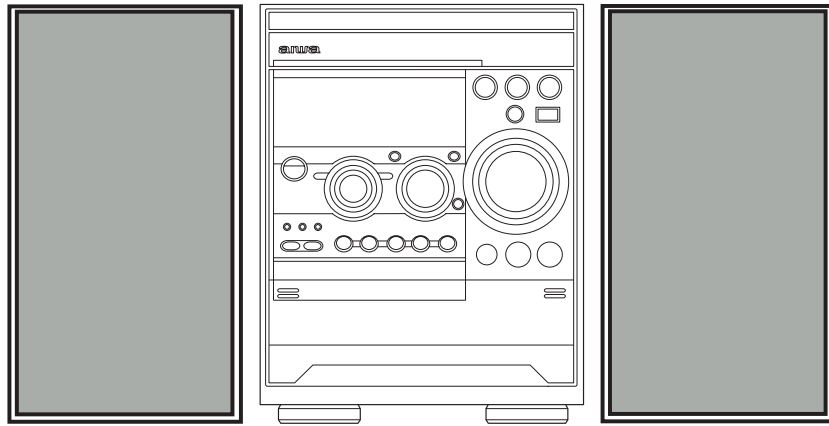




NSX-R50 K

NSX-R51 EZ



SERVICE MANUAL

COMPACT DISC
STEREO SYSTEM

BASIC TAPE MECHANISM : ZZM-3 PR3NM
BASIC CD MECHANISM : BZG-5 ZD3GNM

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-R50	CX-NR50	SX-NR50	RC-CAS01
NSX-R51	CX-NR51		

- If requiring information about the CD mechanism, see Service Manual of BZG-5, (S/M Code No. 09-00C-353-3N6).

aiwa

S/M Code No. 09-01A-449-7N1



SPECIFICATIONS

MAIN UNIT CX-NR50 (K) / CX-NR51 (EZ)

TUNER

FM tuning range	87.5 MHz to 108 MHz
FM usable sensitivity (IHF)	16.8 dBf
FM antenna terminal	75 ohms (unbalanced)
MW tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
MW usable sensitivity	350 μ V/m
LW tuning range	144 kHz to 290 kHz
LW usable sensitivity	1400 μ V/m
MW/LW antenna	Loop antenna

AMPLIFIER

Power output	Rated: 64 W + 64 W (6 ohms, T.H.D. 1 %, 1 kHz/DIN 45500) Reference: 80 W + 80 W (6 ohms, T.H.D. 10 %, 1 kHz/DIN 45324) EZ: DIN MUSIC POWER: 210 W + 210 W
Total Harmonic distortion	0.08 % (35 W, 1 kHz, 6 ohms, DIN AUDIO)
Input	VIDEO/AUX: 500 mV
Outputs	SPEAKERS: 6 ohms or more PHONES: 32 ohms or more

CASSETTE DECK

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz - 15 kHz
Recording system	AC bias
Heads	DECK 1 : playback X 1 DECK 2 : recording/playback X 1,

CD PLAYER

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

GENERAL

Power requirements	230 V AC, 50 Hz
Power consumption	100 W
Power consumption in standby mode	With ECO mode on: 0.6 W With ECO mode off: 19 W
Dimensions (W x H x D)	260 x 324 x 360 mm
Weight	6.9 kg

FRONT SPEAKERS SX-NR50

Speaker system	3 way, bass reflex (magnetic shielded)
Speaker units	Woofer: 160 mm cone Tweeter: 60 mm cone Super tweeter: 20 mm ceramic X 2
Impedance	6 ohms
Dimensions (W x H x D)	250 x 324 x 268 mm
Weight	4.0 kg

• Design and specifications are subject to change without notice.

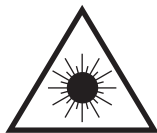
erase x 1

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.

CAUTION

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

ATTENTION

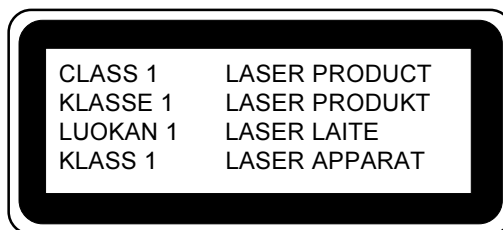
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL

Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er 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.

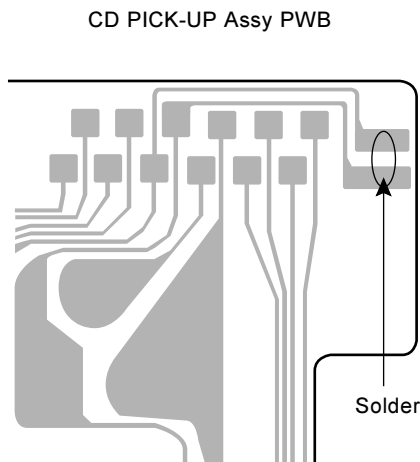


Precaution to replace Optical block

(KSS-213F)

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 right figure.



NOTE ON BEFORE STARTING REPAIR

1. Forced discharge of electrolytic capacitor of power supply block

When repair is going to be attempted in the set that uses relay circuit in the power supply block, electric potential is kept charged across the electrolytic capacitors (C101, 102) even though AC power cord is removed. If repair is attempted in this condition, secondary defect can occur.

In order to prevent the secondary trouble, perform the following measures before starting repair work.

Discharge procedure

- ① Remove the AC power cord.
- ② Connect a discharging resistor at an end of lead wire that has clips at both ends. Connect the other end of the lead wire to metal chassis.
- ③ Contact the other end of the discharging resistor to the positive (+) side (+VH) of C101. (For two seconds)
- ④ Contact the same end of the discharging resistor as step ③ to the negative (-) side (-VH) of C102 in the same way. (For two seconds)
- ⑤ Check that voltage across C101 and C102 has decreased to 1 V or less using a multimeter or an oscilloscope.

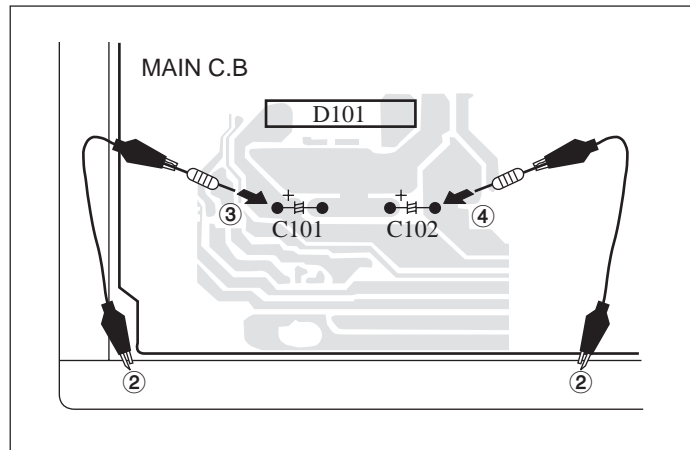


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor (Ω)	Rated power (W)	Parts number
25-48	100	3	87-A00-247-090
49-140	220	5	87-A00-232-090

Note: The reference numbers (C101, C102) of the electrolytic capacitors can change depending on the models. Be sure to check the reference numbers of the charging capacitors on schematic diagram before starting the discharging work.

2. Check items before exchanging the MICROCOMPUTER

Be sure to check the following items before exchanging the MICROCOMPUTER. Exchange the MICROCOMPUTER after confirming that the MICROCOMPUTER is surely defective.

2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.

When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

- ① Turn on the AC main power.
- ② Confirm that the main power is turned on and the HOLD terminal of the MICROCOMPUTER keeps the "H" level or not.
- ③ When the HOLD terminal is "L" level, the abnormality detection circuit is judged to be working correctly and the MICROCOMPUTER is judged to be good.

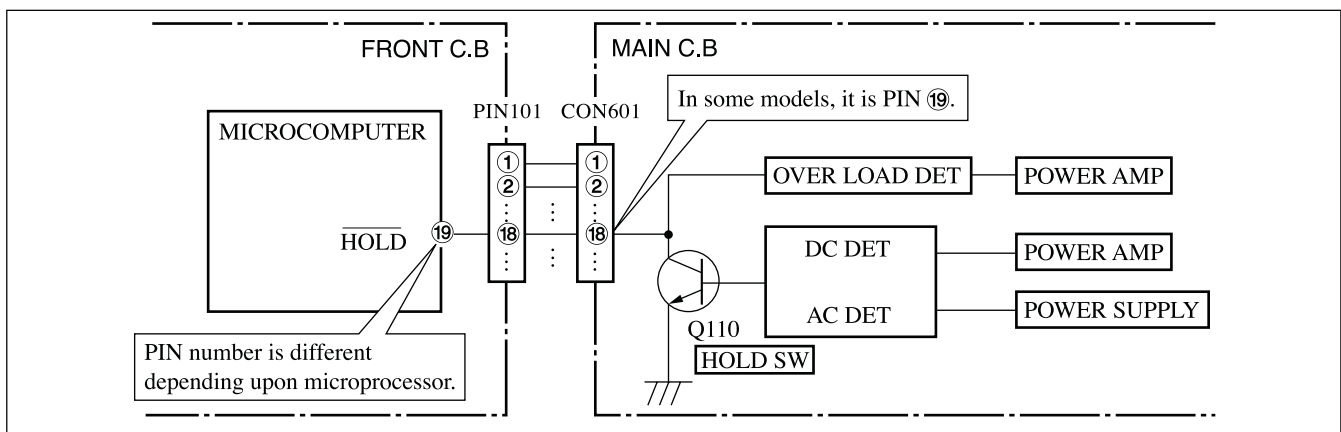


Fig-2-1

In such a case, check also if the POWER AMPLIFIER circuit or power supply circuit has any abnormalities or not.

2-2. Regarding reset

There are cases that the machine does not work correctly because the MICROCOMPUTER is not reset even though the AC power cord is re-inserted, or the software reset (pressing the STOP key + POWER key) is performed.

When the above described phenomenon occurs, it can lead to wrong judgement as if the MICROCOMPUTER is defective and to exchange the MICROCOMPUTER. In such a case, perform the forced-reset by the following procedure and check good or no good of the MICROCOMPUTER.

- ① Remove the AC power cord.

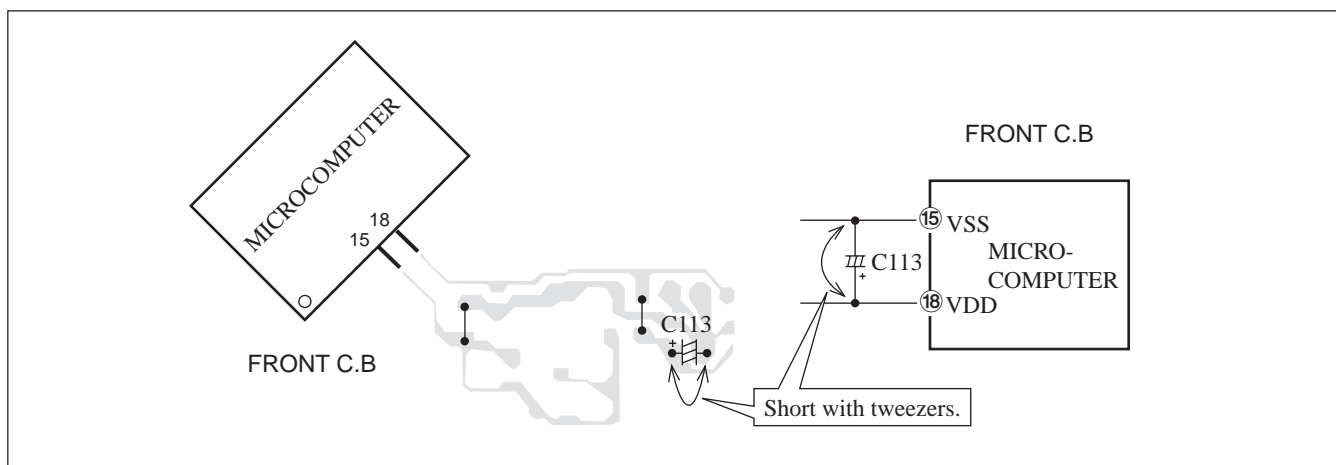


Fig-2-2

- ② Short both ends of the electrolytic capacitor C113 that is connected to VDD of the MICROCOMPUTER with tweezers.
- ③ Connect the AC power cord again. If the MICROCOMPUTER returns to the normal operation, the MICROCOMPUTER is good.

Note: The reference number or MICROCOMPUTER pin number of transistor (Q110) and electrolytic capacitor (C113) can change depending on the models. Be sure to check the reference numbers on schematic diagram before starting the discharging work.

2-3. Confirmation of soldering state of MICROCOMPUTER

Check the soldering state of the MICROCOMPUTER in addition to the above described procedures. Be sure to exchange the MICROCOMPUTER after surely confirming that the trouble is not caused by poor soldering but the MICROCOMPUTER itself.

ELECTRICAL MAIN PARTS LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC				C21	87-A12-826-000		CAP,E 3300-35 M 85 GS
	87-A21-419-040		C-IC,NJM14558MD-TE2	C22	87-A12-826-000		CAP,E 3300-35 M 85 GS
	87-A22-112-040		C-IC,BD3861FS	C25	87-A12-072-080		CAP,E 100-25 SMG
	87-070-289-040		C-IC,BU 2092F	C26	87-A12-072-080		CAP,E 100-25 SMG
	87-A21-695-010		IC,LA1845L	C27	87-A12-072-080		CAP,E 100-25 SMG
	87-A20-440-040		C-IC,BU1920FS<EZ>	C28	87-A12-072-080		CAP,E 100-25 SMG
	8B-NF1-605-030		C-IC,UPD780228-061-3BA	C30	87-A12-095-080		CAP,E 100-50 SMG
	87-A21-831-010		IC,SPS-442-1-F1	C31	87-A12-062-080		CAP,E 100-10 SMG
	87-A21-928-010		IC,LC72131D-N	C32	87-012-286-080		CAP, U 0.01-25
	87-A21-269-010		IC,EW 732	C34	87-A12-072-080		CAP,E 100-25 SMG
TRANSISTOR				C35	87-A12-071-080		CAP,E 47-25 SMG
	87-A30-494-080		TR,2SA1980G	C36	87-A12-067-080		CAP,E 330-16 SMG
	89-213-702-010		TR,2SB1370	C38	87-012-286-080		CAP, U 0.01-25
	87-026-610-080		TR,KTC3198GR	C60	87-A12-089-080		CAP,E 3.3-50 SMG
	87-A30-076-080		C-TR,2SC3052F	C61	87-A12-071-080		CAP,E 47-25 SMG
	87-A30-075-080		C-TR,2SA1235F	C83	87-A12-068-080		CAP,E 470-16 SMG
	87-A30-635-040		C-TR,SBT5401F	C97	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-484-080		C-TR,KRA102S	C101	87-012-276-080		CAP, CHIP SS 1500 PBK
	87-A30-257-080		C-TR,2SD1306E	C102	87-012-276-080		CAP, CHIP SS 1500 PBK
	87-A30-074-080		C-TR,RT1P 141C	C103	87-A12-090-080		CAP,E 4.7-50 SMG
	87-A30-468-080		C-TR,KRC102S-RTK	C104	87-A12-090-080		CAP,E 4.7-50 SMG
	89-322-405-680		TR,2SC2240 (GR/BL)	C105	87-012-282-080		CAP, U 4700P-50
	87-A30-636-040		C-TR,SBT5551F	C106	87-012-282-080		CAP, U 4700P-50
	87-A30-528-010		TR,2SB1686	C107	87-A12-091-080		CAP,E 10-50 SMG
	87-A30-529-010		TR,2SD2642	C108	87-A12-091-080		CAP,E 10-50 SMG
	87-A30-186-010		FET,2SK3053	C109	87-012-195-080		C-CAP,U 100P-50CH
	87-A30-091-080		FET,2SJ460	C110	87-012-195-080		C-CAP,U 100P-50CH
	87-A30-090-080		FET,2SK2541	C111	87-A12-077-080		CAP,E 33-35 SMG
	87-A30-062-080		C-TR,KRC104S	C112	87-A12-077-080		CAP,E 33-35 SMG
	87-A30-495-080		TR,2SA1981Y	C113	87-A10-596-080		C-CAP,S 100P-100 J CH
	87-A30-582-080		TR,CDA1585BC	C114	87-A10-596-080		C-CAP,S 100P-100 J CH
	87-A30-288-040		C-TR,DTC114YKA	C117	87-A12-317-080		C-CAP,U 0.1-50 Z F
	87-A30-521-080		C-TR,2SC5345S (O)	C118	87-A12-317-080		C-CAP,U 0.1-50 Z F
	87-A30-489-080		C-TR,KRA107S	C119	87-012-286-080		CAP, U 0.01-25
	89-503-602-080		C-FET,2SK360E	C120	87-012-286-080		CAP, U 0.01-25
	87-A30-664-080		C-TR,2SC2620B	C123	87-010-177-080		C-CAP,S 820P-50 SL
	87-A30-086-070		C-TR,CSD1306E	C124	87-010-177-080		C-CAP,S 820P-50 SL
	87-A30-234-080		TR,CSC4115BC	C133	87-012-282-080		CAP, U 4700P-50
				C140	87-012-278-080		C-CAP,U 2200P-50 B
				C186	87-010-759-080		C-CAP,U, 0.1-25F
DIODE				C187	87-A12-890-080		CAP,E 10-63 VR
	87-A40-455-090		DIODE,RL203 GW	C188	87-A12-890-080		CAP,E 10-63 VR
	87-A40-553-080		DIODE,1N4003 LES	C225	87-A12-317-080		C-CAP,U 0.1-50 Z F
	87-A40-776-080		ZENER,UZ27BSD	C226	87-A12-317-080		C-CAP,U 0.1-50 Z F
	87-A40-291-080		DIODE,1N4148M (CPT)	C227	87-A12-317-080		C-CAP,U 0.1-50 Z F
	87-A40-764-080		ZENER,UZ10BSC	C228	87-A12-317-080		C-CAP,U 0.1-50 Z F
	87-A40-270-080		C-DIODE,MC2838	C229	87-010-191-080		C-CAP,S 0.015-50 F
	87-A40-269-080		C-DIODE,MC2836	C230	87-010-191-080		C-CAP,S 0.015-50 F
	87-A40-393-090		DIODE,1N5402GW (F20)	C231	87-012-286-080		CAP, U 0.01-25
	87-A40-747-080		ZENER,UZ5.1BSB	C232	87-012-286-080		CAP, U 0.01-25
	87-A40-749-080		ZENER,UZ5.6BSB	C301	87-012-275-080		C-CAP,U 1200P-50 B
	87-A40-748-080		ZENER,UZ5.6BSA	C302	87-012-275-080		C-CAP,U 1200P-50 B
	87-A40-760-080		ZENER,UZ9.1BSA	C303	87-012-275-080		C-CAP,U 1200P-50 B
	87-017-149-080		ZENER,HZS6A2L	C304	87-012-275-080		C-CAP,U 1200P-50 B
				C307	87-A12-062-080		CAP,E 100-10 SMG
MAIN C.B				C308	87-A12-062-080		CAP,E 100-10 SMG
C3	87-A12-317-080		C-CAP,U 0.1-50 Z F	C309	87-012-174-080		C-CAP,U 12P-50 J CH
C4	87-A12-317-080		C-CAP,U 0.1-50 Z F	C310	87-012-174-080		C-CAP,U 12P-50 J CH
C5	87-A12-317-080		C-CAP,U 0.1-50 Z F	C313	87-012-284-080		CAP, U 6800P-50
C6	87-A12-317-080		C-CAP,U 0.1-50 Z F	C314	87-012-284-080		CAP, U 6800P-50
C9	87-010-759-080		C-CAP,U, 0.1-25F	C315	87-A12-062-080		CAP,E 100-10 SMG
C10	87-010-759-080		C-CAP,U, 0.1-25F	C317	87-A12-085-080		CAP,E 0.33-50 SMG
C11	87-010-759-080		C-CAP,U, 0.1-25F	C318	87-A12-085-080		CAP,E 0.33-50 SMG
C12	87-010-759-080		C-CAP,U, 0.1-25F	C326	87-010-191-080		CAP, U 68P-50 J CH
C19	87-A12-831-000		CAP,E 2200-56 M 85 GS	C327	87-010-759-080		C-CAP,U, 0.1-25F
C20	87-A12-831-000		CAP,E 2200-56 M 85 GS	C350	87-012-286-080		CAP, U 0.01-25
				C360	87-A12-087-080		CAP,E 1-50 SMG
				C399	87-A10-039-080		C-CAP,U 470P-50 J CH
				C401	87-A12-083-080		CAP,E 0.1-50 SMG
				C402	87-A12-083-080		CAP,E 0.1-50 SMG

