

# SERVICE MANUAL

CD-R/CD STEREO SYSTEM

BASIC CD MECHANISM : DA11B3

BASIC CD-R/RW MECHANISM : CRD-RA1W02(A)

SYSTEM	SPEAKERS	REMOTE CONTROLLER
XR-MR5	SX-M510	RC-AAT16

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" (S/M Code No. 09-006-435-4T1).

# aiwa

S/M Code No. 09-009-435-4R1

REVISION

DATA

# SPECIFICATIONS

## Main unit

### <FM Tuner section>

<b>Tuning range</b>	87.5 MHz to 108 MHz
<b>Usable sensitivity (IHF)</b>	16.8 dBf
<b>Antenna terminal</b>	75 ohms (unbalanced)

### <AM Tuner section>

<b>Tuning range</b>	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
<b>Usable sensitivity</b>	400 $\mu$ V/m
<b>Antenna</b>	Loop antenna

### <Amplifier section>

<b>Power output</b>	25 W + 25 W (100 Hz to 10 kHz, THD less than 1%, 6 ohms) 30 W + 30 W (1 kHz, THD 10%, 6 ohms)
<b>Inputs</b>	AUX/VIDEO IN: 310 mV DIGITAL IN
<b>Outputs</b>	SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack): accept headphones of 32 ohms or more SUPER WOOFER: 1.2 V

### <Compact disc player section (CD player)>

<b>Laser</b>	Semiconductor laser ( $\lambda = 780$ nm)
<b>D-A converter</b>	1 bit dual
<b>Signal-to-noise ratio</b>	85 dB (1 kHz, 0 dB)
<b>Harmonic distortion</b>	0.05 % (1 kHz, 0 dB)
<b>Wow and flutter</b>	Unmeasurable

### <Compact disc player section (CD-R/RW player/recorder)>

<b>Laser</b>	Semiconductor laser ( $\lambda = 785 \pm 5$ nm)
<b>Recording method</b>	Track at once
<b>Sampling frequency</b>	44.1 kHz
<b>Harmonic distortion</b>	Play: 0.05 % or less (1 kHz, 0 dB) Digital record: 0.05 % or less (1 kHz, 0 dB)

## <General>

<b>Power requirements</b>	120 V AC, 60 Hz
<b>Power consumption</b>	90 W
<b>Standby power consumption</b>	1.5 W (power-economizing mode set to ON or AUTO)
<b>Dimensions of main unit (W x H x D)</b>	177.6 x 265.0 x 333.0 mm (7 x 10 <sup>1</sup> / <sub>2</sub> x 13 in.)
<b>Weight of main unit</b>	6.0 kg (13 lbs 4 oz.)
<b>Speaker system</b>	2 way, bass reflex (magnetic shielded type)
<b>Cabinet type</b>	2 way, bass reflex (magnetic shielded type)
<b>Speakers</b>	Woofer: 130 mm Tweeter: 22 mm dome type
<b>Impedance</b>	6 ohms
<b>Output sound pressure level</b>	86 dB/W/m
<b>Dimensions (W x H x D)</b>	155 x 254 x 210 mm (6 <sup>1</sup> / <sub>8</sub> x 10 x 8 <sup>3</sup> / <sub>8</sub> in.)
<b>Weight</b>	2.6 kg (5 lbs 12 oz.)

• Design and specifications are subject to change without notice.

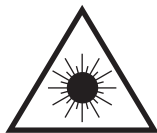
• The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.  
Under license from BBE Sound, Inc.

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

### WARNING!!

WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel: Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

### VAROITUS!

Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

### WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstråling, som överskrider gränsen för laserklass 1.

## Precaution to replace Optical block (SF-P101NR)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the right figure.

### CAUTION

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

### ATTENTION

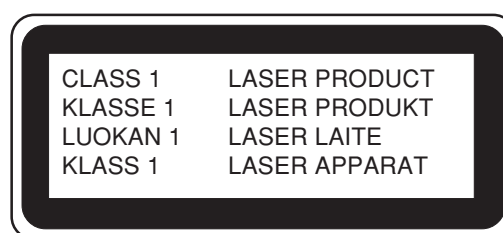
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### ADVARSEL

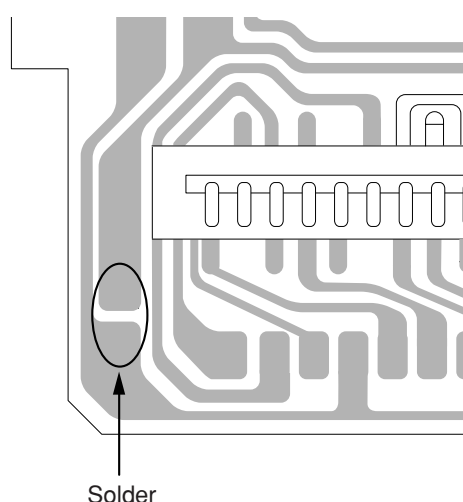
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.

The CLASS 1 LASER PRODUCT label is located on the rear exterior.



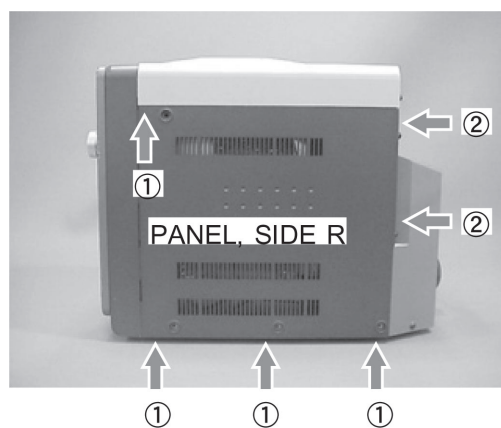
CD PICK-UP ASSY. PWB



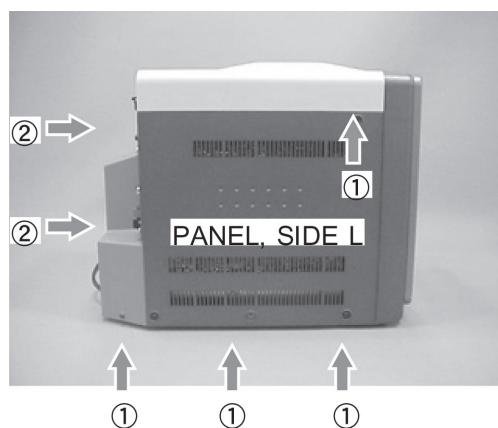
## DISASSEMBLY INSTRUCTIONS

### 1. Removing the ornamental parts

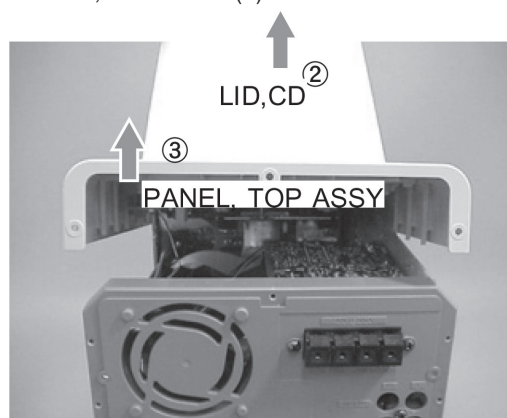
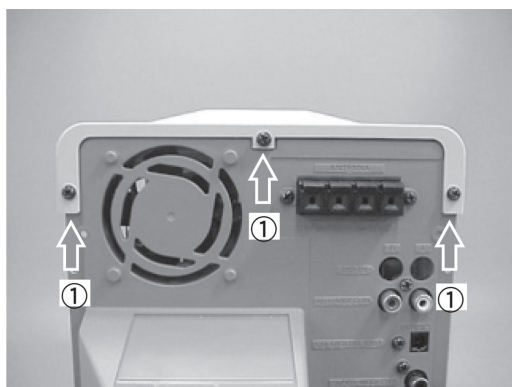
- 1) Remove the six screws (four (1)s, two (2)s) and remove the PANEL, SIDE R.



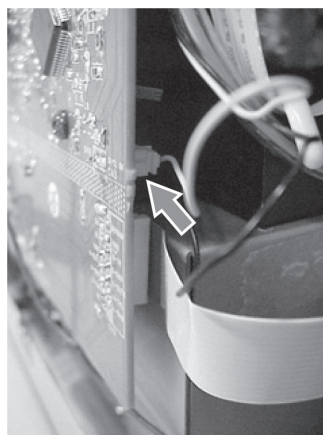
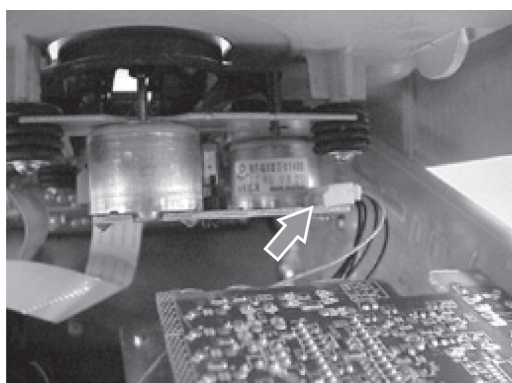
- 2) Remove the six screws (four (1)s, two (2)s) and remove the PANEL, SIDE L.



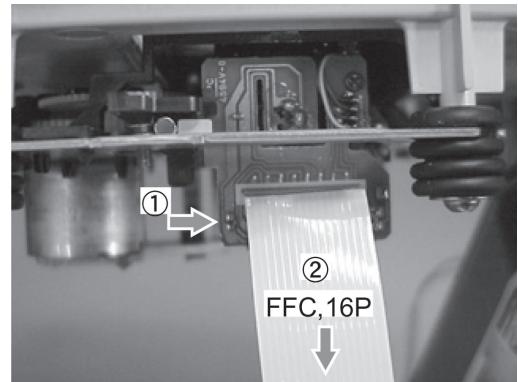
- 3) Remove the three screws (1), open the LID, CD (2), and lift up the PANEL, TOP ASSY (3).



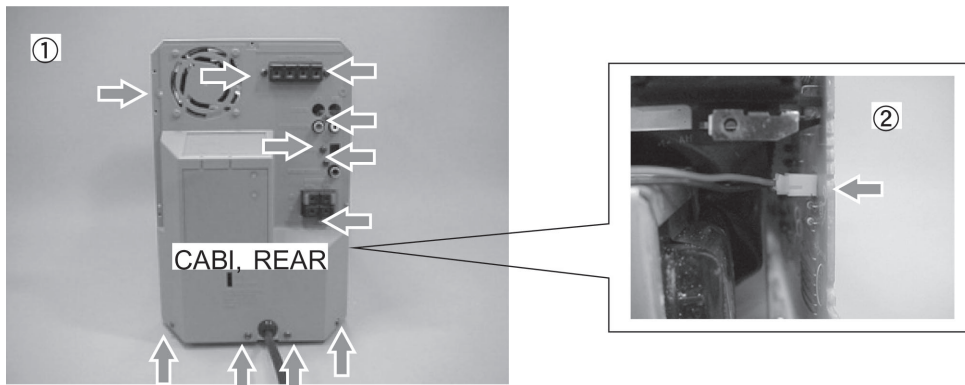
- 4) Remove the two connectors.



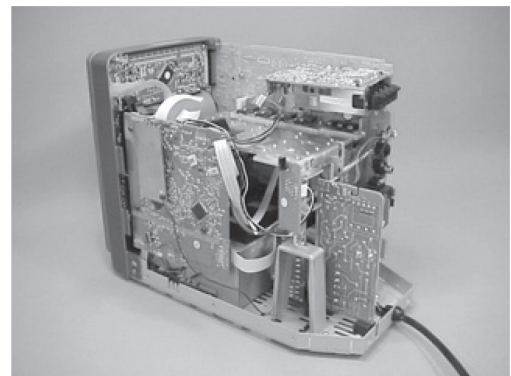
- 5) Short the short land (1) of the Pick Up by soldering, pull out the FFC, 16P (2) and remove the PANEL, TOP ASSY.



- 6) Remove the 11 screws (1). Disconnect the connector (2) of the FAN and remove the CABINET, REAR.

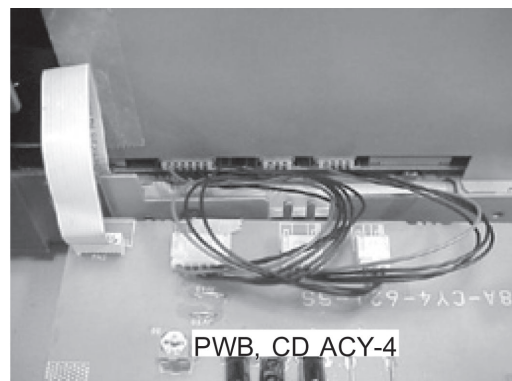
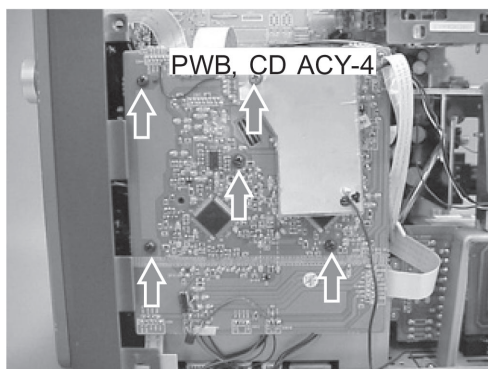


- 7) This picture indicates the status of the unit with the ornamental parts removed.



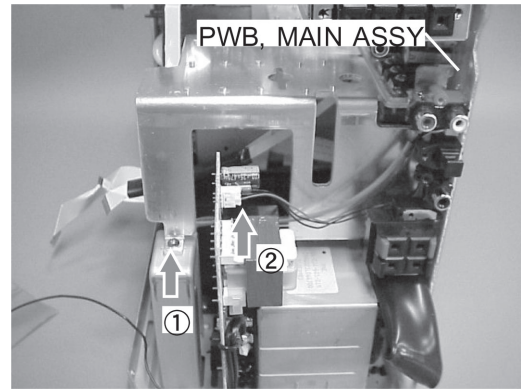
2. Removing the PWB, CD ACY-4

- 1) Remove the five screws, disconnect the FFC, wires, etc., and remove the PWB, CD ACY-4.

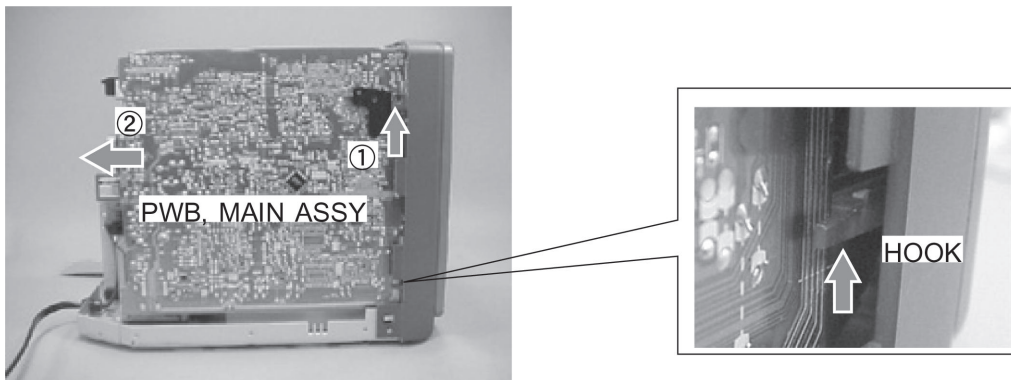


3. Removing the PWB, MAIN ASSY.

- 1) Remove the screw (1) and remove the connector (2).

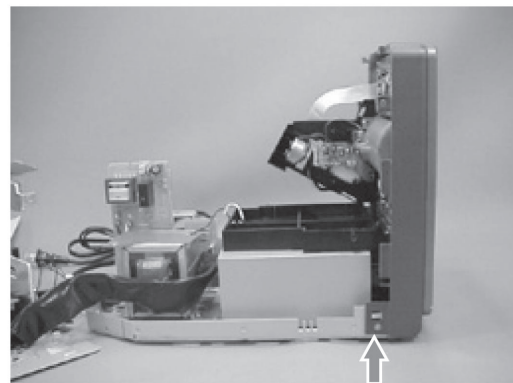
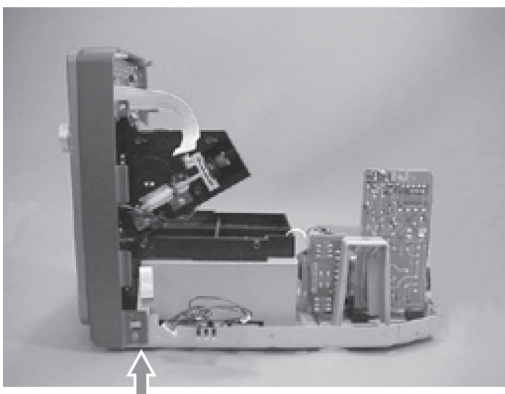


- 2) Remove the screw (1) and remove the PWB, MAIN ASSY in the direction of the arrow (2).  
(The board is hooked. While lifting up the hook, remove the board.)

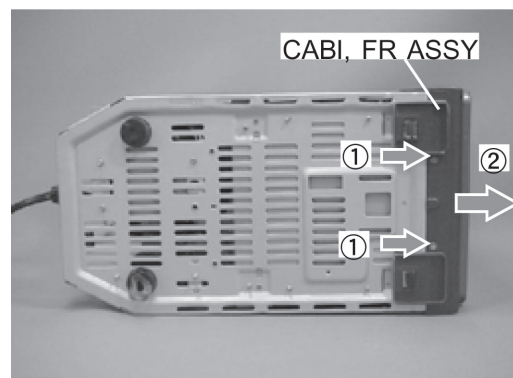


4. Removing the FRONT block.

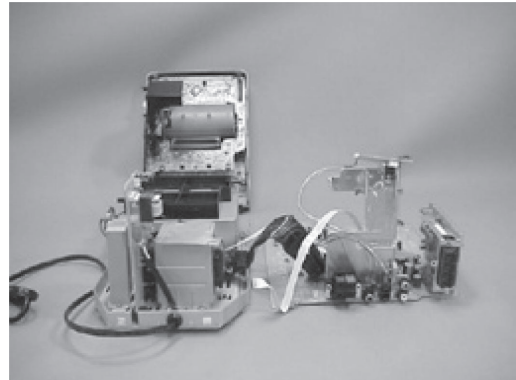
- 1) Remove the two screws securing the CAB, FR ASSY.



- 2) Remove the two screws (1) and remove the CABI, FR ASSY in the direction of the arrow (2).

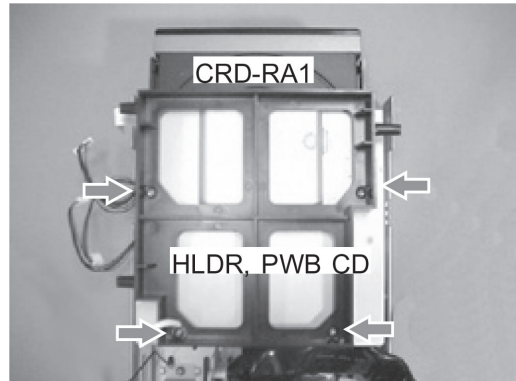


3) This picture indicates the status of the unit with the PWB, MAIN ASSY and CABI, FRONT ASSY removed.

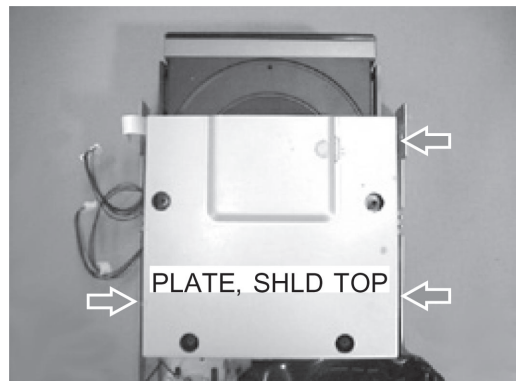


5. Removing the CD-R/RW drive unit (CRD-RA1W02(A)).

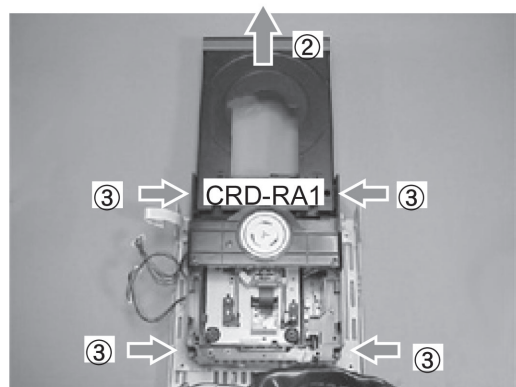
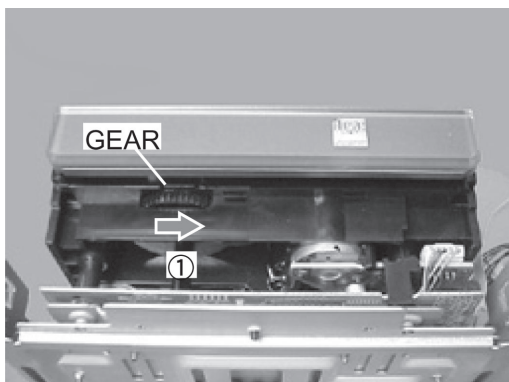
1) Remove the four screws and remove the HLDR, PWB CD.



2) Remove the three screws and remove the PLATE, SHILD TOP.



3) Rotate the gear (1) in the direction of the arrow and open the tray (2). Remove the four screws (3) and remove the CD-R/RW drive unit.

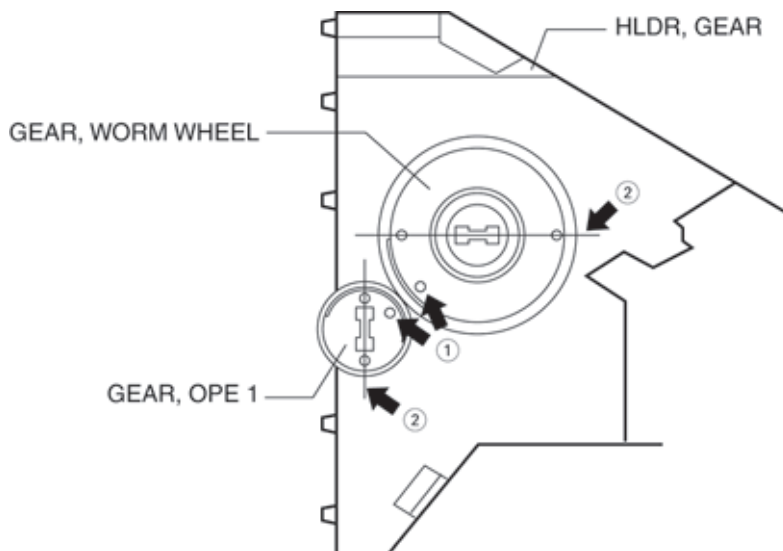


## NOTES DURING RE-ASSEMBLING

When assemble the magical change panel, adjust the phase of the gear.

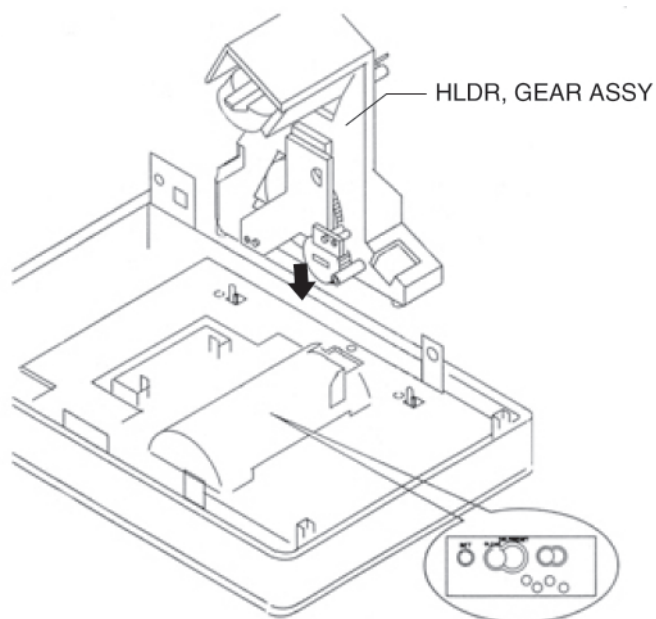
### 1. Phase adjustment of the GEAR, OPE 1 and GEAR, WORM WHEEL.

- 1) Align holes ①.
- 2) Then, move the position of the holes of each gear as shown by ② in the illustration.



### 2. Procedure of installing the HLDR, GEAR ASSY

- 1) Position the panel side so that it faces the front as shown in the illustration.
- 2) Install the HLDR, GEAR ASSY.



Position the HLDR GEAR ASSY  
so that it faces the front.



# ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC							
	87-A20-446-010		C-IC, LA9241ML		87-A40-350-080		ZENER, MTZJ 4.7C
	87-A20-459-010		C-IC, LC78622ED		87-A40-250-040		C-DIODE, DAN217
	87-017-917-080		IC, BU4066BCF		87-A40-488-080		DIODE, 1SS244
	87-A21-093-010		IC, LA6541D		87-A40-437-080		ZENER, MTZJ4.3B
	87-A21-770-010		IC, PQ15RW11		87-A40-002-080		ZENER, MTZJ5.1C
	87-A21-021-040		C-IC, BU2099FV		87-017-932-080		ZENER, MTJ6.2B
	8A-CY4-601-010		C-IC, LC87F65C8AU:ACY-4		87-070-136-080		ZENER, MTZJ5.1B
	87-A21-573-010		IC, SPS-448-1-E		87-017-099-080		ZENER, HZS6B3
	87-A21-452-030		C-IC, BD3876KS2		87-017-121-080		ZENER, HZS11A1
	87-A21-103-040		C-IC, MM1454XFBE		87-A40-871-080		ZENER, MTZJ5.6PC
	87-070-289-040		IC, BU 2092F		87-A40-234-080		ZENER, MTZJ5.6A
	87-001-755-080		IC, NJM78L05UA		87-017-149-080		ZENER, HZS6A2L
	87-A20-971-040		C-IC, SN74LV14APW		87-A40-291-080		DIODE, 1N4148
	87-070-127-110		IC, LC72131D	MAIN C.B			
	87-A20-913-010		IC, LA1837NL				
	87-A20-870-010		IC, GP1F37R	C104	87-012-368-080		C-CAP, S 0.1-50 F
				C105	87-012-368-080		C-CAP, S 0.1-50 F
				C106	87-010-196-080		CHIP CAPACITOR, 0.1-25
				C107	87-010-196-080		CHIP CAPACITOR, 0.1-25
				C108	87-010-196-080		CHIP CAPACITOR, 0.1-25
TRANSISTOR							
	87-A30-073-080		C-TR, RT1N 141C	C109	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-026-463-080		TR, 2SA933S (0.3W)	C110	87-010-928-000		CAP, E 4700-25 M SMG
	87-A30-076-080		C-TR, 2SC3052F	C111	87-012-140-080		CAP, CHIP 470P
	87-026-239-080		C-TR, DTC114TK (0.2W)	C112	87-010-112-080		CAP, ELECT 100-16V
	87-A30-427-040		C-TR, DTC114EKA	C113	87-010-408-080		CAP, ELECT 47-50V
	89-213-702-010		TR, 2SB1370 (1.8W)	C114	87-010-112-080		CAP, ELECT 100-16V
	87-026-610-080		TR, KTC3198GR	C115	87-010-235-080		CAP, E 470-16 SME
	87-A30-075-080		C-TR, 2SA1235F	C116	87-012-368-080		C-CAP, S 0.1-50 F
	87-A30-234-080		TR, CSC4115BC	C117	87-012-368-080		C-CAP, S 0.1-50 F
	87-026-580-080		C-TR, DTA123JK	C118	87-016-658-000		CAP, E 4700-35 M SMG
	87-A30-107-070		C-TR, CMBT5401	C119	87-016-658-000		CAP, E 4700-35 M SMG
	87-A30-087-080		C-FET, 2SK2158	C131	87-010-263-080		CAP, ELECT 100-10V
	87-A30-074-080		C-TR, RT1P 141C	C132	87-010-405-080		CAP, ELECT 10-50V
	87-026-609-080		TR, KTA1266GR	C133	87-010-194-080		CAP, CHIP 0.047
	87-A30-190-080		TR, CC5551	C134	87-010-194-080		CAP, CHIP 0.047
	87-A30-106-070		C-TR, CMBT5551	C152	87-010-496-040		CAP, ELECT 3.3-50 M 5L
	87-A30-105-080		C-TR, RT1P 441C	C161	87-010-260-080		CAP, ELECT 47-25V
	87-A30-137-010		TR, 2SD2494	C163	87-010-197-080		CAP, CHIP 0.01 DM
	87-A30-138-010		TR, 2SB1625	C171	87-010-260-080		CAP, ELECT 47-25V
	87-A30-257-080		C-TR, 2SD1306E	C172	87-010-260-080		CAP, ELECT 47-25V
	87-A30-240-080		TR, CSA1585BC	C173	87-010-260-080		CAP, ELECT 47-25V
	87-A30-047-080		TR, CSD655E	C174	87-010-260-080		CAP, ELECT 47-25V
	87-026-235-080		CHIP-TR, DTC114EK	C175	87-A10-944-080		CAP, ELECT 100-100V
	87-026-297-080		TR, DTA144TK	C176	87-010-263-080		CAP, ELECT 100-10V
	89-113-184-080		TR, 2SA1318T	C181	87-010-196-080		CHIP CAPACITOR, 0.1-25
	89-113-695-680		C-TR, 2SA1369G/H	C182	87-A11-233-090		CAP, E 4700-16 105 KMG
	87-A30-071-080		C-TR, RT1N 144C	C183	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-026-233-080		C-TR, DTA114TK	C186	87-016-080-090		CAP, E 3300-16 M SME
	87-A30-072-080		C-TR, RT1P 144C	C191	87-010-196-080		CHIP CAPACITOR, 0.1-25
	89-327-143-080		C-TR, 2SC2714 (0.1W)	C192	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-026-226-080		C-TR, DTA143EK	C193	87-010-196-080		CHIP CAPACITOR, 0.1-25
	89-505-434-540		C-FET, 2SK543 (4/5)	C194	87-010-196-080		CHIP CAPACITOR, 0.1-25
	87-A30-086-070		C-TR, CSD1306E	C201	87-010-260-080		CAP, ELECT 47-25V
	87-A30-196-080		TR, 2SC4115SRS	C202	87-010-260-080		CAP, ELECT 47-25V
	89-503-602-080		C-FET, 2SK360E	C203	87-A10-946-080		C-CAP, S 220P-100 J CH
				C204	87-A10-946-080		C-CAP, S 220P-100 J CH
DIODE				C209	87-010-178-080		CHIP CAP, 1000P
	87-020-465-080		DIODE, 1SS133 (110MA)	C210	87-010-178-080		CHIP CAP, 1000P
	87-A40-270-080		C-DIODE, MC2838	C211	87-012-368-080		C-CAP, S 0.1-50 F
	87-A40-269-080		C-DIODE, MC2836	C212	87-012-368-080		C-CAP, S 0.1-50 F
	87-017-082-080		ZENER, HZS4C1	C213	87-010-195-080		C-CAP, S 0.068-25 F
	87-017-113-080		ZENER, HZS9A2	C214	87-010-195-080		C-CAP, S 0.068-25 F
	87-070-274-080		DIODE, 1N4003 SEM	C215	87-012-368-080		C-CAP, S 0.1-50 F
	87-070-022-010		DIODE, IN5402 (RECT)	C216	87-012-368-080		C-CAP, S 0.1-50 F
	87-A40-345-080		ZENER, MTZJ10C	C217	87-010-182-080		C-CAP, S 2200P-50 B
	87-A40-004-080		ZENER, MTZJ16A	C218	87-010-182-080		C-CAP, S 2200P-50 B
	87-070-322-080		ZENER, MTZJ 36D	C219	87-012-368-080		C-CAP, S 0.1-50 F
				C220	87-012-368-080		C-CAP, S 0.1-50 F
	87-A40-341-080		ZENER, MTZJ 36 A	C221	87-010-186-080		CAP, CHIP 4700P

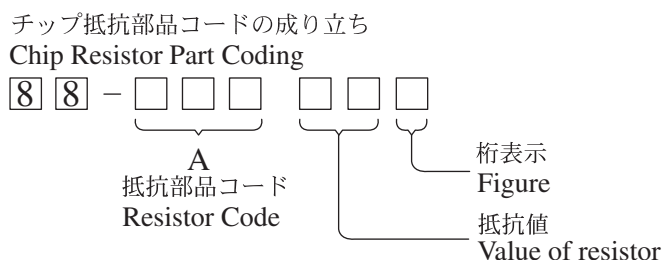
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C222	87-010-186-080		CAP,CHIP 4700P	C902	87-010-178-080		CHIP CAP,1000P
C223	87-010-401-080		CAP,ELECT 1-50V	C903	87-010-178-080		CHIP CAP,1000P
C254	87-010-494-040		CAP,ELECT 1-50V M5L	C904	87-010-196-080		CHIP CAPACITOR,0.1-25
C256	87-010-492-040		CAP,ELECT 0.33-50 M5L	C905	87-012-140-080		CAP,470P
C261	87-010-197-080		CAP,CHIP 0.01 DM	C906	87-010-196-080		CHIP CAPACITOR,0.1-25
C262	87-010-197-080		CAP,CHIP 0.01 DM	C907	87-010-197-080		CAP,CHIP 0.01 DM
C265	87-010-546-080		CAP,ELECT 0.33-50V	CN401	87-A60-619-010		CONN,2P V 2MM JMT
C266	87-010-546-080		CAP,ELECT 0.33-50V	CN501	87-099-719-010		CONN,30P TYK-B(X)
C267	87-010-260-080		CAP,ELECT 47-25V	CN502	87-A60-423-010		CONN,14P V TOC-B
C277	87-010-197-080		CAP,CHIP 0.01 DM	CN503	87-A60-133-010		CONN,8P V FE
C283	87-010-184-080		C-CAP,S 3300P-50 KB	CN571	87-099-570-010		CONN,13P TUC-P13P-B1
C284	87-010-184-080		C-CAP,S 3300P-50 KB	CNA101	8A-CJ3-640-010		CONN ASSY,3P V AC1
C401	87-010-494-080		CAP,ELECT 1-50V	CNA901	8Z-CL4-656-010		CONN ASSY,2P V DTL SHLD
C491	87-010-496-080		CAP,ELECT 3.3-50 M5L	FB901	87-A50-322-080		C-COIL,S BK2125LM252
C492	87-010-496-080		CAP,ELECT 3.3-50 M5L	H101	87-A90-511-010		HLDR,WIRE 2.5 10P
C402	87-010-263-080		CAP,E 100-10 M 11L SME	J201	87-A60-420-010		JACK,3.5 ST(MSC)
C403	87-010-260-080		CAP,E 47-25 M 11L SME	J202	87-099-801-010		JACK,PIN 1P BLK
C410	87-010-260-080		CAP,E 47-25 M 11L SME	J203	87-A60-238-010		TERMINAL,SP 4P(MSC)
C461	87-010-402-080		CAP,ELECT 2.2-50V	J501	87-A60-354-010		JACK,PIN 2P MSP -242V-05
C462	87-010-400-080		CAP,ELECT 0.47-50V	L201	87-003-383-010		COIL,1UH-S
C501	87-010-374-080		CAP,ELECT 47-10V	L202	87-003-383-010		COIL,1UH-S
C502	87-010-374-080		CAP,ELECT 47-10V	L203	87-003-098-080		COIL,2.2UH K LAL02
C515	87-010-318-080		C-CAP,S 47P-50 CH	L205	87-003-098-080		COIL,2.2UH K LAL02
C516	87-010-318-080		C-CAP,S 47P-50 CH	L206	87-003-098-080		COIL,2.2UH K LAL02
C517	87-010-318-080		C-CAP,S 47P-50 CH	L563	87-A50-517-080		COIL,10UH K FLR88
C518	87-010-318-080		C-CAP,S 47P-50 CH	L590	87-008-372-080		FILTER,EMIBL01RN1
C521	87-010-956-080		CHIP-CAP,S 0.068-25B	R215	87-A00-258-080		RES,M/F 0.22-1W J
C522	87-016-369-080		C-CAP,S 0.033-25 B K	R216	87-A00-258-080		RES,M/F 0.22-1W J
C524	87-010-401-080		CAP,ELECT 1-50V	R217	87-A00-258-080		RES,M/F 0.22-1W J
C525	87-016-081-080		C-CAP,S 0.1-16 RK	R218	87-A00-258-080		RES,M/F 0.22-1W J
C526	87-016-081-080		C-CAP,S 0.1-16 RK	R219	87-A00-258-080		RES,M/F 0.22-1W J
C527	87-010-197-080		CAP,CHIP 0.01 DM	R220	87-A00-258-080		RES,M/F 0.22-1W J
C531	87-010-404-080		CAP,ELECT 4.7-50V	R563	87-012-156-080		C-CAP,S 220P-50
C532	87-010-404-080		CAP,ELECT 4.7-50V	R564	87-012-156-080		C-CAP,S 220P-50
C535	87-A11-590-080		C-CAP,S 0.047-16 KB	R591	87-003-143-080		COIL,4.7UH K LAL02
C536	87-A11-590-080		C-CAP,S 0.047-16 KB	R592	87-003-143-080		COIL,4.7UH K LAL02
C537	87-010-400-080		CAP,ELECT 0.47-50V	TH251	87-A91-042-080		C-THMS,100K 55001
C538	87-010-400-080		CAP,ELECT 0.47-50V	TH252	87-A91-042-080		C-THMS,100K 55001
C539	87-010-185-080		C-CAP,S 3900P-50 KB	W101	8Z-CL4-658-010		F-CABLE,10P 2.5 300MM
C540	87-010-185-080		C-CAP,S 3900P-50 KB	FC502	88-914-201-110		FF-CABLE,14P 1.25 200MM
C541	87-A10-307-080		CAP,M 0.1-50 J	FC503	88-908-201-110		FF-CABLE,8P 1.25
C542	87-A10-307-080		CAP,M 0.1-50 J				
C543	87-A10-307-080		CAP,M 0.1-50 J				
C544	87-A10-307-080		CAP,M 0.1-50 J				
C545	87-016-081-080		C-CAP,S 0.1-16 RK				
C546	87-016-081-080		C-CAP,S 0.1-16 RK				
C547	87-010-401-080		CAP,ELECT 1-50V	C161	87-010-196-080		CHIP CAPACITOR,0.1-25
C548	87-010-196-080		CHIP CAPACITOR,0.1-25	C162	87-010-322-080		C-CAP,S 100P-50 CH
C549	87-010-401-080		CAP,ELECT 1-50V	C201	87-010-316-080		C-CAP,S 33P-50 CH
C550	87-010-401-080		CAP,ELECT 1-50V	C203	87-010-313-080		CAP,CHIP 18P
C551	87-010-402-080		CAP,ELECT 2.2-50V	C204	87-010-196-080		CHIP CAPACITOR,0.1-25
C552	87-010-402-080		CAP,ELECT 2.2-50V	C205	87-010-196-080		CHIP CAPACITOR,0.1-25
C561	87-010-407-080		CAP,ELECT 33-50V	C206	87-010-196-080		CHIP CAPACITOR,0.1-25
C562	87-010-407-080		CAP,ELECT 33-50V	C207	87-010-196-080		CHIP CAPACITOR,0.1-25
C563	87-012-158-080		C-CAP,S 390P-50 CH	C231	87-010-560-040		CAP,E 10-50 GAS
C564	87-A12-001-080		CAP,E 2200-10 M SME	C232	87-010-178-080		CHIP CAP 1000P
C565	87-010-403-080		CAP,E 3.3-50 M 11L SME	C241	87-016-526-080		C-CAP,S 0.47-16 BK
C581	87-010-404-080		CAP,ELECT 4.7-50V	C242	8A-CJ4-635-010		CAP,E 470-10 SRG3.5PITCH
C582	87-010-404-080		CAP,ELECT 4.7-50V	C243	87-010-196-080		CHIP CAPACITOR,0.1-25
C595	87-010-493-080		CAP,ELECT 0.47-50V	C246	87-012-393-080		C-CAP,S 0.22-16 R K
C603	87-010-544-080		CAP,ELECT 0.1-50V	C250	87-010-198-080		CHIP CAPACITOR,0.022-25 KB
C604	87-010-544-080		CAP,ELECT 0.1-50V	C351	87-010-197-080		CAP,CHIP 0.01 DM
C605	87-010-408-080		CAP,ELECT 47-50V	C352	87-010-197-080		CAP,CHIP 0.01 DM
C607	87-010-405-080		CAP,ELECT 10-50V	C353	87-010-197-080		CAP,CHIP 0.01 DM
C608	87-010-405-080		CAP,ELECT 10-50V	C354	87-010-197-080		CAP,CHIP 0.01 DM
C609	87-010-196-080		CHIP CAPACITOR,0.1-25	C371	87-010-552-040		CAP,E 22-16 GAS
C610	87-010-384-080		CAP,ELECT 100-25V	C372	87-010-552-040		CAP,E 22-16 GAS
C611	87-010-197-080		CAP,CHIP 0.01 DM	C373	87-A12-078-040		CAP,E 47-35 SMG
C612	87-010-197-080		CAP,CHIP 0.01 DM	C701	87-012-156-080		C-CAP,S 220P-50 CH
C901	87-010-196-080		CHIP CAPACITOR,0.1-25	C713	87-012-156-080		C-CAP,S 220P-50 CH
				CN101	87-099-720-010		CONN,30P TYK-B(P)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CN102	87-A60-984-010		CONN,17P V TOC-B	C32	87-015-680-040		CAP,E 47-10 M 7L SRE
CN302	87-A60-624-010		CONN,7P V 2MM JMT	C33	87-010-071-040		CAP, ELECT 1-50 M 5L SRE
CNA303	8A-CJ4-641-010		CONN ASSY,7P H SW	C34	87-010-184-080		CHIP CAPACITOR 3300P(K)
D151	87-A40-317-080		LED,SLR-342VCT31 RED	C35	87-010-197-080		CAP, CHIP 0.01 DM
D153	87-A40-317-080		LED,SLR-342VCT31 RED	C36	87-010-374-080		CAP,E 47-10 M11L SME
D154	87-A40-317-080		LED,SLR-342VCT31 RED	C37	87-010-404-080		CAP, ELECT 4.7-50V
D155	87-A40-317-080		LED,SLR-342VCT31 RED	C38	87-010-196-080		CHIP CAPACITOR,0.1-25
D156	87-A40-317-080		LED,SLR-342VCT31 RED	C39	87-012-349-080		C-CAP,S 1000P-50 CH
D161	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB	C40	87-010-145-080		C-CAP,S 1P-50 C CH GRM
D162	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB	C41	87-010-184-080		CHIP CAPACITOR 3300P(K)
D163	87-A40-786-080		LED,SMLS1BE16WTP4 BLU/UMB	C42	87-010-313-080		C-CAP,S 18P-50 CH
FL301	8A-CY4-604-010		FL,13-ST-46GNK ACY-4	C45	87-010-196-080		CHIP CAPACITOR,0.1-25
L201	87-A50-333-010		COIL,OSC 9.43MHZ	C46	87-010-196-080		CHIP CAPACITOR,0.1-25
S301	87-A90-095-080		SW,TACT EVQ11G04M	C47	87-010-196-080		CHIP CAPACITOR,0.1-25
S303	87-A90-095-080		SW,TACT EVQ11G04M	C48	87-010-315-080		C-CAP,S 27P-50 CH
S304	87-A90-095-080		SW,TACT EVQ11G04M	C50	87-015-968-040		CAP,E 4.7-16 M 5L SRE
S305	87-A90-095-080		SW,TACT EVQ11G04M	C51	87-012-156-080		C-CAP,S 220P-50 CH
S306	87-A90-095-080		SW,TACT EVQ11G04M	C53	87-010-322-080		C-CAP,S 100P-50 CH
S307	87-A90-095-080		SW,TACT EVQ11G04M	C55	87-010-263-080		CAP,E 100-10 11L
S309	87-A90-095-080		SW,TACT EVQ11G04M	C57	87-010-316-080		C-CAP,S 33P-50 CH
S310	87-A90-095-080		SW,TACT EVQ11G04M	C58	87-010-316-080		C-CAP,S 33P-50 CH
S311	87-A90-095-080		SW,TACT EVQ11G04M	C59	87-010-263-080		CAP,E 100-10 11L
S312	87-A90-095-080		SW,TACT EVQ11G04M	C60	87-010-196-080		CHIP CAPACITOR,0.1-25
S352	87-A91-687-010		SW,RTRY RE012102PV-VOL	C61	87-010-196-080		CHIP CAPACITOR,0.1-25
S801	87-A90-095-080		SW,TACT EVQ11G04M	C62	87-010-371-080		CAP, ELECT 470-6.3V
S802	87-A90-095-080		SW,TACT EVQ11G04M	C65	87-010-404-080		CAP, ELECT 4.7-50V
S803	87-A90-095-080		SW,TACT EVQ11G04M	C66	87-010-196-080		CHIP CAPACITOR,0.1-25
S804	87-A90-095-080		SW,TACT EVQ11G04M	C67	87-010-263-080		CAP,E 100-10 11L
S805	87-A90-095-080		SW,TACT EVQ11G04M	C68	87-010-322-080		C-CAP,S 100P-50 CH
S806	87-A90-095-080		SW,TACT EVQ11G04M	C69	87-012-154-080		C-CAP,S 150P-50 CH
S807	87-A90-095-080		SW,TACT EVQ11G04M	C72	87-012-140-080		C-CAP,S 470P-50 J CH
S808	87-A90-095-080		SW,TACT EVQ11G04M	C81	87-010-417-080		CAP,E 2.2-35 5L
S809	87-A90-095-080		SW,TACT EVQ11G04M	C82	87-010-417-080		CAP,E 2.2-35 5L
S810	87-A90-095-080		SW,TACT EVQ11G04M	C83	87-010-181-080		CAP,CHIP S 1800P
SW351	87-A91-753-010		SW,RTRY EC12E12504-JOG	C84	87-010-181-080		CAP,CHIP S 1800P
X201	87-XMN-602-010		VIB,PIEZO PKM13EPY	C90	87-010-196-080		CHIP CAPACITOR,0.1-25
CD C.B				C93	87-010-196-080		CAP, CHIP 0.1-25 Z F
C1	87-010-418-040		CAP, ELECT 3.3-25 M	C94	87-010-197-080		CAP, CHIP 0.01 DM
C2	87-010-197-080		CAP, CHIP 0.01 DM	C95	87-010-197-080		CAP, CHIP 0.01 DM
C3	87-010-263-080		CAP,E 100-10 11L	C101	87-010-322-080		C-CAP,S 100P-50 CH
C4	87-A11-242-040		CAP, ELECT 220-10M	C102	87-010-322-080		C-CAP,S 100P-50 CH
C5	87-010-197-080		CAP, CHIP 0.01 DM	C103	87-010-322-080		C-CAP,S 100P-50 CH
C6	87-010-234-040		CAP,E 47-16 M 5L SRE	C104	87-010-322-080		C-CAP,S 100P-50 CH
C7	87-012-349-080		C-CAP,S 1000P-50 CH	C105	87-010-322-080		C-CAP,S 100P-50 CH
C8	87-010-198-080		CAP, CHIP 0.022	C106	87-012-350-080		C-CAP,S 1-25 Z F
C9	87-A11-242-040		CAP, ELECT 220-10M 5L	C110	87-010-196-080		CHIP CAPACITOR,0.1-25
C10	87-010-263-080		CAP,E 100-10 11L	C495	87-010-196-080		CHIP CAPACITOR,0.1-25
C11	87-016-083-080		C-CAP,S 0.15-16 K R	C601	87-010-263-080		CAP,E 100-10 11L
C12	87-010-071-040		CAP, ELECT 1-50 M 5L SRE	C620	87-010-196-080		CHIP CAPACITOR,0.1-25
C13	87-A11-586-080		C-CAP,S 0.033-50 K B	C660	87-010-197-080		CAP, CHIP 0.01 DM
C14	87-010-405-080		CAP ELECT 10-50 M 11L	C661	87-010-197-080		CAP, CHIP 0.01 DM
C15	87-010-196-080		CHIP CAPACITOR,0.1-25	C671	87-010-196-080		CHIP CAPACITOR,0.1-25
C16	87-015-962-040		CAP ELECT 0.22-50 M 5L	C672	87-010-196-080		CHIP CAPACITOR,0.1-25
C17	87-012-157-080		C-CAP,S 330P-50 CH	C673	87-010-196-080		CHIP CAPACITOR,0.1-25
C18	87-010-213-080		C-CAP,S 0.015-50 B	C674	87-010-196-080		CHIP CAPACITOR,0.1-25
C19	87-A10-201-080		C-CAP,S0.33-16 KB	C675	87-010-197-080		CAP, CHIP 0.01 DM
C20	87-A11-586-080		C-CAP,S 0.033-50 K B	C676	87-A12-326-080		CAP,E 1000-16 RS
C21	87-A12-308-080		C-CAP,S 0.15-25 K B	C679	87-010-263-080		CAP,E 100-10 11L
C22	87-010-184-080		C-CAP,S 3300P-50 K B	C680	87-010-197-080		CAP, CHIP 0.01 DM
C23	87-A11-591-080		C-CAP,S 0.047-25 K B	C901	87-A11-727-080		C-CAP,S 0.33-25 Z F
C24	87-A11-606-080		C-CAP,S 0.047-25 K B	C902	87-010-196-080		CHIP CAPACITOR,0.1-25
C25	87-010-994-080		C-CAP,S 680P-50 CH	C905	87-012-156-080		CAP 220P-50 J CH
C26	87-A10-201-080		C-CAP,S0.33-16 KB	C906	87-012-156-080		CAP 220P-50 J CH
C28	87-010-197-080		CAP, CHIP 0.01 DM	C907	87-012-156-080		CAP 220P-50 J CH
C29	87-010-186-080		CAP,CHIP 4700P	C908	87-012-156-080		CAP 220P-50 J CH
C30	87-012-156-080		C-CAP,S 220P-50 CH	C909	87-012-156-080		CAP 220P-50 J CH
C31	87-015-962-040		CAP ELECT 0.22-50 M 5L	C910	87-012-156-080		CAP 220P-50 J CH
				C913	87-010-197-080		CAP, CHIP 0.01 DM
				CN1	87-A60-424-010		CONN,16P V TOC-B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
CN2	87-009-034-010		CONN,6P PH V	S864	87-A90-095-080		SW,TACT EVQ11G04M
CN3	87-009-345-010		CONN,2P H WHT PH	S865	87-A90-095-080		SW,TACT EVQ11G04M
CN4	87-A61-283-010		CONN,17P V FWN-BTRK	S866	87-A90-095-080		SW,TACT EVQ11G04M
CN5	87-A60-156-010		CONN,8P H FE				
CN6	87-A61-375-010		CONN,9P H GRY FMN-SSTK				
CN7	87-A61-089-010		CONN,14P H GRY FMN-SSTK				
CN8	87-009-349-010		CONN,6P PH H	C901	87-010-264-040		CAP,E 100-10 5L
CN9	87-009-347-010		CONN,4P PH H WHT	C902	87-010-264-040		CAP,E 100-10 5L
CN10	87-009-346-010		CONN,3P PH H	CN303	87-A60-672-010		CONN,8P H 2MM JMT
CN11	87-A60-619-010		CONN,2P V 2MM JMT	CNA901	8A-CJ4-646-010		CONN ASSY,2P V SW-2
				S902	87-A90-117-010		SW,PUSH 1-1-1 MPU103
CNA12	88-805-042-490		CONN ASSY,4P				
CNA103	8A-CY4-632-010		CONN ASSY,2P RED	S903	87-A90-117-010		SW,PUSH 1-1-1 MPU103
FC1	8A-CY4-631-010		FF-CABLE,16P 1.0 220MM	S904	87-A90-117-010		SW,PUSH 1-1-1 MPU103
FC4	8A-CJ4-651-010		FF-CABLE,17P 1.0				
FC6	88-909-101-210		FF-CABLE,9P 1.25 100MM				
JR907	83-XM1-617-080		C-COIL,BK2125HM601				
JR908	83-XM1-617-080		C-COIL,BK2125HM601	S901	87-A90-117-010		SW,PUSH 1-1-1 MPU103
JR909	83-XM1-617-080		C-COIL,BK2125HM601				
JR910	83-XM1-617-080		C-COIL,BK2125HM601				
JR911	87-A50-189-080		C-COIL,S BLM21B272S				
JR912	83-XM1-617-080		C-COIL,BK2125HM601	C1	87-010-387-080		CAP,E 470-25 M SME
JR913	87-A50-189-080		C-COIL,S BLM21B272S	△ C3	87-A10-479-080		CAP,CER 2200P-250 M E KH
JR922	83-XM1-617-080		C-COIL,BK2125HM601	C5	87-010-403-080		CAP,ELECT 3.3-50V
JW39	87-008-372-080		FLTR,EMI BL01 RN1	CN1	87-A60-620-010		CONN,3P V 2MM JMT
L1	87-003-102-080		COIL, 10UH	△ PR1	87-A91-276-080		FUSE,125MA 125V F 251
L2	87-003-146-080		COIL,15UH LAL02	△ PT2	8Z-NF8-661-010		PT,SUB ZNF-8(U)
L3	87-008-372-080		FILTER, EMI BL OIRNI	△ RY1	87-A90-976-010		RELAY,AC12V SDT-S-112LMR
L4	87-003-102-080		COIL, 10UH	△ T1	87-A60-317-010		TERMINAL,1P MSC
L5	87-003-152-080		COIL, 100UH	△ T2	87-A60-317-010		TERMINAL,1P MSC
L6	87-003-102-080		COIL, 10UH				
L7	87-003-102-080		COIL, 10UH	PT2 C.B			
L8	87-003-102-080		COIL, 10UH				
R68	87-A50-189-080		C-COIL,S BLM21B272S	H51	87-A90-511-010		HLDR,WIRE 2.5 10P
SFR130	87-024-437-080		SFR100K,RH063EC	△ PR51	87-A90-113-080		FUSE,4A 125V 251
X1	87-A70-046-010		VIB,XTAL 16.934MHZ	△ PR52	87-A90-113-080		FUSE,4A 125V 251
				△ PR53	87-026-690-080		FUSE,5A 125V 251
				△ PR54	87-026-690-080		FUSE,5A 125V 251
				△ PR55	87-026-690-080		FUSE,5A 125V 251
				△ PR56	87-026-690-080		FUSE,5A 125V 251
				△ PT1	8A-CJ4-607-010		PT,U ACJ-4
FACE-A C.B							
C824	87-010-197-080		CAP, CHIP 0.01 DM				
CNA801	8A-CJ4-650-010		CONN ASSY,2P V FACE A				
FACE-B C.B							
C151	87-018-209-080		CAP, CER 0.1-50V	M1	S0-M10-A09-700		MOTOR SLED ASSY
C152	87-010-196-080		CHIP CAPACITOR,0.1-25	PIN3	S2-369-750-000		PLUG,6P
C801	87-010-322-080		C-CAP,S 100P-50 CH	SW1	S4-S13-A01-600		SW,LEAF
C802	87-010-322-080		C-CAP,S 100P-50 CH				
C821	87-010-196-080		CHIP CAPACITOR,0.1-25				
C826	87-010-197-080		CAP, CHIP 0.01 DM				
C827	87-010-197-080		CAP, CHIP 0.01 DM	C91	87-010-112-080		CAP,E 100-16
C829	87-010-197-080		CAP, CHIP 0.01 DM	C92	87-A11-727-080		C-CAP,S 0.33-25 Z F
C830	87-010-197-080		CAP, CHIP 0.01 DM	CN12	87-009-032-010		CONN,4P V WHT PH
CN801	87-A60-619-010		CONN,2P V 2MM JMT				
CNA302	8A-CL4-641-010		CONN ASSY,7P H PANEL				
CNA804	8A-CL4-644-010		CONN ASSY,3P V FACE C				
D831	87-A40-496-040		LED,SLR-342MCT31 GRN	C701	87-010-381-080		CAP,ELECT 330-16V
D832	87-A40-496-040		LED,SLR-342MCT31 GRN	C702	87-010-404-080		CAP,ELECT 4.7-50V
D833	87-A40-496-040		LED,SLR-342MCT31 GRN	C703	87-012-286-080		CAP,U 0.01-25
D834	87-A40-496-040		LED,SLR-342MCT31 GRN	C704	87-012-286-080		CAP,U 0.01-25
D835	87-A40-496-040		LED,SLR-342MCT31 GRN	C705	87-A10-592-080		C-CAP,S 0.015-50 J B
L151	87-003-154-080		COIL, 220UH J LAL02	C706	87-A10-592-080		C-CAP,S 0.015-50 J B
L152	87-003-154-080		COIL, 220UH J LAL02	C709	87-012-195-080		C-CAP,U 100P-50CH
				C711	87-010-260-080		CAP,ELECT 47-25V
				C712	87-010-831-080		C-CAP,U,0.1-16F
				C714	87-012-286-080		CAP,U 0.01-25
FACE-C C.B							
C825	87-010-197-080		CAP, CHIP 0.01 DM	C717	87-012-286-080		CAP,U 0.01-25
CN804	87-A60-620-010		CONN,3P V 2MM JMT	C719	87-012-286-080		CAP,U 0.01-25
S861	87-A90-095-080		SW,TACT EVQ11G04M	C720	87-012-195-080		C-CAP,U 100P-50CH
S862	87-A90-095-080		SW,TACT EVQ11G04M	C721	87-012-176-080		CAP,15P
S863	87-A90-095-080		SW,TACT EVQ11G04M	C722	87-012-176-080		CAP,15P

