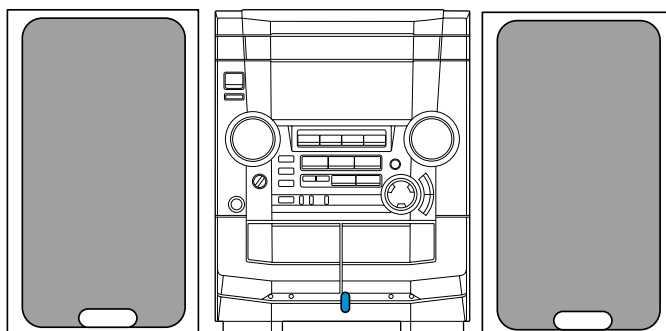




SERVICE MANUAL

COMPACT DISC STEREO
SYSTEM

BASIC TAPE MECHANISM : ZZM-3 PR1NM
2ZM-3MK2 PR4NM
BASIC CD MECHANISM : AZG-1 ZD8RDM

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-AJ50	CX-NAJ50	SX-WNAJ50	RC-ZAS02
NSX-SZ50	CX-NSZ50	SX-WNSZ50	RC-ZAS01

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual", (S/M Code No. 09-99C-424-6T1).
- If requiring information about the CD mechanism, see Service Manual of AZG-1, (S/M Code No. 09-001-335-3N6).

SPECIFICATIONS

Main unit CX-NAJ50(U)/CX-NSZ50(LH)

<FM tuner section>

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

<AM (MW) tuner section>

Tuning range	530 kHz to 1710 kHz (10 kHz step) 531 kHz to 1602 kHz (9 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

<Amplifier section>

Mid-high frequency amplifier

Power output	U : 20 W + 20 W (200 Hz to 20 kHz, T.H.D. less than 1 %, 8 ohms) LH : Rated : 20 W + 20 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference : 25 W + 25 W (8 ohms, T.H.D. 10 %, 1 kHz)
Total harmonic distortion	0.1 % (10W, 1 kHz, 8 ohms, DIN AUDIO)

Low frequency amplifier

Power output	U : 60 W + 60 W (50 Hz to 200Hz, T.H.D. less than 1 %, 6 ohms) LH : Rated : 60 W + 60 W (6 ohms, T.H.D. 1 %, 130 Hz) Reference : 75 W + 75 W (6 ohms, T.H.D. 10 %, 130 Hz)
Total harmonic distortion	0.1 % (30W, 130 kHz, 6 ohms, DIN AUDIO)

Inputs

VIDEO / AUX: 500 mV
LH : MIC 1.0mV(10 K ohms)

Outputs

SPEAKERS HIGH FREQ:
accept speakers of 8 ohms or more
SPEAKERS LOW FREQ:
accept speakers of 6 ohms or more
U : SURROUND SPEAKERS:
accept speakers of 8 ohms to 16 ohms
PHONES (stereo jack): accepts
headphones of 32 ohms or more

<Cassette deck section>

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 16000 Hz
Recording system	AC bias
Heads	Deck 1 : Playback head x 1 Deck 2 : Recording / Playback head x 1, erase head x 1

<Compact disc player section>

Laser	Semiconductor laser ($\lambda = 780 \text{ nm}$)
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	U : 120 V AC, 60 Hz LH : 120V/220 – 230V/240V AC switchable, 50/60 Hz
Power consumption	U : 110 W LH : 130 W
Standby power consumption	20 W (power-economizing mode set to OFF) 0.9 W (power-economizing mode set to ON)
Dimensions of main unit (W x H x D)	U : 240 x 324.6 x 271 mm (9 ¹ / ₂ x 12 ⁷ / ₈ x 10 ³ / ₄ in.) LH : 260 x 326 x 345 mm
Weight of main unit	U : 8.0 kg (17 lbs 10 oz.) LH : 9.0 kg

Speaker system SX-WNAJ50(U)/SX-WNSZ50(LH)

Speaker system	3 way, bass reflex (magnetic shielded type)
Speaker units	Subwoofer : 160 mm(6 ³ / ₈ in.) cone type Full range : 100 mm(4 in.) cone type Super tweeter: 20 mm (1 ³ / ₁₆ in.) ceramic type
Impedance	6 ohms/8 ohms
Sensitivity	86 dB/W/m
Dimensions (W x H x D)	240 x 324 x 271 mm (9 ¹ / ₂ in. x 12 ⁷ / ₈ x 10 ³ / ₄ in.)
Weight	4.8 kg (10 lbs 9 oz.)

• Design and specifications are subject to change without notice.

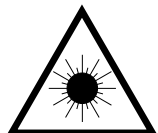
• The word "BBE" and the "BBE symbol" are trademarks of BBE Sound, Inc.
Under license from BBE Sound, Inc.

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 käyttäjän turvallisuusluokan 1 ylitävälle näkymättömälle lasersäteilylle.

WARNING!

Om apparaten används på annat sätt än vad som specificeras i denna bruksanvisning, kan användaren utsättas för osynlig laserstrålning, 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

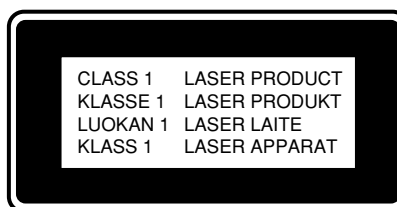
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

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.

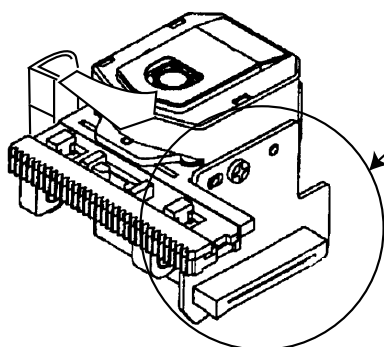
The CLASS 1 LASER PRODUCT label is located on the rear exterior.



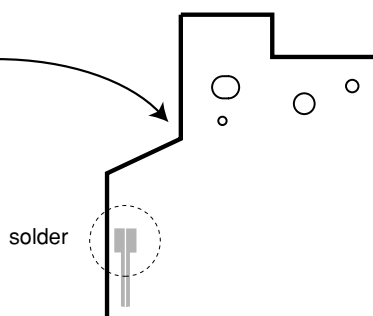
Precaution to replace Optical block (KSM-880CAB)

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.



PICK-UP Assy P.C.B



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.

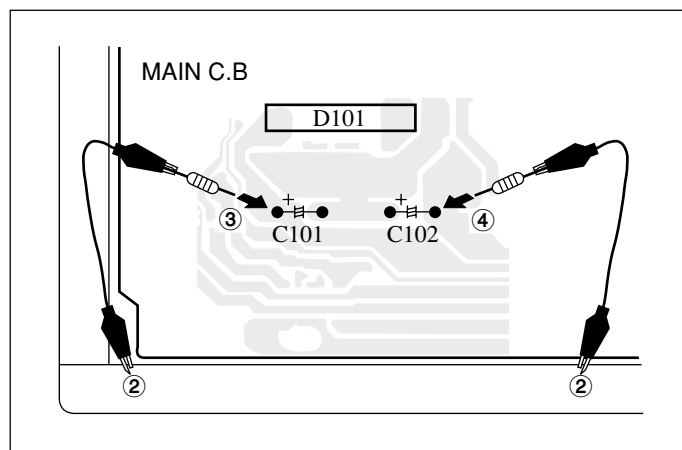


Fig-1

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.

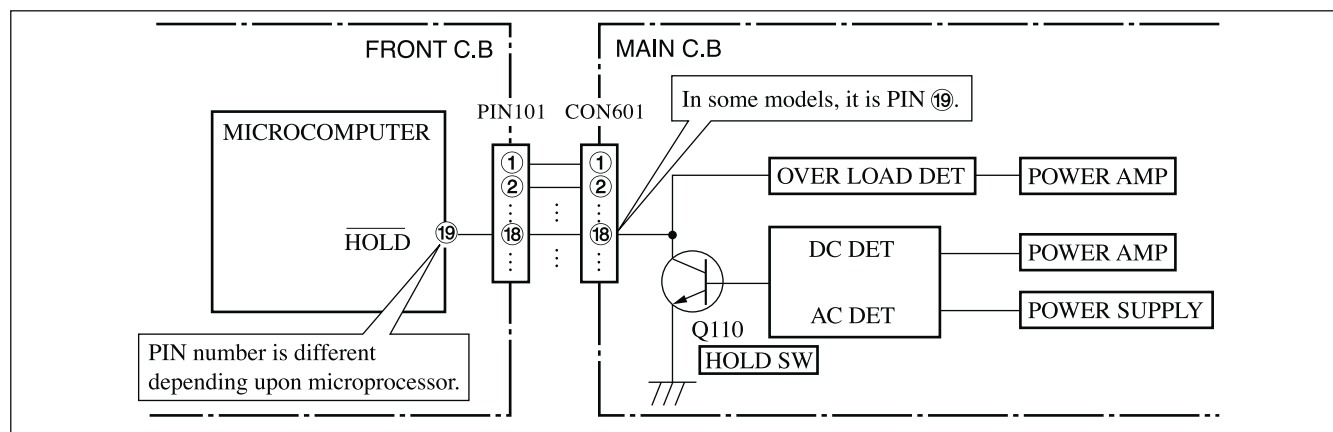


Fig-2-1

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.

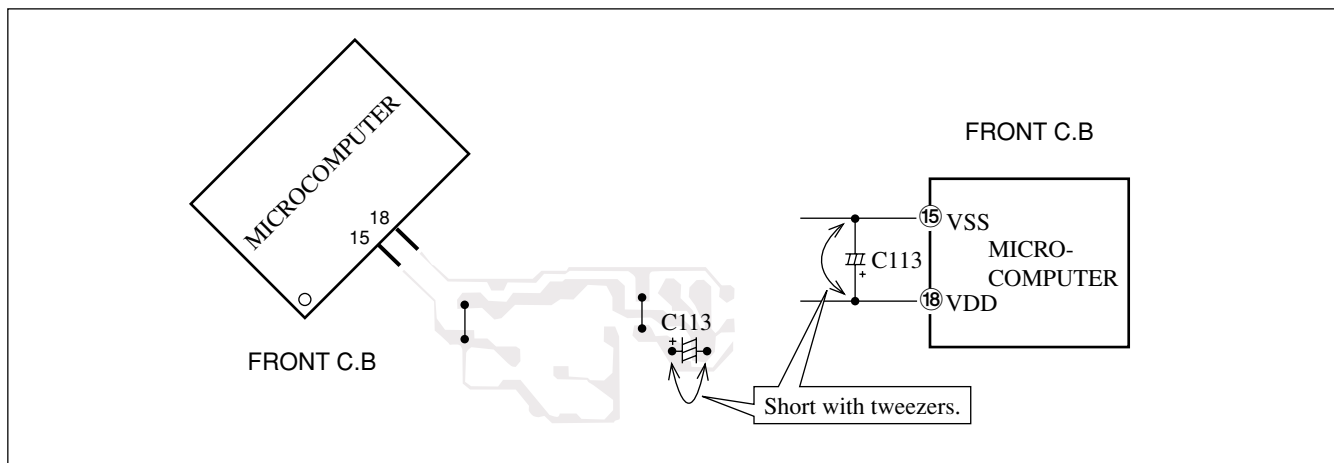


Fig-2-2

- 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				C16	87-012-368-080		C-CAP,S 0.1-50 F
	87-A21-417-010		IC,STK490-310	C17	87-012-368-080		C-CAP,S 0.1-50 F
	8A-NF8-610-010		C-IC,LC866548V-5P03	C18	87-012-368-080		C-CAP,S 0.1-50 F
	87-A21-396-010		IC,STK490-040	C19	87-016-520-000		CAP,E 3300-65 M SMG
	87-A21-482-010		IC,RPM6938-H4	C20	87-016-520-000		CAP,E 3300-65 M SMG
	87-A21-419-040		IC,NJM14558MD-TE2	C21	87-016-051-000		CAP,E 2200-35 M SMG
	87-A21-023-040		C-IC,BA3835F	C22	87-016-051-000		CAP,E 2200-35 M SMG
	87-A21-401-040		C-IC,M61503FP	C23	87-016-658-000		CAP,E 4700-35 M SMG
	87-070-289-040		IC,BU 2092F	C24	87-016-658-000		CAP,E 4700-35 M SMG
	87-070-127-110		IC,LC72131 D	C25	87-010-408-080		CAP, ELECT 47-50V
	87-A21-415-010		IC,LA1843	C26	87-010-247-080		CAP, ELECT 100-50V
	87-A21-269-010		IC,EW732<U>	C30	87-010-430-080		CAP, ELECT 100-63
	87-020-454-010		IC,DN6851<LH>	C31	87-010-263-080		CAP, ELECT 100-10V
TRANSISTOR				C32	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-609-080		TR,KTA1266GR	C33	87-010-263-080		CAP, ELECT 100-10V<U>
	89-213-702-010		TR,2SB1370 (1.8W)	C34	87-010-260-080		CAP, ELECT 47-25V
	87-026-610-080		TR,KTC3198GR	C35	87-015-682-080		CAP,E 22-16 7L
	87-A30-076-080		C-TR,2SC3052F	C36	87-010-381-080		CAP, ELECT 330-16V
	87-A30-075-080		C-TR,2SA1235F	C38	87-010-197-080		CAP, CHIP 0.01 DM
	87-026-245-080		TR,DTC114ES	C60	87-010-403-080		CAP, ELECT 3.3-50V
	87-A30-198-080		TR,KTC3199GR	C61	87-010-260-080		CAP, ELECT 47-25V
	87-A30-107-070		C-TR,CMBT5401	C101	87-010-183-080		C-CAP,S 2700P-50 B
	87-A30-106-040		C-TR,CMBT5551	C102	87-010-183-080		C-CAP,S 2700P-50 B
	87-A30-087-080		C-FET,2SK2158	C103	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-074-080		C-TR,RT1P 141C	C104	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-091-080		FET,2SJ460	C107	87-010-405-080		CAP, ELECT 10-50V
	87-A30-318-080		TR,CSA952K	C108	87-010-405-080		CAP, ELECT 10-50V
	87-A30-090-080		FET,2SK2541	C111	87-010-405-080		CAP, ELECT 10-50V
	87-A30-329-080		TR,CD1585BC	C112	87-010-405-080		CAP, ELECT 10-50V
	87-A30-104-080		C-TR,RT1N 441C	C113	87-010-866-080		CAP, ELECT 10-63
	87-A30-073-080		C-TR,RT1N 141C	C114	87-010-866-080		CAP, ELECT 10-63
	89-333-317-880		TR,2SC3331 (0.5W)	C119	87-010-197-080		CAP, CHIP 0.01 DM
	87-A30-269-040		C-FET,2SJ461-T1	C120	87-010-197-080		CAP, CHIP 0.01 DM
	89-327-143-080		C-TR,2SC27140 (0.1W)	C125	87-012-368-080		C-CAP,S 0.1-50 F
	87-A30-072-080		C-TR,RT1P 144C	C126	87-012-368-080		C-CAP,S 0.1-50 F
	87-A30-234-080		TR,CSC4115BC	C127	87-012-368-080		C-CAP,S 0.1-50 F
DIODE				C128	87-012-368-080		C-CAP,S 0.1-50 F
	87-A40-393-090		DIODE,1N5402GW(F20)	C133	87-010-186-080		CAP,CHIP 4700P
	87-A40-736-080		DIODE,1N4148M(SEM)	C140	87-010-182-080		C-CAP,S 2200P-50 B
	87-A40-548-090		DIODE,D3SBA20<U>	C141	87-010-196-080		CHIP CAPACITOR,0.1-25
	87-A40-547-090		DIODE,D5SBA20<LH>	C203	87-010-182-080		C-CAP,S 2200P-50 B
	87-A40-455-080		DIODE,RL203 GW	C204	87-010-182-080		C-CAP,S 2200P-50 B
	87-A40-553-080		DIODE,1N4003 LES	C209	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-776-080		ZENER,UZ27BSD	C210	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-764-080		ZENER,UZ10BSC	C211	87-010-184-080		CHIP CAPACITOR 3300P(K)
	87-A40-313-080		C-DIODE,MC 2840	C212	87-010-184-080		CHIP CAPACITOR 3300P(K)
	87-A40-270-080		C-DIODE,MC2838	C213	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-269-080		C-DIODE,MC2836	C214	87-010-402-080		CAP, ELECT 2.2-50V
	87-A40-768-080		ZENER,UZ16BSA	C217	87-010-405-080		CAP, ELECT 10-50V
	87-A40-752-080		ZENER,UZ6.2BSC	C218	87-010-405-080		CAP, ELECT 10-50V
	87-A40-802-080		ZENER,UZ5.1BSC	C220	87-010-405-080		CAP, ELECT 10-50V
	87-A40-739-080		ZENER,UZ2.7BSA	C223	87-010-190-080		S CHIP F 0.01
	87-017-149-080		ZENER,HZS6A2L	C224	87-010-190-080		S CHIP F 0.01
MAIN C.B				C228	87-010-405-080		CAP, ELECT 10-50V
C3	87-012-368-080		C-CAP,S 0.1-50 F	C229	87-010-993-080		C-CAP,S 0.056-25 B
C4	87-012-368-080		C-CAP,S 0.1-50 F	C230	87-010-993-080		C-CAP,S 0.056-25 B
C5	87-012-368-080		C-CAP,S 0.1-50 F	C231	87-010-196-080		CHIP CAPACITOR,0.1-25
C6	87-012-368-080		C-CAP,S 0.1-50 F	C232	87-010-196-080		CHIP CAPACITOR,0.1-25
C9	87-012-368-080		C-CAP,S 0.1-50 F	C239	87-010-196-080		CHIP CAPACITOR,0.1-25
C10	87-012-368-080		C-CAP,S 0.1-50 F	C301	87-010-178-080		CHIP CAP 1000P
C11	87-012-368-080		C-CAP,S 0.1-50 F	C302	87-010-178-080		CHIP CAP 1000P
C12	87-012-368-080		C-CAP,S 0.1-50 F	C303	87-010-178-080		CHIP CAP 1000P
C15	87-012-368-080		C-CAP,S 0.1-50 F	C304	87-010-178-080		CHIP CAP 1000P
				C307	87-010-263-080		CAP, ELECT 100-10V
				C308	87-010-263-080		CAP, ELECT 100-10V
				C309	87-010-318-080		C-CAP,S 47P-50 CH
				C310	87-010-318-080		C-CAP,S 47P-50 CH
				C313	87-010-188-080		CAP,CHIP 6800P
				C314	87-010-188-080		CAP,CHIP 6800P
				C315	87-010-263-080		CAP, ELECT 100-10V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C317	87-010-546-080	CAP, ELECT	0.33-50V
C318	87-010-546-080	CAP, ELECT	0.33-50V
C326	87-010-198-080	CAP, CHIP	0.022
C327	87-012-368-080	C-CAP,S	0.1-50 F
C360	87-010-401-080	CAP, ELECT	1-50V
C399	87-012-140-080	CAP	470P
C401	87-010-544-080	CAP, ELECT	0.1-50V
C402	87-010-544-080	CAP, ELECT	0.1-50V
C403	87-010-321-080	CHIP CAPACITOR,	82P (J)
C404	87-010-321-080	CHIP CAPACITOR,	82P (J)
C405	87-010-197-080	CAP, CHIP	0.01 DM
C406	87-010-197-080	CAP, CHIP	0.01 DM
C407	87-010-197-080	CAP, CHIP	0.01 DM
C408	87-010-197-080	CAP, CHIP	0.01 DM
C409	87-010-182-080	C-CAP,S	2200P-50 B
C410	87-010-182-080	C-CAP,S	2200P-50 B
C411	87-010-405-080	CAP, ELECT	10-50V
C412	87-010-405-080	CAP, ELECT	10-50V
C452	87-010-382-080	CAP, ELECT	22-25V
C453	87-010-183-080	C-CAP,S	2700P-50 B
C454	87-010-183-080	C-CAP,S	2700P-50 B
C455	87-010-183-080	C-CAP,S	2700P-50 B
C456	87-010-197-080	CAP, CHIP	0.01 DM
C458	87-010-178-080	CHIP CAP	1000P
C459	87-010-175-080	CAP	560P
C460	87-010-196-080	CHIP CAPACITOR,	0.1-25
C461	87-012-158-080	C-CAP,S	390P-50 CH
C462	87-012-158-080	C-CAP,S	390P-50 CH
C507	87-010-196-080	CHIP CAPACITOR,	0.1-25
C508	87-010-178-080	CHIP CAP	1000P
C509	87-A10-300-080	CAP,M	0.027-50 J
C510	87-A10-300-080	CAP,M	0.027-50 J
C515	87-A10-300-080	CAP,M	0.027-50 J
C516	87-A10-300-080	CAP,M	0.027-50 J
C518	87-010-196-080	CHIP CAPACITOR,	0.1-25
C519	87-010-546-080	CAP, ELECT	0.33-50V
C520	87-010-546-080	CAP, ELECT	0.33-50V
C521	87-010-546-080	CAP, ELECT	0.33-50V
C522	87-010-546-080	CAP, ELECT	0.33-50V
C523	87-010-545-080	CAP, ELECT	0.22-50V
C524	87-010-545-080	CAP, ELECT	0.22-50V
C525	87-010-545-080	CAP, ELECT	0.22-50V
C526	87-010-545-080	CAP, ELECT	0.22-50V
C605	87-010-179-080	CAP,CHIP S	B1200P
C606	87-010-179-080	CAP,CHIP S	B1200P
C609	87-010-213-080	C-CAP,S	0.015-50 B
C610	87-010-213-080	C-CAP,S	0.015-50 B
C611	87-010-545-080	CAP, ELECT	0.22-50V
C612	87-010-545-080	CAP, ELECT	0.22-50V
C613	87-010-545-080	CAP, ELECT	0.22-50V
C614	87-010-545-080	CAP, ELECT	0.22-50V
C615	87-010-154-080	CAP CHIP	10P
C616	87-010-385-080	CAP, ELECT	220-25V
C617	87-010-385-080	CAP, ELECT	220-25V
C618	87-010-405-080	CAP, ELECT	10-50V
C620	87-010-263-080	CAP, ELECT	100-10V
C630	87-016-669-080	C-CAP,S	0.1-25 K B
C631	87-010-185-080	C-CAP,S	3900P-50 B
C632	87-010-185-080	C-CAP,S	3900P-50 B
C633	87-016-369-080	C-CAP,S	0.033-25 B K
C634	87-016-369-080	C-CAP,S	0.033-25 B K
C671	87-010-196-080	CHIP CAPACITOR,	0.1-25<LH>
C672	87-010-196-080	CHIP CAPACITOR,	0.1-25<LH>
C673	87-010-182-080	C-CAP,S	2200P-50 B<LH>
C677	87-010-197-080	CAP, CHIP	0.01 DM
C678	87-010-197-080	CAP, CHIP	0.01 DM
C771	87-010-263-080	CAP, ELECT	100-10V
C772	87-010-197-080	CAP, CHIP	0.01 DM
C782	87-010-197-080	CAP, CHIP	0.01 DM
C783	87-010-197-080	CAP, CHIP	0.01 DM

