

CDP-797

SERVICE MANUAL

AEP Model
UK Model



Model Name Using Similar Mechanism	CDP-791
CD Mechanism Type	CDM14-5BD8A
Optical Pick-Up Block Type	BU-5BD8A

SPECIFICATIONS

Compact disc player

Frequency response	2 Hz to 20 kHz ± 0.5 dB
Signal-to-noise ratio	More than 110 dB
Dynamic range	More than 98 dB
Harmonic distortion	Less than 0.0027%
Channel separation	More than 105 dB

Outputs

LINE OUT (FIXED) (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
LINE OUT (VARIABLE) (phono jacks)	Output level max. 2 V (at 50 kilohms) Load impedance over 50 kilohms
DIGITAL OUT (OPTICAL) (optical output connector)	Wave length 660 nm Output level -18 dBm
PHONES (stereo phone jack)	Output level max. 10 mW Load impedance 32 ohms

General

Power requirements	AEP, Germany models: 220 V - 230 V AC, 50/60 Hz UK model: 240 V AC, 50 Hz
Power consumption	12 W
Dimensions (approx., including projections)	430 x 110 x 295 mm (w/h/d) (17 x 4 5/16 x 11 5/8 inches)
Weight (approx.)	3.9 kg (lbs oz)

Remote commander

Remote control system	Infrared control
Power requirements	3 VDC with two R6 (size AA) batteries
Dimensions (approx., including projections)	62 x 18 x 175 mm (w/h/d) (2 1/2 x 23/32 x 7 inches)
Weight (approx.)	130 g (4.6 oz) Including batteries

Supplied accessories

Audio connecting cord	(1) (2 phono plugs - 2 phono plugs)
Remote commander	(1)
Sony SUN-3(NS) batteries	(2)

Design and specifications are subject to change without notice.

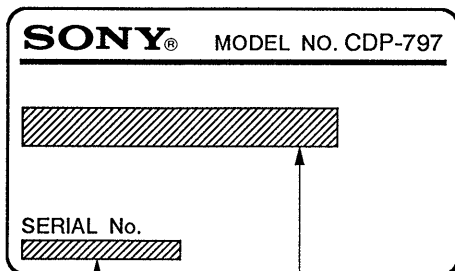
COMPACT DISC PLAYER
SONY®

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MODEL IDENTIFICATION

– Model Number Label –

MADE IN JAPAN
MADE IN FRANCEAEP, Germany model: AC 220 – 230 V ~50/60 Hz
UK model: AC 240 V ~50/60 Hz*Can be identified MADE IN JAPAN with MADE IN FRANCE
by the label model number, or the Back Panel.

	LABEL, MODEL NUMBER
MADE IN JAPAN	PRINTED
MADE IN FRANCE	SEALED

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  OR DOTTED LINE WITH MARK  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.

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

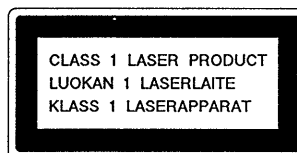
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.

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 more than 30 cm away from the objective lens.

For UK Model and AEP Model



This Compact Disc player is classified as a
CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located
on the rear exterior.

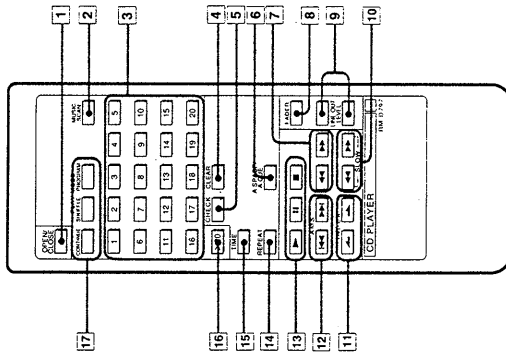
This section is extracted from instruction manual.

SECTION 1 GENERAL

Remote Commander

- 1) OPEN/CLOSE button (20)
- 2) MUSIC SCAN button (40)
- 3) Numeric buttons (24, 38, 48, 52)
- 4) CLEAR (program clear) button (36, 42)
- 5) CHECK button (36)
- 6) A. SPACE/A. CUE button (28, 62)
- 7) << (manual search) buttons (26, 46)
- 8) FADER button (44)
- 9) LINE OUT LEVEL buttons (14) (line out/headphone level) buttons
- 10) <</> SLOW (low speed manual search) buttons (26)
- 11) <---> INDEX buttons (26)
- 12) <<<>> (AMS*) buttons (24, 48)
- 13) <<< (play) button (22)
- 14) <<<> (stop) button (22)
- 15) REPEAT button (44)
- 16) TIME button (22)
- 17) >20 (over 20) button (24)
- 18) PLAY/MODE buttons
- 19) CONTINUE button (30, 34, 38, 56)
- 20) SHUFFLE button (30, 34, 38, 56)
- 21) PROGRAM button (34, 48)
- 22) Display window (20)
- 23) Remote sensor (12)
- 24) TIMER switch (64)
- 25) PEAK SEARCH button (60)
- 26) EDIT/TIME FADE button (52, 58)
- 27) TIME SET button (54, 58)
- 28) MUSIC SCAN button (40)
- 29) Numeric buttons (24, 38, 48, 52)
- 30) >20 (over 20) button (24)
- 31) CHECK (program check) button (36)
- 32) CLEAR (program clear) button (36, 42)
- 33) LINE OUT/PHONE LEVEL control (14)
- 34) PHONES jack (20)
- 35) <<<>> (manual search) buttons (26, 46)
- 36) <<<>> (AMS*) buttons (24, 48)
- 37) <<< (stop) button (22)
- 38) A. SPACE/A. CUE button (28, 62)
- 39) <<< (pause) button (22)
- 40) FADER button (44)
- 41) REPEAT button (44)
- 42) >20 (play) button (22)
- 43) TIME button (22)

* AMS is the abbreviation of Automatic Music Sensor.



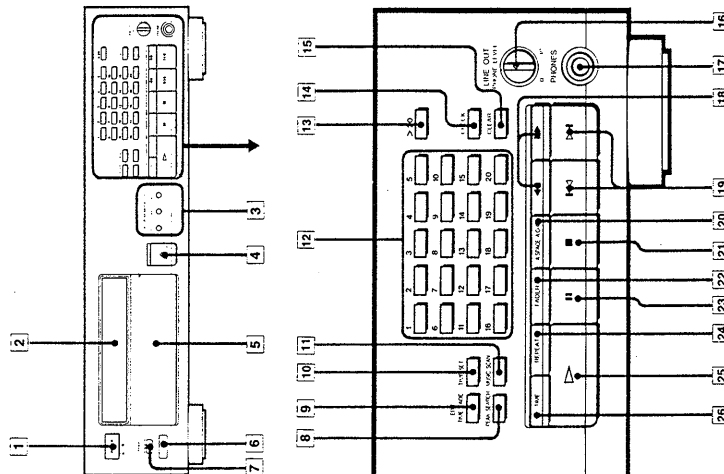
Identifying the Parts

Refer to the pages indicated in parenthesis for details.

Front Panel

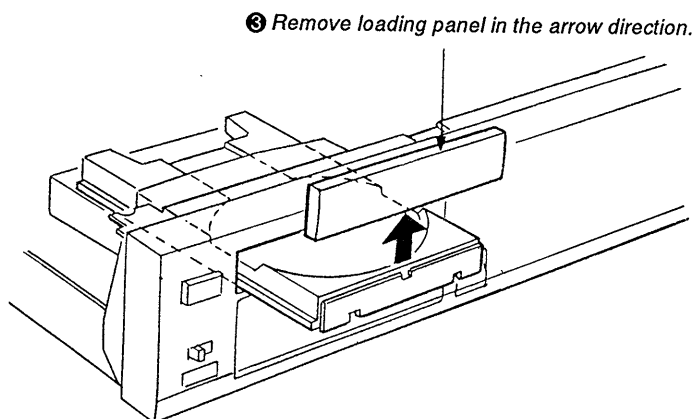
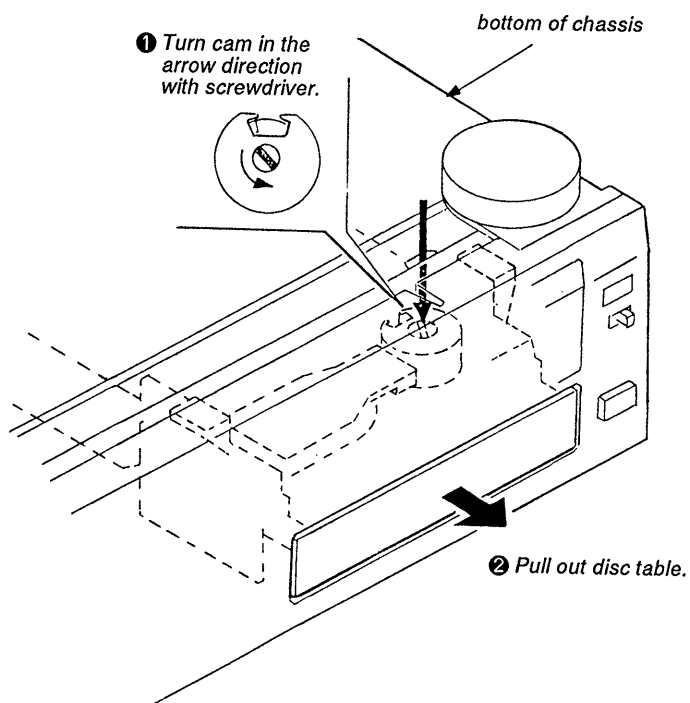
- 1) POWER switch (20)
- 2) Disc tray (20)
- 3) PLAY/MODE buttons
- 4) CONTINUE button (30, 34, 38, 56)
- 5) SHUFFLE button (30, 34, 38, 56)
- 6) PROGRAM button (34, 48)
- 7) OPEN/CLOSE button (20)
- 8) Display window (20)
- 9) Remote sensor (12)
- 10) TIMER switch (64)
- 11) PEAK SEARCH button (60)
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- 22) <<<>> (AMS*) buttons (24, 48)
- 23) <<< (stop) button (22)
- 24) A. SPACE/A. CUE button (28, 62)
- 25) <<< (pause) button (22)
- 26) FADER button (44)
- 27) REPEAT button (44)
- 28) >20 (play) button (22)
- 29) TIME button (22)

* AMS is the abbreviation of Automatic Music Sensor.



SECTION 2 DISASSEMBLY

- When removing the front panel assembly on electric power failure, first open the loading block by turning cam with a screwdriver as shown in the figure, next pull out the loading block with hand, and remove the loading panel as shown in the figure. Then remove the front panel assembly.

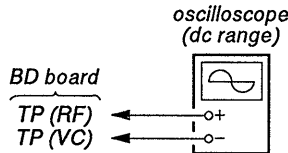


SECTION 3 ELECTRICAL CHECKS

1. Perform adjustments in the order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10 M Ω impedance.

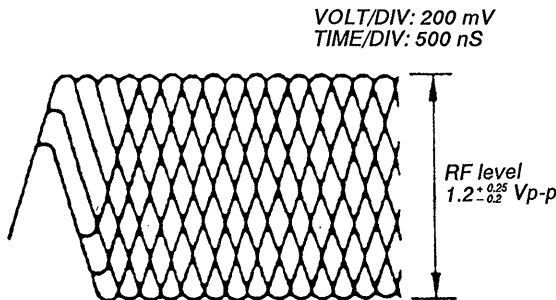
RF LEVEL Check

Procedure:



1. Connect oscilloscope to test point TP (RF) and TP (VC) on BD board.
2. Turn POWER switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that RF level and eye pattern is optimum.
Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.

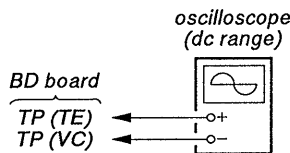
RF Signal Reference Waveform (eye pattern)



REFERENCE

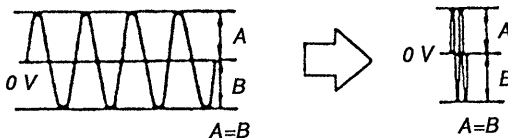
E-F Balance Check

Procedure:



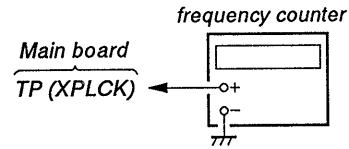
1. Connect test point TP (ADJ) to ground and TP (TEI) to VC with lead wires.
2. Connect oscilloscope to test point TP (TE).
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0 V.
6. After check, remove the lead wires connected in step 1.

