CDX-1000RF

SERVICE MANUAL

US Model

Model Name Using Similar Mechanism	CDX-2500R
CD Drive Mechanism Type	MG-363X-121
Optical Pick-up Name	KSS-521A

SPECIFICATIONS

AUDIO POWER SPECIFICATIONS

POWER OUTPUT AND TOTAL HARMONIC DISTORTION
13 watts per channel minimum continuous average power into 4 ohms, 4 channels driven from 20 Hz to 20 kHz with no more than 1% total harmonic distortion.

Other Specifications

CD player section

System	Compact disc digital audio system
Signal-to-noise ratio	90 dB
Frequency response	10 – 20,000 Hz
Wow and flutter	Below measurable limit
Laser Diode Properties	
Material	GaAs+GaAlAs
Wavelength	785 – 815 nm (Typ. 800 nm)
Emission Duration	Continuous
Laser output power	Less than 0.5 mW*

* *This output is the value measured at a distance of 0.7 mm from the objective lens surface on the Optical Pick-up Block.*

General

Outputs	Line outputs
Power requirements	12 V DC car battery (negative ground)
Current drain	2A (at disc loading)
Dimensions	Approx. 178 × 50 × 173 mm (7 1/8 × 2 × 6 7/8 in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 159 mm (7 1/4 × 2 1/8 × 6 3/8 in.) (w/h/d)
Mass	Approx. 1.1 kg (2 lb. 7 oz.)
Supplied accessories	Parts for installation and connections (1 set)

Design and specifications are subject to change without notice.

COMPACT DISC PLAYER

SONY®

SERVICE NOTE

CAUTION

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

Notes on Chip Component Replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

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

The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

NOTES ON PICK-UP FLEXIBLE BOARD

The pick-up flexible board in this set is secured to the optical pick-up with an adhesive tape. Once the tape is removed, an adhering force becomes weak, and it cannot be reused.
Therefore, if the optical pick-up is replaced, replace also the pick-up flexible board with a new one.

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.

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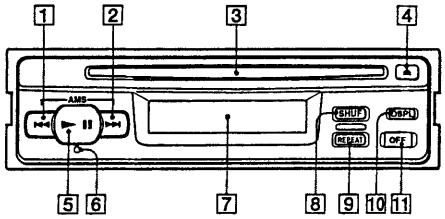
SECTION 1
GENERAL

This section is extracted from instruction manual.

Location of controls

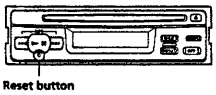


1 AMS (Automatic Music Sensor) I◄◄ button
2 AMS (Automatic Music Sensor) ►►I button
3 Disc insertion slot
4 ⏏ (eject) button
5 ►II (play/pause) button
If pressed during playback, the CD will pause. If pressed again, playback will continue.
6 Reset button
7 Display window
8 SHUF (shuffle play) button
9 REPEAT (repeat play) button
10 DSPL (display mode change) button
11 OFF button

Getting Started

Resetting the unit

Before operating the unit for the first time or after replacing the car battery, you must reset the unit. Press the reset button with a pointed object, such as a ball-point pen.



Reset button

Notes
- *Pressing the reset button will erase the clock setting and some memorized program and memory functions.*
- *When you connect the power supply cord to the unit or reset the unit, wait for about 10 seconds before you insert a disc. If you insert a disc within these 10 seconds, the unit will not be reset, and you will have to press the reset button again.*

Changing the transmitting frequency

Because this unit processes CD playback sound through an FM tuner, there may be interference noise during CD playback. In this case, change the frequency of the modulated RF signal transmitted from the unit. The initial setting is 88.3 MHz.

1 Press (REPEAT) for two seconds until frequency appears.

2 Press either the left or right side of (AMS) to select the frequency.
Each time you press (AMS), the frequency changes as follows:

►►I : 88.3 MHz → 88.5 MHz → 88.7 MHz → 88.9 MHz → 89.1 MHz → 89.3 MHz → 89.5 MHz → 89.7 MHz → 89.9 MHz →
I◄◄ : 88.3 MHz → 89.9 MHz → 89.7 MHz → 89.5 MHz → 89.3 MHz → 89.1 MHz → 88.9 MHz → 88.7 MHz → 88.5 MHz →

3 Press (REPEAT) for more than two seconds.

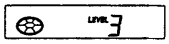
Note
Be sure to set the frequency of your FM tuner to the newly selected frequency.

Changing the output level

You can select the output level of the CD player. Normally the initial output level is adequate; change the level if necessary.

1 Press (REPEAT) for two seconds.

2 Press (REPEAT) again.



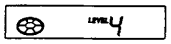
Initial setting

3 Press either the left or right side of (AMS) to select the output level.
To decrease the output level

I◄◄ : ➡

To increase the output level

►►I : ➡



4 Press (REPEAT) for more than two seconds.

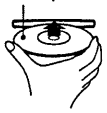
Operation

Listening to a CD

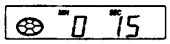
1 Adjust the selected transmitting frequency with an FM tuner.
(88.3 MHz/88.5 MHz/88.7 MHz/88.9 MHz/89.1 MHz/89.3 MHz/89.5 MHz/89.7 MHz/89.9 MHz)

2 Insert a CD.
Playback starts automatically.

Label side up



If a CD is already inserted, press ►II to start playback.



Elapsed playing time

Note
To play back an 8 cm (3 in.) CD, use the optional Sony compact disc single adapter (CSA-8).

3 Adjust the volume with the volume control on the car audio.

To	Press
Stop playback	⏏ or (OFF)
Eject the CD	⏏

Notes
- *Be sure to press (OFF) to turn this unit off when you want to listen to FM radio.*
- *When CD playback is stopped, you may hear some noise from the speakers. To prevent this from happening, turn the volume down before stopping CD playback.*
- *If you leave the ejected disc in the disc insertion slot after you have pressed ⏏, the disc will automatically retract into the unit after about 15 seconds in order to protect it.*

Changing the display item

Each time you press (DSPL) during CD playback, the item changes as follows:

Elapsed playing time ◄—► Track number

Locating a specific track
— Automatic Music Sensor (AMS)

During CD playback, press either side of (AMS) for each track you want to skip.

To locate preceding tracks — To locate succeeding tracks

Locating a specific point in a track
— Manual Search

During playback, press and hold either side of (AMS) for about two seconds. Release when you have found the desired point.

To search backward — To search forward

Note
If "L L L L" or "┐┐┐┐" appears in the display, you have reached the beginning or the end of the disc and you cannot go any further.

Playing a CD in various modes

Playing tracks repeatedly
— Repeat Play

Press (REPEAT) during playback.
"REP" appears in the display.

When the current track is over, it will play again from the beginning.

To return to normal playback mode, press again.

Playing tracks in random order
— Shuffle Play

Press (SHUF) during playback.
"SHUF" appears in the display.

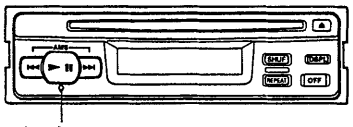
To return to normal playback mode, press again.

Caution

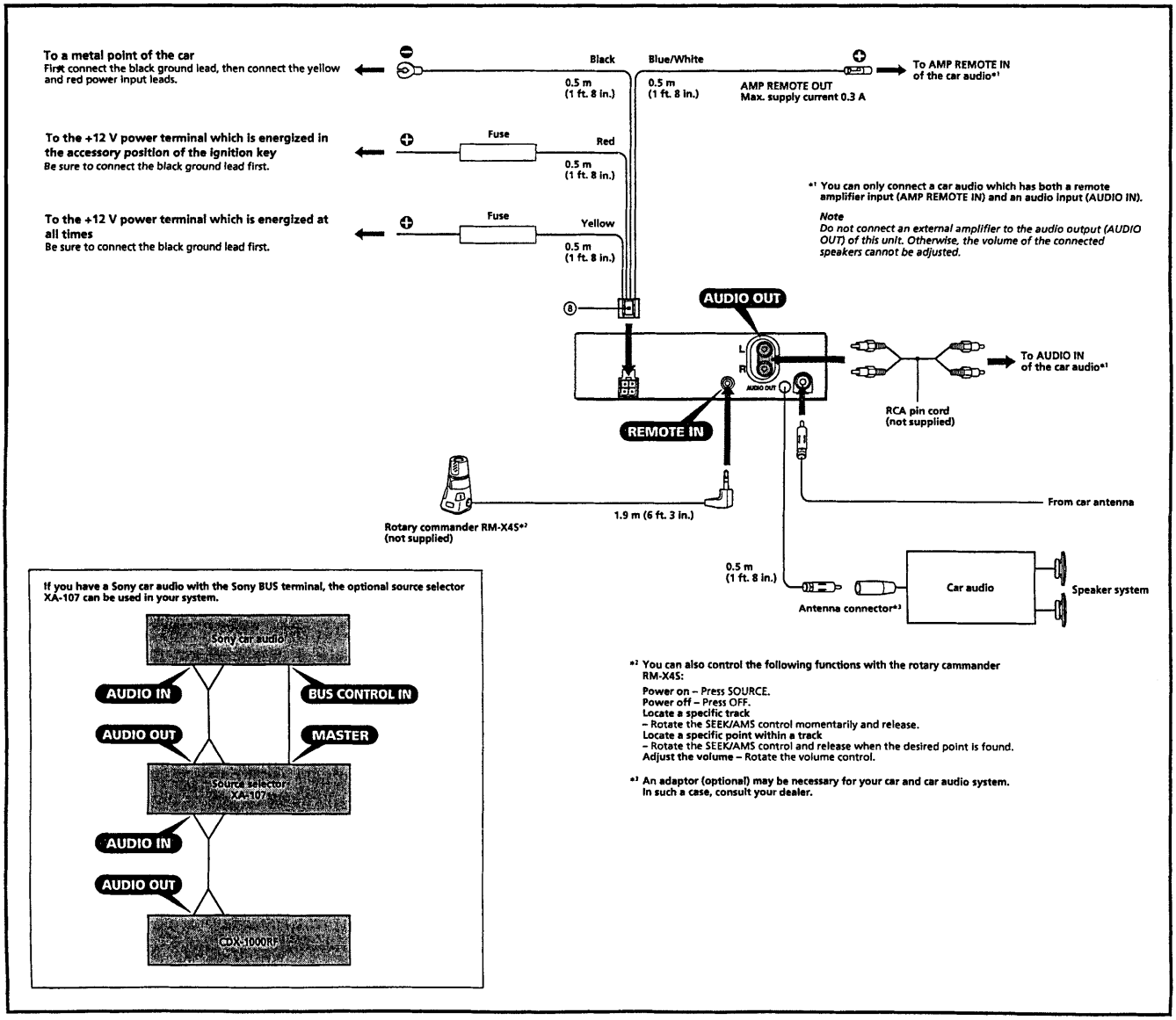
- This unit is designed for negative ground 12 V DC operation only.
- Before making connections, disconnect the ground terminal of the car battery to avoid short circuits.
- Connect the **yellow** and **red** power input leads only after all other leads have been connected.
- Be sure to connect the red power input lead to the positive 12 V power terminal which is energized when the ignition key is in the accessory position.
- **Run all ground wires to a common ground point.**
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating.
  If you connect this unit in series with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual component's fuse rating.
  If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery.
  If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.
- The use of optical instruments with this product will increase eye hazard.

Reset button

When the installation and connections are complete, be sure to press the reset button with a ball-point pen, etc.