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C784	87-010-197-080	CAP, CHIP	0.01 DM
C785	87-010-197-080	CAP, CHIP	0.01 DM
C786	87-010-197-080	CAP, CHIP	0.01 DM
C788	87-010-149-080	C-CAP,S	5P-50 CH
C789	87-A12-052-080	C-CAP,S	0.033-25 J B
C790	87-A12-052-080	C-CAP,S	0.033-25 J B
C791	87-010-196-080	CHIP CAPACITOR,	0.1-25
C792	87-010-197-080	CAP, CHIP	0.01 DM
C793	87-010-404-080	CAP, ELECT	4.7-50V
C795	87-010-197-080	CAP, CHIP	0.01 DM
C796	87-010-197-080	CAP, CHIP	0.01 DM
C797	87-010-405-080	CAP, ELECT	10-50V
C798	87-010-197-080	CAP, CHIP	0.01 DM
C799	87-010-407-080	CAP, ELECT	33-50V
C800	87-012-369-080	C-CAP,S	0.047-50F
C801	87-010-403-080	CAP, ELECT	3.3-50V
C802	87-010-194-080	CAP, CHIP	0.047
C803	87-010-198-080	CAP, CHIP	0.022
C804	87-010-263-080	CAP, ELECT	100-10V
C807	87-010-400-080	CAP, ELECT	0.47-50V
C808	87-010-401-080	CAP, ELECT	1-50V
C809	87-010-401-080	CAP, ELECT	1-50V
C810	87-010-196-080	CHIP CAPACITOR,	0.1-25
C814	87-010-197-080	CAP, CHIP	0.01 DM
C815	87-010-403-080	CAP, ELECT	3.3-50V
C816	87-010-403-080	CAP, ELECT	3.3-50V
C821	87-010-405-080	CAP, ELECT	10-50V
C823	87-010-177-080	C-CAP,S	820P-50 SL
C824	87-010-405-080	CAP, ELECT	10-50V
C825	87-010-596-080	CAP, S	0.047-16
C842	87-010-197-080	CAP, CHIP	0.01 DM
C844	87-010-197-080	CAP, CHIP	0.01 DM
C850	87-010-408-080	CAP, ELECT	47-50V
C851	87-010-197-080	CAP, CHIP	0.01 DM
C852	87-010-197-080	CAP, CHIP	0.01 DM
C853	87-010-197-080	CAP, CHIP	0.01 DM
C858	87-010-196-080	CHIP CAPACITOR,	0.1-25
C859	87-010-196-080	CHIP CAPACITOR,	0.1-25
C860	87-010-197-080	CAP, CHIP	0.01 DM
C959	87-010-196-080	CHIP CAPACITOR,	0.1-25
C960	87-010-196-080	CHIP CAPACITOR,	0.1-25
C961	87-010-152-080	C-CAP,S	8P-50 CH
C963	87-015-785-080	CHIP CAPACITOR,	0.1FZ-25Z
C971	87-010-381-080	CAP, ELECT	330-16V
C972	87-010-404-080	CAP, ELECT	4.7-50V
C973	87-010-197-080	CAP, CHIP	0.01 DM
C974	87-010-197-080	CAP, CHIP	0.01 DM
C979	87-010-322-080	C-CAP,S	100P-50 CH
C981	87-010-260-080	CAP, ELECT	47-25V
C982	87-010-196-080	CHIP CAPACITOR,	0.1-25
C983	87-010-197-080	CAP, CHIP	0.01 DM
C984	87-010-197-080	CAP, CHIP	0.01 DM
C987	87-010-197-080	CAP, CHIP	0.01 DM
C991	87-010-312-080	C-CAP,S	15P-50 CH
C992	87-010-312-080	C-CAP,S	15P-50 CH
C993	87-010-178-080	CHIP CAP	1000P
C995	87-010-178-080	CHIP CAP	1000P
C997	87-010-196-080	CHIP CAPACITOR,	0.1-25
C998	87-010-260-080	CAP, ELECT	47-25V
C999	87-A11-132-080	CAP,TC U	0.01-50 K B
CF831	87-008-261-010	FILTER, SFE10.7MA5-A	
CF832	87-008-261-010	FILTER, SFE10.7MA5-A	
CN301	87-A60-620-010	CONN,3P V 2MM JMT	
CN351	87-A60-625-010	CONN,8P V 2MM JMT	
CN601	87-099-719-010	CONN,30P TYK-B(X)	
CN602	87-A60-131-010	CONN,6P V FE	
CNA1	8A-NF8-654-010	CONN ASSY,11P TID-A(480)	
FFE831	A8-8ZA-190-030	8ZA-1 FEUNM	
J202	87-A60-483-010	JACK,DIA6.3 BLK ST W/S KM	
J203	87-A60-238-010	TERMINAL,SP 4P (MSC)	

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
J204	87-A61-153-010		JACK,PIN 4P R/W(BL) (SEPA) KM<U>	C339	87-012-156-080		C-CAP,S 220P-50 CH
J205	87-A61-157-010		JACK,PIN 2P R/W/BL V(SEPA) KM<LH>	C340	87-010-197-080		CAP, CHIP 0.01 DM
J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN	C341	87-010-194-080		CAP, CHIP 0.047
J831	87-A60-202-010		TERMINAL, ANT 4P MSP-154V-02	C351	87-010-382-040		CAP,E 22-25 SME
L101	87-003-383-010		COIL,1UH-S	C401	87-010-197-080		CAP, CHIP 0.01 DM
L102	87-003-383-010		COIL,1UH-S	C451	87-010-196-080		CHIP CAPACITOR,0.1-25
L201	87-003-383-010		COIL,1UH-S	C452	87-010-196-080		CHIP CAPACITOR,0.1-25
L202	87-003-383-010		COIL,1UH-S	C453	87-010-196-080		CHIP CAPACITOR,0.1-25
L451	87-007-342-010		COIL,OSC 85K BIAS	C454	87-010-196-080		CHIP CAPACITOR,0.1-25
L801	87-A50-540-010		COIL,FM DET(TOK)	C455	87-010-196-080		CHIP CAPACITOR,0.1-25
L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)	C502	87-010-186-080		CAP,CHIP 4700P<LH>
L811	87-005-847-080		COIL,2.2UH(CECS)	C503	87-010-112-040		CAP,E 100-16<LH>
L832	87-005-847-080		COIL,2.2UH(CECS)	C504	87-010-405-040		CAP,E 10-50<LH>
L951	8A-NF8-667-010		COIL,AM PACK 4(TOK)	C505	87-010-545-040		CAP,E 0.22-50 SME<LH>
R129	87-A00-257-080		RES,M/F 0.15-1W J	C506	87-010-320-080		CHIP CAP 68P<LH>
R130	87-A00-257-080		RES,M/F 0.15-1W J	C507	87-010-544-040		CAP,E 0.1-50 SME<LH>
R143	87-A00-439-050		RES,180-1/2W J RP<U>	C508	87-010-544-040		CAP,E 0.1-50 SME<LH>
R143	87-A00-440-050		RES,220-1/2W J RP<LH>	C509	87-010-177-080		C-CAP,S 820P-50 SL<LH>
R144	87-A00-439-050		RES,180-1/2W J RP<U>	C510	87-010-322-080		C-CAP,S 100P-50 CH<LH>
R144	87-A00-440-050		RES,220-1/2W J RP<LH>	C511	87-010-265-040		CAP,E 33-16 SME<LH>
R145	87-A00-439-050		RES,180-1/2W J RP<U>	C513	87-010-196-080		CHIP CAPACITOR,0.1-25<LH>
R145	87-A00-440-050		RES,220-1/2W J RP<LH>	C515	87-010-178-080		CHIP CAP 1000P<LH>
R146	87-A00-439-050		RES,180-1/2W J RP<U>	C602	87-010-322-080		C-CAP,S 100P-50 CH
R146	87-A00-440-050		RES,220-1/2W J RP<LH>	C603	87-010-322-080		C-CAP,S 100P-50 CH
R233	87-A00-258-080		RES,M/F 0.22-1W J	C604	87-010-322-080		C-CAP,S 100P-50 CH
R234	87-A00-258-080		RES,M/F 0.22-1W J	C650	87-010-196-080		CHIP CAPACITOR,0.1-25
R790	87-010-197-080		CAP, CHIP 0.01 DM	C699	87-010-196-080		CHIP CAPACITOR,0.1-25
R991	87-010-322-080		C-CAP,S 100P-50 CH	CN101	87-099-720-010		CONN,30P TYK-B(P)
R993	87-010-322-080		C-CAP,S 100P-50 CH	CN102	87-099-015-010		CONN,13P 6216V
R995	87-010-322-080		C-CAP,S 100P-50 CH	CN301	87-A60-140-010		CONN,15P V FE<LH>
SFR451	87-A90-432-080		SFR,30K H NVZ6TLTA	CN302	87-A60-136-010		CONN,11P V FE<U>
SFR452	87-A90-432-080		SFR,30K H NVZ6TLTA	FB501	87-008-372-080		FILTER, EMI BL OIRNI<LH>
WH1	87-A91-179-010		HLDR,WIRE 2.5-11P	FL401	8A-NF8-601-010		FL,HNA-11MM30 (ANF-8)
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309	J501	87-A61-242-010		JACK,6.3 BLK MONO W/SW V KM<LH>
				L331	87-A50-408-010		COIL,OSC 5.76MHZ
FRONT C.B				LED311	87-A40-589-040		LED,SLR-56VCT31 RED
C201	87-010-322-080		C-CAP,S 100P-50 CH	LED601	87-A40-803-010		LED,SELU1E10CXM-S LF38 BLUE
C202	87-010-322-080		C-CAP,S 100P-50 CH	LED602	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
C203	87-010-322-080		C-CAP,S 100P-50 CH	LED603	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
C204	87-010-322-080		C-CAP,S 100P-50 CH	LED604	87-A40-619-080		LED,SLR-56PT-TE7-W GRN<LH>
C205	87-010-322-080		C-CAP,S 100P-50 CH	LED605	87-A40-619-080		LED,SLR-56PT-TE7-W GRN<U>
C206	87-010-322-080		C-CAP,S 100P-50 CH	LED606	87-A40-619-080		LED,SLR-56PT-TE7-W GRN<LH>
C207	87-010-322-080		C-CAP,S 100P-50 CH	LED607	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
C208	87-010-322-080		C-CAP,S 100P-50 CH	LED608	87-A40-619-080		LED,SLR-56PT-TE7-W GRN
C209	87-010-322-080		C-CAP,S 100P-50 CH	S401	87-A91-024-180		SW,TACT KSH0611BT
C210	87-010-322-080		C-CAP,S 100P-50 CH	S402	87-A91-024-180		SW,TACT KSH0611BT
C211	87-010-322-080		C-CAP,S 100P-50 CH	S403	87-A91-024-180		SW,TACT KSH0611BT
C251	87-010-405-040		CAP,E 10-50	S404	87-A91-024-180		SW,TACT KSH0611BT
C253	87-010-196-080		CHIP CAPACITOR,0.1-25	S405	87-A91-024-180		SW,TACT KSH0611BT
C254	87-012-369-080		C-CAP,S 0.047-50F	S406	87-A91-024-180		SW,TACT KSH0611BT
C255	87-010-415-040		CAP,E 10-50 5L	S407	87-A91-024-180		SW,TACT KSH0611BT
C256	87-010-405-040		CAP,E 10-50	S408	87-A91-024-180		SW,TACT KSH0611BT
C259	87-010-405-040		CAP,E 10-50	S409	87-A91-024-180		SW,TACT KSH0611BT
C273	87-010-178-080		CHIP CAP 1000P	S410	87-A91-024-180		SW,TACT KSH0611BT
C274	87-010-178-080		CHIP CAP 1000P	S411	87-A91-024-180		SW,TACT KSH0611BT
C301	87-010-182-080		C-CAP,S 2200P-50 B	S412	87-A91-024-180		SW,TACT KSH0611BT<LH>
C302	87-010-196-080		CHIP CAPACITOR,0.1-25	S413	87-A91-024-180		SW,TACT KSH0611BT
C312	87-010-498-040		CAP,E 10-16 GAS	S414	87-A91-024-180		SW,TACT KSH0611BT
C314	87-010-196-080		CHIP CAPACITOR,0.1-25	S415	87-A91-024-180		SW,TACT KSH0611BT
C315	87-010-196-080		CHIP CAPACITOR,0.1-25	S416	87-A91-024-180		SW,TACT KSH0611BT
C316	87-010-196-080		CHIP CAPACITOR,0.1-25	S417	87-A91-024-180		SW,TACT KSH0611BT
C321	87-A11-606-080		C-CAP,S 0.22-25 K B	S418	87-A91-024-180		SW,TACT KSH0611BT
C322	87-010-400-040		CAP,E 0.47-50	S419	87-A91-024-180		SW,TACT KSH0611BT
C325	87-A10-189-040		CAP,E 220-10	S420	87-A91-024-180		SW,TACT KSH0611BT<LH>
C326	87-A10-189-040		CAP,E 220-10	S425	87-A91-024-180		SW,TACT KSH0611BT
C332	87-010-178-080		CHIP CAP 1000P	S426	87-A91-024-180		SW,TACT KSH0611BT
C334	87-010-312-080		C-CAP,S 15P-50 CH	S430	87-A91-024-180		SW,TACT KSH0611BT
C335	87-012-140-080		CAP 470P	S431	87-A91-024-180		SW,TACT KSH0611BT
C336	87-012-155-080		C-CAP 180P-50CH	S432	87-A91-024-180		SW,TACT KSH0611BT
				S433	87-A91-024-180		SW,TACT KSH0611BT

