

# NSX-AJ310

U

# NSX-SZ310

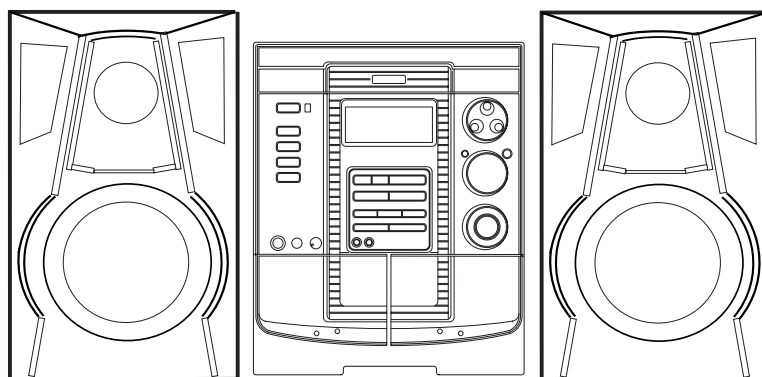
K,EZ,LH

# NSX-SZ315

EZ

# NSX-SZ510

LH



# SERVICE MANUAL

COMPACT DISC  
STEREO SYSTEM

BASIC TAPE MECHANISM : ZZM-3 PR1NM/PR1NF  
BASIC CD MECHANISM : BZG-5 ZD3NM/YKZD3NF

SYSTEM	CD CASSEIVER	MAIN SPEAKERS	TAPE MECHANISM	CD MECHANISM	REMOTE CONTROLLER
NSX-AJ310 TYPE : U	CX-NAJ310	SX-NAJ312	ZZM-3 PR1NM	BZG-5 ZD3NM	RC-ZAS02
NSX-SZ310 TYPE : K,EZ,LH	CX-NSZ310	SX-NSZ312	ZZM-3 PR1NF	BZG-5 YKZD3NF	
NSX-SZ315 TYPE : EZ	CX-NSZ315	SX-NSZ312	ZZM-3 PR1NF	BZG-5 YKZD3NF	
NSX-SZ510 TYPE : LH	CX-NSZ510	SX-NSZ702	ZZM-3 PR1NF	BZG-5 YKZD3NF	

- This Service Manual is the "Revision Publishing" and replaces "Simple Manual" (S/M Code No. 09-011-442-0T1).
- If requiring information about the CD mechanism, see Service Manual of BZG-5, (S/M Code No. 09-00C-353-3N2).

# aiwa

S/M Code No. 09-012-442-0R1

REVISION

DATA

## SPECIFICATIONS <U,LH>

### <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)

### <AM tuner section>

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

### <Amplifier section>

#### CX-NAJ310:

<b>Power output</b>	60 W + 60 W (50 Hz - 20 kHz, T.H.D. less than 1 %, 6 ohms) 75 W + 75 W (1 kHz, T.H.D. less than 10 %, 6 ohms)
<b>Total harmonic distortion</b>	0.08 % (30 W, 1 kHz, 6 ohms, DIN AUDIO)

#### CX-NSZ310:

<b>Power output</b>	Rated : 62 W + 62 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference : 80 W + 80 W (6 ohms, T.H.D. 10 %, 1 kHz)
<b>Total harmonic distortion</b>	0.08 % (40 W, 1 kHz, 6 ohms, DIN AUDIO)

#### CX-NSZ510:

<b>Power output</b>	Rated : 85 W + 85 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference : 100 W + 100 W (6 ohms, T.H.D. 10 %, 1 kHz)
<b>Total harmonic distortion</b>	0.08 % (40 W, 1 kHz, 6 ohms, DIN AUDIO)

<b>Inputs</b>	VIDEO / AUX : 500 mV
<b>Outputs</b>	SPEAKERS : 6 ohms or more PHONES : 32 ohms or more

### <Cassette deck section>

<b>Track format</b>	4 tracks, 2 channels stereo
<b>Frequency response</b>	50 Hz - 15 kHz
<b>Recording system</b>	AC bias
<b>Heads</b>	Deck 1 : Playback head x 1 Deck 2 : Recording / Playback x 1, erase head x 1

### <Compact disc player section>

<b>Laser</b>	Semiconductor laser ( $\lambda = 780 \text{ nm}$ )
<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)

### <General>

#### CX-NAJ310

<b>Power requirements</b>	120 V AC, 60 Hz
<b>Power consumption</b>	70 W
<b>Power consumption in standby mode</b>	With ECO mode on : 0.6 W With ECO mode off : 20 W
<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 339 mm (10 <sup>1</sup> / <sub>4</sub> x 12 <sup>7</sup> / <sub>8</sub> x 13 <sup>3</sup> / <sub>8</sub> in.)
<b>Weight</b>	6.3 kg (13 lbs 14 oz)

#### CX-NSZ310

<b>Power requirements</b>	120 V/220 - 230 V/240 V AC, (Switchable), 50 Hz/60 Hz
<b>Power consumption</b>	90 W
<b>Power consumption in standby mode</b>	With ECO mode on : 0.6 W With ECO mode off : 19 W
<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 339 mm
<b>Weight</b>	6.8 kg

#### CX-NSZ510

<b>Power requirements</b>	120 V/220 - 230 V/240 V AC, (Switchable), 50 Hz/60 Hz
<b>Power consumption</b>	105 W
<b>Power consumption in standby mode</b>	With ECO mode on : 0.6 W With ECO mode off : 20 W
<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 339 mm
<b>Weight</b>	7.2 kg

### <Speaker system SX-NAJ312 (for NSX-AJ310)>

<b>Speaker system</b>	3 way, bass reflex (magnetic shielded)
<b>Speaker units</b>	Woofer : 140 mm (5 <sup>5</sup> / <sub>8</sub> in.) cone Tweeter : 60 mm (2 <sup>3</sup> / <sub>8</sub> in.) cone Super tweeter : 20 mm (1 <sup>3</sup> / <sub>16</sub> in.) ceramic
<b>Impedance</b>	6 ohms
<b>Dimensions (W x H x D)</b>	220 x 324 x 225 mm (8 <sup>3</sup> / <sub>4</sub> x 12 <sup>7</sup> / <sub>8</sub> x 8 <sup>7</sup> / <sub>8</sub> in.)
<b>Weight</b>	4.3 kg (9 lbs 8 oz)

### <Speaker system SX-NSZ312 (for NSX-SZ310)>

<b>Speaker system</b>	3 way, bass reflex (magnetic shielded)
<b>Speaker units</b>	Woofer : 140 mm cone Tweeter : 60 mm cone Super tweeter : 20 mm ceramic
<b>Impedance</b>	6 ohms
<b>Dimensions (W x H x D)</b>	220 x 324 x 225 mm
<b>Weight</b>	4.3 kg

### <Speaker system SX-NSZ702 (for NSX-SZ510)>

<b>Speaker system</b>	2 way, bass reflex (magnetic shielded)
<b>Speaker units</b>	Woofer : 160 mm cone Tweeter : 60 mm cone
<b>Impedance</b>	6 ohms
<b>Dimensions (W x H x D)</b>	230 x 324 x 223 mm
<b>Weight</b>	4.6 kg

• Design and specifications are subject to change without notice.

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

## SPECIFICATIONS <EZ,K>

### <FM tuner section>

<b>Tuning range</b>	87.5 MHz to 108 MHz
<b>Usable sensitivity (IHF)</b>	16.8 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

### <LW tuner section>

<b>Tuning range</b>	144 kHz to 290 kHz
---------------------	--------------------

<b>Usable sensitivity</b>	1400 $\mu$ V/m
<b>Antenna</b>	Loop antenna

### <Amplifier section>

<b>Power output</b>	Rated : 32 W + 32 W (6 ohms, T.H.D. 1 %, 1 kHz / DIN 45500) Reference : 40 W + 40 W (6 ohms, T.H.D. 10 %, 1 kHz / DIN 45324) <b>EZ only</b> : DIN MUSIC POWER : 120 W + 120 W
<b>Total harmonic distortion</b>	0.08 % (20 W, 1 kHz, 6 ohms, DIN AUDIO)
<b>Inputs</b>	VIDEO / AUX : 500 mV
<b>Outputs</b>	SPEAKERS : 6 ohms or more PHONES : 32 ohms or more

### <Cassette deck section>

<b>Track format</b>	4 tracks, 2 channels stereo
<b>Frequency response</b>	50 Hz - 15 kHz
<b>Recording system</b>	AC bias
<b>Heads</b>	Deck 1 : Playback head x 1 Deck 2 : Recording / Playback x 1, erase 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)

### <General>

<b>Power requirements</b>	230 V AC, 50 Hz
<b>Power consumption</b>	75 W
<b>Power consumption in standby mode</b>	With ECO mode on : 0.6 W With ECO mode off : 17 W
<b>Dimensions of main unit (W x H x D)</b>	260 x 324 x 339 mm
<b>Weight</b>	5.8 kg

### <Speaker system SX-NSZ312>

<b>Speaker systm</b>	3 way, bass reflex (magnetic shielded)
<b>Speaker unites</b>	Woofer : 140 mm cone Tweeter : 60 mm cone Super tweeter : 20 mm ceramic
<b>Impedance</b>	6 ohms
<b>Dimensions (W x H x D)</b>	220 x 324 x 225 mm
<b>Weight</b>	4.3 kg

• Design and specifications are subject to change without notice.

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

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

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

### WARNING!!

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



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

### VAROITUS!

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

### WARNING!

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

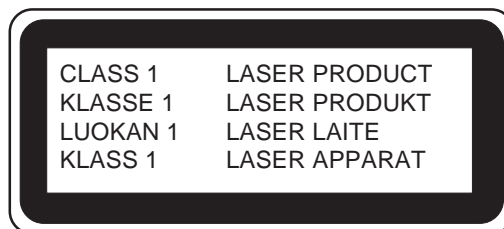
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

### 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.

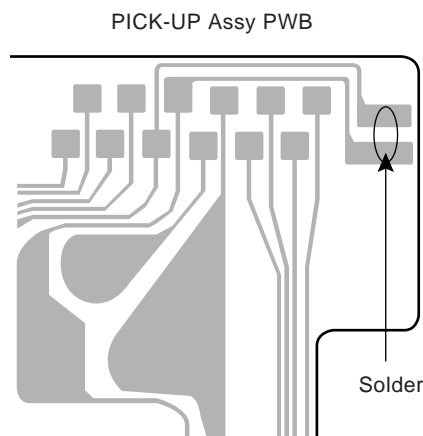


## Precaution to replace Optical block

### (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.

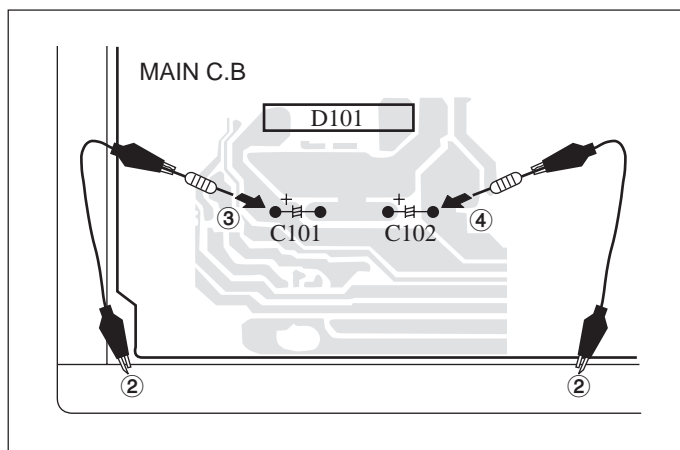


Fig-1

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.

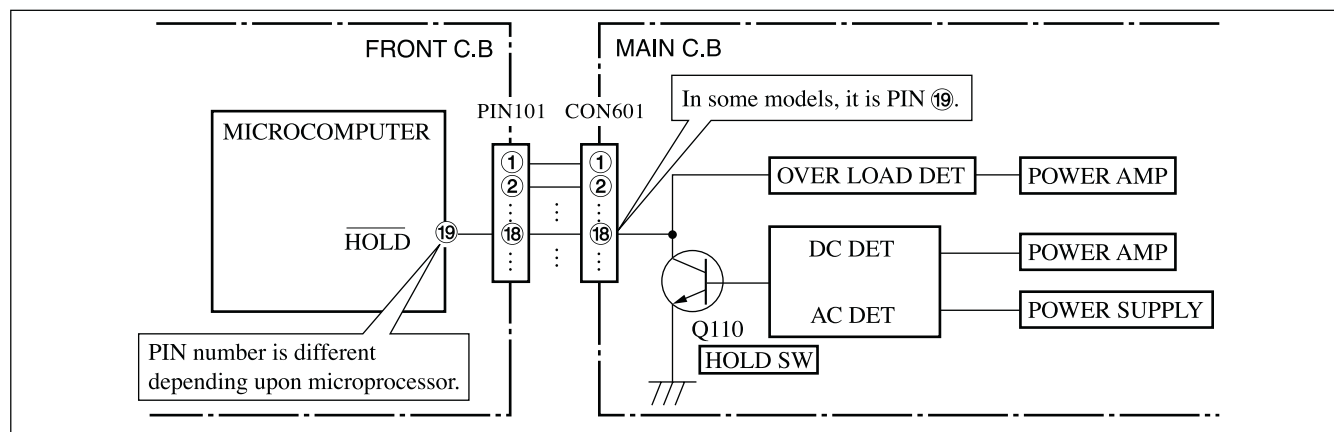


Fig-2-1

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.

