

# SERVICE MANUAL

COMPACT DISC  
STEREO SYSTEM

BASIC TAPE MECHANISM : ZZM-2 PR1NC  
BASIC CD MECHANISM : BZG-2 ZD4NC

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-SZ100	CX-NSZ100	SX-NSZ102	RC-ZAS11

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" NSX-SZ100 (EZ), (S/M Code No. 09-00C-441-4T1).
- If requiring information about the CD mechanism, see Service Manual of BZG-2, (S/M Code No. 09-00C-353-2N2)

## SPECIFICATIONS

### <FM tuner section>

**Tuning range** 87.5 MHz to 108 MHz  
**Usable sensitivity (IHF)** 16.8 dBf  
**Antenna terminal** 75 ohms (unbalanced)

### <MW tuner section>

**Tuning range** 531 kHz to 1602 kHz (9 kHz step)  
 530 kHz to 1710 kHz (10 kHz step)  
**Usable sensitivity** 350  $\mu$ V/m  
**Antenna** Loop antenna

### <LW tuner section>

**Tuning range** 144 kHz to 290 kHz  
**Usable sensitivity** 1400  $\mu$ V/m  
**Antenna** Loop antenna

### <Amplifier section>

**Power output** Rated: 8 W + 8 W (6 ohms,  
 T.H.D. 1 %, 1 kHz/DIN45500)  
 Reference: 10 W + 10 W (6 ohms,  
 T.H.D. 10 %, 1 kHz/DIN45324)  
**Total harmonic distortion** DIN MUSIC POWER: 30 W + 30 W  
 0.1 % (4 W, 1 kHz, 6 ohms, DIN  
 AUDIO)  
**Inputs** VIDEO/AUX: 500 mV  
**Output** SPEAKERS: 6 ohms or more  
 PHONES: 32 ohms or more

### <Cassette deck section>

**Track format** 4 tracks, 2 channels stereo  
**Frequency response** 50 Hz – 8000 Hz  
**Recording system** AC bias  
**Heads** Deck 1: recording/playback x 1,  
 erase x 1  
 Deck 2: playback x 1

### <Compact disc player section>

**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** 45 W  
**Dimensions (W x H x D)** 260 x 301 x 292 mm  
**Weight** 4.3 kg

### <Speaker system SX-NSZ102>

**Speaker system** 1 way, bass reflex (magnetic shielded)  
**Speaker units** Full range: 100 mm cone  
**Impedance** 6 ohms  
**Dimensions (W x H x D)** 196 x 301 x 188 mm  
**Weight** 1.5 kg

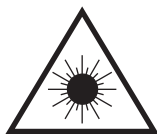
• Specifications and external appearance are subject to change without notice.

## 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!

Laitteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle 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

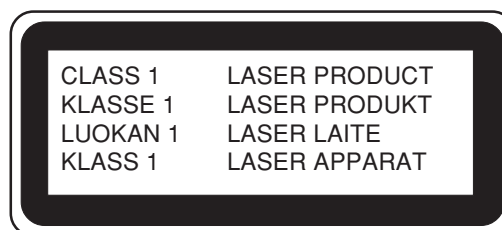
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### 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.

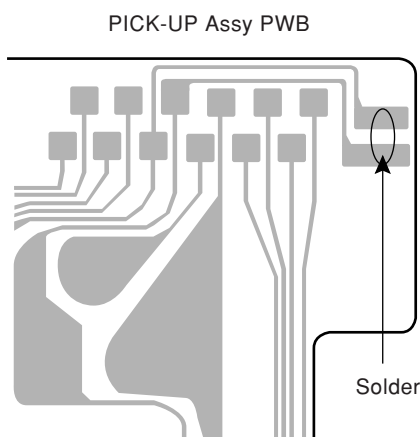


## Precaution to replace Optical block

### (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.

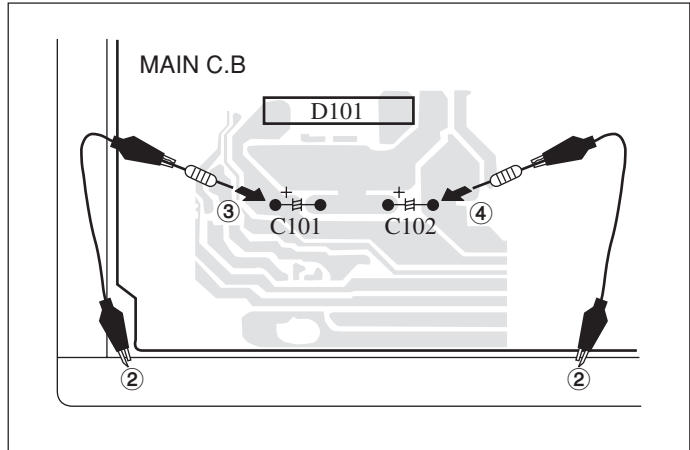


Fig-1

Select a discharging resistor referring to the following table.

Charging voltage (V) (C101, 102)	Discharging resistor ( $\Omega$ )	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.

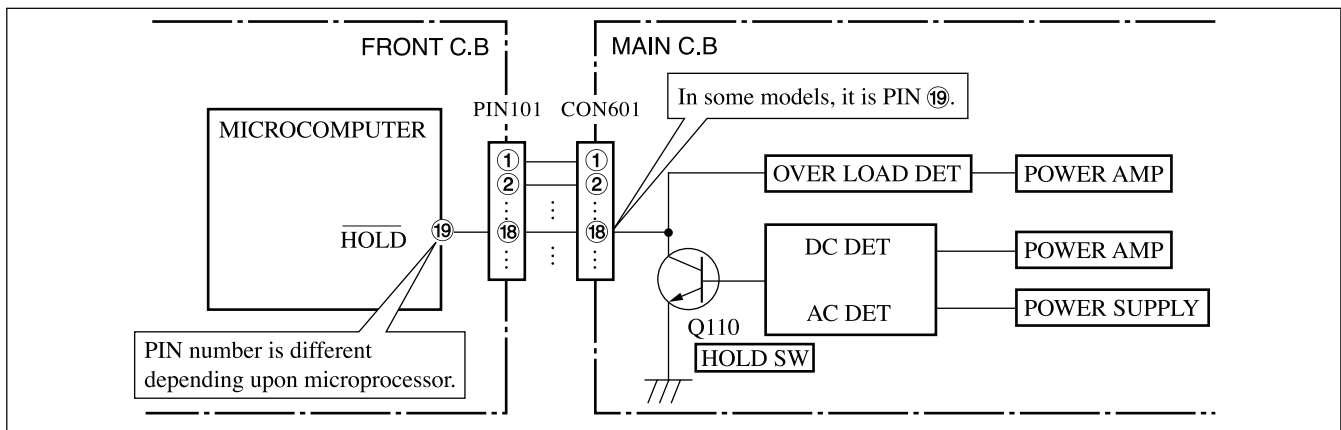


Fig-2-1

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.

