CDP-M202/M302

SERVICE MANUAL

AEP Model
UK Model
CDP-M202/M302
E Model
CDP-M202

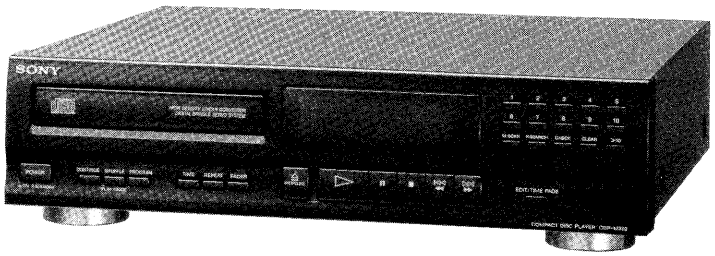


Photo : CDP-M202

Model Name Using Similer Mechanism	CDP-M201/M301
CD Mechanism Type	CDM14-5BD10
Base Unit Type	BU-5BD10B
Optical Pick-up Type	KSS-240A

SPECIFICATIONS

Compact disc player

Laser	Semiconductor laser
Wavelength	780 – 790 nm
Frequency response	2 Hz to 20 kHz ±0.5 dB
Signal-to-noise ratio	More than 100 dB
Dynamic range	More than 97 dB
Harmonic distortion	Less than 0.0045%
Channel separation	More than 95 dB

Outputs

LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over10 kilohms

General

Power requirements	AEP model : 220 – 230 V AC, 50/60 Hz UK model: 240 V AC, 50 Hz E, Saudi Arabia model: 110-120,220-240V AC adjustadle 50/60Hz
Power consumption	10 W
Dimensions (approx., including projections)	355 x 95 x 320 mm (w/h/d) (14 x 3 3/4 x 12 5/8 inches)
Mass (approx.)	2.8 kg (6 lb 3 oz)

Remote commander (only for CDP-M302)

Remote control system	Infrared control
Power requirements	3 VDC with two R6 (size AA) batteries
Dimensions (approx., including projections)	44 x 21 x 185 mm (w/h/d) (1 3/4 x 7/8 x 7 3/8 inches)
Mass (approx.)	100 g (4 oz)

Supplied accessories

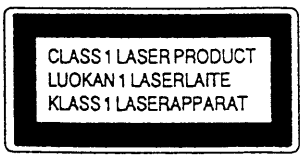
Audio cord	(1) (2 phono plugs – 2 phono plugs)
Remote commander (only for CDP-M302)	(1)
Sony SUM-3 (NS) batteries (only for CDP-M302)	(2)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

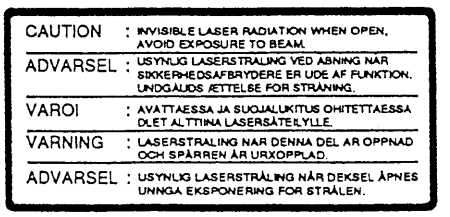
SONY®

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



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.

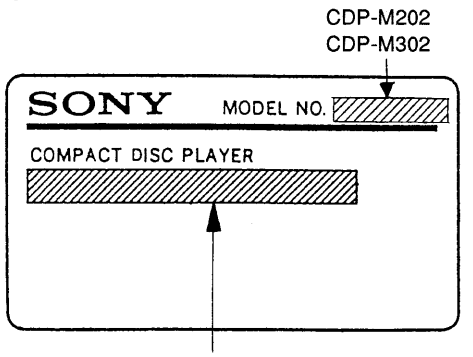


CAUTION

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

MODEL IDENTIFICATION

— Specification Label —



AEP, German model : AC220 - 230V ~ 50/60Hz, 10W
UK model : AC240 ~ 50/60Hz
E, Saudi Arabia model: AC110 - 120/220 - 240V ~ 50/60Hz, 10W

Notes 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.

TABLE OF CONTENTS

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.

SECTION 1
SERVICING NOTE

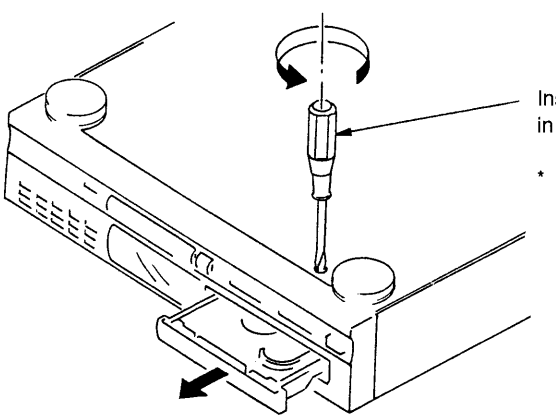
NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

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 repain 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.

HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF

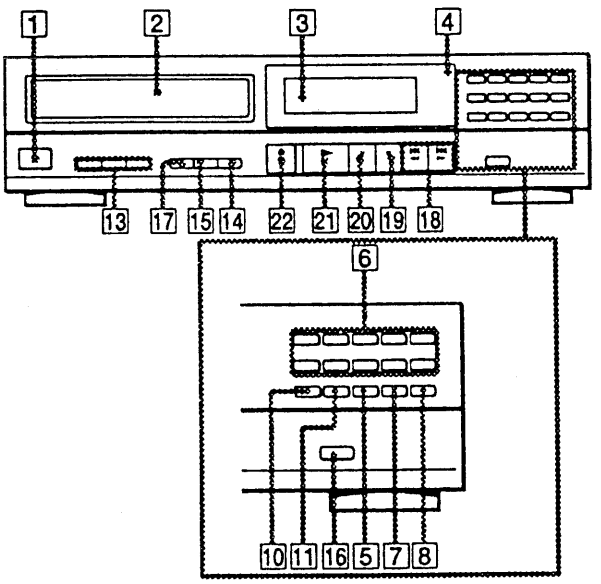


Insert a tapeing driver into the aperture of the unit bottom, and turn in the direction of arrow (to OUT direction).

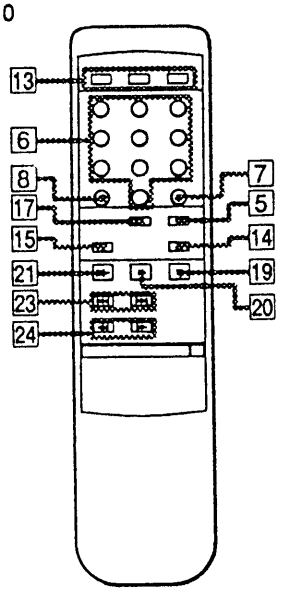
* To close the disc tray, turn the driver in the reverse direction (to IN direction).

SECTION 2
GENERAL

This section is extracted from instruction manual.



RM-D320



(only for CDP-M302)

Front Panel / Remote Commander

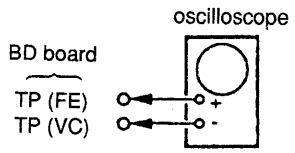
1 POWER switch (16)
2 Disc tray (16)
3 Display
4 Remote sensor
5 CHECK (program check) button (30)
6 Numeric buttons (20, 26, 28, 36, 40)
7 CLEAR (program clear) button (30)
8 >10 (over 10) button (20)
9 PHONE LEVEL control (16)
10 MUSIC SCAN button (32)
11 PEAK SEARCH (P.SEARCH on the models CDP-M302/M202) button (42)
12 PHONES jack (16)
13 Play Mode buttons
CONTINUE button (24, 26, 38)
SHUFFLE button (24, 26, 38)
PROGRAM button (26, 28)
14 FADER button (22)
15 REPEAT button (34)
16 EDIT/TIME FADE button (36, 38, 40)
17 TIME button (18)
18 ⏮⏪/⏩⏭ (AMS*/manual search) buttons
(20, 22, 28, 32, 36, 40, 42)
19 ■ (stop) button (16)
20 ⏸ (pause) button (16)
21 ▷ (play) button (16)
22 ⏏ OPEN/CLOSE button (16)
23 ⏮/⏭ (AMS*) buttons (20, 28)
(Only on the remote commander)
24 ⏪/⏩ (manual search)(22, 32)
(Only on the remote commander)

* AMS is the abbreviation of Automatic Music Sensor.

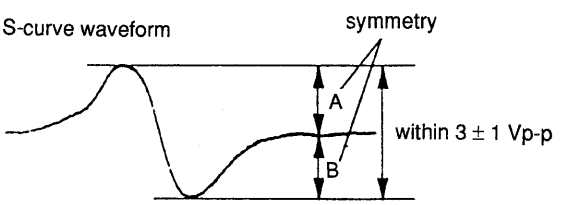
SECTION 3
ELECTRICAL BLOCK CHECKING

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

S Curve Check



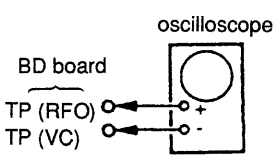
Procedure :
1. Connect oscilloscope to test point TP (FE) on BD board.
2. Connect between test point TP (FEI) and TP (VC) by lead wire.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and turn Power switch on again and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
5. Check if the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within 3±1 Vp-p.



6. After check, remove the lead wire connected in step 2.

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

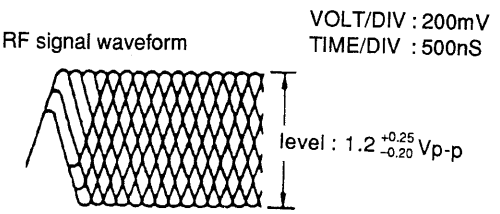
RF Level Check



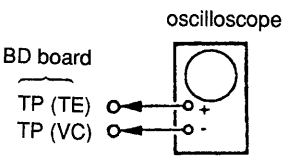
Procedure :
1. Connect oscilloscope to test point TP (RF) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check if RF signal level is correct or not.

Note :

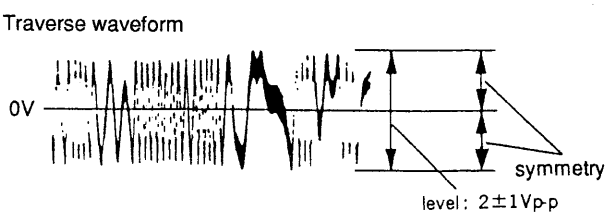
A clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.



