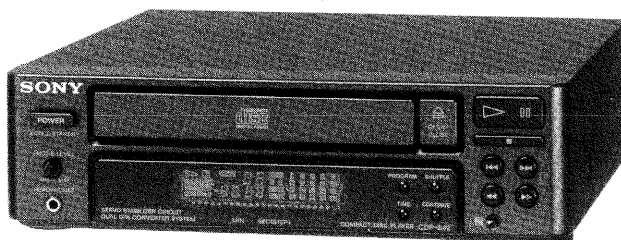


CDP-S42

SERVICE MANUAL

*AEP Model
E Model
Australian Model
Tourist Model*



SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz – 20kHz $\pm$ 0.5 dB
Signal to noise ratio	More than 95 dB
Dynamic range	More than 90 dB
Harmonic distortion	Less than 0.05% (at 1 kHz)
Channel separation	More than 90 dB

Outputs

LINE OUT (FIXED) (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
HEADPHONES (stereo phone-jack)	Output level max. 1 mW Load impedance 32 ohms

General

Power requirements	AEP Model : 220–230V AC50Hz Australian Model : 240V AC50Hz E, Saudi Arabia Tourist Model : 110–120/220–240V AC adjustable, 50/60Hz
Power consumption	10 W
Dimensions (approx., including projections)	225 x 65 x 230 mm (w/h/d) (8 ³ / ₈ x 2 ³ / ₄ x 9 ¹ / ₈ inches)
Weight (approx.)	2.0 kg (4 lb 7 oz)

Model Name Using Similar Mechanism	CDP-S41
CD Mechanism Type	CDM13A-5BD3
Optical Pick-up Block Type	BU-5BD3

Supplied accessories

Audio cord	1 (2 phono plugs – 2 phono plugs)
Connecting cord	1
Remote commander	1
Sony SUM-3 (NS) batteries	2

Remote commander

Remote control system

Infrared control

Power requirements

3 V DC with two R6 (size AA)
batteries

Dimensions
Approx. 40 x 20 x 175 mm
(w/h/d)
(1⁵/₈ x 1³/₁₆ x 7 inches)

Weight
Approx. 100 g (3.5 oz)
Including batteries

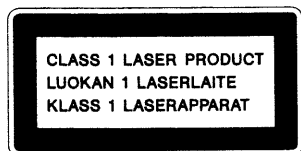
Note

This appliance conforms with EEC Directive 87/308/EEC regarding interference suppression.

Design and specifications subject to change without notice.

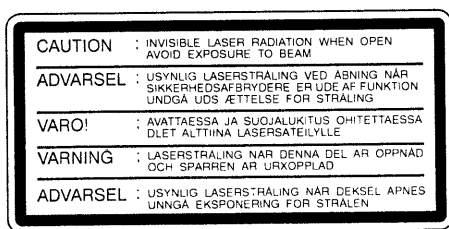
COMPACT DISC PLAYER
SONY®

For the European countries



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

The following caution label is located inside of the unit.



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.

ATTENTION AU COMPOSANT AYANT RAPPORT A LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

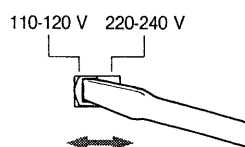
TABLE OF CONTENTS

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SECTION 3.	DIAGRAMS	
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Adjusting Operating Voltage

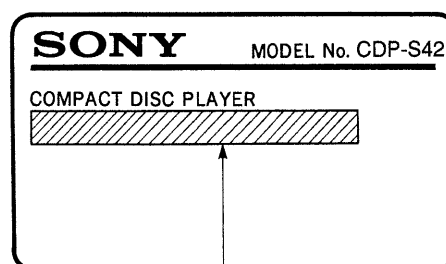
For the customers of the model equipped with the voltage selector

Check that the voltage selector is set to the local power line voltage. If not, set the selector to the correct position before connecting AC power cord to a wall outlet.



MODEL IDENTIFICATION

—Model Number Label—

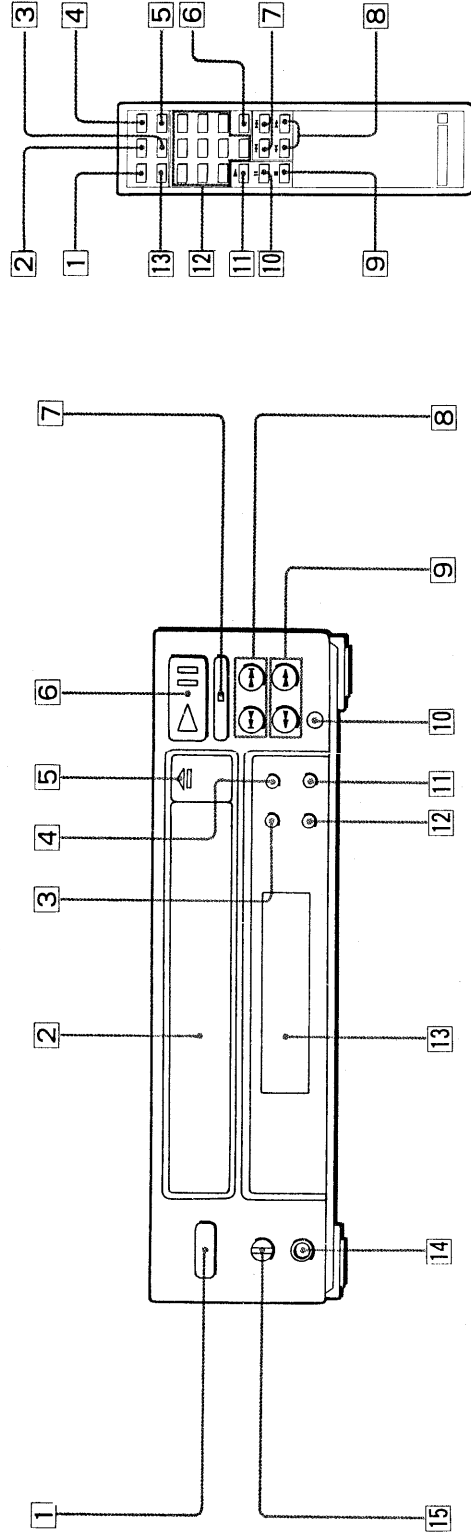


AEP Model	AC: 220-230V~50Hz 10W
E, Saudi Arabia	
Tourist Model	AC: 110-120/220-240V~50/60Hz 10W
Australian Model	AC: 240V~50Hz 10W

SECTION 1 GENERAL

Location of Controls

Front panel and remote commander



Front panel:

- 1 POWER switch
- 2 Disc compartment
- 3 PROGRAM button
- 4 SHUFFLE button
- 5 ▲ (open/close) button
- 6 ►▶ (play/pause) button
- 7 ■ (stop) button
- 8 ◀◀▶▶ (AMS) buttons
- 9 ◀◀▶▶ (manual search) buttons
- 10 Remote control sensor
- 11 CONTINUE button
- 12 TIME button
- 13 Display window
- 14 HEADPHONES jack
- 15 PHONE LEVEL (headphone Level) control

Remote commander:

- 1 REPEAT button
- 2 TIME button
- 3 SHUFFLE button
- 4 FADER button
- 5 PGM (program) button
- 6 >10 (over 10) button
- 7 ◀◀▶▶ (AMS buttons)
- 8 ◀◀▶▶ (manual search) buttons
- 9 ■ (stop) button
- 10 ■ (pause) button
- 11 ▶ (play) button
- 12 Numeric buttons
- 13 CONTINUE button

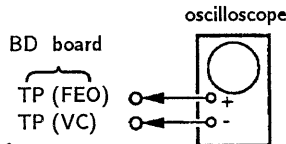
This section is extracted from instruction manual.

SECTION 2 ELECTRICAL BLOCK CHECKING

Note :

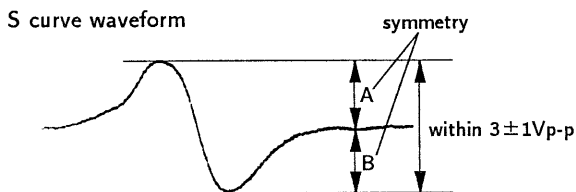
1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in the order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope of more than 10M Ω impedance.
4. Clean the object lens using an applicator with neutral detergent when the signal level is low than specified value for the following checks.

