

# CDP-C160Z/C260Z/CE215/CE315

## SERVICE MANUAL

*US Model*  
CDP-C160Z/C260Z/CE215/CE315

*Canadian Model*  
CDP-C260Z/CE215/CE315

*AEP Model*  
*Australian Model*  
CDP-CE215/CE315

*UK Model*  
*E Model*  
CDP-CE315



Photo : CDP-CE315

Model Name Using Similar Mechanism	CDP-C250Z/C350Z/CE305/CE405
CD Mechanism Type	CDM27A2-5BD20
Base Unit Type	BU-5BD20
Optical Pick-up Type	KSS-213BA/F-NP

### SPECIFICATIONS

#### Compact Disc Player

Laser	Semiconductor laser ( $\lambda = 780 \text{ nm}$ )
Laser output	Emission duration: continuous Max 44.6 $\mu\text{W}$ * * This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up block with 7 mm aperture.
Frequency response	2 Hz to 20 kHz $\pm 0.5 \text{ dB}$
Signal-to-noise ratio	More than 102 dB
Dynamic range	More the 98 dB
Harmonic distortion	Less than 0.0045%

#### Output

	Jack type	Maximum output level	Load impedance
LINE OUT	Phono jacks	2V (at 50 kilohms)	Over 10 kilohms
DIGITAL OUT (OPTICAL) (AEP, UK, CIS, North European, East European models only)	Optical output connector	-18 dBm	Wave length: 660nm

#### General

##### Power requirements

Where purchased	Power requirements
US, Canadian	120V AC, 60 Hz
AEP, UK, CIS, Singapore	220-230V AC, 50/60 Hz
North European, East European	
Australian	240V AC, 50/60 Hz
E	110-120V, 220-240V adjustable, 50/60 Hz

Power consumption	14W
Dimensions (approx.) (w/h/d)	430 $\times$ 120 $\times$ 385 mm (17 $\times$ 4 3/4 $\times$ 15 1/4 in.) incl. projecting parts
Mass (approx.)	5.4 kg (11 lbs 15 oz)

#### Supplied accessories

Audio cord (2 phono plugs-2 phono plugs) (1)  
Remote commander (remote) (CDP-CE315 and CDP-C260Z only)  
Sony SUM-3 (NS) batteries (2) (CDP-CE315 and CDP-C260Z only)

Design and specifications are subject to change without notice.

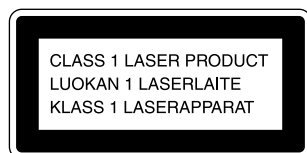


## COMPACT DISC PLAYER

# SONY®

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 ALTIINNA LASERSÄTELYLLE.
VARNING	;	LASERSTRÅLING NÅR DENNA DEL ÄR ÖPPNAD OCH SPÄRREN ÄR URÖPPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.



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

### CAUTION

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

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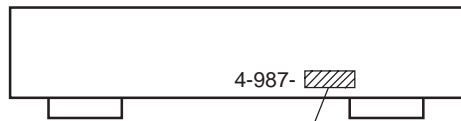
### SAFETY-RELATED COMPONENT WARNING!!

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.

### ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE  $\triangle$  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.

## MODEL IDENTIFICATION — BACK PANEL —



CDP-C160Z	
US Model	: 782-4□
CDP-C260Z	
US Model	: 783-7□
Canadian Model	: 783-8□
CDP-CE215	
US Model	: 782-0□
Canadian Model	: 782-1□
AEP Model	: 782-2□
Australian Model	: 782-3□
CDP-CE315	
AEP, East European, North European,	
CIS Model	: 783-0□
UK Model	: 783-1□
Singapore Model	: 783-2□
Australian Model	: 783-3□
E Model	: 783-4□
US Model	: 783-5□
Canadian Model	: 783-6□

### 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 from more than 30 cm away from the objective lens.

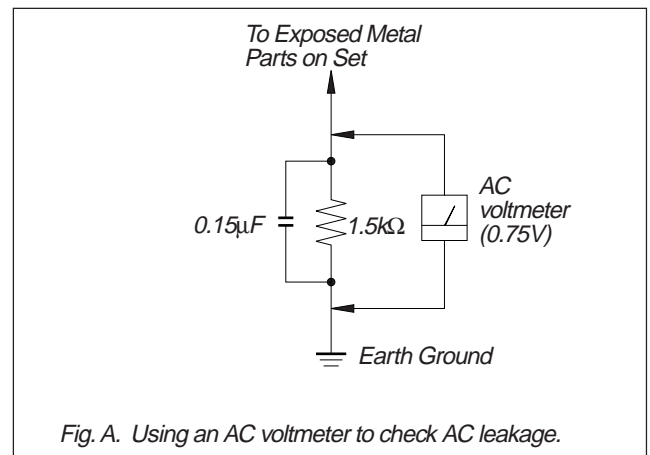
## SAFETY CHECK-OUT (US model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer: Check the antenna terminals, metal trim, “metallized” knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

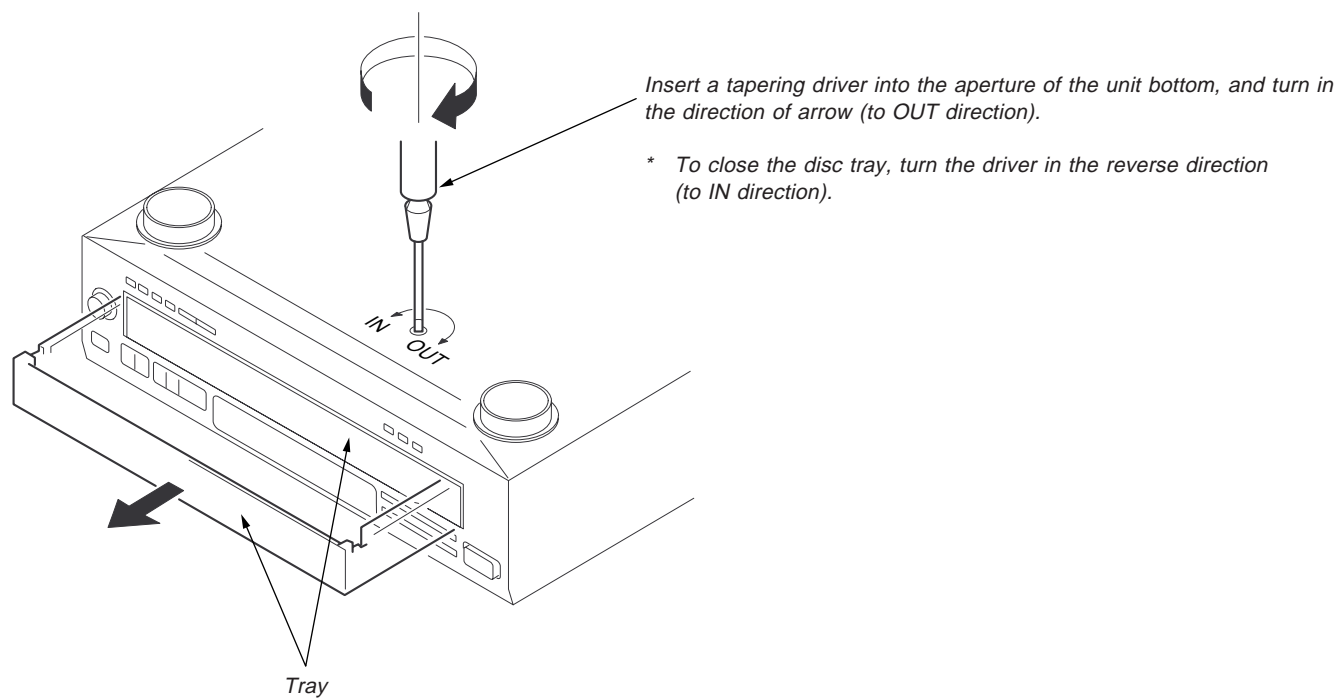
### LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microamperes). Leakage current can be measured by any one of three methods.

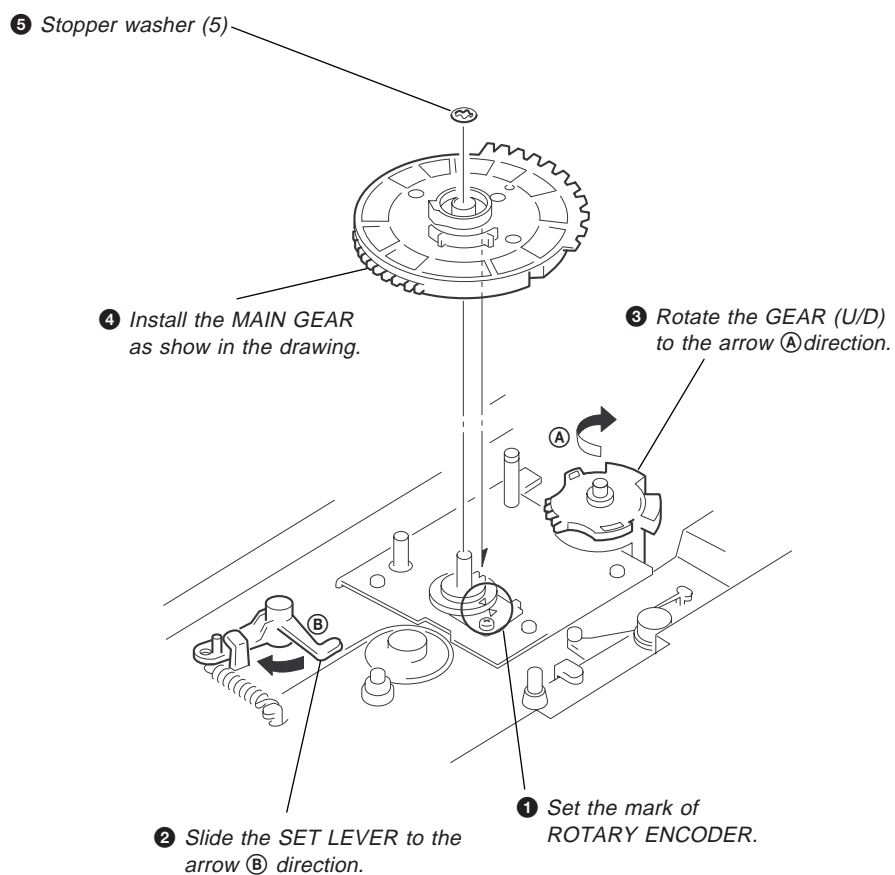
1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The “limit” indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)



## HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF



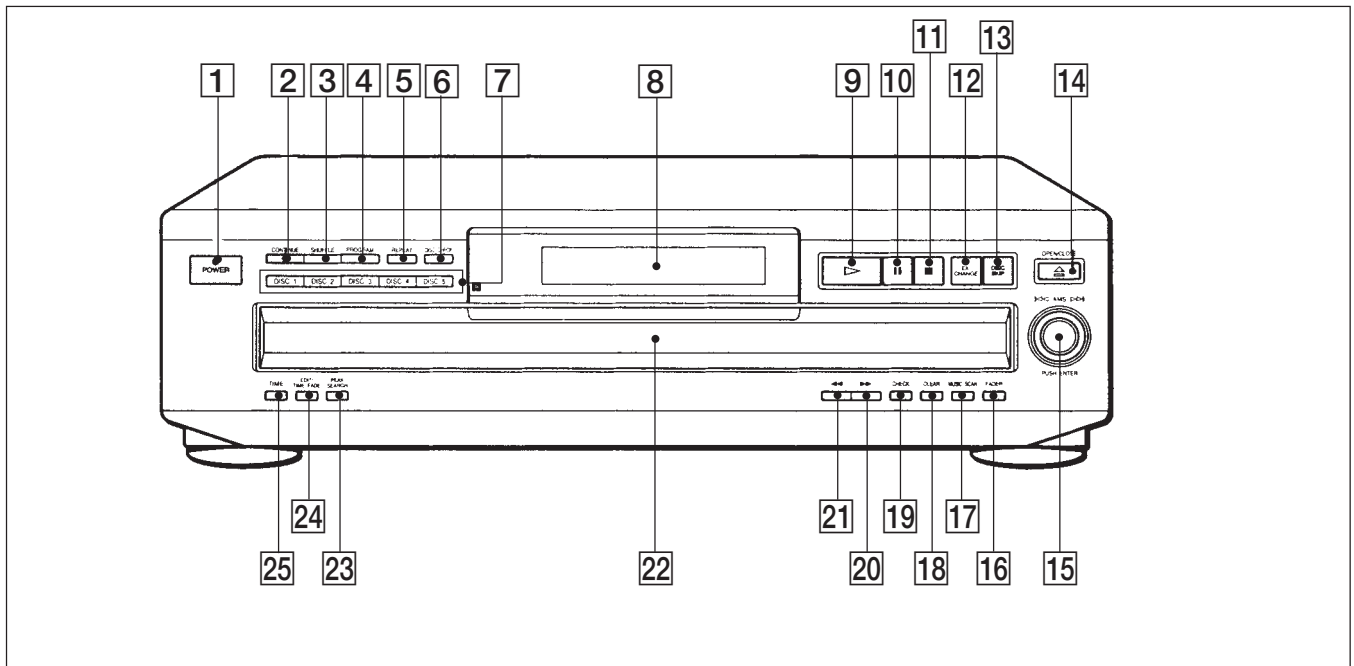
## NOTE FOR MAIN GEAR INSTALLATION



## SECTION 1 GENERAL

### Identifying the Parts

#### Front Panel

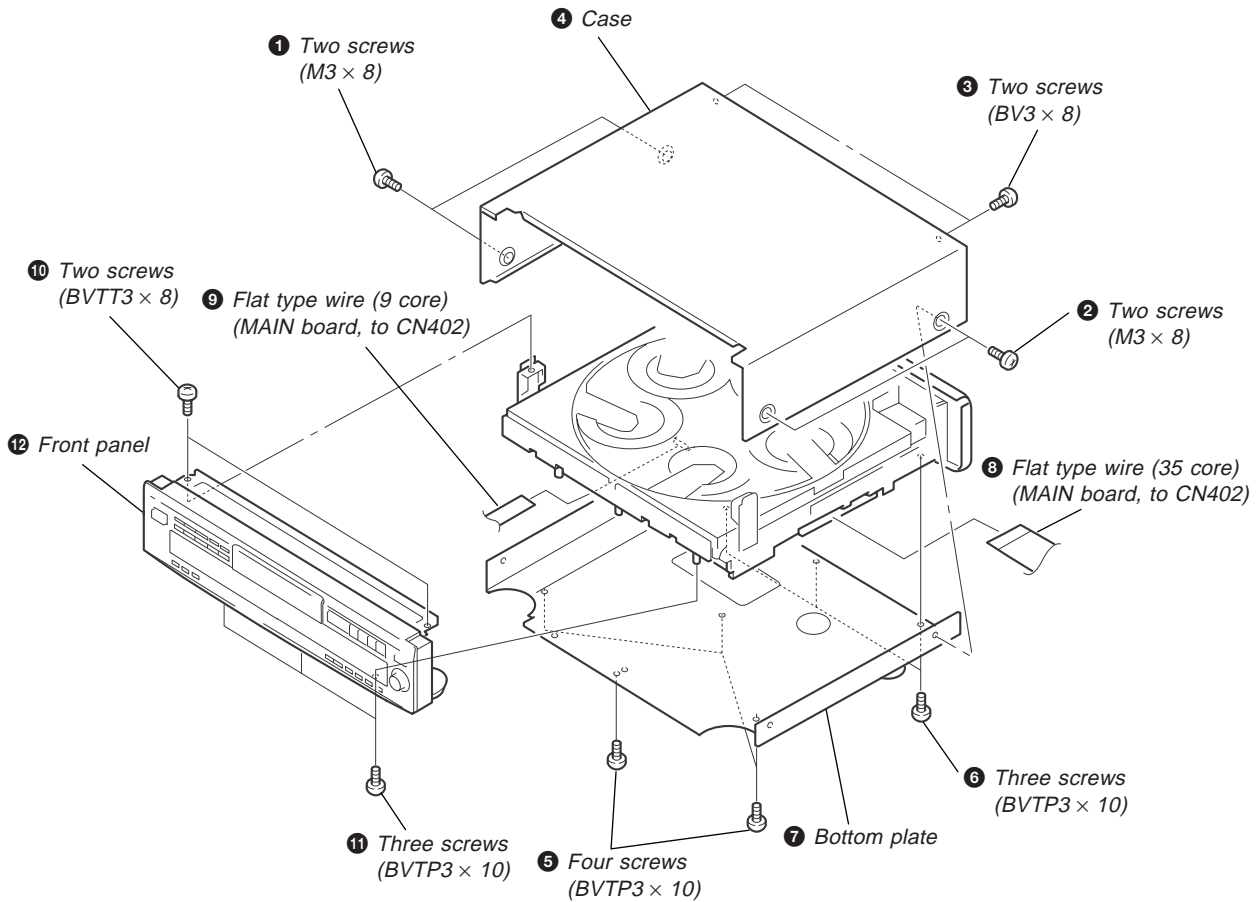


- |   |  |
|---|--|
| <b>1</b> POWER switch   | <b>13</b> DISC SKIP button                         |
| <b>2</b> CONTINUE button  | <b>14</b> ▲ OPEN/CLOSE button                      |
| <b>3</b> SHUFFLE button   | <b>15</b> AMS knob                                 |
| <b>4</b> PROGRAM button   | <b>16</b> FADER button                             |
| <b>5</b> REPEAT button  | <b>17</b> MUSIC SCAN button                        |
| <b>6</b> DISC CHECK button: CE215/CE315 model<br>TIME button: C160Z/C260Z model | <b>18</b> CLEAR button                             |
| <b>7</b> DISC 1-5 button  | <b>19</b> CHECK button                             |
| <b>8</b> Display window   | <b>20</b> ►► (forward) button                      |
| <b>9</b> ► (play) button  | <b>21</b> ◀◀ (backward) button                     |
| <b>10</b>    (pause) button   | <b>22</b> Disc tray                                |
| <b>11</b> ■ (stop) button   | <b>23</b> PEAK SEARCH button: CE215/CE315 model    |
| <b>12</b> EX-CHANGE button  | <b>24</b> EDIT/TIME FADE button: CE215/CE315 model |
|   | <b>25</b> TIME button: CE215/CE315 model           |

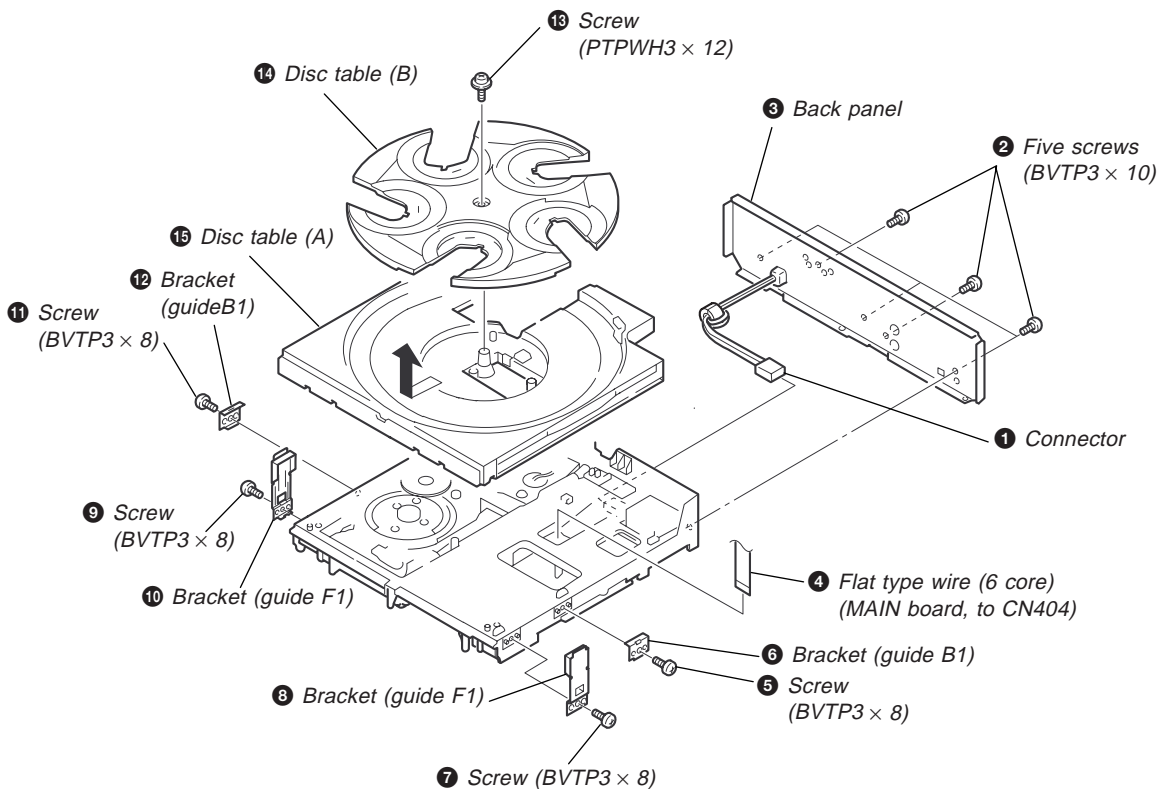
## SECTION 2 DISASSEMBLY

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

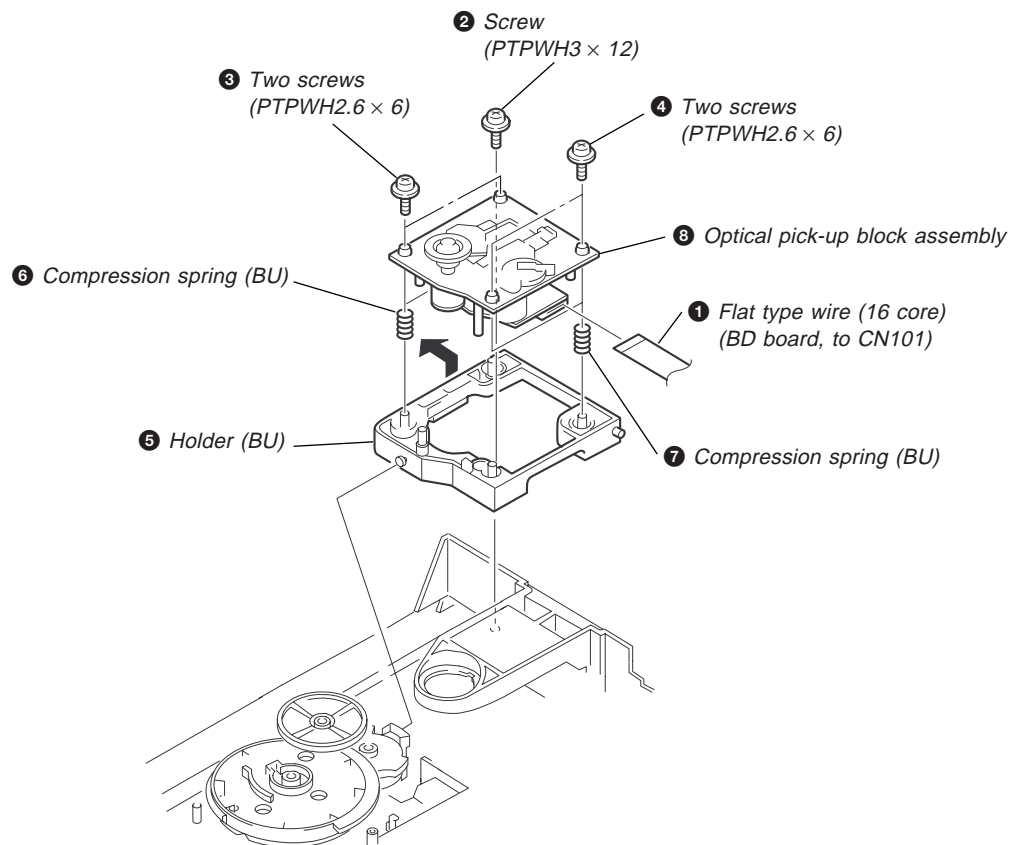
### 2-1. CASE, BOTTOM PLATE AND FRONT PANEL



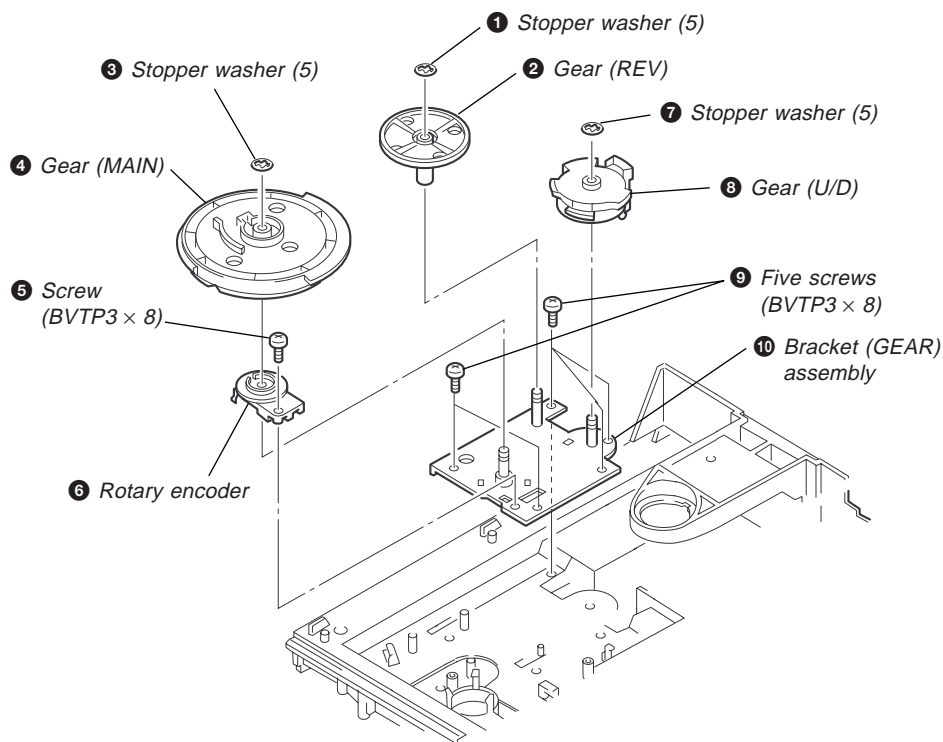
### 2-2. BACK PANEL AND DISC TABLE



## 2-3. OPTICAL PICK-UP BLOCK ASSEMBLY



## 2-4. BRACKET (GEAR) ASSEMBLY



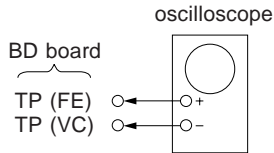
Note : As for the installation of the main gear, refer to “Note for MAIN GEAR installation” on page 4.

## SECTION 3 ELECTRICAL BLOCK CHECKING

Note :

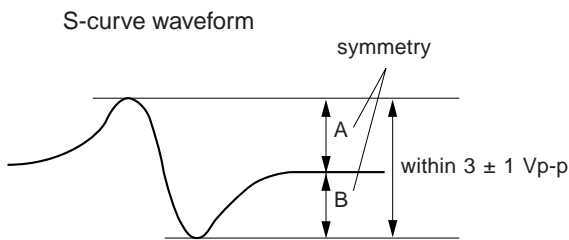
1. CD Block is basically designed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10M $\Omega$  impedance.
4. Clean the object lens using an applicator with neutral detergent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

### S Curve Check



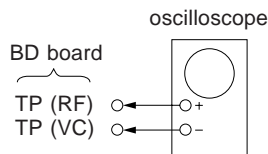
Procedure :

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  $3 \pm 1$  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.
  - Take sweep time as long as possible and light up the brightness to obtain best waveform.

### RF Level Check



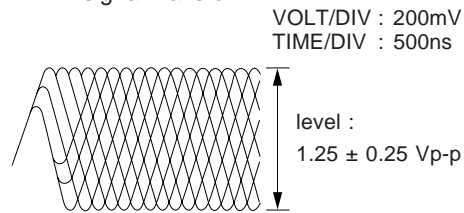
Procedure :

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

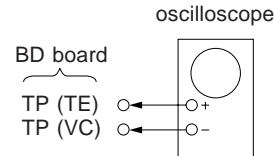
Note :

A clear RF signal waveform means that the shape “ $\diamond$ ” can be clearly distinguished at the center of the waveform.

