

# CDP-M201/M301

## SERVICE MANUAL

*AEP Model*  
*UK Model*  
CDP-M201/M301

*E Model*  
CDP-M201

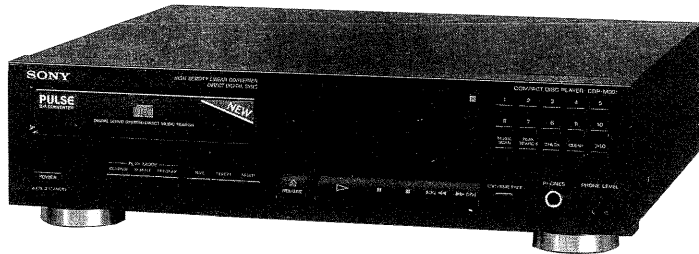


Photo: CDP-M301 model

Model Name Using Similar Mechanism	CDP-211/311
Tape Transport Mechanism Type	CDM14-5BD10
Optical Pickup Block Type	BU-5BD10

### SPECIFICATIONS

#### Compact disc player

Laser	Semiconductor laser ( $\lambda = 780 \text{ nm}$ )
Wavelength	780 – 790 nm
Frequency response	2 Hz to 20 kHz $\pm 0.5 \text{ dB}$
Signal-to-noise ratio	More than 100 dB
Dynamic range	More than 98 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 over 10 kilohms
PHONES (stereo phone jack)	Output level max. 10 mW Load impedance 32 ohms

#### General

Power requirements	AEP, Germany models: 220 - 230V AC, 50/60 Hz UK model: 240V AC, 50Hz E, Saudi Arabia models: 110 - 120/220 - 240 V AC, adjustable with the voltage selector, 50/60 Hz
Power consumption	10 W
Dimensions (approx., including projections)	355 x 95 x 325 mm (w/h/d) (14 x 3 <sup>3</sup> / <sub>4</sub> x 12 <sup>7</sup> / <sub>8</sub> inches)
Mass (approx.)	3.0 kg (6 lbs 10 oz)

#### Remote commander (only for CDP-M301)

Remote control system	Infrared control
Power requirements	3 VDC with two R6 (size AA) batteries
Dimensions (approx., including projections)	40 x 20 x 175 mm (w/h/d) (1 <sup>5</sup> / <sub>8</sub> x 1 <sup>3</sup> / <sub>16</sub> x 7 inches)
Mass (approx.)	95 g (4 oz)

#### Supplied accessories

Audio cord	(1) (2 phono plugs – 2 phono plugs)
Remote commander (only for CDP-M301)	(1)
Sony SUM-3 (NS) batteries (only for CDP-M301)	(2)
Plug adaptor (E, Saudi Arabia models)	(1)

Design and specifications are subject to change without notice.

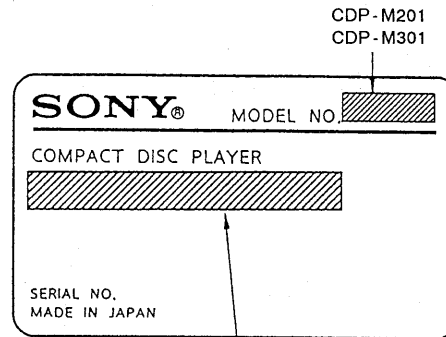
COMPACT DISC PLAYER  
**SONY**®

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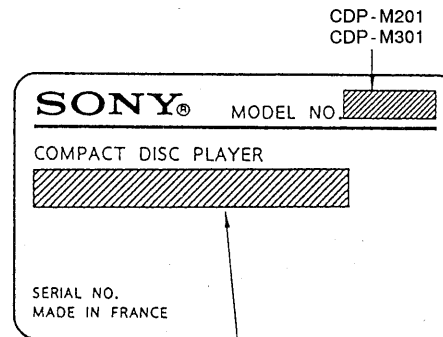
## MODEL IDENTIFICATION

Made in Japan



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

Made in France



AEP, Germany Models: AC 220-230V ~ 50/60Hz 10W  
UK Model: AC240V~ 50/60Hz

### SAFETY-RELATED COMPONENT WARNING!!

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

## SERVICING NOTES

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

The laser diode in the optical pick-up block may suffer electrostatic 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.

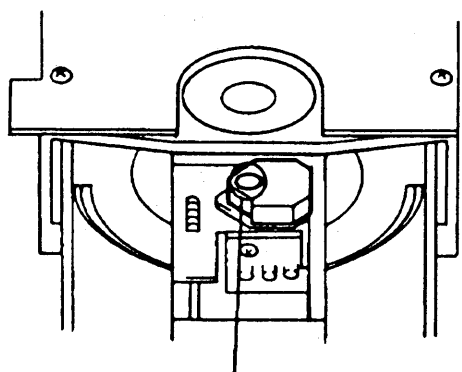
The flexible board is easily damaged and should be handled with care.

### 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.

### LASER DIODE AND FOCUS SEARCH OPERATION CHECK

1. Turn POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objecting lens.



- ① Confirm that laser beam is spread.
- ② Up and down motion of the objective lens. (3 times)

CLASS 1 LASER PRODUCT  
LUOKAN 1 LASERLAITE  
KLASS 1 LASERAPPARAT

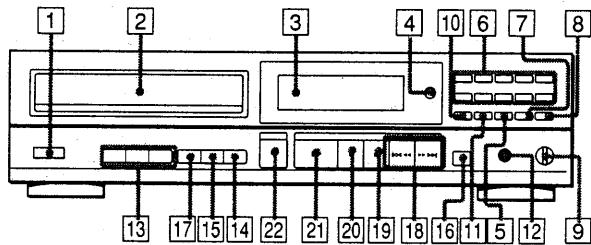
This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

The following caution label is located inside of the unit.

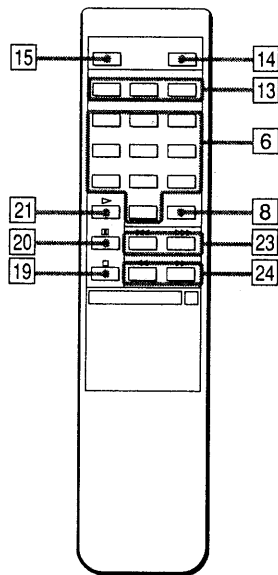
CAUTION	: INVISIBLE LASER RADIATION WHEN OPEN: AVOID EXPOSURE TO BEAM.
ADVARSEL	: USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	: AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSÄTEILYLLE.
VARNING	: LASERSTRÅLING NÅR DENNA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

# SECTION 1 GENERAL

This section is extracted from instruction manual.



RM-D190



(only for CDP-M301)

## Identifying the Parts

Refer to the pages indicated in parenthesis for details.

### Front Panel/Remote Commander

- 1 POWER switch (16)
- 2 Disc tray (16)
- 3 Display window
- 4 Remote sensor
- 5 CHECK (program check) button (30)
- 6 Numeric buttons (20, 26, 28, 36, 40)
- 7 CLEAR (program clear) button (30)
- 8  $\geq 10$  (over 10) button (20)
- 9 PHONE LEVEL control (16)
- 10 MUSIC SCAN button (32)
- 11 PEAK SEARCH button (42)
- 12 PHONES jack (16)
- 13 Play Mode buttons  
CONTINUE button (24, 26, 38)  
SHUFFLE button (24, 26, 38)  
PROGRAM button (26, 28)  
(PGM for the remote commander)
- 14 FADER button (22)
- 15 REPEAT button (34)
- 16 EDIT/TIME FADE button (36, 40)
- 17 TIME button (18)
- 18  $\ll\ll / \gg\gg$  (AMS\*/manual search) buttons  
(20, 22, 28, 32, 36, 40, 42)
- 19  $\blacksquare$  (stop) button (16)
- 20  $\parallel$  (pause) button (16)
- 21  $\blacktriangleright$  (play) button (16)
- 22  $\blacktriangle$  OPEN/CLOSE button (16)
- 23  $\ll\ll / \gg\gg$  (AMS\*) buttons (20, 28)  
(Only on the remote commander)
- 24  $\ll\ll / \gg\gg$  (manual search)(22, 32)  
(Only on the remote commander)

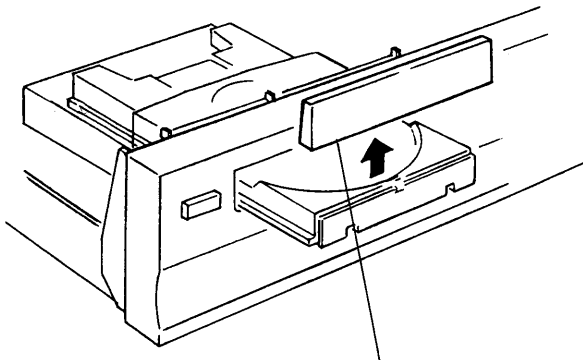
\* AMS is the abbreviation of Automatic Music Sensor.

## SECTION 2 DISASSEMBLY

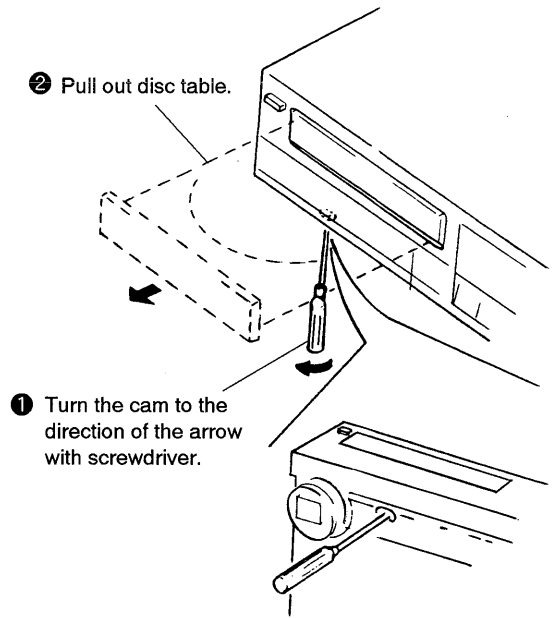
**Note:** Follow the disassembly procedure in the numerical order given.

### FRONT PANEL REMOVAL

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.