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect test point TP (FES) and TP (VC) by a lead wire.
3. Turn the Power switch on and actuate the focus search. (actuate the focus search when the disc tray is moving in and out.)
4. Check if the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm that peak to peak level within $3 \pm 1V_{p-p}$.

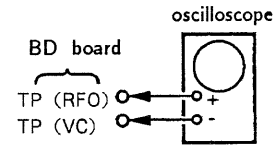


5. After checking, remove the lead wire connected in step 2.

Note :

- Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.
- Set the sweep time as long as possible and adjust up the brightness to obtain best waveform.

RF Level Check

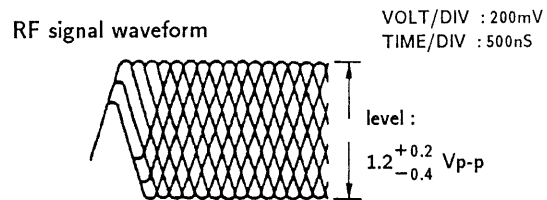


Procedure :

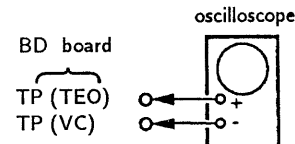
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn the Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that the oscilloscope waveform is clear and check if RF signal level is correct or not.

Note :

Clear RF signal waveform means that the shape "◇" can be clearly distinguished at the center of the waveform.

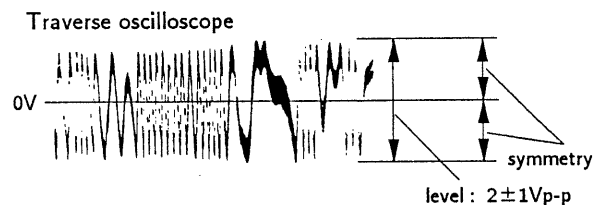


E-F Balance Check



Procedure :

1. Connect test point TP (ADJ) to ground and TP (TES) to TP (VC) with lead wire.
2. Connect oscilloscope to test point TP (TEO) on BD board.
3. Turn the 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 0V, and check the level.

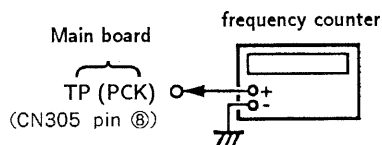


6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

1. Connect frequency counter to test point (PCK) with lead wire.



2. Turn the Power switch on.
3. Confirm that reading on frequency counter is
4. 3218MHz.

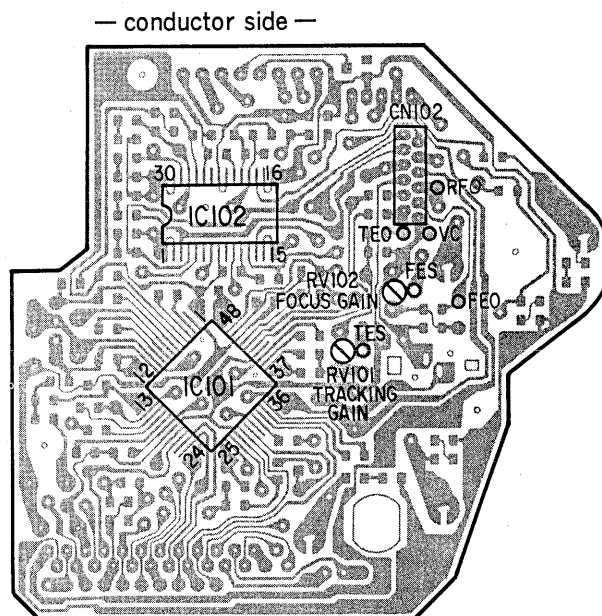
Focus/Tracking Gain

This gain has a margin, so even if it is slightly off, there is no problem.

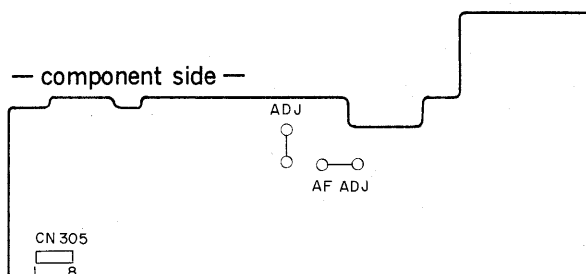
Therefore, do not perform, this adjustment.

Please note that it should be fixed to mechanical center position if inadvertently moved and the original position is unknown.

Adjustment Locations : [BD board]



[Main board]



SECTION 3 DIAGRAMS

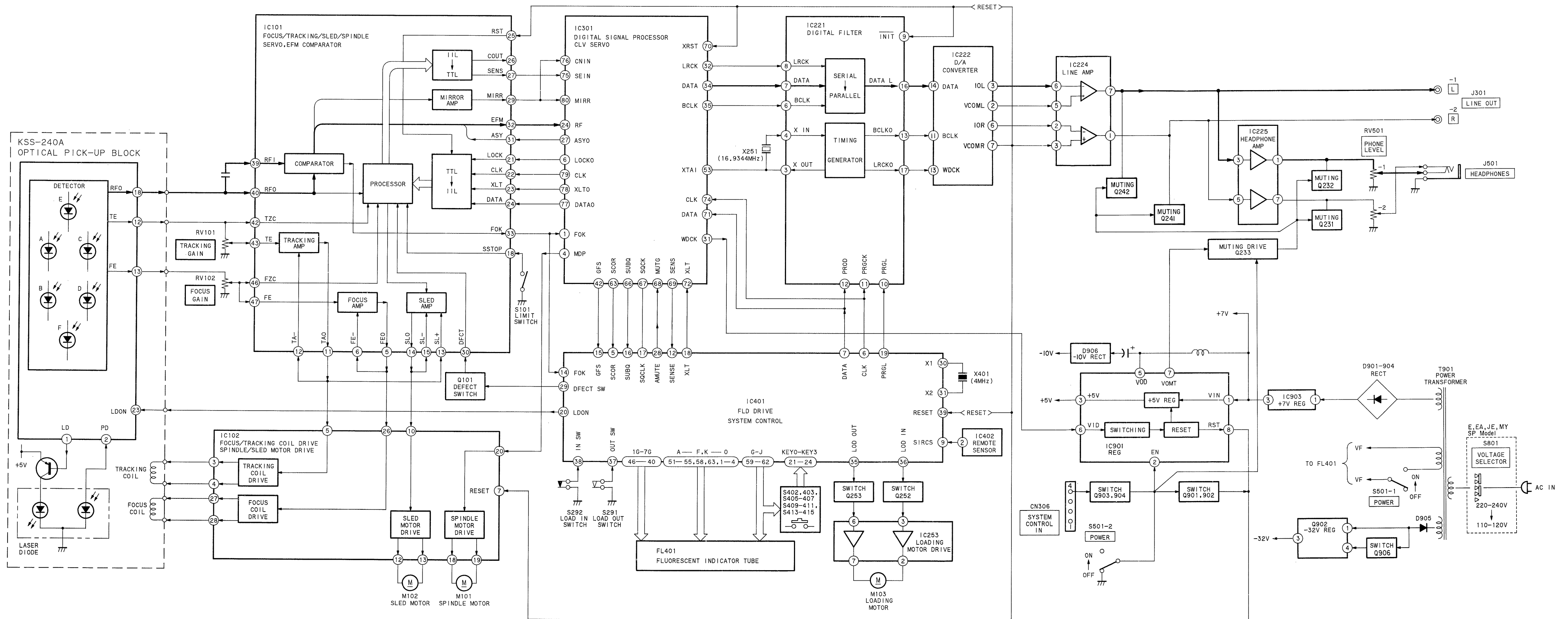
• IC PIN FUNCTION

• IC401 SYSTEM CONTROLLER (μPD75212ACW-205)

This system control integrated circuit consists of the RF amp control, DSP, Servo, loading and digital filter for CD block and also, key input function, FL tube indication function, remote control signal processor.