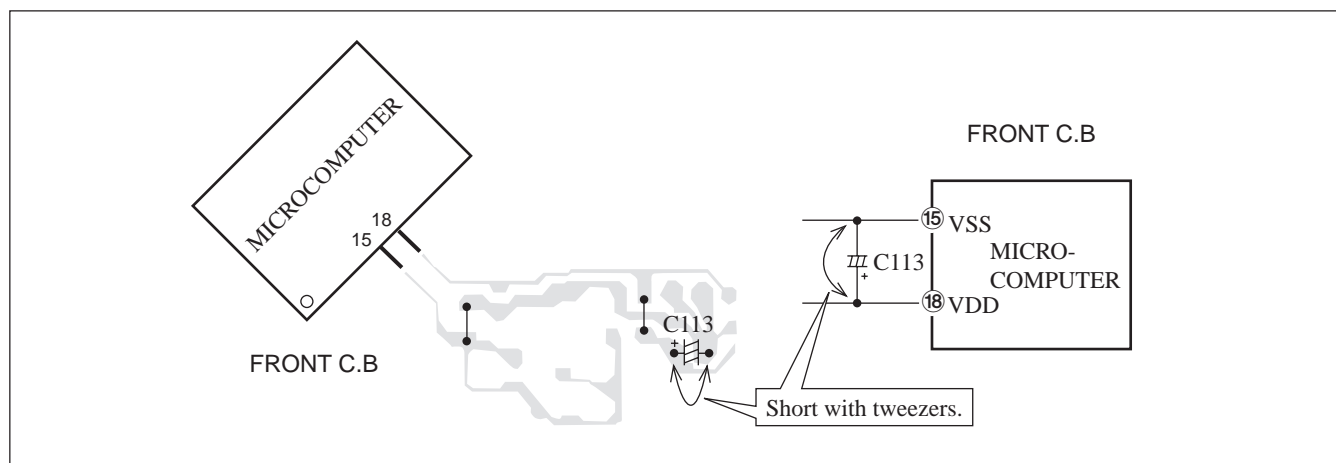


Fig-2-2

- 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
IC				C19	87-016-520-000	CAP, E	3300-65<5LH>
	87-A21-269-010	IC, EW732		C20	87-A12-776-090	CAP, E	2200-50<K, EZ, 5EZ>
	87-A21-419-040	C-IC, NJM14558MD-TE2		C20	87-A12-036-000	CAP, E	2200-63<LH, U>
	87-A21-893-040	C-IC, NJM14558V-TE2		C20	87-016-520-000	CAP, E	3300-65<5LH>
	87-A21-401-040	C-IC, M61503FP		C21	87-A12-777-090	CAP, E	3300-25<EXCEPT 5LH>
	87-A21-695-010	IC, LA1845L		C21	87-A12-780-090	CAP, E	4700-35<5LH>
	87-A20-440-040	C-IC, BU1920FS<5EZ>		C22	87-A12-777-090	CAP, E	3300-25<EXCEPT 5LH>
	8B-NF9-601-030	C-IC, UPD780226GF-021-3BA<EXCEPT 5EZ>		C22	87-A12-780-090	CAP, E	4700-35<5LH>
	8B-NF9-602-030	C-IC, UPD780228GF-078-3BA<5EZ>		C25	87-A12-072-080	CAP, E	100-25 SMG
	87-A21-218-110	IC, NJL64H380A		C26	87-A12-072-080	CAP, E	100-25 SMG
	87-A21-928-010	IC, LC72131D-N		C27	87-A12-072-080	CAP, E	100-25 SMG
TRANSISTOR				C28	87-A12-072-080	CAP, E	100-25 SMG
	87-A30-494-080	TR, 2SA1980G		C30	87-010-430-080	CAP, E	100-63<5LH>
	87-A30-559-010	TR, CSB1370EF		C30	87-A12-095-080	CAP, E	100-50<EXCEPT 5LH>
	87-A30-492-080	TR, 2SC5343G		C31	87-A12-062-080	CAP, E	100-10 SMG
	87-A30-076-080	C-TR, 2SC3052F		C32	87-012-286-080	CAP, U	0.01-25
	87-A30-075-080	C-TR, 2SA1235F		C33	87-A12-062-080	CAP, E	100-10<U>
	87-A30-107-070	C-TR, CMBT5401		C34	87-A12-072-080	CAP, E	100-25 SMG
	87-A30-484-080	C-TR, KRA102S		C35	87-A12-071-080	CAP, E	47-25 SMG
	87-A30-468-080	C-TR, KRC102S-RTK		C36	87-A12-067-080	CAP, E	330-16 SMG
	87-A30-190-080	TR, CC5551		C38	87-012-286-080	CAP, U	0.01-25
	87-A30-106-040	C-TR, CMBT5551		C60	87-A12-089-080	CAP, E	3.3-50 SMG
	87-A30-528-010	TR, 2SB1686		C61	87-A12-071-080	CAP, E	47-25 SMG
	87-A30-529-010	TR, 2SD2642		C83	87-A12-068-080	CAP, E	470-16<K, EZ, 5EZ>
	87-A30-162-010	FET, 2SK2937		C83	87-A12-074-080	CAP, E	470-25<LH, 5LH, U>
	87-A30-091-080	FET, 2SJ460		C97	87-010-831-080	C-CAP, U	0.1-16F
	87-A30-090-080	FET, 2SK2541		C101	87-012-278-080	C-CAP, U	2200P-50<K, EZ, 5EZ>
	87-A30-062-080	C-TR, KRC104S		C101	87-012-279-080	C-CAP, U	2700P-50<LH, 5LH, U>
	87-A30-495-080	TR, 2SA1981Y		C102	87-012-278-080	C-CAP, U	2200P-50<K, EZ, 5EZ>
	87-A30-087-080	C-FET, 2SK2158		C102	87-012-279-080	C-CAP, U	2700P-50<LH, 5LH, U>
	87-A30-582-080	TR, CDA1585BC		C103	87-A12-084-080	CAP, E	0.22-50 SMG
	87-A30-288-040	C-TR, DTC114YKA<U>		C104	87-A12-084-080	CAP, E	0.22-50 SMG
	87-A30-490-080	C-TR, KRC107S<EXCEPT U>		C105	87-012-277-080	C-CAP, U	1800P-50 B
	89-327-143-080	C-TR, 2SC27140		C106	87-012-277-080	C-CAP, U	1800P-50 B
	87-A30-489-080	C-TR, KRA107S		C107	87-A12-089-080	CAP, E	3.3-50 SMG
	89-503-602-080	C-FET, 2SK360E		C108	87-A12-089-080	CAP, E	3.3-50 SMG
	87-A30-086-040	C-TR, CSD1306E<K, EZ, 5EZ>		C109	87-012-195-080	C-CAP, U	100P-50<K, EZ, 5EZ>
	87-A30-234-080	TR, CSC4115BC		C110	87-012-195-080	C-CAP, U	100P-50<K, EZ, 5EZ>
DIODE				C111	87-A12-077-080	CAP, E	33-35 SMG
	87-A40-393-090	DIODE, 1N5402GW (F20)		C112	87-A12-077-080	CAP, E	33-35 SMG
	87-A40-291-080	DIODE, 1N4148M (CPT)		C113	87-A10-596-080	C-CAP, S	100P-100<LH, 5LH>
	87-A40-454-090	DIODE, 1N5393 GW 12.5<K, EZ, 5EZ, U>		C113	87-012-195-080	C-CAP, U	100P-50<K, EZ, 5EZ, U>
	87-A40-455-090	DIODE, RL203 GW<LH, U>		C114	87-A10-596-080	C-CAP, S	100P-100<LH, 5LH>
	87-A40-553-080	DIODE, 1N4003 LES		C114	87-012-195-080	C-CAP, U	100P-50<K, EZ, 5EZ, U>
	87-A40-776-080	ZENER, UZ27BSD		C117	87-012-368-080	C-CAP, S	0.1-50 F
	87-A40-764-080	ZENER, UZ10BSC		C118	87-012-368-080	C-CAP, S	0.1-50 F
	87-A40-270-080	C-DIODE, MC2838		C119	87-012-286-080	CAP, U	0.01-25
	87-A40-269-080	C-DIODE, MC2836		C120	87-012-286-080	CAP, U	0.01-25
	87-A40-747-080	ZENER, UZ5.1BSB		C123	87-010-177-080	C-CAP, S	820P-50 SL
	87-A40-749-080	ZENER, UZ5.6BSB		C124	87-010-177-080	C-CAP, S	820P-50 SL
	87-A40-748-080	ZENER, UZ5.6BSA		C133	87-012-282-080	CAP, U	4700P-50
	87-A40-739-080	ZENER, UZ2.7BSA		C140	87-012-278-080	C-CAP, U	2200P-50 B
	87-017-149-080	ZENER, HZS6A2L		C186	87-010-759-080	C-CAP, U	0.1-25F
MAIN C.B				C187	87-010-866-080	CAP, E	10-63<LH, 5LH, U>
C3	87-012-368-080	C-CAP, S	0.1-50 F	C187	87-A12-091-080	CAP, E	10-50<K, EZ, 5EZ>
C4	87-012-368-080	C-CAP, S	0.1-50 F	C188	87-010-866-080	CAP, E	10-63<LH, 5LH, U>
C5	87-012-368-080	C-CAP, S	0.1-50 F	C188	87-A12-091-080	CAP, E	10-50<K, EZ, 5EZ>
C6	87-012-368-080	C-CAP, S	0.1-50 F	C223	87-010-176-080	C-CAP, S	680P-50<K, EZ, 5EZ>
C9	87-010-759-080	C-CAP, U	0.1-25F	C224	87-010-176-080	C-CAP, S	680P-50<K, EZ, 5EZ>
C10	87-010-759-080	C-CAP, U	0.1-25F	C225	87-012-368-080	C-CAP, S	0.1-50 F
C11	87-010-759-080	C-CAP, U	0.1-25F	C226	87-012-368-080	C-CAP, S	0.1-50 F
C12	87-010-759-080	C-CAP, U	0.1-25F	C227	87-012-368-080	C-CAP, S	0.1-50 F
C19	87-A12-776-090	CAP, E	2200-50<K, EZ, 5EZ>	C228	87-012-368-080	C-CAP, S	0.1-50 F
C19	87-A12-036-000	CAP, E	2200-63<LH, U>	C229	87-010-191-080	C-CAP, S	0.015-50<K, EZ, 5EZ>
				C230	87-010-191-080	C-CAP, S	0.015-50<K, EZ, 5EZ>
				C231	87-012-286-080	CAP, U	0.01-25<K, EZ, 5EZ>
				C232	87-012-286-080	CAP, U	0.01-25<K, EZ, 5EZ>
				C241	87-010-831-080	C-CAP, U	0.1-16F
				C301	87-012-275-080	C-CAP, U	1200P-50 B
				C302	87-012-275-080	C-CAP, U	1200P-50 B



REF.NO.	PART NO.	KANRI NO.	DESCRIPTION	REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
C303	87-012-275-080		C-CAP,U 1200P-50 B	C782	87-012-286-080		CAP, U 0.01-25
C304	87-012-275-080		C-CAP,U 1200P-50 B	C783	87-012-286-080		CAP, U 0.01-25
C307	87-A12-062-080		CAP,E 100-10 SMG	C784	87-012-286-080		CAP, U 0.01-25
C308	87-A12-062-080		CAP,E 100-10 SMG	C785	87-012-286-080		CAP, U 0.01-25
C309	87-012-188-080		C-CAP,U 47P-50 CH	C786	87-012-286-080		CAP, U 0.01-25
C310	87-012-188-080		C-CAP,U 47P-50 CH	C788	87-012-167-080		C-CAP,U 5P-50 CH
C313	87-012-284-080		CAP, U 6800P-50	C789	87-A12-052-080		C-CAP,S 0.033-25<LH,5LH,U>
C314	87-012-284-080		CAP, U 6800P-50	C789	87-016-118-080		C-CAP,U0.022-25<K,EZ,5EZ>
C315	87-A12-062-080		CAP,E 100-10 SMG	C790	87-A12-052-080		C-CAP,S 0.033-25<LH,5LH,U>
C317	87-A12-085-080		CAP,E 0.33-50 SMG	C790	87-016-118-080		C-CAP,U0.022-25<K,EZ,5EZ>
C318	87-A12-085-080		CAP,E 0.33-50 SMG	C791	87-010-831-080		C-CAP,U,0.1-16F
C326	87-010-787-080		CAP, U 0.022-25	C792	87-012-286-080		CAP, U 0.01-25
C327	87-010-831-080		C-CAP,U,0.1-16F	C793	87-A12-090-080		CAP,E 4.7-50 SMG
C350	87-012-286-080		CAP, U 0.01-25<K,EZ,5EZ>	C795	87-012-286-080		CAP, U 0.01-25
C360	87-A12-087-080		CAP,E 1-50 SMG	C796	87-012-286-080		CAP, U 0.01-25
C399	87-A10-039-080		C-CAP,U 470P-50 J CH	C797	87-A12-091-080		CAP,E 10-50 SMG
C401	87-A12-083-080		CAP,E 0.1-50 SMG	C798	87-012-286-080		CAP, U 0.01-25
C402	87-A12-083-080		CAP,E 0.1-50 SMG	C799	87-A12-093-080		CAP,E 33-50 SMG
C403	87-012-193-080		C-CAP,U 82P-50 CH	C800	87-010-829-080		CAP, U 0.047-16
C404	87-012-193-080		C-CAP,U 82P-50 CH	C801	87-A12-089-080		CAP,E 3.3-50 SMG
C405	87-012-286-080		CAP, U 0.01-25	C802	87-010-829-080		CAP, U 0.047-16
C406	87-012-286-080		CAP, U 0.01-25	C803	87-010-787-080		CAP, U 0.022-25
C407	87-012-286-080		CAP, U 0.01-25	C804	87-A12-062-080		CAP,E 100-10 SMG
C408	87-012-286-080		CAP, U 0.01-25	C807	87-A12-086-080		CAP,E 0.47-50 SMG
C409	87-012-278-080		C-CAP,U 2200P-50 B	C808	87-A12-087-080		CAP,E 1-50 SMG
C410	87-012-278-080		C-CAP,U 2200P-50 B	C809	87-A12-087-080		CAP,E 1-50 SMG
C411	87-A12-091-080		CAP,E 10-50 SMG	C810	87-010-831-080		C-CAP,U,0.1-16F
C412	87-A12-091-080		CAP,E 10-50 SMG	C814	87-012-286-080		CAP, U 0.01-25
C452	87-A12-069-080		CAP,E 22-25 SMG	C815	87-A12-086-080		CAP,E 0.47-50 SMG
C453	87-012-279-080		C-CAP,U 2700P-50 B	C816	87-A12-086-080		CAP,E 0.47-50 SMG
C454	87-012-279-080		C-CAP,U 2700P-50 B	C818	87-012-276-080		C-CAP SS 1500<K,EZ,5EZ>
C455	87-012-279-080		C-CAP,U 2700P-50 B	C821	87-A12-091-080		CAP,E 10-50 SMG
C456	87-012-286-080		CAP, U 0.01-25	C823	87-012-349-080		C-CAP,S 1000P-50<K,EZ,5EZ>
C457	87-A12-361-080		CAP,M 5600P-100 J CP	C823	87-010-177-080		C-CAP,S 820P-50<LH,5LH,U>
C458	87-012-274-080		CHIP CAP,U 1000P-50B	C824	87-A12-090-080		CAP,E 4.7-50 SMG
C459	87-012-271-080		CAP, U 560P-50	C825	87-010-596-080		CAP, S 0.047-16
C460	87-010-831-080		C-CAP,U,0.1-16F	C831	87-A12-092-080		CAP,E 22-50<K,EZ,5EZ>
C461	87-012-158-080		C-CAP,S 390P-50 CH	C842	87-012-286-080		CAP, U 0.01-25
C462	87-012-158-080		C-CAP,S 390P-50 CH	C844	87-012-286-080		CAP, U 0.01-25
C470	87-018-127-080		CAP, CER 470P-50V	C850	87-A12-071-080		CAP,E 47-25 SMG
C605	87-012-280-080		CAP, U 3300P-50	C851	87-012-286-080		CAP, U 0.01-25
C606	87-012-280-080		CAP, U 3300P-50	C852	87-012-286-080		CAP, U 0.01-25
C609	87-010-785-080		C-CAP,U0.015-25BK	C853	87-012-286-080		CAP, U 0.01-25
C610	87-010-785-080		C-CAP,U0.015-25BK	C858	87-010-831-080		C-CAP,U,0.1-16F
C611	87-A12-084-080		CAP,E 0.22-50 SMG	C859	87-010-831-080		C-CAP,U,0.1-16<K,EZ,5EZ>
C612	87-A12-084-080		CAP,E 0.22-50 SMG	C860	87-012-286-080		CAP, U 0.01-25<K,EZ,5EZ>
C613	87-A12-084-080		CAP,E 0.22-50 SMG	C869	87-012-286-080		CAP, U 0.01-25<5EZ>
C614	87-A12-084-080		CAP,E 0.22-50 SMG	C870	87-012-274-080		CHIP CAP,U 1000P-50<5EZ>
C615	87-012-172-080		CAPACITOR CHIP U 10P CH	C871	87-012-199-080		CAP 220P<5EZ>
C616	87-016-459-080		CAP,E 470-10 SMG	C872	87-012-199-080		CAP 220P<5EZ>
C617	87-016-459-080		CAP,E 470-10 SMG	C873	87-A10-039-080		C-CAP,U 470P-50<5EZ>
C618	87-A12-091-080		CAP,E 10-50 SMG	C874	87-A12-091-080		CAP,E 10-50<5EZ>
C620	87-010-263-080		CAP, ELECT 100-10V	C875	87-010-759-080		C-CAP,U, 0.1-25<5EZ>
C623	87-A12-372-080		CAP,M 0.047-100 J CP	C876	87-A12-091-080		CAP,E 10-50<5EZ>
C624	87-A12-372-080		CAP,M 0.047-100 J CP	C877	87-012-286-080		CAP, U 0.01-25<5EZ>
C630	87-016-669-080		C-CAP,S 0.1-25<EXCEPT 5LH>	C878	87-012-184-080		C-CAP,U 33P-50<5EZ>
C630	87-A10-260-080		C-CAP,U 0.1-16<5LH>	C879	87-012-180-080		C-CAP,U 22P-50<5EZ>
C631	87-012-281-080		C-CAP,U 3900P-50 B	C901	87-018-145-080		CAP,TC-U 6.8P-50<LH,5LH,U>
C632	87-012-281-080		C-CAP,U 3900P-50 B	C904	87-012-286-080		CAP, U 0.01-25<LH,5LH,U>
C633	87-A11-070-080		C-CAP,U 0.033-16 K B	C905	87-012-286-080		CAP, U 0.01-25<LH,5LH,U>
C634	87-A11-070-080		C-CAP,U 0.033-16 K B	C907	87-012-286-080		CAP, U 0.01-25<LH,5LH,U>
C661	87-012-336-080		CAP, CHIP U 330P SL	C908	87-A10-915-080		C-CAP,U 1000P-25<LH,5LH,U>
C662	87-012-336-080		CAP, CHIP U 330P SL	C909	87-012-286-080		CAP, U 0.01-25<LH,5LH,U>
C669	87-012-274-080		C-CAP,U 1000P-50<K,EZ,5EZ>	C910	87-012-174-080		CAP CHIP U 12P-50<LH,5LH,U>
C670	87-012-274-080		C-CAP,U 1000P-50<K,EZ,5EZ>	C911	87-012-170-080		C-CAP,U 8P-50<LH,5LH,U>
C677	87-012-286-080		CAP, U 0.01-25	C912	87-012-195-080		C-CAP,U 100P-50<LH,5LH,U>
C771	87-A12-062-080		CAP,E 100-10 SMG	C913	87-012-286-080		CAP, U 0.01-25<LH,5LH,U>
C772	87-012-286-080		CAP, U 0.01-25	C914	87-012-166-080		C-CAP,U 4P-50<LH,5LH,U>
C779	87-010-949-080		C-CAP,S 0.01-50<K,EZ,5EZ>	C915	87-012-174-080		CAP CHIP CERA SS 12P<LH,5LH,U>
C780	87-010-949-080		C-CAP,S 0.01-50<K,EZ,5EZ>	C916	87-012-180-080		C-CAP,U 22P-50<LH,5LH,U>