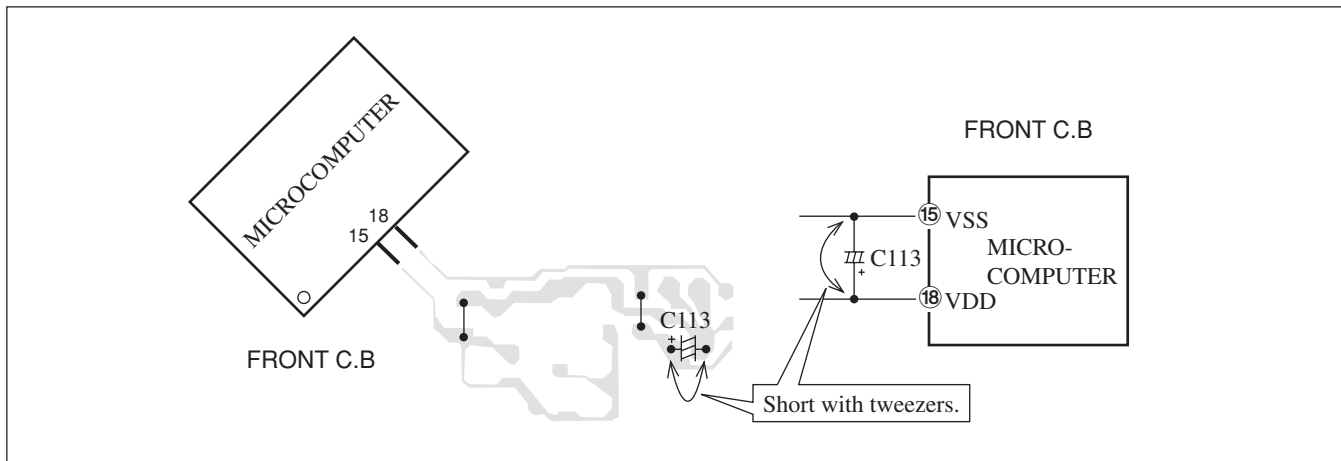


Fig-2-2

- 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
<b>IC</b>				C108	87-010-403-080		CAP,E 3.3-50 SME
	87-A21-893-040		C-IC,NJM14558V-TE2	C109	87-012-195-080		C-CAP,U 100P-50CH
	87-A21-419-040		C-IC,NJM14558MD-TE2	C110	87-012-195-080		C-CAP,U 100P-50CH
	8B-NFC-602-030		C-IC,UPD780226GF-023-3BA	C111	87-010-406-080		CAP,E 22-50 SME
	87-A21-218-010		IC,NJL64H380A	C112	87-010-406-080		CAP,E 22-50 SME
	87-A21-443-040		C-IC,M62495AFP	C113	87-012-195-080		C-CAP,U 100P-50CH
	87-A21-695-010		IC,LA1845L	C114	87-012-199-080		C-CAP,U 220P-50CH
	87-A21-928-010		IC,LC72131D-N	C117	87-012-286-080		CAP, U 0.01-25
				C118	87-012-286-080		CAP, U 0.01-25
				C119	87-012-286-080		CAP, U 0.01-25
<b>TRANSISTOR</b>				C120	87-012-286-080		CAP, U 0.01-25
	87-A30-494-080		TR,2SA1980G	C123	87-012-336-080		CAP, CHIP SS 3300 SL
	87-A30-476-010		TR,KTA1046Y	C124	87-012-336-080		CAP, CHIP SS 3300 SL
	87-A30-492-080		TR,2SC5343G	C125	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-076-080		C-TR,2SC3052F	C126	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-075-080		C-TR,2SA1235F	C127	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-256-010		TR,2SD1933	C128	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-255-010		TR,2SB1342	C129	87-012-276-080		CAP, CHIP SS 1500 PBK
	87-A30-234-080		TR,CSC4115BC	C130	87-012-276-080		CAP, CHIP SS 1500 PBK
	87-A30-091-080		FET,2SJ460	C140	86-ZA1-616-080		C-CAP,U 0.01-50 K B (MUR)
	87-A30-090-080		FET,2SK2541	C401	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-062-080		C-TR,KRC104S	C402	87-010-759-080		C-CAP,U, 0.1-25F
	87-A30-495-080		TR,2SA1981Y	C403	87-012-193-080		C-CAP,U 82P-50 CH
	89-327-143-080		C-TR,2SC2714 (0.1W)	C404	87-012-193-080		C-CAP,U 82P-50 CH
	87-A30-489-080		C-TR,KRA107S	C405	87-012-286-080		CAP, U 0.01-25
	89-503-602-080		C-FET,2SK360E	C406	87-012-286-080		CAP, U 0.01-25
	87-A30-086-040		C-TR,CSD1306E	C407	87-012-286-080		CAP, U 0.01-25
	87-A30-484-080		C-TR,KRA102S	C408	87-012-286-080		CAP, U 0.01-25
				C409	87-012-278-080		C-CAP,U 2200P-50 B
				C410	87-012-278-080		C-CAP,U 2200P-50 B
<b>DIODE</b>				C411	87-010-405-080		CAP,E 10-50 SME
	87-A40-455-090		DIODE,RL203 GW	C412	87-010-405-080		CAP,E 10-50 SME
	87-A40-553-080		DIODE,1N4003 LES	C413	87-012-286-080		CAP, U 0.01-25
	87-A40-777-080		ZENER,UZ30BSB	C421	87-012-275-080		C-CAP,U 1200P-50 B
	87-A40-291-080		DIODE,1N4148 (CPT)	C422	87-012-275-080		C-CAP,U 1200P-50 B
	87-A40-764-080		ZENER,UZ10BSC	C423	87-012-274-080		CHIP CAP,U 1000P-50B
	87-A40-269-080		C-DIODE,MC2836	C424	87-012-274-080		CHIP CAP,U 1000P-50B
	87-A40-270-080		C-DIODE,MC2838	C425	87-010-263-080		CAP,E 100-10 SME
	87-A40-749-080		ZENER,UZ5.6BSB	C426	87-010-263-080		CAP,E 100-10 SME
	87-A40-739-080		ZENER,UZ2.7BSA	C427	87-012-188-080		C-CAP,U 47P-50 CH
	87-017-149-080		ZENER,HZS6A2L	C428	87-012-188-080		C-CAP,U 47P-50 CH
	87-A40-760-080		ZENER,UZ9.1BSA	C429	87-010-956-080		CHIP-CAP,S 0.068-25B
				C430	87-010-956-080		CHIP-CAP,S 0.068-25B
				C431	87-012-284-080		CAP, U 6800P-50
				C432	87-012-284-080		CAP, U 6800P-50
<b>MAIN C.B</b>				C433	87-010-546-080		CAP,E 0.33-50 SME
C9	87-010-759-080		C-CAP,U, 0.1-25F	C434	87-010-546-080		CAP,E 0.33-50 SME
C10	87-010-759-080		C-CAP,U, 0.1-25F	C435	87-010-263-080		CAP,E 100-10 SMG
C11	87-010-759-080		C-CAP,U, 0.1-25F	C436	87-010-759-080		C-CAP,U, 0.1-25F
C12	87-010-759-080		C-CAP,U, 0.1-25F	C437	87-010-759-080		C-CAP,U, 0.1-25F
C22	87-010-388-080		CAP,E 1000-25 M SME	C439	87-010-759-080		C-CAP,U, 0.1-25F
C25	87-010-408-080		CAP,E 47-50 SME	C440	87-010-759-080		C-CAP,U, 0.1-25F
C26	87-010-408-080		CAP,E 47-50 SME	C441	87-010-759-080		C-CAP,U, 0.1-25F
C31	87-010-759-080		C-CAP,U, 0.1-25F	C442	87-010-759-080		C-CAP,U, 0.1-25F
C32	87-012-286-080		CAP, U 0.01-25	C443	87-010-759-080		C-CAP,U, 0.1-25F
C34	87-010-260-080		CAP,E 47-25 SME	C444	87-012-197-080		C-CAP,U 150P-50 CH
C35	87-010-406-080		CAP,E 22-50 SME	C445	87-A10-039-080		C-CAP,U 470P-50 J CH
C36	87-010-112-080		CAP,E 100-16 SME	C452	87-010-382-080		CAP,E 22-25 SME
C50	87-010-247-080		CAP,E 100-50 SME	C453	87-012-279-080		C-CAP,U 2700P-50 B
C51	87-010-247-080		CAP,E 100-50 SME	C454	87-012-279-080		C-CAP,U 2700P-50 B
C60	87-010-403-080		CAP,E 3.3-50 SME	C455	87-012-279-080		C-CAP,U 2700P-50 B
C61	87-010-260-080		CAP,E 47-25 SME	C456	87-012-286-080		CAP, U 0.01-25
C74	87-010-759-080		C-CAP,U, 0.1-25F	C457	87-A12-361-080		CAP,M 5600P-100 J CP
C101	87-012-284-080		CAP, U 6800P-50	C458	87-012-274-080		CHIP CAP,U 1000P-50B
C102	87-012-284-080		CAP, U 6800P-50	C459	87-010-175-080		CAP 560P
C103	87-010-544-080		CAP,E 0.1-50 SME	C460	87-010-759-080		C-CAP,U, 0.1-25F
C104	87-010-544-080		CAP,E 0.1-50 SME	C461	87-012-158-080		C-CAP,S 390P-50 CH
C105	87-012-282-080		CAP, U 4700P-50	C462	87-012-158-080		C-CAP,S 390P-50 CH
C106	87-012-282-080		CAP, U 4700P-50	C470	87-A10-039-080		C-CAP,U 470P-50 J CH
C107	87-010-403-080		CAP,E 3.3-50 SME	C605	87-012-275-080		C-CAP,U 1200P-50 B

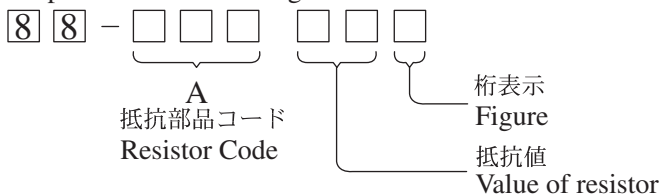
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C606	87-012-275-080		C-CAP,U 1200P-50 B	C957	87-012-174-080		CAP CHIP CERA SS 12P CHJ
C609	87-010-785-080		C-CAP,U 0.015-25BK	C958	87-012-286-080		CAP, U 0.01-25
C610	87-010-785-080		C-CAP,U 0.015-25BK	C962	87-010-401-080		CAP,E 1-50 SME
C611	87-010-545-080		CAP,E 0.22-50 SME	C971	87-010-381-080		CAP,E 330-16 SME
C612	87-010-545-080		CAP,E 0.22-50 SME	C972	87-010-404-080		CAP,E 4.7-50 SME
C613	87-010-545-080		CAP,E 0.22-50 SME	C973	87-012-286-080		CAP, U 0.01-25
C614	87-010-545-080		CAP,E 0.22-50 SME	C974	87-012-286-080		CAP, U 0.01-25
C615	87-012-172-080		CAPACITOR CHIP U 10P CH	C979	87-012-195-080		C-CAP,U 100P-50CH
C616	87-010-248-080		CAP,E 220-10 SME	C981	87-010-260-080		CAP,E 47-25 SME
C617	87-010-221-080		CAP,E 470-10 SME	C982	87-010-759-080		C-CAP,U, 0.1-25F
C618	87-010-405-080		CAP,E 10-50 SME	C983	87-012-286-080		CAP, U 0.01-25
C623	87-010-544-080		CAP,E 0.1-50 SME	C984	87-012-286-080		CAP, U 0.01-25
C624	87-010-544-080		CAP,E 0.1-50 SME	C985	87-012-195-080		C-CAP,U 100P-50CH
C630	87-A10-260-080		C-CAP,U 0.1-16 K B	C987	87-012-286-080		CAP, U 0.01-25
C669	87-012-195-080		C-CAP,U 100P-50CH	C989	87-012-286-080		CAP, U 0.01-25
C670	87-012-195-080		C-CAP,U 100P-50CH	C990	87-012-195-080		C-CAP,U 100P-50CH
C771	87-010-263-080		CAP,E 100-10 SME	C991	87-012-176-080		CAP 15P
C772	87-012-286-080		CAP, U 0.01-25	C992	87-012-176-080		CAP 15P
C779	87-010-971-080		C-CAP,S 4700P-50 B J	C993	87-012-274-080		CHIP CAP,U 1000P-50B
C780	87-010-971-080		C-CAP,S 4700P-50 B J	C994	87-012-195-080		C-CAP,U 100P-50CH
C782	87-012-286-080		CAP, U 0.01-25	C995	87-012-274-080		CHIP CAP,U 1000P-50B
C783	87-012-286-080		CAP, U 0.01-25	C996	87-012-195-080		C-CAP,U 100P-50CH
C784	87-012-286-080		CAP, U 0.01-25	C997	87-010-759-080		C-CAP,U, 0.1-25F
C785	87-012-286-080		CAP, U 0.01-25	C998	87-010-260-080		CAP,E 47-25 SME
C786	87-012-286-080		CAP, U 0.01-25	C999	87-A11-155-080		CAP,TC U 0.01-16 Z F
C788	87-012-167-080		C-CAP,U 5P-50 CH	CF831	87-008-423-010		CERAMIC FILTER, SFE10.7
C789	87-A10-801-080		C-CAP,S 0.022-16 J B CM	CF832	82-785-747-010		CF MS2 GHY R
C790	87-A10-801-080		C-CAP,S 0.022-16 J B CM	CN351	87-A60-625-010		CONN,8P V 2MM JMT
C791	87-010-759-080		C-CAP,U, 0.1-25F	CN401	87-A60-620-010		CONN,3P V 2MM JMT
C792	87-012-286-080		CAP, U 0.01-25	CN602	87-099-194-010		CONN,6P 6216V
C793	87-010-404-080		CAP,E 4.7-50 SME	CNA351	8B-NFC-634-010		CONN ASSY,8P RPB
C794	87-A10-039-080		C-CAP,U 470P-50 J CH	CNA401	8B-NFC-633-010		CONN ASSY,3P (PH)
C795	87-012-286-080		CAP, U 0.01-25	F101	87-A91-207-010		FUSE 315MA 250VT 50T
C796	87-012-286-080		CAP, U 0.01-25	FC101	87-A90-505-080		FUSE CLAMP,TP00351-51
C797	87-010-405-080		CAP,E 10-50 SME	FC102	87-A90-505-080		FUSE CLAMP,TP00351-51
C798	87-012-286-080		CAP, U 0.01-25	FC602	88-906-251-110		FF-CABLE,6P 1.25
C799	87-010-407-080		CAP,E 33-50 SME	FFE831	A8-6ZA-199-170		6ZA-1 FEENC
C800	87-010-829-080		CAP, U 0.047-16	J101	87-A61-480-010		JACK,DIA6.3 BLK ST W/SW MSC16A
C801	87-010-403-080		CAP,E 3.3-50 SME	J103	87-A61-452-010		TERMINAL,SP 4P(MSC)
C802	87-010-829-080		CAP, U 0.047-16	J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
C803	87-010-787-080		CAP, U 0.022-25	J832	87-A60-403-010		TERMINAL,ANT PAL 2P HSP-312V05
C804	87-010-263-080		CAP,E 100-10 SME	JW959	87-A11-155-080		CAP,TC U 0.01-16 Z F
C807	87-010-400-080		CAP,E 0.47-50 SME	L101	87-A50-611-010		COIL,1UH K(CS)
C808	87-A12-087-080		CAP,E 1-50 SME	L102	87-A50-611-010		COIL,1UH K(CS)
C809	87-A12-087-080		CAP,E 1-50 SME	L451	87-007-342-010		COIL,OSC 85K BIAS
C810	87-010-759-080		C-CAP,U, 0.1-25F	L801	87-A50-608-010		COIL,FM DET-N(TOK)
C814	87-012-286-080		CAP, U 0.01-25	L802	87-A91-551-010		FLTR,PCFJZH-450 L(TOK)
C815	87-A12-086-080		CAP,E 0.47-50 SMG	L811	87-005-847-080		COIL,2.2UH(CECS)
C816	87-A12-086-080		CAP,E 0.47-50 SMG	L832	87-005-847-080		COIL,2.2UH(CECS)
C818	87-012-276-080		CAP, CHIP SS 1500 PBK	L941	87-A50-020-010		COIL,ANT LW(COI)
C821	87-010-405-080		CAP,E 10-50 SME	L942	87-A50-019-010		COIL,OSC LW(COI)
C823	87-012-349-080		C-CAP,S 1000P-50 CH	L951	8A-NF8-668-010		COIL,AM PACK 2(TOK)
C824	87-010-404-080		CAP,E 4.7-50 SME	PT101	8B-NFC-608-010		PT,BNF-C EZ
C825	87-010-596-080		CAP, S 0.047-16	R790	87-012-286-080		CAP, U 0.01-25
C831	87-010-406-080		CAP,E 22-50 SME	RY101	87-A92-058-010		RELAY,AC DC12V HRM4-S
C836	87-012-286-080		CAP, U 0.01-25	T101	87-A60-317-010		TERMINAL, 1P MSC
C837	87-012-286-080		CAP, U 0.01-25	T102	87-A60-317-010		TERMINAL, 1P MSC
C842	87-012-286-080		CAP, U 0.01-25	TC942	87-A91-774-080		TRIMMER,PLY 30P 6.8X5.4 CDYL
C844	87-012-286-080		CAP, U 0.01-25	X992	87-A70-306-010		VIB,XTAL 4.500MHZ CSA-309ST
C850	87-010-260-080		CAP,E 47-25 SME				
C851	87-012-286-080		CAP, U 0.01-25	FRONT C.B			
C852	87-012-286-080		CAP, U 0.01-25				
C853	87-012-286-080		CAP, U 0.01-25	C390	87-010-384-040		CAP,E 100-25 SME
C858	87-010-759-080		C-CAP,U, 0.1-25F	C500	87-010-759-080		C-CAP,U, 0.1-25F
C859	87-010-759-080		C-CAP,U, 0.1-25F	C505	87-010-829-080		CAP, U 0.047-16
C860	87-012-286-080		CAP, U 0.01-25	C506	87-010-263-040		CAP,E 100-10
C942	87-012-167-080		C-CAP,U 5P-50 CH	C507	87-010-246-040		CAP,E 47-35 SME
C947	87-012-286-080		CAP, U 0.01-25	C508	87-010-192-080		C-CAP,S 0.022-50 F
C948	87-A10-039-080		C-CAP,U 470P-50 J CH	C509	87-010-404-040		CAP,E 4.7-50 SME
C952	87-012-286-080		CAP, U 0.01-25	C510	87-010-404-040		CAP,E 4.7-50 SME

