

CDP-690

SERVICE MANUAL

*US Model
Canadian Model*



SPECIFICATIONS

Compact disc player

Frequency response	2Hz – 2 kHz $\pm$ 0.5 dB
Signal to noise ratio	More than 102 dB
Dynamic range	More than 95 dB
Harmonic distortion	Less than 0.005%
Channel separation	More than 95 dB

Outputs

LINE OUT (phono jacks)	Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms
DIGITAL OUT (OPTICAL) (optical output connector)	Wave length 660 nm Output level – 18 dBm
PHONES (stereo phone jack)	Output level max. 15 mW Load impedance 32 ohms

General

Power requirements	120 V AC, 60Hz
Power consumption	14W
Dimensions (approx., including projections)	430×100×280 mm (w/h/d) (17×4×11 ¹ / ₈ inches)
Weight (approx.)	3.7 kg (8 lbs 3oz)

Supplied accessories

Audio cord	1 (2 phono plugs – 2 phono plugs)
Remote commander	1
R6 (size AA) batteries	2

Remote commander

Remote control system	Infrared control
Power requirements	3 V DC with two R6 (size AA) batteries
Dimensions	Approx. 43×20×175 mm (w/h/d) (1 ³ / ₄ ×1 ³ / ₁₆ ×7 inches)
Weight	Approx. 105 g (4 oz) Including batteries

Design and specifications subject to change without notice.

Optional accessory
Optical cable POC-15

SAFETY-RELATED COMPONENT WARNING!!

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

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

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

COMPACT DISC PLAYER
SONY[®]



使用時は添付資料も参照のこと
Refer to the additional documents.

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SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety check 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 TEST

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 microampers). 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 2 V AC range are suitable. (See Fig. A)

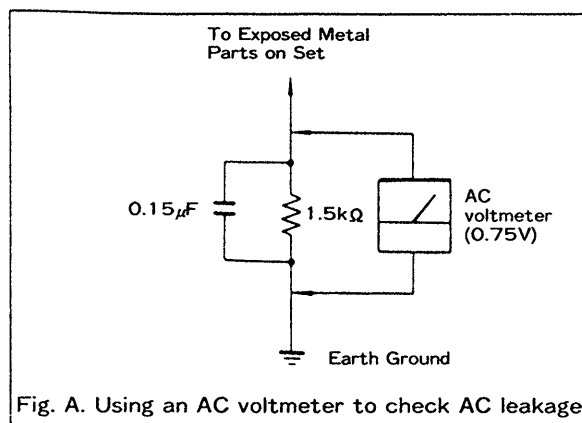


Fig. A. Using an AC voltmeter to check AC leakage.

SERVICING NOTE

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

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

CAUTION

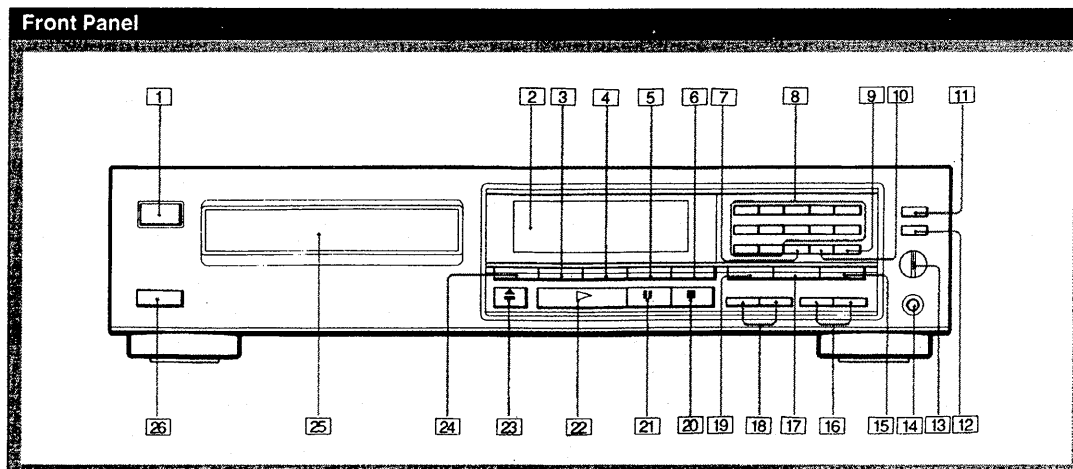
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

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.

SECTION 1 GENERAL

Location of Controls

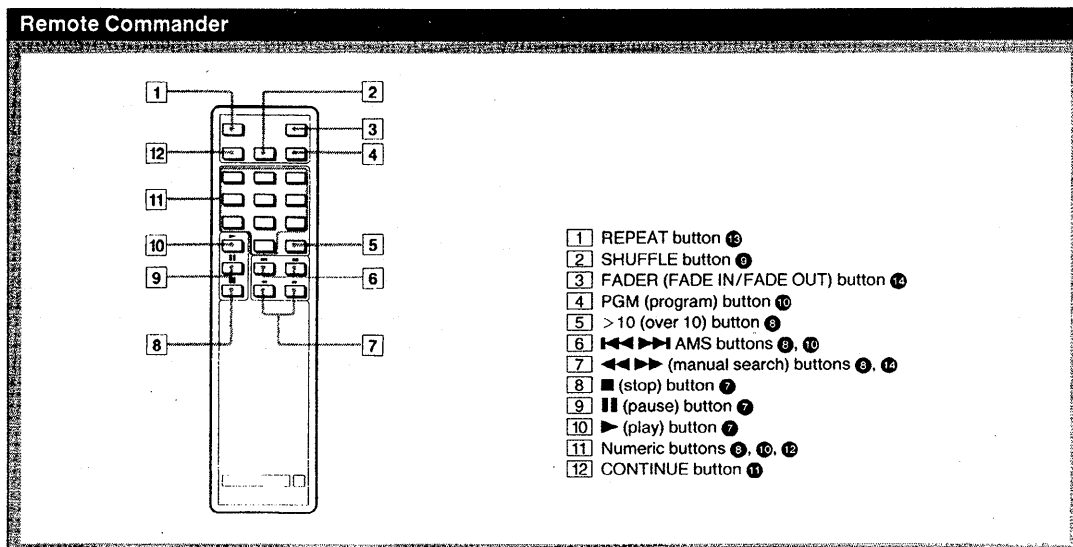


Refer to the pages indicated in ● for details.

- 1 POWER switch ●
- 2 Display window
- 3 TIME button ●
- 4 AUTO SPACE (auto space) button ●
- 5 REPEAT button ●
- 6 FADER (FADE IN/FADE OUT) button ●
- 7 CHECK (program check) button ●
- 8 Numeric buttons ●, ●, ●
- 9 > 12 (over 12) button ●
- 10 CLEAR (program clear) button ●
- 11 EDIT/TIME FADE button ●, ●
- 12 TIME SET button ●, ●
- 13 PHONE LEVEL control
- 14 PHONES jack

- 15 PROGRAM button ●
- 16 ◀▶ (manual search) buttons ●, ●
- 17 SHUFFLE button ●
- 18 ◀▶▶▶ (AMS*) buttons ●, ●
- 19 CONTINUE button ●
- 20 ■ (stop) button ●
- 21 || (pause) button ●
- 22 ▶ (play) button ●
- 23 ▲ (open/close) button ●
- 24 PEAK SEARCH button ●
- 25 Disc tray ●
- 26 Remote sensor ●

* AMS is an abbreviation of Automatic Music Sensor.



- 1 REPEAT button ●
- 2 SHUFFLE button ●
- 3 FADER (FADE IN/FADE OUT) button ●
- 4 PGM (program) button ●
- 5 > 10 (over 10) button ●
- 6 ◀▶▶▶ AMS buttons ●, ●
- 7 ◀▶ (manual search) buttons ●, ●
- 8 ■ (stop) button ●
- 9 || (pause) button ●
- 10 ▶ (play) button ●
- 11 Numeric buttons ●, ●, ●
- 12 CONTINUE button ●

SECTION 2

IC FUNCTION DESCRIPTION

IC101 (CXA1372Q) PIN DESIGNATION

Pin No.	Pin Name	I/O	Pin Description
1	VC		GND when two ($\pm$) dual power supplies are in use, or the center voltage (2.5 V) when a single power supply is in use.
2	FGD	I	Time constants for gain switching in normal mode/down mode and for focus gain are connected between the FGD and FS3 pins.
3	FS3	I	
4	FLB	I	The capacitor for low frequency boost in the focus servo loop is connected.
5	FEO	O	Focus drive output
6	FE-	I	Inverted input to focus amplifier
7	SRCH	I	Time constants to generate the focus search waveform are connected.
8	TGU	I	Time constants for gain switching in normal mode/up mode and for tracking gain are connected between TGU pin and TG2 pin.
9	TG2	I	
10	AVCC		Analog power supply (5 V when $\pm$ dual power supplies are in use, 5 V when a single power supply is in use.)
11	TAO	O	Tracking drive output
12	TA-	I	Inverted input to tracking amplifier
13	SL+	I	Non-inverted input to sled amplifier
14	SLO	O	Sled drive output
15	SL-	I	Non-inverted input to sled amplifier
16	ESET	I	The 610-k Ω phase compensator resistor is connected to this pin.
17	ISET	I	The current setting resistor is connected to this pin.
18	SSTOP	I	The limit switch is connected to this pin.
19	AVEE		Analog power supply (-5V when $\pm$ dual power supplies are in use, or GND when a single power supply is in use.)
20	DIRC	I	Direct control pin.
21	LOCK	I	Sled run-away prevention circuit operates when this signal is "L".
22	CLK	I	Serial data transfer clock input that is supplied from CPU (or DSP).
23	XLT	I	Latch input from CPU (or DSP).
24	DATA	I	Serial data input from CPU (or DSP).
25	XRST	I	System reset. "L" to reset.
26	C.OUT	O	Output to tracking counter.
27	SENS	O	SENS output
28	DGND		Digital ground (GND). (GND when $\pm$ dual power supplies are in use. GND when a single power supply is in use.)
29	MIRR	O	Mirror output.
30	DFCT	O	Defect output. "H" when defective.
31	ASY	I	Auto-assymetry control input.
32	EFM	O	EFM comparator output.
33	FOK	O	Focus OK.
34	CC2	I	Defect-bottom-hold input (input by capacitive coupling).
35	CC1	O	Defect-bottom-hold output.
36	DVCC		Digital power supply (+5 V when $\pm$ dual power supplies in use. +5 V when a single power supply is in use.)
37	CB	I	The defect-bottom-hold capacitor is connected to this pin.
38	CP	I	The mirror hold capacitor is connected to this pin.
39	RF1	I	RF signal input (input by capacitive coupling).
40	RF0	I	RF signal input (input by DC coupling).
41	DVEE		Digital power supply (-5 V when $\pm$ dual power supplis are in use. GND when a single power supply is in use.)
42	TZC	I	Tracking zero cross comparator input.
43	TE	I	Tracking error input.
44	TDFCT	I	The defect prevention hold capacitor is connected to this pin.
45	ATSC	I	Anti-shock input.
46	FZC	I	Focus zero-cross comparator input.
47	FE	I	Focus error input.
48	FDFCT	I	The defect prevention hold capacitor is connected to this pin.

