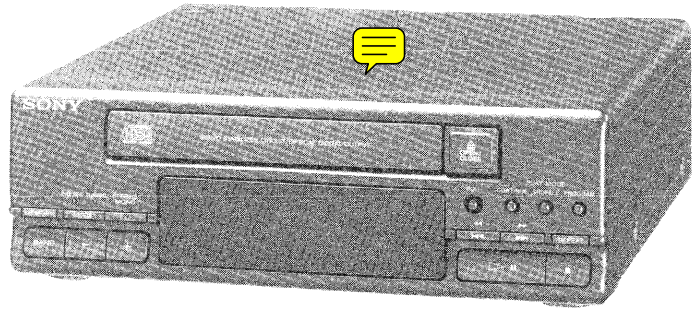
HCD-H4800

SERVICE MANUAL

E Model
Australian Model
Tourist Model



HCD-H4800 is the
TUNER/COMPACT DISC PLAYER
in FH-E8X.

Model Name Using Similar Mechanism	CDP-H3700
CD Mechanism Type	CDM13B-5BD3
Base Unit Name	BU-5BD3

SPECIFICATIONS

System — FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range — 87.5 — 108 MHz
Antenna terminals — 75 ohms unbalanced
Intermediate frequency — 10.7 MHz

AM tuner section

Tuning range — MW: 531 — 1,602 kHz (with the MW tuning interval set at 9 kHz)
MW: 530 — 1,710 kHz (with the MW tuning interval set at 10 kHz, except the Middle Eastern model)
SW: 5.95 — 17.90 MHz
Antenna — AM loop antenna, External antenna terminals
Intermediate frequency — 450 kHz

Compact Disc Player Section

System — Compact disc digital audio system
Laser — Semiconductor laser
Wavelength — 780 — 790 nm
Outputs — DIGITAL OPTICAL OUT (optical output connector)
wavelength: 660 nm
output level: –18 dBm

General

Power requirements — 110 — 120 V, or 220 — 240 V AC ajustable, 50/60 Hz
Power consumption — 210 watts
Dimensions — Approx. 225 x 390 x 280 mm (w/h/d) ($8^{7}/_{8}$ x $15^{3}/_{8}$ x $11^{1}/_{8}$ in.) incl. projecting parts and controls
Mass — Approx. 13 kg (28 lb 11 oz)
Supplied accessories — Remote Commander (1) (RM-S380)
Sony SUM-3 (NS) batteries (2)
AM loop antenna (1)
FM antenna (1)
AC power cord (2)
Flat cord (1)
Speaker cord (2)

Design and specifications subject to change without notice.

Note

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

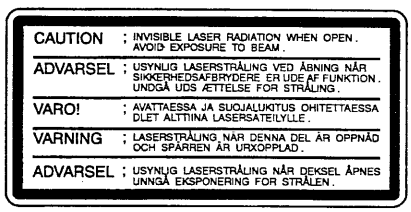
使用時は添付資料も参照のこと
Refer to the additional documents.

TUNER/COMPACT DISC PLAYER

SONY®

TABLE OF CONTENTS

The following caution label is located inside the unit.



SAFETY-RELATED COMPONENT WARNING!!

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

SECTION 1
SERVICE NOTE

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

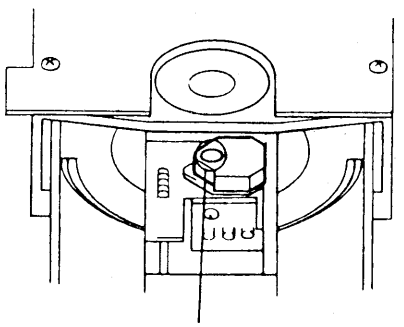
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the 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.

LASER DIODE AND FOCUS SEARCH OPERATION CHECK

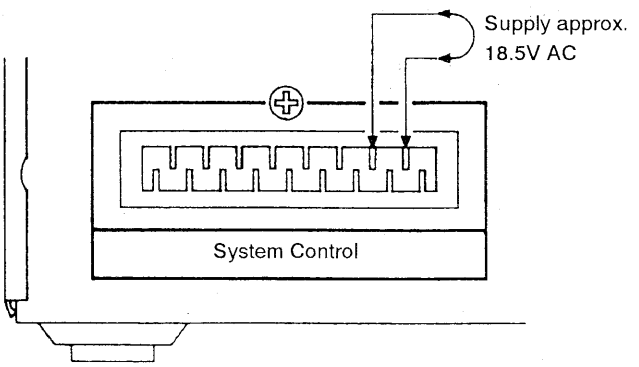
1. Turn POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objective lens.



❶ Confirm that laser beam is spread.
❷ Up and down motion of the objective lens. (3 times)

- **POWER SUPPLIED WHILE SERVICING**
  This unit does not have its own power supply. It operates on the power supplied from the amplifier (TA-H4800, SEQ-H4800) used by this series. Therefore connect the amplifier when servicing the unit as in electrical repairs.

- **TURNING ON THE POWER FORCIBLY**
  This unit does not have a power switch. Its power is turned on/off by the amplifier. However, if power is being supplied, its power can be turned on without an amplifier using the following method.
  - Press the MODE and "⏭" switches together to turn on the CD section, (Tuner section stops functioning.)
  - Press the STEREO/MONO and "⏮" switches together to turn on the tuner section (CD section stops functioning.)



(The power can also be supplied by connecting the connector of the "CDP/TC" section of the PFJ-1 tool.)

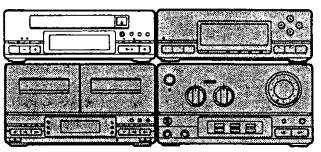
- **SERVICE MODE FOR CHECKING THE FL TUBE**
  All FL display tubes will light up when the "BAND" and "⏏ OPEN/CLOSE" switches are pressed together.

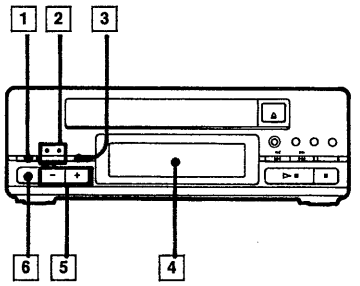
- **MEASURING THE TUNER/TCB BOARDS VOLTAGE**
  Prepare the following tools (extension cables) when measuring the voltages of the TUNER and TOB boards.
  1) 4-pin extension cable (J-8000-026-A) ×3
  2) 8-pin extension cable (J-8000-027-A) ×1

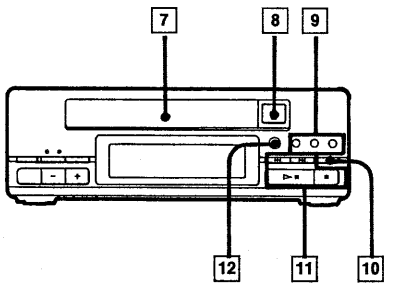
SECTION 2
GENERAL

This section is extracted from instruction manual.

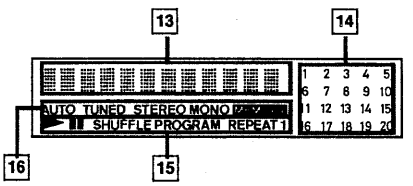
A







B



Parts Identification

Refer to the pages indicated in ( ) for use of the buttons.

Tuner/CD Player Section A

Tuner

1 MEMORY button (58)
2 MODE button and PRESET/TUNING indicators (54, 56, 60)
3 STEREO/MONO button (56)
4 Display window
5 –/+ buttons
6 BAND selector (54, 56)

CD player

7 Disc tray
8 ⏏ OPEN/CLOSE button
9 PLAY MODE buttons
  CONTINUE button (46, 48, 50)
  SHUFFLE button (46, 48)
  PROGRAM button (50, 92)
10 REPEAT button (44)
11 CD operation buttons
  ⏮◀◀ ▶▶⏭: Manual search (when kept depressed)/Automatic Music Sensor (when pressed)
  ▷II: Play/Pause
  ■: Stop
12 EDIT button (86, 88)

Display window B

13 Frequency and playing time display
14 CD selection numbers display
  Preset station number display
15 CD status display
16 Tuner status display

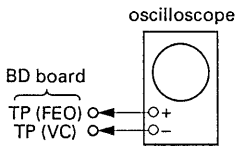
SECTION 3
ADJUSTMENTS

3-1. CD Section Checking

Note :

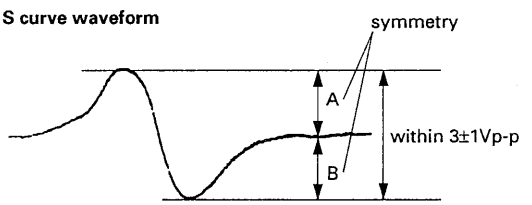
1. CD Block basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.
4. Clean an object lens by an applicator with neutral detergent when the signal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

S Curve Check



Procedure :

1. Connect oscilloscope to test point TP (FEO) on BD board.
2. Connect between test point TP (FES) and TP (VC) by lead wire.
3. Turned Power switch on and actuate the focus search. (actuate the focus search when disc table is moving in and out.)
4. Check the oscilloscope waveform (S curve) is symmetrical between A and B. And confirm peak to peak level within 3±1Vp-p.

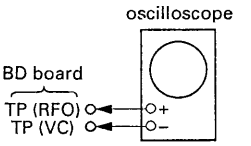


5. After check, remove the lead wire TP(FES) connected in step 2.

Note : • Try to measure several times to make sure that the ratio of A : B or B : A is more than 10 : 7.

• Take sweep time as long as possible and light up the brightness to obtain best waveform.

RF Level Check

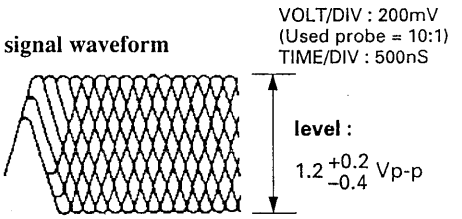


Procedure :

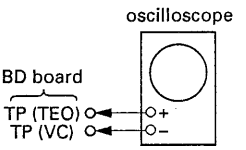
1. Connect oscilloscope to test point TP (RFO) on BD board.
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

Note :

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

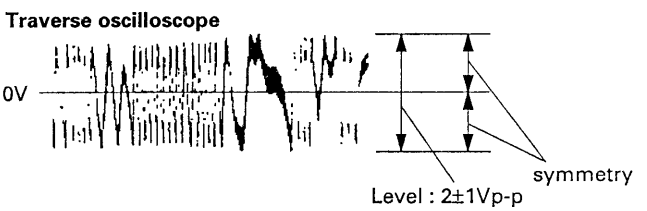


E-F Balance Check



Procedure :

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

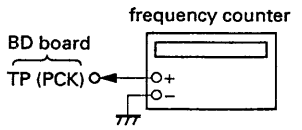


6. Remove the lead wire (TP [ADJ] and TP [TES]) connected in step 1.

RF PLL Free-run Frequency Check

Procedure :

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



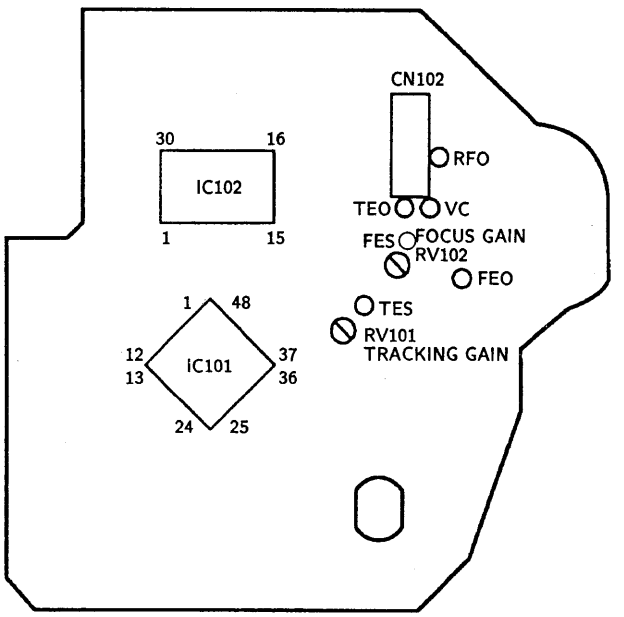
2. Turn Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that reading on frequency counter is 4.3218MHz.

Focus/Tracking Gain

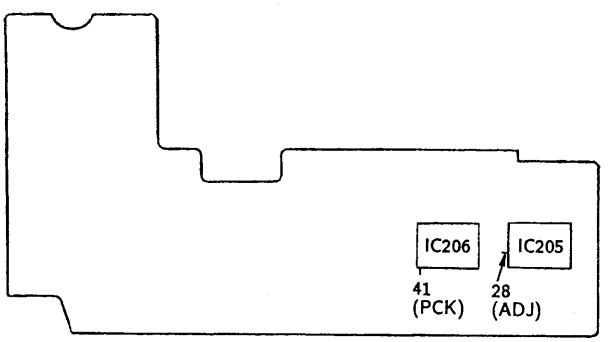
This gain has a margin, so even if it is slightly off.
There is no problem.
Therefore, do not perform, this adjustment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

Checking Location:

[BD BOARD] — Conductor side —



[CD BOARD] — Conductor side —

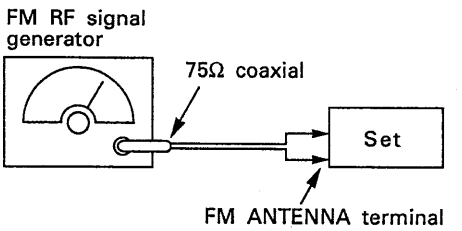


3-2. Tuner Section Adjustments

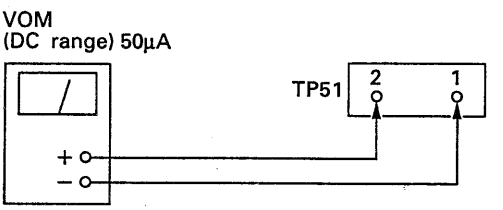
FM SECTION

Note : The FM front-end is carefully adjusted at the factory and is supplied as one whole block for replacement.