Pin No.	Pin Name	I / O	Description
1 - 4	L - O	O	Segment, Key scan output.
5	SCOR	I	Subcode sync signal S ₀ + S ₁ detection input from IC301 (CXD2500BQ).
6	CLK	O	Serial data transfer clock to IC301 (CXD2500BQ).
7	DATA	O	Serial data output to IC301 (CXD2500BQ).
8	TIMER	—	Not used (always "Ground").
9	SIRCS	I	Remote Control signal input.
10	GND	—	Ground.
11	ADJ	I	Test mode input. GFS check will not activate by "L". But, the spindle will turn continuously even it the frame sync does not appear.
12	SENSE	I	SENS input signal from IC301 (CXD2500BQ).
13	AFADJ	I	Test mode input. All test operation will be activate "L" mode when power on.
14	FOK	I	Focus OK signal input from IC101 (CXA1372AQ).
15	GFS	I	Frame sync signal clock status input from IC301 (CXD2500BQ).
16	SUBQ	I	Sub code (Q data) serial input from IC301 (CXD2500BQ).
17	SQCK	O	Sub code (Q data) readout clock output to IC301 (CXD2500BQ).
18	XLT	O	Serial data latch output.
19	PRGL	O	Attenuate data latch clock output to IC221 (MSM6538-01-RS).
20	LDON	O	Laser diode ON/OFF selector output of optical pick-up.
21 - 24	KEY0 - 3	I	Key scan input.
25, 26	—	—	Not used (open).
27	BUS-OUT	O	Not used (Audio bus line signal output).
28	MUTE	O	Muting output for IC224 and IC301. Muting on by "H", Muting off by "L".
29	DFCT	O	Defect circuit ON/OFF select output for IC101 (CXA1372AQ). The disc scratch detection circuit is shut off when focus search is operating.
30	XOUT	O	Clock output.
31	XIN	I	Clock input. (4MHz)
32	GND	—	Ground.
33	GND	—	Ground.
34	—	—	Not used (open).
35	LODOUT	O	Output for switching the loading motor to unload.
36	LODIN	O	Output for switching the loading motor to load.
37	OUTSW	I	Input for unload switch.
38	INSW	I	Input for load switch.
39	RESET	I	Reset input.
40 - 46	7G - 1G	O	Common output for FL tube.
47 - 50	—	—	Not used (open).
51 - 55	A - E	O	Segment, Key scan output.
56	—28V	I	Power voltage —28V for FL tube controller (Built-in).
57	VPRE	I	Power voltage —4V for FL tube predriver (Built-in).
58 - 63	F - K	O	Segment, Key scan output.
64	VDD	—	Power voltage terminal (+5V).

3-1. BLOCK DIAGRAM



3-2. PRINTED WIRING BOARDS

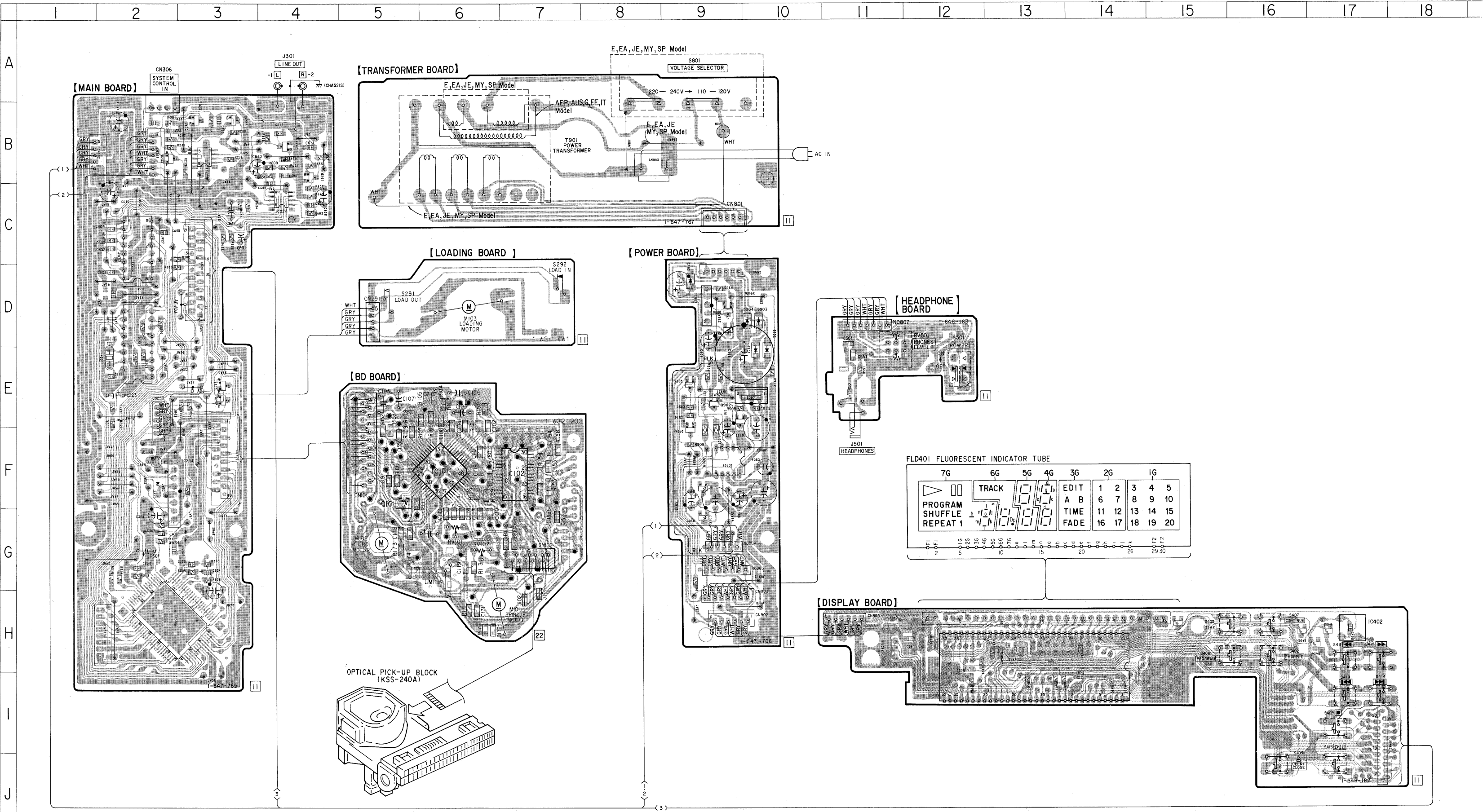
•See page 17 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref.No.	Location
D201	F-2
D401	H-15
D402	H-16
D403	H-17
D404	H-17
D412	H-13
D901	E-10
D902	E-10
D903	D-10
D904	D-10
D905	D-9
D906	G-9
D907	F-9
D909	D-9
IC101	F-6
IC102	F-7
IC221	D-2
IC222	C-2
IC224	C-4
IC225	B-3
IC253	F-2
IC301	H-2
IC401	H-13
IC402	H-17
IC901	F-9
IC902	D-2
IC903	E10
Q101	F-5
Q231	B-3
Q232	B-3
Q233	B-2
Q241	B-4
Q242	B-4
Q252	E-3
Q253	E-3
Q901	E-9
Q902	E-9
Q903	E-9
Q904	F-9
Q906	D-9