E-F Balance Check



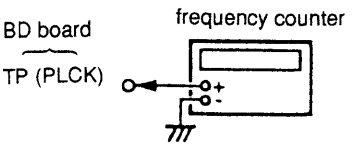
Procedure :
1. Connect test point TP (ADJ) on MAIN board to ground and TP(TEI) to TP (VC) with a lead wire.
2. Connect oscilloscpe to test point TP (TE) on BD board.
3. Turn Power switch on.
4. Put disc (YEDS-18) in and playback.
5. Confirm that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V, and check this level.



6. Remove the lead wire connected in step 1.

RF PLL Free-run Frequency Check

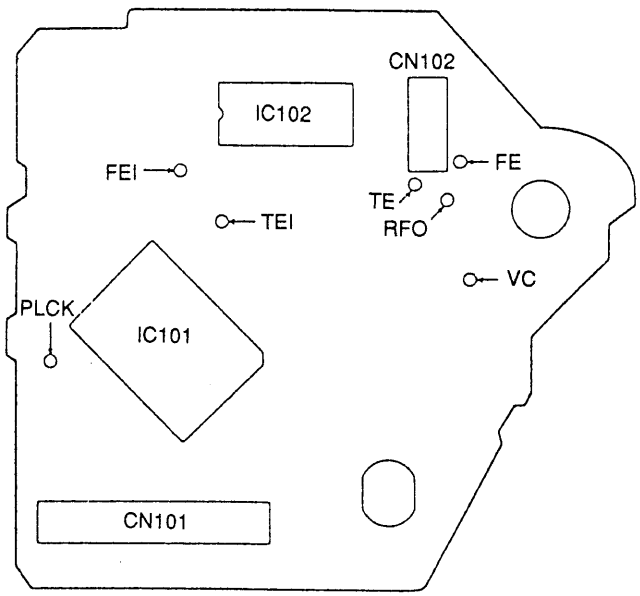
Procedure :
1. Connect frequency counter to test point (PLCK) with lead wire.



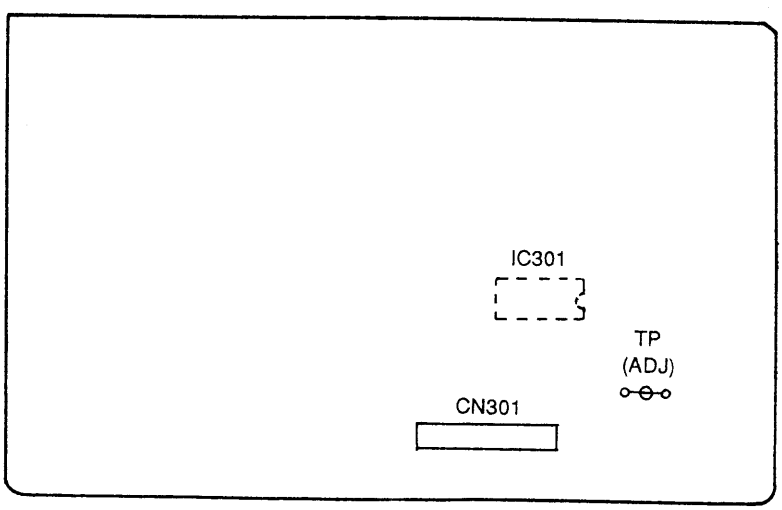
2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218MHz.

Adjustment Location :