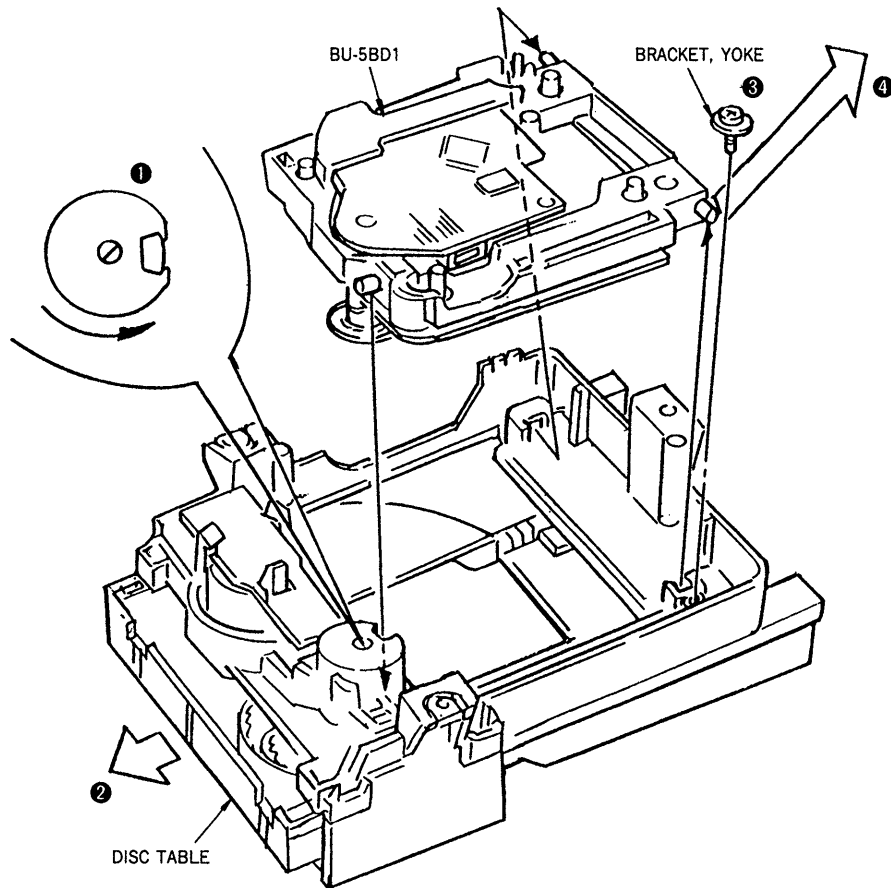
SECTION 3

DISSASSEMBLY OF BASE UNIT

Note:

Follow the disassembly procedure in the numerical order given.

- ❶ Turn the cam to the direction of arrow (Counter clock wise) by minus screw driver.
- ❷ Take off the disc table.
- ❸ Remove the bracket yoke.
- ❹ Remove the MD (BU-5BD1) to the direction of arrow.



SECTION 4 ADJUSTMENTS

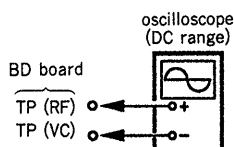
ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 (Part No. 3-702-101-01) disc unless otherwise indicated.
3. Use the oscilloscope with more than 10M Ω impedance.

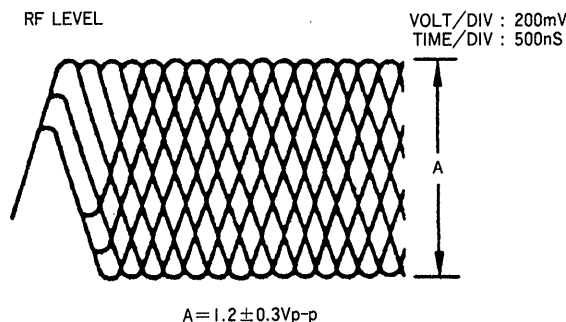
RF LEVEL check

This adjustment should be made after replacing the Optical Pick-up Block.

Procedure:



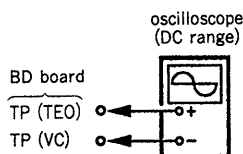
1. Connect oscilloscope to the test points TP (RF) and TP (VC).
2. Turn POWER switch on.
3. Put the disc (YEDS-18) in and press $\triangleright$ button.
4. Confirm that an optimum waveform eye pattern. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.



E-F Balance Check

This adjustment should be made after replacing the Optical Pick-up Block.

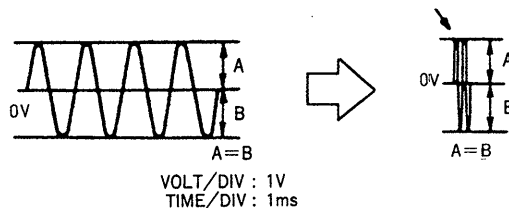
Procedure:



1. Connect the oscilloscope to the test points TP (TEO) and TP (VC).
2. Ground TP (ADJ), TP (TES).
3. Turn POWER switch on.

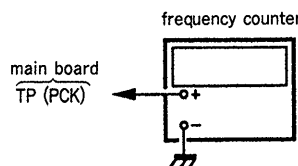
4. Put the disc (YEDS-18) in and press $\triangleright$ button.
5. Confirm that the traverse waveform is symmetrical above and below.
6. After adjustment, remove the TP(ADJ), TP(TES) in ground.

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



RF PLL Free-run Frequency Check

Procedure:



1. Connect the frequency counter to the test points TP (PCK) and TP (GND).
2. Turn POWER switch on.
3. Put the disc (YEDS-18) in and press $\triangleright$ button.
4. Confirm that the reading on the frequency counter is locked at 4.3218 MHz.

Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, this adjustment is not recommended generally to be performed.

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

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

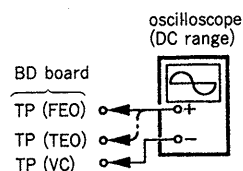
Symptoms \ Gain	Focus	Tracking
• The time until music starts becomes longer for STOP →▷PLAY or automatic selection (◀◀ ▶▶ buttons) pressed. (Normally takes about 2 seconds.)	low	low or high
• Music does not start and disc continues to rotate for STOP →▷PLAY or automatic selection (◀◀ ▶▶ buttons pressed.)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

The following is a simple adjustment method.

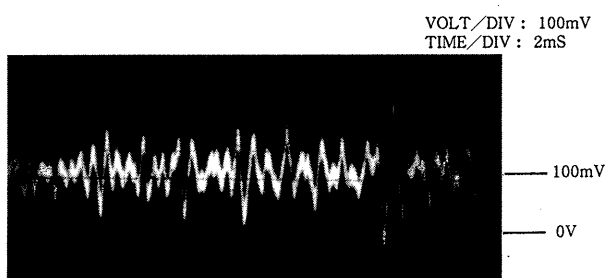
Simple Adjustment

Note: Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

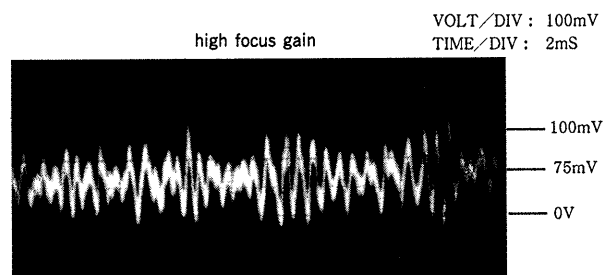
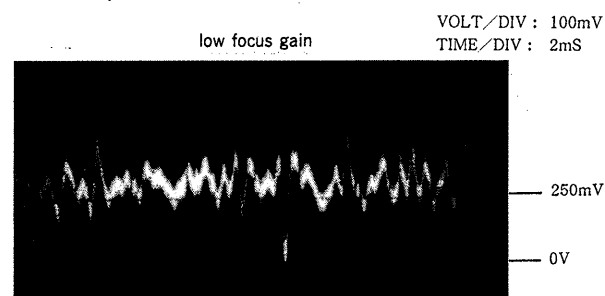
Procedure:



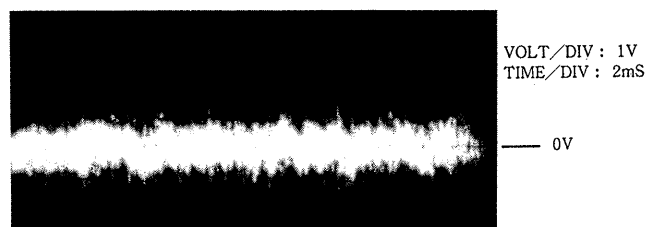
1. Keep the set flat.
If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.
2. Insert the disc (YEDS-18) and press ▷ PLAY button.
3. Connect the oscilloscope to TP (FEO) and TP (VC).
4. Adjustment RV102 so that the waveform is as shown in the picture below. (focus gain adjustment)



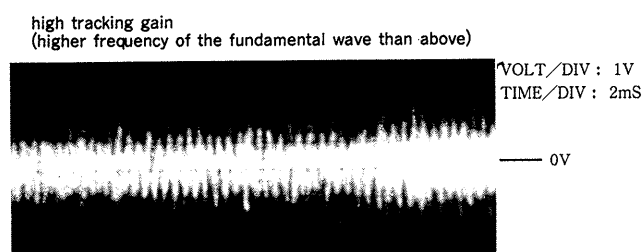
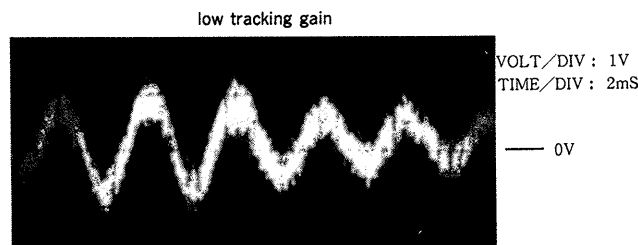
- Incorrect Examples (DC level is quite different from the adjusted waveform) (below)



5. Connect the oscilloscope to BD BOARD, TP (TEO).
6. Adjust RV101 so that the waveform is as shown in the picture below. (tracking gain adjustment)