Setting :



Carrier frequency : 98MHz
Modulation : 1kHz, 75kHz deviation
Output level : 1mV (60dBμ)



FM Discriminator Alignment (NULL Check)

BAND switch: FM

Procedure:

1. Supply a 1mV (60dBμ) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust IFT51 for 0V reading on the VOM.

Adjustment Location: TUNER board.

Note : FM tuned indication lighting level adjustment should be made after FM discriminator alignment.

FM Tuned Indication Lighting Level Adjustment

BAND switch: FM

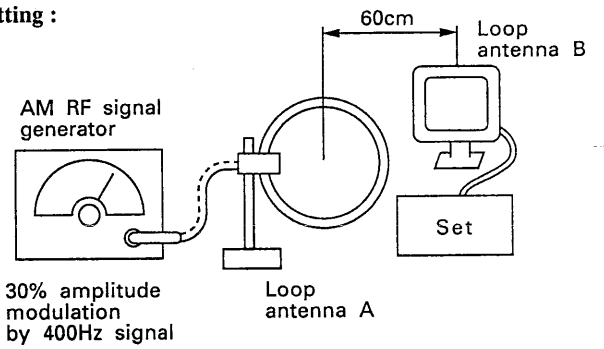
Procedure:

1. Supply a 22.5μV (27dBμ) 98MHz signal from the ANTENNA terminal.
2. Tune the set to 98MHz.
3. Adjust RV52 so that the TUNED light up.
4. Confirm that the TUNED light off with FM RF SSG output level set at –3dB.

Adjustment Location : TCB board.

MW SECTION

Setting :



MW Tuned Indication Lighting Level Adjustment

BAND switch: MW

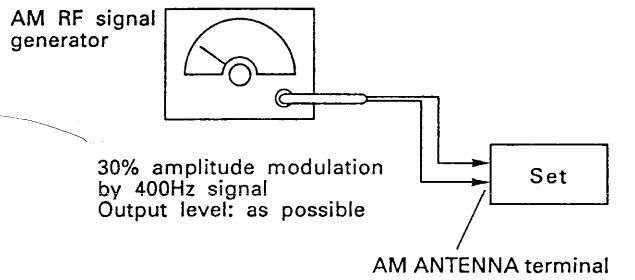
Procedure:

1. Set loop antenna A so that the loop antenna B input level becomes 1mV (60dBμ).
2. Tune the set to 1,404kHz
   (9k step mode) (10k step mode : 1,490kHz).
3. Adjust the RV51 so that the TUNED light up.
4. Confirm that the TUNED light off with AM RF SG output level set at –3dB.

Adjustment Location : TCB board.

SW SECTION

Setting :



SW Tracking Adjustment

BAND switch: SW

Adjust for maximum reading on VTVM.	
17MHz	CV1
7MHz	T1

Adjustment Location : TCB board.

SW OSC Voltage Adjustment

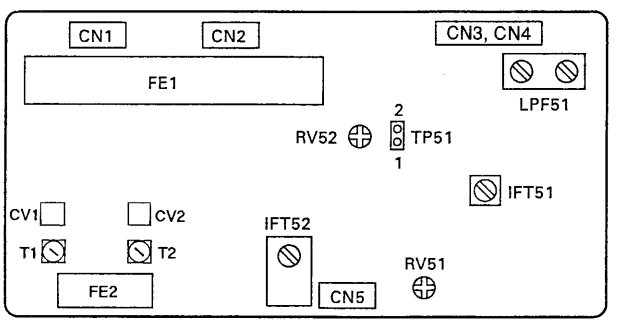
BAND switch: SW

Procedure:

1. Press TUNING (+, –) button for 5.95MHz.
   Adjust T2 for 0.9 – 1.1V VOM reading.
2. Press the button for 17.9MHz.
   Adjust CV2 for 8.3 – 8.7V reading.

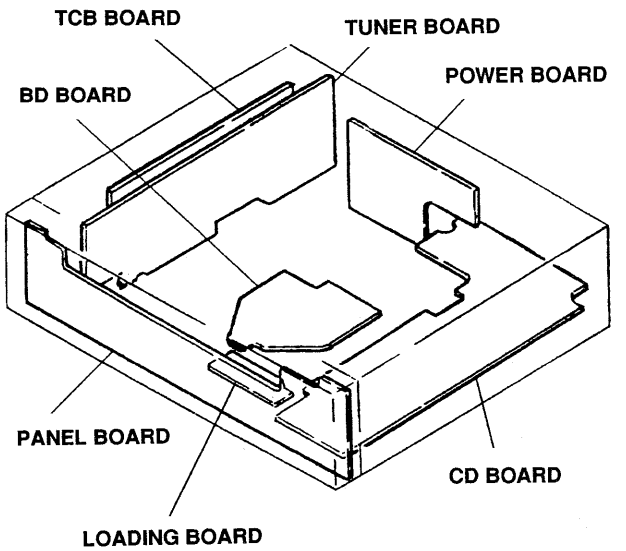
Adjustment Location : TCB board.