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C516	87-010-831-080		C-CAP,U,0.1-16F	C556	87-012-198-080		CAP 180P
C517	87-010-831-080		C-CAP,U,0.1-16F	C557	87-010-831-080		C-CAP,U,0.1-16F
C518	87-012-274-080		CHIP CAP,U 1000P-50B	C558	87-010-831-080		C-CAP,U,0.1-16F
C519	87-012-336-080		CAP, CHIP SS 3300 SL	C560	87-012-286-080		CAP, U 0.01-25
C520	87-012-282-080		CAP, U 4700P-50	CN501	87-A60-673-010		CONN,9P H 2MM JMT
C521	87-010-829-080		CAP, U 0.047-16	CN502	87-099-196-010		CONN,8P 6216 V
C522	87-010-221-040		CAP,E 470-10 SME	FC502	88-908-201-110		FF-CABLE,8P 1.25
C523	87-010-248-040		CAP,E 220-10 SME	FL501	8B-NFC-601-010		FL,NHA-10SS18T
C524	87-010-787-080		CAP, U 0.022-25	L501	87-A50-655-010		COIL,CLK 4.19MHZ (TOKO)7KLY
C525	87-010-071-040		CAP,E 1-50 M 5L SRE	S301	87-A91-024-180		SW,TACT KSH0611BT
C526	87-010-405-040		CAP,E 10-50	S302	87-A91-024-180		SW,TACT KSH0611BT
C527	87-A10-039-080		C-CAP,U 470P-50 J CH	S303	87-A91-024-180		SW,TACT KSH0611BT
C530	87-012-195-080		C-CAP,U 100P-50CH	S304	87-A91-024-180		SW,TACT KSH0611BT
C531	87-012-195-080		C-CAP,U 100P-50CH	S305	87-A91-024-180		SW,TACT KSH0611BT
C532	87-012-195-080		C-CAP,U 100P-50CH	S306	87-A91-024-180		SW,TACT KSH0611BT
C533	87-012-195-080		C-CAP,U 100P-50CH	S307	87-A91-024-180		SW,TACT KSH0611BT
C534	87-012-195-080		C-CAP,U 100P-50CH	S308	87-A91-024-180		SW,TACT KSH0611BT
C535	87-012-195-080		C-CAP,U 100P-50CH	S309	87-A91-024-180		SW,TACT KSH0611BT
C536	87-012-195-080		C-CAP,U 100P-50CH	S310	87-A91-024-180		SW,TACT KSH0611BT
C537	87-012-195-080		C-CAP,U 100P-50CH	S311	87-A91-024-180		SW,TACT KSH0611BT
C538	87-012-195-080		C-CAP,U 100P-50CH	S312	87-A91-024-180		SW,TACT KSH0611BT
C539	87-012-195-080		C-CAP,U 100P-50CH	S313	87-A91-024-180		SW,TACT KSH0611BT
C540	87-010-759-080		C-CAP,U, 0.1-25F	S314	87-A91-024-180		SW,TACT KSH0611BT
C546	87-010-759-080		C-CAP,U, 0.1-25F	S315	87-A91-024-180		SW,TACT KSH0611BT
C555	87-012-172-080		CAP 10P-50	S316	87-A91-024-180		SW,TACT KSH0611BT
				SFR391	87-024-431-080		SFR,3.3K RH063EC

○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

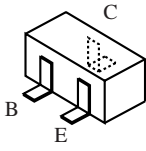


チップ抵抗  
Chip resistor

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



2SA1235F  
2SC2714  
2SC3052F  
CSD1306E  
KRA102S  
KRA107S  
KRC104S



E C B

2SA1980G  
2SA1981Y  
2SC5343G



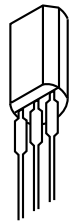
E C B

CSC4115BC



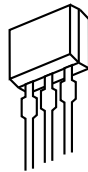
B C E

2SD1933  
2SB1342  
KTA1046Y



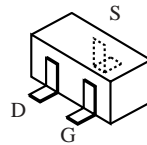
E C B

2SJ460



S D G

2SK2541

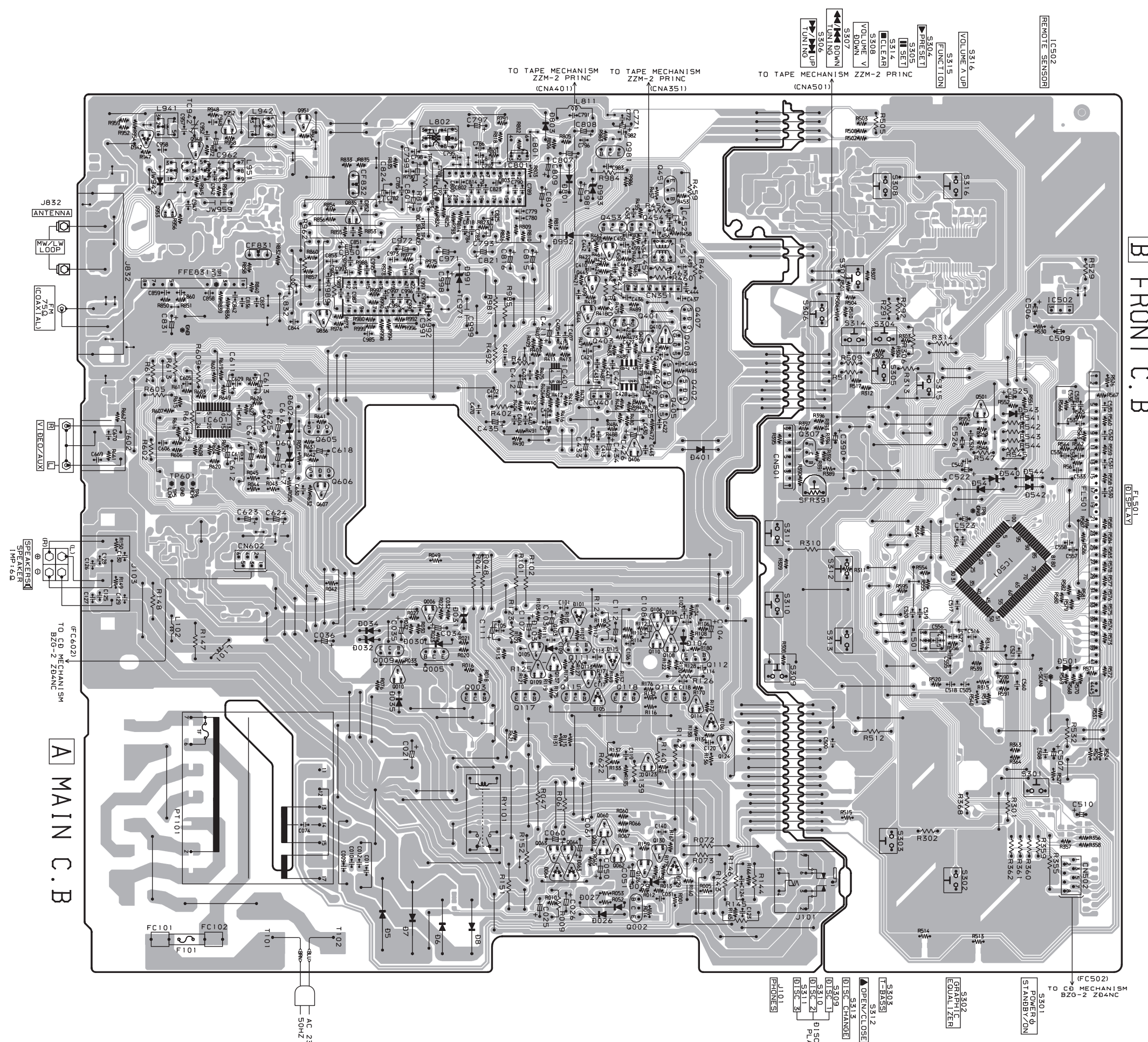


2SK360E

WIRING - 1 (MAIN / FRONT)

