

# SERVICE MANUAL

COMPACT DISC STEREO  
CASSETTE RECEIVER

BASIC TAPE MECHANISM : ZZM-2 PR1NM  
BASIC CD MECHANISM : AZG-1 VZD3RNDM

SYSTEM	CD CASSEIVER	SPEAKER	REMOTE CONTROLLER
NSX-VC18	CX-NVC18	SX-NBL17	RC-ZAS11

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" NSX-VC18(HR / HT), (S/M Code No. 09-004-429-2T1).
- If requiring information about the CD mechanism, see Service Manual of AZG-1, (S/M Code No. 09-001-335-3NG).

# aiwa

S/M Code No. 09-005-429-2R1

REVISION

DATA

## SPECIFICATIONS

### <FM tuner section>

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

### <MW tuner section>

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

### <SW tuner section>

<b>Tuning range</b>	5.730 MHz to 17.900 MHz
<b>Usable sensitivity</b>	40 $\mu$ V (IEC)
<b>Antenna</b>	Wire antenna

### <Amplifier section>

<b>Power output</b>	Rated: 24 W + 24 W (1 kHz, T.H.D. 1%, 6 ohms) Reference: 30 W + 30 W (1 kHz, T.H.D. 10%, 6 ohms)
<b>Total harmonic distortion</b>	0.1% (8 W, 1 kHz, 6 ohms, DIN AUDIO)
<b>Inputs</b>	VIDEO/AUX: 500 mV MIC: 1.0 mV (10 kohms)
<b>Outputs</b>	VIDEO OUT: 1.0 Vp-p (75 ohms) SPEAKERS: accept speakers of 6 ohms or more PHONES (stereo jack) : accepts headphones of 32 ohms or more

### <Cassette deck section>

<b>Track format</b>	4 tracks, 2 channels stereo
<b>Frequency response</b>	50 Hz – 8000 Hz
<b>Recording system</b>	AC bias
<b>Heads</b>	Deck 1 : Recording/Playback head x 1, erase head x 1 Deck 2 : Playback head x 1

### <Compact disc player section>

<b>Laser</b>	Semiconductor laser ( $\lambda$ =780 nm)
<b>D-A converter</b>	1 bit dual
<b>Signal-to-noise ratio</b>	85 dB (1 kHz, 0 dB)
<b>Harmonic distortion</b>	0.05 % (1 kHz, 0 dB)
<b>Video signal</b>	NTSC/PAL color format(selectable)
<b>Video data</b>	MPEG 1
<b>Audio data</b>	MPEG 1, LAYER 2

### <Speaker system>SX-NBL17

<b>Speaker System</b>	2 way, bass reflex (magnetic shielded type)
<b>Speaker units</b>	Woofer: 120 mm cone type Tweeter: 20 mm ceramic type
<b>Impedance</b>	6 ohms
<b>Sensitivity</b>	87 dB/W/m
<b>Dimensions (W x H x D)</b>	220 x 324 x 211 mm
<b>Weight</b>	2.0 kg

### <General>

<b>Power requirements</b>	120 V/220V-230 V/240 V AC (switchable), 50/60 Hz
<b>Power consumption</b>	60 W
<b>Power consumption in standby mode</b>	14 W with power-economizing mode off 0.9 W with power-economizing mode on
<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 346 mm
<b>Weight of main unit</b>	5.6 kg

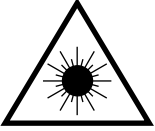
• Design and specifications are subject to change without notice.

## 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!

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

### WARNING!

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

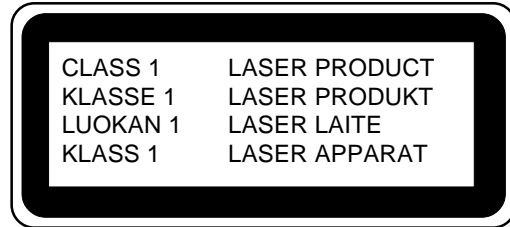
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### 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.



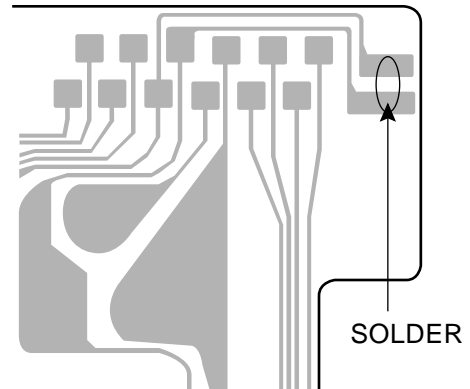
## Precaution to replace Optical block

### (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.

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.

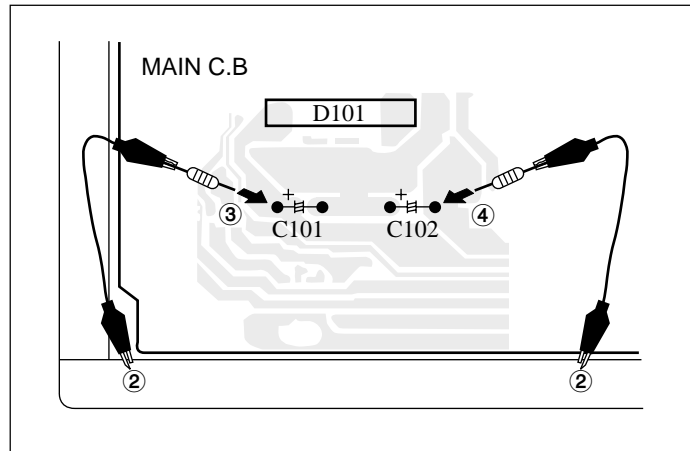


Fig-1

Select a discharging resistor referring to the following table.

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

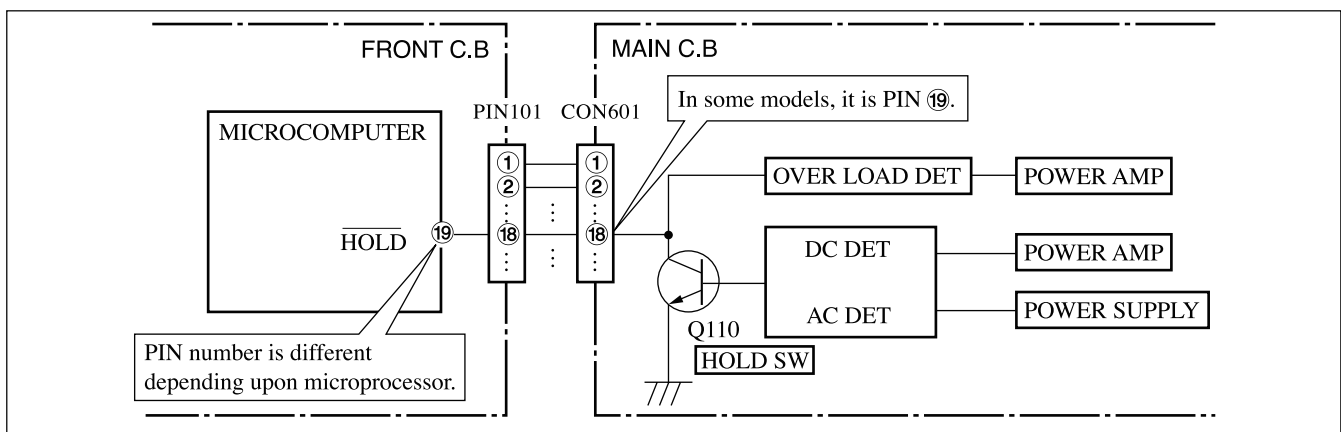


Fig-2-1

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.

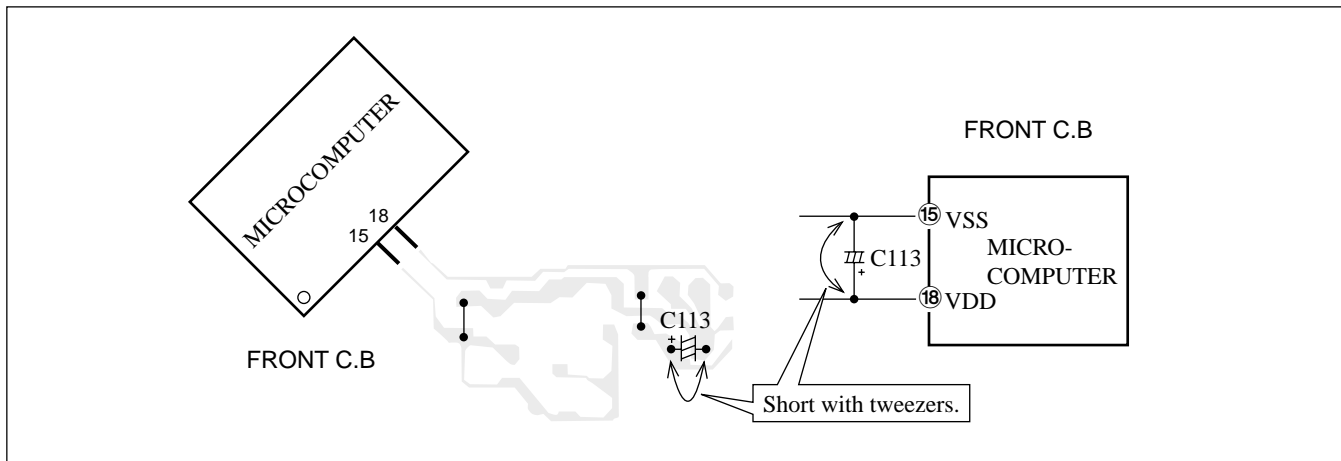


Fig-2-2

- 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>				C31	87-010-263-080		CAP, ELECT 100-10V
	8A-NHZ-601-010		C-IC,M38B57MCH-E244FP	C32	87-010-197-080		CAP, CHIP 0.01 DM
	87-A21-396-010		IC,STK490-040	C33	87-010-263-080		CAP, ELECT 100-10V
	87-A21-419-040		C-IC,NJM14558MD-TE2	C34	87-010-247-080		CAP, ELECT 100-50V
	87-A21-443-040		C-IC,M62495AFP	C35	87-010-406-080		CAP, ELECT 22-50
	87-A21-560-010		IC,LA1844L-A	C36	87-010-381-080		CAP, ELECT 330-16V
	87-070-127-110		IC,LC72131 D	C38	87-010-190-080		C-CAP,S 0.01-50 ZF
	87-A21-482-010		IC,RPM6938-H4	C60	87-010-403-080		CAP, ELECT 3.3-50V
	87-A21-018-040		C-IC,M65849BFP631D	C97	87-010-196-080		CHIP CAPACITOR,0.1-25
				C100	87-018-127-080		CAP TC-U 470P
<b>TRANSISTOR</b>				C101	87-010-183-080		C-CAP,S 2700P-50 B
	87-026-609-080		TR,KTA1266GR	C102	87-010-183-080		C-CAP,S 2700P-50 B
	89-213-702-010		TR,2SB1370 (1.8W)	C103	87-010-545-080		CAP, ELECT 0.22-50V
	87-026-610-080		TR,KTC3198GR	C104	87-010-545-080		CAP, ELECT 0.22-50V
	87-A30-076-080		C-TR,2SC3052F	C105	87-010-178-080		CHIP CAP 1000P
	87-A30-075-080		C-TR,2SA1235F	C106	87-010-178-080		CHIP CAP 1000P
	87-026-245-080		TR,DTC114ES	C107	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-198-080		TR,KTC3199GR	C108	87-010-404-080		CAP, ELECT 4.7-50V
	87-A30-090-080		FET,2SK2541	C109	87-010-179-080		C-CAP, S 1200P-50KB
	87-A30-484-080		C-TR,KRA102S	C110	87-010-179-080		C-CAP, S 1200P-50KB
	87-A30-468-080		C-TR,KRC102S-RTK	C111	87-010-391-080		CAP,E 10-35 SME
	87-A30-107-070		C-TR,CMBT5401	C112	87-010-391-080		CAP,E 10-35 SME
	87-A30-106-040		C-TR,CMBT5551	C113	87-010-405-080		CAP, ELECT 10-50V
	87-A30-091-080		FET,2SJ460	C114	87-010-405-080		CAP, ELECT 10-50V
	87-A30-062-080		C-TR,KRC104S	C119	87-010-197-080		CAP, CHIP 0.01 DM
	87-A30-318-080		TR,CSA952K	C120	87-010-197-080		CAP, CHIP 0.01 DM
	89-333-317-880		TR,2SC3331 (0.5W)	C125	87-012-368-080		C-CAP,S 0.1-50 F
	87-A30-234-080		TR,CSC4115BC	C126	87-012-368-080		C-CAP,S 0.1-50 F
	89-327-143-080		TR,2SC2714 (0.1W)	C127	87-012-368-080		C-CAP,S 0.1-50 F
	87-A30-489-080		C-TR,KRA107S	C128	87-012-368-080		C-CAP,S 0.1-50 F
	89-503-602-080		C-FET,2SK360E	C129	87-A10-592-080		C-CAP,S 0.015-50 J
	87-A30-086-070		C-TR,CSD1306E	C130	87-A10-592-080		C-CAP,S 0.015-50 J
	87-A30-495-080		TR,2SA1981Y	C131	87-010-197-080		CAP, CHIP 0.01 DM
	87-A30-074-080		C-TR,RT1P141C	C132	87-010-197-080		CAP, CHIP 0.01 DM
				C133	87-010-186-080		CAP,CHIP 4700P
<b>DIODE</b>				C140	87-010-182-080		C-CAP,S 2200P-50 B
	87-A40-736-080		DIODE,1N4148M (SEM)	C200	87-018-195-080		CAP TC-U 1200P
	87-020-465-080		DIODE,1SS133 (110MA)	C239	87-A11-718-080		C-CAP,S 0.1-25 ZF<HR>
	87-A40-455-080		DIODE,RL203 GW	C239	87-010-196-080		C-CAP,S 0.1-25 ZF<HT>
	87-A40-553-080		DIODE,1N4003 LES	C300	87-018-195-080		CAP TC-U 1200P
	87-A40-774-080		ZENER,UZ24BSD	C301	87-010-179-080		CAP,CHIP S B1200P
	87-A40-764-080		ZENER,UZ10BSC	C302	87-010-179-080		CAP,CHIP S B1200P
	87-A40-313-080		C-DIODE,MC 2840	C303	87-010-178-080		CHIP CAP 1000P
	87-A40-270-080		C-DIODE,MC2838	C304	87-010-178-080		CHIP CAP 1000P
	87-A40-269-080		C-DIODE,MC2836	C305	87-010-198-080		CAP, CHIP 0.022
	87-A40-768-080		ZENER,UZ16BSA	C307	87-010-263-080		CAP, ELECT 100-10V
	87-A40-752-080		ZENER,UZ6.2BSC	C308	87-010-263-080		CAP, ELECT 100-10V
	87-A40-739-080		ZENER,UZ2.7BSA	C309	87-010-318-080		C-CAP, S 47P-50J CH
	87-017-149-080		ZENER,HZS6A2L	C310	87-010-318-080		C-CAP, S 47P-50J CH
	87-017-931-080		ZENER,MTZJ5.6B	C311	87-010-598-080		C-CAP,S 0.068-16VRK
<b>MAIN C.B</b>				C312	87-010-598-080		C-CAP,S 0.068-16VRK
C3	87-010-196-080		CHIP CAPACITOR,0.1-25	C313	87-010-188-080		CAP,CHIP 6800P
C4	87-010-196-080		CHIP CAPACITOR,0.1-25	C314	87-010-188-080		CAP,CHIP 6800P
C5	87-010-196-080		CHIP CAPACITOR,0.1-25	C315	87-010-263-080		CAP, ELECT 100-10V
C6	87-010-196-080		CHIP CAPACITOR,0.1-25	C317	87-010-546-080		CAP, ELECT 0.33-50V
C9	87-010-196-080		CHIP CAPACITOR,0.1-25	C318	87-010-546-080		CAP, ELECT 0.33-50V
C10	87-010-196-080		CHIP CAPACITOR,0.1-25	C326	87-010-198-080		CAP, CHIP 0.022
C11	87-010-196-080		CHIP CAPACITOR,0.1-25	C327	87-010-196-080		CHIP CAPACITOR,0.1-25
C12	87-010-196-080		CHIP CAPACITOR,0.1-25	C360	87-010-401-080		CAP, ELECT 1-50V
C19	87-A10-627-000		CAP,E 2200-50 M SMG	C399	87-012-140-080		CAP 470P
C20	87-A10-627-000		CAP,E 2200-50 M SMG	C401	87-010-544-080		CAP, ELECT 0.1-50V
C21	87-016-495-000		CAP,E 3300-25 M SMG	C402	87-010-544-080		CAP, ELECT 0.1-50V
C22	87-016-495-000		CAP,E 3300-25 M SMG	C405	87-010-197-080		CAP, CHIP 0.01 DM
C25	87-010-385-080		CAP, ELECT 220-25V	C406	87-010-197-080		CAP, CHIP 0.01 DM
C26	87-010-247-080		CAP, ELECT 100-50V	C407	87-010-197-080		CAP, CHIP 0.01 DM
C30	87-010-247-080		CAP, ELECT 100-50V	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