[TCB BOARD] — Component side —



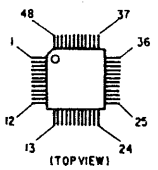
SECTION 4
DIAGRAMS

4-1. CIRCUIT BOARDS LOCATION

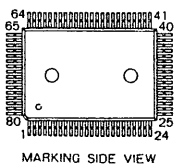


4-2. SEMICONDUCTOR LEAD LAYOUTS

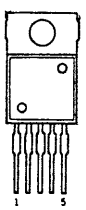
CXA1372AQ



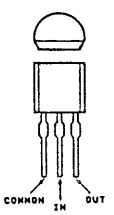
CXD2500BQ



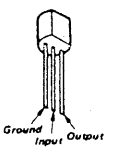
L78MR05



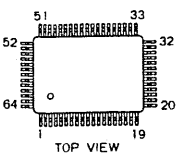
NJM79L24A



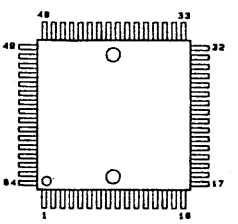
PST572C



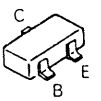
μPD75116GF-G38-3BE



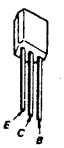
μPD78011GC-514-AB8



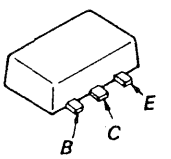
DTC144EK
2SC1623-L6
2SC3398
2SC3900



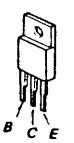
2SA1344



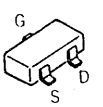
2SB798-DL
2SD999-CLCK



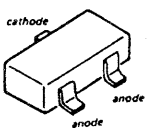
2SB1094-LK
2SD2012



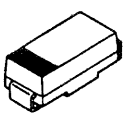
2SK208GR3



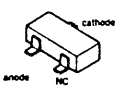
DCB010



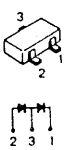
EC10QS-04



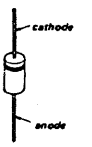
UZM3.9Z
UZM4.7B
UZM10Y
UZM11X



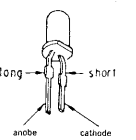
1SS226



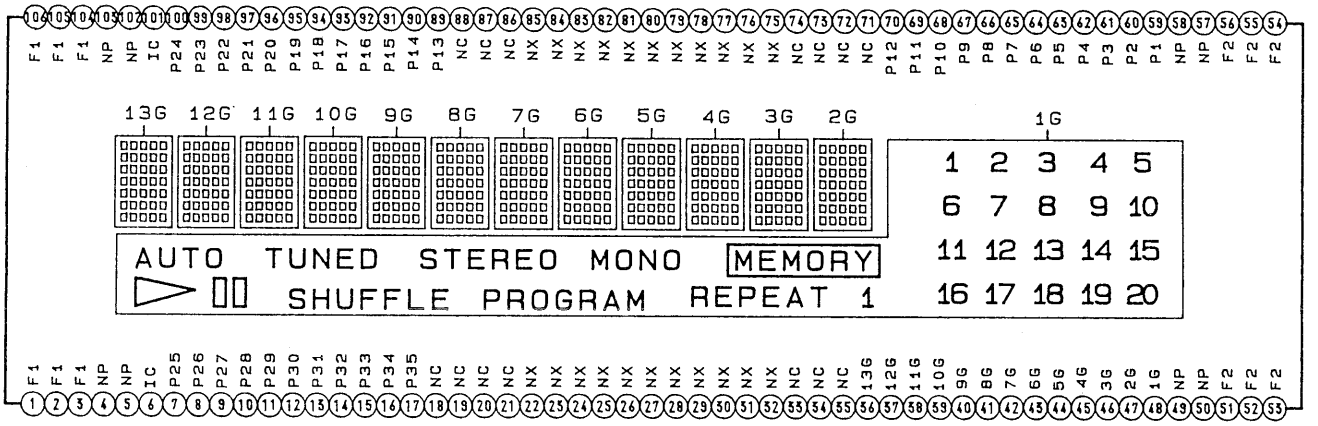
10E-2

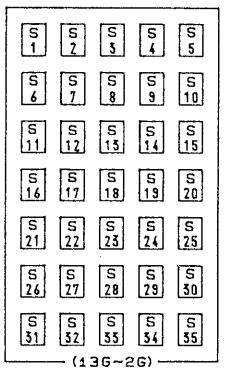


SEL2210S



• **FL601 (FLUORESCENT INDICATOR TUBE)**

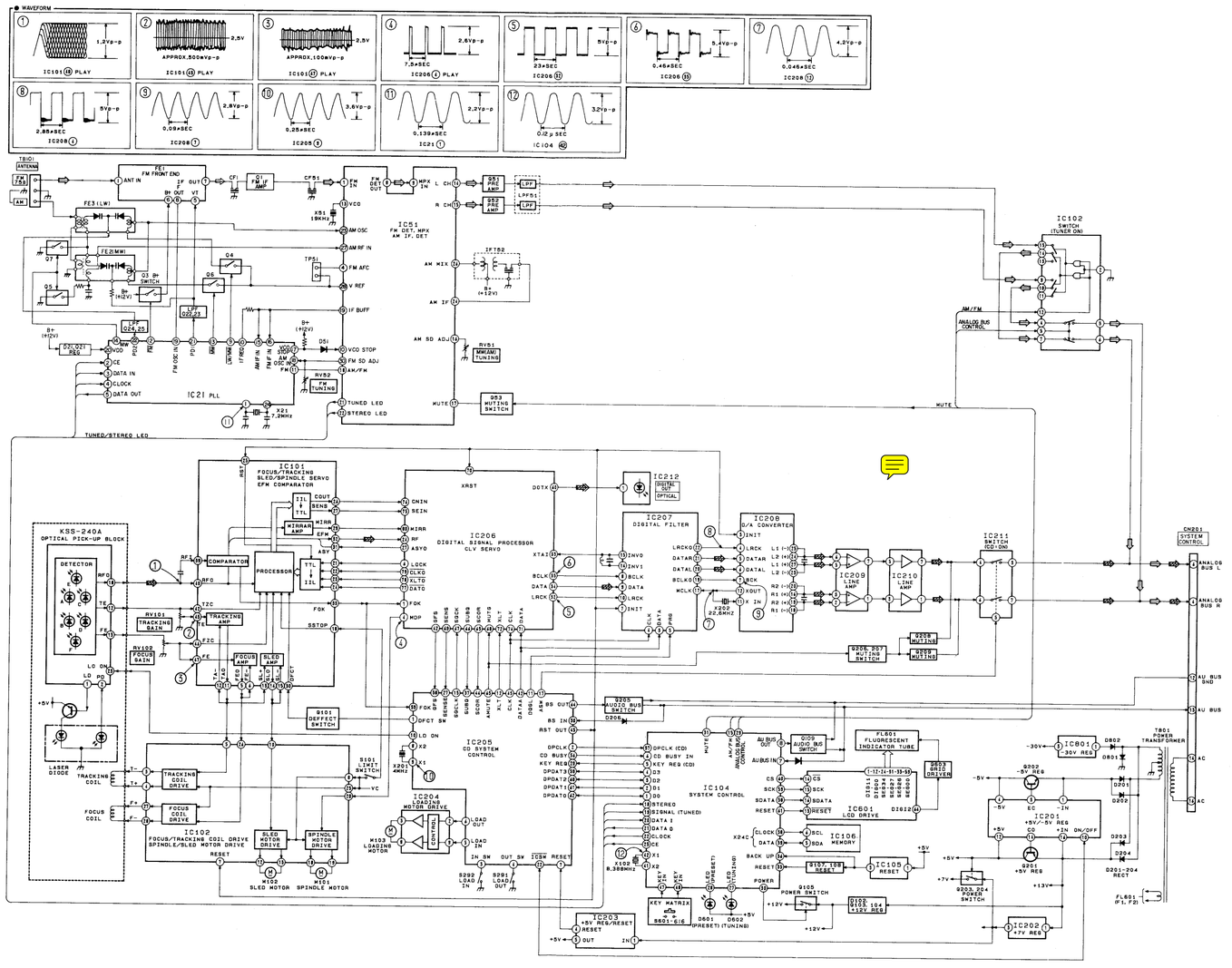




• **SEGMENT CONNECTION TABLE**

	13G	12G	11G	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	S1	**1**
P2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	S2	**2**
P3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	S3	**3**
P4	S4	S4	S4	S4	S4	S4	S4	S4	S4	S4	S4	S4	**4**
P5	S5	S5	S5	S5	S5	S5	S5	S5	S5	S5	S5	S5	**5**
P6	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	S6	**6**
P7	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7	S7	**7**
P8	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8	S8	**8**
P9	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9	S9	**9**
P10	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	S10	**10**
P11	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11	S11	**11**
P12	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12	S12	**12**
P13	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	S13	**13**
P14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	S14	**14**
P15	S15	S15	S15	S15	S15	S15	S15	S15	S15	S15	S15	S15	**15**
P16	S16	S16	S16	S16	S16	S16	S16	S16	S16	S16	S16	S16	**16**
P17	S17	S17	S17	S17	S17	S17	S17	S17	S17	S17	S17	S17	**17**
P18	S18	S18	S18	S18	S18	S18	S18	S18	S18	S18	S18	S18	**18**
P19	S19	S19	S19	S19	S19	S19	S19	S19	S19	S19	S19	S19	**19**
P20	S20	S20	S20	S20	S20	S20	S20	S20	S20	S20	S20	S20	**20**
P21	S21	S21	S21	S21	S21	S21	S21	S21	S21	S21	S21	S21	▷
P22	S22	S22	S22	S22	S22	S22	S22	S22	S22	S22	S22	S22	▯▯
P23	S23	S23	S23	S23	S23	S23	S23	S23	S23	S23	S23	S23	SHUFFLE
P24	S24	S24	S24	S24	S24	S24	S24	S24	S24	S24	S24	S24	PROGRAM
P25	S25	S25	S25	S25	S25	S25	S25	S25	S25	S25	S25	S25	REPEAT
P26	S26	S26	S26	S26	S26	S26	S26	S26	S26	S26	S26	S26	1 (REPEAT)
P27	S27	S27	S27	S27	S27	S27	S27	S27	S27	S27	S27	S27	AUTO
P28	S28	S28	S28	S28	S28	S28	S28	S28	S28	S28	S28	S28	TUNED
P29	S29	S29	S29	S29	S29	S29	S29	S29	S29	S29	S29	S29	STEREO
P30	S30	S30	S30	S30	S30	S30	S30	S30	S30	S30	S30	S30	MONO
P31	S31	S31	S31	S31	S31	S31	S31	S31	S31	S31	S31	S31	MEMORY
P32	S32	S32	S32	S32	S32	S32	S32	S32	S32	S32	S32	S32	—
P33	S33	S33	S33	S33	S33	S33	S33	S33	S33	S33	S33	S33	—
P34	S34	S34	S34	S34	S34	S34	S34	S34	S34	S34	S34	S34	—
P35	S35	S35	S35	S35	S35	S35	S35	S35	S35	S35	S35	S35	—

4-3. BLOCK DIAGRAM



4-4. PRINTED WIRING BOARDS

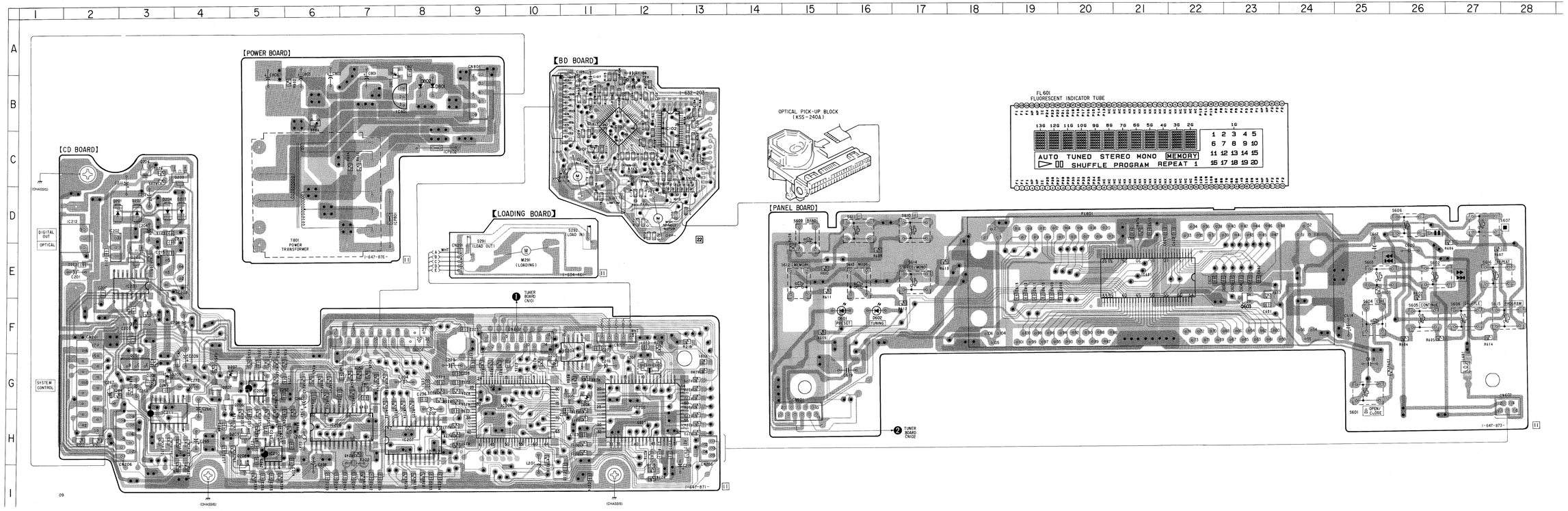
- **CD SECTION**
- **See page 8 for Circuit Boards Location and Semiconductor Lead Layouts.**

Notes on printed wiring boards:

- ○—— : Indicated a lead wire mounted on the component side.
- ■ : Parts mounted on the conductor side.
- ● : Through hole.
- ▨▨▨ : Pattern from the side which enables seeing.
- ▨▨▨ : Pattern of the rear side.

• Semiconductor Location

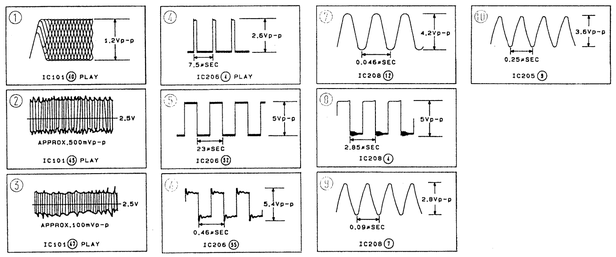
Ref. No.	Location
D201	D-2
D202	D-3
D203	D-3
D204	D-3
D205	G-10
D206	G-11
D207	G-4
D208	G-3
D209	G-3
D601	F-15
D602	F-16
D801	B-8
D802	B-8
D803	B-7
D804	B-6
IC101	B-11
IC102	B-12
IC201	E-2
IC202	D-2
IC203	E-3
IC204	F-10
IC205	H-12
IC206	H-10
IC207	H-8
IC208	H-6
IC209	G-6
IC210	H-5
IC211	H-3
IC212	D-1
IC601	E-21
IC801	B-7
Q101	C-11
Q201	G-3
Q202	E-3
Q203	C-3
Q204	C-3
Q205	G-10
Q206	G-4
Q207	G-4
Q208	I-5
Q209	H-5
Q603	F-23



Notes on schematic diagram:

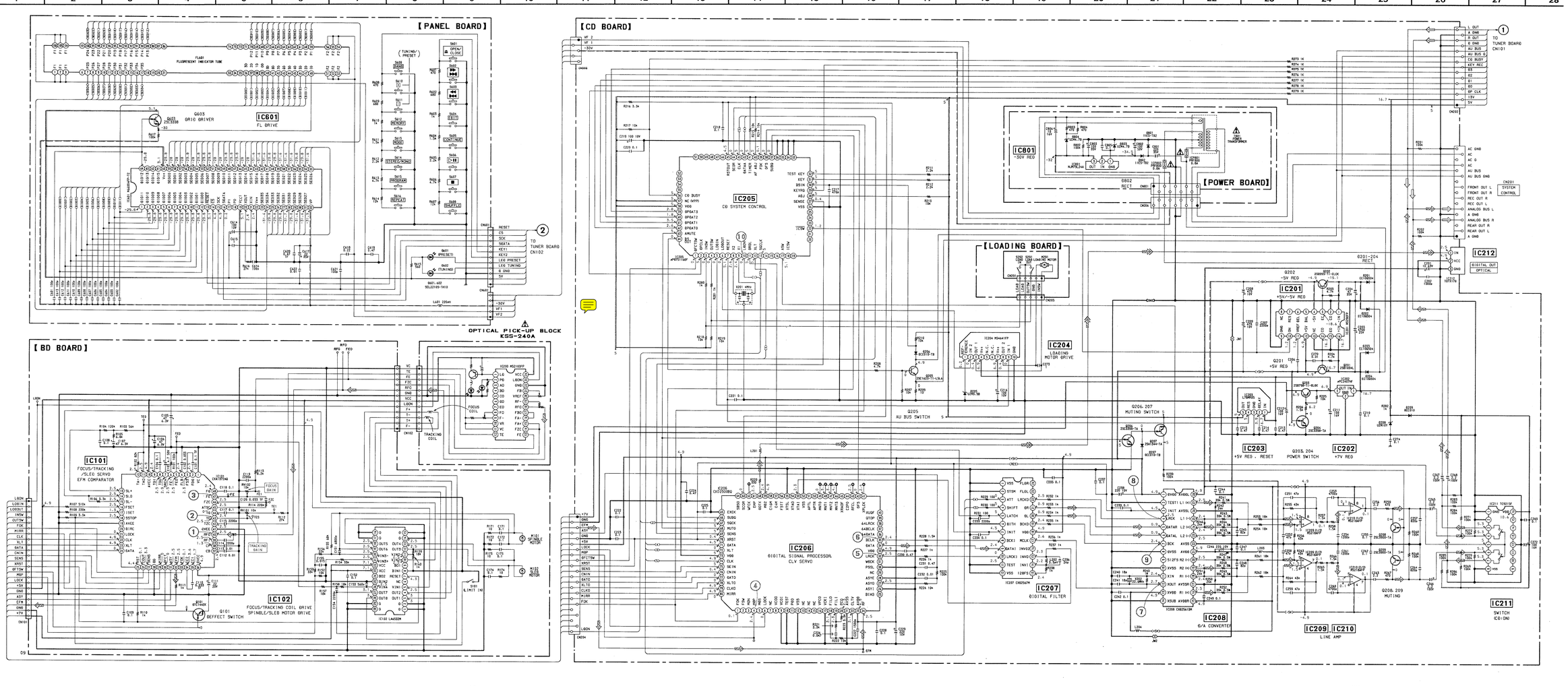
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- △ : Internal component.
- ——— : B+ line
- — — — : B– line
- ▭ : Adjustment for repair.
- Voltage are dc with respect to ground under no-signal conditions.
- No mark : CD, STOP
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ⇨ : CD ⇨ : DIGITAL OUT

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



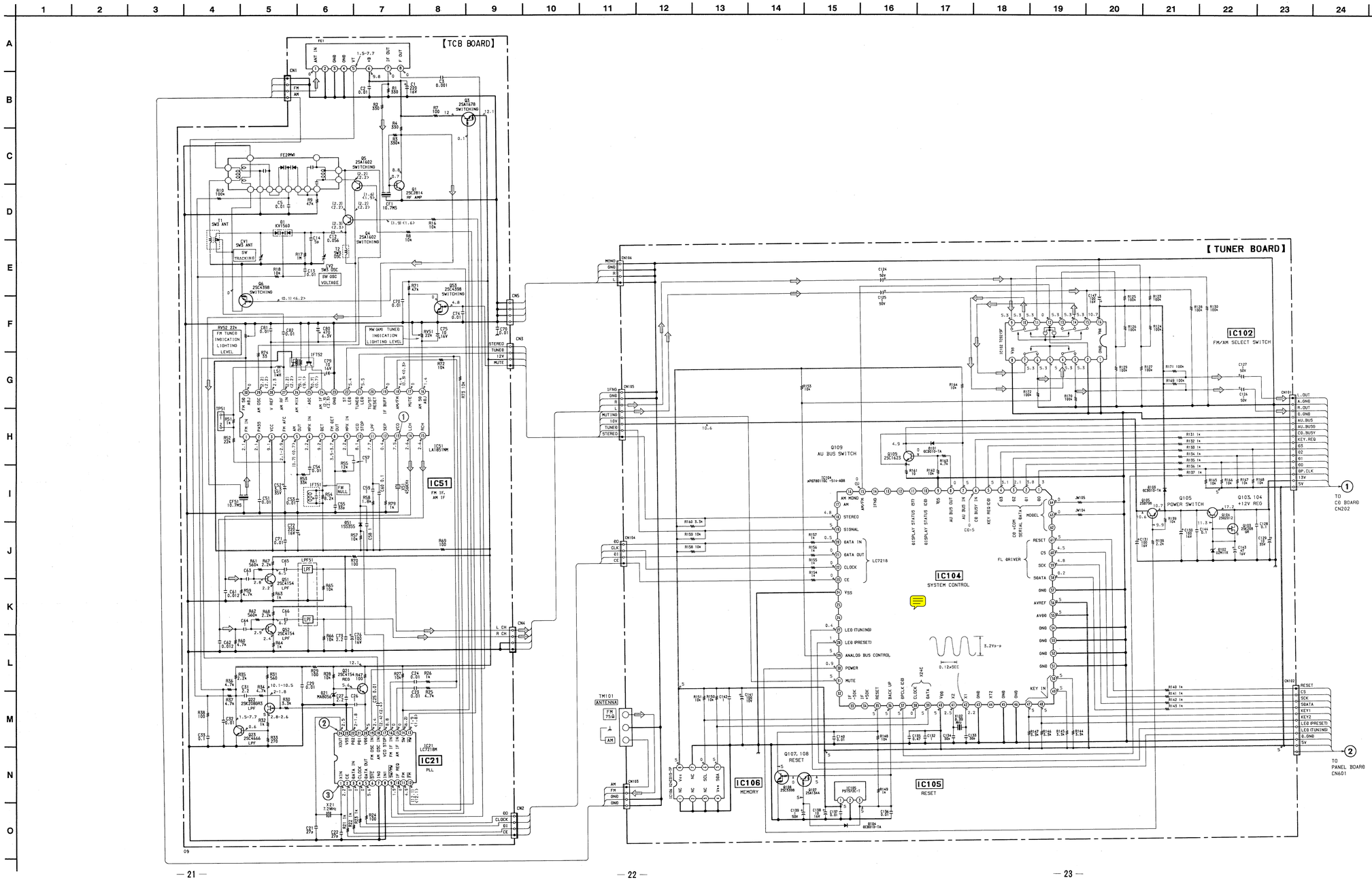
4-5. SCHEMATIC DIAGRAM

- CD SECTION
- See page 29, 30 and 31 for IC Block Diagrams.