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C403	87-012-193-080		C-CAP,U 82P-50 CH	C793	87-A12-090-080		CAP,E 4.7-50 SMG
C404	87-012-193-080		C-CAP,U 82P-50 CH	C795	87-012-286-080		CAP, U 0.01-25
C405	87-012-286-080		CAP, U 0.01-25	C796	87-012-286-080		CAP, U 0.01-25
C406	87-012-286-080		CAP, U 0.01-25	C797	87-A12-091-080		CAP,E 10-50 SMG
C407	87-012-286-080		CAP, U 0.01-25	C798	87-012-286-080		CAP, U 0.01-25
C408	87-012-286-080		CAP, U 0.01-25	C799	87-A12-065-080		CAP,E 33-16 SMG
C409	87-012-278-080		C-CAP,U 2200P-50 B	C800	87-010-829-080		CAP, U 0.047-16
C410	87-012-278-080		C-CAP,U 2200P-50 B	C801	87-A12-089-080		CAP,E 3.3-50 SMG
C411	87-A12-091-080		CAP,E 10-50 SMG	C802	87-010-829-080		CAP, U 0.047-16
C412	87-A12-091-080		CAP,E 10-50 SMG	C803	87-010-787-080		CAP, U 0.022-25
C452	87-A12-069-080		CAP,E 22-25 SMG	C804	87-A12-062-080		CAP,E 100-10 SMG
C453	87-012-279-080		C-CAP,U 2700P-50 B	C807	87-A12-086-080		CAP,E 0.47-50 SMG
C454	87-012-279-080		C-CAP,U 2700P-50 B	C808	87-A12-087-080		CAP,E 1-50 SMG
C455	87-012-279-080		C-CAP,U 2700P-50 B	C809	87-A12-087-080		CAP,E 1-50 SMG
C456	87-012-286-080		CAP, U 0.01-25	C810	87-010-759-080		C-CAP,U, 0.1-25F
C457	87-A12-361-080		CAP,M 5600P-100 J CP	C814	87-012-286-080		CAP, U 0.01-25
C458	87-012-274-080		CHIP CAP,U 1000P-50B	C815	87-A12-086-080		CAP,E 0.47-50 SMG
C459	87-012-271-080		CAP, U 560P-50	C816	87-A12-086-080		CAP,E 0.47-50 SMG
C460	87-010-759-080		C-CAP,U, 0.1-25F	C818	87-012-276-080		CAP, CHIP SS 1500 PBK
C461	87-012-158-080		C-CAP,S 390P-50 CH	C821	87-A12-091-080		CAP,E 10-50 SMG
C462	87-012-158-080		C-CAP,S 390P-50 CH	C823	87-012-349-080		C-CAP,S 1000P-50 CH
C470	87-018-117-080		CAP, TC U68P-50J SL UP050	C824	87-A12-090-080		CAP,E 4.7-50 SMG
C602	87-012-282-080		CAP, U 4700P-50	C825	87-010-596-080		CAP, S 0.047-16
C603	87-012-282-080		CAP, U 4700P-50	C831	87-A12-092-080		CAP,E 22-50 SMG
C604	87-010-785-080		C-CAP,U0.015-25BK	C844	87-012-286-080		CAP, U 0.01-25
C605	87-010-785-080		C-CAP,U0.015-25BK	C850	87-A12-071-080		CAP,E 47-25 SMG
C606	87-010-785-080		C-CAP,U0.015-25BK	C851	87-012-286-080		CAP, U 0.01-25
C607	87-010-785-080		C-CAP,U0.015-25BK	C852	87-012-286-080		CAP, U 0.01-25
C608	87-A12-084-080		CAP,E 0.22-50 SMG	C853	87-012-286-080		CAP, U 0.01-25
C609	87-A12-084-080		CAP,E 0.22-50 SMG	C859	87-010-759-080		C-CAP,U, 0.1-25F
C610	87-A12-084-080		CAP,E 0.22-50 SMG	C860	87-012-286-080		CAP, U 0.01-25
C611	87-A12-084-080		CAP,E 0.22-50 SMG	C869	87-012-286-080		CAP, U 0.01-25<EZ>
C615	87-A12-086-080		CAP,E 0.47-50 SMG	C870	87-012-274-080		CHIP CAP,U 1000P-50B<EZ>
C616	87-A12-086-080		CAP,E 0.47-50 SMG	C871	87-012-199-080		CAP 220P<EZ>
C617	87-010-221-080		CAP, ELECT 470-10V	C872	87-012-199-080		CAP 220P<EZ>
C618	87-A12-091-080		CAP,E 10-50 SMG	C873	87-A10-039-080		C-CAP,U 470P-50 J CH<EZ>
C619	87-A12-061-080		CAP,E 47-10 SMG	C874	87-A12-091-080		CAP,E 10-50 SMG<EZ>
C623	87-A12-088-080		CAP,E 2.2-50 SMG	C875	87-010-759-080		C-CAP,U, 0.1-25F<EZ>
C624	87-A12-088-080		CAP,E 2.2-50 SMG	C876	87-A12-091-080		CAP,E 10-50 SMG<EZ>
C630	87-016-669-080		C-CAP,S 0.1-25 K B	C877	87-012-286-080		CAP, U 0.01-25<EZ>
C637	87-A12-087-080		CAP,E 1-50 SMG	C878	87-012-184-080		C-CAP,U 33P-50 CH<EZ>
C638	87-A12-087-080		CAP,E 1-50 SMG	C879	87-012-180-080		C-CAP,U 22P-50 CH<EZ>
C639	87-A12-087-080		CAP,E 1-50 SMG	C901	87-012-162-080		C-CAP,U 1P-50 CK
C640	87-A12-087-080		CAP,E 1-50 SMG	C902	87-012-165-080		CAP 3P
C641	87-A12-087-080		CAP,E 1-50 SMG	C903	87-012-164-080		C-CAP,U 2P-50 CK
C642	87-A12-087-080		CAP,E 1-50 SMG	C904	86-ZA1-615-080		C-CAP,U 680P-25 J CH
C643	87-A12-090-080		CAP,E 4.7-50 SMG	C905	87-012-162-080		C-CAP,U 1P-50 CK
C644	87-A12-090-080		CAP,E 4.7-50 SMG	C906	87-012-172-080		CAPACITOR CHIP U 10P CH
C645	87-A12-087-080		CAP,E 1-50 SMG	C907	87-012-166-080		C-CAP,U 4P-50 CH
C646	87-A12-087-080		CAP,E 1-50 SMG	C908	87-012-165-080		CAP 3P
C661	87-012-336-080		C-CAP, U 330P-50 J SL	C909	86-ZA1-615-080		C-CAP,U 680P-25 J CH
C662	87-012-336-080		C-CAP, U 330P-50 J SL	C910	87-012-164-080		C-CAP,U 2P-50 CK
C669	87-012-274-080		CHIP CAP,U 1000P-50B	C911	87-012-166-080		C-CAP,U 4P-50 CH
C670	87-012-274-080		CHIP CAP,U 1000P-50B	C912	87-012-195-080		C-CAP,U 100P-50CH
C677	87-012-286-080		CAP, U 0.01-25	C913	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
C678	87-012-286-080		CAP, U 0.01-25	C914	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
C686	87-012-283-080		C-CAP,U 5600P-50 B	C915	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
C687	87-012-283-080		C-CAP,U 5600P-50 B	C916	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
C771	87-A12-062-080		CAP,E 100-10 SMG	C917	87-012-178-080		C-CAP,U 18P-50 CH
C772	87-012-286-080		CAP, U 0.01-25	C918	87-012-172-080		CAPACITOR CHIP U 10P CH
C782	87-012-286-080		CAP, U 0.01-25	C919	87-012-184-080		C-CAP,U 33P-50 CH
C783	87-012-286-080		CAP, U 0.01-25	C920	87-012-184-080		C-CAP,U 33P-50 CH
C784	87-012-286-080		CAP, U 0.01-25	C921	87-012-180-080		C-CAP,U 22P-50 CH
C785	87-012-286-080		CAP, U 0.01-25	C922	87-012-174-080		CAP CHIP CERA SS 12P CHJ
C786	87-012-286-080		CAP, U 0.01-25	C923	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
C788	87-012-167-080		C-CAP,U 5P-50 CH	C924	87-012-164-080		C-CAP,U 2P-50 CK
C789	87-016-118-080		C-CAP,U0.022-25BJ	C925	87-012-164-080		C-CAP,U 2P-50 CK
C790	87-016-118-080		C-CAP,U0.022-25BJ	C926	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
C791	87-010-759-080		C-CAP,U, 0.1-25F	C931	87-A12-319-080		C-CAP,U 0.1-25 K B
C792	87-012-286-080		CAP, U 0.01-25	C940	87-012-286-080		CAP, U 0.01-25

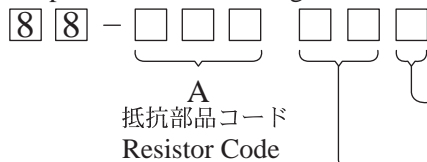
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C942	87-012-165-080		CAP 3P	R995	87-012-195-080		C-CAP,U 100P-50CH
C947	87-012-286-080		CAP, U 0.01-25	SFR451	87-A90-432-080		SFR,30K H NVZ6TLTA
C948	87-A10-039-080		C-CAP,U 470P-50 J CH	SFR452	87-A90-432-080		SFR,30K H NVZ6TLTA
C952	87-012-286-080		CAP, U 0.01-25	TC942	87-A91-774-080		TRIMMER,PLY 30P 6.8X5.4 CDYL
C957	87-012-174-080		CAP CHIP CERA SS 12P CHJ	TH101	87-A91-042-080		C-THMS,100K 55001
C958	87-012-286-080		CAP, U 0.01-25	TH102	87-A91-042-080		C-THMS,100K 55001
C959	87-010-759-080		C-CAP,U, 0.1-25F	W99	8B-NFJ-620-010		F-CABLE,9P 2.5 280MM
C960	87-010-759-080		C-CAP,U, 0.1-25F	W101	8B-NF1-640-010		F-CABLE,5P 2.5 250MM
C962	87-A12-087-080		CAP,E 1-50 SMG	WH1	87-A90-510-010		HLDR,WIRE 2.5-9P
C963	87-010-759-080		C-CAP,U, 0.1-25F	WH101	87-A90-459-010		HLDR,WIRE 2.5-5P
C971	87-A12-067-080		CAP,E 330-16 SMG	X862	87-A70-307-010		VIB,XTAL 4.332MHZ CSA-309ST<EZ>
C972	87-A12-090-080		CAP,E 4.7-50 SMG	X992	87-A70-306-010		VIB,XTAL 4.500MHZ CSA-309ST
C973	87-012-286-080		CAP, U 0.01-25				
C974	87-012-286-080		CAP, U 0.01-25				
C979	87-012-195-080		C-CAP,U 100P-50CH				
C981	87-A12-071-080		CAP,E 47-25 SMG	C108	87-010-785-080		C-CAP,U0.015-25BK
C982	87-010-759-080		C-CAP,U, 0.1-25F	C153	87-010-787-080		CAP, U 0.022-25
C983	87-012-286-080		CAP, U 0.01-25	C154	87-A12-078-040		CAP,E 47-35 SMG
C984	87-012-286-080		CAP, U 0.01-25	C155	87-A12-090-040		CAP,E 4.7-50 SMG
C985	87-012-195-080		C-CAP,U 100P-50CH	C156	87-A12-090-040		CAP,E 4.7-50 SMG
C987	87-012-286-080		CAP, U 0.01-25	C201	87-010-759-080		C-CAP,U, 0.1-25F
C989	87-012-286-080		CAP, U 0.01-25	C202	87-012-195-080		C-CAP,U 100P-50CH
C991	87-012-176-080		CAP 15P	C203	87-012-195-080		C-CAP,U 100P-50CH
C992	87-012-176-080		CAP 15P	C204	87-012-195-080		C-CAP,U 100P-50CH
C993	87-012-274-080		CHIP CAP,U 1000P-50B	C301	87-012-278-080		C-CAP,U 2200P-50 B
C995	87-012-274-080		CHIP CAP,U 1000P-50B	C351	87-A10-353-080		C-CAP,U0.22-10KB
C997	87-010-759-080		C-CAP,U, 0.1-25F	C361	87-012-274-080		CHIP CAP,U 1000P-50B
C998	87-A12-071-080		CAP,E 47-25 SMG	C362	87-012-274-080		CHIP CAP,U 1000P-50B
C999	87-A11-155-080		CAP,TC U 0.01-16 Z F	C363	87-012-274-080		CHIP CAP,U 1000P-50B
CF831	87-008-423-010		CERAMIC FILTER, SFE10.7MS3G-A	C364	87-012-274-080		CHIP CAP,U 1000P-50B
CF832	82-785-747-010		CF MS2 GHY R	C371	87-012-274-080		CHIP CAP,U 1000P-50B
CN301	87-A60-620-010		CONN,3P V 2MM JMT	C372	87-012-274-080		CHIP CAP,U 1000P-50B
CN351	87-A60-625-010		CONN,8P V 2MM JMT	C601	87-A12-069-040		CAP,E 22-25 SMG
CN601	87-099-719-010		CONN,30P TYK-B(X)	C801	87-A10-353-080		C-CAP,U 0.22-10KB
CN602	87-A60-131-010		CONN,6P V FE	C802	87-010-213-080		C-CAP,S 0.015-50 B
D901	87-A41-048-040		C-VARI-CAP,HVM16-03 TL	C803	87-012-280-080		CAP, U 3300P-50
D902	87-A41-048-040		C-VARI-CAP,HVM16-03 TL	C804	87-A10-592-080		C-CAP,S 0.015-50 J B
D903	87-A41-048-040		C-VARI-CAP,HVM16-03 TL	C805	87-016-116-080		C-CAP,U 0.015-25 J B CB
FC602	88-906-251-110		FF-CABLE,6P 1.25 (RVS-FACE)	C806	87-012-273-080		C-CAP,U 820P-50 B
J203	87-A60-238-010		TERMINAL,SP 4P (MSC)	C807	87-016-116-080		C-CAP,U 0.015-25 J B CB
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN	C808	87-A12-083-040		CAP,E 0.1-50 SMG
J832	87-A60-403-010		TERMINAL,ANT PAL 2P HSP-312V05	C809	87-A12-090-040		CAP,E 4.7-50 SMG
JR123	87-A10-596-080		C-CAP,S 100P-100 J CH	C810	87-010-759-080		C-CAP,U, 0.1-25F
JR124	87-A10-596-080		C-CAP,S 100P-100 J CH	C811	87-A12-052-080		C-CAP,S 0.033-25 J B
L201	87-A50-610-010		COIL,1UH K(MDEC)	C812	87-012-285-080		C-CAP,U 8200P-50 B
L202	87-A50-610-010		COIL,1UH K(MDEC)	C901	87-012-195-080		C-CAP,U 100P-50CH
L451	87-007-342-010		COIL,OSC 85K BIAS	C902	87-012-195-080		C-CAP,U 100P-50CH
L801	87-A50-608-010		COIL,FM DET-N(TOK)	C903	87-012-195-080		C-CAP,U 100P-50CH
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)	C904	87-012-195-080		C-CAP,U 100P-50CH
L811	87-005-847-080		COIL,2.2UH(CECS)	C905	87-012-195-080		C-CAP,U 100P-50CH
L832	87-005-847-080		COIL,2.2UH(CECS)	C906	87-012-195-080		C-CAP,U 100P-50CH
L861	87-005-847-080		COIL,2.2UH(CECS)<EZ>	C907	87-012-195-080		C-CAP,U 100P-50CH
L901	86-ZA1-612-010		COIL,FM ANT/RF-1-Z	C908	87-012-195-080		C-CAP,U 100P-50CH
L902	86-ZA1-613-010		COIL,FM ANT/RF-2-Z	C909	87-012-195-080		C-CAP,U 100P-50CH
L903	87-005-847-080		COIL,2.2UH(CECS)	C910	87-012-195-080		C-CAP,U 100P-50CH
L904	86-ZA1-613-010		COIL,FM ANT/RF-2-Z	C911	87-012-274-080		CHIP CAP,U 1000P-50B
L905	86-ZA1-612-010		COIL,FM ANT/RF-1-Z	C912	87-010-759-080		C-CAP,U, 0.1-25F
L906	87-005-847-080		COIL,2.2UH(CECS)	C913	87-A10-189-040		CAP,E 220-10
L907	86-ZA1-614-010		COIL,FM OSC-Z	C915	87-010-759-080		C-CAP,U, 0.1-25F
L908	88-ZA1-624-010		COIL,FM IFT 7-6.2 (COILS)	C916	87-010-759-080		C-CAP,U, 0.1-25F
L941	87-A50-020-010		COIL,ANT LW(COI)	C917	87-010-759-080		C-CAP,U, 0.1-25F
L942	87-A50-019-010		COIL,OSC LW(COI)	C919	87-012-286-080		CAP, U 0.01-25
L951	8A-NF8-668-010		COIL,AM PACK 2(TOK)	C920	87-010-829-080		CAP, U 0.047-16
R129	87-A00-257-080		RES,M/F 0.15-1W J	C921	87-012-282-080		CAP, U 4700P-50
R130	87-A00-257-080		RES,M/F 0.15-1W J	C922	87-012-195-080		C-CAP,U 100P-50CH
R131	87-A00-257-080		RES,M/F 0.15-1W J	C951	87-012-172-080		CAPACITOR CHIP U 10P CH
R132	87-A00-257-080		RES,M/F 0.15-1W J	C952	87-010-854-080		C-CAP,S 560PCH
R790	87-012-286-080		CAP, U 0.01-25	C953	87-012-349-080		C-CAP,S 1000P-50 CH
R991	87-012-195-080		C-CAP,U 100P-50CH	C961	87-A12-075-040		CAP,E 10-35 SMG
R993	87-012-195-080		C-CAP,U 100P-50CH	C962	87-012-336-080		C-CAP,U 330P-50 J SL