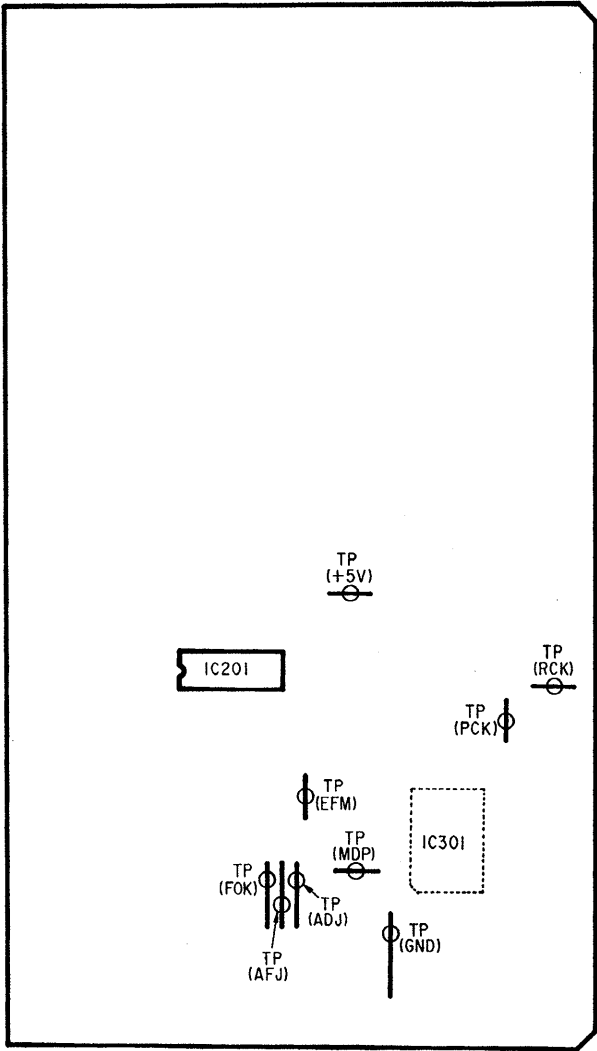


- Incorrect Examples (fundamental wave appears)

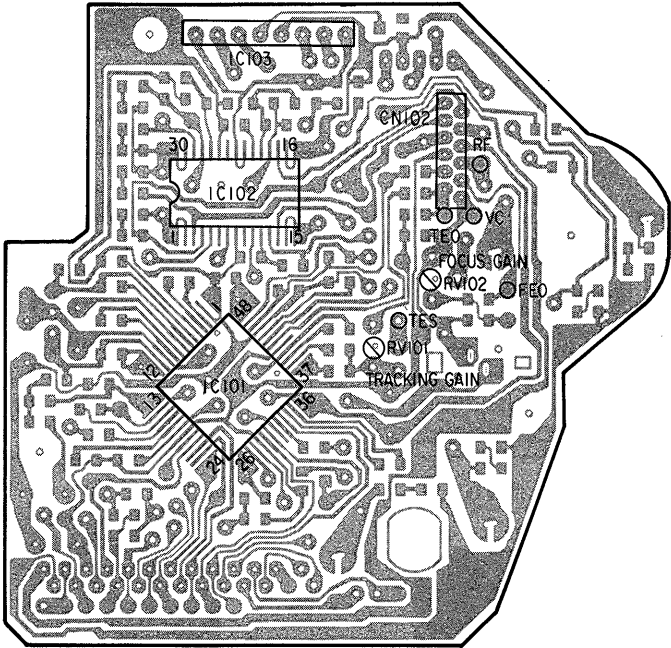


● Adjustment Location :

MAIN BOARD (Component side)

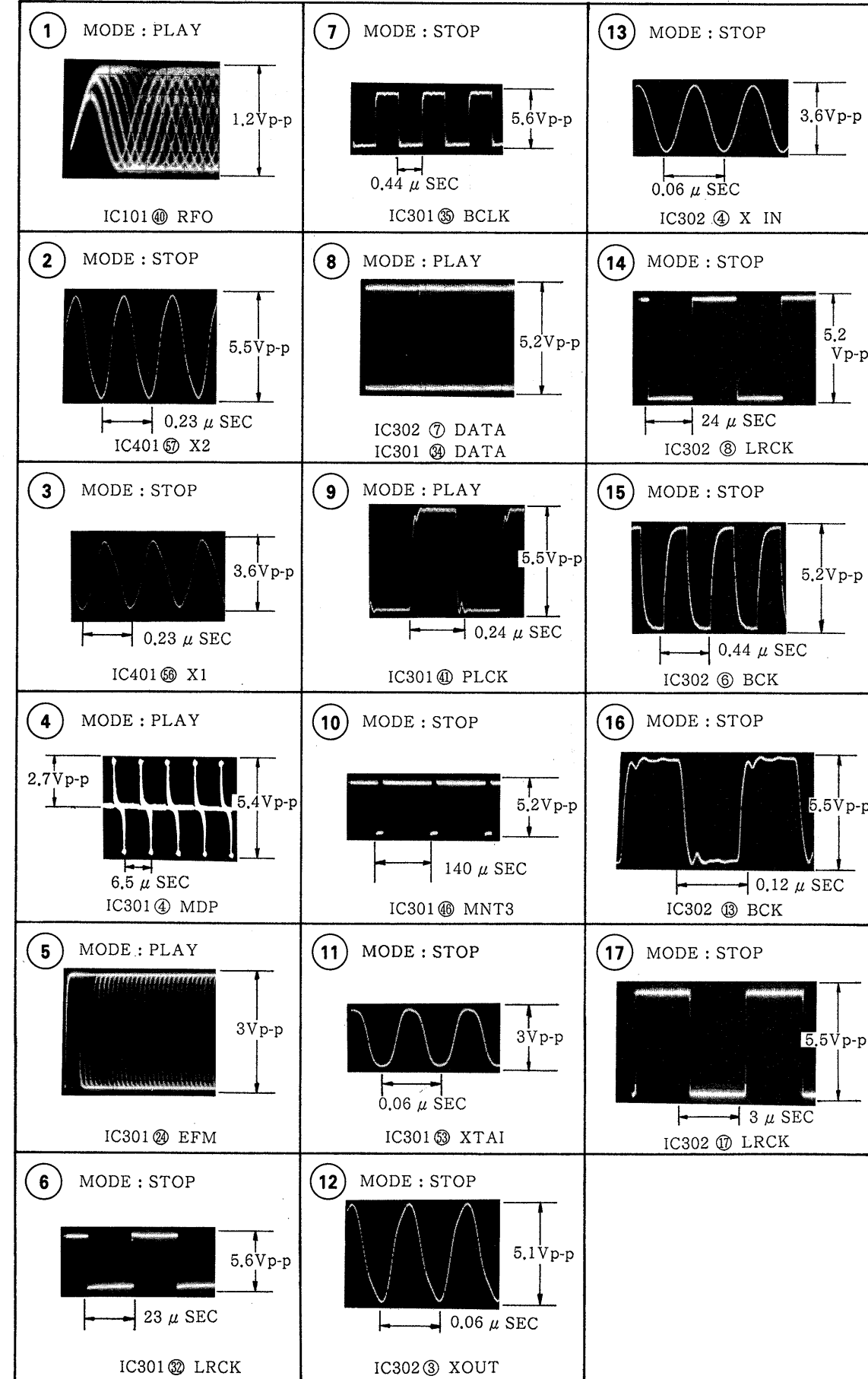


BD BOARD (Component side)



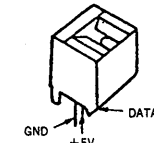
SECTION 5 DIAGRAMS

5-1. WAVEFORMS

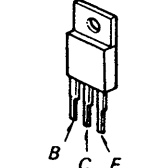


● Semiconductor Lead Layouts

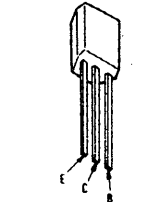
GP1U52XB



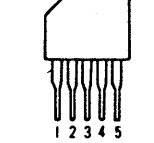
2SB1094-L



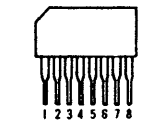
2SC2603-EF BA1L3Z-K DTA144ES DTC114ES



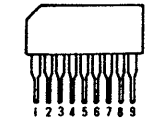
M5293L



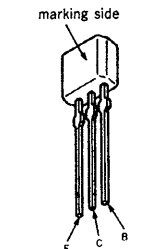
M54641L



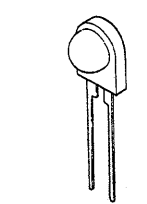
RC4556S



2SA1175-HFE DTC144ES



BR4361F



● Semiconductor Locations

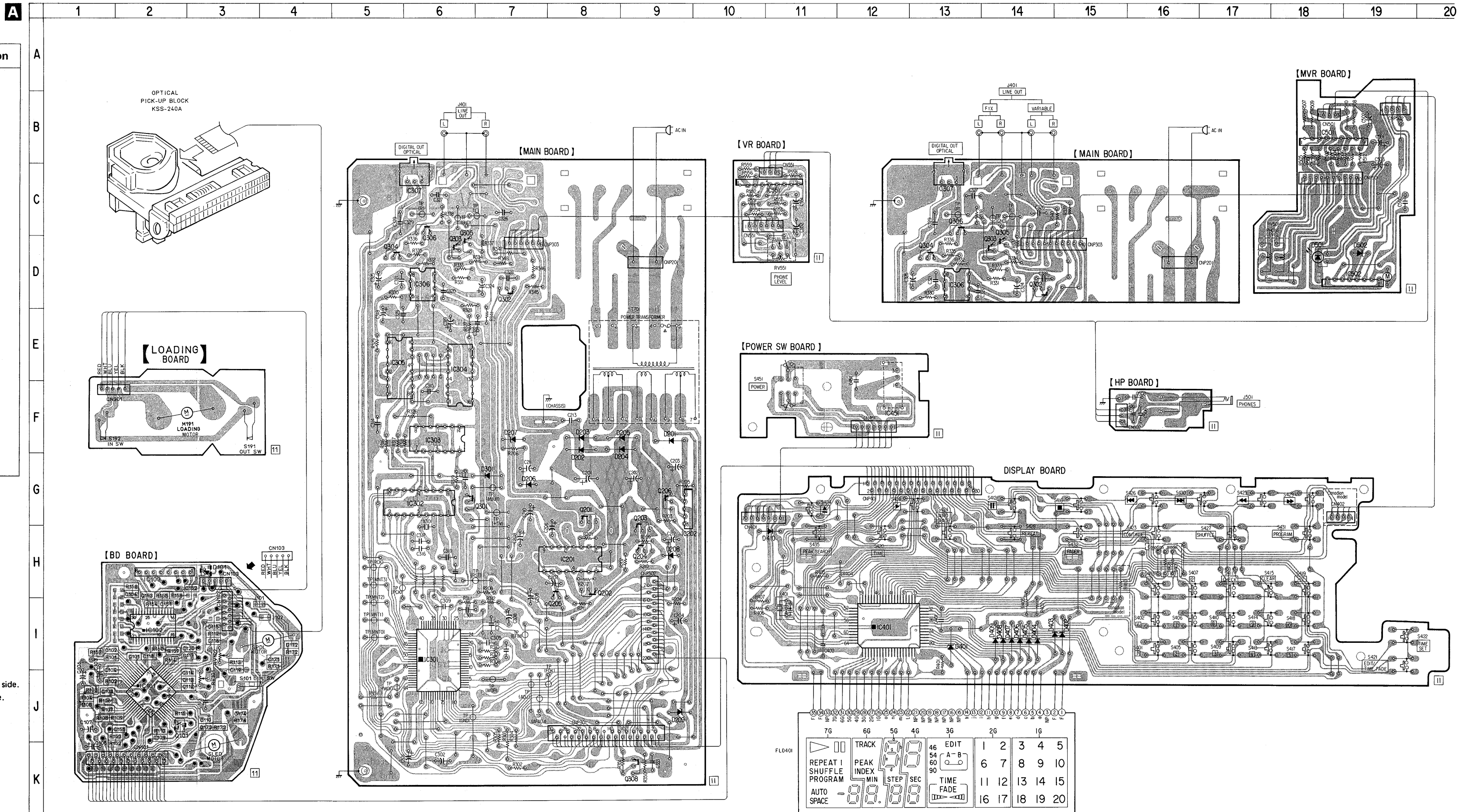
Ref. No.	Location	Ref. No.	Location
D101	H-3	IC304	E-6
D201	F-9	IC305	E-5
D202	F-8	IC306(US)	D-6
D203	F-8	IC306(CND)	D-13
D204	F-9	IC307(US)	C-6
D205	F-9	IC307(CND)	C-13
D206	G-7	IC401	I-12
D207	F-7	IC451	F-12
D208	H-9	IC501	B-18
D209	J-9	IC502	D-19
D301	G-7	IC551	C-11
D401	I-13		
D402	I-15	Q101	J-2
D403	I-14	Q201	G-8
D404	I-14	Q202	H-8
D405	I-14	Q203	G-9
D406	I-14	Q204	H-9
D407	I-14	Q205	H-8
D408	I-14	Q206	G-9
D409	I-14	Q301	G-6
D410	H-11	Q302(US)	D-7
D501	D-18	Q302(CND)	D-14
D502	D-19	Q303(US)	D-6
		Q303(CND)	D-14
IC101	J-2	Q304(US)	D-5
IC102	I-2	Q304(CND)	D-13
IC103	H-2	Q305(US)	D-6
IC201	H-8	Q305(CND)	D-14
IC202	G-9	Q306(US)	C-6
IC301	I-6	Q306(CND)	C-13
IC302	G-6	Q308	K-9
IC303	F-6		