[BD BOARD] — Conductor Side —

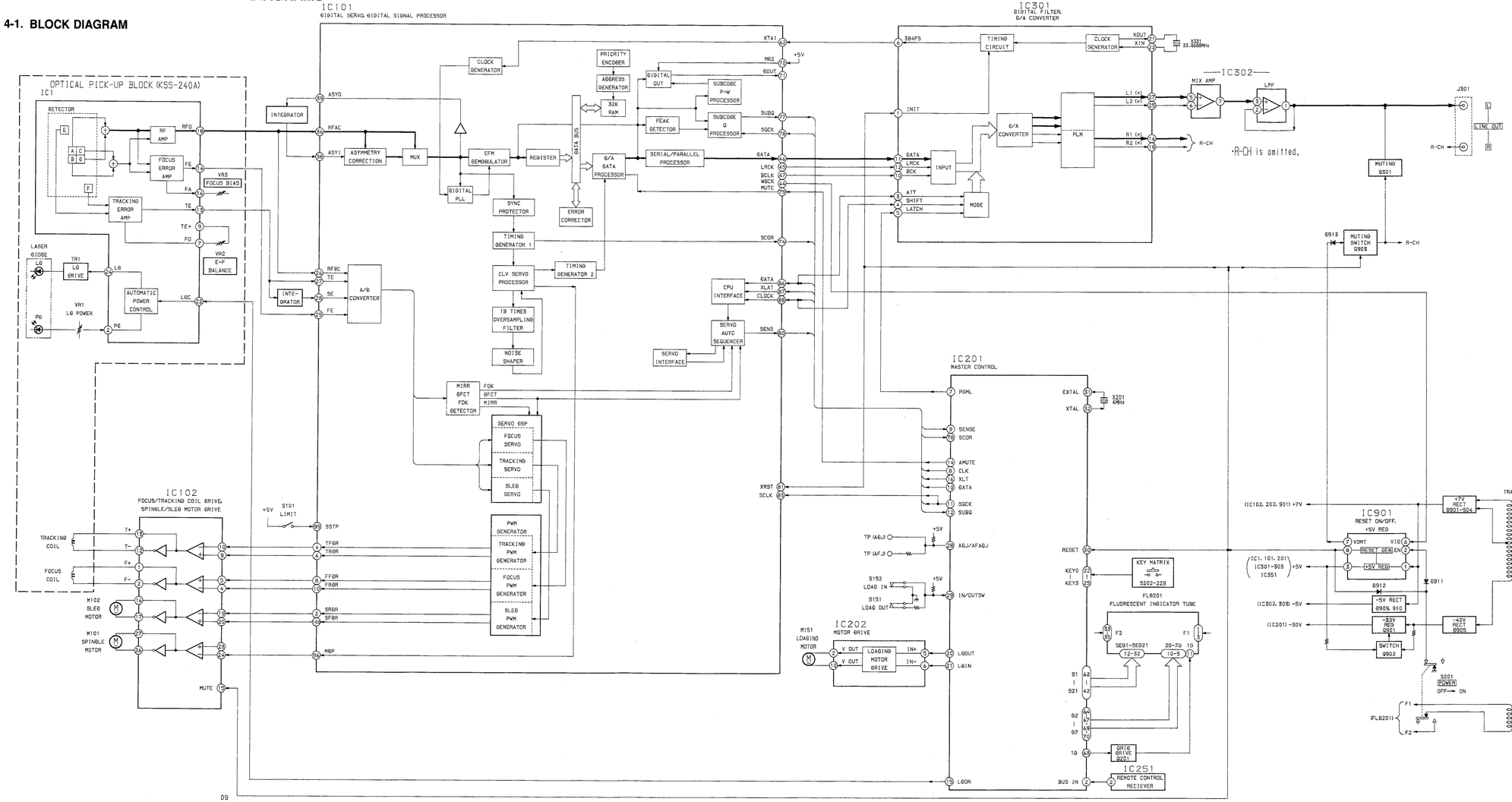


[MAIN BOARD] — Component Side —

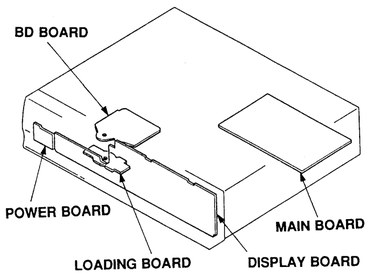


SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAM



4-2. CIRCUIT BOARDS LOCCATION

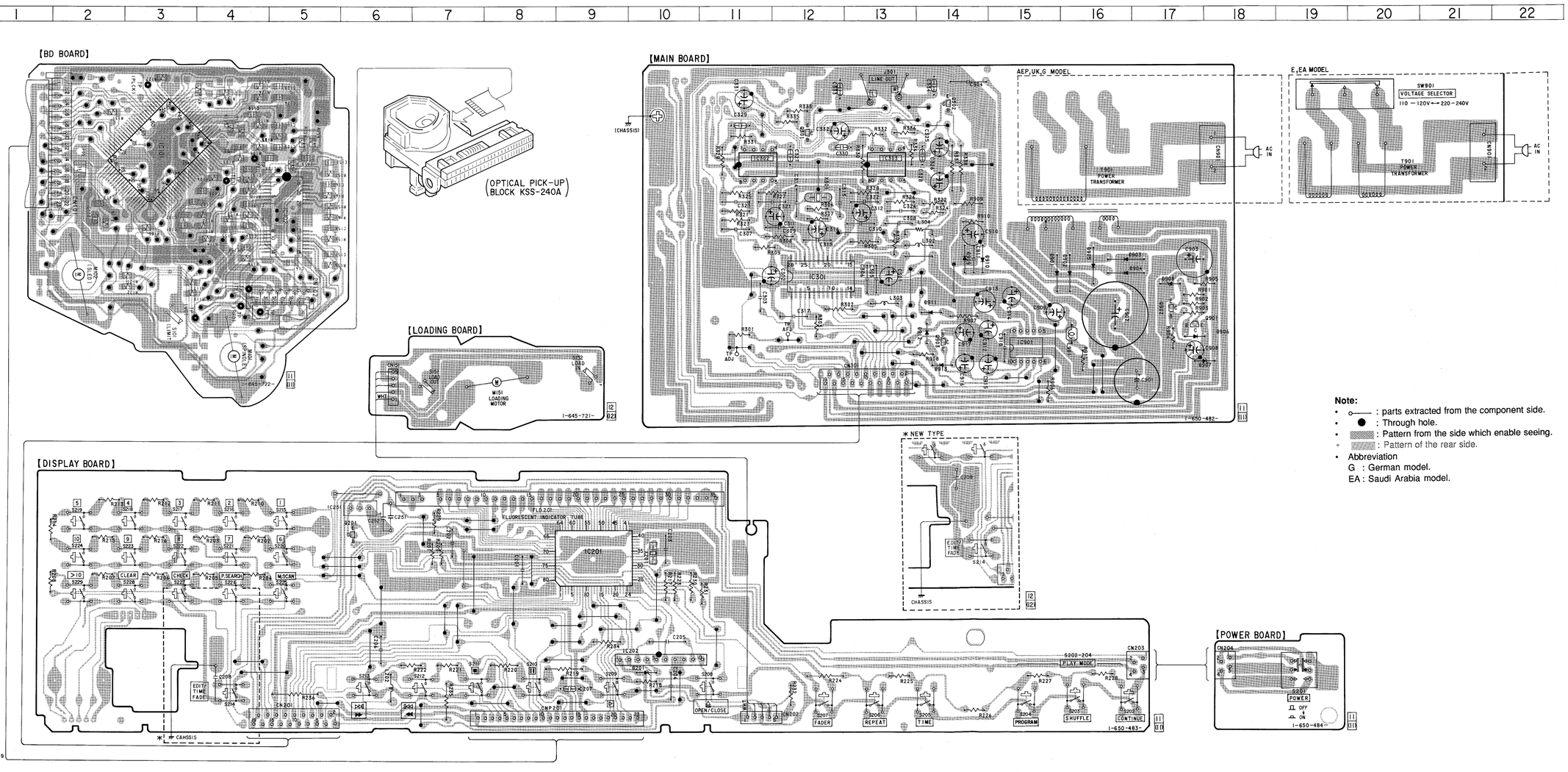


4-3. PRINTED WIRING BOARDS

• See page 18 for Semiconductor Lead Layouts.

• Semiconductor Location

Ref. No.	Location
D201	I-10
D901	D-15
D902	D-16
D903	D-16
D904	D-16
D905	D-16
D906	E-17
D907	E-18
D908	D-17
D909	D-14
D910	D-14
D911	E-14
D912	E-14
D913	E-14
IC101	B-3
IC102	C-5
IC201	H-9
IC202	I-10
IC251	G-6
IC301	D-12
IC302	B-11
IC303	B-13
IC901	E-15
Q201	H-6
Q301	B-12
Q302	B-14
Q901	E-17
Q902	D-17
Q903	E-14

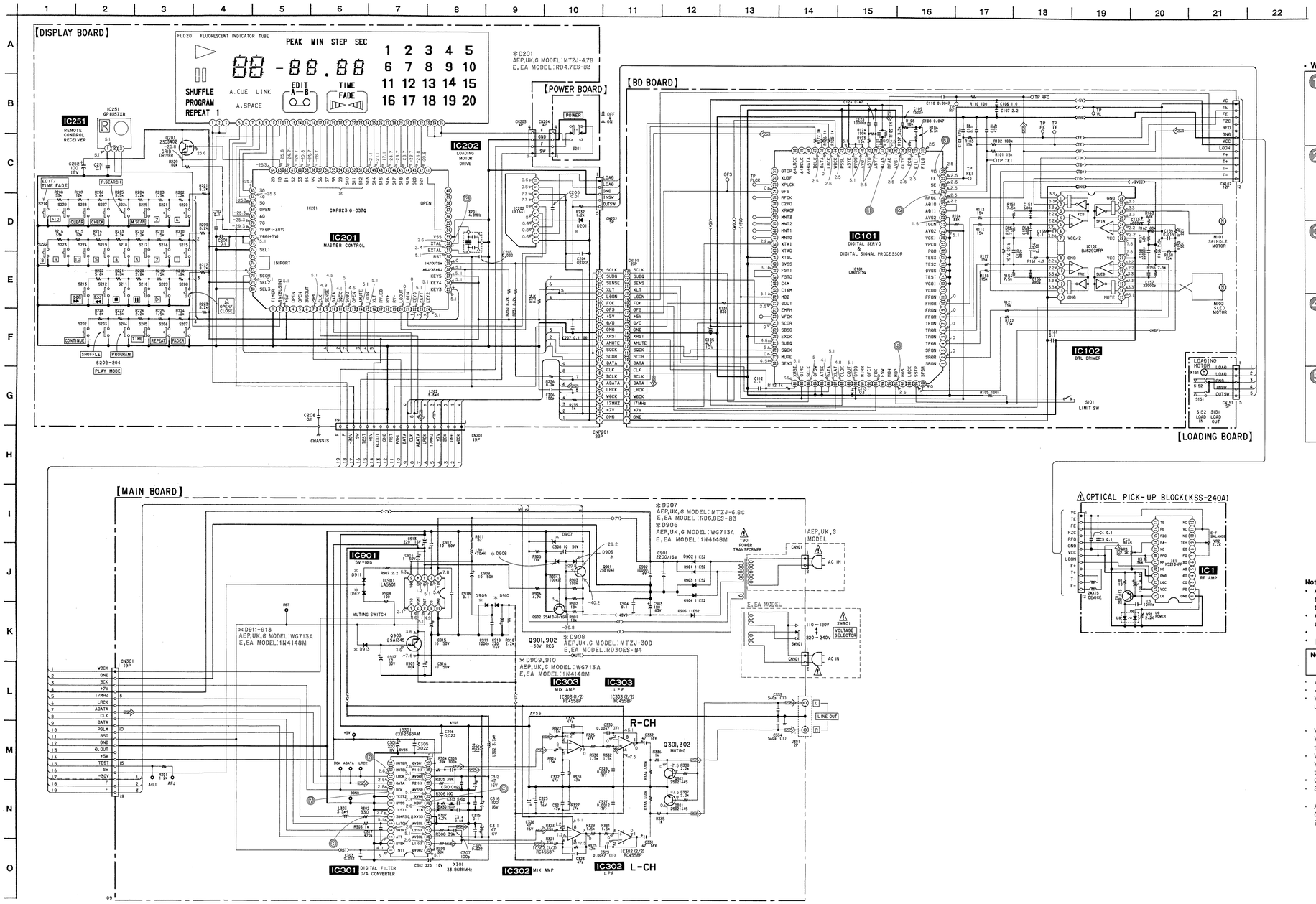


Note:

- ○——: parts extracted from the component side.
- ●: Through hole.
- ▨: Pattern from the side which enable seeing.
- ▨: Pattern of the rear side.
- Abbreviation
  G : German model.
  EA : Saudi Arabia model.

4-4. SCHEMATIC DIAGRAM

- See page 9 for Circuit Boards Location.
- See page 17, 18 for IC Block Diagrams.
- See page 19 to 22 for IC Pin Functions. (IC101, IC201)



• Waveforms

1. IC101 ㊱ PLAY — 1.5Vp-p
2. IC101 ㉗ PLAY — APPROX 500mVp-p, 2.5V
3. IC101 ㉙ PLAY — APPROX 100mVp-p, 2.5V
4. IC201 ㉛ — 4MHz, 5.2Vp-p
5. IC101 ㊱ PLAY — 7.5µsec, 2.6Vp-p
6. IC301 ⑫ — 22.7µsec, 5.2Vp-p
7. IC301 ⑱ — 470n sec, 4.5Vp-p
8. IC301 ⑥ — 16.9MHz, 2.8Vp-p
9. IC301 ㉑ — 33.8688MHz, 3.3Vp-p

Note:

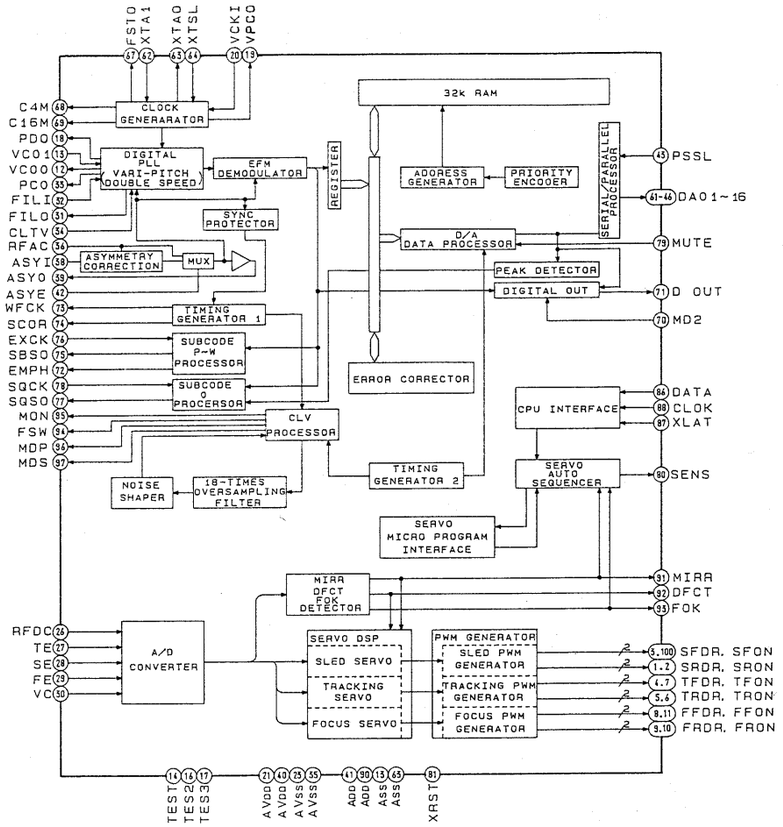
- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ▭ : panel designation.

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

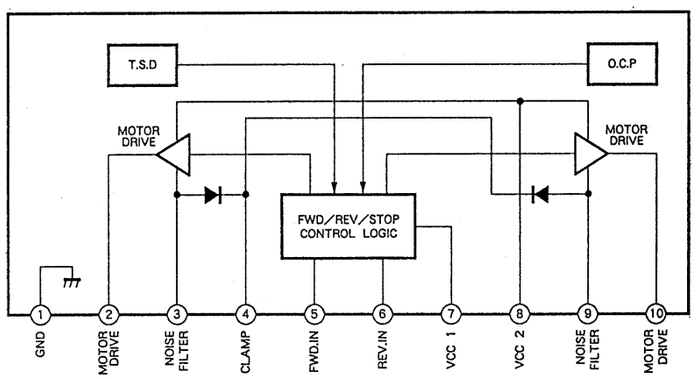
- ▬▬ : B+ Line
- ▬▬▬ : B− Line
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : PLAY
  ※ : can not be measured.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD
- Abbreviation
  G : German model.
  EA : Saudi Arabia model.