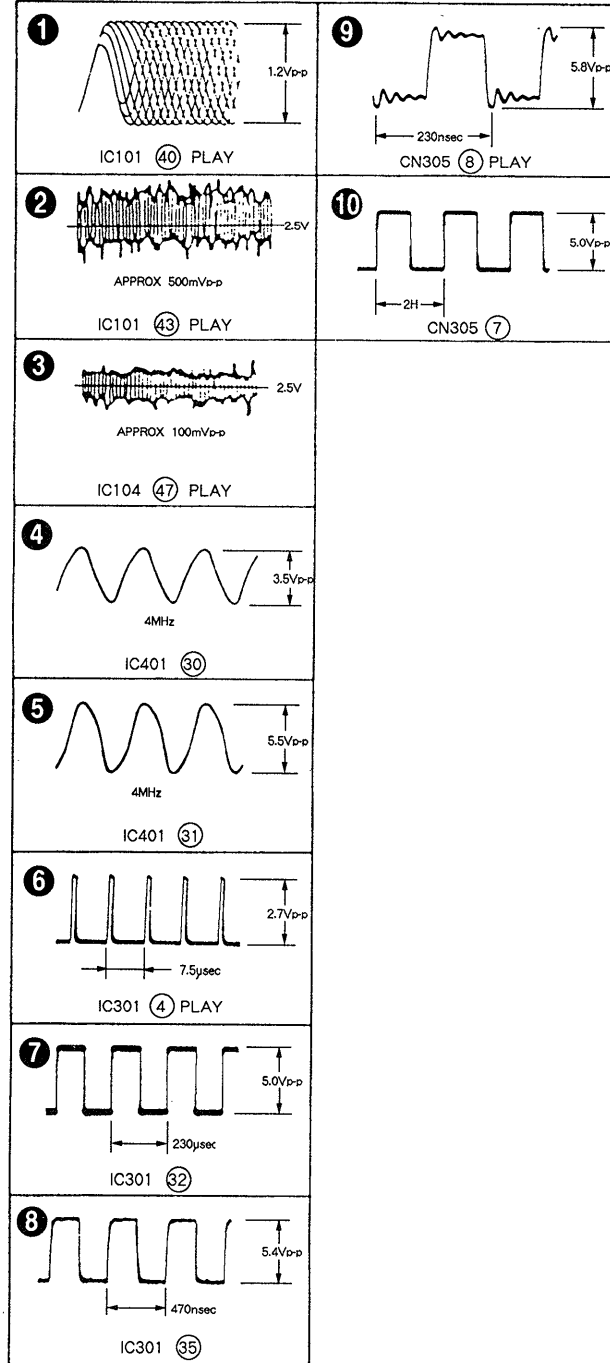
Note:

- : parts extracted from the component side.
- : Through hole.
- ▨ : Pattern on the side which is seen.
- ▧ : Pattern of the rear side.
- EA : Saudi Arabia model
- AUS : Australian model
- JE : Tourist model
- SP : Singapore model
- EE : East European model
- IT : Italian model
- MY : Malaysia model



3-3. SCHEMATIC DIAGRAM
• See page 18, 19 for IC Block Diagrams.

• Waveforms

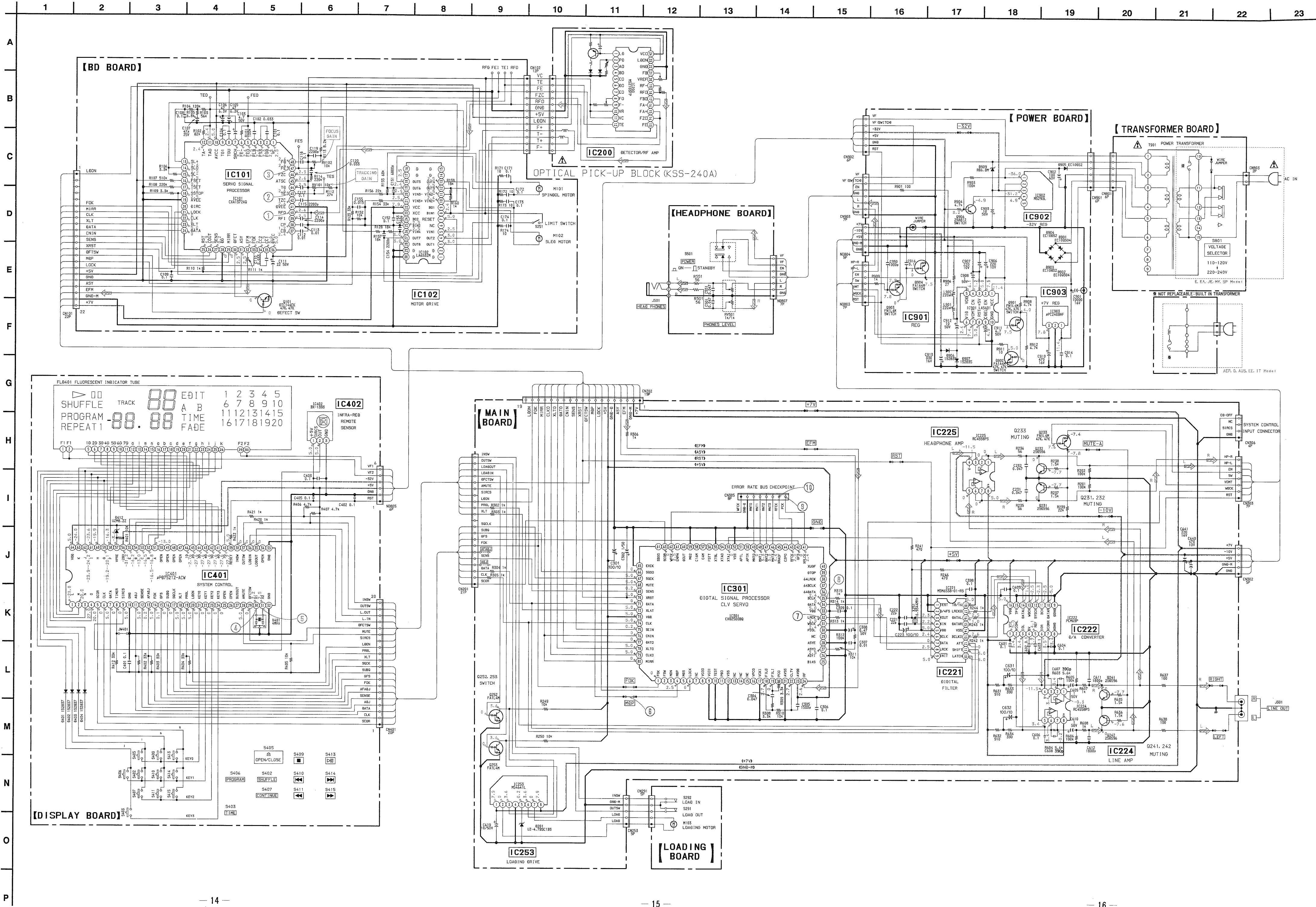


Note:

- 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.

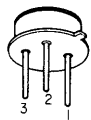
Note: The components identified by mark Δ or dotted line with mark Δ are critical for safety. Replace only with part number specified.

- Δ : B+ Line
- Δ : B- Line
- Δ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: STOP
- Voltages are taken with a VOM (Input Impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
- Circled numbers refer to waveforms.
- Signal path.
- Δ : CD
- EA: Saudi Arabia model
- AUS: Australian model
- JE: Tourist model
- SP: Singapore model
- EE: East European model
- IT: Italian model
- MY: Malaysia model

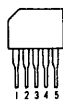


3-4. SEMICONDUCTOR LEAD LAYOUTS

BX1393



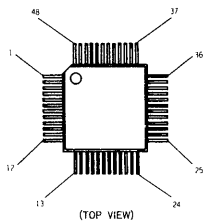
M5293L



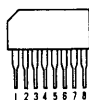
MA152WK



CXA1372AQ



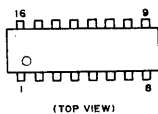
M54641L



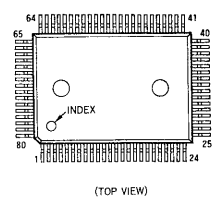
**RD6.8M-B2
RD8.2M-B3
UZM8.2Z**



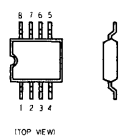
PCM69P-B



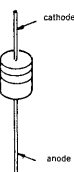
CXD2500BQ



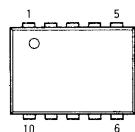
**RC4558PS-T1
MSF7808**



UZ-4.7BSC



LA5601



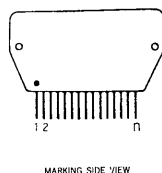
uPC2408HF



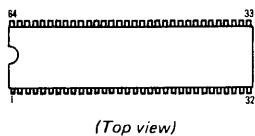
1S2836



LA6532M



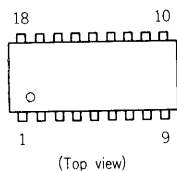
uPD75212ACW-205



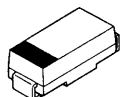
**DTC144EK
FA1A4M-L33
FA1L4M-L31
FN1L4M-M31
2SA1162
2SD596DV345**



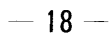
**MSM6538-01-RS
CXD2554P**

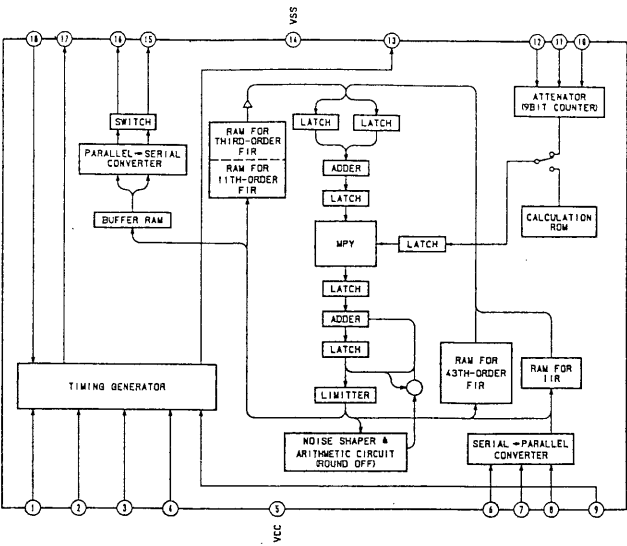


**EC10DS2
EC10QS-04**



IC301 CXD2500Q





SECTION 4

EXPLODED VIEWS

NOTE:

- -XX, -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.