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
S434	87-A91-024-180	SW, TACT	KSH0611BT
S435	87-A91-024-180	SW, TACT	KSH0611BT
SW252	87-A91-555-010	SW, RTRY	EC12E24504
SW253	87-A91-542-010	SW, RTRY	EC12E12504
VR501	86-NFA-607-010	VR, RTRY	10K15AX1 1 V XV0121PVN<LH>

PT C.B

C1	87-010-387-080	CAP, E	470-25 SME
C31	87-010-403-040	CAP, E	3.3-50 SME
△ CN1	87-A61-122-010	CONN, 11P V	TID-A
△ PT2	8A-NF8-673-010	PT, SUB	ANF-8 (H) KAMI<LH>
△ PT2	8A-NF8-661-010	PT, SUB	ANF-8 (U) <U>
△ RY1	87-A91-339-010	RELAY, AC	DC12V G5PA-2<LH>
△ RY2	87-A91-418-010	RELAY, AC12V	G5PA-1-M<U>
△ S1	87-A90-165-010	SW, SL	1-2-3 SWS2301<LH>
△ T1	87-A60-317-010	TERMINAL,	1P MSC
△ T2	87-A60-317-010	TERMINAL,	1P MSC

DECK C.B<U>

CN1	87-099-753-010	CONN, 11P H	9604
SFR1	87-024-581-010	SFR, 3.3K	DIA6V K0A
SW1	87-A90-673-010	SW, MICRO	ESE11SH1C
SW2	87-A91-500-010	SW, MICRO	MPU11470MLB0
SW3	87-A91-500-010	SW, MICRO	MPU11470MLB0
SW4	87-A91-500-010	SW, MICRO	MPU11470MLB0
SW5	87-A90-673-010	SW, MICRO	ESE11SH1C

DECK C.B<LH>

CON105	87-099-756-019	CONN, 15P	9604 S F
SFR1	87-024-581-019	SFR, 3.3K	DIA 6H
SOL1	82-ZM1-618-410	SOL ASSY,	27
SOL2	82-ZM1-618-410	SOL ASSY,	27
SW1	87-A90-248-019	SW, MICRO	ESE11SH2CXQ
SW2	87-A90-248-019	SW, MICRO	ESE11SH2CXQ
SW3	87-A90-248-019	SW, MICRO	ESE11SH2CXQ
SW4	87-036-110-019	SW, MICRO	SPPB62
SW5	87-036-110-019	SW, MICRO	SPPB62
SW6	87-036-110-019	SW, MICRO	SPPB62
SW8	87-A90-248-019	SW, MICRO	ESE11SH2CXQ
SW9	87-A90-248-019	SW, MICRO	ESE11SH2CXQ
W1	82-ZM3-601-019	RBN, CORD,	4P-75

HEAD-1 C.B

85-ZM3-602-010	PWB, FLEX	A
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HEAD-2 C.B

85-ZM3-602-010	PWB, FLEX	A
CON351	87-NF6-616-010	CONN ASSY, 8P-RPB

TRANSISTOR ILLUSTRATION



E C B

KTA1266GR
KTC3198GR
CD1585BC
CSA952K



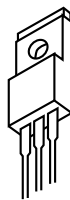
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2SC3331(T/U)



E C B

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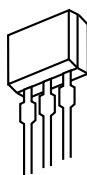
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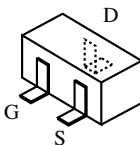
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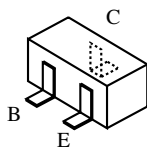


S D G

2SJ460
2SK2541



2SK2158
2SJ461-T1



2SA1235F
2SC3052F
CMBT5551
CMBT5401
RT1P141C

RT1N441C
RT1N141C
RT1P144C
2SC2714O

○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



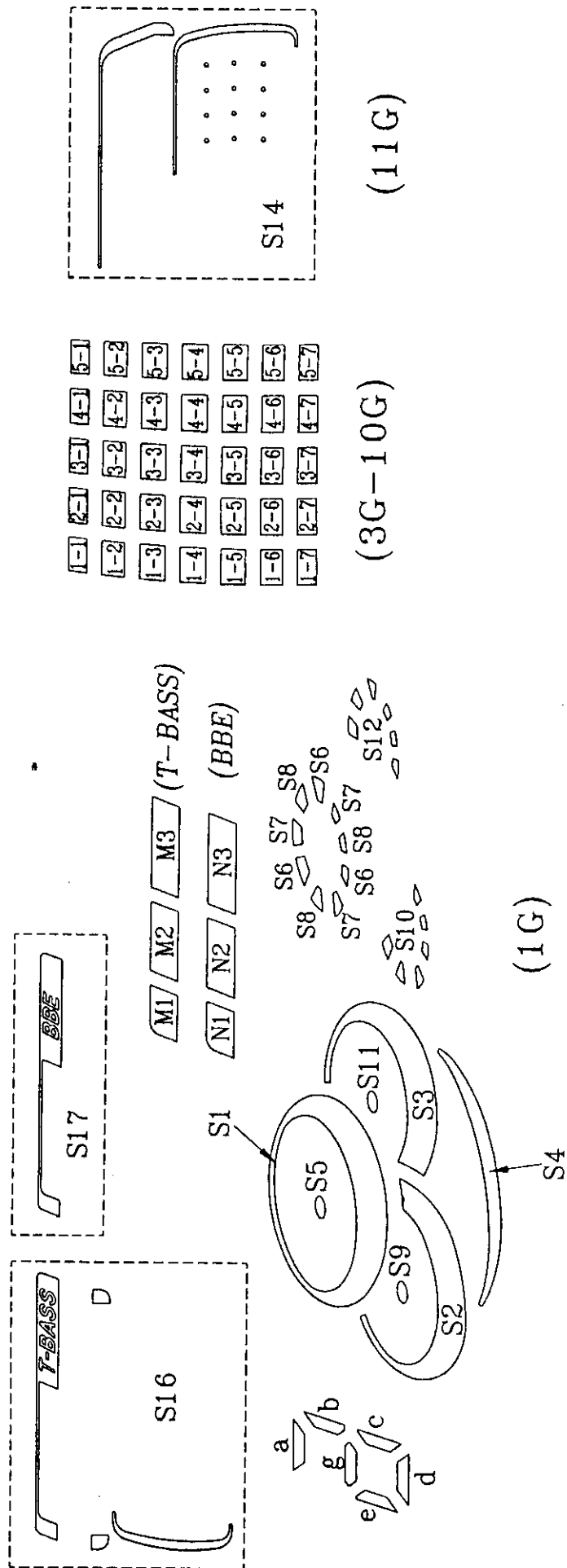
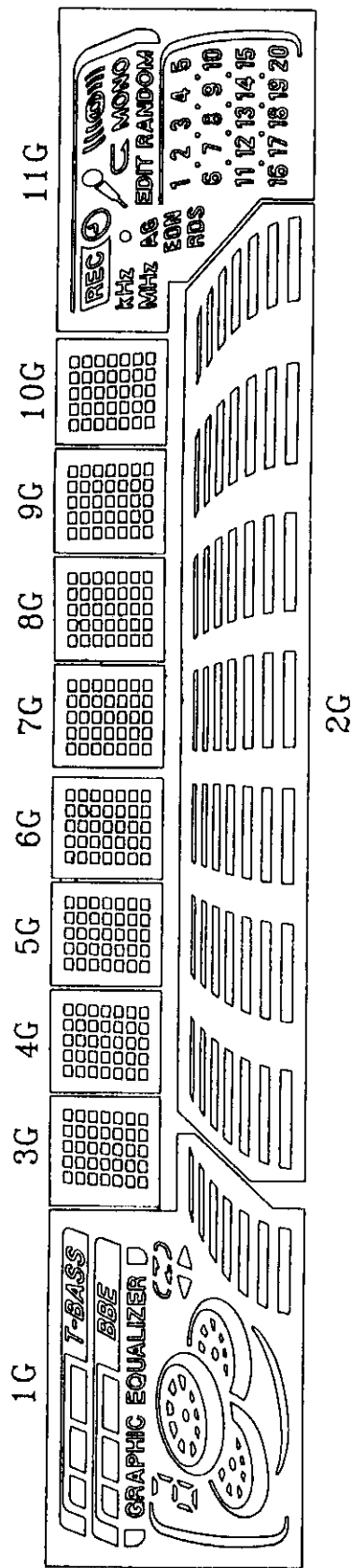
A
抵抗部品コード
Resistor Code

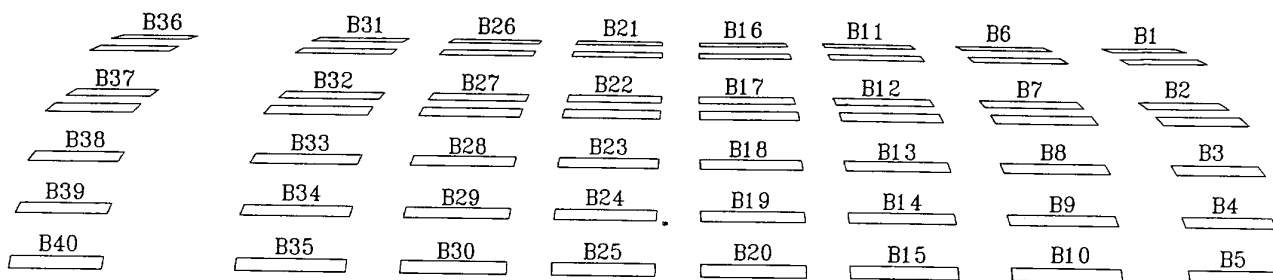
桁表示
Figure
抵抗値
Value of resistor

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

GRID ASSIGNMENT





(1G)

(2G)

ANODE CONNECTION

	1G	2G	3G-10G	11G
P1	S17	B35	1-1	
P2	N1	B30	2-1	MONO
P3	N2	B25	3-1	RANDOM
P4	N3	B20	4-1	
P5	GRAPHIC EQUALIZER	B15	5-1	EDIT
P6		B10	1-2	
P7		B5	2-2	REC
P8		B34	3-2	KHz
P9		B29	4-2	MHz
P10		B24	5-2	o
P11	S4	B19	1-3	AG
P12	S2	B14	2-3	EON
P13	S10	B9	3-3	RDS
P14	S9	B4	4-3	S14
P15	S3	B33	5-3	20
P16	S12	B28	1-4	19
P17	S11	B23	2-4	18
P18	S1	B18	3-4	17

	1G	2G	3G-10G	11G
P19	S6	B13	4-4	16
P20	S7	B8	5-4	15
P21	S8	B3	1-5	14
P22	S5	B32	2-5	13
P23	S16	B27	3-5	12
P24	M1	B22	4-5	11
P25	M2	B17	5-5	10
P26	M3	B12	1-6	9
P27	e	B7	2-6	8
P28	a,g,d	B2	3-6	7
P29	b	B31	4-6	6
P30	c	B26	5-6	5
P31	B40	B21	1-7	4
P32	B39	B16	2-7	3
P33	B38	B11	3-7	2
P34	B37	B6	4-7	1
P35	B36	B1	5-7	

	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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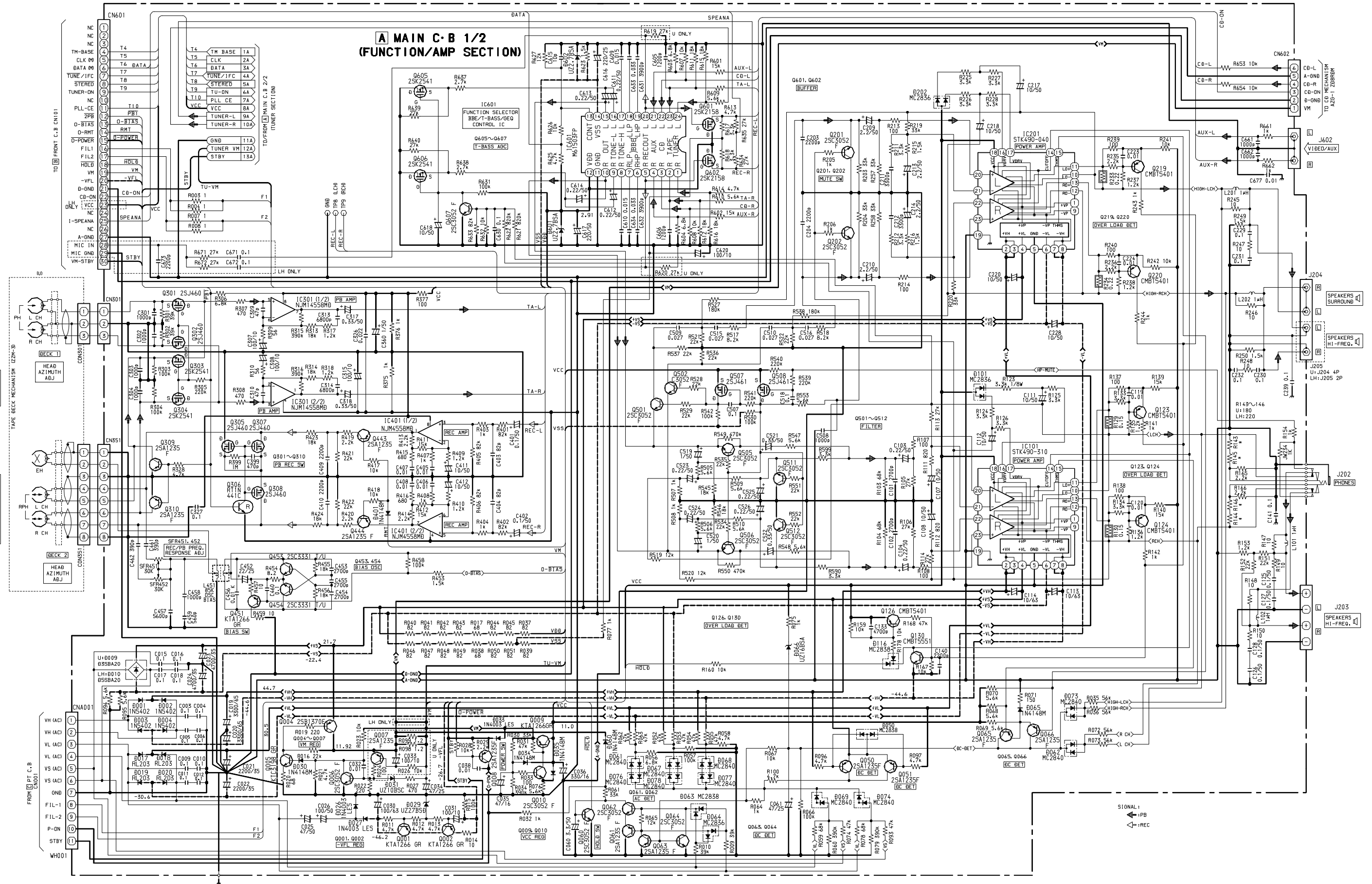


Diagram illustrating the Type B lock mechanism, showing two heads (HEAD-1 and HEAD-2) and their corresponding cam tracks (CAM-1 and CAM-2).

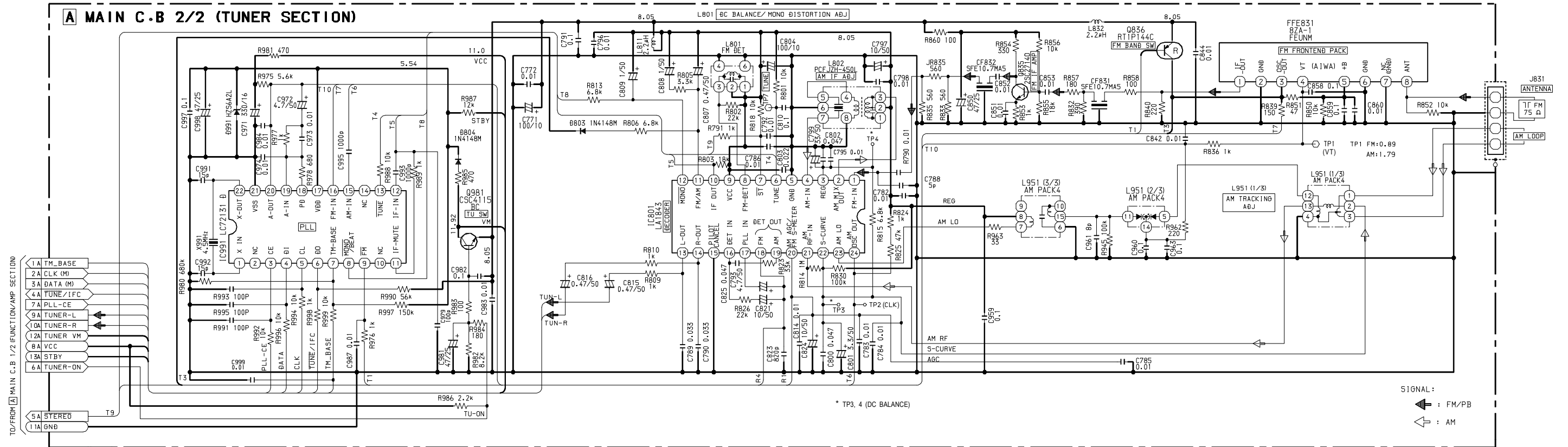
HEAD-1: Includes PH (Pump Head), L CH (Locking Cam Head), and R CH (Release Cam Head) components. It is associated with CAM-1.