4-5. IC BLOCK DIAGRAMS

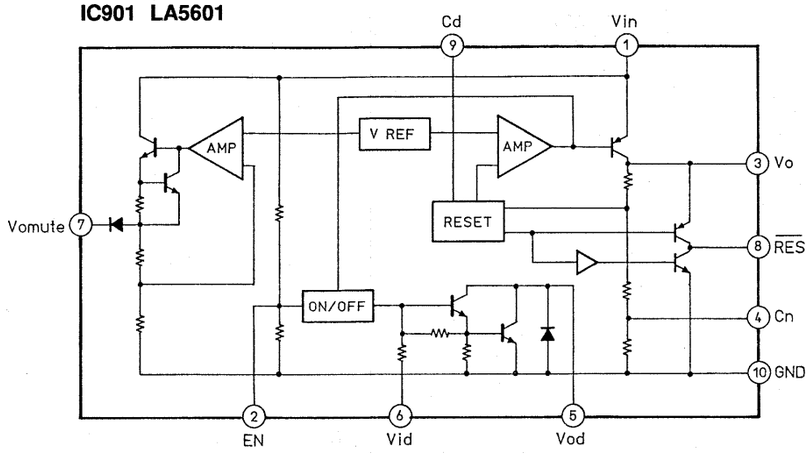
IC101 CXD2515Q



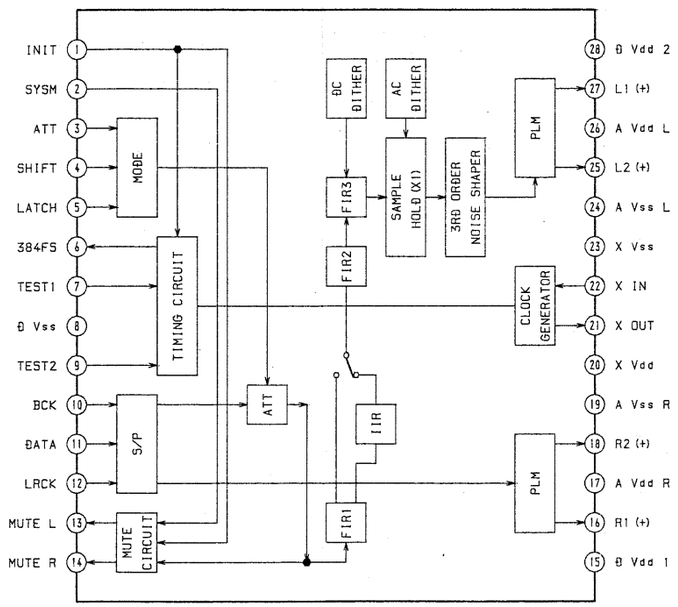
IC202 LB1641



IC901 LA5601

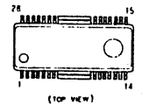


IC301 CXD2565AM

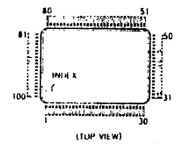


4-6. SEMICONDUCTOR LEAD LAYOUTS

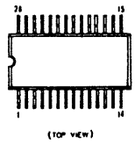
BA6297AFP



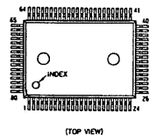
CXD2515Q



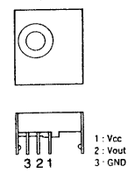
CXD2565AM



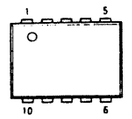
CXP82316-037Q



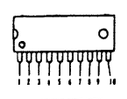
GP1U57XB



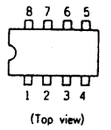
LA5601



LB1641

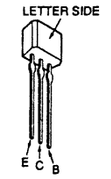


UPC4558C

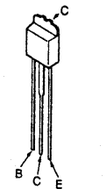


DTA144ES
DTC114ES
2SD2144S

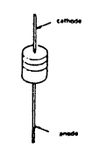
2SA1175-HFE



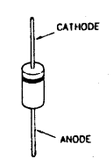
2SB1041



MTZJ-4.7B
MTZJ-30D
RD4.7ESB2
RD6.8ES-B2
RD6.8ES-B3
RD30ES-T2B4
UZ-4.7BSC
1SS119
11ES2



1N4148M



4-7. IC PIN FUNCTIONS

- **IC101 Digital Servo & DSP (CXD2515Q)**

Pin No.	Pin Name	I/O	Function
1	SRON	O	Sled drive output (Not used)
2	SRDR	O	Sled drive output
3	SFON	O	Sled drive output (Not used)
4	TFDR	O	Tracking drive output
5	TRON	O	Tracking drive output (Not used)
6	TRDR	O	Tracking drive output
7	TFON	O	Tracking drive output (Not used)
8	FFDR	O	Focus drive output
9	FRON	O	Focus drive output (Not used)
10	FRDR	O	Focus drive output
11	FFON	O	Focus drive output (Not used)
12	VCOO	O	VCO output for analog EFM PLL (Not used)
13	VCOI	I	VCO output for analog EFM PLL
14	TEST	I	TEST pin connected normally to GND
15	DVss	–	Digital GND
16	TES2	I	TEST pin connected normally to GND
17	TES3	I	TEST pin connected normally to GND
18	PDO	O	Charge-pump output for analog EFM PLL (Not used)
19	VPCO	O	Charge-pump output for variable pitch PLL (Not used)
20	VCKI	I	Clock input from variable pitch external VCO
21	AVD2	–	Analog power supply
22	IGEN	I	Power supply pin for operational amplifiers
23	AVS2	–	Analog GND
24	ADII	I	Input pin for A/D converter
25	ADIO	O	Operational amplifier output pin
26	RFDC	I	RF signal input
27	TE	I	Tracking error signal input
28	SE	I	Sled error signal input
29	FE	I	Focus error signal input
30	VC	I	Center voltage input pin
31	FILO	O	Filter output for master PLL
32	FILI	I	Filter input for master PLL
33	PCO	O	Charge-pump output for master PLL
34	CLTV	I	Control voltage input for master VCO
35	AVS1	–	Analog GND
36	RFAC	I	EFM signal input
37	BIAS	I	Asymmetry circuit constant current input
38	ASYI	I	Asymmetry comparate voltage input
39	ASYO	O	EFM full swing output
40	AVD1	–	Analog power supply

Pin No.	Pin Name	I/O	Function
41	DVDD	–	Digital power supply
42	ASYE	I	Asymmetry circuit ON/OFF
43	PSSL	I	Audio data output mode selection input
44	WDCK	O	48-bit slot D/A interface. Word clock
45	LRCK	O	48-bit slot D/A interface. LR clock
46	DATA	O	DA 16 output when PSSL=1. 48-bit slot serial data when PSSL=0
47	BCLK	O	DA 15 output when PSSL=1. 48-bit slot data when PSSL=0
48	64DATA	O	DA 14 output when PSSL=1. 64-bit slot data when PSSL=0 (Not used)
49	64BCLK	O	DA 13 output when PSSL=1. 64-bit slot data when PSSL=0 (Not used)
50	64LRCK	O	DA 12 output when PSSL=1. 64-bit slot data when PSSL=0 (Not used)
51	GTOP	O	DA 11 output when PSSL=1. GTOP output when PSSL=0 (Not used)
52	XUGF	O	DA 10 output when PSSL=1. XUGF output when PSSL=0 (Not used)
53	XPLCK	O	DA 09 output when PSSL=1. XPLCK output when PSSL=0
54	GFS	O	DA 08 output when PSSL=1. GFS output when PSSL=0
55	PFCK	O	DA 07 output when PSSL=1. RFCK output when PSSL=0
56	C2PO	O	DA 06 output when PSSL=1. C2PO output when PSSL=0 (Not used)
57	XRAOF	O	DA 05 output when PSSL=1. XRA0F output when PSSL=0 (Not used)
58	MNT3	O	DA 04 output when PSSL=1. MNT3 output when PSSL=0
59	MNT2	O	DA 03 output when PSSL=1. MNT2 output when PSSL=0
60	MNT1	O	DA 02 output when PSSL=1. MNT1 output when PSSL=0
61	MNT0	O	DA 01 output when PSSL=1. MNT0 output when PSSL=0
62	XTAI	I	X'tal oscillator circuit input
63	XTAO	O	X'tal oscillator circuit output (Not used)
64	XTSL	I	X'tal selection input pin (Connected to GND)
65	DVss	–	Digital GND
66	FSTI	I	2/3 divider output of pins 62, 63
67	FSTO	O	2/3 divider output of pins 62, 63
68	C4M	O	4.2336 MHz output (Not used)
69	C16M	O	16.9344 MHz output (Not used)
70	MD2	I	Digital-out ON/OFF control pin
71	DOUT	O	Digital-out output pin
72	EMPH	O	Playback disc output in emphasis mode (Not used)
73	WFCK	O	WFCK output
74	SCOR	O	Sub-code sync output
75	SBSO	O	Sub-P through Sub-W serial output (Not used)
76	EXCK	I	Clock input for SBS0 read-out (Connected to GND)
77	SUBQ	O	Sub-Q 80-bit output
78	SQCK	I	Clock input for SQS0 read-out
79	MUTE	I	Muting selection pin
80	SENS	O	SENS output
81	XRST	I	System reset
82	DIRC	I	Used in 1-track jump mode (Connected to +5V)
83	SCLK	I	SENS serial data read-out clock
84	DFSW	I	DFCT selection pin
85	ATSK	I	Input pin for anti-shock