Note:

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

5-2. PRINTED WIRING BOARDS

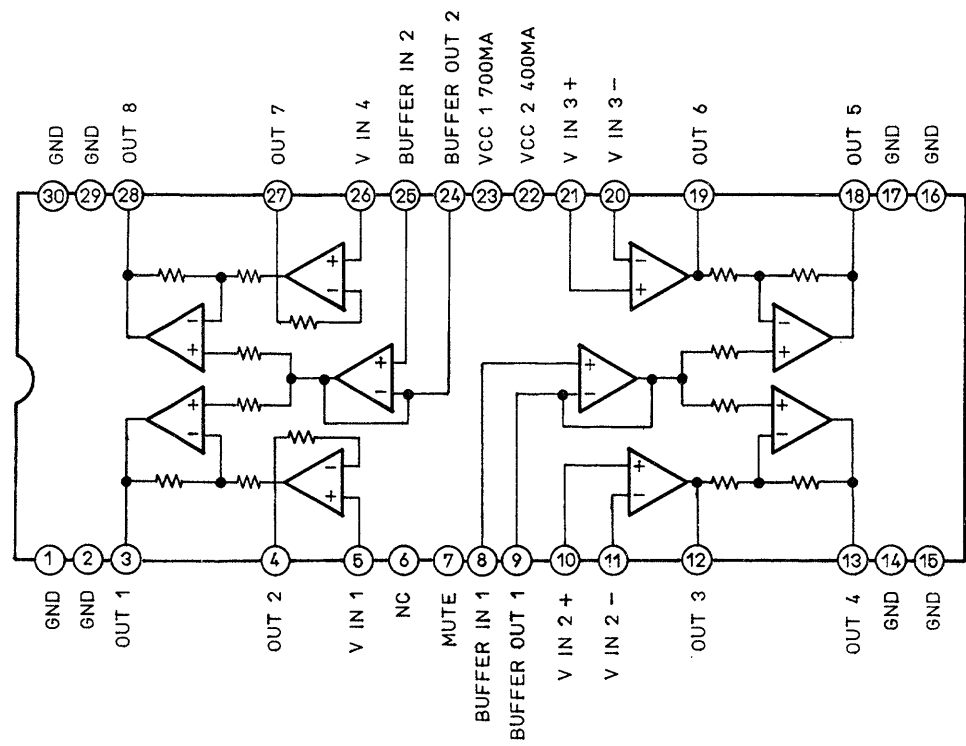
A



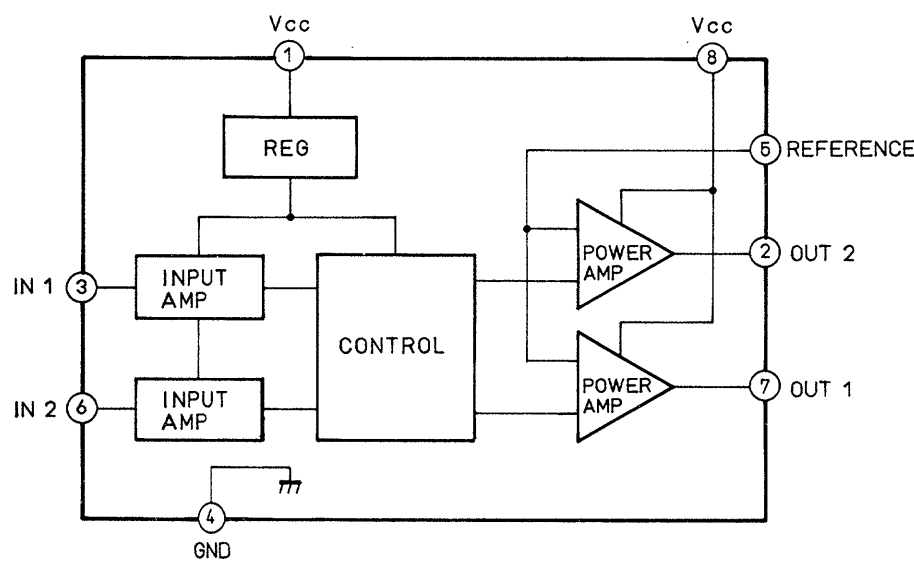
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