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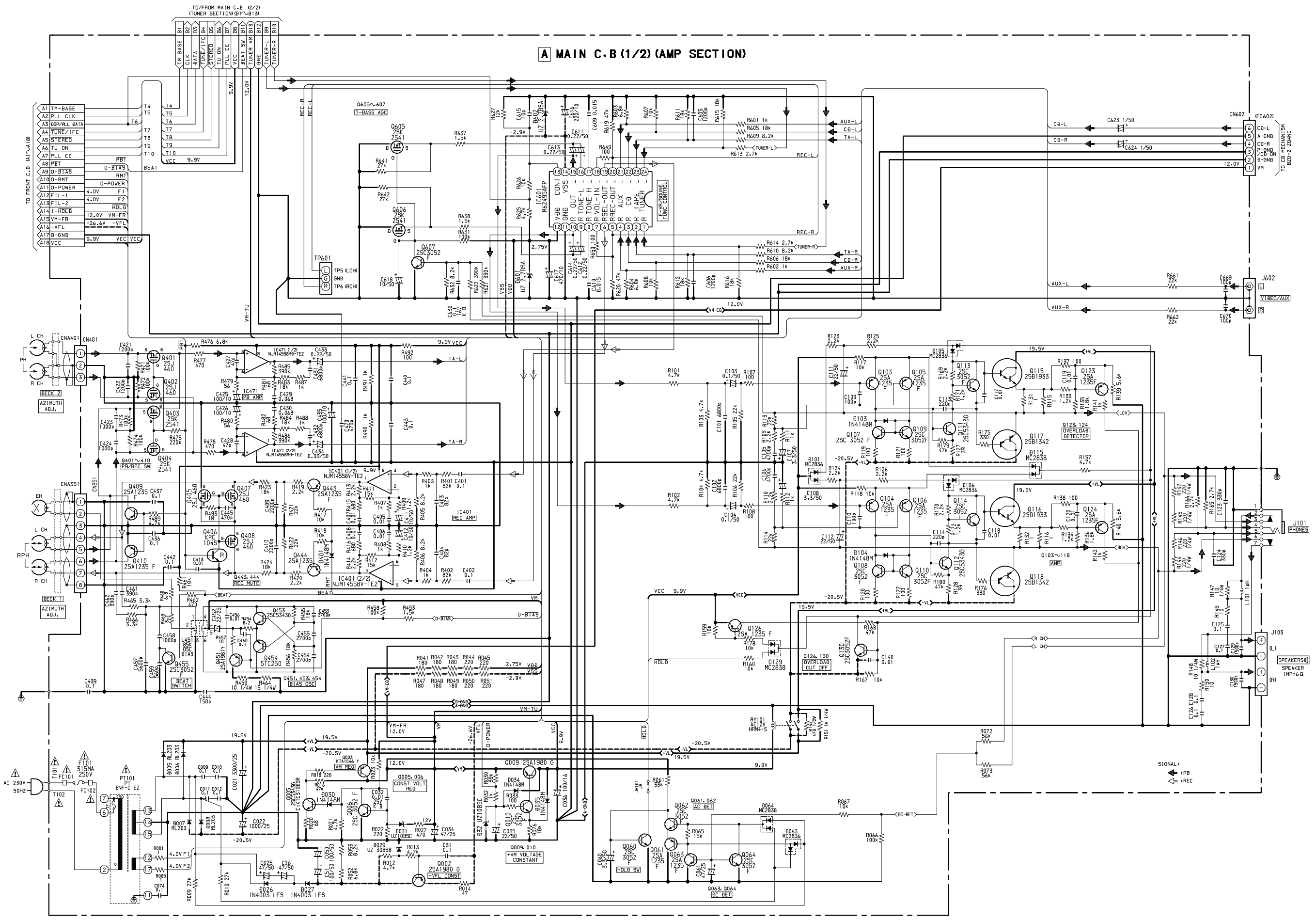
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
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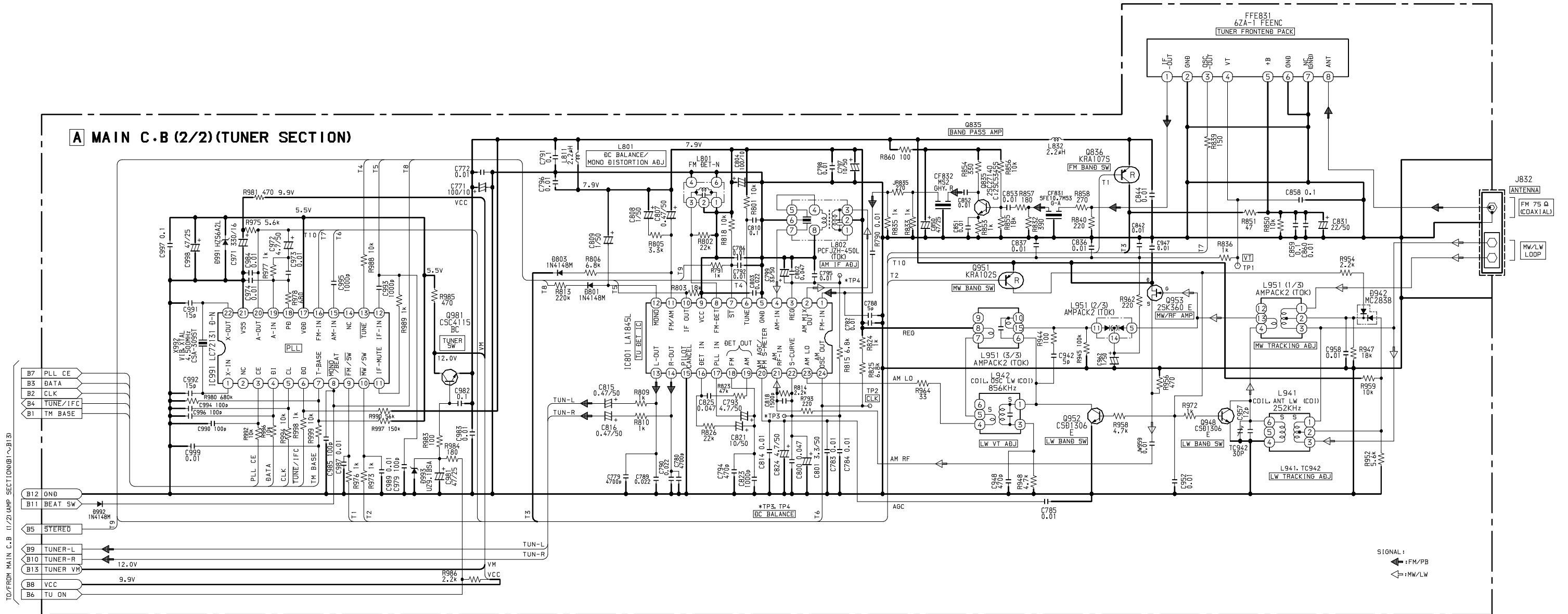
B FRONT C.B

A MAIN C.B

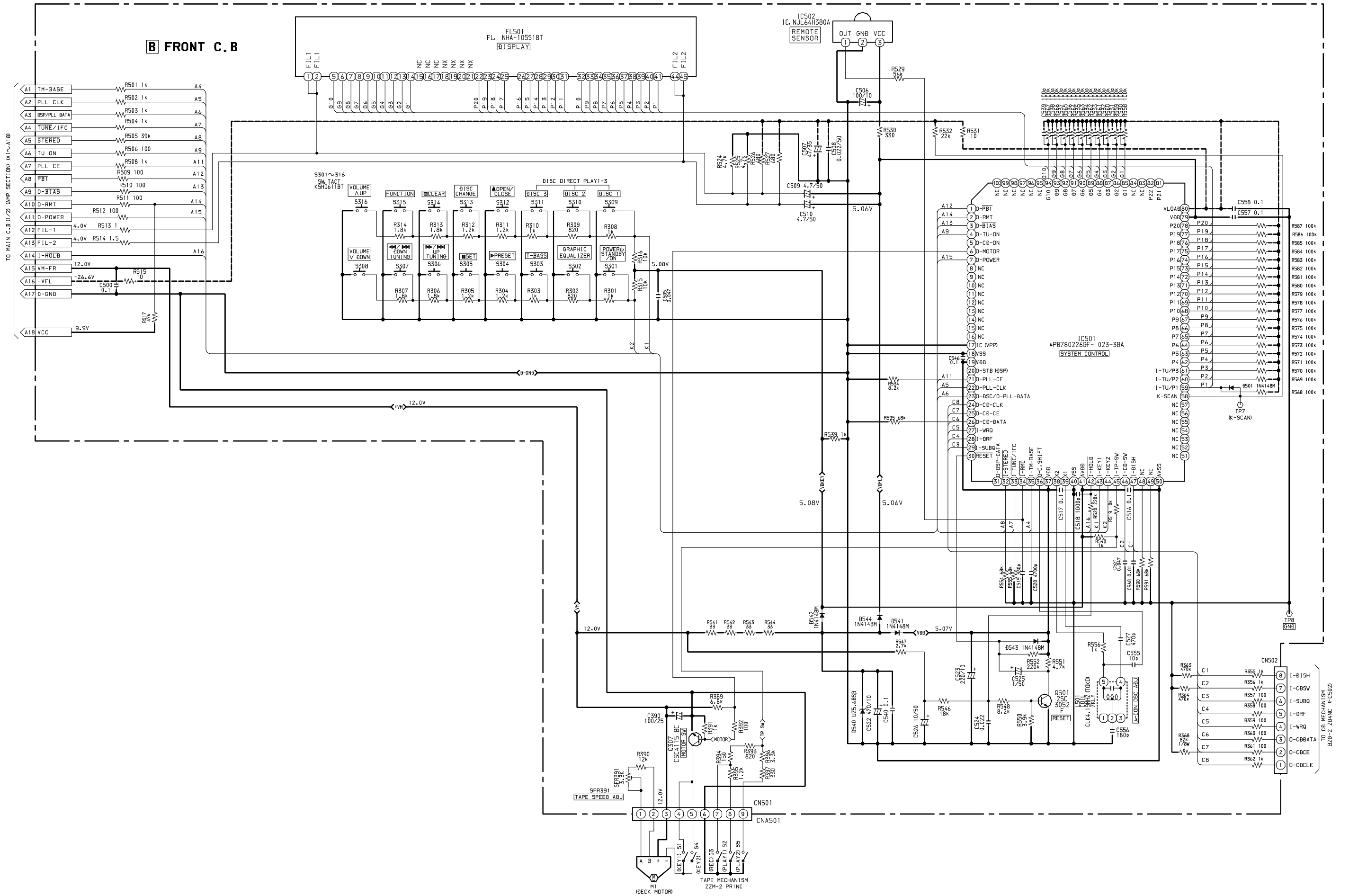
SCHEMATIC DIAGRAM-1 (MAIN 1/2:AMP SECTION)