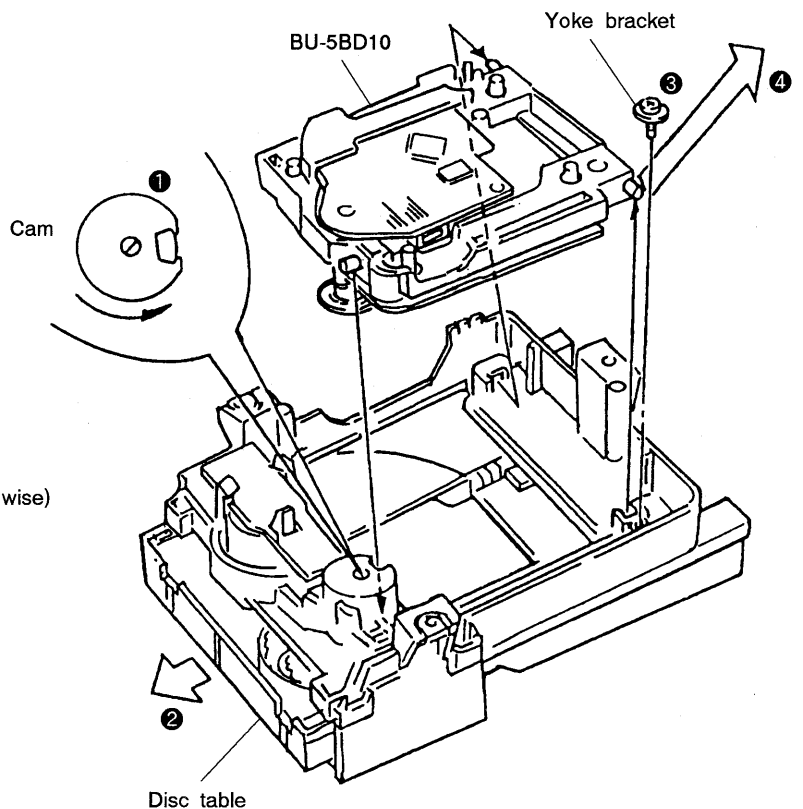
③ Remove loading panel to the direction of arrow.



② Pull out disc table.

① Turn the cam to the direction of the arrow with screwdriver.

**Note:** Keep the set horizontal.



### MD (BU-5BD10) REMOVAL

- ① Turn the cam to the direction of arrow (Counter clock wise) by minus screw driver.
- ② Take off the disc table.
- ③ Remove the yoke bracket.
- ④ Remove the MD (BU-5BD10) to the direction of arrow.

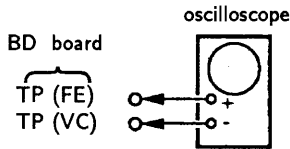
## SECTION 3

### ELECTRICAL BLOCK CHECKING

**Note :**

1. CD Block basically constructed 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 the oscilloscope with more than  $10M\Omega$  impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

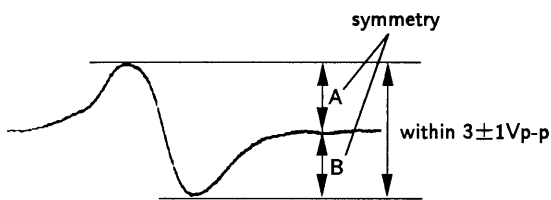
**S-Curve Check**



**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. Turned Power switch on and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
4. Check the oscilloscope waveform (S-curve) is symmetrical between A and B. And confirm peak to peak level within  $3\pm 1V_{p-p}$ .

S-curve waveform

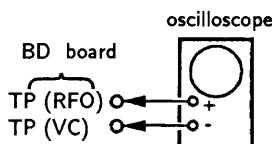


5. After check, remove the lead wire connected in step 2.

**Note :**

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

**RF Level Check**



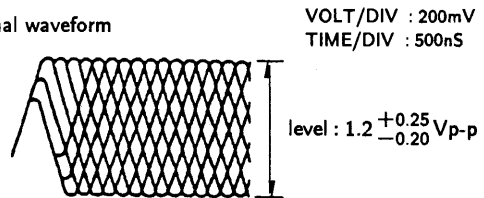
**Procedure :**

1. Connect oscilloscope to test point TP (RFO) 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 RF signal level is correct or not.

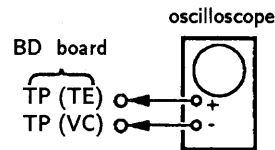
**Note :**

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

RF signal waveform



**E-F Balance Check**



**Procedure :**

1. Connect test point TP (ADJ) to ground and TP (TEI) to TP (VC) with lead wire.
2. Connect oscilloscope 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.

Traverse waveform

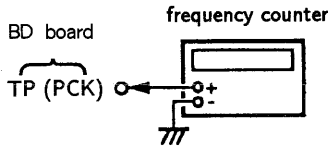


6. Remove the lead wire connected in step 1.

## RF PLL Free-run Frequency Check

### Procedure :

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

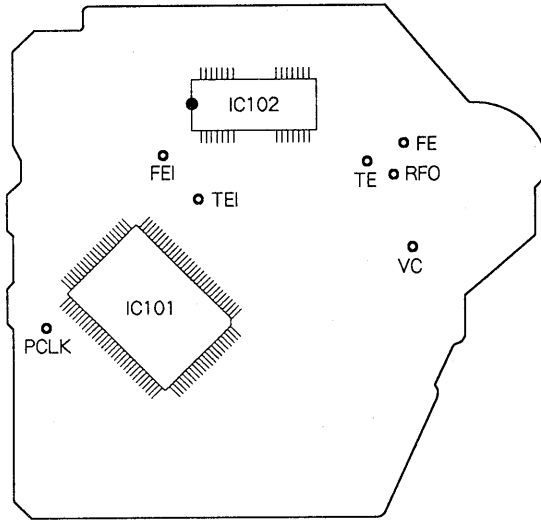


2. Turn Power switch on.
3. Confirm that reading on frequency counter is 4.3218 MHz.

### Adjustment Location :

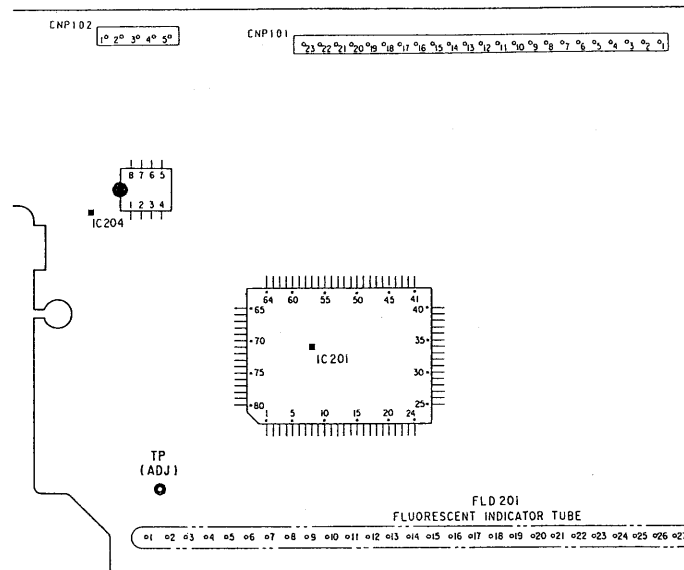
#### [BD BOARD]

- Conductor side -



#### [MAIN BOARD]

- Conductor side -



## SECTION 4

### IC PIN DESCRIPTION

• IC101 CXD2515Q

No.	Pin Name	I/O	Description
1	SRON	O	Sled drive output
2	SRDR	O	Sled drive output
3	SFON	O	Sled drive output
4	TFDR	O	Tracking drive output
5	TRON	O	Tracking drive output
6	TRDR	O	Tracking drive output
7	TFON	O	Tracking drive output
8	FFDR	O	Focus drive output
9	FRON	O	Focus drive output
10	FRDR	O	Focus drive output
11	FFON	O	Focus drive output
12	VCOO	O	VCO output for analog EFM PLL
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
19	VPCO	O	Charge-pump output for variable pitch PLL
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 compare voltage input
39	ASYO	O	EFM full swing output
40	AVD1	—	Analog power supply
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



No.	Pin Name	I/O	Description
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
49	64BCLK	O	DA 13 output when PSSL = 1. 64-bit slot data when PSSL = 0
50	64LRCK	O	DA 12 output when PSSL = 1. 64-bit slot data when PSSL = 0
51	GTOP	O	DA 11 output when PSSL = 1. GTOP output when PSSL = 0
52	XUGF	O	DA 10 output when PSSL = 1. XUGF output when PSSL = 0
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
57	XRAOF	O	DA 05 output when PSSL = 1. XRAOF output when PSSL = 0
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
64	XTSL	I	X'tal selection input pin
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	4.2336MHz output
69	C16M	O	16.9344MHz output
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
73	WFCK	O	WFCK output
74	SCOR	O	Sub-code sync output
75	SBSO	O	Sub-P through Sub-W serial output
76	EXCK	I	Clock input for SBS0 read-out
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
83	SCLK	I	SENS serial data read-out clock
84	DFSW	I	DFCT selection pin
85	ATSK	I	Input pin for anti-shock
86	DATA	I	Serial data input, supplied from CPU
87	XLAT	I	Latch input, supplied from CPU
88	CLOK	I	Serial data transfer clock input, supplied from CPU

No.	Pin Name	I/O	Description
89	COUT	O	Numbers of track counted signal output
90	DVDD	—	Digital power supply
91	MIRR	O	Mirror signal output
92	DFCT	O	Defect signal output
93	FOK	O	Focus OK output
94	FSW	O	Output to select spindle motor output filter
95	MON	O	Output to control ON/OFF of spindle motor
96	MDP	O	Output to control spindle motor servo
97	MDS	O	Output to control spindle motor servo
98	LOCK	O	GFS is sampled by 460Hz. H when GFS is H.
99	SSTP	I	Input signal to detect disc inner most track
100	SFDR	O	Sled drive output

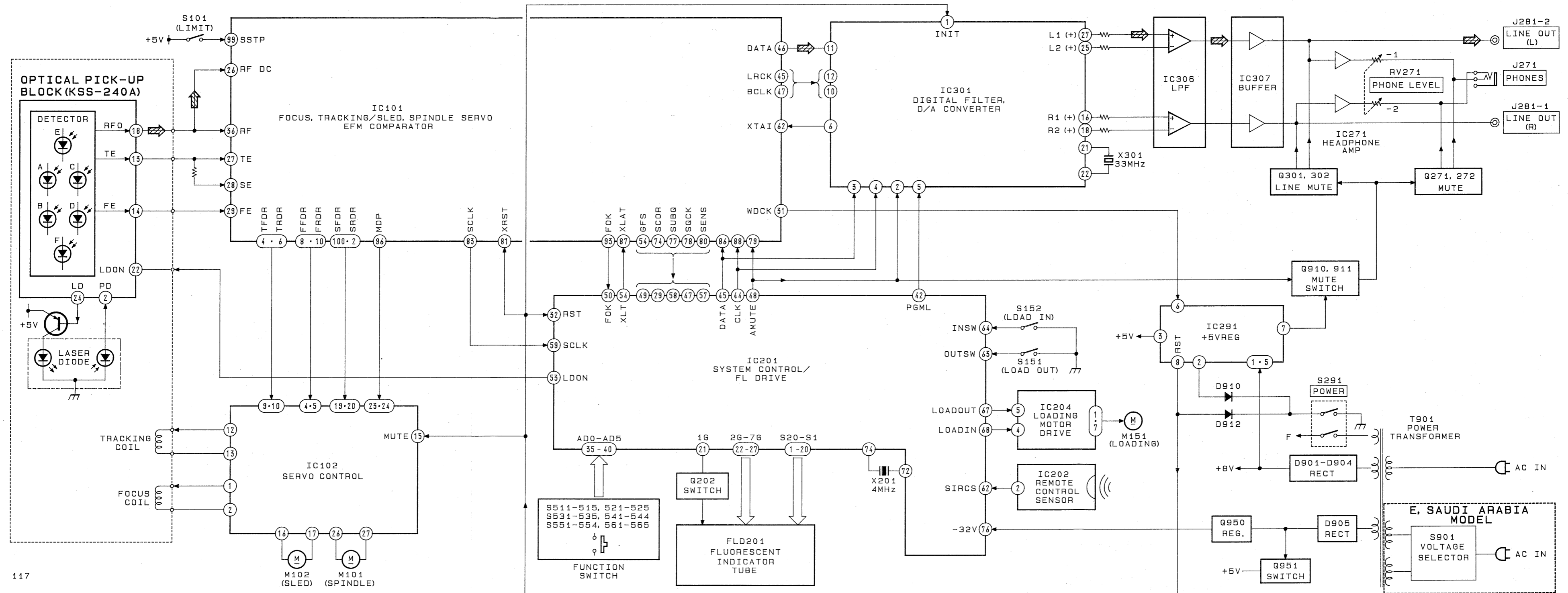
•IC201 CD System Controller (CXP50112-416Q)