RF signal waveform



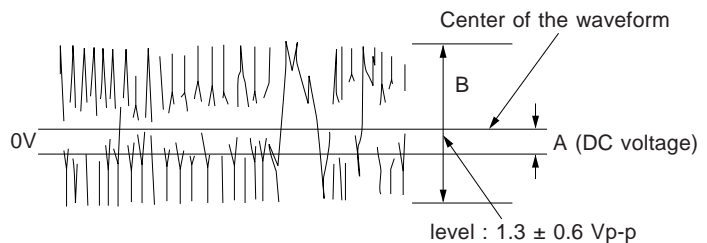
### E-F Balance Check



Procedure :

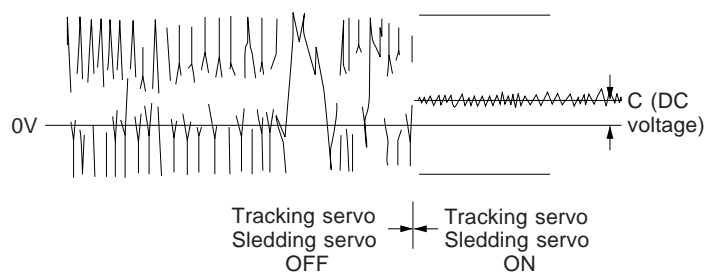
1. Connect test point TP1 (ADJ) to ground with a lead wire.
2. Connect oscilloscope to test point TP (TE) on BD board.
3. Turned Power switch on.
4. Put disc (YEDS-18) in to play the number five track.
5. Press the “3” button. (The tracking servo and the sledding servo are turned OFF.)
6. Check the level B of the oscilloscope's waveform and the A (DC voltage) of the center of the Traverse waveform. Confirm the following :  
 $A/B \times 100 = \text{less than } \pm 22\%$

Traverse waveform



7. Press the “8” button. (The tracking servo and sledding servo are turned ON.) Confirm the C (DC voltage) is almost equal to the A (DC voltage) is step 6.

Traverse waveform



8. Disconnect the lead wire of TP (ADJ) connected in step 1.

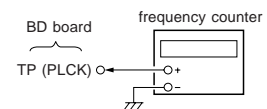


## SECTION 4 DIAGRAMS

### RF PLL Free-run Frequency Check

#### Procedure :

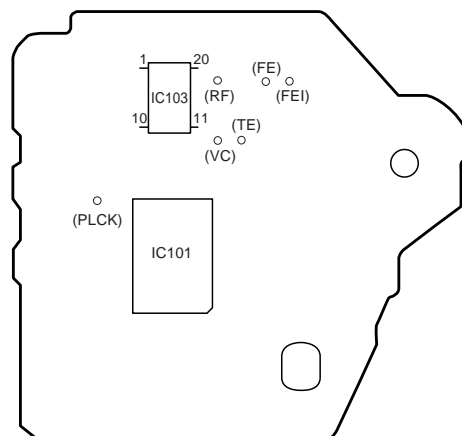
1. Connect frequency counter to test point (PLCK) with lead wire.



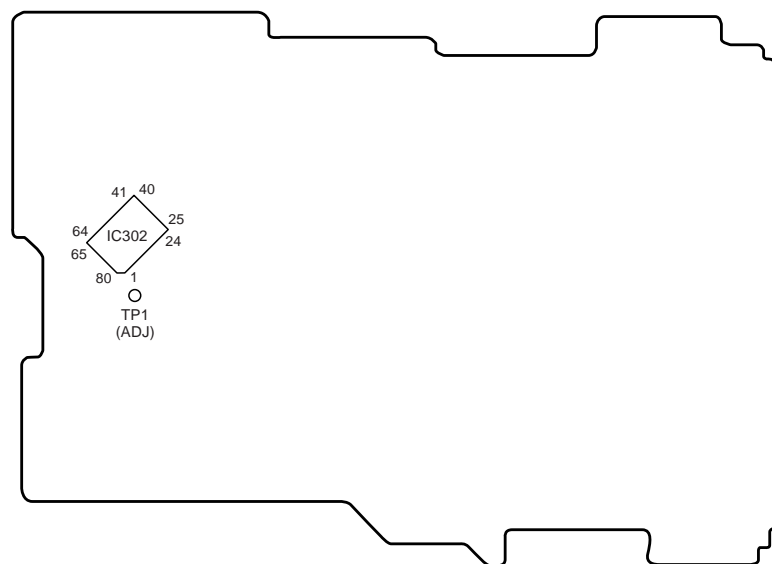
2. Turned Power switch on.
3. Put the disc (YEDS-18) in to play the number five track.  
Confirm that reading on frequency counter is 4.3218MHz.

#### Adjustment Location :

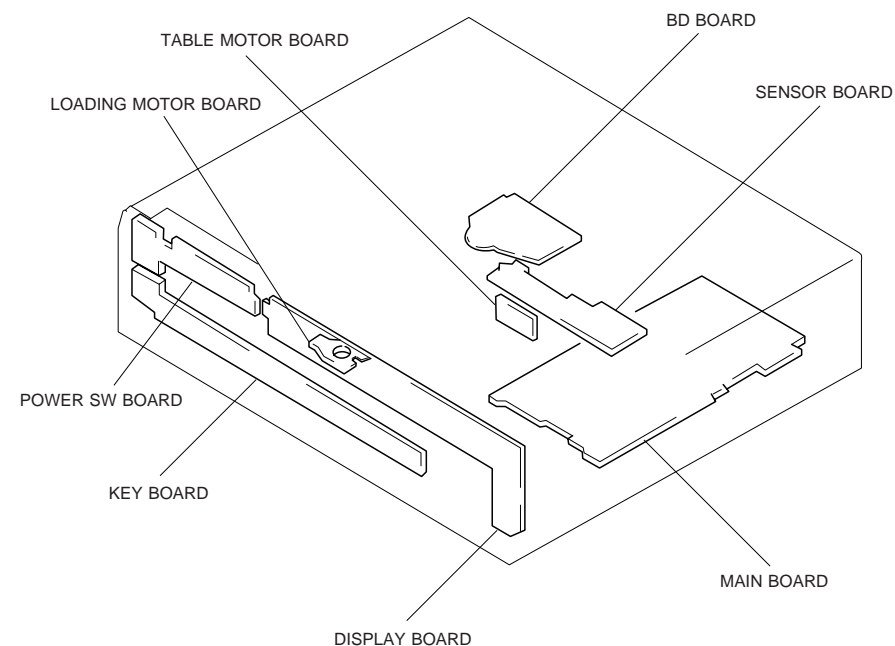
#### [ BD BOARD ] — Conductor Side —



#### [ MAIN BOARD ] — Conductor Side —

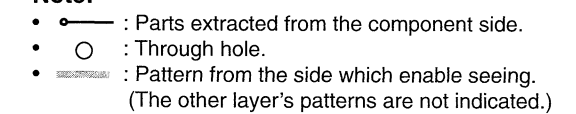


#### 4-1. CIRCUIT BOARDS LOCATION



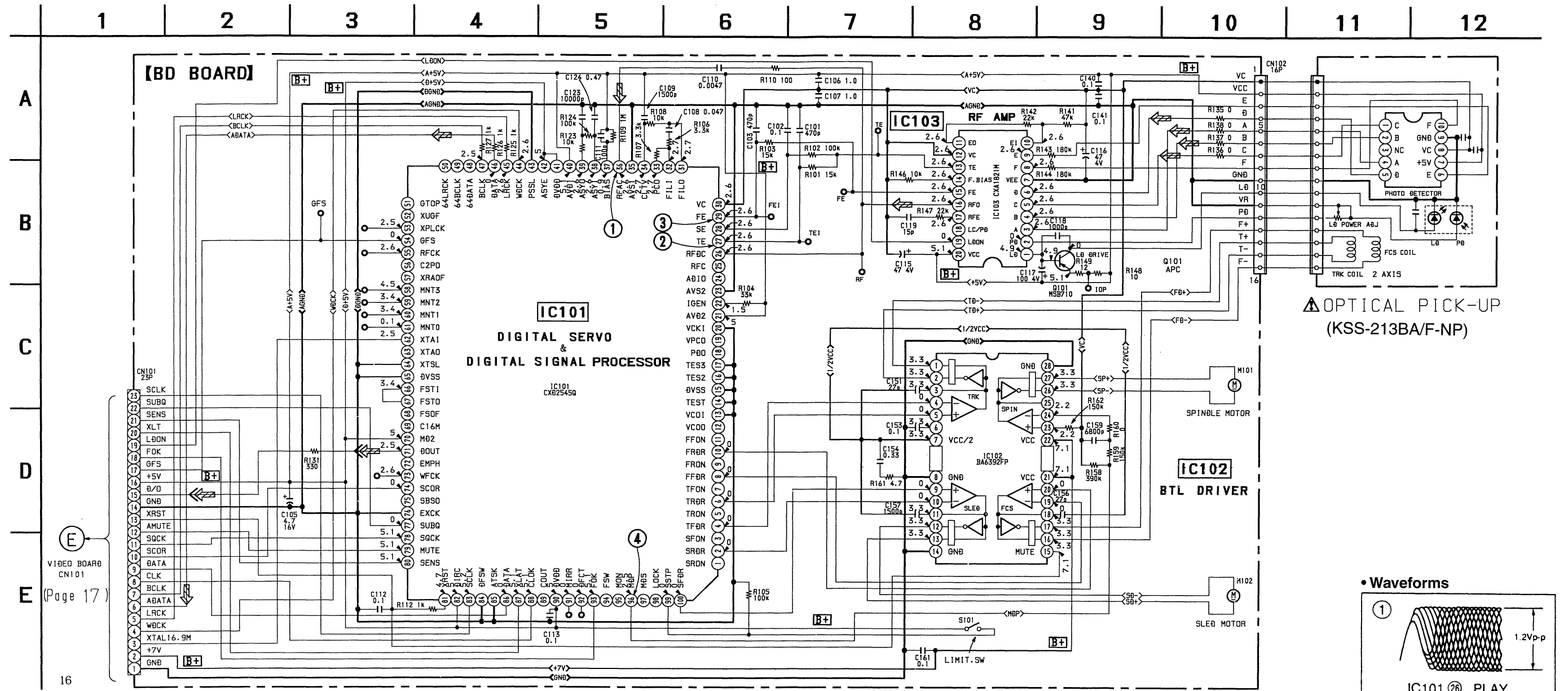
- See page 10 for Circuit Board Location.

- See page 10 for Circuit Board Location.



4-3. SCHEMATIC DIAGRAM – BD SECTION –

- See page 23 for IC Block Diagrams.
- See page 25 for IC Pin Functions. (IC101)

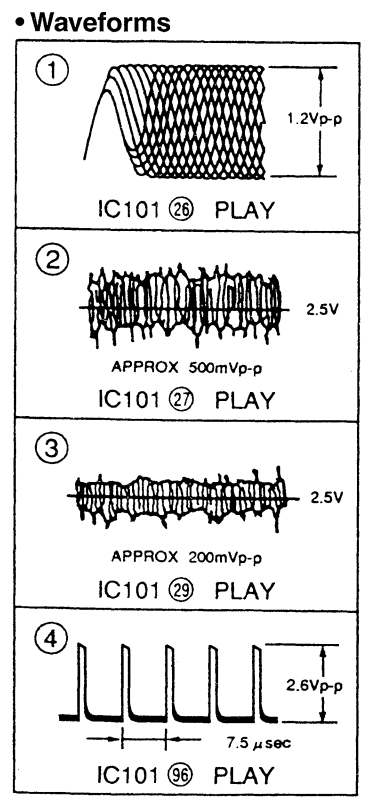


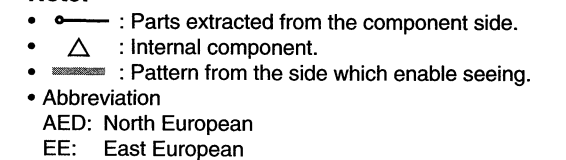
**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50VV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- **[B+]**: B+ Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- No mark: STOP
- Voltages are taken with a VOM (Input impedance  $10\text{M}\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with an oscilloscope. Voltage variations may be noted due to normal production tolerances.

- Circled numbers refer to waveforms.
- Signal path.
  - $\Rightarrow$  : CD
  - $\Rightarrow$  : Digital out

<b>Note :</b> The components identified by mark $\Delta$ or dotted line with mark $\Delta$ are critical for safety. Replace only with part number specified.	<b>Note :</b> Les composants identifiés par une marque $\Delta$ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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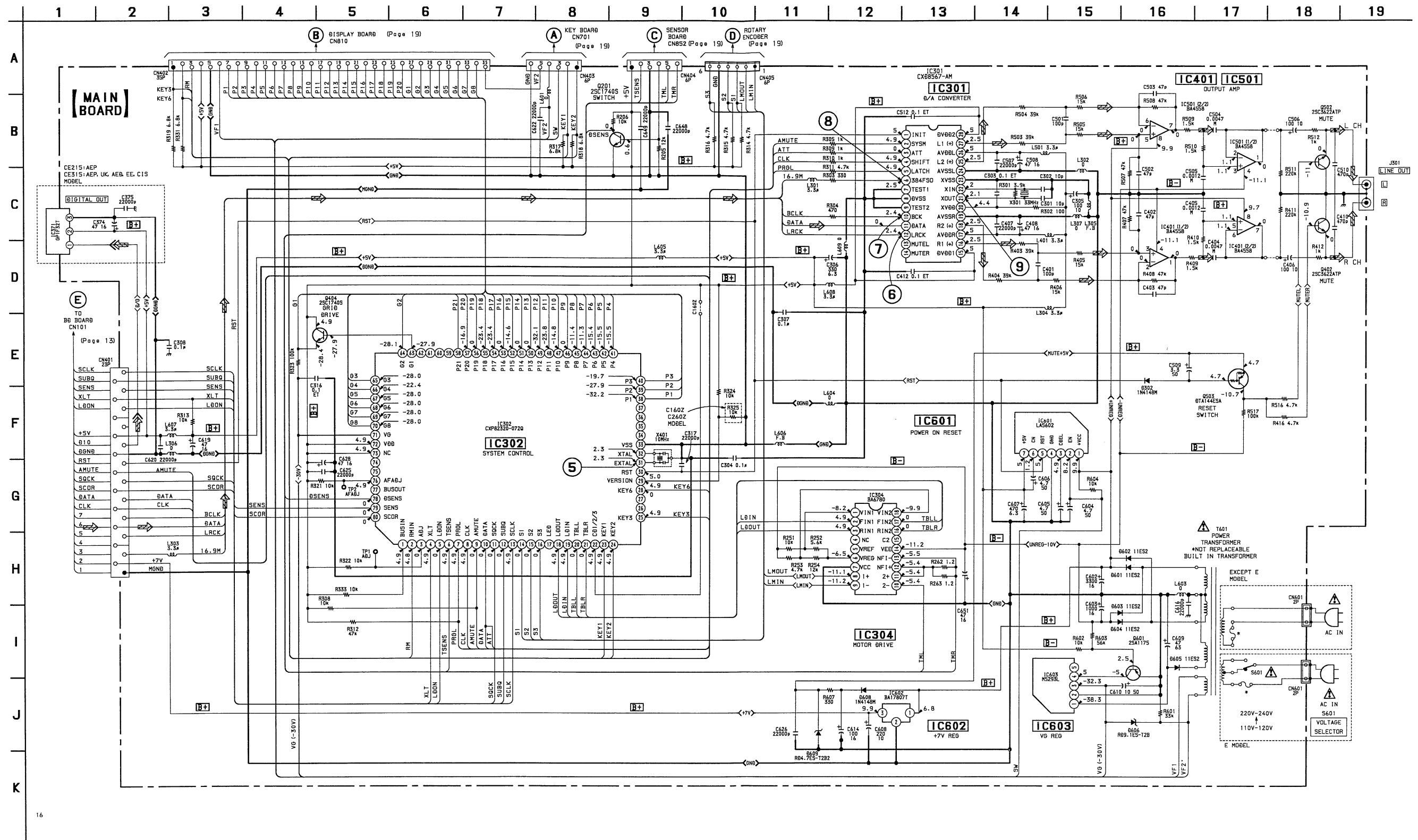






## 4-5. SCHEMATIC DIAGRAM – MAIN SECTION –

- See page 23 for IC Block Diagrams.
- See page 28 for IC Pin Function. (IC302)



## Note:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- $\triangle$ : Internal component.
- $\square$ : Panel designation.
- $\text{B+}$ : B+ Line.
- $\text{B-}$ : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.