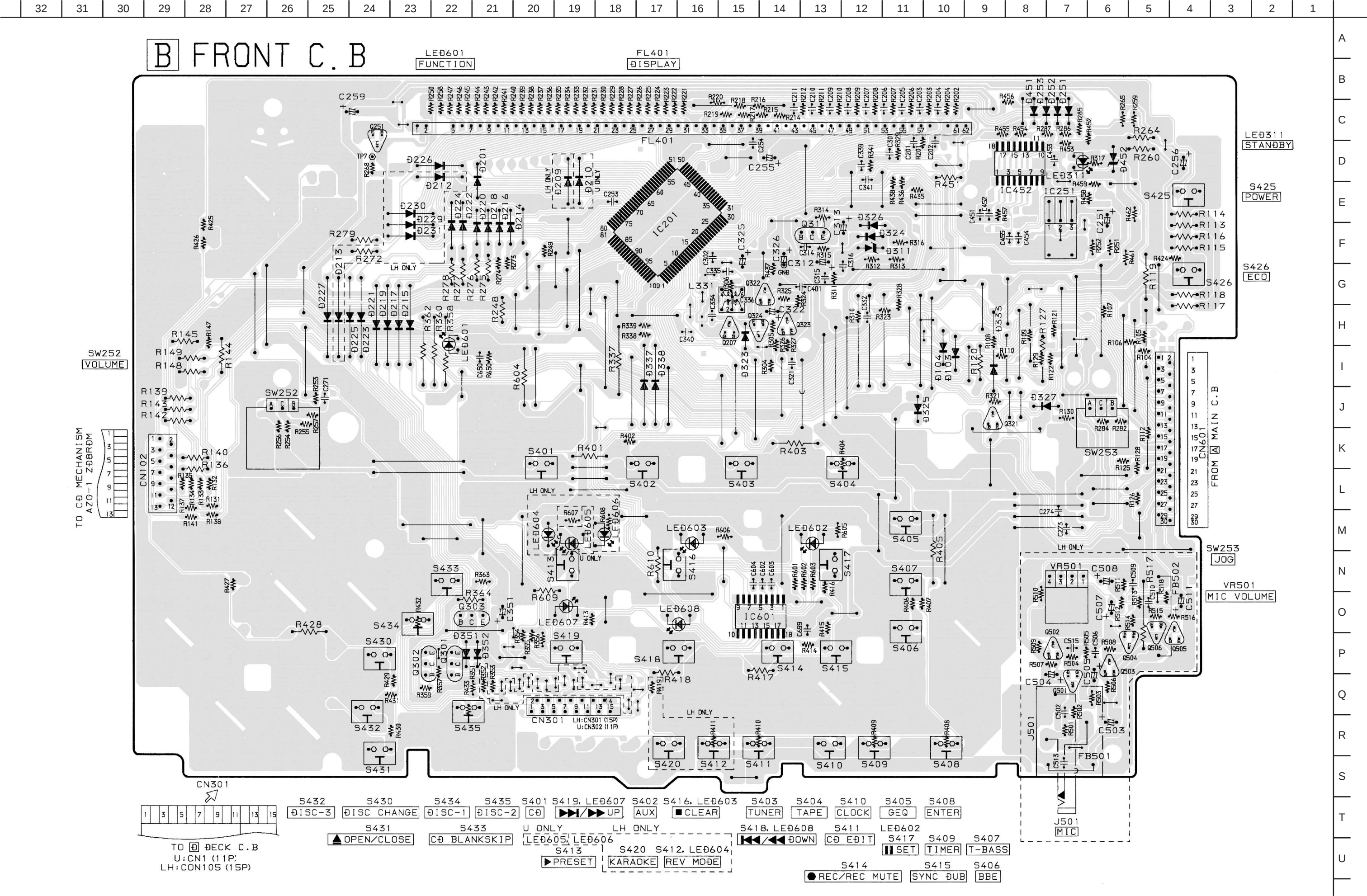
HEAD-2: Includes DH (Drive Head), L CH (Locking Cam Head), and R CH (Release Cam Head) components. It is associated with CAM-2.

The diagram shows the mechanical linkage and cam profiles for each head, with numbered points (1-6) indicating specific positions or states.

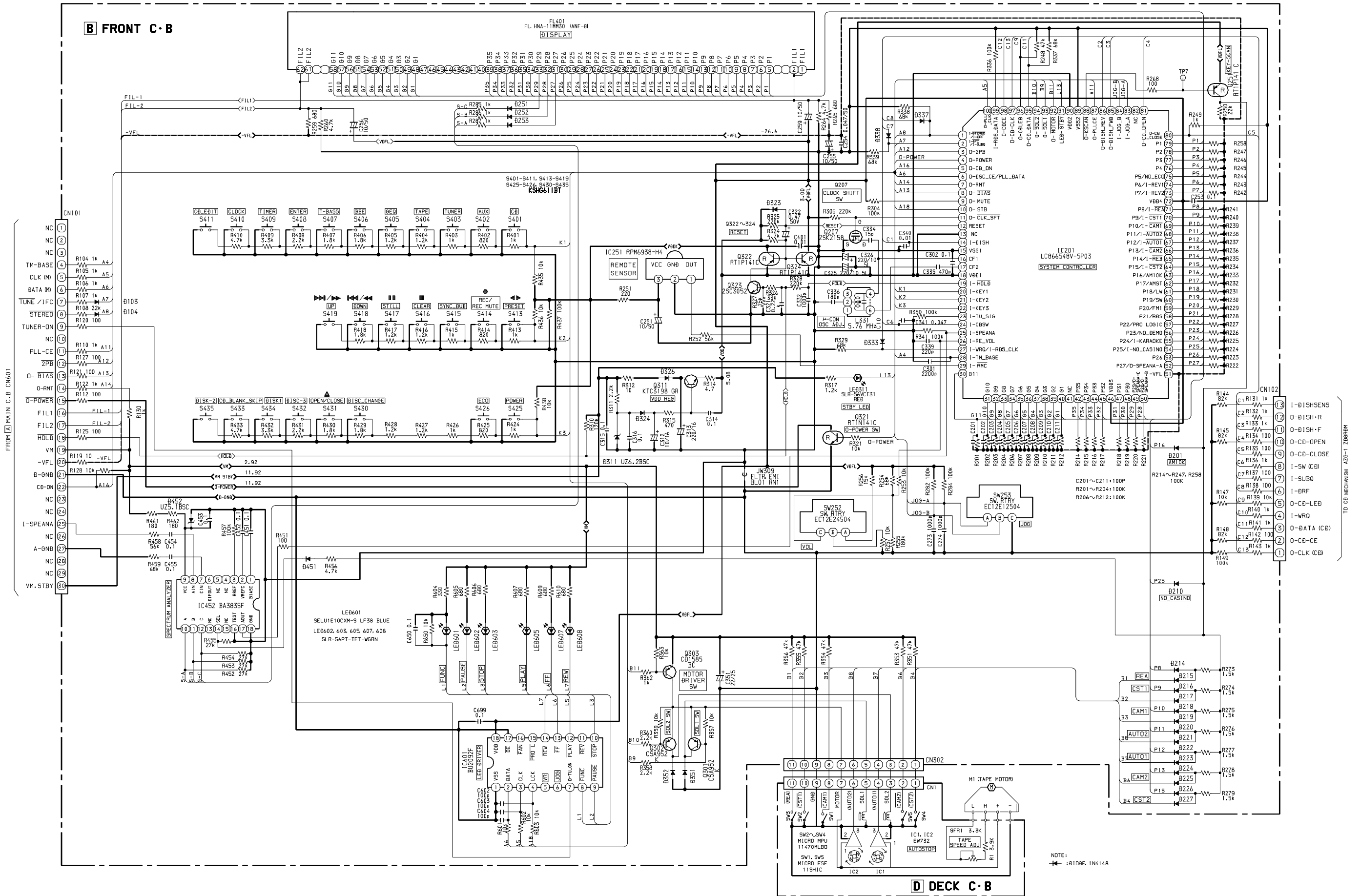


SCHEMATIC DIAGRAM – 2 (MAIN 2 / 2 : TUNER)

