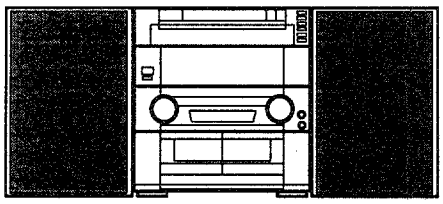
aiwa

aiwa SERVICE

# Z-R770
# Z-R774
# Z-R775



COMPACT DISC STEREO
CASSETTE RECEIVER

- BASIC TAPE MECHANISM : 6ZM-3 PR2NM
- BASIC CD MECHANISM : 6ZG–1 S2DSHNM
- TYPE : LH,U

| SYSTEM | SPEAKER | STEREO TURNTABLE | CD – CASSEIVER | REMOTE CONTROLLER |
|---|---|---|---|---|
| Z–R770 (TYPE : LH) | SX–FZR77 | – | CX – ZR770 | RC–7AS01 |
| Z–R774 (TYPE : U) | SX–ZR77 SX–R286 | – | CX – ZR774 | |
| Z–R775 (TYPE : U) | SX–ZR77 | PX–E855 | | |

- If requiring information about the CD mechanism, see Service Manual of 6ZG-1, S/M Code No. 09-984-249-90T.
- If requiring information about the Stereo turntable, see Service Manual of original. S/M Code No. 09-984-264-30I.

S/M Code No. 09–985–257–5FE

SERVICE MANUAL

# TABLE OF CONTENTS

# SPECIFICATIONS

**<FM Tuner section>**

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

**<AM Tuner section>**

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

**<Amplifier section>**

| | |
|---|---|
| **Power output** | LH :<br>100 W + 100 W<br>(6 ohms, T.H.D. 10 %, 1 kHz)<br>U :<br>100 W + 100 W<br>(50 Hz – 20 kHz, THD less than 1%, 6 ohms) |
| **Total harmonic distortion** | 0.15 % (50 W, 1 kHz, 6 ohms) |
| **Inputs** | VIDEO/AUX : 210 mV (adjustable)<br>PHONO : 350 mV (47 kohms)<br>MIC 1, MIC 2 : 1.4 mV (20 kohms) |
| **Outputs** | CD DIGITAL OUT (OPTICAL)<br>SUPER WOOFER : 2.5V<br>SPEAKERS: accept speakers of 6 ohms or more<br>SURROUND SPEAKERS : accept speakers of 8 ohms to 16 ohms or more<br>PHONES (stereo jack) : accepts headphones of 32 ohms or more |

**<Cassette deck section>**

| | |
|---|---|
| **Track format** | 4 tracks, 2 channels stereo |
| **Frequency response** | 50 Hz – 15000Hz |
| **Recording system** | AC bias |
| **Heads** | Deck 1 : Playback head x 1<br>Deck 2 : Recording/playback/ erase head x 1 |

**<Compact disc player section>**

| | |
|---|---|
| **Laser** | Semiconductor laser (λ =780 nm) |
| **D-A converter** | 1 bit dual |
| **Signal-to-noise ratio** | 85 dB (1 kHz, 0 dB) |
| **Harmonic distortion** | 0.03% (1 kHz, 0 dB) |
| **Wow and flutter** | Unmeasurable |

**<Speaker system SX-FZR77> (LH only)**

| | |
|---|---|
| **Cabinet type** | 3 way, bass reflex with surround speaker |
| **Speakers** | Woofer :<br>220 mm cone type<br>Tweeter :<br>80 mm cone type<br>Super tweeter :<br>20 mm ceramic type<br>Surround speaker : 80mm |
| **Impedance** | Front speaker : 6 ohms<br>Surround speaker : 8 ohms |
| **Output sound pressure level** | 90 dB/W/m |
| **Dimensions (W x H x D)** | 290 x 444 x 320 mm |
| **Weight** | 5.5 kg |

**<Speaker system SX-ZR77> (U only)**

| | |
|---|---|
| **Cabinet type** | 3 way, bass reflex (magnetic shielded type) |
| **Speakers** | Woofer :<br>220 mm ($8^3/_4$ in.) cone type<br>Tweeter:<br>60 mm ($2^3/_8$ in.) cone type<br>Super tweeter:<br>20 mm ($^{13}/_{16}$ in.) ceramic type |
| **Impedance** | 6 ohms |
| **Output sound pressure level** | 89 dB/W/m |
| **Dimensions (W x H x D)** | 280 x 444 x 272 mm<br>($11\ ^1/_8$ x $17\ ^1/_2$ x $10\ ^3/_4$ in.) |
| **Weight** | 4.5 kg (9 lbs 15oz) |

**<General>**

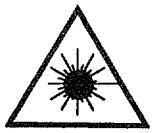
| | |
|---|---|
| **Power requirements** | LH :<br>120 V/ 220 – 230 V/ 240 V AC, switchable ,50 / 60 Hz<br>U : 120V AC,60Hz |
| **Power consumption** | LH : 140W<br>U : 110W |
| **Dimensions of main unit (W x H x D)** | 360 x 394.5 x 382.5 mm<br>($14^1/_4$ X $15\ ^5/_8$ X $15\ ^1/_8$ in.) |
| **Weight of main unit** | 9.5 kg (20lbs 15oz) |

•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 laserståling 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.

**VARNING!**
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling 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 laserståling ved åbning, når sikkerhedsafbrydereer 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.

| | |
|---|---|
| CLASS 1 | LASER PRODUCT |
| KLASSE 1 | LASER PRODUKT |
| LUOKAN 1 | LASER LAITE |
| KLASS 1 | LASER APPARAT |

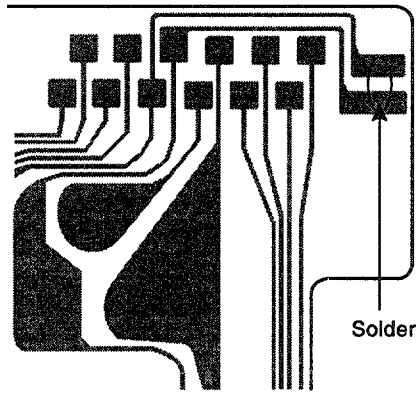
## Precaution to replace Optical block

## (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, the 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 1 V or less using a multimeter or an oscilloscope.

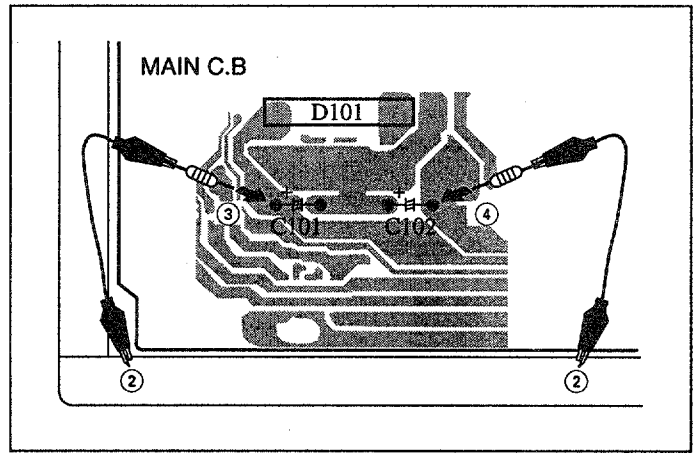



Fig-1

Select a discharging resistor referring to the following table.

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

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

## 2. Check items before exchanging the MICROCOMPUTER

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

### 2-1. Regarding the HOLD terminal of the MICROCOMPUTER

When the HOLD terminal (INPUT) of the MICROCOMPUTER is "H", the MICROCOMPUTER is judged to be operating correctly. When this terminal is "L", the main power cannot be turned on. Therefore, be sure to check the terminal voltage of the HOLD terminal before exchange.
When the MICROCOMPUTER is not defective, the HOLD terminal can also go "L" when the POWER AMPLIFIER has any abnormalities that triggers the abnormality detection circuit on the MAIN C. B. that sets the HOLD terminal to "L".