5-4. IC BLOCK DIAGRAMS

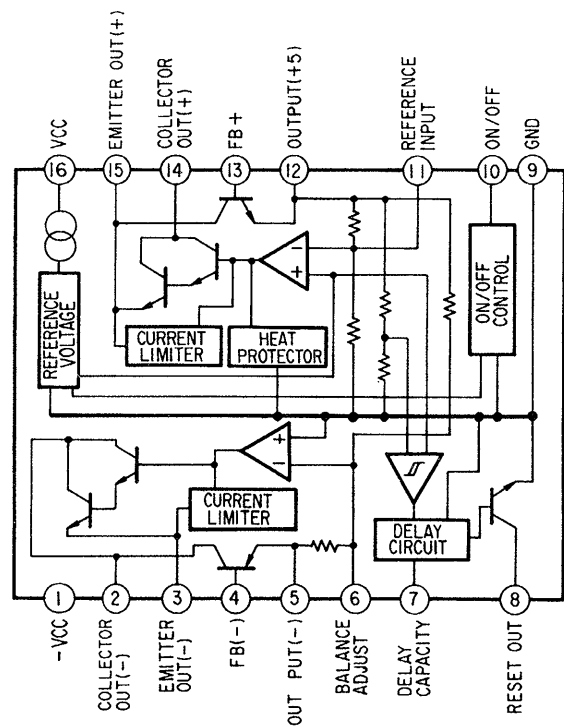
IC102
LA6532M



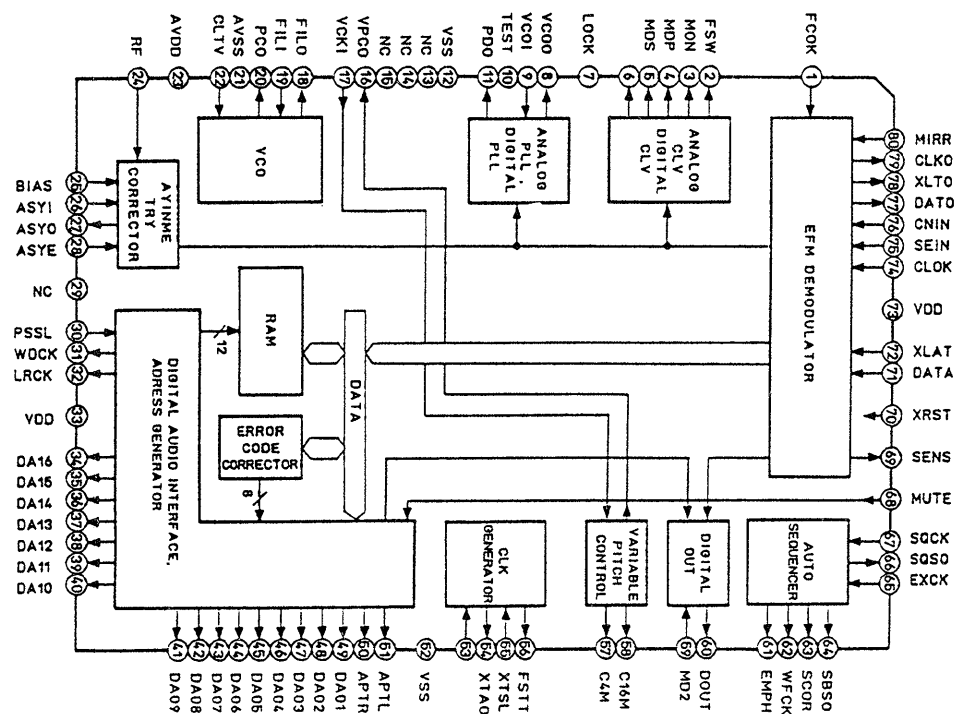
IC103, 502
M54641L



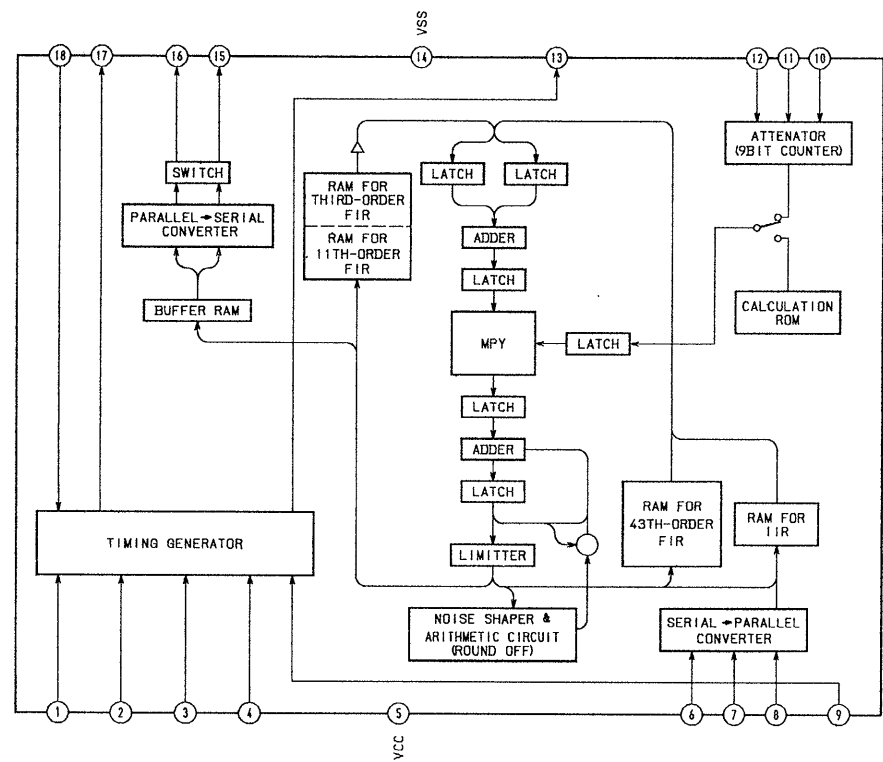
IC201
M5290P-16



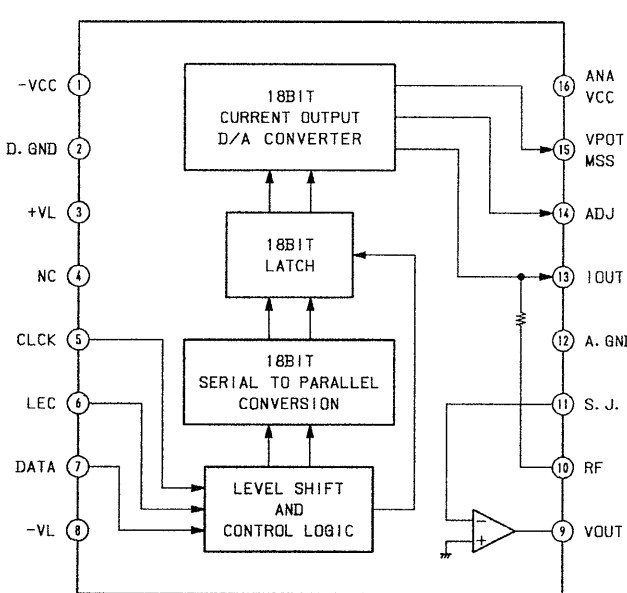
IC301
CXD2500Q



IC302
CXD2551P



IC304, 305
AD1860N-T



SECTION 6 EXPLODED VIEWS

NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.

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

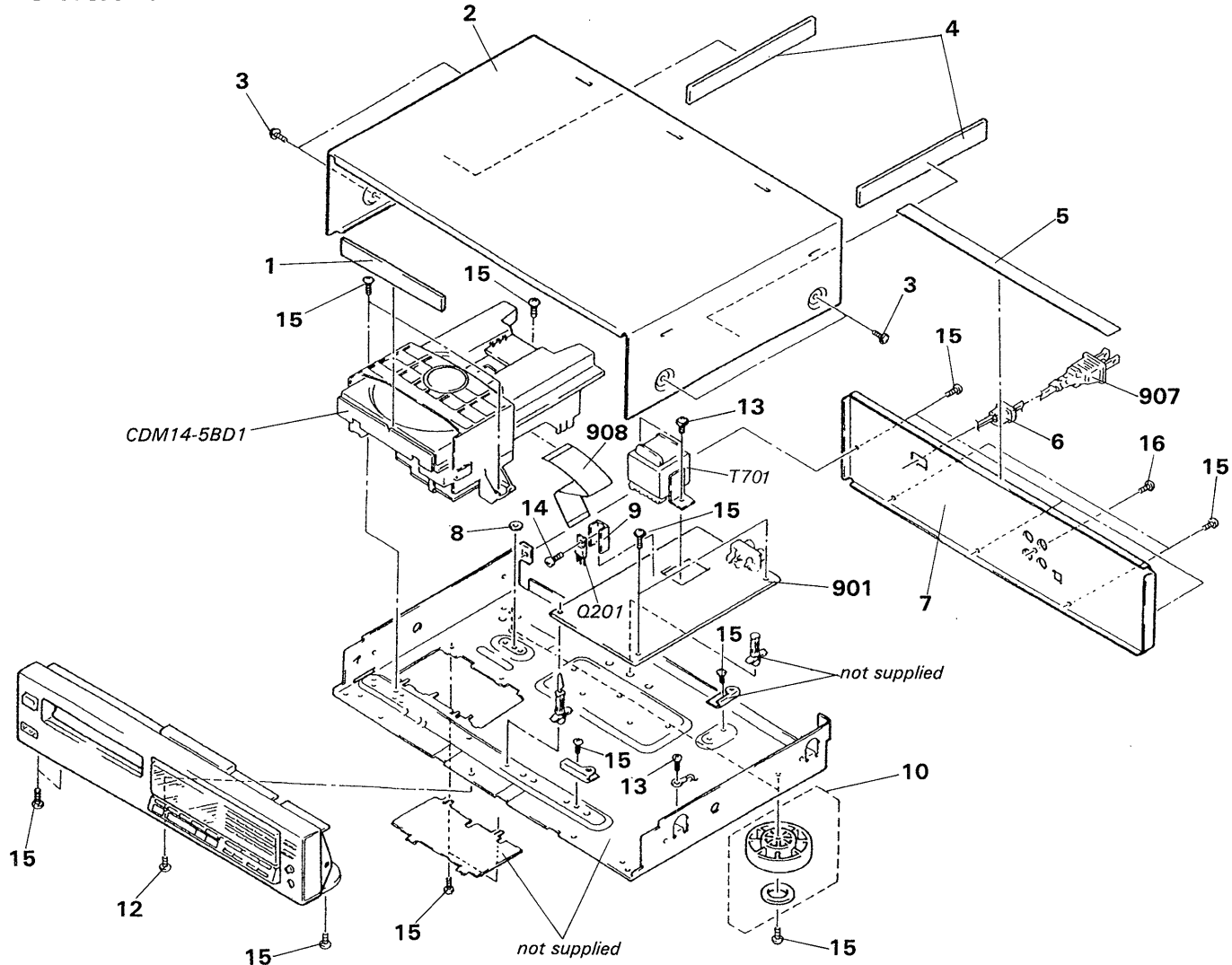
↑
Cabinet's Color

↑
Parts' Color

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

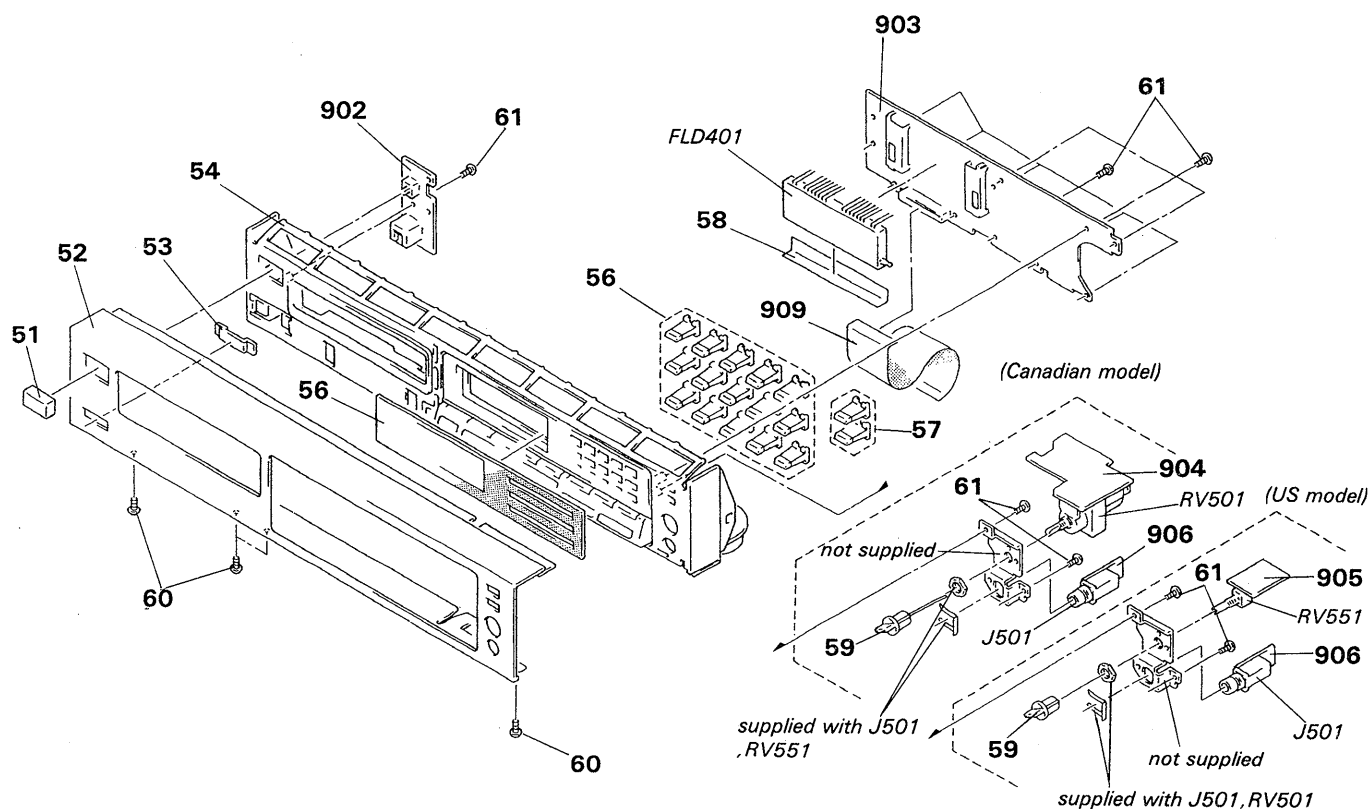
Les composants identifiés par une marque  sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

6-1. CABINET SECTION



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
1	4-933-208-62	PANEL, LOADING		12	3-703-685-21	SCREW (+BV 3X8)	
2	4-929-035-31	CASE		13	2-383-566-00	SCREW	
3	3-704-366-01	SCREW (CASE) (M3X8)		14	7-682-547-09	SCREW +B 3X6	
4	*4-929-561-01	CUSHION (CASE)		15	7-682-548-09	SCREW +BVTT 3X8 (S)	
5	4-933-242-01	CUSHION (PANEL)		16	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
6	*3-703-244-00	BUSHING (2104), CORD		901	*A-4617-376-A	(US).....MOUNTED PCB, MAIN	
7	*4-933-201-81	(US).....PANEL, BACK			*A-4617-377-A	(Canadian)...MOUNTED PCB, MAIN	
	*4-933-230-11	(Canadian)...PANEL, BACK		907	▲.1-575-105-11	CORD, POWER	
8	*4-933-220-01	SPACER (MD)		908	1-575-002-11	WIRE, FLAT TYPE (22 CORE)	
9	4-902-345-01	HEAT SINK		T701	▲.1-449-921-11	TRANSFORMER, POWER	
10	X-4885-950-1	FOOT ASSY	11				
11	4-923-836-11	CUSHION					