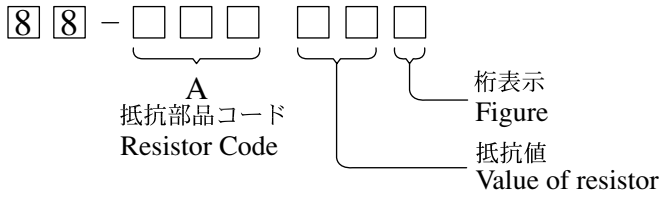
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C452	87-010-382-080		CAP, ELECT 22-25V	C849	87-010-197-080		CAP, CHIP 0.01 DM<HT>
C453	87-010-183-080		C-CAP,S 2700P-50 B	C851	87-010-197-080		CAP, CHIP 0.01 DM
C454	87-010-183-080		C-CAP,S 2700P-50 B	C852	87-010-197-080		CAP, CHIP 0.01 DM
C455	87-010-183-080		C-CAP,S 2700P-50 B	C853	87-010-197-080		CAP, CHIP 0.01 DM
C456	87-010-197-080		CAP, CHIP 0.01 DM	C858	87-010-196-080		CHIP CAPACITOR,0.1-25
C460	87-010-196-080		CHIP CAPACITOR,0.1-25	C859	87-010-196-080		CHIP CAPACITOR,0.1-25
C461	87-012-158-080		C-CAP,S 390P-50 CH	C860	87-010-197-080		CAP, CHIP 0.01 DM
C462	87-012-158-080		C-CAP,S 390P-50 CH	C940	87-010-197-080		CAP, CHIP S 0.01-25 KB
C470	87-018-127-080		CAP, TC U 470P-50 BK<HT>	C941	87-010-314-080		CAP, CHIP S 22P-50 JCH
C605	87-010-179-080		CAP,CHIP S B1200P	C943	87-010-197-080		CAP, CHIP S 0.01-25 KB
C606	87-010-179-080		CAP,CHIP S B1200P	C945	87-010-197-080		CAP, CHIP S 0.01-25 KB
C609	87-010-213-080		C-CAP,S 0.015-50 B	C946	87-010-971-080		CAP, CHIP S 4700P-50 JB
C610	87-010-213-080		C-CAP,S 0.015-50 B	C947	87-010-197-080		CAP, CHIP S 0.01-25 KB
C611	87-010-545-080		CAP, ELECT 0.22-50V	C948	87-010-148-080		CAP, CHIP S 4P-50 CH
C612	87-010-545-080		CAP, ELECT 0.22-50V	C952	87-010-197-080		CAP, CHIP S 0.01-25 KB
C613	87-010-545-080		CAP, ELECT 0.22-50V	C953	87-010-197-080		CAP, CHIP S 0.01-25 KB
C614	87-010-545-080		CAP, ELECT 0.22-50V	C954	87-010-400-080		CAP, E 0.47-50 M
C615	87-010-154-080		CAP CHIP 10P	C956	87-010-263-080		CAP, E 100-10 M
C616	87-010-385-080		CAP, ELECT 220-25V	C959	87-010-196-080		CHIP CAPACITOR,0.1-25
C617	87-010-385-080		CAP, ELECT 220-25V	C960	87-010-196-080		CHIP CAPACITOR,0.1-25
C618	87-010-405-080		CAP, ELECT 10-50V	C961	87-010-152-080		C-CAP,S 8P-50 CH
C630	87-016-669-080		C-CAP,S 0.1-25 K B	C962	87-010-401-080		CAP, ELECT 1-50 M
C669	87-010-322-080		C-CAP,S 100P-50 CH	C963	87-015-785-080		CHIP CAPACITOR, 0.1FZ-25Z
C670	87-010-322-080		C-CAP,S 100P-50 CH	C964	87-010-854-080		CAP, CHIP S 560P-50 JCH
C671	87-016-669-080		C-CAP,S 0.1-25 KB	C971	87-010-381-080		CAP, ELECT 330-16V
C672	87-016-669-080		C-CAP,S 0.1-25 KB	C972	87-010-404-080		CAP, ELECT 4.7-50V
C677	87-010-197-080		CAP, CHIP 0.01 DM	C973	87-010-197-080		CAP, CHIP 0.01 DM
C771	87-010-263-080		CAP, ELECT 100-10V	C974	87-010-197-080		CAP, CHIP 0.01 DM
C772	87-010-197-080		CAP, CHIP 0.01 DM	C979	87-010-322-080		C-CAP,S 100P-50 CH
C782	87-010-197-080		CAP, CHIP 0.01 DM	C982	87-010-196-080		CHIP CAPACITOR,0.1-25
C783	87-010-197-080		CAP, CHIP 0.01 DM	C983	87-010-197-080		CAP, CHIP 0.01 DM
C784	87-010-197-080		CAP, CHIP 0.01 DM	C984	87-010-197-080		CAP, CHIP 0.01 DM
C785	87-010-197-080		CAP, CHIP 0.01 DM	C987	87-010-197-080		CAP, CHIP 0.01 DM
C786	87-010-197-080		CAP, CHIP 0.01 DM	C989	87-010-197-080		CAP, CHIP 0.01 DM
C788	87-010-149-080		C-CAP,S 5P-50 CH	C993	87-010-178-080		CHIP CAP 1000P
C789	87-A11-532-080		C-CAP,S 0.022-50 J B<HR>	C995	87-010-178-080		CHIP CAP 1000P
C789	87-A10-801-080		C-CAP,S 0.022-16 J B<HT>	C997	87-010-196-080		CHIP CAPACITOR,0.1-25
C790	87-A11-532-080		C-CAP,S 0.022-50 J B<HR>	C999	87-A11-155-080		CAP,TC U 0.01-16 Z F
C790	87-A10-801-080		C-CAP,S 0.022-16 J B<HT>	CF831	87-008-261-010		FILTER, SFE10.7MA5-A
C791	87-010-196-080		CHIP CAPACITOR,0.1-25	CF832	87-008-261-010		FILTER, SFE10.7MA5-A
C792	87-010-197-080		CAP, CHIP 0.01 DM	CN301	87-A60-620-010		CONN,3P V 2MM JMT
C793	87-010-404-080		CAP, ELECT 4.7-50V	CN351	87-A60-625-010		CONN,8P V 2MM JMT
C795	87-010-197-080		CAP, CHIP 0.01 DM	CN601	87-099-719-010		CONN,30P TYK-B(X)
C796	87-010-197-080		CAP, CHIP 0.01 DM	CN602	87-099-194-010		CONN,6P 6216V
C797	87-010-405-080		CAP, ELECT 10-50V	CNA1	8A-NF8-653-010		CONN ASSY,9P TID-A(480)
C798	87-010-197-080		CAP, CHIP 0.01 DM	D951	87-A40-618-080		VARI-CAP,SVC 348(S/T)
C799	87-010-407-080		CAP, ELECT 33-50V	FFE831	A8-8ZA-190-030		8ZA-1 FEUNM
C800	87-012-369-080		C-CAP,S 0.047-50F	J101	87-A60-602-010		JACK,DIA6.3 BLK ST W/SW TC
C801	87-010-403-080		CAP, ELECT 3.3-50V	J203	87-A60-238-010		TERMINAL,SP 4P (MSC)
C802	87-012-369-080		C-CAP,S 0.047-50F	J602	87-A60-881-010		JACK,PIN 2P MSP 242V05 PBSN
C803	87-010-198-080		CAP, CHIP 0.022	J831	87-A60-202-010		TERMINAL,ANT 4P MSP-154V02
C804	87-010-263-080		CAP, ELECT 100-10V	J940	87-A60-633-010		CONN,2P H2.5MM
C807	87-010-400-080		CAP, ELECT 0.47-50V	L101	87-003-383-010		COIL,1UH-S<HR>
C808	87-010-401-080		CAP, ELECT 1-50V	L101	87-A50-610-010		COIL,1UH-K(MDEC) <HT>
C809	87-010-401-080		CAP, ELECT 1-50V	L102	87-003-383-010		COIL,1UH-S<HR>
C810	87-010-196-080		CHIP CAPACITOR,0.1-25	L102	87-A50-610-010		COIL,1UH-K(MDEC) <HT>
C814	87-010-197-080		CAP, CHIP 0.01 DM	L451	87-007-342-010		COIL,OSC 85K BIAS
C815	87-010-400-080		CAP, ELECT 0.47-50V	L801	87-A50-608-010		COIL,FM DET-N (TOK)
C816	87-010-400-080		CAP, ELECT 0.47-50V	L802	87-A91-552-010		FLTR,CFMT-450AL(TOK)
C821	87-010-405-080		CAP, ELECT 10-50V	L811	87-005-847-080		COIL,2.2UH(CECS)
C823	87-010-177-080		C-CAP,S 820P-50 SL	L832	87-005-847-080		COIL,2.2UH(CECS)
C824	87-010-405-080		CAP, ELECT 10-50V	L941	87-A50-022-010		COIL,ANT SW COI 7.96MHZ
C825	87-010-596-080		CAP, S 0.047-16	L942	87-A50-550-010		COIL,OSC SW-2N
C842	87-010-197-080		CAP, CHIP 0.01 DM	L943	87-A50-522-080		COIL,1MH K CEC
C843	87-010-197-080		CAP, CHIP 0.01 DM<HT>	L944	87-A50-159-010		COIL,10MH K
C844	87-010-197-080		CAP, CHIP 0.01 DM	L952	87-A50-430-010		COIL,ANT MW(3BSW)
C845	87-010-197-080		CAP, CHIP 0.01 DM<HT>	L953	87-A50-431-010		COIL,OSC MW(3BSW)
C846	87-010-197-080		CAP, CHIP 0.01 DM<HT>	R131	87-A00-258-080		RES,M/F 0.22-1W J
C847	87-010-197-080		CAP, CHIP 0.01 DM<HT>	R132	87-A00-258-080		RES,M/F 0.22-1W J
C848	87-010-197-080		CAP, CHIP 0.01 DM<HT>	R653	87-A11-144-080		CAP,TC U 0.1-50 K B

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
R654	87-A11-144-080		CAP,TC U 0.1-50 K B				
R790	87-010-197-080		CAP, CHIP 0.01 DM	C513	87-016-669-080		C-CAP,S 0.1-25 K B
R991	87-010-322-080		C-CAP,S 100P-50 CH	C515	87-010-374-040		CAP,E 47-10 M 11L
R993	87-010-322-080		C-CAP,S 100P-50 CH	C517	87-016-669-080		C-CAP,S 0.1-25 K B
R995	87-010-322-080		C-CAP,S 100P-50 CH	C518	87-010-318-080		C-CAP,S 47P-50 J CH
				C519	87-010-318-080		C-CAP,S 47P-50 J CH
TC941	87-011-254-080		TRIMMER,CER 20P 4.0X4.5 ECR				
TC943	87-011-253-080		TRIMMER,CER 30P 4.0X4.5 ECRLA	C520	87-010-318-080		C-CAP,S 47P-50 J CH
WH1	87-A90-510-010		HLDR,WIRE 2.5-9P	C701	87-010-384-040		CAP,E 100-25 SME
X991	87-A70-061-010		VIB,XTAL 4.500MHZ CSA-309	CN101	87-099-720-010		CONN,30P TYK-B(P)
				CN701	87-A60-673-010		CONN,9P H 2MM JMT
				CN801	87-099-015-010		CONN,13P 6216V
FRONT C.B							
C101	87-010-196-080		CHIP CAPACITOR,0.1-25	EMI401	87-008-372-080		FLTR,EMI BL01 RN1
C102	87-012-369-080		C-CAP,S 0.047-50F	FL201	8A-NFA-604-010		FL,10-BT-224GNK
C103	87-010-374-040		CAP, ELECT 47-10	J401	87-A61-242-010		JACK,6.3 BLK MONO W/SW VKM
C104	87-A10-797-040		CAP,E 47-35 M 5L SRM	L101	87-A50-050-010		COIL,CLK 4.19M(COI)
C105	87-010-192-080		C-CAP,S 0.022-50 F	LED101	87-A40-317-080		LED,SLR-342VCT31 RED
C107	87-010-196-080		CHIP CAPACITOR,0.1-25	S101	87-A91-555-010		SW,RTRY EC12E24504
C108	87-010-178-080		CHIP CAP 1000P	S301	87-A90-164-080		SW,TACT SKQAB(N)
C109	87-012-369-080		C-CAP,S 0.047-50F	S302	87-A90-164-080		SW,TACT SKQAB(N)
C110	87-010-197-080		CAP, CHIP 0.01 DM	S303	87-A90-164-080		SW,TACT SKQAB(N)
C111	87-010-196-080		CHIP CAPACITOR,0.1-25	S304	87-A90-164-080		SW,TACT SKQAB(N)
C113	87-010-178-080		CHIP CAP 1000P	S305	87-A90-164-080		SW,TACT SKQAB(N)
C114	87-010-154-080		CAP CHIP 10P	S306	87-A90-164-080		SW,TACT SKQAB(N)
C115	87-010-175-080		CAP 560P	S307	87-A90-164-080		SW,TACT SKQAB(N)
C116	87-010-400-040		CAP,E 0.47-50	S308	87-A90-164-080		SW,TACT SKQAB(N)
C117	87-012-393-080		C-CAP,S 0.22-16 K	S309	87-A90-164-080		SW,TACT SKQAB(N)
C118	87-A10-189-040		CAP,E 220-10	S310	87-A90-164-080		SW,TACT SKQAB(N)
C119	87-A10-189-040		CAP,E 220-10	S311	87-A90-164-080		SW,TACT SKQAB(N)
C120	87-012-156-080		C-CAP,S 220P-50 CH	S312	87-A90-164-080		SW,TACT SKQAB(N)
C123	87-010-196-080		CHIP CAPACITOR,0.1-25	S321	87-A90-164-080		SW,TACT SKQAB(N)
C124	87-010-196-080		CHIP CAPACITOR,0.1-25	S322	87-A90-164-080		SW,TACT SKQAB(N)
C125	87-010-405-040		CAP,E 10-50	S323	87-A90-164-080		SW,TACT SKQAB(N)
C126	87-010-196-080		CHIP CAPACITOR,0.1-25	S324	87-A90-164-080		SW,TACT SKQAB(N)
C129	87-010-374-040		CAP,E 47-10	S325	87-A90-164-080		SW,TACT SKQAB(N)
C210	87-012-156-080		C-CAP,S 220P-50 CH	S326	87-A90-164-080		SW,TACT SKQAB(N)
C212	87-010-404-040		CAP,E 4.7-50 SME	S327	87-A90-164-080		SW,TACT SKQAB(N)
C213	87-010-404-040		CAP,E 4.7-50 SME	S328	87-A90-164-080		SW,TACT SKQAB(N)
C401	87-010-186-080		C-CAP,S 4700P-50 K B	S329	87-A90-164-080		SW,TACT SKQAB(N)
C402	87-010-060-040		CAP,E 100-16 M 7L SRA	S330	87-A90-164-080		SW,TACT SKQAB(N)
C403	87-010-545-040		CAP,E 0.22-50 M 11L SME	S331	87-A90-164-080		SW,TACT SKQAB(N)
C404	87-010-322-010		C-CAP,S 100P-50 J CH GRM	S332	87-A90-164-080		SW,TACT SKQAB(N)
C405	87-010-545-040		CAP,E 0.22-50 M 11L SME	S333	87-A90-164-080		SW,TACT SKQAB(N)
C406	87-016-669-080		C-CAP,S 0.1-25 K B	SFR701	87-024-431-080		SFR,3.3K RH063EC
C407	87-010-405-040		CAP,E 10-50 M 11L SME				
C408	87-010-322-010		C-CAP,S 100P-50 J CH GRM	PT C.B			
C409	87-010-406-040		CAP,E 22-50 M 11L SME				
C410	87-010-196-080		C-CAP,S 0.1-25 Z F	C1	87-010-387-080		CAP,E 470-25 SME
C412	87-010-177-080		C-CAP,S 820P-50 J SL	C31	87-010-403-080		CAP, ELECT 3.3-50V
C501	87-010-196-080		C-CAP,S 0.1-25 Z F<HT>	CN1	87-A61-110-010		CONN,9P V TID-A
C501	87-A11-718-080		C-CAP,S 0.1-25 Z F<HR>	△ JW14	87-A90-093-080		PROTECTOR,3A 491SERIES 60V<HT>
C502	87-010-263-040		CAP,E 100-10 M 11L	△ JW15	87-A90-093-080		PROTECTOR,3A 491SERIES 60V<HT>
C503	87-016-460-080		C-CAP,S 0.22-16 K B	△ PT1	8A-NFA-609-010		PT,ANF-A LH
C504	87-016-460-080		C-CAP,S 0.22-16 K B	△ PT2	8A-NF8-673-010		PT,SUB ANF-8 (H)KAMI
C505	87-016-460-080		C-CAP,S 0.22-16 K B	△ RY1	87-A91-281-010		RELAY,AC DC12V OSA-SS-212DM5
C506	87-016-669-080		C-CAP,S 0.1-25 K B	△ S1	87-A90-165-010		SW,SL 1-2-3 SWS2301
C507	87-010-184-080		C-CAP,S 3300P-50 KB	△ T1	87-A60-317-010		TERMINAL, 1P MSC
C508	87-010-177-080		C-CAP,S 820P-50 J SL	△ T2	87-A60-317-010		TERMINAL, 1P MSC
C509	87-016-669-080		C-CAP,S 0.1-25 K B				
C510	87-016-669-080		C-CAP,S 0.1-25 K B				
C511	87-010-184-080		C-CAP,S 3300P-50 KB				
C512	87-010-177-080		C-CAP,S 820P-50 J SL				