Note: Take sweep time as long as possible to obtain best waveform.



RF PLL Free-run Frequency Check

Procedure:



1. Turn POWER switch on.
2. Put disc (YEDS-18) in and playback.
3. Confirm that reading on frequency counter is 4.3218 MHz.

Focus/Tracking Gain Check

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the microcomputer adjusts automatically at the point where both are satisfied.

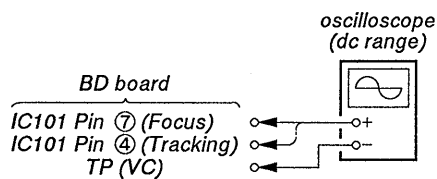
- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, mechanical shock and skipping occurs more easily.

When gain adjustment is off, the symptoms below appear.

	Gain	Focus	Tracking
Symptoms			
• The time until music starts becomes longer for STOP → PLAY or automatic selection (⏮, ⏭ buttons pressed). (Normally takes about 2 seconds.)	low	low or high	
• Music does not start and disc continues to rotate for STOP → PLAY or automatic selection (⏮, ⏭ buttons pressed).	—	low	
• Sound is interrupted during PLAY. Or time counter display stops progressing.	—	low	
• Noise increases during 2-axis device operation.	high	high	

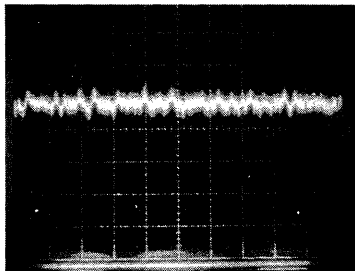
Focus Gain Check

1. Keep the set horizontal.
(If the set is not horizontal, this adjustment cannot be performed)
(due to the gravity against the 2-axis device.)
2. Insert disc (YEDS-18: Fifth track) and press ▷ PLAY button.
3. Connect oscilloscope to Pin ⑦ of IC101 on BD board.
4. Confirm the waveform is as shown in the figure below.



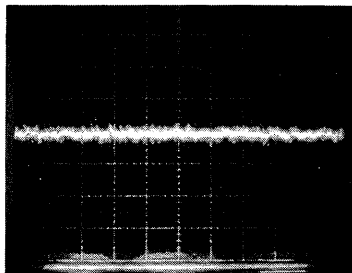
Normal

VOLT/DIV : 100 mV
TIME/DIV : 2 mS



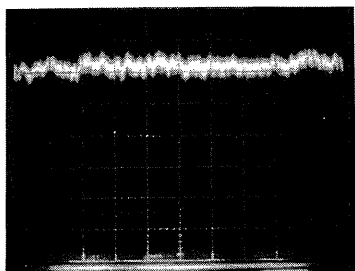
Normal

VOLT/DIV : 500 mV
TIME/DIV : 2 mS



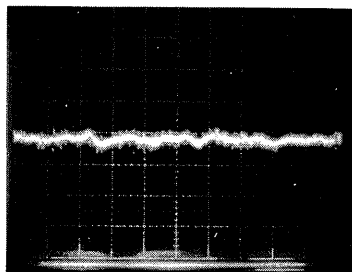
Focus gain is low.

VOLT/DIV : 100 mV
TIME/DIV : 2 mS



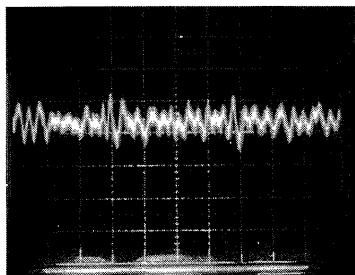
Focus gain is low.

VOLT/DIV : 500 mV
TIME/DIV : 2 mS



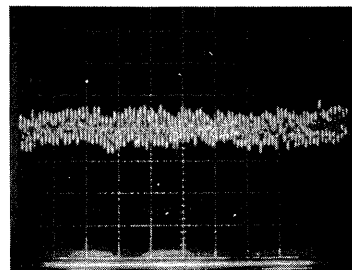
Focus gain is high.

VOLT/DIV : 100 mV
TIME/DIV : 2 mS



Focus gain is high.

VOLT/DIV : 500 mV
TIME/DIV : 2 mS



SECTION 4

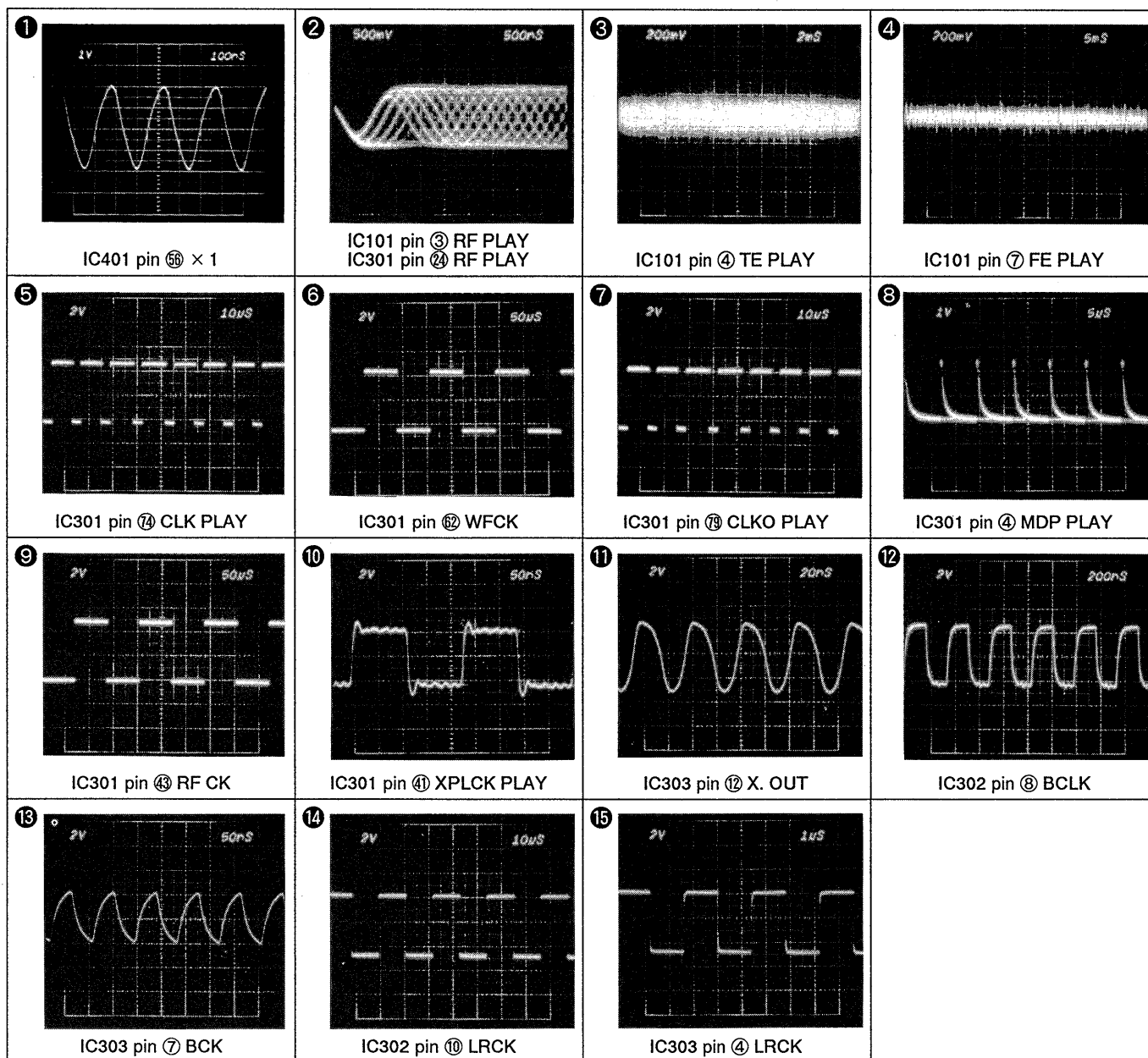
DIAGRAMS

4-1. IC401 μ PD75216 AGF-660 PIN FUNCTION

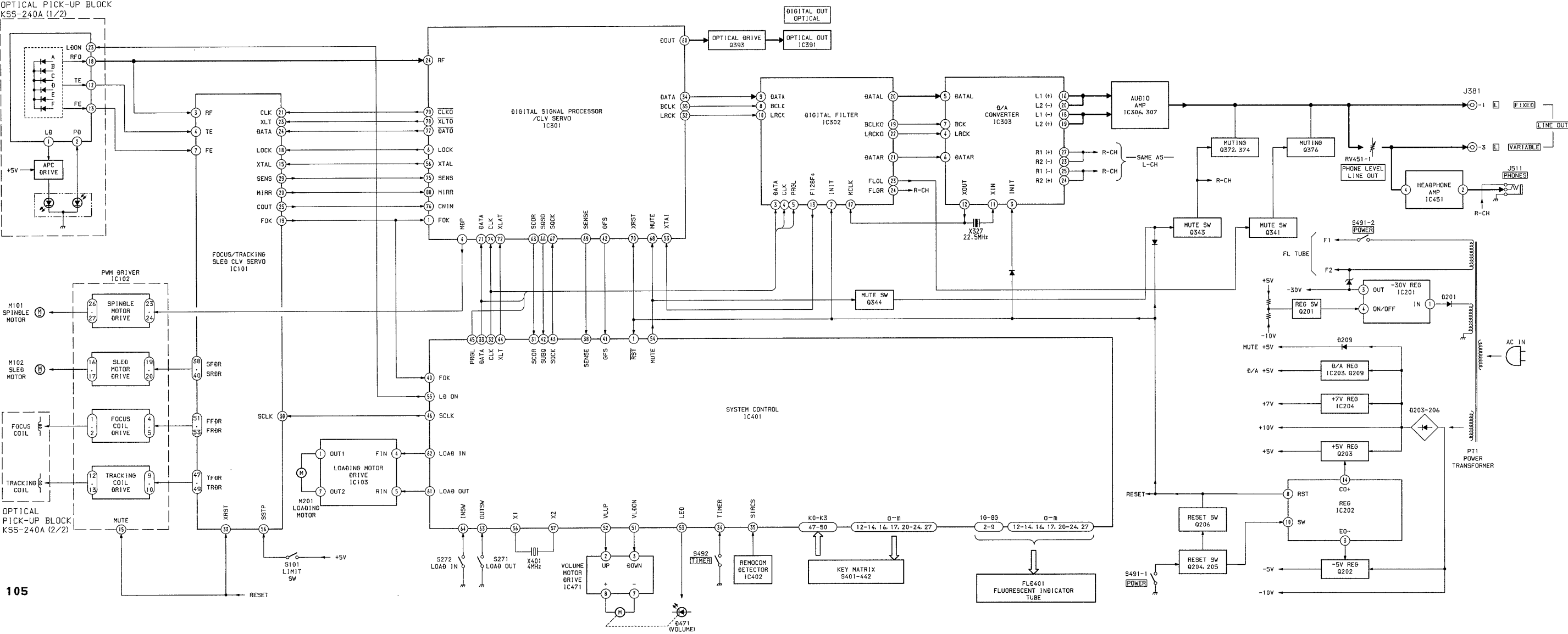
Pin No.	Pin Name	I/O	Description
1	RST	I	RESET input
2	1G	O	Display grid 1G
3	2G	O	Display grid 2G
4	3G	O	Display grid 3G
5	4G	O	Display grid 4G
6	5G	O	Display grid 5G
7	6G	O	Display grid 6G
8	7G	O	Display grid 7G
9	8G	O	Display grid 8G
10	—	—	
11	—	—	
12	a	O	Display segment a
13	b	O	Display segment b
14	c	O	Display segment c
15	—	—	
16	d	O	Display segment d
17	e	O	Display segment e
18	VLOAD	I	— 30 V, Display grid, segment low voltage
19	VPRE	I	Display grid, segment voltage supply
20	f	O	Display segment f
21	g	O	Display segment g
22	h	O	Display segment h
23	i	O	Display segment i
24	j	O	Display segment j
25	—	—	
26	VDD	I	5 V
27	k	O	Display segment k
28	l	O	Display segment l
29	m	O	Display segment m
30	—	—	
31	SCOR	I	SUB-Q sync input
32	CLK	O	SSP, DSP, D/F data clock
33	DATA	O	SSP, DSP, D/F data
34	TIMERSW	I	Timer start switch
35	SIRCS	I	Remote commander input
36	GND	I	0 V
37	ADJ	I	ADJ mode terminal
38	SENSE	I	SSP, DSP sense input
39	AFADJ	I	AF ADJ mode terminal
40	FOK	I	FOK input