4-6. SCHEMATIC DIAGRAM

- TUNER, TCB SECTION
- See page 29, 30 and 31 for IC Block Diagrams.



Notes on schematic diagram:

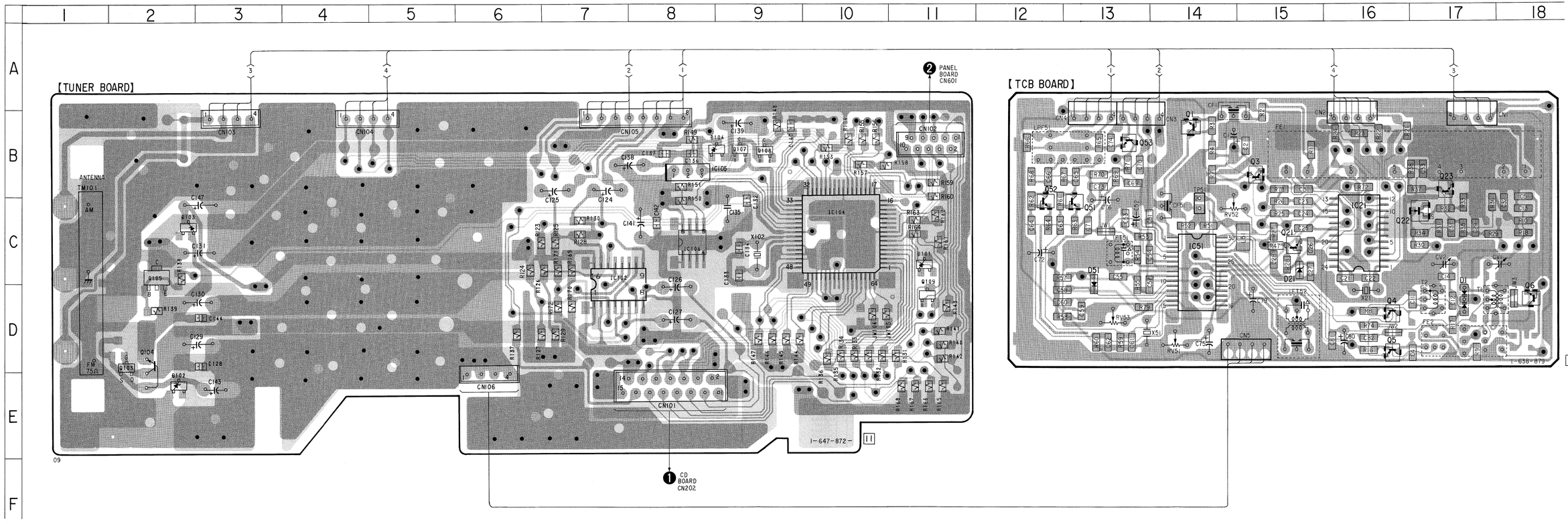
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in ohms, 1/4W or less unless otherwise noted.
- ——— : B+ line
- ▭ : Adjustment for repair.
- Voltage are dc with respect to ground under no-signal conditions.
- No mark : FM
- Voltages are taken with a VOM (input impedance 10 MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path. ⇨ : FM

4-7. PRINTED WIRING BOARD
- TUNER, TCB SECTION
- See page 8 for Circuit Boards Location and Semiconductor Lead Layouts.

Notes on printed wiring boards:
- ○—— : Indicated a lead wire mounted on the component side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enables seeing.
- ▒▒▒ : Pattern of the rear side.

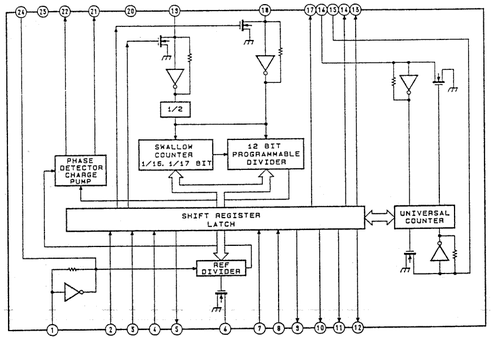
• Semiconductor Location

Ref. No.	Location
D1	D-17
D21	D-15
D51	D-13
D101	C-11
D102	E-2
D103	C-2
D104	B-8
IC21	C-16
IC51	C-14
IC102	D-7
IC104	C-10
IC105	B-8
IC106	C-8
Q1	B-14
Q3	B-15
Q4	D-16
Q5	D-16
Q6	D-18
Q21	C-15
Q22	C-16
Q23	C-17
Q51	C-13
Q52	C-12
Q53	B-13
Q103	E-2
Q104	E-2
Q105	D-2
Q107	B-9
Q108	B-9
Q109	D-11

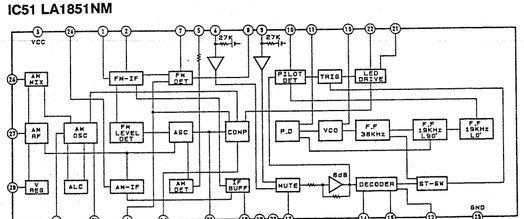


4-9. IC BLOCK DIAGRAMS

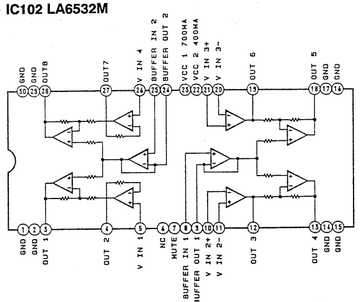
IC21 LC7218M



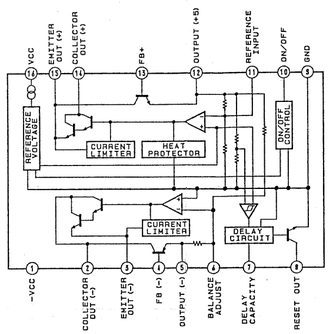
IC51 LA1851NM



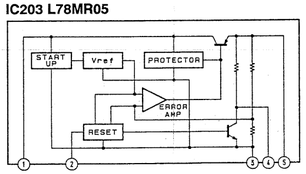
IC102 LA6532M



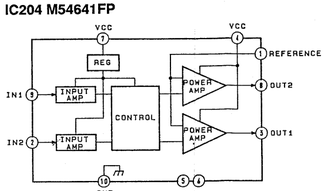
IC201 M5290FP



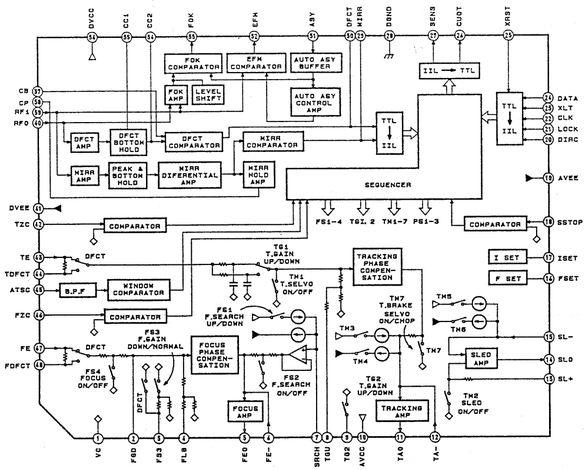
IC203 L78MR05



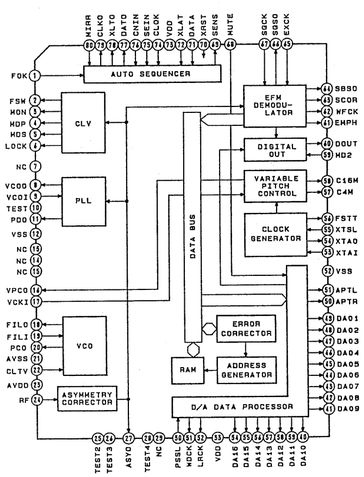
IC204 M54641FP



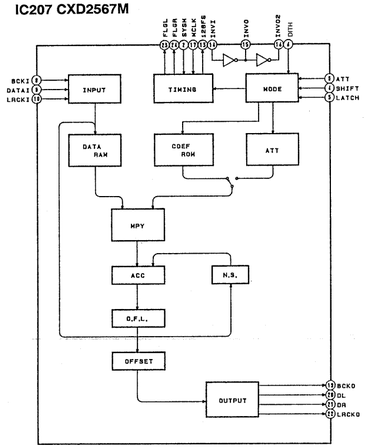
IC101 CXA1372AQ



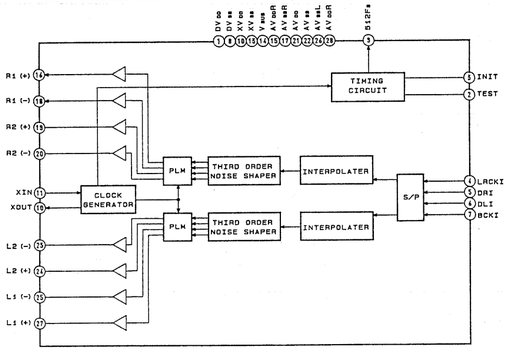
IC206 CXD2500BQ



IC207 CXD2567M



IC208 CXD2561BM



SECTION 5
IC PIN FUNCTIONS

- **IC104 Tuner System Controller (μPD78011GC-514-AB8)**

No.	Name	I/O	Function
1	D0	I/O	Data input/output terminal with IC205 (CD system controller).
2	D1	I/O	Data input/output terminal with IC205 (CD system controller).
3	D2	I/O	Data input/output terminal with IC205 (CD system controller).
4	D3	I/O	Data input/output terminal with IC205 (CD system controller).
5	KEY REQ (CD)	O	Key data output timing. (CD)
6	CD BUSY INPUT	I	CD condition input.
7	AU BUS INPUT	I	Audio bus input.
8	AU BUS OUTPUT	O	Audio bus output.
9	Vss	–	GND pin.
10	Display status (CD)	O	Not used in this unit (Open).
11	Display status (ST)	O	Not used in this unit (Open).
12			Not used in this unit (Open).
13			Not used in this unit (Open).
14	IFOK	O	Not used in this unit (Open).
15	AM/FM	O	FM/AM selection output. "Low": FM "High": AM
16	AM forcible mono	O	Not used in this unit (Open).
17	AM	O	Not used in this unit (Open).
18	STEREO	I	STEREO input.
19	SIGNAL	I	SIGNAL input.
20	DATA INPUT	I	Data input from IC21 (PLL).
21	DATA OUTPUT	O	Data output to IC21 (PLL).
22	CLOCK	O	CLOCK output to IC21 (PLL).
23	CE	O	CE output to IC21 (PLL).
24	Vss	–	GND pin.
25			Not used in this unit (Open).
26			Not used in this unit (Open).
27	LED (TUNING)	O	Tuner "+"/"–" key mode LED output.
28	LED (PRESET)	O	Tuner "+"/"–" key mode LED output.
29	Analog bus control	O	Analog bus control output of IC102 (TC9215F-TP1).
30	POWER	O	Power output. "Low": ON "High": OFF
31	MUTE	O	Muting output. "Low": ON "High": OFF
32			Not used in this unit (Open).
33	IF –50K	I	Not used in this unit (Open).
34	IF +50K	I	Not used in this unit (Open).
35	RESET	I	Reset input.
36	BACK UP	I	Backup input.
37	DPCLK (CD)	I	CD display data timing input.
38	CLOCK	O	CLOCK output to IC106 (MEMORY).
39	DATA	I/O	Data input/output with IC106 (MEMORY).
40	VDD	–	Power supply pin (+5V).

No.	Name	I/O	Function
41	X2		Main clock.
42	X1	I	Main clock (8.38 MHz).
43	GND	–	GND pin.
44	XT2	–	Not used in this unit (Open).
45	GND	–	GND pin.
46	GND	–	GND pin.
47	Key input	I	Key input.
48	Key input	I	Key input.
49	Key input	I	Not used in this unit (+5V).
50	Key input	I	Not used in this unit (+5V).
51	GND	–	GND pin.
52	GND	–	GND pin.
53	GND	–	GND pin.
54	GND	–	GND pin.
55	AVDD	–	Power supply pin (+5V).
56	AVREF	–	Power supply pin (+5V).
57	GND	–	GND pin.
58	SDATA	O	Data output to IC601 (FL driver).
59	SCK	O	CLOCK output to IC601 (FL driver).
60	CS	O	CS output to IC601 (FL driver).
61	RESET	O	Reset output to IC601 (FL driver).
62	Destination	I	Destination determination input.
63	Destination	I	Destination determination input.
64	Destination	I	Destination determination input.

- **IC205 CD SYSTEM CONTROLLER (μPD75116GF-G38-3BE)**

Controls IC101 (RF signal processing•servo), IC102 (DSP•digital filter) and loading, replaces data with IC104 (system controller), performs audio bus input, etc. of the CD section.

