

# SERVICE MANUAL

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COMPACT DISC STEREO  
SYSTEM

BASIC CD MECHANISM : DA11T3C

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| SYSTEM | SPEAKER    |
|--------|------------|
| XR-MK8 | SX-M310 YL |

## SPECIFICATIONS

### Main unit

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

#### **Amplifier section**

|                     |  |
|---------------------|--|
| <b>Power output</b> | Rated: 12 W + 12 W (6 ohms, T.H.D.1%,<br>1 kHz)<br>Reference: 15 W + 15 W (6 ohms, T.H.D.<br>10%, 1 kHz) |
|---------------------|--|

#### **Inputs**

AUX IN: 500 mV  
MD IN: 500 mV

#### **Outputs**

SUPER WOOFER: 700 mV  
SPEAKERS: accept speakers of 6  
ohms or more  
PHONES (stereo mini jack): accepts  
headphones of 32 ohms or more  
LINE OUT: 500 mV  
VIDEO OUT: 1 Vp-p (75 ohms)

### **Compact disc player section**

|                              |   |
|------------------------------|---|
| <b>Laser</b>                 | Semiconductor laser ( $\lambda = 780$ nm) |
| <b>D-A converter</b>         | 1 bit dual                                |
| <b>Signal-to-noise ratio</b> | 85 dB (1 kHz, 0 dB)                       |
| <b>Harmonic distortion</b>   | 0.05 % (1 kHz, 0 dB)                      |
| <b>Wow and flutter</b>       | Unmeasurable                              |

#### **General**

|                                  |   |
|----------------------------------|---|
| <b>Power requirements</b>        | 120 V/220-240V AC, Switchable<br>50/60 Hz   |
| <b>Power consumption</b>         | 80 W  |
| <b>Standby power consumption</b> | 1.8 W (power-economizing mode set to<br>ON) |

#### **Dimensions of main unit (W $\times$ H $\times$ D)**

144  $\times$  175  $\times$  284 mm

#### **Weight of main unit**

3.6 kg

### Speaker system

**Cabinet type** 2 way, bass reflex (magnetic shielded  
type)

#### **Speakers**

Woofer:  
100 mm cone type  
Tweeter:  
22 mm dome type

#### **Impedance**

6 ohms

#### **Output sound pressure level**

86 dB/W/m

#### **Dimensions (W $\times$ H $\times$ D)**


116  $\times$  169  $\times$  200 mm

#### **Weight**

1.4 kg

- Design and specifications are subject to change without notice.
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- Under license from BBE Sound, Inc.

## ACCESSORIES LIST

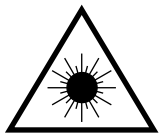
| REF. NO   | PART NO.       | KANRI NO.      | DESCRIPTION              |
|---|----------------|----------------|--------------------------|
| 1   | 8A-CG6-901-010 |                | IB, H (EC) M             |
| 2   | 8A-CG6-951-010 |                | RC UNIT, RC-AAT19        |
| 3   | 87-043-115-010 |                | ANT, FEEDER FM           |
| 4   | 87-006-225-010 |                | AM LOOP ANT NC2          |
| 5   | 87-050-103-010 |                | CORD, PIN 1PY1.5M        |
|  | 6              | 87-A91-017-010 | PLUG, CONVERSION JT-0476 |

## PROTECTION OF EYES FROM 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 bruksanvising, kan användaren utsättas för osynlig laserstråling, 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.

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

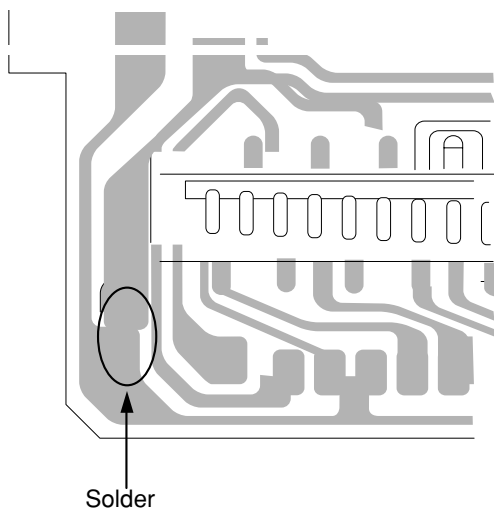
## Precaution to replace Optical block

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

- 1) After the connection, remove solder shown in the figures below.