No mark: STOP

- 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.

•  $\Rightarrow$ : CD  $\Rightarrow$ : Digital out

• Abbreviation

AED: North European

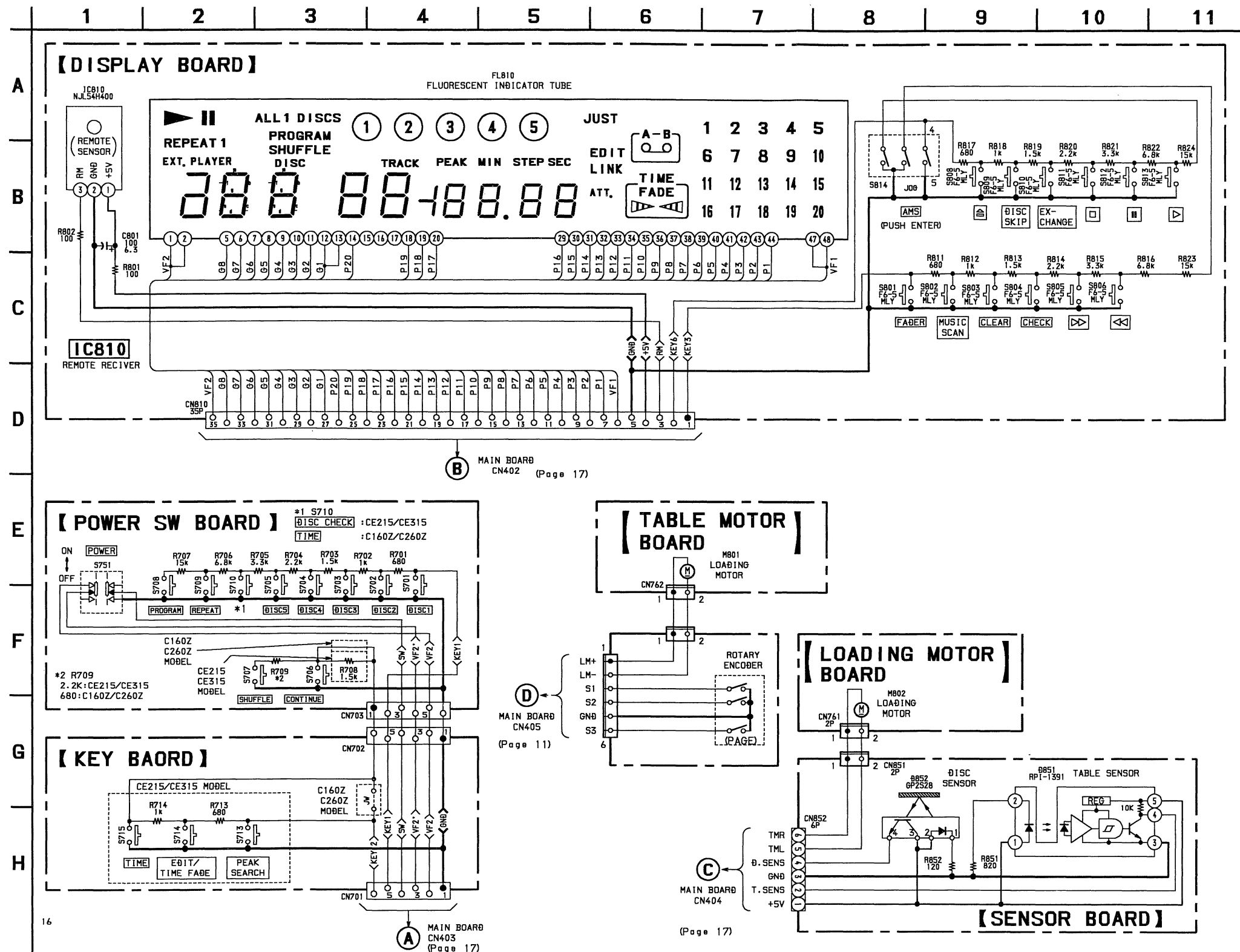
EE: East European

## Note:

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

## Note:

Les composants identifiés par mark  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

**Note:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{F}$  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and 1/4W or less unless otherwise specified.
- $\triangle$  : Internal component.
- $\square$  : Panel designation.
- $\text{B+}$  : B+ Line.
- $\text{B-}$  : B- Line.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- No mark: STOP
- 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.

**Note :**

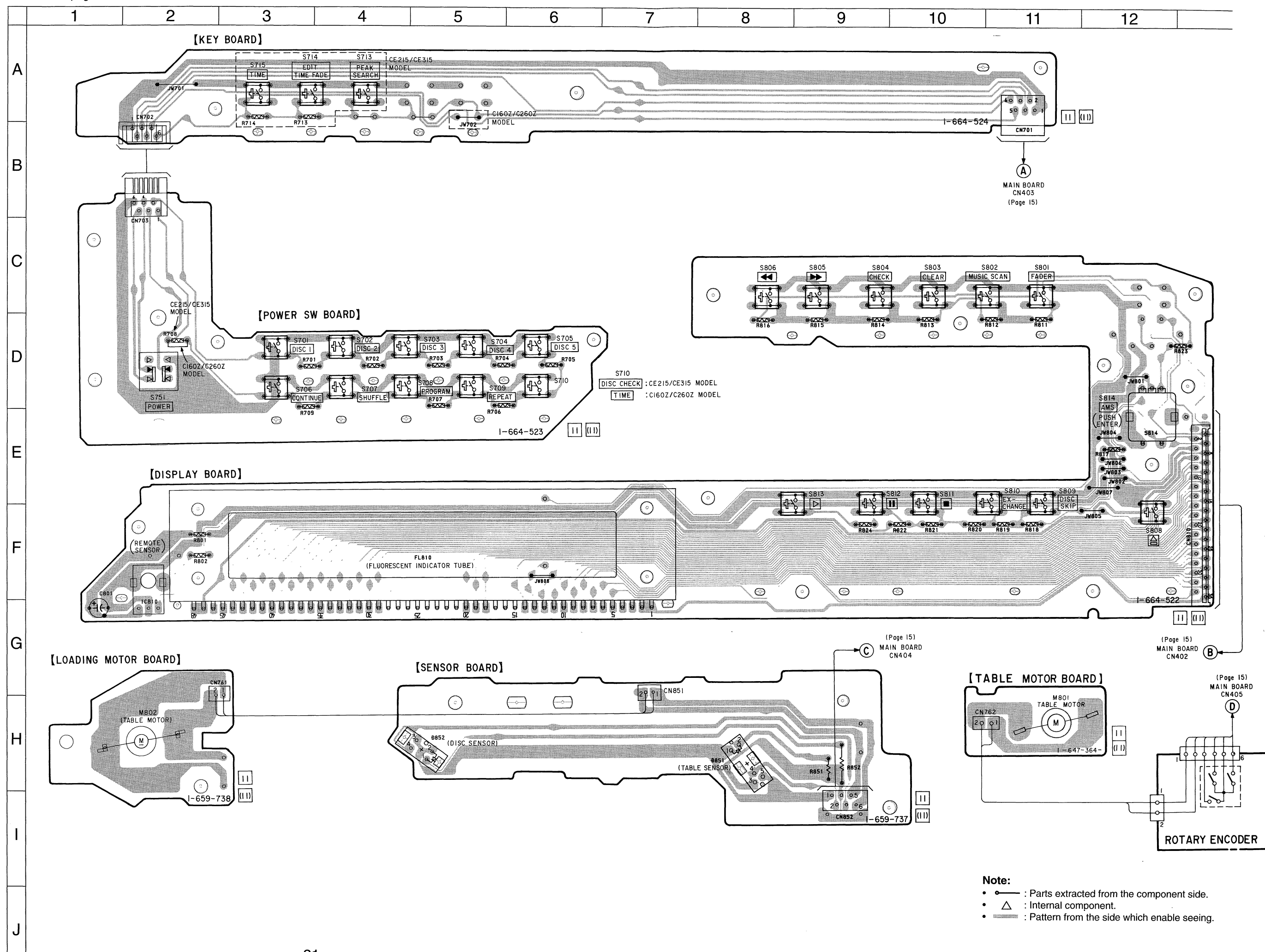
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

**Note :**

Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

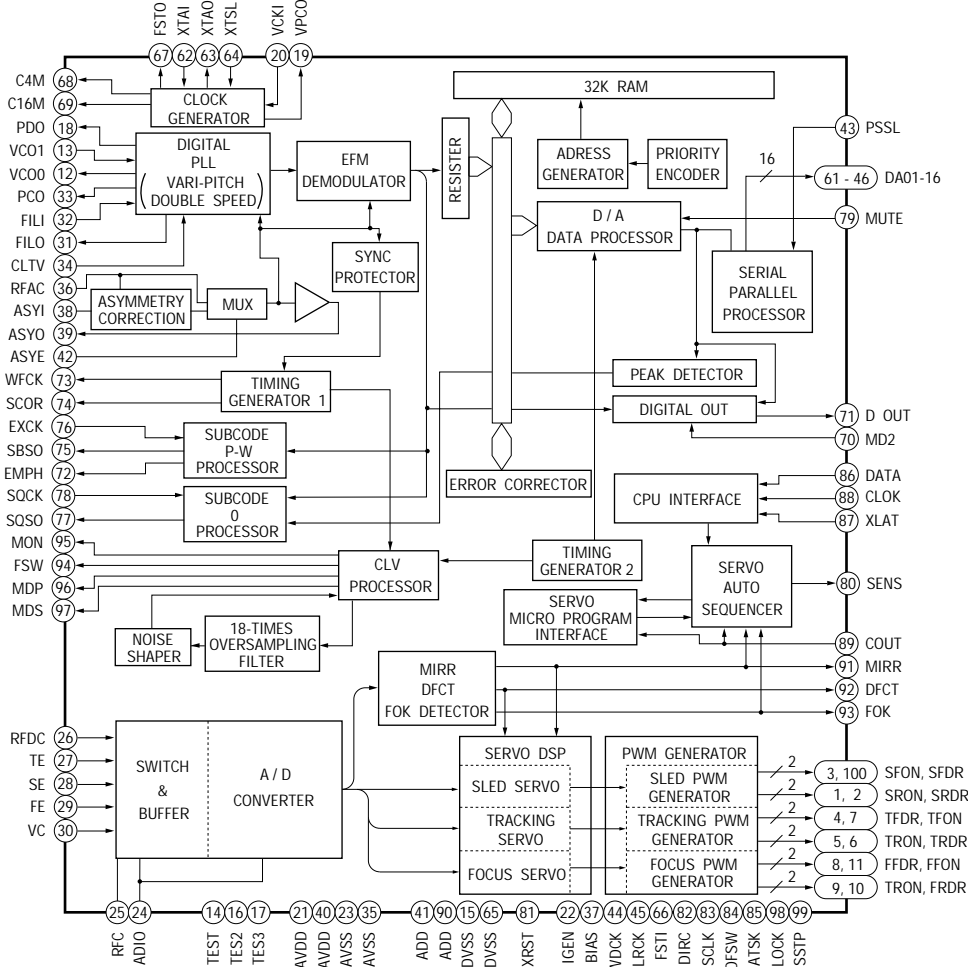
## 4-7. PRINTED WIRING BOARD – DISPLAY SECTION –

• See page 10 for Circuit Board Location.