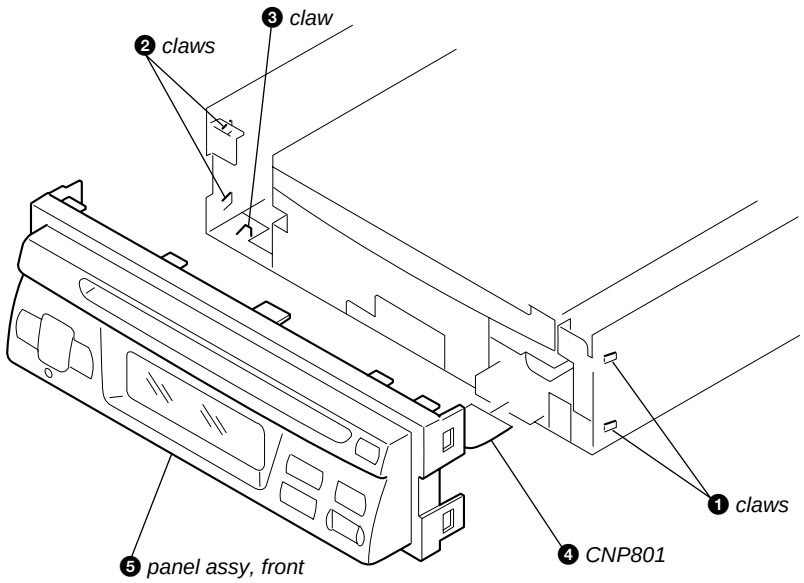
Connection example



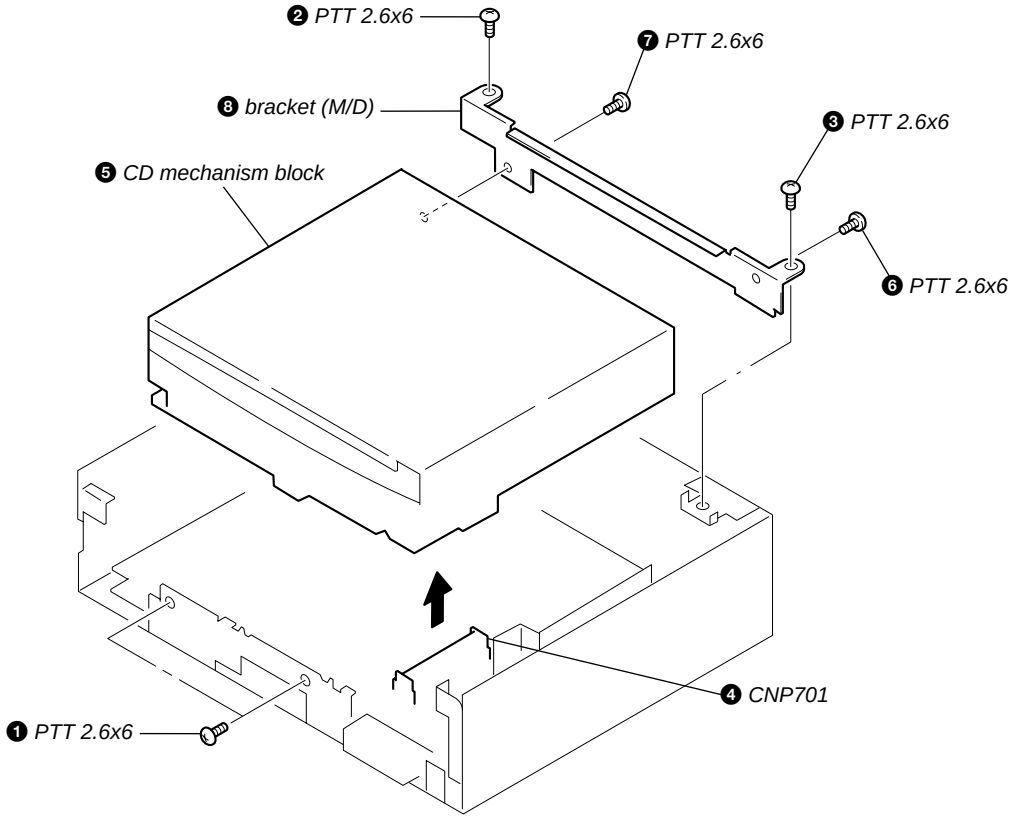
SECTION 2
DISASSEMBLY

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

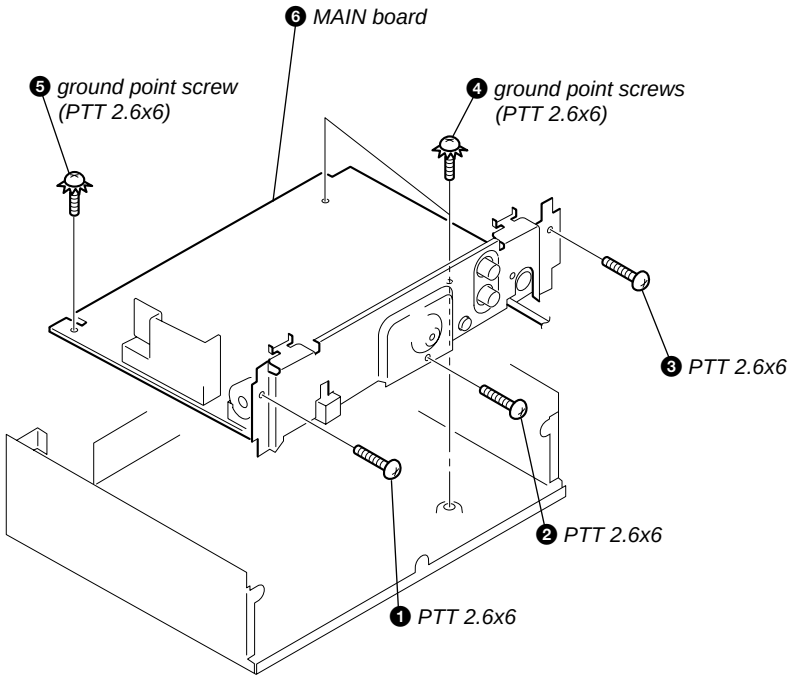
2-1. PANEL ASSY, FRONT



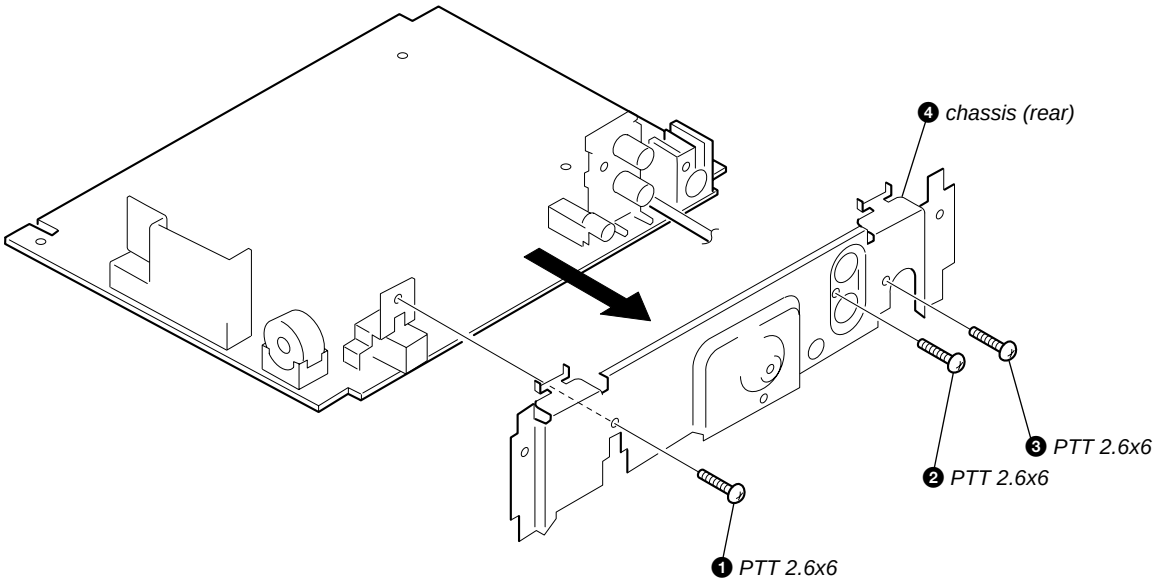
2-2. CD MECHANISM BLOCK



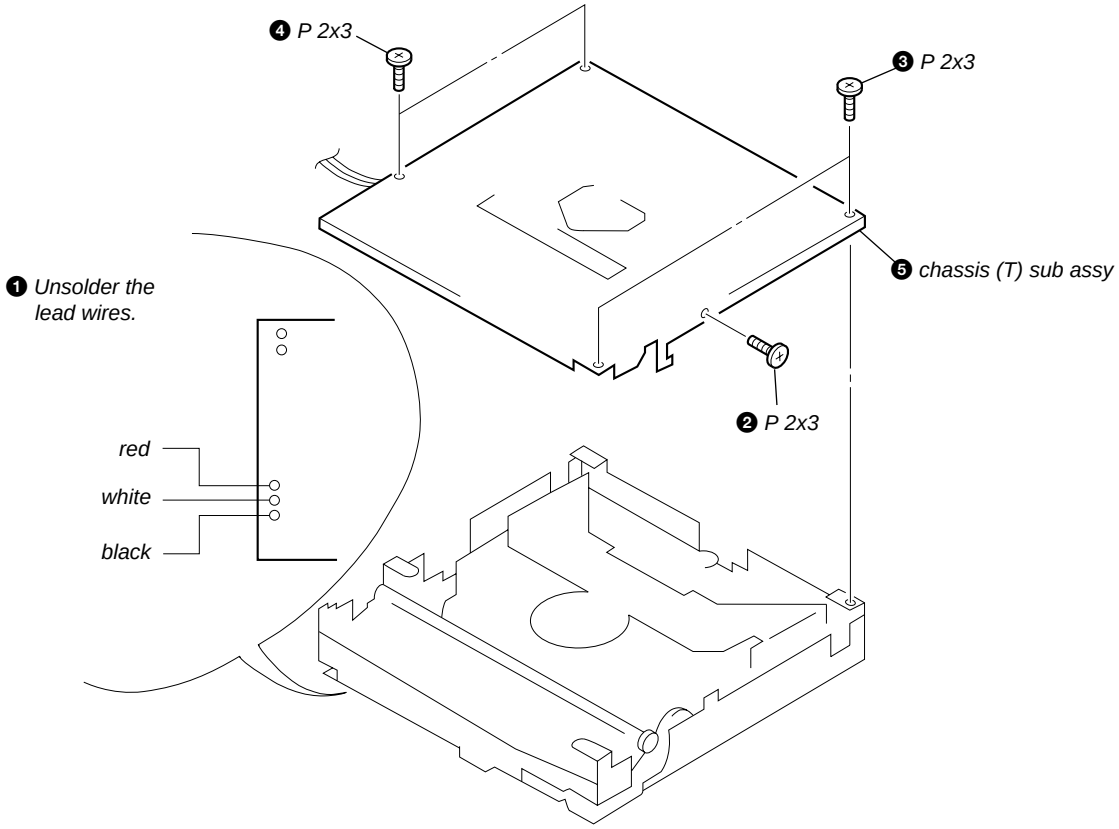
2-3. MAIN BOARD



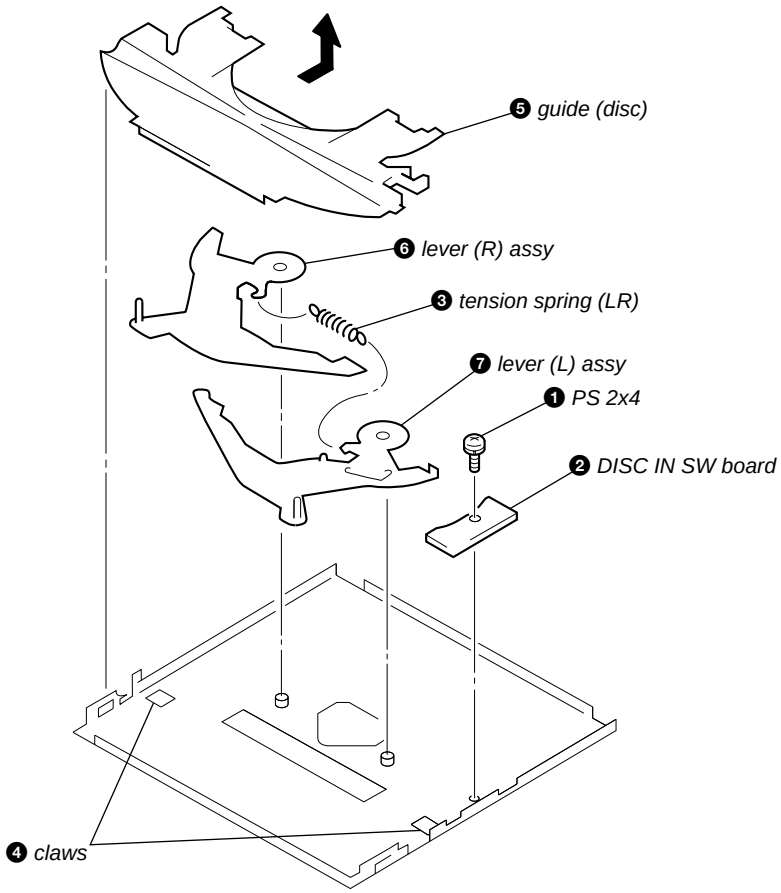
2-4. CHASSIS (REAR)



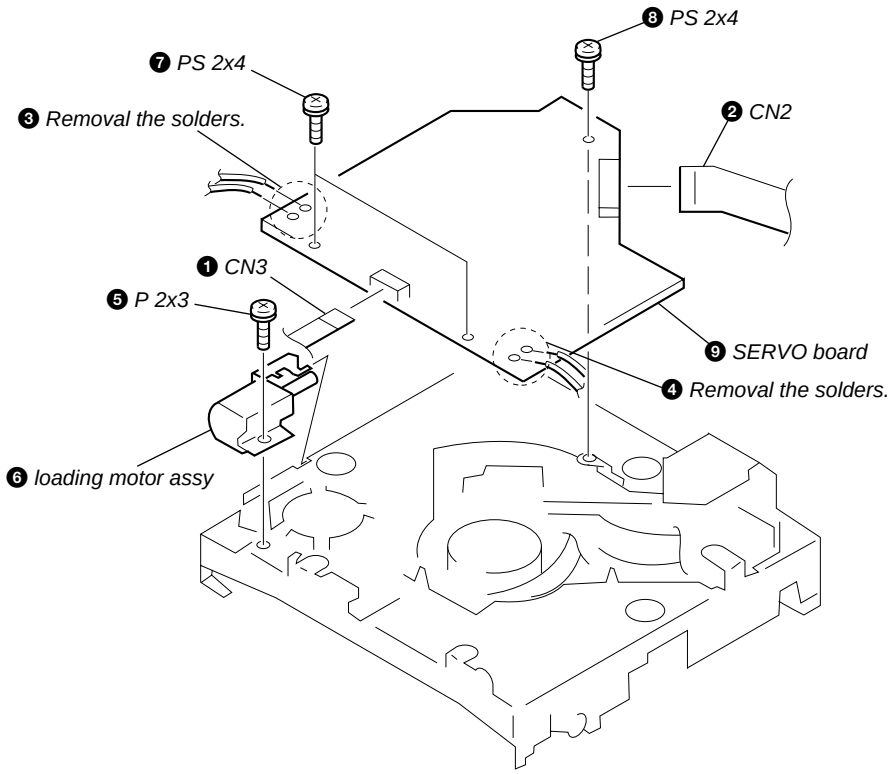
2-5. CHASSIS (T) SUB ASSY



2-6. LEVER ASSY



2-7. SERVO BOARD



2-8. ROLLER ASSY

• When installing, take note of the positions arm (roller) and washers. (Fig. 1)

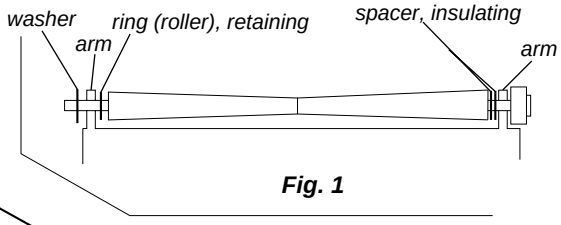
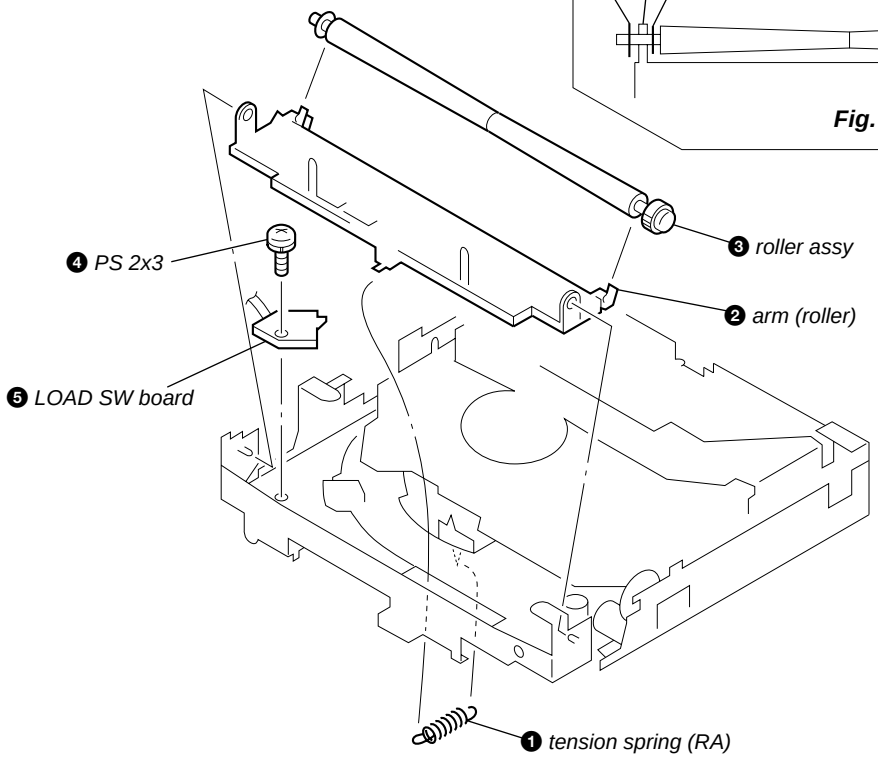
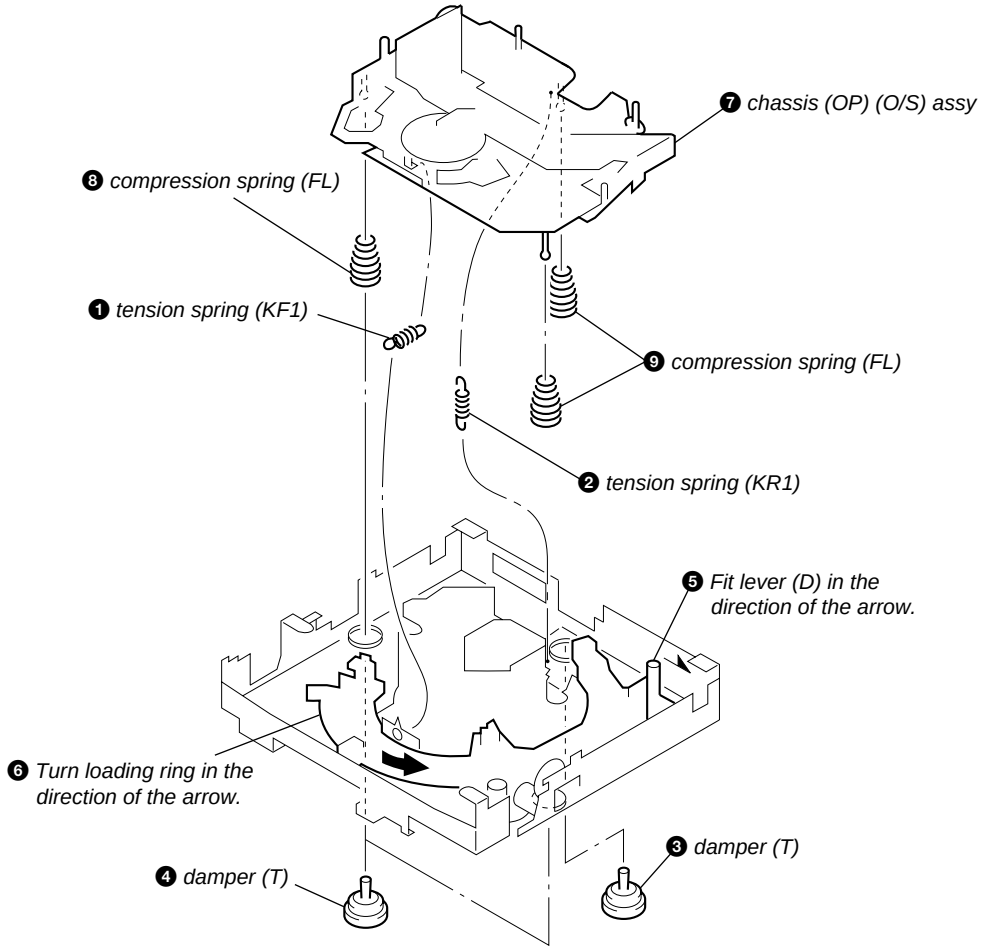


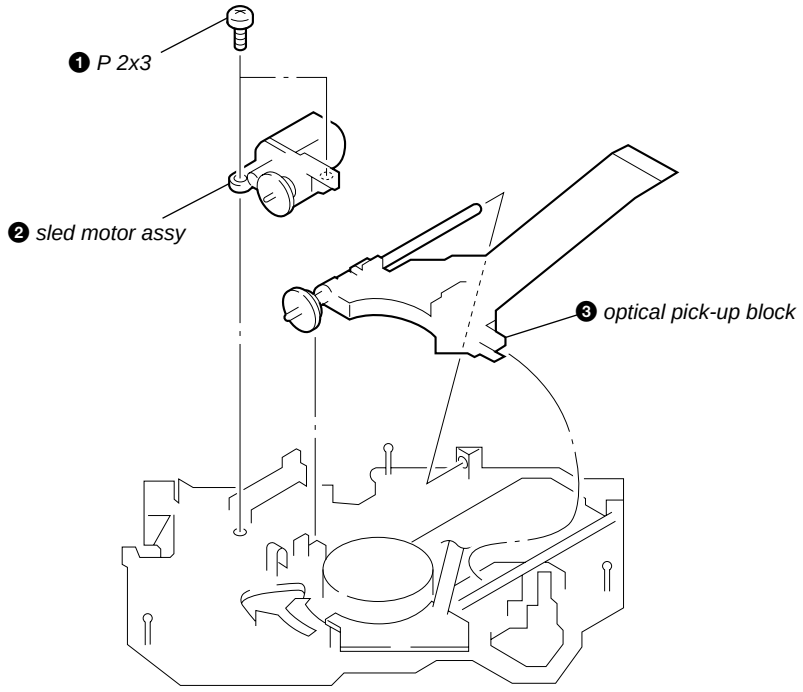
Fig. 1



2-9. CHASSIS (OP) (O/S) ASSY



2-10. OPTICAL PICK-UP BLOCK



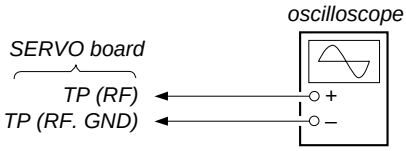
SECTION 3
ELECTRICAL ADJUSTMENTS

CD SECTION

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 10 MΩ impedance.
4. Clean an objective lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.

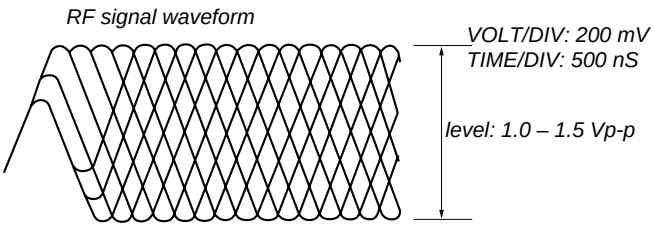
Focus Bias Adjustment

Setting: This adjustment is performed with the set placed horizontally.



Procedure:
1. Connect an oscilloscope between TP (RF) and TP (RF. GND) on the SERVO board.
2. Connect the power supply.
3. Push the RESET button (S900) on the MAIN board.
4. Insert the disc (YEDS-18) and playback.
5. Adjust RV1 so that the oscilloscope waveform is clear and check RF signal level is correct or not.

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



- When observing the eye pattern, set the oscilloscope to AC range and raise the vertical sensitivity so that it may be easily seen.

Adjustment Location: servo board

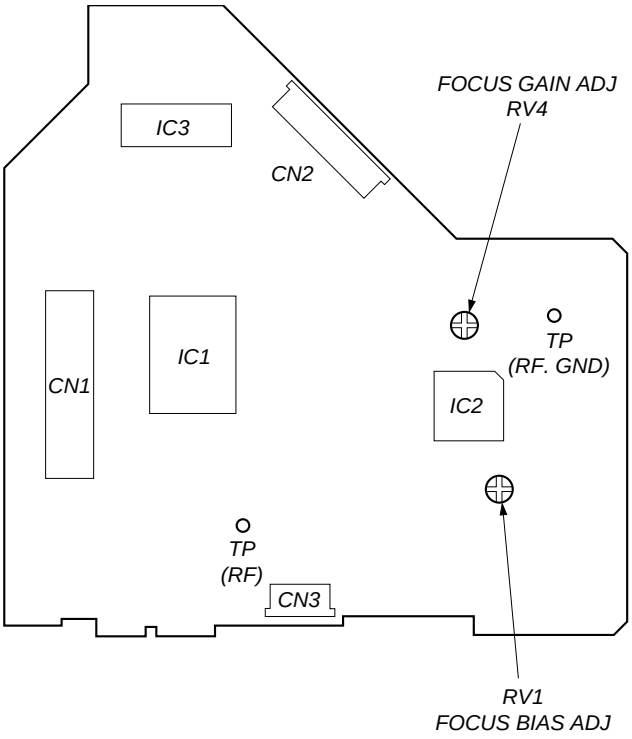
Focus Gain Adjustment (Coarse adjustment)

This adjustment is not required unless the following parts are replaced:
- Optical pick-up
- RV4

Procedure:
1. Set RV4 to the standard position. (mechanical center)
2. Check whether operation noise (while noise type) caused by the 2-axis device (lens section of the optical pick-up) is abnormally loud.
   If the operation noise is too loud, turn RV4 slightly counter-clockwise.
- If the gain is too low:
  Focus does not function and no music is selected.
- If the gain is too high:
  Noise caused by scratches and dust is heard and the operation becomes unstable.