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C963	87-010-759-080		C-CAP,U, 0.1-25F				
CN104	87-A60-057-010		CONN,11P V 9604S-11C				
CN202	87-099-209-010		CONN,4P 6216H				
CN701	87-099-720-010		CONN,30P TYK-B(P)				
CN731	87-099-196-010		CONN,8P 6216 V				
FC104	88-911-101-110		FF-CABLE,11P 1.25				
FC202	88-904-201-110		FF-CABLE, 4P 1.25				
FC731	88-908-301-110		FF-CABLE,8P 1.25				
FL901	8B-NF1-610-010		FL,BJ854GNK BNF-1				
L951	87-A50-655-010		COIL,CLK 4.19MHZ (TOKO)7KLY				
LED201	87-A41-062-040		LED,LTL-1CHEE-012A RED				
LED205	87-A41-062-040		LED,LTL-1CHEE-012A RED				
LED206	87-A41-062-040		LED,LTL-1CHEE-012A RED				
LED207	87-A41-062-040		LED,LTL-1CHEE-012A RED				
LED208	87-A41-062-040		LED,LTL-1CHEE-012A RED				
S321	87-A91-024-180		SW,TACT KSHG611BT				
S322	87-A91-024-180		SW,TACT KSHG611BT				
S323	87-A91-024-180		SW,TACT KSHG611BT				
S324	87-A91-024-180		SW,TACT KSHG611BT				
S325	87-A91-024-180		SW,TACT KSHG611BT				
S326	87-A91-024-180		SW,TACT KSHG611BT				
S327	87-A91-024-180		SW,TACT KSHG611BT				
S328	87-A91-024-180		SW,TACT KSHG611BT				
S329	87-A91-024-180		SW,TACT KSHG611BT				
S330	87-A91-024-180		SW,TACT KSHG611BT				
S331	87-A91-024-180		SW,TACT KSHG611BT				
S332	87-A91-024-180		SW,TACT KSHG611BT				
S333	87-A91-024-180		SW,TACT KSHG611BT				
S341	87-A91-024-180		SW,TACT KSHG611BT				
S342	87-A91-024-180		SW,TACT KSHG611BT				
S343	87-A91-024-180		SW,TACT KSHG611BT				
S344	87-A91-024-180		SW,TACT KSHG611BT				
S345	87-A91-024-180		SW,TACT KSHG611BT				
S346	87-A91-024-180		SW,TACT KSHG611BT				
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S350	87-A91-024-180		SW,TACT KSHG611BT<EZ>				
S361	87-A92-178-010		SW,RTRY EC12E2430402-300-OFF				
S363	87-A92-273-010		SW,RTRY EC12E12204 30MM				
S371	87-A92-273-010		SW,RTRY EC12E12204 30MM				

○チップ抵抗部品コード/CHIP RESISTOR PART CODE

チップ抵抗部品コードの成り立ち

Chip Resistor Part Coding



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



ECB

2SC2240(GR/BL)
CDA1585BC
CSC4115BC
KTC3198GR



ECB

2SA1980G
2SA1981Y



GDS

2SK3053



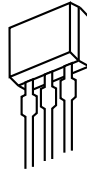
BCE

2SB1370



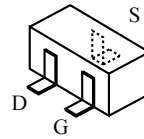
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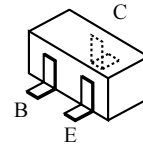


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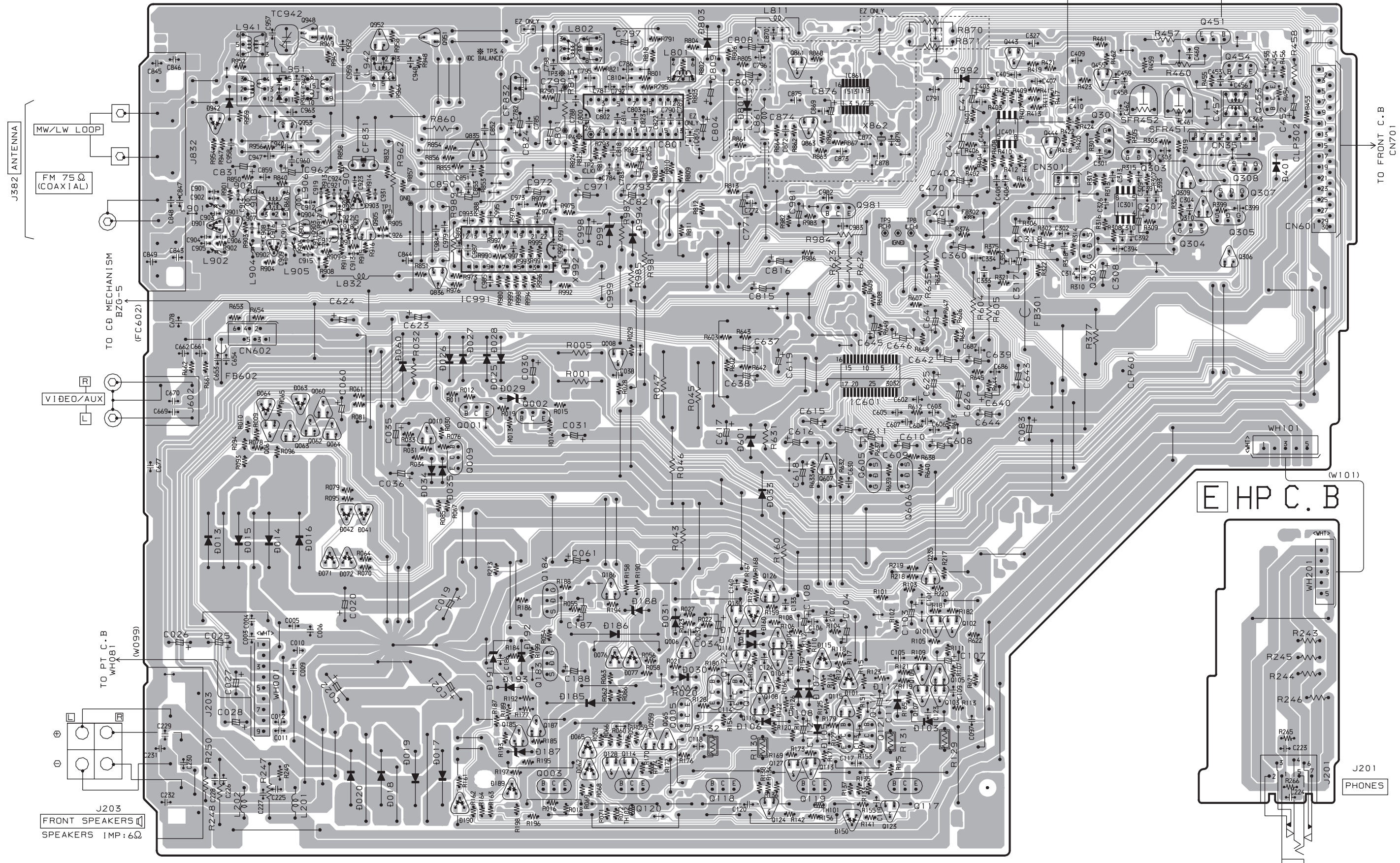


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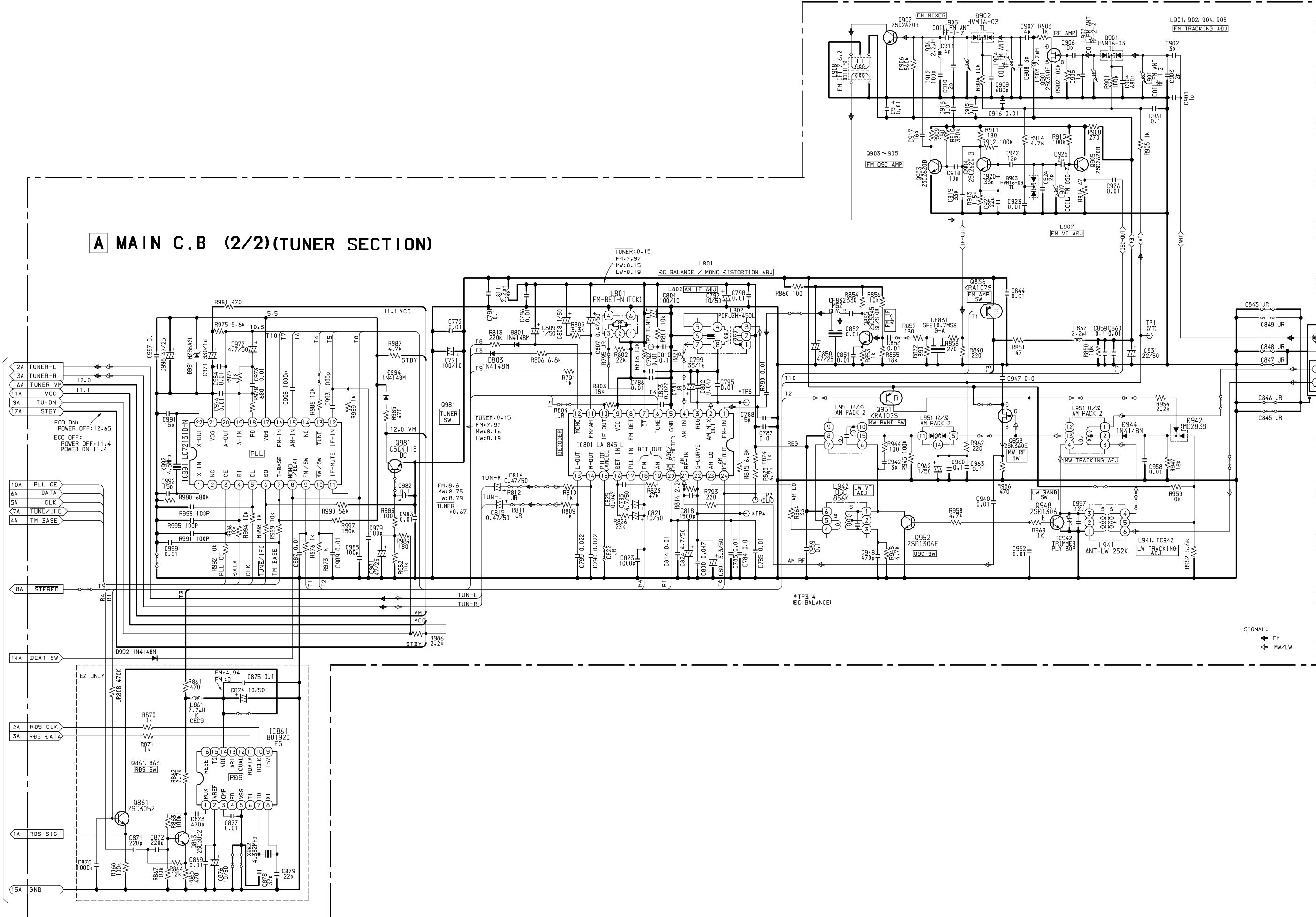


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2SC2620B KRA107S
2SC3052F KRC102S-RTK
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CSD1306E SBT5401F
DTC114YKA SBT5551F