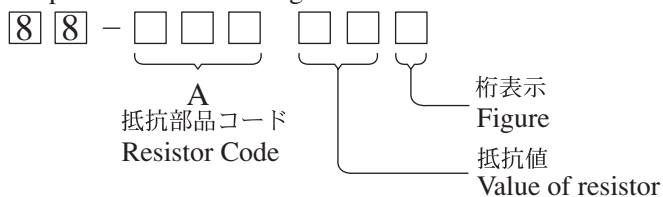
REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C917	87-012-186-080		C-CAP, U 39P-50<LH, 5LH, U>	L905	88-ZA1-624-010		COIL, FM IFT 7-6.2 (COILS) <LH, 5LH, U>
C918	87-A10-039-080		C-CAP, U 470P-50<LH, 5LH, U>	L906	88-ZA1-603-010		COIL, FM-OSC-U 2G<LH, 5LH, U>
C921	87-012-195-080		C-CAP, U 100P-50<LH, 5LH, U>	L941	87-A50-020-010		COIL, ANT LW (COI) <K, EZ, 5EZ>
C922	87-012-174-080		CAP CHIP CERA SS 12P<LH, 5LH, U>	L942	87-A50-019-010		COIL, OSC LW (COI) <K, EZ, 5EZ>
C940	87-012-286-080		CAP, U 0.01-25<K, EZ, 5EZ>	L951	8A-NF8-668-010		COIL, AM PACK 2 (TOK) <K, EZ, 5EZ>
C942	87-012-165-080		CAP 3P<K, EZ, 5EZ>	L951	8A-NF8-667-010		COIL, AM PACK 4 (TOK) <LH, 5LH, U>
C947	87-012-286-080		CAP, U 0.01-25<K, EZ, 5EZ>	R129	87-A00-257-080		RES, M/F 0.15-1W J<U>
C948	87-A10-039-080		C-CAP, U 470P-50<K, EZ, 5EZ>	R129	87-A00-262-080		RES, M/F 0.15-2W J<LH, 5LH>
C952	87-012-286-080		CAP, U 0.01-25<K, EZ, 5EZ>	R129	87-A00-258-080		RES, M/F 0.22-1W J<K, EZ, 5EZ>
C957	87-012-174-080		CAP CHIP CERA SS 12P<K, EZ, 5EZ>	R130	87-A00-257-080		RES, M/F 0.15-1W J<U>
C958	87-012-286-080		CAP, U 0.01-25<K, EZ, 5EZ>	R130	87-A00-262-080		RES, M/F 0.15-2W J<LH, 5LH>
C959	87-010-831-080		C-CAP, U, 0.1-16F	R130	87-A00-258-080		RES, M/F 0.22-1W J<K, EZ, 5EZ>
C960	87-010-831-080		C-CAP, U, 0.1-16F	R131	87-A00-257-080		RES, M/F 0.15-1W J<U>
C961	87-012-167-080		C-CAP, U 5P-50<LH, 5LH, U>	R131	87-A00-262-080		RES, M/F 0.15-2W J<LH, 5LH>
C962	87-A12-087-080		CAP, E 1-50<K, EZ, 5EZ>	R131	87-A00-258-080		RES, M/F 0.22-1W J<K, EZ, 5EZ>
C963	87-015-785-080		CHIP CAPACITOR, 0.1-25 Z F	R132	87-A00-257-080		RES, M/F 0.15-1W J<U>
C971	87-A12-067-080		CAP, E 330-16 SMG	R132	87-A00-262-080		RES, M/F 0.15-2W J<LH, 5LH>
C972	87-A12-090-080		CAP, E 4.7-50 SMG	R132	87-A00-258-080		RES, M/F 0.22-1W J<K, EZ, 5EZ>
C973	87-012-286-080		CAP, U 0.01-25	R243	87-A00-439-050		RES, 180-1/2W J RP<EXCEPT LH, U>
C974	87-012-286-080		CAP, U 0.01-25	R243	87-A00-440-050		RES, 220-1/2W J RP<LH, U>
C979	87-012-195-080		C-CAP, U 100P-50CH	R244	87-A00-439-050		RES, 180-1/2W J RP<EXCEPT LH, U>
C981	87-A12-071-080		CAP, E 47-25 SMG	R244	87-A00-440-050		RES, 220-1/2W J RP<LH, U>
C982	87-010-831-080		C-CAP, U, 0.1-16F	R245	87-A00-439-050		RES, 180-1/2W J RP<EXCEPT LH, U>
C983	87-012-286-080		CAP, U 0.01-25	R245	87-A00-440-050		RES, 220-1/2W J RP<U>
C984	87-012-286-080		CAP, U 0.01-25	R245	87-A00-441-050		RES, 270-1/2W J RP<LH>
C985	87-012-195-080		C-CAP, U 100P-50<K, EZ, 5EZ>	R246	87-A00-439-050		RES, 180-1/2W J RP<EXCEPT LH, U>
C987	87-012-286-080		CAP, U 0.01-25	R246	87-A00-440-050		RES, 220-1/2W J RP<U>
C989	87-012-286-080		CAP, U 0.01-25<K, EZ, 5EZ>	R246	87-A00-441-050		RES, 270-1/2W J RP<LH>
C991	87-012-176-080		CAP 15P	R790	87-012-286-080		CAP, U 0.01-25
C992	87-012-176-080		CAP 15P	R991	87-012-195-080		C-CAP, U 100P-50CH
C993	87-012-274-080		CHIP CAP, U 1000P-50B	R993	87-012-195-080		C-CAP, U 100P-50CH
C995	87-012-274-080		CHIP CAP, U 1000P-50B	R995	87-012-195-080		C-CAP, U 100P-50CH
C997	87-010-831-080		C-CAP, U, 0.1-16F	SFR451	87-024-435-080		SFR 33K H RH063EC
C998	87-A12-071-080		CAP, E 47-25 SMG	SFR452	87-024-435-080		SFR 33K H RH063EC
C999	87-A11-155-080		CAP, TC U 0.01-16 Z F	TC942	87-A91-774-080		TRIMMER, PLY 30P 6.8X5.4<K, EZ, 5EZ>
CF831	87-008-261-010		FILTER, CF SFE10.7MA5<LH, 5LH, U>	TH101	87-A91-042-080		C-THMS, 100K 55001
CF831	87-008-423-010		FILTER, CF SFE10.7MS3GA<K, EZ, 5EZ>	TH102	87-A91-042-080		C-THMS, 100K 55001
CF832	82-785-747-010		CF MS2 GHY R<K, EZ, 5EZ>	W99	8A-NF9-609-010		F-CABLE, 9P 2.5 480MM<K, EZ, 5EZ, U>
CF832	87-008-261-010		FILTER, SFE10.7MA5-A<LH, 5LH, U>	WH1	87-A90-510-010		HLDR, WIRE 2.5-9P
CN301	87-A60-620-010		CONN, 3P V 2MM JMT	X862	87-A70-307-010		VIB, XTAL 4.332MHZ CSA-309ST<5EZ>
CN351	87-A60-625-010		CONN, 8P V 2MM JMT	X992	87-A70-306-010		VIB, XTAL 4.500MHZ CSA-309ST
CN601	87-099-719-010		CONN, 30P H BLK TYK-B (X)				
CN602	87-A60-131-010		CONN, 6P V FE				
CNA1	8A-NF8-653-010		CONN ASSY, 9P TID-A (480) <LH, 5LH>	FRONT C.B			
CNA301	86-ZM3-604-210		CONN ASSY, 3P-PB	C108	87-010-785-080		C-CAP, U 0.015-25BK
CNA351	86-ZM3-605-110		CONN ASSY, 8P-RPB	C153	87-010-787-080		CAP, U 0.022-25
D902	87-A40-128-080		C-VARI-CAP, HVU202A<LH, 5LH, U>	C154	87-010-246-040		CAP, E 47-35 SME
D903	87-A40-128-080		C-VARI-CAP, HVU202A<LH, 5LH, U>	C155	87-010-404-040		CAP, E 4.7-50 SME
FC602	88-906-251-110		FF-CABLE, 6P 1.25	C156	87-010-404-040		CAP, E 4.7-50 SME
FFB831	A8-6ZA-19M-030		6ZA-1 YFEMENM<K, EZ, 5EZ>	C301	87-012-278-080		C-CAP, U 2200P-50 B
J202	87-A61-480-010		JACK, DIA6.3 BLK ST W/SW MSC16A	C351	87-A10-353-080		C-CAP, U 0.22-10KB
J203	87-A60-238-010		TERMINAL, SP 4P (MSC)	C361	87-012-274-080		CHIP CAP, U 1000P-50B
J602	87-A60-881-010		JACK, PIN 2P MSP 242V05 PBSN	C362	87-012-274-080		CHIP CAP, U 1000P-50B
J831	87-A60-202-010		TERMINAL, ANT 4P MSP-154V<LH, 5LH, U>	C371	87-012-274-080		CHIP CAP, U 1000P-50B
J832	87-A60-403-010		TERMINAL, ANT PAL 2P HSP<K, EZ, 5EZ>	C372	87-012-274-080		CHIP CAP, U 1000P-50B
JR123	87-A10-596-080		C-CAP, S 100P-100<LH, 5LH>	C601	87-010-382-040		CAP, E 22-25 SME
JR123	87-012-195-080		C-CAP, U 100P-50<K, EZ, 5EZ, U>	C702	87-012-286-080		CAP, U 0.01-25
JR124	87-A10-596-080		C-CAP, S 100P-100<LH, 5LH>	C801	87-A10-804-080		C-CAP, S 0.1-25 J B
JR124	87-012-195-080		C-CAP, U 100P-50<K, EZ, 5EZ, U>	C803	87-012-280-080		CAP, U 3300P-50
L201	87-A50-610-010		COIL, 1UH K (MDEC)	C804	87-A10-592-080		C-CAP, S 0.015-50 J B
L202	87-A50-610-010		COIL, 1UH K (MDEC)	C805	87-012-184-080		C-CAP, U 33P-50 CH
L451	87-007-342-010		COIL, OSC 85KHZ BIAS	C806	87-012-274-080		CHIP CAP, U 1000P-50B
L801	87-A50-608-010		COIL, FM DET-N (TOK)	C807	87-012-274-080		CHIP CAP, U 1000P-50B
L802	87-A91-551-010		FLTR, PCFJZH-450 L (TOK)	C808	87-010-544-040		CAP, E 0.1-50 SME
L811	87-005-847-080		COIL, 2.2UH (CECS)	C809	87-010-404-040		CAP, E 4.7-50 SME
L832	87-005-847-080		COIL, 2.2UH (CECS)	C810	87-016-114-080		C-CAP, U 0.01-25B
L861	87-005-847-080		COIL, 2.2UH (CECS) <5EZ>	C811	87-A12-052-080		C-CAP, S 0.033-25 J B
L902	88-ZA1-602-110		COIL, FM-RF-U2 2G<LH, 5LH, U>	C901	87-012-195-080		C-CAP, U 100P-50CH
L903	88-ZA1-601-010		COIL, FM-RF-U1 2G<LH, 5LH, U>	C902	87-012-195-080		C-CAP, U 100P-50CH
L904	87-005-847-080		COIL, 2.2UH (CECS) <LH, 5LH, U>				

REF.NO.	PART NO.	KANRI NO.	DESCRIPTION	REF.NO.	PART NO.	KANRI NO.	DESCRIPTION
C903	87-012-195-080		C-CAP,U 100P-50CH	PT C.B			
C904	87-012-195-080		C-CAP,U 100P-50CH				
C905	87-012-195-080		C-CAP,U 100P-50CH	C85	87-010-831-080		C-CAP,U,0.1-16<K,EZ,5EZ>
C906	87-012-195-080		C-CAP,U 100P-50CH	CN1	87-A61-110-010		CONN,9P V TID-A<LH,5LH>
C907	87-012-195-080		C-CAP,U 100P-50CH	PT1	8B-NF9-615-010		PT,BNF-9 LH<LH>
				PT1	8B-NFY-694-010		PT,BNF-Y EZ<K,EZ,5EZ>
C908	87-012-195-080		C-CAP,U 100P-50CH	PT1	8B-NFY-693-010		PT,BNF-Y LH<5LH>
C909	87-012-195-080		C-CAP,U 100P-50CH				
C910	87-012-195-080		C-CAP,U 100P-50CH	PT1	8B-NFY-690-010		PT,BNF-Y U<U>
C911	87-012-274-080		CHIP CAP,U 1000P-50B	PT2	8B-MA6-673-010		PT,SUB BMA H (VRK)<LH,5LH>
C912	87-010-831-080		C-CAP,U,0.1-16F	PT81	8B-MA6-675-010		PT,SUB BMA E (VRK)<K,EZ,5EZ>
				PT81	8B-MA3-671-010		PT,SUB BMA U (VRK)<U>
C913	87-A10-189-040		CAP,E 220-10	RY1	87-A91-339-010		RELAY,AC DC12V G5PA-2<LH,5LH>
C914	87-A10-189-040		CAP,E 220-10				
C915	87-010-831-080		C-CAP,U,0.1-16F	RY81	87-A92-072-010		RELAY,AC DC12V HRM3H-S-1POLE<U>
C916	87-010-831-080		C-CAP,U,0.1-16F	RY81	87-A91-418-010		RELAY,AC12V G5PA-1-M<K,EZ,5EZ>
C917	87-010-831-080		C-CAP,U,0.1-16F	S1	87-A90-165-010		SW,SL 1-2-3 SWS2301<LH,5LH>
				T1	87-A60-317-010		TERMINAL, 1P MSC<LH,5LH>
C919	87-012-286-080		CAP, U 0.01-25	T2	87-A60-317-010		TERMINAL, 1P MSC<LH,5LH>
C920	87-010-829-080		CAP, U 0.047-16				
C921	87-012-282-080		CAP, U 4700P-50	T81	87-A60-317-010		TERMINAL, 1P MSC<K,EZ,5EZ,U>
C951	87-012-172-080		CAPACITOR CHIP U 10P CH	T82	87-A60-317-010		TERMINAL, 1P MSC<K,EZ,5EZ,U>
C952	87-010-854-080		C-CAP,S 560PCH	WH81	87-A90-510-010		HLDR,WIRE 2.5-9P<K,EZ,5EZ,U>
C953	87-012-349-080		C-CAP,S 1000P-50 CH	DECK C.B			
C961	87-010-378-040		CAP,E 10-16				
C962	87-012-336-080		CAP, CHIP U 330P SL	CN1	87-099-753-010		CONN,11P H 9604
C963	87-010-831-080		C-CAP,U,0.1-16F	SFR1	87-024-581-010		SFR,3.3K H KVSF637A
CN104	87-A60-057-010		CONN,11P V 9604S-11C	SOL1	82-ZM3-627-010		SOL ASSY,27 SO<U>
				SOL1	82-ZM3-634-110		SOL ASSY,27 OM<EXCEPT U>
CN701	87-099-720-010		CONN,30P TYK-B(P)	SOL2	82-ZM3-627-010		SOL ASSY,27 SO<U>
CN731	87-099-196-010		CONN,8P 6216 V				
FC731	88-908-301-110		FF-CABLE,8P 1.25	SOL2	82-ZM3-634-110		SOL ASSY,27 OM<EXCEPT U>
FFC104	88-911-101-110		FF-CABLE,11P 1.25	SW1	87-A90-673-010		SW,MICRO ESE11SH1C
FL901	8B-NFY-605-010		FL,HNA-08LS02	SW2	87-A90-673-010		SW,MICRO ESE11SH1C
				SW3	87-A90-673-010		SW,MICRO ESE11SH1C
L951	87-A50-655-010		COIL,CLK 4.19MHZ (TOKO)7KLY	SW4	87-A90-673-010		SW,MICRO ESE11SH1C
LED209	87-A40-317-080		LED,SLR-342VCT31 RED				
S321	87-A90-164-080		SW,TACT SKQAB(N)	SW5	87-A90-673-010		SW,MICRO ESE11SH1C
S322	87-A90-164-080		SW,TACT SKQAB(N)	W1	82-ZM3-601-010		RBN-CORD,4P-75
S323	87-A90-164-080		SW,TACT SKQAB(N)				
S324	87-A90-164-080		SW,TACT SKQAB(N)	NOTE:			
S325	87-A90-164-080		SW,TACT SKQAB(N)				310U = U
S326	87-A90-164-080		SW,TACT SKQAB(N)				310K = K
S327	87-A90-164-080		SW,TACT SKQAB(N)				310EZ = EZ
S328	87-A90-164-080		SW,TACT SKQAB(N)				310LH = LH
							315EZ = 5EZ
S329	87-A90-164-080		SW,TACT SKQAB(N)				510LH = 5LH
S330	87-A90-164-080		SW,TACT SKQAB(N)				
S331	87-A90-164-080		SW,TACT SKQAB(N)				
S332	87-A90-164-080		SW,TACT SKQAB(N)				
S333	87-A90-164-080		SW,TACT SKQAB(N)				
S334	87-A90-164-080		SW,TACT SKQAB(N)				
S341	87-A90-164-080		SW,TACT SKQAB(N)				
S342	87-A90-164-080		SW,TACT SKQAB(N)				
S343	87-A90-164-080		SW,TACT SKQAB(N)				
S344	87-A90-164-080		SW,TACT SKQAB(N)				
S345	87-A90-164-080		SW,TACT SKQAB(N)				
S346	87-A90-164-080		SW,TACT SKQAB(N)				
S347	87-A90-164-080		SW,TACT SKQAB(N)				
S348	87-A90-164-080		SW,TACT SKQAB(N)				
S349	87-A90-164-080		SW,TACT SKQAB(N)				
S350	87-A90-095-080		SW,TACT EVQ11G04M<5EZ>				
S351	87-A90-095-080		SW,TACT EVQ11G04M<5EZ>				
S352	87-A90-095-080		SW,TACT EVQ11G04M<5EZ>				
S361	87-A91-633-010		SW,RTRY XRE012103PVB25FINA 1-2				
S371	87-A91-632-010		SW,RTRY XRE012103PVB25FINB 1-2				