Adjustment Location: servo board

Adjustment Location: servo board (component side)



SECTION 4
DIAGRAMS

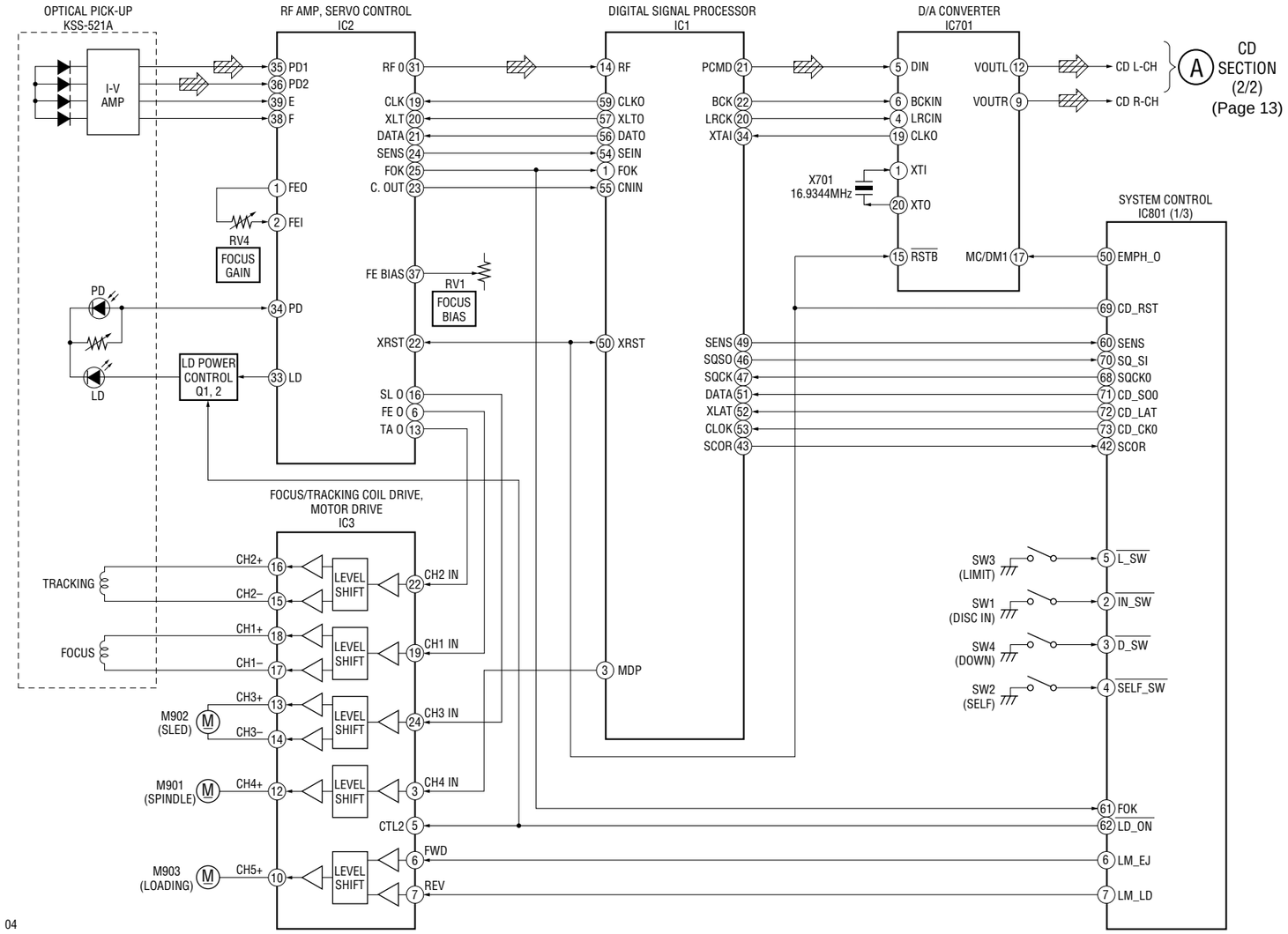
4-1. IC PIN DESCRIPTION

• IC801 μPD17705GC-547-3B9 (SYSTEM CONTROL)

Pin No.	Pin Name	I/O	Pin Description
1	NC	—	Not used. (Connect to ground in this set.)
2	$\overline{\text{IN_SW}}$	I	Disc insertion detection input L: IN_SW
3	$\overline{\text{D_SW}}$	I	DOWN switch detection input L: D_SW
4	$\overline{\text{SELF_SW}}$	I	Disc self store detection input L: SELF_SW
5	$\overline{\text{L_SW}}$	I	Sled limit switch detection input L: L_SW
6	LM_EJ	O	Loading motor control output (Eject direction)
7	LM_LD	O	Loading motor control output (Loading direction)
8	RY_ON	O	Relay control output
9, 10	NC	—	Not used. (Open)
11	BAND_SW	I	BAND select input 0: US
12 – 20	NC	—	Not used. (Open)
21	GND3	—	Ground
22	NC	—	Not used. (Open)
23	ADKI2	I	A/D key input 2
24	ADKI1	I	A/D key input 1
25	ROTCOM	I	Rotary commander shift key input
26	NC	—	Not used. (Open)
27	$\overline{\text{TEST_SW}}$	I	Test mode initial setting detection input L: TEST_SW
28, 29	NC	—	Not used. (Open)
30	VDD2	—	Power supply pin (+5 V)
31	FMIN	I	PLL local oscillator frequency input
32	NC	—	Not used. (Open)
33	GND2	—	Ground
34	NC	—	Not used. (Open)
35	EO1	O	PLL error 1 output
36	TEST0	—	Connect to GND line.
37 – 40	NC	—	Not used. (Open)
41	$\overline{\text{ACC_IN}}$	I	Accessory power detection input L: ACC_IN
42	SCOR	I	SCOR signal detection input
43	MUTE	O	Mute control output
44	LEVEL D	O	Level control output
45	NC	—	Not used. (Open)
46	PH2	I	Connect to +5 V line.
47	LEVEL 1	O	Volume control output
48, 49	NC	O	Not used. (Open)
50	EMPH_O	O	Emphasis control output
51	PW_ON	O	System power control output
52	LM_ON	O	Loading motor power control output
53	CD_ON	O	CD power control output
54	ILLON	O	Illumination power control output
55 – 57	NC	—	Not used. (Open)
58	LCD_CE	O	LCD chip enable output
59	$\overline{\text{EZ_SEL}}$	I	Rotary commander shift key input L: EZ_SEL
60	SENS	I	CD SENS signal detection input
61	FOK	I	Focus OK signal detection input
62	$\overline{\text{LD_ON}}$	O	Laser ON/OFF control output L: LD_ON
63, 64	NC	—	Not used. (Open)
65	LCD_CLK	O	LCD serial clock output
66	LCD_DAT	O	LCD serial data output
67	$\overline{\text{LCD_INH}}$	O	LCD inhibition output L: LCD_INH
68	SQCK0	O	Sub Q read clock output
69	CD_RST	O	Reset output to CD signal processor IC.
70	SQ_SI	I	Sub Q data input
71	CD_SO0	O	CD signal serial data output
72	CD_LAT	O	CD signal processing data latch output
73	CD_CK0	O	CD signal processing serial clock output
74	NC	—	Not used. (Open)
75	GND1	—	Ground
76	XOUT	O	ceramic oscillator output (4.5 MHz)
77	XIN	I	ceramic oscillator input (4.5 MHz)
78	BU_IN	I	Backup power detection input
79	VDD1	—	Power supply pin (+5 V)
80	$\overline{\text{RESET}}$	I	Reset input L: RESET

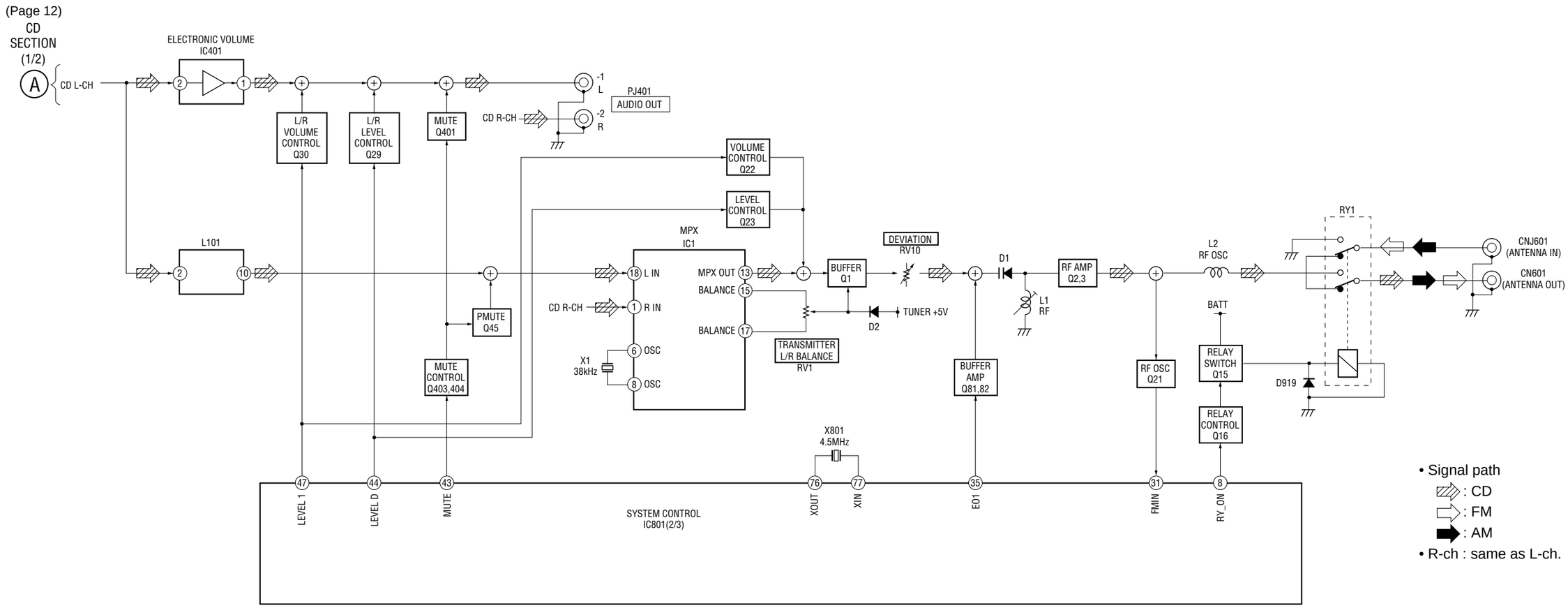
11

4-2. BLOCK DIAGRAM — CD SECTION (1/2) —

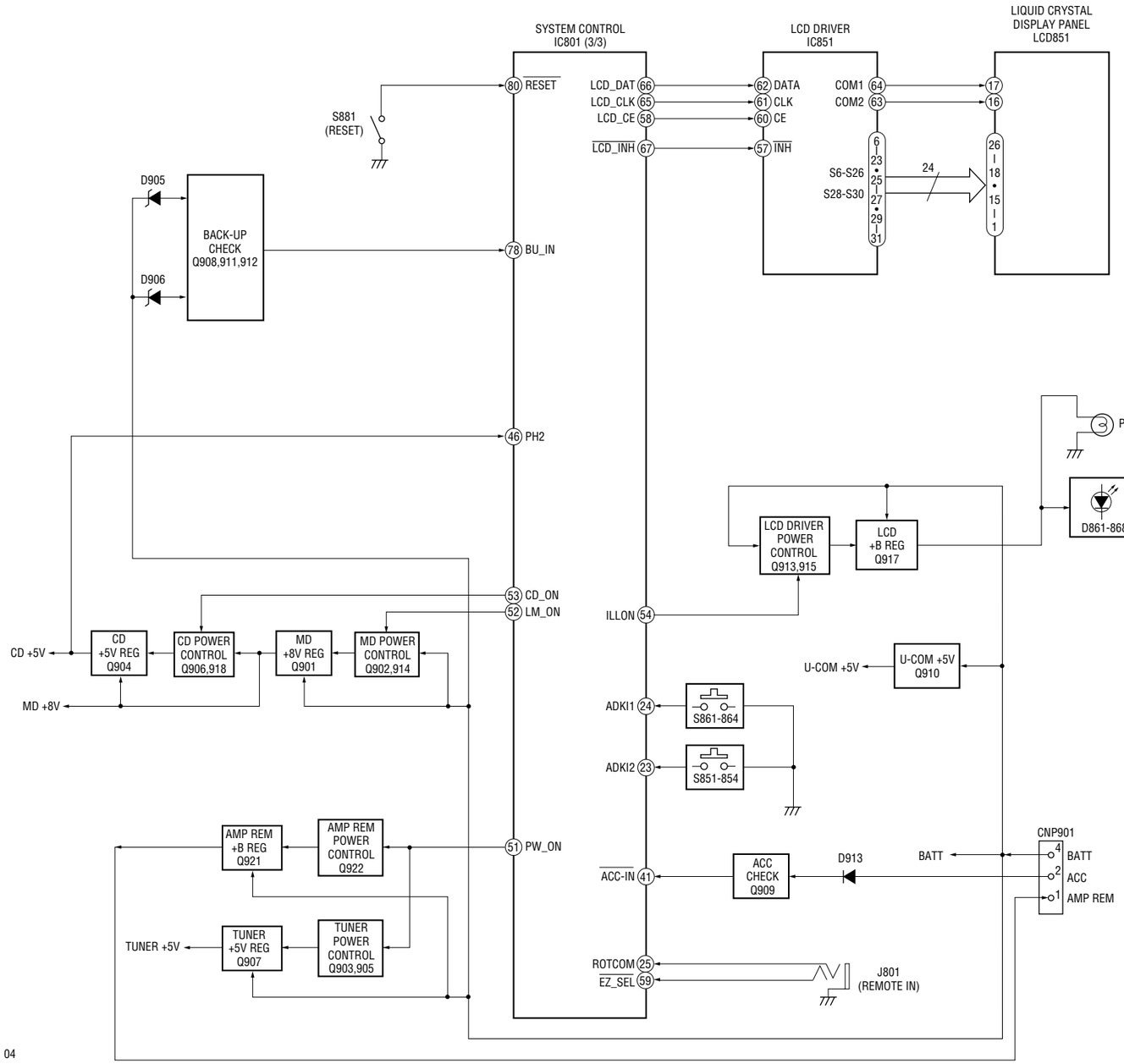


• Signal path
: CD
• R-ch : same as L-ch.

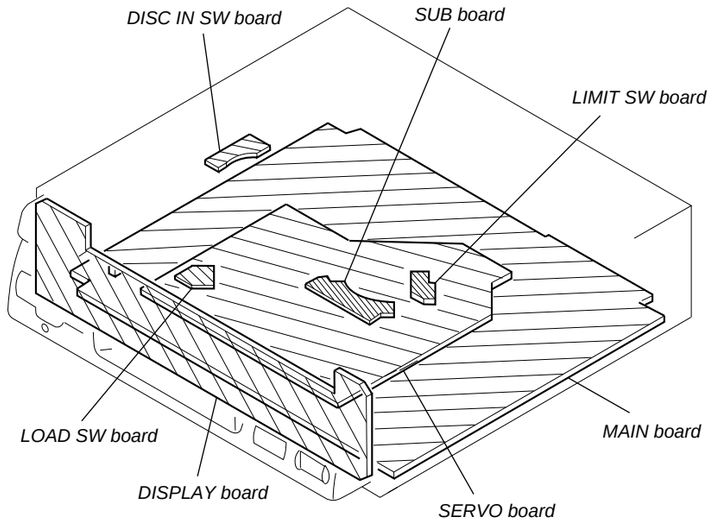
4-3. BLOCK DIAGRAM — CD SECTION (2/2) —



4-4. BLOCK DIAGRAM — DISPLAY, POWER SUPPLY SECTION —



4-5. CIRCUIT BOARDS LOCATION



THIS NOTE IS COMMON FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS.
(In addition to this, the necessary note is printed in each block.)

for schematic diagram:

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

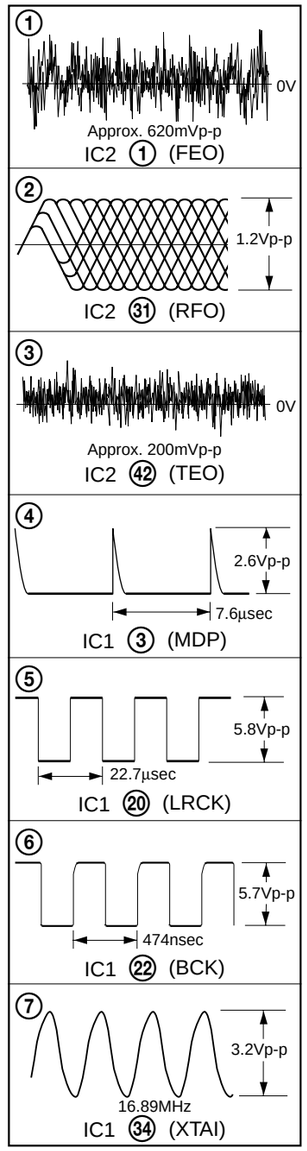
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line.
- ▬ : adjustment for repair.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- 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.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM
  - ⇨ : CD