No.	Pin Name	I/O	Description
1   20	S20   S1	O	Fluorescent character display tube segment output
21   27	1G   7G	O	Fluorescent character display tube timing output
28	8G	O	Not used in this unit (open)
29	SCOR	I	Sub-code sync input from IC101 (CXD2515Q) Sub-code reading begins when this signal is received.
30	OPEN	—	Not used in this unit (open)
31	+5V	I	Not used in this unit (connected to +5V)
32	RST	I	Resetting input for the microprocessor
33	+5V	—	Not used in this unit (connected to +5V)
34	VDD	—	+5V power supply terminal
35   40	AD0   AD5	I	Key data input (arrangement is selected with the A/D terminal)
41	GND	I	Not used in this unit (connected to +5V)
42	PGML	O	Program latch to the digital filter (IC301)
43	GND		Not used in this unit (connected to GND)
44	CLK	O	Serial data transmission clock output to IC101 (CXD2515Q) (or IC301 (CXD2565M))
45	DATA	O	Serial data output to IC101 (CXD2515Q) (or IC301 (CXD2565M))
46	GND	I	Not used in this unit (connected to GND)
47	SQCK	O	Sub-code Q reading clock output to IC101 (CXD2515Q)
48	AMUTE	O	Muting control output "H" : Mute
49	GFS	I	GFS signal input from IC101 (CXD2515Q)
50	FOK	I	Focus OK signal input from IC101 (CXD2515Q)
51	OPEN	O	Not used in this unit (open)
52	OPEN	O	Not used in this unit (open)
53	LDON	O	Laser diode ON/OFF switching output "H" : ON

No.	Pin Name	I/O	Description
54	XLT	O	Serial data latch output to IC101 (CXD2515Q)
55	A/D	I	Key arrangement switching (connected to +5V)
56	GND	I	Not used in this unit (connected to GND)
57	SENSE	I	SENSE input from IC101 (CXD2515Q)
58	SUBQ	I	Sub-code Q data input from IC101 (CXD2515Q)
59	SCLK	O	Data reading clock output to IC101 (CXD2515Q)
60	OPEN	O	Not used in this unit (open)
61	TIMER	I	Auto start switching "H" : OFF
62	RM	I	Remote control input from IC202 (GP1U58XB). L : Active
63	OUTSW	I	S151 (loading out switch) input
64	INSW	I	S152 (loading in switch) input
65	ADJ	I	Test mode input. Normally H
66	AFADJ	I	Test mode input. Normally H. Keys and displays can be tested when adjusted to "L" during power on.
67	LDOUT	O	Output for turn the loading motor (M151) to un loading. "H" : Un loading
68	LDIN	O	Output for turn the loading motor (M151) to loading. "H" : Loading
69	OPEN	-	Not used in this unit (open)
70	OPEN	-	Not used in this unit (open)
71	VSS	-	GND terminal
72	XTAL	O	Vibrator connection terminal (4MHz)
73	+5V	-	Not used in this unit (connected to +5V)
74	EXTAL	I	Vibrator connection terminal (4MHz)
75	+5V	I	Reference voltage input of power supply voltage resetting circuit
76	-30V	-	Power supply for the fluorescent character display tube (-30V)
77		O	Not used in this unit
78		O	Not used in this unit

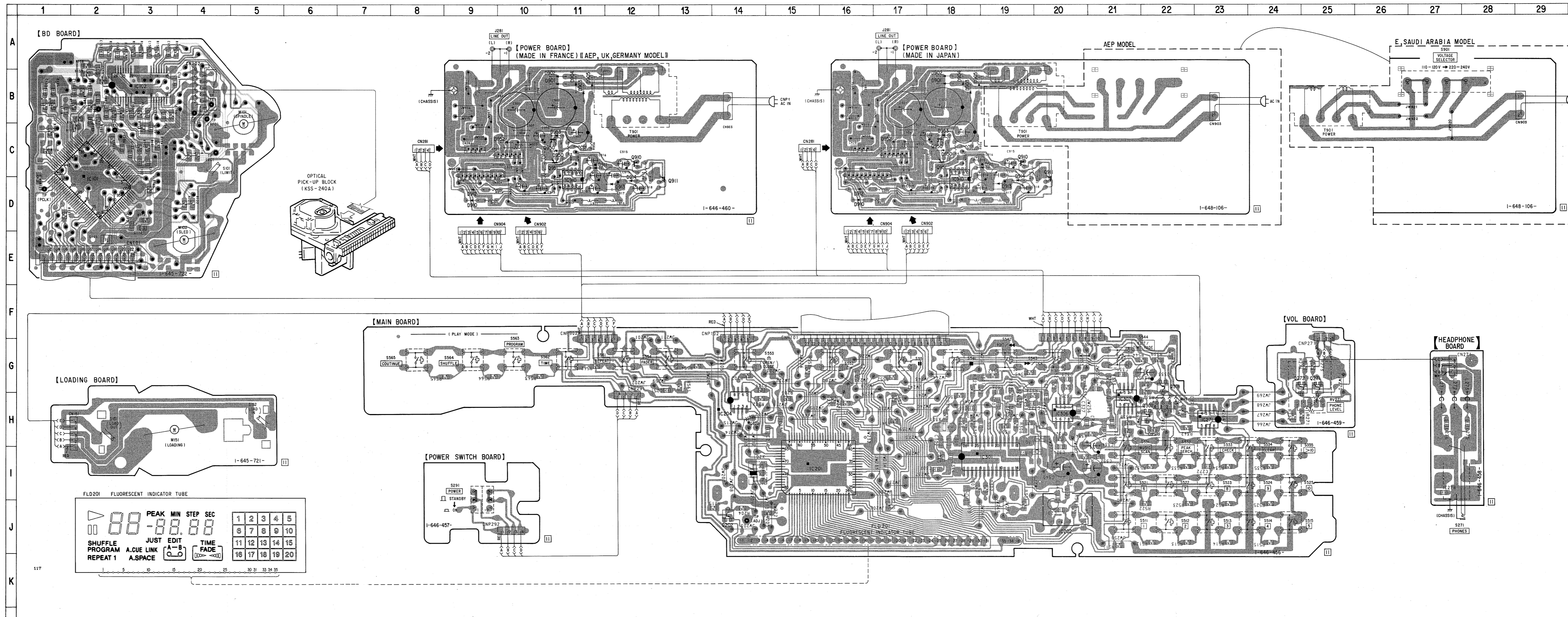
SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAM



• Semiconductor Location

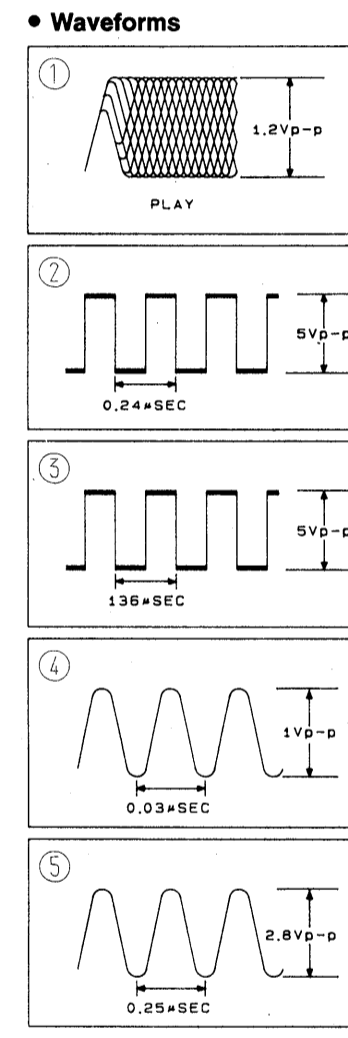
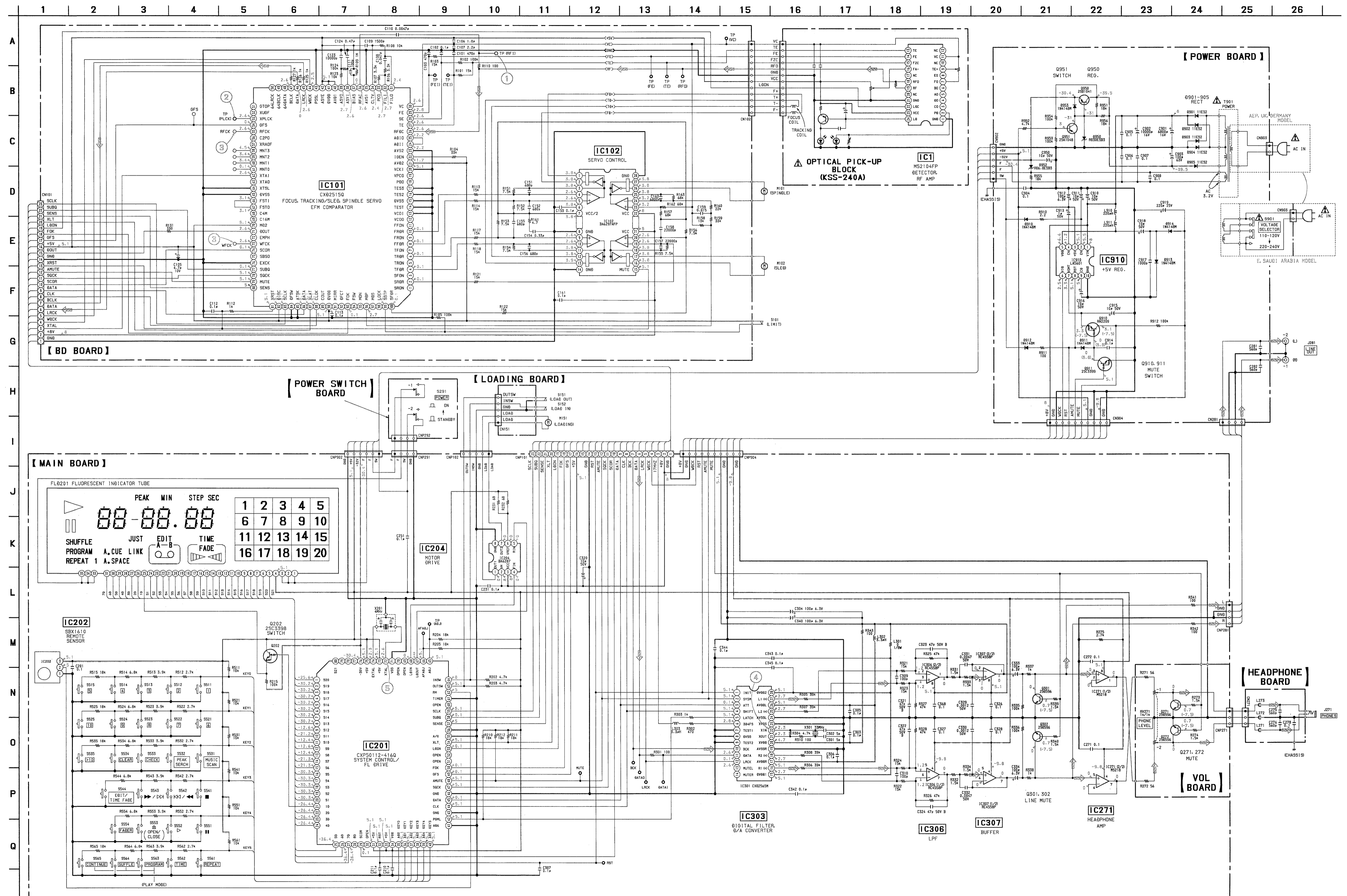
Ref. No.	Location	
	Made in Japan	Made in France
D901	B-18	B-11
D902	B-18	B-11
D903	B-18	B-11
D904	B-18	B-11
D905	B-18	B-11
D910	D-16	D-9
D911	C-19	C-11
D912	D-16	D-9
D913	D-19	D-12
D914	D-19	D-12
D950	C-18	C-11
D952	C-17	C-10
D953	C-18	C-11
IC101	D-2	D-2
IC102	B-3	B-3
IC201	I-15	I-15
IC202	J-20	J-20
IC204	H-14	H-14
IC271	H-23	H-23
IC301	I-19	I-19
IC306	H-20	H-20
IC307	H-21	H-21
IC910	D-18	D-11
Q202	J-14	J-14
Q271	G-25	G-25
Q272	G-25	G-25
Q301	G-22	G-22
Q302	H-22	H-22
Q910	C-19	C-12
Q911	D-20	D-13
Q950	C-18	C-11
Q951	C-18	C-11