○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



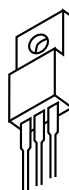
E C B

CSC4115  
CDA1585



E C B

CC5551  
2SA1981  
2SC5343  
2SA1980



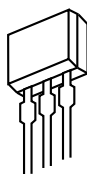
B C E

CSB1370



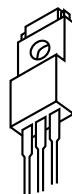
B C E

2SD2642  
2SB1686



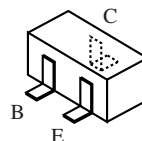
S D G

2SJ460  
2SK2541



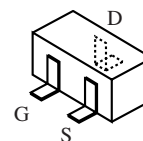
G D S

2SK2937



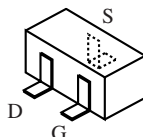
B E C

2SA1235 DTC114YKA  
2SC2714 KRA102S  
2SC3052 KRA107S  
CMBT5401 KRC102S  
CMBT5551 KRC104S  
CSD1306 KRC107S



G S D

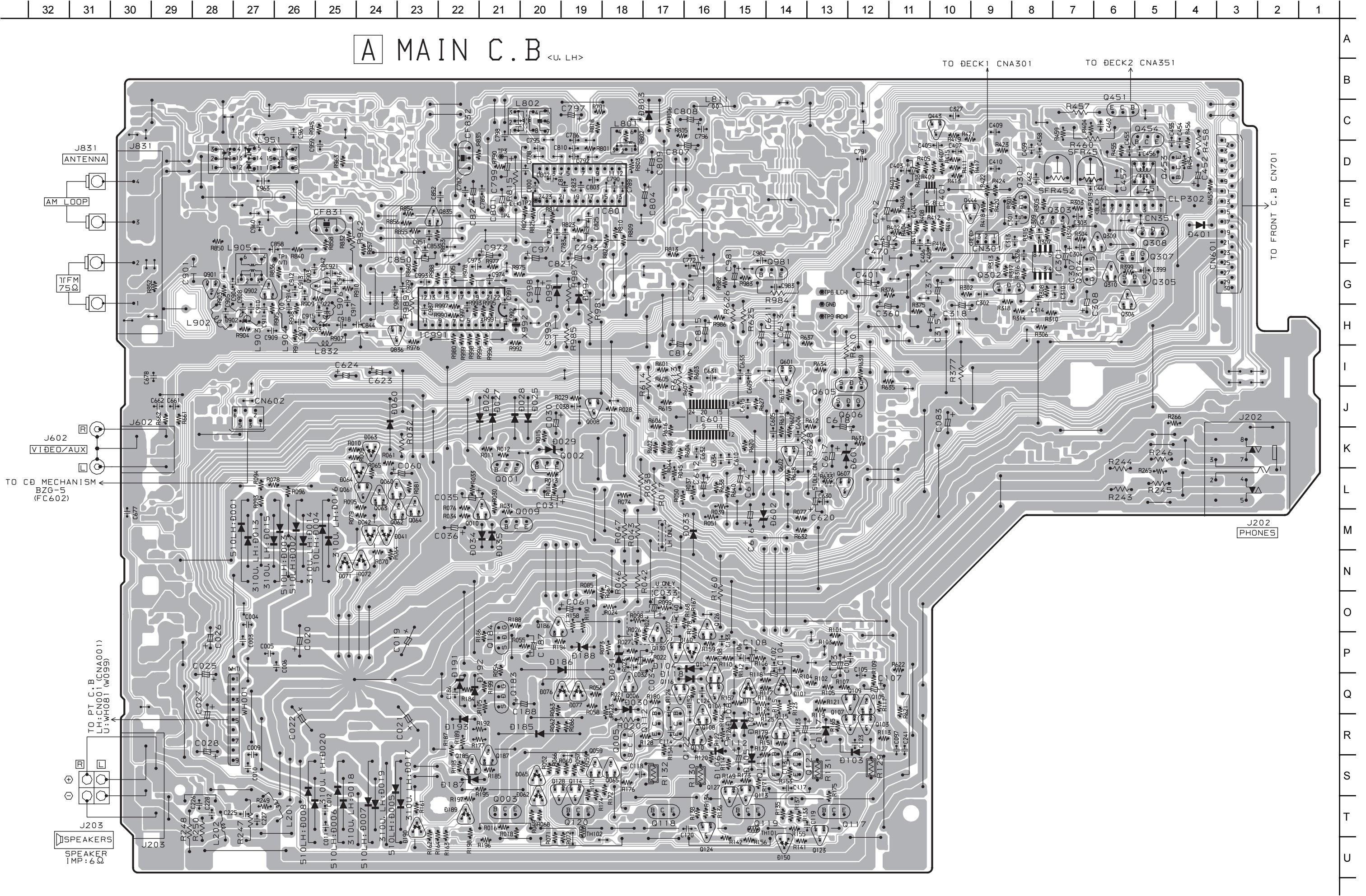
2SK2158



S D G

2SK360E



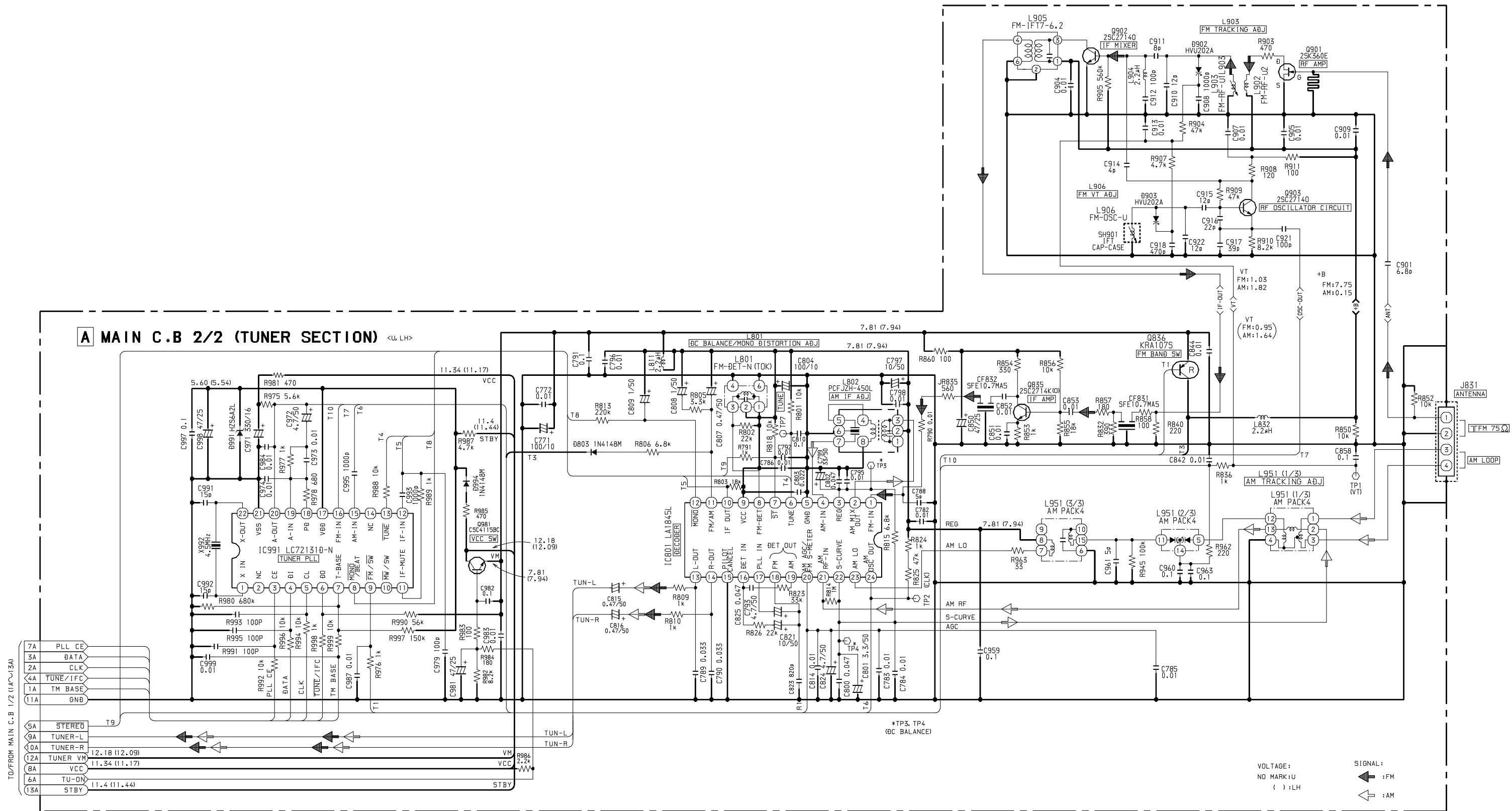


**A MAIN C.B 1/2** <U LH>



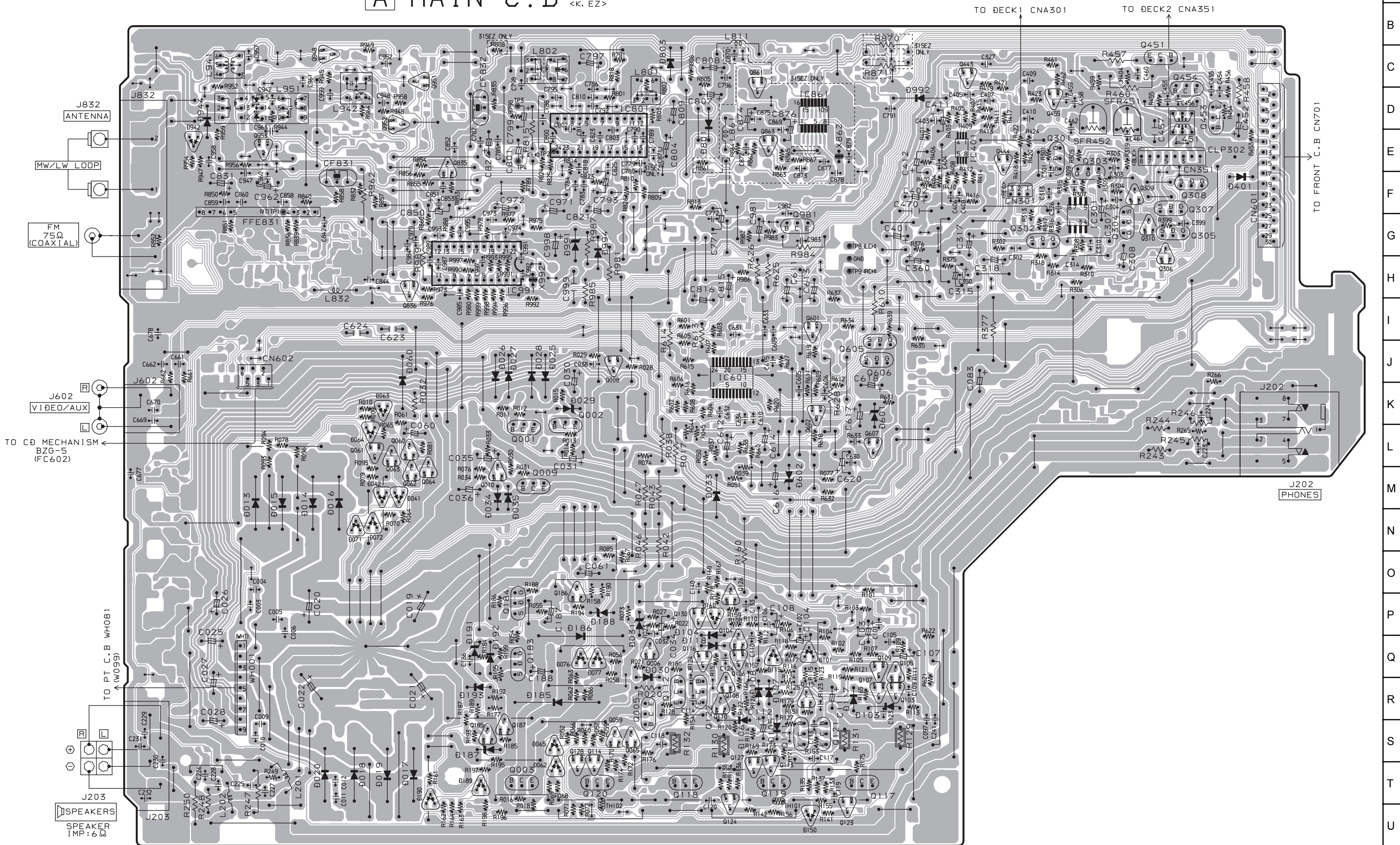
VOLTAGE :  
NO MARK : U  
( ) : LH

SCHEMATIC DIAGRAM-2 (U, LH: MAIN 2/2: TUNER)



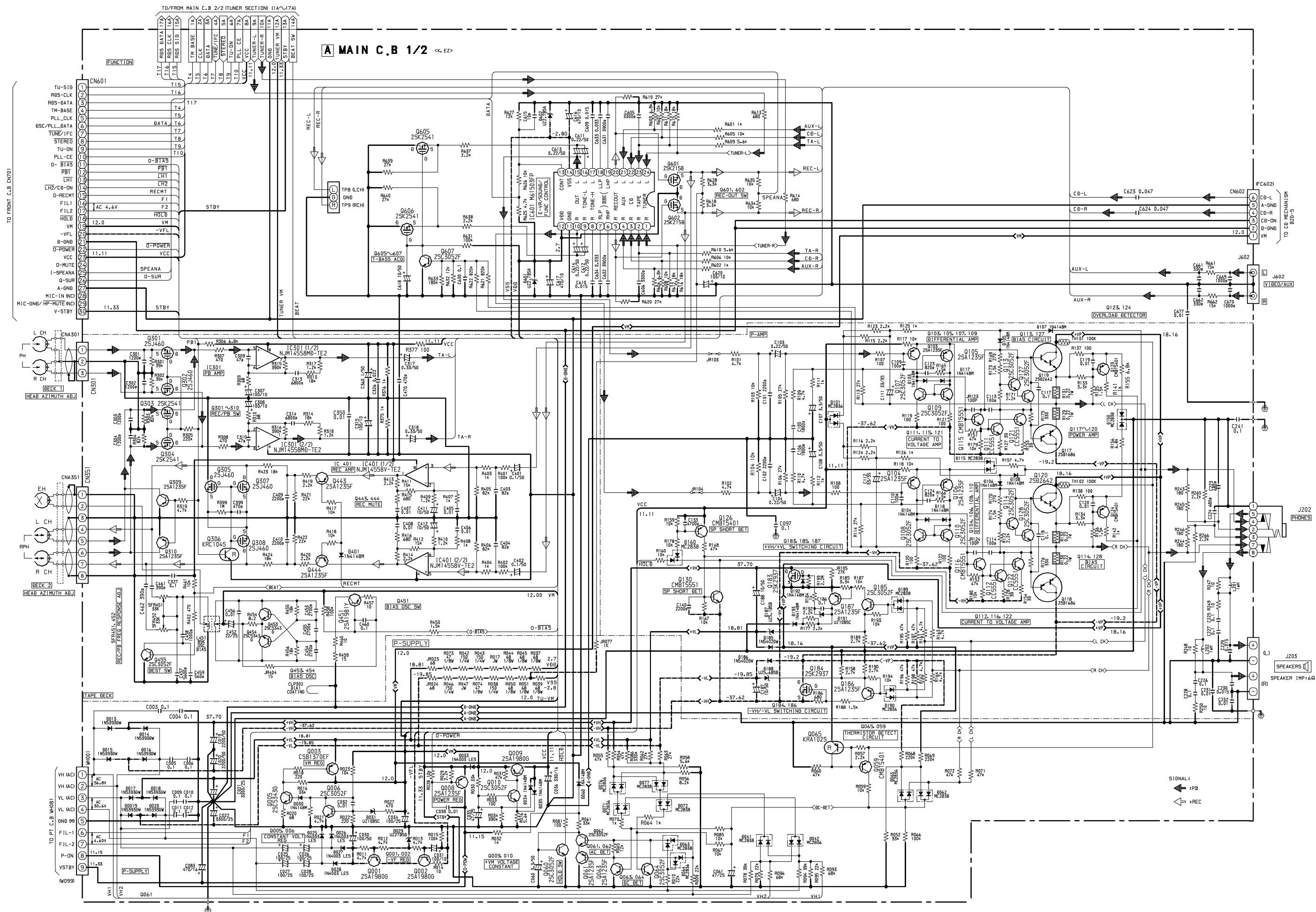


A MAIN C.B. <K, EZ>

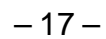




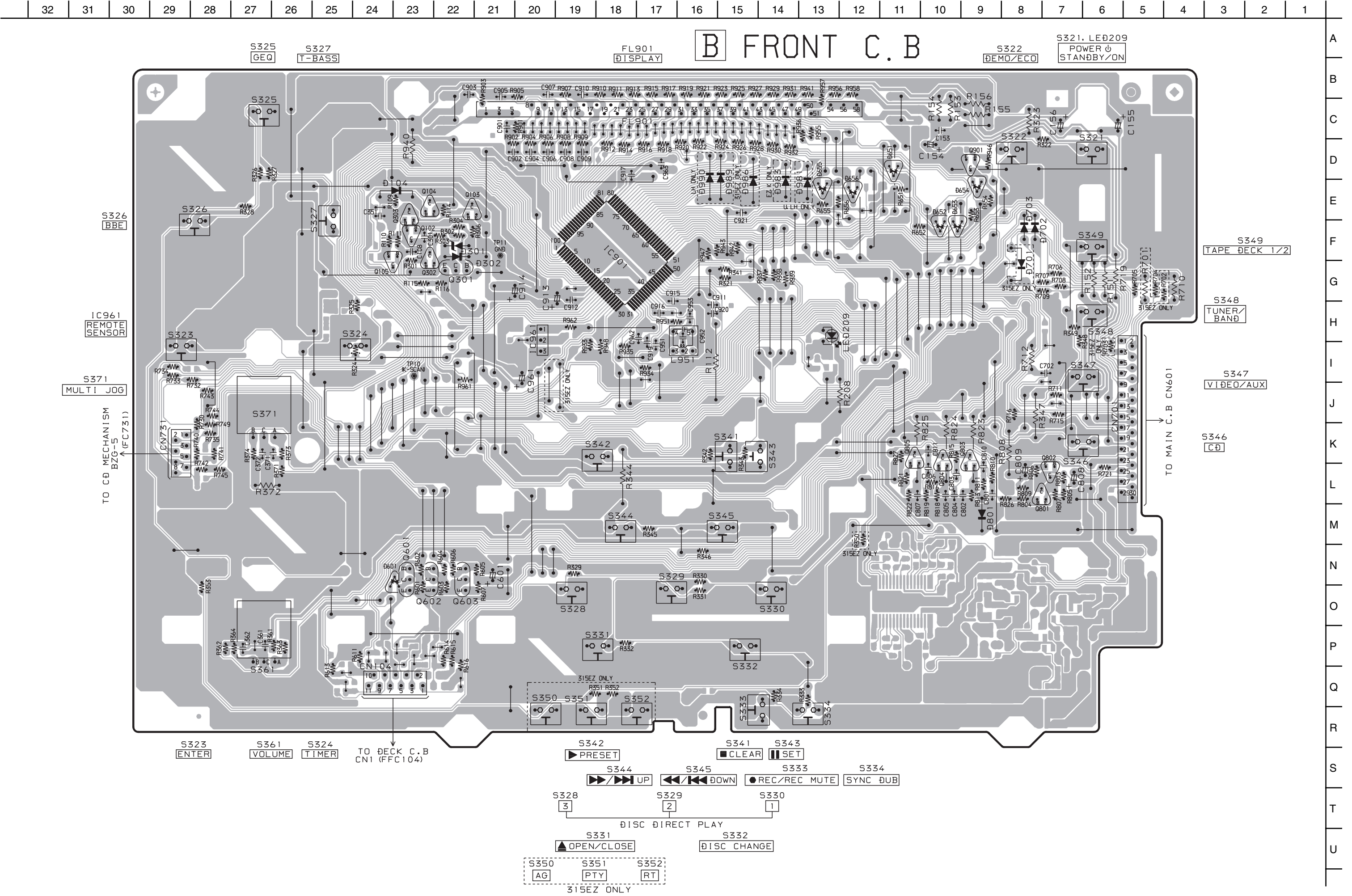
SCHEMATIC DIAGRAM – 3 (K, EZ : MAIN 1/2)