Pin No.	Pin Name	I/O	Description
41	GFS	I	GFS input
42	SUBQ	I	SUB-Q serial data
43	SQCLK	O	SUB-Q read clock
44	XLT	O	SSP, DSP data latch pulse
45	PRGL	O	D/F data latch pulse
46	SCLK	O	SSP data read clock
47	K0	I	Key scan 0
48	K1	I	Key scan 1
49	K2	I	Key scan 2
50	K3	I	Key scan 3
51	RV+	O	Remote commander Volume +
52	RV —	O	Remote commander Volume —
53	RVLED	O	Remote commander Volume LED
54	AMUTE	O	Audio mute out
55	LDON	O	Laser ON/OFF
56	X1	—	Main system clock connection
57	X2	—	Main system clock connection
58	Vss	I	0 V
59	GND	I	0 V
60	—	—	
61	LDOUT	O	Loading out output
62	LDIN	O	Loading in output
63	OUTSW	I	Loading out switch
64	INSW	I	Loading in switch

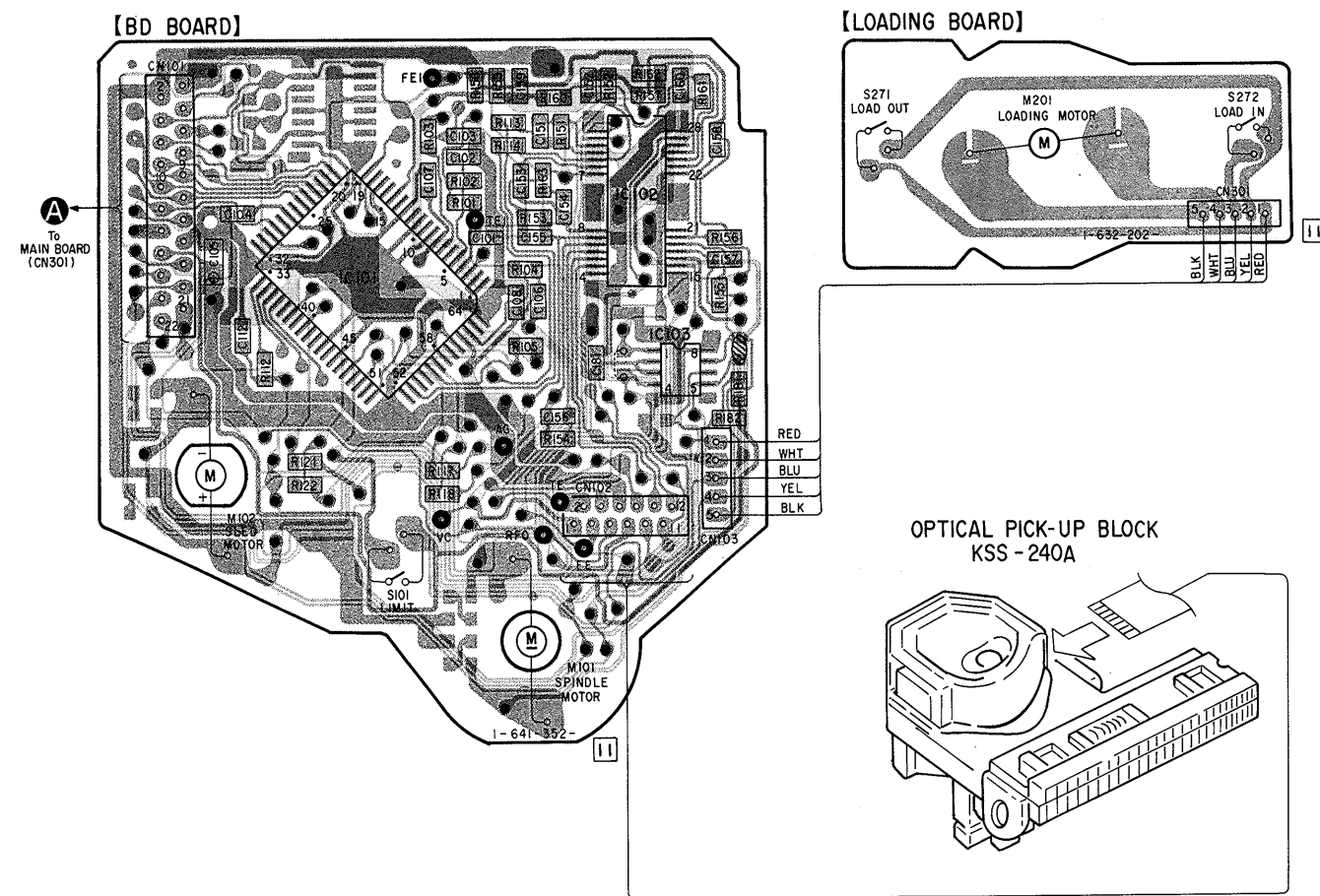
• Waveforms



4-2. BLOCK DIAGRAM



4-3. BD SECTION PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAM



Note on Schematic Diagram:

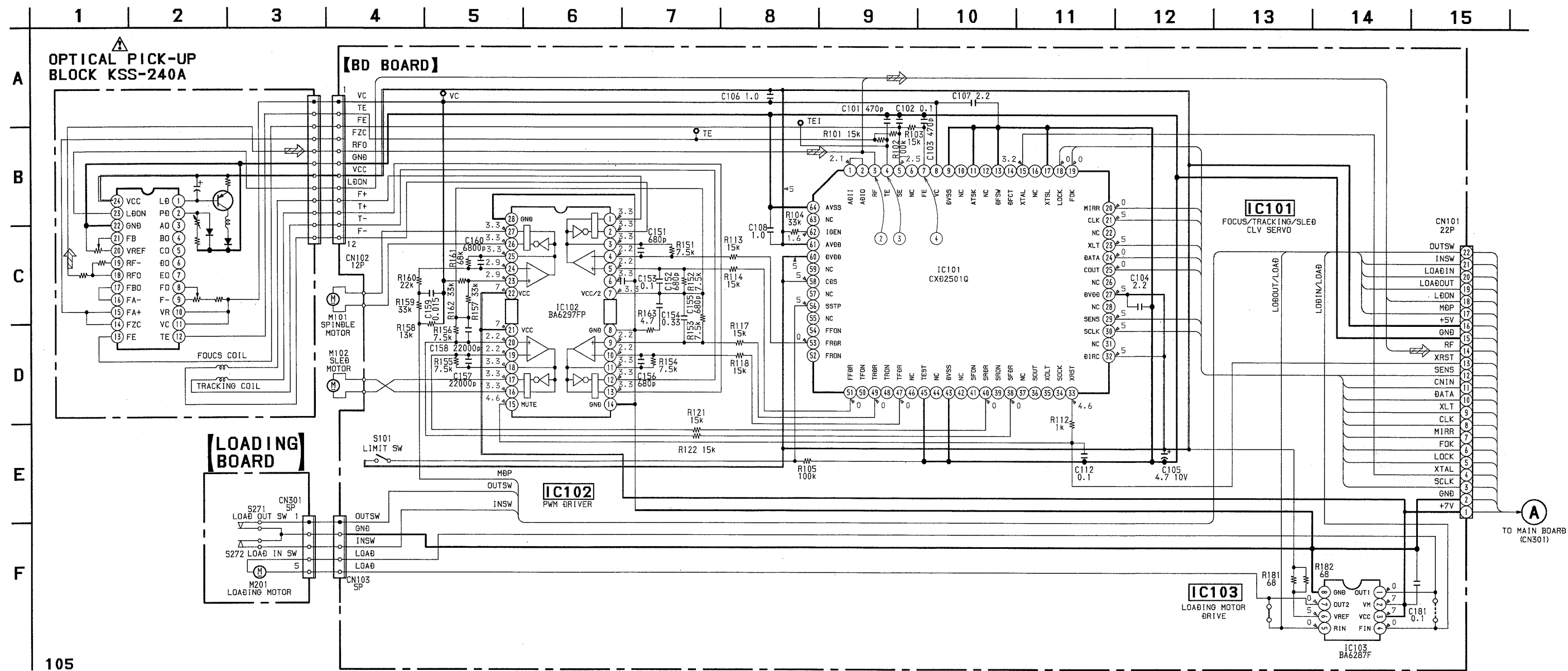
- All capacitors are in μF unless otherwise noted. pF: μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}$ W or less unless otherwise specified.

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.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10 M 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.
- ⇒ : CD

Note on Printed Wiring Board:

- : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ▩ : Pattern of the rear side.



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4-4. MAIN SECTION PRINTED WIRING BOARDS

Note on Schematic Diagram:

- All capacitors are in μF unless otherwise noted. pF : μF 50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and $\frac{1}{4}\text{ W}$ or less unless otherwise specified.
- Δ : internal component.

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

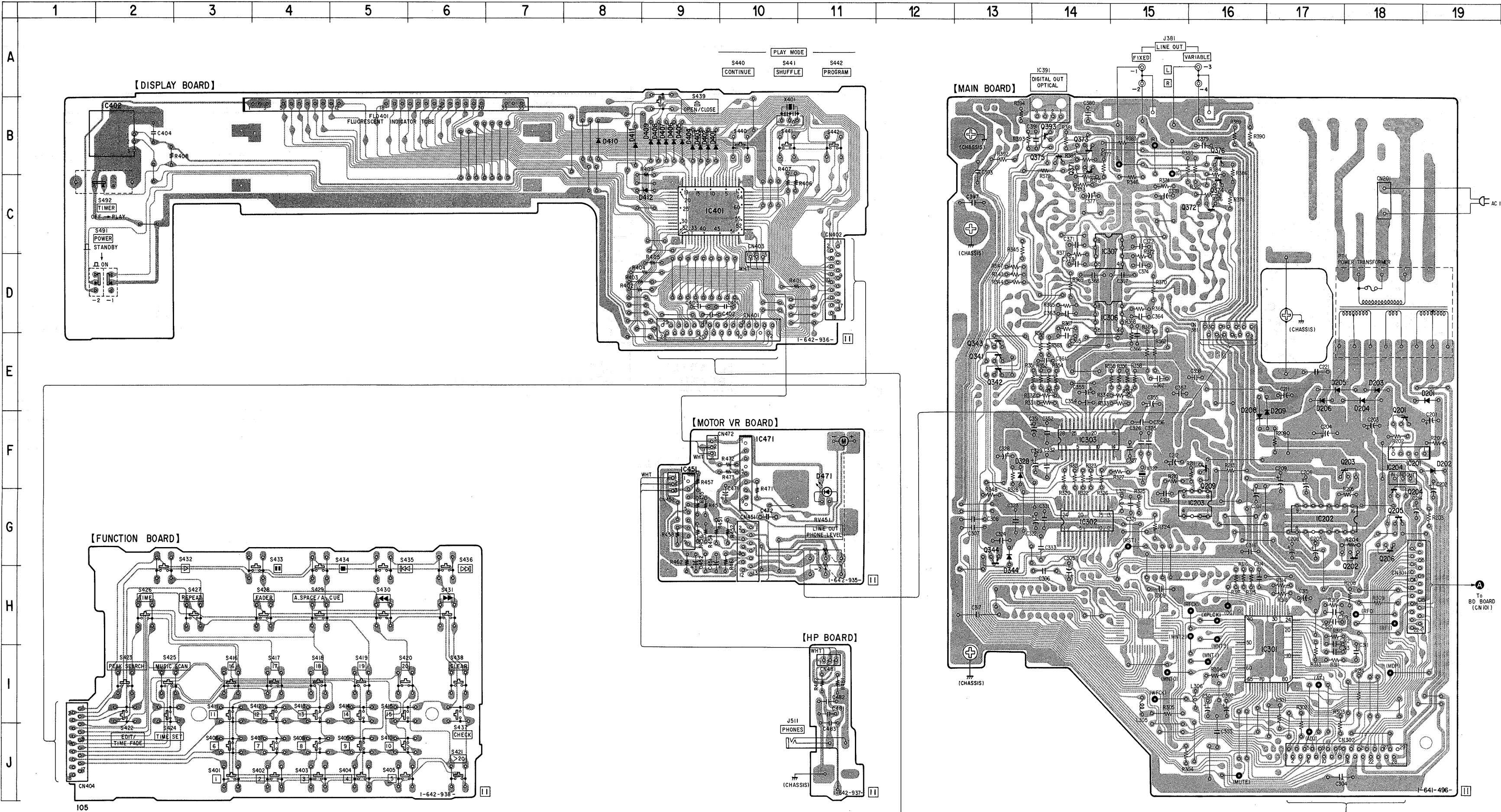
- --- : B + Line.
- --- : B - Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10 $\text{M}\Omega$). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope.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