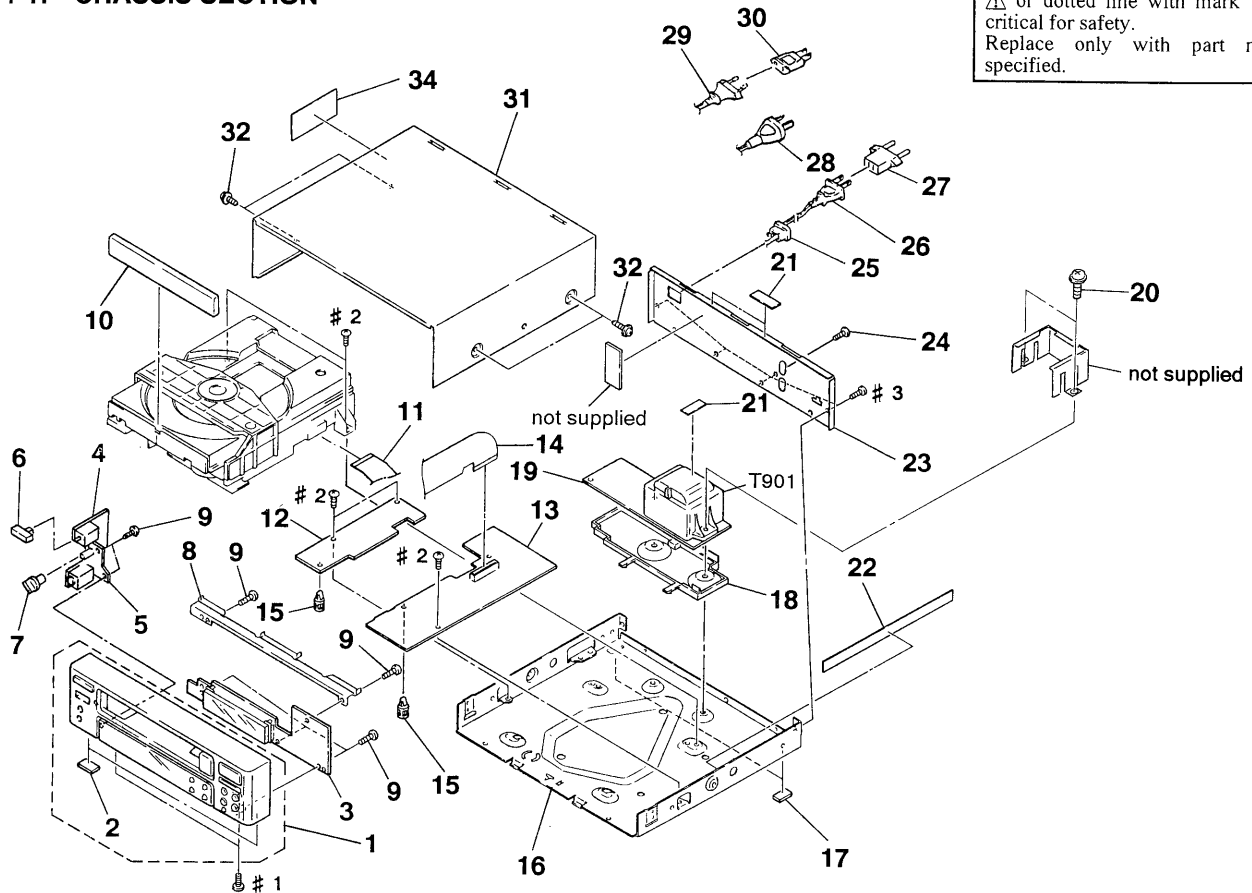
- The mechanical parts with no reference number in the exploded views are not supplied.

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

- G : Germany model
- IT : Italian model
- EE : East Europe model
- EA : Saudi Arabia model
- AUS: Australian model
- MY : Malaysia model
- SP : Singapore model
- JE : Tourist model