6-2.FRONT PANEL SECTION

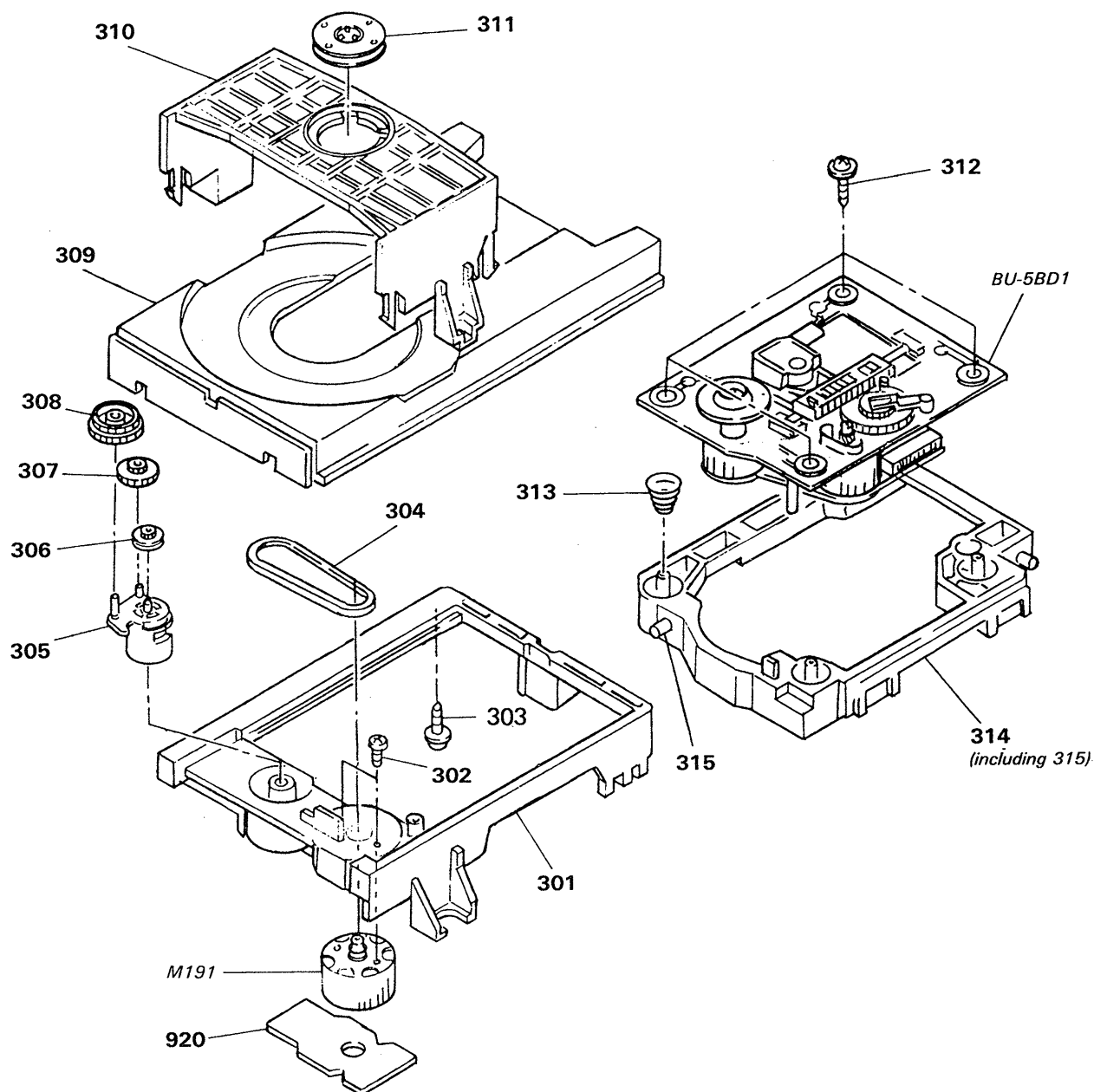


Note:
The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.

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

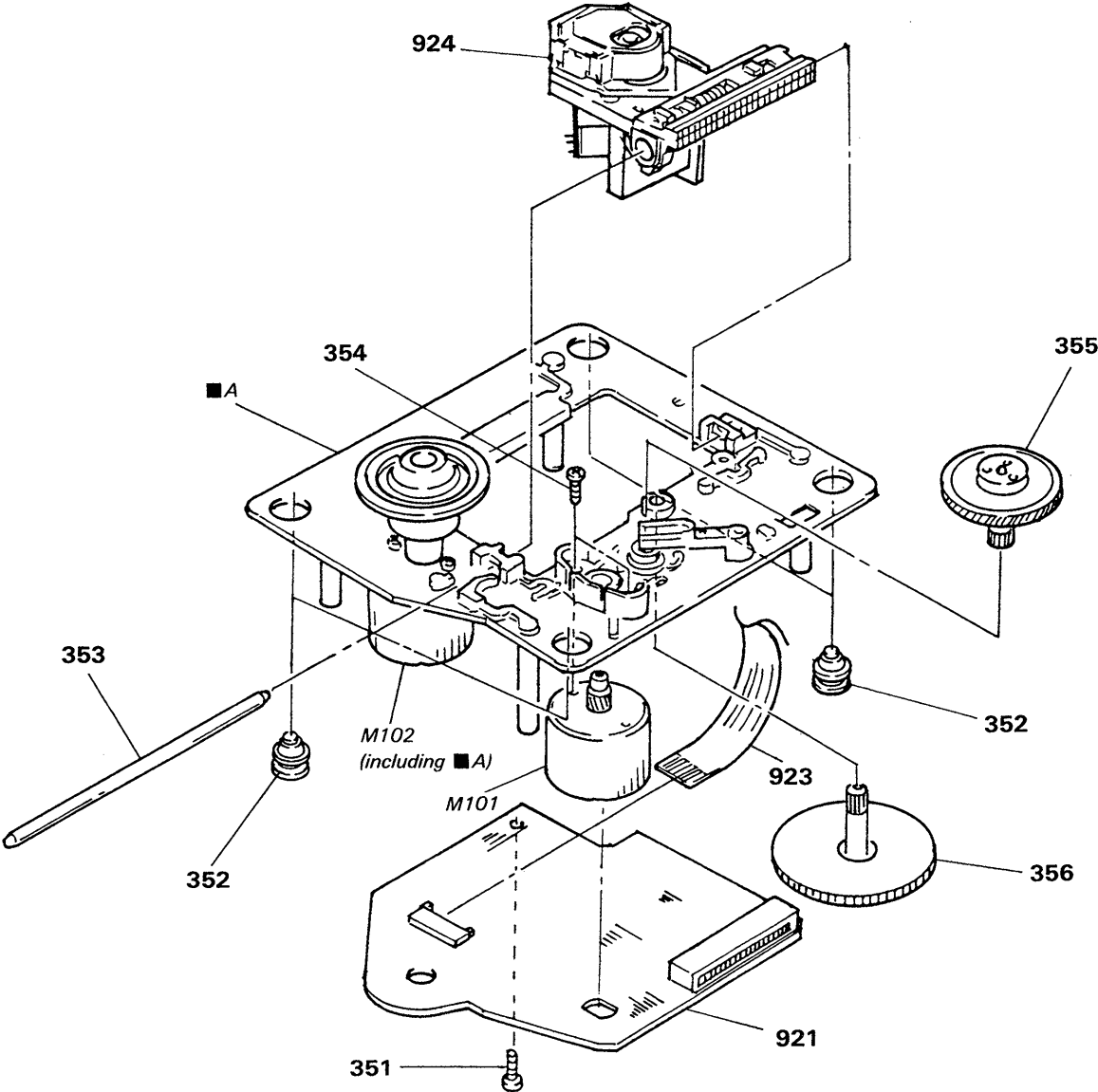
No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
51	4-922-921-01	BUTTON (POWER)		903	*A-4617-373-A (US).....MOUNTED PCB, DISPLAY *A-4617-381-A (Canadian)...MOUNTED PCB, DISPLAY		
52	4-933-233-11 (US).....PANEL (FRONT) 4-933-233-21 (Canadian)...PANEL (FRONT)			904	*A-4617-397-A (Canadian)...MOUNTED PCB, MVR		
53	4-933-236-01	PLATE, RAY CATCHER		905	*1-634-312-11 (US)...PC BOARD, VR		
54	X-4933-209-1	PANEL ASSY, SUB		906	*1-634-311-11	PC BOARD, HP	
55	4-933-235-01	PLATE, INDICATION		909	1-575-120-11	WIRE, FLAT TYPE (30 CORE)	
56	4-933-237-01	BUTTON (M/C)		FLD401	1-519-556-11	INDICATOR TUBE, FLUORESCENT	
57	4-933-234-01	BUTTON (C)		J501	1-568-519-21	JACK, LARGE TYPE (PHONES)	
59	A-4675-298-A	KNOB (HP) ASSY		RV501	1-238-974-11	(Canadian)...RES, VAR, CARBON 10K/10K (PHONE LEVEL)	
58	*4-927-353-01	SHEET (FL)		RV551	1-238-487-11	(US).....RES, VAR, CARBON 20K/20K (PHONE LEVEL)	
60	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S					
61	4-928-635-01	SCREW, +BV (2.6X8) TAPPING					
902	*1-634-310-11	PC BOARD, SW					

6-3. MD SECTION-1 (CDM14-5BD1)



No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
301	4-933-111-01	CHASSIS (MD)		310	4-933-110-01	HOLDER (MG)	
302	7-621-775-10	SCREW +B 2.6X4		311	A-4675-347-A	MG ASSY	
303	*4-917-583-21	BRACKET, YOKE		312	4-933-134-01	SCREW (+PTPWH M2.6X6)	
304	4-927-649-01	BELT		313	4-917-541-01	SPRING (B)	
305	4-933-109-01	CAM		314	4-933-129-01	HOLDER (BU)	
306	4-927-651-01	PULLEY (S)		315	4-933-108-01	SHAFT (CAM)	
307	4-927-628-01	GEAR (C)		M191	A-4604-363-A	MOTOR (L) ASSY	
308	4-933-107-01	GEAR (PL)		920	*1-632-202-11	PC BOARD, LOADING	
309	4-933-112-01	TABLE, DISK					

6-4.MD SECTION-2 (BU-5BD1)



Note: The components identified by mark  or dotted line with mark  are critical for safety. Replace only with part number specified.	Note: 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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No.	Part No.	Description	Remarks	No.	Part No.	Description	Remarks
351	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S		921	*A-4617-161-A	MOUNTED PCB, BD	
352	4-933-126-01	INSULATOR (A)		923	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
353	4-917-565-01	SHAFT, SLED		924	 .8-848-144-11	DEVICE, OPTICAL KSS-240A	
354	7-621-255-15	SCREW +P 2X3		M101	X-4917-504-1	MOTOR ASSY (SLED)	
355	4-917-567-01	GEAR (M)		M102	X-4917-523-3	MOTOR ASSY (SPINDLE)	
356	4-917-564-01	GEAR (P), FLATNESS					

SECTION 7 ELECTRICAL PARTS LIST

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.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:MF: μ F, PF: μ MF.**RESISTORS**

- All resistors are in ohms.
- F: nonflammable

COILS

- MMH: mH, UH: μ H

SEMICONDUCTORSIn each case, U: μ , for example:
 UA...: μ A..., UPA...: μ PA...,
 UPC...: μ PC, UPD...: μ PD...