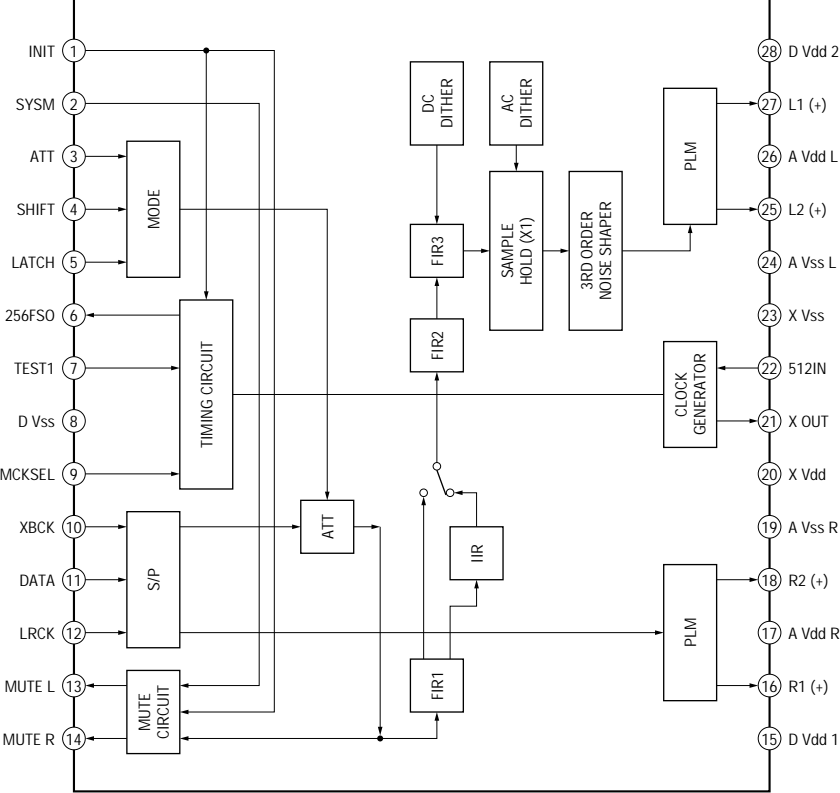


4-8. IC BLOCK DIAGRAMS

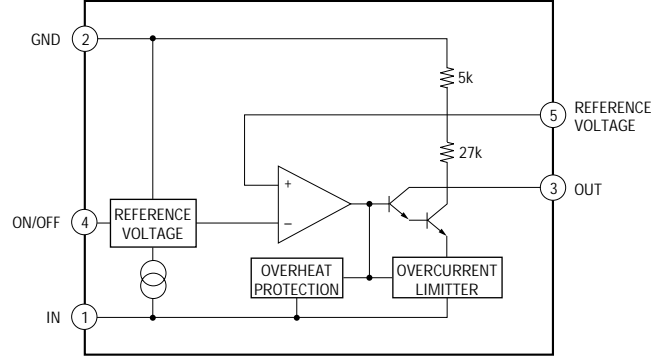
IC101 CXA2545Q



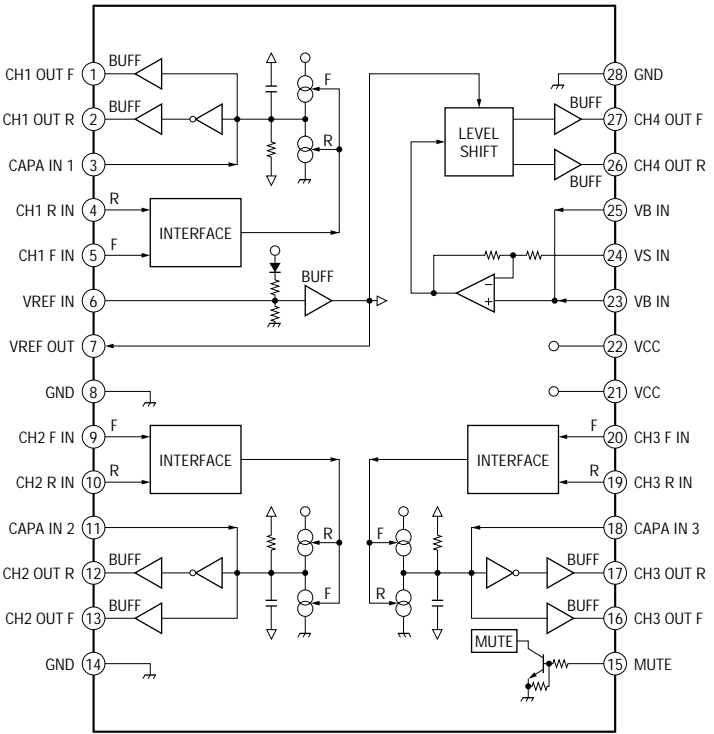
IC301 CXD8567AM



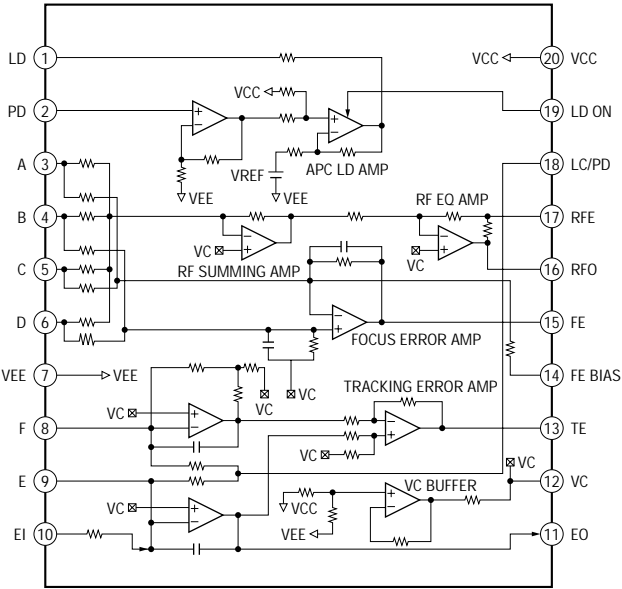
IC603 M5293L



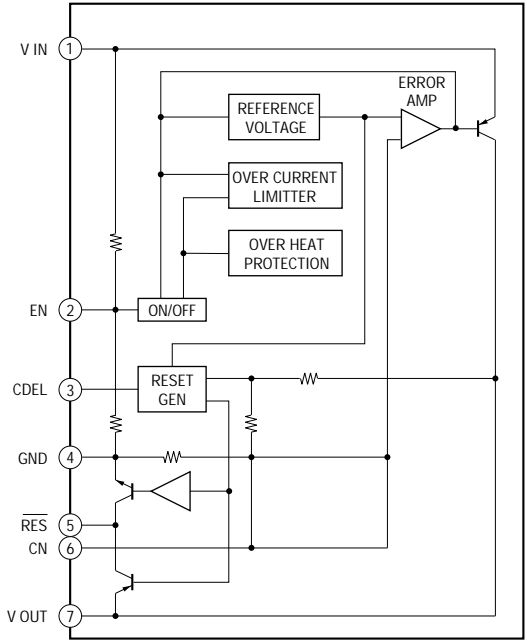
IC102 BA6392FP



IC103 CXA1821M



IC601 LA5602





## 4-9. IC PIN FUNCTIONS

### • IC101 DIGITAL SIGNAL PROCESSOR (CXD2545Q)

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 (Ground)
14	TEST	I	TEST pin connected normally to ground
15	DVss	—	Digital ground
16	TES2	I	TEST pin connected normally to ground
17	TES3	I	TEST pin connected normally to ground
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 (Ground)
21	AVD2	—	Analog power supply
22	IGEN	I	Power supply pin for operational amplifiers
23	AVS2	—	Analog ground
24	ADIO	I	(Not used)
25	RFC	O	(Not used)
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 ground
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

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
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 (Ground)
65	DVss	—	Digital ground
66	FSTI	I	2/3 divider output of pins 62, 63
67	FSTO	O	2/3 divider output of pins 62, 63
68	FSOF	O	(Not used)
69	C16M	O	16.9344 MHz output (Not used)
70	MD2	I	Digital-out ON/OFF control pin (+5V)
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 (Ground)
77	SUBQ	O	Sub-Q 80-bit output
78	SQCK	I	Muting selection pin
79	MUTE	I	SENS output
80	SENS	O	System reset

Pin No.	Pin Name	I/O	Function
81	XRST	I	System reset
82	DIRC	I	Used in 1-track jump mode (+5v)
83	SCLK	I	SENS serial data read-out clock
84	DFSW	I	DFCT selection pin (Ground)
85	ATSK	I	Input pin for anti-shock (Ground)
86	DATA	I	Serial data input, supplied from CPU
87	XLAT	I	Latch input, supplied from CPU
88	CLOCK	I	Serial data transfer clock input, supplied from CPU
89	COUT	O	Numbers of track counted signal output (Not used)
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 (Not used)
95	MON	O	Output to control ON/OFF of spindle motor (Not used)
96	NDP	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

• IC302 SYSTEM CONTROL (CXP82324-082Q)

Pin No.	Pin Name	I/O	Function
1	BUS IN	I	Not used. (Pull up)
2	RM IN	I	Remote control signal input
3	ADJ	I	ADJ mode setting pin
4	XLT	O	CXD2545 latch output
5	LD ON	O	Laser diode ON output
6	TSENS	I	Table position sensor input
7	PRGL	O	CXD8567 latch output
8	CLK	O	CXD2545/CXD8567 serial clock output
9	AMUTE	O	Mute output pin
10	DATA	O	CXD2545/CXD8567 serial data output
11	SQCK	O	Subcode Q read clock
12	SUBQ	I	Subcode Q read data input
13	SCLK	O	CXD2545 data read serial clock output
14	S1	I	CDM27 table rotary encoder input 1
15	S2	I	CDM27 table rotary encoder input 2
16	S3	I	CDM27 table rotary encoder input 3
17	LED	O	Not used. (Open)
18	LDOUT	O	Loading-out output
19	LDIN	O	Loading-in output
20	TBLL	O	Rotary table rotation counter-clockwise rotation output
21	TBLR	O	Rotary table rotation clockwise rotation output
22	CD123	I	Not used. (Pull up)
23	KEY1	I	A/D input 1 for key input
24	KEY2	I	A/D input 2 for key input
25	KEY3	I	A/D input 3 for key input
26	KEY4	O	Not used. (Open)
27	KEY5	O	Not used. (Open)
28	KEY6	I	A/D input 6 for key input
29	VERSION	I	Version setting input pin
30	XRST	I	Reset input
31	EXTAL	—	Oscillator connection pin
32	XTAL	—	Oscillator connection pin
33	Vss	—	Ground
34 to 37	NC	O	Not used. (Open)
38	P1	O	FL display tube segment output 1
39	P2	O	FL display tube segment output 2
40	P3	O	FL display tube segment output 3

Pin No.	Pin Name	I/O	Function
41	P4	O	FL display tube segmant output 4
42	P5	O	FL display tube segmant output 5
43	P6	O	FL display tube segmant output 6
44	P7	O	FL display tube segmant output 7
45	P8	O	FL display tube segmant output 8
46	P9	O	FL display tube segmant output 9
47	P10	O	FL display tube segmant output 10
48	P11	O	FL display tube segmant output 11
49	P12	O	FL display tube segmant output 12
50	P13	O	FL display tube segmant output 13
51	P14	O	FL display tube segmant output 14
52	P15	O	FL display tube segmant output 15
53	P16	O	FL display tube segmant output 16
54	P17	O	FL display tube segmant output 17
55	P18	O	FL display tube segmant output 18
56	P19	O	FL display tube segmant output 19
57	P20	O	FL display tube segmant output 20
58 to 62	NC	O	Not used. (Open)
63	G1	O	FL display tube grid output 1
64	G2	O	FL display tube grid output 2
65	G3	O	FL display tube grid output 3
66	G4	O	FL display tube grid output 4
67	G5	O	FL display tube grid output 5
68	G6	O	FL display tube grid output 6
69	G7	O	FL display tube grid output 7
70	G8	O	FL display tube grid output 8
71	VG	—	FL display tube filament voltage (–30 V)
72	VDD	—	+5V
73	NC	—	+5V
74	NC	O	Not used. (Open)
75	NC	O	Not used. (Open)
76	AFADJ	I	AFADJ mode setting pin
77	BUS OUT	O	Not used. (Open)
78	DSSENS	I	Disc sensor input
79	SENS	I	CXD2545 internal state monitor input
80	SCOR	I	Subcode sync. input

## SECTION 5 EXPLODED VIEWS

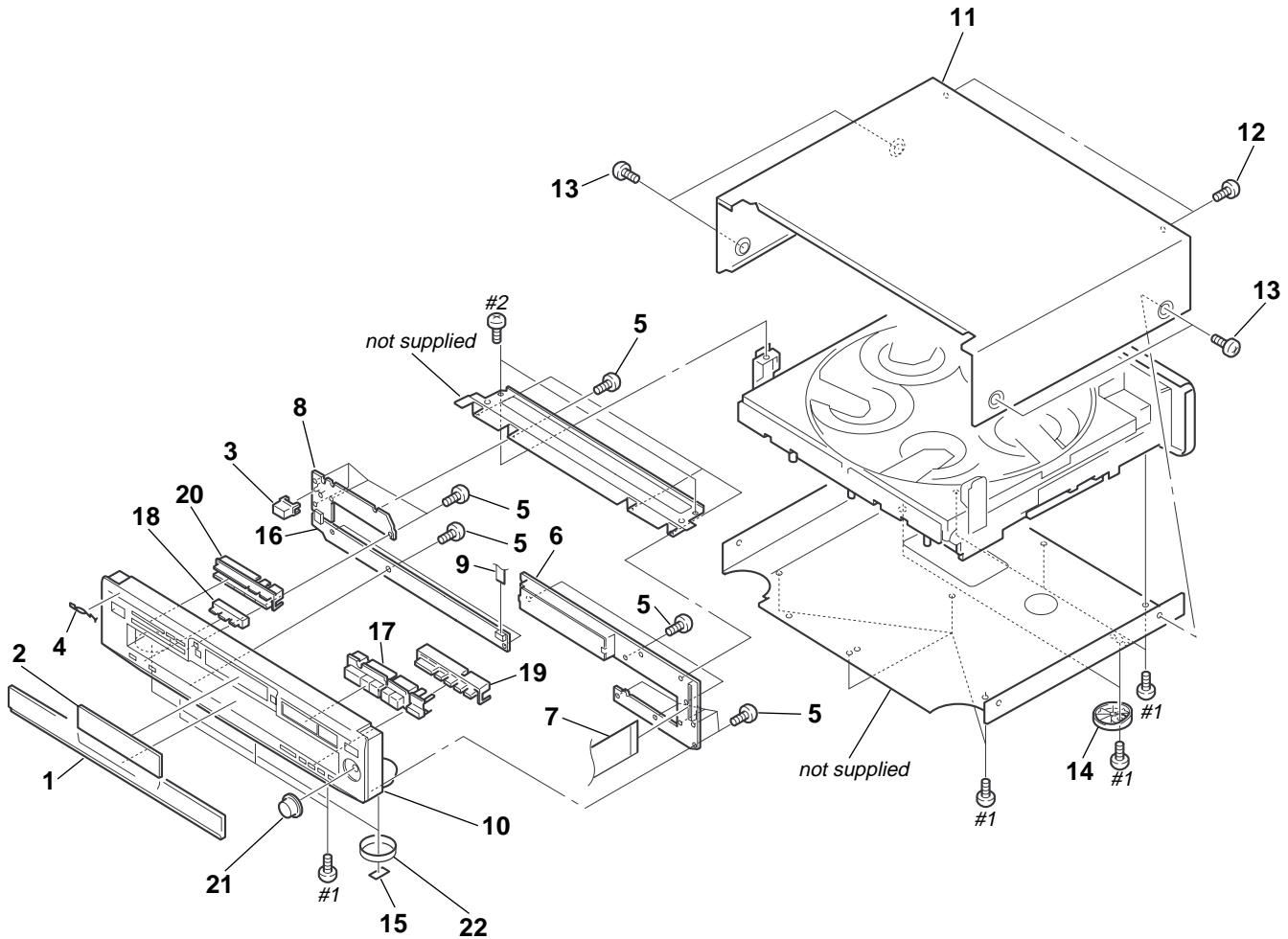
### NOTE:

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- 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.
- Abbreviation  
CND : Canadian model  
EE : East European model  
AUS : Australian model  
AED: North European model  
SP: Singapore model