○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

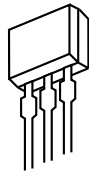
容量 Wattage	種類 Type	許容誤差 Tolerance	記号 Symbol	寸法/Dimensions (mm)			抵抗コード : A Resistor Code : A	
				外形/Form	L	W		t
1/16W	1005	± 5%	CJ		1.0	0.5	0.35	104
1/16W	1608	± 5%	CJ		1.6	0.8	0.45	108
1/10W	2125	± 5%	CJ		2	1.25	0.45	118
1/8W	3216	± 5%	CJ		3.2	1.6	0.55	128

TRANSISTOR ILLUSTRATION



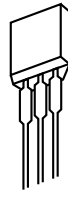
E C B

CSA952  
CSC4115  
KTA1266  
KTC3198  
KTC3199



S D G

2SJ460  
2SK2541



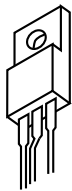
E C B

DTC114



B C E

2SB1370



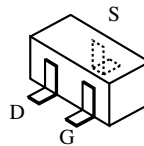
B C E

2SC3331

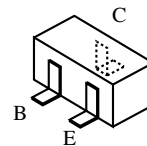


E B C

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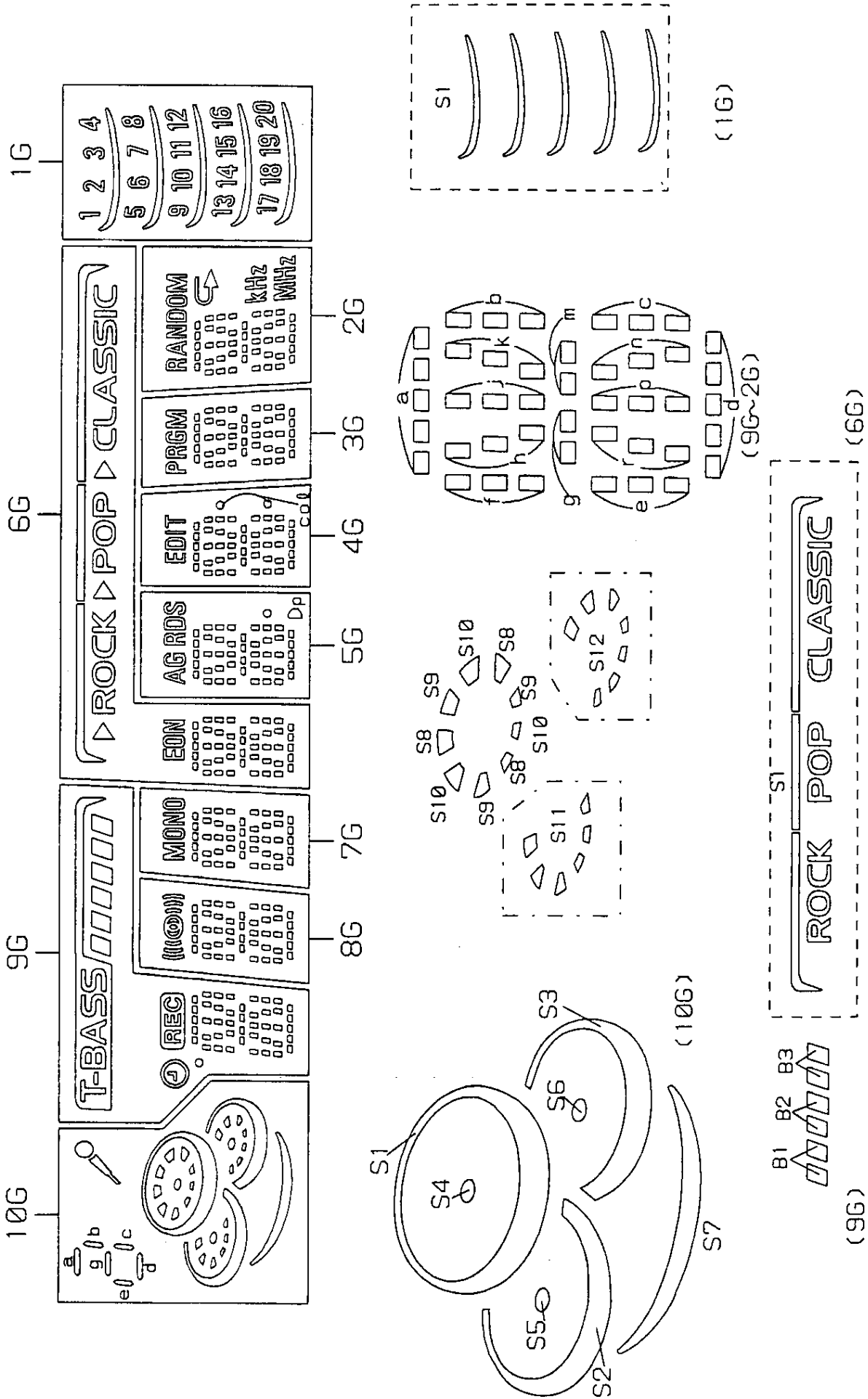


2SK360














2SA1235    KRA102  
2SC2714    KRA107  
2SC3052    KRC102  
CSD1306    KRC104  
CMBT5401    RT1P141  
CMBT5551

FL (10-BT-224GNK) GRID ASSIGNMENT AND ANODE CONNECTION  
 GRID ASSIGNMENT



ANODE CONNECTION

	10G	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	-	d	d	d	d	d	d	d	d	20
P2	S7	n	n	n	n	n	n	n	n	19
P3	-	p	p	p	p	p	p	p	p	18
P4	S11	r	r	r	r	r	r	r	r	17
P5	S5	e	e	e	e	e	e	e	e	16
P6	S2	c	c	c	c	c	c	c	c	15
P7	S12	g	g	g	g	g	g	g	g	14
P8	S6	m	m	m	m	m	m	m	m	13
P9	S3	f	f	f	f	f	f	f	f	12
P10	S10	b	b	b	b	b	b	b	b	11
P11	S9	k	k	k	k	k	k	k	k	10
P12	S8	j	j	j	j	j	j	j	j	9
P13	S4	h	h	h	h	h	h	h	h	8
P14	S1	a	a	a	a	a	a	a	a	7
P15	-				Dp	col (F)	col (F)	-	MHZ	6
P16	-		-	-	AG	col (H)	col (H)	-	KHZ	5
P17			-	-	RDS	EDIT	PRGM	PRGM		4
P18	a, d, g		-	-	-	-	-	-	-	3
P19	b	B1	-	-		-	-	-	-	2
P20	c	B2	-	-		-	-	-	-	1
P21	e	B3	-	-		S1	-	-	RANDOM	S1

WIRING - 1 (MAIN) <HR>

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

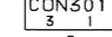
TO CD MECHANISM AZG-1



CN602

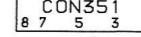
**A** MAIN C.B. <HR>

TO DECK2

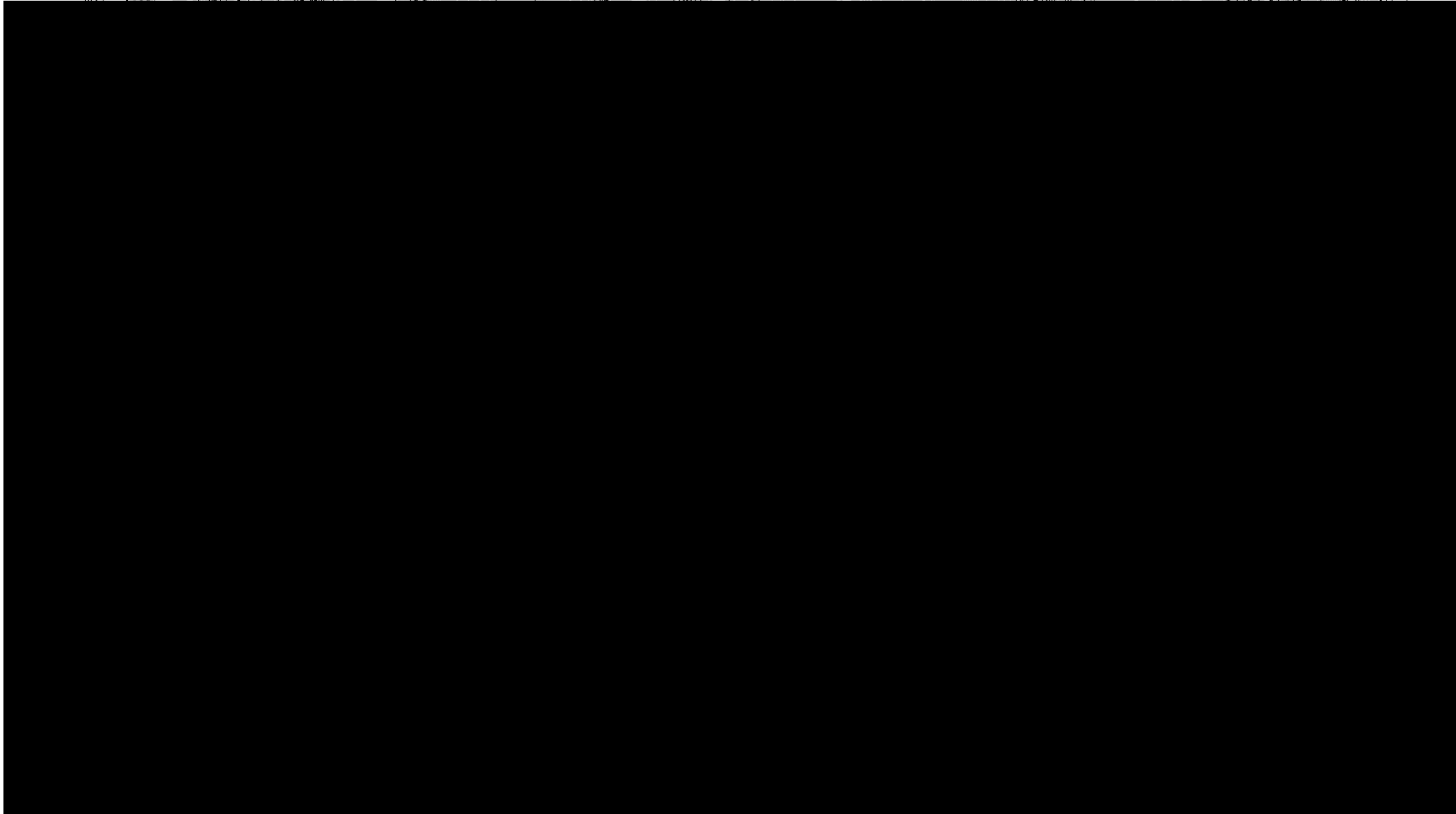
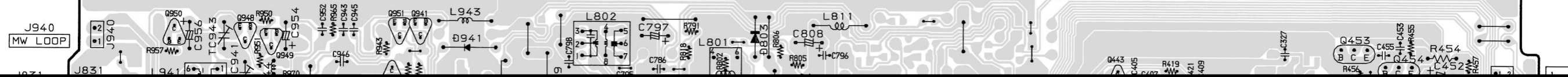