Note on Printed Wiring Board:

- --- : parts extracted from the component side.
- --- : Pattern on the side which is seen.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	E-19	IC302	G-14
D202	F-19	IC303	F-14
D203	E-18	IC306	D-14
D204	E-18	IC307	C-14
D205	E-17	IC391	A-14
D206	E-17	IC401	C-9
D208	E-16	IC402	B-2
D209	E-17	IC451	F-9
D328	F-13	IC471	F-10
D344	H-13		
D401	B-9	Q201	E-18
D402	B-9	Q202	G-18
D403	B-9	Q203	F-18
D404	B-9	Q204	G-18
D405	B-9	Q205	G-18
D406	B-9	Q206	G-18
D407	B-9	Q209	F-16
D408	B-9	Q341	E-13
D409	B-9	Q342	E-13
D410	B-8	Q343	E-13
D411	B-8	Q344	G-13
D412	C-9	Q371	B-14
D471	F-11	Q372	C-16
		Q373	B-14
		Q374	C-16
IC201	F-18	Q375	B-14
IC202	G-17	Q376	B-16
IC203	G-16	Q393	B-14
IC204	F-18		
IC301	I-17		



• Semiconductor Lead Layouts

BA6208
RC4566S

BA6297AFP

CXD2500AQ

CXD2501Q
μ PD75216AGF-660-3BE

GP1U50XB

M5F7807

M5293L

DTA144ES
2SC1815Y

DTC144ES
2SA1175-HFE
2SC3623A-LK

2SB1094-LK

2SC2878-AB

2SD774-34

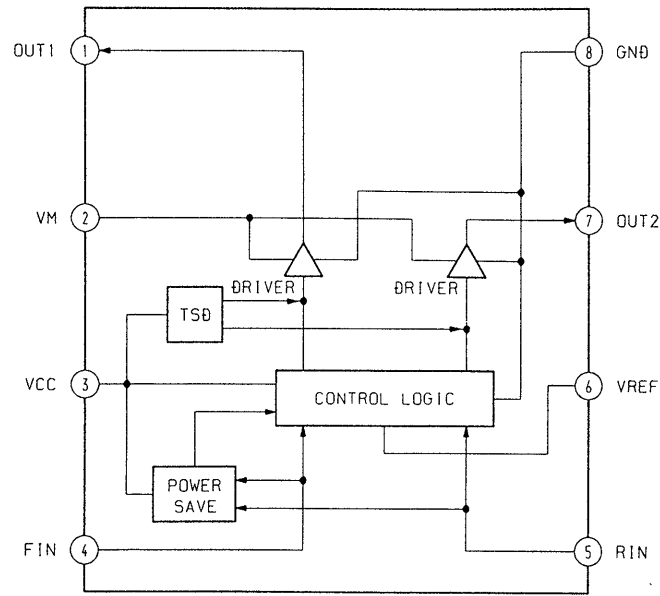
BR4361F

MTZJ-T-77-7.5
MTZJ-T-77-9.1
RD5.6ES-B2
RD7.5ES-B2
RD9.1ES-L
WG713A
11ES2

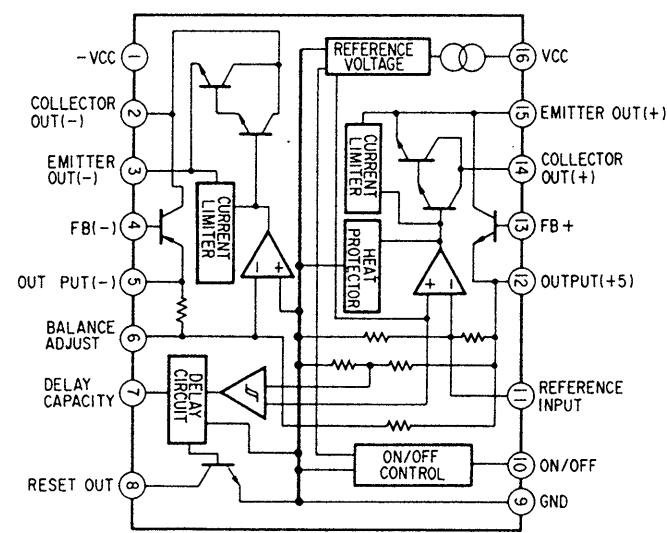
1N4148M

• IC Block Diagrams

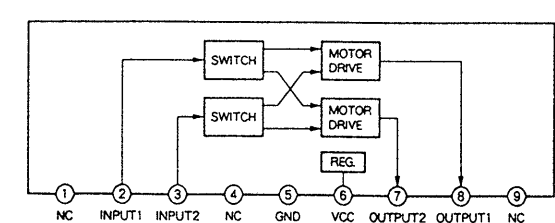
IC103 BA6287F



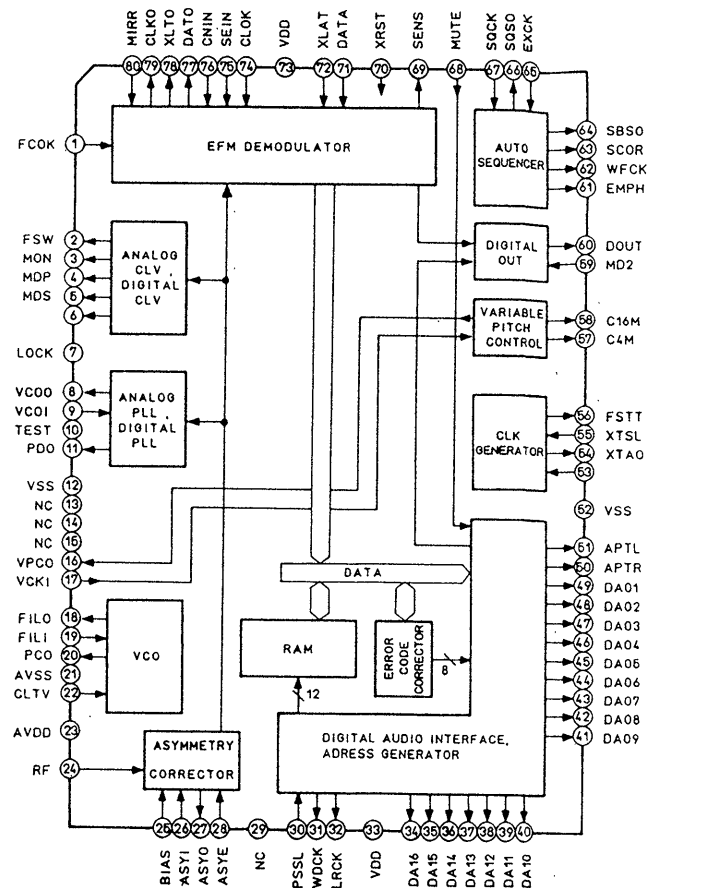
IC202 M5290P-16



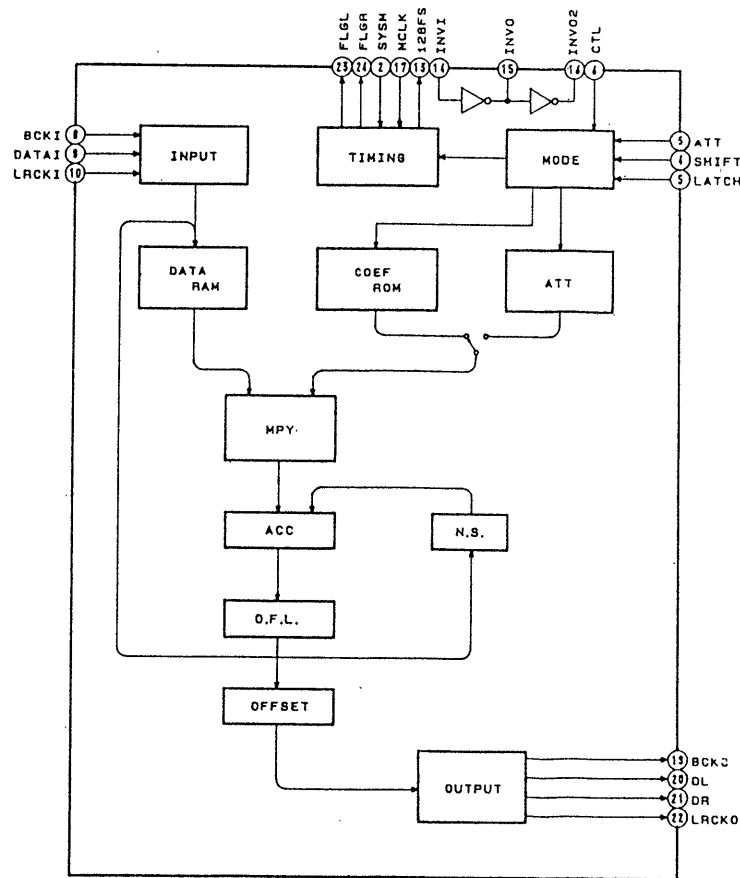
IC471 BA6208



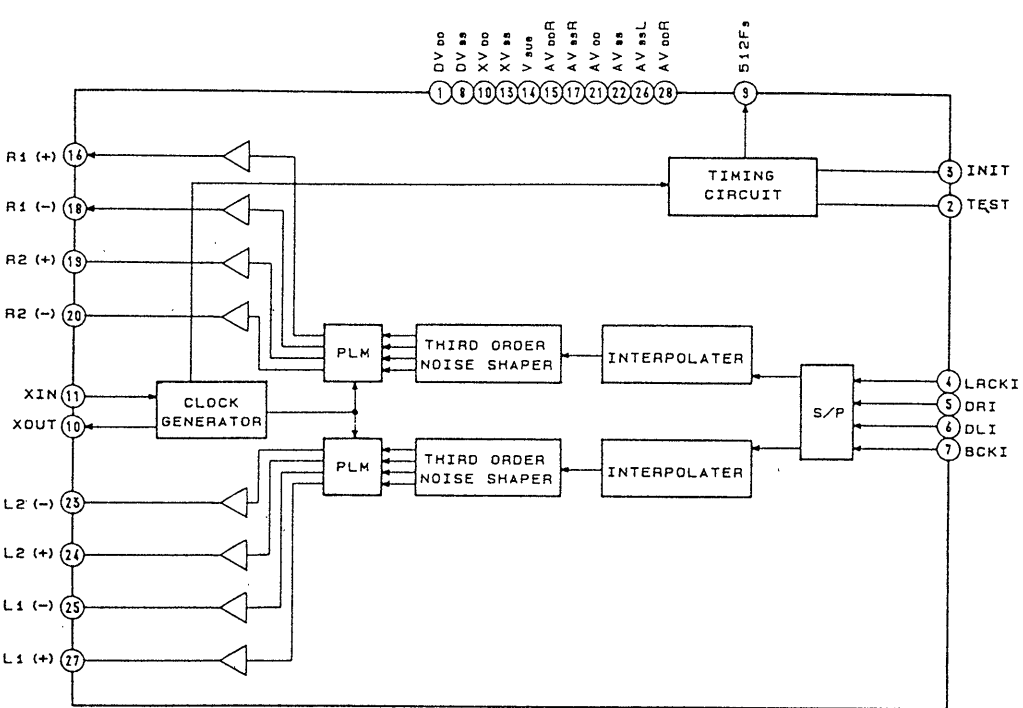
IC301 CXD2500AQ



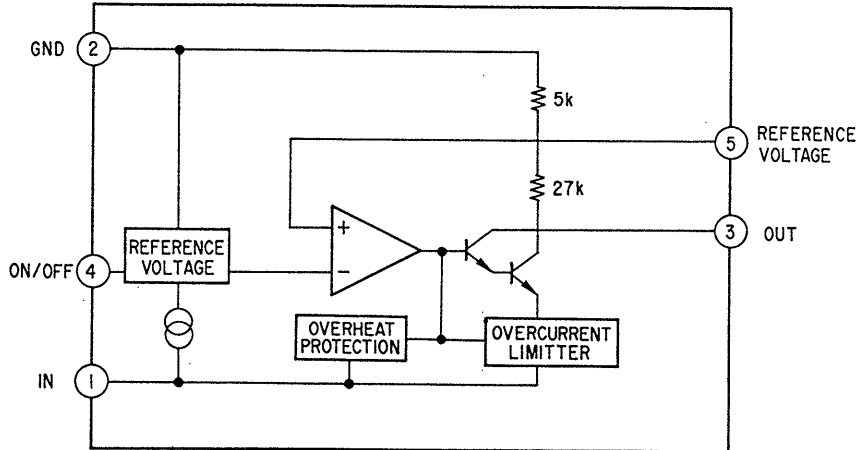
IC302 CXD2560M



IC303 CXD2561AM-1



IC201 M5293L



SECTION 5

EXPLODED VIEWS

NOTE:

- -XX and -X mean standardized parts, so they may have some difference from the original one.