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

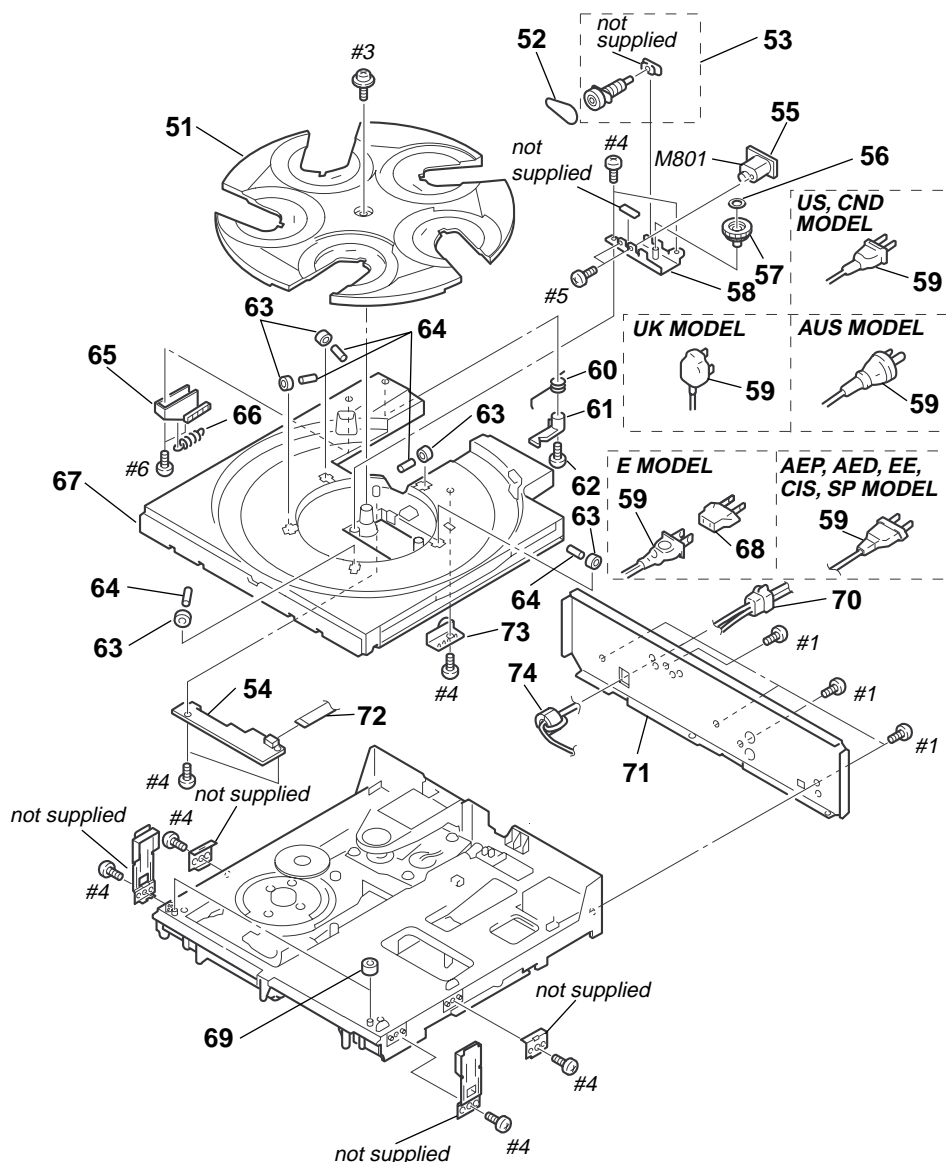
Les composants identifiés par une marque  $\triangle$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 5-1. FRONT PANEL AND CASE SECTION



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
1	4-987-780-01	PANEL, LOADING		* 11	4-978-492-11	CASE	
2	4-987-779-01	WINDOW (FL) (C160Z/CE215)		12	3-703-685-21	SCREW (+BV 3X8)	
2	4-987-779-11	WINDOW (FL) (C260Z/CE315)		13	3-704-366-01	SCREW (CASE) (M3X8)	
3	4-977-589-01	BUTTON (POWER)		14	X-4946-618-1	FOOT ASSY (US,CND)	
4	3-008-600-01	EMBLEM (5-AR), SONY		14	X-4946-641-1	FOOT ASSY (EXCEPT US,CND)	
5	4-951-620-01	SCREW (2.6X8), +BVTP		* 15	4-978-398-21	CUSHION	
* 6	1-664-522-11	DISPLAY BOARD		* 16	1-664-524-11	KEY BOARD	
7	1-777-837-11	WIRE (FLAT TYPE) (35 CORE)		17	4-987-775-01	BUTTON (PLAY)	
* 8	1-664-523-11	POWER SW BOARD		18	4-987-776-01	BUTTON (FUNC)(CE215/CE315)	
9	1-777-838-11	WIRE (FLAT TYPE) (6 CORE)		19	4-987-777-01	BUTTON (FF)	
10	4-987-773-01	PANEL, FRONT (CE215)		20	4-987-774-01	BUTTON (MODE)	
10	4-987-773-11	PANEL, FRONT (CE315)		21	4-987-994-01	KNOB (AMS)	
10	4-987-773-21	PANEL, FRONT (C160Z)		22	4-977-593-01	RING (DIA. 50), ORNAMENTAL	
10	4-987-773-71	PANEL, FRONT (C260Z)					(EXCEPT US,CND)

## 5-2. BACK PANEL AND DISC TABLE SECTION

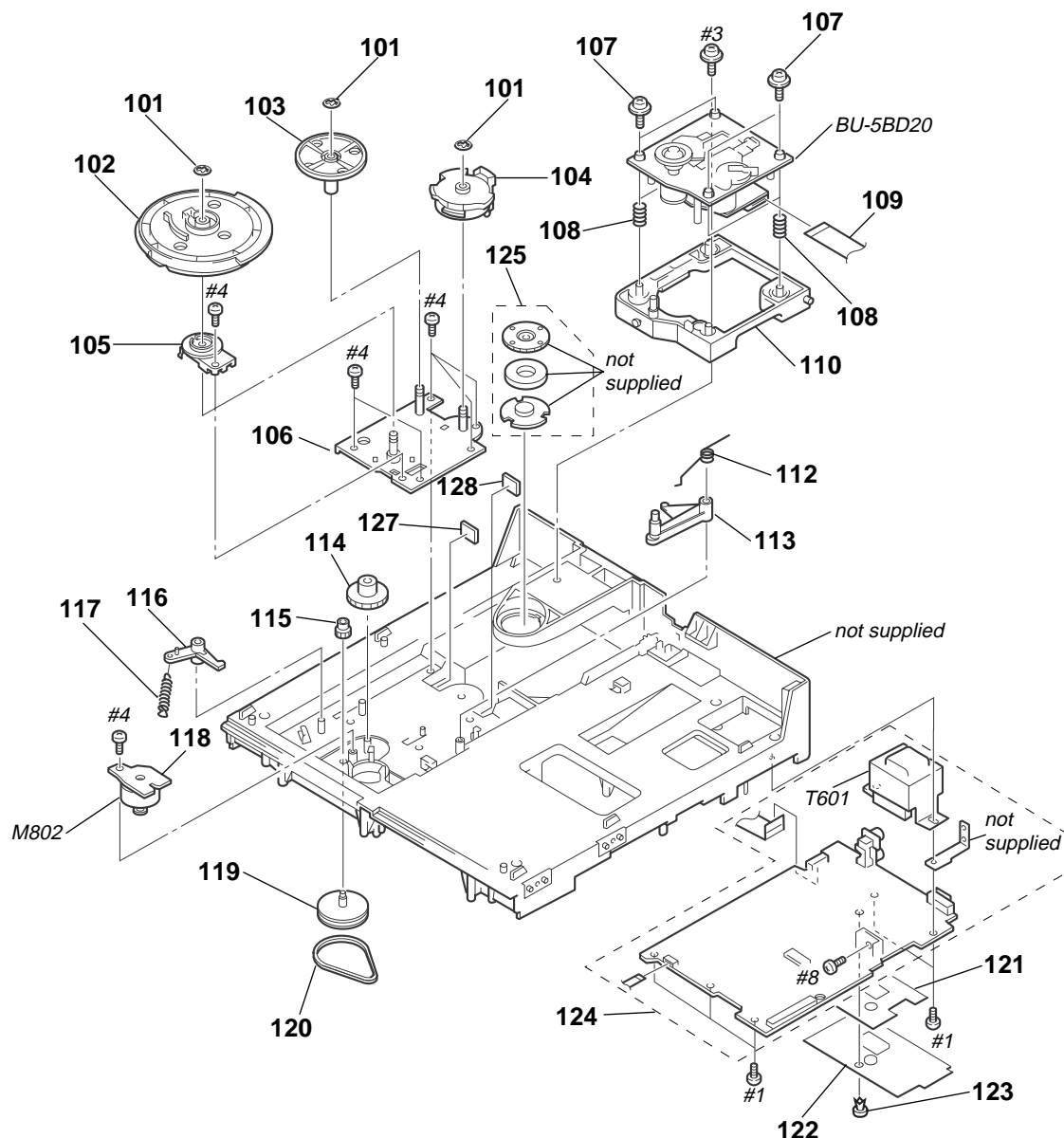


Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
51	4-957-299-11	TABLE (B), DISC		△ 68	1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
52	4-957-304-01	BELT (RM)		* 69	4-951-619-01	CUSHION (A)	
53	X-4943-479-1	GEAR (ROTARY A) ASSY		* 70	3-703-244-00	BUSHING (2104), CORD (EXCEPT E)	
* 54	1-659-737-11	SENSOR BOARD		* 70	3-703-571-11	BUSHING (S) (4516), CORD (E)	
* 55	1-647-364-11	TABLE MOTOR BOARD		* 71	4-987-782-01	PANEL, BACK (CE215:US)	
				* 71	4-987-782-11	PANEL, BACK (CE215:CND)	
56	3-325-697-01	WASHER		* 71	4-987-782-21	PANEL, BACK (CE215:AEP)	
57	4-957-284-01	GEAR (ROTARY B)		* 71	4-987-782-31	PANEL, BACK (CE215:AUS)	
58	X-4943-477-1	BRACKET (RM) ASSY		* 71	4-987-782-41	PANEL, BACK (C160Z:US)	
△ 59	1-558-943-61	CORD, POWER (E)		* 71	4-987-783-01	PANEL, BACK (CE315:AEP,AED,EE,CIS)	
△ 59	1-575-651-21	CORD, POWER (AEP,AED,EE,CIS,SP)		* 71	4-987-783-11	PANEL, BACK (CE315:UK)	
△ 59	1-590-926-11	CORD, POWER (US,CND)		* 71	4-987-783-21	PANEL, BACK (CE315:SP)	
△ 59	1-696-845-11	CORD, POWER (AUS)		* 71	4-987-783-31	PANEL, BACK (CE315:AUS)	
△ 59	1-751-529-11	CORD, POWER (UK)		* 71	4-987-783-41	PANEL, BACK (CE315:E)	
60	4-957-293-01	SPRING (RACK RELEASE)		* 71	4-987-783-51	PANEL, BACK (CE315:US)	
61	4-957-291-11	LEVER (RACK RELEASE)		* 71	4-987-783-61	PANEL, BACK (CE315:CND)	
62	4-957-868-01	SCREW (+PTPWH 2.6X20)		* 71	4-987-783-71	PANEL, BACK (C260Z:US)	
63	X-4924-457-1	ROLLER ASSY		* 71	4-987-783-81	PANEL, BACK (C260Z:CND)	
64	4-934-376-01	SHAFT (ROLLER)		72	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
65	4-957-292-11	SLIDER (RACK)		73	X-4943-480-1	BRACKET (ROLLER D) ASSY	
66	4-957-294-01	SPRING (D.T), TENSION		74	1-500-455-11	CORE, FERRITE	
67	4-957-298-01	TABLE (A), DISC		M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)	