- Good or no good judgement of the MICROCOMPUTER

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

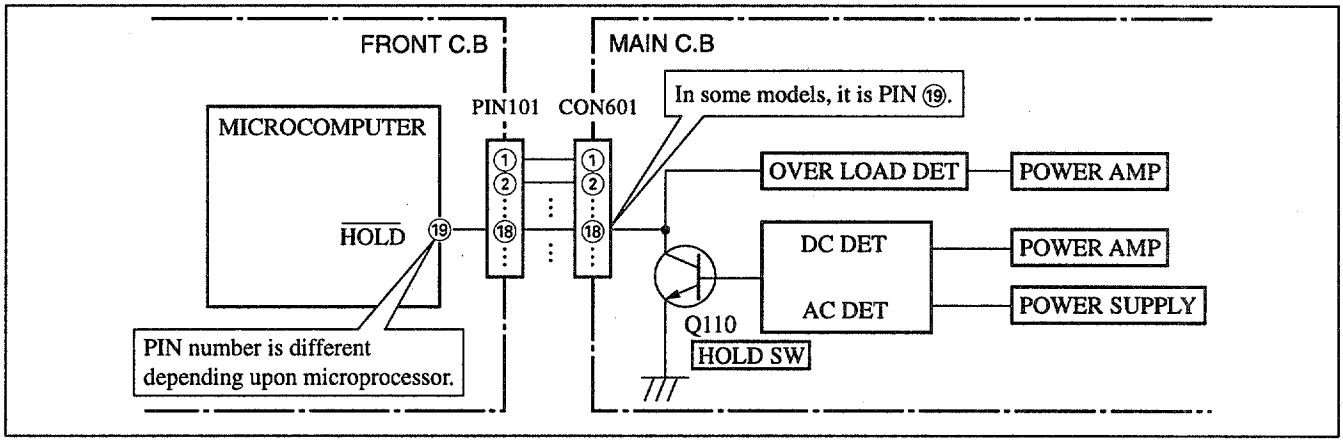



Fig-2-1

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

## 2-2. Regarding reset

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

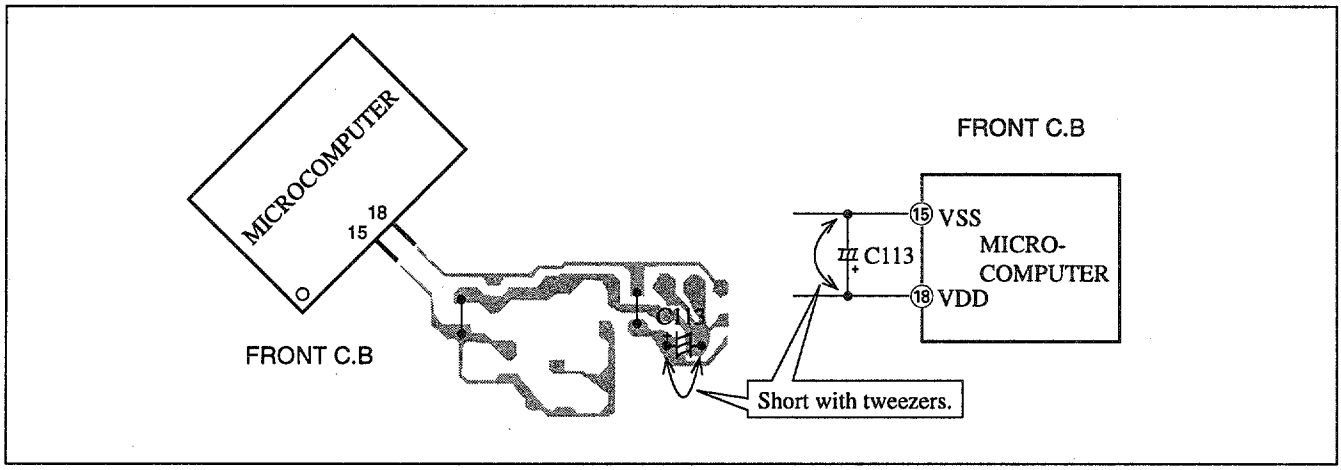



Fig-2-2

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

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| IC | | | |
| | 87-020-454-010 | | IC,DN6851 |
| | 88-MA1-602-010 | | C-IC,LC866560W-5H04 |
| | 87-NF8-614-010 | | IC,SPS-442-1-W |
| | 87-017-915-080 | | IC,BU4094BCF |
| | 87-A20-083-010 | | IC,BA3835S |
| | 87-A20-613-040 | | C-IC,BU9262AFS<LH> |
| | 87-A20-954-040 | | C-IC,M62445FP-601 |
| | 87-017-888-080 | | IC,NJM4558MD |
| | 86-NFZ-655-010 | | IC,LC72131D(Z) |
| | 87-A20-438-010 | | IC,LA1837 |
| | 88-NF5-615-040 | | C-IC,MSM6654A-521GS-KR1<LH> |
| | 87-A20-783-040 | | C-IC,BA7762AFS |
| TRANSISTOR | | | |
| | 87-A30-076-080 | | C-TR,2SC3052F |
| | 89-213-702-010 | | TR,2SB1370 (1.8W) |
| | 87-026-610-080 | | TR,KTC3198GR |
| | 87-A30-073-080 | | C-TR,RT1N 141C |
| | 87-A30-085-070 | | C-TR,CSA1362GR |
| | 87-A30-196-080 | | TR,2SC4115SRS |
| | 87-A30-075-080 | | C-TR,2SA1235F |
| | 89-112-965-080 | | TR,2SA1296 (0.75W) |
| | 87-A30-071-080 | | C-TR,RT1N 144C |
| | 87-026-609-080 | | TR,KTA1266GR |
| | 87-A30-105-080 | | C-TR,RT1P 441C |
| | 87-026-580-080 | | C-TR,DTA123JK |
| | 87-A30-107-070 | | C-TR,CMBT5401 |
| | 87-A30-190-080 | | TR,CC5551 |
| | 87-A30-097-010 | | TR,FN 1016 |
| | 87-A30-098-010 | | TR,FP 1016 |
| | 87-A30-106-070 | | C-TR,CMBT5551 |
| | 87-A30-072-080 | | C-TR,RT1P 144C |
| | 87-A30-221-080 | | C-TR,DTA114WK |
| | 87-A30-087-080 | | C-FET,2SK2158 |
| | 89-327-143-080 | | C-TR,2SC2714 (0.1W) |
| | 87-A30-089-010 | | FET,2SK2723 |
| DIODE | | | |
| | 87-A40-470-080 | | DIODE,1SS254 |
| | 87-A40-269-080 | | C-DIODE,MC2836 |
| | 87-A40-270-080 | | C-DIODE,MC2838 |
| | 87-070-274-080 | | DIODE,1N4003 SEM |
| | 87-A40-344-080 | | ZENER,MTZJ6.2C |
| | 87-A40-341-080 | | ZENER,MTZJ 36 A |
| | 87-A40-345-080 | | ZENER,MTZJ10C |
| | 87-A40-004-080 | | ZENER,MTZJ16A |
| | 87-A40-438-080 | | ZENER,MTZJ4.7A |
| | 87-070-136-080 | | ZENER,MTZJ5.1B |
| | 87-A40-488-080 | | DIODE,1SS244 |
| | 87-017-931-080 | | ZENER,MTZJ5.6B |
| | 87-A40-002-080 | | ZENER,MTZJ5.1C |
| | 87-A40-234-080 | | ZENER,MTZJ5.6A |
| | 87-A40-115-060 | | DIODE,RS603M |
| | 87-A40-370-090 | | DIODE,RK46-P20<U> |
| | 87-A40-184-090 | | DIODE,RK34(F)<LH> |
| MAIN C.B | | | |
| | 88-906-251-110 | | FF-CABLE,6P 1.25 |
| C101 | 87-016-657-090 | | CAP,E 3300-71 M SMG |
| C102 | 87-016-657-090 | | CAP,E 3300-71 M SMG |
| C103 | 87-016-658-090 | | CAP,E 4700-35 SMG |
| C104 | 87-016-658-090 | | CAP,E 4700-35 SMG |
| C105 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C106 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C107 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C108 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C109 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C110 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C111 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C112 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C113 | 87-010-247-080 | | CAP, ELECT 100-50V |
| C114 | 87-010-385-080 | | CAP,E 220-25 M SME |
| C115 | 87-010-385-080 | | CAP,E 220-25 M SME |
| C116 | 87-010-247-080 | | CAP, ELECT 100-50V |
| C117 | 87-010-430-080 | | CAP, ELECT 100-63 |
| C118 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C119 | 87-010-260-080 | | CAP, ELECT 47-25V |
| C120 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C121 | 87-012-140-080 | | C-CAP,S 470P |
| C122 | 87-010-263-080 | | CAP,E 100-10V |
| C123 | 87-010-247-080 | | CAP, ELECT 100-50V |
| C124 | 87-010-112-080 | | CAP, ELECT 100-16V |
| C125 | 87-010-235-080 | | CAP,E 470-16 SME |
| C209 | 87-010-546-080 | | CAP, ELECT 0.33-50V |
| C210 | 87-010-546-080 | | CAP, ELECT 0.33-50V |
| C211 | 87-010-185-080 | | C-CAP,S 3900P-50 B<U> |
| C211 | 87-010-184-080 | | C-CAP,S 3300P-50 B<LH> |
| C212 | 87-010-185-080 | | C-CAP,S 3900P-50 B<U> |
| C212 | 87-010-184-080 | | C-CAP,S 3300P-50 B<LH> |
| C213 | 87-010-186-080 | | CAP,CHIP 4700P |
| C214 | 87-010-186-080 | | CAP,CHIP 4700P |
| C215 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C216 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C217 | 87-010-913-080 | | CAP, ELECT 47-25BP |
| C218 | 87-010-913-080 | | CAP, ELECT 47-25BP |
| C229 | 87-A10-812-080 | | C-CAP,S 220P-200 J CH |
| C230 | 87-A10-812-080 | | C-CAP,S 220P-200 J CH |
| C231 | 87-012-154-080 | | C-CAP,S 150P-50 CH |
| C232 | 87-012-154-080 | | C-CAP,S 150P-50 CH |
| C233 | 87-010-544-080 | | CAP, ELECT 0.1-50V |
| C234 | 87-010-544-080 | | CAP, ELECT 0.1-50V |
| C235 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C237 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C238 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C239 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C240 | 87-012-368-080 | | C-CAP,S 0.1-50 F |
| C280 | 87-010-188-080 | | C-CAP,S 6800P-50 KB |
| C298 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C301 | 87-010-318-080 | | C-CAP,S 47P-50 CH |
| C302 | 87-010-318-080 | | C-CAP,S 47P-50 CH |
| C303 | 87-012-157-080 | | C-CAP,S 330P-50 CH |
| C304 | 87-012-157-080 | | C-CAP,S 330P-50 CH |
| C305 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C306 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C307 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C309 | 87-010-196-080 | | C-CAP,S 0.1-25FZ |
| C310 | 87-010-196-080 | | C-CAP,S 0.1-25FZ |
| C311 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C312 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C313 | 87-010-178-080 | | C-CAP,S 1000P-50 KB |
| C314 | 87-010-178-080 | | C-CAP,S 1000P-50 KB |
| C315 | 87-010-178-080 | | C-CAP S 1000P-50 KB |
| C316 | 87-010-178-080 | | C-CAP,S 1000P-50 KB |
| C321 | 87-016-492-080 | | CHIP-CAPACITOR,0.33-16FZ |
| C322 | 87-016-492-080 | | CHIP-CAPACITOR,0.33-16FZ |
| C324 | 87-010-260-080 | | CAP, ELECT 47-25V |
| C325 | 87-010-370-080 | | CAP,E 330-6.3 SME |
| C327 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| C328 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| C332 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C335 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C336 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C337 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C339 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C340 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| C351 | 87-012-140-080 | | C-CAP 470P |
| C352 | 87-012-140-080 | | C-CAP 470P |
| C354 | 87-010-175-080 | | C-CAP 560P |
| C355 | 87-010-178-080 | | CHIP CAP 1000P |
| C356 | 87-010-260-080 | | CAP, ELECT 47-25V |
| C357 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C358 | 87-010-183-080 | | C-CAP,S 2700P-50 B |
| C359 | 87-010-183-080 | | C-CAP,S 2700P-50 B |
| C360 | 87-010-183-080 | | C-CAP,S 2700P-50 B |
| C370 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C373 | 87-016-083-080 | | C-CAP,S 0.15-16RK |
| C374 | 87-016-083-080 | | C-CAP,S 0.15-16RK |
| C378 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C379 | 87-010-382-080 | | CAP, ELECT 22-25V |
| C380 | 87-010-382-080 | | CAP, ELECT 22-25V |
| C391 | 87-010-319-080 | | C-CAP,S 56P-50 CH |
| C392 | 87-010-319-080 | | C-CAP,S 56P-50 CH |
| C393 | 87-010-319-080 | | C-CAP,S 56P-50 CH |
| C394 | 87-010-319-080 | | C-CAP,S 56P-50 CH |
| C401 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C402 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C457 | 87-010-404-080 | | CAP, ELECT 4.7-50 SME |
| C458 | 87-010-404-080 | | CAP, ELECT 4.7-50 SME |
| C516 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C601 | 87-010-180-080 | | C-CER 1500P |
| C602 | 87-010-180-080 | | C-CER 1500P |
| C613 | 87-016-081-080 | | C-CAP,S 0.1-16 RK |
| C614 | 87-016-081-080 | | C-CAP,S 0.1-16 RK |
| C619 | 87-010-185-080 | | C-CAP,S 3900P-50 B |
| C620 | 87-010-185-080 | | C-CAP,S 3900P-50 B |
| C621 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C622 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C625 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C626 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C629 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C630 | 87-010-213-080 | | C-CAP,S 0.015-50 B |
| C631 | 87-010-992-080 | | C-CAP,S 0.047-25 B |
| C632 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C633 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C634 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C635 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C636 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C637 | 87-010-183-080 | | C-CAP,S 2700P-50 B |
| C641 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C701 | 87-010-381-080 | | CAP, ELECT 330-16V |
| C702 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| C703 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C704 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C709 | 87-010-322-080 | | C-CAP,S 100P-50 CH |
| C711 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C712 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C713 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C714 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C721 | 87-010-312-080 | | C-CAP,S 15P-50 CH |
| C722 | 87-010-312-080 | | C-CAP,S 15P-50 CH |
| C723 | 87-010-178-080 | | CHIP CAP 1000P |
| C725 | 87-010-178-080 | | CHIP CAP 1000P |
| C727 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C728 | 87-010-248-080 | | CAP, ELECT 220-10V |
| C755 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C756 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C757 | 87-010-318-080 | | C-CAP,S 47P-50 CH |
| C758 | 87-010-149-080 | | C-CAP,S 5P-50 CH |
| C759 | 87-012-156-080 | | C-CAP,S 220P-50 CH |
| C760 | 87-012-156-080 | | C-CAP,S 220P-50 CH |
| C761 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C762 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C763 | 87-010-194-080 | | CAP, CHIP 0.047 |
| C764 | 87-010-319-080 | | C-CAP,S 56P-50 CH |
| C765 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C766 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C767 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C768 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C769 | 87-010-408-080 | | CAP, ELECT 47-50V |
| C770 | 87-015-821-080 | | C-CAP 0.047 |
| C771 | 87-010-407-080 | | CAP, ELECT 33-50V |
| C772 | 87-010-194-080 | | CAP, CHIP 0.047 |
| C773 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C774 | 87-010-263-080 | | CAP, ELECT 100-10V |
| C775 | 87-010-404-080 | | CAP, ELECT 4.7-50V |
| C776 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C777 | 87-010-400-080 | | CAP, ELECT 0.47-50V |
| C778 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C779 | 87-010-401-080 | | CAP, ELECT 1-50V |
| C780 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C781 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C782 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C783 | 87-015-819-080 | | C-CAP,0.01 |
| C784 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C785 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C786 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C789 | 87-010-179-080 | | CAP,CHIP S B1200P |
| C790 | 87-010-179-080 | | CAP,CHIP S B1200P |
| C791 | 87-010-405-080 | | CAP, ELECT 10-50V |
| C793 | 87-010-177-080 | | C-CAP,S 820P-50 SL |
| C794 | 87-010-406-080 | | CAP, ELECT 22-50 |
| C795 | 87-010-596-080 | | CAP, S 0.047-16 |
| C796 | 87-010-403-080 | | CAP, ELECT 3.3-50V |
| C797 | 87-010-181-080 | | C-CAP,S 1800P-50 B |
| C798 | 87-010-181-080 | | C-CAP,S 1800P-50 B |
| C799 | 87-010-194-080 | | CAP, CHIP 0.047 |
| C812 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C814 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C820 | 87-010-408-080 | | CAP, ELECT 47-50V |
| C821 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C822 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C823 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C828 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C829 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C959 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C960 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C961 | 87-010-152-080 | | C-CAP,S 8P-50 CH |
| CF801 | 87-008-261-010 | | FILTER, SFE10.7MA5-A |
| CF802 | 87-008-261-010 | | FILTER, SFE10.7MA5-A |
| FB601 | 87-A50-190-080 | | C-COIL,S BLM21A102S |
| FFE801 | A8-8ZA-190-030 | | 8ZA-1 FEUNM |
| J201 | 87-A60-488-010 | | JACK,DIA6.3 BLK ST W/SW KM16AT |
| J202 | 87-A60-547-010 | | JACK,PIN 4P R/W/B |
| J203 | 87-033-240-010 | | TERMINAL,SP 4P32SV1-05 |
| J602 | 87-099-625-010 | | JACK PIN 4P,RVS (KM) |
| J801 | 87-033-239-010 | | TERMINAL,HSP-154V-2 |
| L201 | 87-003-383-010 | | COIL,1UH-S |
| L202 | 87-003-383-010 | | COIL,1UH-S |
| L301 | 87-A50-049-010 | | COIL,TRAP 85K(COI) |
| L302 | 87-A50-049-010 | | COIL,TRAP 85K(COI) |
| L351 | 87-007-342-010 | | COIL,OSC 85K BIAS |
| L771 | 87-A50-266-010 | | COIL,FM DET-2N(TOK) |
| L772 | 87-A90-733-010 | | FLTR,PCFAZH-450 (TOK) |
| L781 | 87-005-847-080 | | COIL,2.2UH(CECS) |
| L832 | 86-NFZ-694-080 | | COIL,2.2UH K CECS |
| L981 | 87-NF4-650-010 | | COIL,AM PACK 4N(TOK) |
| R123 | 87-022-200-080 | | RES,M/F 0.56-1W J <U> |
| R237 | 87-A00-262-080 | | RES,M/F 0.15-2W J |
| R238 | 87-A00-262-080 | | RES,M/F 0.15-2W J |
| R239 | 87-A00-262-080 | | RES,M/F 0.15-2W J |
| R240 | 87-A00-262-080 | | RES,M/F 0.15-2W J |
| RY101 | 87-A90-464-010 | | RELAY,DG12D2-O(M) |
| RY201 | 87-A90-713-010 | | RELAY,12V DQ12D1-OS(M)<LH> |
| SFR351 | 87-A90-433-080 | | SFR,50K H NVZ6TLTA |
| SFR352 | 87-A90-433-080 | | SFR,50K H NVZ6TLTA |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| X721 | 87-A70-061-010 | | VIB,XTAL 4.500MHZ CSA-309 |
| FRONT C.B | | | |
| | 88-911-271-110 | | CABLE,FFC 11P-1.25 |
| | 88-912-281-110 | | FF-CABLE,12P 1.25 |
| | 88-908-231-110 | | FF-CABLE,8P 1.25 |
| C101 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C102 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C103 | 87-010-197-080 | | CAP, CHIP 0.01 DM |
| C104 | 87-010-312-080 | | C-CAP,S 15P-50 CH |
| C105 | 87-010-316-080 | | C-CAP,S 33P-50 CH |
| C106 | 87-010-320-080 | | CHIP CAP 68P |
| C107 | 87-012-157-080 | | C-CAP,S 330P-50 CH |
| C108 | 87-010-405-040 | | CAP,E 10-50 |
| C109 | 87-010-071-040 | | CAP,E 1-50 5L |
| C110 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C111 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C112 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C113 | 87-A10-189-040 | | CAP,E 220-10 |
| C114 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C115 | 87-010-178-080 | | CHIP CAP 1000P |
| C116 | 87-010-071-040 | | CAP,E 1-50 5L |
| C117 | 87-010-079-040 | | CAP,E 100-6.3 5L |
| C118 | 87-012-369-080 | | C-CAP,S 0.047-50F |
| C119 | 87-010-408-040 | | CAP,E 47-50 SME |
| C120 | 87-010-421-040 | | CAP,E 4.7-50 5L |
| C121 | 87-010-421-040 | | CAP,E 4.7-50 5L |
| C122 | 87-010-194-080 | | CAP, CHIP 0.047 |
| C123 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C124 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C125 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C127 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C202 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C203 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C204 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C281 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C282 | 87-010-198-080 | | CAP, CHIP 0.022 |
| C381 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C382 | 87-012-158-080 | | C-CAP,S 390P-50 CH |
| C383 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C384 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C385 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C386 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C387 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C501 | 87-010-319-080 | | C-CAP,S 56P-50 CH <LH> |
| C502 | 87-010-319-080 | | C-CAP,S 56P-50 CH <LH> |
| C503 | 87-012-393-080 | | C-CAP,S 0.22-16 R K <LH> |
| C504 | 87-010-197-080 | | CAP, CHIP 0.01 DM <LH> |
| C505 | 87-010-180-080 | | C-CER 1500P <LH> |
| C506 | 87-010-213-080 | | C-CAP,S 0.015-50 B <LH> |
| C507 | 87-010-213-080 | | C-CAP,S 0.015-50 B <LH> |
| C508 | 87-010-197-080 | | CAP, CHIP 0.01 DM <LH> |
| C509 | 87-010-181-080 | | CAP,CHIP S 1800P <LH> |
| C510 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 <LH> |
| C511 | 87-010-067-040 | | CAP,E 0.1-50 5L <LH> |
| C512 | 87-010-503-040 | | CAP,E 220-4 GAS <LH> |
| C513 | 87-010-071-040 | | CAP,E 1-50 5L <LH> |
| C514 | 87-010-071-040 | | CAP,E 1-50 5L <LH> |
| C515 | 87-010-183-080 | | C-CAP,S 2700P-50 B <LH> |
| C516 | 87-010-183-080 | | C-CAP,S 2700P-50 B <LH> |
| C518 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 <LH> |
| C519 | 87-010-263-040 | | CAP,E 100-10 <LH> |
| C525 | 87-012-141-080 | | CHIP-CAPACITOR,0.22-16F <LH> |
| C601 | 87-010-405-040 | | CAP,E 10-50 |
| C602 | 87-010-186-080 | | CAP,CHIP 4700P <LH> |
| C603 | 87-010-405-040 | | CAP,E 10-50 <LH> |
| C604 | 87-010-382-040 | | CAP,E 22-25 SME <LH> |
| C607 | 87-010-321-080 | | CHIP CAPACITOR,82P(J) |
| C608 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| C609 | 87-010-068-040 | | CAP E 0.22-50 5L |
| C611 | 87-010-176-080 | | C-CAP,S 680P-50 SL <LH> |
| C611 | 87-010-180-080 | | C-CER 1500P <U> |
| C612 | 87-010-176-080 | | C-CAP,S 680P-50 SL |
| C614 | 87-010-248-040 | | CAP,E 220-10 SME |
| C801 | 87-010-263-040 | | CAP,E 100-10 <LH> |
| C802 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 <LH> |
| C803 | 87-010-400-040 | | CAP,E 0.47-50 <LH> |
| C804 | 87-010-315-080 | | C-CAP,S 27P-50 CH <LH> |
| C805 | 87-010-315-080 | | C-CAP,S 27P-50 CH <LH> |
| C852 | 87-012-156-080 | | C-CAP,S 220P-50 CH <LH> |
| C853 | 87-010-404-040 | | CAP,E 4.7-50 SME <LH> |
| C854 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 <LH> |
| C938 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C941 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C942 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C943 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C944 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C945 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C946 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C947 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C948 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C949 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C950 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C951 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| C952 | 87-012-145-080 | | CAP, CHIP S 270P CH |
| CN301 | 87-099-196-010 | | CONN,8P, 6216V |
| FB601 | 87-A50-190-080 | | C-COIL,S BLM21A102S |
| FL101 | 88-MA2-604-010 | | FL,BJ607GK |
| JR802 | 87-010-196-080 | | CHIP CAPACITOR, 0.1-25<LH> |
| L501 | 87-005-448-080 | | COIL 220UH,K <LH> |
| LED201 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED202 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED203 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED204 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED205 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED206 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED207 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED208 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED209 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED210 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED211 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED212 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED213 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED214 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED215 | 87-070-197-080 | | LED,SLP7118C-51-S RED |
| LED216 | 87-A40-446-080 | | LED,SLP-7131F-81H-S-T1 P-GRN |
| LED217 | 87-A40-446-080 | | LED,SLP-7131F-81H-S-T1 P-GRN |
| LED218 | 87-A40-446-080 | | LED,SLP-7131F-81H-S-T1 P-GRN |
| LED219 | 87-A40-446-080 | | LED,SLP-7131F-81H-S-T1 P-GRN |
| LED220 | 87-A40-446-080 | | LED,SLP-7131F-81H-S-T1 P-GRN |
| LED221 | 87-A40-446-080 | | LED,SLP-7131F-81H-S-T1 P-GRN |
| LED233 | 87-070-278-010 | | LED,SLZ-738A-24-S P-GRN |
| LED234 | 87-070-278-010 | | LED,SLZ-738A-24-S P-GRN |
| LED235 | 87-070-278-010 | | LED,SLZ-738A-24-S P-GRN |
| LED236 | 87-070-278-010 | | LED,SLZ-738A-24-S P-GRN |
| LED237 | 87-070-290-010 | | LED,SLZ 936-30-S RED |
| LED238 | 87-070-290-010 | | LED,SLZ 936-30-S RED |
| LED239 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED240 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED241 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED242 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED243 | 87-070-201-080 | | LED,SLP9118C-51-S RED |
| LED247 | 87-070-201-080 | | LED,SLP9118C-51-S RED <LH> |
| LED249 | 87-070-201-080 | | LED,SLP9118C-51-S RED <LH> |
| LED250 | 87-070-201-080 | | LED,SLP9118C-51-S RED <LH> |
| R301 | 87-022-355-080 | | C-RES,S10K-1/10W F |
| R321 | 87-022-355-080 | | C-RES,S10K-1/10W F |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| R341 | 87-022-355-080 | | C-RES,S10K-1/10W F |
| S101 | 87-A90-535-010 | | SW,RTRY EC16B24304 |
| S102 | 87-A90-791-010 | | SW,RTRY EC16B12204 ENCODER <U> |
| S103 | 87-A90-792-010 | | SW,RTRY EC12E12244 ENCODER <LH> |
| S301 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S303 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S304 | 87-A90-095-080 | | SW,TACT EVQ11G04M <LH> |
| S305 | 87-A90-095-080 | | SW,TACT EVQ11G04M <LH> |
| S307 | 87-A90-095-080 | | SW,TACT EVQ11G04M <LH> |
| S309 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S310 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S311 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S321 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S322 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S323 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S324 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S325 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S326 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S327 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S328 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S329 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S330 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S331 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S332 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S334 | 87-A90-095-080 | | SW,TACT EVQ11G04M <LH> |
| S341 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S343 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S345 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S346 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S347 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S348 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S349 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S350 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S351 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S353 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S355 | 87-A90-095-080 | | SW,TACT EVQ11G04M <LH> |
| S356 | 87-A90-095-080 | | SW,TACT EVQ11G04M <LH> |
| VR601 | 83-MA1-661-010 | | VR,SL 10KB <U> |
| X101 | 87-A70-070-080 | | VIB,CER 5.76MHZ CRHF |
| X801 | 87-A70-075-080 | | VIB,CER 4.19MHZ CRHF <LH> |

MIC C.B

| | | | |
|---|---|---|---|
| C605 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| J601 | 87-099-659-010 | | JACK,6.3 JY-6314-01130 |
| J602 | 87-099-659-010 | | JACK,6.3 JY-6314-01130 |

CD KEY C.B

| | | | |
|---|---|---|---|
| C287 | 87-010-196-080 | | CHIP CAPACITOR,0.1-25 |
| CN302 | 87-099-201-010 | | CONN,8P 6216 H |
| LED258 | 87-070-201-080 | | LED,SLP-9118C-51-S RED |
| LED259 | 87-070-201-080 | | LED,SLP-9118C-51-S RED |
| LED260 | 87-070-201-080 | | LED,SLP-9118C-51-S RED |
| LED261 | 87-070-201-080 | | LED,SLP-9118C-51-S RED |
| LED262 | 87-070-201-080 | | LED,SLP-9118C-51-S RED |
| S312 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S313 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S314 | 87-A90-095-080 | | SW,TACT EVQ11G04M |

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| S315 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S316 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S317 | 87-A90-095-080 | | SW,TACT EVQ11G04M |
| S318 | 87-A90-095-080 | | SW,TACT EVQ11G04M |

AC1 C.B

| | | | |
|---|---|---|---|
| ⚠ F101 | 87-035-491-010 | | FUSE,6A 125VT 237<U> |
| ⚠ F101 | 87-035-459-010 | | FUSE,5A 250V <LH> |
| ⚠ FC101 | 87-033-147-010 | | FUSE CLAMP <LH> |
| ⚠ FC101 | 87-A90-505-080 | | FUSE CLAMP,TP00351-51<U> |
| ⚠ FC102 | 87-033-147-010 | | FUSE CLAMP <LH> |
| ⚠ FC102 | 87-A90-505-080 | | FUSE CLAMP,TP00351-51<U> |
| ⚠ PT101 | 88-MA3-609-010 | | PT,8MA-3 LH <LH> |
| ⚠ PT101 | 88-MA3-607-010 | | PT,8MA-3 U <U> |
| ⚠ S101 | 87-A90-165-010 | | SW,SL 1-2-3 SWS2301 <LH> |
| ⚠ T101 | 87-A60-317-010 | | TERMINAL, 1P MSC |
| ⚠ T102 | 87-A60-317-010 | | TERMINAL, 1P MSC |

AC2 C.B

| | | | |
|---|---|---|---|
| ⚠ PR101 | 87-026-682-080 | | PROTECTOR,10A 60V491 <LH> |
| ⚠ PR101 | 87-026-691-080 | | FUSE,10A 125V 251 <U> |
| ⚠ PR102 | 87-026-682-080 | | PROTECTOR,10A 60V491 <LH> |
| ⚠ PR102 | 87-026-691-080 | | FUSE,10A 125V 251 <U> |
| ⚠ PR103 | 87-026-682-080 | | PROTECTOR,10A 60V491 <LH> |
| ⚠ PR103 | 87-026-691-080 | | FUSE,10A 125V 251 <U> |
| ⚠ PR104 | 87-026-682-080 | | PROTECTOR,10A 60V491 <LH> |
| ⚠ PR104 | 87-026-691-080 | | FUSE,10A 125V 251 <U> |
| W104 | 85-NF5-628-010 | | F-CABLE 7P-2.5 |

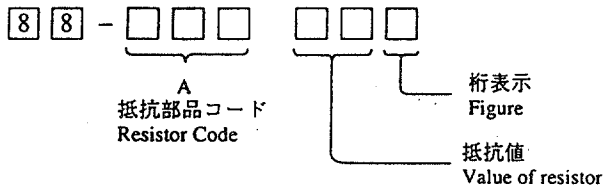
DECK C.B

| | | | |
|---|---|---|---|
| CON105 | 87-099-753-019 | | CONN,11P H 9604 |
| CON301 | 86-ZM3-604-219 | | CON ASSY,3P-PB |
| CON351 | 86-ZM3-605-119 | | CON ASSY,8P-RPB |
| SFR1 | 87-024-581-089 | | SFR,3.3K DIA 6H |
| SOL1 | 82-ZM1-618-410 | | SOL ASSY,27 |
| SOL2 | 82-ZM1-618-410 | | SOL ASSY,27 |
| SW1 | 87-A90-248-010 | | SW,MICRO ESE11SH2CX0 |
| SW2 | 87-A90-248-010 | | SW,MICRO ESE11SH2CX0 |
| SW3 | 87-A90-248-010 | | SW,MICRO ESE11SH2CX0 |
| SW4 | 87-A90-248-010 | | SW,MICRO ESE11SH2CX0 |
| SW5 | 87-A90-248-010 | | SW,MICRO ESE11SH2CX0 |
| W1 | 82-ZM3-601-019 | | RBN-CORD,4P-75 |

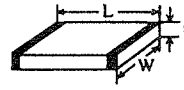
HEAD-1 C.B

○ 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 | 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