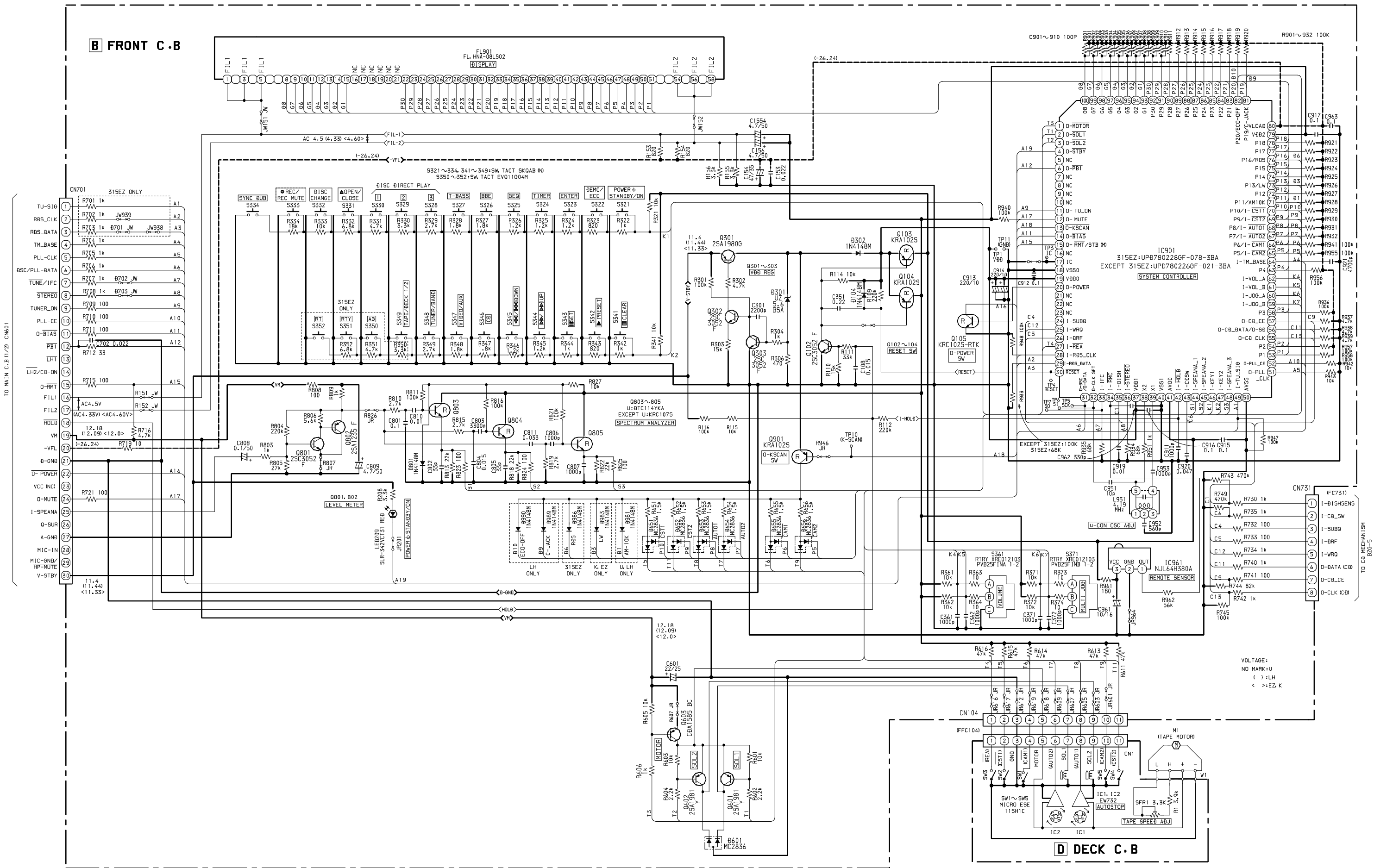
TO/FROM MAIN C B 1 1/2 (UAC-J7A)



WIRING – 3 (FRONT)



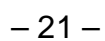
### SCHEMATIC DIAGRAM – 5 (FRONT / DECK)



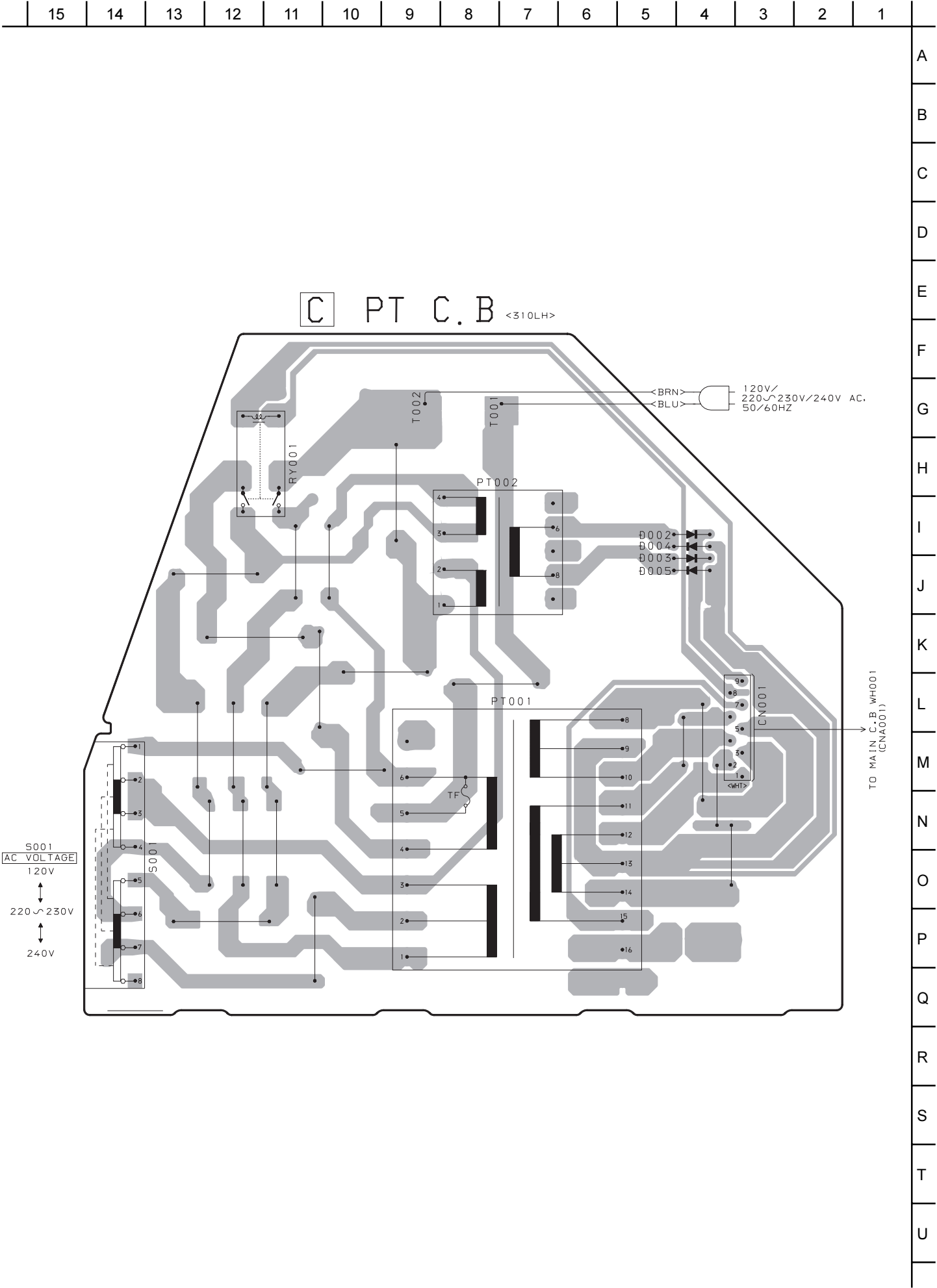
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
----	----	----	----	----	----	---	---	---	---	---	---	---	---	---	--



## TO MAIN C.B (1/2) WH001

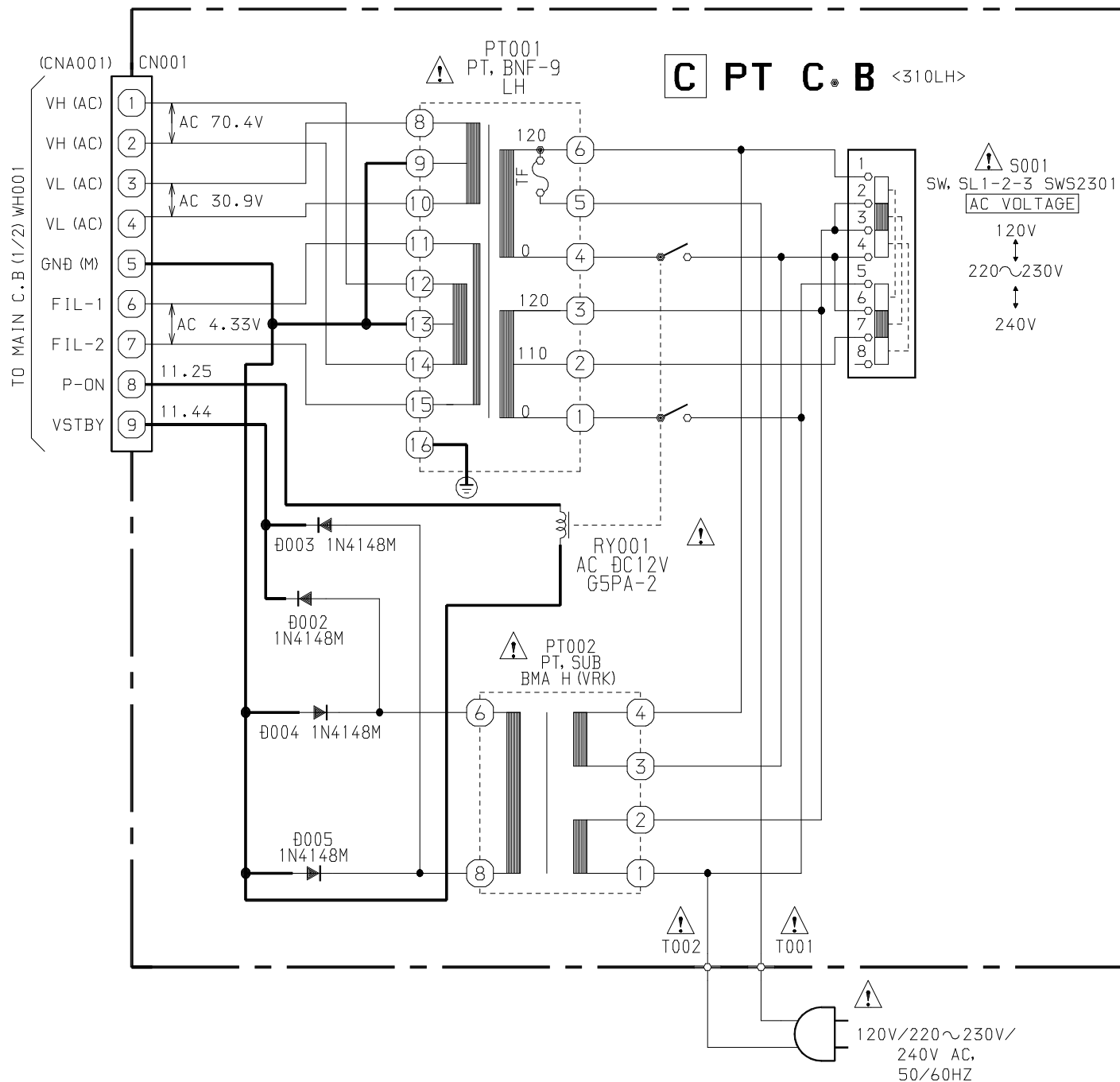


WIRING – 5 (310LH : PT)





# SCHEMATIC DIAGRAM – 7 (310 LH: PT)



15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	
															A
															B
															C
															D
															E
															F
															G
															H
															I
															J
															K
															L
															M
															N
															O
															P
															Q
															R
															S
															T
															U

120V/  
220~230V/240V AC,  
50/60HZ

C PT C.B <510LH>

RY001

T002

T001

B002

B004

B003

B005

PT002

PT001

TF

CN001

S001

AC VOLTAGE

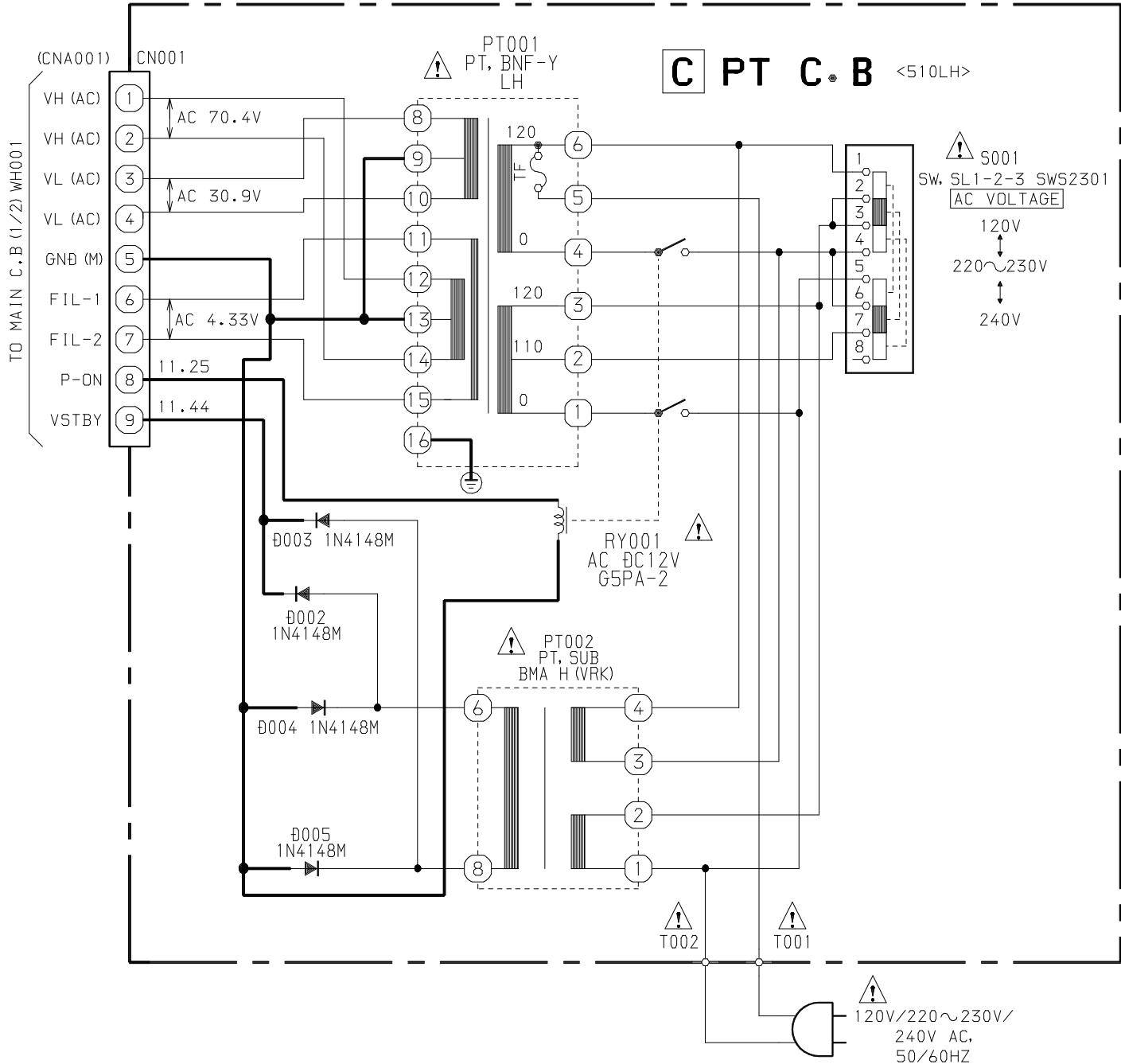
120V

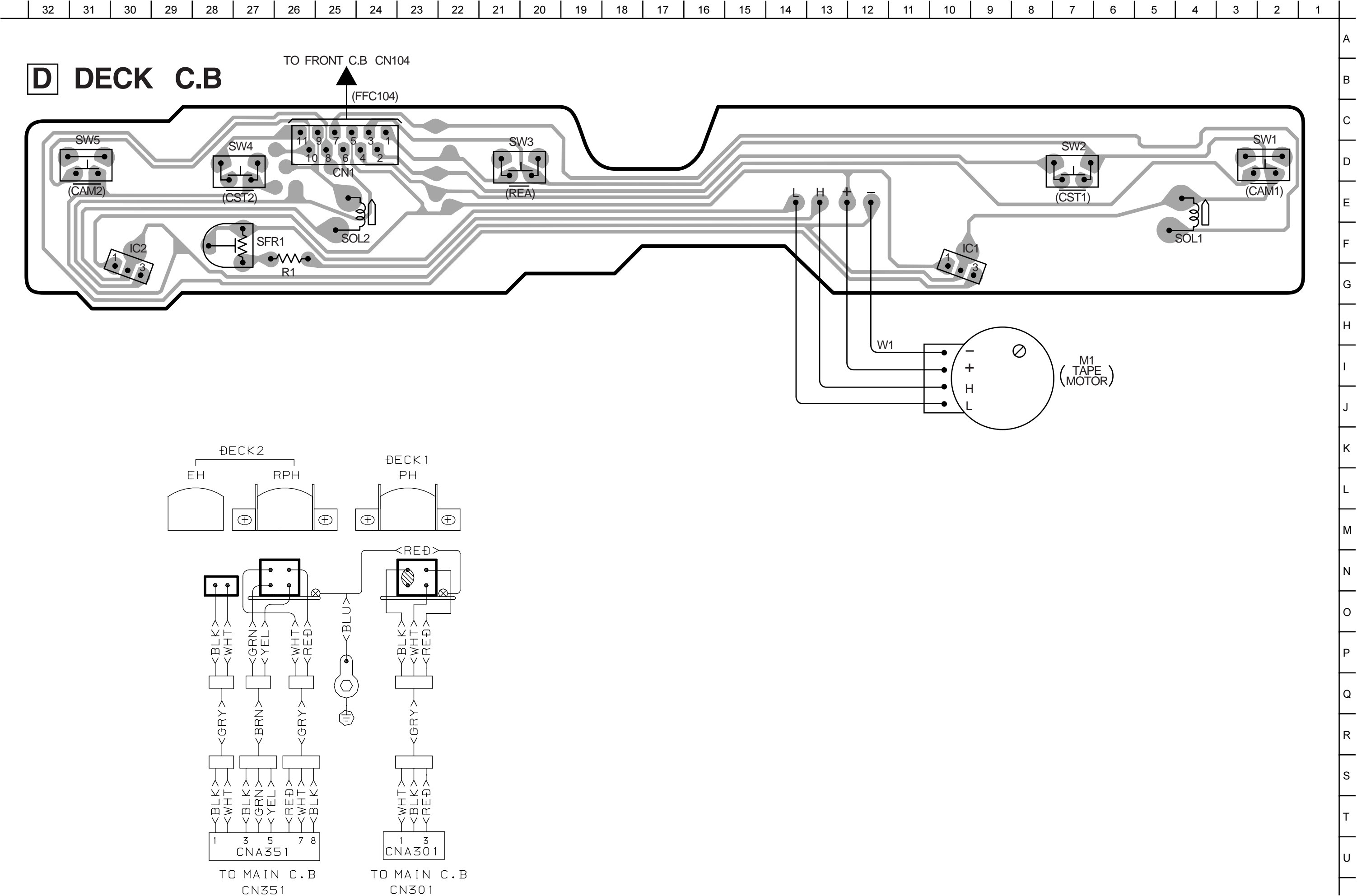
220~230V

240V

TO MAIN C.B. WH001  
(CN0001)