**Note:**

- : parts mounted on the conductor side.
- : Through hole.
- : Pattern on the side which is seen.
- : Pattern of the rear side.

5-3. SCHEMATIC DIAGRAM Refer to page 23 for IC Block Diagrams.



**Note:**

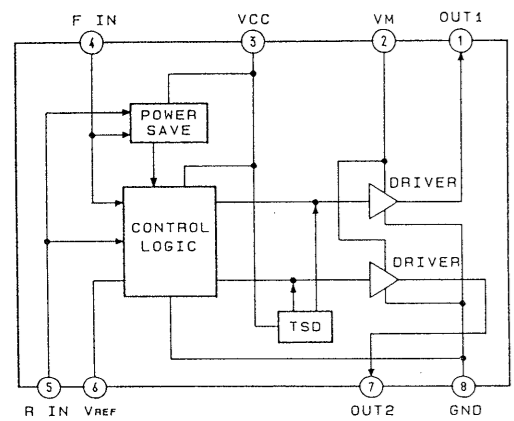
- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$ F
- 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $\frac{1}{2}\text{W}$  or less unless otherwise specified.
- $\Delta$ : internal component.

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

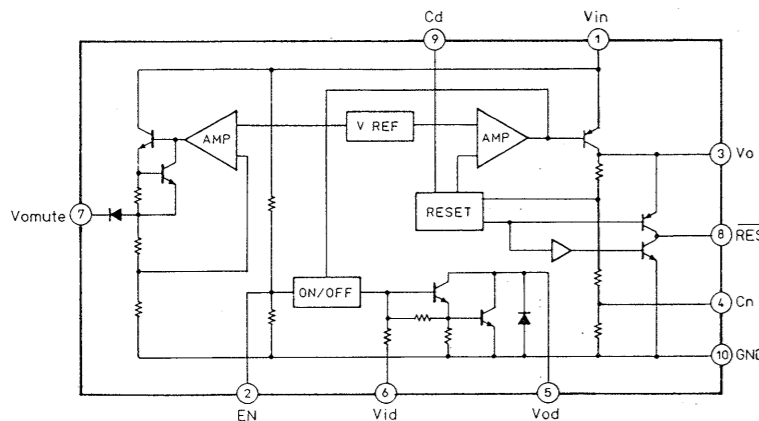
- : B+ line.
- : B- line.
- ~: Voltage and waveforms are dc with respect to ground under no-signal conditions.
- no mark: STOP
- ( ): PLAY
- ~: Voltages are taken with a VOM. (Input impedance 10M $\Omega$ )
- ~: Voltage variations may be noted due to normal production tolerances.
- ~: Waveforms are taken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