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C723	87-012-274-080		CHIP CAP,U 1000P-50B	C783	87-012-286-080		CAP,U 0.01-25
C725	87-012-274-080		CHIP CAP,U 1000P-50B	C784	87-012-286-080		CAP,U 0.01-25
C727	87-010-196-080		CHIP CAPACITOR,0.1-25	C785	87-010-401-080		CAP, ELECT 1-50V
C728	87-010-248-080		CAP,ELECT 220-10V	C786	87-010-401-080		CAP, ELECT 1-50V
C729	87-012-274-080		CHIP CAP,U 1000P-50B	C789	87-012-275-080		C-CAP,U 1200P-50 B
C731	87-012-286-080		CAP,U 0.01-25	C790	87-012-275-080		C-CAP,U 1200P-50 B
C733	87-010-987-080		C-CAP,S 1500P-50 CH	C791	87-010-405-080		CAP,ELECT 10-50V
C734	87-010-987-080		C-CAP,S 1500P-50 CH	C793	87-012-273-080		C-CAP,U 820P-50 B
C735	87-010-987-080		C-CAP,S 1500P-50 CH	C794	87-010-406-080		CAP,ELECT 22-50
C736	87-010-987-080		C-CAP,S 1500P-50 CH	C795	87-010-596-080		CAP,S 0.047-16
C737	87-A10-592-080		C-CAP,S 0.015-50 J B	C796	87-010-403-080		CAP,ELECT 3.3-50V
C738	87-A10-592-080		C-CAP,S 0.015-50 J B	C799	87-010-829-080		CAP,U 0.047-16
C751	87-012-365-080		C-CAP,S 0.027-25VBK	C812	87-012-286-080		CAP,U 0.01-25
C752	87-012-365-080		C-CAP,S 0.027-25VBK	C820	87-010-260-080		CAP,ELECT 47-25V
C756	87-012-286-080		CAP,U 0.01-25	C821	87-012-286-080		CAP,U 0.01-25
C757	87-012-188-080		C-CAP,U 47P-50 CH	C822	87-012-286-080		CAP,U 0.01-25
C758	87-012-167-080		C-CAP,U 5P-50 CH	C823	87-012-286-080		CAP,U 0.01-25
C763	87-010-829-080		CAP,U 0.047-16	C828	87-010-196-080		CHIP CAPACITOR,0.1-25
C764	87-012-337-080		C-CAP,U 56P-50 CH	C829	87-010-196-080		CHIP CAPACITOR,0.1-25
C765	87-012-286-080		CAP,U 0.01-25	C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C768	87-012-286-080		CAP,U 0.01-25	C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C769	87-010-260-080		CAP,ELECT 47-25V	C961	87-012-170-080		C-CAP,U 8P-50 CH
C770	87-010-829-080		CAP,U 0.047-16	C963	87-010-196-080		CHIP CAPACITOR,0.1-25
C771	87-010-383-080		CAP,ELECT 33-25V	CF801	87-008-261-010		FILTER, SFE10.7MA5-A
C772	87-010-829-080		CAP,U 0.047-16	CF802	87-008-261-010		FILTER, SFE10.7MA5-A
C773	87-010-196-080		CHIP CAPACITOR,0.1-25	CN701	87-A60-700-010		CONN,13P H GRY TUC-P13X-C1
C774	87-010-263-080		CAP,ELECT 100-10V	FFE801	A8-6ZA-19C-170		6ZA-1 YFEENC
C775	87-010-404-080		CAP,ELECT 4.7-50V	J801	87-A60-702-010		TERMINAL,ANT 4P CJ-9036
C776	87-012-286-080		CAP,U 0.01-25	L771	87-A50-266-010		COIL,FM DET-2N(TOK)
C777	87-010-400-080		CAP, ELECT 0.47-50V	L772	87-A90-110-010		FLTR,PCFJZH-450 (TOK)
C778	87-010-401-080		CAP,ELECT 1-50V	L981	8Z-ZA1-667-010		COIL,AM PACK 4F(TOK)
C779	87-010-401-080		CAP,ELECT 1-50V	X721	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309
C780	87-010-196-080		CHIP CAPACITOR,0.1-25				
C781	87-010-405-080		CAP,ELECT 10-50V				
C782	87-010-405-080		CAP,ELECT 10-50V				

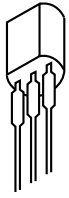
○チップ抵抗部品コード／CHIP RESISTOR PART CODE



チップ抵抗  
Chip resistor

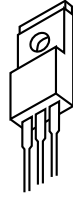
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

# TRANSISTOR ILLUSTRATION



E C B

CC5551  
CSA1585BC  
CSC4115BC  
KTA1266GR  
KTC3198GR



B C E

2SB1370  
2SB1625  
2SD2494



E C B

2SA1318T



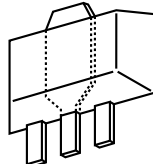
E C B

CSD655E



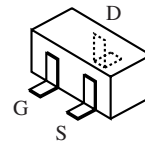
E C B

2SA933S  
2SC4115SRS

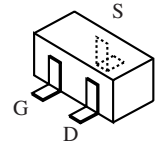


B C E

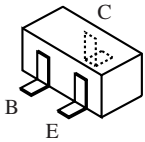
2SA1369G/H



2SK2158



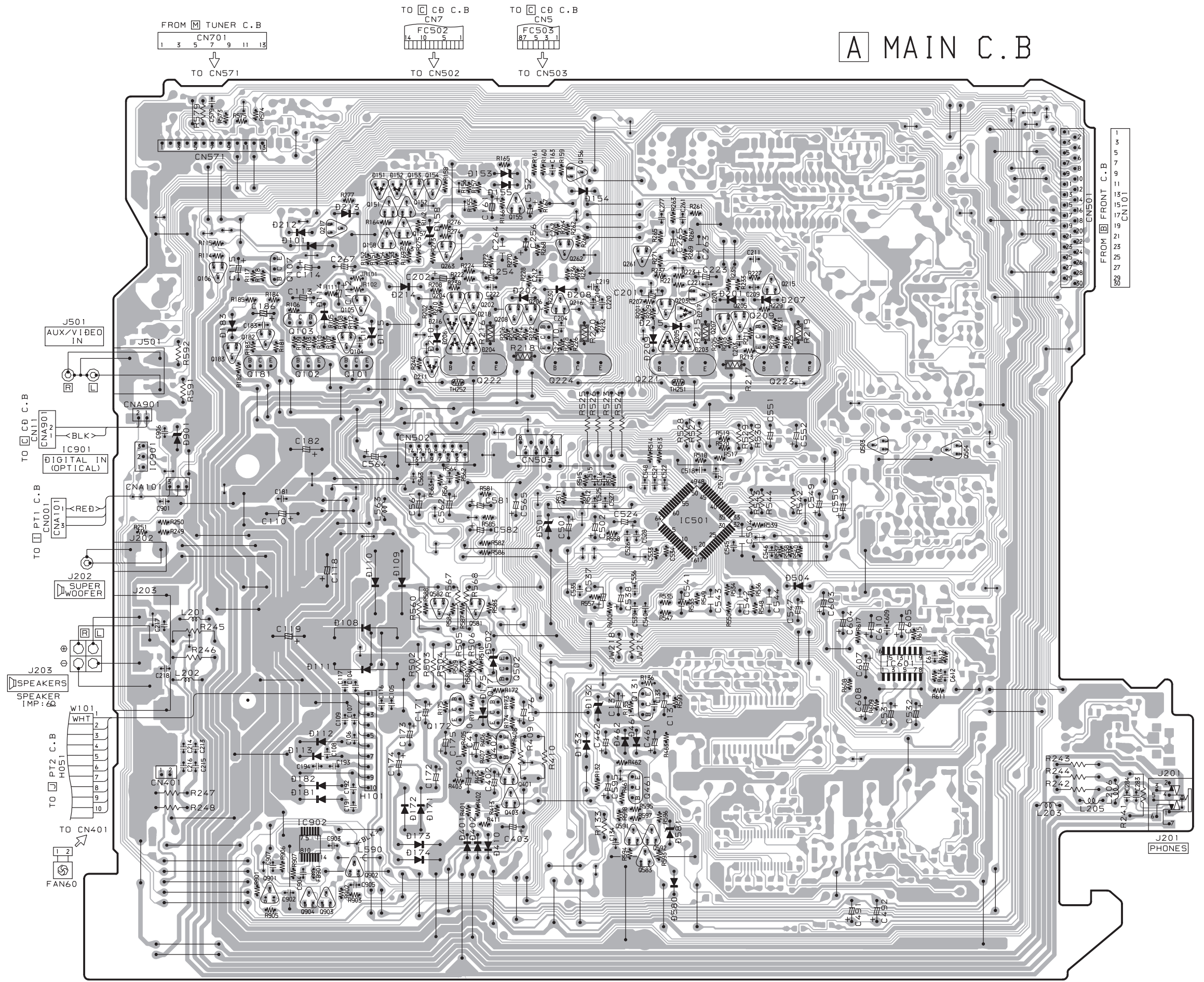
2SK360E  
2SK543 (4/5)



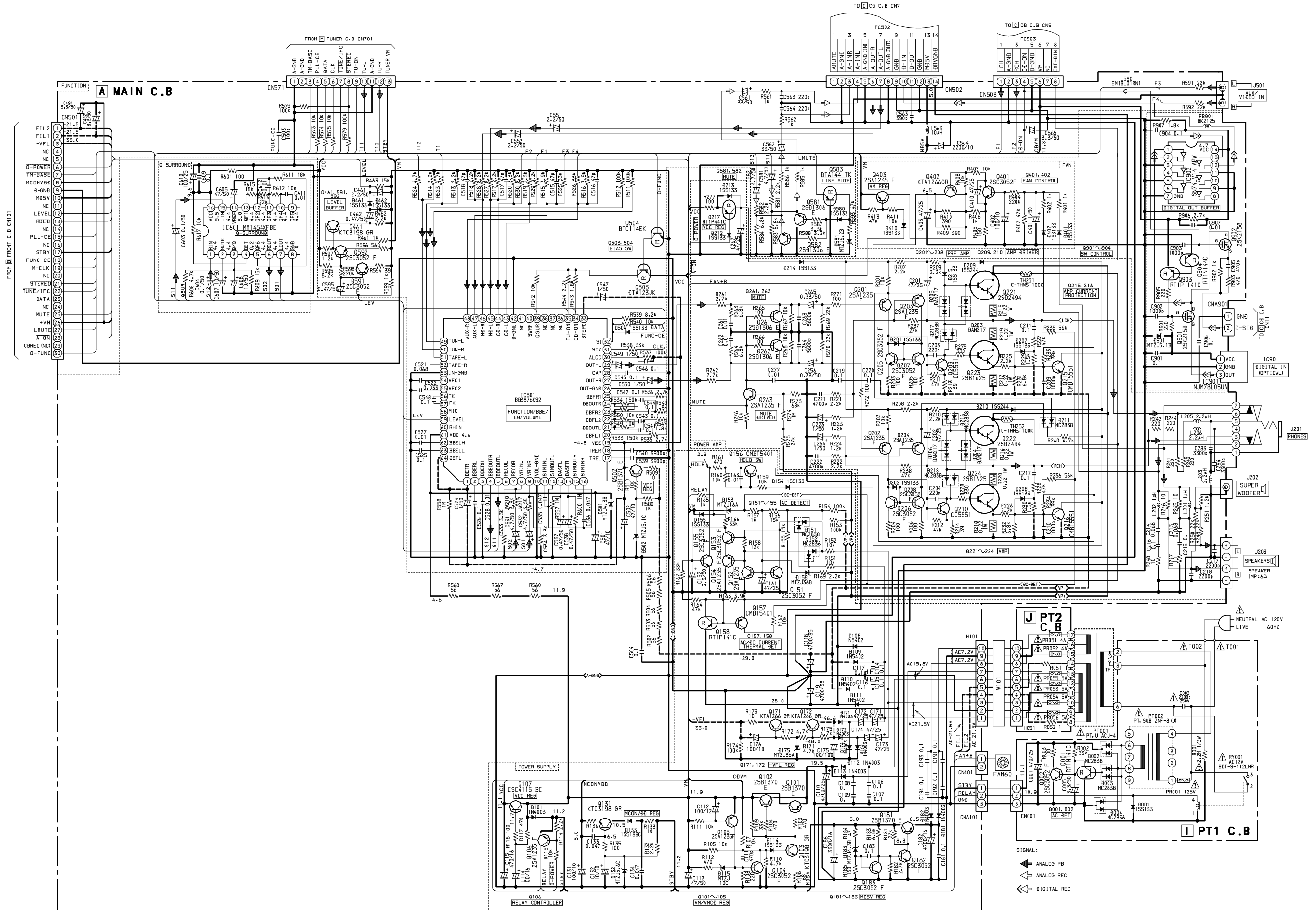
2SA1235F DTA114TK  
2SC2714 DTC114EK  
2SC3052F DTC114EKA  
2SD1306E DTC114TK  
CMBT5401 RT1N141C  
CMBT5551 RT1N144C  
CSD1306E RT1P141C  
DTA123JK RT1P144C  
DTA143EK RT1P441C  
DTA144TK

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

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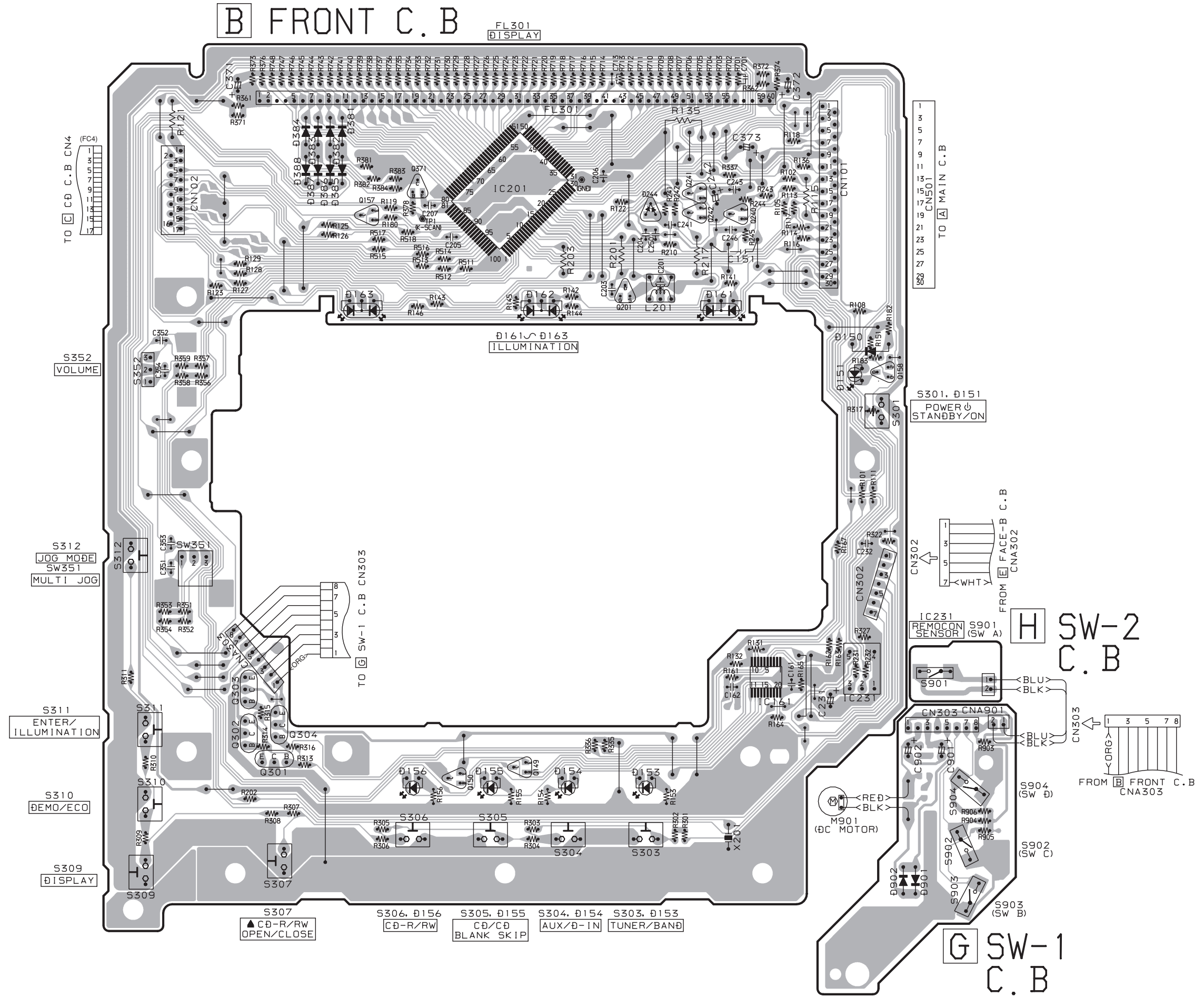


SCHEMATIC DIAGRAM - 1 (MAIN/PT1/PT2)