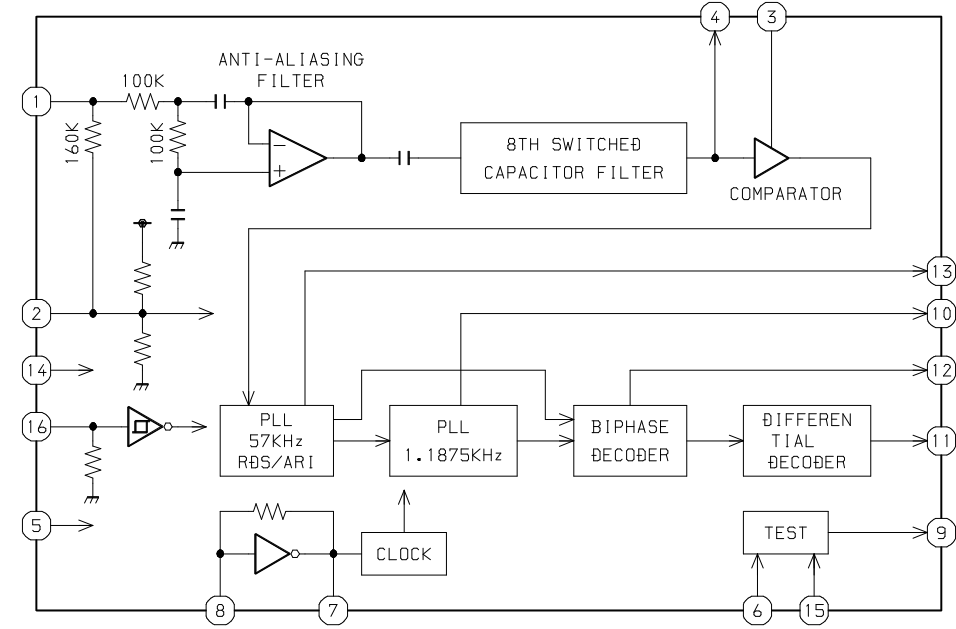
SCHEMATIC DIAGRAM – 8 (510 LH : PT)



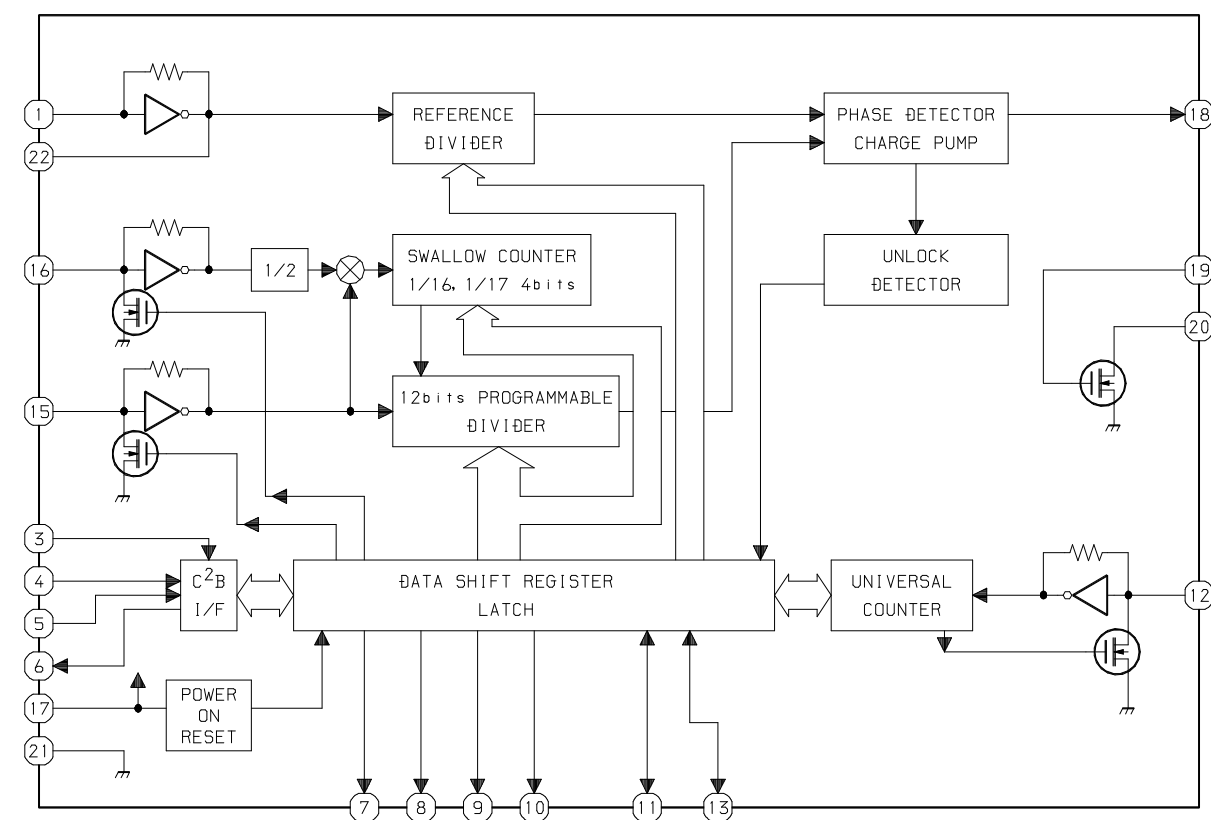


IC BLOCK DIAGRAM

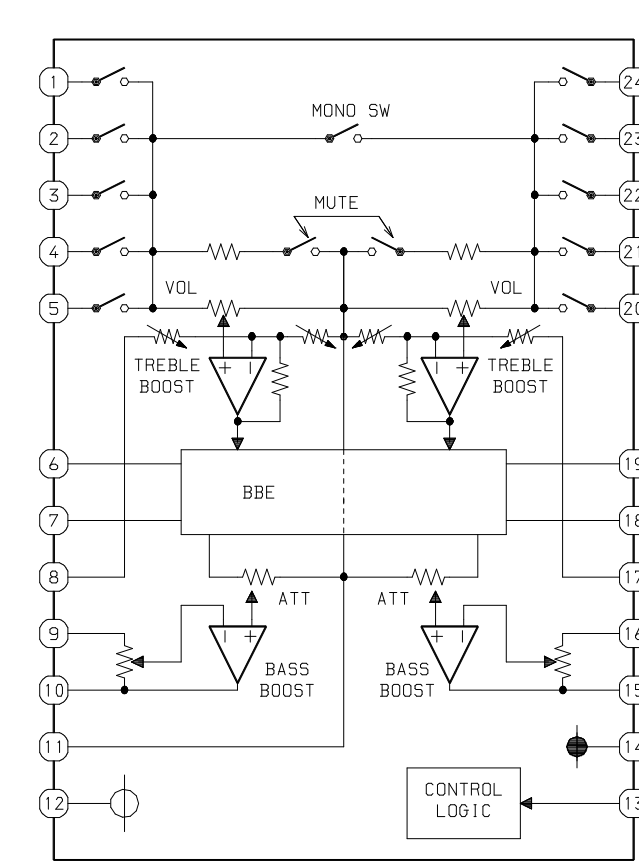
IC, BU1920FS



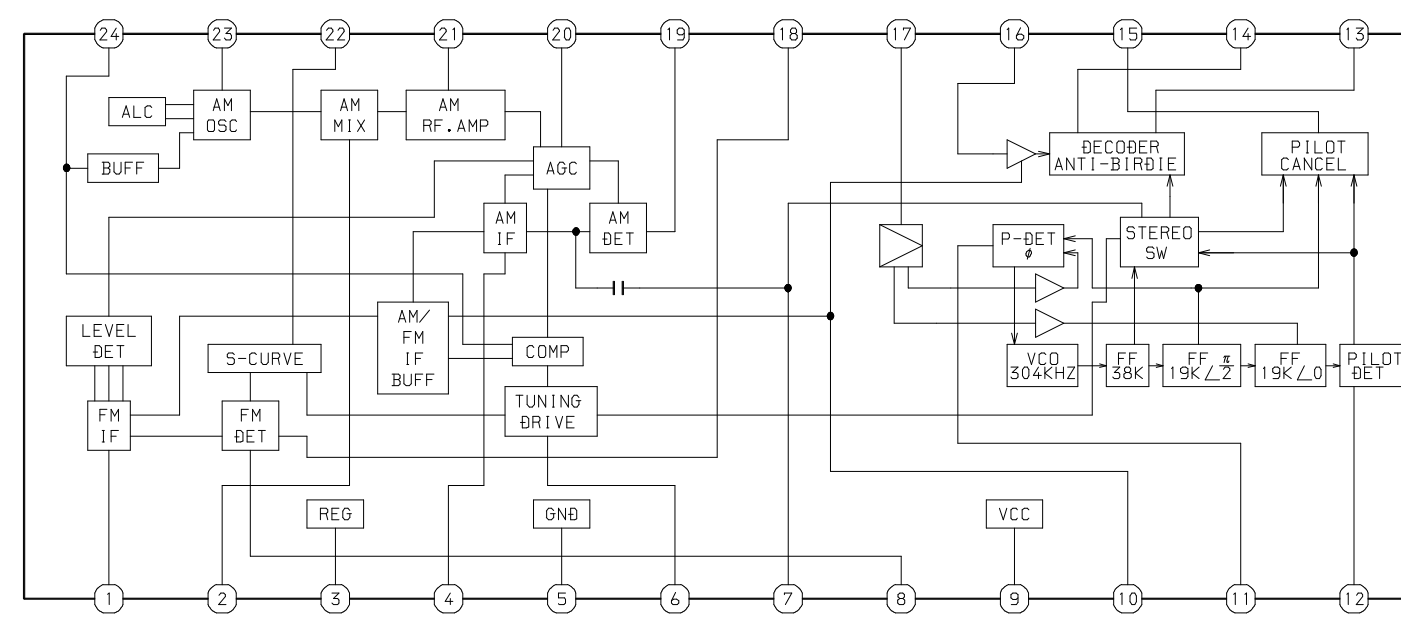
IC, LC72131D-N



IC, M61503FP

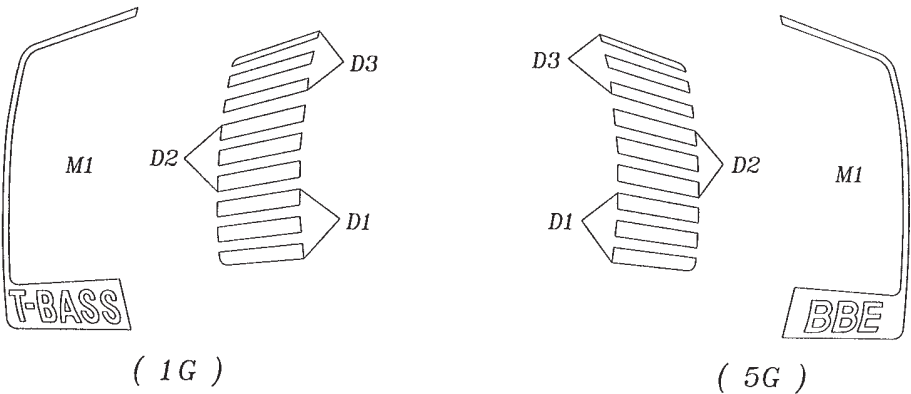
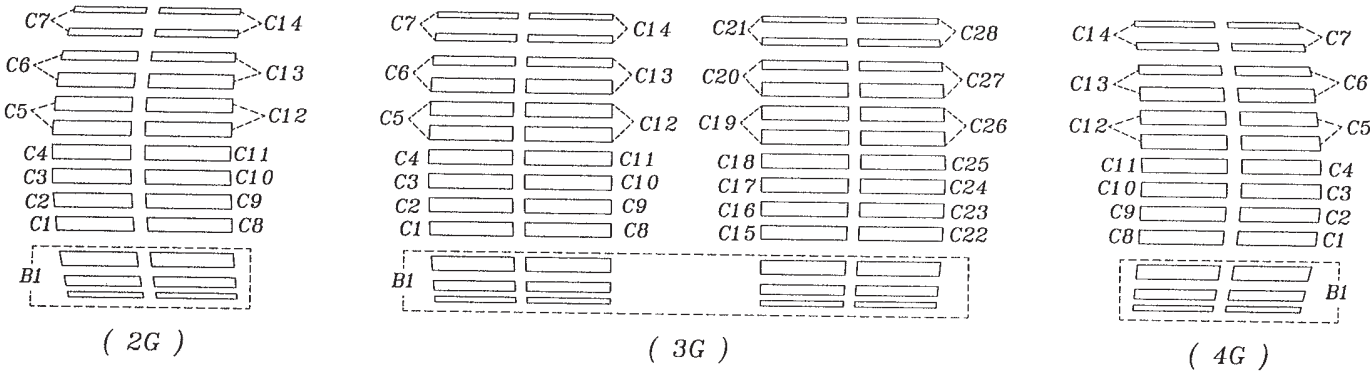
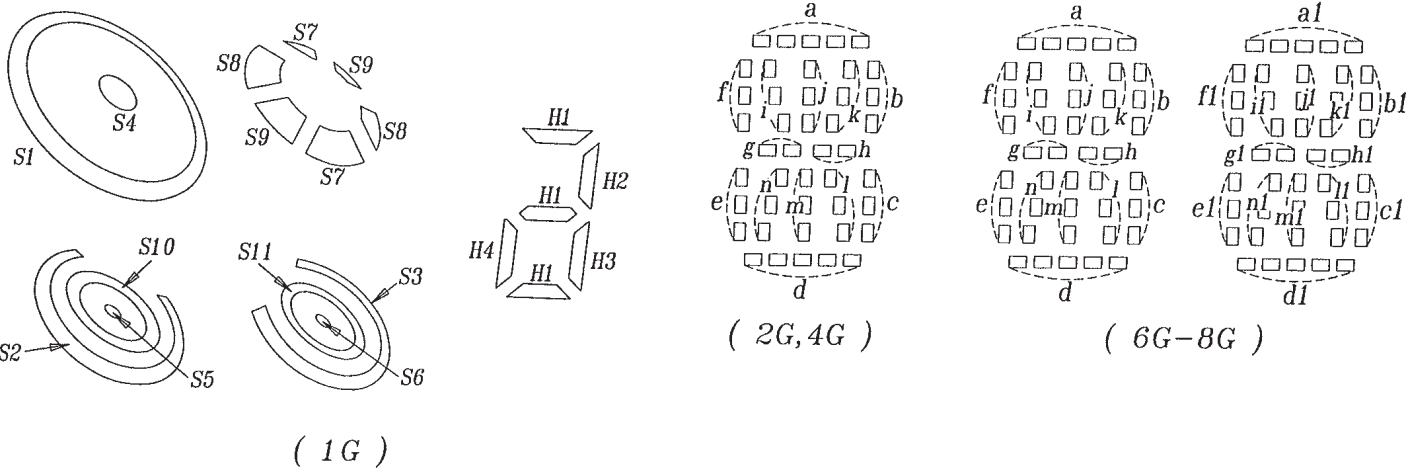
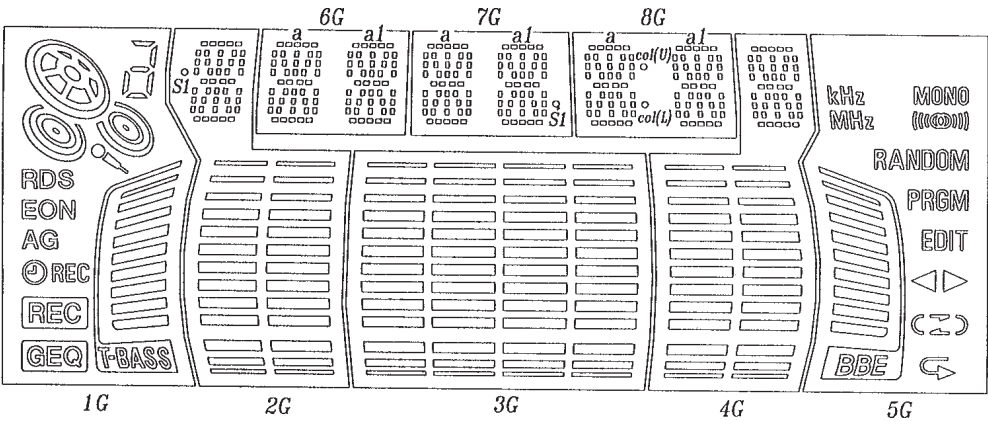