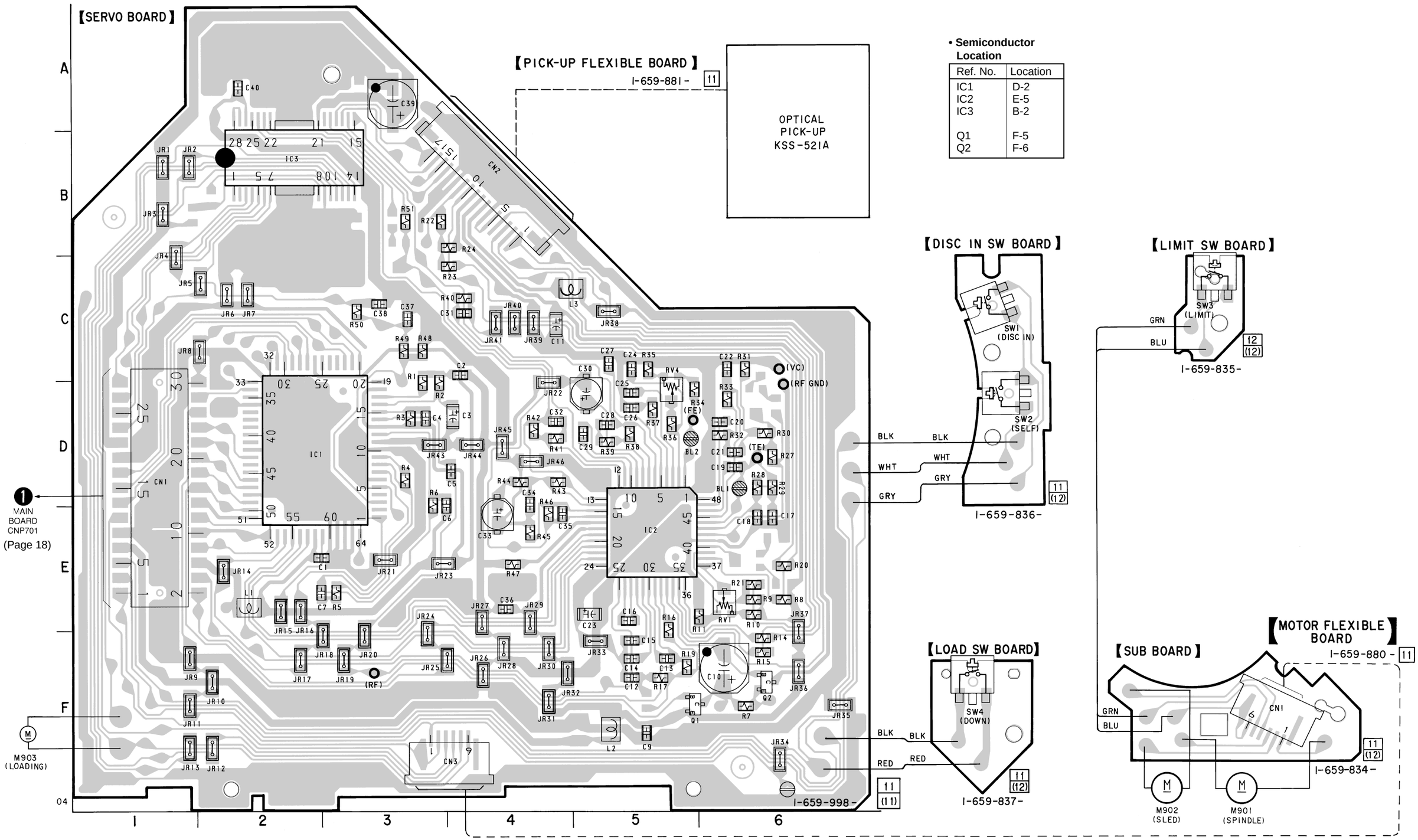
for printed wiring boards:

- ○—— : parts extracted from the component side.
- ▒▒▒ : Pattern from the side which enables seeing.

• Waveforms (MODE:PLAY)



4-6. PRINTED WIRING BOARDS — CD MECHANISM SECTION — • Refer to page 15 for Circuit Boards Location.

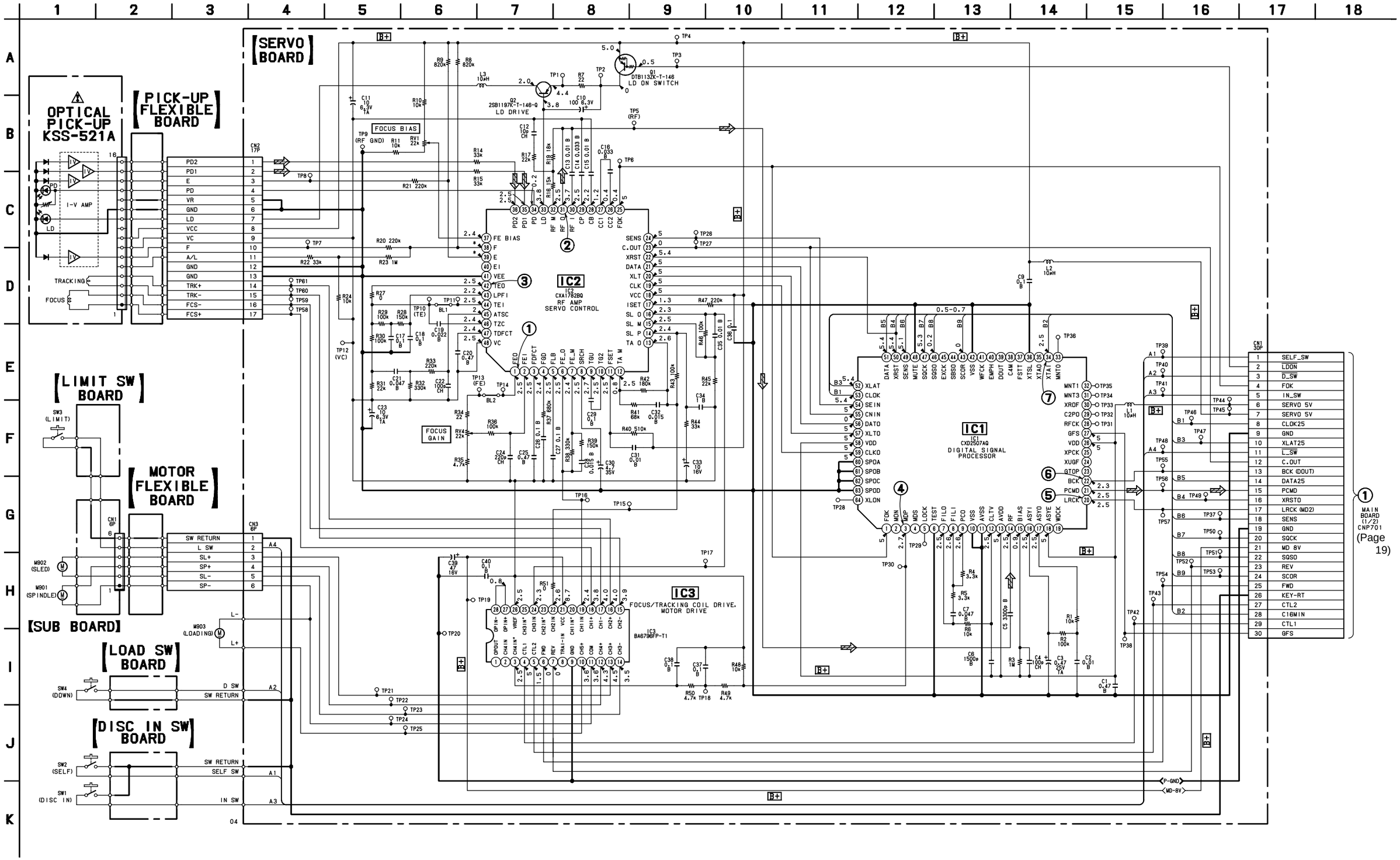


• **Semiconductor Location**

Ref. No.	Location
IC1	D-2
IC2	E-5
IC3	B-2
Q1	F-5
Q2	F-6

4-7. SCHEMATIC DIAGRAM — CD MECHANISM SECTION —

• Refer to page 15 for Waveforms.
• Refer to page 23 for IC Block Diagrams.



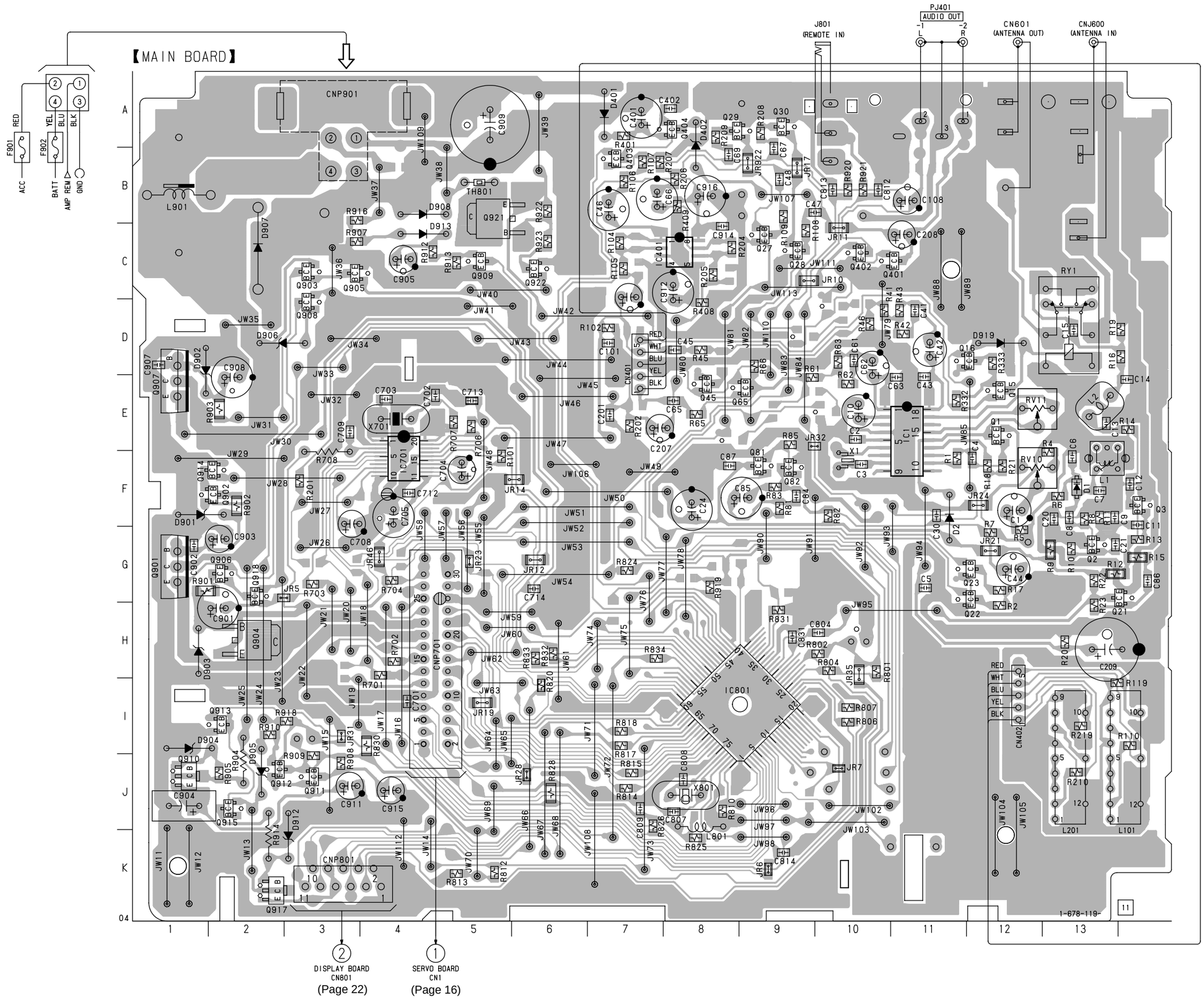
Note:

- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : CD PLAY
  ∗ : Impossible to measure

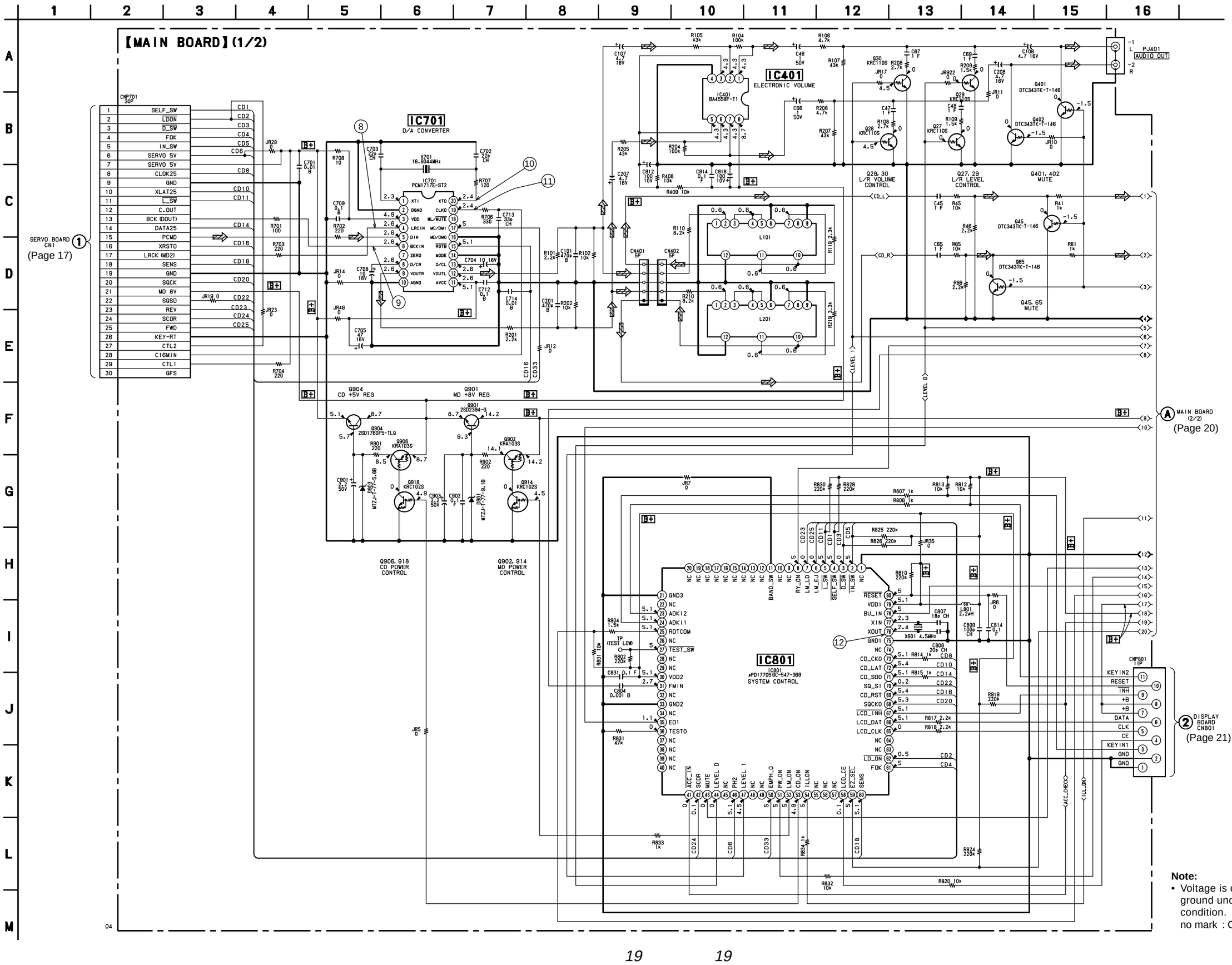
4-8. PRINTED WIRING BOARD — MAIN SECTION — • Refer to page 15 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location
D1	F-13
D2	F-11
D401	A-7
D402	A-8
D901	F-1
D902	D-1
D903	H-1
D904	I-1
D905	J-2
D906	D-2
D907	C-2
D908	B-4
D912	K-3
D913	C-4
D919	D-12
IC1	E-11
IC401	C-8
IC701	F-4
IC801	I-8
Q1	E-12
Q2	G-13
Q3	F-13
Q15	E-12
Q16	D-11
Q21	G-13
Q22	G-11
Q23	G-11
Q27	C-9
Q28	C-9
Q29	A-9
Q30	A-9
Q45	E-8
Q65	E-8
Q81	F-9
Q82	F-9
Q401	C-10
Q402	C-10
Q403	B-7
Q404	A-8
Q901	G-1
Q902	F-2
Q903	C-3
Q904	H-2
Q905	C-3
Q906	G-2
Q907	E-1
Q908	D-3
Q909	C-5
Q910	J-1
Q911	J-3
Q912	J-2
Q913	I-2
Q914	F-2
Q915	J-2
Q917	K-2
Q918	G-2
Q921	B-5
Q922	C-6



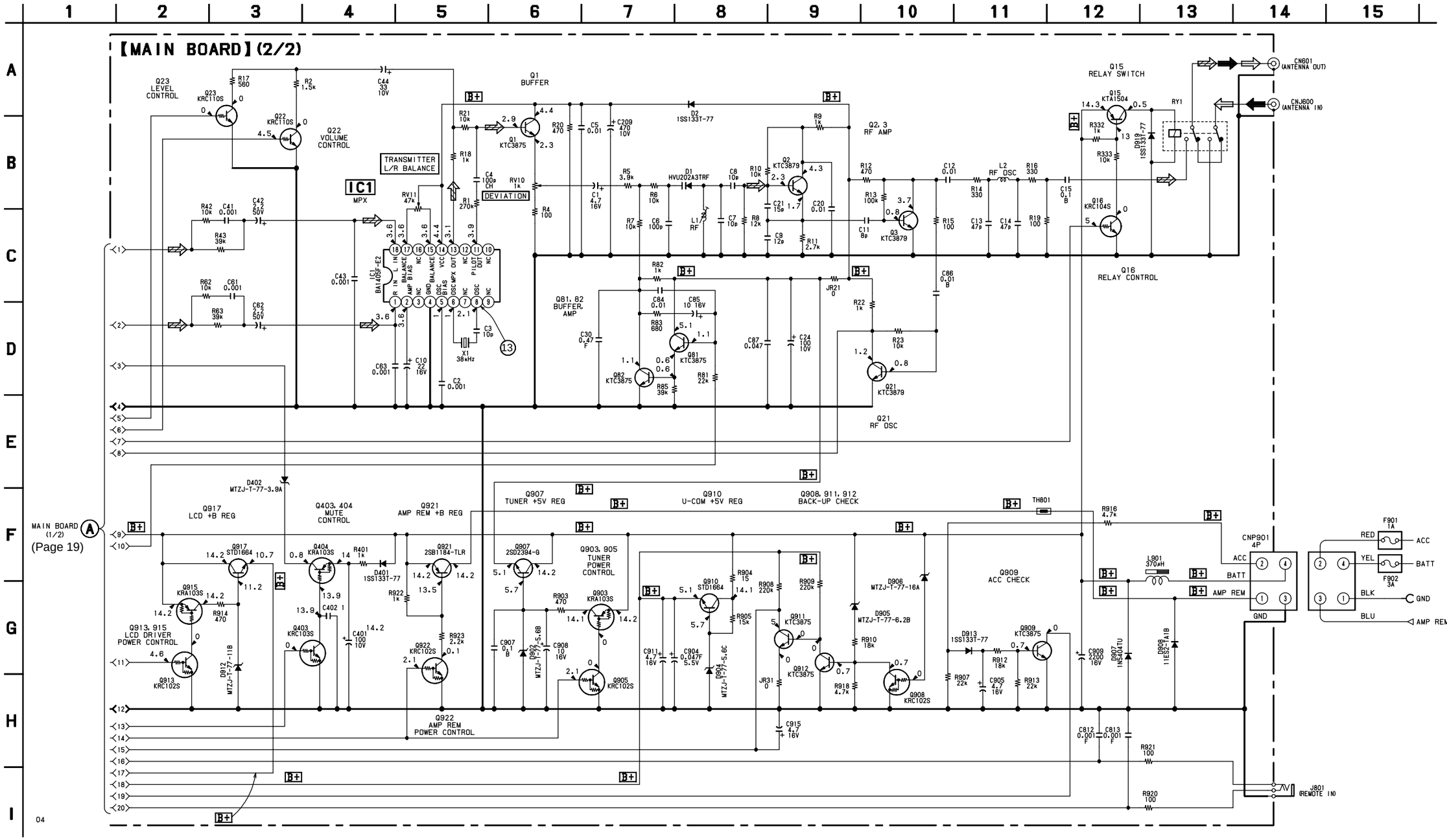
4-9. SCHEMATIC DIAGRAM — MAIN SECTION (1/2) — • Refer to page 21 for Waveforms.
• Refer to page 25 for IC Block Diagrams.