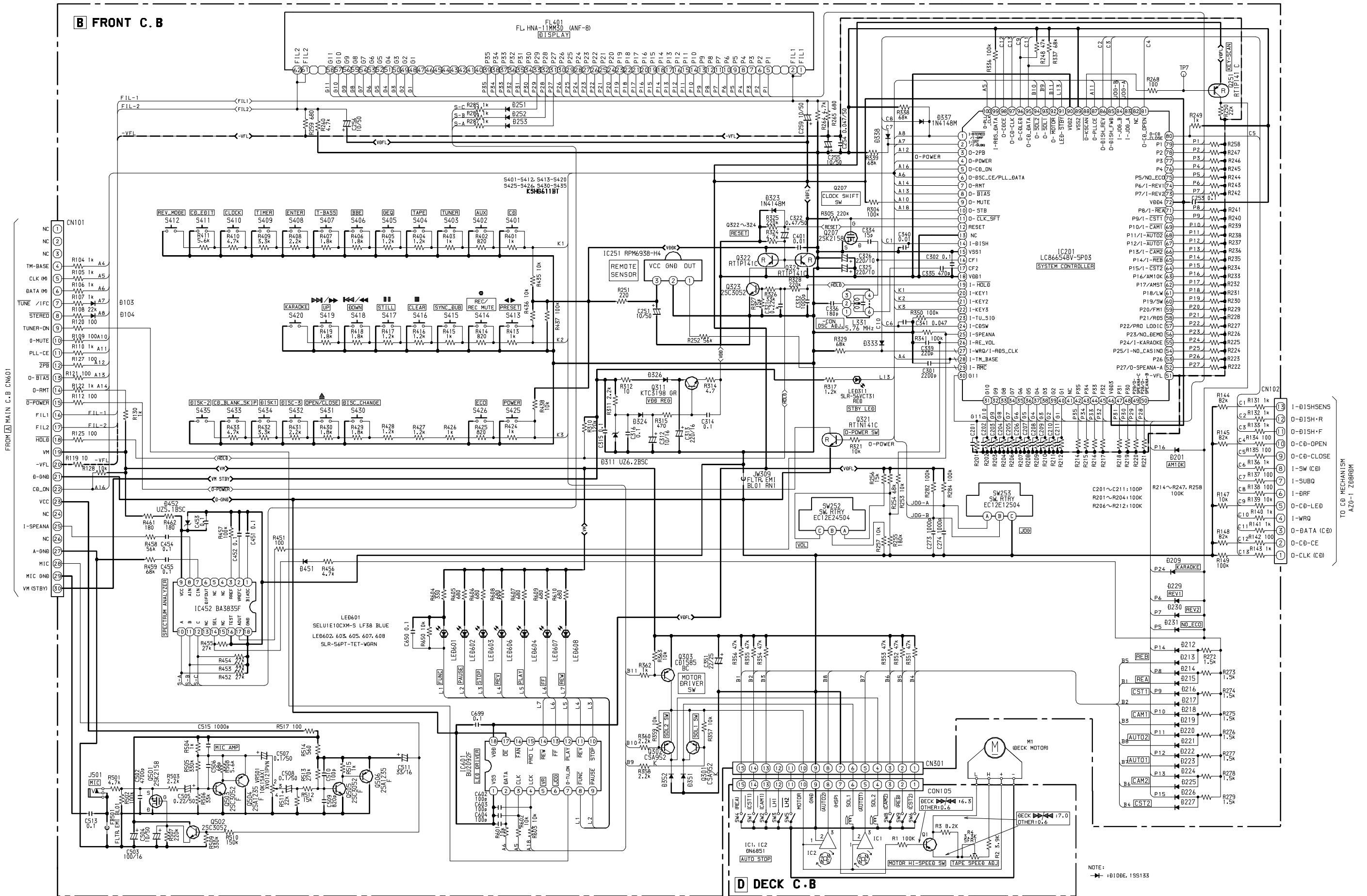




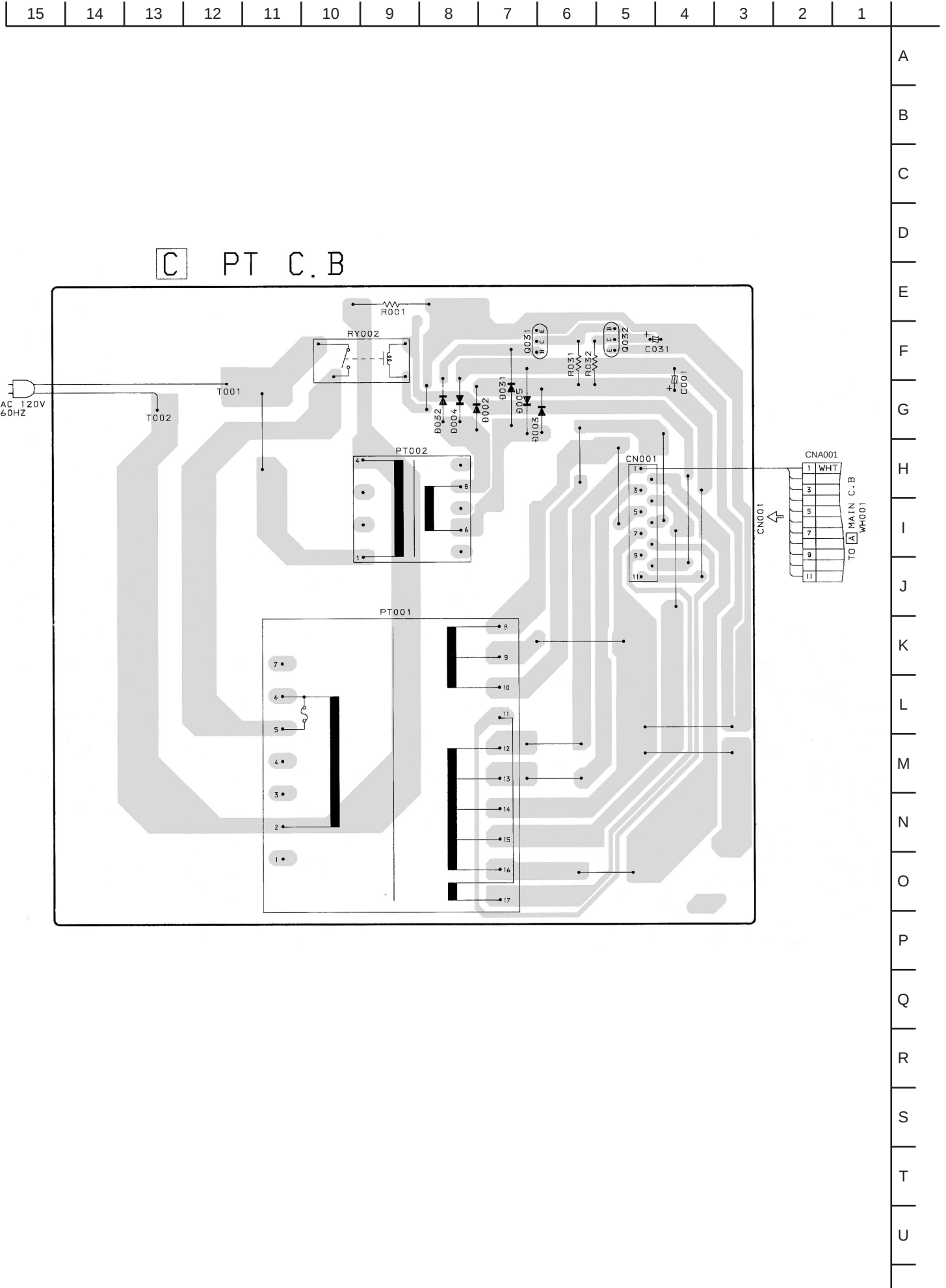
SCHEMATIC DIAGRAM – 3 (FRONT)<U>



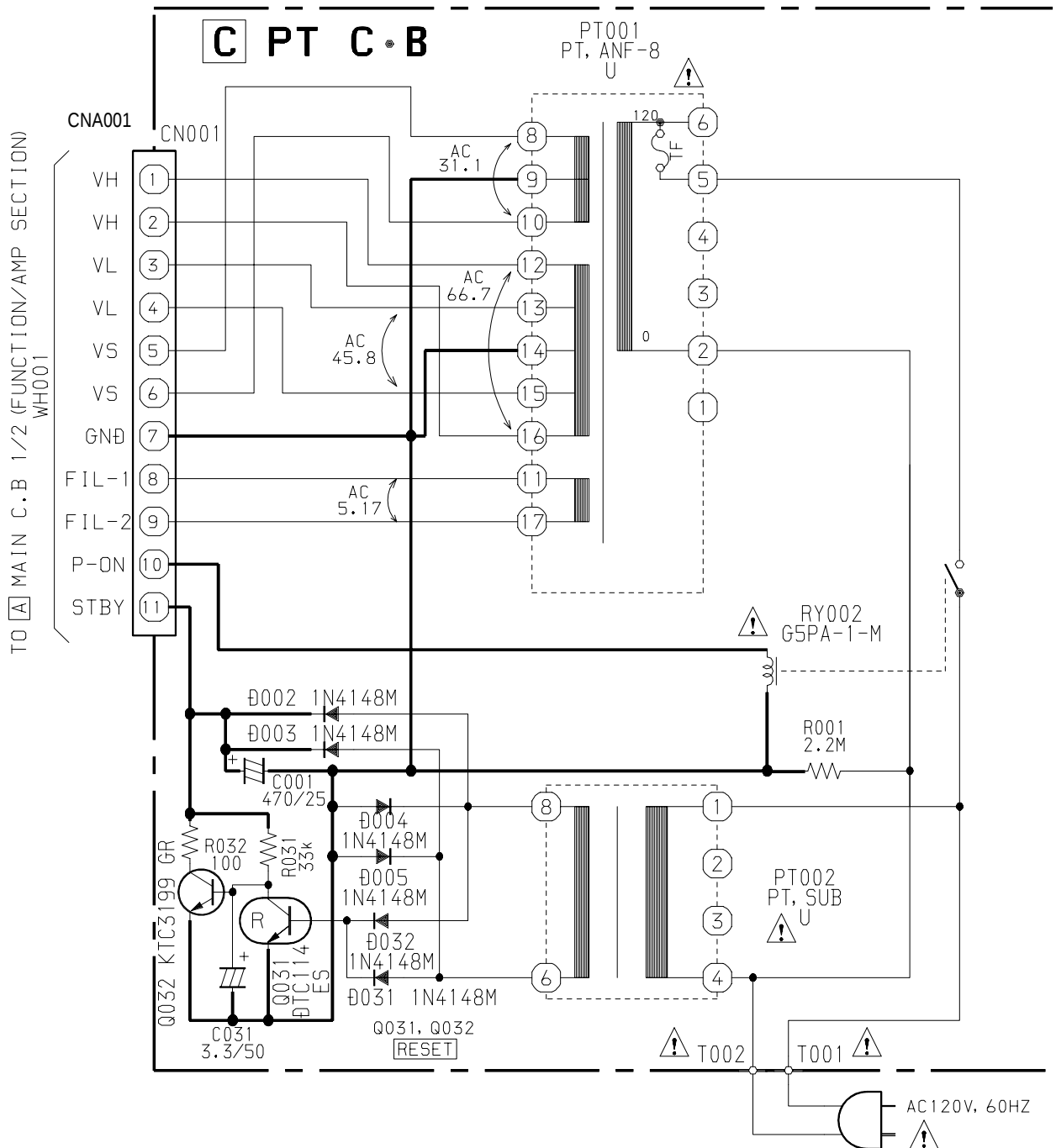
SCHEMATIC DIAGRAM - 4 (FRONT)<LH>



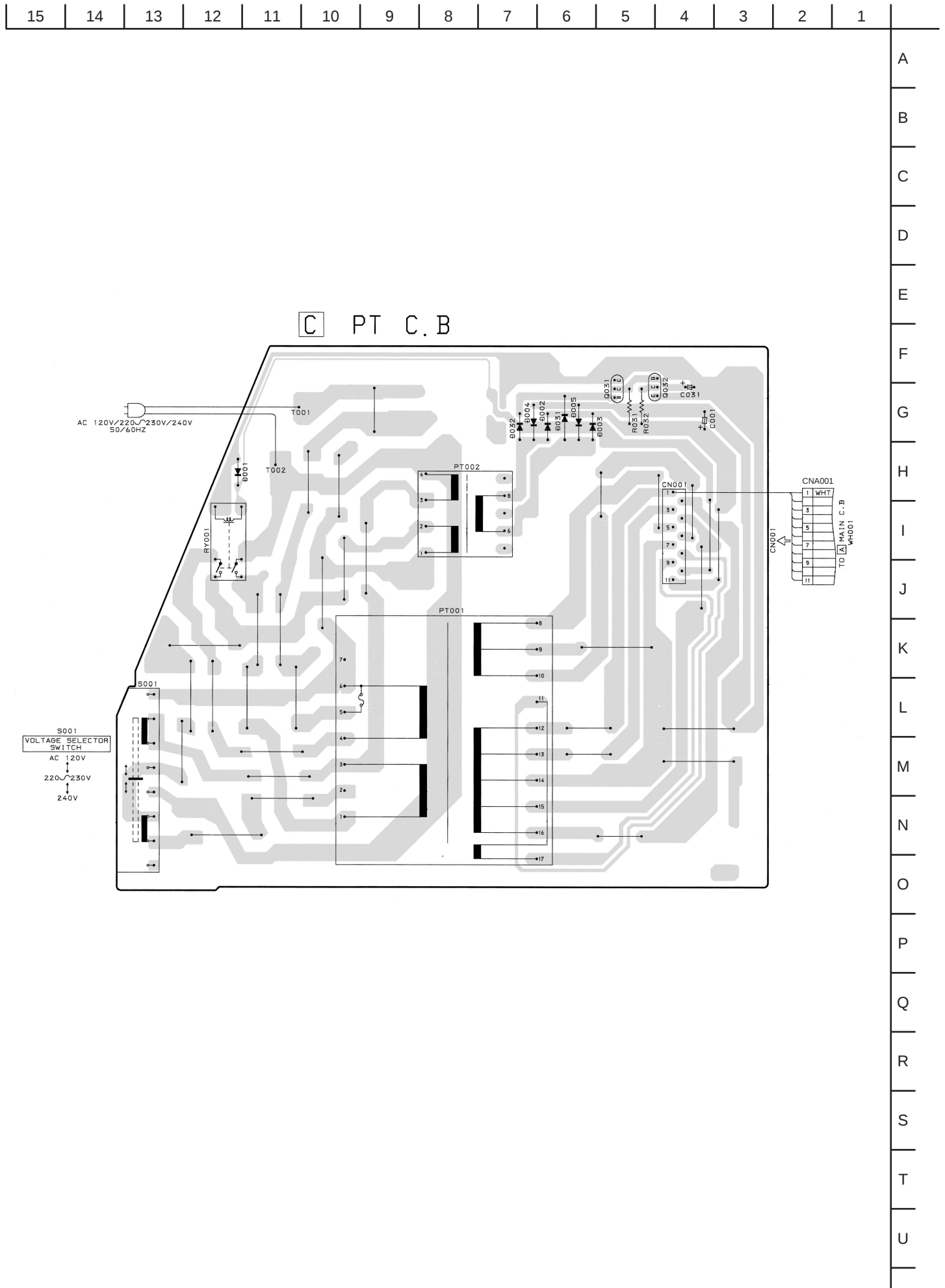
WIRING - 3 (PT) <U>



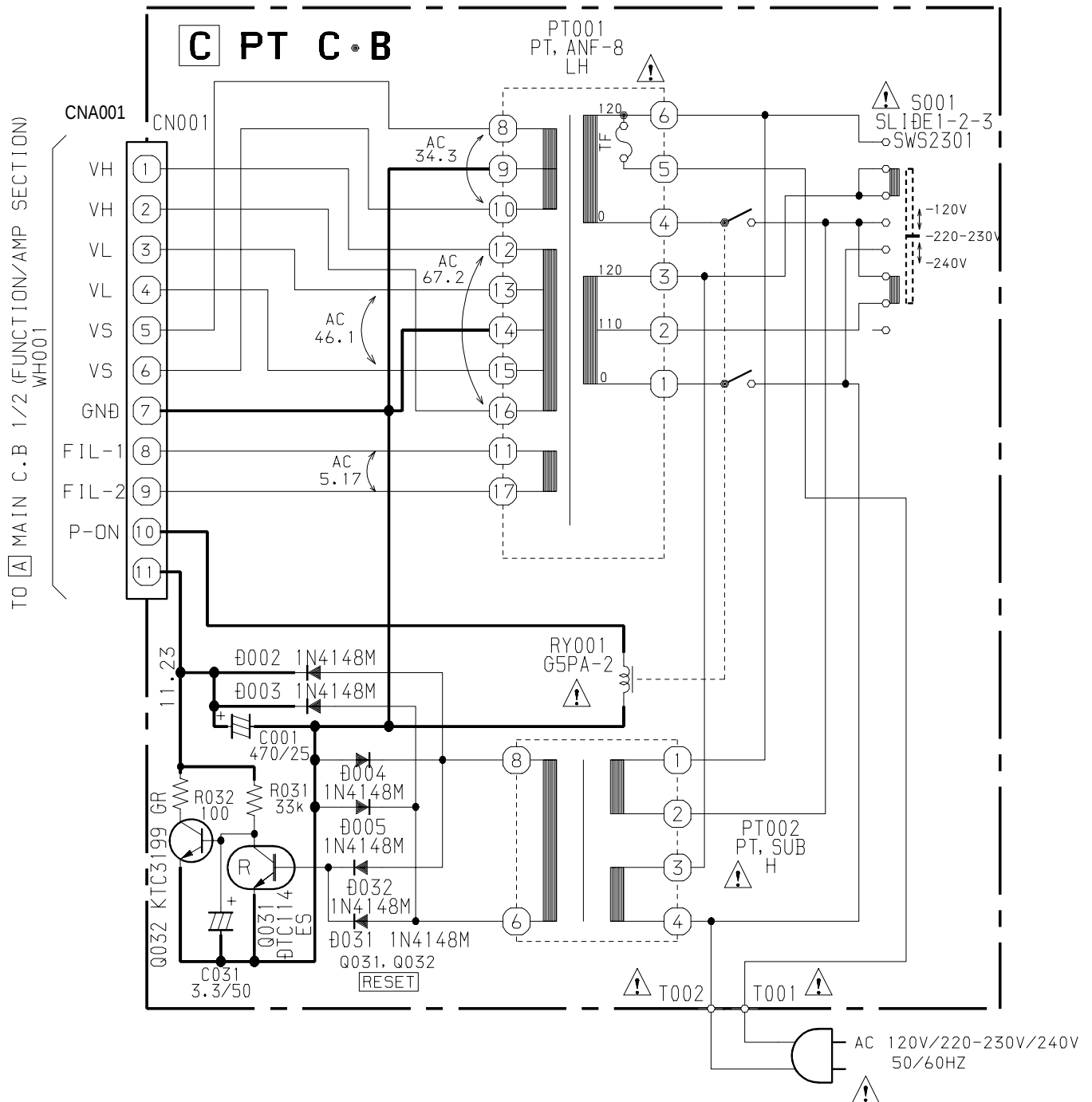
SCHEMATIC DIAGRAM – 5 (PT) <U>



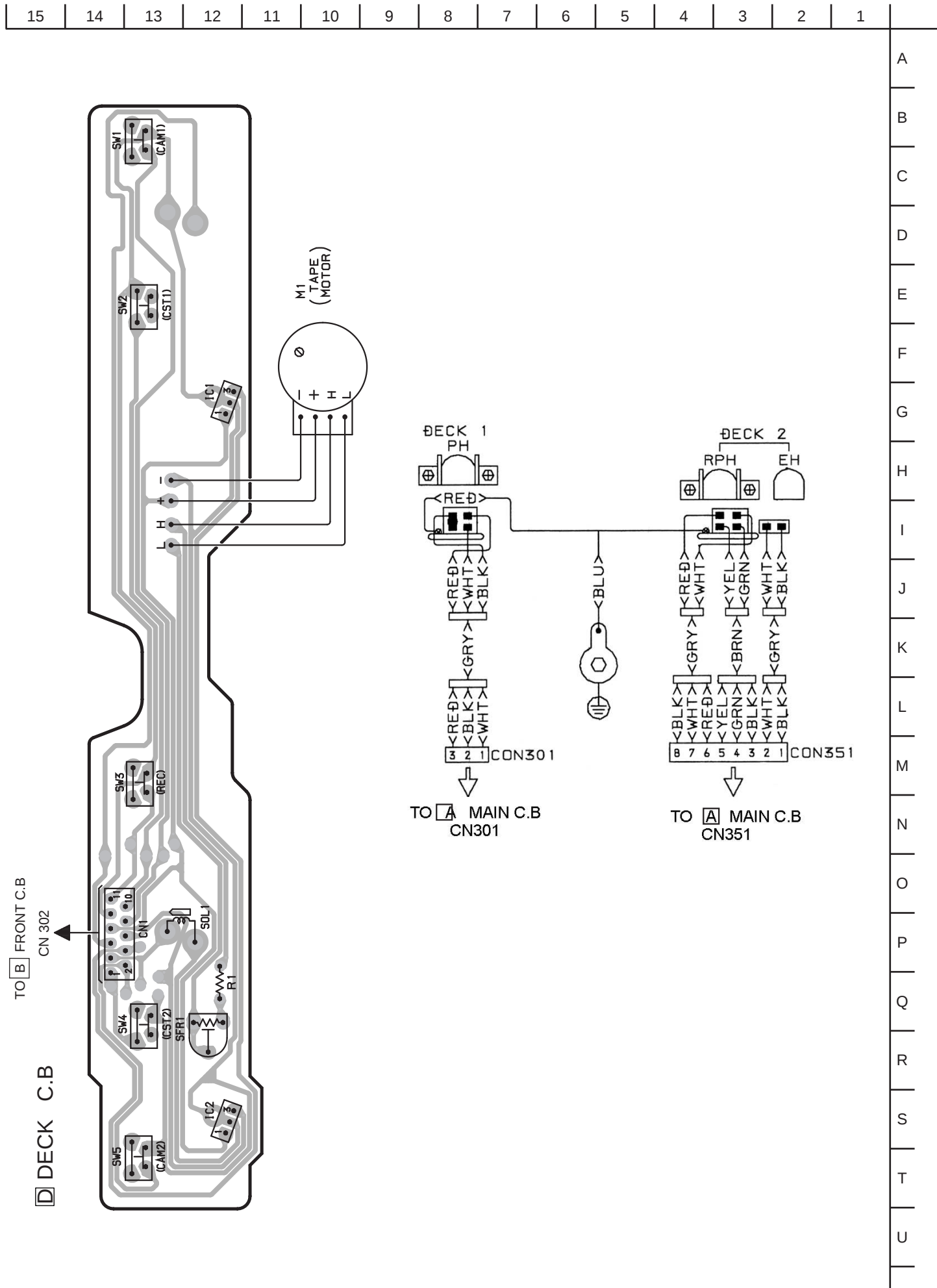
WIRING - 4 (PT) <LH>



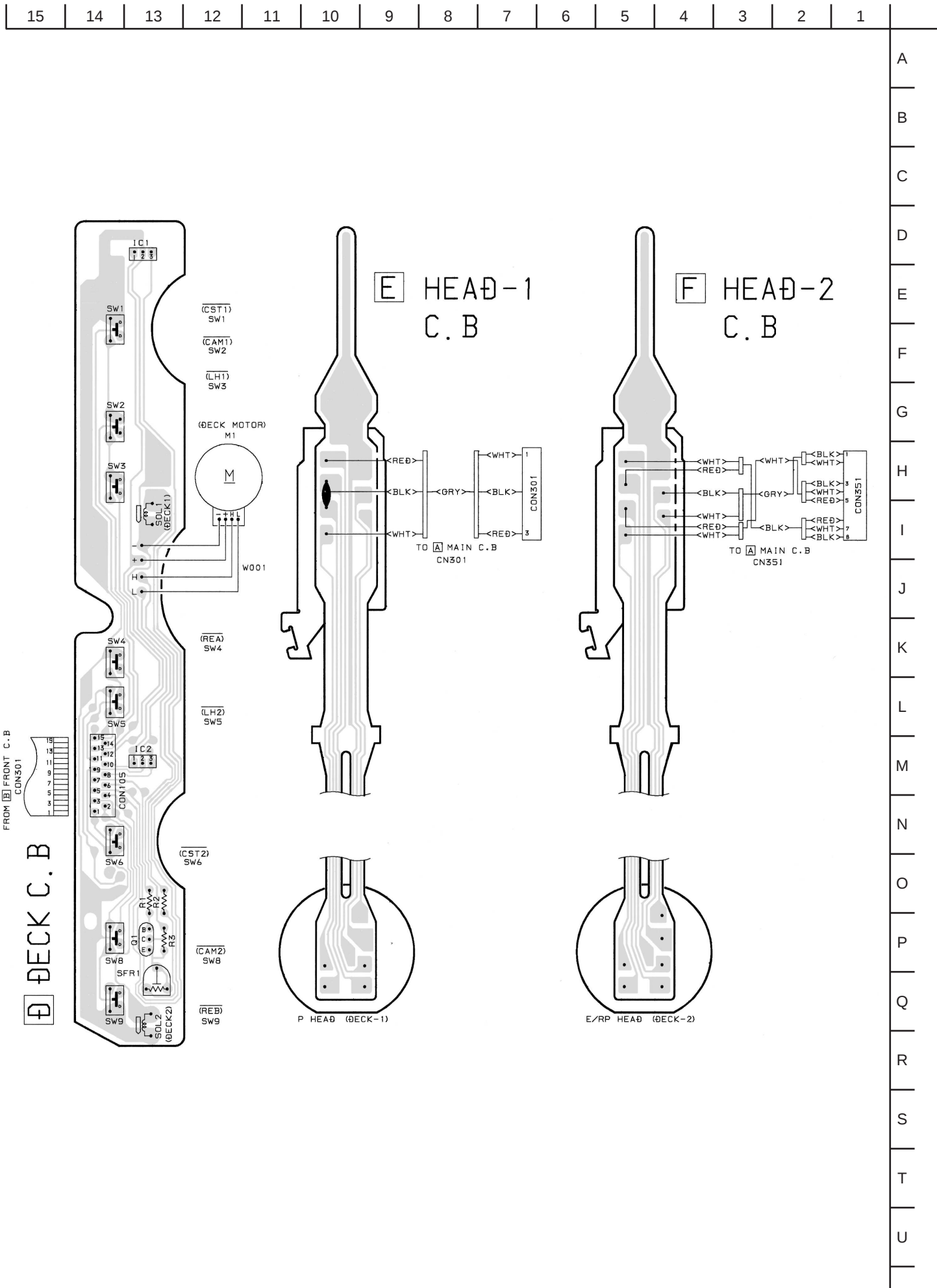
SCHEMATIC DIAGRAM – 6 (PT) <LH>



WIRING - 5 (DECK) <U>

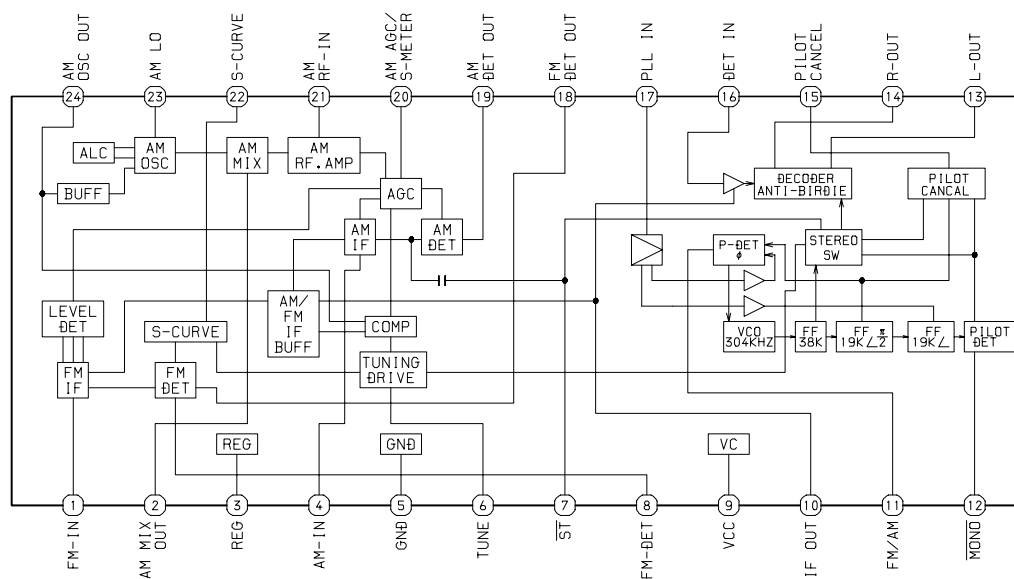


WIRING - 6 (DECK) <LH>

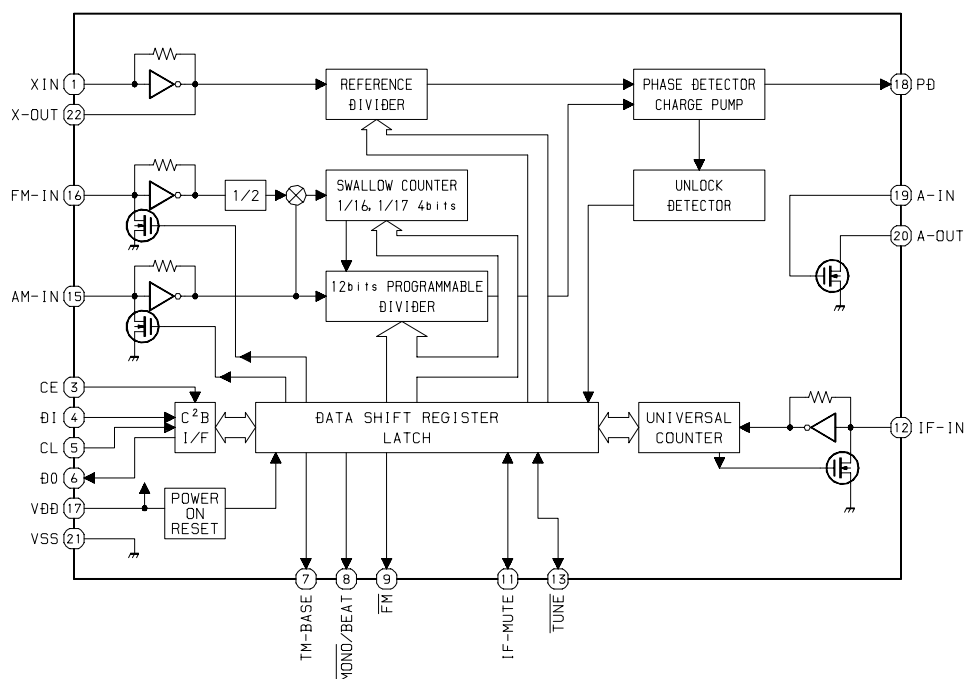


IC BLOCK DIAGRAM

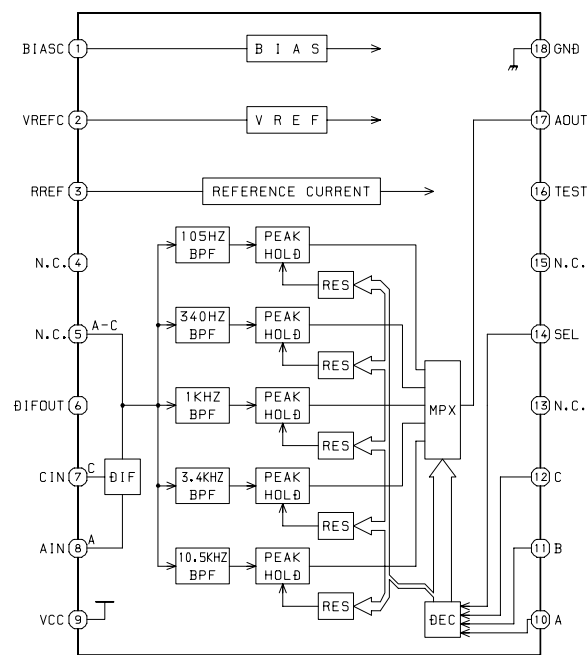
IC, LA1843



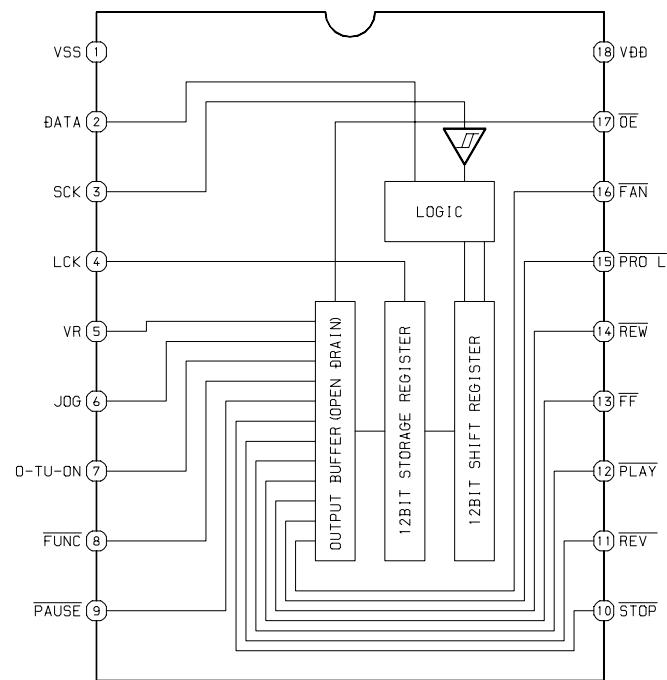
IC, LC72131D

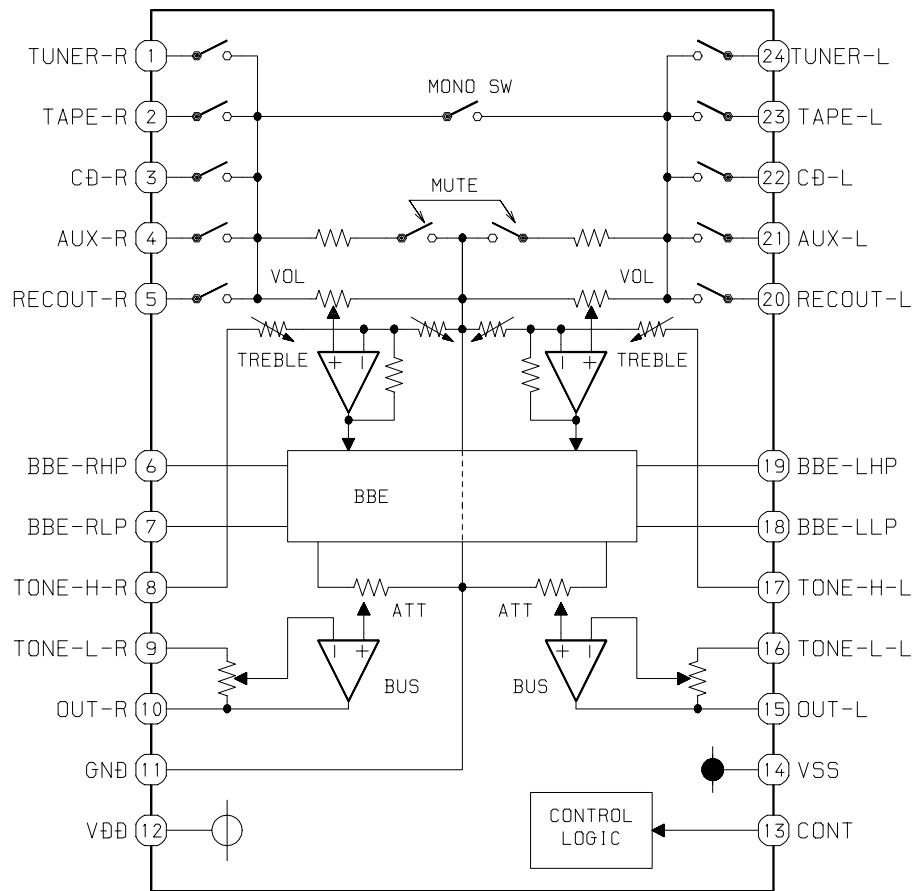


IC, BA3835F



IC, BU2092F





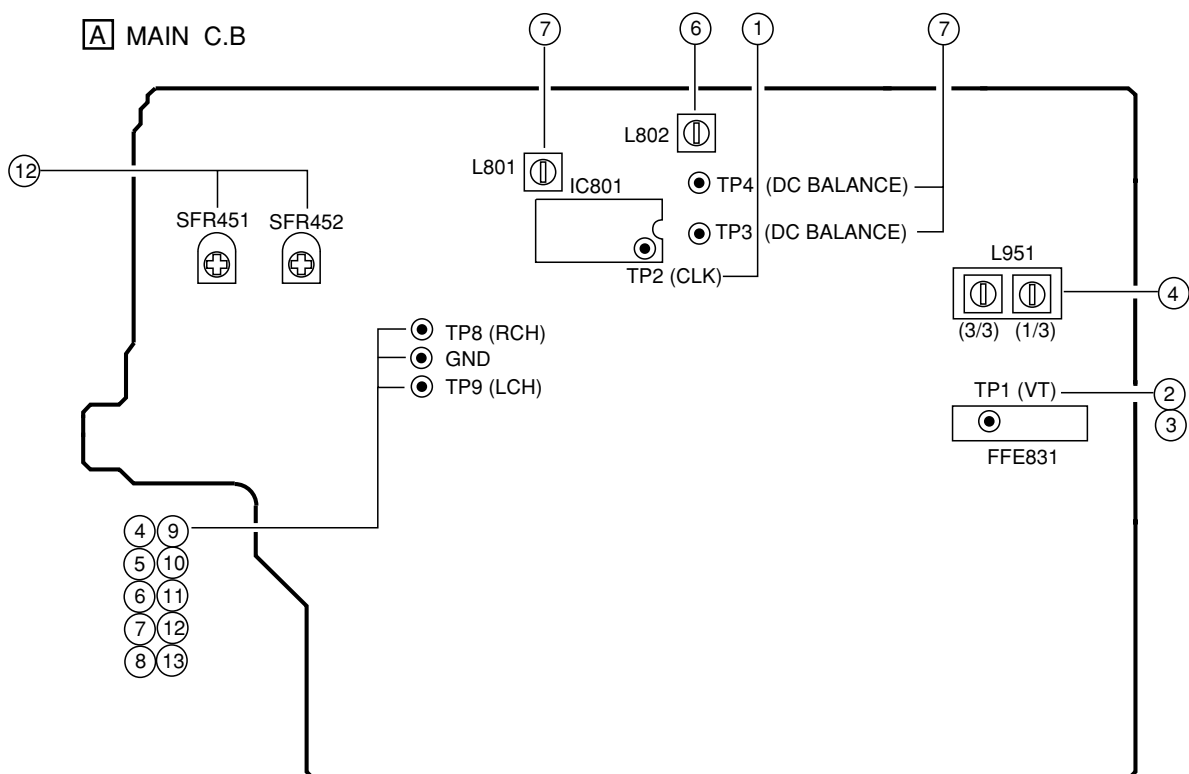
IC DESCRIPTION

IC, LC866548V-5P03

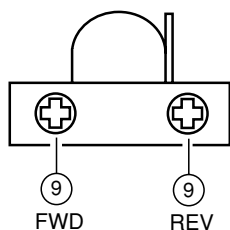
Pin No.	Pin Name	I/O	Description
1	I-STEREO/I-DRF	I	Stereo detected input / CD DRF input.
2	I-IFC/I-SUBQ	I	Tune IF count serial data input / CD SUBQ input.
3	O-2PB	O	DECK2 playback switch output.
4	O-POWER	O	System power supply ON/OFF output.
5	O-CD-ON	O	CD power ON/OFF output.
6	O-PLL-DATA	O	LED driver, TUNER IC, FUNCTION IC data output.
7	O-RMT	O	DECK2 record mute output.
8	O-BIAS	O	DECK2 bias ON/OFF output.
9	O-MUTE	O	System mute ON/OFF output.
10	O-STB	O	Latch strobe output for LED driver IC.
11	O-CLK-SFT	O	Micon clock shift output.
12	RESET	I	System reset.
13	NC	-	Not connected.
14	I-DISH	I	Latch strobe output for FRONT shift register.
15	VSS1	-	GND.
16	CF1	-	5.76MHz oscillator circuit.
17	CF2	-	5.76MHz oscillator circuit.
18	VDD1	-	Power supply input.
19	I-HOLD	I	Power failure detected input.
20	I-KEY1	I	KEY input (A/D).
21	I-KEY2	I	KEY input (A/D).
22	I-KEY3	I	KEY input (A/D).
23	I-TU-SIG	I	Tuner signal input.
24	I-CDSW	I	CD mechanical switch A/D converter input.
25	I-SPEANA	I	A/D input for spectrum analyzer display.
26	I-RE-VOL	I	Rotary encoder input (VOL).
27	I-WRQ/I-RDS-CLK	I	CD WRQ input / Tune RDS clock input.
28	I-TM-BASE	I	Reference clock input for timer watch.
29	I-RMC	I	System remote control signal input.
30 ~ 40	G11 ~ G1	O	FL grid output G11 ~ G1
41	NC	-	Not connected.
42 ~ 45	P35 ~ P32	O	FL segment output P35 ~ P32.
46	VDD3	-	Power supply input.
47 ~ 48	P31 ~ P30	O	FL segment output P31 ~ P30.
49	P29/O-SPEANA-C	O	FL segment output P29 / Spectrum analyzer band switching output.
50	P28/O-SPEANA-B	O	FL segment output P28 / Spectrum analyzer band switching output.
51	-VFL	-	Power supply input for FL display.