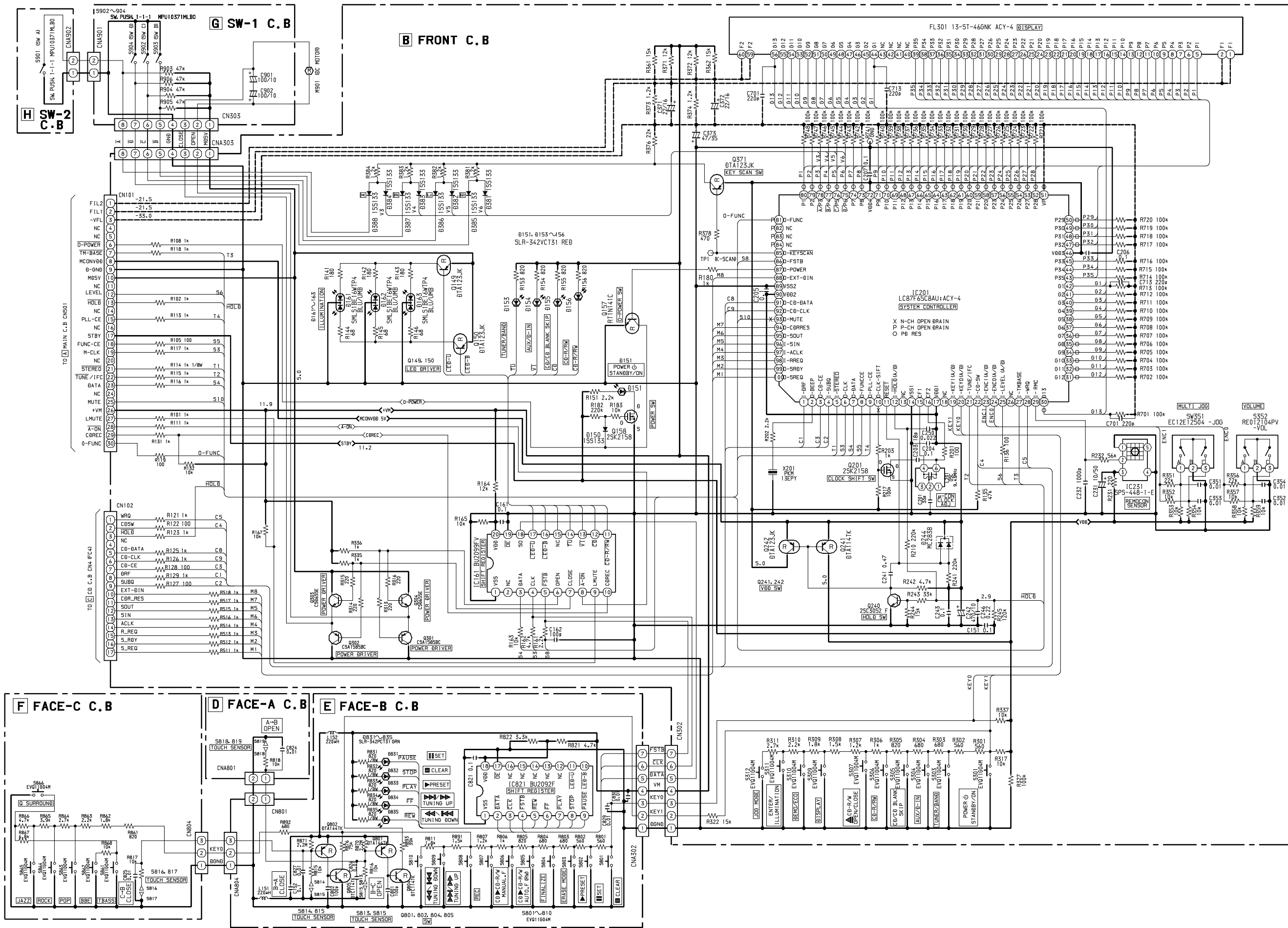


**B FRONT C. B**

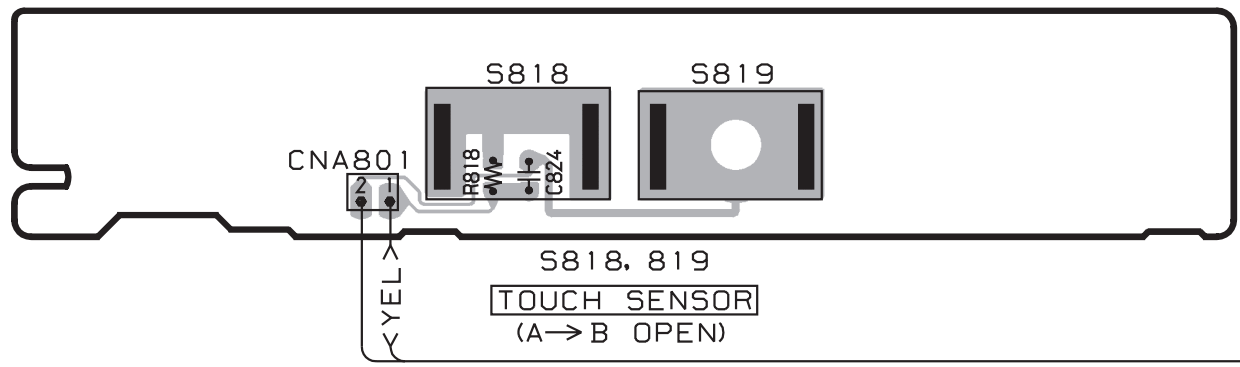


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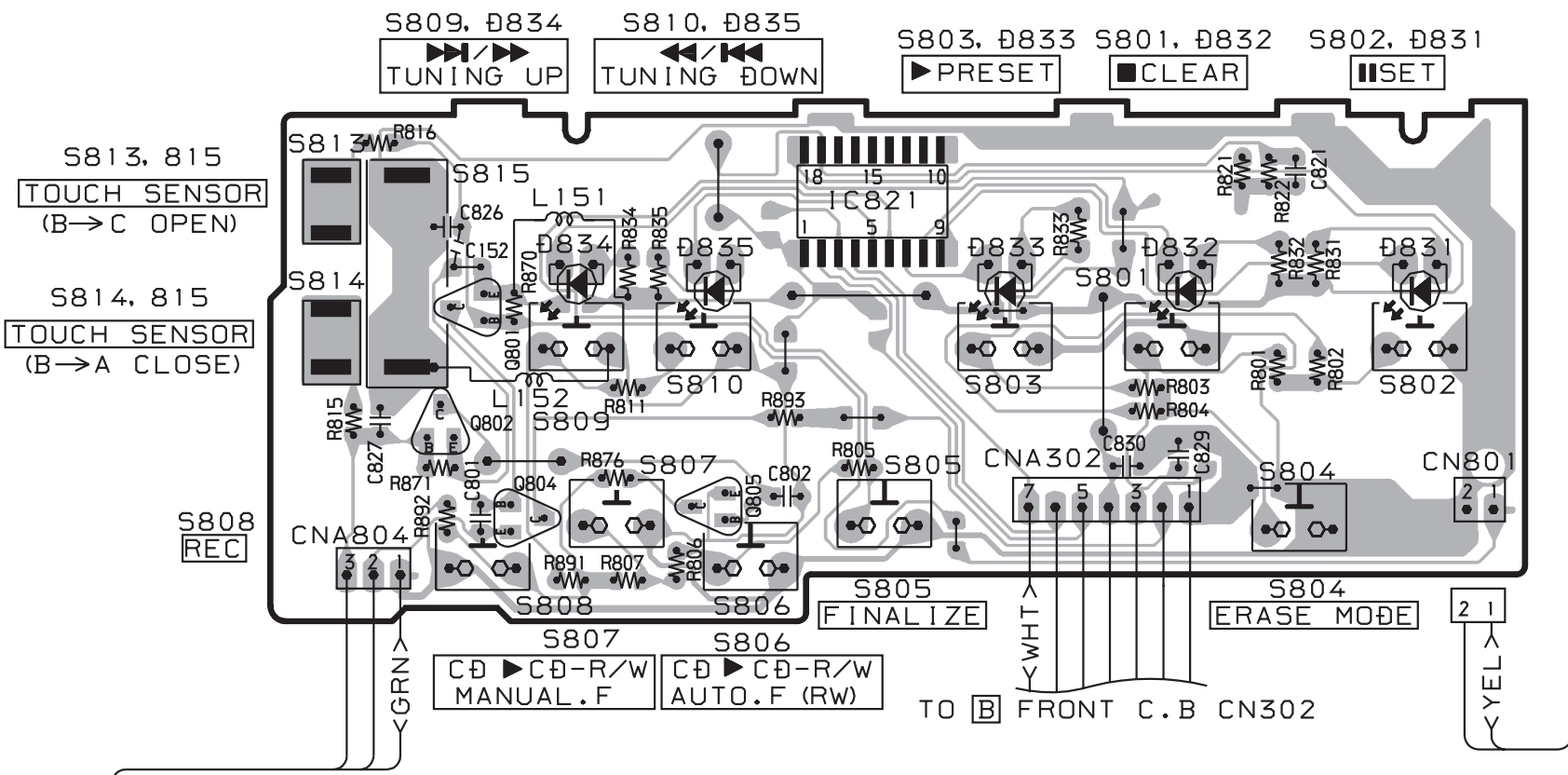
SCHEMATIC DIAGRAM – 2 (FRONT / FACE-A / FACE-B / FACE-C / SW-1 / SW-2)



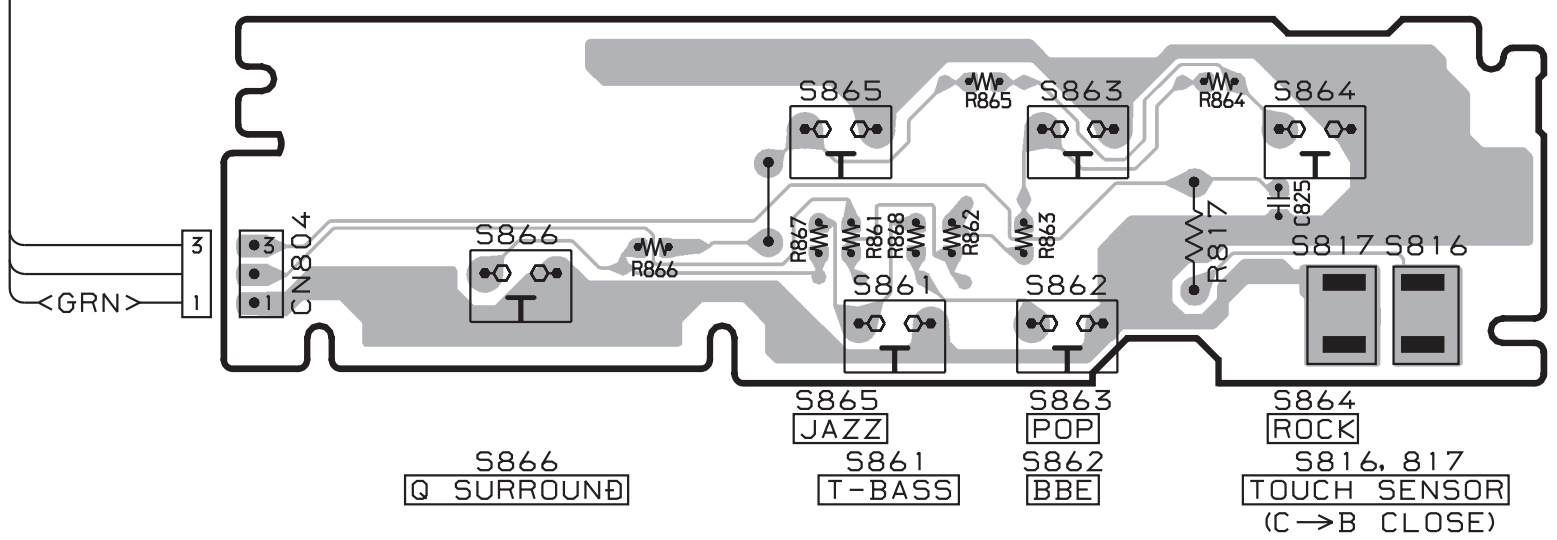
32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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**D** FACE - A  
C. B



**E** FACE - B  
C. B

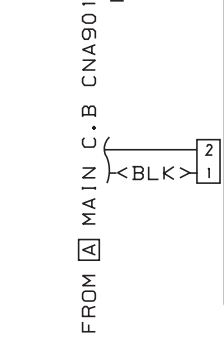
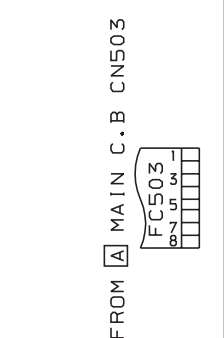
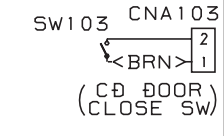
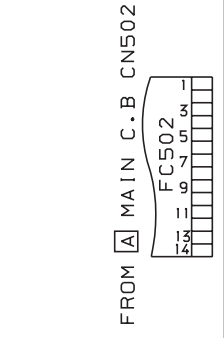
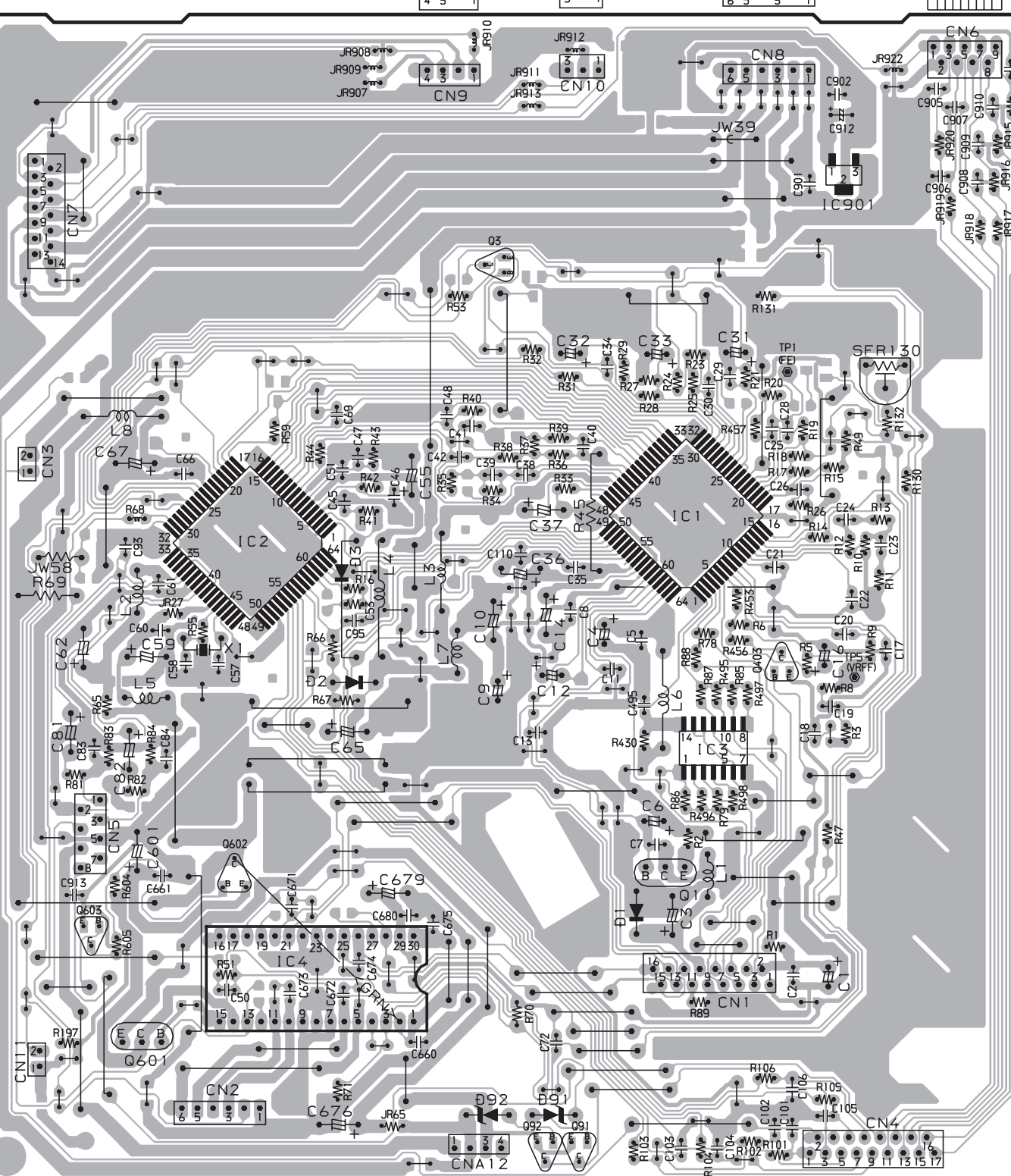
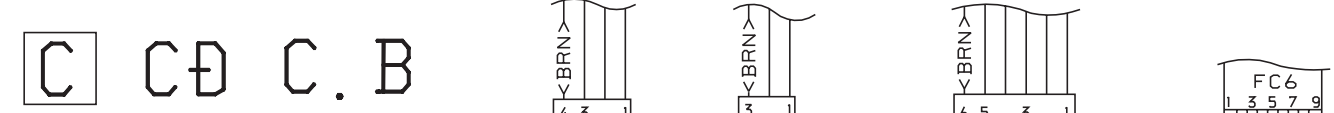


**F** FACE - C  
C. B

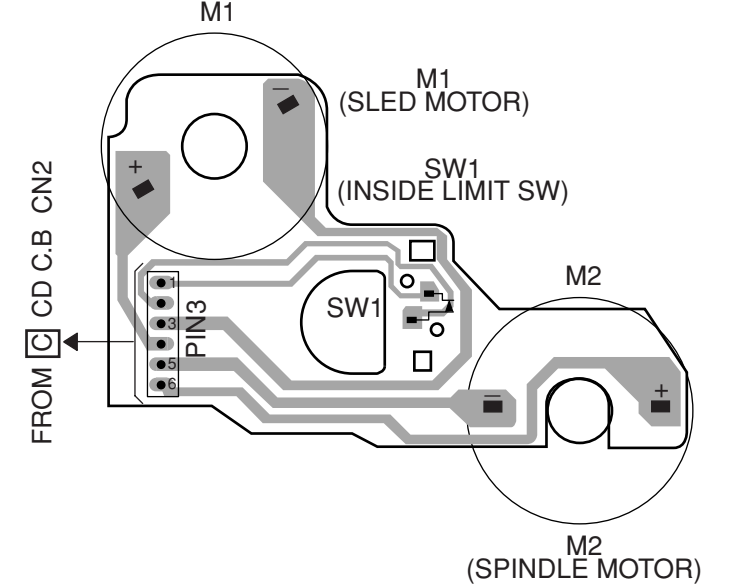
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32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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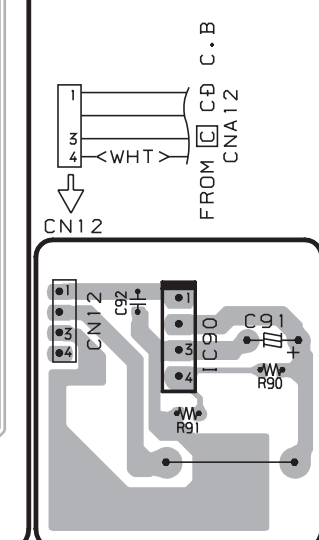
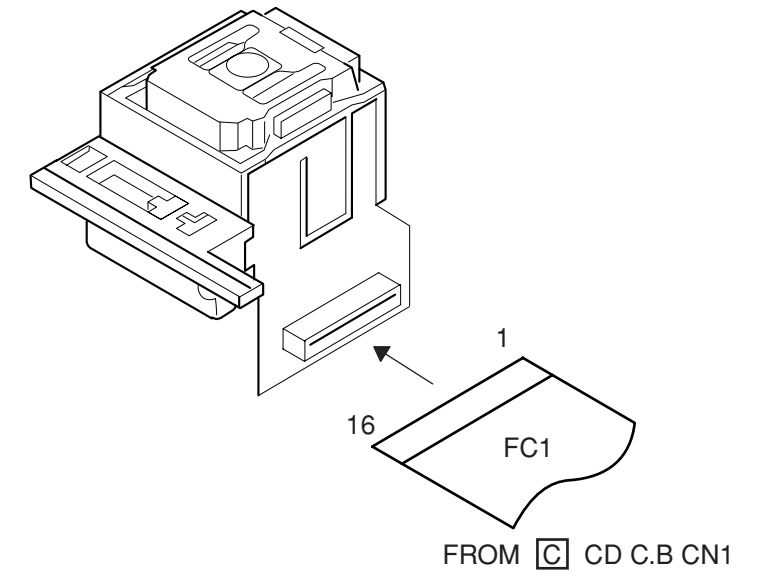
TO CD-R/RW MECHANISM CRD-RA1W02 (A)



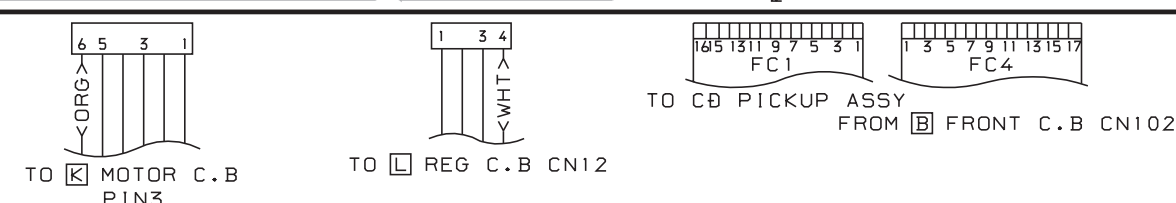
**K MOTOR C.B**



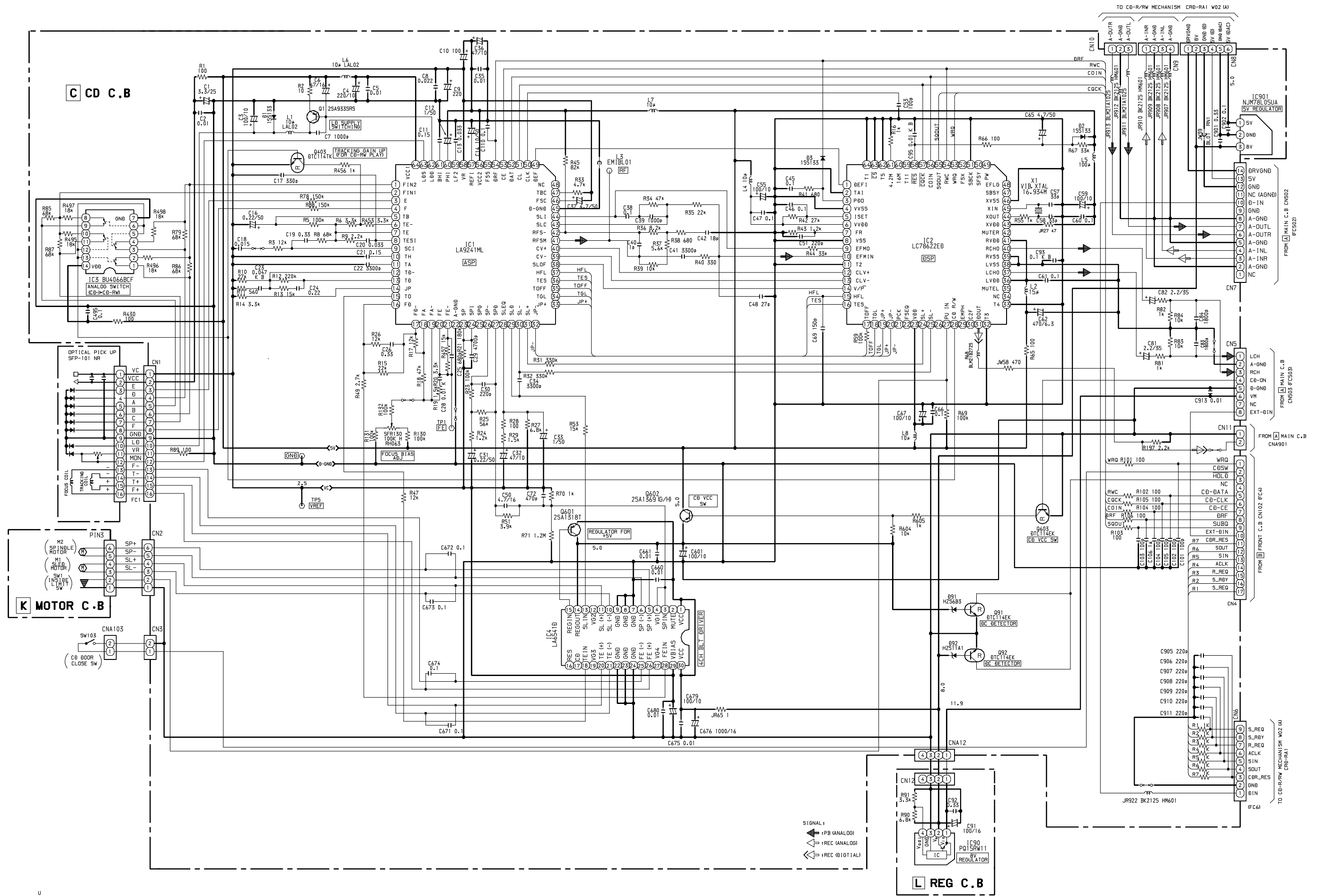
PICK UP ASSY SF-P101NR



**L REG C.B**

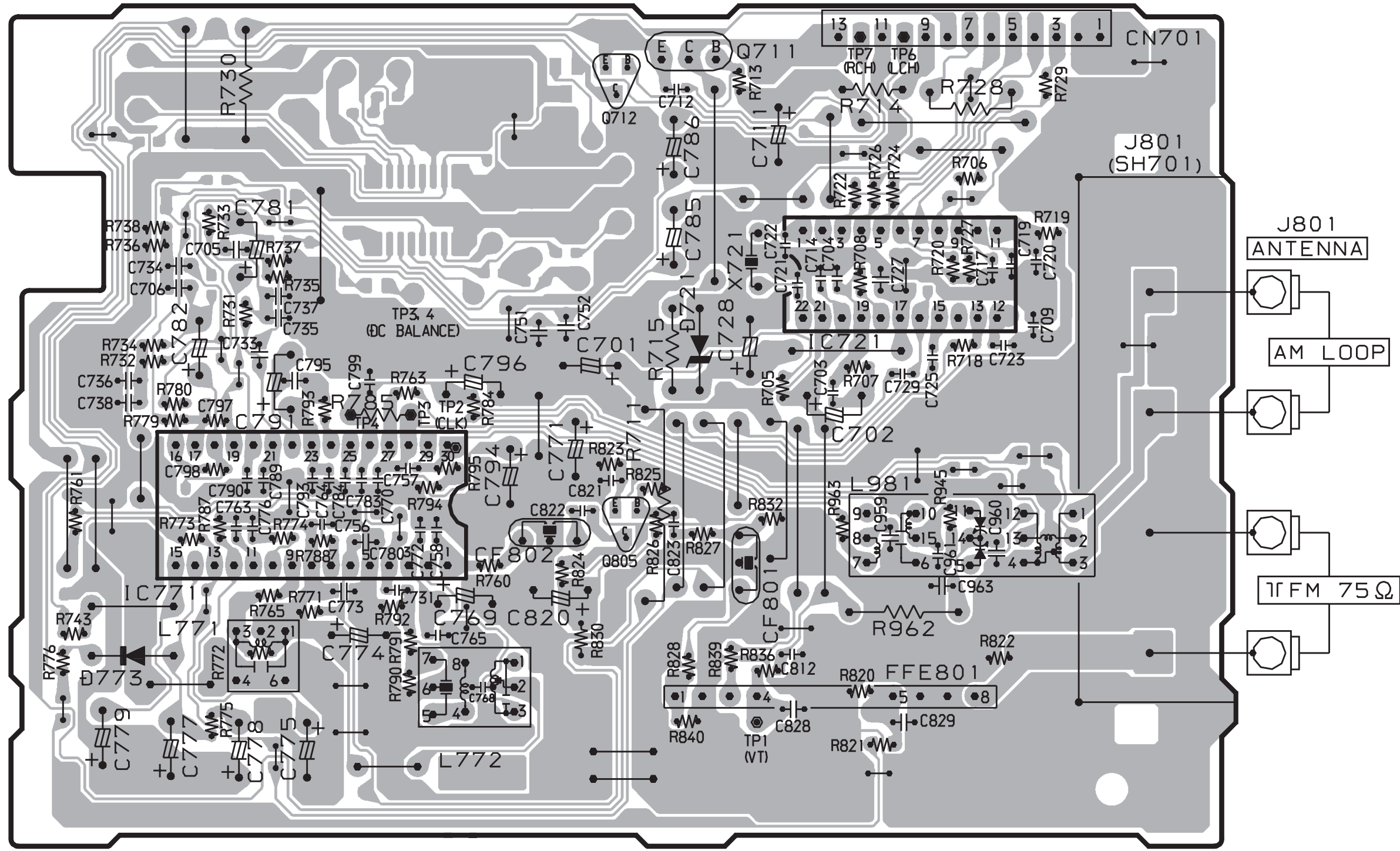


SCHEMATIC DIAGRAM - 3 (CD/MOTOR/REG)