TO CN301

TO DECK1

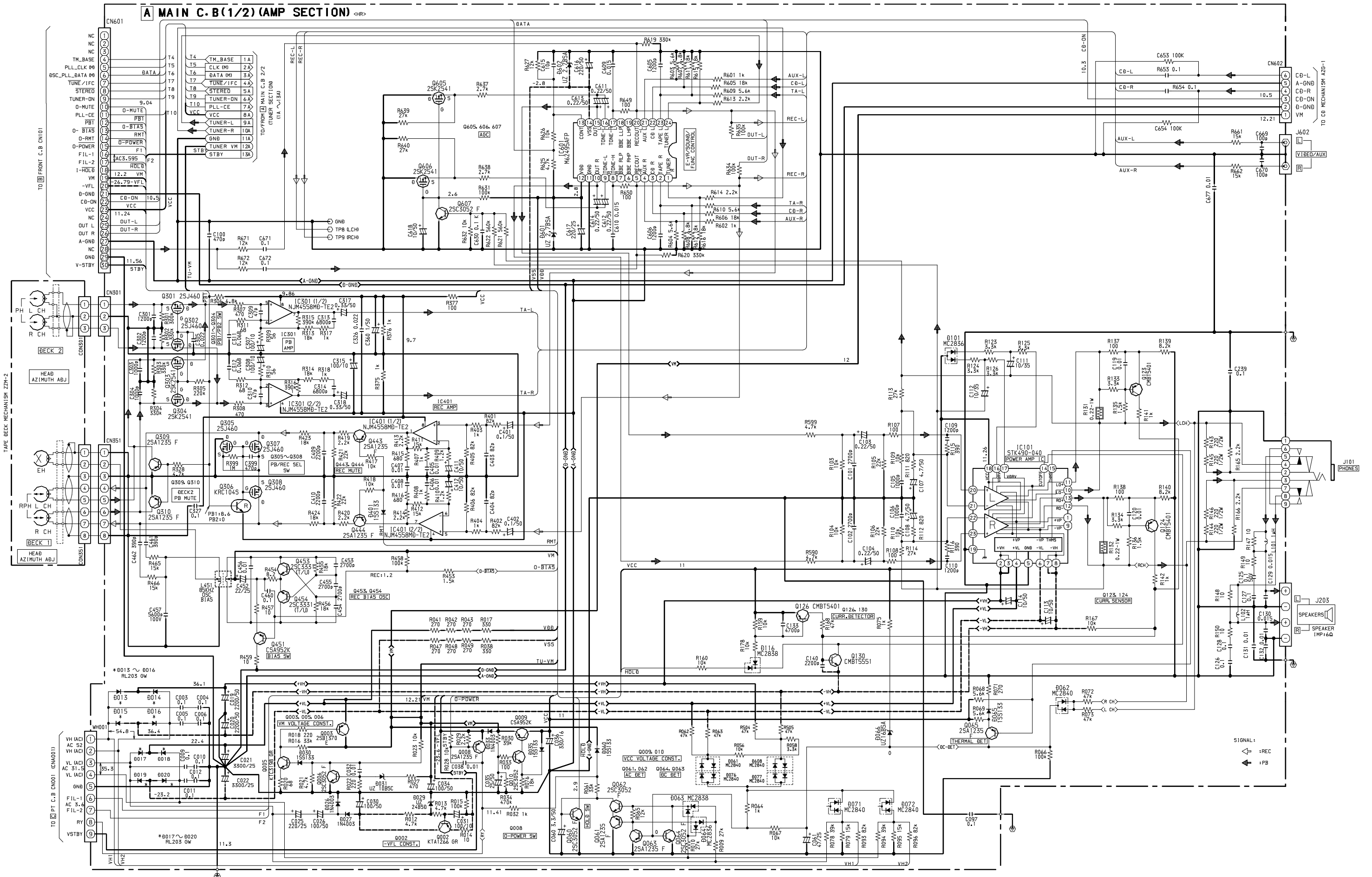


TO CN351

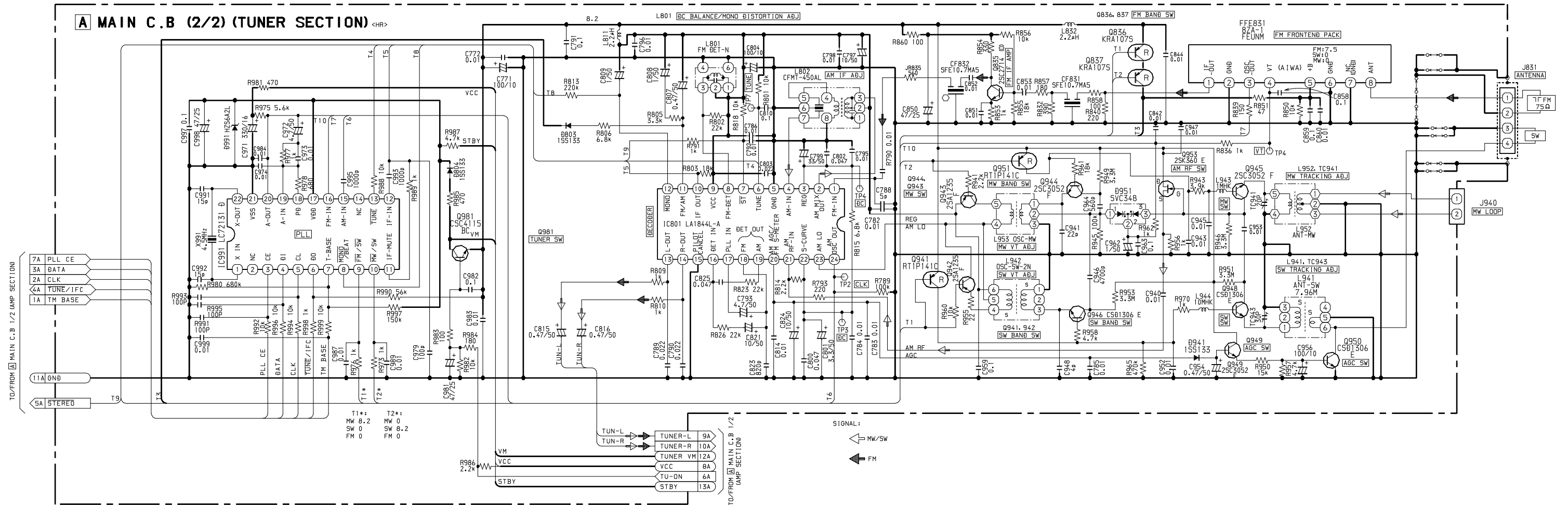


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SCHEMATIC DIAGRAM - 1 (MAIN 1/2 : AMP SECTION) <HR>



SCHEMATIC DIAGRAM-2 (MAIN 2/2 : TUNER SECTION)<HR>

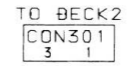


TO CD MECHANISM AZG-1

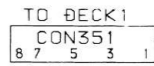


CN602

# A MAIN C.B. <HT>

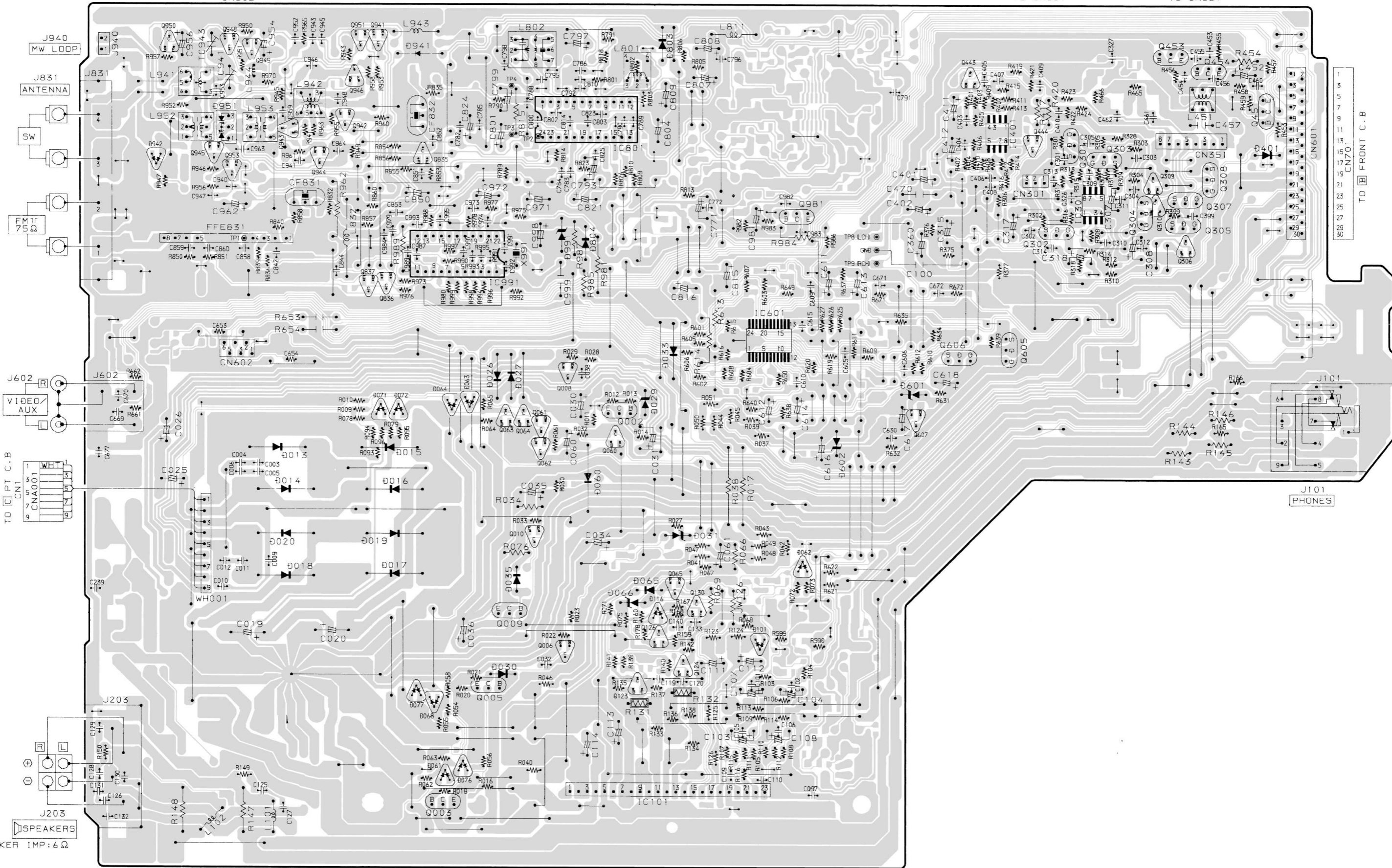


TO CN301



TO CN351

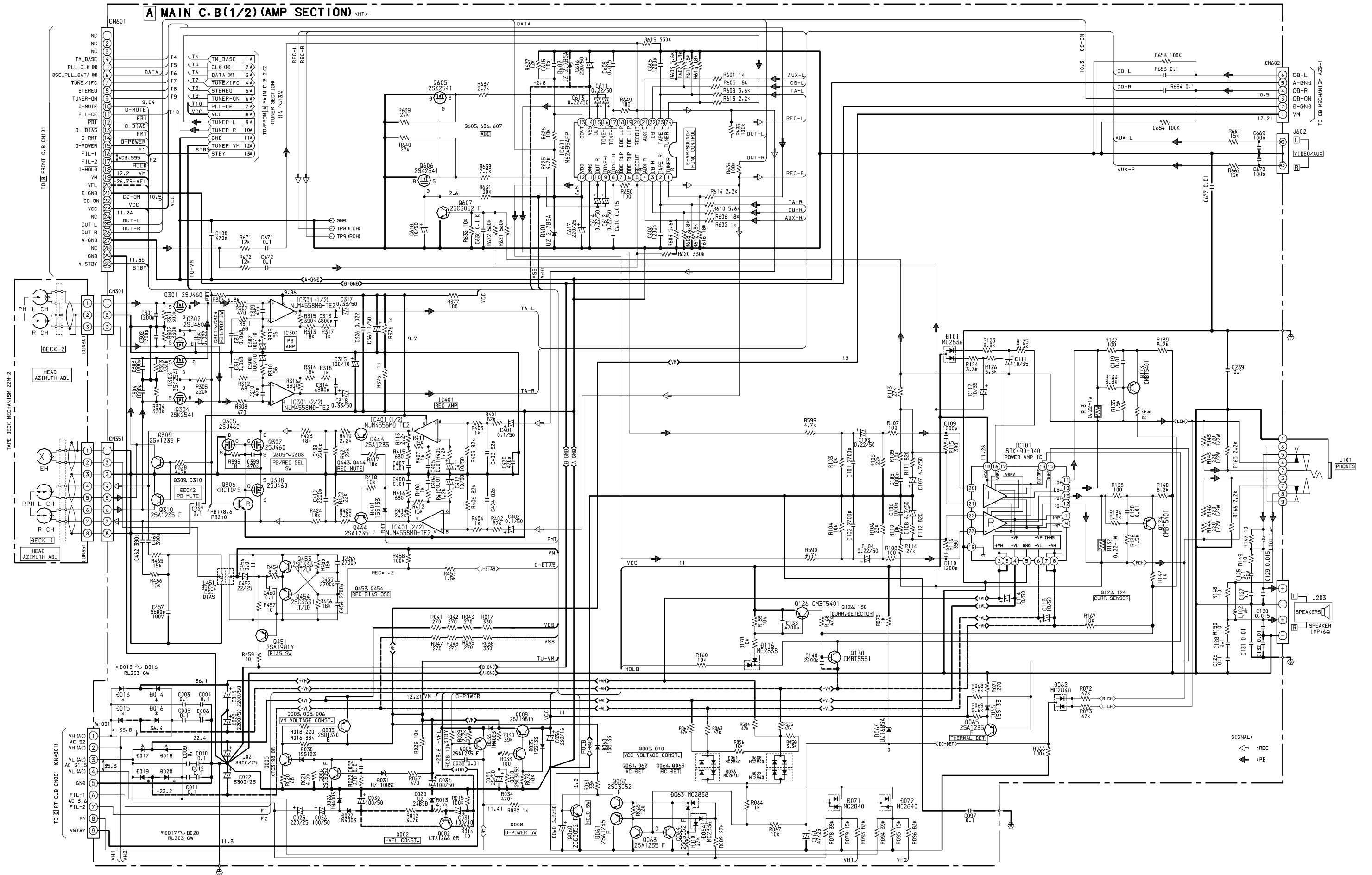
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TO FRONT C.B.  
CN701