Pin No.	Pin Name	I/O	Function
86	DATA	I	Serial data input, supplied from IC201 (master control)
87	XLAT	I	Latch input, supplied from IC201 (master control)
88	CLOK	I	Serial data transfer clock input, supplied from IC201 (master control)
89	COUT	O	Numbers of track counted signal output (Not used)
90	DV_{DD}	–	Digital power supply
91	MIRR	O	Mirror signal output (Not used)
92	DFCT	O	Defect signal output (Not used)
93	FOK	O	Focus OK output
94	FSW	O	Output to select spindle motor output filter (Not used)
95	MON	O	Output to control ON/OFF of spindle motor (Not used)
96	MDP	O	Output to control spindle motor servo
97	MDS	O	Output to control spindle motor servo (Not used)
98	LOCK	O	GFS is sampled by 460 Hz. H when GFS is H (Not used)
99	SSTP	I	Input signal to detect disc inner most track
100	SFDR	O	Sled drive output

- **IC201 Master Control (CXP82316-037Q)**

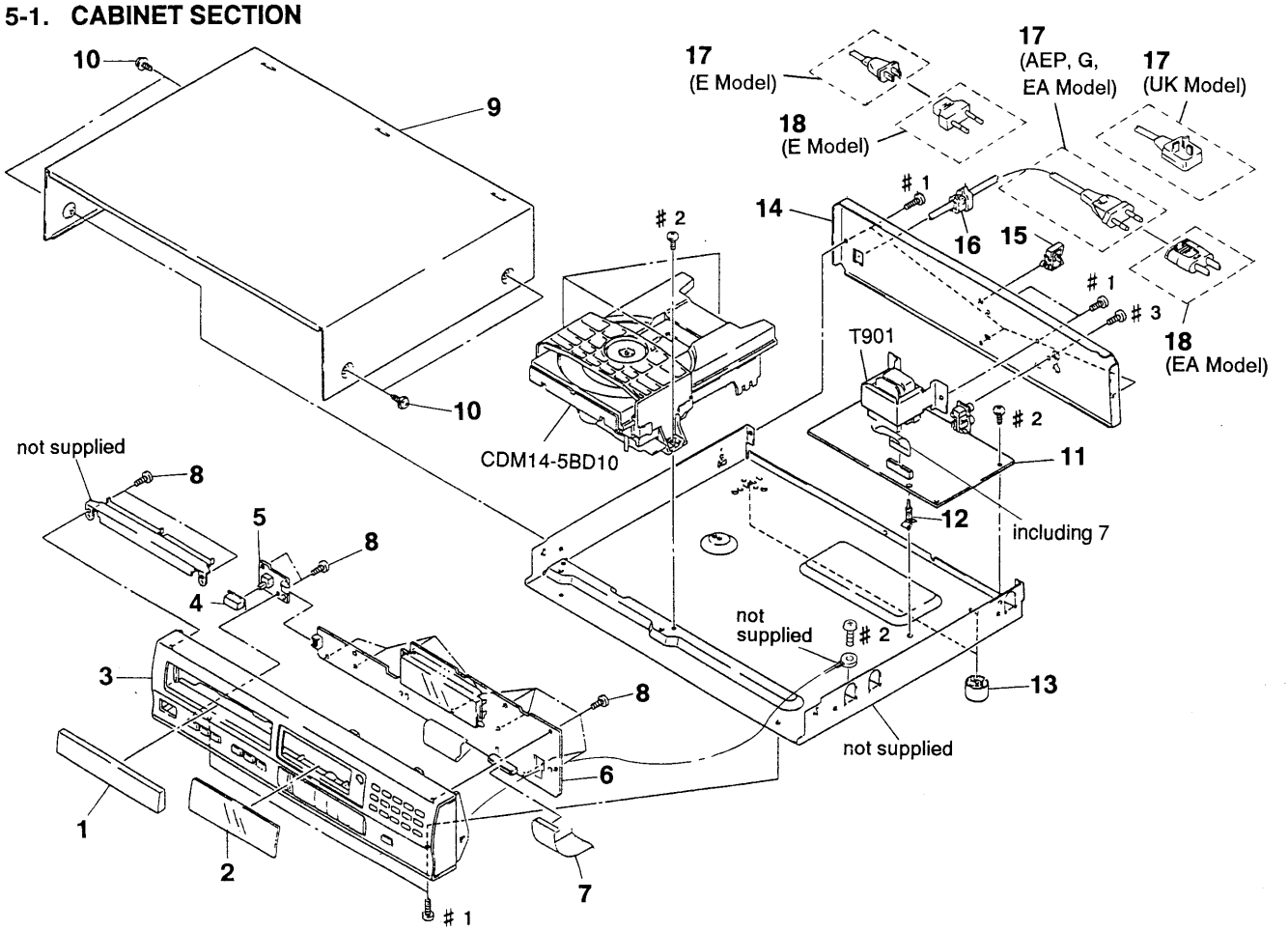
Pin No.	Pin Name	I/O	Function
1	TIMER	–	Connected to GND.
2	RM (BUS IN)	I	Sircs signal input from remote control receiver (IC251).
3	+5V	–	Connected to +5V.
4	OPEN	–	Not used. (open).
5	OPEN	–	
6	BUS OUT	O	Audio bus output. (Not used. (open))
7	PGML	O	Latch signal output to digital filter, D/A converter (IC301).
8	CLK	O	Serial clock output.
9	SENSE	I	SENSE signal input.
10	DATA	O	Serial data output.
11	SQCK	O	Read out clock output for subcode Q data.
12	SUBQ	I	Subcode Q data input.
13	OPEN	–	Not used. (open)
14	AMUTE	O	Analog muting control signal output.
15	LDON	O	Optical pickup laser diode control output.
16	XLT	O	Serial data latch signal output.
17	RV LED	O	Remote commander volume LED. (Not used. (open))
18	RV+	O	Remote commander volume +. (Not used. (open))
19	RV–	O	Remote commander volume –. (Not used. (open))
20	LDOUT	O	Loading motor control signal output.
21	LDIN	O	
22 to 27	KEY0 to KEY5	I	Key input. (S202 to S229)
28	ADJ/AFADJ	–	ADJ, AFJ test pin.
29	IN/OUTSW	I	Loading IN/OUT switch input.
30	RST	I	Reset signal input.
31	EXTAL	I	Clock input. (4 MHz)
32	XTAL	O	Clock output. (4 MHz)
33	Vss	–	GND
34 to 41	OPEN	–	Not used. (open)
42 to 62	S1 to S21	O	FL segment output.
63 to 67	1G to 5G	O	FL grid output.
68	OPEN	–	Not used. (open).
69	6G	O	FL grid output.
70	7G	O	
71	VFDP (–30V)	–	–30V pin for FL display tube.
72	V_{DD} (+5V)	–	+5V pin.
73	——	–	
74	SEL1	–	Connected to GND.
75	IN PORT	–	Not used. (open).
76	IN PORT	–	
77	IN PORT	–	
78	SCOR	I	Read out timing signal input for subcode Q data.
79	SEL2	–	Connected to +5V.
80	SEL3	–	Connected to GND.

SECTION 5
EXPLODED VIEWS

NOTE:
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  G : German model
  EA : Saudi Arabia model