Note:
- Voltage is dc with respect to ground under no-signal condition.
  no mark : CD PLAY

4-10. SCHEMATIC DIAGRAM — MAIN SECTION (2/2) —

• Refer to page 21 for Waveforms.
• Refer to page 25 for IC Block Diagrams.



Note:
- Voltage is dc with respect to ground under no-signal condition.
  no mark : CD PLAY

4-11. SCHEMATIC DIAGRAM — DISPLAY SECTION —

• **Waveforms** (MODE:PLAY)

⑧ 5.1Vp-p, 22.7µsec
IC701 ④ (LRCIN)

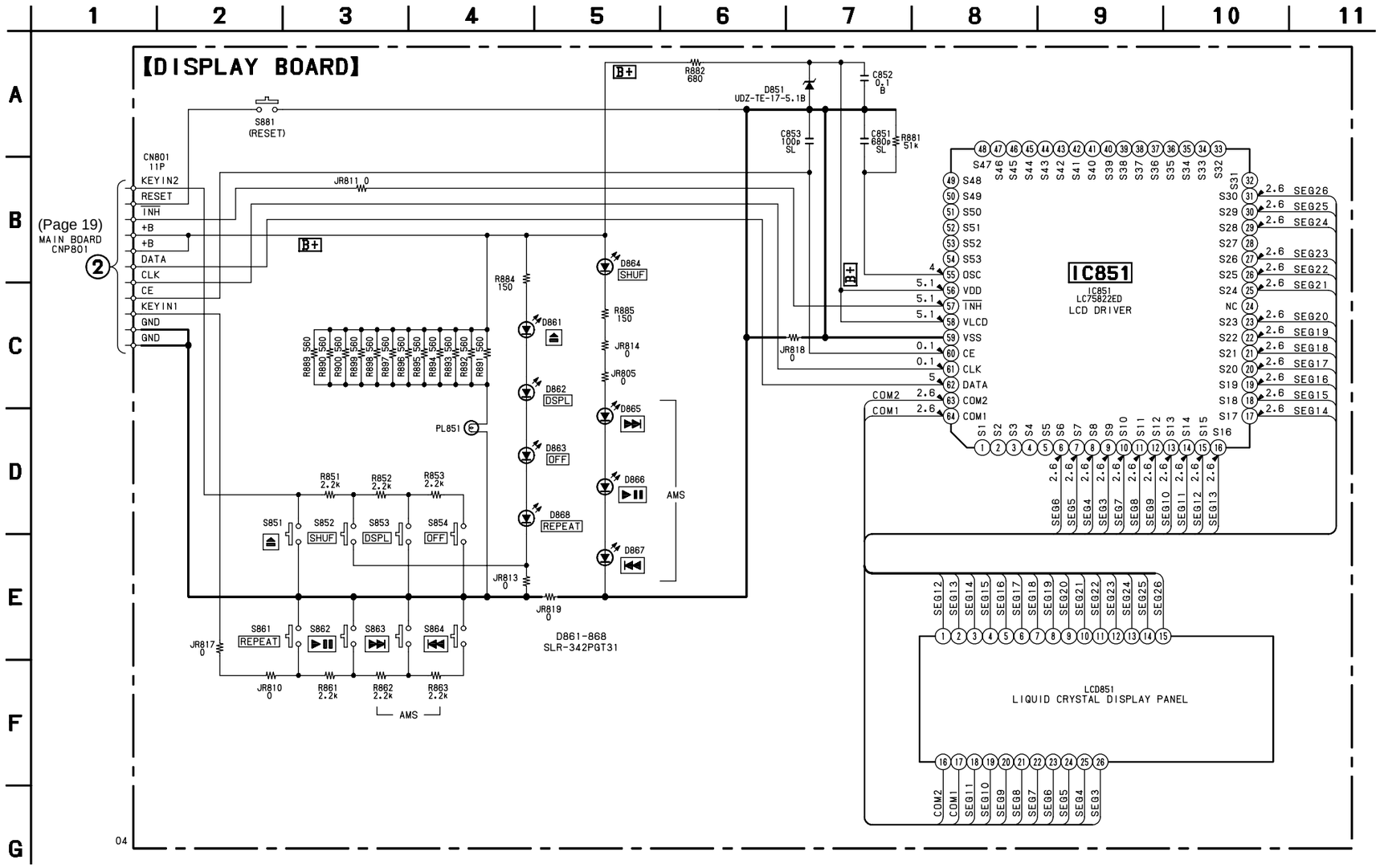
⑨ 5.1Vp-p, 474nsec
IC701 ⑥ (BCKIN)

⑩ 4.7Vp-p, 16.9344MHz
IC701 ⑳ (XTO)

⑪ 4Vp-p, 16.89MHz
IC701 ⑲ (CLKO)

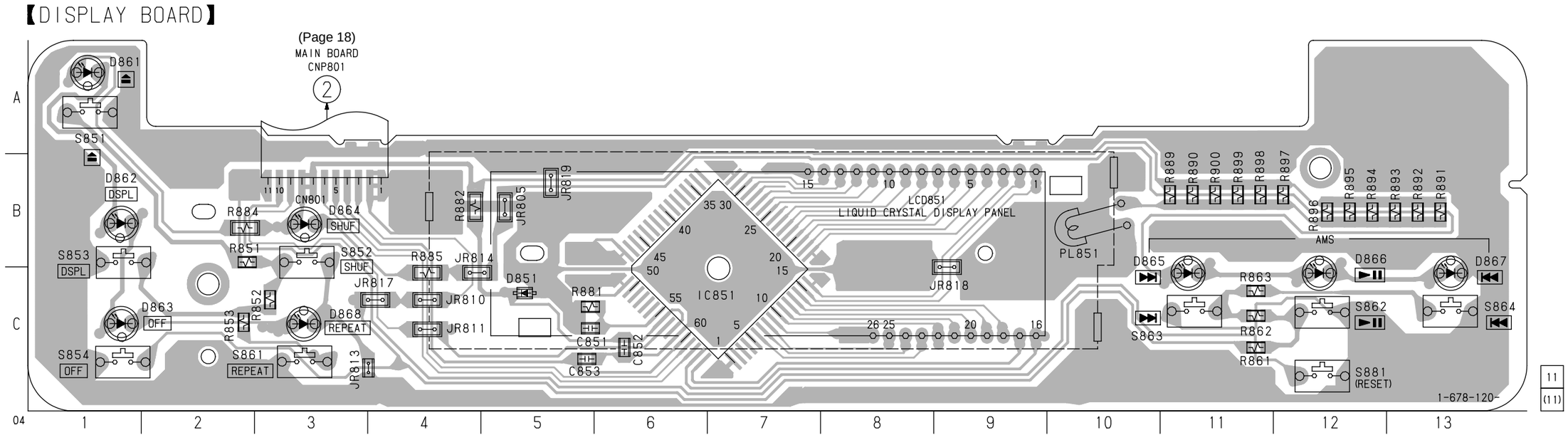
⑫ 2.7Vp-p, 4.5MHz
IC801 ㊻ (XOUT)

⑬ 4.1Vp-p, 22.7µsec
IC1 ⑧ (OSC)



Note:
• Voltage is dc with respect to ground under no-signal condition.
no mark : CD PLAY

4-12. PRINTED WIRING BOARD — DISPLAY SECTION — • Refer to page 15 for Circuit Boards Location.

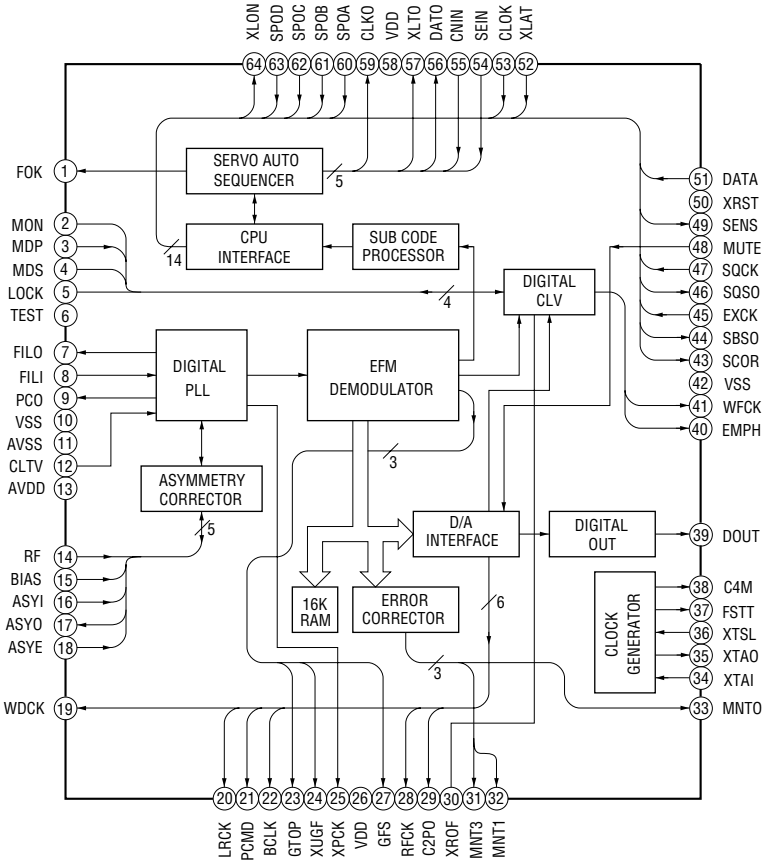


- **Semiconductor Location**

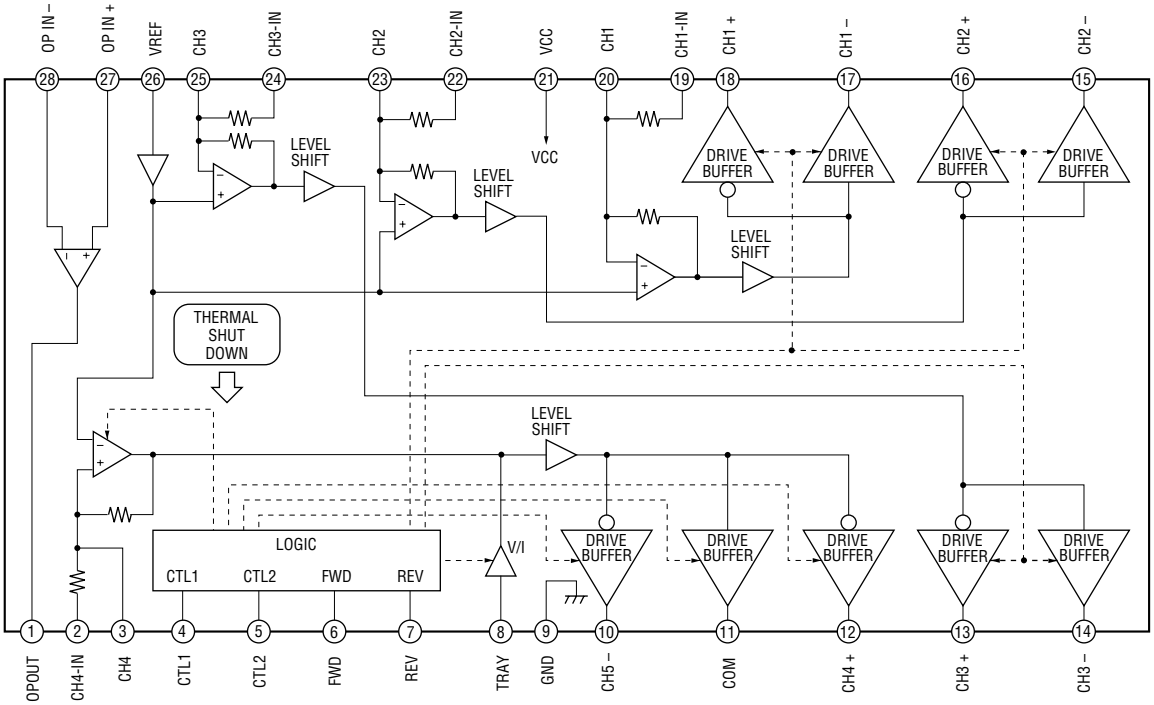
Ref. No.	Location
D851	C-5
D861	A-1
D862	B-1
D863	C-1
D864	B-3
D865	B-11
D866	B-12
D867	B-13
D868	C-3
IC851	C-7

• IC Block Diagrams

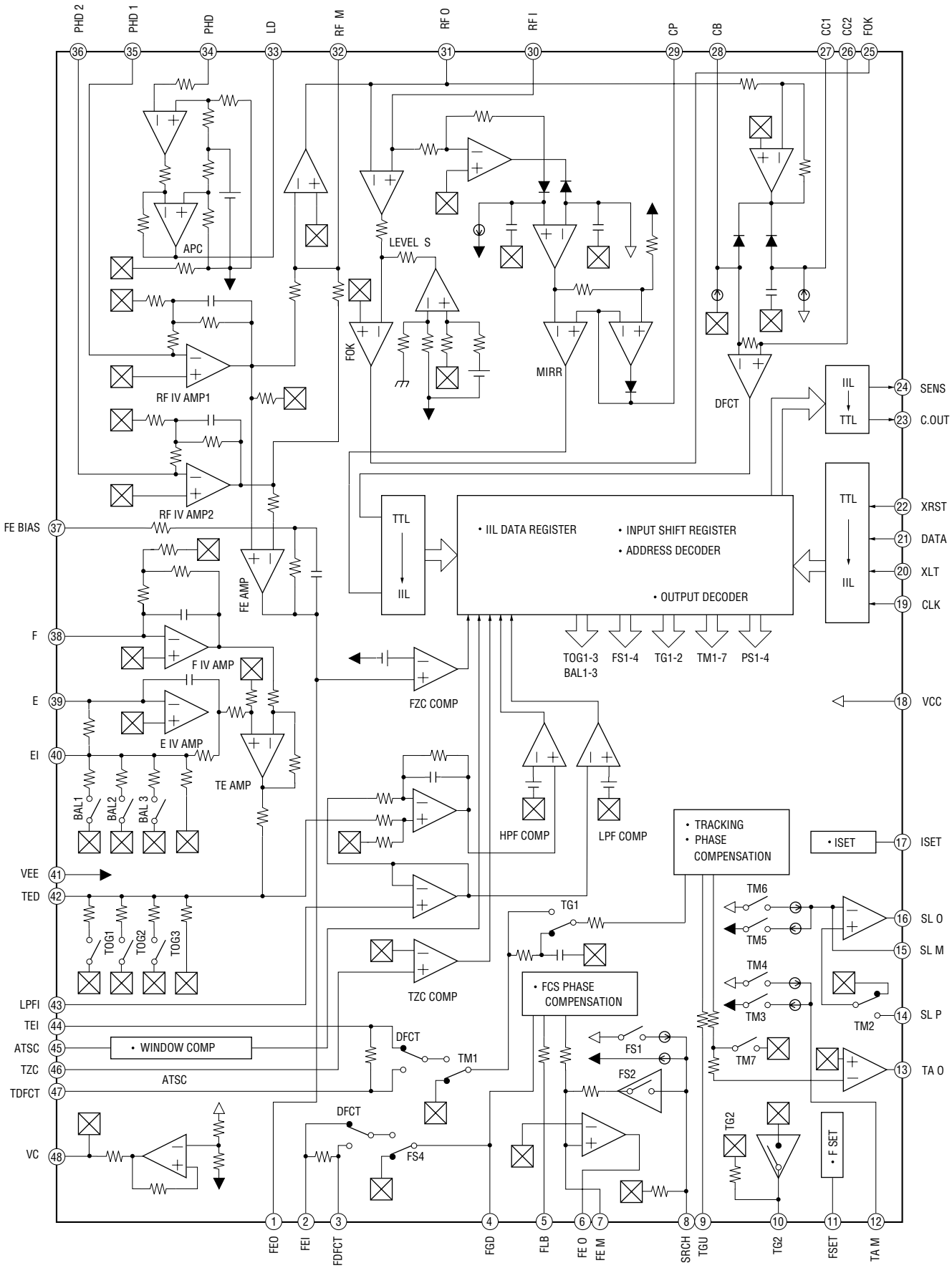
IC1 CXD2507AQ (SERVO Board)