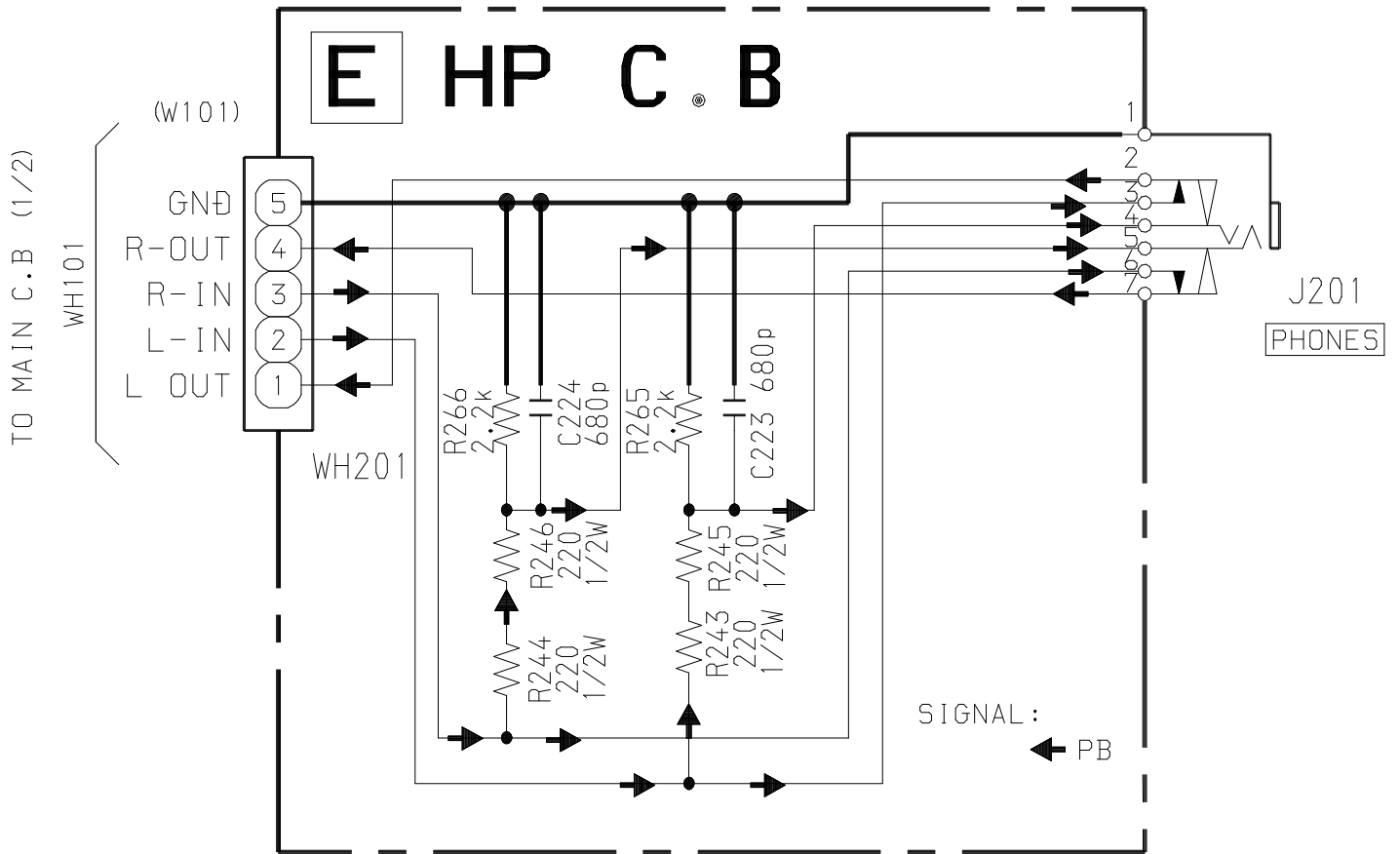
A MAIN C.B

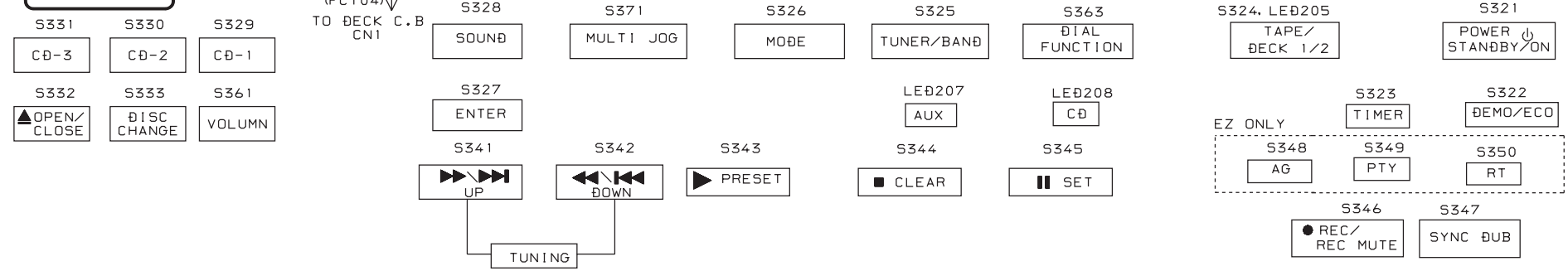
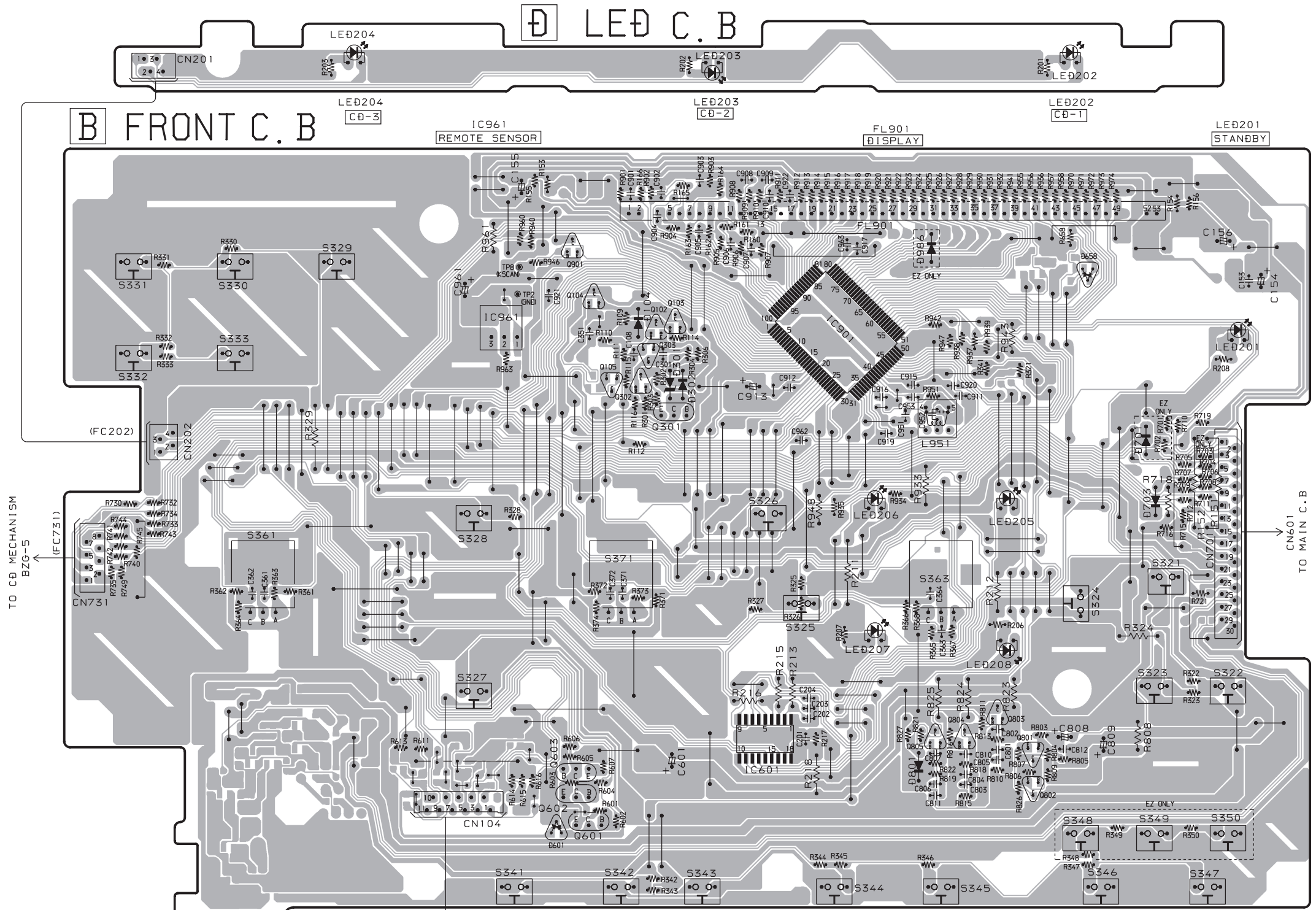


E HP C.B

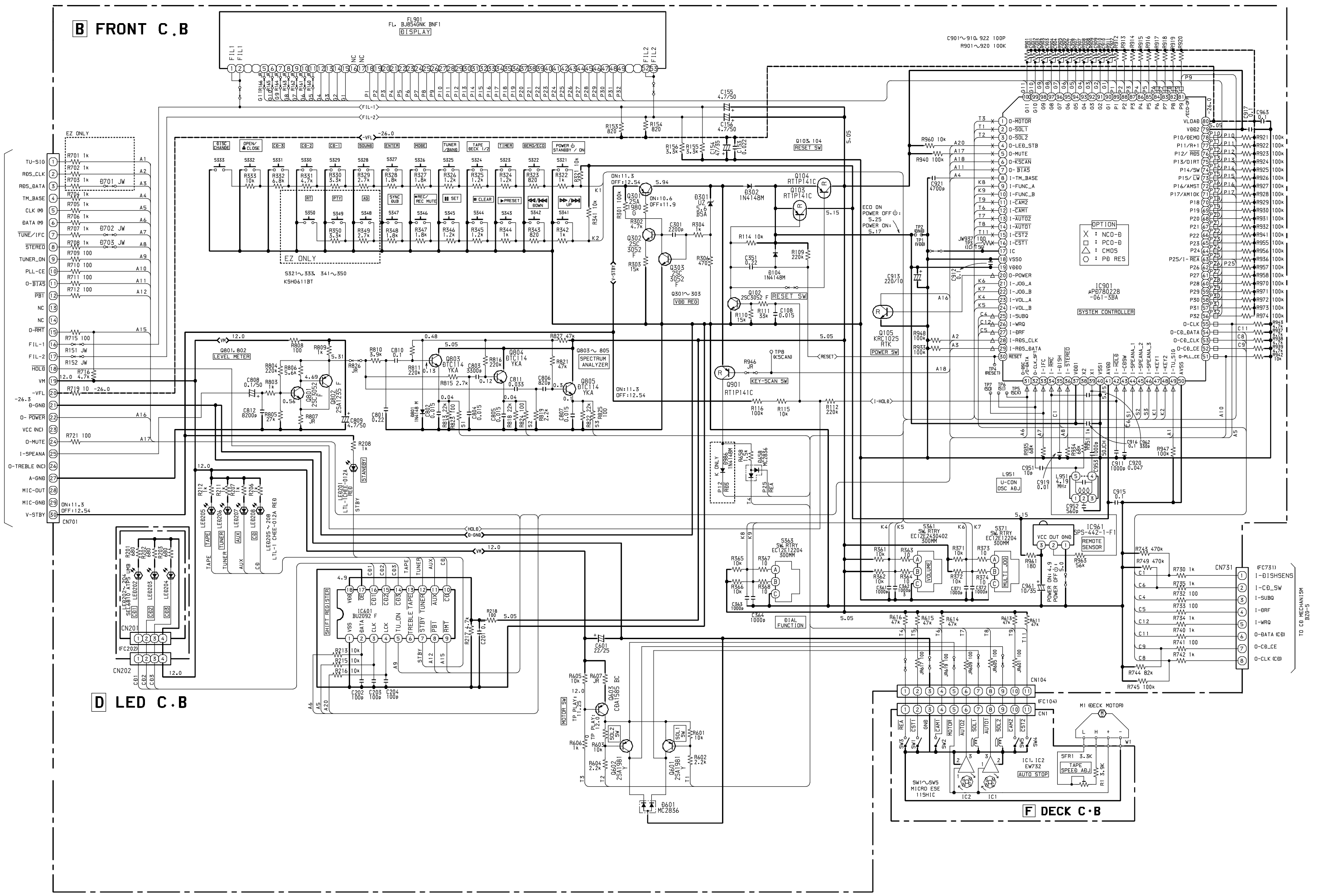


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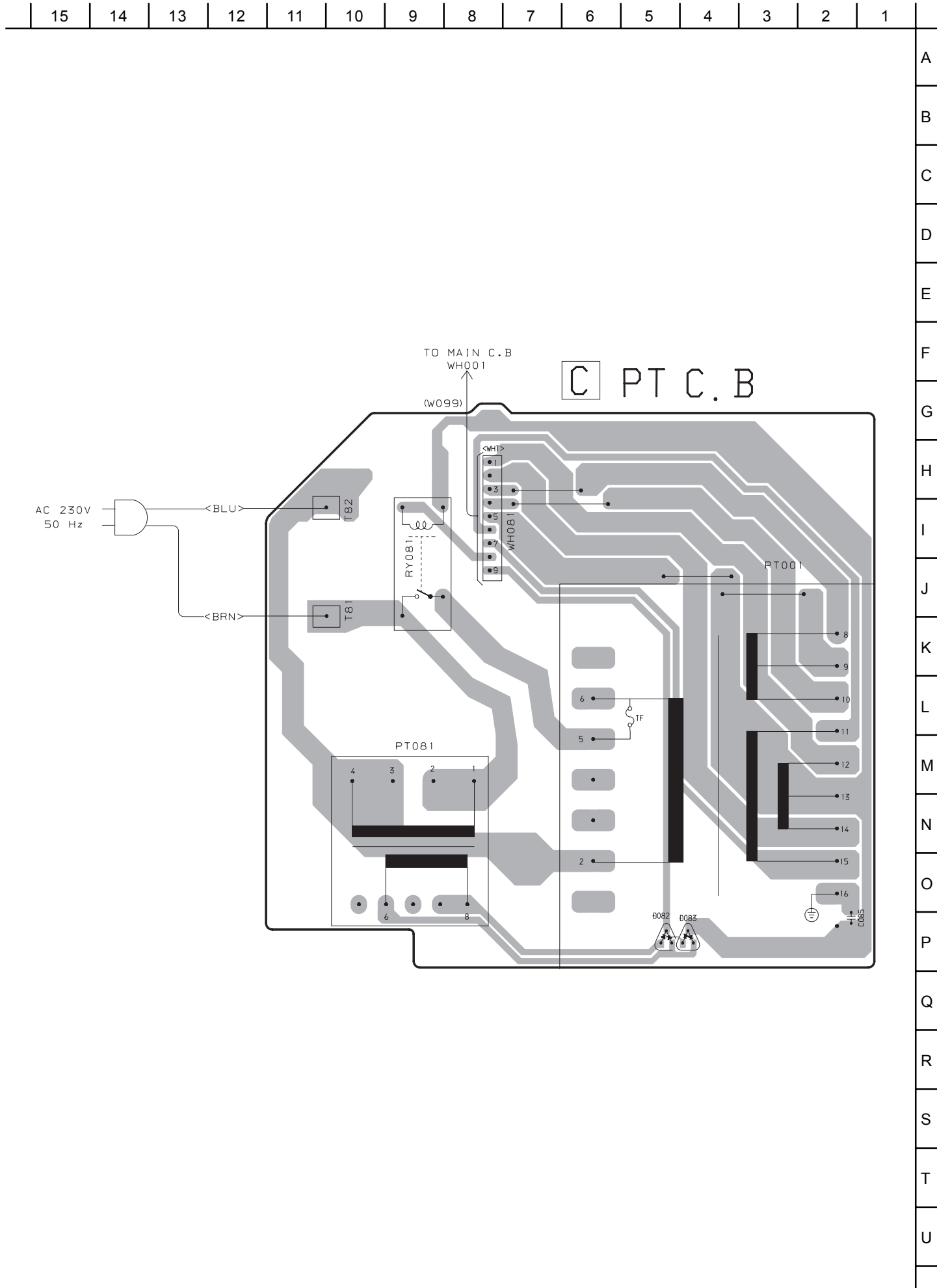




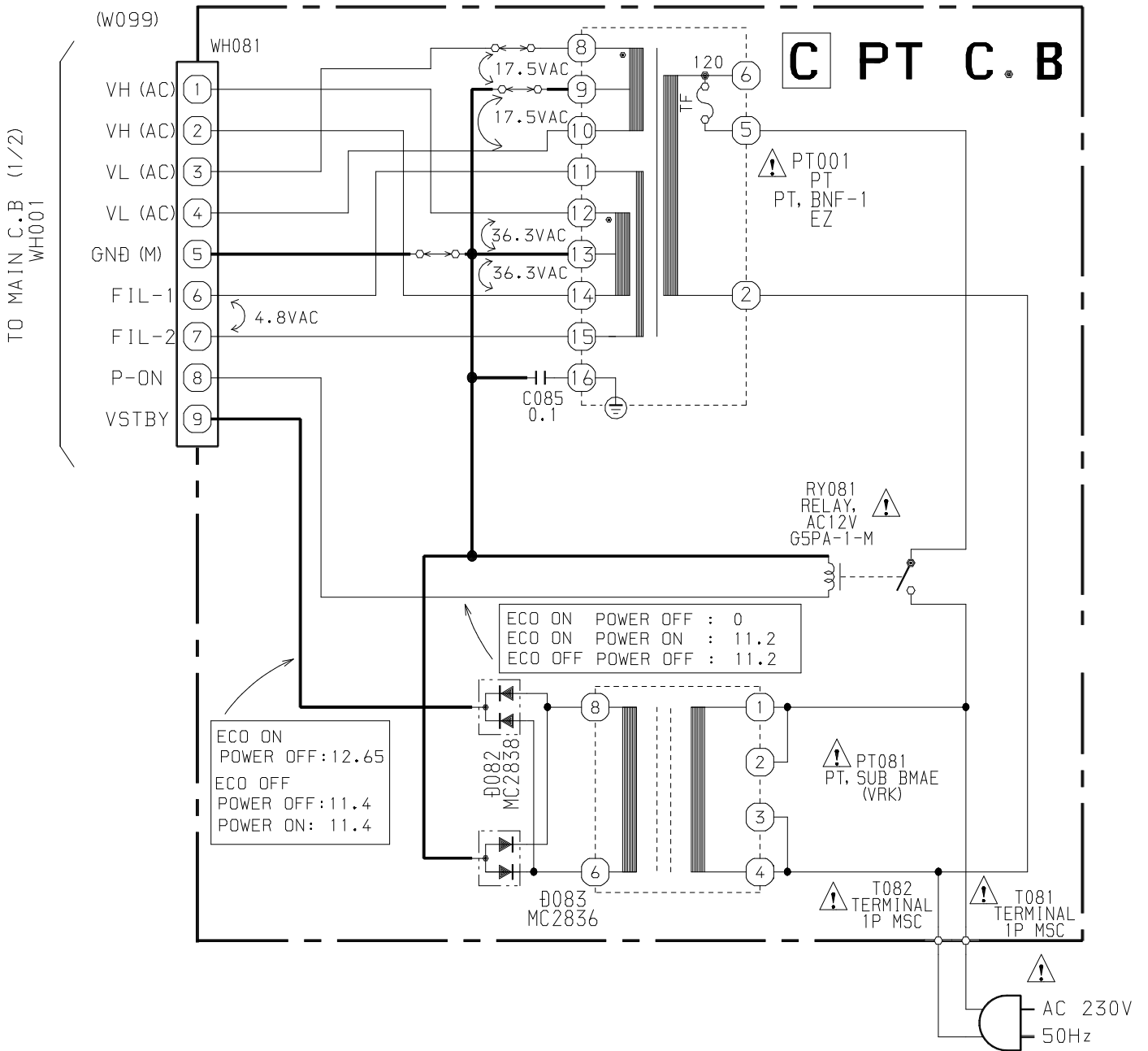
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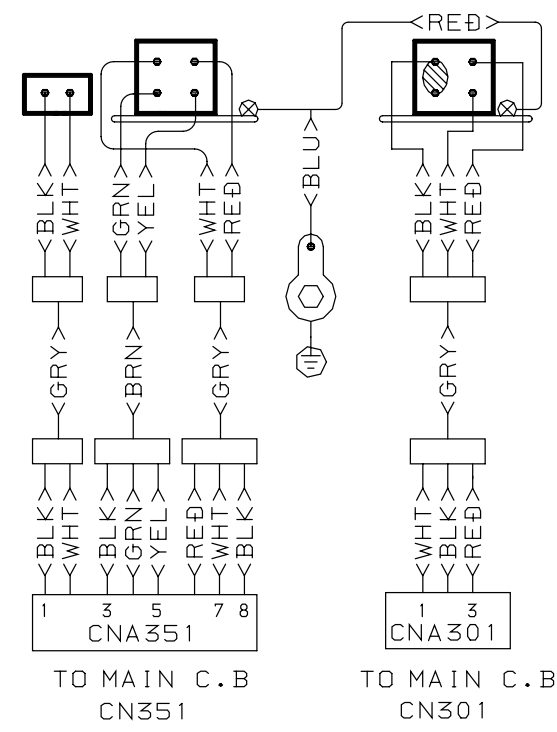
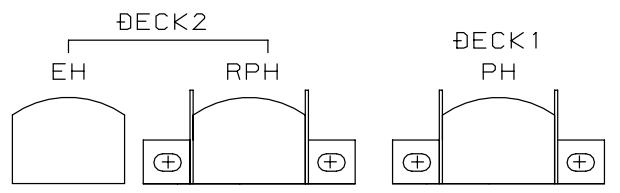
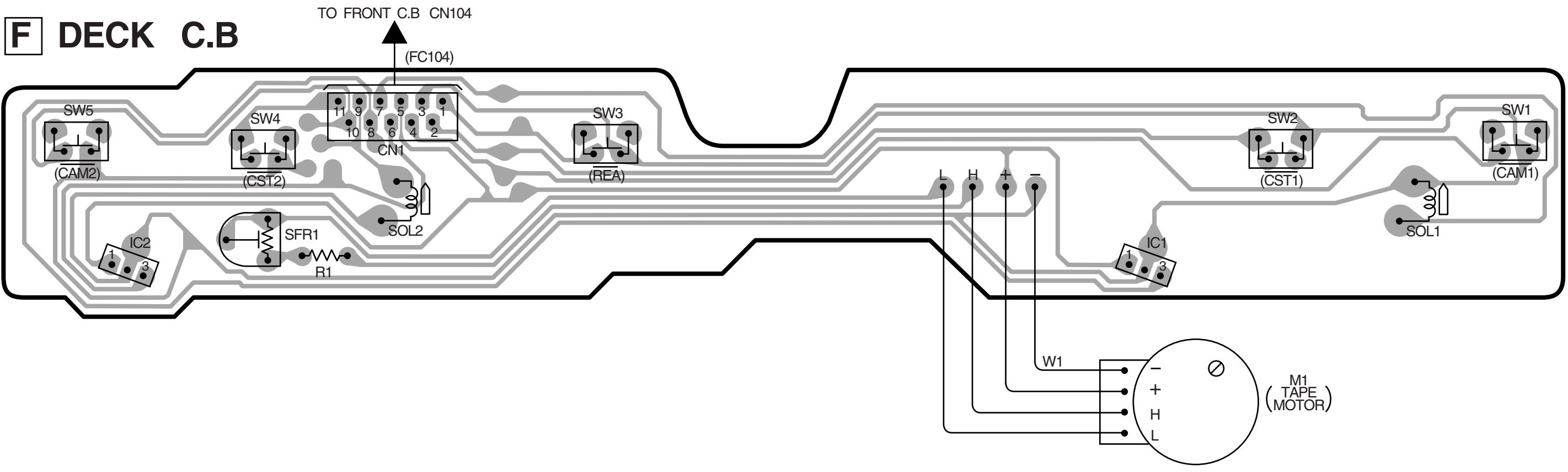
WIRING-3 (PT)