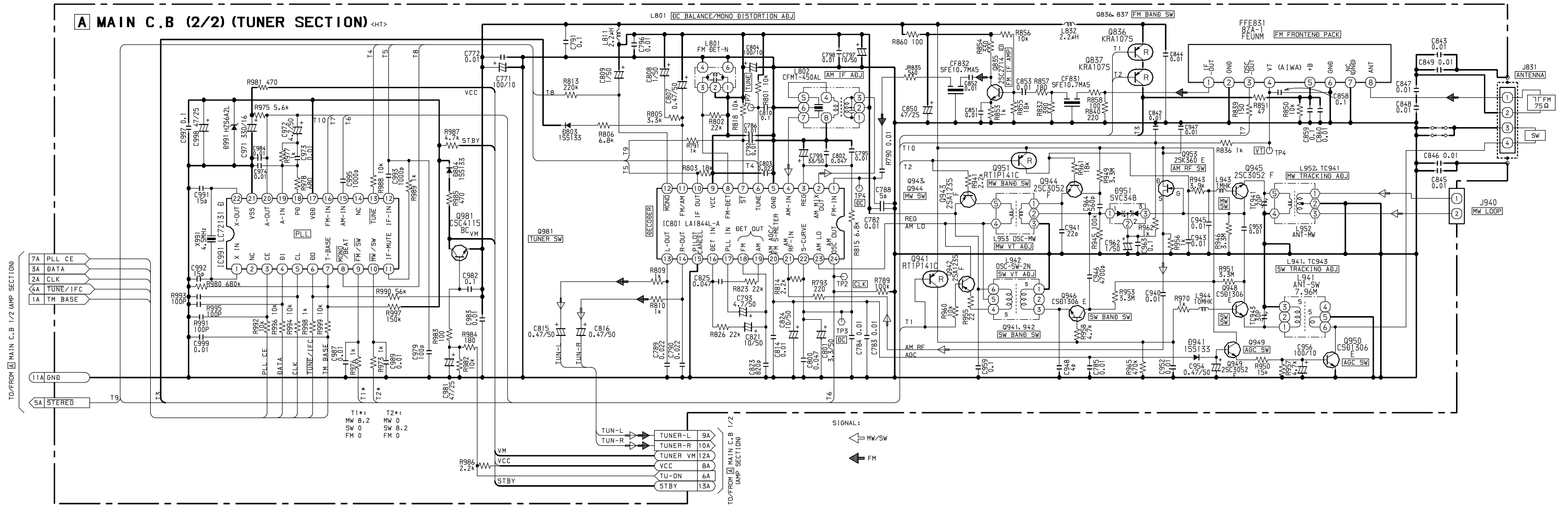
SPEAKER IMP: 6Ω

SCHEMATIC DIAGRAM - 3 (MAIN 1/2 : AMP SECTION) <HT>





SCHEMATIC DIAGRAM-4 (MAIN 2/2 : TUNER SECTION)<HT>



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TO CD MECHANISM AZG-1

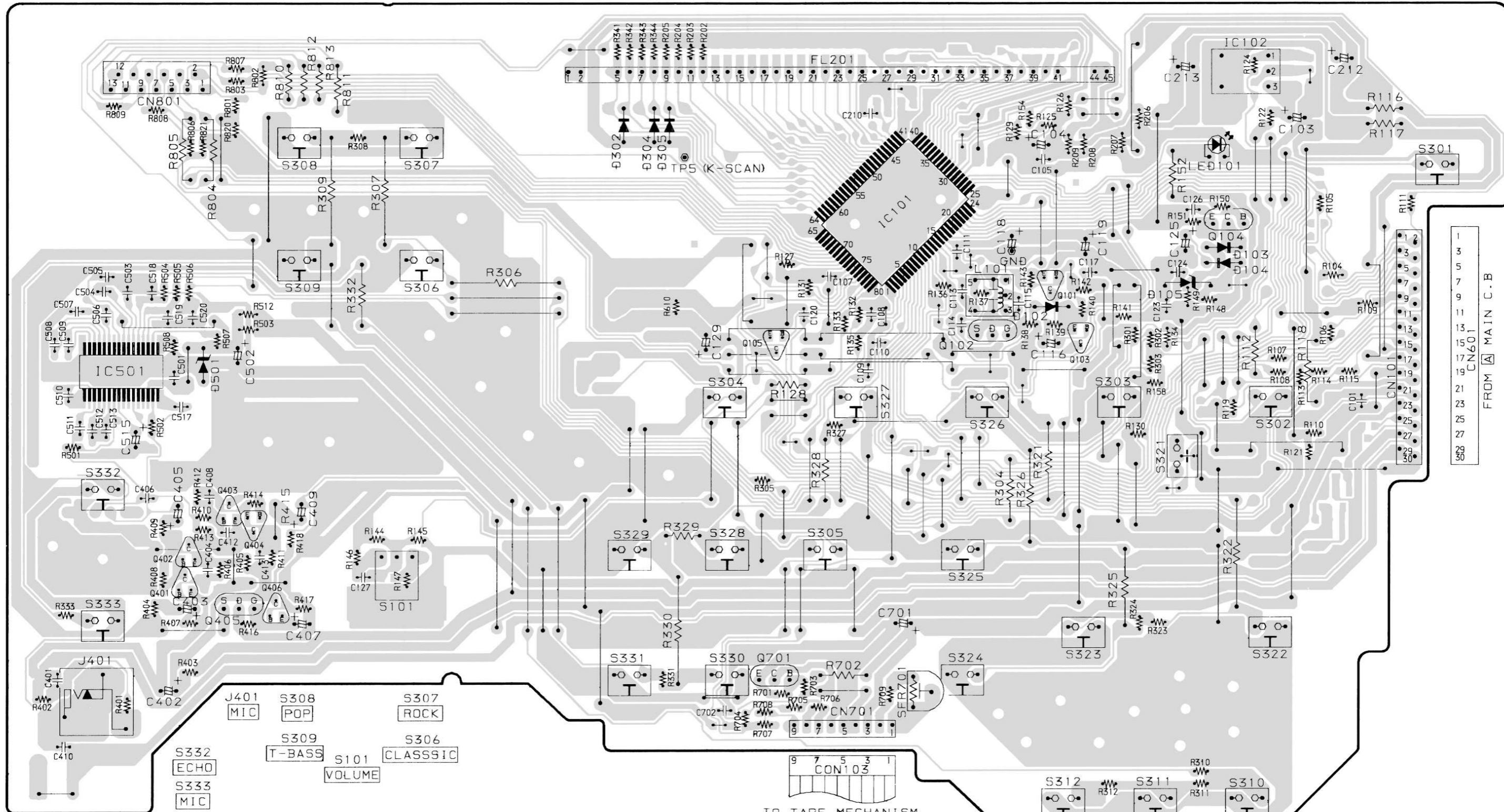
**B FRONT C. B** <HR, HT>

FL201 (DISPLAY)

LED101 (STANDBY)

IC102 (REMOTE SENSOR)

S301 (POWER)



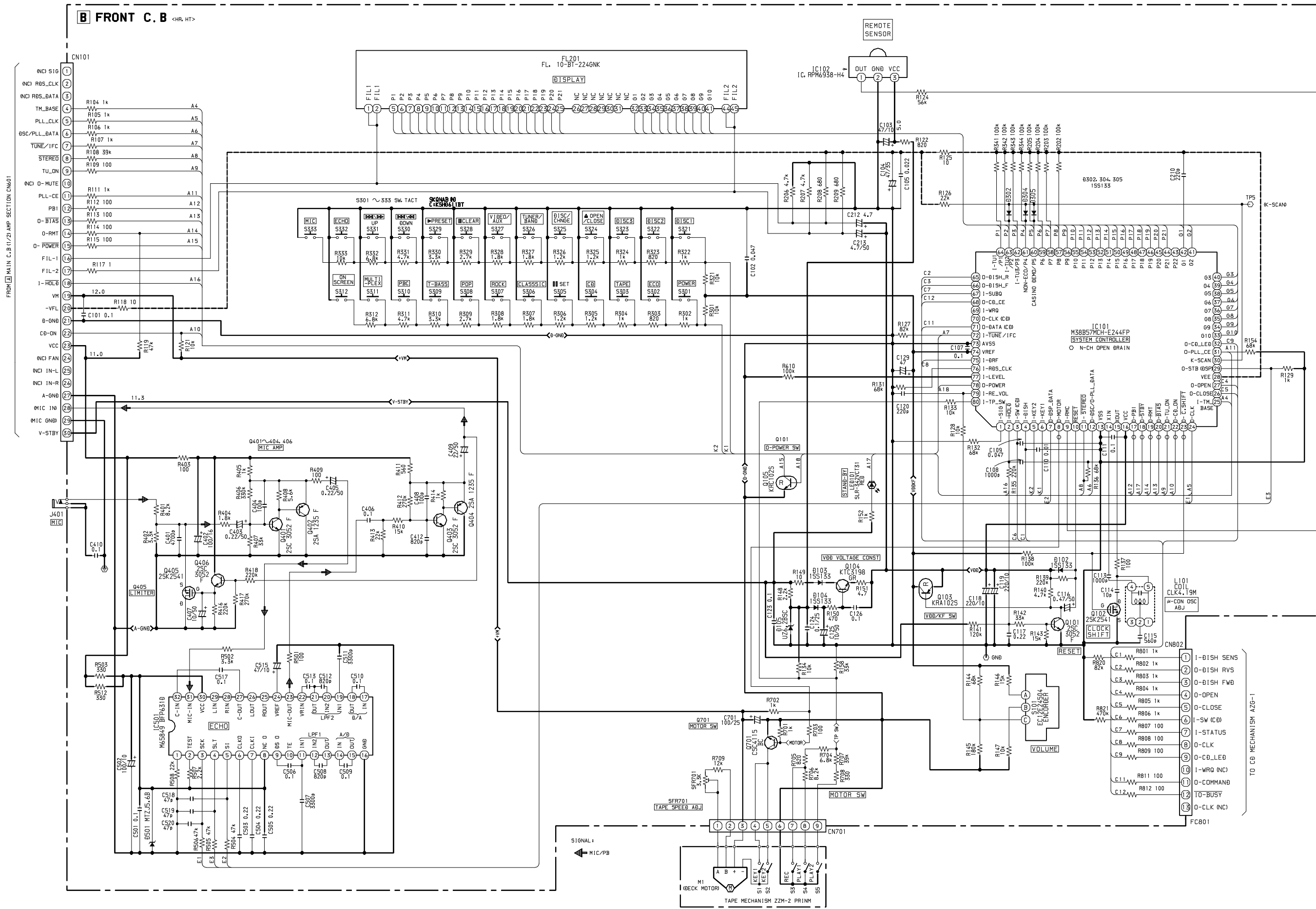
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FROM MAIN C.B.  
CN601

TO TAPE MECHANISM ZZM-2 PR1NM

- S329  
▶ PRESET
- S331  
▶▶ UP
- S328  
■ CLEAR
- S330  
◀◀ DOWN
- S304  
Ⓞ
- S327  
VIDEO/AUX
- S305  
|| SET
- S326  
TUNER/BAND
- S325  
DISC/CHANGE
- S324  
▲ OPEN/CLOSE
- S303  
TAPE
- S321, 322, 323  
DISC DIRECT PLAY 1-3
- S312  
ON SCREEN
- S311  
MULTIPLEX
- S302  
ECO
- S310  
PBC

SCHEMATIC DIAGRAM-5 (FRONT)

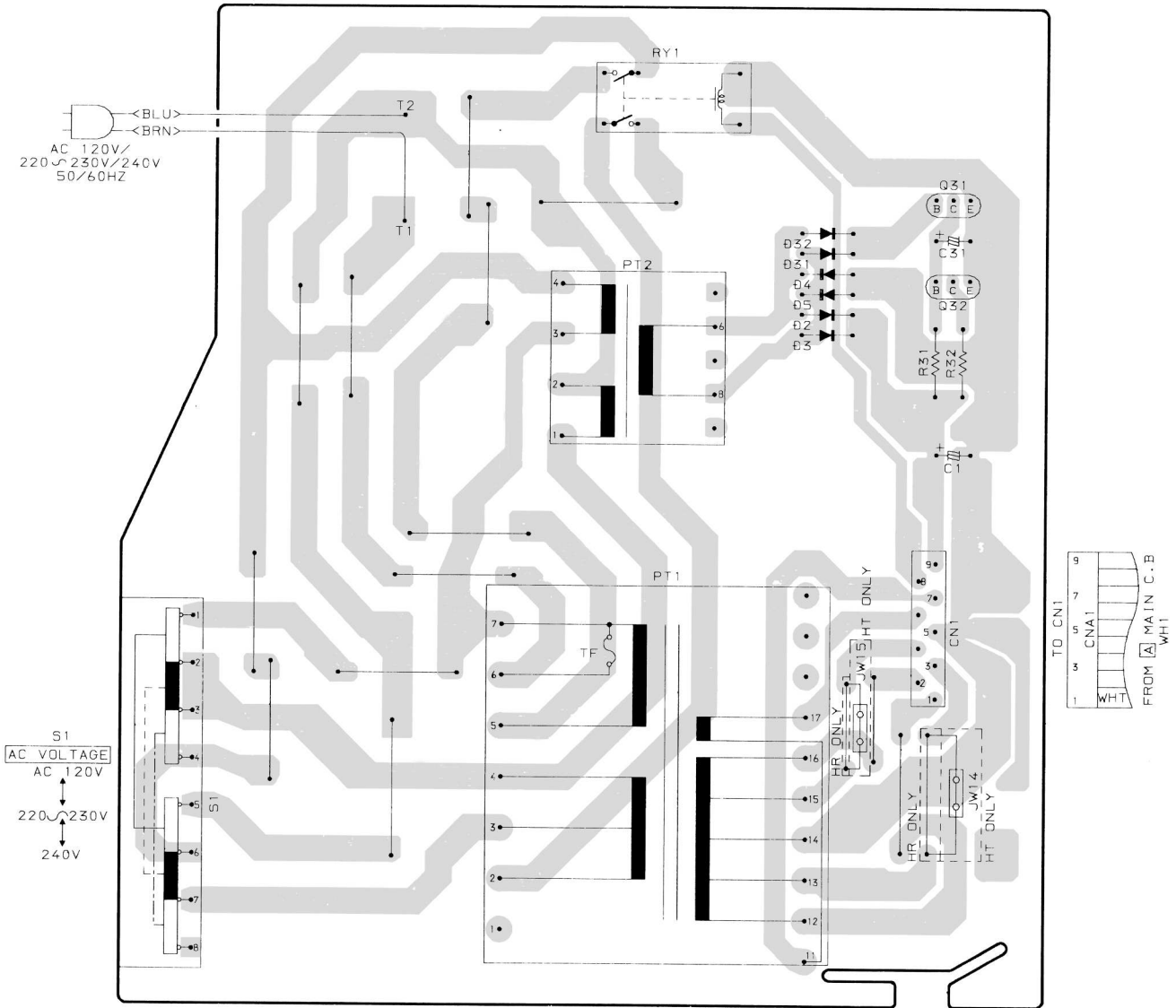


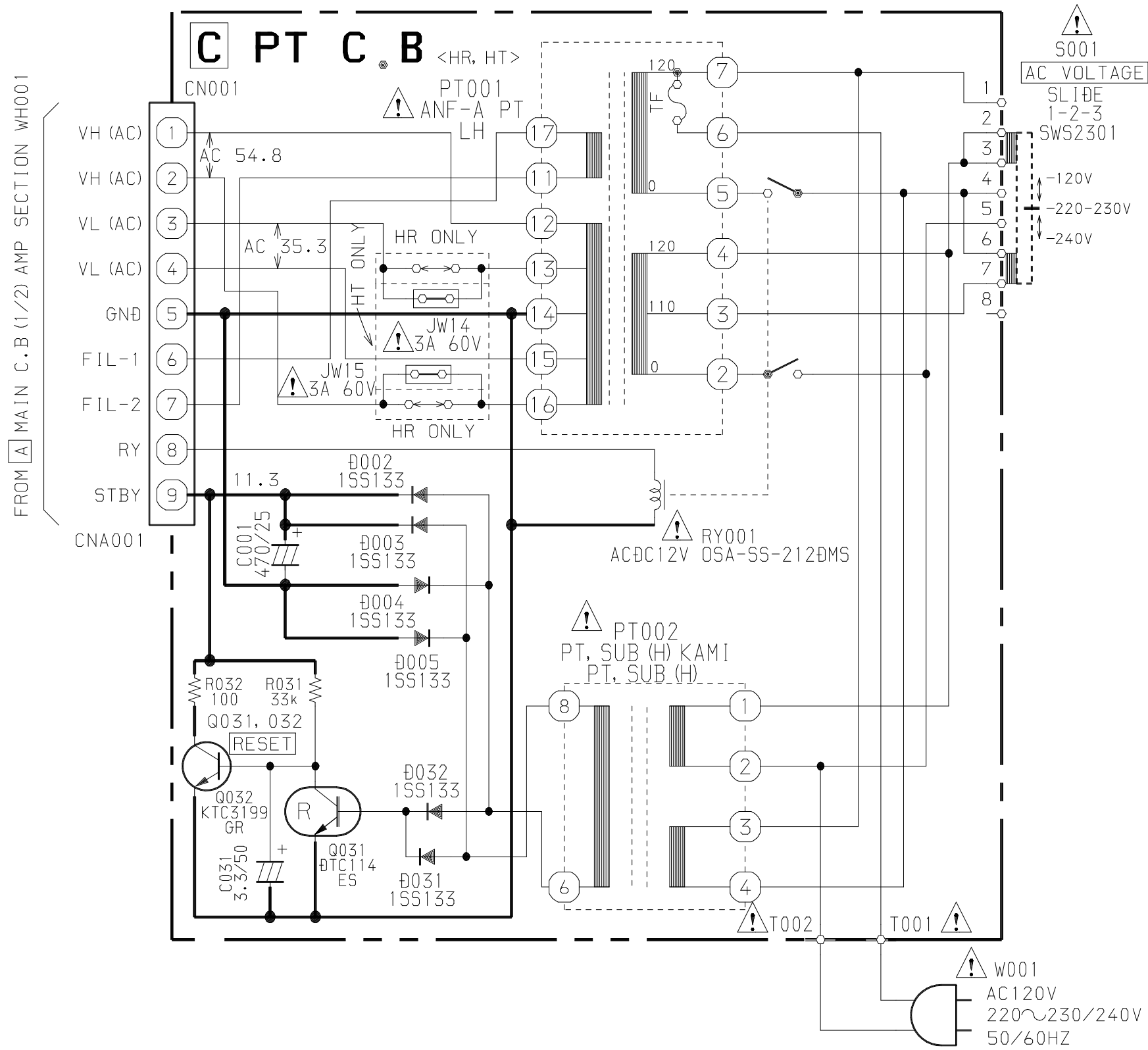
WIRING - 4 (PT)