- Color Indication of Appearance Parts
Example:
KNOB, BALANCE (WHITE) ... (RED)

↑ ↑
Parts Color Cabinet's Color

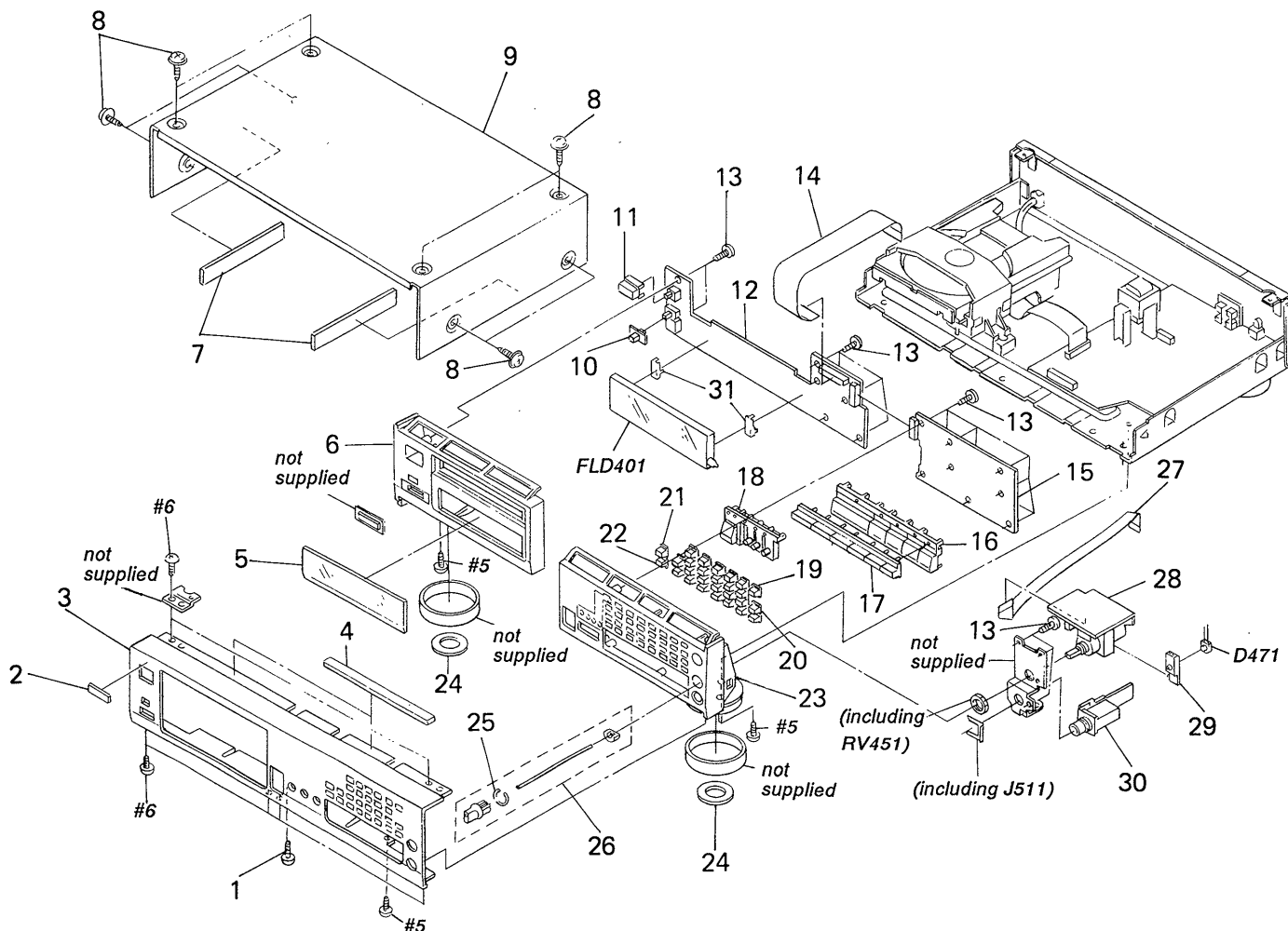
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- The mechanical parts with no reference number in the exploded views are not supplied.

- Hardware (# mark) list is given in the last of this parts list.

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

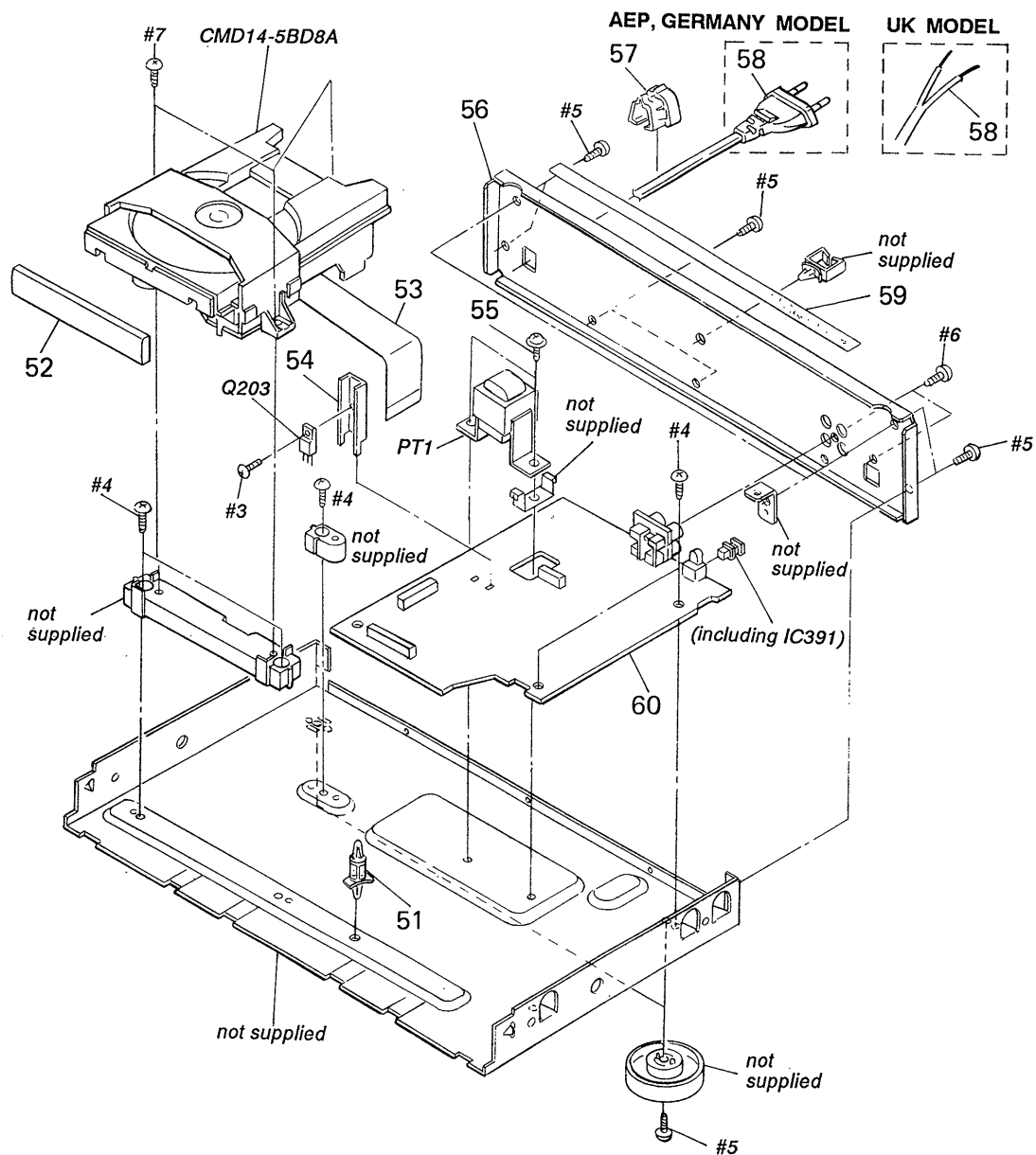
(1) FRONT PANEL ASS'Y AND CASE SECTION



Ref. No.	Part No.	Description	Remark
1	3-703-685-21	SCREW (+BV 3X8)	
2	4-908-848-01	EMBLEM, SONY	
3	4-949-195-21	PANEL (FRONT)	
* 4	4-929-557-01	CUSHION (PANEL)	
5	4-949-244-01	PLATE, INDICATION	
6	X-4942-163-1	PANEL (BASE) (L) ASSY	
* 7	4-929-561-01	CUSHION (CASE)	
8	3-704-366-01	SCREW (CASE) (M3X8) (MADE IN JAPAN)	
8	3-363-099-01	SCREW (CASE +3X8 TP2) (MADE IN FRANCE)	
9	4-929-529-01	CASE	
10	4-922-518-11	KNOB (TIMER)	
11	4-947-034-03	BUTTON (POWER)	
* 12	A-4649-245-A	DISP BOARD, COMPLETE	
13	4-951-620-01	SCREW (2.6X8), +BVTP	
14	1-690-782-11	WIRE (FLAT TYPE) (29 CORE)	
* 15	1-642-938-21	FUNCTION BOARD	
16	4-949-243-01	BUTTON (L)	
17	4-947-582-21	BUTTON (S)	

Ref. No.	Part No.	Description	Remark
18	4-949-191-01	BUTTON (O/C)	
19	4-947-574-11	BUTTON (MC1)	
20	4-947-575-11	BUTTON (MC2)	
21	4-947-576-11	BUTTON (MC3)	
22	4-947-577-11	BUTTON (MC4)	
23	X-4941-940-1	PANEL (BASE) (R) ASSY	
24	4-923-836-11	CUSHION	
25	4-948-469-01	SPRING, RING	
26	A-4660-110-A	KNOB (HP) ASSY	
27	1-690-392-11	WIRE, FLAT TYPE (13 CORE)	
* 28	1-642-935-21	MOTOR VR BOARD	
* 29	4-922-980-01	HOLDER (LED)	
* 30	1-642-937-21	HP BOARD	
* 31	4-947-170-01	HOLDER	
D471	8-719-970-49	DIODE BR4361F	
FLD401	1-519-681-11	INDICATOR TUBE, FLUORESCENT	