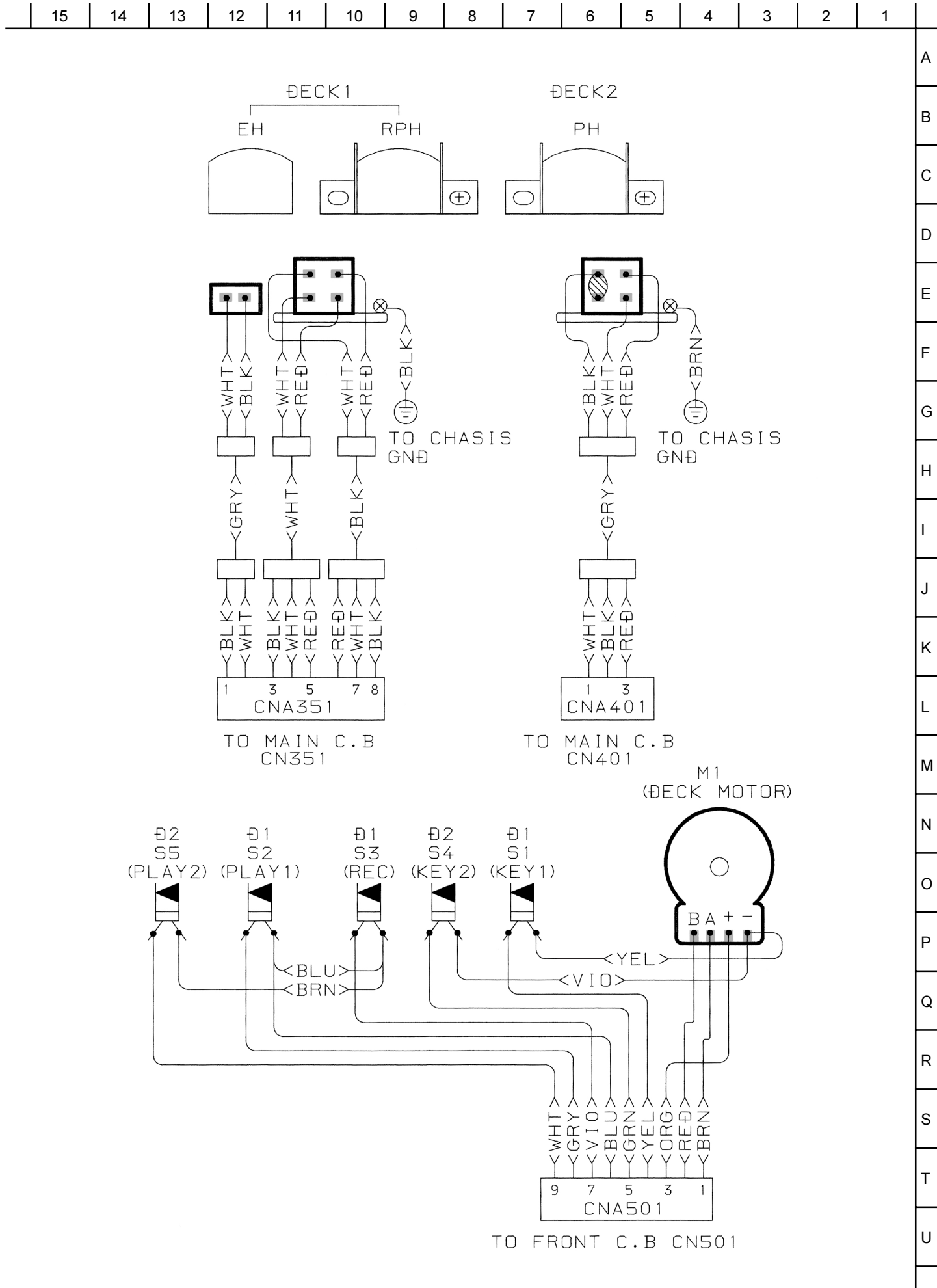
SCHEMATIC DIAGRAM-2 (MAIN 2/2:TUNER SECTION)



SCHEMATIC DIAGRAM-3 (FRONT)