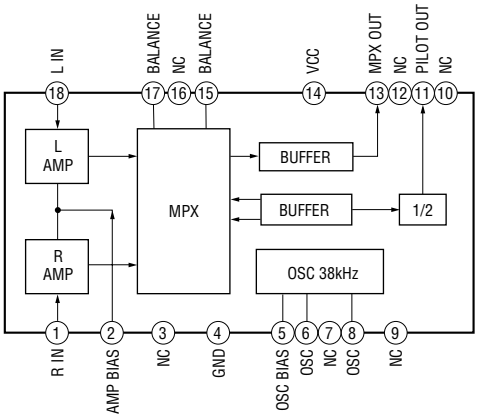
IC3 BA6796FP-T1



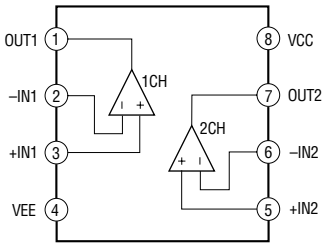
IC2 CXA1782BQ



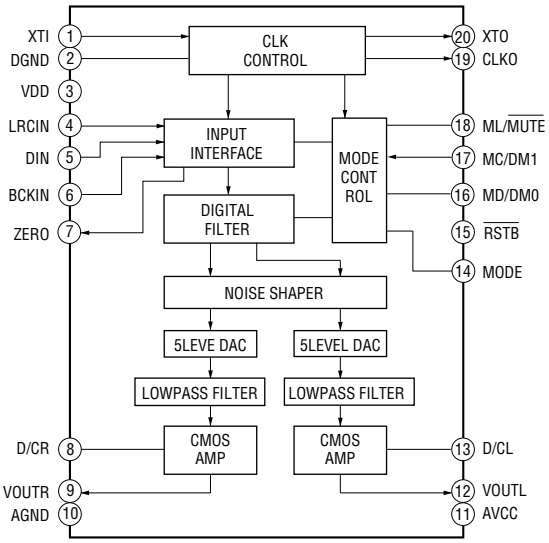
IC1 BA1405F-E2 (MAIN Board)



IC401 BA4558F



IC701 PCM1717E-S



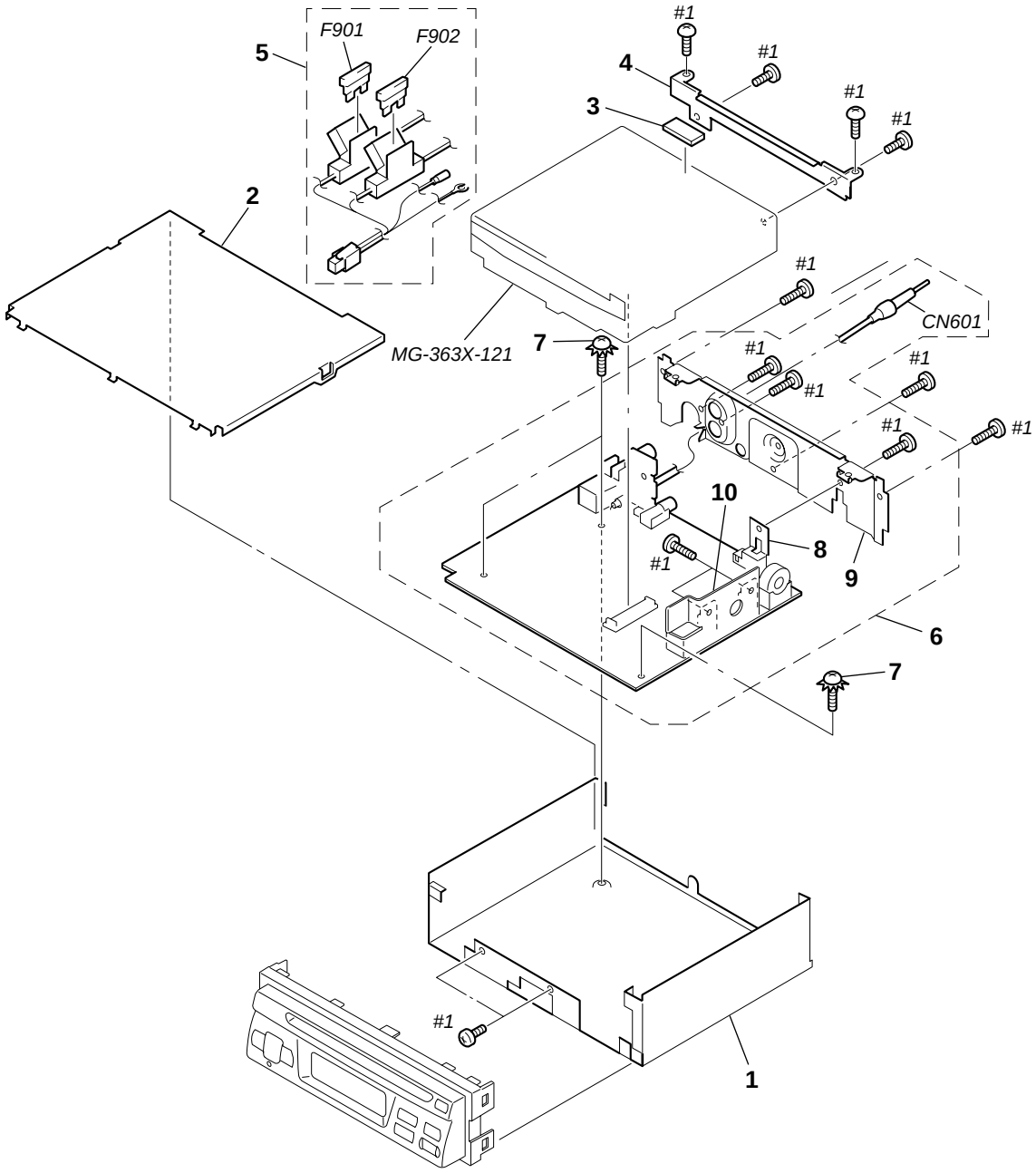
SECTION 5
EXPLODED VIEWS

NOTE:
- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- -XX and -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
- Accessories and packing materials and hardware (# mark) list are given in the last of this parts list.

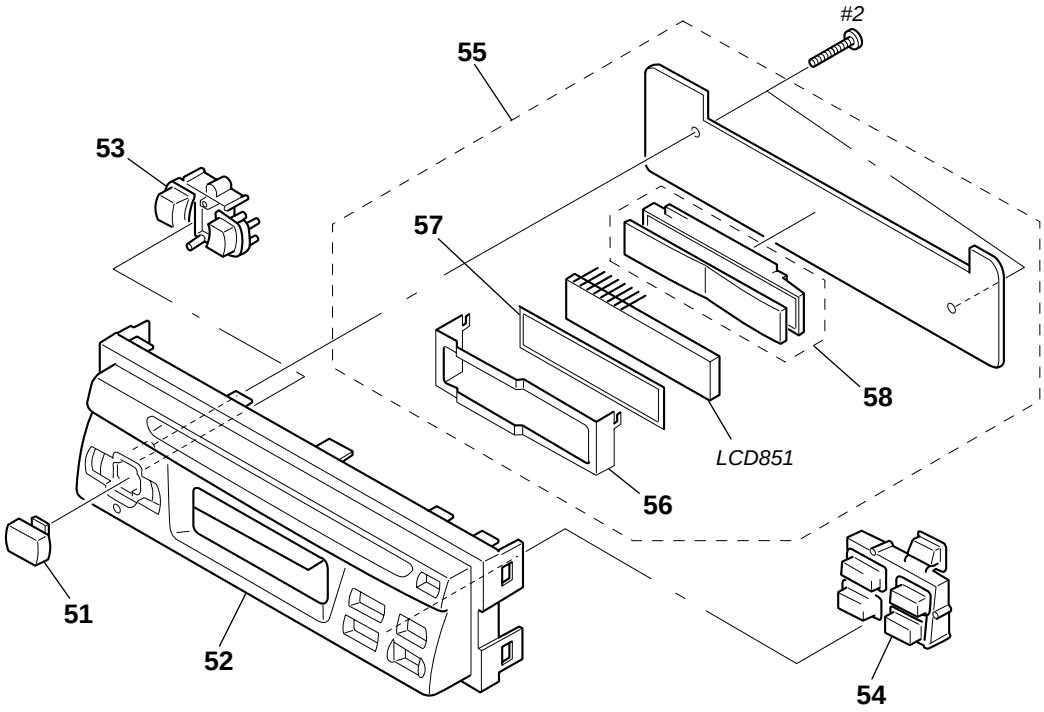
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

5-1. CHASSIS SECTION



Ref. No.	Part No.	Description	Remark
* 1	3-030-876-01	CHASSIS (MAIN)	
* 2	3-030-925-41	COVER	
* 3	3-024-285-01	CUSHION (RUBBER)	
* 4	3-030-927-01	BRACKET (M/D)	
5	1-792-738-11	CORD (WITH CONNECTOR) (POWER) (INCLUDING F901,902)	
* 6	A-3294-932-A	MAIN BOARD, COMPLETE	
7	3-922-535-11	SCREW (+BTT)	
* 8	3-045-807-01	BRACKET (CONNECTOR)	
* 9	3-043-192-01	CHASSIS (REAR)	
* 10	3-030-850-01	HEAT SINK (REG)	
CN601	1-792-841-11	CORD (WITH CONNECTOR) (ANTENNA OUT)	
F901	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A)	
F902	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A)	

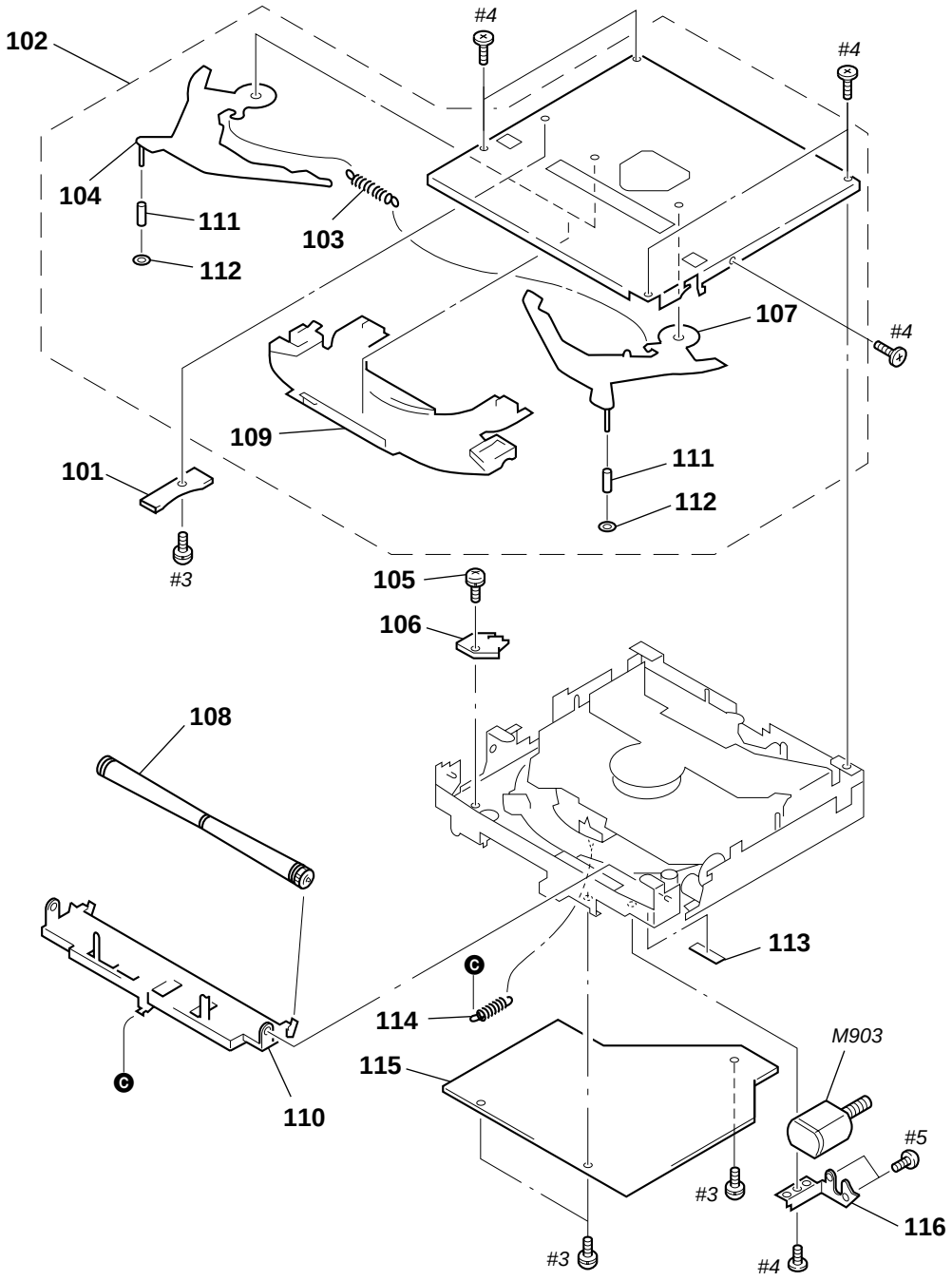
5-2. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
51	3-043-188-01	BUTTON (PLAY)	
52	X-3378-481-1	PANEL ASSY, FRONT	
53	3-043-190-01	BUTTON (AMS)	
54	3-043-189-01	BUTTON (EJECT)	
* 55	A-3294-933-A	DISPLAY BOARD, COMPLETE	

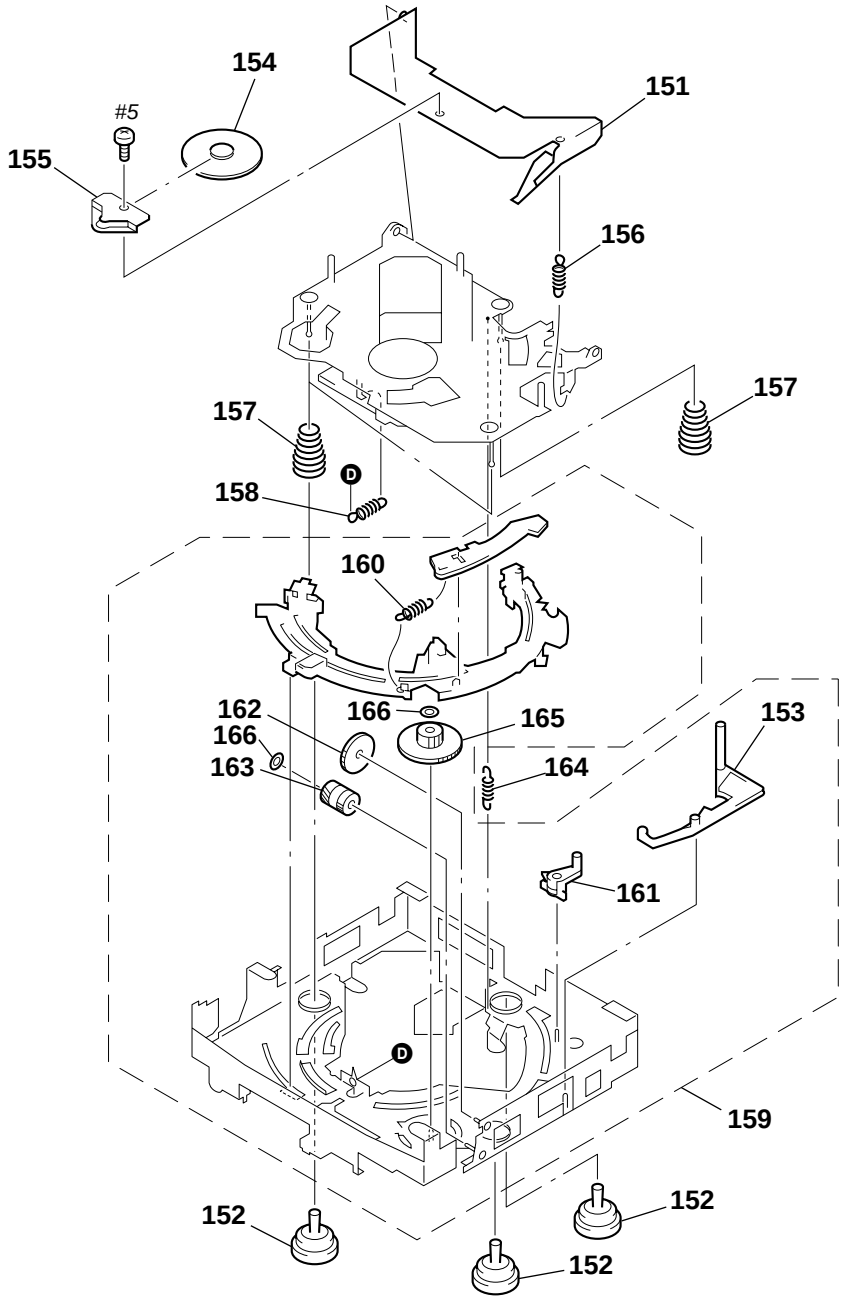
Ref. No.	Part No.	Description	Remark
* 56	3-043-193-01	PLATE (LCD), GROUND	
* 57	3-043-196-01	SHEET (D)	
* 58	X-3378-707-1	HOLDER (LCD) ASSY	
LCD851	1-803-904-21	DISPLAY PANEL, LIQUID CRYSTAL	

5-3. CD MECHANISM SECTION (1)
(MG-363X-121)



Ref. No.	Part No.	Description	Remark
* 101	1-659-836-11	DISC IN SW BOARD	
* 102	A-3291-816-B	CHASSIS (T) SUB ASSY	
103	3-931-909-01	SPRING (LR), TENSION	
104	X-3371-501-5	LEVER (L) ASSY	
105	3-338-737-01	SCREW (2X3), +PS	
* 106	1-659-837-11	LOAD SW BOARD	
107	X-3371-502-4	LEVER (R) ASSY	
108	A-3301-203-A	ROLLER ASSY	
109	3-931-908-01	GUIDE (DISC)	
110	3-017-301-01	ARM (ROLLER)	
111	3-936-756-01	ROLLER (D)	
112	3-321-393-01	WASHER, STOPPER	
* 113	3-939-139-01	SPACER	
114	3-931-916-01	SPRING (RA), TENSION	
* 115	A-3309-227-A	SERVO BOARD, COMPLETE	
* 116	3-007-530-01	BRACKET (MOTOR)	
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING (LOADING)	