(2) CHASSIS SECTION

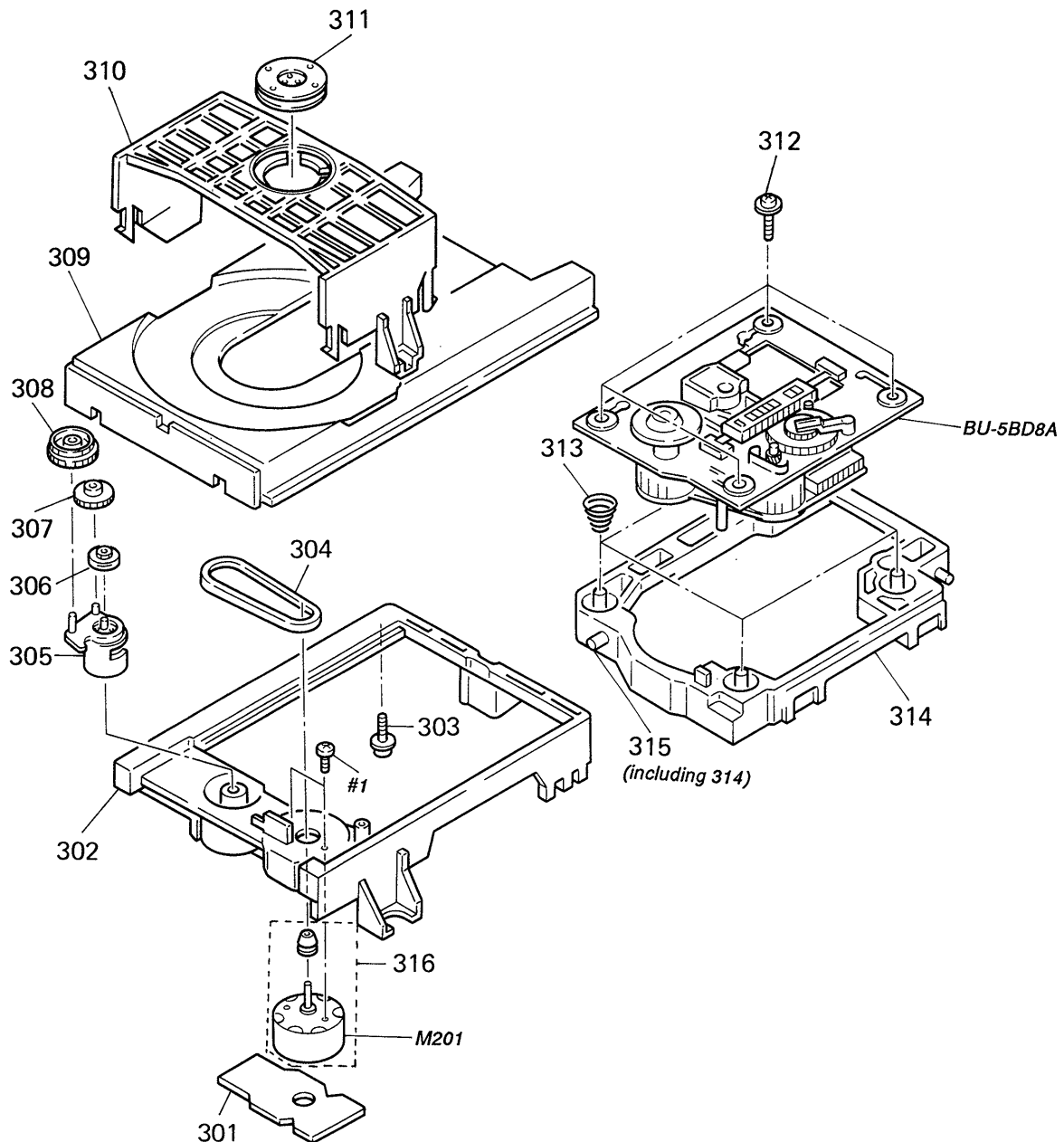


Ref. No.	Part No.	Description	Remark
* 51	4-924-098-01	HOLDER, PC BOARD	
52	4-947-167-01	PANEL, LOADING	
53	1-575-002-11	WIRE, FLAT TYPE (22 CORE)	
* 54	4-941-237-01	HEAT SINK	
55	4-886-821-11	SCREW, S TIGHT, +PTWH 3X6	
* 56	4-942-050-21	PANEL, BACK (MADE IN FRANCE)	
* 56	4-949-176-81	PANEL, BACK (MADE IN JAPAN)	

Ref. No.	Part No.	Description	Remark
* 57	3-703-244-00	BUSHING (2104), CORD	
△58	1-558-946-21	CORD, POWER (UK)	
△58	1-575-651-21	CORD, POWER (AEP)	
* 59	4-927-653-01	SHEET (F/P)	
* 60	A-4649-277-A	MAIN BOARD, COMPLETE	
△PT1	1-449-922-11	TRANSFORMER, POWER	
Q203	8-729-141-83	TRANSISTOR 2SB1094-LK	

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

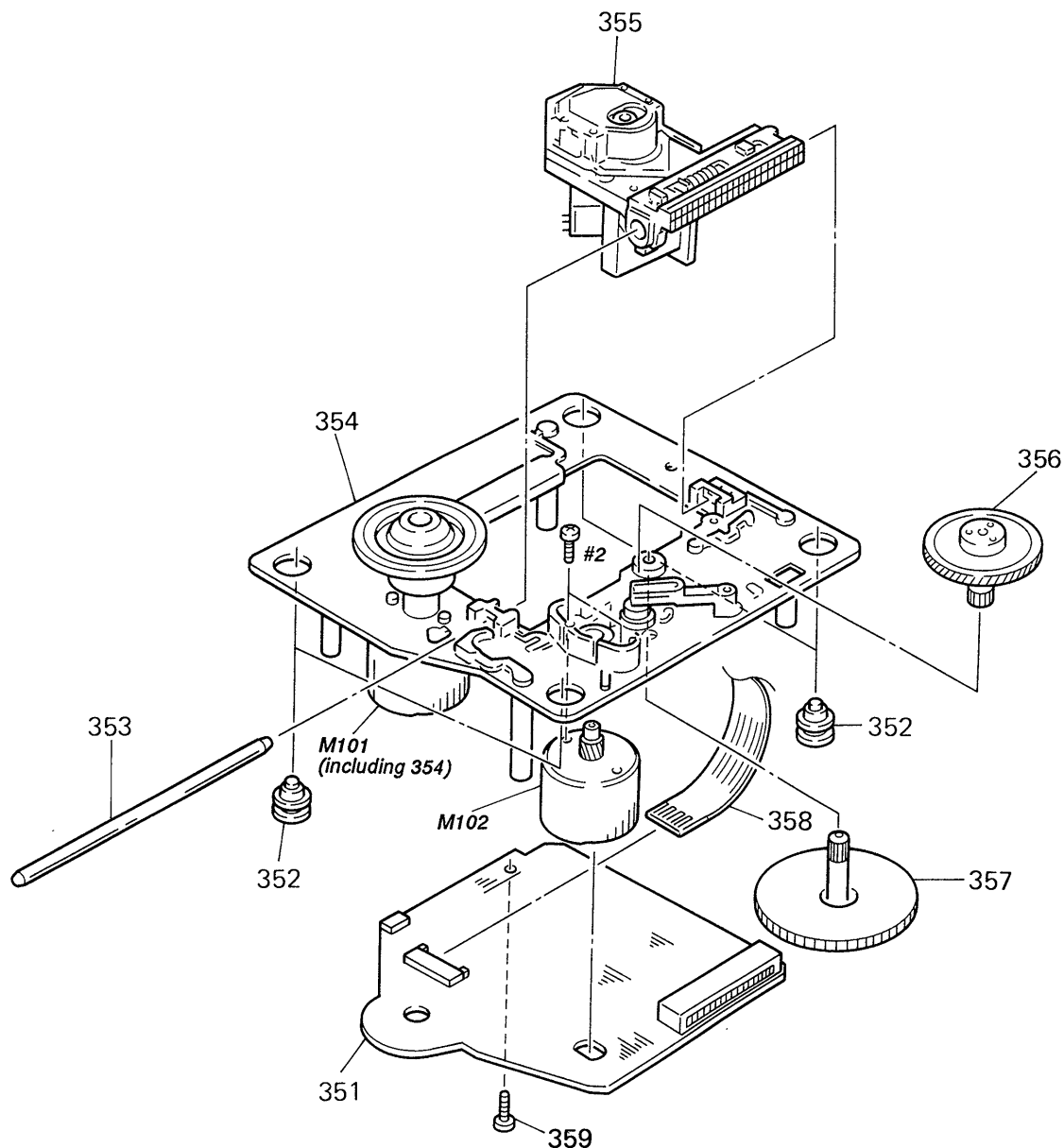
(3) CD MECHANISM SECTION (CDM14-5BD8A)



Ref. No.	Part No.	Description	Remark
* 301	1-632-202-11	LOADING BOARD	
302	4-933-111-01	CHASSIS (MD) (MADE IN JAPAN)	
302	4-933-111-11	CHASSIS (MD) (MADE IN FRANCE)	
* 303	4-917-583-21	BRACKET, YOKE	
304	4-927-649-01	BELT	
305	4-933-109-01	CAM	
306	4-927-651-01	PULLEY (S)	
307	4-927-628-01	GEAR (C)	
308	4-933-107-01	GEAR (PL)	



Ref. No.	Part No.	Description	Remark
309	4-933-112-01	TABLE, DISK (MADE IN JAPAN)	
309	4-933-112-11	TABLE, DISK (MADE IN FRANCE)	
310	4-933-110-01	HOLDER (MG)	
* 311	1-452-538-11	MAGNET	
312	4-933-134-01	SCREW (+PTPH M2.6X6)	
313	4-948-503-01	SPRING (BU), COMPRESSION	
314	4-933-129-01	HOLDER (BU)	
315	4-933-108-01	SHAFT (CAM)	
316	A-4604-363-A	MOTOR (L) ASSY	
M201	1-541-632-11	MOTOR, DC (LOADING)	

(4) OPTICAL PICK-UP BLOCK (BU-5BD8A)



Ref. No.	Part No.	Description	Remark
* 351	A-4617-977-A	BD BOARD, COMPLETE	
352	4-933-126-01	INSULATOR (A)	
353	4-917-565-01	SHAFT, SLED	
354	X-4917-523-3	BASE ASSY (OUTSERT) (Including M101)	

Ref. No.	Part No.	Description	Remark
A355	8-848-144-11	OPTICAL PICK-UP BLOCK KSS-240A	
356	4-917-567-01	GEAR (M)	
357	4-917-564-01	GEAR (P), FLATNESS	
358	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
359	4-951-620-01	SCREW (2.6X8), BVTP	
M102	X-4917-504-1	MOTOR ASSY (SLED)	

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

SECTION 6

ELECTRICAL PARTS LIST

BD

NOTE:

- 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 and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
All resistors are in ohms.
METAL: Metal-film resistor.
METAL OXIDE: Metal oxide-film resistor.
F: nonflammable

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- 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

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.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-4617-977-A	BD BOARD, COMPLETE				< RESISTOR >	

		< CAPACITOR >					
C101	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	R101	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C102	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R102	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C103	1-163-005-11	CERAMIC CHIP 470PF	10% 50V	R103	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C104	1-164-505-11	CERAMIC CHIP 2.2uF	16V	R104	1-216-085-00	METAL CHIP 33K 5% 1/10W	
C105	1-135-155-21	TANTALUM CHIP 4.7uF	10% 16V	R105	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C106	1-164-346-11	CERAMIC CHIP 1uF	16V	R112	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C107	1-164-505-11	CERAMIC CHIP 2.2uF	16V	R113	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C108	1-164-346-11	CERAMIC CHIP 1uF	16V	R114	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C112	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R117	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C151	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R118	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C152	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R121	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C153	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R122	1-216-077-00	METAL CHIP 15K 5% 1/10W	
C154	1-164-336-11	CERAMIC CHIP 0.33uF	25V	R151	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C155	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R152	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C156	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	R153	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C157	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	R154	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C158	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V	R155	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C159	1-163-023-00	CERAMIC CHIP 0.015uF	5% 50V	R156	1-216-070-00	METAL CHIP 7.5K 5% 1/10W	
C160	1-163-019-00	CERAMIC CHIP 0.0068uF	10% 50V	R157	1-216-085-00	METAL CHIP 33K 5% 1/10W	
C181	1-163-038-00	CERAMIC CHIP 0.1uF	25V	R158	1-216-076-00	METAL CHIP 13K 5% 1/10W	
		< CONNECTOR >		R159	1-216-085-00	METAL CHIP 33K 5% 1/10W	
CN101	1-568-796-11	SOCKET, CONNECTOR 22P		R160	1-216-081-00	METAL CHIP 22K 5% 1/10W	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P		R161	1-216-093-00	METAL CHIP 68K 5% 1/10W	
CN103	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P		R162	1-216-085-00	METAL CHIP 33K 5% 1/10W	
		< IC >		R163	1-216-308-00	METAL CHIP 4.7 5% 1/10W	
IC101	8-752-344-48	IC CXD2501Q		R181	1-216-021-00	METAL CHIP 68 5% 1/10W	
IC102	8-759-071-80	IC BA6297AFP		R182	1-216-021-00	METAL CHIP 68 5% 1/10W	
IC103	8-759-040-83	IC BA6287F				< SWITCH >	
				S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