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

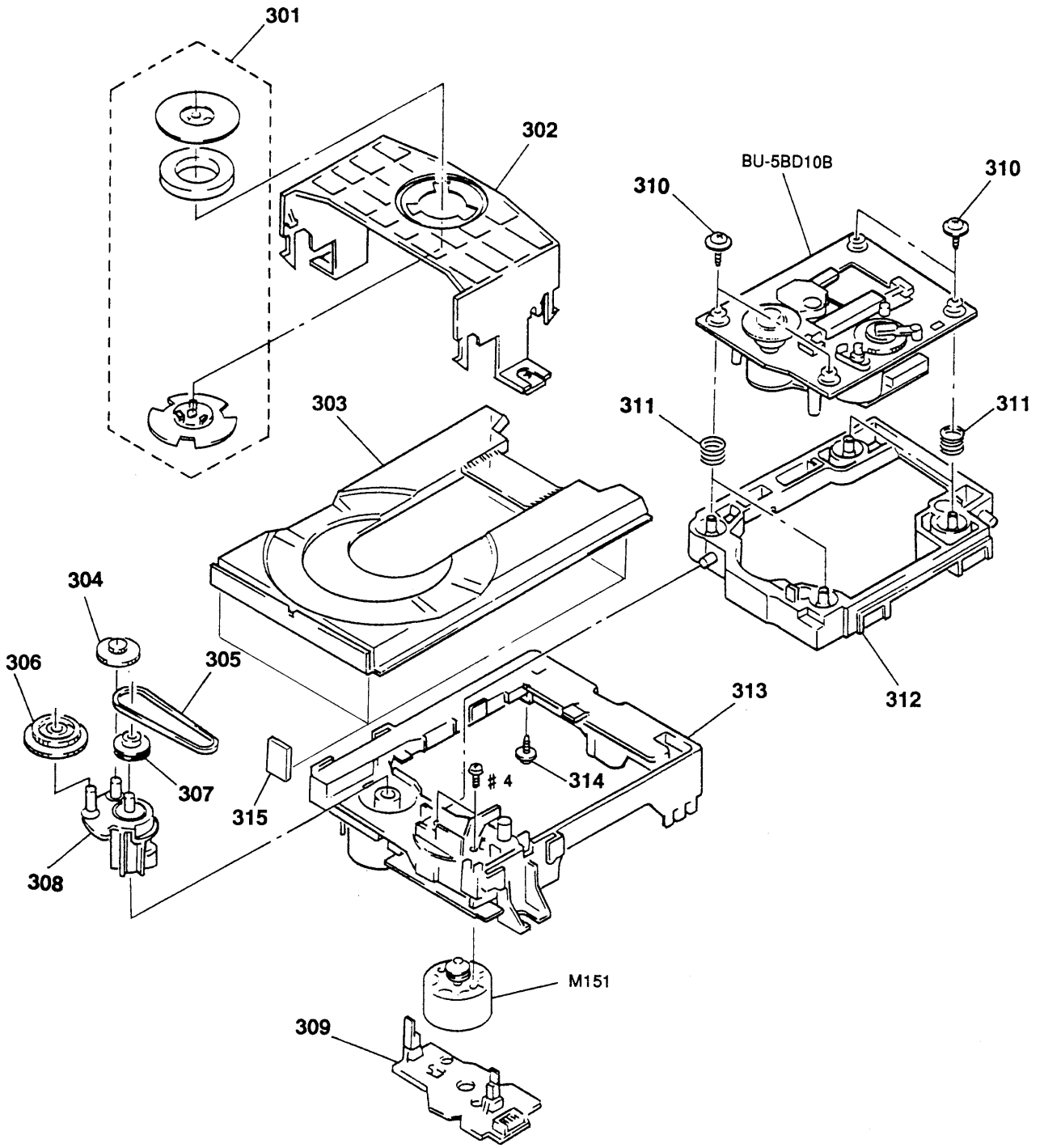
5-1. CABINET SECTION



Ref. No.	Part No.	Description	Remark
1	4-963-099-21	PANEL, LOADING (M302)	
1	4-963-099-32	PANEL, LOADING (M202:AEP, UK, G)	
1	4-963-099-42	PANEL, LOADING (M202:E, EA)	
2	4-963-100-01	PLATE, INDICATION	
3	X-4944-915-1	PANEL ASSY, FRONT (M302)	
3	X-4944-916-1	PANEL ASSY, FRONT (M202:AEP, UK, G)	
3	X-4944-917-3	PANEL ASSY, FRONT (M202:E, EA)	
4	4-963-098-01	BUTTON (POWER)	
* 5	1-650-484-11	POWER BOARD	
* 6	A-4673-141-A	DISPLAY BOARD, COMPLETE (M202:E, EA)	
* 6	A-4673-144-A	DISPLAY BOARD, COMPLETE (M202:AEP, UK, G/M302)	
7	1-765-073-11	WIRE (FLAT TYPE) (19 CORE)	
8	4-951-620-01	SCREW (2.6X8), +BVTP	
* 9	4-919-376-31	CASE	
10	3-363-099-01	SCREW (CASE 3 TP2) (M202:AEP, UK, G/M302)	
10	3-704-366-01	SCREW (CASE) (M3X8) (M202:E, EA)	
* 11	A-4673-140-A	MAIN BOARD, COMPLETE (M202:E, EA)	
* 11	A-4673-143-A	MAIN BOARD, COMPLETE (M202:AEP, UK, G/M302)	

Ref. No.	Part No.	Description	Remark
* 12	4-954-051-51	HOLDER, PC BOARD	
13	4-931-169-01	FOOT	
* 14	4-963-101-11	PANEL, BACK (M302:AEP, G)	
* 14	4-963-101-21	PANEL, BACK (M302:UK)	
* 14	4-963-101-31	PANEL, BACK (M202:AEP, G)	
* 14	4-963-101-41	PANEL, BACK (M202:UK)	
* 14	4-964-507-22	PANEL, BACK (M202:E, EA)	
* 15	3-681-263-11	SADDLE, WIRE (M202:AEP, UK, G/M302)	
* 15	4-949-235-01	HOOK (M202:E, EA)	
* 16	3-703-244-00	BUSHING, CORD (M202:AEP, UK, G, EA/M302)	
* 16	3-703-571-11	BUSHING (S) (4516), CORD (M202:E)	
⚠17	1-575-651-21	CORD, POWER (M202:AEP, G, EA/M302:AEP, G)	
⚠17	1-696-027-11	CORD, POWER (M202:E)	
⚠17	1-696-907-11	CORD, POWER (M202:UK/M302:UK)	
⚠18	1-569-007-11	ADAPTER, CONVERSION 2P (M202:E)	
⚠18	1-569-008-11	ADAPTER, CONVERSION 2P (M202:EA)	
⚠T901	1-423-979-11	TRANSFORMER, POWER (M202:AEP, UK, G/M302)	
⚠T901	1-426-622-11	TRANSFORMER, POWER (M202:E, EA)	

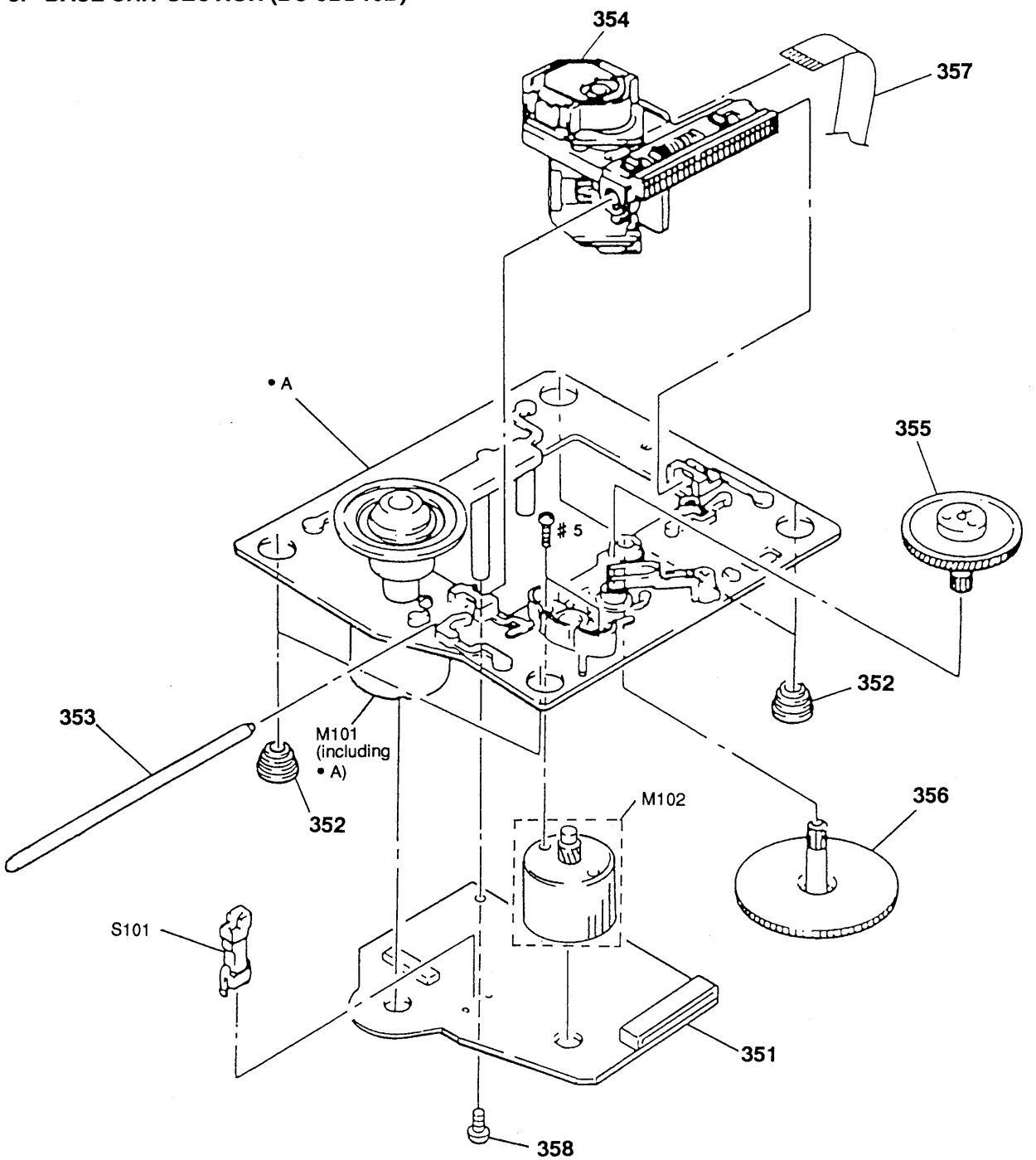
5-2. CD MECHANISM SECTION (CDM14-5BD10)



Ref. No.	Part No.	Description	Remark
* 301	1-452-538-11	MAGNET	
302	4-933-110-01	HOLDER (MG)	
303	4-933-112-01	TABLE, DISK	
304	4-927-628-01	GEAR (C)	
305	4-927-649-01	BELT	
306	4-933-107-01	GEAR (PL)	
307	4-927-651-01	PULLEY (S)	
308	4-933-109-01	CAM	
* 309	1-645-721-11	LOADING BOARD	

Ref. No.	Part No.	Description	Remark
310	4-933-134-01	SCREW (+PTPWH M2.6X6)	
311	4-959-996-01	SPRING (932), COMPRESSION	
312	4-933-129-01	HOLDER (BU)	
313	4-933-111-01	CHASSIS (MD)	
* 314	4-917-583-21	BRACKET, YOKE	
315	4-925-315-31	DAMPER	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	

5-3. BASE UNIT SECTION (BU-5BD10B)



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
* 351	A-4649-432-A	BD BOARD, COMPLETE	
352	4-951-940-01	INSULATOR (BU)	
353	4-917-565-01	SHAFT, SLED	
⚠354	8-848-144-11	OPTICAL PICK-UP BLOCK KSS-240A	
355	4-917-567-01	GEAR (M)	
356	4-917-564-01	GEAR (P), FLATNESS	
357	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
358	4-951-620-01	SCREW (2.6X8), +BVTP	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	

BD

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  G : German model
  EA : Saudi Arabia model

- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH

Ref.No.	Part No.	Description			Remark
*	A-4649-432-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C102	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C103	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C105	1-135-155-21	TANTALUM CHIP	4.7uF	10%	16V
C106	1-164-346-11	CERAMIC CHIP	1uF		16V
C107	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C108	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C109	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C110	1-163-017-00	CERAMIC CHIP	0.0047uF	5%	50V
C111	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C112	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C113	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C123	1-164-232-11	CERAMIC CHIP	0.01uF		50V
C124	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C151	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C152	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C153	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C154	1-164-336-11	CERAMIC CHIP	0.33uF		25V
C155	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C156	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C157	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C158	1-163-033-00	CERAMIC CHIP	0.022uF		50V
C159	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C160	1-163-019-00	CERAMIC CHIP	0.0068uF	10%	50V
C161	1-163-038-00	CERAMIC CHIP	0.1uF		25V
		< CONNECTOR >			
* CN101	1-568-865-11	SOCKET, CONNECTOR 23P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-361-90	IC CXD2515Q			
IC102	8-759-071-79	IC BA6297AFP			
		< MOTOR >			
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)			
M102	X-4917-504-1	MOTOR ASSY (SLED)			