• IC BLOCK DIAGRAMS

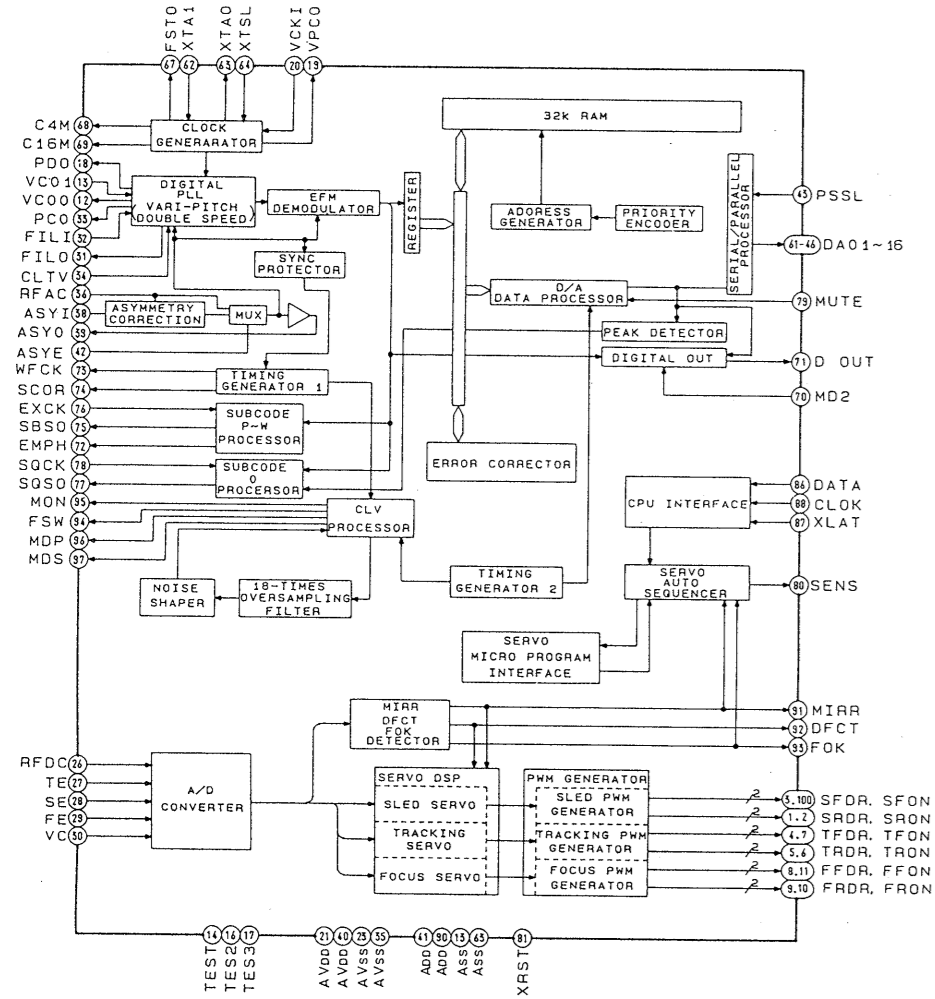
IC204 BA6287



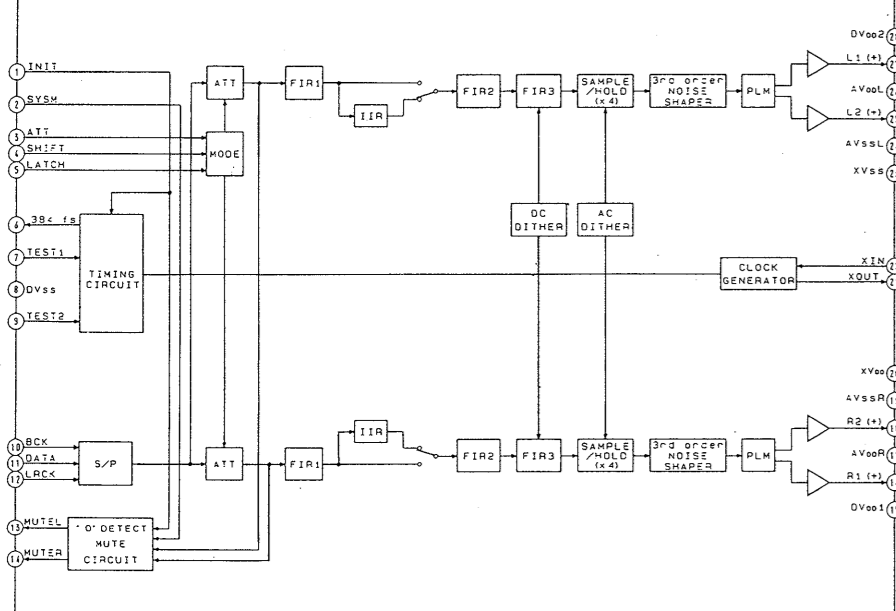
IC291 LA5601



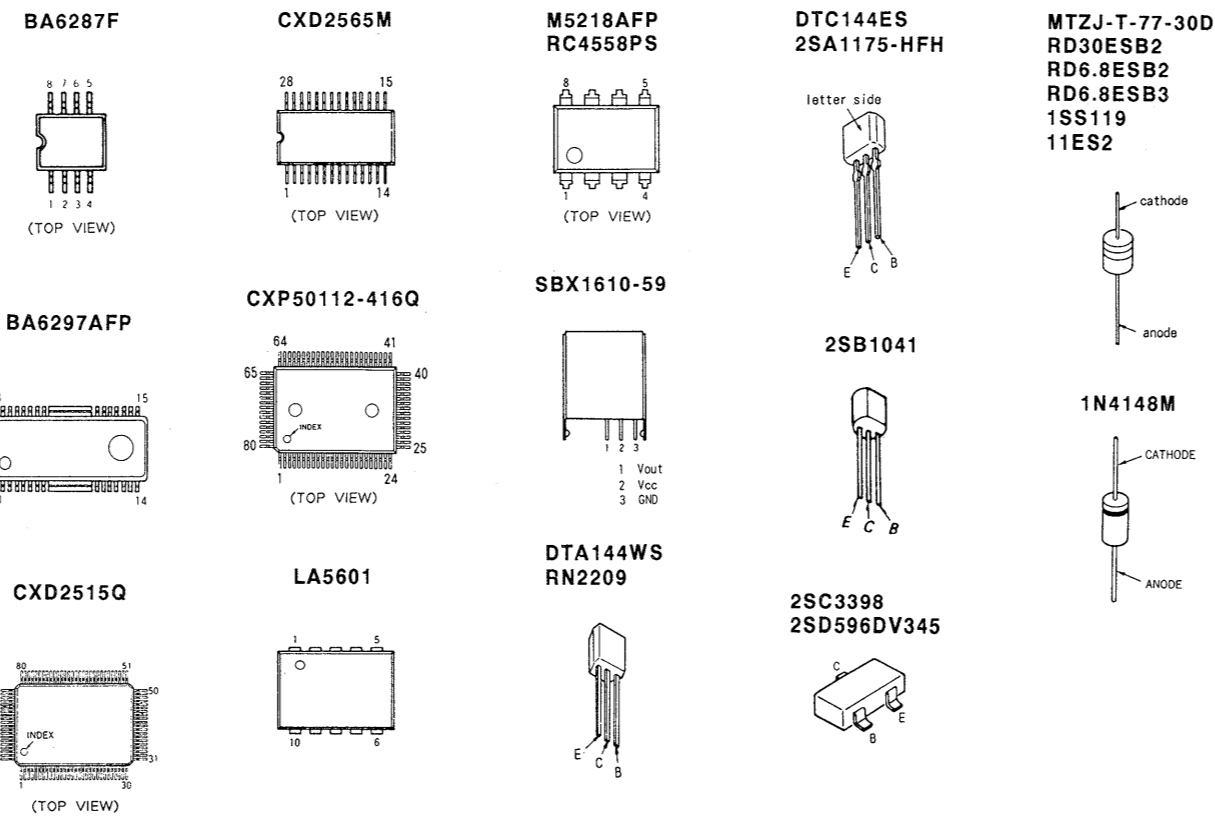
IC201 CXD2515Q



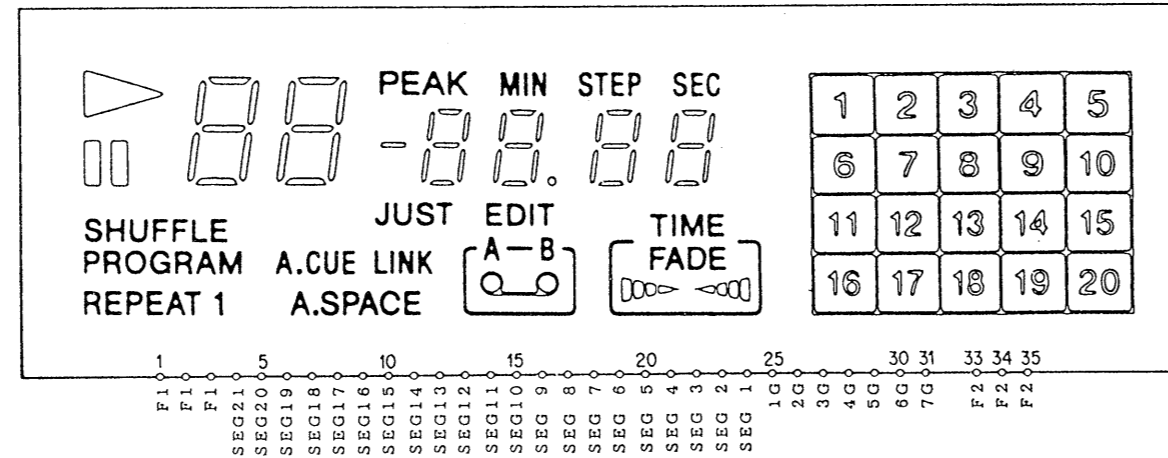
IC301 CXD2565M



5-4. SEMICONDUCTOR LEAD LAYOUTS



• FLD201 FLUORESCENT INDICATOR



SEGMENT	GRID	7G	6G	5G	4G	3G	2G	1G
SEG 1		▶		A. CUE				20
SEG 2		□□		A. SPACE			SEC	19
SEG 3		SHUFFLE		JUST	MIN			18
SEG 4		PROGRAM		LINK	o	STEP		17
SEG 5								16
SEG 6								15
SEG 7								14
SEG 8								13
SEG 9								12
SEG 10								11
SEG 11								10
SEG 12								9
SEG 13								8
SEG 14								7
SEG 15								6
SEG 16								5
SEG 17		REPEAT			A		▶▶▶▶	4
SEG 18		1			B		◀◀◀◀	3
SEG 19					—		EDIT	2
SEG 20					▭		TIME	1
SEG 21							FADE	

SECTION 6 EXPLODED VIEWS

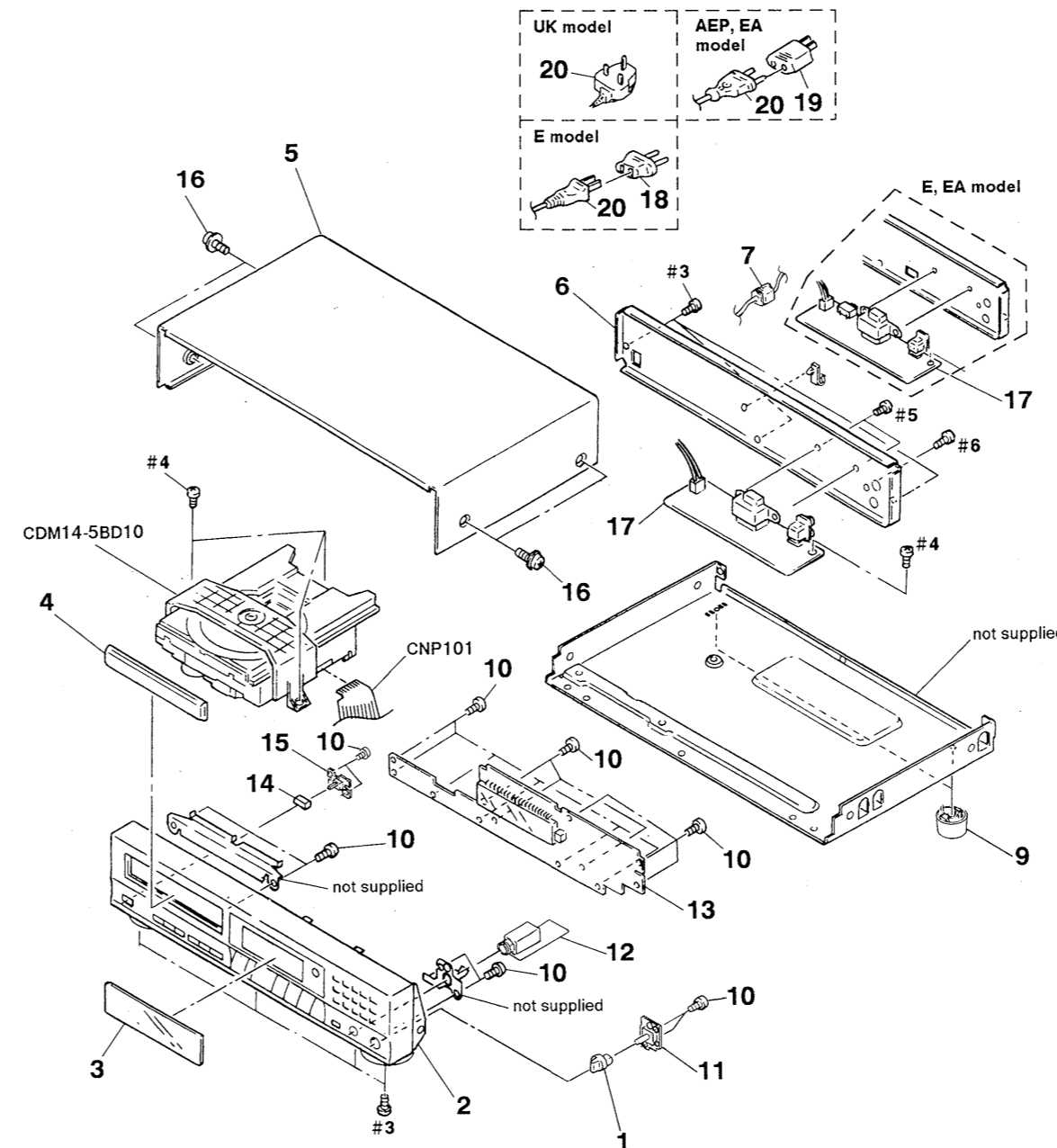
NOTE:

- XX-X mean standardized parts, so they may have some difference from the original one.
- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- 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.
- Model Name  
M201:CDP-M201  
M301:CDP-M301