IC, LA1845L



FL (HNA-08LS02) GRID ASSIGNMENT / ANODE CONNECTION

GRID ASSIGNMENT



# ANODE CONNECTION

	1G	2G	3G	4G	5G	6G	7G	8G
P1		C1	C1	C1	—	a	a	a
P2	M1	C2	C2	C2	M1	i	i	i
P3	D1	C3	C3	C3	D1	j	j	j
P4	D2	C4	C4	C4	D2	k	k	k
P5	D3	C5	C5	C5	D3	b	b	b
P6	AG	C6	C6	C6	Ⓒ	f	f	f
P7	EON	C7	C7	C7	≡	h	h	h
P8	RDS	C8	C8	C8	⌋	g	g	g
P9		C9	C9	C9	◁	c	c	c
P10	REC	C10	C10	C10	▷	e	e	e
P11		C11	C11	C11	—	n	n	n
P12		C12	C12	C12	EDIT	m	m	m
P13	S1	C13	C13	C13	PRGM	l	l	l
P14	S2	C14	C14	C14	RANDOM	d	đ	d
P15	S3	B1	C15	B1	MONO	a1	a1	a1

	1G	2G	3G	4G	5G	6G	7G	8G
P16	S4	a	C16	a		i1	i1	i1
P17	S5	i	C17	i	—	j1	j1	j1
P18	S6	j	C18	j	MHz	k1	k1	k1
P19	S7	k	C19	k	kHz	b1	b1	b1
P20	S8	b	C20	b		f1	f1	f1
P21	S9	f	C21	f	—	h1	h1	h1
P22	S10	h	C22	h	—	g1	g1	g1
P23	S11	g	C23	g	—	c1	c1	c1
P24	H1	c	C24	c	—	e1	e1	e1
P25	H2	e	C25	e	—	n1	n1	n1
P26	H3	n	C26	n	—	m1	m1	m1
P27	H4	m	C27	m	—	l1	l1	l1
P28	—	l	C28	l	—	d1	d1	d1
P29	—	d	B1	d	—	—	S1	col(U)
P30	—	S1	—	—	—	—	—	col(L)



## IC DESCRIPTION

IC,  $\mu$ PD780226GF-021-3BA <EXCEPT 315EZ>, IC,  $\mu$ PD780228GF-078-3BA <315EZ>

Pin No.	Pin Name	I/O	Description
1	O-MOTOR	O	DECK MOTOR $\overline{\text{ON}}$ /OFF output.
2	O-SOL1	O	DECK1 solenoid $\overline{\text{ON}}$ /OFF output.
3	O-SOL2	O	DECK2 solenoid $\overline{\text{ON}}$ /OFF output.
4	O-STBY	O	STANDBY LED (Echo mode) output ( $\overline{\text{ON}}$ /OFF).
5	NC	–	Not connected.
6	O-PB1	O	DECK1 playback switch output ( $\overline{\text{ON}}$ /OFF).
7	NC	–	Not connected.
8	NC	–	Not connected.
9	NC	–	Not connected.
10	NC	–	Not connected.
11	O-TU_ON	O	TUNER ON/ $\overline{\text{OFF}}$ switch output.
12	O-MUTE	O	System MUTE ON/ $\overline{\text{OFF}}$ output.
13	O-KSCAN	O	Switch SCAN timing output.
14	O-BIAS	O	DECK2 BIAS $\overline{\text{ON}}$ /OFF output.
15	O-RMT/STB(M)	O	DECK2 REC MUTE $\overline{\text{ON}}$ /OFF output.
16	NC	–	Not connected.
17	IC	–	Internal connection (connected to GND).
18	VSS0	–	GND.
19	VDD0	–	Power supply.
20	O-POWER	O	System power supply ON/ $\overline{\text{OFF}}$ output.
21	NC	–	Not connected.
22	NC	–	Not connected.
23	NC	–	Not connected.
24	I-SUBQ	I	CD SUBQ data input.
25	I-WRQ	I	CD interrupt signal input.
26	I-DRF	I	CD focus ON detect data input.
27	I-REA	I	DECK2 sideA record OK switch data input.
28	I-RDS_CLK	I	Tuner RDS clock input <315EZ only>.
29	I-RDS_DATA	I	Tuner RDS data input <315EZ only>.
30	$\overline{\text{RESET}}$	–	System reset input ( $\overline{\text{ON}}$ /OFF).
31	O-DSC/O-DATA	O	Function IC/Tuner IC, DATA output.
32	O-CLK_SFT	O	MICON clock shift output.
33	I-IFC	I	Tune IF count serial data input.
34	I-RMC	I	System remote control signal input.
35	I-DISH	I	CD turntable photo sensor input A/D converter input.
36	I-STEREO	I	Tuner STEREO detect input.
37	VDD1	–	Power supply.
38	X2	–	4.19MHz oscillator circuit.
39	X1	–	4.19MHz oscillator circuit.
40	VSS1	–	GND.
41	AVDD	–	Power supply.
42	I-HOLD	I	Power failure detected input.
43	I-CDSW	I	CD mecha switch A/D converter input.

Pin No.	Pin Name	I/O	Description
44	I-SPEANA_1	I	A/D input for spectrum analyser level display.
45	I-SPEANA_2	I	A/D input for spectrum analyser level display.
46	I-KEY1	I	Key A/D input 1.
47	I-KEY2	I	Key A/D input 2.
48	I-SPEANA_3	I	A/D input for spectrum analyser level display.
49	I-TU_SIG	I	Tuner signal input <315EZ only>.
50	AVSS	–	GND.
51	O-PLL_CLK	O	PLL IC clock enable output.
52	O-PLL_CE	O	PLL IC chip enable output.
53, 54	P1, P2	O	FL segment P1, P2 output.
55	O-CD_CLK	O	CD clock output.
56	O-CD_DATA/O-SD	O	CD data output.
57	O-CD_CE	O	CD chip enable output.
58	P3	O	FL segment P3 output.
59	I-JOG_B	I	Dial jog rotary encoder input B.
60	I-JOG_A	I	Dial jog rotary encoder input A.
61	I-VOL_B	I	Volume rotary encoder input B.
62	I-VOL_A	I	Volume rotary encoder input A.
63	P4	O	FL segment P4 output.
64	I-TM_BASE	I	Base input for clock.
65	P5/I-CAM2	O/I	FL segment P5 output / DECK2 CAM switch data input.
66	P6/I-CAM1	O/I	FL segment P6 output / DECK1 CAM switch data input.
67	P7/I-AUTO2	O/I	FL segment P7 output / DECK2 AUTO STOP switch data input.
68	P8/I-AUTO1	O/I	FL segment P8 output / DECK1 AUTO STOP switch data input.
69	P9/I-CST2	O/I	FL segment P9 output / DECK2 cassette detect switch data input.
70	P10/I-CST1	O/I	FL segment P10 output / DECK1 cassette detect switch data input.
71	P11/AM10K	O/I	FL segment P11 output / AM10K input to diode <LH, U only>.
72	P12	O	FL segment P12 output.
73	P13/LW	O/I	FL segment P13 output / LW input to diode <K, EZ only>.
74, 75	P14, P15	O	FL segment P14, P15 output.
76	P16/RDS	O/I	FL segment P16 output / RDS input to diode <315EZ only>.
77, 78	P17, P18	O	FL segment P17, P18 output.
79	VDD2	–	Power supply.
80	VLOAD	–	Power supply for FL display.
81	P19/C-JACK	O/I	FL segment P19 output / C-JACK data input <LH only>.
82	P20/ECO-OFF	O/I	FL segment P20 output / ECO-OFF data input <LH only>.
83 ~ 92	P21 ~ P30	O	FL segment P21 ~ P30 output.
93 ~ 100	G1 ~ G8	O	FL grid G1 ~ G8 output.

## ADJUSTMENT (TUNER / DECK / FRONT)

### < TUNER SECTION > <U, LH>

1. Clock Frequency Check  
Settings : • Test point : TP2 (CLK)  
Method : Set to AM 1710kHz and check that the test point is 2160kHz  $\pm$  45Hz.
2. AM VT Check  
Settings : • Test point : TP1 (VT)  
Method : Set to AM 1710kHz and check that the test point is less than 8.5V. Then set to AM 530kHz and check that the test point is more than 0.6V.
3. AM Tracking Adjustment  
Settings : • Test point : TP8 (Lch), TP9 (Rch)  
• Adjustment location : L951 (1/3)  
Method : Set to AM 1000kHz and adjust L951 (1/3) so that the test point becomes maximum.
4. AM IF Adjustment  
Settings : • Test point : TP8 (Lch), TP9 (Rch)  
• Adjustment location :  
L802 ..... 450kHz
5. FM VT Adjustment.  
Settings : • Test point : TP1 (VT)  
• Adjustment location : L906  
Method : Set to FM 108.0MHz and adjust L906 so that the test point becomes 7.0V  $\pm$  0.1V. Then set to FM 87.5MHz and check that the test point is more than 0.4V.
6. FM Tracking Adjustment  
Settings : • Test point : TP8 (Lch), TP9 (Rch)  
• Adjustment location : L903  
Method : Set to FM 87.5MHz and adjust L903 so that the test point is less than 9dB $\mu$ V.
7. DC Balance / Mono Distortion Adjustment  
Settings : • Test point : TP3, TP4 (DC balance)  
TP8 (Lch), TP9 (Rch)  
(Mono Distortion)  
• Adjustment location : L801  
• Input level : 60dB $\mu$ V  
Method : Set to FM 98.0MHz and adjust L801 so that the distortion is less than 1.2%. Then check the voltage between TP3 and TP4 is 0V  $\pm$  500mV.
8. Output Level Check  
<AM>  
Settings : • Test point : TP8 (Lch), TP9 (Rch)  
• Input level : 74dB $\mu$ V  
Method : Set to AM 1000kHz and check that the test point is 40mV  $\pm$  3dB.  
  
<FM>  
Settings : • Test point : TP8 (Lch), TP9 (Rch)  
• Input level : 60dB $\mu$ V  
Method : Set to FM 98.0MHz and check that the test point is 200mV  $\pm$  3dB.
9. FM Separation Check  
Settings : • Test point : TP8 (Lch), TP9 (Rch)  
• Input level : 60dB $\mu$ V  
Method : Set to FM 98.0MHz and check that the test point is more than 25dB.

< TUNER SECTION > <EZ, K>

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 531kHz and check that the test point is more than 0.6V.
3. MW Tracking Adjustment
 

Settings : • Test point : TP8 (Lch), TP9 (Rch)

• Adjustment location : L951 (1/3)

Method : Set to MW 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  $\pm$  0.05V. Then set to LW 290kHz and check that the test point is less than 8.0V.
5. LW Tracking Adjustment
 

Settings : • Test point : TP8 (Lch), TP9 (Rch)

• Adjustment location :

L941 ..... 144kHz

TC942 ..... 290kHz

Method : Set up TC942 to center before adjustment. The level at 144kHz is adjusted to MAX by L941. Then the level at 290kHz is adjusted to MAX by TC942.
6. AM IF Adjustment
 

Settings : • Test point : TP8 (Lch), TP9 (Rch)

• Adjustment location :

L802 ..... 450kHz
7. 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.
8. 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 13dB $\mu$ V.
9. DC Balance / Mono Distortion Adjustment
 

Settings : • Test point : TP3, TP4 (DC balance)

TP8 (Lch), TP9 (Rch)

(Mono Distortion)

• Adjustment location : L801

• Input level : 60dB $\mu$ V

Method : Set to FM 98.0MHz and adjust L801 so that the distortion is less than 1.2%. Then check the voltage between TP3 and TP4 is 0V  $\pm$  500mV.
10. Output Level Check
 

<MW>

Settings : • Test point : TP8 (Lch), TP9 (Rch)

• Input level : 74dB $\mu$ V

Method : Set to MW 999kHz and check that the test point is 40mV  $\pm$  3dB.

<FM>

Settings : • Test point : TP8 (Lch), TP9 (Rch)

• Input level : 60dB $\mu$ V

Method : Set to FM 98.0MHz and check that the test point is 140mV  $\pm$  3dB.
11. FM Separation Check
 

Settings : • Test point : TP8 (Lch), TP9 (Rch)

• Input level : 60dB $\mu$ V

Method : Set to FM 98.0MHz and check that the test point is more than 12dB.

## < DECK SECTION >

### 1. Tape Speed Adjustment (DECK 2)

Settings : • Test tape : TTA-100  
 • Test point : TP8(Lch), TP9(Rch)  
 • Adjustment location : SFR1

Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000 Hz  $\pm$  5 Hz (FWD) and FWD speed  $\pm$  45 Hz (REV) with respect to forward speed.

### 2. 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 8 kHz 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 : TP8(Lch), TP9(Rch)

Method : Play back the 315 Hz and 8 kHz signals of the test tape and check that the output ratio of the 8 kHz signal with respect to that of the 315 Hz signal is 0 dB  $\pm$  5 dB.

### 4. 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 110 mV  $\pm$  3 dB.

### 5. REC/PB Frequency Response Adjustment (DECK 2)

Settings : • Test tape : TTA-602  
 • Test point : TP8(Lch), TP9(Rch)  
 • Input signal : 1 kHz / 8 kHz (LINE IN) (-20VU)  
 • Adjustment location : SFR451 (Lch)  
 SFR452 (Rch)

Method : Apply a 1 kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP8, TP9 becomes 0 dB (10 mV). Record and play back the 1 kHz and 8 kHz signals and adjust SFRs so that the output of the 8 kHz signals becomes 0 dB  $\pm$  1 dB with respect to that of the 1 kHz signal.

### 6. REC/PB Sensitivity Check (DECK 2)

Settings : • Test tape : TTA-602  
 • Test point : TP8(Lch), TP9(Rch)  
 • Input signal : 1 kHz (LINE IN) (0VU)

Method : Apply a 1 kHz signal and REC mode. Then adjust OSC attenuator so that the output level at TP8, TP9 becomes 0 dB (100 mV). Record and play back the 1 kHz signals and check that the output is -1 dB  $\pm$  3.5 dB.

## < FRONT SECTION >

### 7. $\mu$ -CON OSC Adjustment

Settings : • Test point : TP10 (K-SCAN)  
 TP11 (GND)  
 • Adjustment location : L951

Method : Insert AC plug while pressing POWER key and TUNER BAND key. Connect a frequency counter across TP10 and TP11. Then adjust L951 so that the frequency at the test point is 112.88 Hz  $\pm$  0.11 Hz.

## 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.

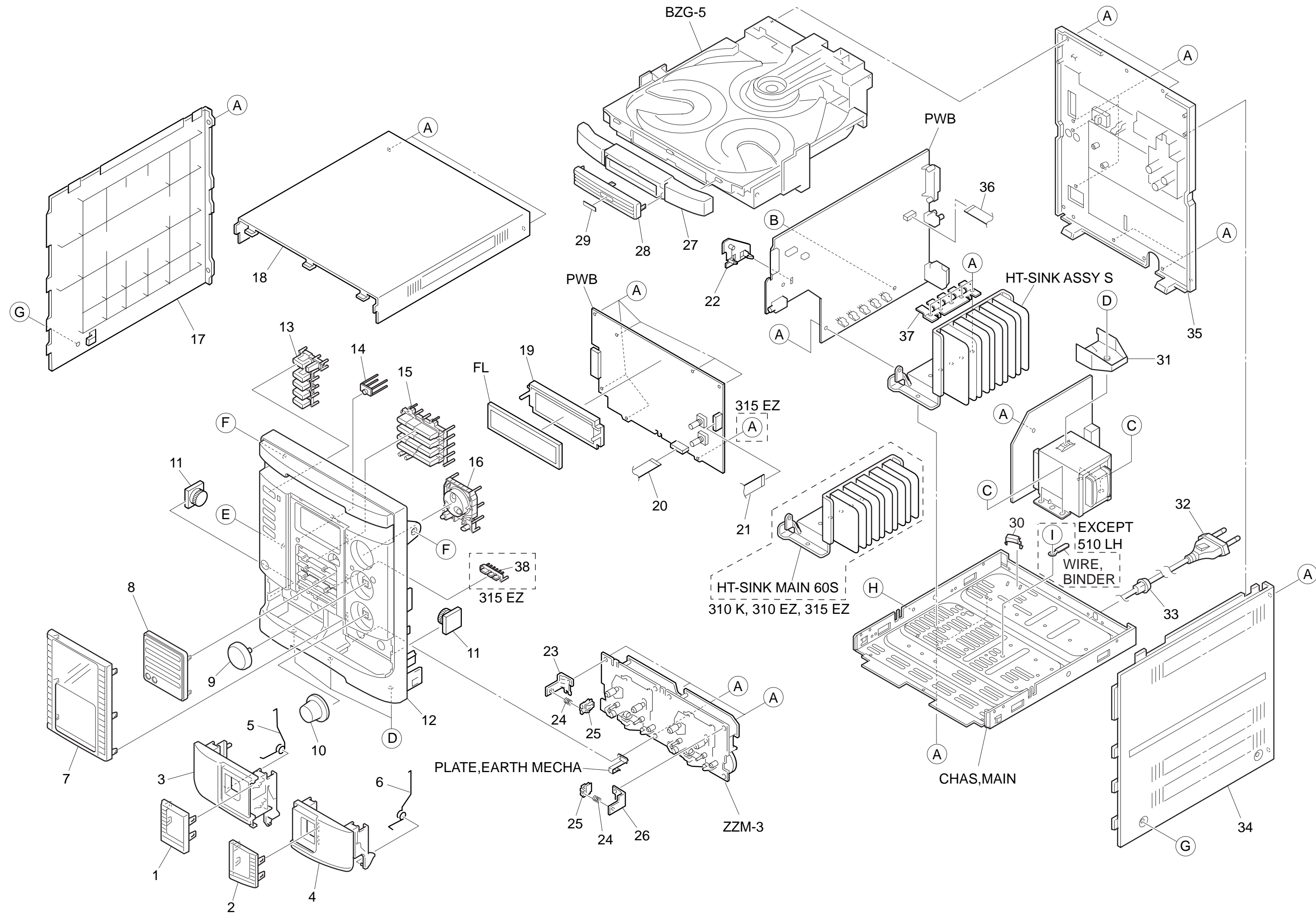
\* When any key other than PLAY is pressed during play mode, the machine exits the test mode.