52	P27/O-SPEANA-A	O	FL segment output P27 / Spectrum analyzer band switching output.
53	P26	O	FL segment output P26.
54	P25/I-NO-CASINO	O/I	FL segment output P25 / NO CASINO DEMO input to diode (U only).
55	P24/I-KARAOKE	O/I	FL segment output P24 / KARAOKE input to diode (LH only).
56	P23/NO-DEMO	O/I	FL segment output P23 / NO DEMO input to diode (Not used).
57	P22/PRO LOGIC	O/I	FL segment output P22 / PRO LOGIC input to diode.(Not used)

Pin No.	Pin Name	I/O	Description
58	P21/RDS	O/I	FL segment output P21 / RDS input to diode (Not used).
59	P20/FM1	O/I	FL segment output P20 / FM1 input to diode (Not used).
60	P19/SW	O/I	FL segment output P19 / SW input to diode (Not used).
61	P18/LW	O/I	FL segment output P18 / LW input to diode (Not used).
62	P17/AMST	O/I	FL segment output P17 / AMST input to diode (Not used).
63	P16/AM10K	O/I	FL segment output P16 / AM10K input to diode.
64	P15/I-CST2	O/I	FL segment output P15 / DECK2 cassette detect switch data input.
65	P14/I-REB	O/I	FL segment output P14 / DECK2 side-B record OK switch data input (LH only).
66	P13/I-CAM2	O/I	FL segment P13 output / DECK2 CAM switch data input.
67	P12/I-AUTO1	O/I	FL segment P12 output / DECK1 AUTO STOP switch data input.
68	P11/I-AUTO2	O/I	FL segment P11 output / DECK2 AUTO STOP switch data input.
69	P10/I-CAM1	O/I	FL segment P10 output / DECK1 CAM STOP switch data input.
70	P9/I-CST1	O/I	FL segment P9 output / DECK1 cassette detect switch data input.
71	P8/I-REA	O/I	FL segment P8 output / DECK2 side A record OK switch data input.
72	VDD4	-	Power supply input.
73	P7/I-REV2	O/I	FL segment P7 output / DECK2 REVERSE mode input (LH only).
74	P6/I-REV1	O/I	FL segment P6 output / DECK1 REVERSE mode input (LH only).
75	P5/NO-ECO	O/I	FL segment P5 output / NO ECO mode input (LH only).
76 ~ 79	P4 ~ P1	O	FL segment output P4 ~ P1.
80	O-CD-CLOSE	O	CD TRAY CLOSE data input.
81	O-CD-OPEN	O	CD TRAY OPEN data input.
82	NC	-	Not connected.
83	I-JOG-A	I	Rotary encoder A input.
84	I-JOG-B	I	Rotary encoder B input.
85	O-DISH-FWD	O	CD turntable forward rotation output.
86	O-DISH-REV	O	CD turntable reverse rotation output.
87	O-PLL-CE	O	PLL IC chip enable output.
88	O-KSCAN	O	Switch scan timing output.
89	VSS2	-	GND.
90	VDD2	-	Power supply input.
91	LED-STBY	O	STANDBY LED output.
92	O-MOTOR	O	DECK MOTOR ON/OFF output.
93	O-SOL1	O	DECK1 solenoid output.
94	O-SOL2	O	DECK2 solenoid output.
95	O-CD-DATA	O	CD DATA output.
96	O-CD LED	O	CD LED output.
97	O-CD-CLK	O	CD clock output.
98	O-CD CE	O	CD chip enable output.
99	I-RDS-DATA	I	RDS data input.(Not used)
100	O-PLL-CLK	O	PLL IC clock output.