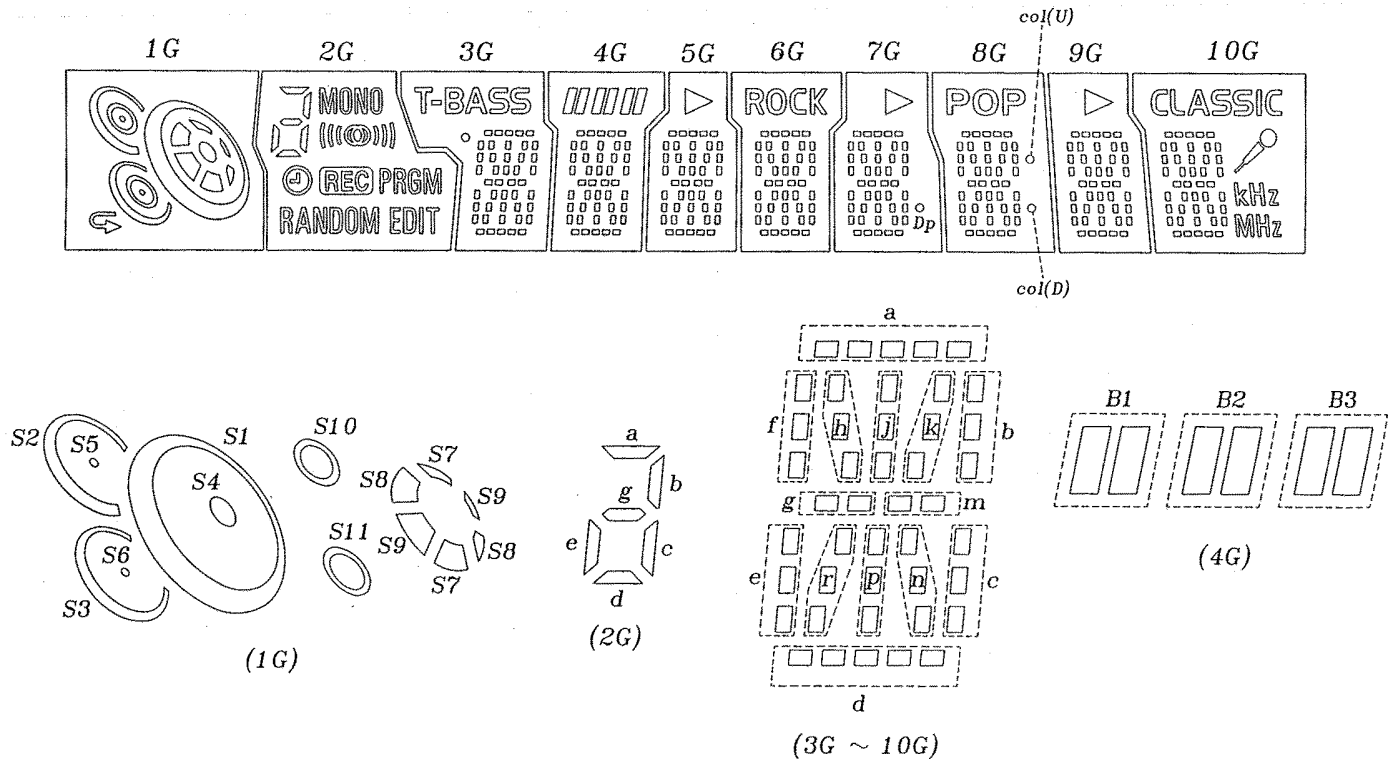


# WIRING - 2 (DECK)



# FL (NHA-10SS18T) GRID ASSIGNMENT AND ANODE CONNECTION

## GRID ASSIGNMENT

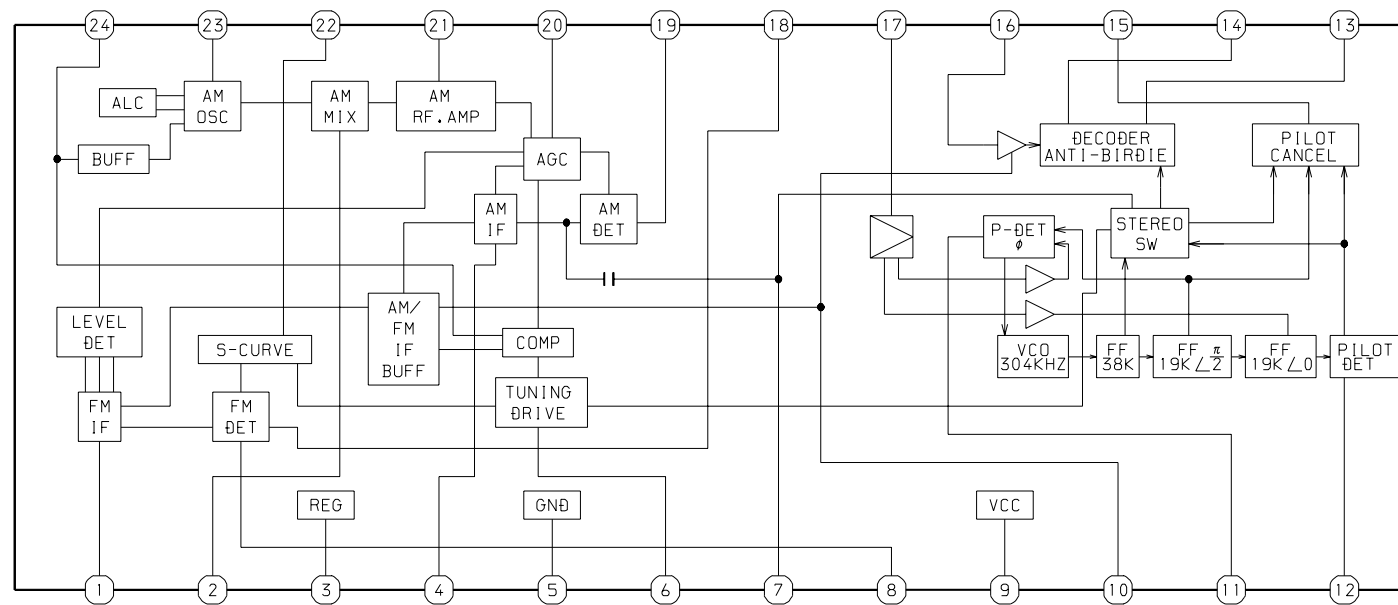


## ANODE CONNECTION

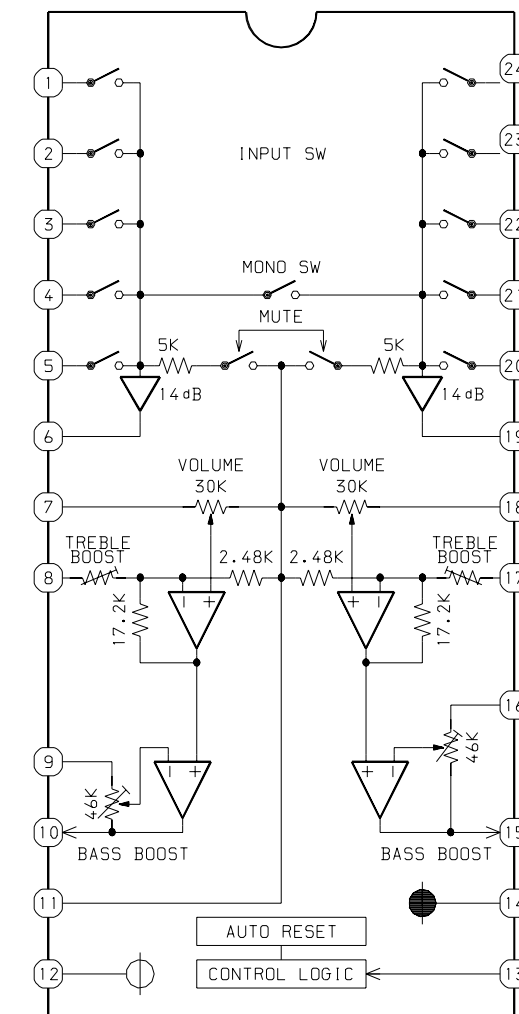
	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	S1	MONO	d	d	d	d	d	d	d	d
P2	S2	(MONO)	n	n	n	n	n	n	n	n
P3	S3	REC	p	p	p	p	p	p	p	p
P4	S4	Ⓜ	r	r	r	r	r	r	r	r
P5	S5	EDIT	e	e	e	e	e	e	e	e
P6	S6	—	c	c	c	c	c	c	c	c
P7	S7	RANDOM	g	g	g	g	g	g	g	g
P8	S8	PRGM	m	m	m	m	m	m	m	m
P9	S9	a,g,d	f	f	f	f	f	f	f	f
P10	S10	b	b	b	b	b	b	b	b	b
P11	S11	c	k	k	k	k	k	k	k	k
P12	↶	e	j	j	j	j	j	j	j	j
P13	—	—	h	h	h	h	h	h	h	h
P14	—	—	a	a	a	a	a	a	a	a
P15	—	—	T-BASS	B1	▷	ROCK	▷	POP	▷	CLASSIC
P16	—	—	○	B2	—	—	Dp	col(U)	—	MHz
P17	—	—	—	B3	—	—	—	col(D)	—	kHz
P18	—	—	—	—	—	—	—	—	—	🔧

IC BLOCK DIAGRAM

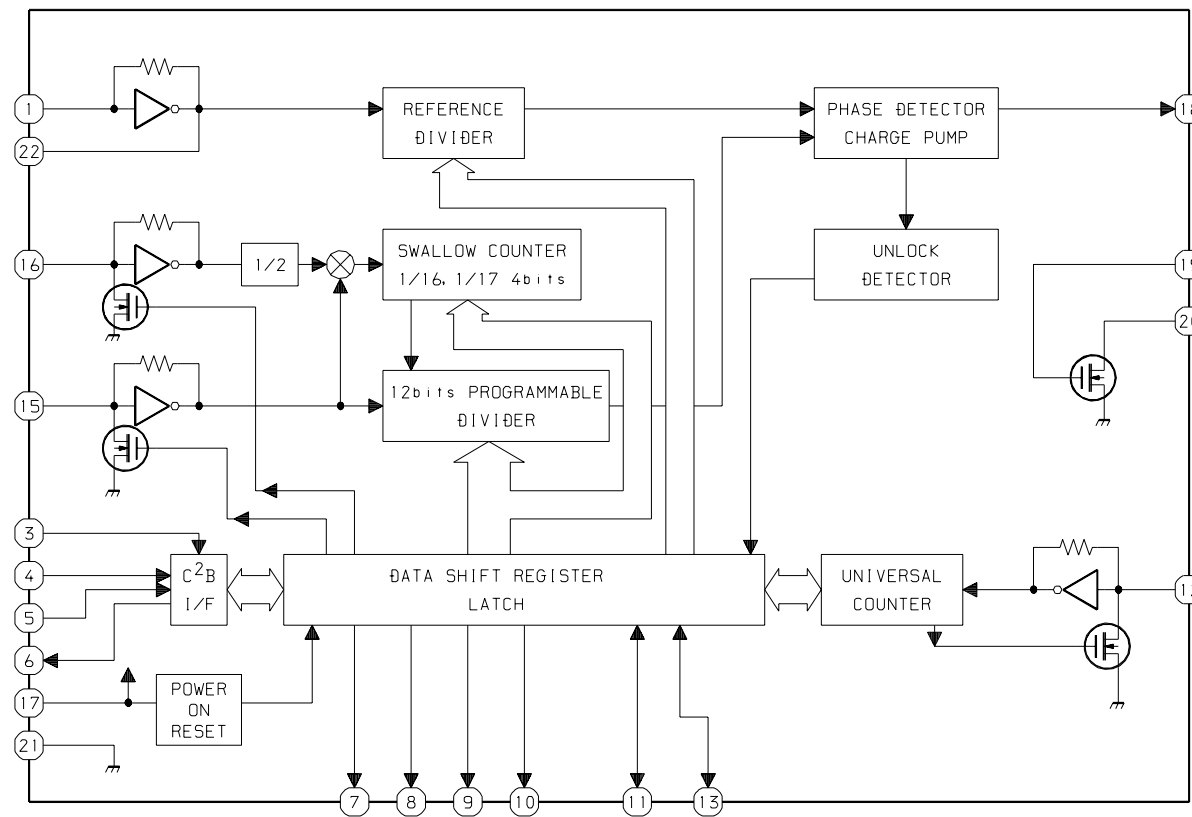
IC, LA1845L



IC, M62495AFP



IC, LC72131D-N





## IC DESCRIPTION

IC, UPD780226GF-023-3BA

Pin No.	Pin Name	I/O	Description
1	$\overline{\text{O-PB1}}$	O	Cassette deck output switching $\overline{\text{PB1/PB2}}$ .
2	O-RMT	O	REC MUTE output.
3	$\overline{\text{O-BIAS}}$	O	Bias $\overline{\text{ON/OFF}}$ output.
4	O-TU ON	O	Tuner power supply $\overline{\text{ON/OFF}}$ output.
5	O-CD ON	O	CD power supply $\overline{\text{ON/OFF}}$ output (Not used).
6	O-MOTOR	O	Cassette deck motor control output.
7	O-POWER	O	Power control $\overline{\text{ON/OFF}}$ output.
8 ~ 16	NC	—	Not connected.
17	IC (VPP)	—	Internal connection. (Connected to GND)
18	VSS	—	Connected to GND.
19	VDD	—	Digital power supply pin.
20	O-STB (DSP)	—	Not used.
21	O-PLL-CE	O	Tuner PLL IC chip enable output.
22	O-PLL-CLK	O	PLL IC clock output.
23	O-DSC/ O-PLL-DATA	O	Function IC control output/PLL data output. (Pull down)
24	O-CD-CLK	O	CD IC control clock output.
25	O-CD-CE	O	CD data chip enable output.
26	O-CD-DATA	O	CD IC control data output.
27	I-WRQ	I	CD WRQ input.
28	I-DRF	I	CD DRF input.
29	I-SUBQ	I	SUB-Q data input.
30	$\overline{\text{RESET}}$	I	Reset input for MICON.
31	O-DSP DATA	—	Not used.
32	$\overline{\text{I-STEREO}}$	I	Tuner stereo detect input.
33	$\overline{\text{I-TUNE/IFC}}$	I	Tuner SD detection input/Tuner IF count input.
34	$\overline{\text{I-RMC}}$	I	System remote control signal input. (Active "L")
35	I-TM-BASE	I	Reference clock input for timer switch.
36	O-C.SHIFT	O	Clock shift output for micro computer when tuner receiving broadcast.
37	VDD	—	Digital power supply pin.
38	X2	—	Crystal connection for main system clock oscillation.
39	X1	I	
40	VSS	—	Connected to GND.
41	AVDD	—	A/D converter analog power supply pin.
42	$\overline{\text{I-HOLD}}$	I	Hold input.
43	I-KEY 1	I	Key AD input 1.
44	I-KEY 2	I	Key AD input 2.
45	I-TP-SW	I	Deck mechanism SW AD input.
46	I-CD-SW	I	CD mecha switch input.
47	I-DISH	I	CD turnable photo sensor input.
48 ~ 49	NC	—	Connected to GND through resistor.

Pin No.	Pin Name	I/O	Description
50	AVSS	—	A/D converter ground pin.
51 ~ 57	NC	—	Not connected.
58	K-SCAN	O	Initial scan output.
59	I-TU/P1	I/O	TU1 diode input/FL segment output (P1).
60	I-TU/P2	I/O	TU2 diode input (Not used)/FL segment output (P2).
61	I-TU/P3	I/O	TU3 diode input (Not used)/FL segment output (P3).
62 ~ 78	P4 ~ P20	O	FL segment output (P4 ~ P20).
79	VDD	—	Digital power supply pin.
80	VLOAD	—	Power supply for FL display.
81 ~ 82	P21 ~ P22	—	Not used.
83 ~ 84	NC	—	Not connected.
85 ~ 94	G1 ~ G10	O	FL grid output (G1 ~ G10).
95 ~ 100	NC	—	Not connected.

## ADJUSTMENT <TUNER / DECK / FRONT>

### < TUNER SECTION >

1. Clock Frequency Check  
Settings : • Test point : TP2 (CLK)  
Method : Set to MW 1602kHz and check that the test point is 2052kHz  $\pm$  45Hz.
2. MW VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to MW 1602kHz and check that the test point is less than 8.0V. Then set to MW 531 kHz and check that the test point is more than 0.6 V.
3. MW Tracking Adjustment  
Settings : • Test point : TP5(Lch), TP6(Rch)  
• Adjustment location : L951(1/3)  
Method : Set to AM 999kHz and adjust L951(1/3) so that the test point becomes maximum.
4. LW VT Adjustment  
Settings: • Test point :TP1 (VT)  
• Adjustment location : L942  
Method : Set to LW 144kHz and adjust L942 so that the test point becomes 1.3V  $\pm$  0.05 V.  
Then set to LW 290kHz and check that the test point is less than 8.0V.
5. LW Tracking Adjustment  
Settings : • Test point :TP5(Lch),TP6(Rch)  
• Adjustment location :  
L941.....144kHz  
TC942.....290kHz  
Method: Set up TC942 to center before adjustment. The level at 144kHz is adjusted to maximum by L941. Then the level at 290kHz is adjusted to maximum by TC942.
6. FM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to FM 108.0MHz and check that the test point is less than 8.0V then set to FM 87.5MHz and check that the test point is more than 0.5V.
7. FM Tracking Check  
Settings : • Test point : TP5(Lch), TP6(Rch)  
Method : Set to FM 98.0MHz and check that the test point is less than 13.0dB $\mu$ V.
8. AM IF Adjustment  
Settings : • Test point : TP5(Lch), TP6(Rch)  
• Adjustment location :  
L802.....450kHz
7. DC Balance / Mono Distortion Adjustment  
Settings : • Test point : TP3, TP4 (DC Balance)  
: TP5 (Lch), TP6 (Rch) (Distortion)  
• Adjustment location : L801  
• Input level : 60dB $\mu$ V  
Method : Set to FM 98.0MHz and adjust L801 so that the voltage between TP3 and TP4 becomes 0V  $\pm$  0.04V.  
Then check that the distortion is less than 1.3%.