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 5-3. CHASSIS SECTION



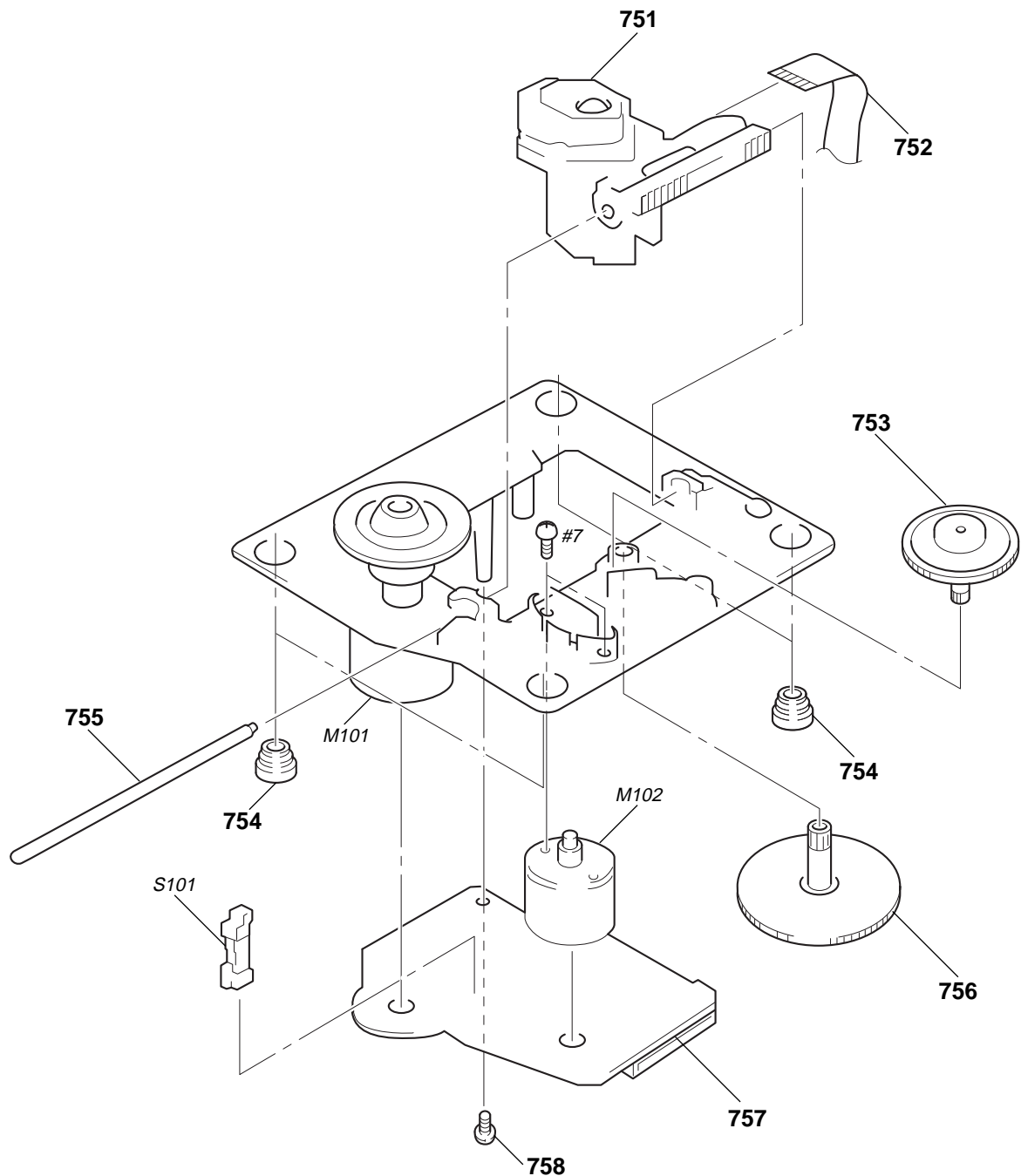
Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
101	4-957-283-01	WASHER (5), STOPPER		120	4-944-490-01	BELT (TIMING)	
102	4-957-288-01	GEAR (MAIN)		* 121	4-957-555-01	SHEET, INSULATING (EXCEPT US,CND)	
103	4-957-287-01	GEAR (REV)		* 122	4-957-556-01	SHEET, INSULATING (EXCEPT US,CND)	
104	4-957-286-01	GEAR (U/D)		123	3-531-576-11	RIVET (EXCEPT US,CND)	
105	1-466-996-11	ENCODER, ROTARY		* 124	A-4699-469-A	MAIN BOARD, COMPLETE (C160Z/C260Z)	
106	X-4946-195-1	BRACKET (GEAR) ASSY		* 124	A-4699-472-A	MAIN BOARD, COMPLETE (CE215:AUS/CE315:AUS,SP)	
107	4-933-134-01	SCREW (+PTPWH M2.6X6)		* 124	A-4699-476-A	MAIN BOARD, COMPLETE (CE215:US,CND/CE315:US,CND)	
108	4-948-503-01	SPRING (BU), COMPRESSION		* 124	A-4699-477-A	MAIN BOARD, COMPLETE (CE215:AEP/CE315:AEP,UK,AED,EE,CIS)	
109	1-765-443-11	WIRE (FLAT TYPE) (23 CORE)		* 124	A-4699-565-A	MAIN BOARD, COMPLETE (CE315:E)	
110	4-957-289-12	HOLDER (BU)		125	1-452-838-12	MAGNET (ASSY)	
112	4-957-281-01	SPRING (LOCK LEVER)		* 127	4-981-731-01	CUSHION (U/D)	
113	4-957-279-11	LEVER, LOCK		* 128	4-981-731-11	CUSHION (U/D)	
114	4-957-303-01	GEAR (LOADING C)		△ T601	1-429-956-11	TRANSFORMER, POWER (US,CND)	
115	4-934-375-01	GEAR (LOADING B)		△ T601	1-431-076-11	TRANSFORMER, POWER (EXCEPT US,CND,E)	
116	4-957-285-01	LEVER, SET		△ T601	1-431-168-11	TRANSFORMER, POWER (E)	
117	4-962-087-01	SPRING (S), TENSION		M802	A-4660-914-A	MOTOR ASSY (LOADING)	
* 118	1-659-738-11	LOADING MOTOR BOARD					
119	X-4941-529-1	PULLEY ASSY					

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.



5-4. BASE UNIT SECTION (BU-5BD20)



Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
△ 751	8-848-379-31	OPTICAL PICK UP KSS-213BA/F-NP		* 757	A-4673-510-A	BD BOARD, COMPLETE	
752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)		758	4-951-620-01	SCREW (2.6X8), +BVTP	
753	4-917-567-01	GEAR (M)		M101	X-4917-523-3	MOTOR ASSY (SPINDLE)	
754	4-951-940-01	INSULATOR (BU)		M102	X-4917-504-1	MOTOR ASSY (SLED)	
755	4-917-565-01	SHAFT, SLED		S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
756	4-917-564-01	GEAR (P), FLATNESS					

The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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## SECTION 6 ELECTRICAL PARTS LIST

**BD**

**DISPLAY**

### NOTE:

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

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

Les composants identifiés par une marque  $\Delta$  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- 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.
- **RESISTORS**  
All resistors are in ohms  
METAL: Metal-film resistor  
F : nonflammable
- **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
- **Abbreviation**  
CND : Canadian model  
EE : East European model  
AUS : Australian model  
AED: North European model  
SP: Singapore model

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
*	A-4673-510-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 GLAZE 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 GLAZE 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	1-164-346-11	CERAMIC CHIP 1uF 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	1-163-145-00	CERAMIC CHIP 0.0015uF 5% 50V		R109	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
C110	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V		R110	1-216-025-00	METAL GLAZE 100 5% 1/10W	
C111	1-163-251-11	CERAMIC CHIP 100PF 5% 50V		R112	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
C112	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R123	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C113	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R124	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
C115	1-126-607-11	ELECT CHIP 47uF 20% 4V		R125	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
C116	1-126-607-11	ELECT CHIP 47uF 20% 4V		R126	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
C117	1-126-209-11	ELECT 100uF 20% 4V		R127	1-216-049-11	METAL GLAZE 1K 5% 1/10W	
C118	1-163-275-11	CERAMIC CHIP 0.001uF 5% 50V		R131	1-216-037-00	METAL CHIP 330 5% 1/10W	
C119	1-163-231-11	CERAMIC CHIP 15PF 5% 50V		R135	1-216-295-00	CONDUCTOR, CHIP (2012)	
C123	1-164-232-11	CERAMIC CHIP 0.01uF 50V		R136	1-216-295-00	CONDUCTOR, CHIP (2012)	
C124	1-164-005-11	CERAMIC CHIP 0.47uF 25V		R137	1-216-295-00	CONDUCTOR, CHIP (2012)	
C140	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R138	1-216-295-00	CONDUCTOR, CHIP (2012)	
C141	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R141	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
C151	1-163-237-11	CERAMIC CHIP 27PF 5% 50V		R142	1-216-081-00	METAL CHIP 22K 5% 1/10W	
C153	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R143	1-216-103-00	METAL CHIP 180K 5% 1/10W	
C154	1-164-336-11	CERAMIC CHIP 0.33uF 25V		R144	1-216-103-00	METAL CHIP 180K 5% 1/10W	
C156	1-163-237-11	CERAMIC CHIP 27PF 5% 50V		R146	1-216-073-00	METAL CHIP 10K 5% 1/10W	
C157	1-163-145-00	CERAMIC CHIP 0.0015uF 5% 50V		R147	1-216-081-00	METAL CHIP 22K 5% 1/10W	
C159	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V		R148	1-216-001-00	METAL CHIP 10 5% 1/10W	
C161	1-163-038-00	CERAMIC CHIP 0.1uF 25V		R149	1-216-003-11	METAL GLAZE 12 5% 1/10W	
		< CONNECTOR >		R158	1-216-111-00	METAL GLAZE 390K 5% 1/10W	
CN101	1-770-072-11	CONNECTOR,(LIF(NON-ZIF))FFC23P		R159	1-216-101-00	METAL CHIP 150K 5% 1/10W	
CN102	1-770-014-11	CONNECTOR, FFC/FPC 16P		R160	1-216-295-00	CONDUCTOR, CHIP (2012)	
		< IC >		R161	1-216-308-00	METAL CHIP 4.7 5% 1/10W	
IC101	8-752-369-78	IC CXD2545Q		R162	1-216-101-00	METAL CHIP 150K 5% 1/10W	
IC102	8-759-176-09	IC BA6392FP				< SWITCH >	
IC103	8-752-072-45	IC CXA1821M		S101	1-572-085-11	SWITCH, LEAF (LIMIT)	
		< TRANSISTOR >		*****			
Q101	8-729-010-08	TRANSISTOR MSB710-R		*	1-664-522-11	DISPLAY BOARD	
				*****			
						< CAPACITOR >	
				C801	1-126-968-11	ELECT 100uF 20% 6.3V	

# DISPLAY

# KEY

# LOADING MOTOR

# MAIN

Ref. No.	Part No.	Description	Remarks
		< CONNECTOR >	
* CN810	1-691-958-11	SOCKET, CONNECTOR 35P	
		< FILTER >	
FL810	1-517-616-11	TUBE, FLUORESCENT INDICATOR	
		< IC >	
IC810	8-759-459-84	IC NJL56H400	
		< RESISTOR >	
R801	1-247-807-31	CARBON 100 5% 1/4W	
R802	1-247-807-31	CARBON 100 5% 1/4W	
R811	1-249-415-11	CARBON 680 5% 1/4W F	
R812	1-249-417-11	CARBON 1K 5% 1/4W F	
R813	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R814	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R815	1-247-843-11	CARBON 3.3K 5% 1/4W	
R816	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R817	1-249-415-11	CARBON 680 5% 1/4W F	
R818	1-249-417-11	CARBON 1K 5% 1/4W F	
R819	1-249-419-11	CARBON 1.5K 5% 1/4W F	
R820	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R821	1-247-843-11	CARBON 3.3K 5% 1/4W	
R822	1-249-427-11	CARBON 6.8K 5% 1/4W F	
R823	1-249-431-11	CARBON 15K 5% 1/4W	
R824	1-249-431-11	CARBON 15K 5% 1/4W	
		< SWITCH >	
S801	1-554-303-21	SWITCH, TACTILE (FADER)	
S802	1-554-303-21	SWITCH, TACTILE (MUSIC SCAN)	
S803	1-554-303-21	SWITCH, TACTILE (CLEAR)	
S804	1-554-303-21	SWITCH, TACTILE (CHECK)	
S805	1-554-303-21	SWITCH, TACTILE (▶▶)	
S806	1-554-303-21	SWITCH, TACTILE (◀◀)	
S808	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE)	
S809	1-554-303-21	SWITCH, TACTILE (DISC SKIP)	
S810	1-554-303-21	SWITCH, TACTILE (EX-CHANGE)	
S811	1-554-303-21	SWITCH, TACTILE (■)	
S812	1-554-303-21	SWITCH, TACTILE (■)	
S813	1-554-303-21	SWITCH, TACTILE (▷)	
S814	1-473-957-11	ENCODER, ROTARY (AMS)	
*****			
* 1-664-524-11	KEY BOARD	*****	
		< CONNECTOR >	
CN701	1-568-849-11	SOCKET, CONNECTOR 6P	
CN702	1-750-195-11	CONNECTOR, BOARD TO BOARD 6P	
		< RESISTOR >	
R713	1-249-415-11	CARBON 680 5% 1/4W F (CE215/CE315)	
R714	1-249-417-11	CARBON 1K 5% 1/4W F (CE215/CE315)	

Ref. No.	Part No.	Description	Remarks
		< SWITCH >	
S713	1-554-303-21	SWITCH, TACTILE (PEAK SEARCH) (CE215/CE315)	
S714	1-554-303-21	SWITCH, TACTILE (EDIT/TIME FADE) (CE215/CE315)	
S715	1-554-303-21	SWITCH, TACTILE (TIME)(CE215/CE315)	
*****			
* 1-659-738-11	LOADING MOTOR BOARD	*****	
		< MOTOR >	
M802	A-4660-914-A	MOTOR ASSY (LOADING)	
*****			
* A-4699-469-A	MAIN BOARD, COMPLETE (C160Z/C260Z)	*****	
* A-4699-472-A	MAIN BOARD, COMPLETE	*****	
		(CE215:AUS/CE315:AUS,SP)	
* A-4699-476-A	MAIN BOARD, COMPLETE	*****	
		(CE215:US,CND/CE315:US,CND)	
* A-4699-477-A	MAIN BOARD, COMPLETE	*****	
		(CE215:AEP/CE315:AEP,UK,AED,EE,CIS)	
* A-4699-565-A	MAIN BOARD, COMPLETE (CE315:E)	*****	
7-685-871-01	SCREW +BVTT 3X6 (S)		
		< CAPACITOR >	
C301	1-162-199-31	CERAMIC 10PF 5% 50V	
C302	1-162-199-31	CERAMIC 10PF 5% 50V	
C303	1-164-159-11	CERAMIC 0.1uF 50V	
C304	1-164-159-11	CERAMIC 0.1uF 50V	
C305	1-124-443-00	ELECT 100uF 20% 10V	
C306	1-124-442-00	ELECT 330uF 20% 6.3V	
C307	1-164-159-11	CERAMIC 0.1uF 50V	
C308	1-164-159-11	CERAMIC 0.1uF 50V	
C316	1-164-159-11	CERAMIC 0.1uF 50V	
C317	1-161-494-00	CERAMIC 0.022uF 25V	
C374	1-104-664-11	ELECT 47uF 20% 16V (CE215:AEP/CE315:AEP,UK,AED,EE,CIS)	
C375	1-161-494-00	CERAMIC 0.022uF 25V (CE215:AEP/CE315:AEP,UK,AED,EE,CIS)	
C401	1-162-282-31	CERAMIC 100PF 10% 50V	
C402	1-162-215-31	CERAMIC 47PF 5% 50V	
C403	1-162-215-31	CERAMIC 47PF 5% 50V	
C404	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C405	1-130-472-00	MYLAR 0.0012uF 5% 50V	
C406	1-124-443-00	ELECT 100uF 20% 10V	
C407	1-161-494-00	CERAMIC 0.022uF 25V	
C408	1-104-664-11	ELECT 47uF 20% 16V	
C410	1-162-290-31	CERAMIC 470PF 10% 50V	
C412	1-164-159-11	CERAMIC 0.1uF 50V	
C501	1-162-282-31	CERAMIC 100PF 10% 50V	
C502	1-162-215-31	CERAMIC 47PF 5% 50V	
C503	1-162-215-31	CERAMIC 47PF 5% 50V	
C504	1-130-479-00	MYLAR 0.0047uF 5% 50V	
C505	1-130-472-00	MYLAR 0.0012uF 5% 50V	