SCHEMATIC DIAGRAM-5 (PT)



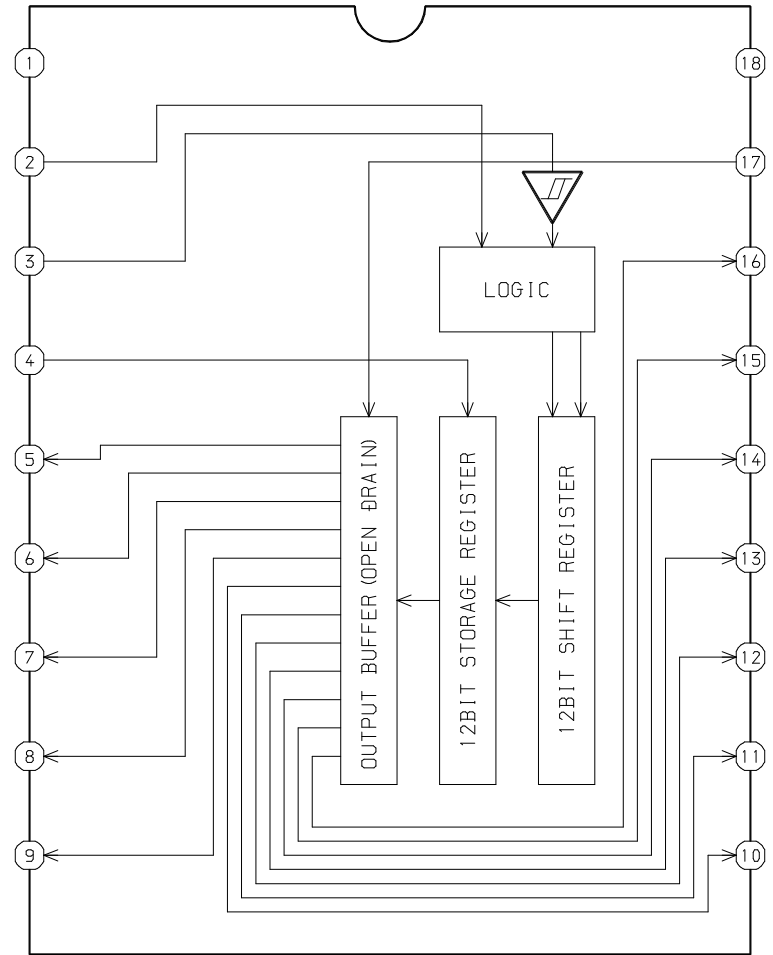
F DECK C.B



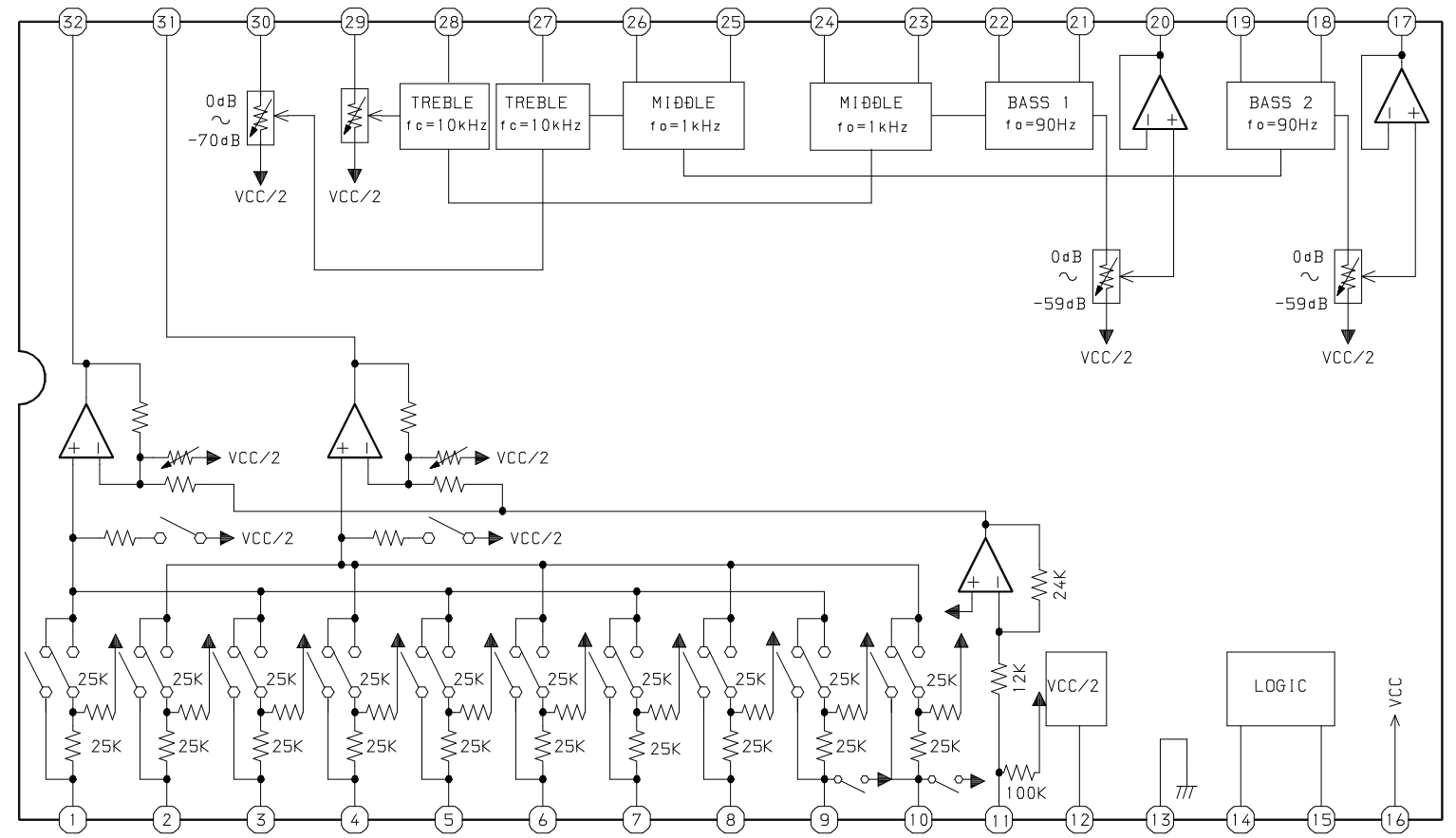
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IC BLOCK DIAGRAM

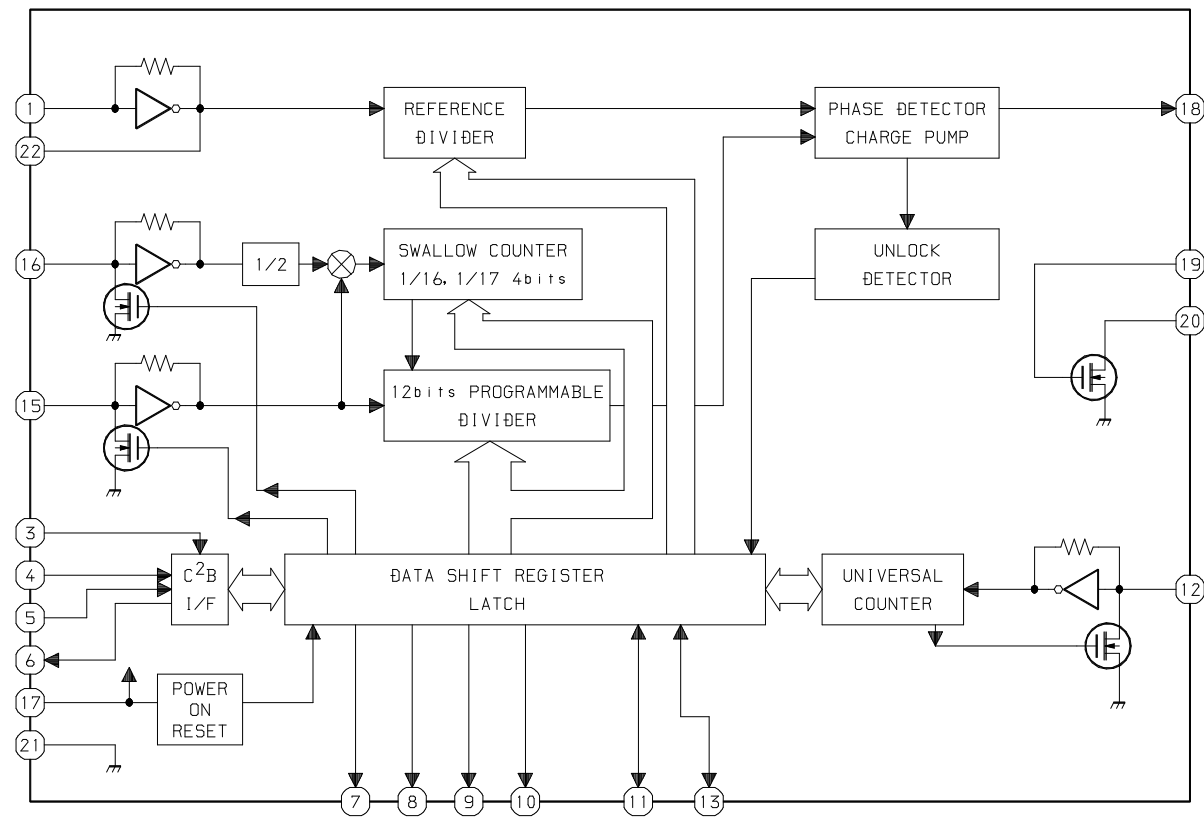
IC. BU2092F



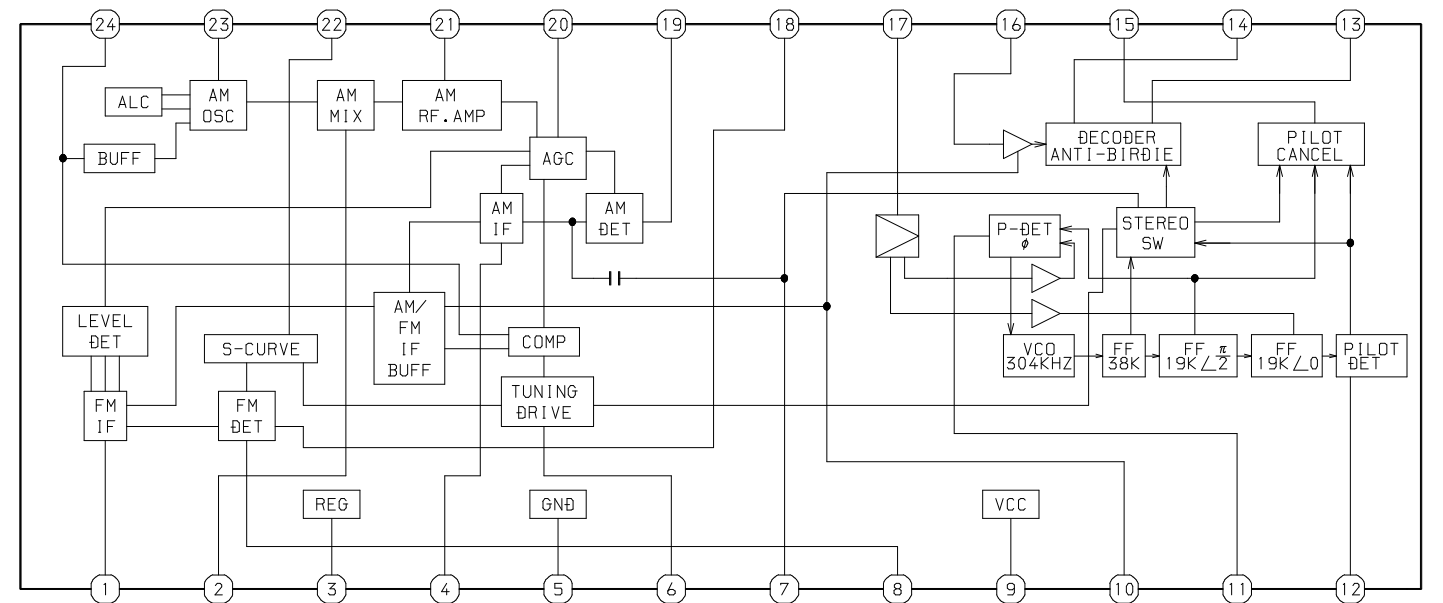
IC. BD3861FS



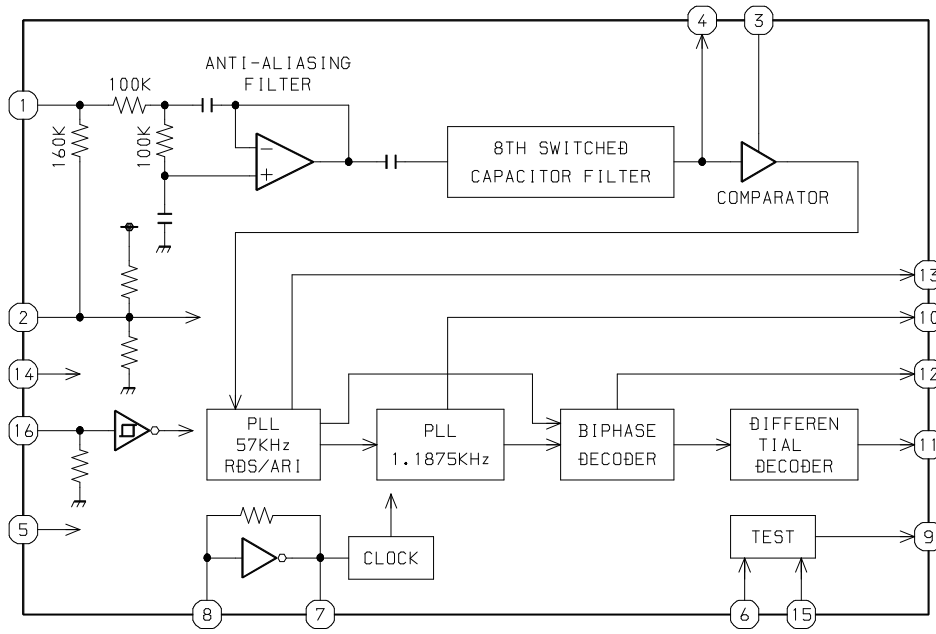
IC. LC72131D-N

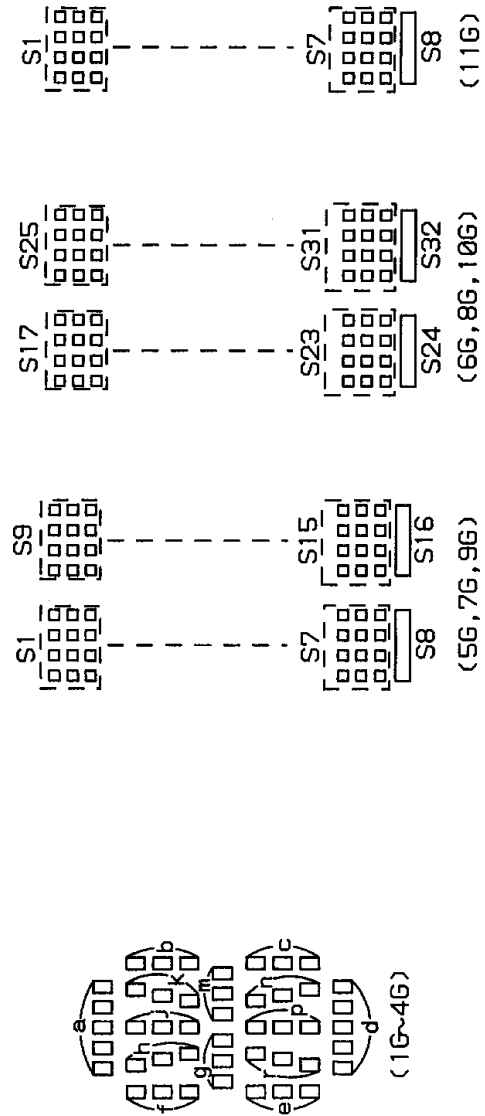
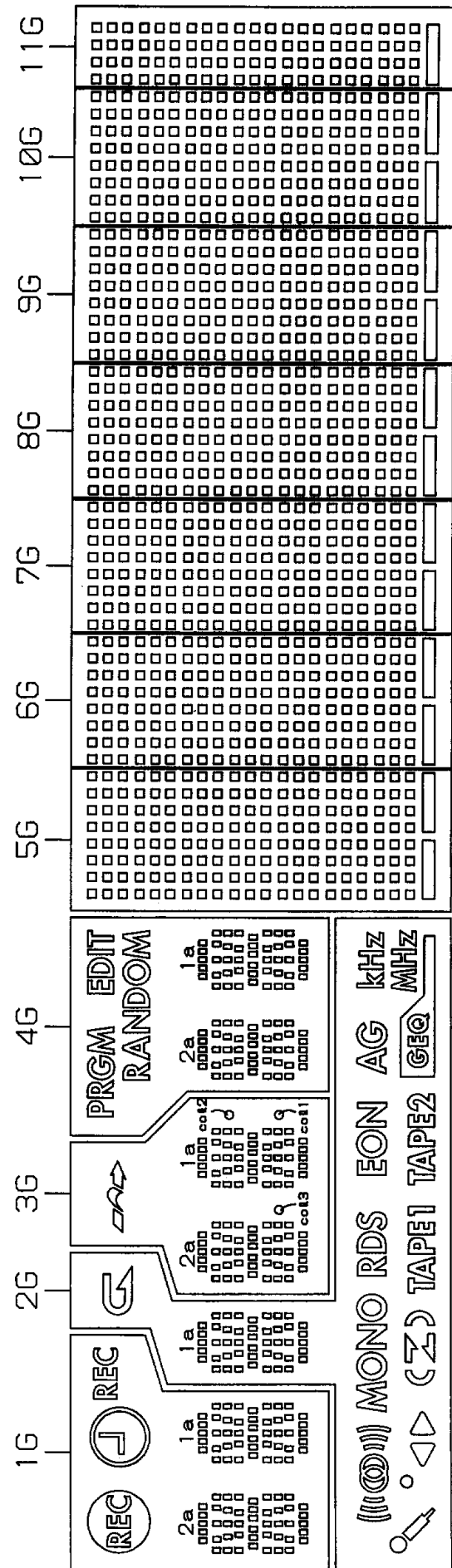