No.	Name	I/O	Function
1	DFCTSW	O	IC101 (CXA1372Q) DEFECT circuit ON/OFF selection output.
2	DPCLK	O	Display data transmission clock output to IC104 (μPD78011GC-514-AB8).
3	INSW	I	S292 (loading-in switch) input.
4	OUTSW	I	S291 (loading-out switch) input.
5	LODIN	O	Output rotating M291 (loading motor) in loading-in direction. *1
6	LODOUT	O	Output rotating M291 (loading motor) in loading-out direction. *1
7	RESET	I	System reset input.
8	X2	I	Clock input.
9	X1	I	Clock input. (4 MHz)
10	LDON	O	Optical pickup laser diode on/off selection output. "H": ON
11	PRGL	O	Latch output to IC207 (digital filter).
12	XLT	O	Serial data latch output to IC206 (CXD2500BQ).
13	SQCLK	O	Sub-code Q data reading clock output to IC206 (CXD2500BQ).
14			Not used in this unit (Open).
15			Not used in this unit (Open).
16			Not used in this unit (Open).
17	ANASW	O	Analog bus control signal output of IC211 (TC9215F-TP1).
18	ICSW	I/O	Not used in this unit (CD power supply control pin).
19			Not used in this unit (Open). (Same function as ICSW).
20			Not used in this unit (Open). (Same function as ICSW).
21			Not used in this unit (Open). (Same function as ICSW).
22	IVICSW	I/O	CD power supply control terminal. OFF: Input (High impedance condition) ON: 0 output
23			Not used in this unit (Open). (Same function as IVICSW).
24			Not used in this unit (Open). (Same function as IVICSW).
25			Not used in this unit (Open). (Same function as IVICSW).
26	Vss		GND pin.
27	SENSE	I	SENSE input from IC206 (CXD2500BQ).
28	ADJ	I	CD test mode input 1. Continues rotating the spindle motor even if the GFS check is not performed or no frame sync is output in PLAY, PAUSE, SEARCH at "Low".
29	KEYRQ	I	Key code input trigger from IC104 (μPD78012GC-514-AB8). (Four falling edges for each key)
30	BSIN	I	Audio bus input.
31	ADKEY	I	AD key input pin. — On the assumption that electrical adjustments are carried out with only the CD (no tuner microprocessor). (Normally 5V pull-up)
32	ADSEL	I	AD key input permission selection pin.
33			Not used in this unit (GND).
34			Not used in this unit (GND).
35			Not used in this unit (GND).
36			Not used in this unit (GND).
37	SUBQ	I	Sub-code Q data input from IC206 (CXD2500BQ).
38	GFS	I	GFS signal input from IC206 (CXD2500BQ). "Low": NG "High": OK
39	FOK	I	Focus OK signal input from IC101 (CXA1372Q). "High": OK
40	AFADJ	I	CD test mode input 2.

No.	Name	I/O	Function
41	DACSW	I	IC208 (D/A converter) select pin. When DACSW: 1, CXD2561 When DACSW: 0, CXD2562
42	DATAA	O	Serial data output to IC206 (CXD2500BQ), IC207 (CXD2567M).
43	CLK	O	Serial data transmission clock output to IC206 (CXD2500BQ), IC207 (CXD2567M).
44	SCOR	I	Sub-code sync S0+S1 detection input from IC206 (CXD2500BQ).
45	RSTOUT	O	Reset output to vicinity ICs.
46			Not used in this unit (Open).
47			Not used in this unit (Open).
48			Not used in this unit (Open).
49			Not used in this unit (Open).
40			Not used in this unit (Open).
51			Not used in this unit (Open).
52			Not used in this unit (Open).
53			Not used in this unit (Open).
54			Not used in this unit (Open).
55			Not used in this unit (Open).
56	CDBUSY	O	CD ON: "High".
57	NC	–	Not used in this unit (+5V).
58	V_{DD}	–	Power supply pin (+5V).
59	DPDAT 3	I/O	Key data input and display data output with IC104 (μPD78012GC-514-AB8).
60	DPDAT 2	I/O	Key data input and display data output with IC104 (μPD78012GC-514-AB8).
61	DPDAT 1	I/O	Key data input and display data output with IC104 (μPD78012GC-514-AB8).
62	DPDAT 0	I/O	Key data input and display data output with IC104 (μPD78012GC-514-AB8).
63	AMUTE	O	Muting control output. "High": Mute
64	BSOUT	O	Audio bus output pin.

*1 Loading motor control

	IN	OUT	BRAKE
LOG OUT ⑥	L	H	H
LOG IN ⑤	H	L	H

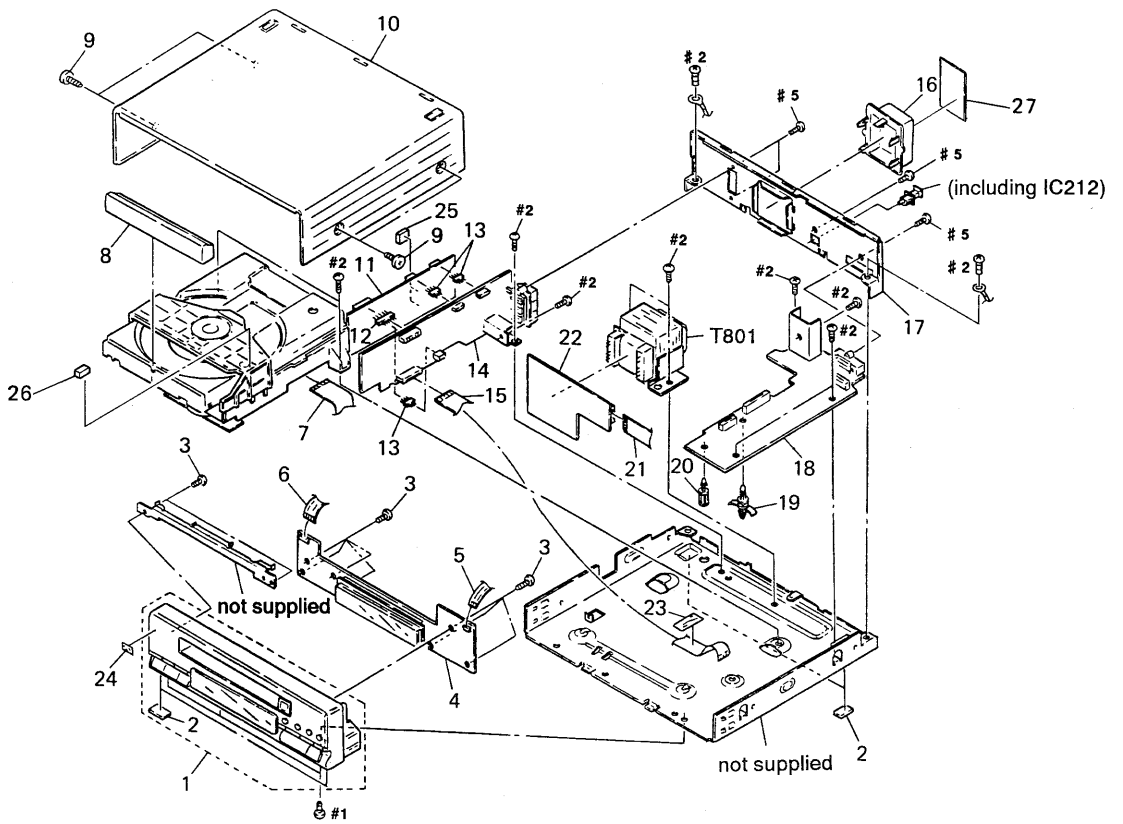
SECTION 6
EXPLODED VIEWS

NOTE:

- -XX, -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list is given in the last of this parts list.

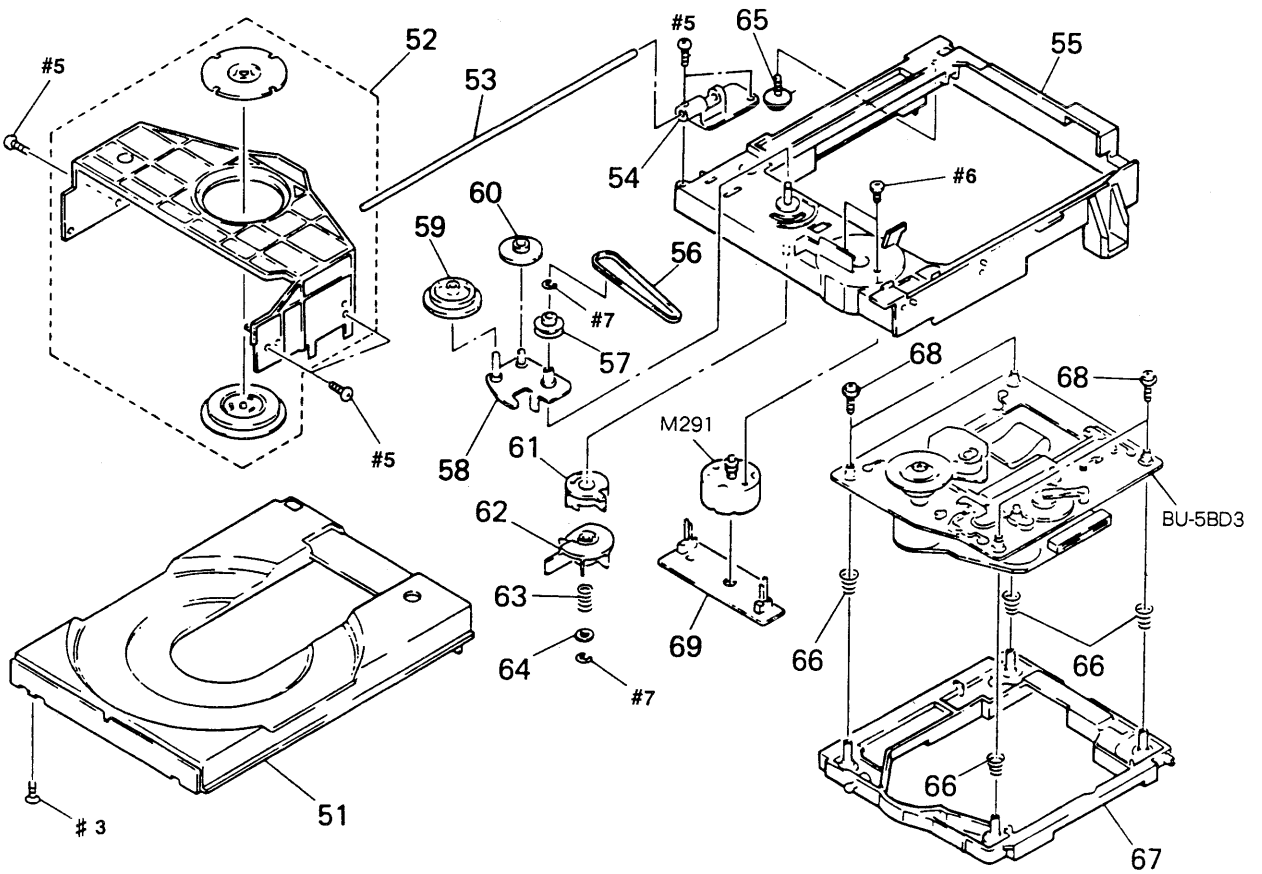
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