15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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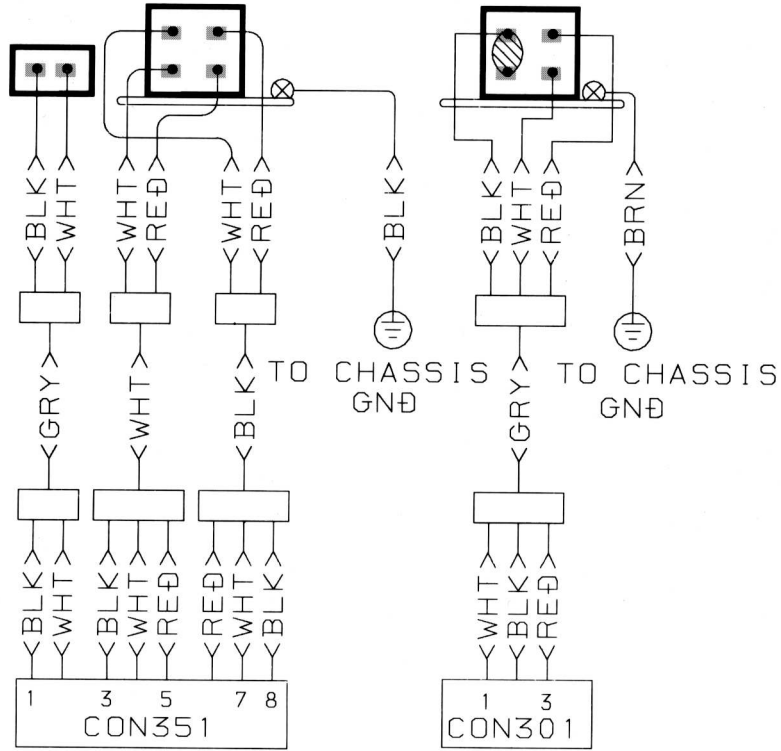
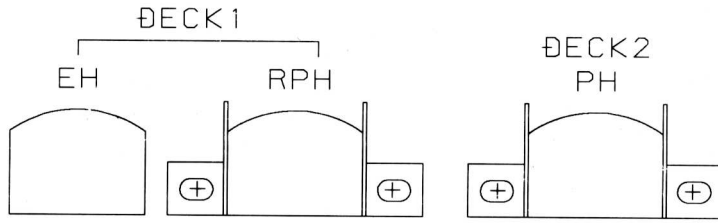
C PT C.B <HR, HT>





# WIRING -5 (DECK)

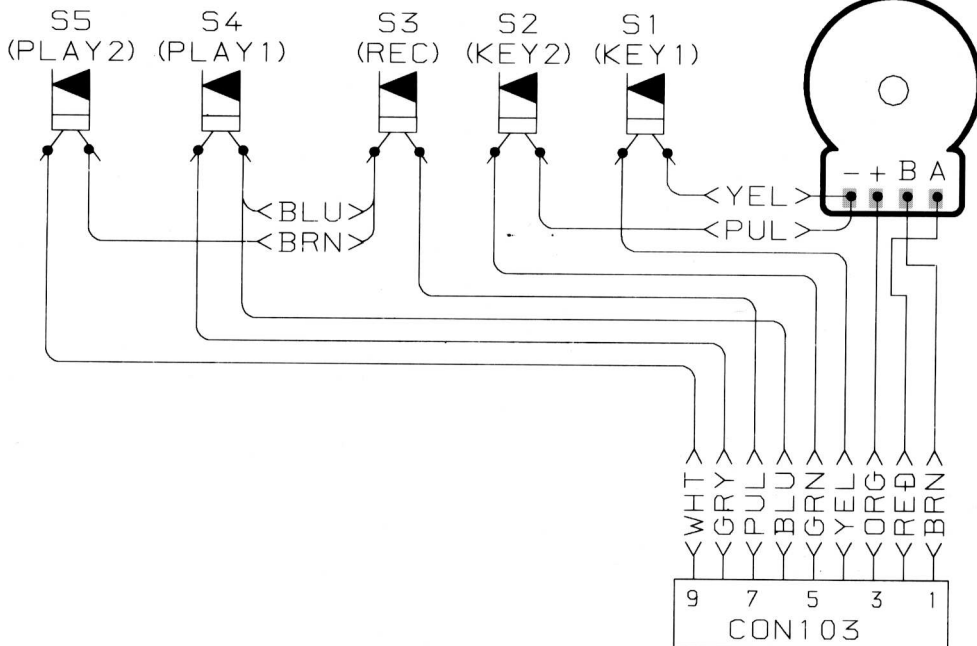
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
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FROM [A] MAIN C.B.  
CN351

FROM [A] MAIN C.B.  
CN301

M1  
(DECK MOTOR)

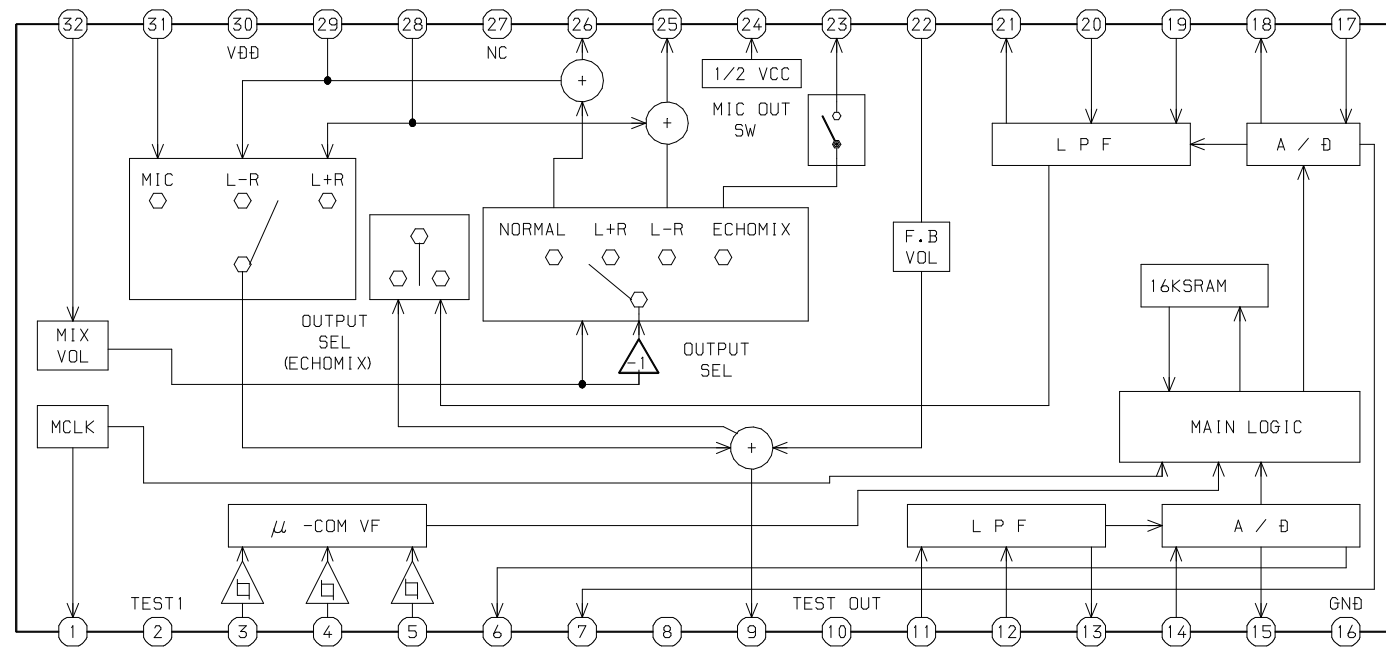


FROM [B] FRONT C.B.  
CN701

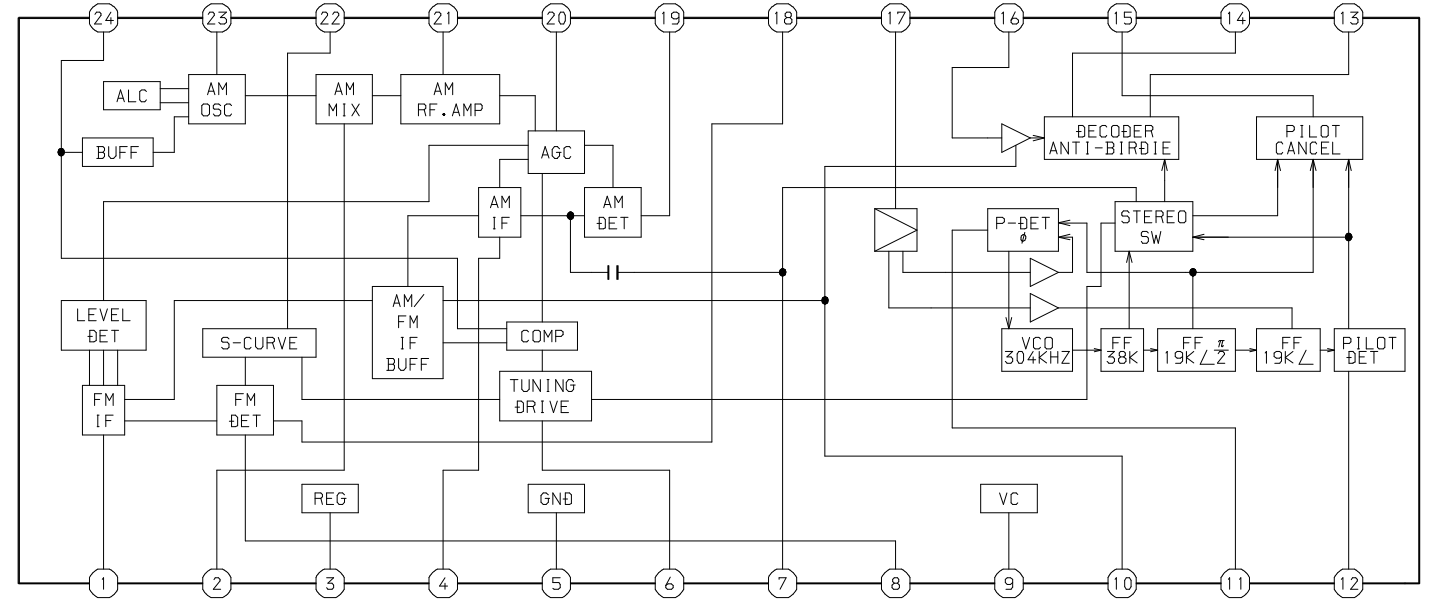
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# IC BLOCK DIAGRAM