Ref.No.	Part No.	Description			Remark
		< RESISTOR >			
R101	1-216-077-00	METAL CHIP	15K	5%	1/10W
R102	1-216-097-00	METAL CHIP	100K	5%	1/10W
R103	1-216-077-00	METAL CHIP	15K	5%	1/10W
R104	1-216-085-00	METAL CHIP	33K	5%	1/10W
R105	1-216-097-00	METAL CHIP	100K	5%	1/10W
R106	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R107	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R108	1-216-073-00	METAL CHIP	10K	5%	1/10W
R109	1-216-121-00	METAL CHIP	1M	5%	1/10W
R110	1-216-025-00	METAL CHIP	100	5%	1/10W
R112	1-216-049-00	METAL CHIP	1K	5%	1/10W
R113	1-216-077-00	METAL CHIP	15K	5%	1/10W
R114	1-216-077-00	METAL CHIP	15K	5%	1/10W
R117	1-216-077-00	METAL CHIP	15K	5%	1/10W
R118	1-216-077-00	METAL CHIP	15K	5%	1/10W
R121	1-216-077-00	METAL CHIP	15K	5%	1/10W
R122	1-216-077-00	METAL CHIP	15K	5%	1/10W
R123	1-216-073-00	METAL CHIP	10K	5%	1/10W
R124	1-216-097-00	METAL CHIP	100K	5%	1/10W
R125	1-216-049-00	METAL CHIP	1K	5%	1/10W
R126	1-216-049-00	METAL CHIP	1K	5%	1/10W
R127	1-216-049-00	METAL CHIP	1K	5%	1/10W
R131	1-216-037-00	METAL CHIP	330	5%	1/10W
R151	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R152	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R153	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R154	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R155	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R156	1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R157	1-216-093-00	METAL CHIP	68K	5%	1/10W
R158	1-216-076-00	METAL CHIP	13K	5%	1/10W
R159	1-216-085-00	METAL CHIP	33K	5%	1/10W
R160	1-216-081-00	METAL CHIP	22K	5%	1/10W
R161	1-216-308-00	METAL CHIP	4.7	5%	1/10W
R162	1-216-093-00	METAL CHIP	68K	5%	1/10W
R163	1-216-093-00	METAL CHIP	68K	5%	1/10W
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			

****

DISPLAY

Ref. No.	Part No.	Description			Remark
*	A-4673-141-A	DISPLAY BOARD, COMPLETE (M202:E, EA)			
		**********			
*	A-4673-144-A	DISPLAY BOARD, COMPLETE			
		**********			
					(M202:AEP, UK, G/M302)
		< CAPACITOR >			
C201	1-164-159-11	CERAMIC	0.1uF		50V
C202	1-164-159-11	CERAMIC	0.1uF		50V
C203	1-161-494-00	CERAMIC	0.022uF		25V
C204	1-161-494-00	CERAMIC	0.022uF		25V
C205	1-162-306-11	CERAMIC	0.01uF	20%	16V
C206	1-162-282-31	CERAMIC	100PF	10%	50V
C207	1-136-165-00	FILM	0.1uF	5%	50V
C208	1-136-165-00	FILM	0.1uF	5%	50V
C251	1-164-159-11	CERAMIC	0.1uF		50V
C252	1-126-933-11	ELECT	100uF	20%	16V
		< CONNECTOR >			
* CN201	1-766-402-11	CONNECTOR (FFC) 19P			
CN203	1-750-194-11	CONNECTOR, BOARD TO BOARD 4P			
CNP201	1-537-472-11	JUMPER, FILM (WITH TERMINAL) 23P			
					(M202:E, EA)
CNP201	1-537-472-21	JUMPER, FILM (WITH TERMINAL) 23P			
					(M202:AEP, UK, G/M302)
		< DIODE >			
D201	8-719-009-81	DIODE	RD4.7ESB2 (M202:E, EA)		
D201	8-719-010-34	DIODE	UZ-4.7BSC (M202:AEP, UK, G/M302)		
		< FLUORESCENT INDICATOR >			
FLD201	1-519-752-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC201	8-752-851-82	IC	CXP82316-037Q		
IC202	8-759-822-09	IC	LB1641		
IC251	8-749-923-43	IC	GP1U57XB		
		< COIL >			
L202	1-410-322-11	INDUCTOR	3.3uH		
		< TRANSISTOR >			
Q201	8-729-900-80	TRANSISTOR	DTC114ES		
		< RESISTOR >			
R201	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R202	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R203	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R204	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R205	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R206	1-249-426-11	CARBON	5.6K	5% 1/4W	
R207	1-249-430-11	CARBON	12K	5% 1/4W	
R208	1-249-435-11	CARBON	33K	5% 1/4W	
R209	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R210	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R211	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R212	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R213	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R214	1-249-426-11	CARBON	5.6K	5% 1/4W	
R215	1-249-430-11	CARBON	12K	5% 1/4W	
R216	1-249-435-11	CARBON	33K	5% 1/4W	
R217	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R218	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R219	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R220	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R221	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R222	1-249-426-11	CARBON	5.6K	5% 1/4W	
R223	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R224	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R225	1-249-419-11	CARBON	1.5K	5% 1/4W	F
R226	1-249-421-11	CARBON	2.2K	5% 1/4W	F
R227	1-249-423-11	CARBON	3.3K	5% 1/4W	F
R228	1-249-426-11	CARBON	5.6K	5% 1/4W	
R229	1-249-441-11	CARBON	100K	5% 1/4W	
R230	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R231	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R232	1-249-418-11	CARBON	1.2K	5% 1/4W	F
R234	1-249-428-11	CARBON	8.2K	5% 1/4W	F
R235	1-249-417-11	CARBON	1K	5% 1/4W	F
R236	1-249-428-11	CARBON	8.2K	5% 1/4W	F
		< SWITCH >			
S202	1-554-303-21	SWITCH, TACTILE (CONTINUE)			
S203	1-554-303-21	SWITCH, TACTILE (SHUFFLE)			
S204	1-554-303-21	SWITCH, TACTILE (PROGRAM)			
S205	1-554-303-21	SWITCH, TACTILE (TIME)			
S206	1-554-303-21	SWITCH, TACTILE (REPEAT)			
S207	1-554-303-21	SWITCH, TACTILE (FADER)			
S208	1-554-303-21	SWITCH, TACTILE (⏏ OPEN/CLOSE)			
S209	1-554-303-21	SWITCH, TACTILE (▷)			
S210	1-554-303-21	SWITCH, TACTILE (▮▮)			
S211	1-554-303-21	SWITCH, TACTILE (■)			
S212	1-554-303-21	SWITCH, TACTILE (⏮/◀◀)			
S213	1-554-303-21	SWITCH, TACTILE (⏭/▶▶)			
S214	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)			
S215	1-554-303-21	SWITCH, TACTILE (1)			
S216	1-554-303-21	SWITCH, TACTILE (2)			
S217	1-554-303-21	SWITCH, TACTILE (3)			
S218	1-554-303-21	SWITCH, TACTILE (4)			