IC. LA1845L



IC, BU1920FS





	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	11G
P1	REC	G	↔	PRGM	S1	-	S1	-	S1	-	S1
P2	⏸	🔍	col1	EDIT	S9	-	S9	-	S9	-	-
P3	REC	🔊	col2	RANDOM	-	S17	-	S17	-	S17	-
P4	-	○	col3	-	-	S25	-	S25	-	S25	-
P5	2a	◀	2a	2a	S2	-	S2	-	S2	-	S2
P6	2h	▶	2h	2h	S10	-	S10	-	S10	-	-
P7	2j	MONO	2j	2j	-	S18	-	S18	-	S18	-
P8	2k	☾	2k	2k	-	S26	-	S26	-	S26	-
P9	2b	Σ	2b	2b	S3	-	S3	-	S3	-	S3
P10	2f	⌋	2f	2f	S11	-	S11	-	S11	-	-
P11	2m	TAPE1	2m	2m	-	S19	-	S19	-	S19	-
P12	2g	TAPE2	2g	2g	-	S27	-	S27	-	S27	-
P13	2c	RDS	2c	2c	S4	-	S4	-	S4	-	S4
P14	2e	EON	2e	2e	S12	-	S12	-	S12	-	-
P15	2r	🔑	2r	2r	-	S20	-	S20	-	S20	-
P16	2p	AG	2p	2p	-	S28	-	S28	-	S28	-
P17	2n	MHz	2n	2n	S5	-	S5	-	S5	-	S5
P18	2d	kHz	2d	2d	S13	-	S13	-	S13	-	-
P19	1a	1a	1a	1a	-	S21	-	S21	-	S21	-
P20	1h	1h	1h	1h	-	S29	-	S29	-	S29	-
P21	1j	1j	1j	1j	S6	-	S6	-	S6	-	S6
P22	1k	1k	1k	1k	S14	-	S14	-	S14	-	-
P23	1b	1b	1b	1b	-	S22	-	S22	-	S22	-
P24	1f	1f	1f	1f	-	S30	-	S30	-	S30	-
P25	1m	1m	1m	1m	S7	-	S7	-	S7	-	S7
P26	1g	1g	1g	1g	S15	-	S15	-	S15	-	-
P27	1c	1c	1c	1c	-	S23	-	S23	-	S23	-
P28	1e	1e	1e	1e	-	S31	-	S31	-	S31	-
P29	1r	1r	1r	1r	S8	-	S8	-	S8	-	S8
P30	1p	1p	1p	1p	S16	-	S16	-	S16	-	-
P31	1n	1n	1n	1n	-	S24	-	S24	-	S24	-
P32	1d	1d	1d	1d	-	S32	-	S32	-	S32	-

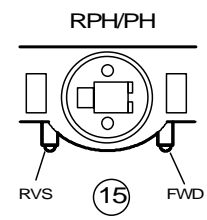
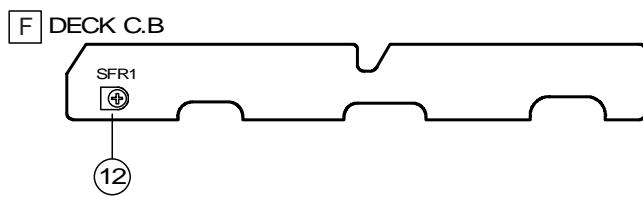
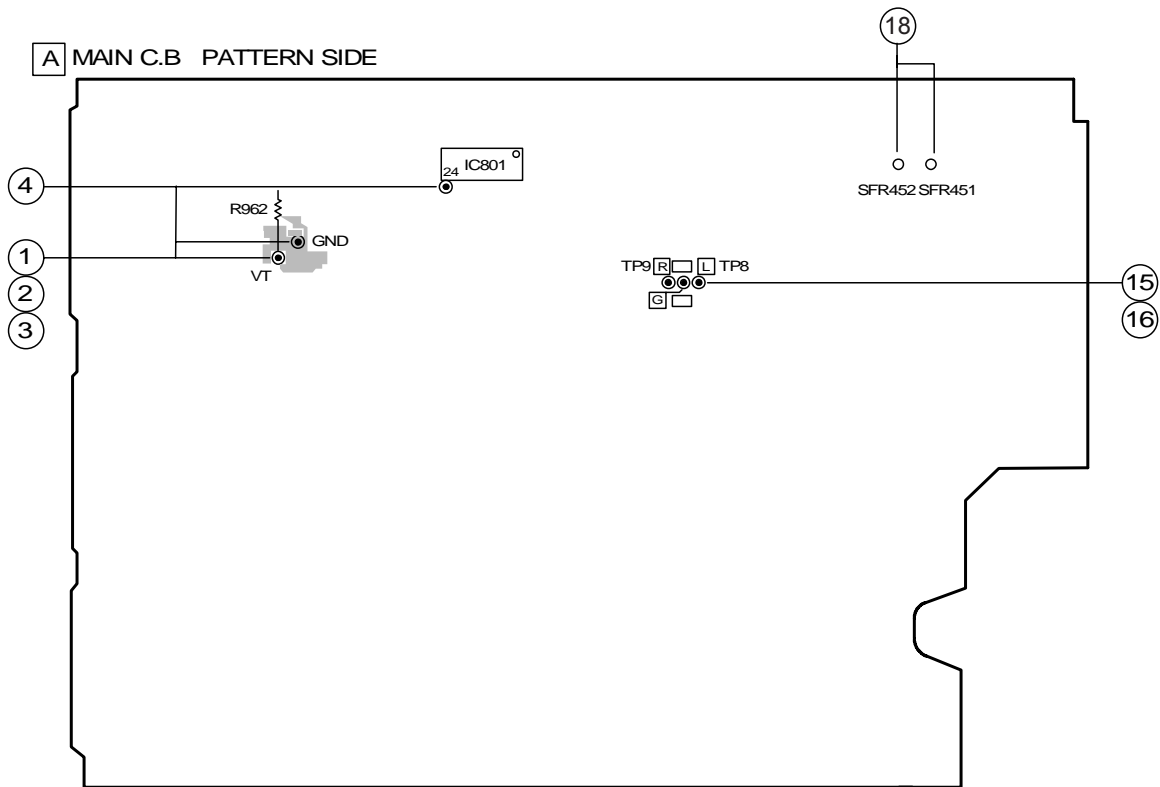
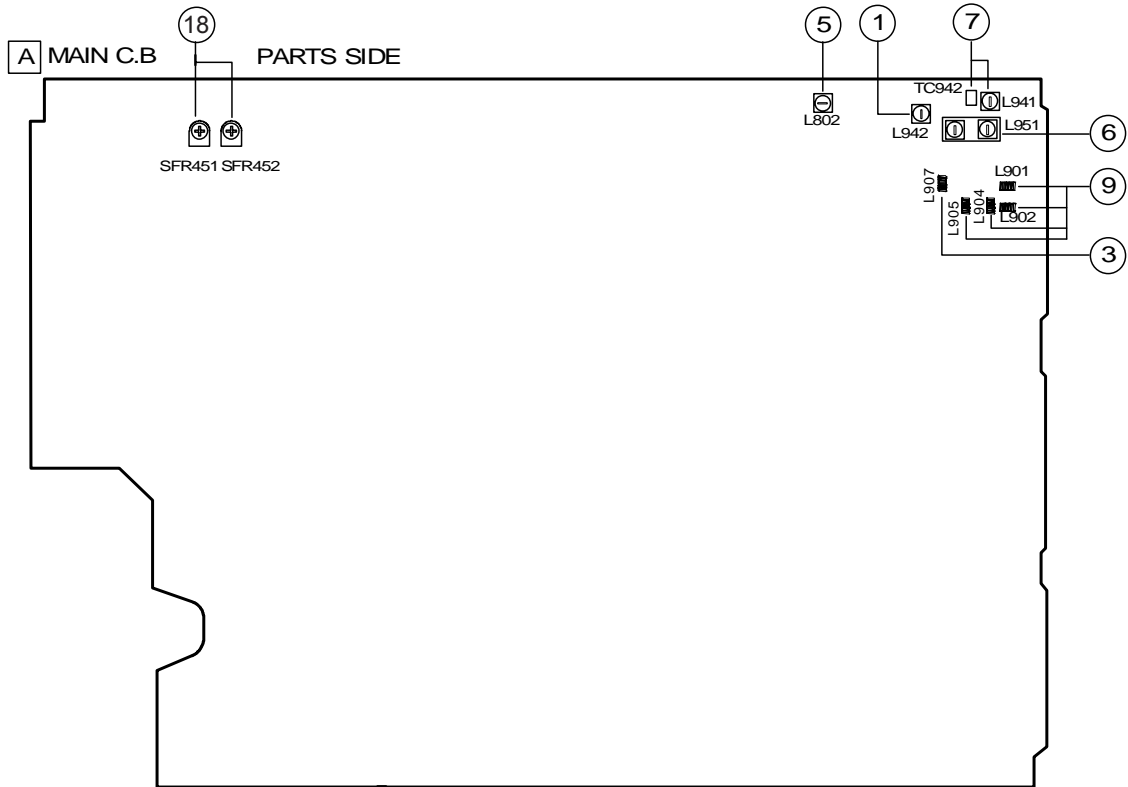
IC DESCRIPTION

IC, μ PD780228-061-3BA

Pin No.	Pin Name	I/O	Description
1	O-MOTOR	O	DECK MOTOR ON/OFF output.
2	O-SOL1	O	DECK1 solenoid ON/OFF output.
3	O-SOL2	O	DECK2 solenoid ON/OFF output.
4	O-LED_STB	O	STB signal make clock and data effective.
5	O-MUTE	O	System MUTE ON/OFF output.
6	O-KSCAN	O	Switch SCAN timing output.
7	O-BIAS	O	Deck 2 BIAS ON/OFF output.
8	I-TM_BASE	I	Base input for clock.
9	I-FUNC_A	I	Function rotary encoder input A.
10	I-FUNC_B	I	Function rotary encoder input B.
11	CAM2	I	Deck 2 CAM STOP switch data input.
12	CAM1	I	Deck 1 CAM STOP switch data input.
13	AUTO2	I	Deck 2 AUTO STOP switch data input
14	AUTO1	I	Deck 1 AUTO STOP switch data input
15	CST2	I	Deck 2 cassette detect switch data input.
16	CST1	I	Deck 1 cassette detect switch data input.
17	IC	-	Internal connection (connected to GND).
18	VSS0	-	GND.
19	VDD0	-	Power supply.
20	O-POWER	O	System power supply ON/OFF output.
21	I-JOG_A	I	Dial jog rotary encoder input A
22	I-JOG_B	I	Dial jog rotary encoder input B.
23	I-VOL_A	I	Volume rotary encoder input A.
24	I-VOL_B	I	Volume rotary encoder input B
25	I-SUBQ	I	CD SUBQ data input.
26	I-WRQ	I	CD interrupt signal input.
27	I-DRF	I	CD focus ON detect data input.
28	I-RDS_CLK	I	Tuner RDS clock input. (EZ only)
29	I-RDS_DATA	I	Tuner RDS data input. (EZ only)
30	RESET	-	System reset input (ON/OFF).
31	O-DSC/O-DATA	O	Function IC / Tuner IC, data output.
32	O-CLK_SFT	O	MICON clock shift output.
33	I-IFC	I	Tune IF count serial data input.
34	I-RMC	I	System remote control signal input.
35	I-DISH	I	CD turntable photo sensor input A/D converter input.
36	I-STEREO	I	Tuner STEREO detect input.
37	VDD1	-	Power supply.
38	X2	-	4.19MHz oscillator circuit.
39	X1	-	4.19MHz oscillator circuit.
40	VSS1	-	GND.
41	AVDD	-	Power supply.
42	I-HOLD	I	Power failure detected input.
43	I-CDSW	I	CD mecha switch A/D converter input.

Pin No.	Pin Name	I/O	Description
44	I-SPEANA_1	I	A/D input for spectrum analyser level display.
45	I-SPEANA_2	I	A/D input for spectrum analyser level display.
46	I-SPEANA_3	I	A/D input for spectrum analyser level display.
47	I-KEY 1	I	Key A/D input 1.
48	I-KEY 2	I	Key A/D input 2.
49	I-TU_SIG	I	Tuner signal input. (EZ only)
50	AVSS	–	GND.
51	O-PLL_CLK	O	PLL IC clock enable output.
52	O-CD_CE	O	CD chip enable output.
53	O-CD_CLK	O	CD clock output.
54	O-CD_DATA	O	CD data output.
55	O-CLK	O	Clock output for MAIN PWB and shift register IC.
56 ~ 62	P32 ~ P26	O	FL segment P32 ~ P26 output.
63	P25/I-REA	O/I	FL segment P25 output / Deck 2 side A record OK switch data input.
64 ~70	P24 ~ P18	O	FL segment P24 ~ P18 output.
71	P17/AM10K	O/I	FL segment P17 output / AM10K input to diode (not used).
72	P16/AMST	O/I	FL segment P16 output / AMST input to diode (not used).
73	P15/LW	O/I	FL segment P15 output / LW input to diode.
74	P14/SW	O/I	FL segment P14 output / SW input to diode (not used).
75	P13/OIRT	O/I	FL segment P13 output / OIRT input to diode (not used).
76	P12/RDS	O/I	FL segment P12 output / RDS input to diode (EZ only).
77	P11/R+1	O/I	FL segment P11 output / R+1 input to diode (not used).
78	P10/DEMO	O/I	FL segment P10 output / DEMO input to diode (not used).
79	VDD2	–	Power supply.
80	VLOAD	–	Power supply for FL display.
81	P9/ECO-OFF	O/I	FL segment P9 output / ECO-OFF input to diode (not used).
82 ~ 89	P8 ~ P1	O	FL segment P8 ~ P1 output.
90 ~100	G1 ~ G11	O	FL grid G1 ~ G11 output.

ADJUSTMENT (TUNER / DECK / FRONT)



<TUNER Adjustment>

1. VT Adjustment and Check (LW)

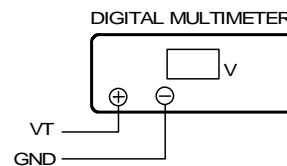
Requirements

* Measuring instrument: Digital multimeter

Test point: VT, GND

Adjustment point: L942

- (1) Connect a digital multimeter to VT and GND.
- (2) Set the unit function to LW, and adjust the receiving frequency at 144 kHz.
- (3) Adjust L942 so that the digital multimeter indicates 1.3 ± 0.05 V.
- (4) Adjust the receiving frequency of the unit to 290 kHz.
- (5) Check that the digital multimeter indicates 8.0 V or below.



2. VT Check (MW)

Requirements: Same as Item 1

- (1) Connect the digital multimeter to VT and GND.
- (2) Set the unit function to MW, and adjust the receiving frequency to 1,602 kHz.
- (3) Check that the digital multimeter indicates 8.0 V or below.
- (4) Adjust the receiving frequency of the unit to 531 kHz.
- (5) Check that the digital multimeter indicates 0.6 V or above.

3. VT Adjustment and Check (FM)

Requirements: Same as Item 1.

- (1) Connect the digital multimeter to VT and GND.
- (2) Set the unit function to FM, and adjust the receiving frequency at 108.0 MHz.
- (3) Adjust L907 so that the digital multimeter indicates 7.0 ± 0.05 V.
- (4) Adjust the receiving frequency of the unit to 87.5 MHz.
- (5) Check that the digital multimeter indicates 0.5 V or above.

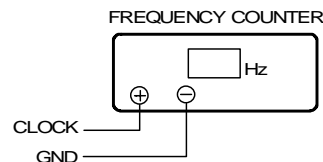
4. Clock Check

Requirements

* Measuring instrument: Frequency counter

Test point: CLOCK, GND

- (1) Connect the frequency counter to CLOCK and GND.
- (2) Set the unit function to MW, and adjust the receiving frequency to 1,602 kHz.
- (3) Check that the frequency counter indicates $2,052 \text{ kHz} \pm 45 \text{ Hz}$.



<MW/LW Adjustment>

Make sure that the following settings are done before adjustment.

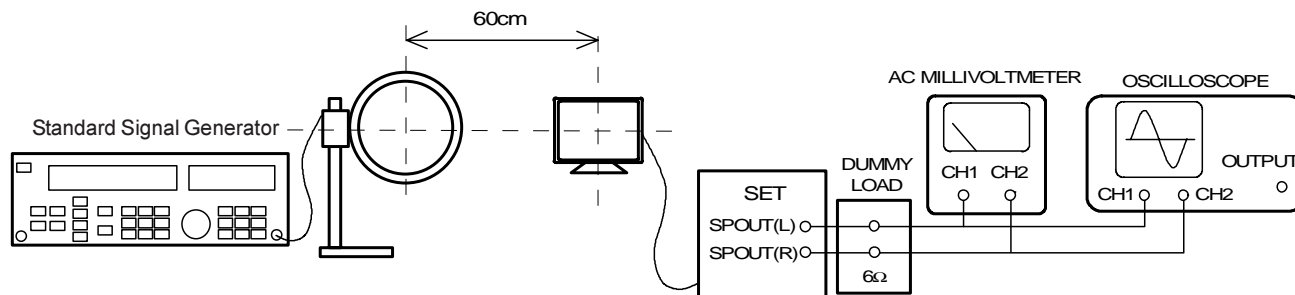
Preparation

* Measuring instruments:

Standard Signal Generator (S.S.G.) / Loop antenna / Oscilloscope / Millivoltmeter / Dummy resistor (6Ω)

(1) Connect the measuring instruments as shown in the diagram below.