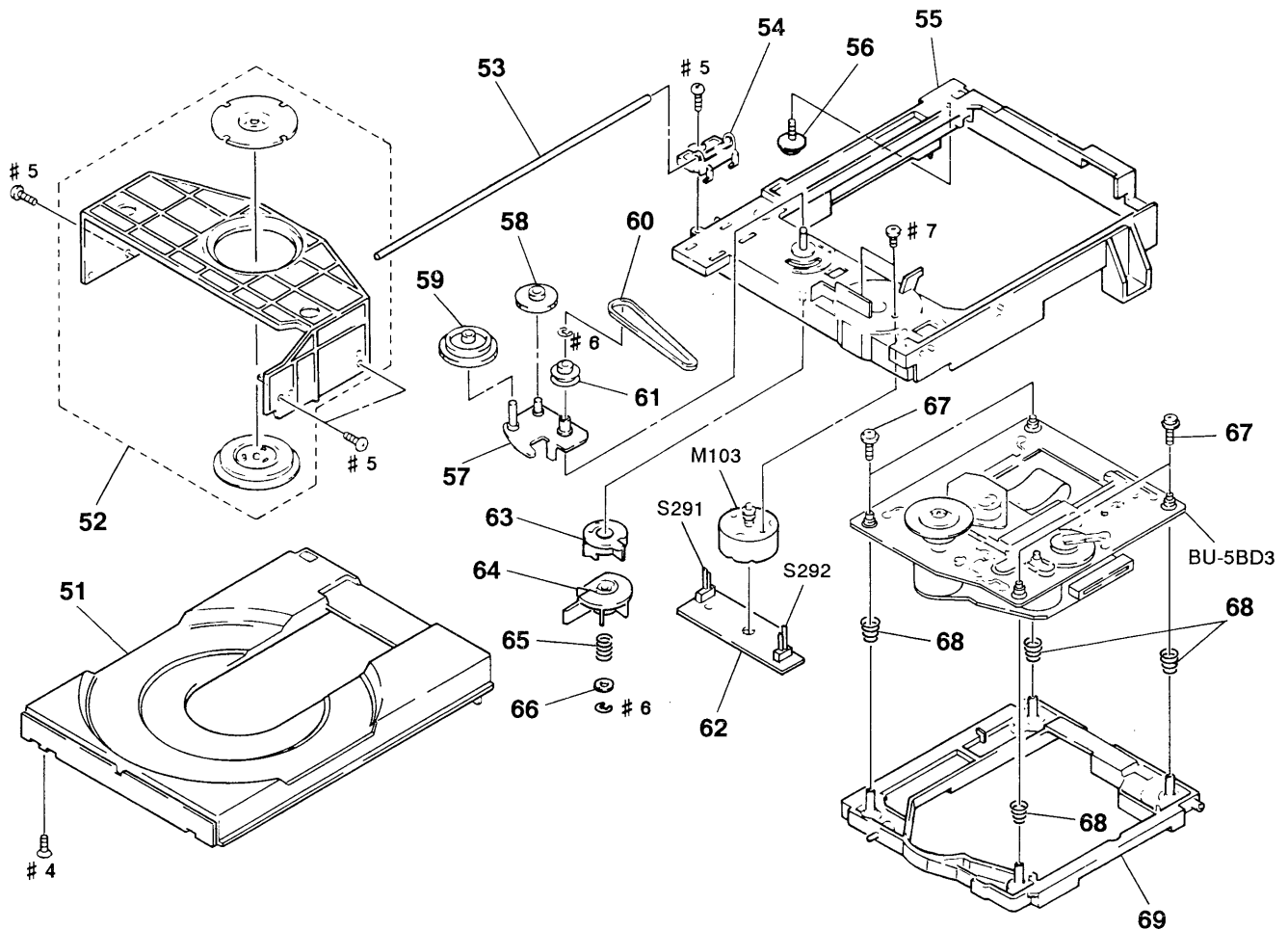
4-1. CHASSIS SECTION

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	Remark	Ref. No.	Part No.	Description	Remark
1	X-4943-395-1	PANEL ASSY, FRONT		20	4-929-742-11	SCREW +PTWH 3X12	
2	4-930-336-21	FOOT (FELT)		21	3-831-441-XX	CUSHION (B), CABINET	
* 3	A-4649-688-A	DISPLAY BOARD, COMPLETE		22	3-831-441-11	SPACER	
* 4	1-648-183-11	HEADPHONE BOARD		* 23	4-956-939-01	PANEL, BACK (E, EA, MY, SP, JE)	
* 5	4-929-706-01	BRACKET (H. P)		*	4-956-939-11	PANEL, BACK (AEP, G, IT, EE)	
6	4-929-713-01	BUTTON (POWER)		*	4-956-939-21	PANEL, BACK (AUS)	
7	4-929-707-01	KNOB (H. P)		24	4-929-074-01	SCREW (3X8)	
* 8	4-929-752-01	REINFORCEMENT		* 25	3-703-244-00	BUSHING (2104), CORD	
9	4-951-620-01	SCREW (2.6X8), +BVTP				(AEP, G, IT, AUS, EE, EA, MY, SP)	
10	4-929-753-41	PANEL, LOADING		*	3-703-571-11	BUSHING (S) (4516), CORD (E, JE)	
11	1-535-845-11	JUMPER, FILM (WITH TERMINAL)			1-575-104-11	CORD, POWER (E, JE)	
* 12	A-4649-663-A	POWER BOARD, COMPLETE			1-569-007-11	ADAPTER, CONVERSION 2P (E, JE)	
* 13	A-4649-662-A	MAIN BOARD, COMPLETE (AEP, G, IT, EE)			1-575-677-11	CORD, POWER (AUS)	
*	A-4649-665-A	MAIN BOARD, COMPLETE (E, AUS, EA, MY, SP, JE)			1-575-453-11	CORD, POWER (AEP, G, IT, EE, EA, MY, SP)	
14	1-535-833-11	JUMPER, FILM (WITH TERMINAL)			1-569-008-11	ADAPTER, CONVERSION 2P (EA, MY, SP)	
15	3-682-057-11	SPACER (SMALL)		31	4-930-347-51	CASE	
* 16	4-929-757-01	CHASSIS		32	3-363-099-01	SCREW (CASE 3 TP2)	
17	4-930-336-01	FOOT (FELT)		* 34	4-941-548-01	LABEL, CLASS 1	
* 18	4-929-760-01	COVER, POWER			1-450-031-11	TRANSFORMER, POWER (E, EA, MY, SP, JE)	
* 19	1-647-767-11	TRANSFORMER BOARD			1-450-349-11	TRANSFORMER, POWER (AUS)	
					1-450-350-11	TRANSFORMER, POWER (AEP, G, IT, EE)	

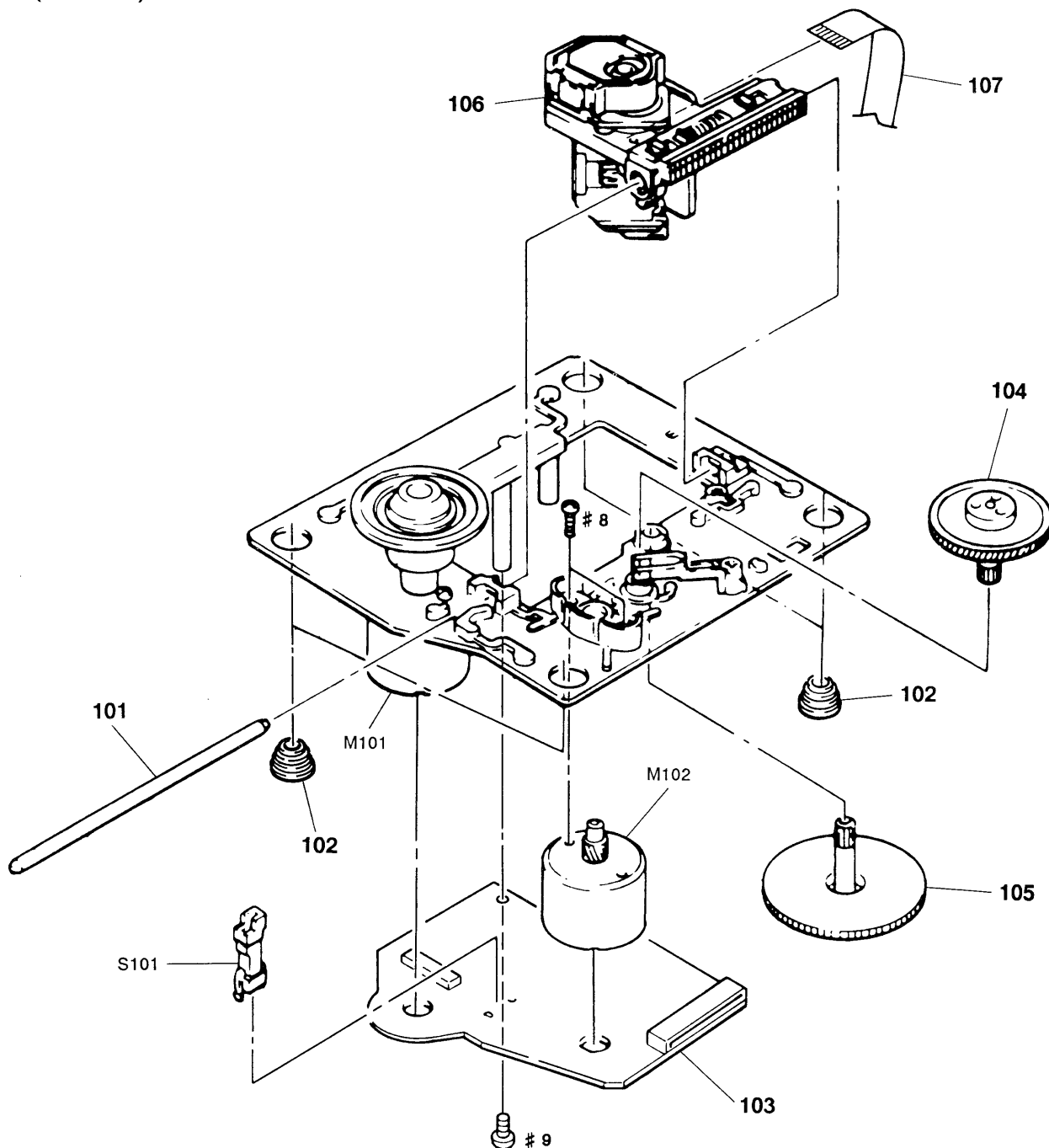
4-2. CD MECHANISM SECTION (CDM13A-5BD3)



Ref.No.	Part No.	Description
51	4-929-732-01	TABLE, DISK
52	A-4604-219-A	HOLDER (MG) ASSY
53	4-929-764-01	SHAFT (TABLE GUIDE)
54	4-929-723-01	GUIDE (T)
55	X-4929-709-1	CHASSIS (MD) ASSY
* 56	4-917-583-21	BRACKET, YOKE
57	X-4929-703-1	ARM ASSY, SWING
58	4-927-628-01	GEAR (C)
59	4-927-620-01	GEAR (P)
60	4-927-649-01	BELT
61	4-929-724-01	PULLEY (B)