6-1. CHASSIS SECTION



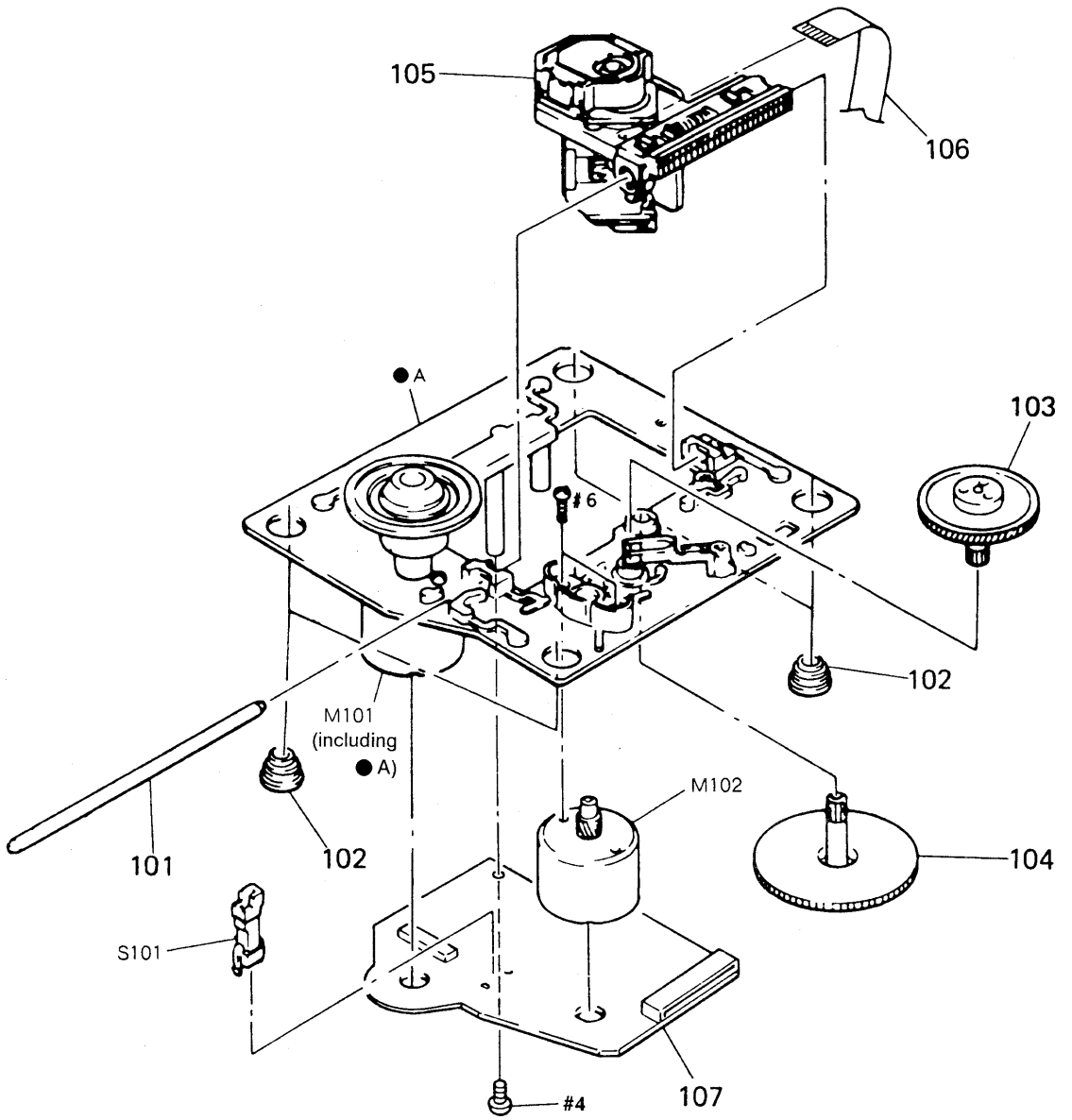
Ref. No.	Part No.	Description	Remark
1	X-4943-000-1	PANEL ASSY, FRONT	
2	4-930-336-31	FOOT (FELT)	
3	4-951-620-01	SCREW (2.6X8), +BVTP	
* 4	A-4360-121-A	PANEL BOARD, COMPLETE	
5	1-696-738-11	WIRE (FLAT TYPE) (5 CORE)	
6	1-696-739-11	WIRE (FLAT TYPE) (11 CORE)	
7	1-690-753-11	WIRE (FLAT TYPE) (22 CORE)	
8	4-955-030-01	PANEL (LOADING)	
9	3-363-099-21	SCREW (CASE 3 TP2)	
* 10	4-954-198-01	CASE	
* 11	A-4303-345-A	TCB BOARD, COMPLETE	
* 12	1-695-810-11	CONNECTOR, PC BOARD (PLUG) 8P	
* 13	1-695-809-11	CONNECTOR, PC BOARD (PLUG) 4P	
* 14	A-4360-120-A	TUNER BOARD, COMPLETE	
15	1-696-740-11	WIRE (FLAT TYPE) (15 CORE)	
* 16	4-954-186-01	COVER (T)	
* 17	4-955-031-21	PANEL (HCD), BACK	
* 18	A-4360-119-A	CD BOARD, COMPLETE	
* 19	4-924-098-11	HOLDER, PC BOARD	
* 20	3-669-610-00	SPACER	
21	1-696-750-11	WIRE (FLAT TYPE) (9 CORE)	
* 22	A-4360-122-A	POWER BOARD, COMPLETE	
23	4-860-518-00	CUSHION	
24	3-703-710-41	STICKER, SONY SYMBOL (12)	
* 25	3-561-427-21	CUSHION	
26	3-884-171-00	STOPPER	
* 27	4-941-548-01	LABEL, CLASS 1	
⚠T801	1-423-378-11	TRANSFORMER, POWER	

6-2. CD MECHANISM SECTION-1 (CDM13B-5BD3)



Ref. No.	Part No.	Description	Remark
51	4-944-012-01	TABLE, DISC	
52	A-4604-752-A	HOLDER (MG) ASSY	
53	4-929-764-01	SHAFT (TABLE GUIDE)	
54	4-944-006-01	BEARING	
55	X-4941-462-1	CHASSIS (MD) ASSY	
56	4-927-649-01	BELT	
57	4-929-724-01	PULLEY (B)	
58	X-4929-703-1	ARM ASSY, SWING	
59	4-927-620-01	GEAR (P)	
60	4-927-628-01	GEAR (C)	
61	4-929-727-01	CAM (A)	
62	4-929-729-01	CAM (B)	
63	3-659-338-00	SPRING, COMPRESSION	
64	4-927-654-01	WASHER (LIMITER)	
* 65	4-917-583-21	BRACKET, YOKE	
66	4-917-541-01	SPRING (B)	
67	4-929-747-01	HOLDER (BU)	
68	4-933-134-01	SCREW (+PTPWH M2.6X6)	
* 69	1-634-461-11	LOADING BOARD	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	

6-3. CD MECHANISM SECTION-2 (BU-5BD3)



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

Ref. No.	Part No.	Description	Remark
101	4-917-565-01	SHAFT, SLED	
102	4-933-126-01	INSULATOR (A)	
103	4-917-567-01	GEAR (M)	
104	4-917-564-01	GEAR (P), FLATNESS	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
* 107	A-4617-371-A	BD BOARD, COMPLETE	
M101	X-4917-523-3	MOTOR, DISK ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)	

SECTION 7
ELECTRICAL PARTS LIST

BD

NOTE:

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

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

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX, -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- Color Indication of Appearance Parts Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ Parts color ↑ Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA...,
  uPB...: μPB..., uPC...: μPC...,
  uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Hardware (# mark) list is given in the last of this parts list.

Ref. No.	Part No.	Description			Remark
*	A-4617-371-A	BD BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C101	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C102	1-163-989-11	CERAMIC CHIP	0.033uF 10%	25V	
C103	1-126-163-11	ELECT	4.7uF 20%	50V	
C104	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C105	1-126-154-11	ELECT	47uF 20%	6.3V	
C106	1-126-154-11	ELECT	47uF 20%	6.3V	
C107	1-126-154-11	ELECT	47uF 20%	6.3V	
C108	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C109	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C110	1-163-989-11	CERAMIC CHIP	0.033uF 10%	25V	
C111	1-131-367-00	TANTALUM	22uF 10%	20V	
C112	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C113	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C114	1-164-161-11	CERAMIC CHIP	0.0022uF 10%	100V	
C115	1-164-161-11	CERAMIC CHIP	0.0022uF 10%	100V	
C117	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C118	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C119	1-164-161-11	CERAMIC CHIP	0.0022uF 10%	100V	
C120	1-163-989-11	CERAMIC CHIP	0.033uF 10%	25V	
C151	1-163-019-00	CERAMIC CHIP	0.0068uF 10%	50V	
C152	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C153	1-163-006-11	CERAMIC CHIP	560PF 10%	50V	
C154	1-164-161-11	CERAMIC CHIP	0.0022uF 10%	100V	
C155	1-163-023-00	CERAMIC CHIP	0.015uF 5%	50V	
C171	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C172	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C173	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
C174	1-163-038-00	CERAMIC CHIP	0.1uF	25V	
		< CONNECTOR >			
CN101	1-568-796-11	SOCKET, CONNECTOR 22P			
CN102	1-568-795-11	SOCKET, CONNECTOR 12P			
		< IC >			
IC101	8-752-053-73	IC CXA1372AQ			
IC102	8-759-822-36	IC LA6532M			
		< JACK >			
J101	1-216-295-00	METAL CHIP	0 5%	1/10W	
J102	1-216-295-00	METAL CHIP	0 5%	1/10W	
		< TRANSISTOR >			
Q101	8-729-901-01	TRANSISTOR	DTC144EK		
		< RESISTOR >			
R101	1-216-097-00	METAL CHIP	100K 5%	1/10W	
R102	1-216-095-00	METAL CHIP	82K 5%	1/10W	
R103	1-216-091-00	METAL CHIP	56K 5%	1/10W	
R104	1-216-099-00	METAL CHIP	120K 5%	1/10W	
R105	1-216-069-00	METAL CHIP	6.8K 5%	1/10W	
R106	1-216-061-00	METAL CHIP	3.3K 5%	1/10W	
R107	1-216-114-00	METAL GLAZE	510K 5%	1/10W	
R108	1-216-105-00	METAL CHIP	220K 5%	1/10W	
R109	1-216-061-00	METAL CHIP	3.3K 5%	1/10W	
R110	1-216-049-00	METAL CHIP	1K 5%	1/10W	
R111	1-216-049-00	METAL CHIP	1K 5%	1/10W	
R112	1-216-083-00	METAL CHIP	27K 5%	1/10W	
R113	1-216-071-00	METAL CHIP	8.2K 5%	1/10W	
R114	1-216-105-00	METAL CHIP	220K 5%	1/10W	
R152	1-216-073-00	METAL CHIP	10K 5%	1/10W	
R153	1-216-085-00	METAL CHIP	33K 5%	1/10W	
R154	1-216-085-00	METAL CHIP	33K 5%	1/10W	
R155	1-216-093-00	METAL CHIP	68K 5%	1/10W	
R156	1-216-081-00	METAL CHIP	22K 5%	1/10W	
R157	1-216-079-00	METAL CHIP	18K 5%	1/10W	
R158	1-216-079-00	METAL CHIP	18K 5%	1/10W	
R159	1-216-079-00	METAL CHIP	18K 5%	1/10W	
R160	1-216-049-00	METAL CHIP	1K 5%	1/10W	
R171	1-216-001-00	METAL CHIP	10 5%	1/10W	
R172	1-216-001-00	METAL CHIP	10 5%	1/10W	
R173	1-216-001-00	METAL CHIP	10 5%	1/10W	
R174	1-216-001-00	METAL CHIP	10 5%	1/10W	
		< VARIABLE RESISTOR >			
RV101	1-241-630-11	RES, ADJ, CARBON 10K			
RV102	1-241-630-11	RES, ADJ, CARBON 10K			
		< SWITCH >			
S101	1-572-085-11	SWITCH, LEAF (LIMIT IN)			
**********					

CD

Ref.No.	Part No.	Description			Remark
*	A-4360-119-A	CD BOARD, COMPLETE			
		**********			
*	4-880-403-21	HEAT SINK			
		< CAPACITOR >			
C201	1-124-915-11	ELECT	10uF	20% 63V	
C202	1-163-141-00	CERAMIC CHIP	0.001uF	5% 50V	
C203	1-124-564-11	ELECT	4700uF	20% 25V	
C204	1-126-947-11	ELECT	47uF	20% 35V	
C206	1-164-346-11	CERAMIC CHIP	1uF	16V	
C207	1-164-695-11	CERAMIC CHIP	0.0022uF	5% 50V	
C208	1-126-925-11	ELECT	470uF	20% 10V	
C209	1-126-925-11	ELECT	470uF	20% 10V	
C210	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C211	1-126-933-11	ELECT	100uF	20% 16V	
C212	1-126-933-11	ELECT	100uF	20% 16V	
C213	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C214	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C215	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C216	1-124-584-00	ELECT	100uF	20% 10V	
C217	1-163-133-00	CERAMIC CHIP	470PF	5% 50V	
C218	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C219	1-124-584-00	ELECT	100uF	20% 10V	
C220	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C221	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C222	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C223	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C224	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C225	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C226	1-163-035-00	CERAMIC CHIP	0.047uF	50V	
C227	1-163-145-00	CERAMIC CHIP	0.0015uF	5% 50V	
C228	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C229	1-126-923-11	ELECT	220uF	20% 10V	
C230	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C231	1-164-005-11	CERAMIC CHIP	0.47uF	25V	
C232	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C233	1-164-695-11	CERAMIC CHIP	0.0022uF	5% 50V	
C234	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C235	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C236	1-163-102-00	CERAMIC CHIP	24PF	5% 50V	
C237	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C238	1-126-923-11	ELECT	220uF	20% 10V	
C239	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C240	1-163-099-00	CERAMIC CHIP	18PF	5% 50V	
C241	1-163-099-00	CERAMIC CHIP	18PF	5% 50V	
C242	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C244	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C245	1-163-115-00	CERAMIC CHIP	82PF	5% 50V	
C246	1-126-923-11	ELECT	220uF	20% 10V	
C247	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C248	1-163-115-00	CERAMIC CHIP	82PF	5% 50V	
C249	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C251	1-163-109-00	CERAMIC CHIP	47PF	5% 50V	
C252	1-163-109-00	CERAMIC CHIP	47PF	5% 50V	
C253	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V	
C254	1-163-143-00	CERAMIC CHIP	0.0012uF	5% 50V	
C255	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C256	1-164-505-11	CERAMIC CHIP	2.2uF	16V	
C257	1-163-139-00	CERAMIC CHIP	820PF	5% 50V	
C258	1-163-109-00	CERAMIC CHIP	47PF	5% 50V	
C259	1-163-109-00	CERAMIC CHIP	47PF	5% 50V	
C260	1-163-017-00	CERAMIC CHIP	0.0047uF	5% 50V	
C261	1-163-143-00	CERAMIC CHIP	0.0012uF	5% 50V	
C262	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C263	1-164-505-11	CERAMIC CHIP	2.2uF	16V	
C264	1-163-139-00	CERAMIC CHIP	820PF	5% 50V	
C265	1-124-925-11	ELECT	2.2uF	20% 100V	
C266	1-124-925-11	ELECT	2.2uF	20% 100V	
C267	1-124-925-11	ELECT	2.2uF	20% 100V	
C268	1-124-925-11	ELECT	2.2uF	20% 100V	
C269	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C270	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C272	1-126-933-11	ELECT	100uF	20% 16V	
C273	1-164-346-11	CERAMIC CHIP	1uF	16V	
C274	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
		< CONNECTOR >			
* CN201	1-569-624-11	SOCKET, CONNECTOR 17P			
* CN202	1-568-834-11	SOCKET, CONNECTOR 15P			
CN203	1-695-830-11	HOUSING, CONNECTOR 5P			
* CN204	1-568-822-11	SOCKET, CONNECTOR 22P			
* CN205	1-564-339-51	PIN, CONNECTOR 5P			
CN206	1-695-693-11	CONNECTOR, FFC/FPC 9P			
		< DIODE >			
D201	8-719-210-39	DIODE	EC10QS-04		
D202	8-719-210-39	DIODE	EC10QS-04		
D203	8-719-210-39	DIODE	EC10QS-04		
D204	8-719-210-39	DIODE	EC10QS-04		
D205	8-719-021-13	DIODE	UZM3.9Z		
D206	8-719-800-76	DIODE	1SS226		
D207	8-719-800-76	DIODE	1SS226		
D208	8-719-021-89	DIODE	UZM10X		
D209	8-719-800-76	DIODE	1SS226		
		< IC >			
IC201	8-759-636-24	IC	M5290FP		
IC202	8-759-148-80	IC	uPC2407HF		
IC203	8-759-820-84	IC	L78MR05		
IC204	8-759-636-20	IC	M54641FP		
IC205	8-759-163-41	IC	uPD75116GF-G38-3BE		