DISP	FUNCTION
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Ref. No.	Part No.	Description	Remark
*	A-4649-245-A	DISP BOARD, COMPLETE *****	
*	4-947-170-01	HOLDER	
		< CAPACITOR >	
C401	1-164-159-11	CERAMIC 0.1uF	50V
C402	1-164-159-11	CERAMIC 0.1uF	50V
C403	1-164-159-11	CERAMIC 0.1uF	50V
C404	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
* CN401	1-568-844-11	SOCKET, CONNECTOR 29P	
* CN402	1-691-188-11	CONNECTOR, BOARD TO BOARD 18P	
		< DIODE >	
D401	8-719-987-63	DIODE 1N4148M	
D402	8-719-987-63	DIODE 1N4148M	
D403	8-719-987-63	DIODE 1N4148M	
D404	8-719-987-63	DIODE 1N4148M	
D405	8-719-987-63	DIODE 1N4148M	
D406	8-719-987-63	DIODE 1N4148M	
D407	8-719-987-63	DIODE 1N4148M	
D408	8-719-987-63	DIODE 1N4148M	
D409	8-719-987-63	DIODE 1N4148M	
D410	8-719-987-63	DIODE 1N4148M	
D411	8-719-987-63	DIODE 1N4148M	
D412	8-719-121-24	DIODE RD9.1ES-L	
		< INDICATOR TUBE >	
FLD401	1-519-681-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC401	8-759-058-71	IC uPD75216AGF-660-3BE	
IC402	8-749-922-36	IC GP1U50XB	
		< RESISTOR >	
R401	1-249-435-11	CARBON 33K 5% 1/4W	
R402	1-249-435-11	CARBON 33K 5% 1/4W	
R403	1-249-435-11	CARBON 33K 5% 1/4W	
R404	1-249-435-11	CARBON 33K 5% 1/4W	
R405	1-249-435-11	CARBON 33K 5% 1/4W	
R406	1-249-425-11	CARBON 4.7K 5% 1/4W	
R407	1-249-425-11	CARBON 4.7K 5% 1/4W	
R408	1-249-435-11	CARBON 33K 5% 1/4W	
R409	1-249-439-11	CARBON 68K 5% 1/4W	

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S439	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)	
S440	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
S441	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
S442	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
S491	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
S492	1-570-157-51	SWITCH, SLIDE (TIMER)	
		< CRYSTAL >	
X401	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

*	1-642-938-21	FUNCTION BOARD *****	
		< CONNECTOR >	
* CN404	1-691-187-11	CONNECTOR, BOARD TO BOARD 18P	
		< SWITCH >	
S401	1-554-303-21	SWITCH, TACTILE (1)	
S402	1-554-303-21	SWITCH, TACTILE (2)	
S403	1-554-303-21	SWITCH, TACTILE (3)	
S404	1-554-303-21	SWITCH, TACTILE (4)	
S405	1-554-303-21	SWITCH, TACTILE (5)	
S406	1-554-303-21	SWITCH, TACTILE (6)	
S407	1-554-303-21	SWITCH, TACTILE (7)	
S408	1-554-303-21	SWITCH, TACTILE (8)	
S409	1-554-303-21	SWITCH, TACTILE (9)	
S410	1-554-303-21	SWITCH, TACTILE (10)	
S411	1-554-303-21	SWITCH, TACTILE (11)	
S412	1-554-303-21	SWITCH, TACTILE (12)	
S413	1-554-303-21	SWITCH, TACTILE (13)	
S414	1-554-303-21	SWITCH, TACTILE (14)	
S415	1-554-303-21	SWITCH, TACTILE (15)	
S416	1-554-303-21	SWITCH, TACTILE (16)	
S417	1-554-303-21	SWITCH, TACTILE (17)	
S418	1-554-303-21	SWITCH, TACTILE (18)	
S419	1-554-303-21	SWITCH, TACTILE (19)	
S420	1-554-303-21	SWITCH, TACTILE (20)	
S421	1-554-303-21	SWITCH, TACTILE (>20)	
S422	1-554-303-21	SWITCH, TACTILE (EDIT TIME FADE)	
S423	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH)	
S424	1-554-303-21	SWITCH, TACTILE (TIME SET)	
S425	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S426	1-554-303-21	SWITCH, TACTILE (TIME)	
S427	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S428	1-554-303-21	SWITCH, TACTILE (FADER)	
S429	1-554-303-21	SWITCH, TACTILE (A. SPACE/A. CUE)	

FUNCTION

HP

LOADING

MAIN

Ref. No.	Part No.	Description	Remark			
S430	1-554-303-21	SWITCH, TACTILE				
S431	1-554-303-21	SWITCH, TACTILE				
S432	1-554-303-21	SWITCH, TACTILE				
S433	1-554-303-21	SWITCH, TACTILE				
S434	1-554-303-21	SWITCH, TACTILE				
S435	1-554-303-21	SWITCH, TACTILE				
S436	1-554-303-21	SWITCH, TACTILE				
S437	1-554-303-21	SWITCH, TACTILE (CHECK)				
S438	1-554-303-21	SWITCH, TACTILE (CLEAR)				

*	1-642-937-21	HP BOARD				

		< CAPACITOR >				
C481	1-162-290-31	CERAMIC	470PF	10%	50V	
C482	1-162-290-31	CERAMIC	470PF	10%	50V	
C483	1-164-159-11	CERAMIC	0.1uF		50V	
		< JACK >				
J511	1-568-519-41	JACK, LARGE TYPE (PHONES)				
		< RESISTOR >				
R481	1-249-402-11	CARBON	56	5%	1/4W	
R482	1-249-402-11	CARBON	56	5%	1/4W	

*	1-632-202-11	LOADING BOARD				

		< CONNECTOR >				
* CN301	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P				
		< SWITCH >				
S271	1-572-086-11	SWITCH, LEAF (LOAD OUT)				
S272	1-572-086-11	SWITCH, LEAF (LOAD IN)				

*	A-4649-277-A	MAIN BOARD, COMPLETE				

*	4-941-237-01	HEAT SINK				
		< CAPACITOR >				
C201	1-124-572-11	ELECT	100uF	20%	63V	
C202	1-126-059-11	ELECT	10uF	20%	50V	
C203	1-124-360-00	ELECT	1000uF	20%	16V	
C204	1-126-937-11	ELECT	4700uF	20%	16V	

Ref. No.	Part No.	Description	Remark			
C205	1-126-163-11	ELECT	4.7uF	20%	50V	
C206	1-126-059-11	ELECT	10uF	20%	50V	
C207	1-126-059-11	ELECT	10uF	20%	50V	
C208	1-124-997-11	ELECT	470uF	20%	10V	
C209	1-124-997-11	ELECT	470uF	20%	10V	
C211	1-124-997-11	ELECT	470uF	20%	10V	
C212	1-124-997-11	ELECT	470uF	20%	10V	
C213	1-130-487-00	MYLAR	0.022uF	5%	50V	
C214	1-126-023-11	ELECT	100uF	20%	16V	
C221	1-164-159-11	CERAMIC	0.1uF		50V	
C301	1-126-022-11	ELECT	47uF	20%	16V	
C302	1-126-301-11	ELECT	1uF	20%	50V	
C303	1-164-159-11	CERAMIC	0.1uF		50V	
C304	1-164-159-11	CERAMIC	0.1uF		50V	
C305	1-126-022-11	ELECT	47uF	20%	16V	
C306	1-164-159-11	CERAMIC	0.1uF		50V	
C307	1-164-159-11	CERAMIC	0.1uF		50V	
C308	1-164-159-11	CERAMIC	0.1uF		50V	
C309	1-164-159-11	CERAMIC	0.1uF		50V	
C311	1-130-491-00	MYLAR	0.047uF	5%	50V	
C312	1-161-374-11	CERAMIC	0.0015uF	20%	50V	
C313	1-161-494-00	CERAMIC	0.022uF		25V	
C314	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C315	1-126-300-11	ELECT	0.47uF	20%	50V	
C316	1-161-494-00	CERAMIC	0.022uF		25V	
C317	1-164-159-11	CERAMIC	0.1uF		50V	
C319	1-162-282-31	CERAMIC	100PF	10%	50V	
C320	1-130-483-00	MYLAR	0.01uF	5%	50V	
C321	1-162-208-31	CERAMIC	24PF	5%	50V	
C322	1-126-022-11	ELECT	47uF	20%	16V	
C323	1-164-159-11	CERAMIC	0.1uF		50V	
C324	1-164-159-11	CERAMIC	0.1uF		50V	
C325	1-162-205-31	CERAMIC	18PF	5%	50V	
C326	1-162-205-31	CERAMIC	18PF	5%	50V	
C327	1-161-494-00	CERAMIC	0.022uF		25V	
C328	1-126-059-11	ELECT	10uF	20%	50V	
C329	1-126-022-11	ELECT	47uF	20%	16V	
C331	1-161-494-00	CERAMIC	0.022uF		25V	
C332	1-164-159-11	CERAMIC	0.1uF		50V	
C333	1-162-294-31	CERAMIC	0.001uF	10%	50V	
C351	1-126-022-11	ELECT	47uF	20%	16V	
C352	1-164-159-11	CERAMIC	0.1uF		50V	
C353	1-126-022-11	ELECT	47uF	20%	16V	
C354	1-161-494-00	CERAMIC	0.022uF		25V	
C355	1-126-022-11	ELECT	47uF	20%	16V	
C356	1-164-159-11	CERAMIC	0.1uF		50V	
C357	1-130-495-00	MYLAR	0.1uF	5%	50V	
C358	1-130-495-00	MYLAR	0.1uF	5%	50V	
C361	1-162-280-31	CERAMIC	82PF	10%	50V	

MAIN

Ref. No.	Part No.	Description	Remark		
C362	1-162-280-31	CERAMIC	82PF	10%	50V
C363	1-162-213-31	CERAMIC	39PF	5%	50V
C364	1-162-213-31	CERAMIC	39PF	5%	50V
C365	1-162-213-31	CERAMIC	39PF	5%	50V
C366	1-162-213-31	CERAMIC	39PF	5%	50V
C367	1-161-494-00	CERAMIC	0.022uF		25V
C368	1-161-494-00	CERAMIC	0.022uF		25V
C371	1-130-479-00	MYLAR	0.0047uF	5%	50V
C372	1-130-479-00	MYLAR	0.0047uF	5%	50V
C373	1-130-472-00	MYLAR	0.0012uF	5%	50V
C374	1-130-472-00	MYLAR	0.0012uF	5%	50V
C377	1-126-022-11	ELECT	47uF	20%	16V
C378	1-126-022-11	ELECT	47uF	20%	16V
C379	1-130-473-00	MYLAR	0.0015uF	5%	50V
C380	1-130-473-00	MYLAR	0.0015uF	5%	50V
C391	1-162-286-31	CERAMIC	220PF	10%	50V
C393	1-164-159-11	CERAMIC	0.1uF		50V
C397	1-164-159-11	CERAMIC	0.1uF		50V
< CONNECTOR >					
* CN201	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P			
* CN301	1-568-822-11	SOCKET, CONNECTOR 22P			
* CN302	1-568-844-11	SOCKET, CONNECTOR 29P			
* CN381	1-568-832-11	SOCKET, CONNECTOR 13P			
< DIODE >					
D201	8-719-200-82	DIODE	11ES2		
D202	8-719-110-03	DIODE	RD7.5ES-B2		
D203	8-719-200-82	DIODE	11ES2		
D204	8-719-200-82	DIODE	11ES2		
D205	8-719-200-82	DIODE	11ES2		
D206	8-719-200-82	DIODE	11ES2		
D208	8-719-109-89	DIODE	RD5.6ES-B2		
D209	8-719-987-63	DIODE	1N4148M		
D328	8-719-987-63	DIODE	1N4148M		
D344	8-719-987-63	DIODE	1N4148M		
< IC >					
IC201	8-759-633-42	IC	M5293L		
IC202	8-759-630-21	IC	M5290P-16		
IC203	8-759-945-58	IC	RC4558P		
IC204	8-759-604-86	IC	M5F7807L		
IC301	8-752-337-26	IC	CXD2500AQ		
IC302	8-752-342-65	IC	CXD2560M		
IC303	8-752-349-02	IC	CXD2561AM-1		
IC306	8-759-503-91	IC	TL082ACP		
IC307	8-759-900-72	IC	NE5532P		
IC391	8-749-921-20	IC	T-1550		

