	50V
C1902	1-162-286-31	CERAMIC 220PF 10%	50V
C1903	1-162-282-31	CERAMIC 100PF 10%	50V
C1904	1-126-967-11	ELECT 47uF 20%	10V
C1905	1-126-965-11	ELECT 22uF 20%	50V
C1906	1-126-967-11	ELECT 47uF 20%	50V
C1908	1-126-965-11	ELECT 22uF 20%	50V
C1909	1-130-493-00	MYLAR 0.068uF 5%	50V
C1910	1-130-493-00	MYLAR 0.068uF 5%	50V
C1911	1-130-493-00	MYLAR 0.068uF 5%	50V
C1912	1-130-493-00	MYLAR 0.068uF 5%	50V
C1913	1-164-159-11	CERAMIC 0.1uF	50V
C1914	1-162-282-31	CERAMIC 100PF 10%	50V
C1915	1-126-963-11	ELECT 4.7uF 20%	50V
C1916	1-126-967-11	ELECT 47uF 20%	50V
C1917	1-162-286-31	CERAMIC 220PF 10%	50V
C1918	1-126-925-11	ELECT 470uF 20%	10V
C1919	1-126-965-11	ELECT 22uF 20%	50V
C1921	1-126-967-11	ELECT 47uF 20%	10V
C1934	1-126-963-11	ELECT 4.7uF 20%	50V
		< DIODE >	
D1901	8-719-987-63	DIODE 1N4148M	
D1902	8-719-987-63	DIODE 1N4148M	
D1903	8-719-987-63	DIODE 1N4148M	
D1904	8-719-987-63	DIODE 1N4148M	
D1905	8-719-987-63	DIODE 1N4148M	

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

POWER (R)