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	Ref.No.	Part No.	Description
901	*A-4617-376-A	(US).....MOUNTED PCB, MAIN	C202	1-126-842-11	ELECT 4700MF 20% 16V
	*A-4617-377-A	(Canadian)...MOUNTED PCB, MAIN	C203	1-126-880-11	ELECT 100MF 20% 63V
902	*1-634-310-11	PC BOARD, SW	C204	1-126-059-11	ELECT 10MF 20% 50V
903	*A-4617-373-A	(US).....MOUNTED PCB, DISPLAY	C206	1-126-059-11	ELECT 10MF 20% 50V
	*A-4617-381-A	(Canadian)...MOUNTED PCB, DISPLAY	C207	1-124-045-00	ELECT 4.7MF 20% 50V
904	*A-4617-397-A	(Canadian)...MOUNTED PCB, MVR	C208	1-126-059-11	ELECT 10MF 20% 50V
905	*1-634-312-11	(US)...PC BOARD, VR	C209	1-126-012-11	ELECT 470MF 20% 16V
906	*1-634-311-11	PC BOARD, HP	C210	1-126-012-11	ELECT 470MF 20% 16V
907	 1-575-105-11	CORD, POWER	C211	1-126-024-11	ELECT 220MF 20% 16V
908	1-575-002-11	WIRE, FLAT TYPE (22 CORE)	C212	1-126-024-11	ELECT 220MF 20% 16V
909	1-575-120-11	WIRE, FLAT TYPE (30 CORE)	C213	1-164-159-11	CERAMIC 0.1MF 50V
920	*1-632-202-11	PC BOARD, LOADING	C301	1-124-994-11	ELECT 100MF 20% 10V
921	*A-4617-161-A	MOUNTED PCB, BD	C302	1-126-301-11	ELECT 1MF 20% 50V
923	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	C304	1-136-161-00	FILM 0.047MF 5% 50V
924	 8-848-144-11	DEVICE, OPTICAL KSS-240A	C305	1-161-374-11	CERAMIC 0.0015MF 30% 16V
C101	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C306	1-164-159-11	CERAMIC 0.1MF 50V
C102	1-163-989-11	CERAMIC CHIP 0.033MF 10% 25V	C307	1-162-306-11	CERAMIC 0.01MF 20% 16V
C103	1-126-094-11	ELECT 4.7MF 20% 16V	C308	1-126-300-11	ELECT 0.47MF 20% 50V
C104	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C309	1-164-159-11	CERAMIC 0.1MF 50V
C105	1-126-154-11	ELECT 47MF 20% 6.3V	C310	1-164-159-11	CERAMIC 0.1MF 50V
C106	1-126-154-11	ELECT 47MF 20% 6.3V	C311	1-164-159-11	CERAMIC 0.1MF 50V
C107	1-126-154-11	ELECT 47MF 20% 6.3V	C312	1-164-159-11	CERAMIC 0.1MF 50V
C108	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C314	1-164-159-11	CERAMIC 0.1MF 50V
C109	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C315	1-164-159-11	CERAMIC 0.1MF 50V
C110	1-163-989-11	CERAMIC CHIP 0.033MF 10% 25V	C316	1-162-205-31	CERAMIC 18PF 5% 50V
C111	1-131-367-00	TANTALUM 22MF 20% 16V	C317	1-162-204-31	CERAMIC 16PF 5% 50V
C112	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	C318	1-126-103-11	ELECT 470MF 20% 16V
C113	1-164-232-11	CERAMIC CHIP 0.01MF 10% 50V	C319	1-126-103-11	ELECT 470MF 20% 16V
C114	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	C320	1-130-481-00	MYLAR 0.0068MF 5% 50V
C115	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	C321	1-130-481-00	MYLAR 0.0068MF 5% 50V
C116	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	C322	1-130-475-00	MYLAR 0.0022MF 5% 50V
C117	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C323	1-130-475-00	MYLAR 0.0022MF 5% 50V
C118	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C324	1-123-332-00	ELECT 47MF 20% 25V
C119	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	C325	1-123-332-00	ELECT 47MF 20% 25V
C120	1-163-989-11	CERAMIC CHIP 0.033MF 10% 25V	C326	1-130-473-00	MYLAR 0.0015MF 5% 50V
C151	1-163-019-00	CERAMIC CHIP 0.0068MF 10% 50V	C327	1-130-473-00	MYLAR 0.0015MF 5% 50V
C152	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C328	1-162-294-31	CERAMIC 0.001MF 10% 50V
C153	1-163-006-11	CERAMIC CHIP 560PF 10% 50V	C329	1-164-159-11	CERAMIC 0.1MF 50V
C154	1-164-161-11	CERAMIC CHIP 0.0022MF 10% 50V	C333	1-162-294-31	CERAMIC 0.001MF 10% 50V
C155	1-163-023-00	CERAMIC CHIP 0.015MF 10% 50V	C401	1-164-159-11	CERAMIC 0.1MF 50V
C171	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C402	1-164-159-11	CERAMIC 0.1MF 50V
C172	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C451	1-164-159-11	CERAMIC 0.1MF 50V
C173	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C501	1-126-101-11	(Canadian)...ELECT 100MF 20% 16V
C174	1-163-038-00	CERAMIC CHIP 0.1MF 25V	C502	1-126-101-11	(Canadian)...ELECT 100MF 20% 16V
C201	1-126-842-11	ELECT 4700MF 20% 16V	C503	1-126-101-11	(Canadian)...ELECT 100MF 20% 16V

Ref.No.	Part No.	Description
C505	1-124-768-11	(Canadian)...ELECT 4.7MF 20% 50V
C506	1-162-294-31	CERAMIC 0.001MF 10% 50V
C507	1-162-294-31	CERAMIC 0.001MF 10% 50V
C508	1-164-159-11	CERAMIC 0.1MF 50V
C551	1-126-101-11	(US)...ELECT 100MF 20% 16V
C552	1-126-101-11	(US)...ELECT 100MF 20% 16V
CN101	1-568-796-11	SOCKET, CONNECTOR 22P
CN102	1-568-795-11	SOCKET, CONNECTOR 12P
CN103	*1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P
CNP201*	1-564-321-00	PIN, CONNECTOR 2P
CNP301*	1-568-933-11	SOCKET, CONNECTOR 30P
CNP302*	1-568-822-11	SOCKET, CONNECTOR 22P
CNP303*	1-564-708-11	(US)...PIN, CONNECTOR (SMALL TYPE) 6P
CNP303*	1-564-712-11	(Canadian)...PIN, CONNECTOR (SMALL TYPE) 10P
CNP401*	1-568-933-11	SOCKET, CONNECTOR 30P
CNP501*	1-564-712-11	(Canadian)...PIN, CONNECTOR (SMALL TYPE) 10P
CNP502*	1-564-338-00	(Canadian)...PIN, CONNECTOR 4P
CNP551*	1-564-708-11	(US)...PIN, CONNECTOR (SMALL TYPE) 6P
D101	8-719-105-72	DIODE RD4.7M-B1
D201	8-719-200-82	DIODE 11ES2
D202	8-719-200-82	DIODE 11ES2
D203	8-719-200-82	DIODE 11ES2
D204	8-719-200-82	DIODE 11ES2
D205	8-719-200-82	DIODE 11ES2
D206	8-719-107-94	DIODE 1SS202-1
D207	8-719-109-84	DIODE RD5.1ES-B1
D208	8-719-110-08	DIODE RD8.2ES-B2
D209	8-719-109-96	DIODE RD6.8ES-B1
D301	8-719-107-94	DIODE 1SS202-1
D401	8-719-121-24	DIODE RD9.1ES-L
D402	8-719-107-94	DIODE 1SS202-1
D403	8-719-107-94	DIODE 1SS202-1
D404	8-719-107-94	DIODE 1SS202-1
D405	8-719-107-94	DIODE 1SS202-1
D406	8-719-107-94	DIODE 1SS202-1
D407	8-719-107-94	DIODE 1SS202-1
D408	8-719-107-94	DIODE 1SS202-1
D409	8-719-107-94	DIODE 1SS202-1
D410	8-719-107-94	DIODE 1SS202-1
D501	8-719-970-49	(Canadian)...LED BR4361F
D502	8-719-109-84	(Canadian)...DIODE RD5.1ES-B1
FLD401	1-519-556-11	INDICATOR TUBE, FLUORESCENT
IC101	8-752-037-33	IC CXA1372Q
IC102	8-759-821-94	IC LA6532M
IC103	8-759-633-65	IC M54641L
IC201	8-759-630-21	IC M5290P-16
IC202	8-759-633-42	IC M5293L
IC301	8-752-333-31	IC CXD2500Q
IC302	8-752-334-06	IC CXD2551P
IC303	8-759-917-18	IC SN74HC04N
IC304	8-759-990-58	IC AD1860N-T
IC305	8-759-990-58	IC AD1860N-T
IC306	8-759-945-58	IC RC4558P
IC307	8-759-977-71	IC GP1F31T (DIGITAL OUT OPTICAL)
IC401	8-759-150-29	IC UPD75212AGF-522-3BE

Ref.No.	Part No.	Description
IC451	8-749-920-83	IC GP1U52XB
IC501	8-759-981-89	(Canadian)...IC RD5.1ES-B1
IC502	8-749-633-65	(Canadian)...IC M54641L
IC551	8-759-981-89	(US)...IC RC4556S
J101	1-216-295-00	METAL GLAZE 0 5% 1/10W
J102	1-216-295-00	METAL GLAZE 0 5% 1/10W
J401	1-566-921-11	(US).....JACK, PIN 2P (LINE OUT)
J401	1-568-761-11	(Canadian)...JACK, PIN 4P (LINE OUT)
J501	1-568-519-21	JACK, LARGE TYPE (PHONES)
M101	X-4917-504-1	MOTOR ASSY (SLED)
M102	X-4917-523-3	MOTOR ASSY (SPINDLE)
M191	A-4604-363-A	MOTOR (L) ASSY
Q101	8-729-901-01	TRANSISTOR DTC144EK
Q201	8-729-111-67	TRANSISTOR 2SB1094-L
Q202	8-729-140-96	TRANSISTOR 2SD774-34
Q203	8-729-111-67	TRANSISTOR 2SB1094-1
Q204	8-729-620-05	TRANSISTOR 2SC2603-EF
Q205	8-729-900-80	TRANSISTOR DTC114ES
Q206	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q301	8-729-900-89	TRANSISTOR DTC144ES
Q302	8-729-900-65	TRANSISTOR DTA114ES
Q303	8-729-115-88	TRANSISTOR BAIL3Z-K
Q304	8-729-115-88	TRANSISTOR BAIL3Z-K
Q305	8-729-115-88	TRANSISTOR BAIL3Z-K
Q306	8-729-115-88	TRANSISTOR BAIL3Z-K
Q308	8-729-900-89	TRANSISTOR DTC144ES
R101	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R102	1-216-097-00	METAL GLAZE 100K 5% 1/10W
R103	1-216-091-00	METAL GLAZE 56K 5% 1/10W
R104	1-216-099-00	METAL GLAZE 120K 5% 1/10W
R105	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W
R106	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R107	1-216-114-00	METAL GLAZE 510K 5% 1/10W
R108	1-216-105-00	METAL GLAZE 220K 5% 1/10W
R109	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W
R110	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R111	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R112	1-216-083-00	METAL GLAZE 27K 5% 1/10W
R113	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W
R114	1-216-105-00	METAL GLAZE 220K 5% 1/10W
R152	1-216-073-00	METAL GLAZE 10K 5% 1/10W
R153	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R154	1-216-085-00	METAL GLAZE 33K 5% 1/10W
R155	1-216-093-00	METAL GLAZE 68K 5% 1/10W
R156	1-216-081-00	METAL GLAZE 22K 5% 1/10W
R157	1-216-079-00	METAL GLAZE 18K 5% 1/10W
R158	1-216-079-00	METAL GLAZE 18K 5% 1/10W
R159	1-216-079-00	METAL GLAZE 18K 5% 1/10W
R160	1-216-049-00	METAL GLAZE 1K 5% 1/10W
R171	1-216-001-00	METAL GLAZE 10 5% 1/10W
R172	1-216-001-00	METAL GLAZE 10 5% 1/10W
R173	1-216-001-00	METAL GLAZE 10 5% 1/10W
R174	1-216-001-00	METAL GLAZE 10 5% 1/10W
R201	1-249-425-11	CARBON 4.7K 5% 1/4W
R202	1-249-425-11	CARBON 4.7K 5% 1/4W
R203	1-249-438-11	CARBON 56K 5% 1/4W