# MAIN

Ref. No.	Part No.	Description	Remarks
C506	1-124-443-00	ELECT 100uF 20% 10V	
C507	1-161-494-00	CERAMIC 0.022uF 25V	
C508	1-104-664-11	ELECT 47uF 20% 16V	
C509	1-126-962-11	ELECT 3.3uF 20% 50V	
C510	1-162-290-31	CERAMIC 470PF 10% 50V	
C512	1-164-159-11	CERAMIC 0.1uF 50V	
C602	1-126-944-11	ELECT 3300uF 20% 16V	
C603	1-126-942-61	ELECT 1000uF 20% 16V	
C604	1-126-963-11	ELECT 4.7uF 20% 50V	
C605	1-126-963-11	ELECT 4.7uF 20% 50V	
C606	1-126-963-11	ELECT 4.7uF 20% 50V	
C607	1-126-941-11	ELECT 470uF 20% 6.3V	
C608	1-104-666-11	ELECT 220uF 20% 10V	
C609	1-124-918-11	ELECT 47uF 20% 63V	
C610	1-124-907-11	ELECT 10uF 20% 50V	
C614	1-104-665-11	ELECT 100uF 20% 16V	
C616	1-161-494-00	CERAMIC 0.022uF 25V	
C619	1-104-664-11	ELECT 47uF 20% 16V	
C620	1-161-494-00	CERAMIC 0.022uF 25V	
C622	1-161-494-00	CERAMIC 0.022uF 25V	
C625	1-161-494-00	CERAMIC 0.022uF 25V	
C626	1-161-494-00	CERAMIC 0.022uF 25V	
C628	1-104-664-11	ELECT 47uF 20% 16V	
C648	1-161-494-00	CERAMIC 0.022uF 25V	
C649	1-161-494-00	CERAMIC 0.022uF 25V	
C651	1-104-664-11	ELECT 47uF 20% 16V	
< CONNECTOR >			
CN401	1-750-640-11	CONNECTOR, FFC/FPC 23P	
CN402	1-764-411-11	PIN, CONNECTOR (PC BOARD) 35P	
CN403	1-568-849-11	SOCKET, CONNECTOR 6P	
* CN404	1-568-825-11	SOCKET, CONNECTOR 6P	
* CN601	1-573-047-11	PIN, CONNECTOR (PC BOARD) 2P	
< DIODE >			
D302	8-719-987-63	DIODE 1N4148M	
D601	8-719-200-82	DIODE 11ES2	
D602	8-719-200-82	DIODE 11ES2	
D603	8-719-200-82	DIODE 11ES2	
D604	8-719-200-82	DIODE 11ES2	
D605	8-719-200-82	DIODE 11ES2	
D606	8-719-923-60	DIODE MTZJ-T-77-9.1A	
D608	8-719-987-63	DIODE 1N4148M	
D609	8-719-010-34	DIODE UZ-4.7BSC	
< IC >			
IC301	8-759-362-47	IC CXD8567AM	
IC302	8-752-884-93	IC CXP82324-082Q	
IC304	8-759-356-03	IC BA6780	
IC371	8-749-921-12	IC GP1F32T (DIGITAL OUT) (CE215:AEP/CE315:AEP,UK,AED,EE,CIS)	
IC401	8-759-145-58	IC uPC4558C	
IC501	8-759-145-58	IC uPC4558C	
IC601	8-759-061-65	IC LA5602	
IC602	8-749-011-78	IC BA17807T	
IC603	8-759-633-42	IC M5293L	
< JACK >			
J301	1-770-719-11	JACK, PIN 2P (LINE OUT)	

Ref. No.	Part No.	Description	Remarks
< COIL >			
L301	1-410-503-11	INDUCTOR 3.3uH	
L302	1-412-473-21	INDUCTOR 0uH	
L303	1-410-503-11	INDUCTOR 3.3uH	
L304	1-410-503-11	INDUCTOR 3.3uH	
L305	1-410-397-21	FERRITE BEAD INDUCTOR	
L306	1-412-473-51	INDUCTOR 0uH	
L307	1-412-473-21	INDUCTOR 0uH	
L401	1-410-503-11	INDUCTOR 3.3uH	
L501	1-410-503-11	INDUCTOR 3.3uH	
L601	1-412-473-21	INDUCTOR 0uH	
L603	1-412-473-21	INDUCTOR 0uH	
L604	1-412-473-21	INDUCTOR 0uH	
L605	1-410-503-11	INDUCTOR 3.3uH	
L606	1-410-397-21	FERRITE BEAD INDUCTOR	
L607	1-410-503-11	INDUCTOR 3.3uH	
L608	1-410-503-11	INDUCTOR 3.3uH	
L609	1-412-473-21	INDUCTOR 0uH	
< TRANSISTOR >			
Q201	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q402	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q502	8-729-141-26	TRANSISTOR 2SC3622A-LK	
Q503	8-729-029-56	TRANSISTOR DTA144ESA	
Q601	8-729-119-76	TRANSISTOR 2SA1175-HFE	
< RESISTOR >			
R205	1-249-430-11	CARBON 12K 5% 1/4W	
R206	1-249-429-11	CARBON 10K 5% 1/4W	
R251	1-249-429-11	CARBON 10K 5% 1/4W	
R252	1-249-426-11	CARBON 5.6K 5% 1/4W	
R253	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R254	1-249-430-11	CARBON 12K 5% 1/4W	
R262	1-249-382-11	CARBON 1.2 5% 1/6W	F
R263	1-249-382-11	CARBON 1.2 5% 1/6W	F
R301	1-249-424-11	CARBON 3.9K 5% 1/4W	F
R302	1-247-807-31	CARBON 100 5% 1/4W	
R303	1-249-411-11	CARBON 330 5% 1/4W	
R304	1-249-413-11	CARBON 470 5% 1/4W	F
R305	1-249-417-11	CARBON 1K 5% 1/4W	F
R308	1-249-429-11	CARBON 10K 5% 1/4W	
R309	1-249-417-11	CARBON 1K 5% 1/4W	F
R310	1-249-417-11	CARBON 1K 5% 1/4W	F
R311	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R312	1-249-437-11	CARBON 47K 5% 1/4W	
R313	1-249-429-11	CARBON 10K 5% 1/4W	
R314	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R315	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R316	1-249-425-11	CARBON 4.7K 5% 1/4W	F
R317	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R318	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R319	1-249-427-11	CARBON 6.8K 5% 1/4W	F
R321	1-249-429-11	CARBON 10K 5% 1/4W	
R322	1-249-429-11	CARBON 10K 5% 1/4W	
R323	1-249-441-11	CARBON 100K 5% 1/4W	
R324	1-249-429-11	CARBON 10K 5% 1/4W	
R325	1-249-429-11	CARBON 10K 5% 1/4W	

(C160Z/C260Z)

## MAIN

## POWER SW

## SENSOR

## TABLE MOTOR

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
R331	1-249-427-11	CARBON	6.8K 5% 1/4W F			< SWITCH >	
R333	1-249-429-11	CARBON	10K 5% 1/4W				
R403	1-249-436-11	CARBON	39K 5% 1/4W				
R404	1-249-436-11	CARBON	39K 5% 1/4W	S701	1-554-303-21	SWITCH, TACTILE (DISC 1)	
R405	1-249-431-11	CARBON	15K 5% 1/4W	S702	1-554-303-21	SWITCH, TACTILE (DISC 2)	
				S703	1-554-303-21	SWITCH, TACTILE (DISC 3)	
R406	1-249-431-11	CARBON	15K 5% 1/4W	S704	1-554-303-21	SWITCH, TACTILE (DISC 4)	
R407	1-215-461-00	METAL	47K 1% 1/4W	S705	1-554-303-21	SWITCH, TACTILE (DISC 5)	
R408	1-215-461-00	METAL	47K 1% 1/4W				
R409	1-249-419-11	CARBON	1.5K 5% 1/4W F	S706	1-554-303-21	SWITCH, TACTILE (CONTINUE)	
R410	1-249-419-11	CARBON	1.5K 5% 1/4W F	S707	1-554-303-21	SWITCH, TACTILE (SHUFFLE)	
				S708	1-554-303-21	SWITCH, TACTILE (PROGRAM)	
R411	1-247-887-00	CARBON	220K 5% 1/4W	S709	1-554-303-21	SWITCH, TACTILE (REPEAT)	
R412	1-249-417-11	CARBON	1K 5% 1/4W F	S710	1-554-303-21	SWITCH, TACTILE (CE215,CE315:DISC CHECK/C160Z,C260Z:TIME)	
R416	1-249-425-11	CARBON	4.7K 5% 1/4W F				
R503	1-249-436-11	CARBON	39K 5% 1/4W	S751	1-554-118-00	SWITCH, PUSH (1 KEY) (POWER)	
R504	1-249-436-11	CARBON	39K 5% 1/4W	*****			
R505	1-249-431-11	CARBON	15K 5% 1/4W	*	1-659-737-11	SENSOR BOARD	
R506	1-249-431-11	CARBON	15K 5% 1/4W			*****	
R507	1-215-461-00	METAL	47K 1% 1/4W			< CONNECTOR >	
R508	1-215-461-00	METAL	47K 1% 1/4W				
R509	1-249-419-11	CARBON	1.5K 5% 1/4W F				
				CN851	1-573-383-11	PIN, CONNECTOR (PC BOARD) 2P	
R510	1-249-419-11	CARBON	1.5K 5% 1/4W F	CN852	1-750-243-11	SOCKET, CONNECTOR 6P	
R511	1-247-887-00	CARBON	220K 5% 1/4W			< DIODE >	
R512	1-249-417-11	CARBON	1K 5% 1/4W F				
R516	1-249-425-11	CARBON	4.7K 5% 1/4W F	D851	8-749-924-18	DIODE PHOTO INTERRUPTER RPI-1391	
R517	1-249-441-11	CARBON	100K 5% 1/4W	D852	8-749-924-30	DIODE PHOTO REFLECTOR GP2S28	
R601	1-249-435-11	CARBON	33K 5% 1/4W			< RESISTOR >	
R602	1-249-429-11	CARBON	10K 5% 1/4W				
R603	1-249-438-11	CARBON	56K 5% 1/4W	R851	1-249-416-11	CARBON 820 5% 1/4W F	
R604	1-249-429-11	CARBON	10K 5% 1/4W	R852	1-249-406-11	CARBON 120 5% 1/4W F	
R607	1-249-411-11	CARBON	330 5% 1/4W	*****			
		< SWITCH >					
△S601	1-572-675-11	SWITCH, POWER VOLTAGE CHANGE (VOLTAGE SELECTOR)(E)		*	1-647-364-11	TABLE MOTOR BOARD	
		< VIBRATOR >				*****	
						< MOTOR >	
X301	1-579-833-21	VIBRATOR, CRYSTAL 33MHZ		M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)	
X401	1-579-175-11	VIBRATOR, CERAMIC 10MHZ		*****			
*****						MISCELLANEOUS	
*	1-664-523-11	POWER SW BOARD				*****	
		*****					
		< CONNECTOR >		7	1-777-837-11	WIRE (FLAT TYPE) (35 CORE)	
				9	1-777-838-11	WIRE (FLAT TYPE) (6 CORE)	
CN703	1-750-186-11	CONNECTOR, BOARD TO BOARD 6P		△59	1-558-943-61	CORD, POWER (E)	
		< RESISTOR >		△59	1-575-651-21	CORD, POWER (AEP,AED,EE,CIS,SP)	
				△59	1-590-926-11	CORD, POWER (US,CND)	
				△59	1-696-845-11	CORD, POWER (AUS)	
				△59	1-751-529-11	CORD, POWER (UK)	
R701	1-249-415-11	CARBON	680 5% 1/4W F	△68	1-569-007-11	ADAPTOR, CONVERSION 2P (E)	
R702	1-249-417-11	CARBON	1K 5% 1/4W F	72	1-751-052-11	WIRE (FLAT TYPE) (6 CORE)	
R703	1-249-419-11	CARBON	1.5K 5% 1/4W F	74	1-500-455-11	CORE, FERRITE	
R704	1-249-421-11	CARBON	2.2K 5% 1/4W F				
R705	1-247-843-11	CARBON	3.3K 5% 1/4W	105	1-466-996-11	ENCODER, ROTARY	
				109	1-765-443-11	WIRE (FLAT TYPE) (23 CORE)	
R706	1-249-427-11	CARBON	6.8K 5% 1/4W F	125	1-452-838-12	MAGNET (ASSY)	
R707	1-249-431-11	CARBON	15K 5% 1/4W	△751	8-848-379-31	OPTICAL PICK UP KSS-213BA/F-NP	
R708	1-249-419-11	CARBON	1.5K 5% 1/4W F	752	1-769-069-11	WIRE (FLAT TYPE) (16 CORE)	
			(CE215/CE315)				
R709	1-249-421-11	CARBON	2.2K 5% 1/4W F				
			(CE215/CE315)				
R709	1-249-415-11	CARBON	680 5% 1/4W F				
			(C160Z/C260Z)				

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

Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remarks	Ref. No.	Part No.	Description	Remarks
M101	X-4917-523-3	MOTOR ASSY (SPINDLE)				*****	
M102	X-4917-504-1	MOTOR ASSY (SLED)				HARDWARE LIST	
M801	A-4660-525-A	MOTOR ASSY, ROTARY (TABLE)				*****	
M802	A-4660-914-A	MOTOR ASSY (LOADING)					
S101	1-572-085-11	SWITCH, LEAF (LIMIT)		#1	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S	
△ T601	1-429-956-11	TRANSFORMER, POWER (US,CND)		#2	7-685-872-09	SCREW +BVTT 3X8 (S)	
△ T601	1-431-076-11	TRANSFORMER, POWER (EXCEPT US,CND,E)		#3	7-685-648-79	SCREW (M3X12), TAPPING	
△ T601	1-431-168-11	TRANSFORMER, POWER (E)		#4	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
*****				#5	7-621-772-00	SCREW +B 2X3	
ACCESSORIES & PACKING MATERIALS				#6	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
*****				#7	7-621-255-15	SCREW +P 2X3	
1-473-519-11	REMOTE COMMANDER (RM-DC41)	(C260Z/CE315)		#8	7-685-871-01	SCREW +BVTT 3X6 (S)	
1-558-271-11	CORD, CONNECTION (AUDIO)108cm						
3-859-177-11	MANUAL, INSTRUCTION (ENGLISH)	(US,UK,AUS)					
3-859-177-21	MANUAL, INSTRUCTION	(ENGLISH/FRENCH/SPANISH/PORTUGUESE/CHINESE)					
		(CND,AEP,E,SP)					
3-859-177-31	MANUAL, INSTRUCTION	(GERMAN/DUTCH/ITALIAN/SWEDISH)(AEP,AED)					
3-859-177-41	MANUAL, INSTRUCTION (DANISH/FINNISH)	(AED)					
3-859-177-51	MANUAL, INSTRUCTION	(ENGLISH/POLISH/RUSSIAN)(EE,CIS)					
4-941-762-11	COVER (MLY), BATTERY (C260Z/CE315)						
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The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque △ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.
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