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

- Abbreviations  
EA: Saudi Arabia  
G: Germany

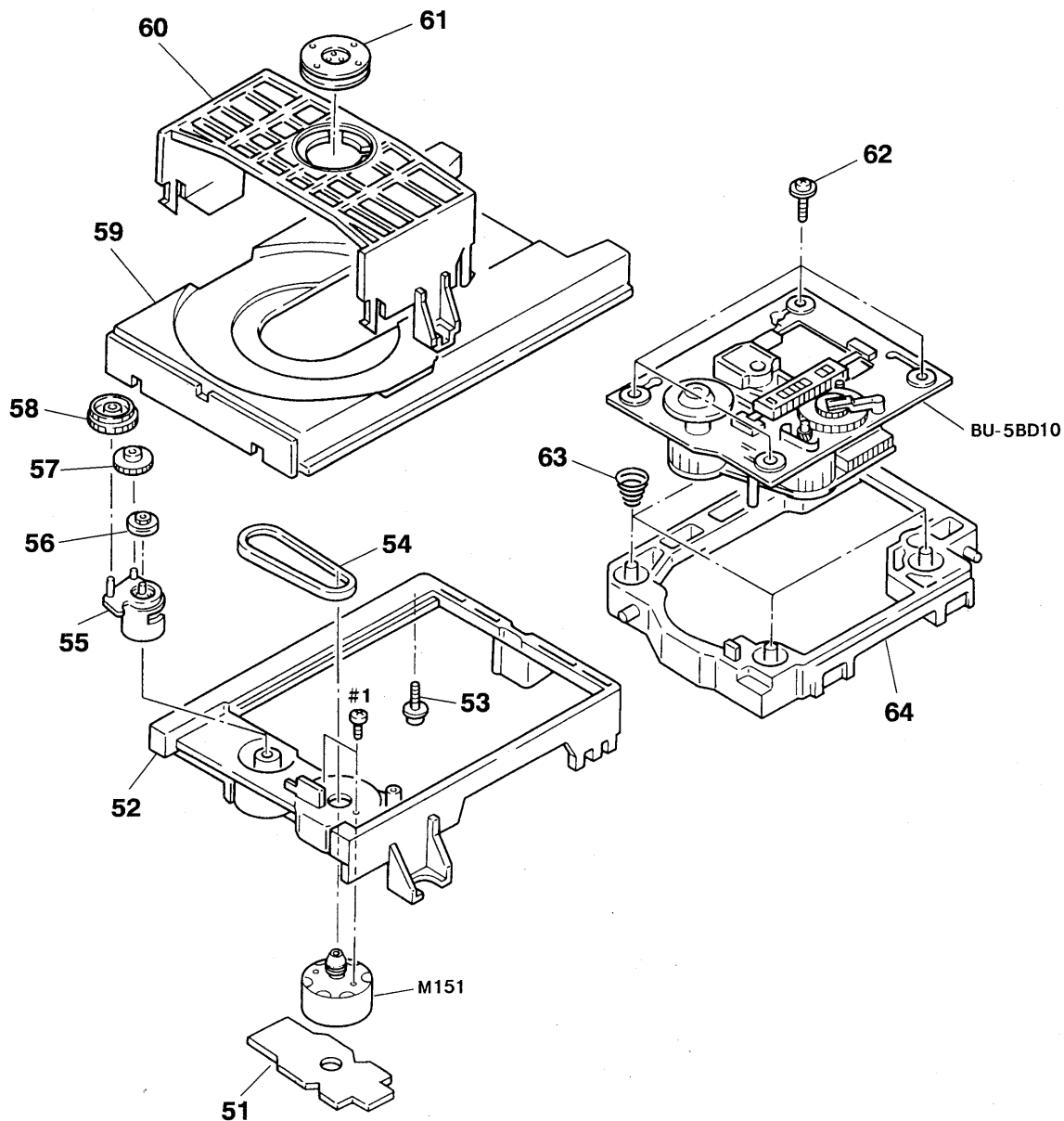
6-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	4-925-014-01	KNOB (DIA. 10)		8	4-949-235-01	HOOK (MADE IN JAPAN)	
2	X-4943-205-2	PANEL ASSY, FRONT (M201) (MADE IN FRANCE)		9	4-931-169-01	FOOT	
2	X-4943-206-2	PANEL ASSY, FRONT (M301) (MADE IN FRANCE)		10	4-951-620-01	SCREW (2.6X8), -B/TP	
2	X-4943-428-2	PANEL ASSY, FRONT (M201) (MADE IN JAPAN)		11	1-646-459-11	VOL BOARD	
2	X-4943-429-2	PANEL ASSY, FRONT (M301) (MADE IN JAPAN)		12	1-646-458-11	HEADPHONE BOARD	
3	4-956-172-01	PLATE, INDICATION (M201)		13	A-4649-586-A	MAIN BOARD, COMPLETE	
3	4-956-172-11	PLATE, INDICATION (M301)		14	4-927-341-01	BUTTON (POWER)	
4	4-956-175-01	PANEL, LOADING (M201)		15	1-646-457-11	POWER SWITCH BOARD	
4	4-956-175-11	PANEL, LOADING (M301)		16	3-363-099-01	SCREW (CASE 3 TP2) (MADE IN FRANCE)	
5	4-919-376-31	CASE (MADE IN FRANCE)		17	A-4649-589-A	POWER BOARD, COMPLETE (AEP)	(MADE IN JAPAN)
5	4-953-659-01	CASE (MADE IN JAPAN)		17	A-4649-479-A	POWER BOARD, COMPLETE (AEP, UK, G)	(MADE IN FRANCE)
* 6	4-955-189-23	PANEL, BACK (M301:AEP, G) (MADE IN FRANCE)		17	A-4649-581-A	POWER BOARD, COMPLETE (E, EA)	
* 6	4-955-189-33	PANEL, BACK (M301:UK)		18	1-595-007-11	ADAPTER, CONVERSION 2P (E)	
* 6	4-957-023-33	PANEL, BACK (M301:AEP) (MADE IN JAPAN)		19	1-569-008-11	ADAPTER, CONVERSION 2P (EA)	
* 6	4-955-189-04	PANEL, BACK (M201:AEP, G) (MADE IN FRANCE)		20	1-575-651-21	CORD, POWER (AEP, G, EA)	
* 6	4-955-189-13	PANEL, BACK (M201:UK)		20	1-696-027-11	CORD, POWER (E)	
* 6	4-957-023-03	PANEL, BACK (M201:AEP) (MADE IN JAPAN)		20	1-696-907-11	CORD, POWER (UK)	
* 6	4-957-023-11	PANEL, BACK (M201:E, EA)		20	1-696-244-00	BUSHING (2104), CORD (AEP, UK, G, EA)	
* 7	3-703-244-00	BUSHING (2104), CORD (AEP, UK, G, EA)		20	3-703-571-11	BUSHING (S) (4516), CORD (E)	
* 7	3-703-571-11	BUSHING (S) (4516), CORD (E)					

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

## 6-2. CD MECHANISM SECTION (CDM14-5BD10)

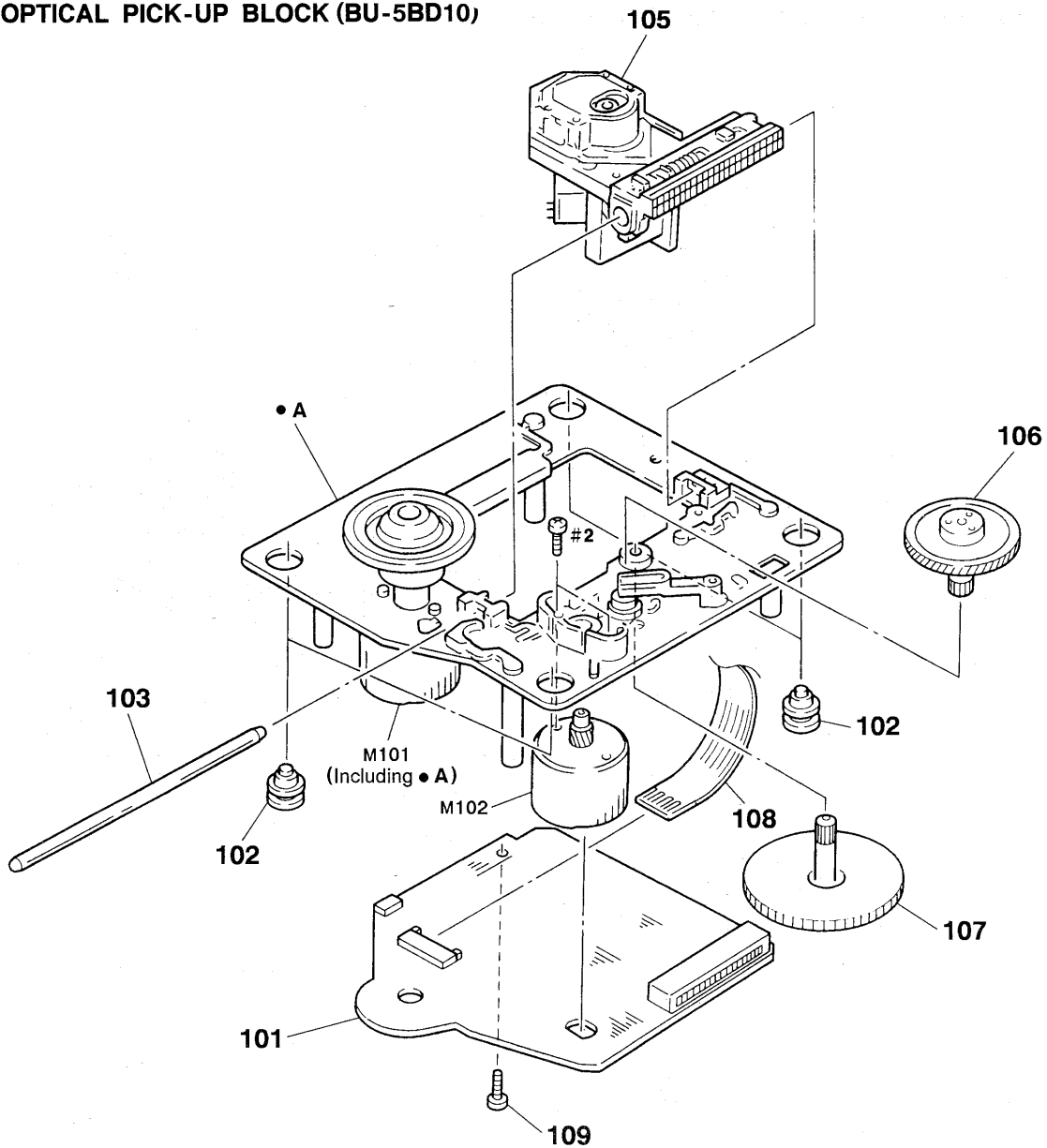


Ref. No.	Part No.	Description	Remark
* 51	1-645-721-11	LOADING BOARD	
52	4-933-111-01	CHASSIS (MD) (MADE IN JAPAN)	
52	4-933-111-11	CHASSIS (MD) (MADE IN FRANCE)	
* 53	4-917-583-21	BRACKET, YOKE	
54	4-927-649-01	BELT	
55	4-933-109-01	CAM	
56	4-927-651-01	PULLEY (S)	
57	4-927-628-01	GEAR (C)	
58	4-933-107-01	GEAR (PL)	
59	4-933-112-01	TABLE, DISK (MADE IN JAPAN)	
59	4-933-112-11	TABLE, DISK (MADE IN FRANCE)	

Ref. No.	Part No.	Description	Remark
60	4-933-110-01	HOLDER (MG) (MADE IN JAPAN)	
60	4-933-110-11	HOLDER (MG) (MADE IN FRANCE)	
* 61	1-452-538-11	MAGNET	
62	4-933-134-01	SCREW (+PTPWH M2.6X6)	
63	4-948-503-01	SPRING (BU), COMPRESSION	
64	4-933-129-01	HOLDER (BU) (MADE IN JAPAN)	
64	4-933-129-12	HOLDER (BU) (MADE IN FRANCE)	
M151	A-4604-363-A	MOTOR (L) ASSY	



6-3. OPTICAL PICK-UP BLOCK (BU-5BD10)



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-4649-432-A	BD BOARD, COMPLETE		107	4-917-564-01	GEAR (P), FLATNESS	
102	4-933-126-01	INSULATOR (A)		108	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
103	4-917-565-01	SHAFT, SLED		109	4-951-620-01	SCREW (2.6X8), +BVTP	
△105	8-848-144-11	DEVICE, OPTICAL KSS-240A		M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
106	4-917-567-01	GEAR (M)		M102	X-4917-504-1	MOTOR ASSY (SLED)	

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

# SECTION 7 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
- Model Name                      ● Abbreviations  
    M201: CDP-M201                      G: Germany Model  
    M301: CDP-M301                      EA: Saudi Arabia Model