Ref. No.	Part No.	Description	Remark
IC206	8-752-352-93	IC CXD2500BQ	
IC207	8-752-356-03	IC CXD2567M	
IC208	8-752-351-19	IC CXD2561BM	
IC209	8-759-636-55	IC M5218AFP	
IC210	8-759-636-55	IC M5218AFP	
IC211	8-759-051-64	IC TC9215F-TP1	
IC212	8-749-923-04	IC TOTX178	
		< JUMPER RESISTOR >	
JW1	1-216-295-00	METAL CHIP 0 5% 1/10W	
JW2	1-216-295-00	METAL CHIP 0 5% 1/10W	
		< COIL >	
L201	1-410-397-21	FERRITE BEAD INDUCTOR	
L202	1-410-464-11	INDUCTOR 3.3uH	
L203	1-410-397-21	FERRITE BEAD INDUCTOR	
L204	1-410-397-21	FERRITE BEAD INDUCTOR	
		< TRANSISTOR >	
Q201	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q202	8-729-140-75	TRANSISTOR 2SD999-CLCK	
Q203	8-729-101-07	TRANSISTOR 2SB798-DL	
Q204	8-729-805-41	TRANSISTOR 2SC3398	
Q205	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q206	8-729-805-41	TRANSISTOR 2SC3398	
Q207	8-729-805-65	TRANSISTOR 2SA1344	
Q208	8-729-805-40	TRANSISTOR 2SC3900	
Q209	8-729-805-40	TRANSISTOR 2SC3900	
		< RESISTOR >	
R201	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R202	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R203	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R204	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R205	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R206	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R207	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R208	1-216-065-00	METAL CHIP 4.7K 5% 1/10W	
R209	1-216-001-00	METAL CHIP 10 5% 1/10W	
R210	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R211	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R212	1-216-057-00	METAL CHIP 2.2K 5% 1/10W	
R213	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R214	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R215	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R216	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R217	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R218	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R219	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R220	1-216-037-00	METAL CHIP 330 5% 1/10W	

Ref. No.	Part No.	Description	Remark
R221	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R222	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R223	1-216-061-00	METAL CHIP 3.3K 5% 1/10W	
R224	1-216-073-00	METAL CHIP 10K 5% 1/10W	
R225	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R226	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R227	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R228	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R229	1-216-025-00	METAL CHIP 100 5% 1/10W	
R230	1-216-025-00	METAL CHIP 100 5% 1/10W	
R231	1-216-025-00	METAL CHIP 100 5% 1/10W	
R232	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R233	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R234	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R235	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R236	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R237	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R238	1-216-049-00	METAL CHIP 1K 5% 1/10W	
R239	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R240	1-216-121-00	METAL CHIP 1M 5% 1/10W	
R241	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R242	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R243	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R244	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R245	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R246	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R247	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R248	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R249	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R250	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R251	1-216-082-00	METAL GLAZE 24K 5% 1/10W	
R252	1-216-689-11	METAL CHIP 39K 0.5% 1/10W	
R253	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R254	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R255	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R256	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R257	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R258	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R259	1-216-041-00	METAL CHIP 470 5% 1/10W	
R260	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R261	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R262	1-216-079-00	METAL CHIP 18K 5% 1/10W	
R263	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R264	1-216-088-00	METAL CHIP 43K 5% 1/10W	
R265	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R266	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R267	1-216-041-00	METAL CHIP 470 5% 1/10W	
R268	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R269	1-216-097-00	METAL CHIP 100K 5% 1/10W	
R270	1-216-097-00	METAL CHIP 100K 5% 1/10W	

CD LOADING PANEL

Ref. No.	Part No.	Description				Remark
R271	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R272	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R273	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R274	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R275	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R276	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R277	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R278	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R279	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R280	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R281	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R282	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R283	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R284	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R285	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R286	1-216-097-00	METAL CHIP	100K	5%	1/10W	
		< VIBRATOR >				
X201	1-577-358-21	VIBRATOR, CERAMIC (4MHz)				
X202	1-567-965-11	VIBRATOR, CRYSTAL (22.6MHz)				
**********						
*	1-634-461-11	LOADING BOARD				
		**********				
		< CONNECTOR >				
* CN291	1-564-498-11	PIN, CONNECTOR 5P				
		< SWITCH >				
S291	1-571-924-11	SWITCH, LEAF (LOAD OUT)				
S292	1-571-924-11	SWITCH, LEAF (LOAD IN)				
**********						
*	A-4360-121-A	PANEL BOARD, COMPLETE				
		**********				
*	4-932-810-11	CUSHION (FL)				
*	4-954-187-01	HOLDER (FL)				
		< CAPACITOR >				
C601	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C602	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C603	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C604	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C605	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C606	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C607	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C608	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C609	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C610	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C611	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C612	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C613	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C614	1-124-584-00	ELECT	100uF	20%	10V	
C615	1-164-346-11	CERAMIC CHIP	1uF		16V	
C616	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C617	1-124-248-00	ELECT	22uF	20%	35V	
C618	1-136-169-00	FILM	0.22uF	5%	50V	
C619	1-136-173-00	FILM	0.47uF	5%	50V	
C620	1-136-173-00	FILM	0.47uF	5%	50V	
C621	1-163-117-00	CERAMIC CHIP	100PF	5%	50V	
C622	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
		< CONNECTOR >				
CN601	1-695-829-11	HOUSING, CONNECTOR 11P				
CN602	1-580-918-11	HOUSING, CONNECTOR 5P				
		< DIODE >				
D601	8-719-301-37	LED SEL2210S-CD				
D602	8-719-301-37	LED SEL2210S-CD				
		< FILTER >				
FL601	1-517-115-11	INDICATOR TUBE, FLUORESCENT				
		< IC >				
IC601	8-759-077-16	IC M66004M4FP-T2				
		< COIL >				
L601	1-408-793-21	INDUCTOR CHIP 220uH				
		< TRANSISTOR >				
Q603	8-729-805-41	TRANSISTOR 2SC3398				
		< RESISTOR >				
R601	1-216-041-00	METAL CHIP	470	5%	1/10W	
R602	1-216-045-00	METAL CHIP	680	5%	1/10W	
R603	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R604	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R605	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R606	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R607	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R608	1-216-041-00	METAL CHIP	470	5%	1/10W	
R609	1-216-045-00	METAL CHIP	680	5%	1/10W	
R610	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R611	1-216-053-00	METAL CHIP	1.5K	5%	1/10W	
R612	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R613	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R614	1-216-075-00	METAL CHIP	12K	5%	1/10W	
R615	1-216-043-00	METAL CHIP	560	5%	1/10W	

Ref.No.	Part No.	Description				Remark
R616	1-216-083-00	METAL CHIP	27K	5%	1/10W	
R617	1-216-097-00	METAL CHIP	100K	5%	1/10W	
		< SWITCH >				
S601	1-554-303-21	SWITCH, TACTILE (⏏)				
S602	1-554-303-21	SWITCH, TACTILE (▶▶)				
S603	1-554-303-21	SWITCH, TACTILE (◀◀)				
S604	1-554-303-21	SWITCH, TACTILE (EDIT)				
S605	1-554-303-21	SWITCH, TACTILE (CONTINUE)				
S606	1-554-303-21	SWITCH, TACTILE (▷▮▮)				
S607	1-554-303-21	SWITCH, TACTILE (■)				
S608	1-554-303-21	SWITCH, TACTILE (SHUFFLE)				
S609	1-554-303-21	SWITCH, TACTILE (BAND)				
S610	1-554-303-21	SWITCH, TACTILE (+)				
S611	1-554-303-21	SWITCH, TACTILE (-)				
S612	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S613	1-554-303-21	SWITCH, TACTILE (MODE)				
S614	1-554-303-21	SWITCH, TACTILE (STEREO/MONO)				
S615	1-554-303-21	SWITCH, TACTILE (PROGRAM)				
S616	1-554-303-21	SWITCH, TACTILE (REPEAT)				
**********						
*	1-647-876-11	POWER BOARD				
		**********				
		< CAPACITOR >				
C801	1-126-949-11	ELECT	220uF	20%	35V	
C802	1-124-122-11	ELECT	100uF	20%	50V	
C803	1-126-948-11	ELECT	100uF	20%	35V	
C805	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C806	1-126-157-11	ELECT	10uF	20%	16V	
		< CONNECTOR >				
CN801	1-695-729-11	CONNECTOR, FFC/FPC 9P				
		< DIODE >				
D801	8-719-200-02	DIODE	10E-2			
D802	8-719-200-02	DIODE	10E-2			
D803	8-719-021-23	DIODE	UZM4.7B			
D804	8-719-021-23	DIODE	UZM4.7B			
		< IC >				
IC801	8-759-700-72	IC	NJM79L24A-T3			
		< IC LINK >				
⚠ICP801	1-532-838-11	LINK, IC (PRF800, 0.8A)				
⚠ICP802	1-532-838-11	LINK, IC (PRF800, 0.8A)				
		< RESISTOR >				
R802	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R803	1-216-041-00	METAL CHIP	470	5%	1/10W	
R804	1-216-041-00	METAL CHIP	470	5%	1/10W	
		< TRASFORMER >				
⚠T801	1-423-378-11	TRANSFORMER, POWER				
**********						
*	A-4303-345-A	TCB BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C001	1-124-120-11	ELECT	220uF	20%	25V	
C002	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C003	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V	
C005	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C012	1-164-343-91	CERAMIC CHIP	0.056uF	10%	25V	
C013	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C014	1-163-577-91	CERAMIC CHIP	5PF	0.25PF	50V	
C021	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C022	1-163-103-00	CERAMIC CHIP	27PF	5%	50V	
C023	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C024	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C025	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C026	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C027	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C029	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C031	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C032	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C033	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C051	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C052	1-123-613-91	ELECT	3.3uF		35V	
C053	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C054	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C055	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	
C057	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C058	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C059	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C060	1-163-038-00	CERAMIC CHIP	0.1uF		25V	
C061	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V	
C062	1-163-022-00	CERAMIC CHIP	0.012uF	10%	50V	
C063	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C064	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C065	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C066	1-164-346-11	CERAMIC CHIP	1.0uF		16V	
C069	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C070	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C071	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C072	1-124-120-11	ELECT	220uF	20%	25V	
C073	1-164-505-11	CERAMIC CHIP	2.2uF		16V	
C074	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C075	1-126-157-11	ELECT	10uF	20%	16V	

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

TCB

Ref. No.	Part No.	Description				Remark
C076	1-126-101-11	ELECT	100uF	20%	16V	
C079	1-126-157-11	ELECT	10uF	20%	16V	
C080	1-124-472-11	ELECT	470uF	20%	10V	
C081	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
C082	1-164-232-11	CERAMIC CHIP	0.01uF		50V	
		< FILTER >				
CF001	1-527-968-11	FILTER, CERAMIC				
CF051	1-567-389-11	FILTER, CERAMIC				
		< CONNECTOR >				
CN001	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)				
CN002	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)				
CN003	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)				
CN004	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)				
CN005	1-573-105-11	CONNECTOR, PC BOARD (RECEPTACLE)				
		< TRIMER >				
CV001	1-141-265-31	TRIMER CAPACITOR				
CV002	1-141-265-31	TRIMER CAPACITOR				
		< DIODE >				
D001	8-719-975-10	DIODE	KV1560NT			
D021	8-719-422-46	DIODE	MA8056			
D051	8-719-988-62	DIODE	1SS355			
		< FRONT END >				
FE001	1-465-673-11	FRONT END (2 BAND)				
FE002	1-239-032-11	ENCAPSULATED COMPONENT (MW)				
		< IC >				
IC021	8-759-821-43	IC	LC7218M			
IC051	8-759-823-68	IC	LA1851NM			
		< TRANSFORMER >				
IFT051	1-404-954-11	TRANSFORMER, DISCRIMINATOR				
IFT052	1-404-713-11	TRANSFORMER, IF				
		< CHIP JUMPER >				
JW001	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW002	1-216-295-00	METAL CHIP	0	5%	1/10W	
JW003	1-216-295-00	METAL CHIP	0	5%	1/10W	
		< COIL >				
L051	1-408-798-00	CHIP INDUCTOR 1mH				
		< LPF >				
LPF051	1-235-221-00	FILTER, LOW PASS				