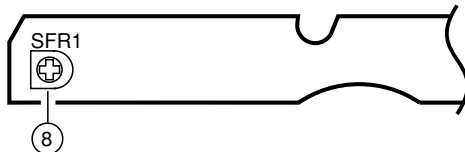
ADJUSTMENT <TUNER / DECK / FRONT>



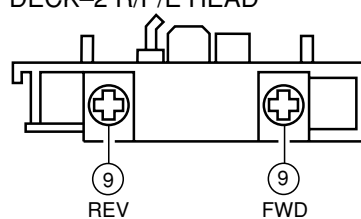
(U)
DECK-1 P HEAD
DECK-2 R/P/E HEAD



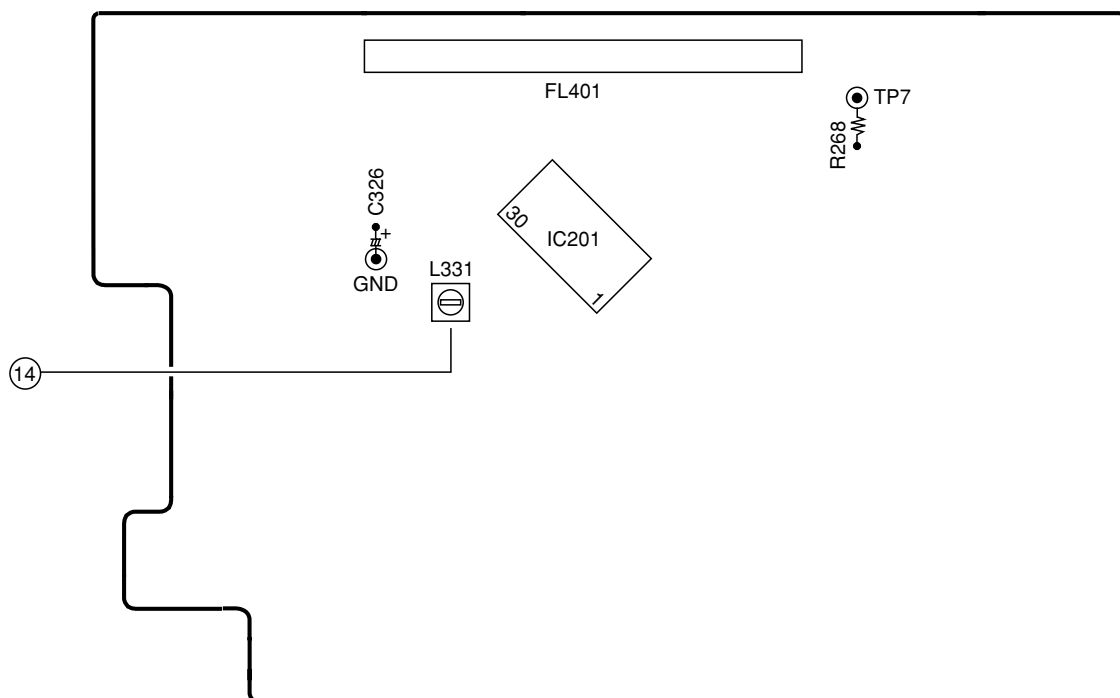
D DECK C.B



(LH)
DECK-1 P HEAD
DECK-2 R/P/E HEAD



B FRONT C.B



< TUNER SECTION >

1. Clock frequency Check
Settings : • Test point : TP2
Method : Set to AM 1710kHz and check that the test point is $2160\text{kHz} \pm 45\text{Hz}$.
2. AM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to AM 1710kHz, 530kHz and check that the test point is less than 8.5V (1710kHz) and more than 0.6V (530kHz).
3. FM VT Check
Settings : • Test point : TP1 (VT)
Method : Set to FM 87.5MHz, 108.0MHz and check that the test point is more than 0.5V (87.5MHz) and less than 8.0V (108.0MHz).
4. AM Tracking Adjustment
Settings : • Test point : TP8(Lch), TP9(Rch)
• Adjustment location :
L951(1/3) 1000kHz
Method : Set to AM 1000kHz and adjust L951(1/3) so that the level at the test point becomes maximum.
5. FM Tracking Check
Settings : • Test point : TP8(Lch), TP9(Rch)
Method : Set to FM 98.0MHz and check that the test point is less than $9\text{dB}\mu\text{V}$.
6. AM(MW) IF Adjustment
Settings : • Test point : TP5(Lch), TP6(Rch)
• Adjustment location :
L802 1000 kHz
Method : Set to FM 98.0MHz and adjust L801 so that the voltage between TP3 and TP4 becomes $0\text{V} \pm 0.04\text{V}$.
Next, check that the distortion is less than 1.3%.
7. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3, TP4 (DC Balance)
: TP8(Lch), TP9(Rch) (Distortion)
• Adjustment location : L801
• Input level : $60\text{dB}\mu\text{V}$
Method : Set to FM 98.0MHz and adjust L801 so that the voltage between TP3 and TP4 becomes $0\text{V} \pm 0.04\text{V}$.
Next, check that the distortion is less than 1.3%.

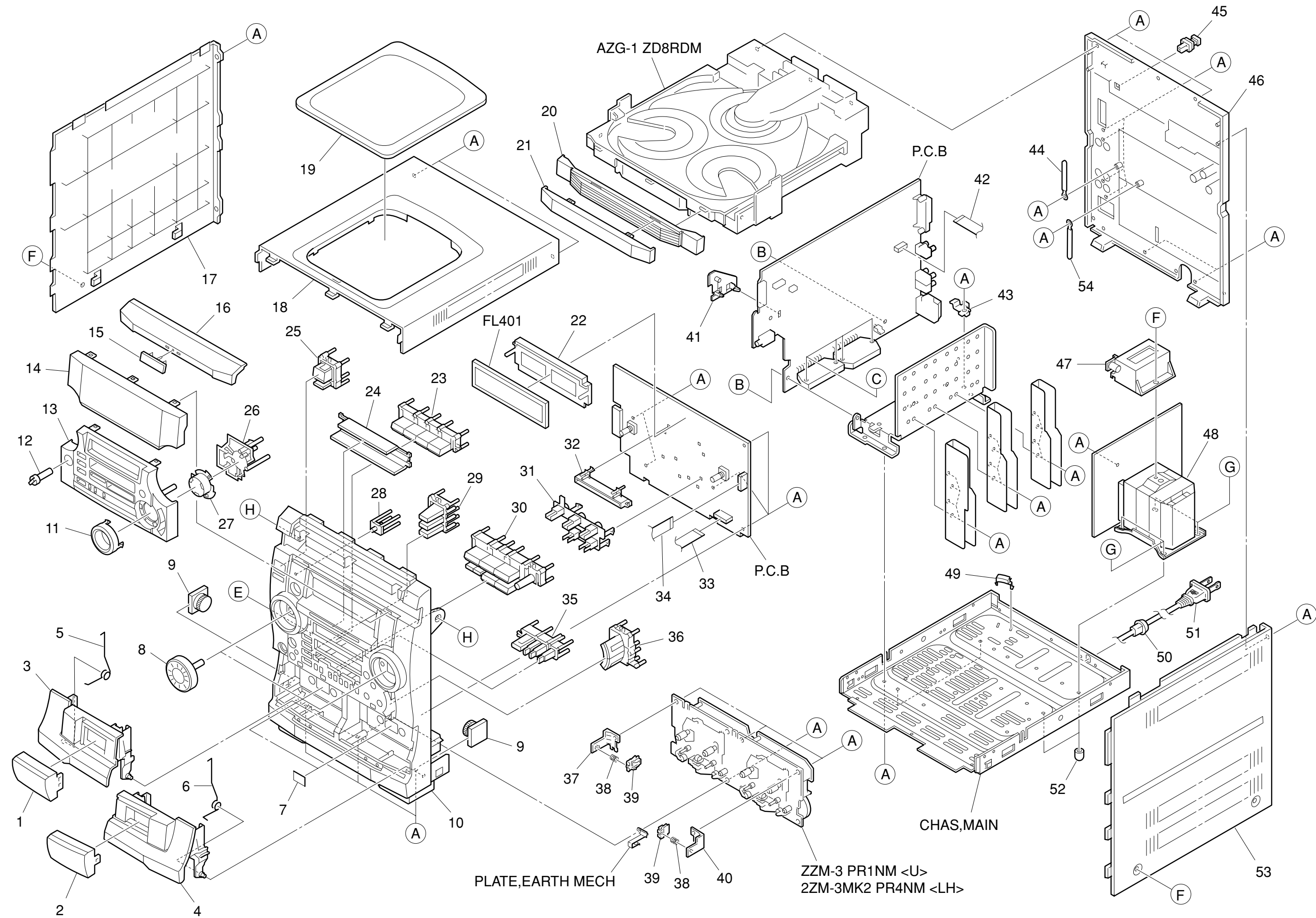
< DECK SECTION >

8. Tape Speed Adjustment (DECK 2)
Settings : • Test tape : TTA-100
• Test point : TP8(Lch), TP9(Rch)
• Adjustment location : SFR1
Method : Play back the test tape and adjust SFR1 so that the frequency counter reads $3000\text{Hz} \pm 5\text{Hz}$ and $\pm 45\text{Hz}$ (REV) with respect to forward speed.
9. Head Azimuth Adjustment (DECK 1, DECK 2)
Settings : • Test tape : TTA-330
• Test point : TP8(Lch), TP9(Rch)
• Adjustment location : Head azimuth adjustment screw
Method : Play back (FWD) the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on REV PLAY mode.

10. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA-300
• Test point : TP8(Lch), TP9(Rch)
Method : Play back the 315Hz and 8kHz signals of the test tape and check that the output ratio of the 8kHz signal with respect to that of the 315Hz signal is within 5dB.
11. PB Sensitivity Check (DECK 1, DECK 2)
Settings : • Test tape : TTA-200
• Test point : TP8(Lch), TP9(Rch)
Method : Play back the test tape and check that the output level of the test point is $140\text{mV} \pm 3\text{dB}$.
12. REC/PB Frequency Response Adjustment (DECK 2)
Settings : • Test tape : TTA-602
• Test point : TP8(Lch), TP9(Rch)
• Input signal : 1kHz / 8kHz (LINE IN)
• Adjustment location : SFR451 (Lch)
SFR452 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes -20VU . Record and play back the 1kHz and 8kHz signals and adjust SFRs so that the output of the 8kHz signals becomes $0\text{dB} \pm 0.5\text{dB}$ with respect to that of the 1kHz signal.
13. REC/PB Sensitivity Check (DECK 2)
Settings : • Test tape : TTA-602
• Test point : TP8(Lch), TP9(Rch)
• Input signal : 1kHz (LINE IN)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0VU . Record and play back the 1kHz signals and check that the output is $-2\text{dB} \pm 3.0\text{dB}$.

< FRONT SECTION >

14. μ -CON OSC Adjustment
Settings : • Test point : TP7 and GND
• Adjustment location : L331
Method : Insert AC plug while pressing POWER and TUNER function keys. Adjust L331 so that the frequency at the test point is $153.84\text{Hz} \pm 0.15\text{Hz}$.

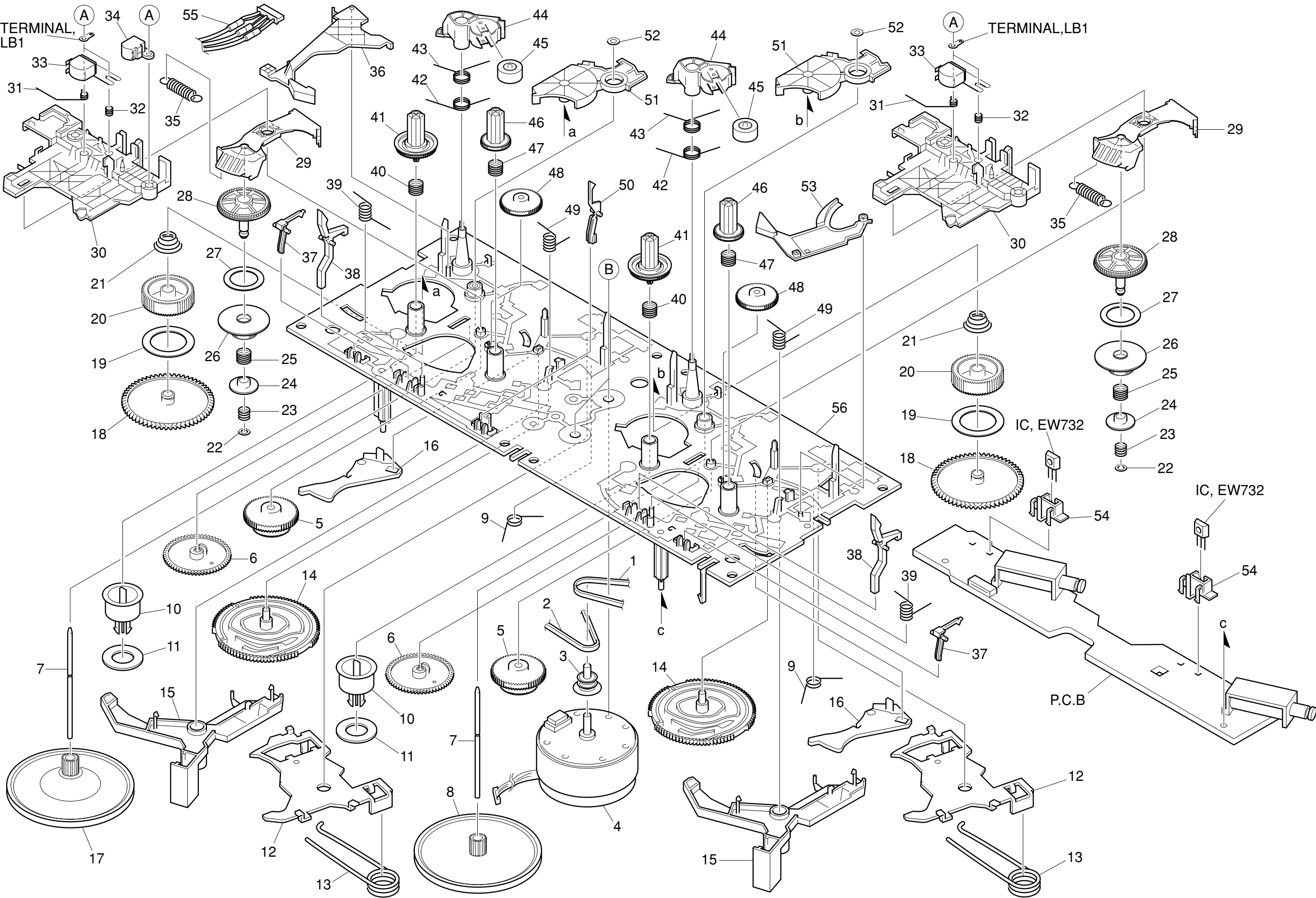


MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF8-014-010		WINDOW, CASS 1	32	8A-NF8-201-010		GUIDE, FUN
2	8A-NF8-015-010		WINDOW, CASS 2	33	88-911-101-110		FF-CABLE, 11P 1.25<U>
3	8A-NF8-003-010		BOX, CASS 1 U<U>	33	88-915-101-110		FF-CABLE 15P 1.25 100MM<LH>
3	8A-NF8-042-010		BOX, CASS 1H<LH>	34	88-913-301-110		FF-CABLE, 13P-1.25
4	8A-NF8-004-010		BOX, CASS 2 U<U>	35	8A-NF8-037-010		KEY, CD EDIT H<LH>
4	8A-NF8-043-010		BOX, CASS 2H<LH>	35	8A-NF8-028-010		KEY, CD EDIT U<U>
5	8A-NF8-207-010		SPR-T, EJECT 1<U>	36	8A-NF8-029-010		KEY, OPEN
5	82-NF5-218-010		SPR-T, EJECT 1 (SIN) <LH>	37	87-NF4-216-010		HLDR, LOCK 1
6	8A-NF8-208-010		SPR-T, EJECT 2<U>	38	86-NF9-224-010		SPR-C, LOCK
6	82-NF5-219-010		SPR-T, EJECT 2 (SIN) <LH>	39	82-NF5-229-010		PLATE, LOCK
7	81-532-080-010		LABEL, CASS. COMPT	40	87-NF4-217-110		HLDR, LOCK 2
8	8A-NF8-019-010		KNOB, RTRY JOG	41	8A-NF8-206-010		HLDR, PWB M
9	87-NF8-220-010		DMPR, 150<LH>	42	88-906-251-110		FF-CABLE, 6P 1.25
9	8A-NF8-209-010		OIL-DMPR, 120<U>	43	8A-NF8-205-010		HLDR, IC
10	8A-NF8-001-010		CABI, FR U	44	87-064-185-010		HLDR, WIRE PVC 0.5<U>
11	8A-NF8-034-010		PANEL, DIRECT	45	84-ZG1-245-210		CAP, OPTICAL
12	8A-NF8-030-010		KNOB, RTRY MIC<LH>	46	8A-NF8-062-010		CABI, REAR LHSM<LH>
13	8A-NF8-044-010		PANEL, FR H<LH>	46	8A-NF8-002-010		CABI, REAR USM<U>
13	8A-NF8-013-010		PANEL, FR U<U>	47	8A-DB8-209-010		HLDR, PWB PT
14	8A-NF8-046-010		WINDOW, DISP H<LH>	48	8A-NF8-605-010		PT, ANF-8 LH<LH>
14	8A-NF8-012-010		WINDOW, DISP U<U>	48	8A-NF8-604-010		PT, ANF-8 U<U>
15	87-CE3-023-010		BADGE, AIWA 30N SILV	49	87-NF4-221-010		HLDR, CABLE
16	8A-NF8-009-010		PANEL, CD	50	87-085-185-010		BUSHING, AC CORD (E) <LH>
17	8A-NF8-007-010		PANEL, LEFT V-2	50	87-A91-422-010		BUSHING, AC CORD(U) <U>
18	8A-NF8-005-010		PANEL, TOP	51	87-A80-092-010		AC CORD ASSY, E BLK SUN FAI<LH>
19	8A-NF8-006-010		WINDOW, TOP	51	87-A80-110-010		AC CORD ASSY, U SPT-2W<U>
20	8A-NF8-010-010		PANEL, TRAY	52	8Z-NB8-240-010		COVER, PL
21	8A-NF8-011-010		WINDOW, TRAY	53	8A-NF8-008-010		PANEL, RIGHT V-2
22	88-NF8-205-010		GUIDE, FL	54	87-064-080-010		BINDER, WIRE
23	8A-NF8-020-010		KEY, FUN	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
24	8A-NF8-018-010		REFLECTOR, FUN	B	87-NF4-224-010		S-SCREW, IT3B+3-8 CU
25	8A-NF8-016-010		KEY, POWER	C	87-067-581-010		TAPPING SCREW, BVT2+3-15
26	8A-NF8-031-010		KEY, DISC	D	87-067-688-010		BVTT+3-6
27	8A-NF8-032-010		CAP, DISC	E	87-723-096-410		QT2+3-10W/O SLOT BL
28	8A-NF8-017-010		REFLECTOR, ECO	F	87-067-641-010		UTT2+3-8 (W/O SLOT) BL
29	8A-NF8-022-010		KEY, GEQ	G	87-078-191-010		S-SCREW, IT+4-10
30	8A-NF8-035-010		KEY, ASSY OPE 1WAY<U>	H	87-721-097-410		QT2+3-12 GLD
30	8A-NF8-036-010		KEY, ASSY OPE REV<LH>				
31	8A-NF8-202-010		GUIDE, OPE 1WAY<U>				
31	8A-NF8-203-010		GUIDE, OPE REV<LH>				