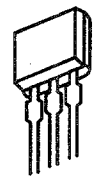
KTA1266GR
KTC3198GR

E C B

CC5551

B C E

2SB1370
FN1016
FP1016

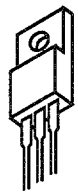


B C E

2SC4115S

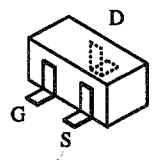
B C E

2SA1296

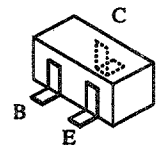


G D S

2SK2723




2SK2158

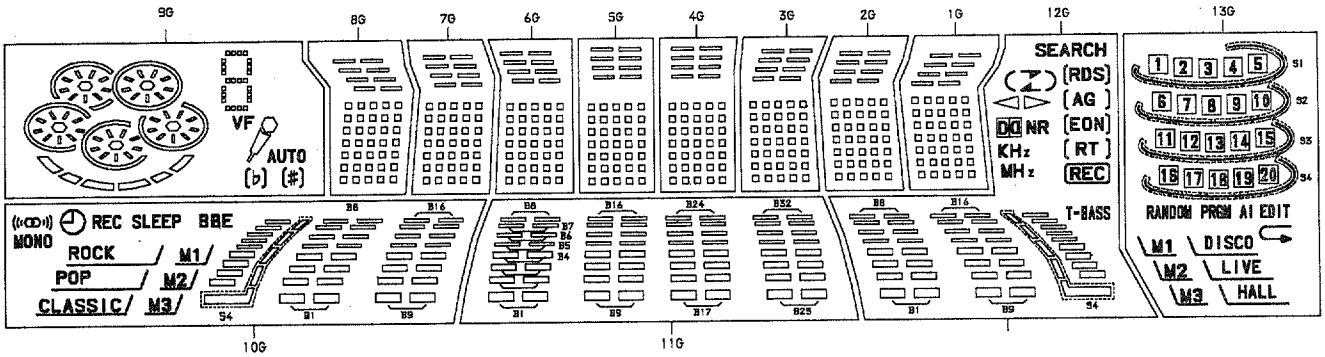


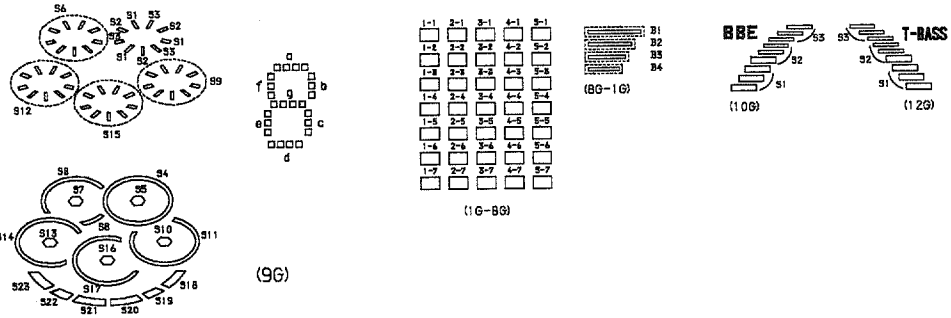

RT1N141C
2SA1235
2SC3052
RT1P144C
CMBT5551
2SC2714
DTA123JK

CSA1362GR
RT1P441C
DTA114WK
CMBT5401
RT1N144C

# FL GRID ASSIGNMENT AND ANODE CONNECTION

## GRID ASSIGNMENT



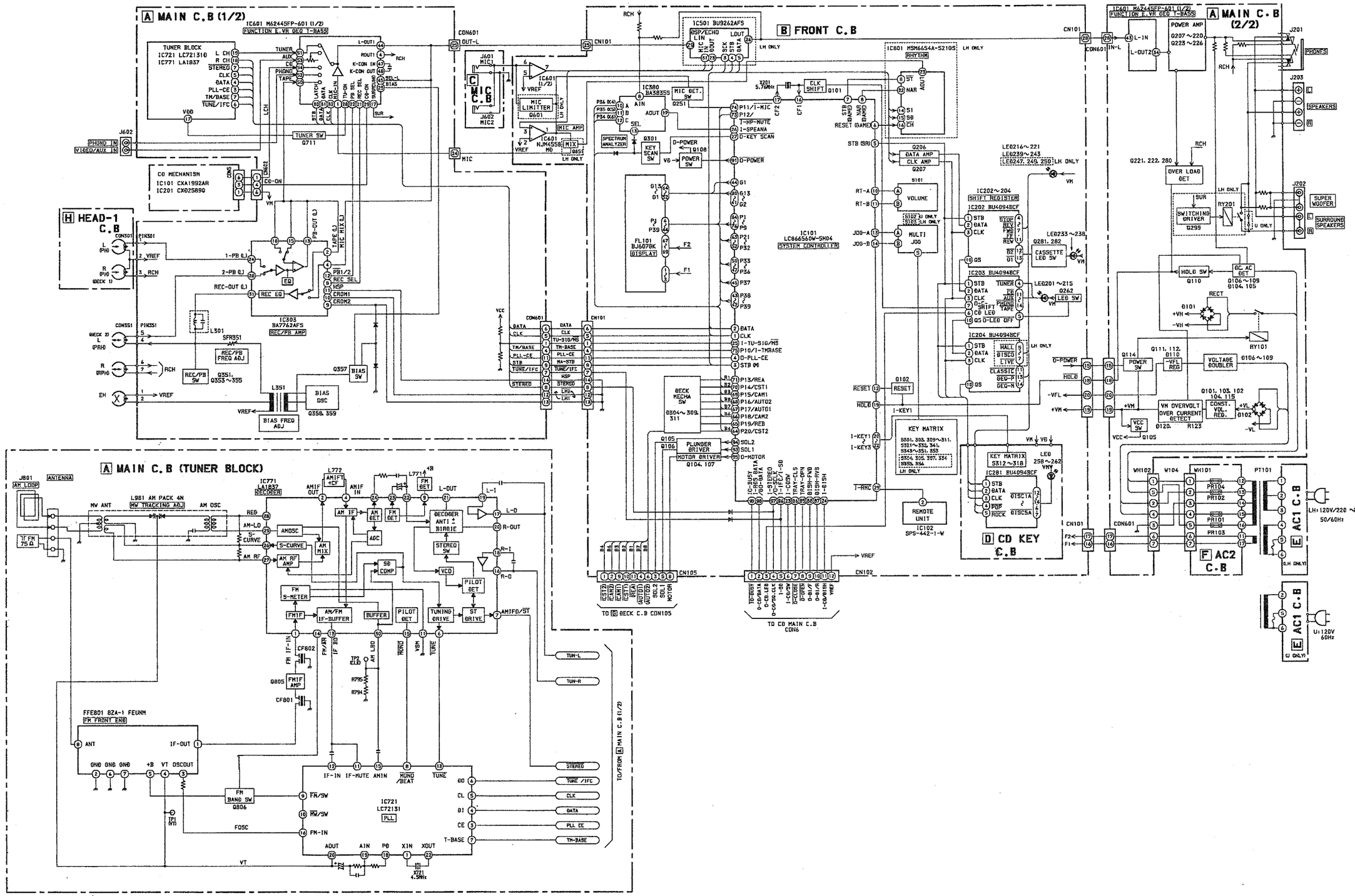




## ANODE CONNECTION

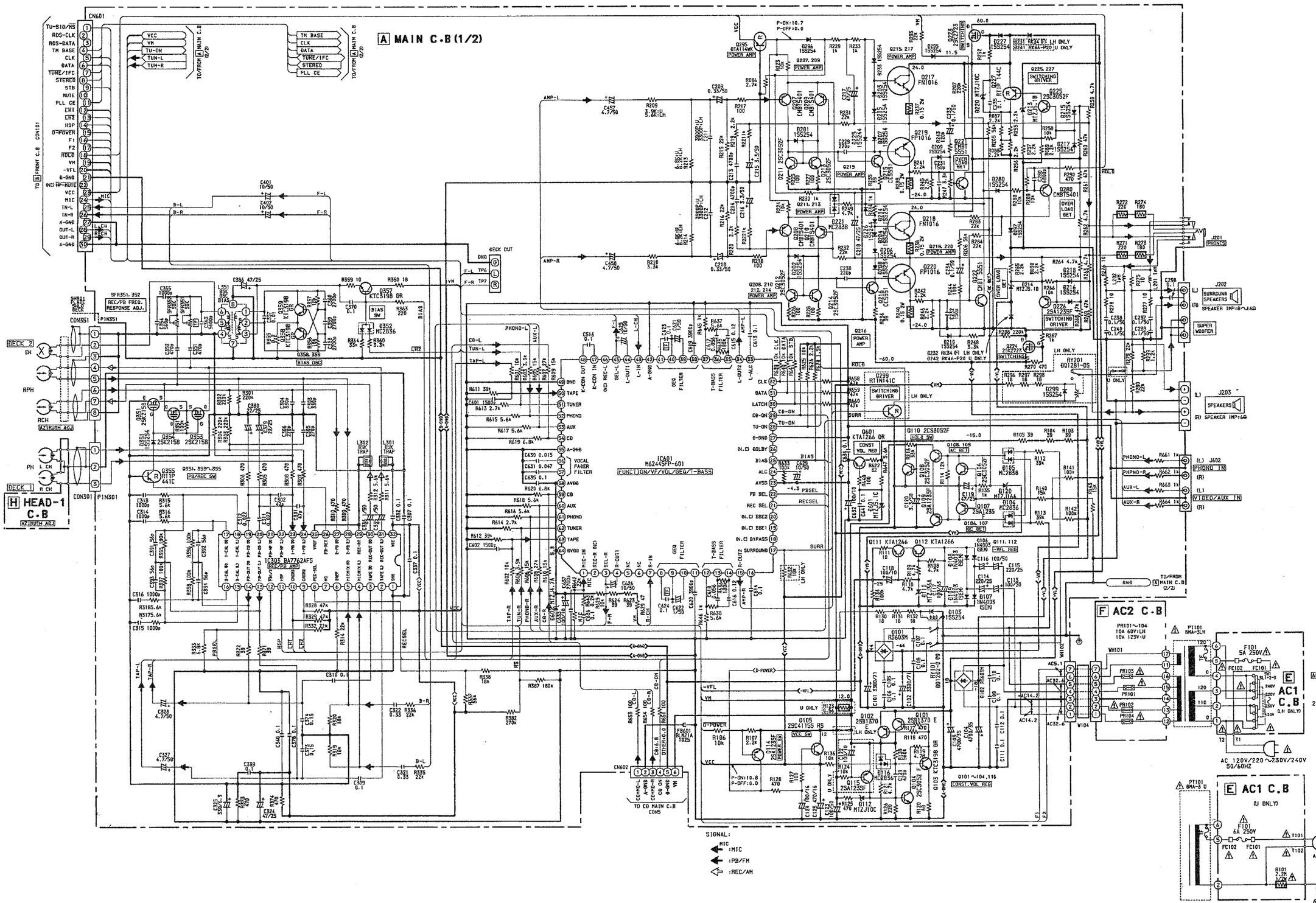
| | 13G | 12G | 11G | 10G | 9G | 1G-8G |
|---|---|---|---|---|---|---|
| P1 | S1 | SEARCH | — | — | — | B4 |
| P2 | S2 | RDS AG EON | — | — | — | B3 |
| P3 | S3 | RT | — | — | — | B2 |
| P4 | S4 | — | — | ((MONO)) | S23 | B1 |
| P5 | DISCO LIVE HALL | (RDS) | — | MONO | S22 | 1-1 |
| P6 | — | (AG) | — | ROCK POP CLASSIC | S21 | 2-1 |
| P7 | (HALL) | (EON) | — | — | S20 | 3-1 |
| P8 | (LIVE) | (RT) | B1 | (CLASSIC) | S19 | 4-1 |
| P9 | (DISCO) | ) | B9 | (POP) | S18 | 5-1 |
| P10 | M1 M2 M3 | B1 | B17 | B1 | S16 | 1-2 |
| P11 | — | B9 | B25 | B9 | S15 | 2-2 |
| P12 | (M3) | ◥ | B2 | (ROCK) | S17 | 3-2 |
| P13 | (M2) | ( | B10 | M1 M2 M3 | S13 | 4-2 |
| P14 | (M1) | B2 | B18 | B2 | S12 | 5-2 |
| P15 | ↵ | B10 | B26 | B10 | S14 | 1-3 |
| P16 | EDIT | ▷ | B3 | — | S10 | 2-3 |
| P17 | AI | ◁ | B11 | (M3) | S9 | 3-3 |
| P18 | PRGM | B3 | B19 | B3 | S11 | 4-3 |
| P19 | RANDOM | B11 | B27 | B11 | S7 | 5-3 |
| P20 | 1 | DIMMER NR | B4 | (M2) | S6 | 1-4 |

| | 13G | 12G | 11G | 10G | 9G | 1G-8G |
|---|---|---|---|---|---|---|
| P21 | 2 | REC | B12 | (M1) | S8 | 2-4 |
| P22 | 3 | B4 | B20 | B4 | S5 | 3-4 |
| P23 | 4 | B12 | B28 | B12 | S2 | 4-4 |
| P24 | 5 | ○ | B5 | REC | S3 | 5-4 |
| P25 | 6 | KHz | B13 | 🕘 | S1 | 1-5 |
| P26 | 7 | B5 | B21 | B5 | S4 | 2-5 |
| P27 | 8 | B13 | B29 | B13 | d | 3-5 |
| P28 | 9 | MHz | B6 | SLEEP | e | 4-5 |
| P29 | 10 | S4 | B14 | S4 | c | 5-5 |
| P30 | 11 | B6 | B22 | B6 | g | 1-6 |
| P31 | 12 | B14 | B30 | B14 | f | 2-6 |
| P32 | 13 | T-BASS | B7 | BBE | b | 3-6 |
| P33 | 14 | S1 | B15 | S1 | a | 4-6 |
| P34 | 15 | B7 | B23 | B7 | VF | 5-6 |
| P35 | 16 | B15 | B31 | B15 | ◢ | 1-7 |
| P36 | 17 | S2 | B8 | S2 | AUTO | 2-7 |
| P37 | 18 | S3 | B16 | S3 | (♭) | 3-7 |
| P38 | 19 | B8 | B24 | B8 | (#) | 4-7 |
| P39 | 20 | B16 | B32 | B16 | ♭ # | 5-7 |

BLOCK DIAGRAM (MAIN / FRONT)

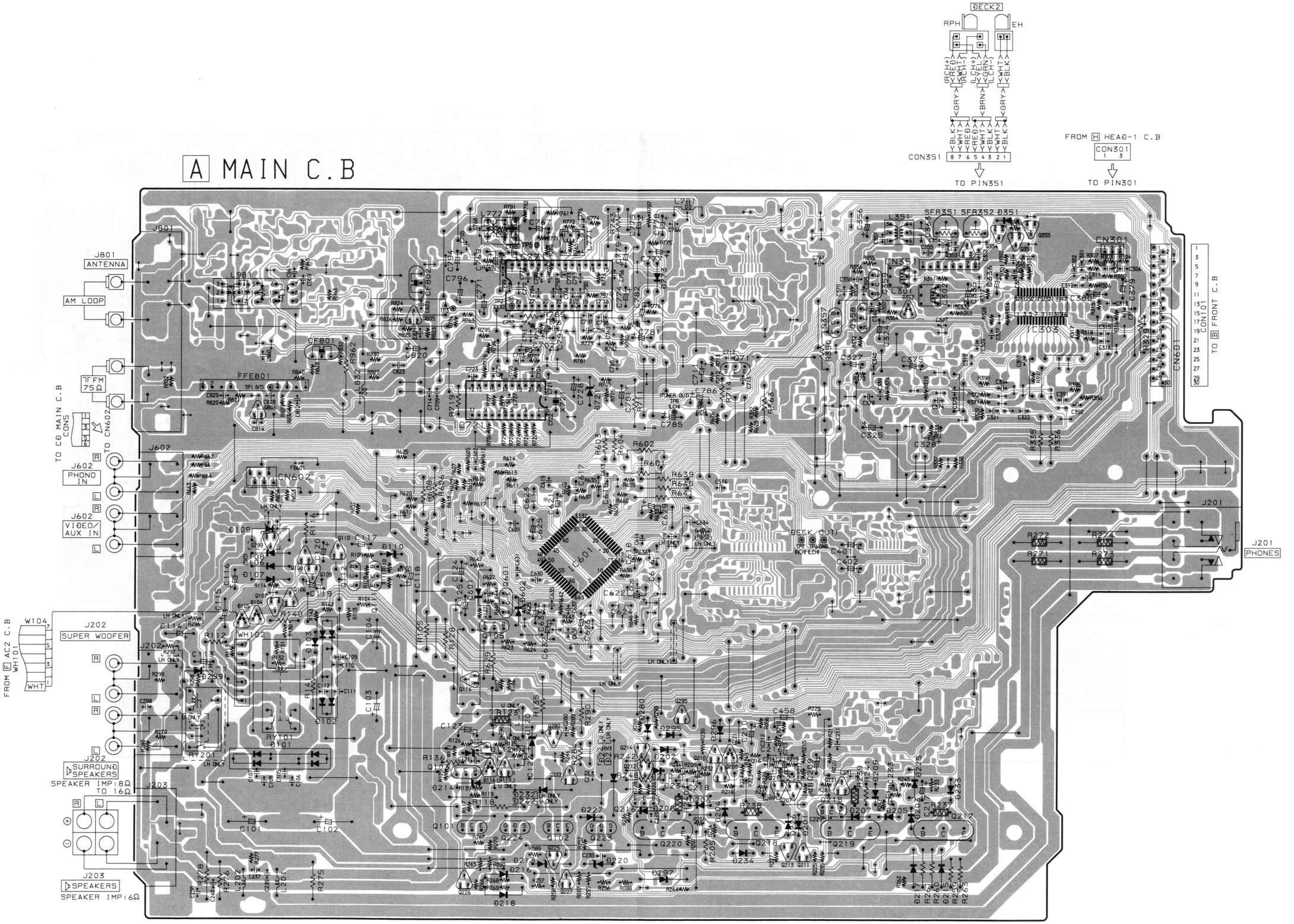


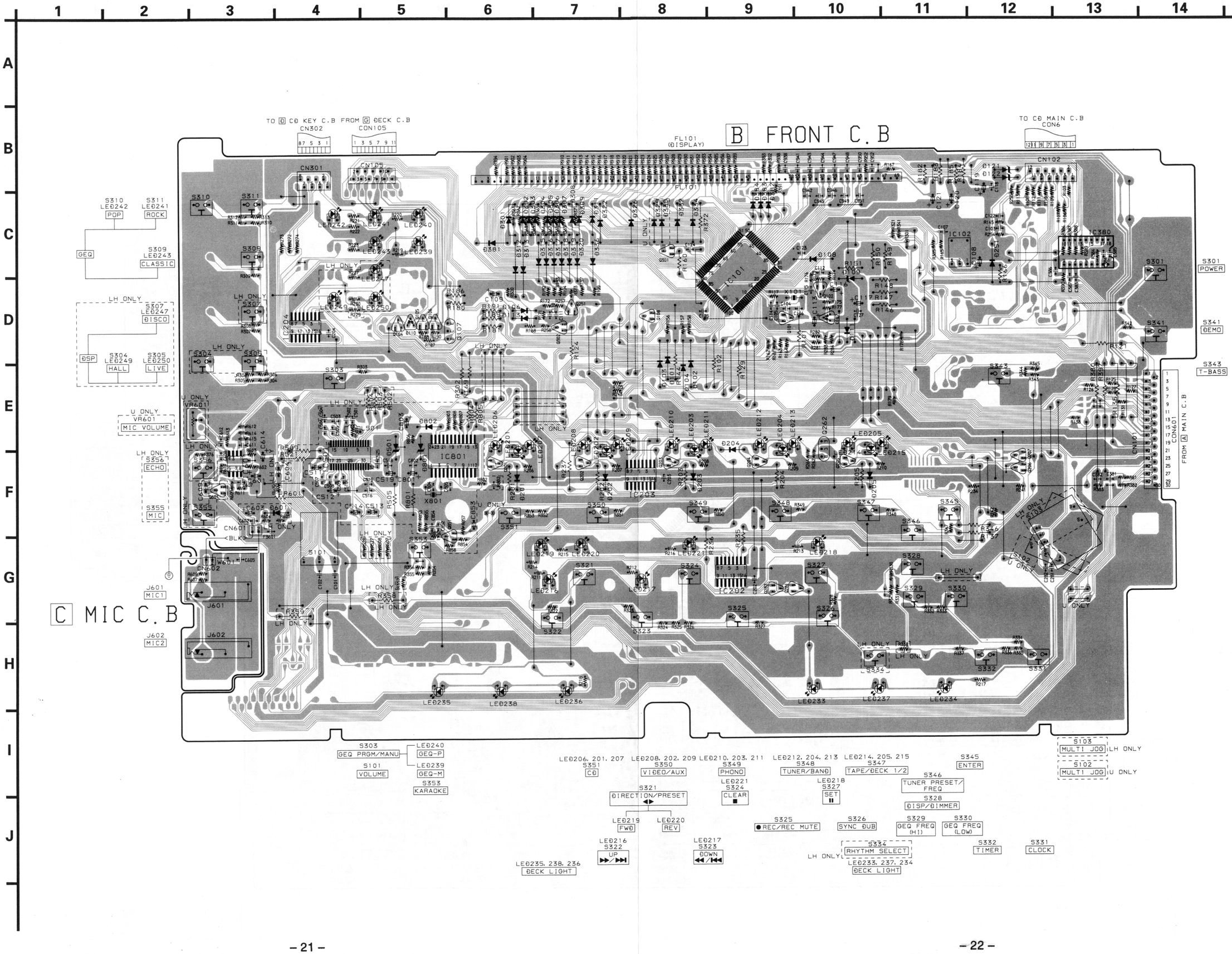
SCHEMATIC DIAGRAM – 1 (MAIN 1 / 2)