- 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:  $\mu$ , for example:  
uA ..:  $\mu$ A..    uPA..:  $\mu$ PA..  
uPB..:  $\mu$ PB..    uPC..:  $\mu$ PC..    uPD..:  $\mu$ PD..
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  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-4649-432-A	BD BOARD, COMPLETE *****				< RESISTOR >		
		< CAPACITOR >		R101	1-216-077-00	METAL CHIP    15K 5%	1/10W	
C101	1-163-005-11	CERAMIC CHIP    470PF	10%	50V	R102	1-216-097-00	METAL CHIP    100K 5%	1/10W
C102	1-163-038-00	CERAMIC CHIP    0.1uF		25V	R103	1-216-077-00	METAL CHIP    15K 5%	1/10W
C103	1-163-005-11	CERAMIC CHIP    470PF	10%	50V	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	R106	1-216-061-00	METAL CHIP    3.3K 5%	1/10W
C107	1-164-505-11	CERAMIC CHIP    2.2uF		16V	R107	1-216-061-00	METAL CHIP    3.3K 5%	1/10W
C108	1-163-035-00	CERAMIC CHIP    0.047uF		50V	R108	1-216-073-00	METAL CHIP    10K 5%	1/10W
C109	1-163-011-11	CERAMIC CHIP    0.0015uF	10%	50V	R109	1-216-121-00	METAL CHIP    1M 5%	1/10W
C110	1-163-017-00	CERAMIC CHIP    0.0047uF	5%	50V	R110	1-216-025-00	METAL CHIP    100 5%	1/10W
C111	1-163-251-11	CERAMIC CHIP    100PF	5%	50V	R112	1-216-049-00	METAL CHIP    1K 5%	1/10W
C112	1-163-038-00	CERAMIC CHIP    0.1uF		25V	R113	1-216-077-00	METAL CHIP    15K 5%	1/10W
C113	1-163-038-00	CERAMIC CHIP    0.1uF		25V	R114	1-216-077-00	METAL CHIP    15K 5%	1/10W
C123	1-164-232-11	CERAMIC CHIP    0.01uF		50V	R117	1-216-077-00	METAL CHIP    15K 5%	1/10W
C124	1-164-005-11	CERAMIC CHIP    0.47uF		25V	R118	1-216-077-00	METAL CHIP    15K 5%	1/10W
C151	1-163-007-11	CERAMIC CHIP    680PF	10%	50V	R121	1-216-077-00	METAL CHIP    15K 5%	1/10W
C152	1-163-007-11	CERAMIC CHIP    680PF	10%	50V	R122	1-216-077-00	METAL CHIP    15K 5%	1/10W
C153	1-163-038-00	CERAMIC CHIP    0.1uF		25V	R123	1-216-073-00	METAL CHIP    10K 5%	1/10W
C154	1-164-336-11	CERAMIC CHIP    0.33uF		25V	R124	1-216-097-00	METAL CHIP    100K 5%	1/10W
C155	1-163-007-11	CERAMIC CHIP    680PF	10%	50V	R125	1-216-049-00	METAL CHIP    1K 5%	1/10W
C156	1-163-007-11	CERAMIC CHIP    680PF	10%	50V	R126	1-216-049-00	METAL CHIP    1K 5%	1/10W
C157	1-163-033-00	CERAMIC CHIP    0.022uF		50V	R127	1-216-049-00	METAL CHIP    1K 5%	1/10W
C158	1-163-033-00	CERAMIC CHIP    0.022uF		50V	R131	1-216-037-00	METAL CHIP    330 5%	1/10W
C159	1-163-023-00	CERAMIC CHIP    0.015uF	5%	50V	R151	1-216-070-00	METAL CHIP    7.5K 5%	1/10W
C160	1-163-019-00	CERAMIC CHIP    0.0068uF	10%	50V	R152	1-216-070-00	METAL CHIP    7.5K 5%	1/10W
C161	1-163-038-00	CERAMIC CHIP    0.1uF		25V	R153	1-216-070-00	METAL CHIP    7.5K 5%	1/10W
		< CONNECTOR >		R154	1-216-070-00	METAL CHIP    7.5K 5%	1/10W	
* CN101	1-568-865-11	SOCKET, CONNECTOR 23P		R155	1-216-070-00	METAL CHIP    7.5K 5%	1/10W	
CN102	1-568-795-11	SOCKET, CONNECTOR 12P		R156	1-216-070-00	METAL CHIP    7.5K 5%	1/10W	
		< IC >		R157	1-216-093-00	METAL CHIP    68K 5%	1/10W	
IC101	8-752-351-94	IC    CXD2515Q		R158	1-216-076-00	METAL CHIP    13K 5%	1/10W	
IC102	8-759-071-79	IC    BA6297AFP		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	

**BD**

**HEADPHONE**

**LOADING**

**MAIN**

Ref. No.	Part No.	Description	Remark
< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
*****			
*	1-646-458-11	HEADPHONE BAORD	
*****			
< CAPACITOR >			
C275	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C276	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C278	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
* CN271	1-568-941-11	PIN, CONNECTOR 3P	
< JACK >			
J271	1-568-519-41	JACK, LARGE TYPE (PHONES)	
< COIL >			
L271	1-410-397-21	FERRITE BEAD INDUCTOR	
L272	1-410-397-21	FERRITE BEAD INDUCTOR	
L273	1-410-397-21	FERRITE BEAD INDUCTOR	
*****			
*	1-645-721-11	LOADING BOARD	
*****			
< CONNECTOR >			
* CN151	1-568-943-11	PIN, CONNECTOR 5P	
< SWITCH >			
S151	1-572-086-11	SWITCH, LEAF (LOAD OUT)	
S152	1-572-086-11	SWITCH, LEAF (LOAD IN)	
*****			
*	A-4649-586-A	MAIN BOARD, COMPLETE	
*****			
< CAPACITOR >			
C201	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C210	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C211	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C231	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C251	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C271	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C272	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C301	1-163-222-11	CERAMIC CHIP 5PF	0.25PF 50V

Ref. No.	Part No.	Description	Remark
C302	1-163-222-11	CERAMIC CHIP 5PF	0.25PF 50V
C303	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C304	1-124-584-00	ELECT 100uF	20% 10V
C305	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C306	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C307	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C309	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C310	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C320	1-126-059-11	ELECT 10uF	20% 50V
C321	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C322	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C323	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C324	1-163-243-11	CERAMIC CHIP 47PF	5% 50V
C326	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C327	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C328	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C329	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V
C330	1-163-143-00	CERAMIC CHIP 0.0012uF	5% 50V
C331	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V
C332	1-163-017-00	CERAMIC CHIP 0.0047uF	5% 50V
C333	1-124-584-00	ELECT 100uF	20% 10V
C334	1-124-584-00	ELECT 100uF	20% 10V
C340	1-124-584-00	ELECT 100uF	20% 10V
C342	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C343	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C344	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C345	1-163-038-00	CERAMIC CHIP 0.1uF	25V
C368	1-163-038-00	CERAMIC CHIP 0.1uF	25V
< CONNECTOR >			
CNP101	1-537-472-11	JUMPER, FILM (WITH TERMINAL)	
< FLUORESCENT INDICATOR >			
FLD201	1-519-752-11	INDICATOR TUBE, FLUORESCENT	
< IC >			
IC201	8-752-838-06	IC CXP50112-416Q	
IC202	8-741-100-48	IC SBX1610-59	
IC204	8-759-040-83	IC BA6287F	
IC271	8-759-636-55	IC M5218AFP	
IC301	8-752-355-45	IC CXD2565M	
IC306	8-759-996-43	IC RC4558PS-T1	
IC307	8-759-996-43	IC RC4558PS-T1	
< RESISTOR >			
L301	1-216-296-00	METAL CHIP 0 5% 1/8W	

# MAIN

Ref. No.	Part No.	Description	Remark
< COIL >			
L302	1-410-375-11	INDUCTOR CHIP 3.3uH	
L303	1-410-375-11	INDUCTOR CHIP 3.3uH	
< TRANSISTOR >			
Q202	8-729-805-41	TRANSISTOR 2SC3398	
Q301	8-729-141-75	TRANSISTOR 2SD596DV345	
Q302	8-729-141-75	TRANSISTOR 2SD596DV345	
< RESISTOR >			
R202	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R203	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R204	1-216-079-00	METAL CHIP 18K 5%	1/10W
R205	1-216-079-00	METAL CHIP 18K 5%	1/10W
R210	1-216-079-00	METAL CHIP 18K 5%	1/10W
R211	1-216-079-00	METAL CHIP 18K 5%	1/10W
R212	1-216-079-00	METAL CHIP 18K 5%	1/10W
R215	1-216-097-00	METAL CHIP 100K 5%	1/10W
R231	1-216-021-00	METAL CHIP 68 5%	1/10W
R232	1-216-021-00	METAL CHIP 68 5%	1/10W
R275	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R301	1-216-025-00	METAL CHIP 100 5%	1/10W
R302	1-216-041-00	METAL CHIP 470 5%	1/10W
R303	1-216-049-00	METAL CHIP 1K 5%	1/10W
R304	1-216-065-00	METAL CHIP 4.7K 5%	1/10W
R305	1-216-689-11	METAL CHIP 39K 0.5%	1/10W
R306	1-216-689-11	METAL CHIP 39K 0.5%	1/10W
R307	1-216-689-11	METAL CHIP 39K 0.5%	1/10W
R308	1-216-689-11	METAL CHIP 39K 0.5%	1/10W
R310	1-216-025-00	METAL CHIP 100 5%	1/10W
R321	1-216-077-00	METAL CHIP 15K 5%	1/10W
R322	1-216-077-00	METAL CHIP 15K 5%	1/10W
R323	1-216-077-00	METAL CHIP 15K 5%	1/10W
R324	1-216-077-00	METAL CHIP 15K 5%	1/10W
R325	1-216-089-00	METAL CHIP 47K 5%	1/10W
R326	1-216-089-00	METAL CHIP 47K 5%	1/10W
R327	1-216-089-00	METAL CHIP 47K 5%	1/10W
R328	1-216-089-00	METAL CHIP 47K 5%	1/10W
R331	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R332	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R333	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R334	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R335	1-216-097-00	METAL CHIP 100K 5%	1/10W
R336	1-216-097-00	METAL CHIP 100K 5%	1/10W
R337	1-216-049-00	METAL CHIP 1K 5%	1/10W
R338	1-216-049-00	METAL CHIP 1K 5%	1/10W
R339	1-216-053-00	METAL CHIP 1.5K 5%	1/10W
R340	1-216-053-00	METAL CHIP 1.5K 5%	1/10W