Ref.No.	Part No.	Description			
R204	1-249-429-11	CARBON	10K	5%	1/4W
R205	1-249-435-11	CARBON	33K	5%	1/4W
R206	1-249-413-11	CARBON	470	5%	1/4W
R207	1-249-429-11	CARBON	10K	5%	1/4W
R208	1-249-423-11	CARBON	3.3K	5%	1/4W
R209	1-249-417-11	CARBON	1K	5%	1/4W
R210	1-249-417-11	CARBON	1K	5%	1/4W
R211	1-249-411-11	CARBON	330	5%	1/4W
R301	1-249-411-11	CARBON	330	5%	1/4W
R302	1-249-417-11	CARBON	1K	5%	1/4W
R303	1-249-417-11	CARBON	1K	5%	1/4W
R304	1-249-417-11	CARBON	1K	5%	1/4W
R305	1-249-417-11	CARBON	1K	5%	1/4W
R308	1-249-423-11	CARBON	3.3K	5%	1/4W
R309	1-249-423-11	CARBON	3.3K	5%	1/4W
R310	1-249-429-11	CARBON	10K	5%	1/4W
R311	1-249-429-11	CARBON	10K	5%	1/4W
R312	1-249-441-11	CARBON	100K	5%	1/4W
R313	1-249-417-11	CARBON	1K	5%	1/4W
R314	1-249-417-11	CARBON	1K	5%	1/4W
R315	1-249-417-11	CARBON	1K	5%	1/4W
R316	1-249-411-11	CARBON	330	5%	1/4W
R317	1-249-411-11	CARBON	330	5%	1/4W
R318	1-249-411-11	CARBON	330	5%	1/4W
R319	1-249-442-11	CARBON	510	5%	1/4W
R320	1-249-413-11	CARBON	470	5%	1/4W
R326	1-249-411-11	CARBON	330	5%	1/4W
R327	1-249-417-11	CARBON	1K	5%	1/4W
R328	1-249-417-11	CARBON	1K	5%	1/4W
R329	1-249-417-11	CARBON	1K	5%	1/4W
R330	1-249-417-11	CARBON	1K	5%	1/4W
R331	1-247-891-00	CARBON	330K	5%	1/4W
R332	1-247-891-00	CARBON	330K	5%	1/4W
R333	1-249-409-11	CARBON	220	5%	1/4W
R334	1-249-409-11	CARBON	220	5%	1/4W
R335	1-249-409-11	CARBON	220	5%	1/4W
R336	1-249-409-11	CARBON	220	5%	1/4W
R337	1-249-414-11	CARBON	560	5%	1/4W
R338	1-249-414-11	CARBON	560	5%	1/4W
R339	1-249-414-11	(Canadian)...CARBON	560	5%	1/4W
R340	1-249-414-11	(Canadian)...CARBON	560	5%	1/4W
R341	1-249-441-11	CARBON	100K	5%	1/4W
R345	1-249-405-11	(US)...CARBON	100	5%	1/4W
R346	1-249-405-11	(US)...CARBON	100	5%	1/4W
R347	1-249-433-11	(US)...CARBON	22K	5%	1/4W
R348	1-249-433-11	(US)...CARBON	22K	5%	1/4W
R350	1-249-441-11	CARBON	100K	5%	1/4W
R351	1-249-429-11	CARBON	10K	5%	1/4W
R401	1-249-439-11	CARBON	68K	5%	1/4W
R402	1-249-435-11	CARBON	33K	5%	1/4W
R403	1-249-435-11	CARBON	33K	5%	1/4W
R404	1-249-435-11	CARBON	33K	5%	1/4W
R405	1-249-441-11	CARBON	100K	5%	1/4W
R406	1-249-425-11	CARBON	4.7K	5%	1/4W
R407	1-249-425-11	(US)...CARBON	4.7K	5%	1/4W
R408	1-249-417-11	(Canadian)...CARBON	1K	5%	1/4W
R409	1-249-417-11	(Canadian)...CARBON	1K	5%	1/4W

Ref.No.	Part No.	Description			
R410	1-249-411-11	(Canadian)...CARBON	330	5%	1/4W
R501	1-249-435-11	(Canadian)...CARBON	33K	5%	1/4W
R502	1-249-435-11	(Canadian)...CARBON	33K	5%	1/4W
R503	1-249-432-11	(Canadian)...CARBON	18K	5%	1/4W
R504	1-249-432-11	(Canadian)...CARBON	18K	5%	1/4W
R505	1-249-422-11	(Canadian)...CARBON	2.7K	5%	1/4W
R506	1-249-422-11	(Canadian)...CARBON	2.7K	5%	1/4W
R507	1-249-431-11	(Canadian)...CARBON	15K	5%	1/4W
R508	1-249-431-11	(Canadian)...CARBON	15K	5%	1/4W
R509	1-249-402-11	(Canadian)...CARBON	56	5%	1/4W
R510	1-249-402-11	(Canadian)...CARBON	56	5%	1/4W
R511	1-249-405-11	(Canadian)...CARBON	100	5%	1/4W
R512	1-249-405-11	(Canadian)...CARBON	100	5%	1/4W
R551	1-249-417-11	(US)...CARBON	1K	5%	1/4W
R552	1-249-417-11	(US)...CARBON	1K	5%	1/4W
R553	1-249-423-11	(US)...CARBON	3.3K	5%	1/4W
R554	1-249-423-11	(US)...CARBON	3.3K	5%	1/4W
R556	1-249-429-11	(US)...CARBON	10K	5%	1/4W
R557	1-249-429-11	(US)...CARBON	10K	5%	1/4W
R558	1-249-402-11	(US)...CARBON	56	5%	1/4W
R559	1-249-402-11	(US)...CARBON	56	5%	1/4W
RV101	1-238-016-11	RES, ADJ, CARBON	10K		
RV102	1-238-016-11	RES, ADJ, CARBON	10K		
RV501	1-238-974-11	(Canadian)...RES, VAR, CARBON	10K/10K		(PHONE LEVEL)
RV551	1-238-487-11	(US).....RES, VAR, CARBON	20K/20K		(PHONE LEVEL)
S101	1-572-085-11	SWITCH, LEAF (LIMIT)			
S191	1-572-086-11	SWITCH, LEAF (LOAD OUT)			
S192	1-572-086-11	SWITCH, LEAF (LOAD IN)			
S401	1-554-596-21	SWITCH, KEY BOARD (1)			
S402	1-554-596-21	SWITCH, KEY BOARD (6)			
S403	1-554-596-21	SWITCH, KEY BOARD (11)			
S404	1-554-596-21	SWITCH, KEY BOARD (▲)			
S405	1-554-596-21	SWITCH, KEY BOARD (2)			
S406	1-554-596-21	SWITCH, KEY BOARD (7)			
S407	1-554-596-21	SWITCH, KEY BOARD (12)			
S408	1-554-596-21	SWITCH, KEY BOARD (►)			
S409	1-554-596-21	SWITCH, KEY BOARD (3)			
S410	1-554-596-21	SWITCH, KEY BOARD (8)			
S411	1-554-596-21	SWITCH, KEY BOARD (CHECK)			
S412	1-554-596-21	SWITCH, KEY BOARD (■)			
S413	1-554-596-21	SWITCH, KEY BOARD (4)			
S414	1-554-596-21	SWITCH, KEY BOARD (9)			
S415	1-554-596-21	SWITCH, KEY BOARD (CLEAR)			
S416	1-554-596-21	SWITCH, KEY BOARD (■)			
S417	1-554-596-21	SWITCH, KEY BOARD (5)			
S418	1-554-596-21	SWITCH, KEY BOARD (10)			
S419	1-554-596-21	SWITCH, KEY BOARD (>12)			
S420	1-554-596-21	SWITCH, KEY BOARD (TIME)			
S421	1-554-596-21	SWITCH, KEY BOARD (EDIT/TIME FADE)			
S422	1-554-596-21	SWITCH, KEY BOARD (TIME SET)			
S423	1-554-596-21	SWITCH, KEY BOARD (CONTINUE)			
S424	1-554-596-21	SWITCH, KEY BOARD (AUTO SPACE)			
S425	1-554-596-21	SWITCH, KEY BOARD (◀◀)			
S426	1-554-596-21	SWITCH, KEY BOARD (◀◀◀)			
S427	1-554-596-21	SWITCH, KEY BOARD (SHUFFLE)			

Ref.No.	Part No.	Description
S428	1-554-596-21	SWITCH, KEY BOARD (REPEAT)
S429	1-554-596-21	SWITCH, KEY BOARD (▶▶)
S430	1-554-596-21	SWITCH, KEY BOARD (▶▶▶)
S431	1-554-596-21	SWITCH, KEY BOARD (PROGRAM)
S432	1-554-596-21	SWITCH, KEY BOARD (FADER)
S435	1-554-596-21	SWITCH, KEY BOARD (PEAK SEARCH)
S451	1-571-305-11	SWITCH, PUSH (1 KEY)(POWER)
T701	△.1-449-921-11	TRANSFORMER, POWER
X301	1-567-926-11	VIBRATOR, CRYSTAL (16.9MHz)
X401	1-567-819-11	VIBRATOR, CERAMIC (4MHz)

ACCESSORY & PACKING MATERIAL

1-465-281-11	(US).....REMOTE COMMANDER
1-465-401-11	(Canadian)...REMOTE COMMANDER
1-559-533-11	CORD, CONNECTION
3-751-495-21	(US).....MANUAL, INSTRUCTION
3-751-495-31	(Canadian)...MANUAL, INSTRUCTION
4-384-285-01	(US).....COVER, BATTERY
4-925-788-01	(Canadian)...COVER, BATTERY
*4-925-389-01	CUSHION
*4-933-231-01	INDIVIDUAL CARTON

Note:

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

Note:

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

CDP-690

SONY SERVICE MANUAL

US Model
Canadian Model

CORRECTION-1

Correct your service manual as shown below.

 : indicates corrected portion.

Page	INCORRECT	CORRECT
6	E-F Balance Check Procedure : 2. Ground TP (ADJ), TP (TES).	E-F Balance Check Procedure : 2. Connect test point <u>TP (ADJ)</u> to <u>ground</u> and <u>TP (TES)</u> to <u>TP (VC)</u> with lead wire.