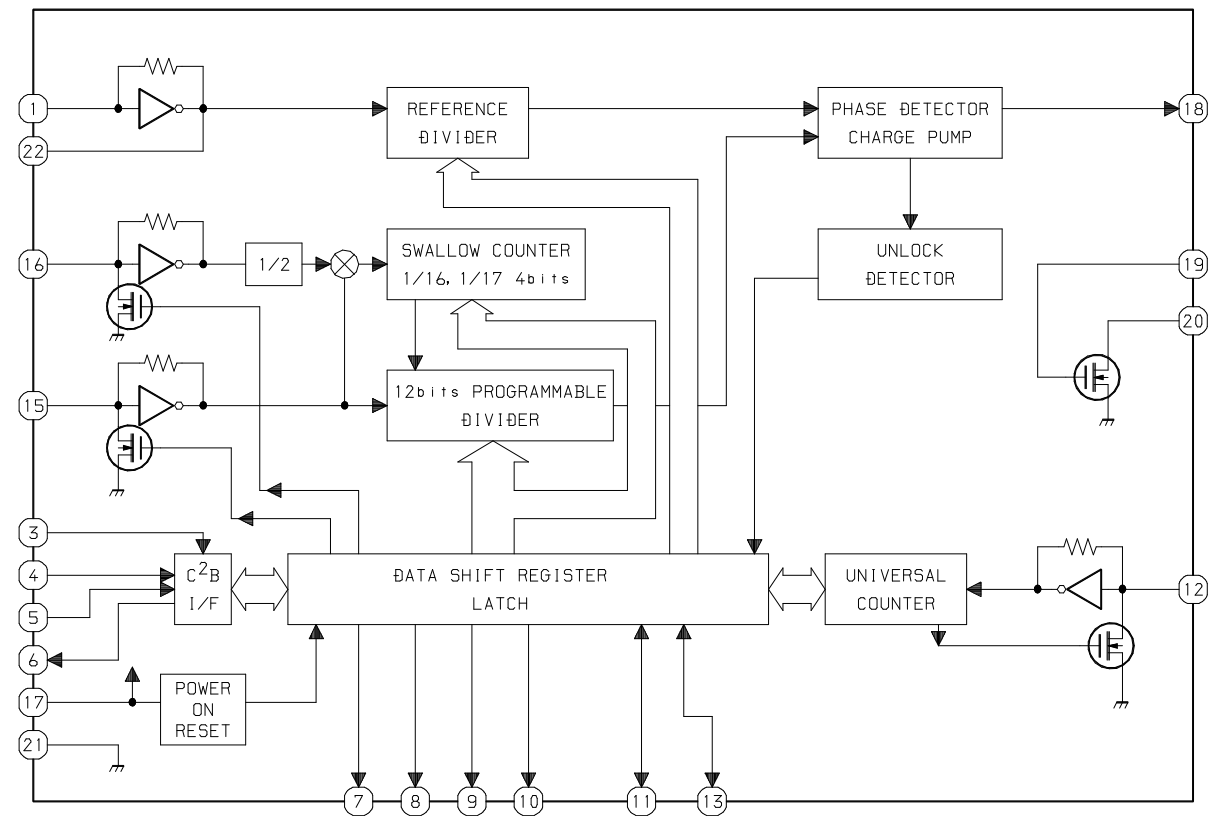
IC, M65849BFP631D



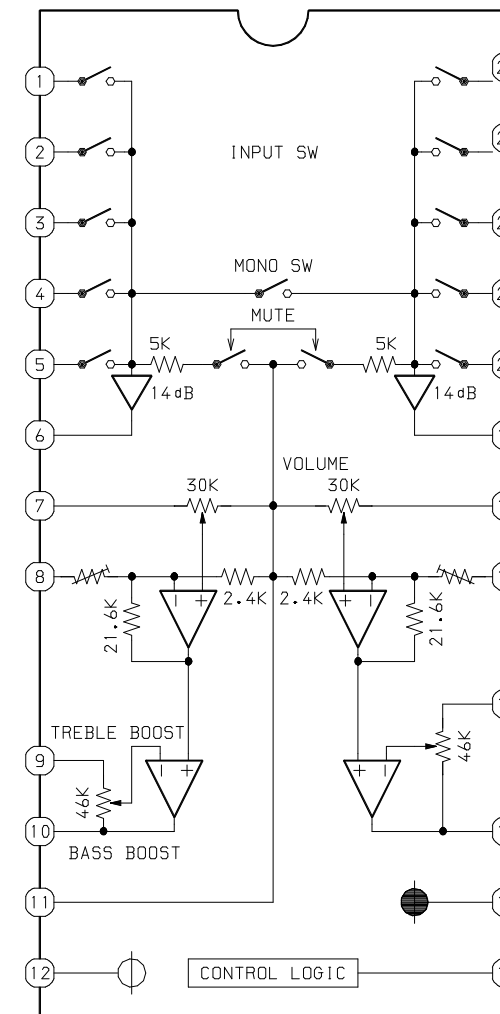
IC, LA1844L-A



IC, LC72131D



IC, M62495AFP



## IC DESCRIPTION

IC, M38B57MCH-E244FP

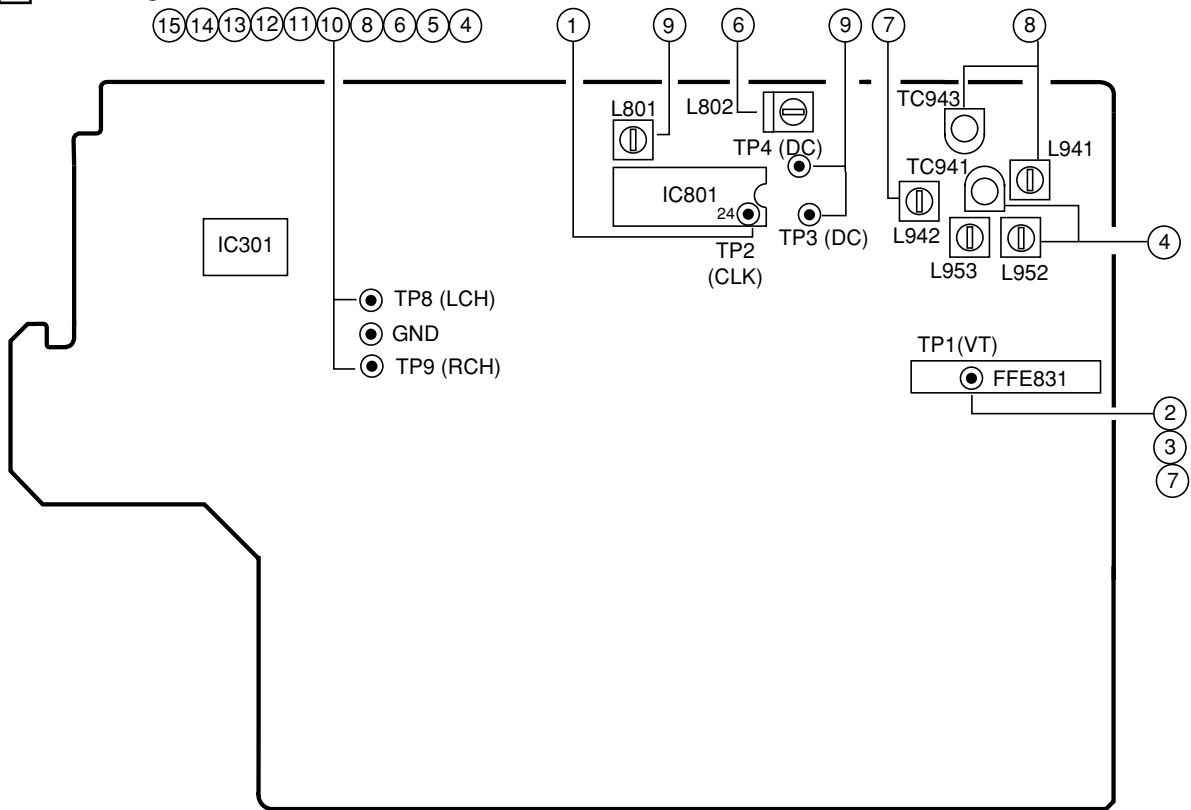
Pin No.	Pin Name	I/O	Description
1	I-SIG	I	RDS signal level A/D input.
2	I-HOLD	I	Hold voltage level A/D input.
3	I-SW (CD)	I	CD mecha SW A/D input.
4	I-DISH	I	CD turn-table position check A/D input.
5	I-KEY2	I	KEY2 A/D input.
6	I-KEY1	I	KEY1 A/D input.
7	O-DSP-DATA	I/O	RDS data input (Not used) / DSP IC data (V-CD) output.
8	O-MOTOR	O	Deck motor supply ON/OFF output.
9	I-RMC	I	System remote control signal input. ("L"=ACTIVE)
10	RESET	I	System reset input. ("L"=RESET)
11	I-STEREO	I	Tuner stereo input. ("L"=STEREO)
12	O-DSC/O-PLL-DATA	O	Function IC control & PLL data output.
13	VSS	-	GND.
14,15	XIN, XOUT	I/O	4.19MHz system CLK input / output.
16	VCC	-	Power supply input.
17	O-PB1	O	Deck 1/2 switch output. ("L"=PLAYBACK DECK 1)
18	O-STBY	O	Standby LED ON/OFF output. ("L"=ON)
19	O-RMT	O	REC mute output. ("H"=MUTE)
20	O-BIAS	O	Record bias ON/OFF output. ("L"=ON)
21	O-TU-ON	O	Tuner supply ON/OFF output. ("H"=ON)
22	O-CD-ON	O	CD supply ON/OFF output. ("H"= ON)
23	O-C.SHIFT	O	MICON clock shift output. ("L"=SHIFT)
24	O-PLL-CLK	O	PLL IC CLK output.
25	I-TM-BASE	I	8 Hz time base input.
26	O-CLOSE	O	CD door close output.
27	O-OPEN	O	CD door open output.
28	VEE	-	Power supply input for FL display.
29	O-STB(DSP)	O	DSP IC strobe output.
30	K-SCAN	O	Initial key scan output.
31	O-PLL-CE	O	CD PLL IC chip enable output.
32	O-CD-LED	O	CD flash window LED output.
33~42	G10~G1	O	FL grid output (G10~G1).
43	P22	O	FL segment output (P22). (Not used)
44~58	P21~P7	O	FL segment output (P21~P7).
59	PHONO/P6	I/O	PHONO diode input / FL segment output (P6).
60	CASINO DEMO/P5	I/O	CASINO DEMO diode input (Not used) / FL segment output (P5).
61	NON-ECO/P4	I/O	ECO OFF diode input / FL segment output (P4).
62	I-TU3/P3	I/O	TU 3 diode input (Not used) / FL segment output (P3).
63	I-TU2/P2	I/O	TU 2 diode input / FL segment output (P2).
64	I-TU1/P1	I/O	TU 1 diode input (Not used) / FL segment output (P1).



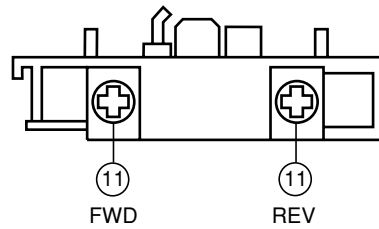
Pin No.	Pin Name	I/O	Description
65	O-DISH-R	O	CD turn-table reverse turn output.
66	O-DISH-F	O	CD turn-table forward turn output.
67	I-SUBQ	I	Sub code-Q data input.
68	O-CD-CE	O	CD DSP chip enable output.
69	I-WRQ	I	CD WRQ input. (Not used)
70	O-CLK (CD)	O	CD control clock output. (Not used)
71	O-DATA (CD)	O	CD control data output.
72	I-TUNE/IFC	I	Tuner SD input / IF count input.
73	AVSS	-	GND.
74	VREF	-	Reference voltage.
75	I-DRF	I	CD DRF input.
76	I-RDS-CLK	I	RDS clock input. (Not used)
77	I-LEVEL	I	Connected to GND through a resistor.
78	O-POWER	O	SYSTEM Power ON/OFF output. ("H"=ON)
79	I-RE-VOL	I	Rotary encoder A/D input.
80	I-TP-SW	I	Deck mecha SW A/D input.

ADJUSTMENT <TUNER / DECK>

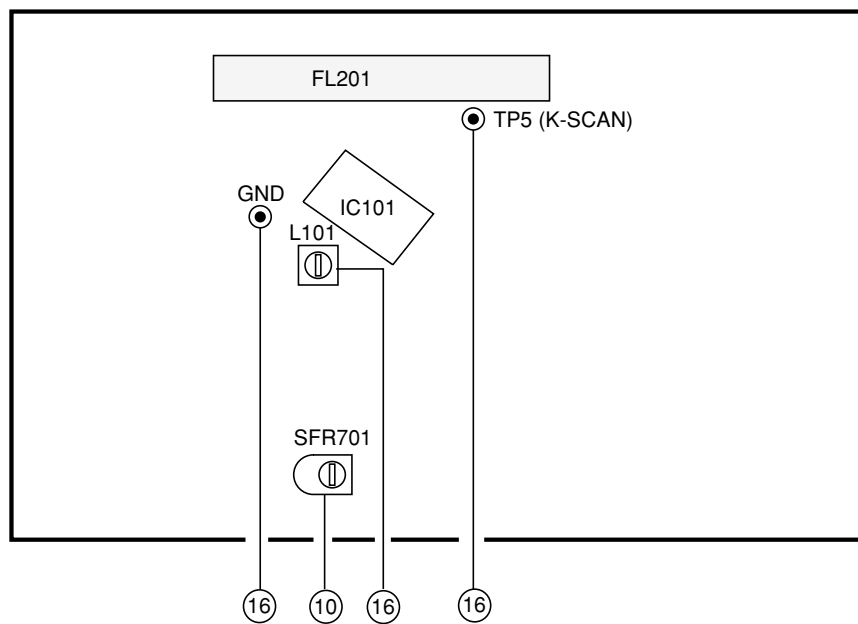
**A** MAIN C.B



DECK-1 R/P/E, DECK-2 P HEAD



**B** FRONT C.B



< TUNER SECTION >

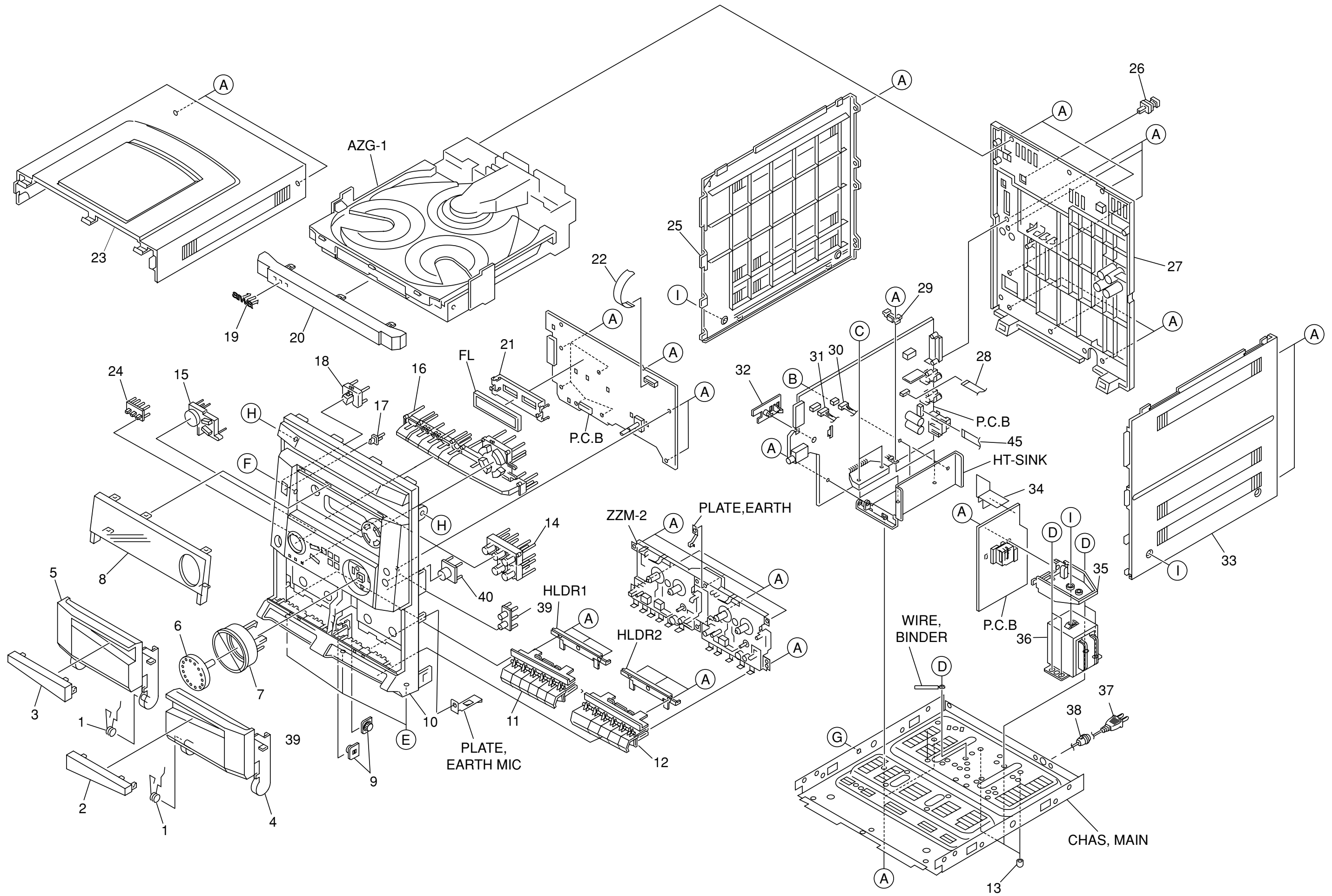
1. Clock frequency Check  
Settings : • Test point : TP2 (CLK)  
Method : Set to MW 1602kHz and check that the test point is 2052kHz  $\pm$  0.045kHz.
2. MW VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to MW 1602kHz and check that the test point is less than 8.0V  $\pm$  0.05V. Then set to 531kHz and check that the test point is more than 0.3V.
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. MW Tracking Adjustment  
Settings : • Test point : TP8(Lch), TP9(Rch)  
• Adjustment location :  
L952 ..... 603kHz  
TC941 ..... 1404kHz  
Method : Set up TC941 to center before adjustment. The output level at 603kHz is adjusted to MAX by L952. Then the output level at 1404kHz is adjusted to MAX by TC941.
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 9dB $\mu$ V.
6. AM IF Adjustment  
Settings : • Test point : TP8(Lch), TP9(Rch)  
• Adjustment location :  
L802 ..... 450kHz
7. SW VT Adjustment  
Settings : • Test point : TP1(VT)  
• Adjustment location : L942  
Method : Set to SW 17.9MHz and adjust L942 so that the test point becomes 8.0V  $\pm$  0.05V.  
Then set to SW 5.73MHz and check that the test point is more than 0.3V.
8. SW Tracking Adjustment  
Settings : • Test point : TP8(Lch), TP9(Rch)  
• Adjustment location :  
L941 ..... 5.73MHz  
TC943 ..... 17.9MHz  
Method : Set up TC943 to center before adjustment. The level at 5.73MHz is adjusted to MAX by L941. Then the level at 17.9MHz is adjusted to MAX by TC943.
9. DC Balance / Mono Distortion Adjustment  
Settings : • Test point : TP3, TP4 (DC Balance)  
• 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  $\pm$  300 mV with minimum distortion.