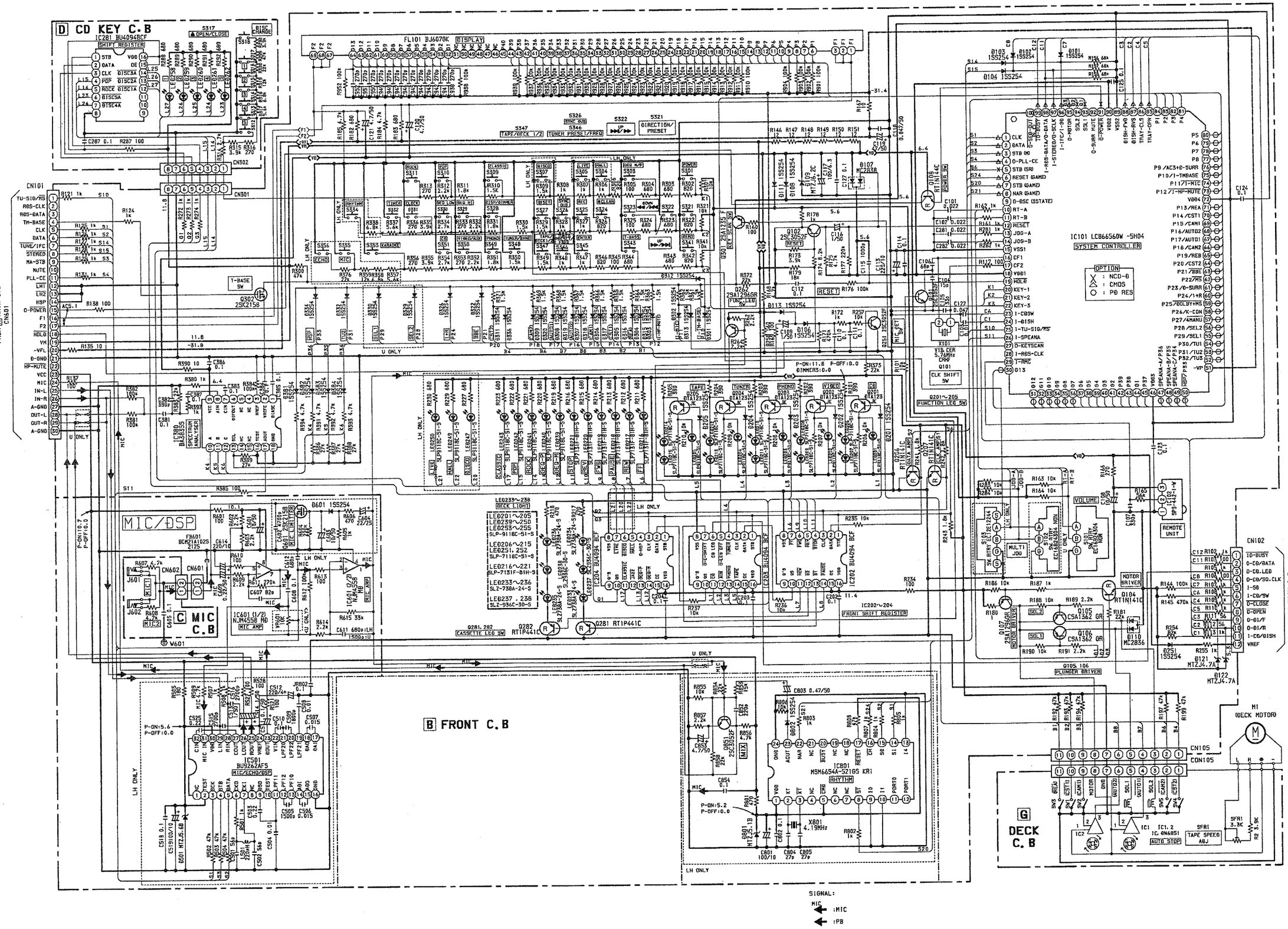
1 2 3 4 5 6 7 8 9 10 11 12 13 14

A B C D E F G H I J

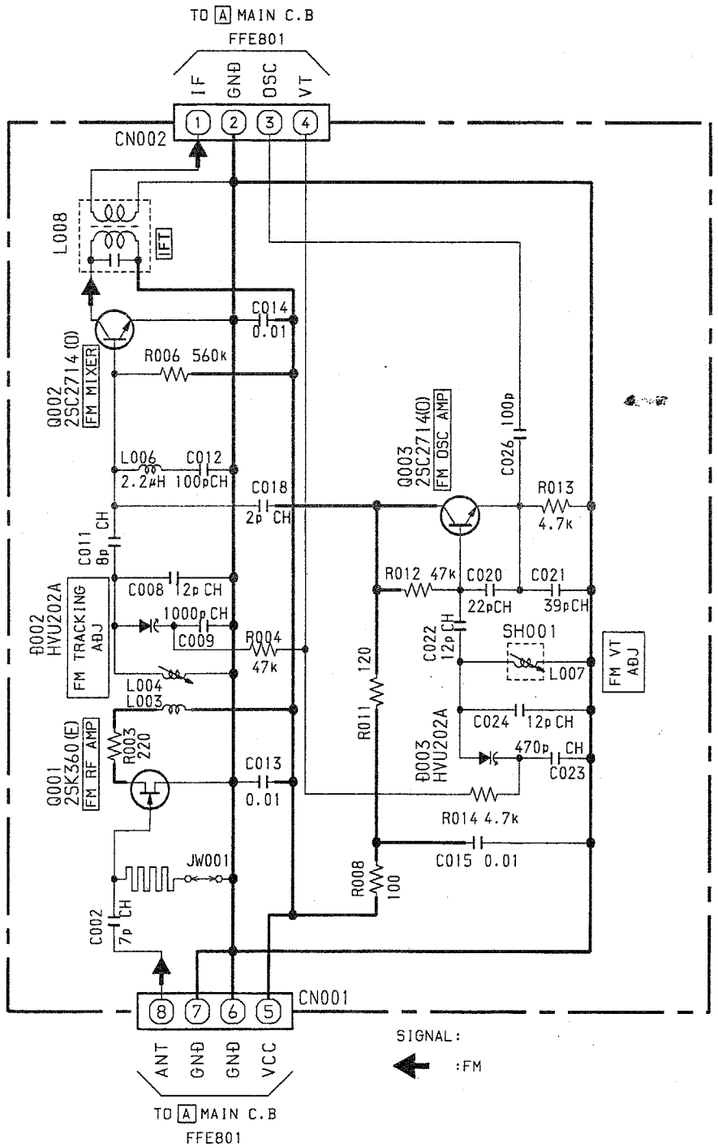



B FRONT C.B
C MIC C.B
TO D CD KEY C.B FROM G DECK C.B
CN302
CON105
CN301
CN105
TO CD MAIN C.B
CON6
CN102
FL101
(DISPLAY)
FL101
IC101
IC102
IC380
IC801
IC203
IC202
X101
X801
S310 LED242 POP
S311 LED241 ROCK
S309 LED243 CLASSIC
GEQ
LH ONLY
S307 LED247 DISCO
DSP
S304 LED249 HALL
S305 LED250 LIVE
U ONLY
VR601
MIC VOLUME
LH ONLY
S356 ECHO
S355 MIC
S301 POWER
S341 DEMO
S343 T-BASS
S103 MULTI JOG LH ONLY
S102 MULTI JOG U ONLY
FROM A MAIN C.B CON601
CN601
BLK
CN602
J601 MIC1
J602 MIC2
S303 GEQ PRGM/MANU
LED240 GEQ-P
LED239 GEQ-M
S101 VOLUME
S353 KARAOKE
LED206, 201, 207 CD
LED208, 202, 209 S351 VIDEO/AUX
LED210, 203, 211 S350 PHONO
LED212, 204, 213 S349 TUNER/BAND
LED214, 205, 215 S348 TAPE/DECK 1/2
S347 S345 ENTER
S346 TUNER PRESET/ FREQ
S328 DISP/DIMMER
LED218 S327 SET
LED221 S324 CLEAR
S321 DIRECTION/PRESET
LED219 FWD
LED220 REV
LED216 S322 UP
LED217 S323 DOWN
S325 REC/REC MUTE
S326 SYNC DUB
S329 GEQ FREQ (HI)
S330 GEQ FREQ (LOW)
S332 TIMER
S331 CLOCK
S334 RHYTHM SELECT
LH ONLY
LED233, 237, 234 DECK LIGHT
LED235, 238, 236 DECK LIGHT

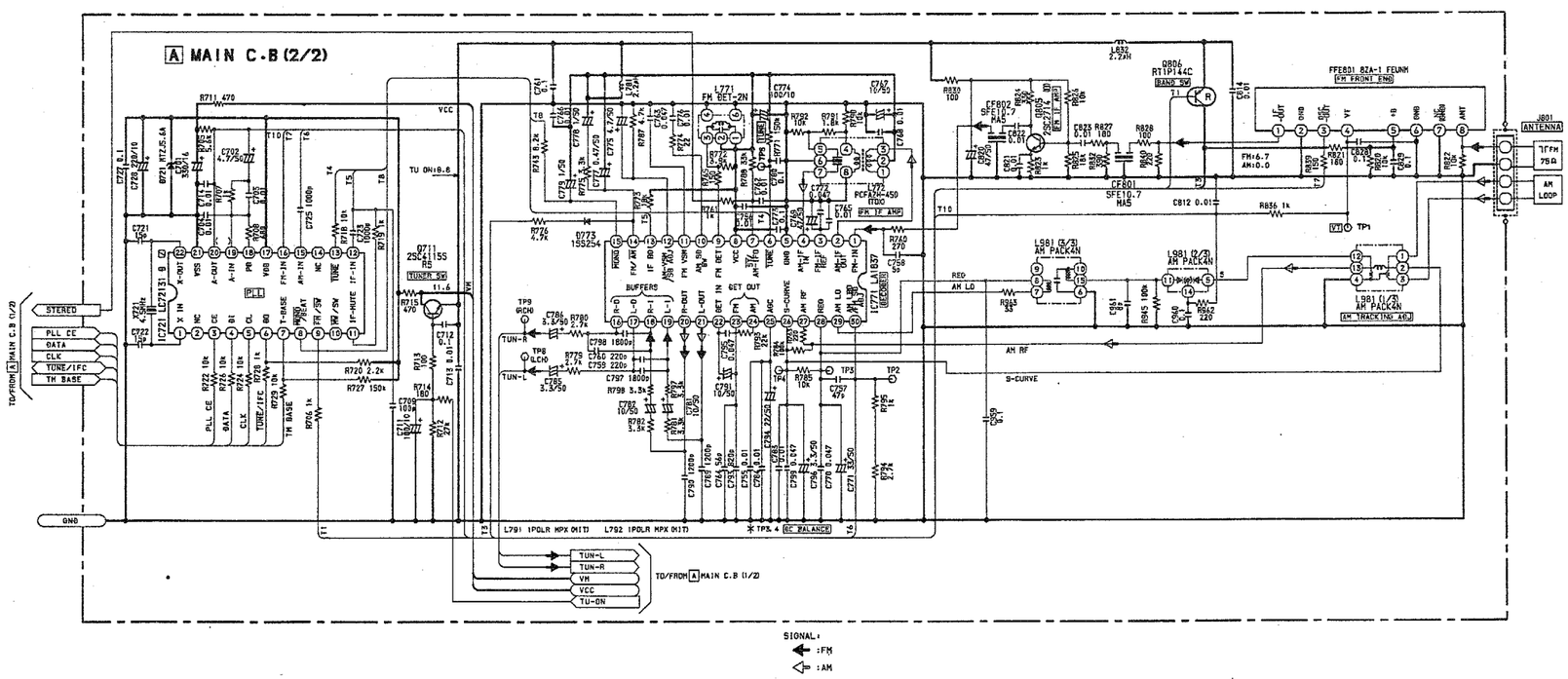
SCHEMATIC DIAGRAM – 2 (FRONT / CD KEY / MIC)

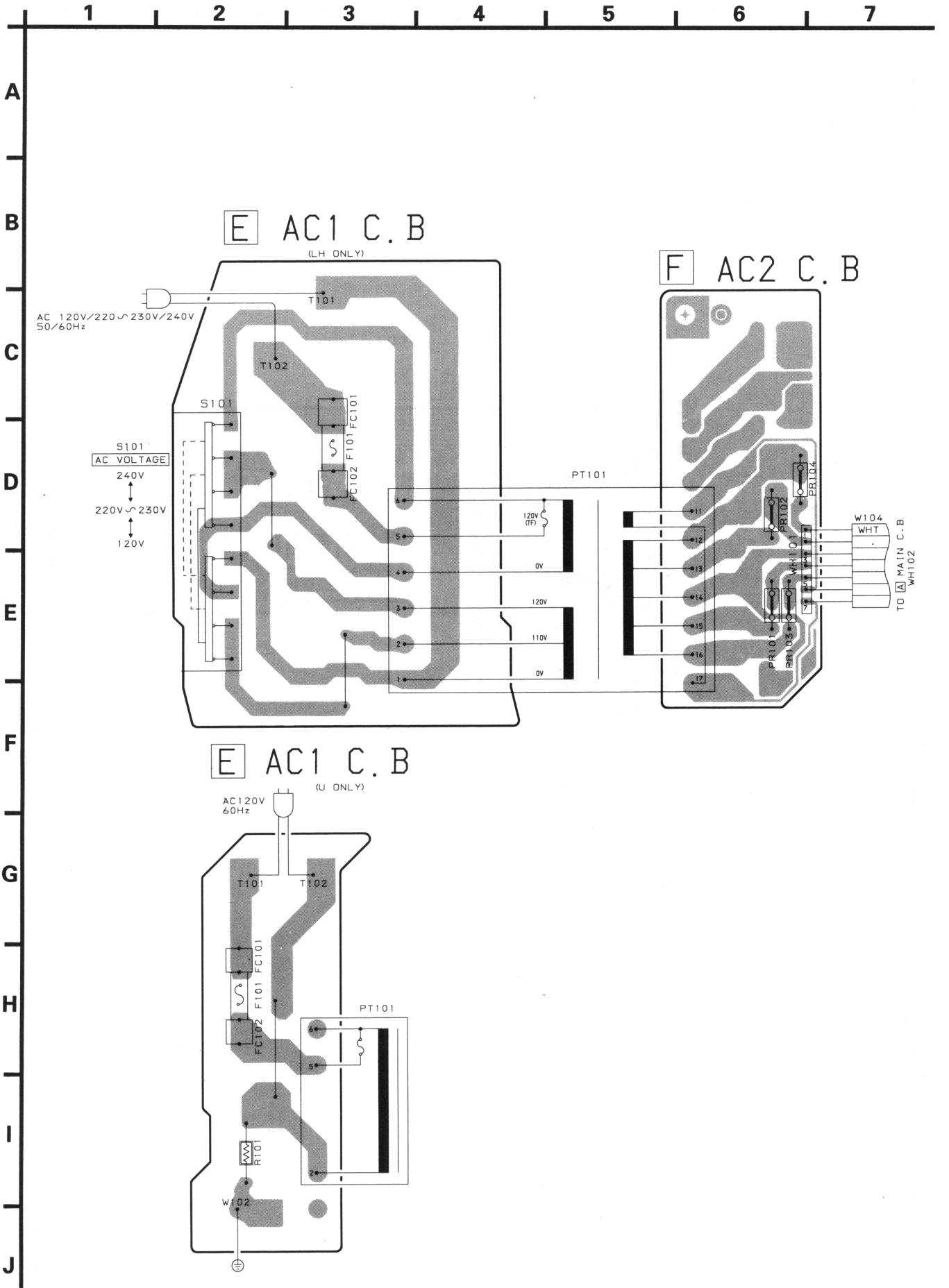


SCHEMATIC DIAGRAM – 3 (TUNER FRONT END)

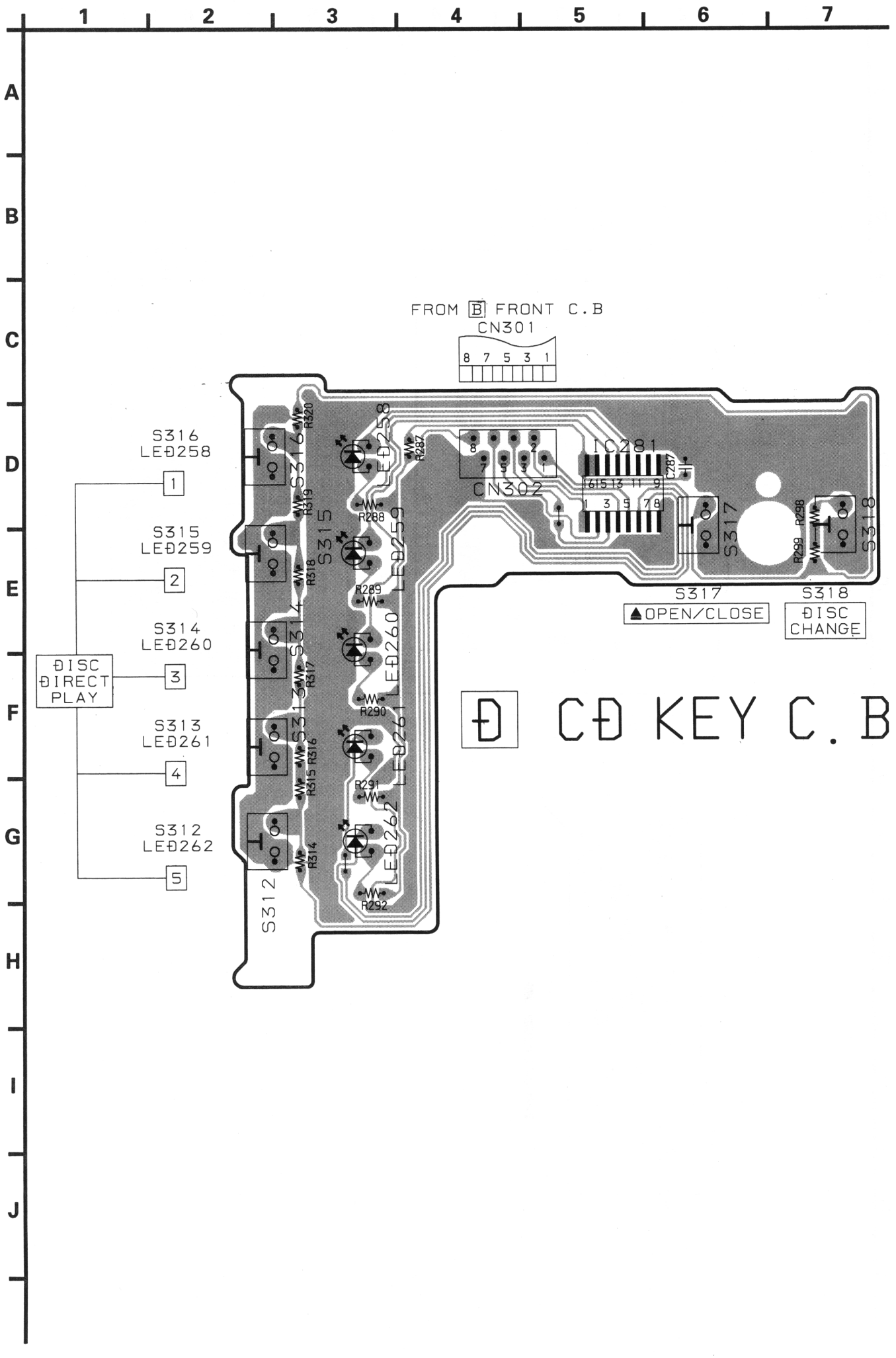


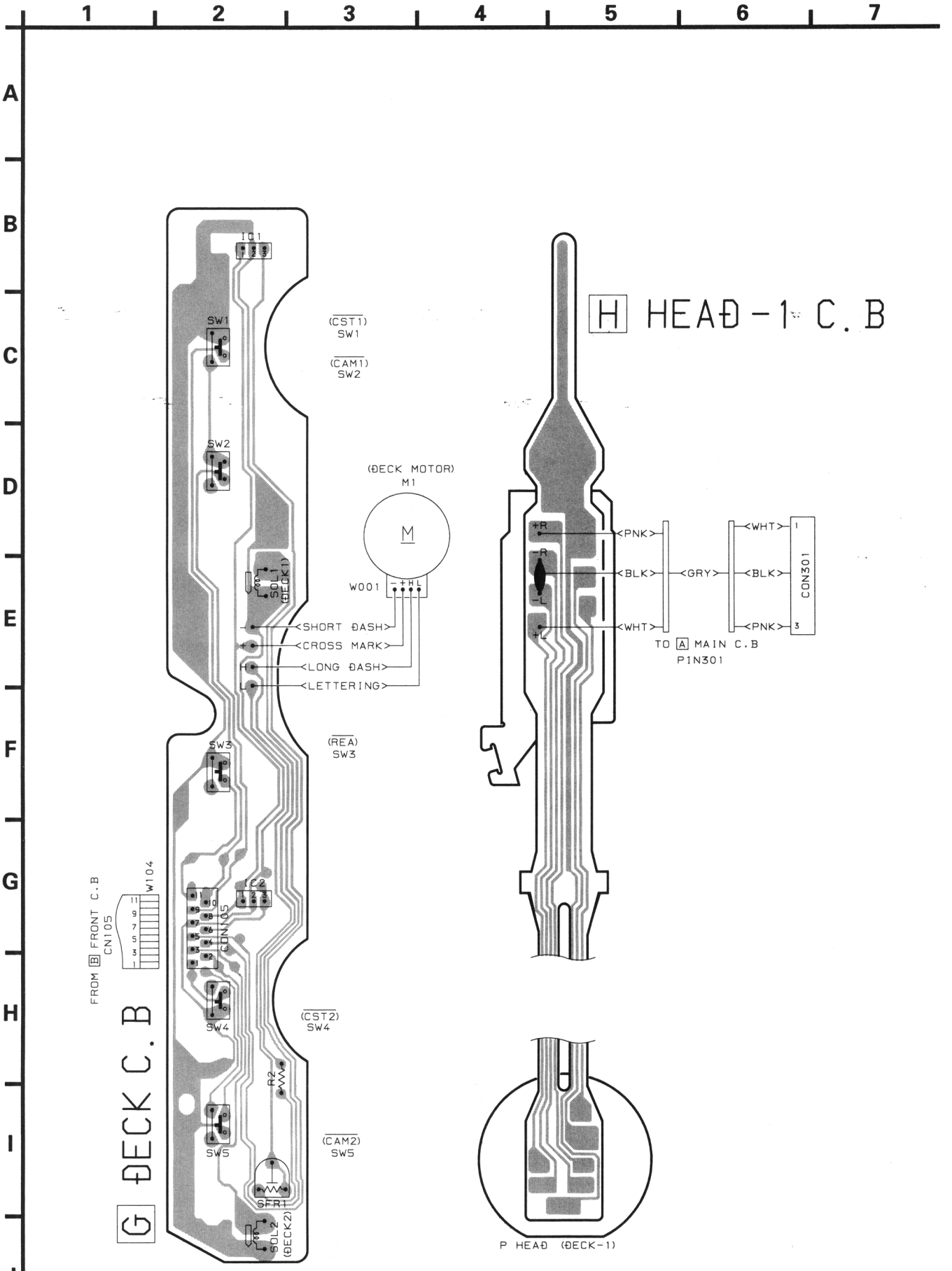

SCHEMATIC DIAGRAM – 4 (MAIN 2 / 2)