Ref. No.	Part No.	Description	Remark
R341	1-216-025-00	METAL CHIP 100 5%	1/10W
R342	1-216-025-00	METAL CHIP 100 5%	1/10W
R343	1-216-025-00	METAL CHIP 100 5%	1/10W
R511	1-216-073-00	METAL CHIP 10K 5%	1/10W
R512	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R513	1-216-063-00	METAL CHIP 3.9K 5%	1/10W
R514	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R515	1-216-079-00	METAL CHIP 18K 5%	1/10W
R521	1-216-073-00	METAL CHIP 10K 5%	1/10W
R522	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R523	1-216-063-00	METAL CHIP 3.9K 5%	1/10W
R524	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R525	1-216-079-00	METAL CHIP 18K 5%	1/10W
R531	1-216-073-00	METAL CHIP 10K 5%	1/10W
R532	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R533	1-216-063-00	METAL CHIP 3.9K 5%	1/10W
R534	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R535	1-216-079-00	METAL CHIP 18K 5%	1/10W
R541	1-216-073-00	METAL CHIP 10K 5%	1/10W
R542	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R543	1-216-063-00	METAL CHIP 3.9K 5%	1/10W
R544	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R551	1-216-073-00	METAL CHIP 10K 5%	1/10W
R552	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R553	1-216-063-00	METAL CHIP 3.9K 5%	1/10W
R554	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R561	1-216-073-00	METAL CHIP 10K 5%	1/10W
R562	1-216-059-00	METAL CHIP 2.7K 5%	1/10W
R563	1-216-063-00	METAL CHIP 3.9K 5%	1/10W
R564	1-216-069-00	METAL CHIP 6.8K 5%	1/10W
R565	1-216-079-00	METAL CHIP 18K 5%	1/10W
< SWITCH >			
S511	1-554-303-21	SWITCH, TACTILE (1)	
S512	1-554-303-21	SWITCH, TACTILE (2)	
S513	1-554-303-21	SWITCH, TACTILE (3)	
S514	1-554-303-21	SWITCH, TACTILE (4)	
S515	1-554-303-21	SWITCH, TACTILE (5)	
S521	1-554-303-21	SWITCH, TACTILE (6)	
S522	1-554-303-21	SWITCH, TACTILE (7)	
S523	1-554-303-21	SWITCH, TACTILE (8)	
S524	1-554-303-21	SWITCH, TACTILE (9)	
S525	1-554-303-21	SWITCH, TACTILE (10)	
S531	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S532	1-554-303-21	SWITCH, TACTILE (PEAK SERCH)	
S533	1-554-303-21	SWITCH, TACTILE (CHECK)	
S534	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S535	1-554-303-21	SWITCH, TACTILE (>10)	
S541	1-554-303-21	SWITCH, TACTILE ( ■ )	

# MAIN

# POWER

Ref. No.	Part No.	Description	Remark
S542	1-554-303-21	SWITCH, TACTILE ( K4/◀ )	
S543	1-554-303-21	SWITCH, TACTILE ( ▶/DM )	
S544	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE)	
S551	1-554-303-21	SWITCH, TACTILE (■)	
S552	1-554-303-21	SWITCH, TACTILE (▷)	
S553	1-554-303-21	SWITCH, TACTILE (⊞ OPEN/CLOSE)	
S554	1-554-303-21	SWITCH, TACTILE (FADER)	
S561	1-554-303-21	SWITCH, TACTILE (REPEAT)	
S562	1-554-303-21	SWITCH, TACTILE (TIME)	
S563	1-554-303-21	SWITCH, TACTILE (PROGRAM (PLAY MODE))	
S564	1-554-303-21	SWITCH, TACTILE (SUFFLE (PLAY MODE))	
S565	1-554-303-21	SWITCH, TACTILE (CONTINUE (PLAY MODE))	
< VIBRATOR >			
X201	1-577-082-11	VIBRATOR, CERAMIC (4MHz)	
X301	1-579-833-11	VIBRATOR, CRYSTAL (33MHz)	
*****			
*	A-4649-589-A	POWER BOARD, COMPLETE (AEP) (MADE IN JAPAN)	
*	A-4649-479-A	POWER BOARD, COMPLETE (AEP, UK, G) (MADE IN FRANCE)	
*	A-4649-591-A	POWER BOARD, COMPLETE (E, EA) *****	
< CAPACITOR >			
C281	1-162-291-31	CERAMIC	560PF 10% 50V
C282	1-162-291-31	CERAMIC	560PF 10% 50V
C901	1-124-894-11	ELECT	6800uF 20% 16V
C902	1-126-939-11	ELECT	10000uF 20% 16V
C903	1-124-572-11	ELECT	100uF 20% 63V
C904	1-164-159-11	CERAMIC	0.1uF 50V
C905	1-164-159-11	CERAMIC	0.1uF 50V
C906	1-164-159-11	CERAMIC	0.1uF 50V
C907	1-164-159-11	CERAMIC	0.1uF 50V
C908	1-164-159-11	CERAMIC	0.1uF 50V
C910	1-126-059-11	ELECT	10uF 20% 50V
C911	1-126-059-11	ELECT	10uF 20% 50V
C912	1-124-443-00	ELECT	100uF 20% 10V
C913	1-126-301-11	ELECT	1uF 20% 50V
C914	1-164-159-11	CERAMIC	0.1uF 50V
C915	1-126-059-11	ELECT	10uF 20% 50V
C916	1-126-059-11	ELECT	10uF 20% 50V
C917	1-162-294-31	CERAMIC	0.001uF 10% 50V
C918	1-126-059-11	ELECT	10uF 20% 50V
C919	1-124-120-11	ELECT	220uF 20% 25V
C950	1-126-059-11	ELECT	10uF 20% 50V

Ref. No.	Part No.	Description	Remark
< CONNECTOR >			
CN281	1-506-469-11	PIN, CONNECTOR 4P	
* CN902	1-568-955-11	PIN, CONNECTOR 6P	
* CN903	1-580-230-11	PIN, CONNECTOR (PC BOARD) 3P	
* CN904	1-568-937-11	PIN, CONNECTOR 10P	
< 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	
D910	8-719-987-63	DIODE 1N4148M	
D911	8-719-987-63	DIODE 1N4148M	
D912	8-719-987-63	DIODE 1N4148M	
D913	8-719-987-63	DIODE 1N4148M	
D914	8-719-987-63	DIODE 1N4148M	
D950	8-719-110-72	DIODE RD30ES-B2	
D952	8-719-109-98	DIODE RD6.8ES-B3	
D953	8-719-987-63	DIODE 1N4148M	
< IC >			
IC910	8-759-821-93	IC LA5601	
< JACK >			
J281	1-569-442-11	JACK, PIN 2P (LINE OUT)	
< COIL >			
L910	1-410-336-11	INDUCTOR 220uH	
L911	1-410-336-11	INDUCTOR 220uH	
< TRANSISTOR >			
Q910	8-729-206-38	TRANSISTOR RN2209	
Q911	8-729-900-89	TRANSISTOR DTC144ES	
Q950	8-729-019-64	TRANSISTOR 2SB1041	
Q951	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< RESISTOR >			
R910	1-249-385-11	CARBON 2.2 5% 1/6W F	
R911	1-249-405-11	CARBON 100 5% 1/4W F	
R912	1-249-441-11	CARBON 100K 5% 1/4W	
R951	1-249-432-11	CARBON 18K 5% 1/4W	
R952	1-249-425-11	CARBON 4.7K 5% 1/4W F	
R953	1-249-441-11	CARBON 100K 5% 1/4W	
R954	1-249-441-11	CARBON 100K 5% 1/4W	
R955	1-249-432-11	CARBON 18K 5% 1/4W	
R956	1-249-432-11	CARBON 18K 5% 1/4W	

**POWER**

**POWER SWITCH**

**VOL**

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
△S901	1-571-722-11	SWITCH, VOLTAGE SELECTION (VOLTAGE SELECTOR) (E, EA)	
		< TRANSFORMER >	
△T901	1-450-213-11	TRANSFORMER, POWER (AEP, UK, G)	
△T901	1-450-214-11	TRANSFORMER, POWER (E, EA)	
*****			
*	1-646-457-11	POWER SWITCH BOARD *****	
		< SWITCH >	
S291	1-571-305-11	SWITCH, PUSH (1 KEY) (POWER)	
*****			
*	1-646-459-11	VOL BAORD *****	
		< TRANSISTOR >	
Q271	8-729-141-75	TRANSISTOR 2SD596DV345	
Q272	8-729-141-75	TRANSISTOR 2SD596DV345	
		< RESISTOR >	
R271	1-216-019-00	METAL CHIP .56 5% 1/10W	
R272	1-216-019-00	METAL CHIP 56 5% 1/10W	
R273	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R274	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
		< VARIABLE RESISTOR >	
RV271	1-238-748-11	RES, VAR, CARBON 1K/1K (PHONE LEVEL)	
*****			
		MISCELLANEOUS *****	
18	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
19	1-569-008-11	ADAPTER, CONVERSION 2P (EA)	
△20	1-575-651-21	CORD, POWER (AEP, G, EA)	
△20	1-696-027-11	CORD, POWER (E)	
△20	1-696-907-11	CORD, POWER (UK)	
* 61	1-452-538-11	MAGNET	
△105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
108	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
M151	A-4604-363-A	MOTOR (L) ASSY (LOADING)	
*****			

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS *****	
	1-465-291-11	REMOTE COMMANDER (RM-D190) (M301)	
	1-558-271-11	CORD, CONNECTION (MADE IN FRANCE)	
	1-559-533-11	CORD, CONNECTION (MADE IN JAPAN)	
	2-181-754-01	COVER, BATTERY (For RM-D190) (M301)	
	3-756-199-11	MANUAL, INSTRUCTION (MADE IN JAPAN) (ENGLISH/FRENCH/SPANISH/CHINESE) (AEP, E, EA)	
	3-756-199-41	MANUAL, INSTRUCTION (MADE IN JAPAN) (GERMAN/ITALIAN/DUTCH/PORTUGUESE) (AEP)	
	3-756-199-51	MANUAL, INSTRUCTION (MADE IN FRANCE) (ENGLISH/FRENCH/SPANISH) (AEP, UK)	
	3-756-199-61	MANUAL, INSTRUCTION (MADE IN FRANCE) (GERMAN/ITALIAN/DUTCH/PORTUGUESE) (AEP)	
	3-756-199-81	MANUAL, INSTRUCTION (MADE IN FRANCE) (GERMAN) (G)	
*	4-922-998-01	CUSHION (MADE IN JAPAN)	
*	4-927-355-01	CUSHION (MADE IN FRANCE)	
*	4-955-663-01	INDIVIDUAL CARTON (M301) (MADE IN FRANCE)	
*	4-955-663-11	INDIVIDUAL CARTON (M201) (MADE IN FRANCE)	
*	4-957-576-01	INDIVIDUAL CARTON (M201) (MADE IN JAPAN)	
*	4-957-576-11	INDIVIDUAL CARTON (M301) (MADE IN JAPAN)	
*****			
		HARDWARE LIST *****	
#1	7-621-775-10	SCREW +B 2.6X4	
#2	7-621-255-15	SCREW +P 2X3	
#3	7-682-548-09	SCREW +BVTT 3X8 (S)	
#4	7-685-871-01	SCREW +BVTT 3X6 (S)	
#5	7-682-562-09	SCREW +BVTT 4X10 (S)	
#6	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	

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