# M TUNER C.B

TO [A] MAIN C.B CN571  
13 11 9 7 5 3 1



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32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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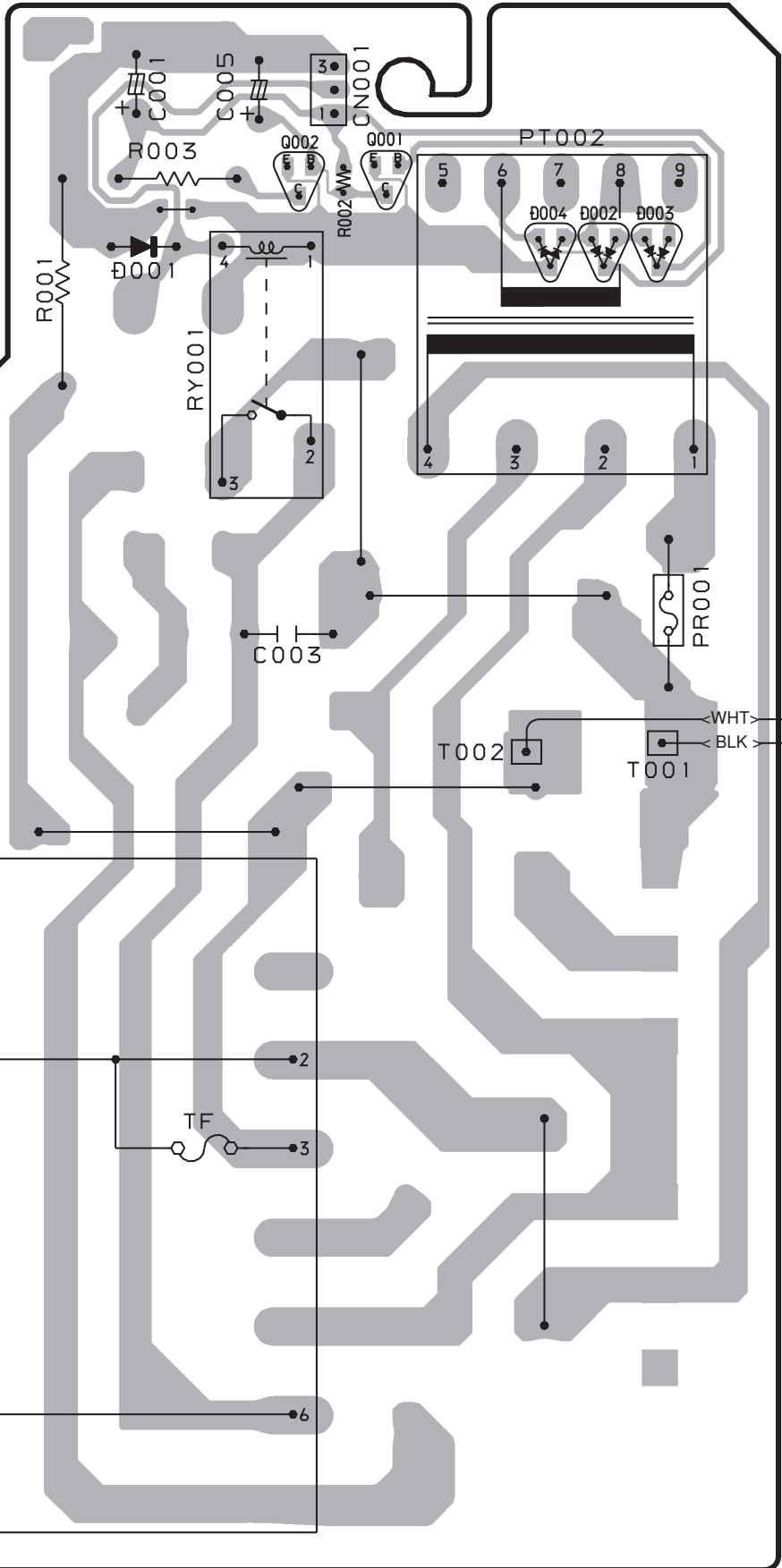
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
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# I PT1 C.B

FROM MAIN C.B



TO CN001

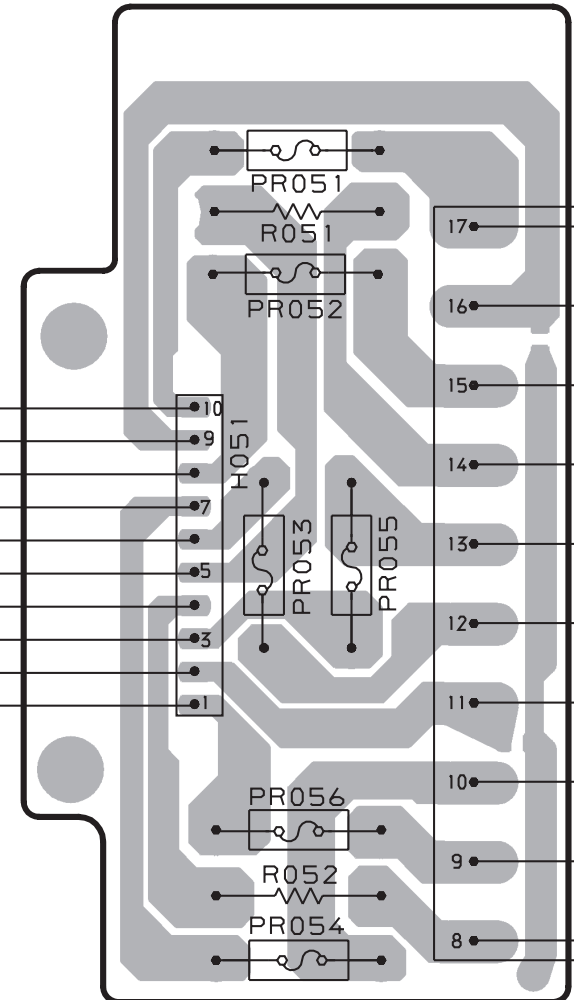


# J PT2 C.B

FROM MAIN C.B

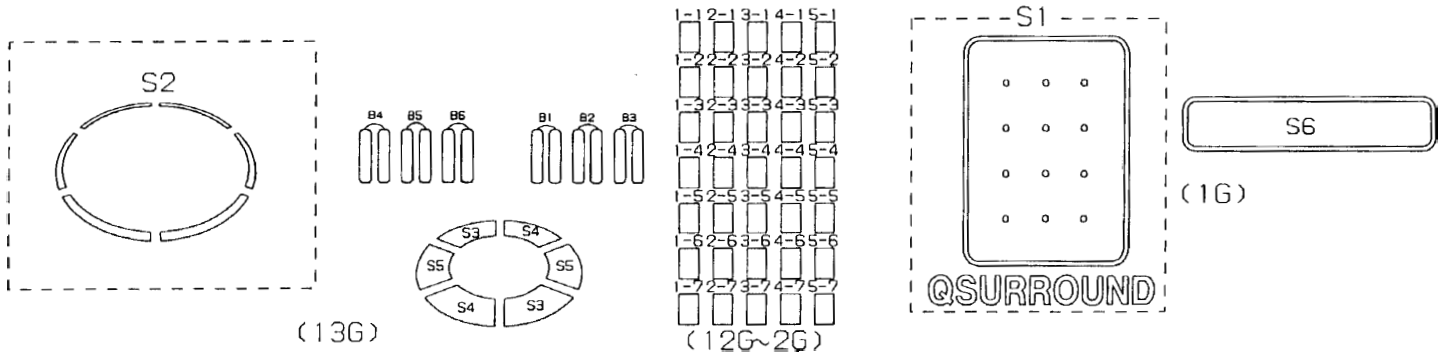
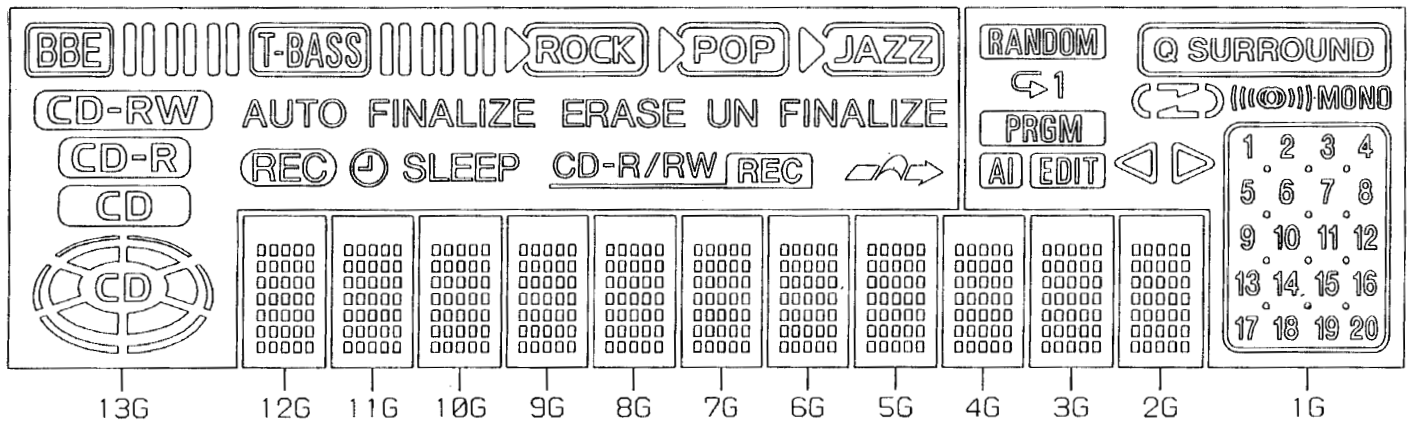


WHT  
W101





FL (13-ST-46GNK ACY-4) GRID ASSIGNMENT / ANODE CONNECTION  
 GRID ASSIGNMENT

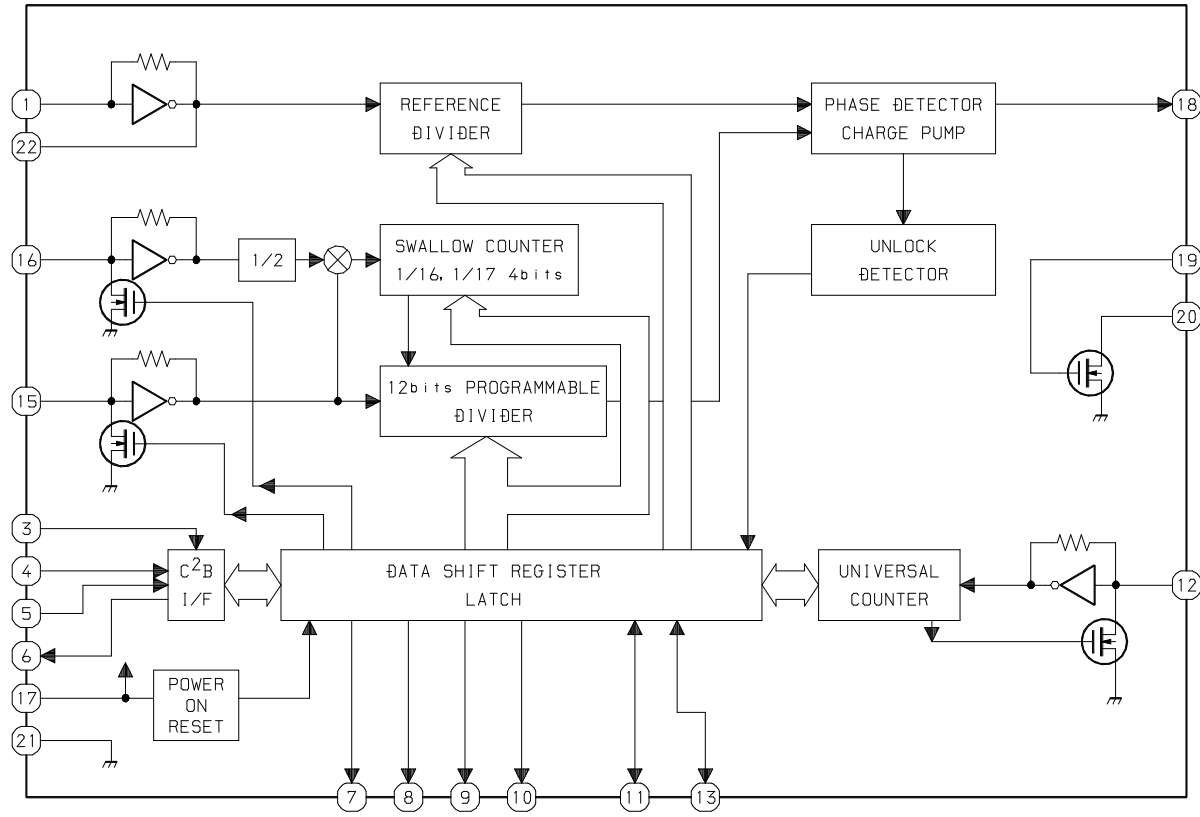


ANODE CONNECTION

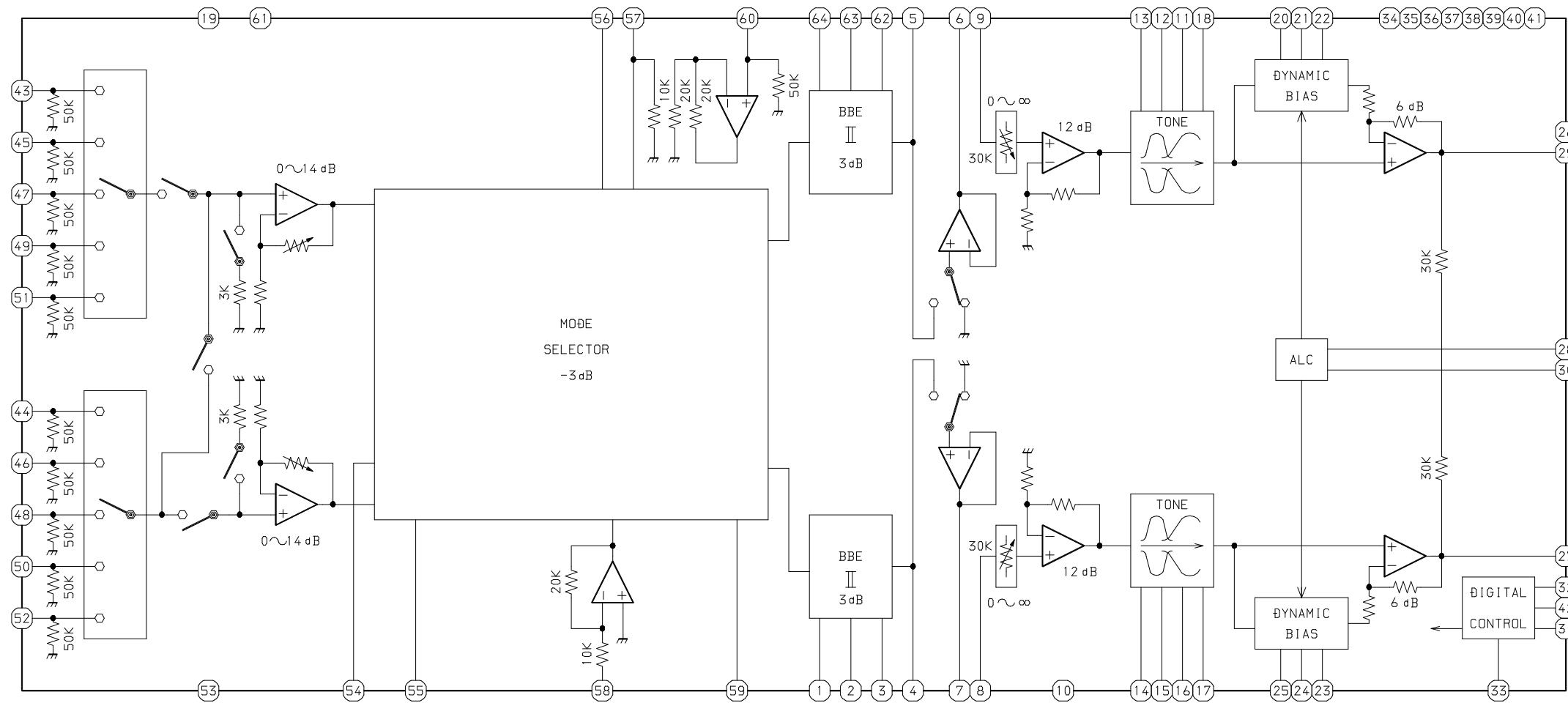
	13G	12G~2G	1G
P1		1-1	
P2	<b>CD-R/RW REC</b>	2-1	
P3	S2	3-1	MONO
P4	FINALIZE (右)	4-1	
P5	UN	5-1	)
P6	ERASE	1-2	
P7	-	2-2	
P8	-	3-2	S6
P9	ROCK POP JAZZ	4-2	<b>EDIT</b>
P10	(JAZZ)	5-2	<b>AI</b>
P11	(POP)	1-3	<b>PRGM</b>
P12	(ROCK)	2-3	1
P13	-	3-3	
P14	SLEEP	4-3	<b>RANDOM</b>
P15		5-3	1
P16	<b>REC</b>	1-4	2
P17	FINALIZE (左)	2-4	3
P18	AUTO	3-4	4
P19	B3	4-4	5
P20	B2	5-4	6
P21	B1	1-5	7
P22	<b>T-BASS</b>	2-5	8
P23	B6	3-5	9
P24	B5	4-5	10
P25	B4	5-5	11
P26	<b>BBE</b>	1-6	12
P27	<b>CD-RW</b>	2-6	13
P28	<b>CD-R</b>	3-6	14
P29	<b>CD</b>	4-6	15
P30	-	5-6	16
P31	-	1-7	17
P32	CD	2-7	18
P33	S3	3-7	19
P34	S4	4-7	20
P35	S5	5-7	S1