1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
E AC1 C.B
(LH ONLY)
AC 120V/220~230V/240V
50/60Hz
T101
T102
S101
S101
AC VOLTAGE
240V
220V~230V
120V
FC102 F101 FC101
PT101
120V
(TF)
0V
120V
110V
0V
F AC2 C.B
PR104
PR102
W104
WHT
WH101
PR101
PR103
TO A MAIN C.B
WH102
E AC1 C.B
(U ONLY)
AC120V
60Hz
T101
T102
FC102 F101 FC101
PT101
R101
W102

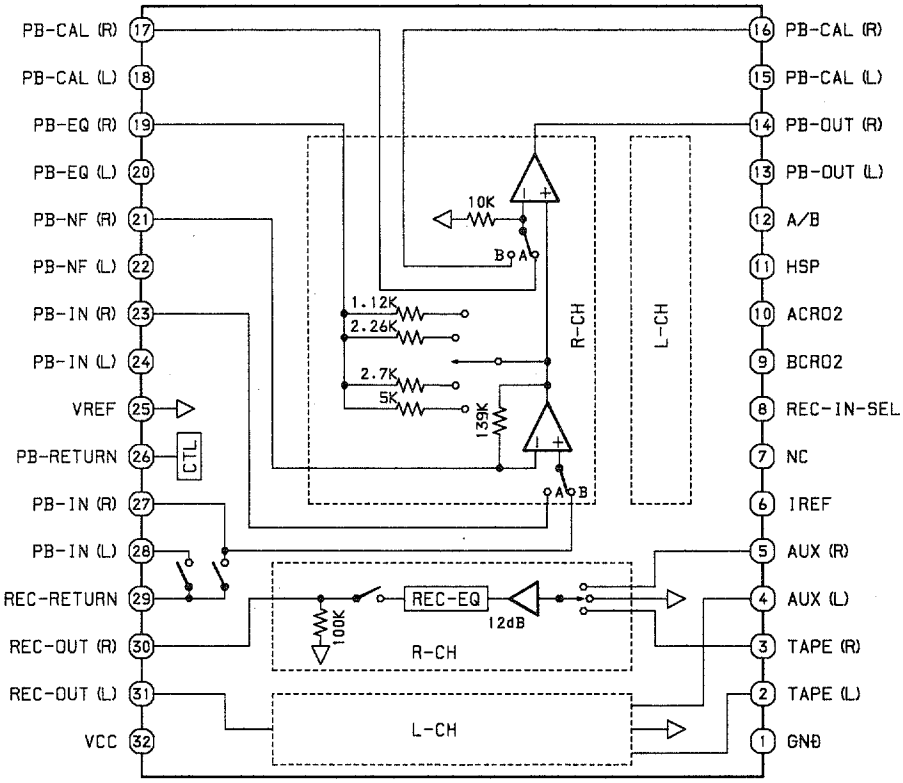
WIRING – 4 (CD KEY)



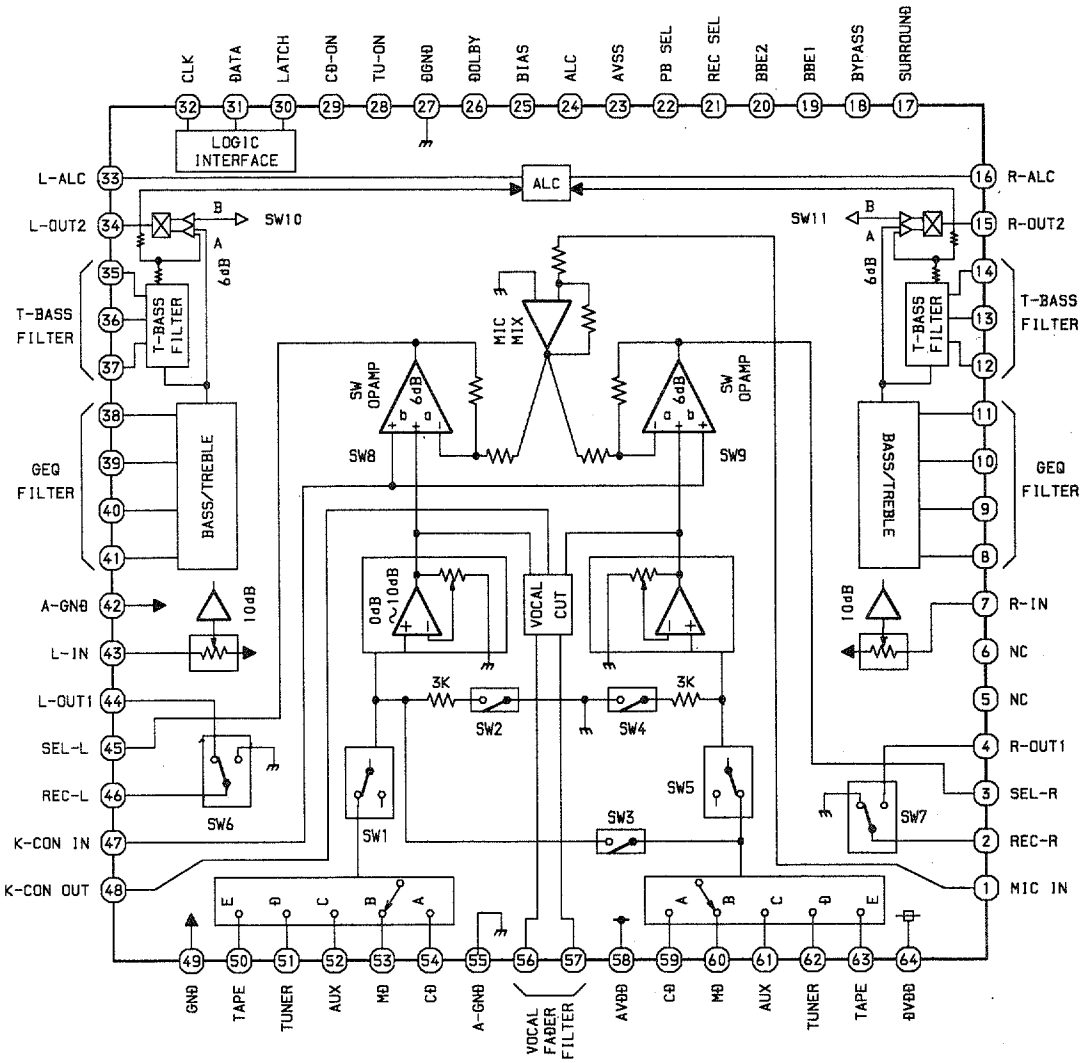

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
G DECK C.B
H HEAD-1 C.B
IC1
SW1
(CST1)
SW1
(CAM1)
SW2
SW2
(DECK MOTOR)
M1
M
W001
SOL1
(DECK1)
<SHORT DASH>
<CROSS MARK>
<LONG DASH>
<LETTERING>
SW3
(REA)
SW3
FROM B FRONT C.B
CN105
W104
CON105
IC2
SW4
(CST2)
SW4
R2
SW5
(CAM2)
SW5
SFR1
SOL2
(DECK2)
+R
R
-L
+L
<PNK>
<BLK>
<WHT>
<GRY>
<WHT>
<BLK>
<PNK>
CON301
TO A MAIN C.B
P1N301
P HEAD (DECK-1)

# IC BLOCK DIAGRAM

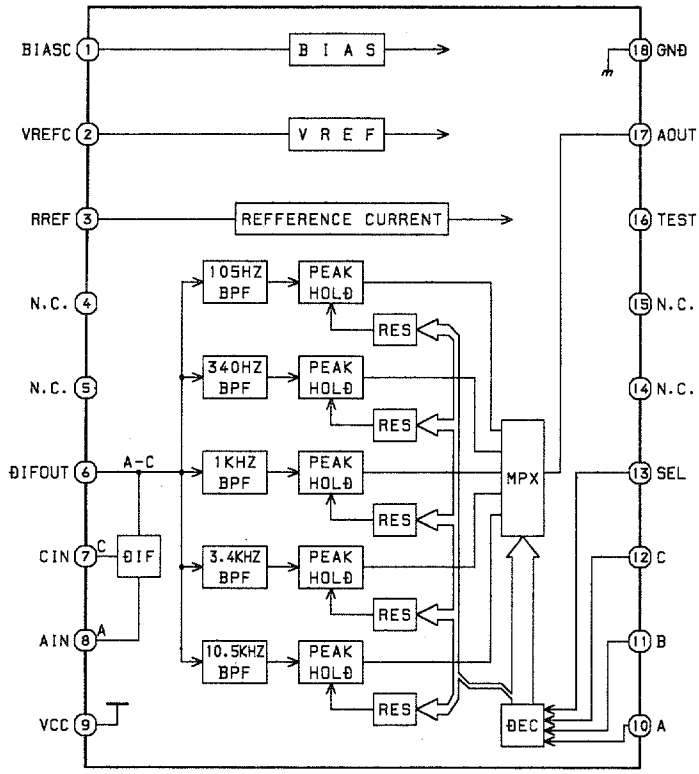
## IC, BA7762AFS



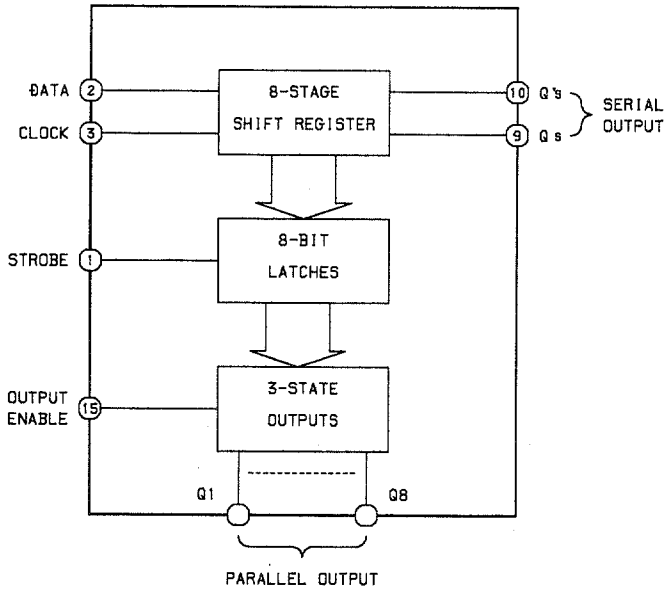

## IC, M62445FP-601



## IC, BA3835S




## IC, BU4094BCF



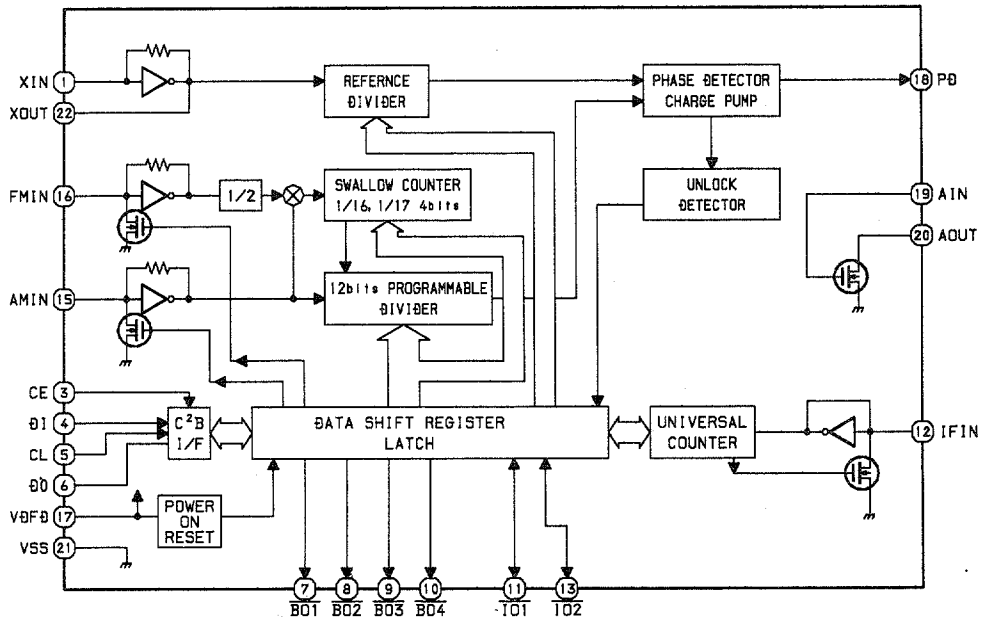

## TRUTH TABLE

| CLOCK | OUTPUT ENABLE | STROBE | DATA | PARALLEL OUTPUTS | | SERIAL OUTPUTS | |
|---|---|---|---|---|---|---|---|
| | | | | Q1 | Qn | Qs | Q's |
| ↑ | L | X | X | Z | Z | Q7 | NO Chg. |
| ↓ | L | X | X | Z | Z | No Chg. | Qs |
| ↑ | H | L | X | No Chg. | No Chg. | Q7 | No Chg. |
| ↑ | H | H | L | L | Qn-1 | Q7 | No Chg. |
| ↑ | H | H | H | H | Qn-1 | Q7 | No Chg. |
| ↓ | H | X | X | No Chg. | No Chg. | No Chg. | Qs |