(2) Keep a distance of 60cm between the loop antenna of signal generator and the one connected to the unit.



5. IF Adjustment (MW)

Requirements

* Test point: SP OUT (Lch, Rch)

(1) Adjust the S.S.G. setting to AM; carrier at 999 kHz, distortion rate at 30 %, and source 1 kHz.

(2) Adjust the unit to MW 999 kHz.

(3) While monitoring the 1 kHz waveform through oscilloscope, decrease the S.S.G. output level (till slight noises appear in the waveform).

(4) Adjust L802 so that the millivoltmeter indicates maximum.

6. Tracking Adjustment (MW)

Requirements: Same as Item 5.

(1) Adjust the S.S.G. setting to AM; carrier at 999 kHz, distortion rate at 30 %, and source 1 kHz.

(2) Adjust the unit to MW 999 kHz.

(3) While monitoring the 1 kHz waveform through oscilloscope, decrease the S.S.G. output level (till slight noises appear in the waveform).

(4) Adjust L951 (1/3) so that the millivoltmeter indicates maximum.

7. Tracking Adjustment (LW)

Requirements: Same as Item 5.

(1) Adjust TC942 to the mechanical center.

(2) Adjust the S.S.G. setting to AM; carrier at 144 kHz, distortion rate at 30 %, and source 1 kHz.

(3) Adjust the unit to LW 144 kHz.

(4) While monitoring 1 kHz waveform through oscilloscope, decrease the S.S.G. output level (till slight noises appear in the waveform).

(5) Adjust L941 so that the millivoltmeter indicates the maximum level.

(6) Adjust the S.S.G. setting to AM; carrier at 290 kHz; distortion rate at 30 %, and source at 1 kHz.

(7) Adjust the unit to LW 290 kHz.

(8) While monitoring 1 kHz waveform through oscilloscope, decrease the S.S.G. output level (till slight noises appear in the waveform).

(9) Adjust TC942 so that the millivoltmeter indicates the maximum level.

(10) Repeat the above steps 2 to 9 two to three times.

8. Auto-Stop Function Check (MW)

Requirements: Same as Item 5.

(1) Adjust the S.S.G. setting to AM; carrier at 999 kHz; distortion rate at 30 %; source at 1 kHz, and output at 78 dBu.

(2) Start the tuning search mode, and check that the auto-stop function is applied at MW 999 kHz.

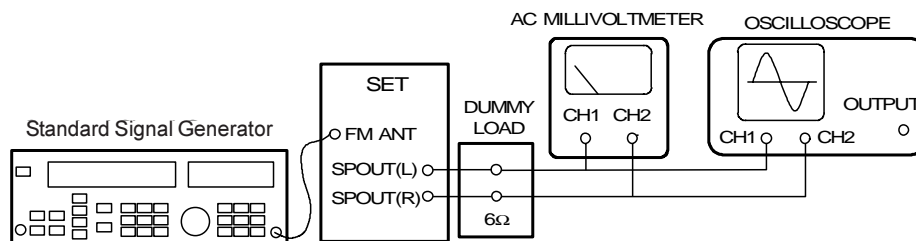
<FM Adjustment>

Make sure that the following settings are done before adjustment.

Preparation

* Measuring instruments: Standard Signal Generator (S.S.G.) / Oscilloscope / Millivoltmeter / Dummy resistor (6Ω)

- (1) Connect the measuring instruments as shown in the diagram below.
- (2) Connect the output terminal of signal generator to the antenna input terminal of the unit.



9. Tracking Adjustment

Requirements

* Test Point: SP OUT (Lch, Rch)

- (1) Adjust the S.S.G. setting to FM; carrier at 108 MHz, distortion at 75 kHz, and source 1 kHz.
- (2) Adjust the unit to FM 75 MHz.
- (3) While monitoring 1 kHz waveform through oscilloscope, decrease the S.S.G. output level (till slight noises appear in the waveform).
- (4) Adjust L901, 902, 904 and 905 so that the millivoltmeter indicates the maximum level.

10. Separation Check

Requirements: Same as Item 9.

- (1) Adjust the S.S.G. setting to FM; carrier at 83 MHz; distortion at 67.5 kHz; source at 1 kHz, and output at 60 dBu.
- (2) Switch the S.S.G. to PILOT ON, and set to PILOT 7.5 kHz.
- (3) Adjust the unit to FM 83 MHz.
- (4) Check that S.S.G. outputs only from Lch and that the difference between Lch and Rch at that time is 25 dB or above.
- (5) Check for Rch in the same manner.

11. Auto-Stop Function Check

Requirements: Same as Item 5.

- (1) Adjust the S.S.G. setting to FM; carrier at 108 MHz; distortion at 75 kHz; source at 1 kHz and output at 25 dBu.
- (2) Start the tuning search mode, and check that the auto-stop function is applied at FM 108 MHz.

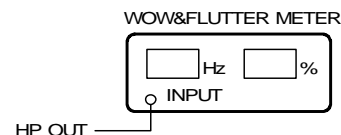
<Deck Section>

12. Tape Speed Adjustment (DECK 2)

Requirements

- * Measuring instruments: Wow-flutter meter (frequency counter)
- Test tape: TTA-100 (3 kHz)
- Test point: HP OUT
- Adjustment point: SFR1

- (1) Connect the HP OUT terminal of the unit to the wow-flutter meter.
- (2) Insert the test tape (TTA-100) to DECK 2. Playback the middle part of the tape in the FWD direction, and adjust SFR1 so that the level, $3,000 \text{ Hz} \pm 5 \text{ Hz}$ can be obtained.
- (3) Playback in the RVS direction. Check that the range within $\pm 45 \text{ Hz}$ is obtained against the FWD speed.



13. Tape Speed Check (DECK 1)

Requirements: Same as Item 1

- (1) Insert the test tape (TTA-100) to DECK 1. Playback the middle part of the tape, and check that the range within $\pm 55 \text{ Hz}$ is obtained against the speed of DECK 2.

14. Wow-Flutter Check (DECK 1, DECK 2)

Requirements: Same as Item 1.

- (1) Connect the HP OUT terminal of the unit to the wow-flutter meter.
- (2) Switch the wow-flutter setting from INDICATOR to JIS, and from a mode to W RMS (WTD).
- (3) Playback the middle part of the test tape (TTA-100), and check that the level is 0.21 % or below.

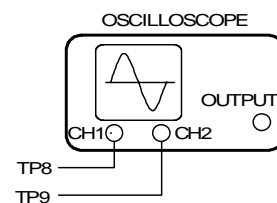
15. Head Azimuth Adjustment (DECK 1, DECK 2)

Requirements

- * Measuring instrument: Oscilloscope
- Test tape: TTA-300 (10 kHz)
- Test point: TP8 (Lch), TP9 (Rch)

Adjustment point: Head azimuth adjustment screw

- (1) Connect the CH1 of the oscilloscope probe to TP8 (Lch) and the CH2 to TP9 (Rch).
- (2) Set the V mode of the oscilloscope to ADD.
- (3) Insert the test tape (TTA-300) to DECK 1. Playback the middle part of the tape in the FWD direction, and adjust the head azimuth adjustment screw so that the waveform reaches maximum when 10 kHz is played.
- (4) Turn the tape over, and playback in the RVS direction. Adjust the head azimuth adjustment screw so that the waveform of oscilloscope becomes maximum.
- (5) After adjustment, lock the screw by bonding (1600B).
- (6) Apply the above steps 3 to 5 to DECK 2.

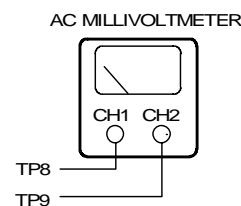


16. Playback Frequency Check (DECK 1, DECK 2)

Requirements

- * Measuring instrument: Millivoltmeter
- Test tape: TTA-300 (315 Hz / 10 kHz)
- Test point: TP8 (Lch), TP9 (Rch)

- (1) Connect the CH1 of millivoltmeter to TP8 (Lch) and the CH2 to TP9 (Rch).
- (2) Insert the test tape (TTA-330) to DECK 1, and playback 315 Hz and 10 kHz.
- (3) Check that the 10 kHz level is ranged within $\pm 3 \text{ dB}$ compared to the output reference level of 315 Hz.
- (4) Apply the above steps 2 and 3 to DECK 2.



17. Playback Sensitivity Check (DECK 1, DECK 2)

Requirements

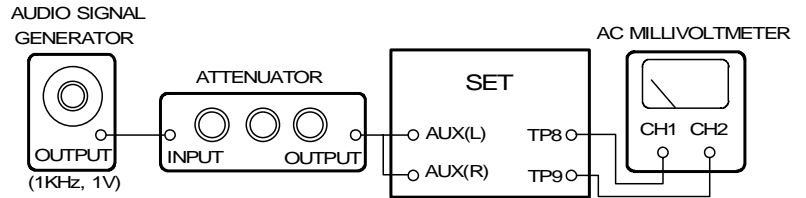
- * Measuring instrument: Millivoltmeter
- Test tape: TTA-200 (400 Hz)
- Test point: TP8 (Lch), TP9 (Rch)

- (1) Connect the CH1 of millivoltmeter to TP8 (Lch) and the CH2 to TP9 (Rch).
- (2) Insert the test tape (TTA-200) to DECK 1 to playback.
- (3) Check that the output level is ranged within $1000 \text{ mV} \pm 3 \text{ dB}$.
- (4) Apply the above steps 2 and 3 to DECK 2.

18. Playback/Record Frequency Response Adjustment (DECK 2)

Requirements

- * Measuring instruments: Millivoltmeter
- Audio signal oscillator (low-frequency oscillator)
- Attenuator
- Test tape: TTA-602 (NORMAL)
- Test point: TP8 (Lch), TP9 (Rch)
- Input point: AUX (1 kHz / 8 kHz)
- Adjustment point: SFR451 (Lch), SFR452 (Rch)



- (1) Connect the CH1 of millivoltmeter to TP8 (Lch) and the CH to TP9 (Rch).
- (2) Connect the output terminal of oscillator to attenuator, and then attenuator to AUX of the unit.
- (3) Insert the test tape (TTA-602) to DECK 2, and record the 1 kHz signal form AUX.
- (4) Adjust the attenuator so that the output levels of TP8 and TP9 become 80 mV.
- (5) Record 1 kHz and 8 kHz alternately.
- (6) Adjust SFR451 (Lch) and SFR452 (Rch) so that the playback output level of 8 kHz is ranged within $0 \pm 0.5 \text{ dB}$ compared to the playback output reference level of 1 kHz.

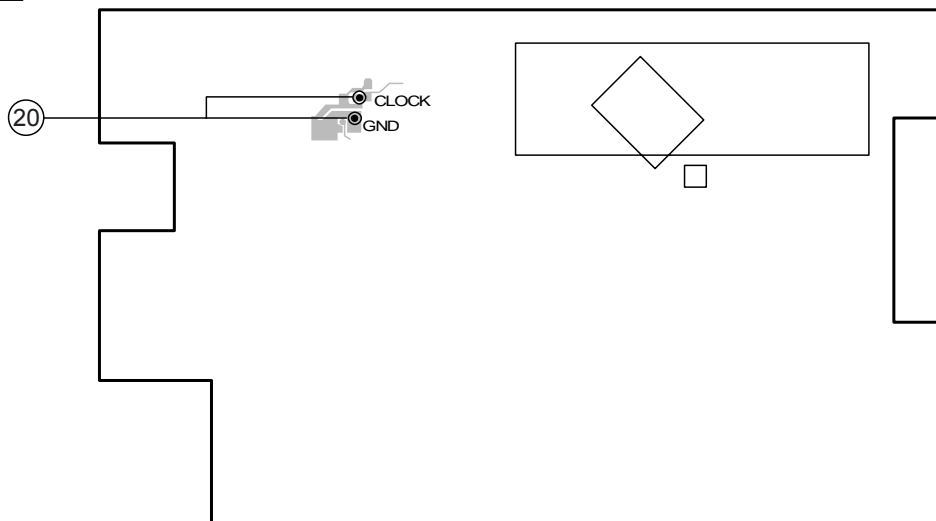
19. Playback/Record Sensitivity Check (DECK 2)

Requirements

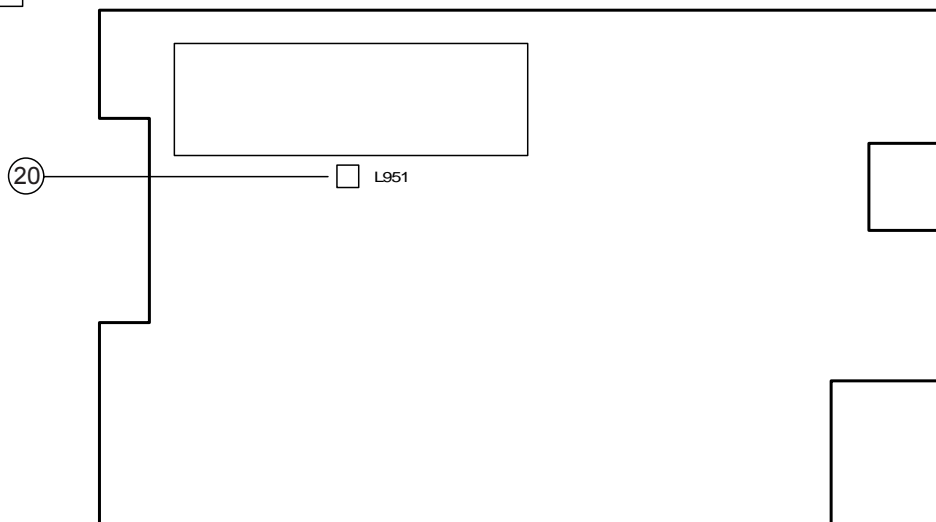
- * Measuring instrument: Same as Item 18.
- Test tape: TTA-602 (NORMAL)
- Test point: TP8 (Lch), TP9 (Rch)
- Input point: AUX (1 kHz)

- (1) Insert the test tape (TTA-602) to DECK 2, and record the 1 kHz signal from AUX.
- (2) Adjust the attenuator so that the output levels of TP8 and TP9 become 800 mV.
- (3) Playback 1 kHz, and check that the output level is ranged within $-1 \text{ dB} \pm 3.5 \text{ dB}$ compared to the output level during recording.

B FRONT C.B. PATTERN SIDE



B FRONT C.B. PARTS SIDE



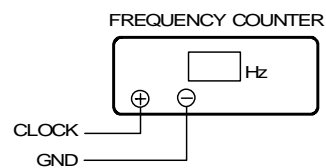
20. Clock Adjustment

Requirement

* Measuring instrument: Frequency counter

Test point: CLOCK, GND

- (1) While pressing and holding down the POWER button and the UP button, insert the AC plug.
- (2) Adjust L951 so that the frequency counter indicates 84.804 ± 0.084 Hz.



CD TEST MODE

1. Starting CD Test Mode

Insert the AC plug while pressing and holding down the CD OPEN/CLOSE button.
When the test mode is activated, the display appears "TEST".

2. Exiting CD Test Mode

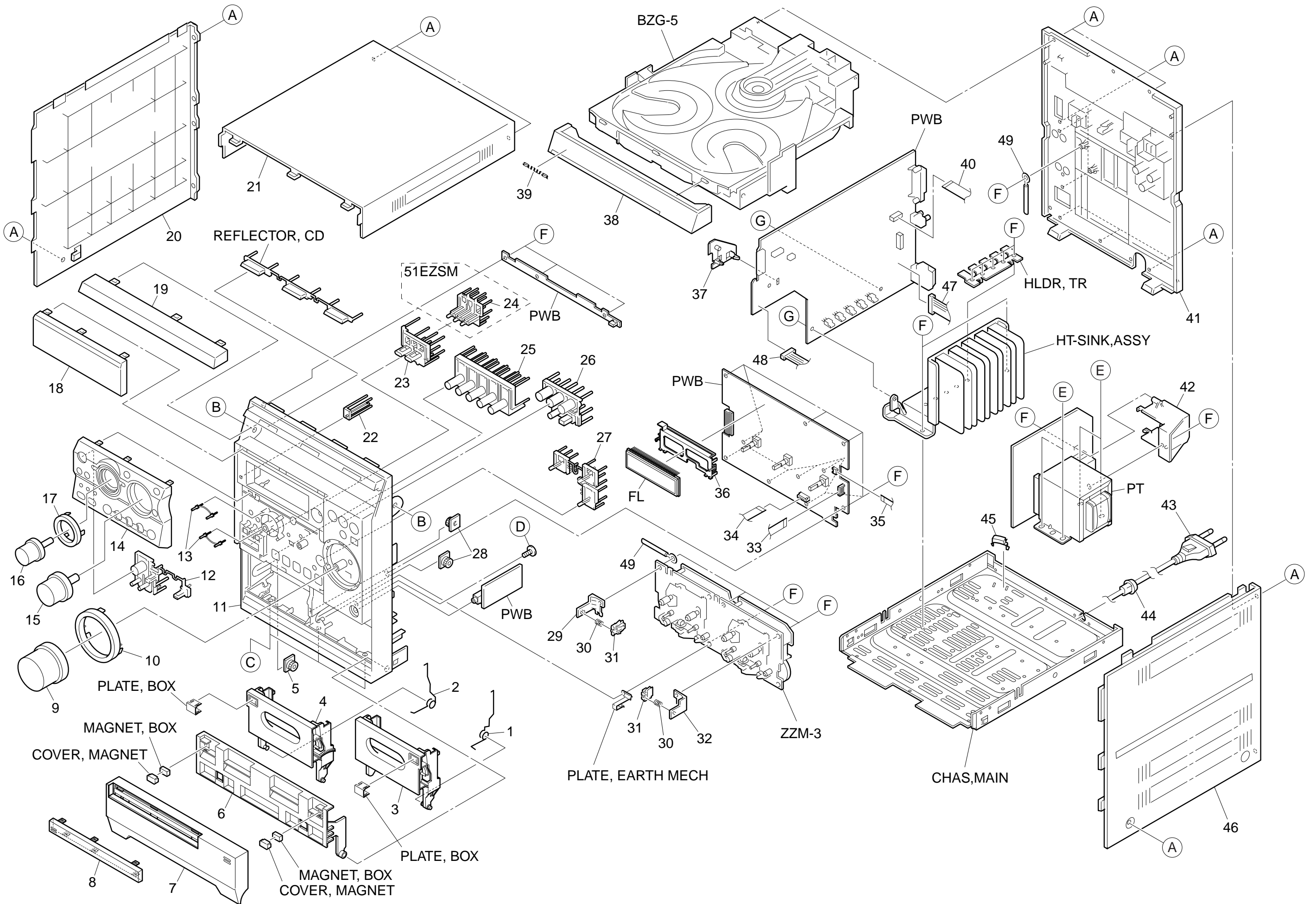
Press the POWER button or unplug the AC plug.