# IC BLOCK DIAGRAM

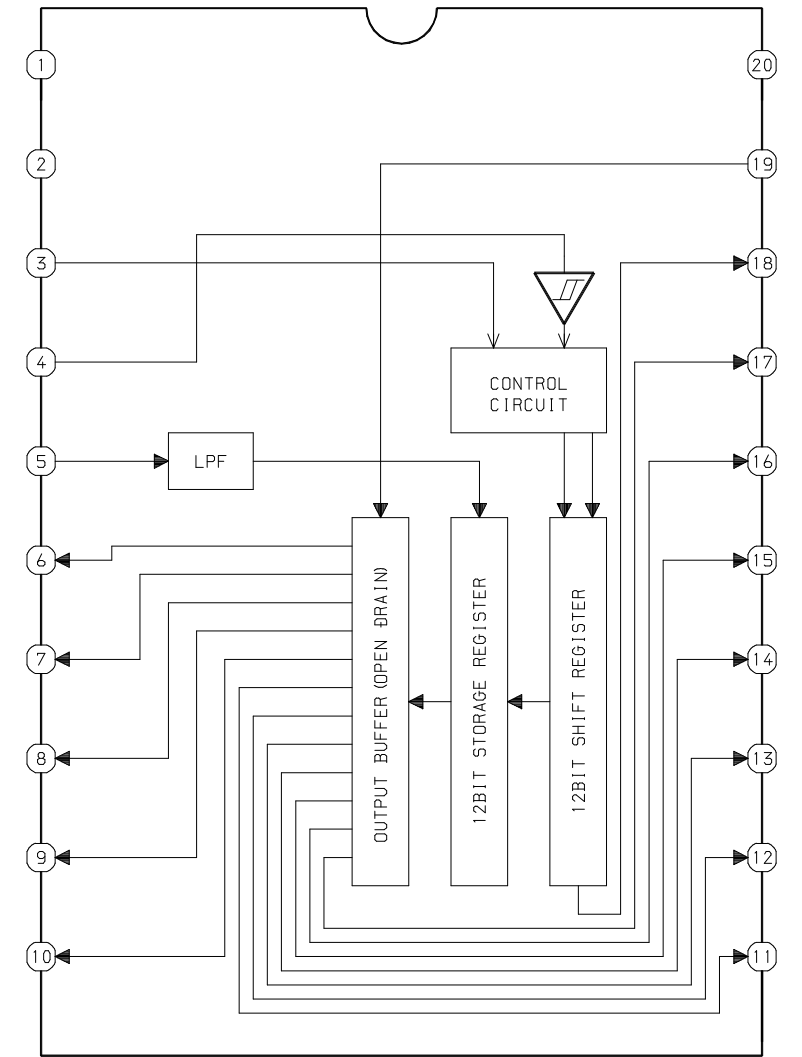
IC, LC72131D



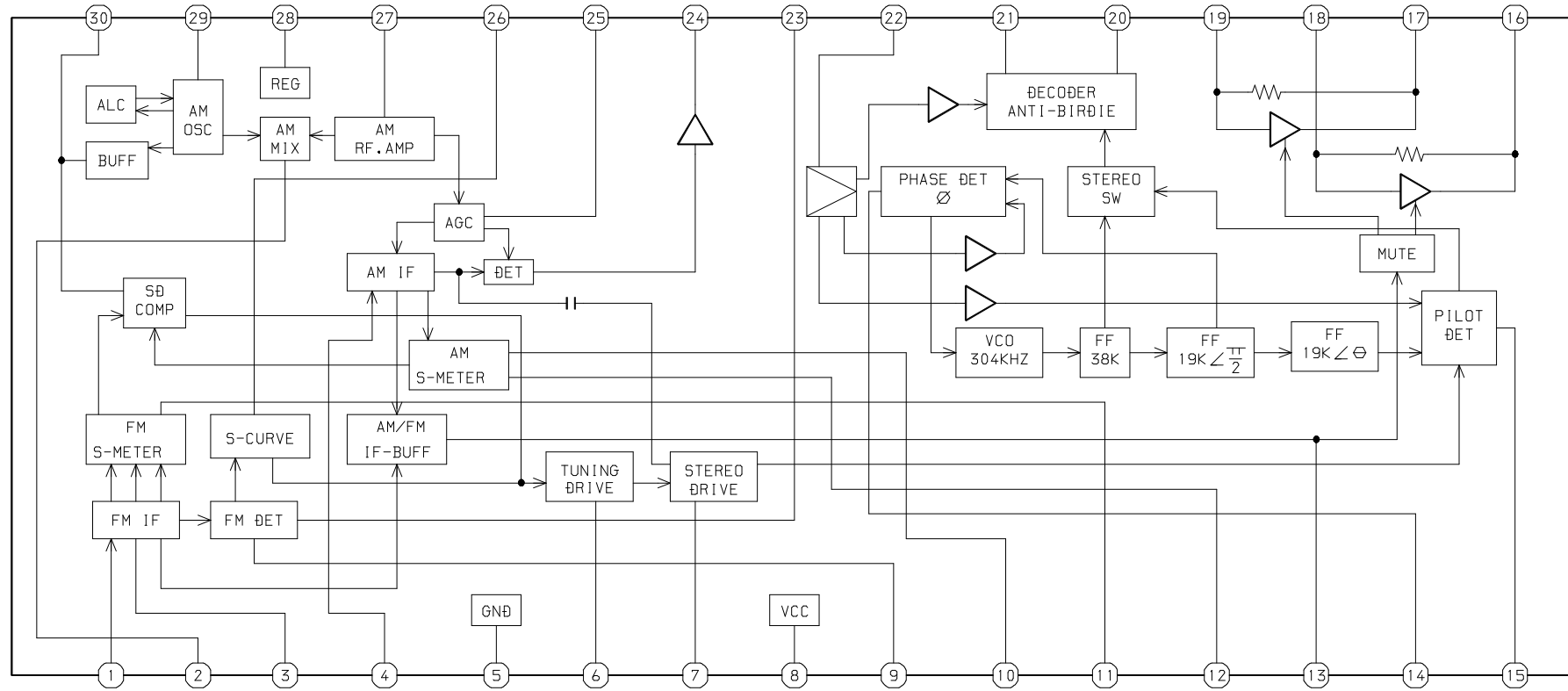
IC, BQ3876KS2



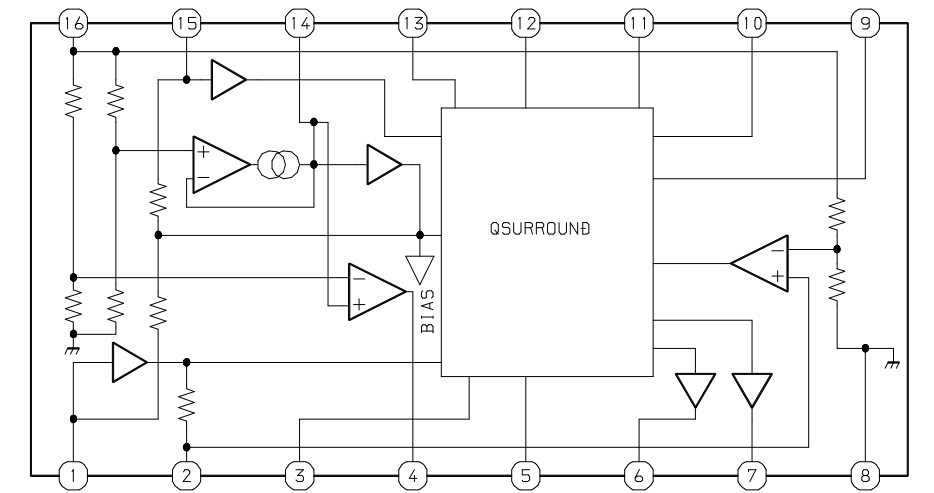
IC, BU2099FV



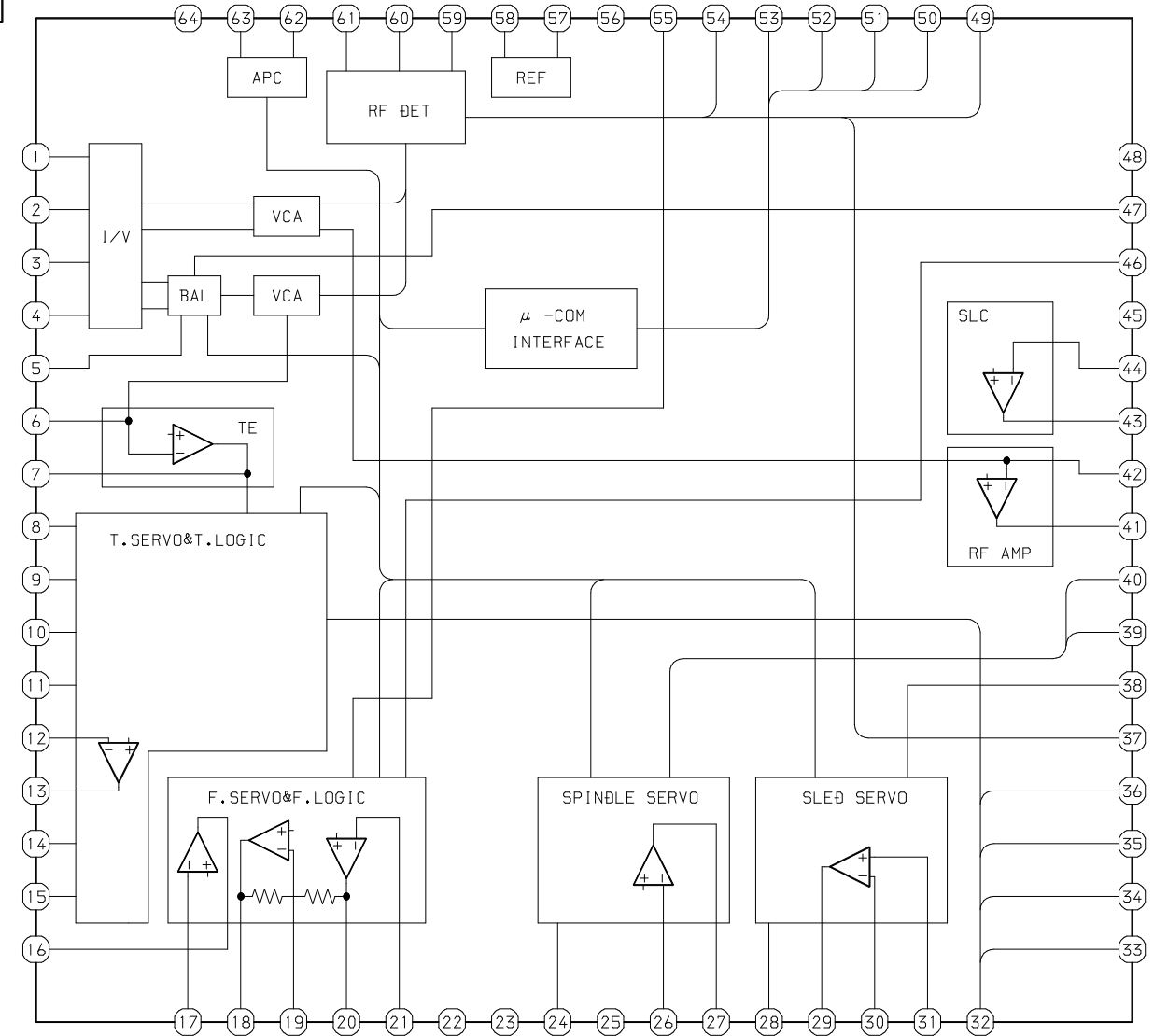
IC, LA1837NL



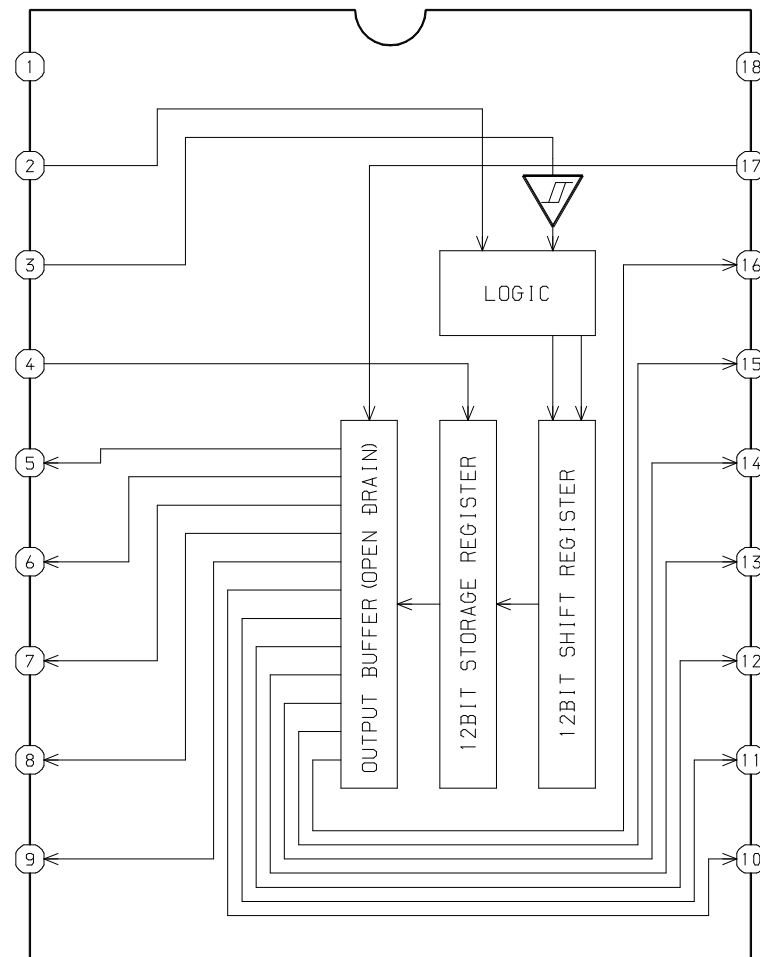
IC, MM1454XFBE



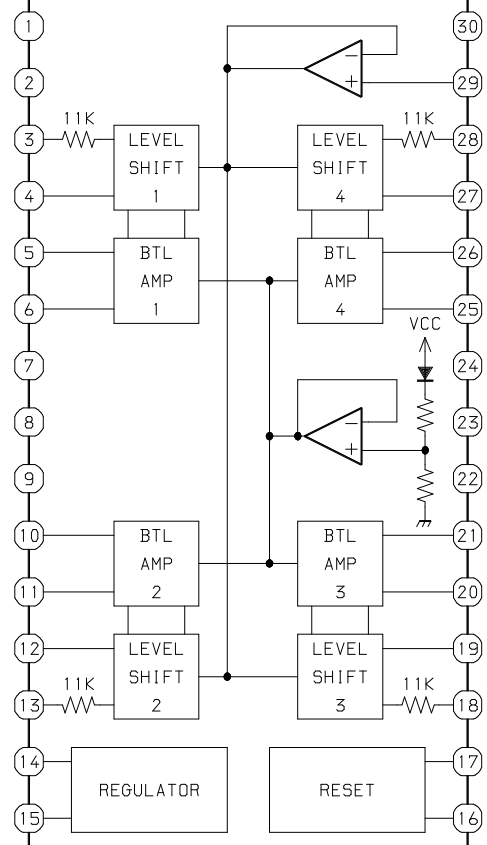
IC, LA9241ML



IC, BU2092F



IC, LA6541D



## IC DESCRIPTION

IC, LC87F65C8AU : ACY-4

Pin No.	Pin Name	I/O	Description
1	I-DRF	I	CD ASP IC DRF data input.
2	O-BEEP	O	Buzzer control.
3	O-CD-CE	O	CD DSP IC command in data output.
4	I-SUBQ	I	CD DSP IC subcode data input.
5	I-STEREO	I	Tuner stereo signal input.
6	O-CLK	O	IC control serial clock output.
7	O-DATA	O	IC control serial data output.
8	O-FUNCCE	O	FUNC IC control chip enable output.
9	O-PLL-CE	O	Tuner PLL IC control chip enable output.
10	O-CLK-SIFT	O	Micon clock shift control output. L : shift up (initial H).
11	RESET	I	Reset input.
12	I-HOLD (A/D)	I	Power failure overcharge detection input.
13	NC	-	Not connected.
14	VSS1	-	GND.
15	CF1	I	Oscillator input for system clock (9.43MHz).
16	CF2	O	Oscillator output for system clock (9.43MHz).
17	VDD1	-	Power supply.
18	NC	-	Not connected.
19	I-KEY1 (A/D)	I	Tact key A/D level input.
20	I-KEY0 (A/D)	I	Tact key A/D level input.
21	I-TUNE / IFC	I	Tuner IF count serial data input.
22	I-CD-SW	I	CD mecha switch detection input.
23	I-ENC1 (A/D)	I	Waveform input for jog rotary encoder.
24	I-ENC0 (A/D)	I	Waveform input for volume rotary encoder.
25	I-LEVEL (A/D)	I	Audio signal level detection input (for level bar, CD blank skip).
26	NC	-	Not connected.
27	I-TMBASE	I	Reference signal input for clock.
28	I-WRQ	I	CD DSP IC WRQ input.
29	I-RMC	I	Remote control signal input.
30 ~ 42	G13 ~ G1	O	FL grid output.
43 ~ 45	P35 ~ P33	O	FL segment output.
46	VDD3	-	Power supply.
47 ~ 50	P32 ~ P29	O	FL segment output.
51	VP	-	Power supply for FL input.
52 ~ 71	P28 ~ P9	O	FL segment output.
72	VDD4	-	Power supply.
73, 74	P8, P7	O	FL segment output.

Pin No.	Pin Name	I/O	Description		
75 ~ 78	D ~ A/P6 ~ P3	I/O	Panel face detection switch D ~ A input / FL segment output.		
			SURFACE		
			ACRYLIC		
			OPE KEY		
			SWA	OFF	ON
			SWB	ON	ON
SWC	OFF	OFF			
SWD	ON	ON			
79, 80	P2, P1	O	FL segment output.		
81	O-FUNC	O	FUNC IC expand port pull up VCC switch output.		
82 ~ 84	NC	–	Not connected.		
85	O-KEYSCAN	O	Segment input timing output. "H" = Input timing.		
86	O-FSTB	O	Shift register IC control serial strobe output.		
87	O-POWER	O	System power control output.		
88	O-EXT-DIN	O	CD-R/RW digital input select. "H" = Ext Din, "L" = Int CD Dout.		
89	VSS2	–	GND.		
90	VDD2	–	Power supply.		
91	O-CD-DATA	O	CD DSP IC control data output.		
92	O-CD-CLK	O	CD DSP IC control clock output.		
93	O-MUTE	O	Audio signal line mute control output.		
94	O-CDRRES	O	CD-R/RW reset output.		
95	O-SOUT	O	CD-R/RW serial data output.		
96	I-SIN	I	CD-R/RW serial data input.		
97	I-ACLK	I	CD-R/RW unit latch clock input.		
98	I-RREQ	I	To CD-R/RW unit serial data transfer request control input.		
99	O-SRDY	O	CD-R/RW unit latch data ready port control output.		
100	O-SREQ	O	From CD-R/RW unit serial data transfer request control output.		

Pin No.	Pin Name	I/O	Description
1	DEFI	I	Defect detection signal (DEF) input.
2	TAI	I	Test input. A pull-down resistor is built in. Must be connected to 0V.
3	PDO	O	External VCO control phase comparator output.
4	VVSS	–	Internal VCO ground. Must be connected to 0V.
5	ISET	I	PDO output current adjustment resistor connection.
6	VVDD	–	Internal VCO power supply.
7	FR	I	VCO frequency range adjustment.
8	VSS	–	Digital system ground. Must be connected to 0V.
9	EFMO	O	Slice level control; EFM signal output.
10	EFMIN	I	Slice level control; EFM signal input.
11	T2	I	Test input. A pull-down resistor is built in. Must be connected to 0V.
12	CLV+	O	Disc motor control output. Three-value output is also possible when specified by microprocessor command.
13	CLV–		
14	V $\bar{P}$	O	Rough servo/phase control automatic switching monitor output. Outputs a high level during rough servo and a low level during phase control.
15	HFL	I	Track detection signal input. This is a Schmitt input.
16	TES	I	Tracking error signal input. This is a Schmitt input.
17	TOFF	O	Tracking off output.
18	TGL	O	Tracking gain switching output. Increase the gain when low.
19	JP+	O	Track jump output. Three-value output is also possible when specified by microprocessor command.
20	JP–		
21	PCK	O	EFM data playback clock monitor. Outputs 4.3218 MHz when the phase is locked. (Not used)
22	FSEQ	O	Synchronization signal detection output. Outputs a high level when the synchronization signal detected from the EFM signal and the internally generated synchronization signal agree. (Not used)
23	VDD	–	Digital system power supply.
24	SL+	O	Serial data command sled signal output terminal from microprocessor.
25	SL–		
26	NC	–	Not used.
27	PU IN	I	CD pickup inside limit switch.
28	CD R/W	O	Serial data command sled signal output terminal from microprocessor.
29	EMPH	O	De-emphasis monitor pin. A high level indicates playback of a de-emphasis disk. (Not used)
30	C2F	O	C2 flag output. (Not used)
31	DOUT	O	Digital output (EIAJ format).
32	T3	I	Test input. A pull-down resistor is built in. Must be connected to 0V.
33	T4		
34	NC	–	Unused. Must be left open.
35	MUTEL	O	Left channel one-bit D/A converter mute output. (Not used)
36	LVDD	–	Left channel one-bit D/A converter power supply.
37	LCHO	O	Left channel one-bit D/A converter output.

Pin No.	Pin Name	I/O	Description
38	LVSS	–	Left channel one-bit D/A converter ground. Must be connected to 0V.
39	RVSS	–	Right channel one-bit D/A converter ground. Must be connected to 0V.
40	RCHO	O	Right channel one-bit D/A converter output.
41	RVDD	–	Right channel one-bit D/A converter power supply.
42	MUTER	O	Right channel one-bit D/A converter mute output. (Not used)
43	XVDD	–	Crystal oscillator power supply.
44	XOUT	O	Connections for a 16.934MHz crystal oscillator element.
45	XIN	I	
46	XVSS	–	Crystal oscillator ground. Must be connected to 0V.
47	SBSY	O	Subcode block synchronization signal output. (Not used)
48	EFLG	O	C1, C2 single and double error correction monitor pin. (Not used)
49	PW	O	Subcode P, Q, R, S, T, U, V and W output. (Not used)
50	SFSY	O	Subcode frame synchronization signal output. This signal falls when the subcode are in the standby state. (Not used)
51	SBCK	I	Subcode readout clock input. This is a Schmitt input. (Must be connected to 0V when unused)
52	FSX	O	Output for the 7.35 kHz synchronization signal divided from the crystal oscillator. (Not used)
53	WRQ	O	Subcode Q output standby output.
54	RWC	I	Readwrite control input. This is a Schmitt input.
55	SQOUT	O	Subcode Q output.
56	COIN	I	Command input from the control microprocessor.
57	$\overline{\text{CQCK}}$	I	Input for both the command input acquisition clock and the SQOUT pin subcode readout clock input. This is a Schmitt input.
58	$\overline{\text{RES}}$	I	Chip reset pin. This pin must be set low briefly after power is first applied.
59	T11	O	Test output. Leave open. (Normally outputs a low level). (Not used)
60	16M	O	16.9344 MHz output. (Not used)
61	4.2M	O	4.2336 MHz output.
62	T5	I	Test input. A pull-down resistor is built in. Must be connected to 0V.
63	$\overline{\text{CS}}$	I	Chip select input. A pull-down resistor is built in. Must be connected to 0V if not controlled.
64	T1	I	Test input. No pull-down resistor. Must be connected to 0V.



## ADJUSTMENT <TUNER / FRONT / CD>

### < TUNER SECTION >

1. Clock Frequency Check  
Settings : • Test point : TP2 (CLK)  
Method : Set to AM 1710kHz and check that the test point is 2160kHz  $\pm$  45Hz.
2. AM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to AM 1710kHz and AM 530kHz and check that the test point is less than 8.5V (1710kHz) and more than 0.6V (530kHz).
3. AM Tracking Adjustment  
Settings : • Test point : TP6 (Lch), TP7 (Rch)  
• Adjustment location :  
L981 (1/3) ..... 1000kHz  
Method : Set to AM 1000kHz and adjust L981 (1/3) so that the test point is maximum.
4. FM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to FM 108.0MHz and check that the test point is less than 8.0V.  
Set to FM 87.5MHz and check that the test point is more than 0.5V.
5. FM Tracking Check  
Settings : • Test point : TP6 (Lch), TP7 (Rch)  
Method : Set to FM 98.0MHz and check that the test point is less than 9.0dB $\mu$ V.
6. AM IF Adjustment  
Settings : • Test point : TP6 (Lch), TP7 (Rch)  
• Adjustment location :  
L772 ..... 450kHz
7. DC Balance / Mono Distortion Adjustment  
Settings : • Test point : TP3, TP4 (DC Balance)  
TP6 (Lch), TP7 (Rch) (Distortion)  
• Adjustment location : L771  
• Input level : 60dB $\mu$ V  
Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V  $\pm$  0.04V.  
Next, check that the distortion is less than 1.3%

### < FRONT SECTION >

8.  $\mu$ -CON Clock Adjustment  
Settings : • Test point : TP1 (K-SCAN), TP2 (GND)  
• Adjustment location : L201  
Method : Insert AC plug while pressing of "TUNER" key and "ERASE" function key.  
Connect a frequency counter across TP1 and TP2.  
Then adjust L201 so that the test point becomes 209.789Hz  $\pm$  0.21Hz.

### < CD SECTION >

9. Focus Bias Adjustment  
Settings : • Test disc : TCD-782  
• Test point : TP1 (FE), TP5 (VREF)  
• Adjustment location : SFR130  
Method : Play back the test disc (TCD-782, Track No. 2) and adjust SFR130 so that the voltage between the test point becomes 0mV  $\pm$  10mV.

## CD TEST MODE

This CD TEST MODE is only for playback type CD player. CD-R/RW type TEST MODE items are not included.

### 1. How to Activate CD Test Mode

- 1) Short circuit the S101.
- 2) While pressing the CD function button, insert the AC plug to the outlet. The message "CD TEST" appears on the display.

### 2. How to Cancel CD Test Mode

- 1) Exit the CD test mode by any of the following procedures.
  - Press the function button (except the CD function button.)
  - Press the power button.
  - Disconnect the AC plug.
- 2) Open circuit the S101 after cancelling TEST MODE.

### 3. CD Test Mode functions

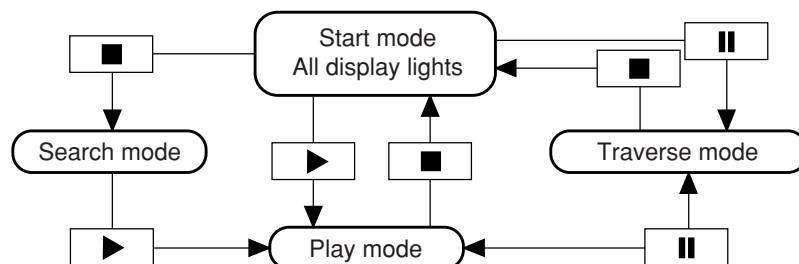
No	Mode	Operation	FL display	Operation	Checking item
1	Start mode	Activation	All lit	<ul style="list-style-type: none"> <li>• Test mode is activated</li> <li>• CD block is power ON</li> </ul>	<ul style="list-style-type: none"> <li>• FL item</li> <li>• Microprocessor</li> </ul>
2	Search mode	■	CD	<ul style="list-style-type: none"> <li>• LD lights</li> <li>• Continuous focus search*1</li> <li>• Continuous spindle kick</li> </ul>	<ul style="list-style-type: none"> <li>• APC circuit</li> <li>• Laser current</li> <li>• Focus search waveform</li> <li>• Focus error waveform (DRF and FZC are not monitored in the search mode)</li> </ul>
3	Play mode	▶	Normal time display (spectrum analyzer)	<ul style="list-style-type: none"> <li>• Normal playback</li> <li>• If TOC cannot be read, focus search of "2" is continued</li> </ul>	<ul style="list-style-type: none"> <li>• Focus servo</li> <li>• Tracking servo</li> <li>• Sled servo</li> <li>• Spindle servo</li> <li>• DRF</li> <li>• RF waveform</li> </ul>
4	Traverse mode		Normal time display	<ul style="list-style-type: none"> <li>• Turning off/on repeats each time tracking servo OFF/ON    is pressed</li> </ul>	<ul style="list-style-type: none"> <li>• Tracking servo</li> <li>• Traverse waveform</li> </ul>
5	Sled mode	▶▶ ◀◀	CD TEST	<ul style="list-style-type: none"> <li>• Pickup moves to the outermost track *2</li> <li>• Pickup moves to the innermost track (normal operation during playback)</li> </ul>	<ul style="list-style-type: none"> <li>• Sled circuit</li> <li>• Mechanism</li> </ul>

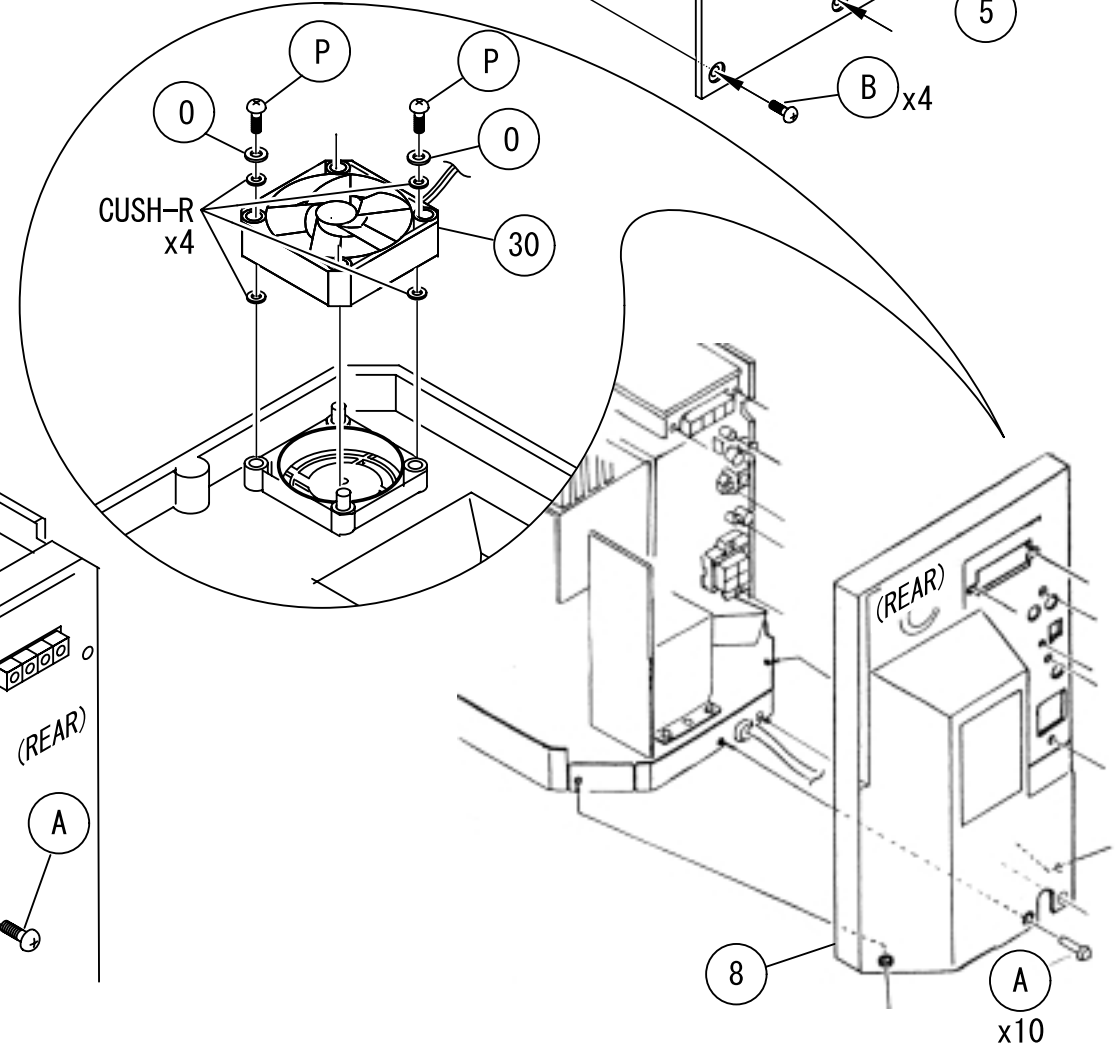
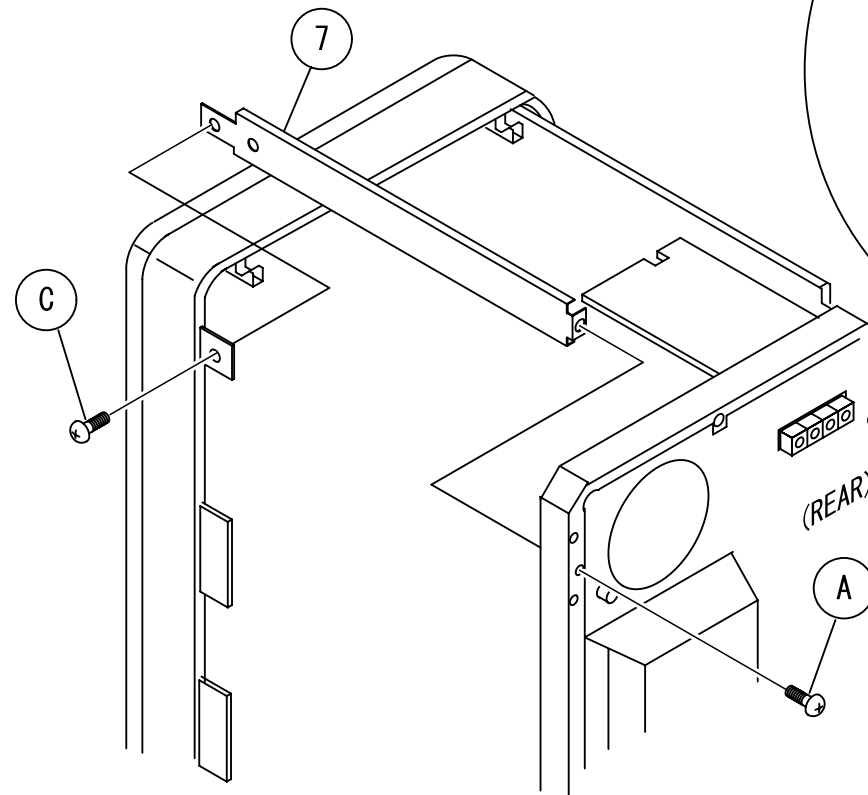
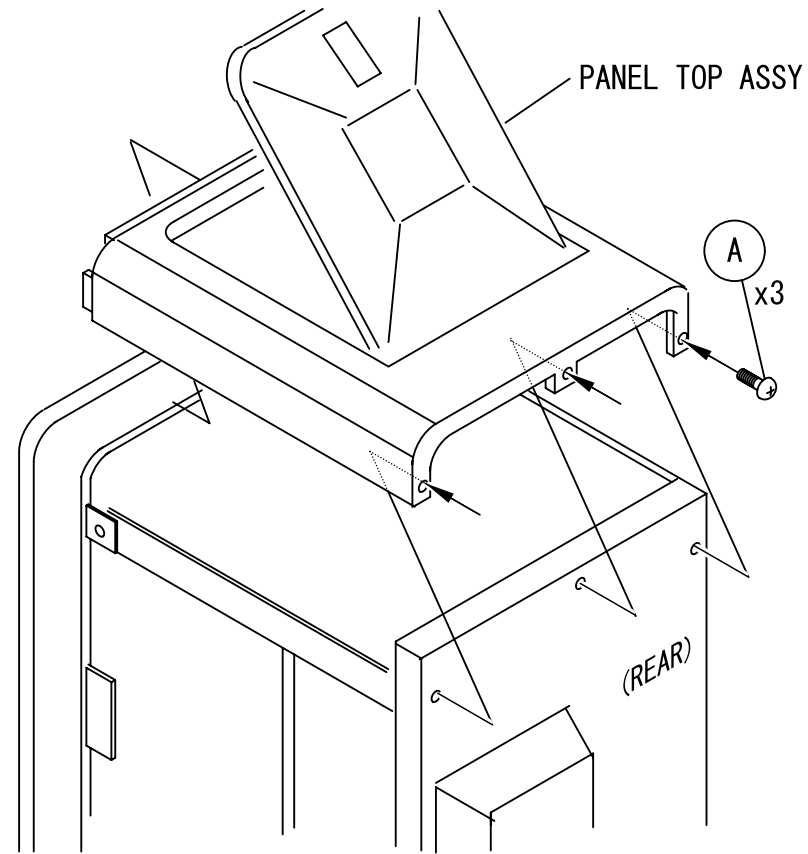
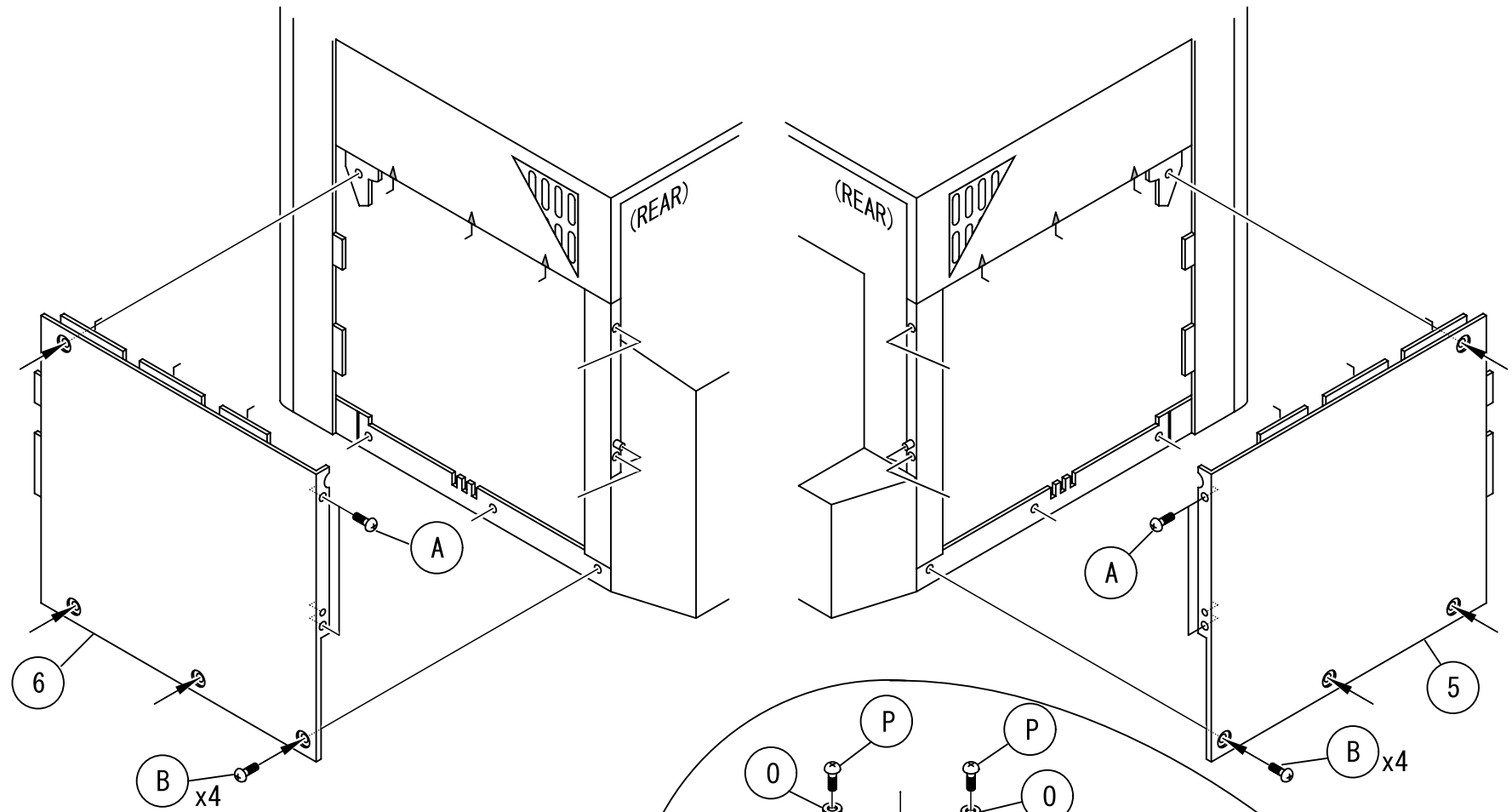
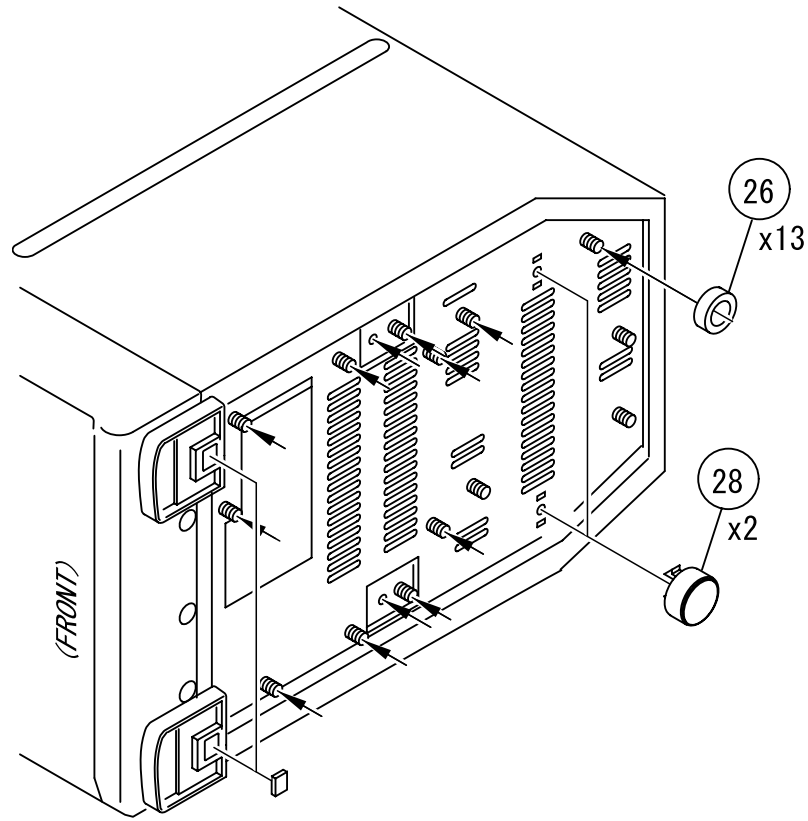
\* Note 1: The driver IC (IC501) heats up and the protection circuit starts working when the focus search is continued for 10 minutes or longer. There can be a case that operations cannot be performed correctly. In such a case, turn off the main power. After cooling down, restart the unit.