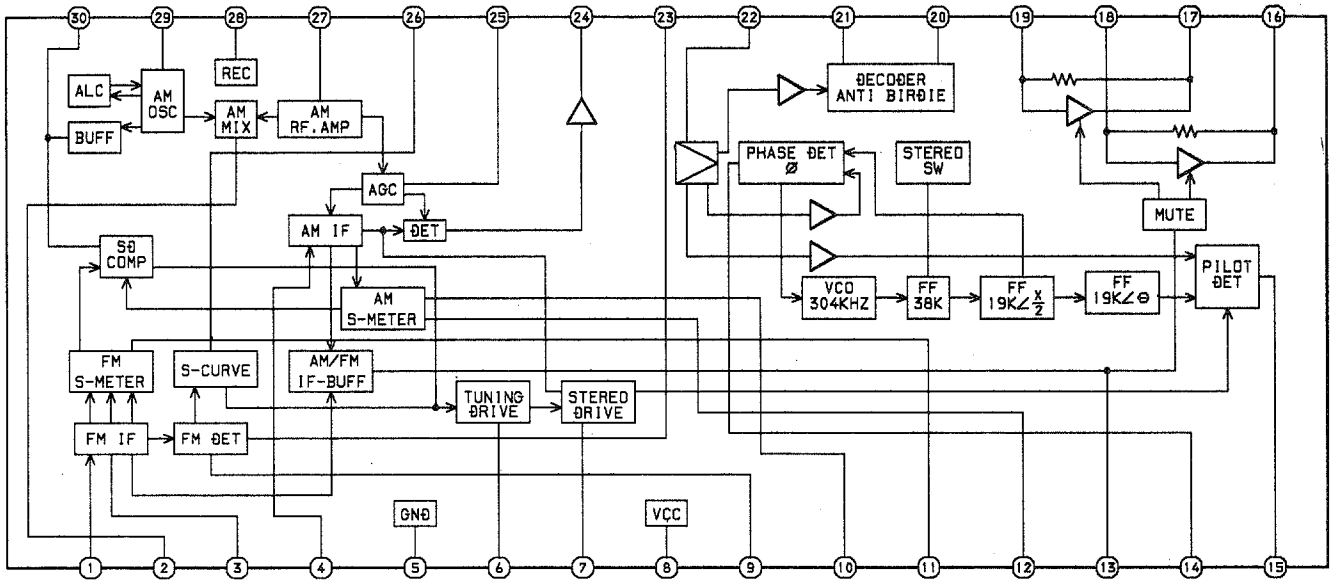
Z=High Impedance

X=Don't Care

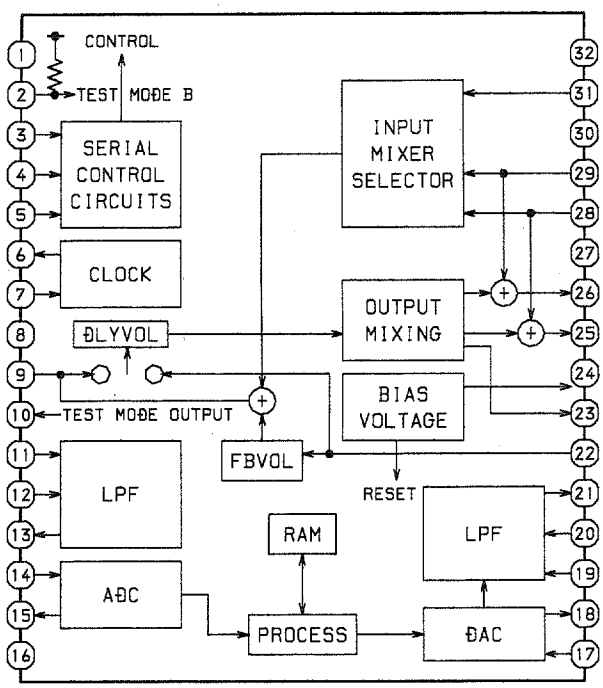
## IC, LC72131D



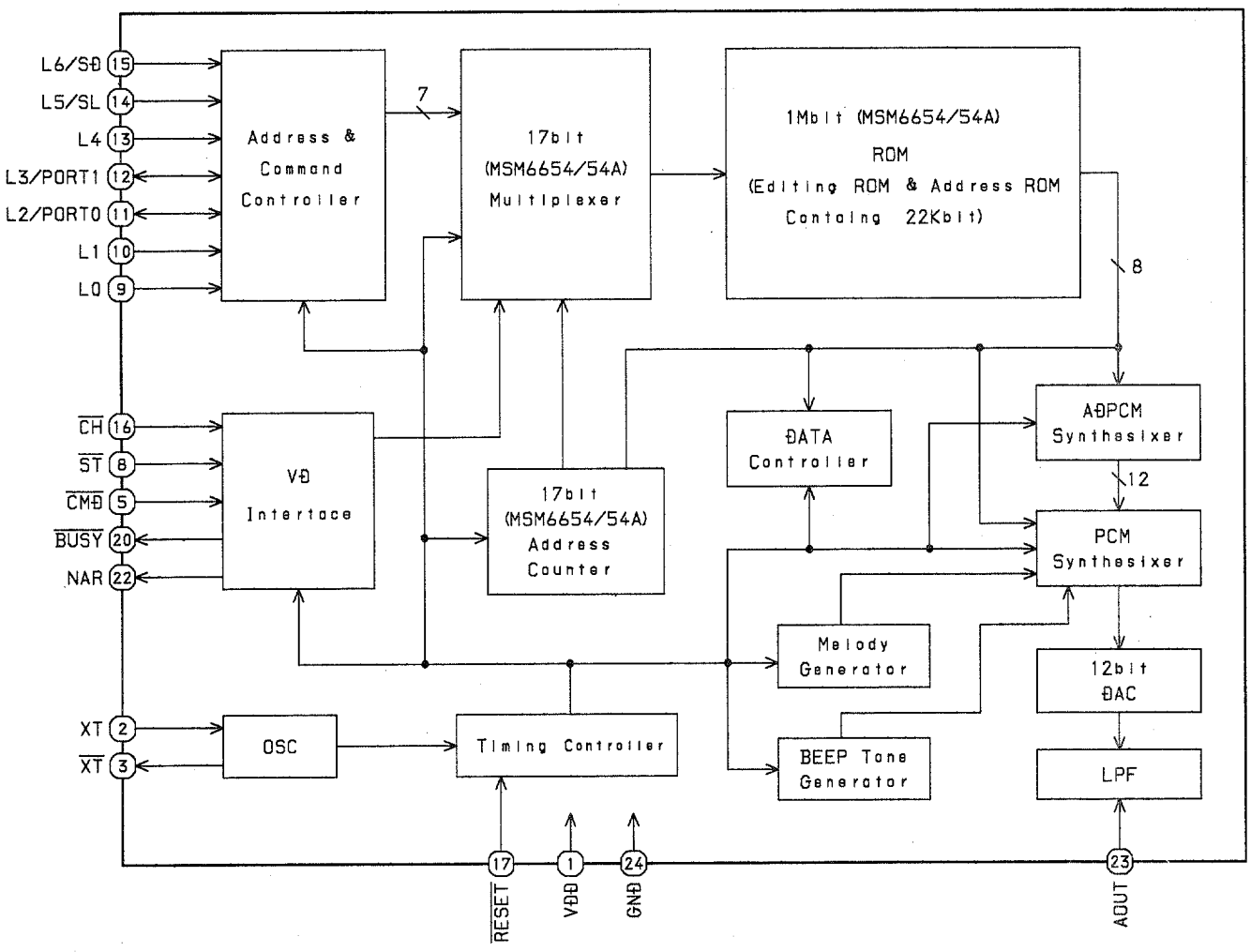

## IC, LA1837



## IC, BU9262AFS <LH>




## IC, MSM6654A-521GS-KR1 <LH>



## IC DESCRIPTION

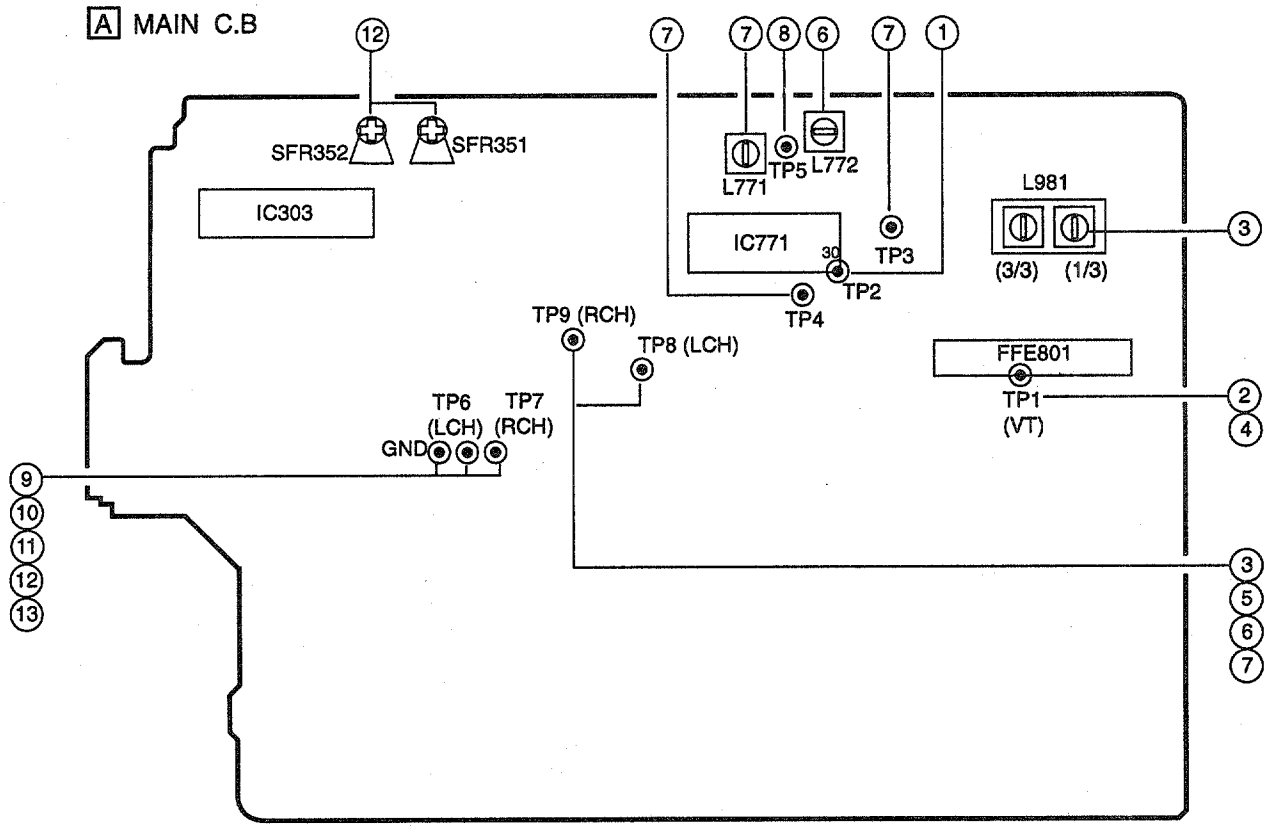
IC, LC866560W-5H04

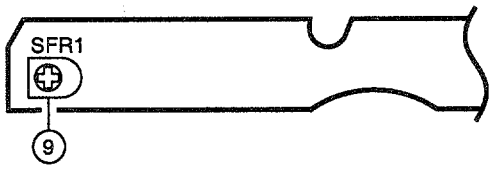
| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 1 | CLK | O | All serial ICs clock output. |
| 2 | DATA | O | All serial ICs data output. |
| 3 | STB (M) | O | Main C.B IC data latch strobe output. |
| 4 | O-PLL-CE | O | PLL IC (LCD72131D) chip enable output. |
| 5 | STB (SR) | O | Shift register data latch strobe output. |
| 6 | RESET (GAME) | I | Reset input. |
| 7 | STB (GAME) | O | Rhythm IC data latch strobe output. |
| 8 | NAR (GAME) | I | Rhythm IC NAR input. |
| 9 | O-DSC (3STATE) | O | Serial data output for Prologic C.B.(Not connected.) |
| 10 | RT-A | I | Rotary encoder volume A input. |
| 11 | RT-B | I | Rotary encoder volume B input. |
| 12 | $\overline{\text{RESET}}$ | I | Reset input. |
| 13 | JOG-A | I | Rotary encoder multi jog A input. |
| 14 | JOG-B | I | Rotary encoder multi jog B input. |
| 15 | VSS 1 | – | GND. |
| 16 | CF 1 | – | 5.76MHz oscillator circuit. |
| 17 | CF 2 | – | |
| 18 | VDD 1 | – | Power supply input. |
| 19 | $\overline{\text{HOLD}}$ | I | Power failure detected input "L" to stop clock and main memory. "H" for normal operation. |
| 20 | KEY-1 | I | KEY input 1~3.(A/D) |
| 21 | KEY-2 | | |
| 22 | KEY-3 | | |
| 23 | I-CD SW | I | CD mechanical switch A/D converter input. |
| 24 | I-DISH | I | CD turntable photo sensor A/D converter input. |
| 25 | I-TU-SIG/$\overline{\text{MS}}$ | I | Tuner signal and deck music sensor signal input. |
| 26 | I-SPEANA | I | A/D input for spectrum analyzer display. |
| 27 | O-$\overline{\text{KEYSCAN}}$ | O | Key scan timing output. |
| 28 | I-RDS-CLK | I | Tuner RDS clock input.(Not connected.) |
| 29 | I-$\overline{\text{RMC}}$ | I | System remote control signal input. |
| 30~41 | G13~G2 | O | FL grid G13~G2 output . |
| 42,43 | P39~P38 | O | FL Segment P39,P38 output . |
| 44 | G1 | O | FL grid G1 output. |
| 45 | P37 | – | FL Segment P37 output. |
| 46 | VDD3 | – | Power supply input. |
| 47 | SPEANA-A/P36 | I/O | Spectrum analyzer band pass filter control A / FL segment P36 output. |
| 48 | SPEANA-B/P35 | I/O | Spectrum analyzer band pass filter control B / FL segment P35 output. |
| 49 | SPEANA-C/P34 | I/O | Spectrum analyzer band pass filter control C / FL segment P34 output. |
| 50 | $\overline{\text{HSP}}$/P33 | I/O | $\overline{\text{HSP}}$ diode detect input / FL segment P33 output. |
| 51 | -VP | – | Power supply input for FL display. |
| 52 | P32/TU3 | I/O | FL segment P32 output / Tuner band select 3 input. |
| 53 | P31/TU2 | I/O | FL segment P31 output / Tuner band select 2 input. |
| 54 | P30/TU1 | I/O | FL segment P30 output / Tuner band select 1 input. |

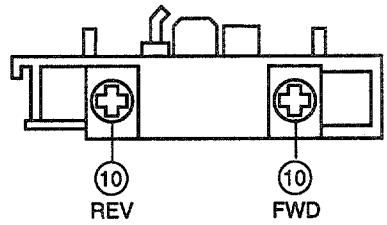
| Pin No. | Pin Name | I/O | Description |
|---|---|---|---|
| 55 | P29/SEL1 | I/O | FL segment P29 output / SEL1 diode detect input. |
| 56 | P28/SEL2 | I/O | FL segment P28 output / SEL2 diode detect input. |
| 57 | P27/$\overline{4MANU}$ | I/O | FL segment P27 output / $\overline{4MANU}$ diode detect input. |
| 58 | P26/K-CON | I/O | FL segment P26 output / K-CON diode detect input. |
| 59 | P25/$\overline{DOLBY+MS}$ | I/O | FL segment P25 output / $\overline{DOLBY+MS}$ diode detect input. |
| 60 | P24/1+R | I/O | FL segment P24 output / 1+R diode detect input. |
| 61 | P23/D-SURR | I/O | FL segment P23 output / D-SURR diode detect input. |
| 62 | P22/$\overline{MS}$ | I/O | FL segment P22 output / $\overline{MS}$ diode detect input. |
| 63 | P21/$\overline{BBE}$ | I/O | FL segment P21 output / $\overline{BBE}$ diode detect input. |
| 64 | P20/CST 2 | I/O | FL segment P20 output / DECK2 cassette detect switch input. |
| 65 | P19/REB | I/O | FL segment P19 output / DECK2 side-B record OK switch input. |
| 66 | P18/CAM 2 | I/O | FL segment P18 output / DECK2 cam switch input. |
| 67 | P17/AUTO 1 | I/O | FL segment P17 output / DECK1 auto stop signal input. |
| 68 | P16/AUTO 2 | I/O | FL segment P16 output / DECK2 auto stop signal input. |
| 69 | P15/CAM 1 | I/O | FL segment P15 output / DECK1 cam switch input. |
| 70 | P14/CST 1 | I/O | FL segment P14 output / DECK1 cassette detect switch input. |
| 71 | P13/REA | I/O | FL segment P13 output / DECK2 side A record OK switch input. |
| 72 | VDD 4 | – | Power supply input. |
| 73 | P12/$\overline{I\text{-}HP\text{-}MUTE}$ | I/O | FL segment P12 output / "L" input prologic DSP off. |
| 74 | P11/$\overline{I\text{-}MIC}$ | I/O | FL segment P11 output / Microphone input for auto vocal fader ON/OFF. |
| 75 | P10/I-TMBASE | I/O | FL segment P10 output / Reference clock input for timer watch. |
| 76 | P9/AC3+D-SURR | I/O | FL segment P9 output / AC3 +D-SURR diode detect input. |
| 77~84 | P8~P1 | O | FL segment P8~P1 output. |
| 85 | TRAY-OPN | O | CD tray open data output. |
| 86 | TRAY-CLS | O | CD tray close data output. |
| 87 | DISH RVS | O | CD turntable reverse rotation output. |
| 88 | DISH-FWD | O | CD turntable forward rotation output. |
| 89 | VSS2 | – | GND. |
| 90 | VDD2 | – | Power supply input. |
| 91 | $\overline{O\text{-}POWER}$ | O | System power supply $\overline{ON}$ /OFF output. |
| 92 | O-SURR MUTE | O | Surround mute output.(Not connected.) |
| 93 | SOL1 | O | Deck1 solenoid output. |
| 94 | SOL2 | O | Deck2 solenoid output. |
| 95 | O-MOTOR | O | Deck motor output. |
| 96 | I-IFC/I-SD | I | Tuner $\overline{SD}$ detect input / Tuner IF count serial data input. |
| 97 | I-STEREO/O-SCLK | I/O | Clock output for CD SUB-Q data / Tuner stereo data input. |
| 98 | I-RDS-DA/O-DA | I/O | Clock control data output / Tuner RDS data input. |
| 99 | $\overline{IO\text{-}BUSY}$ | I/O | CD IC data input/output. |
| 100 | $\overline{O\text{-}SEG\text{-}OUT}$ | O | FL segment control data output. |

IC, LC72131

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>1</td><td>X IN</td><td rowspan="2">I/O</td><td rowspan="2">A crystal oscillator (4.5MHz) is connected between these pins.</td></tr>
<tr><td>22</td><td>X-OUT</td></tr>
<tr><td>2</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>3</td><td>CE</td><td>I</td><td>To enable the IC. Active "H".</td></tr>
<tr><td>4</td><td>DI</td><td>I</td><td>Digital data input from CPU (LC866560W-5H04) when relevant key is operated. Active "H".</td></tr>
<tr><td>5</td><td>CL</td><td>I</td><td>To clock in the data DI.</td></tr>
<tr><td>6</td><td>DO</td><td>O</td><td>Digital data output to CPU (LC866560W-5H04).</td></tr>
<tr><td>7</td><td>TM-BASE</td><td>O</td><td>Outputs a reference clock signal (8Hz) for the clock.</td></tr>
<tr><td>8</td><td>$\overline{\text{MONO}}$ / BEAT</td><td>O</td><td>Outputs "H" when $\overline{\text{MONO}}$ / BEAT is switched.</td></tr>
<tr><td>9</td><td>$\overline{\text{FM}}$ / AM</td><td>O</td><td>Output "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>H</td><td>L</td><td>H</td><td>H</td><td>L</td><td>H</td><td>L</td><td>L</td></tr>
</table></td></tr>
<tr><td>10</td><td>$\overline{\text{MW}}$</td><td>O</td><td>Outputs "L" or "H" as follows:
<table>
<tr><th colspan="2">2 BAND</th><th colspan="3">3 BAND</th><th colspan="3">3 BAND</th></tr>
<tr><th>AM</th><th>FM</th><th>LW</th><th>MW</th><th>FM</th><th>MW</th><th>SW</th><th>FM</th></tr>
<tr><td>L</td><td>L</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
</table></td></tr>
<tr><td>11</td><td>IF-MUTE</td><td>O</td><td>To control internal counter.</td></tr>
<tr><td>12</td><td>IF-IN</td><td>I</td><td>General purpose counter input.</td></tr>
<tr><td>13</td><td>$\overline{\text{TUNE}}$</td><td>I</td><td>Receives "L" when station is tuned.</td></tr>
<tr><td>14</td><td>NC</td><td>–</td><td>Not used.</td></tr>
<tr><td>15</td><td>AM-IN</td><td>I</td><td>Receives the AM local oscillator frequency signal.</td></tr>
<tr><td>16</td><td>FM-IN</td><td>I</td><td>Receives the FM local oscillator frequency signal.</td></tr>
<tr><td>17</td><td>VDD</td><td>–</td><td>Supply power to IC (+5V).</td></tr>
<tr><td>18</td><td>PD</td><td>O</td><td>PLL charge pump output.</td></tr>
<tr><td>19</td><td>A-IN</td><td>I</td><td rowspan="2">The MOS transistor for PLL active low pass filter.</td></tr>
<tr><td>20</td><td>A-OUT</td><td>O</td></tr>
<tr><td>21</td><td>VSS</td><td>–</td><td>Ground.</td></tr>
</table>




## < TUNER SECTION >

1. Clock Frequency Check
   Settings : • Test point : TP2
   Method : Set to AM 1710kHz and check that the test point is 2160kHz ± 45Hz.

2. AM VT Check
   Settings : • Test point : TP1
   Method : Set to AM 1710kHz and AM 530kHz and check that the test point is less than 8.5V(1710kHz) and more than 0.6V(530kHz).

3. AM Tracking Adjustment
   Settings : • Test point : TP8(Lch), TP9(Rch)
   • Adjustment location :
   L981(1/3) ..... 1000kHz
   Method : Set to AM 1000kHz and adjust L981(1/3) so that the test point is max.

4. FM VT Check
   Settings : • Test point : TP1
   Method : Set to FM 108.0MHz and check that the test point is less than 8.0V.
   Set to FM 87.5MHz and check that the test point is more than 0.5V.

5. FM Tracking Check
Settings : • Test point : TP8(Lch), TP9(Rch)
Method : Set to FM 98.0MHz and check that the test point is less than 9.0dB.

6. AM IF Adjustment
Settings : • Test point : TP8(Lch), TP9(Rch)
• Adjustment location :
L772 ..... 450kHz

7. DC Balance / Mono Distortion Adjustment
Settings : • Test point : TP3, TP4 (DC Balance)
TP8, TP9 (Distortion)
• Adjustment location : L771
• Input level : 54dB
Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes 0V ± 0.04V. Next, check that the distortion is less than 1.3%

8. Auto Stop Level Check
AM
Settings : • Input level : 52dB
• Test point : TP5
Method : Set to AM 1000kHz and check that the auto stop is at 37 ~ 62dB.

FM
Settings : • Input level : 25dB
• Test point : TP5
Method : Set to FM 98.0MHz and check that the auto stop is at 25dB ± 10dB.

< DECK SECTION >

9. Tape Speed Adjustment
Settings : • Test tape : TTA-100
• Test point : TP6(Lch), TP7(Rch)
• Adjustment location : SFR1
Method : Play back the test tape and adjust SFR1 so that the frequency counter reads 3000Hz ± 5Hz.

10. Head Azimuth Adjustment
Settings : • Test tape : TTA-300(10kHz)/TTA-330(8kHz)
• Test point : TP6(Lch), TP7(Rch)
• Adjustment location : Head azimuth adjustment screw
Method : Play back (FWD) the 10kHz/8kHz signal of the test tape and adjust screw so that the output becomes maximum.
Next, perform on REV PLAY mode.

11. PB Frequency Response Check (DECK 1, DECK 2)
Settings : • Test tape : TTA-300
• Test point :TP6(Lch), TP7(Rch)
Method : Play back the 315Hz and 10kHz signals of the test tape and check that the output ratio of the 10kHz signal with respect to that of the 315Hz signal is within 2dB.

12. REC/PB Frequency Response Adjustment
Settings : • Test tape : TTA-602
• Test point : TP6(Lch), TP7(Rch)
• Input signal : 1kHz / 10kHz (LINE IN)
• Adjustment location : SFR351 (Lch)
SFR352 (Rch)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes 31mV. Record and play back the 1kHz and 10kHz signals and adjust SFRs so that the output of the 10kHz signals becomes 0dB ± 0.5dB with respect to that of the 1kHz signal.

13. REC/PB Sensitivity Check
Settings : • Test tape : TTA-602
• Test point : TP6(Lch), TP7(Rch)
• Input signal : 1kHz (LINE IN)
Method : Apply a 1kHz signal and REC mode. Then adjust OSC attenuator so that the output level at the TP6, TP7 becomes 310mV. Record and play back the 1kHz signals and check that the output is 0 ± 3.0dB.