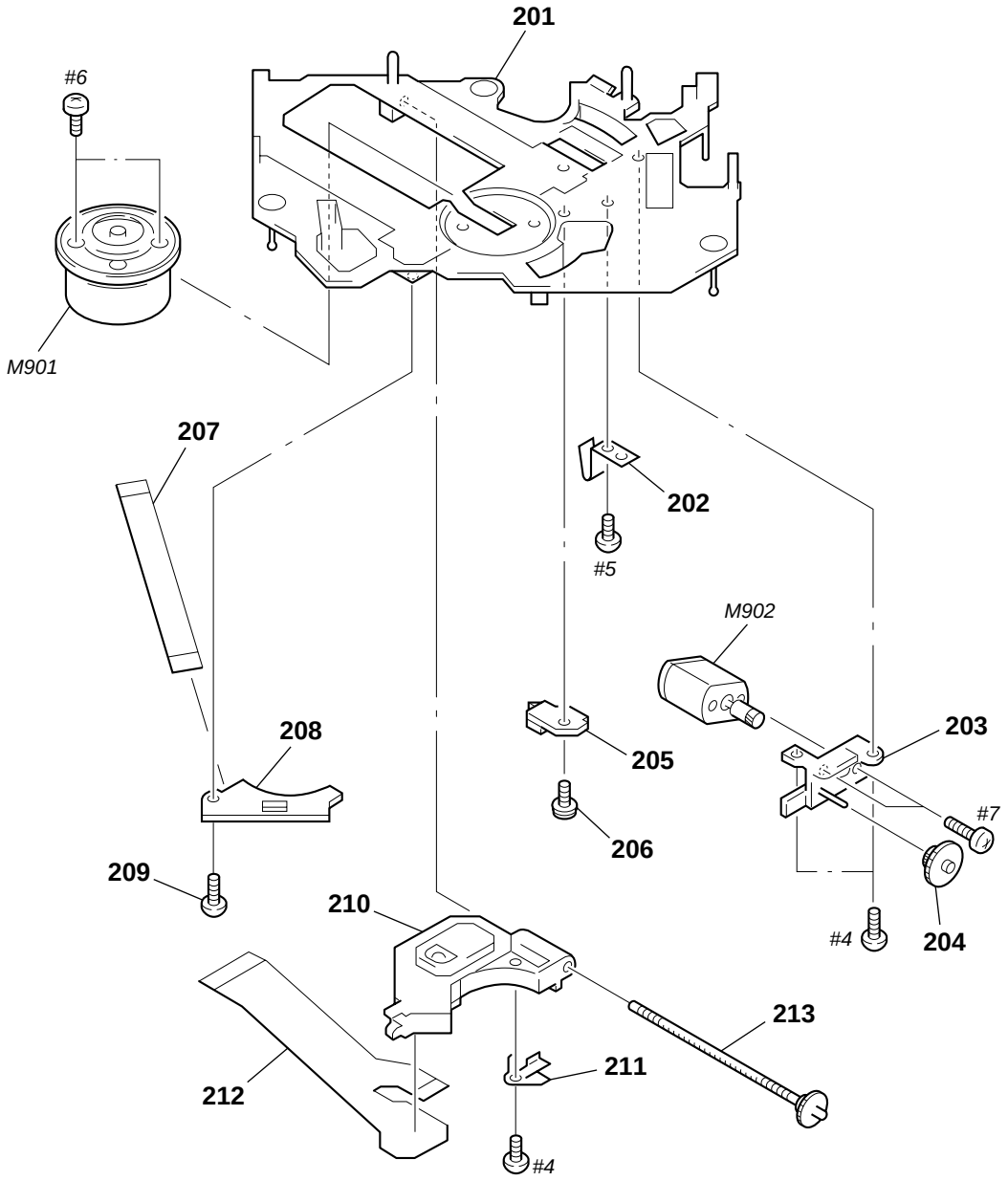
5-4. CD MECHANISM SECTION (2)
(MG-363X-121)



Ref. No.	Part No.	Description	Remark
151	3-931-893-01	ARM, CHUCKING	
152	3-931-897-01	DAMPER (T)	
153	3-931-879-02	LEVER (D)	
* 154	3-913-404-11	RETAINER (DISC)	
155	3-931-894-01	BRACKET (CP)	
156	3-931-895-01	SPRING (CH), TENSION	
157	3-931-898-01	SPRING (FL), COMPRESSION	
158	3-032-483-02	SPRING (KF1), TENSION	

Ref. No.	Part No.	Description	Remark
159	A-3277-802-C	CHASSIS (M) COMPLETE ASSY	
160	3-931-883-01	SPRING (TR), TENSION	
161	3-931-881-01	LEVER (LOCK)	
162	3-931-882-02	GEAR (MDL)	
163	3-007-537-11	WHEEL (U), WORM	
164	3-032-484-01	SPRING (KR1), TENSION	
165	3-014-727-01	WHEEL (LW), WORM	
166	3-018-272-01	WASHER	

5-5. CD MECHANISM SECTION (3)
(MG-363X-121)



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
* 201	X-3374-022-1	CHASSIS (OP) (O/S) ASSY	
202	3-931-829-01	SPRING (SL), PLATE	
203	X-3371-504-1	BASE (DRIVING) ASSY	
204	3-931-832-01	GEAR (SL MIDWAY)	
* 205	1-659-835-12	LIMIT SW BOARD	
206	3-338-737-01	SCREW (2X3), +PS	
207	1-659-880-11	MOTOR FLEXIBLE BOARD	
* 208	1-659-834-11	SUB BOARD	
209	3-909-607-01	SCREW	
⚠210	8-820-010-06	PICK-UP, OPTICAL KSS-521A/K1RP	
211	3-931-834-01	SPRING (FEED), PLATE	
212	1-659-881-11	PICK-UP FLEXIBLE BOARD	
213	A-3291-669-A	SHAFT (FEED) ASSY	
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)	
M902	A-3291-674-A	MOTOR ASSY, SLED (SLED)	

SECTION 6
ELECTRICAL PARTS LIST

DISC IN SW **DISPLAY**

NOTE:
- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL:Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F:nonflammable
- 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

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.

Ref. No.	Part No.	Description			Remark
*	1-659-836-11	DISC IN SW BOARD			
		**********			
		< SWITCH >			
SW1	1-572-288-21	SWITCH, PUSH (DISC IN)			
SW2	1-572-288-21	SWITCH, PUSH (SELF)			
**********					
*	A-3294-933-A	DISPLAY BOARD, COMPLETE			
		**********			
	X-3378-707-1	HOLDER (LCD) ASSY			
*	3-043-193-01	PLATE (LCD), GROUND			
*	3-043-196-01	SHEET (D)			
		< CAPACITOR >			
C851	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C852	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C853	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
		< CONNECTOR >			
CN801	1-783-268-11	CABLE, FLAT			
		< DIODE >			
D851	8-719-976-99	DIODE UDZ-TE-17-5.1B			
D861	8-719-052-61	LED SLR-342PGT31 (⏏)			
D862	8-719-052-61	LED SLR-342PGT31 (DSPL)			
D863	8-719-052-61	LED SLR-342PGT31 (OFF)			
D864	8-719-052-61	LED SLR-342PGT31 (SHUF)			
D865	8-719-052-61	LED SLR-342PGT31 (▶▶I (AMS))			
D866	8-719-052-61	LED SLR-342PGT31 (▶ II)			
D867	8-719-052-61	LED SLR-342PGT31 (I◀◀ (AMS))			
D868	8-719-052-61	LED SLR-342PGT31 (REPEAT)			
		< IC >			
IC851	8-759-369-90	IC LC75822ED			
		< JUMPER RESISTOR >			
JR805	1-216-296-00	SHORT	0		
JR810	1-216-296-00	SHORT	0		
JR811	1-216-296-00	SHORT	0		
JR813	1-216-296-00	SHORT	0		
JR814	1-216-296-00	SHORT	0		
JR817	1-216-296-00	SHORT	0		
JR818	1-216-296-00	SHORT	0		
JR819	1-216-296-00	SHORT	0		

Ref. No.	Part No.	Description			Remark
		< LIQUID CRYSTAL DISPLAY >			
LCD851	1-803-904-21	DISPLAY PANEL, LIQUID CRYSTAL			
		< PILOT LAMP >			
PL851	1-517-973-11	LAMP, PILOT			
		< RESISTOR >			
R851	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R852	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R853	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R861	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R862	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R863	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R881	1-216-090-00	METAL CHIP	51K	5%	1/10W
R882	1-216-194-00	METAL CHIP	680	5%	1/8W
R884	1-216-178-00	RES-CHIP	150	5%	1/8W
R885	1-216-178-00	RES-CHIP	150	5%	1/8W
R889	1-216-043-11	RES-CHIP	560	5%	1/10W
R890	1-216-043-11	RES-CHIP	560	5%	1/10W
R891	1-216-043-11	RES-CHIP	560	5%	1/10W
R892	1-216-043-11	RES-CHIP	560	5%	1/10W
R893	1-216-043-11	RES-CHIP	560	5%	1/10W
R894	1-216-043-11	RES-CHIP	560	5%	1/10W
R895	1-216-043-11	RES-CHIP	560	5%	1/10W
R896	1-216-043-11	RES-CHIP	560	5%	1/10W
R897	1-216-043-11	RES-CHIP	560	5%	1/10W
R898	1-216-043-11	RES-CHIP	560	5%	1/10W
R899	1-216-043-11	RES-CHIP	560	5%	1/10W
R900	1-216-043-11	RES-CHIP	560	5%	1/10W
		< SWITCH >			
S851	1-572-704-31	SWITCH, KEY BOARD (⏏)			
S852	1-572-704-31	SWITCH, KEY BOARD (SHUF)			
S853	1-572-704-31	SWITCH, KEY BOARD (DSPL)			
S854	1-572-704-31	SWITCH, KEY BOARD (OFF)			
S861	1-572-704-31	SWITCH, KEY BOARD (REPEAT)			
S862	1-572-704-31	SWITCH, KEY BOARD (▶ II)			
S863	1-572-704-31	SWITCH, KEY BOARD (▶▶I (AMS))			
S864	1-572-704-31	SWITCH, KEY BOARD (I◀◀ (AMS))			
S881	1-572-704-31	SWITCH, KEY BOARD (RESET)			
**********					

LIMIT SW | LOAD SW | MAIN

Ref. No.	Part No.	Description			Remark
*	1-659-835-12	LIMIT SW BOARD			
		**********			
		< SWITCH >			
SW3	1-572-688-11	SWITCH, PUSH (1 KEY) (LIMIT)			
**********					
*	1-659-837-11	LOAD SW BOARD			
		**********			
		< SWITCH >			
SW4	1-572-288-21	SWITCH, PUSH (DOWN)			
**********					
*	A-3294-932-A	MAIN BOARD, COMPLETE			
		**********			
*	3-030-850-01	HEAT SINK (REG)			
*	3-043-192-01	CHASSIS (REAR)			
*	3-045-807-01	BRACKET (CONNECTOR)			
	7-685-792-09	SCREW +PTT 2.6X6 (S)			
		< CAPACITOR >			
C1	1-124-259-11	ELECT	4.7uF	20%	16V
C2	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C3	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C6	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C7	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C8	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C9	1-163-229-11	CERAMIC CHIP	12PF	5%	50V
C10	1-124-234-00	ELECT	22uF	20%	16V
C11	1-163-091-00	CERAMIC CHIP	8PF		50V
C12	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C13	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C14	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C15	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C20	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C21	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C24	1-124-584-00	ELECT	100uF	20%	10V
C30	1-164-005-11	CERAMIC CHIP	0.47uF		25V
C41	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C42	1-124-257-00	ELECT	2.2uF	20%	50V
C43	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C44	1-124-229-00	ELECT	33uF	20%	10V
C45	1-164-346-11	CERAMIC CHIP	1uF		16V
C46	1-126-160-11	ELECT	1uF	20%	50V
C47	1-164-346-11	CERAMIC CHIP	1uF		16V
C48	1-164-346-11	CERAMIC CHIP	1uF		16V
C61	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C62	1-124-257-00	ELECT	2.2uF	20%	50V
C63	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C65	1-164-346-11	CERAMIC CHIP	1uF		16V
C66	1-126-160-11	ELECT	1uF	20%	50V
C67	1-164-346-11	CERAMIC CHIP	1uF		16V
C69	1-164-346-11	CERAMIC CHIP	1uF		16V
C84	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C85	1-124-233-11	ELECT	10uF	20%	16V
C86	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C87	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C101	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C107	1-124-259-11	ELECT	4.7uF	20%	16V
C108	1-124-259-11	ELECT	4.7uF	20%	16V
C201	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C207	1-124-259-11	ELECT	4.7uF	20%	16V
C208	1-124-259-11	ELECT	4.7uF	20%	16V
C209	1-124-472-11	ELECT	470uF	20%	10V
C401	1-124-584-00	ELECT	100uF	20%	10V
C402	1-164-346-11	CERAMIC CHIP	1uF		16V
C701	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C702	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C703	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C704	1-124-233-11	ELECT	10uF	20%	16V
C705	1-124-589-11	ELECT	47uF	20%	16V
C708	1-124-233-11	ELECT	10uF	20%	16V
C709	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C712	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C713	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C714	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C804	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C807	1-163-233-11	CERAMIC CHIP	18PF	5%	50V
C808	1-163-234-11	CERAMIC CHIP	20PF	5%	50V
C809	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C812	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C813	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C814	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C831	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C901	1-124-257-00	ELECT	2.2uF	20%	50V
C902	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C903	1-124-257-00	ELECT	2.2uF	20%	50V
C904	1-110-654-11	DOUBLE LAYERS	0.047F		5.5V
C905	1-124-259-11	ELECT	4.7uF	20%	16V
C907	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C908	1-124-233-11	ELECT	10uF	20%	16V
C909	1-126-768-11	ELECT	2200uF	20%	16V
C911	1-124-259-11	ELECT	4.7uF	20%	16V
C912	1-124-584-00	ELECT	100uF	20%	10V
C914	1-163-038-00	CERAMIC CHIP	0.1uF		25V
C915	1-124-259-11	ELECT	4.7uF	20%	16V
C916	1-124-584-00	ELECT	100uF	20%	10V
		< CONNECTOR >			
CN601	1-792-841-11	CORD (WITH CONNECTOR) (ANTENNA OUT)			
CNP701	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P			
CNP801	1-563-614-31	CONNECTOR, FLEXIBLE 11P			
* CNP901	1-691-785-11	PIN, CONNECTOR (PC BOARD) 4P			

Ref. No.	Part No.	Description	Remark
		< JACK >	
CNJ600	1-793-598-11	JACK (ANTENNA IN)	
		< DIODE >	
D1	8-719-058-78	DIODE HVU202A3TRF	
D2	8-719-991-33	DIODE 1SS133T-77	
D401	8-719-991-33	DIODE 1SS133T-77	
D402	8-719-109-71	DIODE MTZJ-T-77-3.9A	
D901	8-719-929-15	DIODE MTZJ-T-77-9.1B	
D902	8-719-109-89	DIODE MTZJ-T-77-5.6B	
D903	8-719-109-89	DIODE MTZJ-T-77-5.6B	
D904	8-719-109-89	DIODE MTZJ-T-77-5.6C	
D905	8-719-109-93	DIODE MTZJ-T-77-6.2B	
D906	8-719-923-91	DIODE MTZJ-T-77-16A	
D907	8-719-049-38	DIODE 1N5404TU	
D908	8-719-200-82	DIODE 11ES2-TA1B	
D912	8-719-921-80	DIODE MTZJ-T-77-11B	
D913	8-719-991-33	DIODE 1SS133T-77	
D919	8-719-991-33	DIODE 1SS133T-77	
		< IC >	
IC1	8-759-393-50	IC A1405F-E2	
IC401	8-759-909-71	IC BA4558F-T1	
IC701	8-759-464-81	IC PCM1717E-ST2	
IC801	8-759-675-96	IC uPD17705GC-547-3B9	
		< JACK >	
J801	1-566-822-41	JACK (REMOTE IN)	
		< JUMPER RESISTOR >	
JR5	1-216-295-00	SHORT 0	
JR6	1-216-295-00	SHORT 0	
JR7	1-216-295-00	SHORT 0	
JR10	1-216-296-00	SHORT 0	
JR11	1-216-296-00	SHORT 0	
JR12	1-216-296-00	SHORT 0	
JR14	1-216-296-00	SHORT 0	
JR17	1-216-296-00	SHORT 0	
JR19	1-216-296-00	SHORT 0	
JR21	1-216-296-00	SHORT 0	
JR23	1-216-295-00	SHORT 0	
JR24	1-216-296-00	SHORT 0	
JR28	1-216-295-00	SHORT 0	
JR31	1-216-295-00	SHORT 0	
JR32	1-216-295-00	SHORT 0	
JR35	1-216-296-00	SHORT 0	
JR46	1-216-296-00	SHORT 0	
JR922	1-216-296-00	SHORT 0	
		< COIL >	
L1	1-419-619-11	COIL, IFT	
L2	1-419-620-11	COIL, AIR-CORE	

Ref. No.	Part No.	Description	Remark
L101	1-235-778-21	FILTER, LOW PASS	
L201	1-235-778-21	FILTER, LOW PASS	
L801	1-410-501-11	INDUCTOR 2.2uH	
L901	1-416-539-11	INDUCTOR 370uH	
		< JACK >	
PJ401	1-764-424-11	JACK, PIN 2P (AUDIO OUT)	
		< TRANSISTOR >	
Q1	8-729-034-51	TRANSISTOR KTC3875	
Q2	8-729-052-33	TRANSISTOR KTC3879	
Q3	8-729-052-33	TRANSISTOR KTC3879	
Q15	8-729-034-50	TRANSISTOR KTA1504	
Q16	8-729-034-49	TRANSISTOR KRC104S	
Q21	8-729-052-33	TRANSISTOR KTC3879	
Q22	8-729-038-74	TRANSISTOR KRC110S	
Q23	8-729-038-74	TRANSISTOR KRC110S	
Q27	8-729-038-74	TRANSISTOR KRC110S	
Q28	8-729-038-74	TRANSISTOR KRC110S	
Q29	8-729-038-74	TRANSISTOR KRC110S	
Q30	8-729-038-74	TRANSISTOR KRC110S	
Q45	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q65	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q81	8-729-034-51	TRANSISTOR KTC3875	
Q82	8-729-034-51	TRANSISTOR KTC3875	
Q401	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q402	8-729-920-31	TRANSISTOR DTC343TK-T-146	
Q403	8-729-038-68	TRANSISTOR KRC103S	
Q404	8-729-038-55	TRANSISTOR KRA103S	
Q901	8-729-019-00	TRANSISTOR 2SD2394-G	
Q902	8-729-038-55	TRANSISTOR KRA103S	
Q903	8-729-038-55	TRANSISTOR KRA103S	
Q904	8-729-922-62	TRANSISTOR 2SD1760F5-TLQ	
Q905	8-729-038-67	TRANSISTOR KRC102S	
Q906	8-729-038-55	TRANSISTOR KRA103S	
Q907	8-729-019-00	TRANSISTOR 2SD2394-G	
Q908	8-729-038-67	TRANSISTOR KRC102S	
Q909	8-729-034-51	TRANSISTOR KTC3875	
Q910	8-729-052-35	TRANSISTOR STD1664	
Q911	8-729-034-51	TRANSISTOR KTC3875	
Q912	8-729-034-51	TRANSISTOR KTC3875	
Q913	8-729-038-67	TRANSISTOR KRC102S	
Q914	8-729-038-67	TRANSISTOR KRC102S	
Q915	8-729-038-55	TRANSISTOR KRA103S	
Q917	8-729-052-35	TRANSISTOR STD1664	
Q918	8-729-038-67	TRANSISTOR KRC102S	
Q921	8-729-922-47	TRANSISTOR 2SB1184-TLR	
Q922	8-729-038-67	TRANSISTOR KRC102S	
		< RESISTOR >	
R1	1-216-107-00	METAL CHIP 270K 5% 1/10W	
R2	1-216-053-00	METAL CHIP 1.5K 5% 1/10W	
R4	1-216-025-11	RES-CHIP 100 5% 1/10W	