Ref. No.	Part No.	Description	Remark		
< JACK >					
* J381	1-569-443-11	JACK, PIN 4P (LINE OUT FIXED/VARIABLE)			
< COIL >					
L305	1-408-403-00	INDUCTOR 3.3uH			
L306	1-408-403-00	INDUCTOR 3.3uH			
L321	1-408-403-00	INDUCTOR 3.3uH			
< TRANSISTOR >					
Q201	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q202	8-729-140-96	TRANSISTOR	2SD774-34		
Q203	8-729-141-83	TRANSISTOR	2SB1094-LK		
Q204	8-729-900-65	TRANSISTOR	DTA144ES		
Q205	8-729-900-89	TRANSISTOR	DTC144ES		
Q206	8-729-900-89	TRANSISTOR	DTC144ES		
Q209	8-729-281-52	TRANSISTOR	2SC1815-Y		
Q341	8-729-900-65	TRANSISTOR	DTA144ES		
Q342	8-729-900-65	TRANSISTOR	DTA144ES		
Q343	8-729-900-65	TRANSISTOR	DTA144ES		
Q344	8-729-900-89	TRANSISTOR	DTC144ES		
Q371	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q372	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q373	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q374	8-729-141-30	TRANSISTOR	2SC3623A-LK		
Q375	8-729-231-55	TRANSISTOR	2SC2878-AB		
Q376	8-729-231-55	TRANSISTOR	2SC2878-AB		
Q393	8-729-119-76	TRANSISTOR	2SA1175-HFE		
< RESISTOR >					
R201	1-249-435-11	CARBON	33K	5%	1/4W
R202	1-249-438-11	CARBON	56K	5%	1/4W
R203	1-249-429-11	CARBON	10K	5%	1/4W
R204	1-249-425-11	CARBON	4.7K	5%	1/4W
R205	1-249-425-11	CARBON	4.7K	5%	1/4W
R208	1-249-423-11	CARBON	3.3K	5%	1/4W
R209	1-249-413-11	CARBON	470	5%	1/4W
R210	1-249-429-11	CARBON	10K	5%	1/4W
R211	1-249-410-11	CARBON	270	5%	1/4W
R213	1-249-417-11	CARBON	1K	5%	1/4W
R214	1-249-417-11	CARBON	1K	5%	1/4W
R301	1-249-417-11	CARBON	1K	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-421-11	CARBON	2.2K	5%	1/4W
R304	1-249-417-11	CARBON	1K	5%	1/4W
R305	1-249-411-11	CARBON	330	5%	1/4W
R306	1-249-413-11	CARBON	470	5%	1/4W
R309	1-249-405-11	CARBON	100	5%	1/4W
R311	1-249-423-11	CARBON	3.3K	5%	1/4W

MAIN

MOTOR

Ref.No.	Part No.	Description	Remark		
R312	1-249-429-11	CARBON	10K	5%	1/4W
R313	1-249-423-11	CARBON	3.3K	5%	1/4W
R314	1-249-429-11	CARBON	10K	5%	1/4W
R315	1-249-417-11	CARBON	1K	5%	1/4W
R316	1-249-417-11	CARBON	1K	5%	1/4W
R317	1-249-419-11	CARBON	1.5K	5%	1/4W
R318	1-249-441-11	CARBON	100K	5%	1/4W
R319	1-247-903-00	CARBON	1M	5%	1/4W
R320	1-249-417-11	CARBON	1K	5%	1/4W
R321	1-249-417-11	CARBON	1K	5%	1/4W
R322	1-249-417-11	CARBON	1K	5%	1/4W
R323	1-249-417-11	CARBON	1K	5%	1/4W
R324	1-249-417-11	CARBON	1K	5%	1/4W
R325	1-249-417-11	CARBON	1K	5%	1/4W
R326	1-249-417-11	CARBON	1K	5%	1/4W
R327	1-247-903-00	CARBON	1M	5%	1/4W
R328	1-249-429-11	CARBON	10K	5%	1/4W
R331	1-249-429-11	CARBON	10K	5%	1/4W
R332	1-249-429-11	CARBON	10K	5%	1/4W
R333	1-249-429-11	CARBON	10K	5%	1/4W
R334	1-249-429-11	CARBON	10K	5%	1/4W
R343	1-249-441-11	CARBON	100K	5%	1/4W
R344	1-249-441-11	CARBON	100K	5%	1/4W
R345	1-249-425-11	CARBON	4.7K	5%	1/4W
R346	1-249-425-11	CARBON	4.7K	5%	1/4W
R347	1-249-441-11	CARBON	100K	5%	1/4W
R348	1-249-429-11	CARBON	10K	5%	1/4W
R351	1-249-436-11	CARBON	39K	5%	1/4W
R352	1-249-436-11	CARBON	39K	5%	1/4W
R353	1-249-436-11	CARBON	39K	5%	1/4W
R354	1-249-436-11	CARBON	39K	5%	1/4W
R355	1-249-436-11	CARBON	39K	5%	1/4W
R356	1-249-436-11	CARBON	39K	5%	1/4W
R357	1-249-436-11	CARBON	39K	5%	1/4W
R358	1-249-436-11	CARBON	39K	5%	1/4W
R361	1-249-431-11	CARBON	15K	5%	1/4W
R362	1-249-431-11	CARBON	15K	5%	1/4W
R363	1-249-431-11	CARBON	15K	5%	1/4W
R364	1-249-431-11	CARBON	15K	5%	1/4W
R365	1-249-438-11	CARBON	56K	5%	1/4W
R366	1-249-438-11	CARBON	56K	5%	1/4W
R367	1-249-438-11	CARBON	56K	5%	1/4W
R368	1-249-438-11	CARBON	56K	5%	1/4W
R369	1-249-419-11	CARBON	1.5K	5%	1/4W
R370	1-249-419-11	CARBON	1.5K	5%	1/4W
R371	1-249-419-11	CARBON	1.5K	5%	1/4W
R372	1-249-419-11	CARBON	1.5K	5%	1/4W
R373	1-247-887-00	CARBON	220K	5%	1/4W
R374	1-247-887-00	CARBON	220K	5%	1/4W

Ref. No.	Part No.	Description	Remark		
R375	1-249-409-11	CARBON	220	5%	1/4W
R376	1-249-409-11	CARBON	220	5%	1/4W
R377	1-249-409-11	CARBON	220	5%	1/4W
R378	1-249-409-11	CARBON	220	5%	1/4W
R379	1-249-425-11	CARBON	4.7K	5%	1/4W
R380	1-249-425-11	CARBON	4.7K	5%	1/4W
R381	1-249-425-11	CARBON	4.7K	5%	1/4W
R382	1-249-425-11	CARBON	4.7K	5%	1/4W
R383	1-249-413-11	CARBON	470	5%	1/4W
R384	1-249-413-11	CARBON	470	5%	1/4W
R385	1-249-393-11	CARBON	10	5%	1/4W
R386	1-249-393-11	CARBON	10	5%	1/4W
R389	1-249-413-11	CARBON	470	5%	1/4W
R390	1-249-413-11	CARBON	470	5%	1/4W
R392	1-249-405-11	CARBON	100	5%	1/4W
R393	1-249-406-11	CARBON	120	5%	1/4W
R394	1-249-435-11	CARBON	33K	5%	1/4W
< CRYSTAL >					
X327	1-579-314-11	VIBRATOR, CRYSTAL (22.5MHz)			

*	1-642-935-21	MOTOR VR BOARD			

*	4-922-980-01	HOLDER (LED)			
< CAPACITOR >					
C451	1-124-994-11	ELECT	100uF	20%	10V
C452	1-124-994-11	ELECT	100uF	20%	10V
C471	1-124-994-11	ELECT	100uF	20%	10V
C472	1-124-277-11	ELECT	4.7uF	20%	35V
< CONNECTOR >					
* CN451	1-568-832-11	SOCKET, CONNECTOR 13P			
* CN472	1-568-941-11	PIN, CONNECTOR 3P			
< DIODE >					
D471	8-719-970-49	DIODE	BR4361F		
< IC >					
IC451	8-759-981-89	IC	RC4556S		
IC471	8-759-962-08	IC	BA6208		

MOTOR

Ref. No.	Part No.	Description	Remark
< RESISTOR >			
R451	1-249-435-11	CARBON 33K 5% 1/4W	
R452	1-249-435-11	CARBON 33K 5% 1/4W	
R453	1-249-432-11	CARBON 18K 5% 1/4W	
R454	1-249-432-11	CARBON 18K 5% 1/4W	
R455	1-249-422-11	CARBON 2.7K 5% 1/4W	
R456	1-249-422-11	CARBON 2.7K 5% 1/4W	
R457	1-249-429-11	CARBON 10K 5% 1/4W	
R458	1-249-429-11	CARBON 10K 5% 1/4W	
R461	1-249-399-11	CARBON 33 5% 1/4W	
R462	1-249-399-11	CARBON 33 5% 1/4W	
R471	1-249-411-11	CARBON 330 5% 1/4W	
R472	1-249-417-11	CARBON 1K 5% 1/4W	
R473	1-249-417-11	CARBON 1K 5% 1/4W	

< VARIABLE RESISTOR >

RV451 1-238-974-11 RES. VAR. CARBON 10K/10K
(LINE OUT PHONE LEVEL)

MISCELLANEOUS

14	1-690-782-11	WIRE (FLAT TYPE) (29 CORE)	
27	1-690-392-11	WIRE, FLAT TYPE (13 CORE)	
53	1-575-002-11	WIRE, FLAT TYPE (22 CORE)	
△58	1-558-946-21	CORD, POWER (UK)	
△58	1-575-651-21	CORD, POWER (AEP)	
* 311	1-452-538-11	MAGNET	
△355	8-848-144-11	DEVICE, OPTICAL KSS-240A	
358	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M201	1-541-632-11	MOTOR, DC (LOADING)	
△PT1	1-449-922-11	TRANSFORMER, POWER	

Ref. No.	Part No.	Description	Remark
ACCESSORIES & PACKING MATERIALS			

	1-465-956-11	REMOTE COMMANDER (RM-D797)	
	1-558-271-11	CORD, CONNECTION	
*	3-704-343-01	SHEET (STANDARD), PROTECTION	
	3-707-584-01	COVER, BATTERY	
	3-754-666-11	MANUAL, INSTRUCTION (MADE IN JAPAN:AEP)	
		ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-754-666-41	MANUAL, INSTRUCTION (MADE IN JAPAN:AEP)	
		(ITALIAN, GERMAN, SWEDISH, DUTCH)	
	3-754-666-51	MANUAL, INSTRUCTION	
		(MADE IN FRANCE:AEP, UK)	
		(ENGLISH, FRENCH, SPANISH, PORTUGUESE)	
	3-754-666-61	MANUAL, INSTRUCTION	
		(MADE IN FRANCE:AEP)	
		(ITALIAN, GERMAN, SWEDISH, DUTCH)	

* 4-941-548-01 LABEL, CLASS 1

* 4-941-925-01 CUSHION

* 4-948-308-31 INDIVIDUAL CARTON (MADE IN JAPAN)

* 4-948-881-11 INDIVIDUAL CARTON (MADE IN FRANCE)

HARDWARE LIST

#1	7-621-775-10	SCREW +B 2.6X4
#2	7-621-255-15	SCREW +P 2X3
#3	7-682-547-09	SCREW +B 3X6
#4	7-682-548-04	SCREW +BVTT 3X8 (S)
#5	7-682-548-09	SCREW +BVTT 3X8 (S)
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S
#7	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S

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