# PRACTICAL SERVICE FIGURE

## <TUNER SECTION>

<FM SECTION>

| | |
|---|---|
| IHF Sensitivity : | Less than 10 / 9 / 9dB |
| (THD 3%) | [at 87.5 / 98.0 / 108.0MHz] |
| S/N 50dB Quieting sensitivity : | |
| | Less than 35dB |
| | [at 98.0MHz] |
| Signal to noise ratio : | Mono : More than 68dB |
| | Stereo : More than 66dB |
| | [at 98.0MHz ] |
| Distortion : | Mono : Less than 1.2% |
| | Stereo : Less than 2.0% |
| | [at 98.0MHz] |
| Auto stop level : | 25dB ± 10dB [at 98.0MHz] |
| Stereo separation : | More than 30dB [at 98.0MHz] |
| Intermediate frequency : | 10.7MHz |

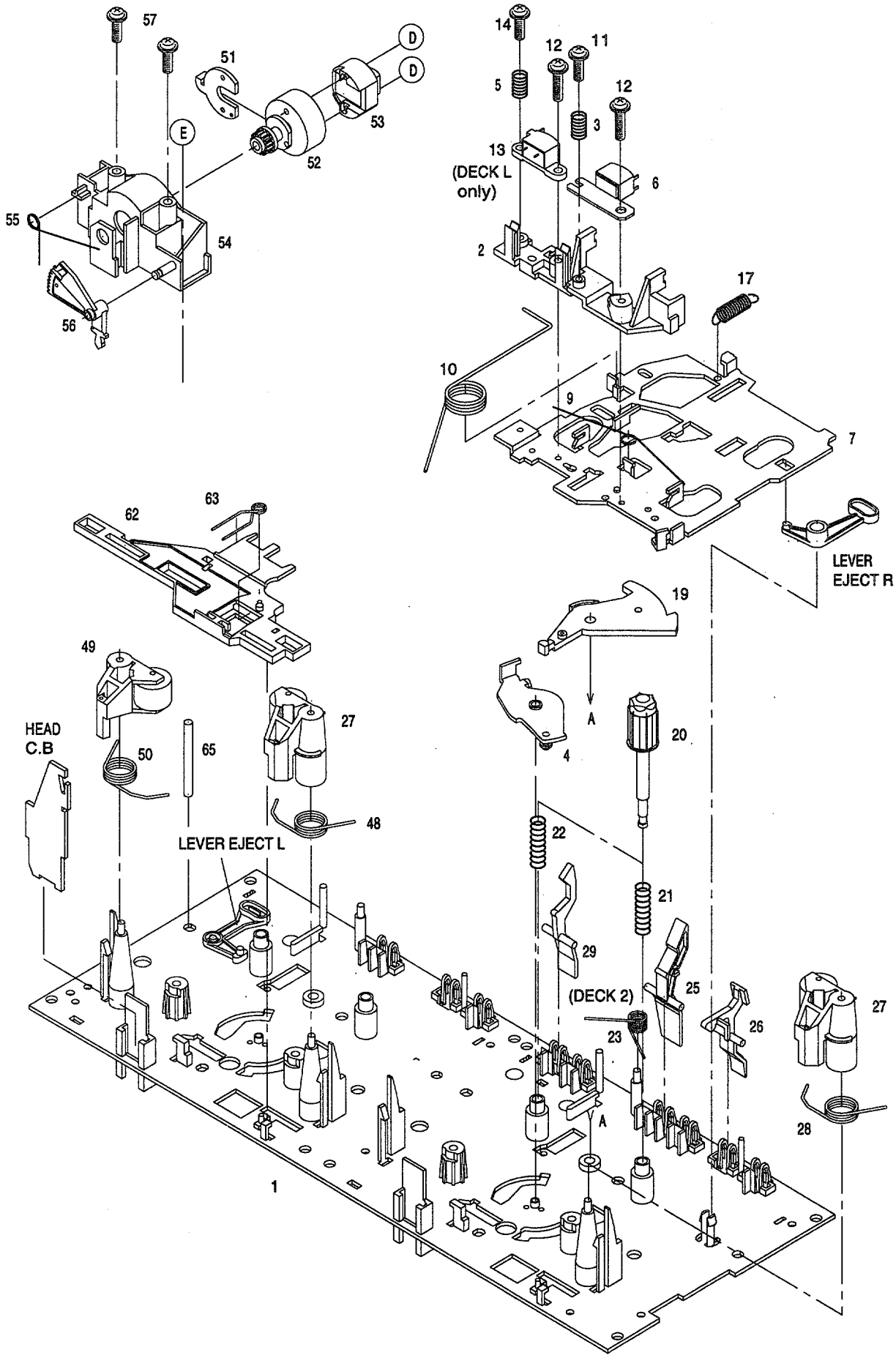
<AM SECTION>

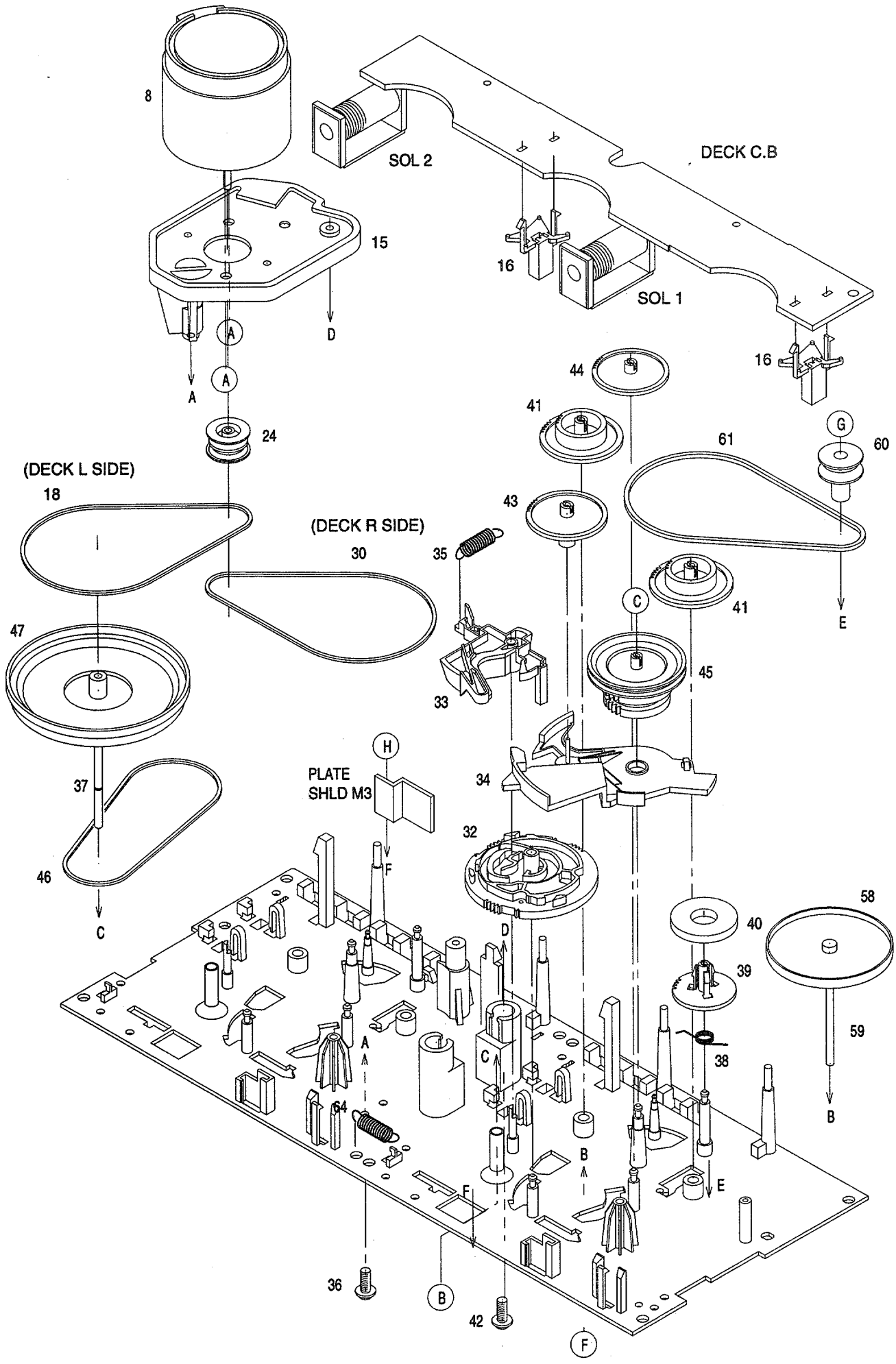
| | |
|---|---|
| Sensitivity : | Less than 60dB |
| (S/N 20 dB) | [at 600kHz] |
| | Less than 58dB |
| | [at 1000kHz] |
| | Less than 58dB |
| | [at 1400kHz] |
| Signal to noise ratio : | Mono : More than 36dB |
| | Stereo : More than 34dB |
| | [at 1000kHz] |
| Distortion : | Mono : Less than 1.5% |
| | Stereo : Less than 4.0% |
| | [at 1000kHz] |
| Stereo separation : | More than 15dB [at 1000kHz] |
| Auto stop level : | 52dB +10/-15dB |
| | [at 1000kHz] |
| Intermediate frequency : | 450kHz |

## <DECK SECTION>

| | |
|---|---|
| Tape speed : | 3000Hz ± 45Hz |
| Wow & flutter : | Less than 0.21% |
| | (W.R.M.S) |
| Take-up torque : | 30 ~ 55g-cm |
| | (FWD, REV) |
| F.F torque : | 75 ~ 180g-cm |
| REW torque : | 75 ~ 130g-cm |
| Back tension : | 2 ~ 7g-cm |
| | (FWD, REV) |
| PB output level : | 2.8V± 3dB |
| | (SP OUT 6Ω) |
| REC/PB output level : | 0 ± 3dB |
| | (SP OUT 6Ω,NORM) |
| Distortion (REC/PB) : | Less than 2.0% |
| | (NORM) |
| Noise level (PB) : | Less than 20mV |
| | (NORM, SP OUT 6Ω) |
| Noise level (REC/PB) : | Less than 20mV |
| | (NORM, SP OUT 6Ω) |
| Erasing ratio : | More than 60dB |
| | (at 125Hz, +10VU, NORM) |
| Test tape : | TTA–602 (NORM) |

# TAPE MECHANISM EXPLODED VIEW 1 / 1



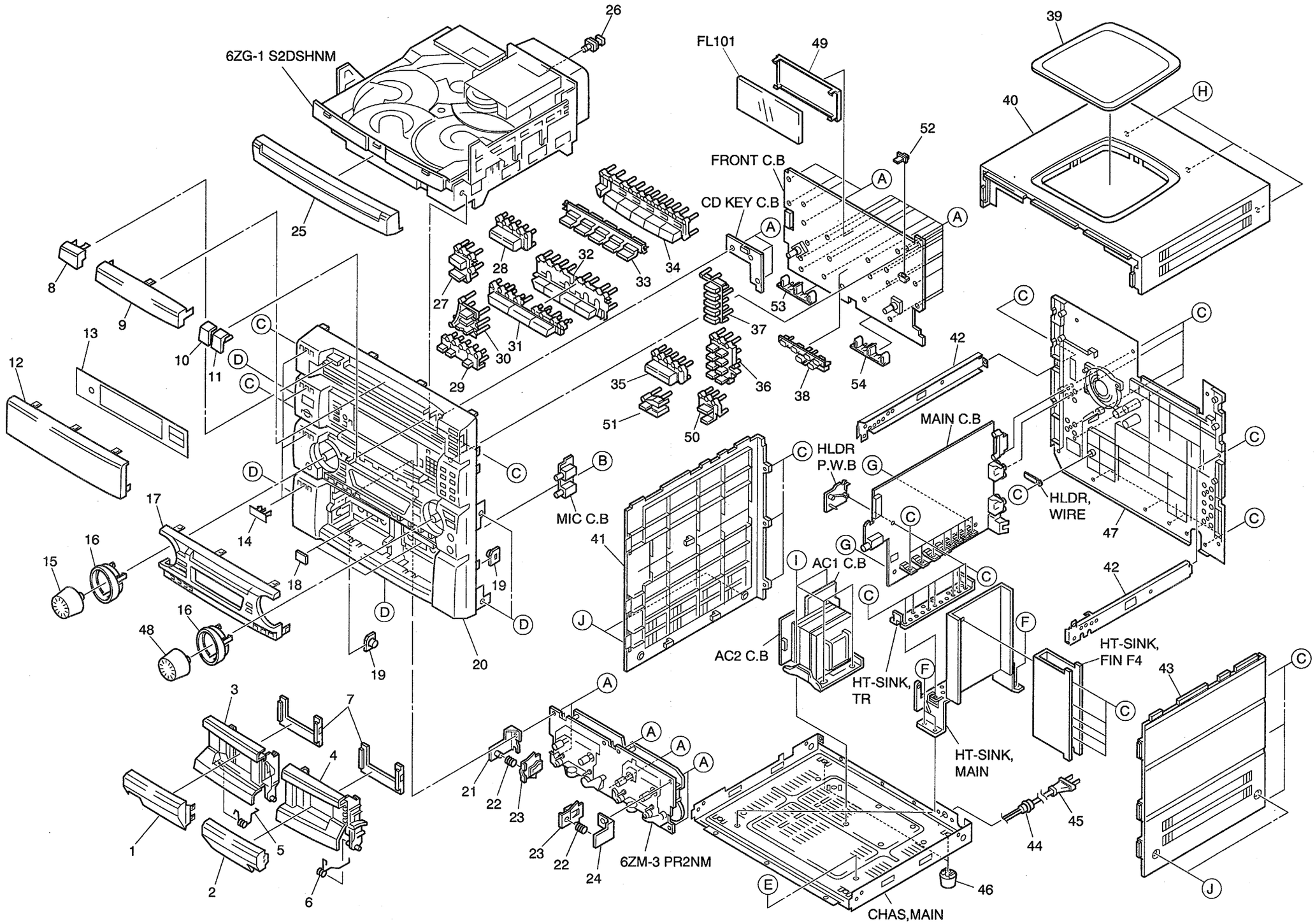

8
SOL 2
DECK C.B
15
16
SOL 1
16
D
A
A
A
44
41
24
G
61
60
(DECK L SIDE)
18
43
(DECK R SIDE)
30
35
C
41
E
47
45
33
H
PLATE
SHLD M3
34
37
32
F
46
C
58
40
D
39
59
A
C
38
64
B
B
E
F
36
B
42
F

# TAPE MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 86-ZM3-215-010 | | CHAS ASSY,RS |
| 2 | 86-ZM3-202-010 | | BASE,HEAD S |
| 3 | 86-ZM3-205-010 | | SPR-C,RPH S |
| 4 | 82-ZM1-333-210 | | PLATE,LINK 2 |
| 5 | 86-ZM3-206-010 | | SPR-C,EH S |
| 6 | 87-A90-403-019 | | HEAD,RPH MS15R |
| 7 | 86-ZM3-201-010 | | CHAS,HEAD S(DECK L) |
| 7 | 82-ZM3-206-910 | | CHAS,HEAD(DECK R) |
| 8 | 87-045-347-019 | | MOT,SHU2L 70(M1) |
| 9 | 82-ZM1-269-219 | | SPR-T,BRG |
| 10 | 82-ZM1-219-110 | | SPR-T,LINK |
| 11 | 86-ZM3-209-010 | | S-SCREW,ASIMUTHS |
| 12 | 86-ZM3-207-010 | | S-SCREW,RPH |
| 13 | 87-A90-404-019 | | HEAD,EH LE15B |
| 14 | 86-ZM3-208-010 | | S-SCREW,EH |
| 15 | 86-ZM3-203-010 | | HLDR,MOTS |
| 16 | 82-ZM1-245-210 | | HLDR,IC |
| 17 | 82-ZM1-218-019 | | SPR-E,HB |
| 18 | 86-ZM3-214-010 | | BELT,SUB RR |
| 19 | 82-ZM1-222-219 | | LVR,PLAY |
| 20 | 82-ZM1-217-419 | | REEL TABLE |
| 21 | 82-ZM1-244-519 | | SPR-C,BT |
| 22 | 82-ZM1-285-410 | | SPR-C,BT L |
| 23 | 82-ZM1-257-019 | | SPR-T,CAS |
| 24 | 82-ZM3-221-010 | | PULLEY,MOT 2M |
| 25 | 82-ZM1-242-019 | | LVR,CAS |
| 26 | 82-ZM1-243-019 | | LVR,STOP |
| 27 | 82-ZM1-344-119 | | LVR ASSY,PINCH |
| 28 | 86-ZM3-204-010 | | SPR-T,PINCHDS |
| 29 | 82-ZM1-240-119 | | LVR,REC (DECK 2) |
| 30 | 86-ZM3-210-010 | | BELT,RS |
| 32 | 82-ZM3-305-119 | | GEAR,CAM M2 |
| 33 | 82-ZM1-227-319 | | LVR,TRIG |
| 34 | 82-ZM3-306-110 | | LVR,FR M2 |
| 35 | 82-ZM1-265-119 | | SPR-E,TRIG |
| 36 | 87-761-073-419 | | VFT2+2.6-6 W/O SLOT |
| 37 | 82-ZM1-239-019 | | CAPSTAN N 2.2-41.7 |
| 38 | 82-ZM1-322-019 | | SPR-T,FR60 |
| 39 | 82-ZM1-220-219 | | GEAR,IDLER |
| 40 | 82-ZM3-616-019 | | RING MAGNET 4 |
| 41 | 82-ZM1-216-319 | | GEAR,REEL |
| 42 | 86-ZM3-213-010 | | S-SCREW,HLDR,MOT 3 |
| 43 | 82-ZM1-225-219 | | GEAR,FR |
| 44 | 82-ZM1-226-019 | | GEAR,REW |
| 45 | 82-ZM3-333-310 | | SLIP DISK ASSY 2 |
| 46 | 82-ZM1-338-010 | | BELT FR4 |
| 47 | 82-ZM1-349-019 | | FLY-WHL RW (DECK L) |
| 47 | 82-ZM3-338-010 | | FLY-WHL R3W (DECK R) |
| 48 | 82-ZM1-259-210 | | SPR-T,PINCH R |
| 49 | 82-ZM1-341-110 | | LVR ASSY,PINCH L2 |
| 50 | 82-ZM1-258-210 | | SPR-T,PINCH L |
| 51 | 82-ZM1-314-110 | | PLATE,HEAD |
| 52 | 82-ZM1-208-310 | | HLDR,HEAD |
| 53 | 87-A90-366-010 | | HEAD,PH YK50P-BF414 |
| 54 | 82-ZM1-207-810 | | GUIDE TAPE |
| 55 | 82-ZM1-213-010 | | SPR-T,HEAD |
| 56 | 82-ZM1-210-110 | | GEAR,HT |
| 57 | 86-ZM4-206-010 | | S-SCREW AZIMUTH L |
| 58 | 82-ZM1-348-010 | | FLY-WHL,LW |
| 59 | 82-ZM1-236-019 | | CAPSTAN N 2-41.5 |
| 60 | 82-ZM3-335-210 | | PULLEY,COUPLER M3 |
| 61 | 86-ZM1-206-010 | | BELT,MAIN L |
| 62 | 82-ZM1-266-110 | | LVR,DIR |
| 63 | 82-ZM1-214-010 | | SPR-T,DIR |
| 64 | 82-ZM1-255-310 | | SPR-E,LVR DIR |
| 65 | 82-ZM3-339-010 | | SHAFT,COUPLER N3 |
| A | 87-251-071-417 | | U+2.6-4 |
| B | 80-ZM6-243-019 | | SH,1.75-3.6-0.5 SLT |
| C | 82-ZM3-334-010 | | PW,2.16-6-0.4 |
| D | 80-ZM6-207-010 | | V+1.6-7 |
| E | 85-ZM3-202-010 | | S-SCREW TG |
| F | 82-ZM1-288-010 | | SH,1.63-3.2-0.5 SLT |
| G | 87-B10-043-010 | | W-P,0.99-4-0.25 SLT |
| H | 87-571-032-410 | | VIT+2-3 |