< DECK SECTION >

10. Tape Speed Adjustment (DECK 1)  
Settings : • Test tape : TTA-100  
• Test point : TP8(Lch), TP9(Rch)  
• Adjustment location : SFR701  
Method : Play back the test tape and adjust SFR701 so that the frequency counter reads 3000Hz  $\pm$  5Hz.
11. 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.
12. PB Frequency Response Check (DECK 1, DECK 2)  
Settings : • Test tape : TTA-330  
• 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 4dB.
13. 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 110mV  $\pm$  3.5dB.
14. REC/PB Frequency Response Check (DECK 1)  
Settings : • Test tape : TTA-602  
• Test point : TP8(Lch), TP9(Rch)  
• Input signal : 1kHz / 8kHz (LINE IN)  
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the test points becomes -20VU. Record and play back the 1kHz and 8kHz signals and check that the output of the 8kHz signals is 0dB  $\pm$  5dB with respect to that of the 1kHz signal.
15. REC/PB Sensitivity Check (DECK 1)  
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 -2dB  $\pm$  3.5dB.

< FRONT SECTION >

16. u-CON OSC Adjustment  
Settings : • Test point : TP5(K-SCAN) / GND  
• Adjustment location : L101  
Method : Insert AC plug with pressing of TUNER function key and POWER key. Adjust L101 so that the frequency across the test point is 58.350Hz  $\pm$  0.02Hz.

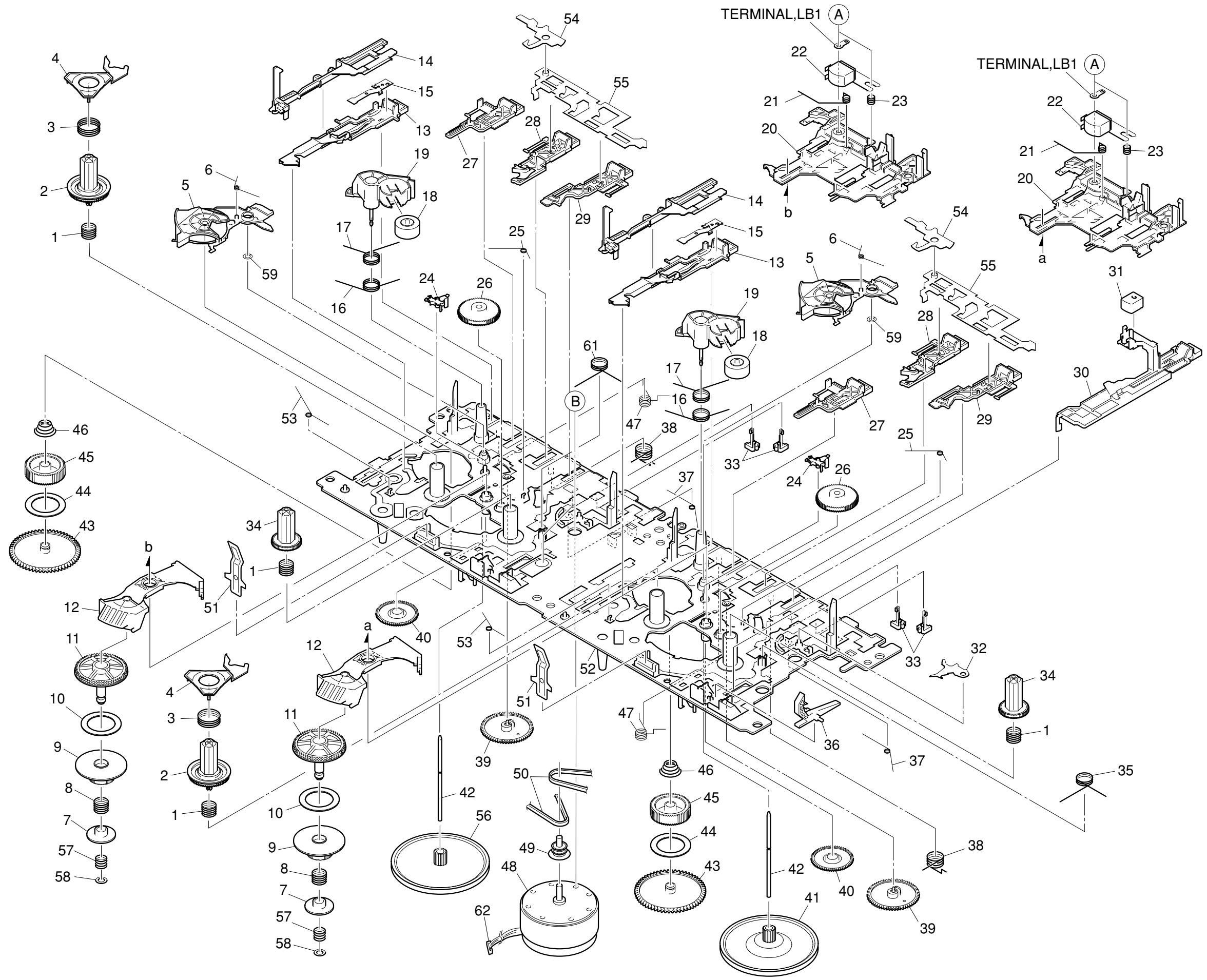


# MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	82-NF7-218-010		SPR-T, CASS	30	8A-NFA-633-010		CONN ASSY, 3P (PH)
2	8A-NFZ-007-010		WINDOW, CASS 2	31	8A-NFA-634-010		CONN ASSY, 8P RPB
3	8A-NFZ-006-010		WINDOW, CASS 1	32	8A-NFA-214-010		HLDL, PWB M ANFA
4	8A-NFZ-004-010		BOX, CASS 2	33	8A-NFA-065-010		PANEL, RIGHT V-2
5	8A-NFZ-003-010		BOX, CASS 1	34	8A-NFA-212-010		PLATE, PL LH
6	8A-NFZ-011-010		KNOB, RTRY VOL	35	8A-NF9-211-010		HLDL, PWB PT HI
7	8A-NFZ-012-010		RING, VOL	36	8A-NHZ-606-010		PT, ANH-Z HR
8	8A-NHZ-003-010		WINDOW, DISP H	37	87-A80-157-010		AC CORD ASSY, E BLK CC
9	86-NFZ-231-010		DMPR, 70	38	87-085-185-010		BUSHING, AC CORD (E)
10	8A-NHZ-001-010		CABI, FR H	39	8A-NHZ-005-010		KEY, ECHO
11	8A-NFZ-016-010		KEY, CASS 1	40	8A-NFZ-047-010		PLATE, MIC BL
12	8A-NFZ-017-010		KEY, CASS 2P	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
13	8Z-NB8-240-010		COVER, PL	B	87-NF4-224-010		S-SCREW, IT3B+3-8 CU
14	8A-NFZ-010-010		KEY, OPE	C	87-067-581-010		TAPPING SCREW, BVT2+3-15
15	8A-NFZ-013-010		KEY, CD	D	87-078-191-010		S-SCREW, IT+4-10
16	8A-NFZ-009-010		KEY, FUN	E	87-067-688-010		BVTT+3-6
17	8A-NFA-018-010		REFLECTOR, ECO	F	87-723-096-410		QT2+3-10W/O SLOT BL
18	8A-NFZ-008-010		KEY, POWER	G	87-721-096-410		QT2+3-10 GLD
19	87-CE3-023-010		BADGE, AIWA 30N SILV	H	87-721-097-410		QT2+3-12 GLD
20	8A-NHZ-002-010		PANEL, TRAY H	I	87-067-641-010		UTT2+3-8 (W/O SLOT) BL
21	8A-NFA-208-010		GUIDE, FL 100-25 ANFA				
22	88-913-221-110		FF-CABLE, 13P 1.25 220MM				
23	8A-NFA-062-010		PANEL, TOP V-2				
24	8A-NHZ-006-010		KEY, PBC				
25	8A-NFA-063-010		PANEL, LEFT V-2				
26	84-ZG1-245-210		CAP, OPTICAL				
27	8A-NHZ-013-010		CABI, REAR HR W/O SPEC<HTSM, HRJSC1M>				
27	8A-NHZ-011-010		CABI, REAR HRJSM<HRJSM, HRJ7SM>				
28	88-906-251-110		FF-CABLE, 6P 1.25				
29	8A-NF8-205-010		HLDL, IC				

## 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		



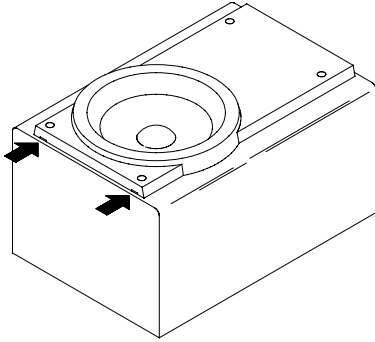
# TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM1-254-210		SPR-C, REEL R	36	8Z-ZM1-220-110		LEVER, REC SENSOR
2	8Z-ZM1-225-110		GEAR, REEL R	37	8Z-ZM1-249-010		SPR-T, FR
3	8Z-ZM1-253-110		SPR-C, AUTO SENSOR	38	8Z-ZM1-242-110		SPR-T, FF/REW
4	8Z-ZM1-217-110		LEVER, AUTO SENSOR	39	8Z-ZM1-229-010		GEAR, CAM
5	8Z-ZM1-212-110		LEVER, T-UP	40	8Z-ZM1-232-010		GEAR, IDL FF/REW
6	8Z-ZM1-245-010		SPR-T, AUTO	41	8Z-ZM1-234-010		FLY-WHL, ZZM-1
7	8Z-ZM1-236-010		CLR, SLIP FF/REW	42	8Z-ZM1-267-010		SHAFT, CAPSTAN 2
8	8Z-ZM1-252-010		SPR-C, FF/REW	43	8Z-ZM1-228-010		GEAR, SLIP T-UP B
9	8Z-ZM1-230-010		GEAR, SLIP FF/REW A	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-ZM1-251-110		SPR-C, T-UP SLIP
12	8Z-ZM1-237-010		LEVER, FF/REW 2	47	8Z-ZM1-243-210		SPR-T, STOP/PAUSE
13	8Z-ZM1-209-210		LEVER, PAUSE	48	87-A91-532-010		MOT, MS15U2LW1A
14	8Z-ZM1-218-110		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-ZM1-244-010		SPR-T, T-UP	51	8Z-ZM1-260-010		SPR-P, CASSETTE
17	8Z-ZM1-247-210		SPR-T, PINCH	52	8Z-ZM2-201-010		CHAS ASSY, ZZM-2
18	8Z-ZM1-261-110		ROLLER ASSY, PINCH	53	8Z-ZM1-255-110		SPR-T, E-LOCK
19	8Z-ZM1-221-010		LEVER, PINCH	54	8Z-ZM2-219-010		LEVER, E-OPEN ZZM-2
20	8Z-ZM1-205-210		LEVER, PLAY	55	8Z-ZM1-214-110		LEVER, LOCK
21	8Z-ZM1-248-110		SPR-T, BRG	56	8Z-ZM2-211-010		FLY-WHL, 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-ZM1-216-010		LEVER, AUTO	59	80-ZM6-243-010		SH 1.75-3.6-0.5 SLT
25	8Z-ZM1-246-010		SPR-T, AUTO 2	60	87-A91-494-010		SW, LEAF MSW17820
26	8Z-ZM2-214-010		GEAR, IDL REW ZZM-2	61	8Z-ZM1-241-010		SPR-T, PLAY
27	8Z-ZM2-212-010		LEVER, STOP ZZM-2	62	8Z-ZM2-601-010		CONN ASSY, 9P ZZM-2
28	8Z-ZM1-207-010		LEVER, FF	A	84-ZM2-242-010		S-SCREW, AZ1-2-6.4
29	8Z-ZM1-206-010		LEVER, REW	B	8Z-ZM2-220-110		V+2.6 ZZM-2
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-ZM1-241-010		SPR-T, PLAY				

# SPEAKER DISASSEMBLY INSTRUCTIONS

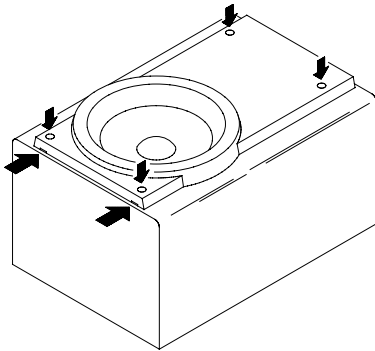
## Type.1

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.



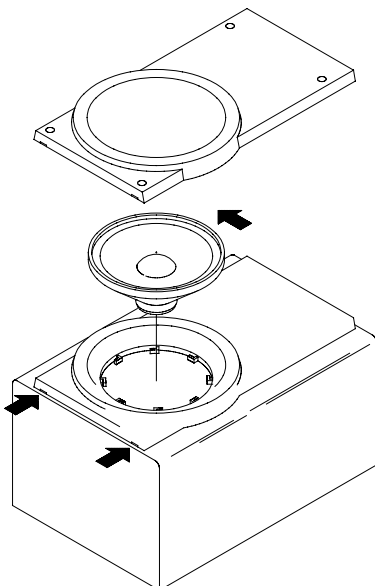
## Type.2

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.

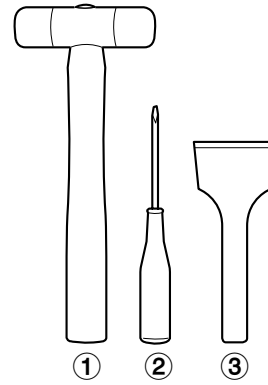


## Type.3

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.

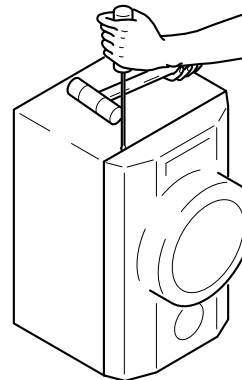


Fig-1

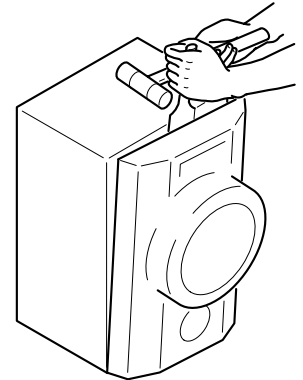


Fig-2

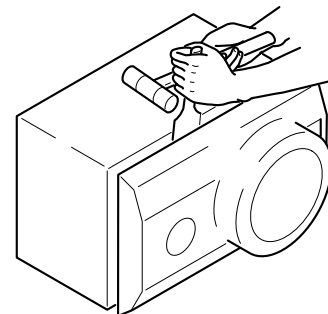


Fig-3

## 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-NBL17(YJ7SL,YJSC,YJSC9,Y1SL)

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NSB-001-010		PANEL, FR
2	8A-NSB-003-010		GRILLE, FRAME ASSY
3	8Z-NSL-603-010		SPKR, W 120

## ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8A-NHZ-901-010		IB, H (ECA) M<EXCEPT HRJSC>
1	8A-NHZ-910-010		IB, H (T) DIT<HRJSC>
2	8Z-NHA-702-010		RC UNIT, RC-ZAS11
3	87-043-115-010		ANT, FEEDER FM
4	87-006-226-010		AM LOOPANT CO
5	87-A90-119-010		ANT, WIRE SW (5M)
6	87-050-103-010		CORD, PIN 1PY1.5M
△ 7	87-A91-017-010		PLUG, CONVERSION JT-0476

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