Ref. No.	Part No.	Description				Remark
		< TRANSISTOR >				
Q001	8-729-804-72	TRANSISTOR	2SC2814-F4			
Q003	8-729-810-16	TRANSISTOR	2SA1678			
Q004	8-729-602-36	TRANSISTOR	2SA1602			
Q005	8-729-602-36	TRANSISTOR	2SA1602			
Q006	8-729-810-28	TRANSISTOR	2SC4398			
Q021	8-729-602-21	TRANSISTOR	2SC4154-F			
Q022	8-729-232-71	TRANSISTOR	2SK208GR3			
Q023	8-729-232-59	TRANSISTOR	2SC4666B			
Q051	8-729-602-21	TRANSISTOR	2SC4154-F			
Q052	8-729-602-21	TRANSISTOR	2SC4154-F			
Q053	8-729-810-28	TRANSISTOR	2SC4398			
		< RESISTOR >				
R001	1-216-037-00	METAL CHIP	330	5%	1/10W	
R002	1-216-037-00	METAL CHIP	330	5%	1/10W	
R003	1-216-109-00	METAL CHIP	330K	5%	1/10W	
R004	1-216-037-00	METAL CHIP	330	5%	1/10W	
R007	1-216-025-00	METAL CHIP	100	5%	1/10W	
R008	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R009	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R010	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R016	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R017	1-216-121-00	METAL CHIP	1M	5%	1/10W	
R018	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R021	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R022	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R023	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R024	1-216-025-00	METAL CHIP	100	5%	1/10W	
R025	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R026	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R027	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R028	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R029	1-216-025-00	METAL CHIP	100	5%	1/10W	
R030	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R031	1-216-043-00	METAL CHIP	560	5%	1/10W	
R032	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R033	1-216-035-00	METAL CHIP	270	5%	1/10W	
R034	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R035	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R036	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R037	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R038	1-216-025-00	METAL CHIP	100	5%	1/10W	
R047	1-216-025-00	METAL CHIP	100	5%	1/10W	
R051	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R052	1-216-081-00	METAL CHIP	22K	5%	1/10W	
R053	1-216-085-00	METAL CHIP	33K	5%	1/10W	
R054	1-216-071-00	METAL CHIP	8.2K	5%	1/10W	
R055	1-216-075-00	METAL CHIP	12K	5%	1/10W	

Ref.No.	Part No.	Description			Remark
R057	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R058	1-216-066-00	METAL CHIP	5.1K	5% 1/10W	
R059	1-216-065-00	METAL CHIP	4.7K	5% 1/10W	
R060	1-216-065-00	METAL CHIP	4.7K	5% 1/10W	
R061	1-216-115-00	METAL CHIP	560K	5% 1/10W	
R062	1-216-115-00	METAL CHIP	560K	5% 1/10W	
R063	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R064	1-216-049-00	METAL CHIP	1K	5% 1/10W	
R065	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R066	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R067	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R068	1-216-057-00	METAL CHIP	2.2K	5% 1/10W	
R069	1-216-025-00	METAL CHIP	100	5% 1/10W	
R070	1-216-025-00	METAL CHIP	100	5% 1/10W	
R071	1-216-089-00	METAL CHIP	47K	5% 1/10W	
R072	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R073	1-216-073-00	METAL CHIP	10K	5% 1/10W	
R074	1-216-013-00	METAL CHIP	33	5% 1/10W	
R079	1-216-049-00	METAL CHIP	1K	5% 1/10W	
		< VARIABLE RESISTOR >			
RV051	1-238-601-11	RES, ADJ, CARBON 22K			
RV052	1-238-601-11	RES, ADJ, CARBON 22K			
		< COIL >			
T001	1-402-547-11	COIL (ANT FOR SW3)			
T002	1-406-415-11	COIL (OSC FOR SW3)			
		< CONNECTOR >			
* TP051	1-564-336-00	PIN, CONNECTOR 2P			
		< CRYSTAL >			
X021	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)			
X051	1-577-075-11	OSCILLATOR, CERAMIC 456kHz			
**********					
*	A-4360-120-A	TUNER BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C124	1-126-160-11	ELECT	1uF	20% 50V	
C125	1-126-160-11	ELECT	1uF	20% 50V	
C126	1-126-160-11	ELECT	1uF	20% 50V	
C127	1-126-160-11	ELECT	1uF	20% 50V	
C128	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C129	1-126-096-11	ELECT	10uF	20% 35V	
C130	1-126-933-11	ELECT	100uF	20% 16V	
C131	1-126-933-11	ELECT	100uF	20% 16V	
C132	1-164-346-11	CERAMIC CHIP	1uF	16V	
C133	1-163-104-00	CERAMIC CHIP	30PF	5% 50V	
C134	1-163-104-00	CERAMIC CHIP	30PF	5% 50V	
C135	1-136-173-00	FILM	0.47uF	5% 50V	
C136	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C137	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C138	1-126-157-11	ELECT	10uF	20% 16V	
C139	1-126-160-11	ELECT	1uF	20% 50V	
C140	1-164-232-11	CERAMIC CHIP	0.01uF	50V	
C141	1-124-584-00	ELECT	100uF	20% 10V	
C142	1-164-346-11	CERAMIC CHIP	1uF	16V	
C143	1-124-589-11	ELECT	47uF	20% 16V	
C144	1-164-004-11	CERAMIC CHIP	0.1uF	10% 25V	
C147	1-126-933-11	ELECT	100uF	20% 16V	
		< CONNECTOR >			
* CN101	1-568-834-11	SOCKET, CONNECTOR 15P			
CN102	1-695-829-11	HOUSING, CONNECTOR 11P			
CN103	1-573-105-11	CONNECTOR, PC BOARD(RECEPTACLE)			
CN104	1-573-105-11	CONNECTOR, PC BOARD(RECEPTACLE)			
* CN105	1-695-808-11	CONNECTOR, PC BOARD(RECEPTACLE)			
CN106	1-573-105-11	CONNECTOR, PC BOARD(RECEPTACLE)			
		< DIODE >			
D101	8-719-990-39	DIODE DCB010			
D102	8-719-021-95	DIODE UZM11B			
D103	8-719-990-39	DIODE DCB010			
D104	8-719-990-39	DIODE DCB010			
		< IC >			
IC102	8-759-051-64	IC TC9215F-TP1			
IC104	8-759-163-40	IC uPD78011GC-514-AB8			
IC105	8-759-510-43	IC PST572C			
IC106	8-759-504-12	IC X24C01S			
		< JUMPER RESISTOR >			
JW104	1-216-295-00	METAL CHIP	0	5% 1/10W	
JW105	1-216-295-00	METAL CHIP	0	5% 1/10W	
		< TRANSISTOR >			
Q103	8-729-232-69	TRANSISTOR 2SK208GR3			
Q104	8-729-209-15	TRANSISTOR 2SD2012			
Q105	8-729-101-07	TRANSISTOR 2SB798-DL			
Q107	8-729-805-65	TRANSISTOR 2SA1344			
Q108	8-729-805-41	TRANSISTOR 2SC3398			
Q109	8-729-120-28	TRANSISTOR 2SC1623-L5L6			
		< RESISTOR >			
R123	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R124	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R125	1-216-097-00	METAL CHIP	100K	5% 1/10W	
R126	1-216-097-00	METAL CHIP	100K	5% 1/10W	

TUNER

Ref. No.	Part No.	Description				Remark
R127	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R128	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R129	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R130	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R131	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R132	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R133	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R134	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R135	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R136	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R137	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R138	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	
R139	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R140	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R141	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R142	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R143	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R144	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R145	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R146	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R147	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R148	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R149	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R150	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R151	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R153	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R154	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R155	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R156	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R157	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R158	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R159	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R160	1-216-061-00	METAL CHIP	3.3K	5%	1/10W	
R161	1-216-001-00	METAL CHIP	10	5%	1/10W	
R162	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R163	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R164	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R165	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R166	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R167	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R168	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R169	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R170	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R171	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R172	1-216-097-00	METAL CHIP	100K	5%	1/10W	

< TERMINAL >

TM101	1-537-466-11	TRAMINAL BOARD (ANT)	

Ref. No.	Part No.	Description	Remark
		< VIBRATOR >	
X102	1-579-600-11	VIBRATOR, CERAMIC (8.39MHz)	
		**********	
		MISCELLANEOUS	
		**********	
5	1-696-738-11	WIRE (FLAT TYPE) (5 CORE)	
6	1-696-739-11	WIRE (FLAT TYPE) (11 CORE)	
7	1-690-753-11	WIRE (FLAT TYPE) (22 CORE)	
* 12	1-695-810-11	CONNECTOR, PC BOARD (PLUG) 8P	
* 13	1-695-809-11	CONNECTOR, PC BOARD (PLUG) 4P	
15	1-696-740-11	WIRE (FLAT TYPE) (15 CORE)	
21	1-696-750-11	WIRE (FLAT TYPE) (9 CORE)	
⚠105	8-848-144-11	DEVICE, OPTICAL KSS-240A	
106	1-575-001-11	WIRE, FLAT TYPE (12 CORE)	
M291	A-4608-362-A	MOTOR (L) ASSY (LOADING)	
M101	X-4917-523-3	MOTOR, DISK ASSY (SPINDLE)	
M102	X-4917-504-1	MOTOR ASSY (SLED)	
⚠T801	1-423-378-11	TRANSFORMER, POWER	
		**********	
		ACCESSORIES & PACKING MATERIALS	
		**********	
*	4-941-548-01	LABEL, CLASS 1	
		**********	
		HARDWARE LIST	
		**********	
#1	7-682-547-09	SCREW +BVTT 3X6 (S)	
#2	7-685-871-01	SCREW +BVTT 3X6 (S)	
#3	7-685-234-19	SCREW +KTP 2.6X8 TYPE2NON-SLIT	
#4	7-685-134-19	SCREW +BTP 2.6X8 TYPE2 N-S	
#5	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S	
#6	7-621-775-10	SCREW +B 2.6X4	
#7	7-624-105-04	STOP RING 2.3, TYPE -E	

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

9-957-725-11

Sony Corporation
Audio Group

English
93C097017-1

Published by Audio Corporate Planning Group

HCD-H4800

SONY
SERVICE MANUAL

E Model
Australian Model
Tourist Model

CORRECTION-1

Correct your service manual as shown below.

☛ : **indicates corrected portion.**

Page	INCORRECT			CORRECT	
	No.	Part No.	Description	Part No.	Description
36	* 22	A-4360-122-A	POWER BOARD, COMPLETE	1-647-876-11 ☛	PC BOARD, POWER

Sony Corporation
Consumer A&V Products Company
Home A&V Products Div.

9-957-725-91

English
94H0225-1D
Printed in Japan

Published by Home A&V Products Div. Quality Engineering Dept.

HCD-H4800

SERVICE MANUAL

AEP Model

- **HCD-H4800 is the TUNER/COMPACT DISC PLAYER in MHC-4800.**

This set is almost the same as model HCD-H3800 (AEP, UK Model) previously produced.
Therefore, see the service manual for the information which is not contained in this service manual.

SECTION 6 EXPLODED VIEWS

6-1. CHASSIS SECTION

G: Germany Model
IT: Italian Model

PAGE	HCD-H3800			HCD-H4800		
	Ref. No	Part No.	Description	Ref. No	Part No.	Description
36	* 4	A-4360-227-A	PANEL BOARD, COMPLETE (AEP)	* 4	A-4360-117-A	PANEL BOARD, COMPLETE (AEP)
	*	A-4360-731-A	PANEL BOARD, COMPLETE (G)	*	A-4360-739-A	PANEL BOARD, COMPLETE (G)
	*	A-4360-735-A	PANEL BOARD, COMPLETE (IT)	*	A-4360-743-A	PANEL BOARD, COMPLETE (IT)
	* 14	A-4360-226-A	TUNER BOARD, COMPLETE (AEP)	* 14	A-4360-116-A	TUNER BOARD, COMPLETE (AEP)
	*	A-4360-730-A	TUNER BOARD, COMPLETE (G)	*	A-4360-738-A	TUNER BOARD, COMPLETE (G)
	*	A-4360-734-A	TUNER BOARD, COMPLETE (IT)	*	A-4360-742-A	TUNER BOARD, COMPLETE (IT)
	* 17	4-955-031-31	PANEL (HCD), BACK (AEP)	* 17	4-955-031-41	PANEL (HCD), BACK (AEP)
	* 18	A-4360-225-A	CD BOARD, COMPLETE (AEP)	* 18	A-4360-115-A	CD BOARD, COMPLETE (AEP)
	*	A-4360-729-A	CD BOARD, COMPLETE (G)	*	A-4360-737-A	CD BOARD, COMPLETE (G)
	*	A-4360-733-A	CD BOARD, COMPLETE (IT)	*	A-4360-741-A	CD BOARD, COMPLETE (IT)

TUNER/COMPACT DISC PLAYER

SONY®

SECTION 7 ELECTRICAL PART LIST

PAGE	HCD-H3800			HCD-H4800		
	Ref. No	Part No.	Description	Ref. No	Part No.	Description
40	*	A-4360-225-A	CD BOARD, COMPLETE (AEP)	*	A-4360-115-A	CD BOARD, COMPLETE (AEP)
	*	A-4360-729-A	CD BOARD, COMPLETE (G)	*	A-4360-737-A	CD BOARD, COMPLETE (G)
	*	A-4360-733-A	CD BOARD, COMPLETE (IT)	*	A-4360-741-A	CD BOARD, COMPLETE (IT)
42	*	A-4360-227-A	PANEL BOARD, COMPLETE (AEP)	*	A-4360-117-A	PANEL BOARD, COMPLETE (AEP)
	*	A-4360-731-A	PANEL BOARD, COMPLETE (G)	*	A-4360-739-A	PANEL BOARD, COMPLETE (G)
	*	A-4360-735-A	PANEL BOARD, COMPLETE (IT)	*	A-4360-743-A	PANEL BOARD, COMPLETE (IT)
43	*	A-4360-226-A	TUNER BOARD, COMPLETE (AEP)	*	A-4360-116-A	TUNER BOARD, COMPLETE (AEP)
	*	A-4360-730-A	TUNER BOARD, COMPLETE (G)	*	A-4360-738-A	TUNER BOARD, COMPLETE (G)
	*	A-4360-734-A	TUNER BOARD, COMPLETE (IT)	*	A-4360-742-A	TUNER BOARD, COMPLETE (IT)

Other boards are the same as those of HCD-H3800.

ACCESSORIES & PACKING MATERIALS

PAGE	HCD-H3800			HCD-H4800		
	Ref. No	Part No.	Description	Ref. No	Part No.	Description
47	*	4-957-154-21	INDIVIDUAL CARTON	*	4-957-154-11	INDIVIDUAL CARTON

English
93C09Y0937-1
Printed in Germany

Published by Audio Corporate Planning Group