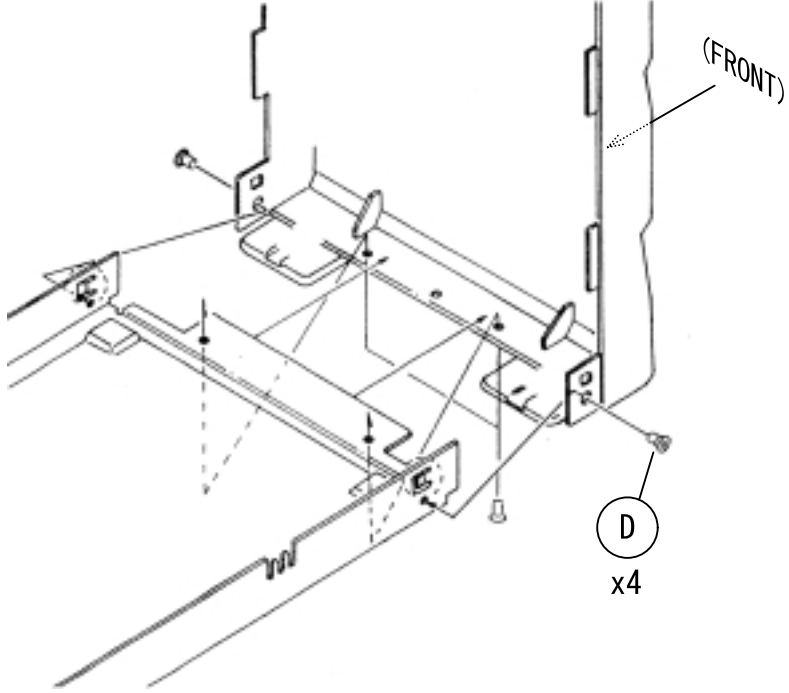
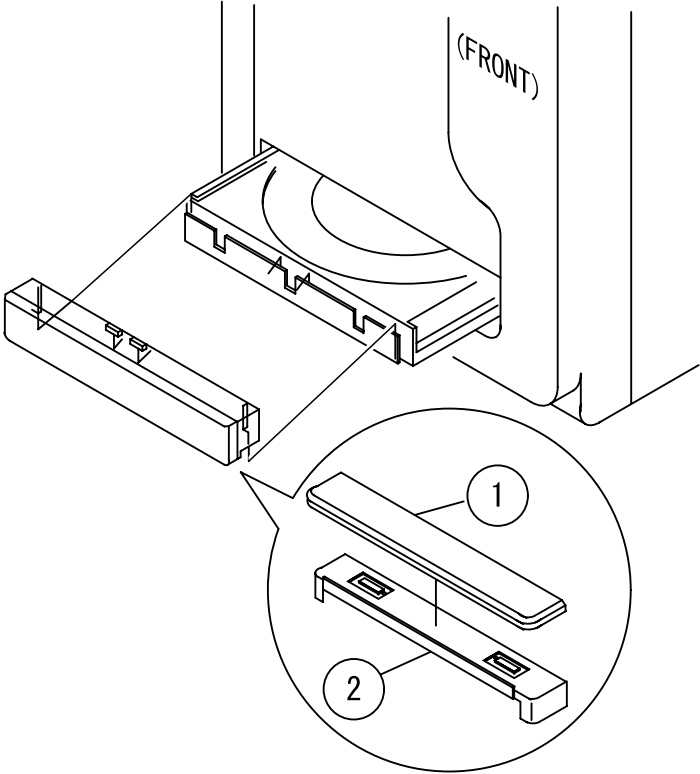
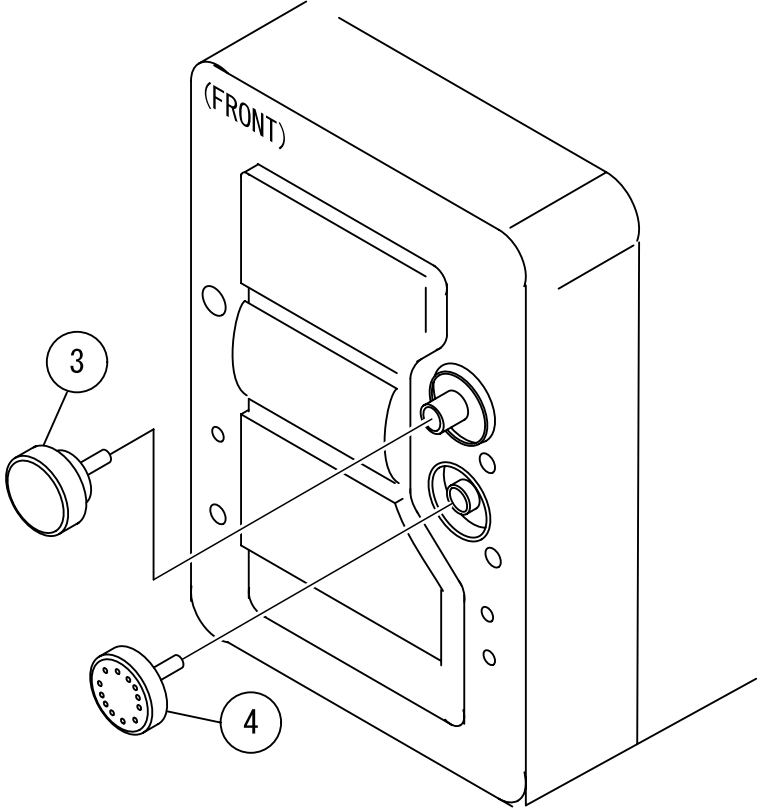
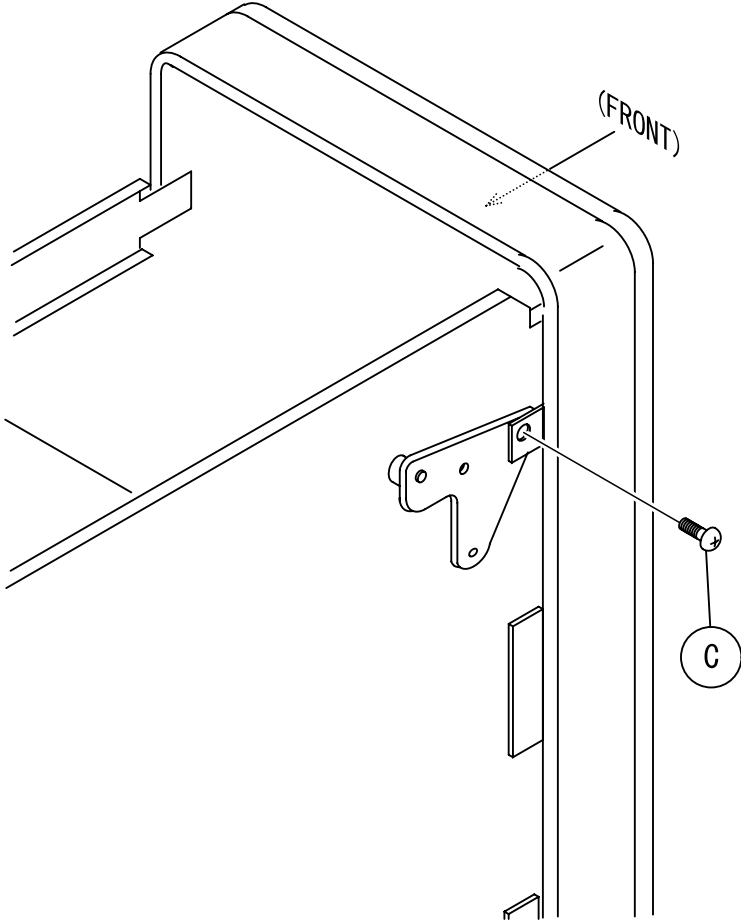
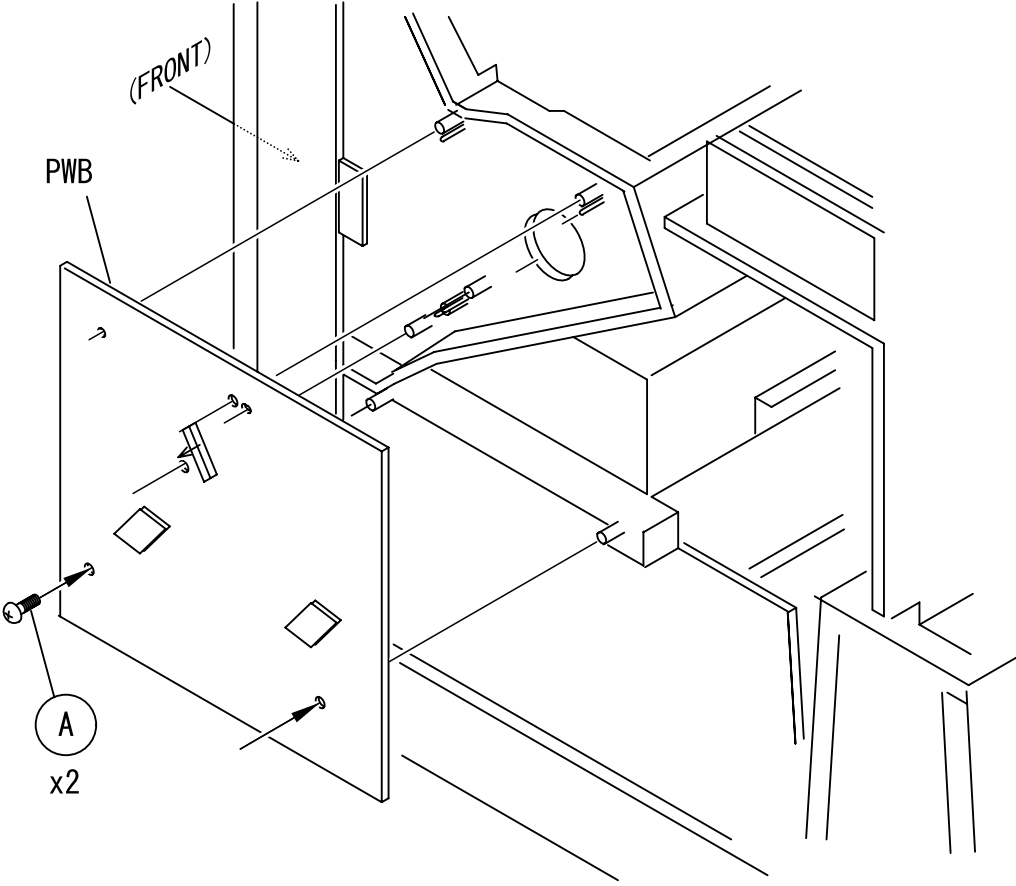
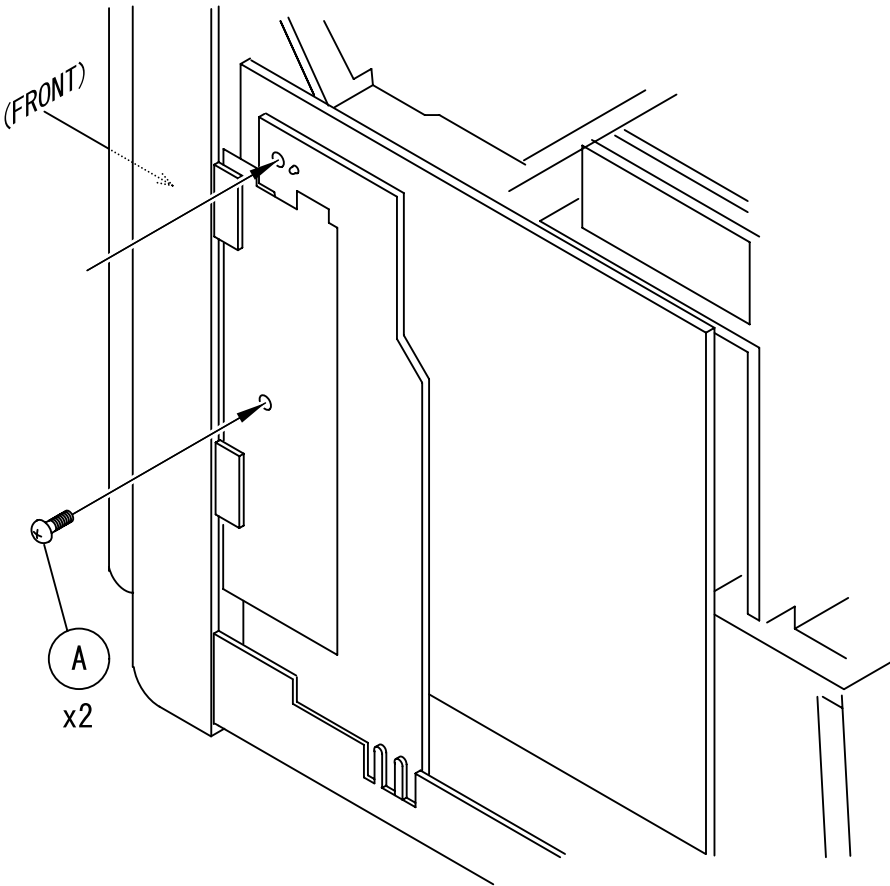
\* Note 2: Be careful not to damage the gear because the sled motor rotates while the FF or FWD button is being pressed even if the pick-up is located in the innermost track or the outermost track.

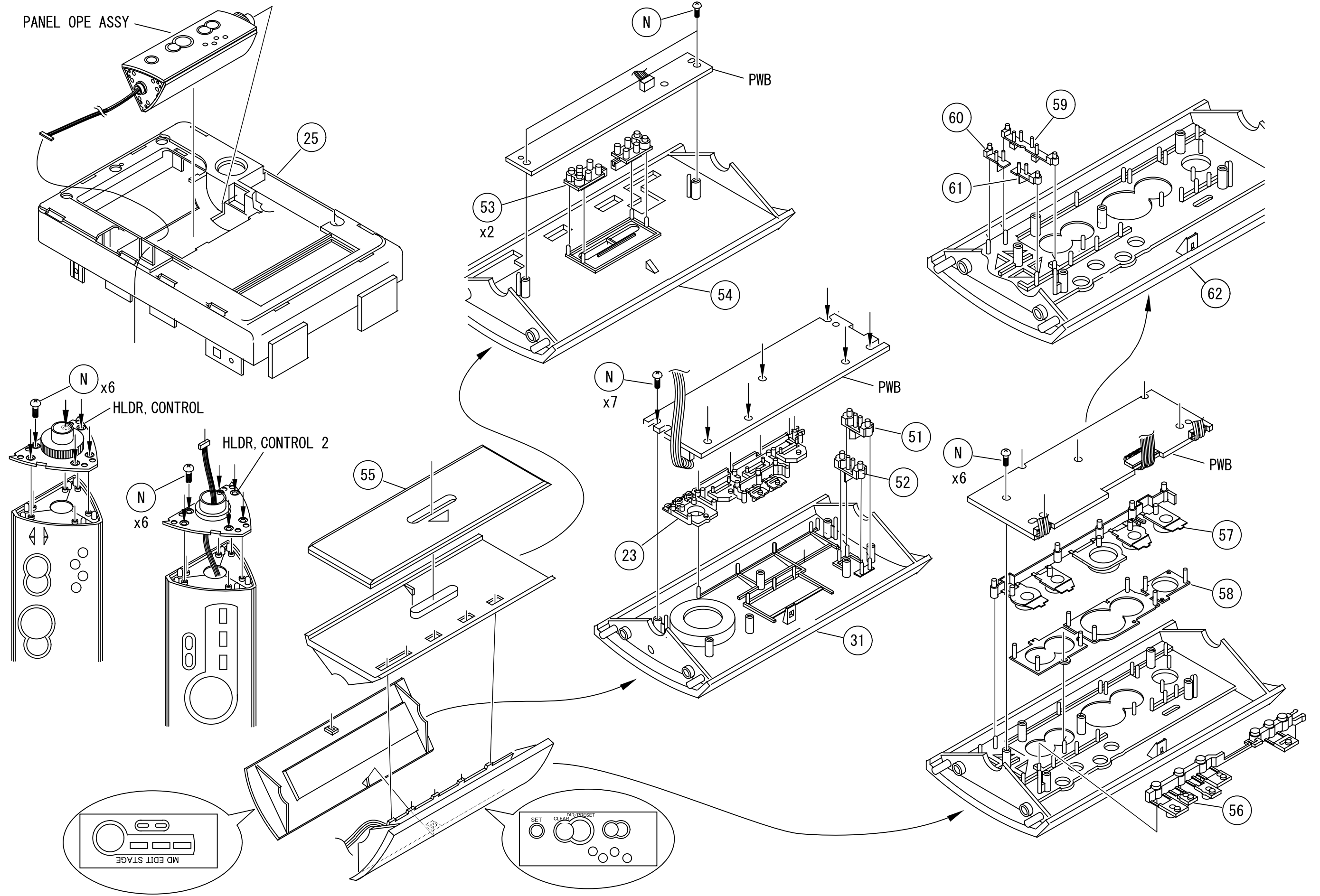
### 4. Overview of Operation

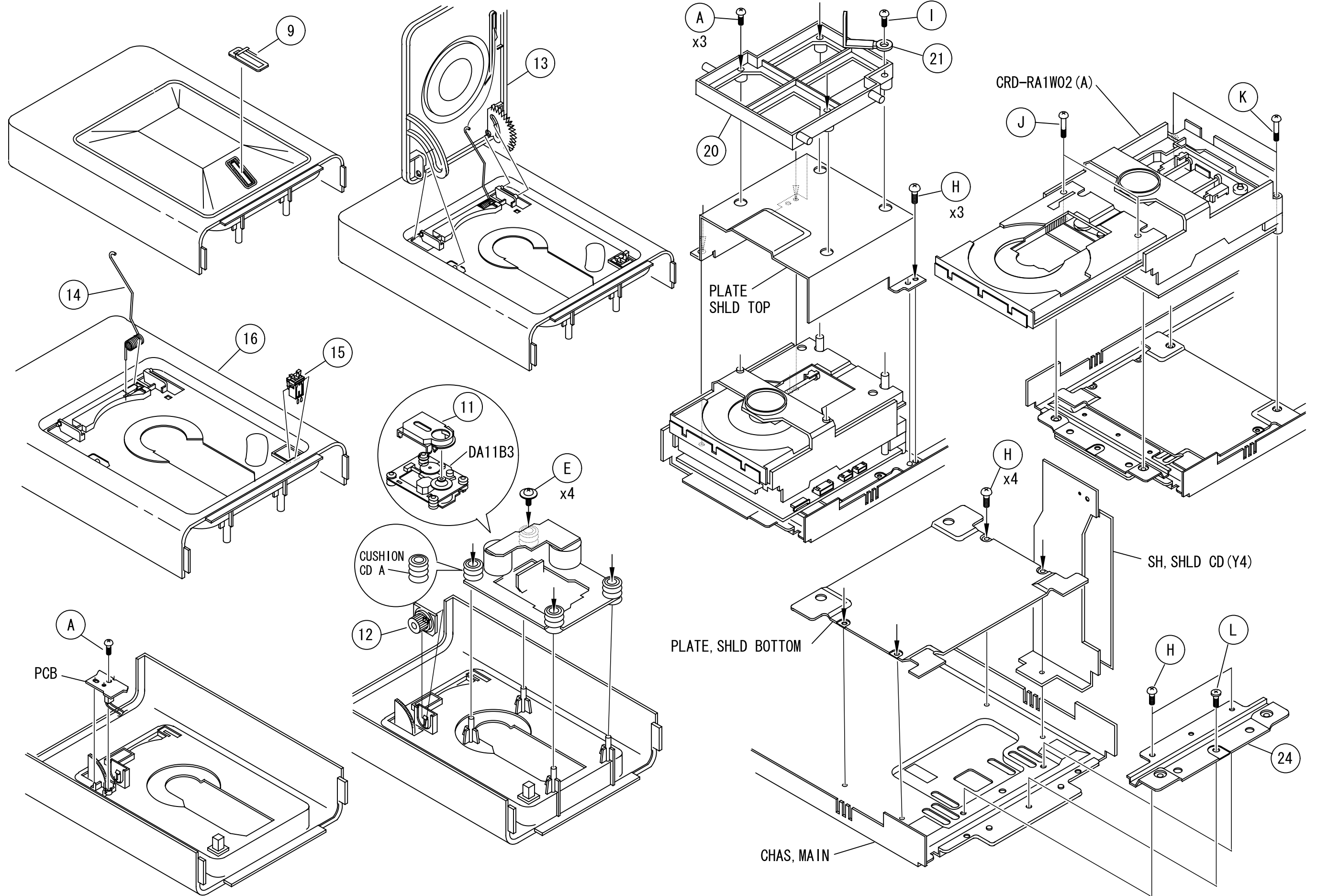
The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.