### 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	REC/REC MUTE 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 cannot 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.



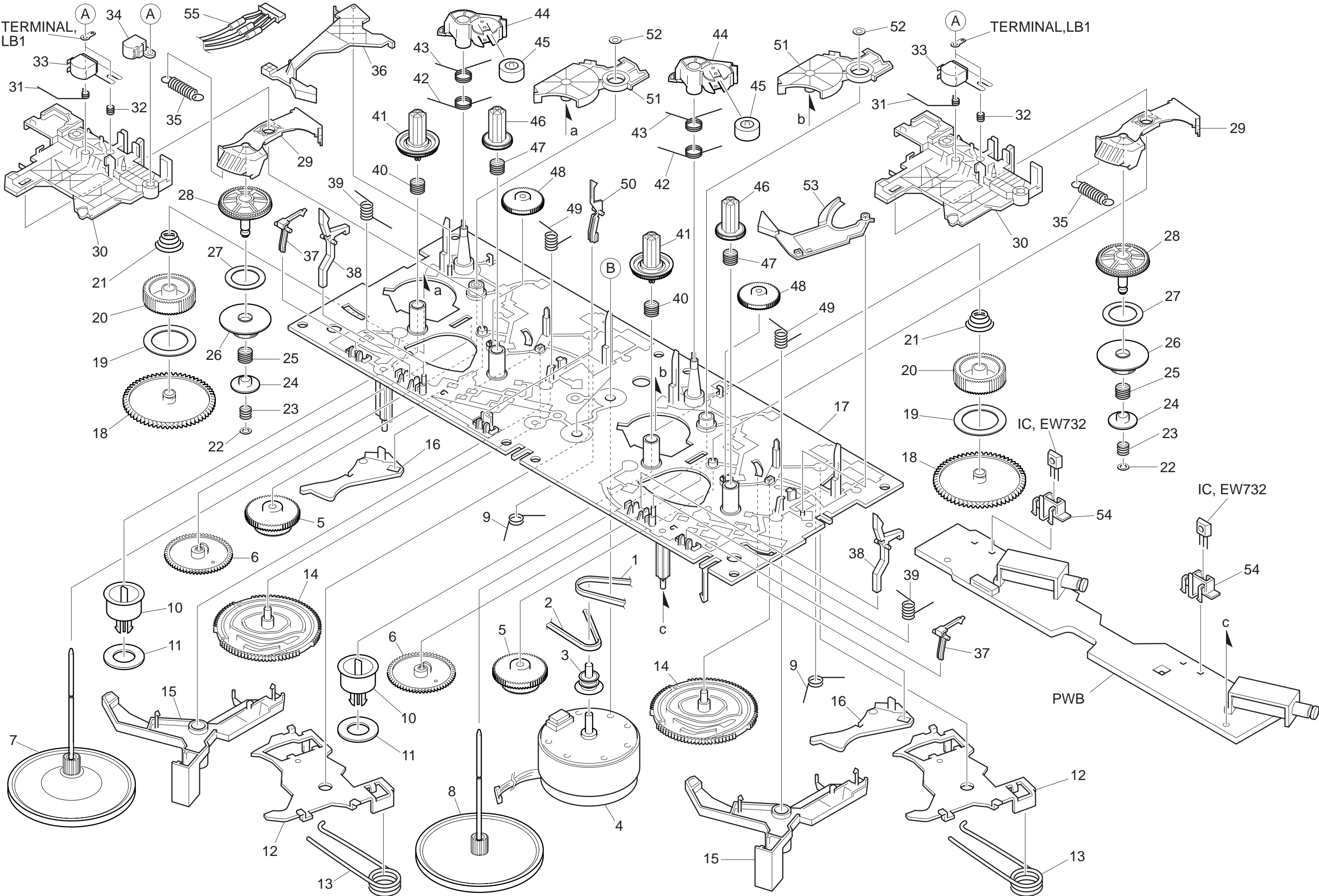


# MECHANICAL PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NFY-008-010		WINDOW,CASS 2	26	87-NF4-217-110		HLDR,LOCK 2
2	8B-NFY-007-010		WINDOW,CASS 1	27	8B-NFY-002-010		PANEL,TRAY
3	8B-NFY-004-010		BOX,CASS 2	28	8B-NFY-017-110		PANEL,CD
4	8B-NFY-003-010		BOX,CASS 1	29	87-CE3-023-010		BADGE,AIWA 30N SILV
5	8A-NF8-281-010		SPR-T,EJECT 1	30	87-NF4-221-010		HLDR,CABLE
6	8A-NF8-282-010		SPR-T,EJECT 2	31	8A-NF9-211-010		HLDR,PWB PT HI<EXCEPT 510LH>
7	8B-NFY-005-010		WINDOW,DISP U	31	8A-NF7-225-010		HLDR,PWB PT 85S<510LH>
8	8B-NFY-006-010		PANEL,FR<310U>	32	87-A80-157-010		AC CORD ASSY,E BLK CC<EXCEPT 310U>
8	8B-NFY-038-010		PANEL,FR 510<510LH>	32	87-A80-149-010		AC CORD ASSY,U BLK<310U>
8	8B-NFY-021-010		PANEL,FR E RDS<315EZ>	33	87-085-185-010		BUSHING, AC CORD (E)<EXCEPT 310U>
8	8B-NFY-023-010		PANEL,FR HR<310LH,310K,310EZ>	33	87-A91-422-010		BUSHING,AC CORD(U)<310U>
9	8B-NFY-014-010		KNOB,RTRY JOG	34	8B-NF9-025-010		PANEL,RIGHT
10	8B-NFY-015-010		KNOB,RTRY VOL	35	8B-NFY-059-010		CABI,REAR EZSFD<310EZ>
11	8Z-NF6-210-010		DMPR,150 N	35	8B-NFY-061-010		CABI,REAR EZSFD RDS<315EZ>
12	8B-NFY-022-010		CABI,FR EZ RDS<315EZ>	35	8B-NFY-058-010		CABI,REAR KSFD<310K>
12	8B-NFY-019-010		CABI,FR LH<EXCEPT 315EZ,310U>	35	8B-NFY-057-010		CABI,REAR LHSFD<310LH>
12	8B-NFY-001-010		CABI,FR U<310U>	35	8B-NFY-060-010		CABI,REAR LHSFD 510<510LH>
13	8B-NFY-012-010		KEY,FUN	35	8B-NFY-048-010		CABI,REAR USM<310U>
14	8B-NFY-036-010		REFLECTOR,ECO	36	88-906-251-110		FF-CABLE,6P 1.25(RVS-FACE)
15	8B-NFY-010-010		KEY,OPE 1W	37	8B-NF9-211-010		HLDR,TR S
16	8B-NFY-013-010		KEY,GEQ	38	8B-NFY-018-010		KEY,RDS<315EZ>
17	8B-NF9-026-010		PANEL,LEFT	A	87-067-703-010		TAPPING SCREW, BVT2+3-10
18	8B-NF9-027-010		PANEL,TOP	B	87-NF4-224-010		S-SCREW,IT3B+3-8 CU
19	8B-NFY-201-010		GUIDE,FL 100-40 BNFY	C	87-078-200-010		S-SCREW,ITC+4-8 R
20	88-911-101-110		FF-CABLE,11P 1.25	D	87-067-689-010		TAPPING SCREW, BVTT+3-8
21	88-908-301-110		FF-CABLE,8P 1.25	E	87-723-096-410		QT2+3-10W/O SLOT BL
22	8A-NF8-206-010		HLDR,PWB M	F	87-721-097-410		QT2+3-12 GLD
23	87-NF4-216-010		HLDR,LOCK 1	G	87-067-641-010		UTT2+3-8(W/O SLOT)BL
24	86-NF9-224-010		SPR-C,LOCK	H	87-721-096-410		QT2+3-10 GLD
25	82-NF5-229-010		PLATE,LOCK	I	87-067-584-010		BVT2+3-6 W/O SLOT<EXCEPT 510LH>

## COLOR NAME TABLE

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



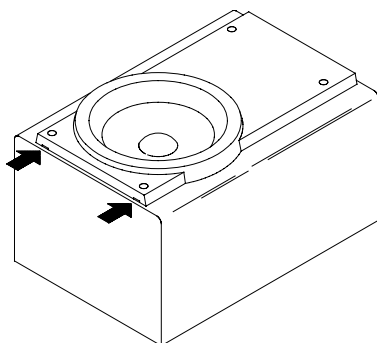
# TAPE MECHANISM PARTS LIST 1 / 1

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION	REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8Z-ZM3-227-010		BELT,MAIN M3	31	8Z-ZM3-233-010		SPR-T,BRG M3
2	8Z-ZM3-235-010		BELT,MAIN L	32	84-ZM2-227-310		SPR-C,AZIMUTH
3	8Z-ZM1-235-010		PULLEY,MOT	33	87-A90-403-110		HEAD,RPH MS15R
4	87-045-347-010		MOT,SHU2L 70	34	87-A90-404-010		HEAD,EH LE15B
5	8Z-ZM1-232-010		GEAR,IDL FF/REW	35	8Z-ZM3-239-010		SPR-E,FR
6	8Z-ZM3-244-010		GEAR,CAM TD20	36	8Z-ZM3-211-010		LEVER,EJECT R
7	8Z-ZM3-256-010		FLY-WHL ASSY,M3 R	37	8Z-ZM3-225-010		LEVER,STOP
8	8Z-ZM3-255-010		FLY-WHL ASSY,M3 L	38	8Z-ZM3-221-010		LEVER,CAS
9	8Z-ZM3-231-010		SPR-T,TRIG	39	8Z-ZM3-234-010		SPR-T,LVR CAS
10	8Z-ZM3-213-010		CLR,MG	40	8Z-ZM3-223-010		SPR-C,REEL R M3
11	82-ZM3-616-010		RING MAGNET 4	41	8Z-ZM1-225-110		GEAR,REEL R
12	8Z-ZM3-243-010		LEVER ASSY,HD UP	42	8Z-ZM3-240-010		SPR-T,T-UP M3
13	8Z-ZM3-238-010		SPR-T,HD UP	43	8Z-ZM3-237-010		SPR-T,PINCH M3
14	8Z-ZM3-219-010		GEAR,CAM M3	44	8Z-ZM3-215-010		LEVER,PINCH M3
15	8Z-ZM3-206-010		LEVER,TRIG	45	8Z-ZM1-261-110		ROLLER ASSY,PINCH
16	8Z-ZM3-209-010		LEVER,CAM FR	46	8Z-ZM1-226-010		GEAR,REEL L
17	8Z-ZM3-203-010		CHAS ASSY,M3	47	8Z-ZM3-222-010		SPR-C,REEL L M3
18	8Z-ZM1-228-010		GEAR,SLIP T-UP B	48	8Z-ZM3-251-010		GEAR,IDL REW M3
19	8Z-ZM1-265-010		FELT,T-UP	49	8Z-ZM3-236-010		SPR-T,PLAY M3
20	8Z-ZM1-227-010		GEAR,SLIP T-UP A	50	82-ZM1-240-110		LVR,REC(*)
21	8Z-ZM1-251-110		SPR-C,T-UP SLIP	51	8Z-ZM3-216-010		LEVER,T-UP M3
22	8Z-ZM1-275-010		W-L,1,47-4-0.25	52	87-B10-301-010		W-L,1.63-3.2-05 SLIT
23	8Z-ZM1-257-010		SPR-C,F/R	53	8Z-ZM3-212-010		LEVER,EJECT L
24	8Z-ZM1-236-010		CLR,SLIP FF/REW	54	8Z-ZM3-214-010		HLDR,IC
25	8Z-ZM3-226-010		SPR-C,FR M3	55	86-ZM3-605-110		CONN ASSY,8P -RPB
26	8Z-ZM3-250-010		GEAR,SLIP F/R A M3	A	84-ZM2-242-010		S-SCREW,AZ1-2-6.4
27	8Z-ZM1-269-010		FELT,FF/REW 2	B	8Z-ZM2-220-110		V+2.6 ZZM-2
28	8Z-ZM1-238-110		GEAR,SLIP FF/REW B 2				
29	8Z-ZM3-220-010		LEVER,FR M3				
30	8Z-ZM3-205-010		LEVER,PLAY M3				

## GENERAL SPEAKER DISASSEMBLY INSTRUCTIONS (FOR REFERENCE)

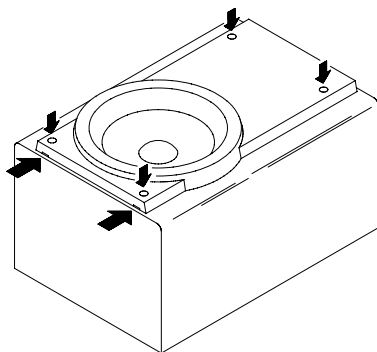
### Type.1

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



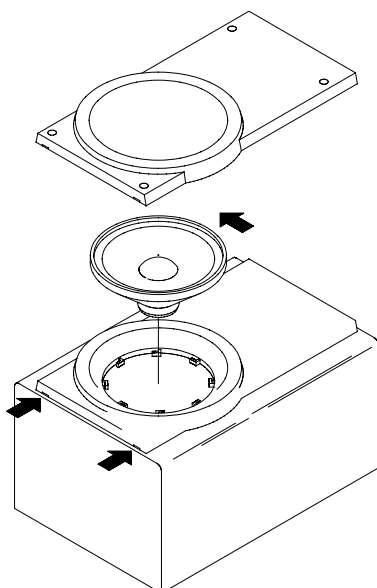
### Type.2

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

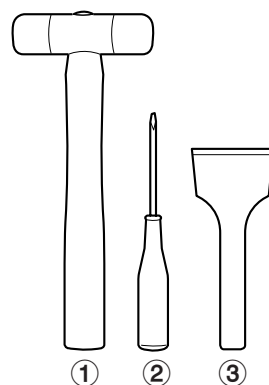


### Type.3

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



### Type.4



### TOOLS

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

### How to Remove the PANEL, FR

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

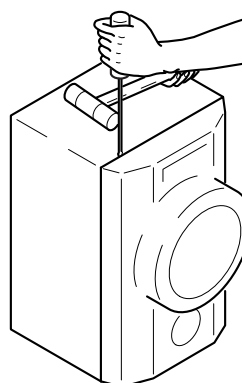


Fig-1

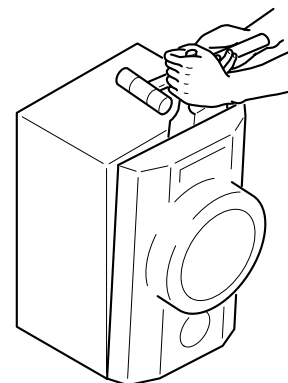


Fig-2

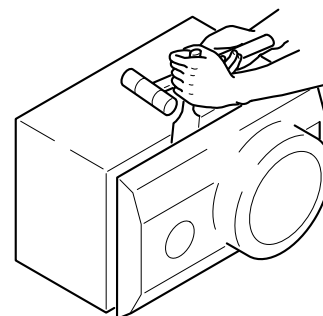


Fig-3

### How to Attach the PANEL, FR

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

## SPEAKER PARTS LIST <SX-NAJ312 (YUS1N, YUSN) / SX-NSZ312 (YLSC, YSC)>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NSY-001-010		PANEL, FR
2	8B-NSY-003-010		PANEL, TW
3	8B-NSY-009-010		PROTECTOR, TW
4	8B-NSY-010-010		SPKR, CERAMIC ASSY
5	8B-NSY-005-010		GRILLE, FRAME ASSY
6	8B-NSY-602-010		SPKR, W 140/30<YLSC, YUS1N, YUSN>
6	8B-NSY-604-010		SPKR, W 140/25<YSC>
7	8B-NSK-604-010		SPKR, T 60<YLSC, YUS1N, YUSN>
7	8B-NSY-606-010		SPKR, TW 60L<YSC>
8	8B-NSY-610-010		CORD, SPKR

## SPEAKER PARTS LIST <SX-NSZ702 (YLSC)>

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NSJ-001-010		PANEL, FR
2	8B-NSJ-003-010		PANEL, DUCT
3	8B-NSJ-004-010		PROTECTOR
4	8A-NSJ-006-010		BADGE, AIWA S35
5	8B-NSJ-606-010		SPKR, W 160 35/4
6	8B-NSJ-604-010		SPKR, TW 60
7	8B-NSJ-612-010		CORD, SPKR

## ACCESSORIES / PACKAGE LIST

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	8B-NFY-913-010		IB, U (ESF) M<310U>
1	8B-NFY-922-010		IB, LH (ESP) IN<310LH, 510LH>
1	8B-NFY-925-010		IB, K (E) IN<310K>
1	8B-NFY-936-010		IB, EZ (9L) IN-SZ315 (RDS) <315EZ>
1	8B-NFY-937-010		IB, EZ (9L) IN<310EZ>
2	87-A90-118-010		ANT, WIRE FM(Z) <310K, 310EZ, 315EZ>
2	87-043-115-010		FEEDER-ANT, FM<310U, 310LH, 510LH>
3	87-A92-150-010		ANT, LOOP AM NO-CONT
4	8Z-NF9-702-010		RC UNIT, ZAS02
△	5	87-A91-017-010	PLUG, CONVERSION JT-0476<310LH, 510LH>
△	6	87-099-811-010	PLUG, ADPTR CONV (K) <310K>

アイワ株式会社 〒110-8710 東京都台東区池之端1-2-11 ☎03(3827)3111 (代表)  
**AIWA CO.,LTD.** 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110, JAPAN TEL:03 (3827) 3111