MECHANICAL EXPLODED VIEW 1 / 1

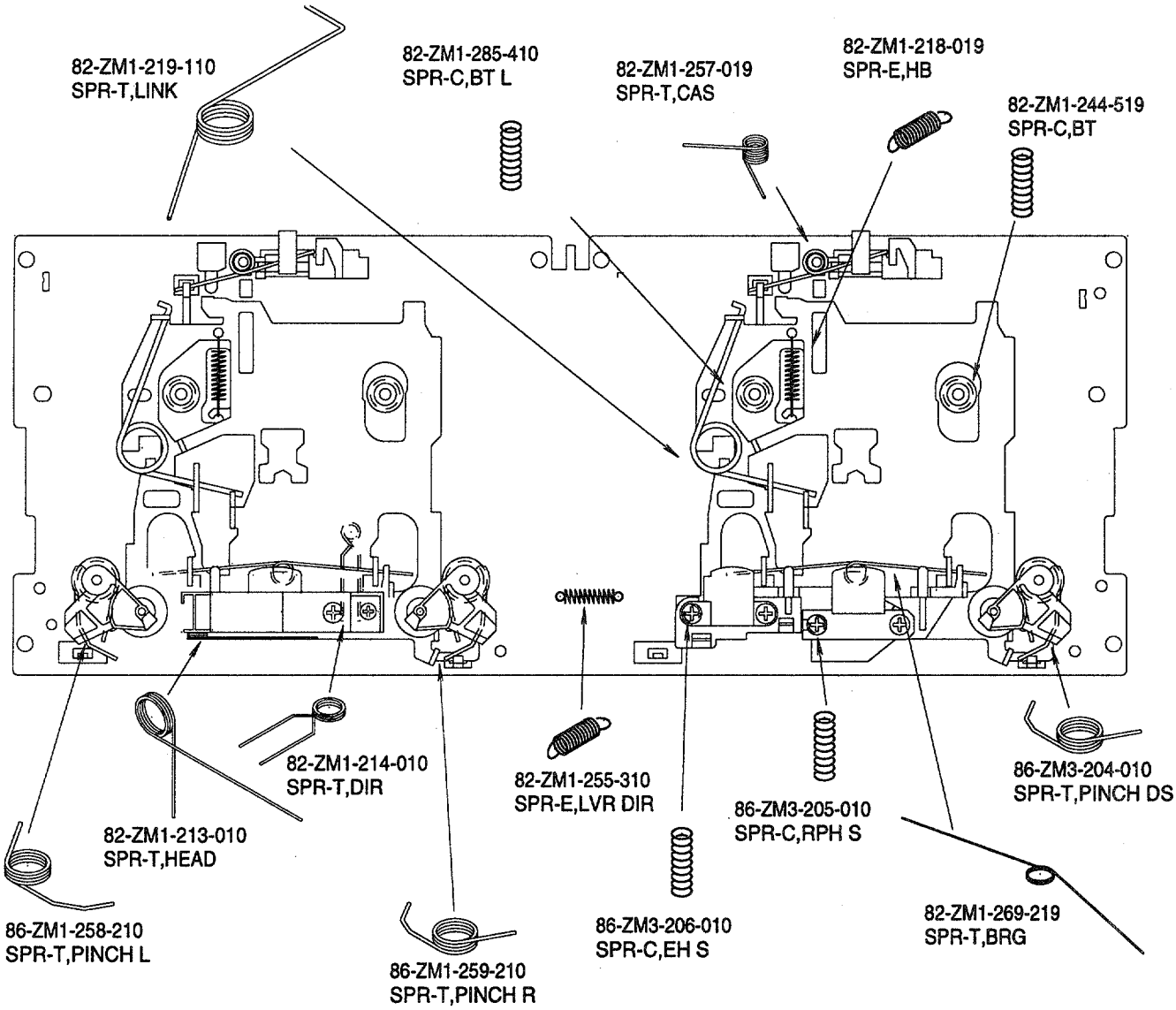


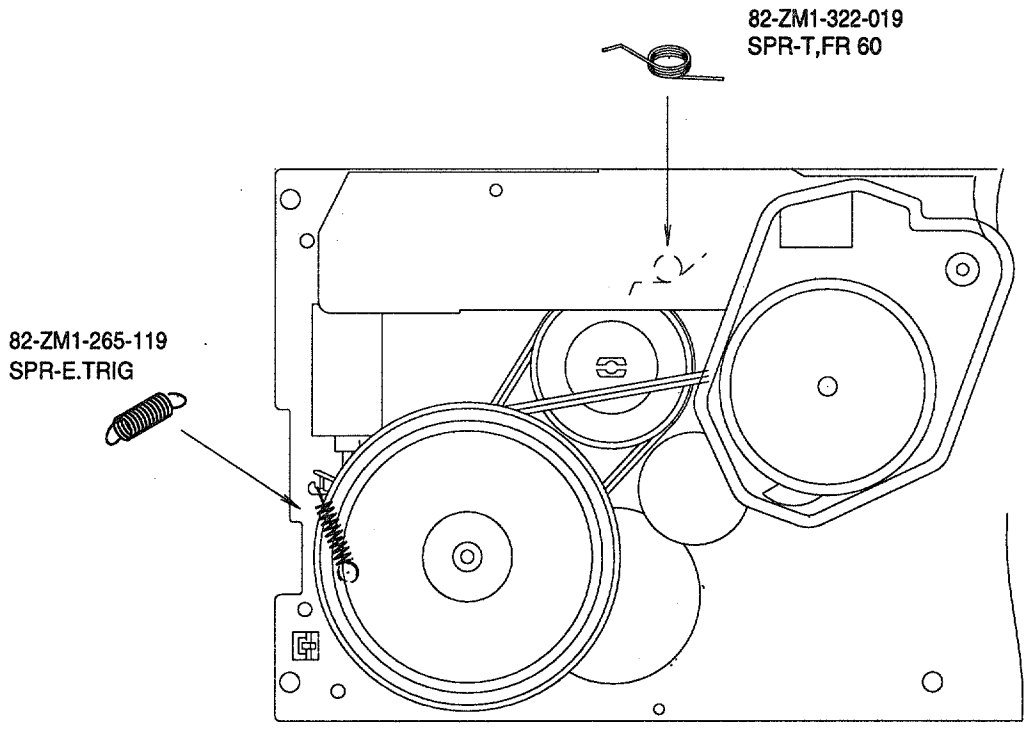
# MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 88-MA1-027-010 | | WINDOW,CASS L |
| 2 | 88-MA1-028-010 | | WINDOW,CASS R |
| 3 | 88-MA3-042-010 | | BOX,CASS L3 |
| 4 | 88-MA3-038-010 | | BOX,CASS R3 |
| 5 | 82-NF5-218-010 | | SPR-T,EJECT 1 (SIN) |
| 6 | 82-NF5-219-010 | | SPR-T,EJECT 2 (SIN) |
| 7 | 86-NF6-061-010 | | REFLECTOR,CASS |
| 8 | 88-MA3-045-010 | | PANEL,CD(2) |
| 9 | 88-MA1-025-010 | | WINDOW,CD |
| 10 | 88-MA3-044-010 | | KEY,CHANGE(2) |
| 11 | 88-MA3-043-010 | | KEY,OPEN(2) |
| 12 | 88-MA1-026-010 | | WINDOW,AMP<LH> |
| 12 | 88-MA3-037-010 | | WINDOW,AMP 3U<U> |
| 13 | 88-MA2-010-010 | | PLATE,GEQ(2)<LH> |
| 13 | 88-MA3-032-010 | | PLATE,GEQ(3) U<U> |
| 14 | 82-NE8-032-010 | | BADGE,AIWA 27.5 |
| 15 | 88-MA1-031-010 | | KNOB,RTRY JOG<U> |
| 15 | 88-MA1-060-010 | | KNOB,RTRY RHYTHM<LH> |
| 16 | 88-MA1-029-010 | | RING,VOL |
| 17 | 88-MA3-027-010 | | PANEL,FR(3) H<LH> |
| 17 | 88-MA3-039-010 | | PANEL,FR(3) U<U> |
| 18 | 81-532-080-010 | | LABEL, CASS. COMPT |
| 19 | 87-NF8-220-010 | | DMPR,150 |
| 20 | 88-MA3-001-010 | | CABI,FR H3<LH> |
| 20 | 88-MA3-004-010 | | CABI,FR U3<U> |
| 21 | 87-NF4-216-010 | | HLDR,LOCK 1 |
| 22 | 86-NF9-224-010 | | SPR-C,LOCK |
| 23 | 82-NF5-229-010 | | PLATE,LOCK |
| 24 | 87-NF4-217-010 | | HLDR,LOCK 2 |
| 25 | 88-MA1-013-010 | | PANEL,TRAY |
| 26 | 84-ZG1-245-210 | | CAP,OPTICAL |
| 27 | 88-MA1-015-010 | | KEY,POWER |
| 28 | 88-MA3-011-010 | | KEY,T-BASS |
| 29 | 88-MA2-023-010 | | KEY,DEMO(2)<LH> |
| 29 | 88-MA3-033-010 | | KEY,TIMER<U> |
| 30 | 88-MA1-019-010 | | KEY,JOG |
| 31 | 88-MA1-039-010 | | KEY,ASSY PLAY |
| 32 | 88-MA3-047-010 | | KEY,ASSY FF(3) |
| 33 | 88-MA1-045-010 | | REFLECTOR,FUN |
| 34 | 88-MA1-018-010 | | KEY,FUN |
| 35 | 88-MA2-015-010 | | KEY,PRGM(2) |
| 36 | 88-MA2-009-010 | | KEY,GEQ(2)<LH> |
| 36 | 88-MA3-029-010 | | KEY,GEQ(3) U<U> |
| 37 | 88-MA1-009-010 | | KEY,DIRECT |
| 38 | 88-MA1-201-010 | | GUIDE,PLAY |
| 39 | 86-MA3-042-010 | | WINDOW,TOP<LH> |
| 39 | 87-MAT-009-010 | | WINDOW,TOP(U)<U> |
| 40 | 88-MA3-015-010 | | PANEL,TOP 3<LH> |
| 40 | 88-MA3-034-010 | | PANEL,TOP 3U<U> |
| 41 | 88-MA3-016-010 | | PANEL,SIDE L3<LH> |
| 41 | 88-MA3-035-010 | | PANEL,SIDE L3U<U> |
| 42 | 88-MA1-208-010 | | JOINT,CABI |
| 43 | 88-MA3-017-010 | | PANEL,SIDE R3<LH> |
| 43 | 88-MA3-036-010 | | PANEL,SIDE R3U<U> |
| ⚠ 44 | 87-085-185-010 | | BUSHING, AC CORD (E)<LH> |
| ⚠ 44 | 87-085-189-010 | | BUSHING, CORD (U)<U> |
| 45 | 87-050-053-010 | | AC CORD ASSY,U-2<U> |
| 45 | 87-050-079-010 | | AC-CORD ASSY,E<LH> |
| 46 | 87-MA3-062-010 | | FOOT, H17 |
| 47 | 88-MA3-007-010 | | CABI,REAR LH<LH> |
| 47 | 88-MA3-010-010 | | CABI,REAR UBNM<U> |
| 48 | 88-MA1-030-010 | | KNOB,RTRY MAIN |
| 49 | 88-MA2-202-010 | | GUIDE,FL(2) |
| 50 | 88-MA1-022-010 | | KEY,MIC<LH> |
| 51 | 88-MA3-040-010 | | KEY,VF(3) |
| 52 | 88-MA3-014-010 | | KNOB,SL MIC<U> |
| 53 | 85-NF5-210-110 | | GUIDE,LED L |
| 54 | 85-NF5-211-110 | | GUIDE,LED R |
| A | 87-078-060-010 | | BVIT3PB+3-10 |
| B | 81-MK1-210-010 | | S-SCREW,VFT2+3-16 |
| C | 87-067-703-010 | | TAPPING SCREW, BVT2+3-10 |
| D | 87-591-095-410 | | TAPPING SCREW, QIT+3-8 (GLD) |
| E | 87-067-688-010 | | BVTT+3-6 |
| F | 87-067-579-010 | | TAPPING SCREW, BVT2+3-8 |
| G | 87-NF4-224-010 | | S-SCREW,IT3B+3-8 CU |
| H | 87-067-758-010 | | BVT2+3-12 W/O SLOT |
| I | 87-067-975-010 | | S-SCREW,IT+4-8 |
| J | 87-067-641-010 | | UTT2+3-8(W/O SLOT)BL |

# SPRING APPLICATION POSITION



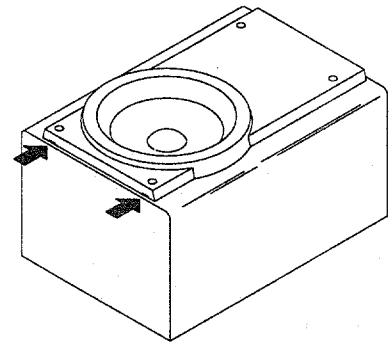



# SPEAKER DISASSEMBLY INSTRUCTIONS

## Type.1

矢印の位置にマイナスドライバーを差し込んで、パネルを外します。各々のスピーカーユニットのビスを取り、スピーカーユニットを外してください。

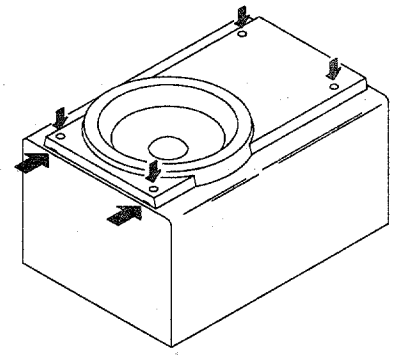
Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then remove the speaker units.



## Type.2

グリルフレームを外し、4個のゴムキャプをマイナスドライバーで端の方から持ち上げて外すと中にビスが有りますので、ビスを取り外します。矢印の位置にマイナスドライバーを差し込んで、パネルを外します。各々のスピーカーユニットのビスを取り、スピーカーユニットを外してください。

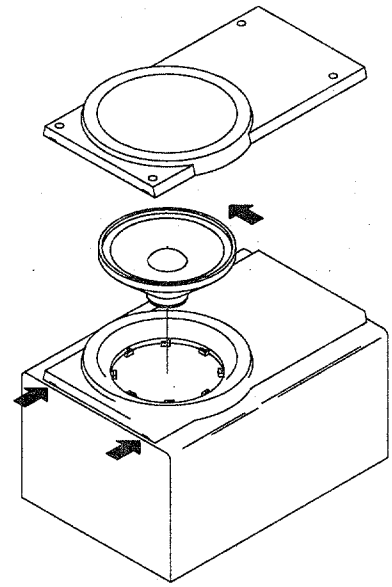
Remove the grill frame and four pieces of rubber caps by pulling out with a flat-bladed screwdriver Remove the screws from hole where installed rubber caps. Insert a flat-bladed screwdriver into the position indicated by the arrows and remove the panel. Remove the screws of each speaker unit and then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



## Type.3

矢印の位置にマイナスドライバーを差し込んで、パネルを外します。各々のスピーカーユニットの凹にマイナスドライバーを差し込んで、反時計方向に回転させスピーカーユニットを外してください。スピーカーユニット交換後は時計方向にクリック音がするまで、回転させて取り付けます。

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 arround speaker unit, and then remove the speaker unit. After replacing the speaker unit, install it turning to clockwise direction until "click" sound comes out.



## SPEAKER PARTS LIST (SX-FZR77<YLB>)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 87-MS4-611-010 | | SPKR,CORD Y/B |
| 2 | 87-MS4-614-010 | | SPKR,CORD |
| 3 | 87-MS5-601-010 | | SPKR W 200 |
| 4 | 87-MS6-607-010 | | SPKR SU 80 |
| 5 | 88-MS3-001-010 | | PANEL,FR |
| 6 | 88-MS3-002-010 | | PANEL,SP |
| 7 | 88-MS3-004-010 | | PROTECTOR, R |
| 8 | 88-MS3-005-010 | | PROTECTOR, L |
| 9 | 88-MS3-006-010 | | GRILLE,FRAME ASSY |
| 10 | 88-MS3-601-010 | | SPKR, TW 80 |
| 11 | 88-MS3-609-010 | | SPKR, CERAMIC |

## SPEAKER PARTS LIST (SX-ZR77<YUB>)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 84-VS3-603-010 | | SPEAKER TWEETER |
| 2 | 86-VSR-602-010 | | SPKR,W 200 |
| 3 | 88-MSP-001-010 | | PANEL,FR R |
| 4 | 88-MSP-002-010 | | PANEL,SP |
| 5 | 88-MSP-004-010 | | GRILLE,FRAME ASSY |
| 6 | 88-MSP-007-010 | | PROTECTOR, TW |
| 7 | 88-MSP-611-010 | | SPKR, CERAMIC ASSY |
| 8 | 88-MSR-610-010 | | SPKR, CORD |

## SPEAKER PARTS LIST (SX-R286<YUB>)

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 87-YS1-004-010 | | GRILLE FRAME ASSY |
| 2 | 87-YS6-002-010 | | SPKR, CORD Y |
| 3 | 87-YS9-601-010 | | SPKR, SPKR,100 |

## ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

| REF. NO. | PART NO. | KANRI NO. | DESCRIPTION |
|---|---|---|---|
| 1 | 88-MA3-902-010 | | IB,LH(ESP)M<LH> |
| 1 | 88-MA3-903-010 | | IB,U(ESF)M<U> |
| 2 | 87-043-115-010 | | FEEDER-ANT,FM |
| 3 | 87-A90-030-010 | | ANT,LOOP AM-NC C |
| ⚠ 4 | 87-099-789-010 | | PLUG,CONVERSION IR44<LH> |
| 5 | 87-MA6-702-010 | | RC UNIT,RC-7AS01 |

# REFERENCE NAME LIST

## ELECTRICAL SECTION

| DESCRIPTION | REFERENCE NAME |
|---|---|
| ANT | ANTENNAS |
| C- | CHIP |
| C-CAP | CAP, CHIP |
| C-CAP TN | CAP, CHIP TANTALUM |
| C-COIL | COIL, CHIP |
| C-DI | DIODE, CHIP |
| C-DIODE | DIODE, CHIP |
| C-FET | FET, CHIP |
| C-FOTR | FILTER, CHIP |
| C-JACK | JACK, CHIP |
| C-LED | LED, CHIP |
| C-RES | RES, CHIP |
| C-SFR | SFR, CHIP |
| C-SLIDE SW | SLIDE SWITCH, CHIP |
| C-SW | SWITCH, CHIP |
| C-TR | TRANSISTOR, CHIP |
| C-VR | VOLUME, CHIP |
| C-ZENER | ZENER, CHIP |
| CAP, CER | CAP, CERA-SOL |
| CAP, E | CAP, ELECT |
| CAP, M/F | CAP, FILM |
| CAP, TC | CAP, CERA-SOL |
| CAP, TC-U | CAP, CERA-SOL SS |
| CAP, TN | CAP, TANTALUM |
| CERA FIL | FILTER, CERAMIC |
| CF | FILTER, CERAMIC |
| DL | DELAY LINE |
| E/CAP | CAP, ELECT |
| FILT | FILTER |
| FLTR | FILTER |
| FUSE RES | RES, FUSE |
| MOT | MOTOR |
| P-DIODE | PHOTO DIODE |
| P-SNSR | PHOTO SENSER |
| P-TR | PHOTO TRANSISTOR |
| POLY VARI | VARIABLE CAPACITOR |
| PPCAP | CAP, PP |
| PT | POWER TRANSFORMER |
| PTR, RES | PTR, MELF |
| RC | REMOTE CONTROLLER |
| RES NF | RES, NON-FLAMMABLE |
| RESO | RESONATOR |
| SHLD | SHIELD |
| SOL | SOLENOID |
| SPKR | SPEAKER |
| SW, LVR | SWITCH, LEVER |
| SW, RTRY | SWITCH, ROTARY |
| SW, SL | SWITCH, SLIDE |
| TC CAP | CAP, CERA-SOL |
| THMS | THERMISTOR |
| TR | TRANSISTOR |
| TRIMER | CAP, TRIMMER |
| TUN-CAP | VARIABLE CAPACITOR |
| VIB, CER | RESONATOR, CERAMIC |
| VIB, XTAL | RESONATOR, CRYSTAL |
| VR | VOLUME |
| ZENER | DIODE, ZENER |

## MECHANICAL SECTION

| DESCRIPTION | REFERENCE NAME |
|---|---|
| ADHESHIVE | SHEET ADHESHIVE |
| AZ | AZIMUTH |
| BAR-ANT | BAR-ANTENNA |
| BAT | BATTERY |
| BATT | BATTERY |
| BRG | BEARING |
| BTN | BUTTON |
| CAB | CABINET |
| CASS | CASSETTE |
| CHAS | CHASSIS |
| CLR | COLLAR |
| CONT | CONTROL |
| CRSR | CURSOR |
| CU | CUSHION |
| CUSH | CUSHION |
| DIR | DIRECTION |
| DUBB | DUBBING |
| FL | FRONT LOADING |
| FLY-WHL | FLYWHEEL |
| FR | FRONT |
| FUN | FUNCTION |
| G-CU | G-CUSHION |
| HDL | HANDOL |
| HIMERON | CLOTH |
| HINGE, BAT | HINGE, BATTERY |
| HLDR | HOLDER |
| HT-SINK | HEAT SINK |
| IB | INSTRUCTION BOOKLET |
| IDLE | IDLER |
| IND, L-R | INDICATOR, L-R |
| KEY, CONT | KEY, CONTROL |
| KEY, PRGM | KEY, PROGRAM |
| KNOB, SL | KNOB, SLIDE |
| LBL | LABEL |
| LID, BATT | LID, BATTERY |
| LID, CASS | LID, CASSETTE |
| LVR | LEVER |
| P-SP | P-SPRING |
| PANEL, CONT | PANEL, CONTROL |
| PANEL, FR | PANEL, FRONT |
| PRGM | PROGRAM |
| PULLY, LOAD MO | PULLY, LOAD MOTOR |
| RBN | RIBBON |
| S- | SPECIAL |
| SEG | SEGMENT |
| SH | SHEET |
| SHLD-SH | SHIELD-SHEET |
| SL | SLIDE |
| SP | SPRING |
| SP-SCREW | SPECIAL-SCREW |
| SPACER, BAT | SPACER, BATTERY |
| SPR | SPRING |
| SPR-P | P-SPRING |
| SPR-PC-PUSH | P-SPRING, C-PUSH |
| T-SP | T-SPRING |
| TERM | TERMINAL |
| TRIG | TRIGGER |
| TUN | TUNING |
| VOL | VOLUME |
| W | WASHER |
| WHL | WHEEL |
| WORM-WHL | WORM-WHEEL |

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