Ref.No.	Part No.	Description	Remark
* 62	1-634-461-11	LOADING BOARD	
63	4-929-727-01	CAM (A)	
64	4-929-729-01	CAM (B)	
65	3-659-338-00	SPRING, COMPRESSION	
66	4-927-654-01	WASHER (LIMITER)	
67	4-933-134-01	SCREW (+PTPWH M2. 6X6)	
68	4-917-541-01	SPRING (B)	
69	4-929-747-01	HOLDER (BU)	
M103	A-4608-362-A	MOTOR (L) ASSY	
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)	

4-3. OPTICAL PICK-UP BLOCK (BU-5BD3)



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
101	4-917-565-01	SHAFT, SLED
102	4-933-126-01	INSULATOR (A)
* 103	A-4617-371-A	BD BOARD, COMPLETE
104	4-917-567-01	GEAR (M)
105	4-917-564-01	GEAR (P), FLATNESS

Remark	Ref. No.	Part No.	Description	Remark
		106	8-848-144-11	DEVICE, OPTICAL KSS-240A
	107	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
	M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE)	
	M102	X-4917-504-1	MOTOR ASSY (SLED)	
	S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

BD

DISPLAY

HEADPHONE

LOADING

Ref.No.	Part No.	Description	Remark
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

*	A-4649-688-A	DISPLAY BOARD, COMPLETE	

*	4-929-706-01	BRACKET (H.P)	
< CAPACITOR >			
C401	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C402	1-136-165-00	FILM 0.1uF	5% 50V
C403	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C405	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
CN401	1-569-566-11	SOCKET, CONNECTOR 20P	
< DIODE >			
D401	8-719-400-18	DIODE MA152WK	
D402	8-719-400-18	DIODE MA152WK	
D403	8-719-400-18	DIODE MA152WK	
D404	8-719-400-18	DIODE MA152WK	
D412	8-719-021-77	DIODE UZM8.2Z	
< INDICATOR >			
FLD401	1-519-600-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC401	8-759-150-21	IC uPD75212ACW-205	
IC402	8-749-900-36	IC BX1393	
< JUMPER WIRE >			
JW401	1-216-295-00	METAL CHIP 0	5% 1/10W
< RESISTOR >			
R401	1-216-073-00	METAL CHIP 10K	5% 1/10W
R402	1-216-085-00	METAL CHIP 33K	5% 1/10W
R403	1-216-085-00	METAL CHIP 33K	5% 1/10W
R404	1-216-085-00	METAL CHIP 33K	5% 1/10W
R405	1-216-073-00	METAL CHIP 10K	5% 1/10W
R406	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
R407	1-216-065-00	METAL CHIP 4.7K	5% 1/10W
R412	1-216-085-00	METAL CHIP 33K	5% 1/10W
R420	1-216-049-00	METAL CHIP 1K	5% 1/10W
R421	1-216-049-00	METAL CHIP 1K	5% 1/10W
R422	1-216-049-00	METAL CHIP 1K	5% 1/10W

Ref.No.	Part No.	Description	Remark
< SWITCH >			
S402	1-554-937-11	SWITCH, KEY BOARD (SHUFFLE)	
S403	1-554-937-11	SWITCH, KEY BOARD (TIME)	
S405	1-554-937-11	SWITCH, KEY BOARD (△ OPEN/CLOSE)	
S406	1-554-937-11	SWITCH, KEY BOARD (PROGRAM)	
S407	1-554-937-11	SWITCH, KEY BOARD (CONTINUE)	
S409	1-554-937-11	SWITCH, KEY BOARD (■)	
S410	1-554-937-11	SWITCH, KEY BOARD (◀)	
S411	1-554-937-11	SWITCH, KEY BOARD (◀)	
S413	1-554-937-11	SWITCH, KEY BOARD (▷□□)	
S414	1-554-937-11	SWITCH, KEY BOARD (▶)	
S415	1-554-937-11	SWITCH, KEY BOARD (▶)	
< VIBRATOR >			
X401	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	

*	1-648-183-11	HEADPHONE BOARD	

< CAPACITOR >			
C501	1-163-035-00	CERAMIC CHIP 0.047F	50V
C551	1-163-035-00	CERAMIC CHIP 0.047F	50V
< JACK >			
J501	1-507-967-31	JACK (HEADPHONES)	
< RESISTOR >			
R501	1-216-019-00	METAL CHIP 56	5% 1/10W
R551	1-216-019-00	METAL CHIP 56	5% 1/10W
< VARIABLE RESISTOR >			
RV501	1-238-302-11	RES, VAR, CARBON 1K/1K	(PHONE LEVEL)
< SWITCH >			
S501	1-552-928-00	SWITCH (POWER)	

*	1-634-461-11	LOADING BOARD	

< CONNECTOR >			
* CN291	1-564-498-11	PIN, CONNECTOR 5P	
< SWITCH >			
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)	

Ref.No.	Part No.	Description	Remark	Ref.No.	Part No.	Description	Remark
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)				< DIODE >	
*****				D201	8-719-010-34	DIODE UZ-4.7BSC	
*	A-4649-662-A	MAIN BOARD, COMPLETE (AEP, G, IT, EE, AU)				< IC >	
		*****		IC221	8-759-098-28	IC MSM6538-01-RS	
*	A-4649-665-A	MAIN BOARD, COMPLETE (E, EA, JE, MY, SP)		IC222	8-759-172-03	IC PCM69P-B	
		*****		IC224	8-759-996-43	IC RC4558PS-T1	
		< CAPACITOR >		IC225	8-759-996-43	IC RC4558PS-T1	
C221	1-163-235-11	CERAMIC CHIP 22PF 5% 50V		IC253	8-759-633-65	IC M54641L	
C222	1-163-235-11	CERAMIC CHIP 22PF 5% 50V		IC301	8-752-352-93	IC CXD2500BQ	
C223	1-124-443-11	ELECT 100uF 20% 10V				< JACK >	
C231	1-163-035-00	CERAMIC CHIP 0.047uF 50V		J301	1-565-352-11	JACK, PIN 2P (LINE OUT)	
C232	1-163-035-00	CERAMIC CHIP 0.047uF 50V				< TRANSISTOR >	
C302	1-124-903-11	ELECT 1uF 20% 50V		Q231	8-729-141-75	TRANSISTOR 2SD596DV345	
C301	1-124-443-11	ELECT 100uF 20% 10V		Q232	8-729-141-75	TRANSISTOR 2SD596DV345	
C304	1-163-035-00	CERAMIC CHIP 0.047uF 50V		Q233	8-729-113-66	TRANSISTOR FN1L4M-M31	
C305	1-163-011-11	CERAMIC CHIP 0.0015uF 10% 50V		Q241	8-729-141-75	TRANSISTOR 2SD596DV345	
C306	1-163-038-00	CERAMIC CHIP 0.1uF 25V		Q242	8-729-141-75	TRANSISTOR 2SD596DV345	
C307	1-163-031-11	CERAMIC CHIP 0.01uF 50V		Q252	8-729-112-97	TRANSISTOR FAIL4M-L31	
C308	1-124-902-00	ELECT 0.47uF 20% 50V		Q253	8-729-112-97	TRANSISTOR FAIL4M-L31	
C309	1-163-038-00	CERAMIC CHIP 0.1uF 25V				< RESISTOR >	
C398	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R201	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C601	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R202	1-216-097-00	METAL CHIP 100K 5% 1/10W	
C602	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R235	1-216-019-00	METAL CHIP 56 5% 1/10W	
C603	1-164-346-11	CERAMIC CHIP 1uF 16V		R236	1-216-019-00	METAL CHIP 56 5% 1/10W	
C604	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R237	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
C605	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R238	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
C606	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R239	1-216-081-00	METAL CHIP 22K 5% 1/10W	
C607	1-163-004-11	CERAMIC CHIP 390PF 10% 50V		R241	1-216-041-00	METAL CHIP 470 5% 1/10W	
C608	1-163-004-11	CERAMIC CHIP 390PF 10% 50V		R242	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C609	1-124-903-11	ELECT 1uF 20% 50V		R243	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C610	1-124-903-11	ELECT 1uF 20% 50V		R244	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C611	1-163-012-00	CERAMIC CHIP 0.0018uF 5% 50V		R246	1-216-041-00	METAL CHIP 470 5% 1/10W	
C612	1-163-012-00	CERAMIC CHIP 0.0018uF 5% 50V		R249	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C619	1-124-907-11	ELECT 10uF 20% 50V		R250	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C631	1-124-443-11	ELECT 100uF 20% 10V		R302	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C632	1-124-443-11	ELECT 100uF 20% 10V		R303	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C640	1-126-925-11	ELECT 470uF 20% 10V		R304	1-216-049-00	METAL CHIP 1K 5% 1/10W	
C641	1-124-118-11	ELECT 220uF 20% 16V		R305	1-216-049-00	METAL CHIP 1K 5% 1/10W	
		< CONNECTOR >		R306	1-216-049-00	METAL CHIP 1K 5% 1/10W	
CN201	1-568-838-11	SOCKET, CONNECTOR 21P		R308	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
CN202	1-568-802-11	SOCKET, CONNECTOR 19P		R309	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
* CN253	1-564-339-51	PIN, CONNECTOR 5P		R310	1-216-073-00	METAL CHIP 10K 5% 1/10W	
* CN302	1-564-339-51	PIN, CONNECTOR 5P		R311	1-216-073-00	METAL CHIP 10K 5% 1/10W	
* CN303	1-564-341-51	PIN, CONNECTOR 7P		R312	1-216-097-00	METAL CHIP 100K 5% 1/10W	
* CN305	1-564-342-51	PIN, CONNECTOR 8P		R313	1-216-049-00	METAL CHIP 1K 5% 1/10W	
CN306	1-564-980-11	PIN, CONNECTOR 4P					