DISPLAY | LOADING | MAIN

Ref. No.	Part No.	Description	Remark
S219	1-554-303-21	SWITCH, TACTILE (5)	
S220	1-554-303-21	SWITCH, TACTILE (6)	
S221	1-554-303-21	SWITCH, TACTILE (7)	
S222	1-554-303-21	SWITCH, TACTILE (8)	
S223	1-554-303-21	SWITCH, TACTILE (9)	
S224	1-554-303-21	SWITCH, TACTILE (10)	
S225	1-554-303-21	SWITCH, TACTILE (M. SCAN)	
S226	1-554-303-21	SWITCH, TACTILE (P. SEARCH)	
S227	1-554-303-21	SWITCH, TACTILE (CHECK)	
S228	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S229	1-554-303-21	SWITCH, TACTILE (>10)	
		< VIBRATOR >	
X201	1-577-082-11	VIBRATOR, CERAMIC (4MHz)	(M202:AEP, UK, G/M302)
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)	(M202:E, EA)
**********			
*	1-645-721-11	LOADING BOARD	
		**********	
		< CONNECTOR >	
* CN151	1-568-943-11	PIN, CONNECTOR 5P	
		< MOTOR >	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
		< SWITCH >	
S151	1-572-086-11	SWITCH, LEAF (LOAD OUT)	
S152	1-572-086-11	SWITCH, LEAF (LOAD IN)	
**********			
*	A-4673-140-A	MAIN BOARD, COMPLETE	(M202:E, EA)
		**********	
*	A-4673-143-A	MAIN BOARD, COMPLETE	
		**********	(M202:AEP, UK, G/M302)
		< CAPACITOR >	
C301	1-126-923-11	ELECT 220uF 20%	10V
C302	1-126-923-11	ELECT 220uF 20%	10V
C303	1-161-494-00	CERAMIC 0.022uF	25V
C305	1-161-494-00	CERAMIC 0.022uF	25V
C306	1-161-494-00	CERAMIC 0.022uF	25V
C307	1-162-282-31	CERAMIC 100PF 10%	50V
C308	1-162-282-31	CERAMIC 100PF 10%	50V
C309	1-161-494-00	CERAMIC 0.022uF	25V
C310	1-161-494-00	CERAMIC 0.022uF	25V
C311	1-124-126-00	ELECT 47uF 20%	16V
C312	1-124-126-00	ELECT 47uF 20%	16V
C313	1-162-196-31	CERAMIC 5.6PF 10%	50V
C314	1-162-196-31	CERAMIC 5.6PF 10%	50V
C315	1-164-159-11	CERAMIC 0.1uF	50V
C316	1-126-933-11	ELECT 100uF 20%	16V
C317	1-162-290-31	CERAMIC 470PF 10%	50V
C321	1-162-215-31	CERAMIC 47PF 5%	50V
C322	1-162-215-31	CERAMIC 47PF 5%	50V
C323	1-162-215-31	CERAMIC 47PF 5%	50V
C324	1-162-215-31	CERAMIC 47PF 5%	50V
C325	1-124-126-00	ELECT 47uF 20%	16V
C326	1-124-126-00	ELECT 47uF 20%	16V
C327	1-130-472-00	MYLAR 0.0012uF 5%	50V
C328	1-130-472-00	MYLAR 0.0012uF 5%	50V
C329	1-130-479-00	MYLAR 0.0047uF 5%	50V
C330	1-130-479-00	MYLAR 0.0047uF 5%	50V
C331	1-124-126-00	ELECT 47uF 20%	16V
C332	1-124-126-00	ELECT 47uF 20%	16V
C333	1-130-468-00	MYLAR 560PF 5%	50V
C334	1-130-468-00	MYLAR 560PF 5%	50V
C901	1-126-768-11	ELECT 2200uF 20%	16V
C902	1-126-939-11	ELECT 10000uF 20%	16V
C903	1-128-576-11	ELECT 100uF 20%	63V
C904	1-164-159-11	CERAMIC 0.1uF	50V
C908	1-126-964-11	ELECT 10uF 20%	50V
C909	1-126-964-11	ELECT 10uF 20%	50V
C910	1-126-934-11	ELECT 220uF 20%	16V
C911	1-162-294-31	CERAMIC 0.001uF 10%	50V
C912	1-126-964-11	ELECT 10uF 20%	50V
C913	1-126-934-11	ELECT 220uF 20%	16V
C914	1-124-903-11	ELECT 1uF 20%	50V
C915	1-126-964-11	ELECT 10uF 20%	50V
C916	1-126-964-11	ELECT 10uF 20%	50V
C917	1-126-964-11	ELECT 10uF 20%	50V
C918	1-164-159-11	CERAMIC 0.1uF	50V
		< CONNECTOR >	
* CN301	1-766-402-11	CONNECTOR (FFC) 19P	
CN901	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
		< DIODE >	
D901	8-719-200-82	DIODE 11ES2	
D902	8-719-200-82	DIODE 11ES2	
D903	8-719-200-82	DIODE 11ES2	
D904	8-719-200-82	DIODE 11ES2	
D905	8-719-200-82	DIODE 11ES2	
D906	8-719-911-19	DIODE 1SS119	(M202:AEP, UK, G/M302)
D906	8-719-987-63	DIODE 1N4148M	(M202:E, EA)
D907	8-719-109-97	DIODE RD6.8ES-B2	(M202:AEP, UK, G/M302)
D907	8-719-109-98	DIODE RD6.8ES-B3	(M202:E, EA)
D908	8-719-113-90	DIODE RD30ES-B4	(M202:E, EA)

Ref. No.	Part No.	Description	Remark
D908	8-719-982-22	DIODE MTZJ-30D (M202:AEP, UK, G/M302)	
D909	8-719-911-19	DIODE 1SS119 (M202:AEP, UK, G/M302)	
D909	8-719-987-63	DIODE 1N4148M (M202:E, EA)	
D910	8-719-911-19	DIODE 1SS119 (M202:AEP, UK, G/M302)	
D910	8-719-987-63	DIODE 1N4148M (M202:E, EA)	
D911	8-719-911-19	DIODE 1SS119 (M202:AEP, UK, G/M302)	
D911	8-719-987-63	DIODE 1N4148M (M202:E, EA)	
D912	8-719-911-19	DIODE 1SS119 (M202:AEP, UK, G/M302)	
D912	8-719-987-63	DIODE 1N4148M (M202:E, EA)	
D913	8-719-911-19	DIODE 1SS119 (M202:AEP, UK, G/M302)	
D913	8-719-987-63	DIODE 1N4148M (M202:E, EA)	
		< IC >	
IC301	8-752-367-61	IC CXD2565AM	
IC302	8-759-145-58	IC uPC4558C	
IC303	8-759-145-58	IC uPC4558C	
IC901	8-759-821-93	IC LA5601	
		< JACK >	
J301	1-750-679-21	JACK, PIN 2P	
		< COIL >	
L302	1-410-322-11	INDUCTOR 3.3uH	
L303	1-410-322-11	INDUCTOR 3.3uH	
L304	1-247-807-31	CARBON 100 5% 1/4W	
L901	1-408-429-00	INDUCTOR 470uH	
		< TRANSISTOR >	
Q301	8-729-922-37	TRANSISTOR 2SD2144S	
Q302	8-729-922-37	TRANSISTOR 2SD2144S	
Q901	8-729-019-64	TRANSISTOR 2SB1041	
Q902	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q903	8-729-900-65	TRANSISTOR DTA144ES	
		< RESISTOR >	
R301	1-249-418-11	CARBON 1.2K 5% 1/4W	F
R302	1-249-411-11	CARBON 330 5% 1/4W	
R303	1-249-417-11	CARBON 1K 5% 1/4W	F
R304	1-249-436-11	CARBON 39K 5% 1/4W	
R305	1-249-436-11	CARBON 39K 5% 1/4W	
R306	1-247-807-31	CARBON 100 5% 1/4W	
R307	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R308	1-249-436-11	CARBON 39K 5% 1/4W	
R309	1-249-436-11	CARBON 39K 5% 1/4W	
R321	1-249-431-11	CARBON 15K 5% 1/4W	
R322	1-249-431-11	CARBON 15K 5% 1/4W	
R323	1-249-431-11	CARBON 15K 5% 1/4W	
R324	1-249-431-11	CARBON 15K 5% 1/4W	
R325	1-249-437-11	CARBON 47K 5% 1/4W	
R326	1-249-437-11	CARBON 47K 5% 1/4W	
R327	1-249-437-11	CARBON 47K 5% 1/4W	
R328	1-249-437-11	CARBON 47K 5% 1/4W	
R329	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R330	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R331	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R332	1-249-419-11	CARBON 1.5K 5% 1/4W	F
R333	1-247-891-00	CARBON 330K 5% 1/4W	
R334	1-247-891-00	CARBON 330K 5% 1/4W	
R335	1-249-417-11	CARBON 1K 5% 1/4W	F
R336	1-249-417-11	CARBON 1K 5% 1/4W	F
R337	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R338	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R901	1-249-432-11	CARBON 18K 5% 1/4W	
R902	1-249-432-11	CARBON 18K 5% 1/4W	
R903	1-249-441-11	CARBON 100K 5% 1/4W	
R904	1-249-441-11	CARBON 100K 5% 1/4W	
R905	1-249-432-11	CARBON 18K 5% 1/4W	
R906	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R907	1-249-385-11	CARBON 2.2 5% 1/6W	F
R908	1-247-807-31	CARBON 100 5% 1/4W	
R909	1-249-441-11	CARBON 100K 5% 1/4W	
R910	1-249-421-11	CARBON 2.2K 5% 1/4W	F
R911	1-249-404-00	CARBON 82 5% 1/4W	F
		< SWITCH >	
⚠SW901	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (M202:E, EA)	
		< TRANSFORMER >	
⚠T901	1-423-979-11	TRANSFORMER, POWER (M202:AEP, UK, G/M302)	
⚠T901	1-426-622-11	TRANSFORMER, POWER (M202:E, EA)	
		< VIBRATOR >	
X301	1-579-833-21	VIBRATOR, CRYSTAL (33.8688MHz)	
**********			
*	1-650-484-11	POWER BOARD	
		**********	
		< CONNECTOR >	
CN204	1-750-185-11	CONNECTOR, BOARD TO BOARD 4P	
		< SWITCH >	
S201	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
**********			

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
		MISCELLANEOUS	
		**********	
7	1-765-073-11	WIRE (FLAT TYPE) (19 CORE)	
⚠17	1-575-651-21	CORD, POWER (M202:AEP, G, EA/M302:AEP, G)	
⚠17	1-696-027-11	CORD, POWER (M202:E)	
⚠17	1-696-907-11	CORD, POWER (M202:UK/M302:UK)	
⚠18	1-569-007-11	ADAPTER, CONVERSION 2P (M202:E)	
⚠18	1-569-008-11	ADAPTER, CONVERSION 2P (M202:EA)	
* 301	1-452-538-11	MAGNET	
⚠354	8-848-144-11	OPTICAL PICK-UP BLOCK KSS-240A	
357	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
⚠T901	1-423-979-11	TRANSFORMER, POWER (M202:AEP, UK, G/M302)	
⚠T901	1-426-622-11	TRANSFORMER, POWER (M202:E, EA)	
**********			
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-467-316-11	REMOTE COMMANDER (RM-D320) (M302)	
	1-558-271-11	CORD, CONNECTION (AUDIO) (108cm)	
	3-757-991-52	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, DANISH) (M202:AEP, UK/M302:AEP, UK)	
	3-757-991-62	MANUAL, INSTRUCTION (GERMAN, DUTCH, ITALIAN, PORTUGUESE) (M202:AEP/M302:AEP)	
	3-757-991-72	MANUAL, INSTRUCTION (GERMAN) (M202:G/M302:G)	
	3-758-774-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, DANISH) (M202:E, EA)	
*	4-922-998-01	CUSHION (M202:E, EA)	
*	4-927-355-01	CUSHION (M202:AEP, UK, G, M302)	
*	4-955-663-31	INDIVIDUAL CARTON (M302)	
*	4-955-663-41	INDIVIDUAL CARTON (M202:AEP, UK, G)	
*	4-957-576-21	INDIVIDUAL CARTON (M202:E, EA)	
	4-962-615-01	COVER, BATTERY (RM-D320) (M302)	
**********			

Ref. No.	Part No.	Description	Remark
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-548-04	SCREW +BVTT 3X8 (S)	
#2	7-682-547-09	SCREW +BVTT 3X6 (S)	
#3	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#4	7-621-775-10	SCREW +B 2.6X4	
#5	7-621-255-15	SCREW +P 2X3	

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Replace only with part number specified.

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