3. CD Test Mode Buttons and Functions

No	Mode	Buttons	Display	Operation	Details
1	Start Mode		All lit.	<ul style="list-style-type: none"> All FL lit. 	<ul style="list-style-type: none"> FL check Microcomputer check
2	Search Mode	STOP button	READING	<ul style="list-style-type: none"> LD continuously lit. Continuous focus search *1 Spindle motor continuous kick 	<ul style="list-style-type: none"> APC circuit check Laser current electricity measurement Focus search waveform check Focus error waveform check (DRF is ignored during search mode.)
3	Play Mode	PLAY button	NORMAL	<ul style="list-style-type: none"> Normal playback Focus search continued if TOC READ is unavailable. 	<ul style="list-style-type: none"> Servo circuits check DRF check
4	Traverse Mode	PAUSE button	NORMAL	<ul style="list-style-type: none"> Tracking servo OFF/ON OFF/ON repeated every time the PAUSE button is pressed. 	<ul style="list-style-type: none"> Tracking balance check
5	Sled Mode	FF button	CD TEST	<ul style="list-style-type: none"> PU moves the inner track *2, and lens is kicked to the inner track. 	<ul style="list-style-type: none"> Sled circuit check Tracking circuit check Mechanism function check PU check
		FWD button	CD TEST	<ul style="list-style-type: none"> PU moves to the outer track *2, and lens is kicked to the outer track. 	
6	Spindle Mode	REC/REC MUTE button	All lit.	<ul style="list-style-type: none"> When the button is pressed at first, spindle motor rotates in the FWD direction (at rough speed). At the second press, the direction is reversed. At the third press, the mode stops. 	<ul style="list-style-type: none"> Spindle circuit check Spindle motor check

*1 When the focus search mode is repeated more than 10 minutes, the driver IC may generate heat, activating the protection circuit to stop operation. In this case, turn off the power, leave the unit for a while, and then, restart.

*2 When the pickup is positioned at the innermost track or the outermost track, and the FF button and the RWD button are pressed down, the sled motor rotates. Therefore, observe gear to avoid damage.



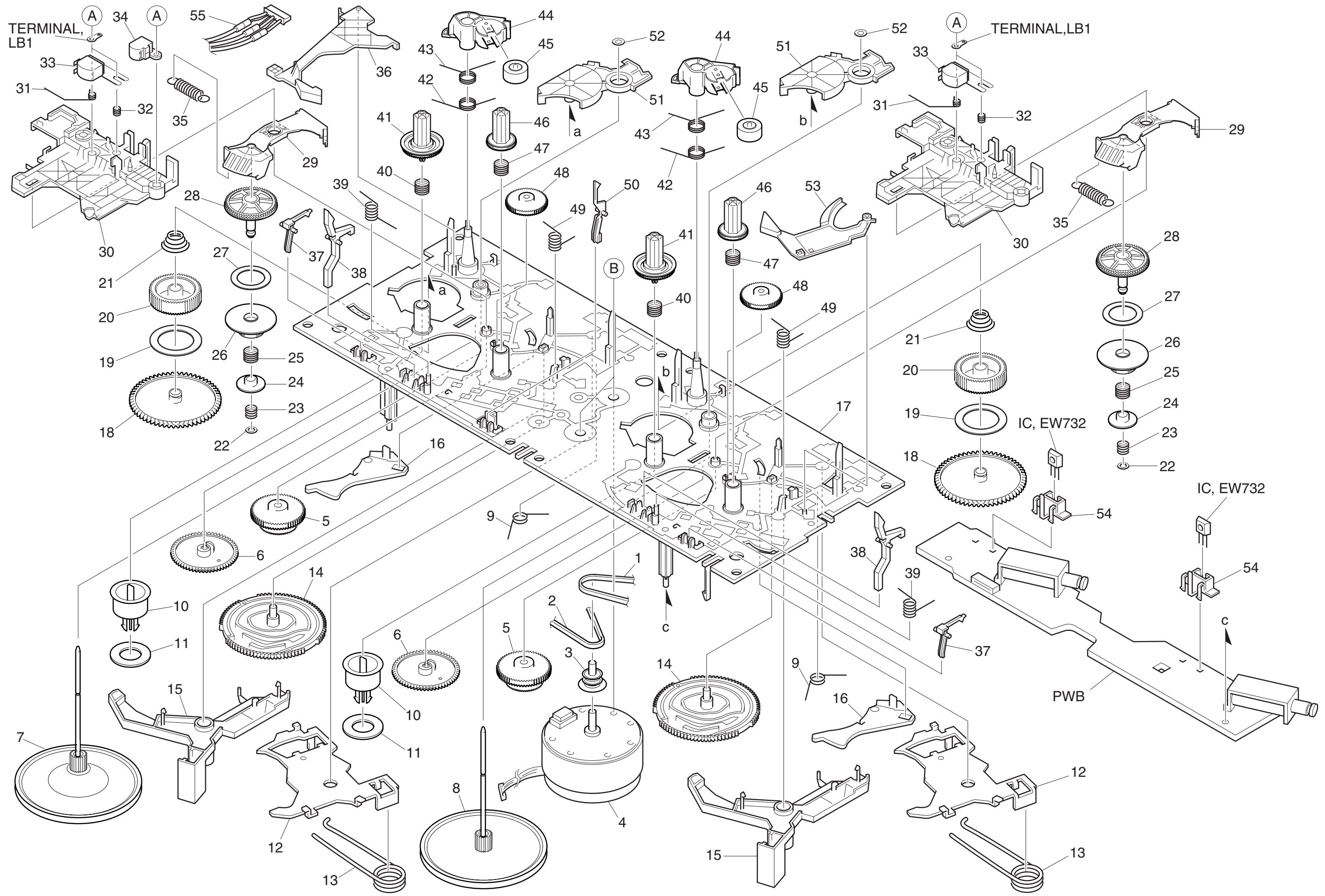
MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF8-208-010		SPR-T,EJECT 2	28	8A-NF8-209-010		OIL-DMPR,120
2	8A-NF8-207-010		SPR-T,EJECT 1	29	87-NF4-216-010		HLDR,LOCK 1
3	8B-NF1-003-010		BOX,CASS 2	30	86-NF9-224-010		SPR-C,LOCK
4	8B-NF1-002-010		BOX,CASS 1	31	82-NF5-229-010		PLATE,LOCK
5	8Z-NF6-210-010		DMPR,150 N	32	87-NF4-217-110		HLDR,LOCK 2
6	8B-NF1-008-010		BOX,DOOR	33	88-908-301-110		FF-CABLE,8P 1.25
7	8B-NF1-009-010		PANEL,DOOR 1WAY	34	88-911-101-110		FF-CABLE,11P 1.25
8	8B-NF1-010-010		WINDOW,CASS	35	88-904-201-110		FF-CABLE, 4P 1.25
9	8B-NF1-021-010		KNOB,RTRY VOL	36	8B-NF9-207-010		GUIDE,FL 90.2-20
10	8B-NF1-023-010		PANEL,VOL	37	8A-NF8-206-010		HLDR,PWB M
11	8B-NF1-001-010		CABI,FR EZ<51EZSM>	38	8B-NF1-013-010		PANEL,TRAY
11	8B-NF1-041-010		CABI,FR K<50KSM>	39	87-CE3-023-010		BADGE,AIWA 30N SILV
12	8B-NF1-015-010		KEY,POWER	40	88-906-251-110		FF-CABLE,6P 1.25 (RVS-FACE)
13	8B-NF1-028-010		REFLECTOR,FUN	41	8B-NF1-004-010		CABI,REAR EZSM<51EZSM>
14	8B-NF1-011-010		PANEL,FR EZ<51EZSM>	41	8B-NF1-042-010		CABI,REAR KSM<50KSM>
14	8B-NF1-043-010		PANEL,FR K<50KSM>	42	8B-NF1-203-010		HLDR,PWB PT
15	8B-NF1-022-010		KNOB,RTRY JOG	43	87-A80-157-010		AC CORD ASSY,E BLK CC
16	8B-NF1-024-010		KNOB,RTRY FUN	44	87-085-185-010		BUSHING, AC CORD (E)
17	8B-NF1-025-010		WINDOW,FUN	45	87-NF4-221-010		HLDR,CABLE
18	8B-NF1-012-010		WINDOW,DISP EZ<51EZSM>	46	8B-NF1-006-010		PANEL,RIGHT
18	8B-NF1-044-010		WINDOW,DISP K<50KSM>	47	8B-NFJ-620-010		F-CABLE,9P 2.5 280MM
19	8B-NF1-014-010		WINDOW,CD	48	8B-NF1-640-010		F-CABLE,5P 2.5 250MM
20	8B-NF1-005-010		PANEL,LEFT	49	87-064-080-010		BINDER,WIRE
21	8B-NF1-007-010		PANEL,TOP	A	87-B10-091-010		UTT2+3-10 W/O BLK
22	8B-NF1-027-010		REFLECTOR,ECO	B	87-721-096-410		QT2+3-10 GLD
23	8B-NF1-018-010		KEY,REC	C	87-067-689-010		BVTT+3-8
24	8B-NF1-020-010		KEY,RDS<51EZSM>	D	88-AR1-217-010		S-SCREW,BFT2+3-8
25	8B-NF1-019-010		KEY,OPE	E	87-078-200-010		S-SCREW,ITC+4-8 R
26	8B-NF1-016-010		KEY,CD	F	87-067-703-010		TAPPING SCREW, BVT2+3-10
27	8B-NF1-017-010		KEY,ENTER	G	87-NF4-224-010		S-SCREW,IT3B+3-8 CU

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	GL	Light Green	HT	Transparent Gray
HM	Metallic Gray	NH	Champagne Gold	M	Wood Pattern

TAPE MECHANISM EXPLODED VIEW 1 / 1



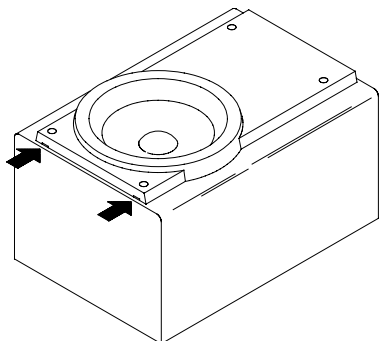
TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT,MAIN M3	31	8Z-ZM3-233-010		SPR-T,BRG M3
2	8Z-ZM3-235-010		BELT,MAIN L	32	84-ZM2-227-310		SPR-C,AZIMUTH
3	8Z-ZM1-235-010		PULLEY,MOT	33	87-A92-198-010		HEAD,PH HASVH 2504A
4	87-045-347-010		MOT,SHU2L 70	34	87-A90-404-010		HEAD,EH LE15B
5	8Z-ZM1-232-010		GEAR,IDL FF/REW	35	8Z-ZM3-239-010		SPR-E,FR
6	8Z-ZM3-244-010		GEAR,CAM TD20	36	8Z-ZM3-211-010		LEVER,EJECT R
7	8Z-ZM3-256-010		FLY-WHL ASSY,M3 R	37	8Z-ZM3-225-010		LEVER,STOP
8	8Z-ZM3-255-010		FLY-WHL ASSY,M3 L	38	8Z-ZM3-221-010		LEVER,CAS
9	8Z-ZM3-231-010		SPR-T,TRIG	39	8Z-ZM3-234-010		SPR-T,LVR CAS
10	8Z-ZM3-213-010		CLR,MG	40	8Z-ZM3-223-010		SPR-C,REEL R M3
11	82-ZM3-616-010		RING MAGNET 4	41	8Z-ZM1-225-110		GEAR,REEL R
12	8Z-ZM3-243-010		LEVER ASSY,HD UP	42	8Z-ZM3-240-010		SPR-T,T-UP M3
13	8Z-ZM3-238-010		SPR-T,HD UP	43	8Z-ZM3-237-010		SPR-T,PINCH M3
14	8Z-ZM3-219-010		GEAR,CAM M3	44	8Z-ZM3-215-010		LEVER,PINCH M3
15	8Z-ZM3-206-010		LEVER,TRIG	45	8Z-ZM1-261-110		ROLLER ASSY,PINCH
16	8Z-ZM3-209-010		LEVER,CAM FR	46	8Z-ZM1-226-010		GEAR,REEL L
17	8Z-ZM3-203-010		CHAS ASSY,M3	47	8Z-ZM3-222-010		SPR-C,REEL L M3
18	8Z-ZM1-228-010		GEAR,SLIP T-UP B	48	8Z-ZM3-251-010		GEAR,IDL REW M3
19	8Z-ZM1-265-010		FELT,T-UP	49	8Z-ZM3-236-010		SPR-T,PLAY M3
20	8Z-ZM1-227-010		GEAR,SLIP T-UP A	50	82-ZM1-240-110		LVR,REC (*)
21	8Z-ZM1-251-110		SPR-C,T-UP SLIP	51	8Z-ZM3-216-010		LEVER,T-UP M3
22	8Z-ZM1-275-010		W-L,1,47-4-0.25	52	87-B10-301-010		W-L,1.63-3.2-05 SLIT
23	8Z-ZM1-257-010		SPR-C,F/R	53	8Z-ZM3-212-010		LEVER,EJECT L
24	8Z-ZM1-236-010		CLR,SLIP FF/REW	54	8Z-ZM3-214-010		HLDR,IC
25	8Z-ZM3-226-010		SPR-C,FR M3	55	86-ZM3-605-110		CONN ASSY,8P -RFB
26	8Z-ZM3-250-010		GEAR,SLIP F/R A M3	A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
27	8Z-ZM1-269-010		FELT,FF/REW 2	B	8Z-ZM2-220-110		V+2.6 ZZM-2
28	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2				
29	8Z-ZM3-220-010		LEVER,FR M3				
30	8Z-ZM3-205-010		LEVER,PLAY M3				

GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE)

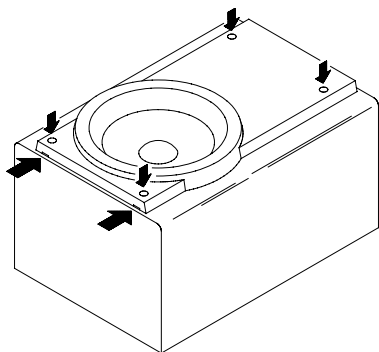
Type.1

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.



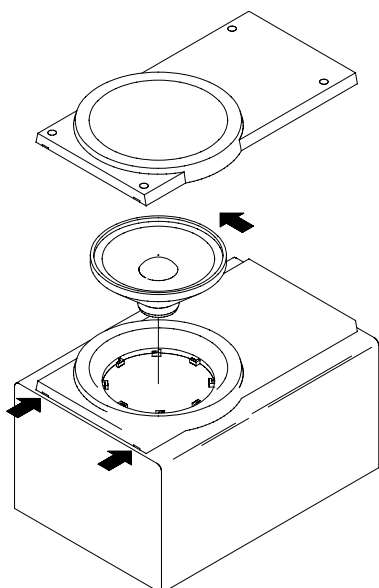
Type.2

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.

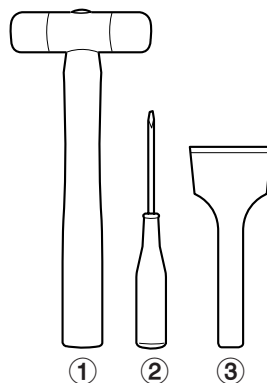


Type.3

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.

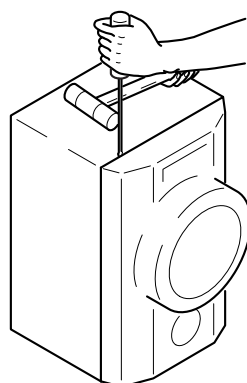


Fig-1

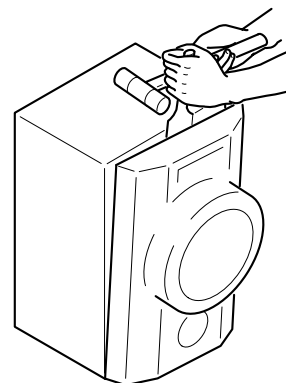


Fig-2

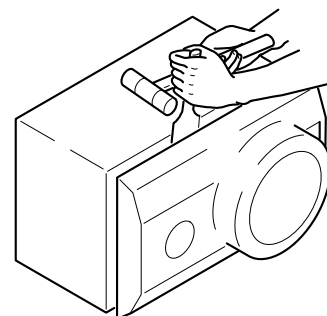


Fig-3

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-NR50 (YSL)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NSA-001-010		PANEL,FR R
2	8B-NSA-002-010		PANEL,FR L
3	8B-NSA-003-010		PANEL,BA R
4	8B-NSA-004-010		PANEL,BA L
5	8B-NSA-005-010		GRILLE,FRAME ASSY
6	8B-NSA-602-010		SPKR, W 160 30/4
7	8B-NSK-604-010		SPKR, T 60
8	88-NSK-610-010		SPKR, CERAMIC ASSY

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NF1-905-010		IB,K(E)M<K>
1	8B-NF1-906-010		IB,EZ(9L)M<EZ>
2	87-A90-118-010		ANT,WIRE FM<EZ>
3	87-006-268-010		ANT LOOP,AM
4	8B-NF1-701-010		RC UNIT,CAS01
△ 5	87-099-811-010		PLUG, ADPTR CONV(K)<K>

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