### < DECK SECTION >

1. Tape Speed Adjustment (DECK 1)  
Settings : • Test tape : TTA-100  
• Test point : TP5 (Lch), TP6 (Rch)  
• Adjustment location : SFR391  
Method : Play back the test tape and adjust SFR391 so that the frequency counter reads 3000Hz  $\pm$  5Hz (FWD) and  $\pm$  45Hz (REV) with respect to forward speed.
2. Head Azimuth Adjustment (DECK 1, DECK 2)  
Settings : • Test tape : TTA-330  
• Test point : TP5 (Lch), TP6 (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.
3. PB Frequency Response Check (DECK 1, DECK 2)  
Settings : • Test tape : TTA-330  
• Test point :TP5 (Lch), TP6 (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 0dB  $\pm$  4dB.
4. REC/PB Frequency Response Check (DECK 1)  
Settings : • Test tape : TTA-602  
• Test point : TP5 (Lch), TP6 (Rch)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP5, TP6 becomes 8mV. Record and play back the 1kHz and 8kHz signal and check that the output of the 8kHz signals is 0dB  $\pm$  5dB with respect to that of the 1kHz signal.
5. REC/PB Sensitivity Check (DECK 1)  
Settings : • Test tape : TTA-602  
• Test point : TP5 (Lch), TP6 (Rch)  
• Input signal : 1kHz (LINE IN)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP5, TP6 becomes 80mV. Record and play back the 1kHz signals and check that the output is -2dB  $\pm$  3.5dB.
6. PB Sensitivity Check (DECK 1, Deck 2)  
Settings : • Test tape : TTA-200  
• Test point :TP5 (Lch), TP6 (Rch)  
Method : Play back the test tape and check that the output level of the test point is 110mV  $\pm$  3.5dB.

### < FRONT SECTION >

1.  $\mu$ -CON OSC Adjustment  
Settings : • Test point : TP7 (K-SCAN) and TP8 (GND)  
• Adjustment location : L501  
Method : Insert AC plug while pressing function key and power key. Adjust L501 so that the frequency at the test point is 92.5Hz  $\pm$  0.1Hz.

## CD TEST MODE

### 1. How to Start the CD Test Mode

While pressing the FUNCTION button, insert the AC plug to the power outlet.  
When the test mode is started, the message [CD TEST] is displayed.

### 2. How to Exit the CD Test Mode

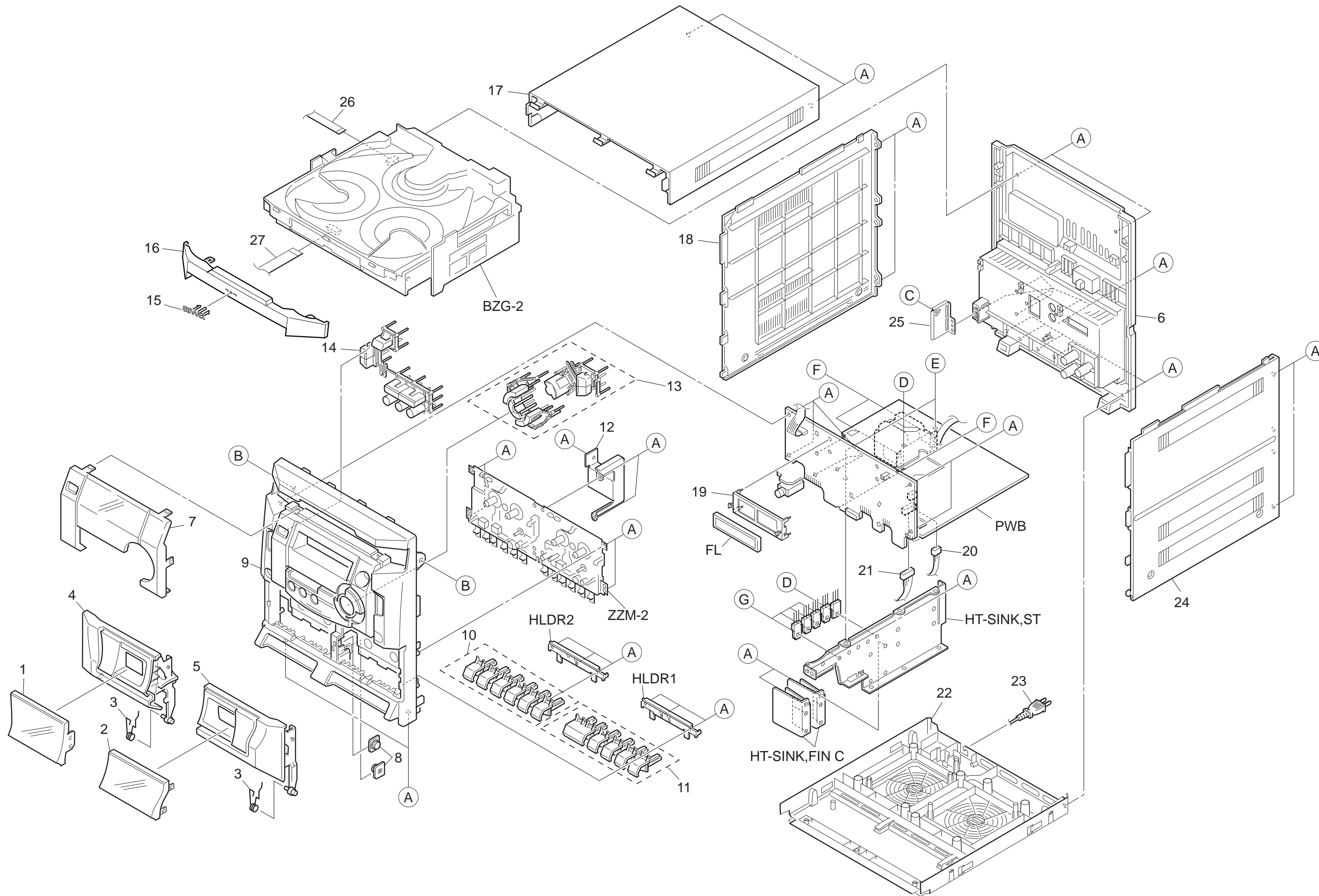
Press the POWER button or disconnect the AC plug.

### 3. Function Descriptions and Application of the CD Test Mode

No	Mode	Operation	Display	Function	Checking item
1	Start mode		All indicators light	<ul style="list-style-type: none"> <li>All FL indicators light</li> </ul>	<ul style="list-style-type: none"> <li>FL check</li> <li>microprocessor check</li> </ul>
2	Search mode	STOP button	READING	<ul style="list-style-type: none"> <li>LD illuminates all the time</li> <li>Focus search continuous operations *1</li> <li>Spindle motor continuous kick</li> </ul>	<ul style="list-style-type: none"> <li>APC circuit check</li> <li>Laser current measurement</li> <li>Focus search waveform check</li> <li>Focus error waveform check (DRF in the search mode is ignored)</li> </ul>
3	Play mode	Play button	Normal	<ul style="list-style-type: none"> <li>Normal playback</li> <li>If TOC cannot be read, focus search is continued</li> </ul>	<ul style="list-style-type: none"> <li>Each servo circuit is checked</li> <li>DRF check</li> </ul>
4	Traverse mode	PAUSE button	Normal	<ul style="list-style-type: none"> <li>Tracking servo OFF/ON</li> <li>Each time PAUSE button is pressed, the tracking servo repeats turning OFF/ON</li> </ul>	<ul style="list-style-type: none"> <li>Tracking balance check</li> </ul>
5	Sled mode	FF button	CD TEST	<ul style="list-style-type: none"> <li>Pickup moves to the inner circumference *2</li> <li>At the same time, lens kicks to the inner circumference</li> </ul>	<ul style="list-style-type: none"> <li>Sled circuit check</li> <li>Tracking circuit check</li> <li>Mechanism operation check</li> <li>Pickup check</li> </ul>
		RWD button	CD TEST	<ul style="list-style-type: none"> <li>Pickup moves to the outer circumference *2</li> <li>At the same time, lens kicks to the outer circumference</li> </ul>	
6	Spindle mode	T-BASS button	All indicators light	<ul style="list-style-type: none"> <li>The spindle motor rotates forward (rough speed) by pressing the button and rotates backward by pressing one more time and stops by pressing again</li> </ul>	<ul style="list-style-type: none"> <li>Spindle circuit</li> <li>Spindle motor</li> </ul>