TRANSFORMER

TRANSFORMER SW

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
		< IC >				< RESISTOR >	
IC1901	8-749-921-04	IC STK-4211MK-2		△ R901	1-219-120-11	FUSIBLE 0.15 5% 1/4W F	
		< TRANSISTOR >		△ R902	1-219-120-11	FUSIBLE 0.15 5% 1/4W F	
Q1901	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		△ R903	1-219-120-11	FUSIBLE 0.15 5% 1/4W F	
Q1902	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA		△ R904	1-219-120-11	FUSIBLE 0.15 5% 1/4W F	
Q1903	8-729-119-78	TRANSISTOR 2SC403SP-51				< TRANSFORMER >	
Q1904	8-729-900-36	TRANSISTOR DTC124ES		△ T901	1-431-504-11	TRANSFORMER,POWER (E,EA)	
		< RESISTOR >		△ T901	1-431-619-11	TRANSFORMER,POWER (SP,MY,TH,AR)	
R1901	1-249-417-11	CARBON 1K 5% 1/4W F				< FUSE >	
R1902	1-249-438-11	CARBON 56K 5% 1/4W		△ F901	1-532-506-31	FUSE,TIME LAG (6.3A,250V)	
R1903	1-249-438-11	CARBON 56K 5% 1/4W		△ F903	1-533-919-11	FUSE,TIME LAG (12A,250V)	
R1904	1-249-415-11	CARBON 680 5% 1/4W F		△ F905	1-533-919-11	FUSE,TIME LAG (12A,250V)	
△ R1905	1-212-881-11	FUSIBLE 100 5% 1/4W F		*****			
R1906	1-260-107-11	CARBON 4.7K 5% 1/2W		*	1-667-247-12	TRANSFORMER SW BOARD	
R1907	1-260-107-11	CARBON 4.7K 5% 1/2W		*****			
△ R1908	1-212-881-11	FUSIBLE 100 5% 1/4W F				< CONNECTOR >	
R1909	1-260-105-11	CARBON 3.3K 5% 1/2W		* CN2905	1-564-687-11	PIN, CONNECTOR 3P (E,EA)	
R1910	1-260-105-11	CARBON 3.3K 5% 1/2W		* CN2905	1-568-106-11	PIN, CONNECTOR 4P (SP,MY,TH,AR)	
R1911	1-247-887-00	CARBON 220K 5% 1/4W				< SWITCH >	
R1912	1-249-429-11	CARBON 10K 5% 1/4W		△ S901	1-571-309-11	SWITCH (VOLTAGE SELECTOR) (E,EA)	
R1913	1-249-429-11	CARBON 10K 5% 1/4W		△ S901	1-692-328-11	SWITCH (VOLTAGE SELECTOR) (SP,MY,TH,AR)	
R1914	1-249-421-11	CARBON 2.2K 5% 1/4W F		*****			
R1915	1-249-441-11	CARBON 100K 5% 1/4W				MISCELLANEOUS	
R1916	1-249-417-11	CARBON 1K 5% 1/4W F		*****			
R1917	1-249-431-11	CARBON 15K 5% 1/4W					
R1918	1-249-431-11	CARBON 15K 5% 1/4W		14	1-773-160-11	WIRE (FLAT TYPE) (21 CORE)	
R1919	1-249-417-11	CARBON 1K 5% 1/4W F		15	1-769-947-11	WIRE (FLAT TYPE) (11 CORE)	
R1920	1-260-076-11	CARBON 10 5% 1/2W		64	1-777-869-11	WIRE (FLAT TYPE) (10 CORE)	
R1921	1-260-076-11	CARBON 10 5% 1/2W		65	1-777-936-11	WIRE (FLAT TYPE) (5 CORE)	
R1922	1-249-438-11	CARBON 56K 5% 1/4W		66	1-773-051-11	WIRE (FLAT TYPE) (17 CORE)	
R1923	1-249-415-11	CARBON 680 5% 1/4W F		74	1-769-909-11	WIRE (FLAT TYPE) (9 CORE)	
R1924	1-249-438-11	CARBON 56K 5% 1/4W		104	1-777-870-11	WIRE (FLAT TYPE) (19 CORE)	
R1925	1-249-417-11	CARBON 1K 5% 1/4W F		106	1-233-545-11	ENCAPSULATED COMPONENT (E2)	
R1926	1-260-107-11	CARBON 4.7K 5% 1/2W		106	1-233-546-11	ENCAPSULATED COMPONENT (EXCEPT E2)	
R1927	1-260-107-11	CARBON 4.7K 5% 1/2W		108	1-751-086-11	WIRE (FLAT TYPE) (13 CORE) (E2)	
△ R1928	1-202-972-61	FUSIBLE 1 5% 1/4W F		△ 115	1-575-653-11	CORD, POWER (E)	
R1929	1-249-441-11	CARBON 100K 5% 1/4W					
R1930	1-249-441-11	CARBON 100K 5% 1/4W		△ 116	1-569-007-11	ADAPTOR, CONVERSION 2P (E3)	
R1931	1-249-441-11	CARBON 100K 5% 1/4W		△ 117	1-569-008-11	ADAPTOR, CONVERSION 2P (EA,SP,MY,TH,AR)	
△ R1932	1-217-156-00	WIREWOUND 0.22 10% 5W F		△ 118	1-575-651-11	CORD, POWER (EA,SP,MY,TH,AR)	
△ R1933	1-217-156-00	WIREWOUND 0.22 10% 5W F		M901	1-698-792-11	FAN, DC	
R1934	1-249-438-11	CARBON 56K 5% 1/4W		*****			
R1935	1-249-441-11	CARBON 100K 5% 1/4W					
		< THERMISTOR >					
TH1901	1-807-796-11	THERMISTOR					

*	1-667-126-12	TRANSFORMER BOARD					

		< CONNECTOR >					
CN901	1-564-321-00	PIN, CONNECTOR 2P		#1	7-685-871-01	SCREW +BVTT 3X6 (S)	
* CN2901	1-564-522-11	PLUG, CONNECTOR 7P		#2	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
* CN2902	1-564-518-11	PLUG, CONNECTOR 3P		#3	7-685-650-79	SCREW +BVTP 3X16 TYPE2 IT-3	
				#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
				#5	7-685-872-09	SCREW +BVTT 3X8 (S)	

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