MAIN

Ref. No.	Part No.	Description			Remark
R5	1-216-063-11	RES-CHIP	3.9K	5%	1/10W
R6	1-216-073-00	METAL CHIP	10K	5%	1/10W
R7	1-216-073-00	METAL CHIP	10K	5%	1/10W
R8	1-216-075-00	METAL CHIP	12K	5%	1/10W
R9	1-216-198-11	RES-CHIP	1K	5%	1/8W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R12	1-216-190-00	RES-CHIP	470	5%	1/8W
R13	1-216-097-11	RES-CHIP	100K	5%	1/10W
R14	1-216-037-00	METAL CHIP	330	5%	1/10W
R15	1-216-174-00	RES-CHIP	100	5%	1/8W
R16	1-216-037-00	METAL CHIP	330	5%	1/10W
R17	1-216-043-11	RES-CHIP	560	5%	1/10W
R18	1-216-049-11	RES-CHIP	1K	5%	1/10W
R19	1-216-025-11	RES-CHIP	100	5%	1/10W
R20	1-216-041-00	METAL CHIP	470	5%	1/10W
R21	1-216-073-00	METAL CHIP	10K	5%	1/10W
R22	1-216-049-11	RES-CHIP	1K	5%	1/10W
R23	1-216-073-00	METAL CHIP	10K	5%	1/10W
R41	1-216-049-11	RES-CHIP	1K	5%	1/10W
R42	1-216-073-00	METAL CHIP	10K	5%	1/10W
R43	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R45	1-216-073-00	METAL CHIP	10K	5%	1/10W
R46	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R61	1-216-049-11	RES-CHIP	1K	5%	1/10W
R62	1-216-073-00	METAL CHIP	10K	5%	1/10W
R63	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R65	1-216-073-00	METAL CHIP	10K	5%	1/10W
R66	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R81	1-216-081-00	METAL CHIP	22K	5%	1/10W
R82	1-216-049-11	RES-CHIP	1K	5%	1/10W
R83	1-216-045-00	METAL CHIP	680	5%	1/10W
R85	1-216-689-11	METAL CHIP	39K	0.5%	1/10W
R101	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R102	1-216-073-00	METAL CHIP	10K	5%	1/10W
R104	1-216-097-11	RES-CHIP	100K	5%	1/10W
R105	1-216-088-00	METAL CHIP	43K	5%	1/10W
R106	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R107	1-216-088-00	METAL CHIP	43K	5%	1/10W
R108	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R109	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R110	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R119	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R201	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R202	1-216-073-00	METAL CHIP	10K	5%	1/10W
R204	1-216-097-11	RES-CHIP	100K	5%	1/10W
R205	1-216-088-00	METAL CHIP	43K	5%	1/10W
R206	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R207	1-216-088-00	METAL CHIP	43K	5%	1/10W
R208	1-216-059-00	METAL CHIP	2.7K	5%	1/10W
R209	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R210	1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R219	1-216-061-00	METAL CHIP	3.3K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R332	1-216-049-11	RES-CHIP	1K	5%	1/10W
R333	1-216-073-00	METAL CHIP	10K	5%	1/10W
R401	1-216-049-11	RES-CHIP	1K	5%	1/10W
R408	1-216-073-00	METAL CHIP	10K	5%	1/10W
R409	1-216-073-00	METAL CHIP	10K	5%	1/10W
R701	1-216-025-11	RES-CHIP	100	5%	1/10W
R702	1-216-033-00	METAL CHIP	220	5%	1/10W
R703	1-216-033-00	METAL CHIP	220	5%	1/10W
R704	1-216-033-00	METAL CHIP	220	5%	1/10W
R706	1-216-037-00	METAL CHIP	330	5%	1/10W
R707	1-216-027-00	METAL CHIP	120	5%	1/10W
R708	1-249-393-11	CARBON	10	5%	1/4W
R801	1-216-073-00	METAL CHIP	10K	5%	1/10W
R802	1-216-105-11	RES-CHIP	220K	5%	1/10W
R804	1-216-053-00	METAL CHIP	1.5K	5%	1/10W
R806	1-216-049-11	RES-CHIP	1K	5%	1/10W
R807	1-216-049-11	RES-CHIP	1K	5%	1/10W
R810	1-216-105-11	RES-CHIP	220K	5%	1/10W
R812	1-216-073-00	METAL CHIP	10K	5%	1/10W
R813	1-216-073-00	METAL CHIP	10K	5%	1/10W
R814	1-216-049-11	RES-CHIP	1K	5%	1/10W
R815	1-216-049-11	RES-CHIP	1K	5%	1/10W
R817	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R818	1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R820	1-216-073-00	METAL CHIP	10K	5%	1/10W
R824	1-216-105-11	RES-CHIP	220K	5%	1/10W
R825	1-216-105-11	RES-CHIP	220K	5%	1/10W
R826	1-216-105-11	RES-CHIP	220K	5%	1/10W
R828	1-216-254-00	RES-CHIP	220K	5%	1/8W
R830	1-216-254-00	RES-CHIP	220K	5%	1/8W
R831	1-216-089-11	RES-CHIP	47K	5%	1/10W
R832	1-216-073-00	METAL CHIP	10K	5%	1/10W
R833	1-216-049-11	RES-CHIP	1K	5%	1/10W
R834	1-216-049-11	RES-CHIP	1K	5%	1/10W
R901	1-216-182-00	RES-CHIP	220	5%	1/8W
R902	1-216-182-00	RES-CHIP	220	5%	1/8W
R903	1-216-190-00	RES-CHIP	470	5%	1/8W
R904	1-249-395-11	CARBON	15	5%	1/4W
R905	1-216-077-11	RES-CHIP	15K	5%	1/10W
R907	1-216-081-00	METAL CHIP	22K	5%	1/10W
R908	1-216-105-11	RES-CHIP	220K	5%	1/10W
R909	1-216-105-11	RES-CHIP	220K	5%	1/10W
R910	1-216-079-00	METAL CHIP	18K	5%	1/10W
R912	1-216-079-00	METAL CHIP	18K	5%	1/10W
R913	1-216-081-00	METAL CHIP	22K	5%	1/10W
R914	1-249-413-11	CARBON	470	5%	1/4W
R916	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R918	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R919	1-216-105-11	RES-CHIP	220K	5%	1/10W
R920	1-216-025-11	RES-CHIP	100	5%	1/10W
R921	1-216-025-11	RES-CHIP	100	5%	1/10W
R922	1-216-049-11	RES-CHIP	1K	5%	1/10W
R923	1-216-057-00	METAL CHIP	2.2K	5%	1/10W

Ref. No.	Part No.	Description			Remark
		< VARIABLE RESISTOR >			
RV10	1-241-761-11	RES, ADJ, CARBON 1K			
RV11	1-238-019-11	RES, ADJ, CARBON 47K			
		< RELAY >			
RY1	1-515-614-11	RELAY			
		< THERMISTOR >			
TH801	1-809-148-11	THERMISTOR PTH8L07AR2R0M1B510			
		< VIBRATOR >			
X1	1-567-093-00	VIBRATOR, CRYSTAL (38kHz)			
X701	1-579-345-11	VIBRATOR, CERAMIC (16.9344MHz)			
X801	1-760-223-11	VIBRATOR, CRYSTAL (4.5MHz)			
**********					
*	A-3309-227-A	SERVO BOARD, COMPLETE			
		**********			
		< CAPACITOR >			
C1	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C3	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C4	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5	1-164-182-11	CERAMIC CHIP	0.0033uF	10%	50V
C6	1-163-011-11	CERAMIC CHIP	0.0015uF	10%	50V
C7	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C9	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C10	1-126-206-11	ELECT CHIP	100uF	20%	6.3V
C11	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C12	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C13	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C14	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C15	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C16	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C17	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C18	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C19	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C20	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C21	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V
C22	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C23	1-135-259-11	TANTAL. CHIP	10uF	20%	6.3V
C24	1-163-259-11	CERAMIC CHIP	220PF	5%	50V
C25	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C26	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C27	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C28	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C29	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C30	1-126-603-11	ELECT CHIP	4.7uF	20%	35V
C31	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C32	1-163-023-00	CERAMIC CHIP	0.015uF	5%	50V
C33	1-124-779-00	ELECT CHIP	10uF	20%	16V
C34	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C35	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C36	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C37	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C38	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C39	1-126-204-11	ELECT CHIP	47uF	20%	16V
C40	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
		< CONNECTOR >			
CN1	1-764-616-12	HOUSING, CONNECTOR (PC BOARD) 30P			
CN2	1-565-728-51	CONNECTOR, FPC 17P			
CN3	1-770-347-21	CONNECTOR, FPC 6P			
		< IC >			
IC1	8-752-372-94	IC XD2507AQ			
IC2	8-752-074-34	IC XA1782BQ			
IC3	8-759-354-16	IC A6796FP-T1			
		< JUMPER RESISTOR >			
JR1	1-216-296-00	SHORT	0		
JR2	1-216-296-00	SHORT	0		
JR3	1-216-296-00	SHORT	0		
JR4	1-216-296-00	SHORT	0		
JR5	1-216-296-00	SHORT	0		
JR6	1-216-296-00	SHORT	0		
JR7	1-216-296-00	SHORT	0		
JR8	1-216-296-00	SHORT	0		
JR9	1-216-296-00	SHORT	0		
JR10	1-216-296-00	SHORT	0		
JR11	1-216-296-00	SHORT	0		
JR12	1-216-296-00	SHORT	0		
JR13	1-216-296-00	SHORT	0		
JR14	1-216-296-00	SHORT	0		
JR15	1-216-296-00	SHORT	0		
JR16	1-216-296-00	SHORT	0		
JR17	1-216-296-00	SHORT	0		
JR18	1-216-296-00	SHORT	0		
JR19	1-216-296-00	SHORT	0		
JR20	1-216-296-00	SHORT	0		
JR21	1-216-296-00	SHORT	0		
JR22	1-216-296-00	SHORT	0		
JR23	1-216-296-00	SHORT	0		
JR24	1-216-296-00	SHORT	0		
JR25	1-216-296-00	SHORT	0		
JR26	1-216-296-00	SHORT	0		
JR27	1-216-296-00	SHORT	0		
JR28	1-216-296-00	SHORT	0		
JR29	1-216-296-00	SHORT	0		
JR30	1-216-296-00	SHORT	0		
JR31	1-216-296-00	SHORT	0		
JR32	1-216-296-00	SHORT	0		
JR33	1-216-296-00	SHORT	0		
JR34	1-216-296-00	SHORT	0		

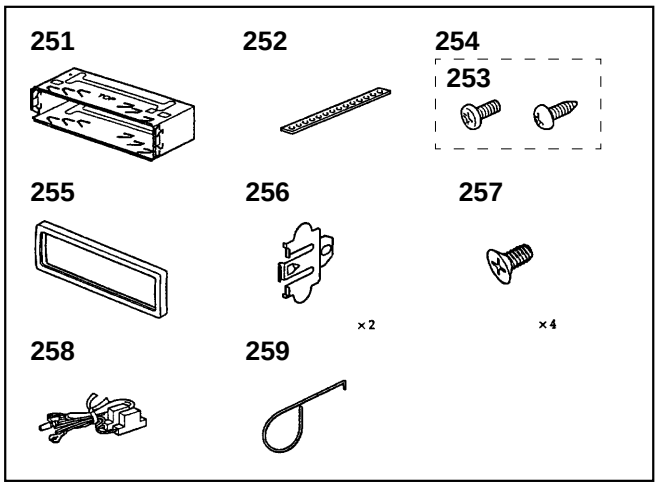
SERVO SUB

Ref. No.	Part No.	Description			Remark
JR35	1-216-296-00	SHORT	0		
JR36	1-216-296-00	SHORT	0		
JR37	1-216-296-00	SHORT	0		
JR38	1-216-296-00	SHORT	0		
JR39	1-216-296-00	SHORT	0		
JR40	1-216-296-00	SHORT	0		
JR41	1-216-296-00	SHORT	0		
JR43	1-216-296-00	SHORT	0		
JR44	1-216-296-00	SHORT	0		
JR45	1-216-296-00	SHORT	0		
JR46	1-216-296-00	SHORT	0		
		< COIL >			
L1	1-412-058-11	INDUCTOR CHIP	10uH		
L2	1-412-058-11	INDUCTOR CHIP	10uH		
L3	1-412-058-11	INDUCTOR CHIP	10uH		
		< TRANSISTOR >			
Q1	8-729-904-60	TRANSISTOR	DTB113ZK-T-146		
Q2	8-729-904-86	TRANSISTOR	2SB1197K-T-146-Q		
		< RESISTOR >			
R1	1-216-073-00	METAL CHIP	10K	5%	1/10W
R2	1-216-097-11	RES-CHIP	100K	5%	1/10W
R3	1-216-121-11	RES-CHIP	1M	5%	1/10W
R4	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R5	1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R6	1-216-073-00	METAL CHIP	10K	5%	1/10W
R7	1-216-009-11	RES-CHIP	22	5%	1/10W
R8	1-216-119-00	METAL CHIP	820K	5%	1/10W
R9	1-216-119-00	METAL CHIP	820K	5%	1/10W
R10	1-216-073-00	METAL CHIP	10K	5%	1/10W
R11	1-216-073-00	METAL CHIP	10K	5%	1/10W
R14	1-216-085-00	METAL CHIP	33K	5%	1/10W
R15	1-216-085-00	METAL CHIP	33K	5%	1/10W
R16	1-216-077-11	RES-CHIP	15K	5%	1/10W
R17	1-216-081-00	METAL CHIP	22K	5%	1/10W
R19	1-216-079-00	METAL CHIP	18K	5%	1/10W
R20	1-216-105-11	RES-CHIP	220K	5%	1/10W
R21	1-216-105-11	RES-CHIP	220K	5%	1/10W
R22	1-216-085-00	METAL CHIP	33K	5%	1/10W
R23	1-216-121-11	RES-CHIP	1M	5%	1/10W
R24	1-216-073-00	METAL CHIP	10K	5%	1/10W
R27	1-216-295-00	SHORT	0		
R28	1-216-101-00	METAL CHIP	150K	5%	1/10W
R29	1-216-097-11	RES-CHIP	100K	5%	1/10W
R30	1-216-097-11	RES-CHIP	100K	5%	1/10W
R31	1-216-081-00	METAL CHIP	22K	5%	1/10W
R32	1-216-109-00	METAL CHIP	330K	5%	1/10W
R33	1-216-105-11	RES-CHIP	220K	5%	1/10W
R34	1-216-009-11	RES-CHIP	22	5%	1/10W
R35	1-216-065-11	RES-CHIP	4.7K	5%	1/10W

Ref. No.	Part No.	Description			Remark
R36	1-216-097-11	RES-CHIP	100K	5%	1/10W
R37	1-216-117-00	METAL CHIP	680K	5%	1/10W
R38	1-216-109-00	METAL CHIP	330K	5%	1/10W
R39	1-216-101-00	METAL CHIP	150K	5%	1/10W
R40	1-216-114-00	RES-CHIP	510K	5%	1/10W
R41	1-216-093-11	RES-CHIP	68K	5%	1/10W
R42	1-216-103-00	METAL CHIP	180K	5%	1/10W
R43	1-216-097-11	RES-CHIP	100K	5%	1/10W
R44	1-216-085-00	METAL CHIP	33K	5%	1/10W
R45	1-216-081-00	METAL CHIP	22K	5%	1/10W
R45	1-216-089-11	RES-CHIP	47K	5%	1/10W
R46	1-216-097-11	RES-CHIP	100K	5%	1/10W
R47	1-216-105-11	RES-CHIP	220K	5%	1/10W
R48	1-216-073-00	METAL CHIP	10K	5%	1/10W
R49	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R50	1-216-065-11	RES-CHIP	4.7K	5%	1/10W
R51	1-216-295-00	SHORT	0		
		< CERMET RESISTOR >			
RV1	1-238-091-11	RES, ADJ, CERMET	22K		
RV4	1-238-091-11	RES, ADJ, CERMET	22K		
**********					
*	1-659-834-11	SUB BOARD			
		**********			
		< CONNECTOR >			
CN1	1-770-347-21	CONNECTOR, FPC 6P			
**********					
		MISCELLANEOUS			
		**********			
5	1-792-738-11	CORD (WITH CONNECTOR) (POWER)			
207	1-659-880-11	MOTOR FLEXIBLE BOARD			
⚠210	8-820-010-06	PICK-UP, OPTICAL KSS-521A/K1RP			
212	1-659-881-11	PICK-UP FLEXIBLE BOARD			
F901	1-532-798-11	FUSE (BLADE TYPE) (AUTO FUSE) (1A)			
F902	1-532-731-11	FUSE (BLADE TYPE) (AUTO FUSE) (3A)			
M901	X-3371-664-2	MOTOR ASSY (SPINDLE)			
M902	A-3291-674-A	MOTOR ASSY, SLED (SLED)			
M903	A-3291-676-A	MOTOR SUB ASSY, LOADING (LOADING)			
**********					
		ACCESSORIES & PACKING MATERIALS			
		**********			
	3-045-044-11	MANUAL, INSTRUCTION (ENGLISH)			
**********					

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
		**********	
		HARDWARE LIST	
		**********	
#1	7-685-792-09	SCREW +PTT 2.6X6 (S)	
#2	7-685-105-19	SCREW +P 2X8 TYPE2 NON-SLIT	
#3	7-628-253-00	SCREW +PS 2X4	
#4	7-627-553-37	SCREW, PRECISION +P 2X3 TYPE3	
#5	7-627-553-17	SCREW, PRECISION +P 2X2 TYPE3	
#6	7-627-000-00	SCREW, PRECISION +P 1.7X2.2 TYPE3	
#7	7-627-850-28	SCREW, PRECISION +P 1.4X3	
**********			
		PARTS FOR INSTALLATION AND CONNECTIONS	
		**********	
251	3-014-370-21	FRAME, FITTING	
252	3-916-012-01	BRACKET (ND), FITTING ASSIST	
253	7-682-160-01	SCREW +P 4X6	
254	X-3368-725-1	SCREW ASSY, FITTING	
255	X-3378-482-1	COLLAR ASSY	
256	3-931-977-01	BRACKET	
257	3-934-325-01	SCREW (+K 5X8 TP)	
258	1-792-738-11	CORD (WITH CONNECTOR) (POWER) (INCLUDING F901,902)	
* 259	3-035-161-01	BRACKET (RELEASE)	



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Mobile Electronics Division Company

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