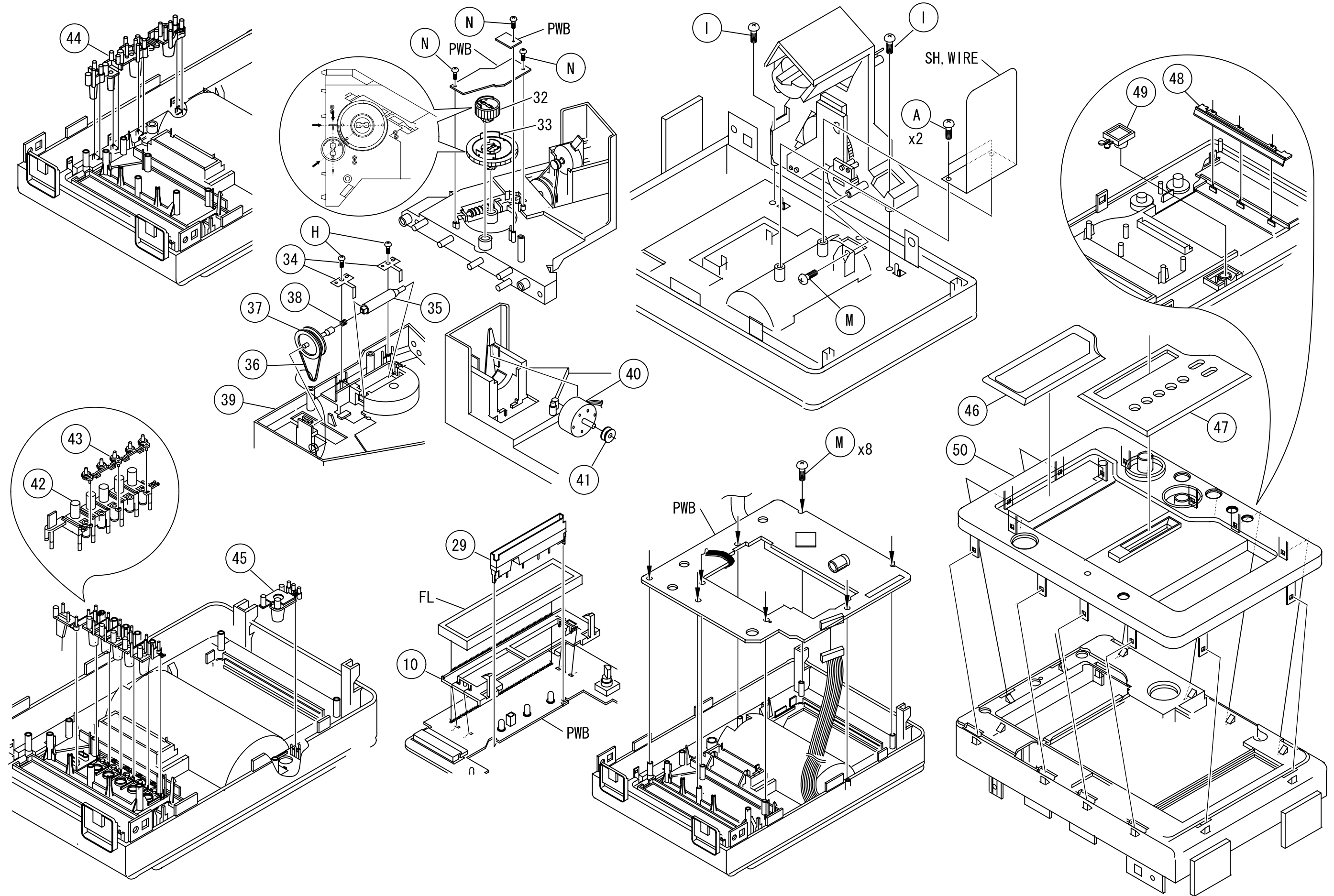




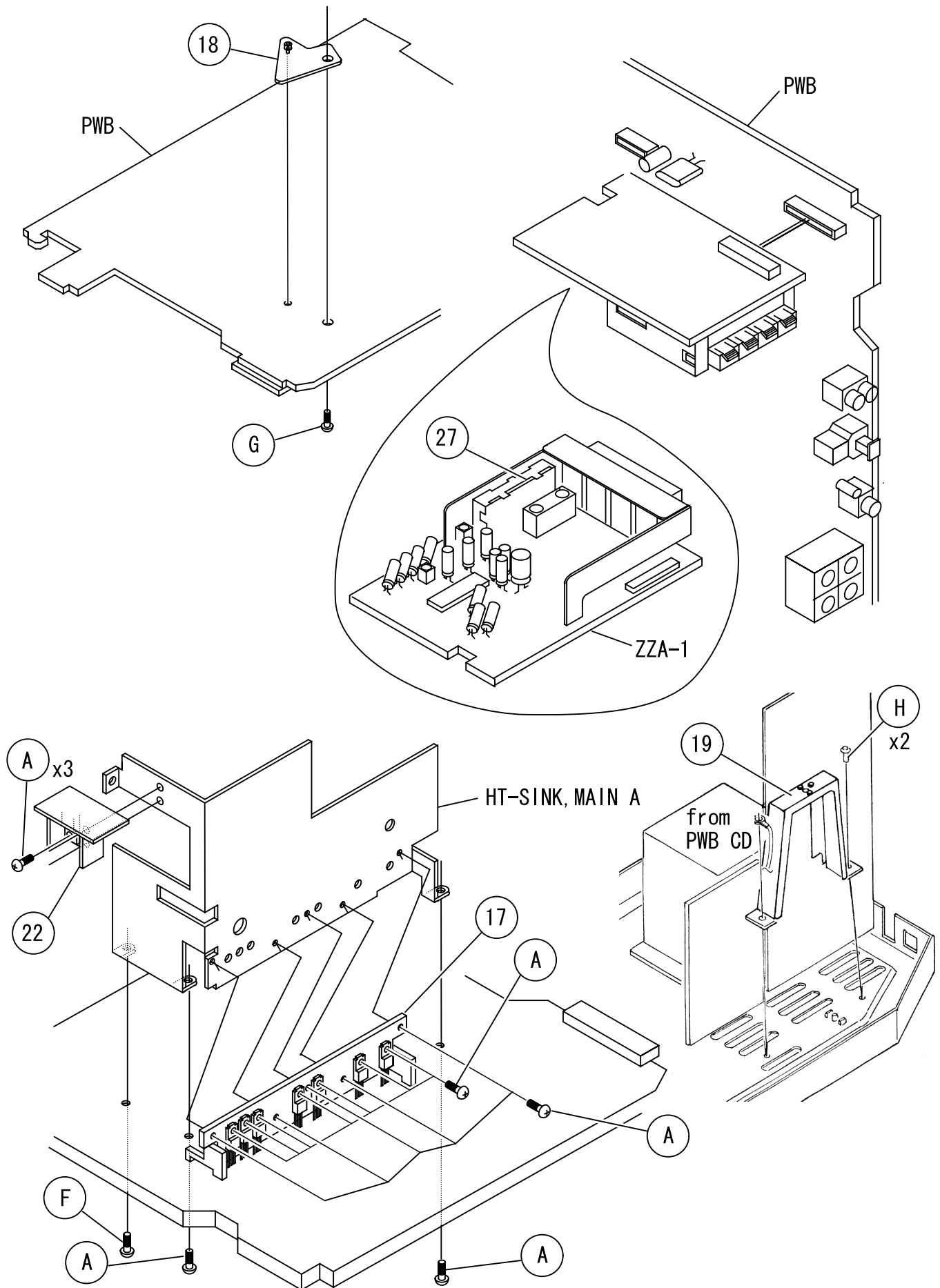








MECHANICAL PARTS ARRANGEMENT 6 / 6





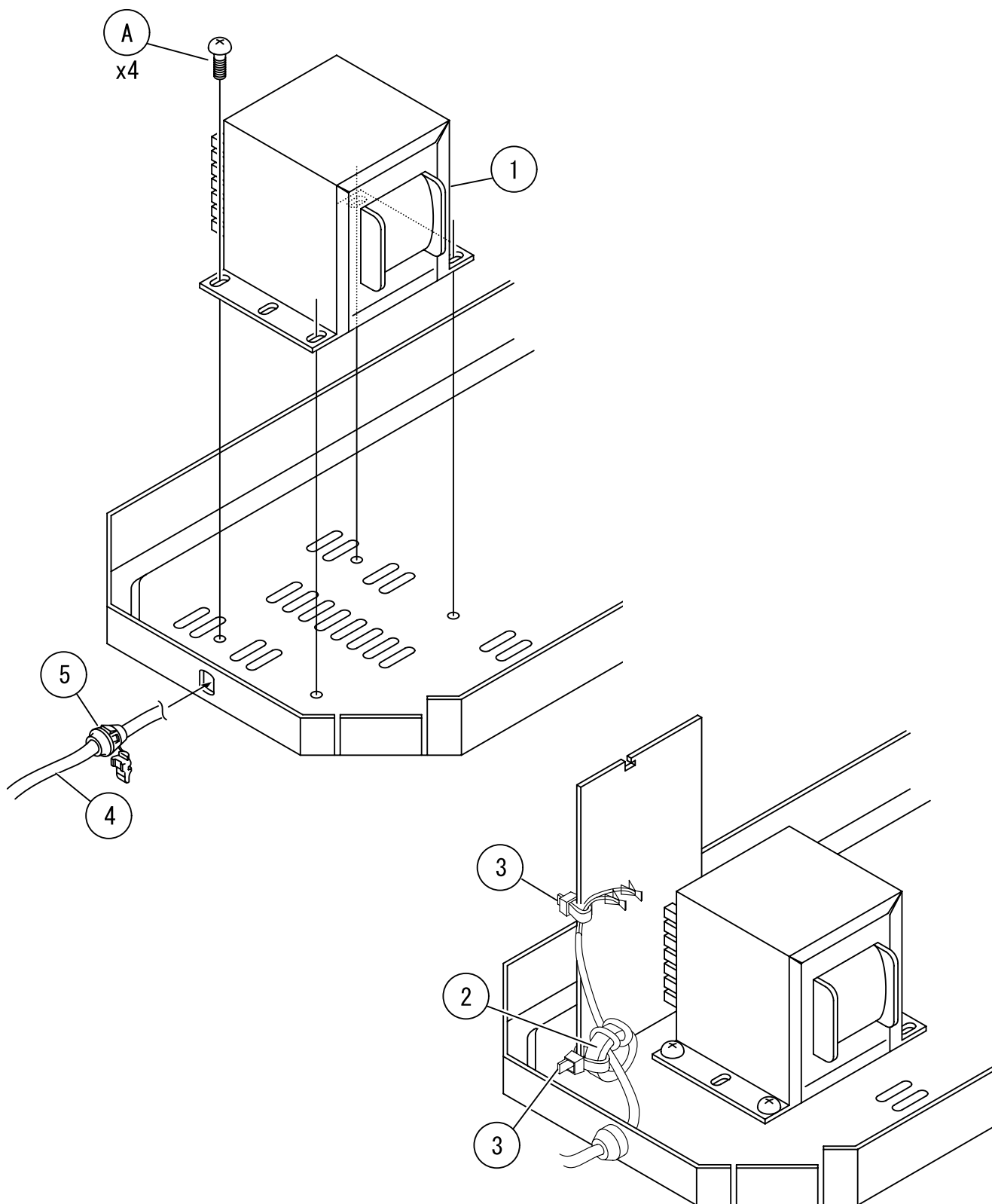
# MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CY4-007-010		WINDOW, TRAY	41	81-ZG1-212-010		PULLY, LOAD MO(*)
2	8A-CY4-004-010		PANEL, TRAY	42	8A-CY4-017-010		KEY, FUN(Y4)
3	8A-CY4-026-010		KNOB, RTRY MAIN (Y4)	43	8A-CJ4-029-010		REFLECTOR, FUN
4	8A-CJ4-017-010		KNOB, RTRY JOG	44	8A-CJ4-020-010		KEY, JOG
5	8A-CY4-013-010		PANEL, SIDE L(U)	45	8A-CJ4-041-010		KEY ASSY, POWER
6	8A-CY4-014-010		PANEL, SIDE R(U)	46	8A-CL4-039-010		WINDOW, DISPLAY (L4) EZ
7	8A-CJ4-239-010		HLLDR, CABI JOINT	47	8A-CY4-006-010		WINDOW, FUN
8	8A-CY4-012-010		CABI, REAR(U)	48	8A-CJ4-046-010		REFLECTOR, CONTROL
9	8A-CY4-005-010		WINDOW, LID CD	49	8A-CJ4-042-010		WINDOW, SENSOR
10	8A-CJ4-201-010		GUIDE, FL	50	8A-CY4-001-010		PANEL, FR
11	8Z-CDB-169-010		PANEL, CD SANYO	51	8A-CJ4-030-010		KEY, OPEN 3B
12	87-NF8-220-010		DMPR, 150	52	8A-CJ4-031-010		KEY, OPEN 3
13	8A-CY4-030-010		LID, CD(U)	53	8A-CJ4-027-010		KEY, OPEN 1
14	8A-CY4-203-010		SPR-T, CD	54	8A-CY4-024-010		PANEL, OPE 1 (Y4)
15	87-036-389-010		SW, PUSH 1-1-1 R8120125	55	8A-CL4-040-010		WINDOW, OPE(L4) EZ
16	8A-CY4-027-010		PANEL, TOP(U)	56	8A-CJ4-032-010		KEY, REC
17	8A-CJ4-202-010		HLLDR, TR EX	57	8A-CY4-020-010		KEY ASSY, PLAY(Y4)
18	8A-CJ4-219-010		HLLDR, PWB(MOLD)	58	8A-CY4-021-010		RING, PLAY(Y4)
19	8A-CJ4-210-110		HLLDR, HT-SINK	59	8A-CJ4-028-010		KEY, OPEN 2
20	8A-CY4-201-010		HLLDR, PWB CD	60	8A-CJ4-047-010		KEY, OPEN 2B
21	87-064-185-010		HLLDR, WIRE PVC 0.5	61	8A-CJ4-048-010		KEY, OPEN 2C
22	8A-CJ5-219-010		HLLDR, TR B	62	8A-CY4-015-010		PANEL, OPE 2 (Y4)
23	8A-CJ4-043-010		KEY, MD EDIT	A	87-067-703-010		BVT2+3-10 W/O SLOT
24	8A-CY4-202-010		HLLDR, CD MECHA	B	87-067-660-010		BVT2+3-8 W/O SLOT BLK
25	8A-CY4-011-010		CABI, FR(U)	C	87-721-095-410		QT2+3-8 W/O SLOT
26	8Z-CE3-206-010		CUSH, PL 9.2-4.2-5	D	87-591-095-410		QIT+3-8
27	A8-6ZA-19C-170		6ZA-1 YFEENC	E	8Z-CK5-222-010		S-SCREW, CD+2.6-6 F9
28	8A-CJ4-080-010		FOOT ASSY, H10	F	87-NF4-224-010		S-SCREW, IT3B+3-8 CU
29	8A-CJ4-204-010		GUIDE, LED CONTROL	G	87-067-579-010		BVT2+3-8 W/O SLOT
30	87-A90-796-010		FAN, F614R-12MC-19-240MM	H	87-067-584-010		BVT2+3-6 W/O SLOT
31	8A-CY4-025-010		PANEL, OPE 3 (Y4)	I	87-067-581-010		BVT2+3-15 W/O SLOT
32	8A-CJ4-203-110		GEAR, OPE 1	J	87-067-873-010		BVT2+3-25 W/O SLOT
33	8A-CJ4-205-110		GEAR, WORM-WHEEL	K	87-B10-069-010		BVT2+3-35 W/O
34	86-ZG1-232-010		SPR-P, WORM	L	87-741-094-410		UT2+3-6 W/O SLOT
35	84-ZG1-256-010		GEAR, WORM N2	M	87-078-060-010		BVIT3B+3-10
36	86-ZG1-225-010		BELT, SQ1.2-32.9	N	87-067-868-010		V+1.7-4 BLK HL
37	86-ZG1-221-010		PULLEY, TT	O	87-WA5-253-010		W, 3.3-10-0.8
38	86-ZG1-231-010		SPR-C, WORM	P	87-067-822-010		BVT2+3-20 W/O SLOT
39	8A-CJ4-206-210		HLLDR, GEAR				
40	87-A90-036-010		MOT ASSY, RF-300CA-11440				

## COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue				

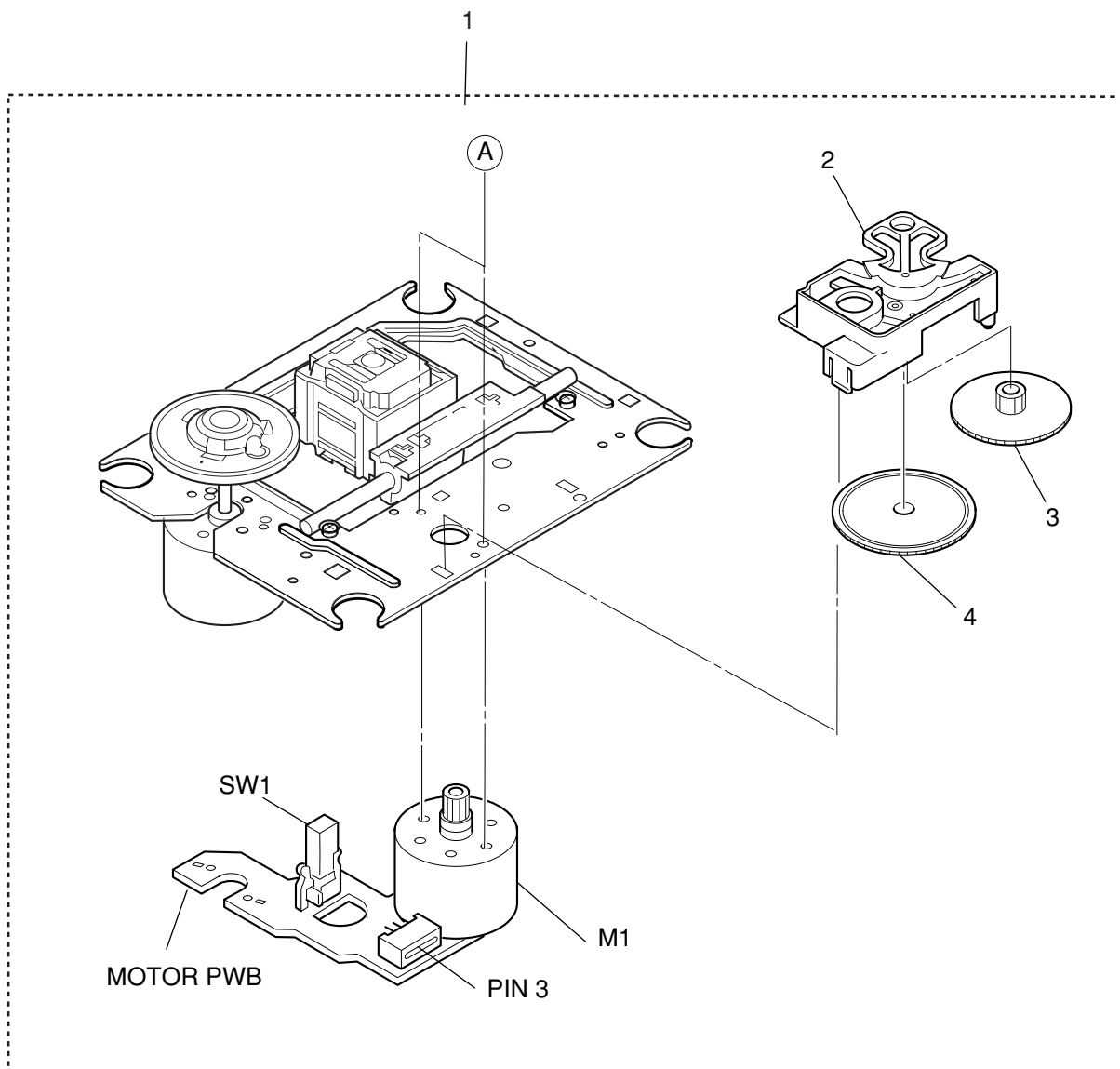
# POWER BLOCK PARTS ARRANGEMENT 1 / 1



## POWER BLOCK PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
△ 1	8A-CJ4-607-010		PT,U ACJ-4
2	87-003-317-010		F-BEAD,15-25-15 E2515MRT
3	87-A90-193-010		HLDR,CV100 (B)
△ 4	87-A80-110-010		AC CORD ASSY,U SPT-2W
5	87-085-189-010		BUSHING,AC CORD(U) CM-22C
A	87-067-585-010		BVTT+4-6

# CD MECHANISM EXPLODED VIEW 1 / 1



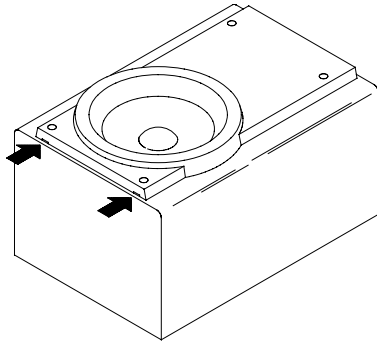
# CD MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	M8-AZK-M90-070	DA11B3	
2	S2-121-A28-400		COVER GEAR
3	S2-511-A21-000		GEAR MIDDLE
4	S2-511-A21-100		GEAR, DRIVE
A	S1-PN2-03R-OSE		SCR PAN PCS 2-3

## GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE)

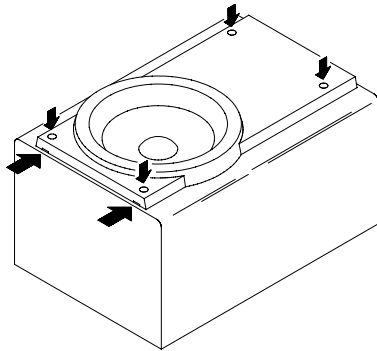
### Type.1

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



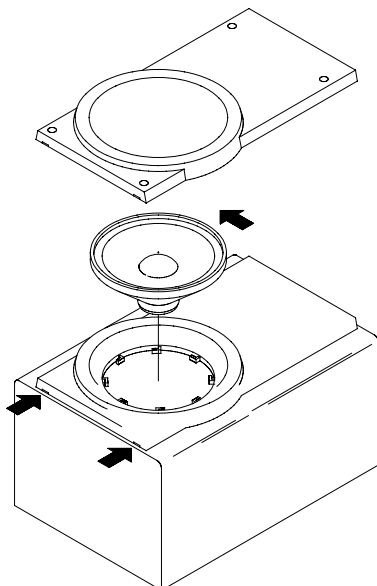
### Type.2

Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver. Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.

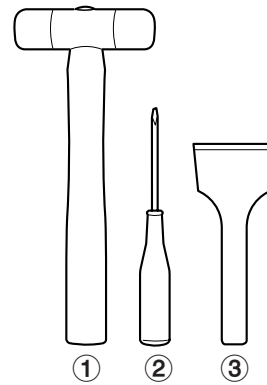


### Type.3

Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Turn the speaker unit to counter-clockwise direction while inserting a flat-bladed screwdriver into one of the hollows around speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



### Type.4



### TOOLS

- ① Plastic head hammer
- ② (⊖) flat head screwdriver
- ③ Cut chisel

### How to Remove the PANEL, FR

1. Insert the (⊖) flat head screwdriver tip into the gap between the PANEL, FR and the PANEL, SPKR. Tap the head of the (⊖) flat head screwdriver with the plastic hammer head, and create the clearance as shown in Fig-1.
2. Insert the cut chisel in the clearance, and tap the head of the cut chisel with plastic hammer as shown in Fig-2, to remove the PANEL, FR.
3. Place the speaker horizontally. Tap head of the cut chisel with plastic hammer as shown in Fig-3, and remove the PANEL, FR completely.

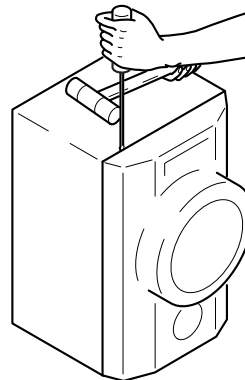


Fig-1

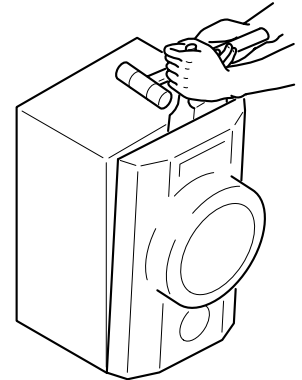


Fig-2

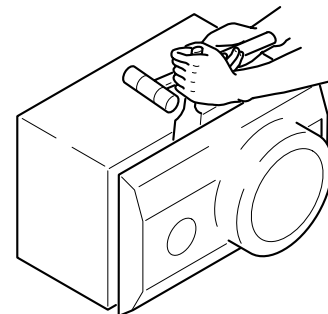


Fig-3

### How to Attach the PANEL, FR

Attach the PANEL, FR to the PANEL, SPKR. Tap the four corners of the PANEL, FR with the plastic hammer to fit the PANEL, FR into the PANEL, SPKR completely.

## SPEAKER PARTS LIST <SX-M510>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CY4-402-010		CABI, B
2	8A-CY4-403-010		PANEL, FR B
3	8A-CY4-404-010		PANEL, SP B
4	8A-CJ4-405-010		PANEL, RING TW
5	8A-CY4-405-010		GRILLE, FRAME ASSY G
6	8A-CY4-406-010		SPKR, W 130
7	8A-CJ5-417-010		SPKR, TW 25
8	8A-CJ4-501-010		CORD, SP

## ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-CY4-903-110		IB, U (ESF) I
2	87-006-225-010		AM LOOP ANT NC2
3	87-043-115-010		ANT, FEEDER FM
4	8A-CY4-951-110		RC UNIT, RC-AAT16

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