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

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

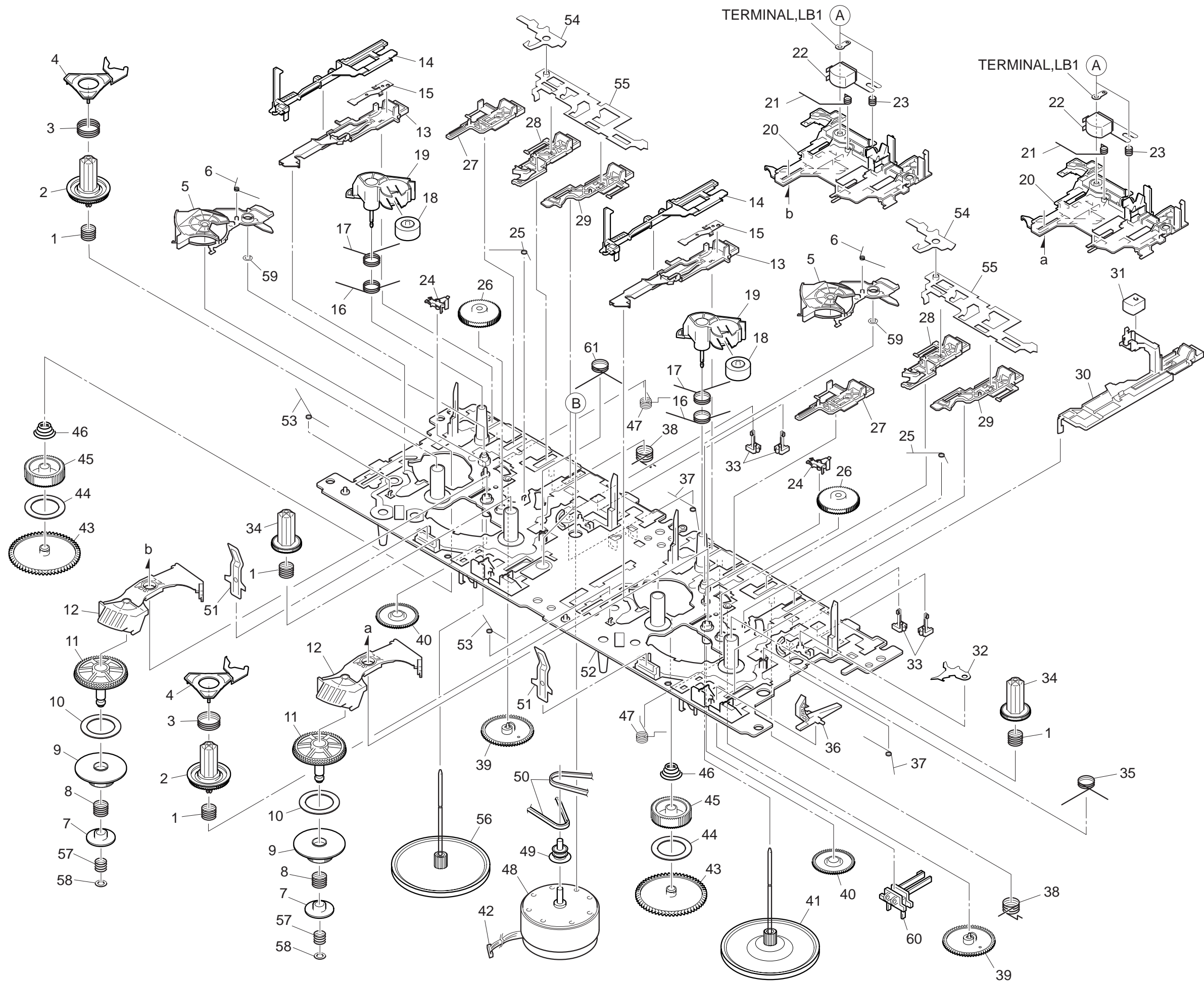


# MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NFC-008-010		WINDOW, CASS 1
2	8B-NFC-009-010		WINDOW, CASS 2
3	82-NF7-218-010		SPR-T, CASS
4	8B-NFC-003-010		BOX, CASS 1
5	8B-NFC-004-010		BOX, CASS 2
6	8B-NFC-014-010		CABI, REAR EZSC
7	8B-NFC-031-010		WINDOW, DISP H
8	86-NFZ-231-010		DMPR, 70
9	8B-NFC-001-010		CABI, FR U
10	8A-NED-010-010		KEY, CASS 1
11	8A-NED-011-010		KEY, CASS 2
12	8A-NEC-206-010		HLLDR, DECK
13	8B-NFC-020-010		KEY, PLAY
14	8B-NFC-005-010		KEY, POWER
15	87-CE3-023-010		BADGE, AIWA 30N SILV
16	8B-NFC-002-010		PANEL, TRAY
17	8B-NFA-004-010		PANEL, TOP
18	8B-NFC-010-010		PANEL, LEFT
19	8A-NFA-208-010		GUIDE, FL 100-25 ANFA
20	8B-NFC-633-010		CONN ASSY, 3P (PH)
21	8B-NFC-634-010		CONN ASSY, 8P RPB
22	8B-NFA-201-010		CABI, BOTTOM
△	87-A80-092-010		AC CORD ASSY, E BLK SUN FAI
24	8B-NFC-011-010		PANEL, RIGHT
25	8A-NEC-201-010		HLLDR, PT
26	88-906-251-110		FF-CABLE, 6P 1.25
27	88-908-201-110		FF-CABLE, 8P 1.25
A	87-067-703-010		TAPPING SCREW, BVT2+3-10
B	87-721-096-410		QT2+3-10 W/O SLOT
C	87-571-092-410		TAPPING SCREW, VIT+3-4
D	87-067-579-010		TAPPING SCREW, BVT2+3-8
E	87-NF4-224-010		S-SCREW, IT3B+3-8 CU
F	87-067-975-010		S-SCREW, IT+4-8
G	87-067-001-010		S-SCREW, BVWST2+3-12 W/O SLOT

## 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		



# TAPE MECHANISM PARTS LIST 1 / 1

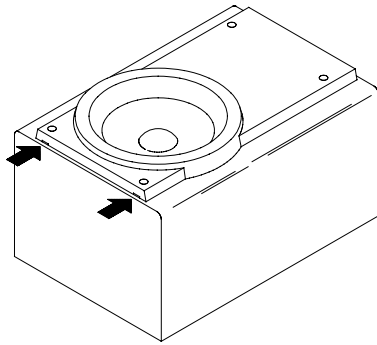
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM1-254-310		SPR-C, REEL R	36	8Z-ZM1-220-110		LEVER, REC SENSOR
2	8Z-ZM1-225-110		GEAR, REEL R	37	8Z-ZM1-249-210		SPR-T, FR
3	8Z-ZM1-253-210		SPR-C, AUTO SENSOR	38	8Z-ZM1-242-310		SPR-T, FF/REW
4	8Z-ZM1-217-110		LEVER, AUTO SENSOR	39	8Z-ZM3-244-110		GEAR, CAM TD20
5	8Z-ZM1-212-210		LEVER, T-UP	40	8Z-ZM1-232-010		GEAR, IDL FF/REW
6	8Z-ZM1-245-310		SPR-T, AUTO	41	8Z-ZM1-290-010		FLY-WHL ASSY, ZZM-1
7	8Z-ZM1-236-010		CLR, SLIP FF/REW	42	8Z-ZM2-601-010		CONN ASSY, 9P ZZM-2
8	8Z-ZM1-252-110		SPR-C, FF/REW	43	8Z-ZM1-228-010		GEAR, SLIP T-UP B
9	8Z-ZM2-213-010		GEAR, SLIP FR A ZZM-2	44	8Z-ZM1-265-010		FELT, T-UP
10	8Z-ZM1-269-010		FELT, FF/REW 2	45	8Z-ZM1-227-010		GEAR, SLIP T-UP A
11	8Z-ZM1-238-110		GEAR, SLIP FF/REW B 2	46	8Z-ZM1-251-210		SPR-C, T-UP SLIP
12	8Z-ZM1-237-110		LEVER, FF/REW 2	47	8Z-ZM1-243-310		SPR-T, STOP/PAUSE
13	8Z-ZM1-209-510		LEVER, PAUSE	48	87-A91-532-010		MOT, MS15U2LW1A
14	8Z-ZM1-218-210		LEVER, E-LOCK H	49	8Z-ZM1-235-010		PULLEY, MOT
15	8Z-ZM1-256-010		SPR-P, PAUSE	50	8Z-ZM2-216-010		BELT, MAIN M
16	8Z-ZM1-244-110		SPR-T, T-UP	51	8Z-ZM1-260-010		SPR-P, CASSETTE
17	8Z-ZM1-247-310		SPR-T, PINCH	52	8Z-ZM2-201-510		CHAS ASSY, ZZM-2
18	8Z-ZM1-261-110		ROLLER ASSY, PINCH	53	8Z-ZM1-255-310		SPR-T, E-LOCK
19	8Z-ZM1-221-210		LEVER, PINCH	54	8Z-ZM2-219-010		LEVER, E-OPEN ZZM-2
20	8Z-ZM1-205-310		LEVER, PLAY	55	8Z-ZM1-214-310		LEVER, LOCK
21	8Z-ZM1-248-210		SPR-T, BRG	56	8Z-ZM2-230-010		FLY-WHL ASSY, ZZM-2
22	87-A90-403-110		HEAD, RPH MS15R	57	8Z-ZM1-257-110		SPR-C, F/R
23	84-ZM2-227-310		SPR-C, AZIMUTH	58	8Z-ZM1-275-010		W-L, 1.47-4-0.25
24	8Z-ZM1-216-110		LEVER, AUTO	59	87-B10-301-010		W-L, 1.63-3.2-0.5 SLIT
25	8Z-ZM1-246-110		SPR-T, AUTO 2	60	87-A91-494-010		SW, LEAF MSW17820
26	8Z-ZM2-214-110		GEAR, IDL REW ZZM-2	61	8Z-ZM1-241-010		SPR-T, PLAY
27	8Z-ZM2-212-010		LEVER, STOP ZZM-2	A	84-ZM2-242-010		S-SCREW, AZ1-2-6.4
28	8Z-ZM1-207-010		LEVER, FF	B	8Z-ZM2-220-110		V+2.6 ZZM-2
29	8Z-ZM1-206-010		LEVER, REW				
30	8Z-ZM1-210-010		LEVER, REC				
31	87-A90-404-010		HEAD, EH LE15B				
32	8Z-ZM2-218-010		LEVER, REC LOCK ZZM-2				
33	87-A91-492-010		SW, LEAF MSW18560				
34	8Z-ZM1-226-010		GEAR, REEL L				
35	8Z-ZM1-241-210		SPR-T, PLAY				



## GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE)

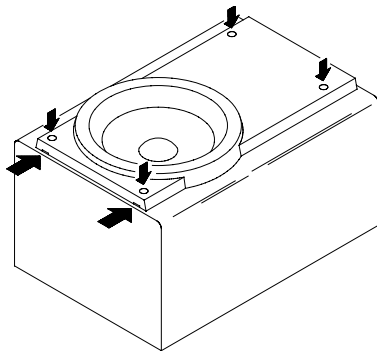
### Type.1

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.



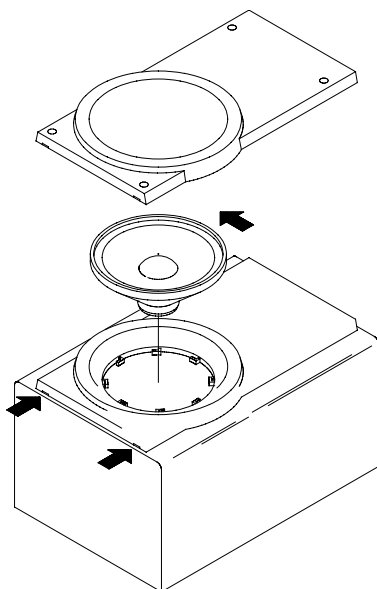
### Type.2

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.

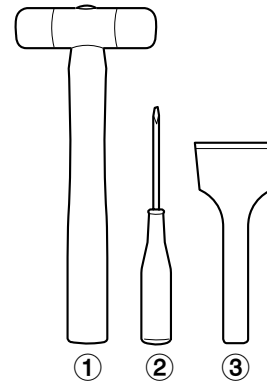


### Type.3

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.

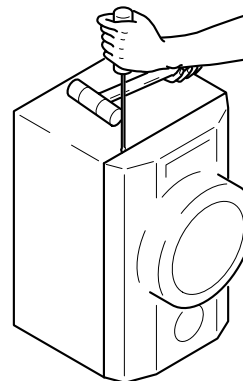


Fig-1

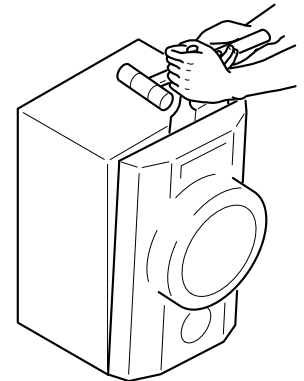


Fig-2

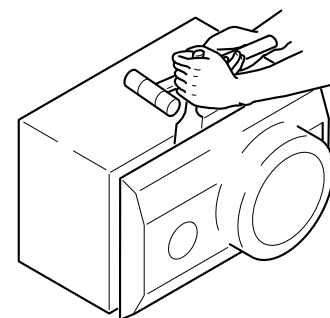


Fig-3

### 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-NSZ102) <YSC>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NSN-001-110		GRILLE, FRAME ASSY
2	8A-NSM-008-010		CORD, SPKR
3	8A-NSM-606-010		SPKR, 100

## ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NFC-906-010		IB, EZ(9L)S
2	8B-NFC-701-010		RC UNIT, RC-ZAS11
3	87-A90-030-010		ANT, LOOP AM-NC C

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