MAIN POWER TRANSFORMER

Ref. No.	Part No.	Description	Remark
R314	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R315	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R603	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R604	1-216-067-00	METAL CHIP 5.6K 5% 1/10W	
R605	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R606	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R607	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R608	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R631	1-216-048-00	METAL CHIP 910 5% 1/10W	
R632	1-216-048-00	METAL CHIP 910 5% 1/10W	
R633	1-216-039-00	METAL CHIP 390 5% 1/10W	
R634	1-216-039-00	METAL CHIP 390 5% 1/10W	
R635	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R636	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R637	1-216-025-00	METAL CHIP 100 5% 1/10W	
R638	1-216-025-00	METAL CHIP 100 5% 1/10W	
< VIBRATOR >			
X251	1-567-908-11	VIBRATOR, CRYSTAL (16.9344MHz)	

*	A-4649-663-A	POWER BOARD, COMPLETE	

< CAPACITOR >			
C901	1-126-939-11	ELECT 10000uF 20% 16V	
C902	1-126-063-11	ELECT 100uF 20% 63V	
C903	1-124-907-11	ELECT 10uF 20% 50V	
C906	1-124-444-11	ELECT 220uF 20% 10V	
C907	1-126-934-11	ELECT 220uF 20% 16V	
C908	1-124-903-11	ELECT 1uF 20% 50V	
C910	1-126-935-11	ELECT 470uF 20% 16V	
C911	1-124-927-11	ELECT 4.7uF 20% 100V	
C912	1-124-907-11	ELECT 10uF 20% 16V	
C913	1-104-119-91	ELECT 330uF 20% 16V	
C914	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C916	1-163-038-00	CERAMIC CHIP 0.1uF 25V	
C950	1-163-009-11	CERAMIC CHIP 0.001uF 10% 50V	
< CONNECTOR >			
CN901	1-568-662-11	CONNECTOR, BOARD TO BOARD 6P	
* CN902	1-564-340-51	PIN, CONNECTOR 6P	
* CN903	1-564-341-51	PIN, CONNECTOR 7P	
< DIODE >			
D901	8-719-210-39	DIODE EC10QS-04	
D902	8-719-210-39	DIODE EC10QS-04	
D903	8-719-210-33	DIODE EC10DS2	
D904	8-719-210-33	DIODE EC10DS2	
D905	8-719-210-33	DIODE EC10DS2	

Ref. No.	Part No.	Description	Remark
D906	8-719-104-34	DIODE 1S2836	
D907	8-719-104-34	DIODE 1S2836	
D909	8-719-106-17	DIODE RD6.8M-B2	
< IC >			
IC901	8-759-821-93	IC LA5601	
IC902	8-759-633-42	IC M5293L	
IC903	8-759-148-81	IC uPC2408HF	
< COIL >			
L901	1-410-658-41	INDUCTOR CHIP 220uH	
L902	1-410-658-41	INDUCTOR CHIP 220uH	
< TRANSISTOR >			
Q901	8-729-113-66	TRANSISTOR FN1L4M-M31	
Q902	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q903	8-729-113-66	TRANSISTOR FN1L4M-M31	
Q904	8-729-113-13	TRANSISTOR FA1A4M-L33	
Q906	8-729-216-22	TRANSISTOR 2SA1162	
< RESISTOR >			
R901	1-216-025-00	METAL CHIP 100 5% 1/10W	
R903	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R904	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R906	1-216-011-00	METAL CHIP 27 5% 1/10W	
R908	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R909	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R911	1-216-001-00	METAL CHIP 10 5% 1/10W	
R912	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	

*	1-647-767-11	TRANSFORMER BOARD	

< CONNECTOR >			
CN801	1-568-668-11	CONNECTOR, BOARD TO BOARD 6P	
* CN803	1-564-321-00	PIN, CONNECTOR 2P	
< SWITCH >			
S801	1-571-722-11	SWITCH, VOLTAGE SELECTION (E, EA, MY, SP, JE)	

MISCELLANEOUS			

11	1-535-845-11	JUMPER, FILM (WITH TERMINAL)	
14	1-535-833-11	JUMPER, FILM (WITH TERMINAL)	
△26	1-575-104-11	CORD, POWER (E, JE)	
△27	1-569-007-11	ADAPTER, CONVERSION 2P (E, JE)	
△28	1-575-677-11	CORD, POWER (AUS)	

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	Remark	Ref. No.	Part No.	Description	Remark
△29	1-575-453-11	CORD, POWER (AEP, G, IT, EE, EA, MY, SP)				*****	
△30	1-569-008-11	ADAPTER, CONVERSION 2P (EA, MY, SP)				HARDWARE LIST	
△106	8-848-144-11	DEVICE, OPTICAL KSS-240A				*****	
107	1-575-001-11	WIRE, FLAT TYPE (12 CORE)		#1	7-682-547-09	SCREW +BVTT 3X6 (S)	
M101	X-4917-523-3	BASE (OUTSERT) ASSY (SPINDLE)		#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
M102	X-4917-504-1	MOTOR ASSY (SLED)		#3	7-682-548-09	SCREW +BVTT 3X8 (S)	
M103	A-4608-362-A	MOTOR (L) ASSY		#4	7-685-234-19	SCREW +KTP 2. 6X8 TYPE2NON-SLIT	
△T901	1-450-031-11	TRANSFORMER, POWER (E, EA, MY, SP, JE)		#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
△	1-450-349-11	TRANSFORMER, POWER (AUS)		#6	7-624-105-04	STOP RING 2.3, TYPE -E	
△	1-450-350-11	TRANSFORMER, POWER (AEP, G, IT, EE)		#7	7-621-775-10	SCREW +B 2. 6X4	
*****				#8	7-621-255-15	SCREW +P 2X3	
				#9	7-685-134-19	SCREW +BTP 2. 6X8 TYPE2 N-S	
ACCESSORIES & PACKING MATERIALS							

	1-465-299-11	REMOTE COMMANDER					
	1-558-233-11	CORD (WITH CONNECTOR) (SIRCS) 4P					
	1-558-271-11	CORD, CONNECTION					
	1-696-170-11	CORD, CONNECTION					
	3-756-773-11	MANUAL, INSTRUCTION					
		(ENGLISH, FRENCH, SPANISH, GERMAN) (AEP, EE)					
	3-756-773-41	MANUAL, INSTRUCTION					
		(PORTUGUESE, DUTCH, SWEDISH, ITALIAN) (AEP, IT, EE, G)					
	3-756-773-51	MANUAL, INSTRUCTION					
		(ENGLISH, FRENCH, SPANISH, CHINESE) (E, AUS, EA, MY, SP, JE)					
	4-920-941-01	SHEET (B), PROTECTION					
*	4-929-703-01	CUSHION (LEFT)					
*	4-929-704-01	CUSHION (RIGHT)					
*	4-941-548-01	LABEL, CLASS 1					
*	4-942-084-21	INDIVIDUAL CARTON					

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Replace only with part number specified.