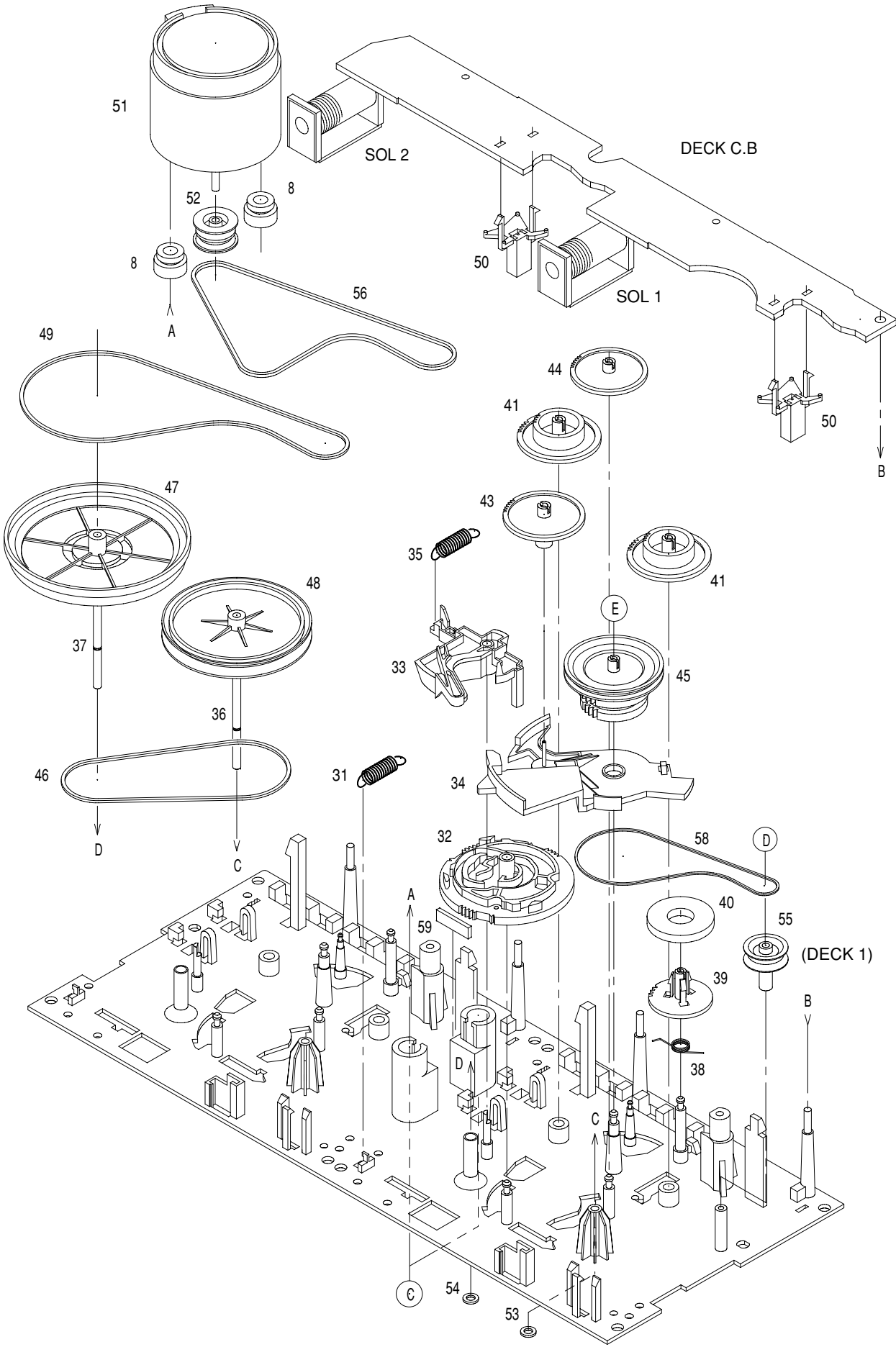
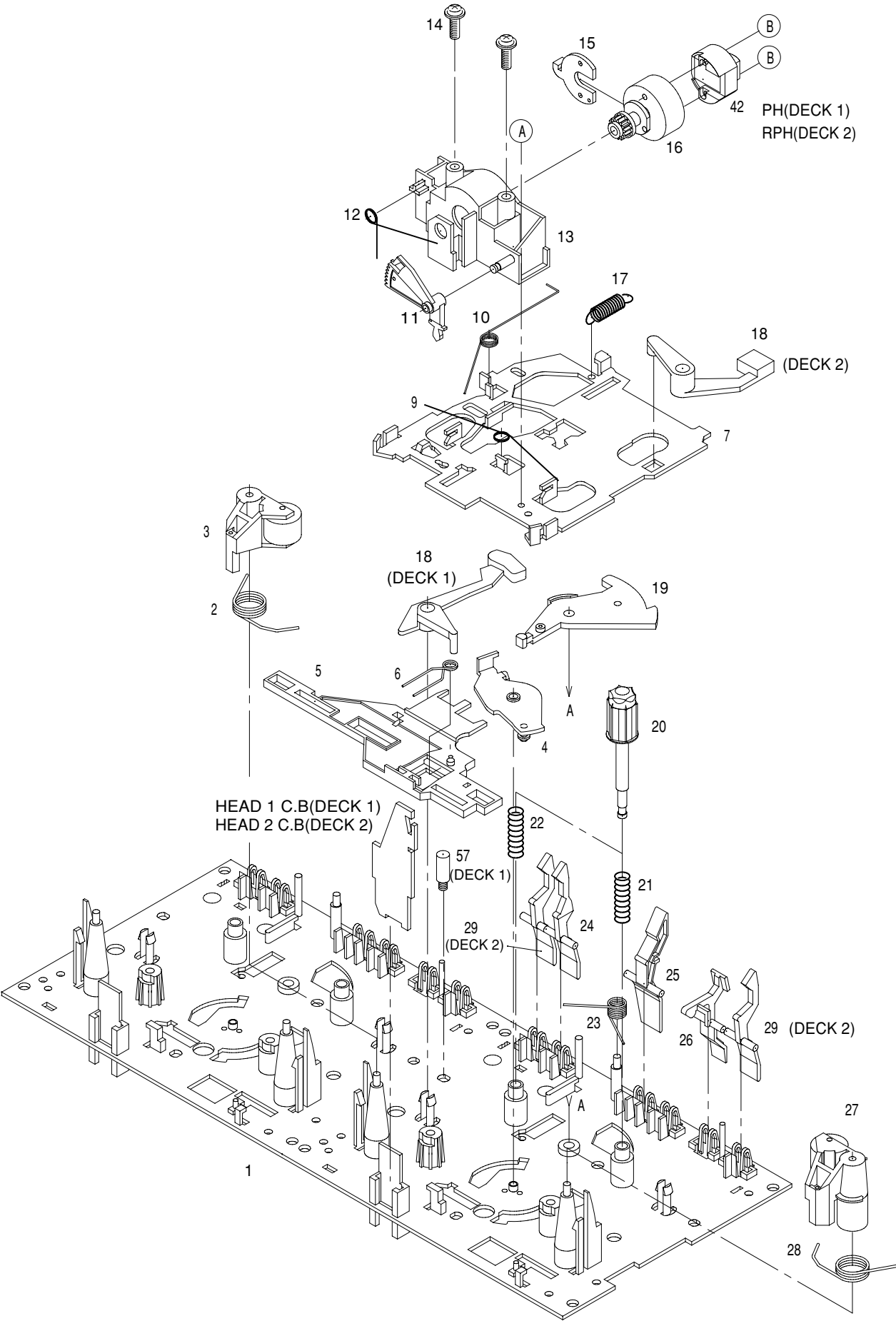
COLOR NAME TABLE

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		



TAPE MECHANISM PARTS LIST 1 / 1 < U: ZZM-3 PR1NM >

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-A90-403-110		HEAD, RPH MS15R
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-ZM3-242-010		SHAFT, CAP M3	37	8Z-ZM3-225-010		LEVER, STOP
8	8Z-ZM3-228-010		FLY-WHL, M3	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-ZM2-211-010		FLY-WHL, ZZM-2	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		HLD, IC
25	8Z-ZM3-226-010		SPR-C, FR M3	55	86-ZM3-605-110		CONN ASSY, 8P -RPB
26	8Z-ZM3-250-010		GEAR, SLIP F/R A M3	56	8Z-ZM3-203-010		CHAS ASSY, M3
27	8Z-ZM1-269-010		FELT, FF/REW 2	A	84-ZM2-242-010		S-SCREW, AZ1-2-6.4
28	8Z-ZM1-238-110		GEAR, SLIP FF/REW B 2	B	8Z-ZM2-220-110		V+2.6 ZZM-2
29	8Z-ZM3-220-010		LEVER, FR M3				
30	8Z-ZM3-205-010		LEVER, PLAY M3				



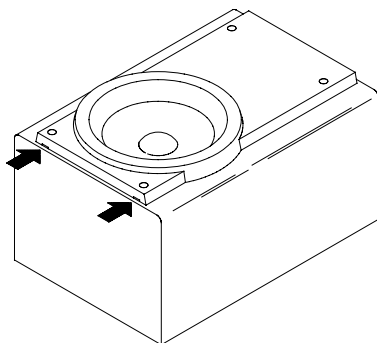
TAPE MECHANISM PARTS LIST 1 / 1 < LH: 2ZM-3MK2 PR4NM >

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-ZM3-301-519		CHAS ASSY,M2	36	82-ZM1-236-019		CAPSTAN N 2-41.5
2	82-ZM1-258-110		SPR-T,PINCH L	37	82-ZM1-239-019		CAPSTAN N 2.2-41.7
3	82-ZM1-341-110		LVR ASSY,PINCH L2	38	82-ZM1-322-019		SPR-T,FR60
4	82-ZM1-333-010		PLATE, LINK 2	39	82-ZM1-220-219		GEAR, IDLER
5	82-ZM1-266-11K		LVR, DIR	40	82-ZM3-616-019		RING MAGNET 4
6	82-ZM1-214-010		SPR-T, DIR	41	82-ZM1-216-31K		GEAR, REEL
7	82-ZM1-206-81K		CHAS, HEAD	42	87-A90-319-010		HEAD, PH HADKH2 FPC
8	82-ZM3-307-019		CUSH-G, DIA3.7-8-3.2	42	87-A90-320-010		HEAD, RPH HADKH5 FPC
9	82-ZM1-269-219		SPR-T, BRG	43	82-ZM1-225-21K		GEAR, FR
10	82-ZM1-219-119		SPR-T, LINK	44	82-ZM1-226-019		GEAR, REW
11	82-ZM1-210-119		GEAR, H T	45	82-ZM3-333-310		SLIP DISK ASSY 2
12	82-ZM1-213-019		SPR-T, HEAD	46	82-ZM1-338-010		BELT FR4
13	82-ZM1-207-619		GUIDE, TAPE	47	82-ZM1-349-110		FLY-WHL, R W (DECK 2)
14	86-ZM4-206-010		S-SCREW, AZIMUTH	47	82-ZM3-338-110		FLY-WHL, R3 W (DECK 1)
15	82-ZM1-314-119		PLATE, HEAD	48	82-ZM1-348-010		FLY-WHL, L W (DECK 2)
16	82-ZM1-208-119		HLDR, HEAD	48	82-ZM1-348-010		FLY-WHL, L W (DECK 1)
17	82-ZM1-218-019		SPR-E, HB	49	82-ZM3-329-210		BELT, SBU R2
18	82-ZM1-263-110		LVR, EJECT L (DECK 1)	50	82-ZM1-245-210		HLDR, IC
18	82-ZM1-264-010		LVR, EJECT R (DECK 2)	51	87-045-347-019		MOT, SHU2L 70 (M1)
19	82-ZM1-222-21K		LVR, PLAY	52	82-ZM3-221-010		PULLEY, MOT 2M
20	82-ZM1-217-319		REEL TABLE	53	82-ZM1-288-019		SH, 1.63-3.2-0.5 SLT
21	82-ZM1-244-510		SPR-C, BT	54	80-ZM6-243-019		SH, 1.75-3.6-0.5 SLT
22	82-ZM1-285-310		SPR-C, BT L	55	82-ZM3-335-210		PULLEY, COUPLER M3 (DECK 1)
23	82-ZM1-257-019		SPR-T, CAS	56	82-ZM3-337-010		BELT, SBU MOT 2
24	82-ZM1-241-319		LVR, MC	57	82-ZM3-339-010		SHAFT, COUPLER N3 (DECK 1)
25	82-ZM1-242-019		LVR, CAS	58	86-ZM1-206-010		BELT, MAIN L
26	82-ZM1-243-019		LVR, STOP	59	82-ZM3-340-010		SH, BELT D2
27	82-ZM1-344-110		LVR ASSY, PINCH R2	A	85-ZM3-202-010		S-SCREW, TG
28	82-ZM1-259-110		SPR-T, PINCH R	B	80-ZM6-207-019		V+1.6-7
29	82-ZM1-240-11K		LVR, REC (DECK 2)	C	82-ZM3-318-019		S-SCRW MOTOR M2
31	82-ZM1-255-319		SPR-E, LVR DIR	D	87-B10-043-010		W-P, 0.99-4-0.25 SLT
32	82-ZM3-305-01K		GEAR, CAM M2	E	82-ZM3-334-010		PW, 2.16-6-0.4
33	82-ZM1-227-21K		LVR, TRIG				
34	82-ZM3-306-11K		LVR, FR M2				
35	82-ZM1-265-119		SPR-E, TRIG				

SPEAKER DISASSEMBLY INSTRUCTIONS

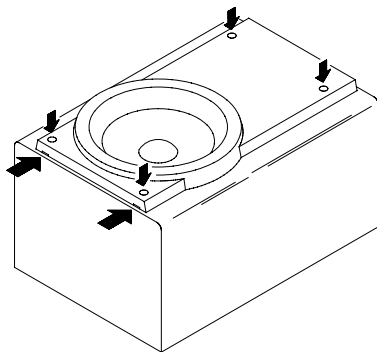
Type.1

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.



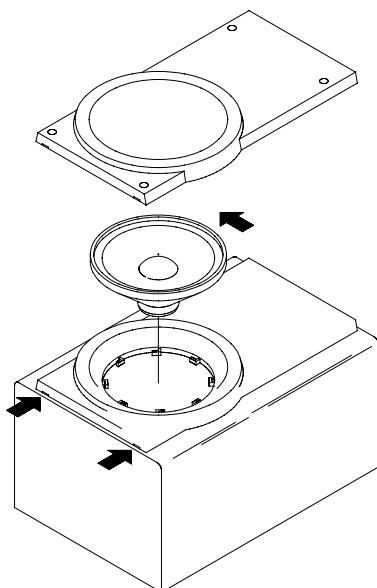
Type.2

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.

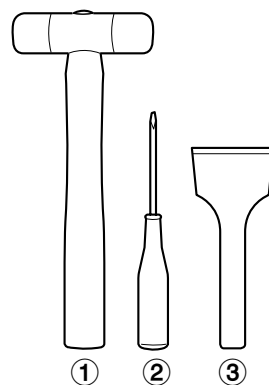


Type.3

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.

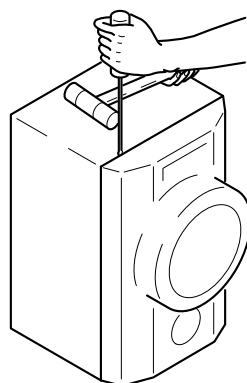


Fig-1

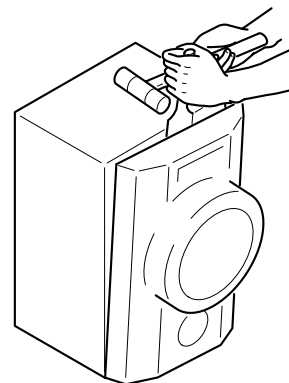


Fig-2

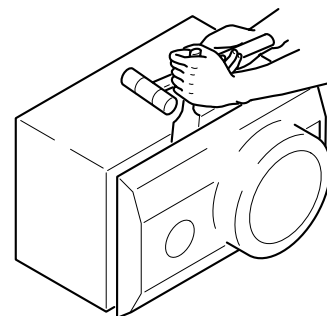


Fig-3

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-WNAJ50 (YUSL), SX-WNAJ50 (YLSL)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NS8-009-010		PANEL, FR U<YUSL>
1	8A-DS8-001-010		PANEL, FR<YLSL>
2	8A-DS8-004-010		PANEL, DUCT
3	8A-NS8-006-010		GRILLE, FRAME ASSY U<YUSL>
3	8A-DS8-005-010		GRILLE, FRAME ASSY <YLSL>
4	8A-DS8-009-010		PROTECTOR
5	88-NS5-610-010		CORD, SPKR
6	88-NS5-611-010		CORD, SPKR B/L
7	8Z-NSY-003-010		CORD, BUSH
8	88-NS3-029-010		CORD, BUSH L
9	8Z-NS7-602-010		SPKR, W 160
10	8Z-NSY-604-010		SPKR, M 100
11	8Z-NSY-608-010		SPKR, CERAMIC ASSY

ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NF8-903-010		IB, U (ESF) M<U>
1	8A-NF8-902-010		IB, LH (ESP) M<LH>
2	87-006-225-010		AM LOOP ANT NC2
3	87-043-115-010		ANT, FEEDER FM
△ 4	87-A91-017-010		PLUG, CONVERSION JT-0476<LH>
5	8Z-NF9-702-010		RC UNIT, RC-ZAS02<U>
5	8Z-NF8-702-010		RC UNIT, RC-ZAS01<LH>

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