### (SF-P101NR)

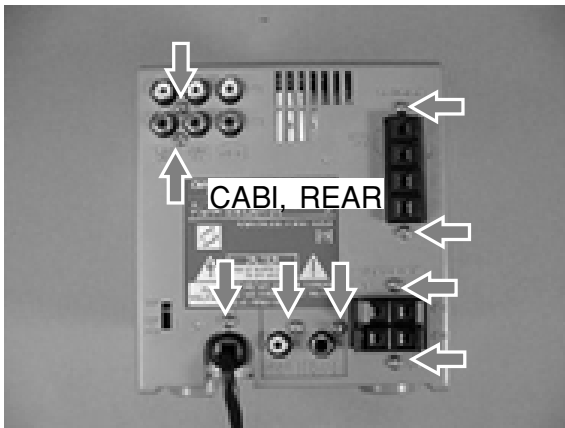
CD PICK-UP ASSY. P.C.B



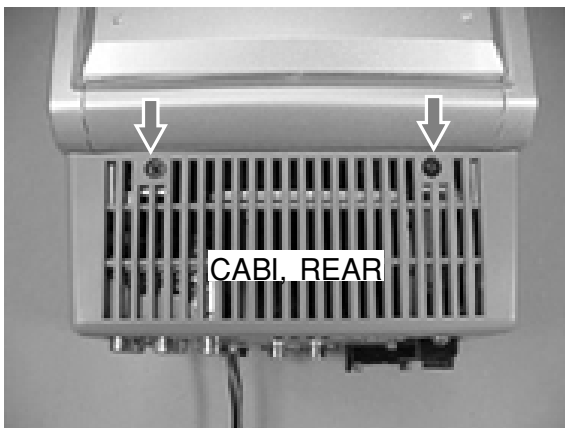
# DISASSEMBLY INSTRUCTIONS

## 1. Removing the Ornament Parts

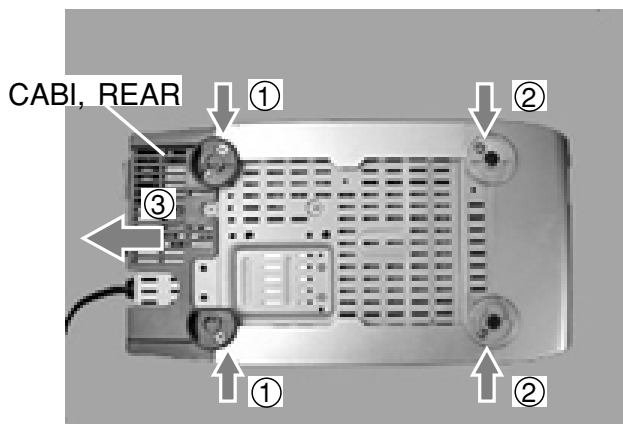
1) Remove the nine screws.



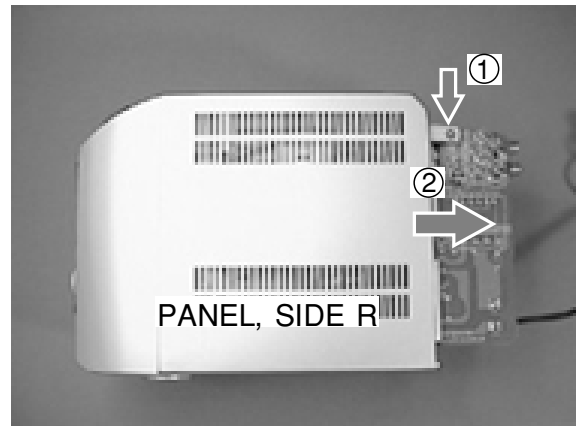
2) Remove the two screws.



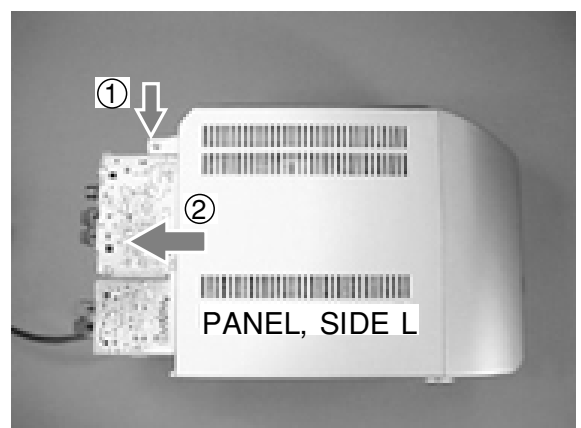
3) Remove the four screws (two screws ①, two screws ②) and remove the CABI, REAR ③.



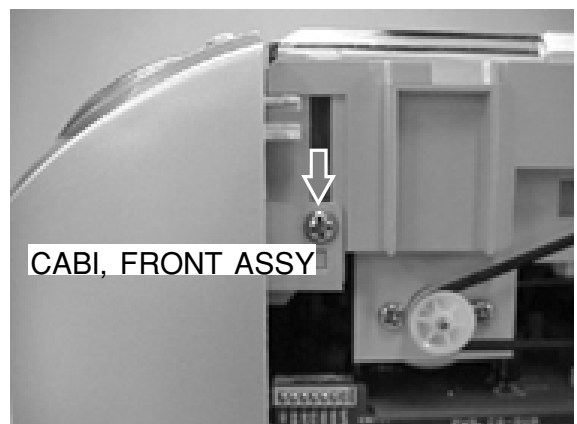
4) Remove the screw ① and remove the PANEL, SIDE R ②.



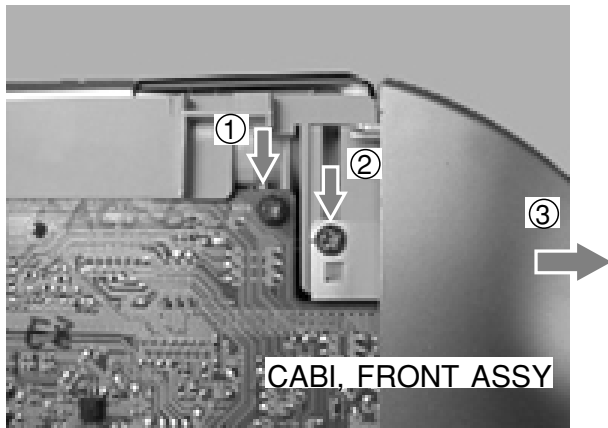
5) Remove the screw ① and remove the PANEL, SIDE L ②.



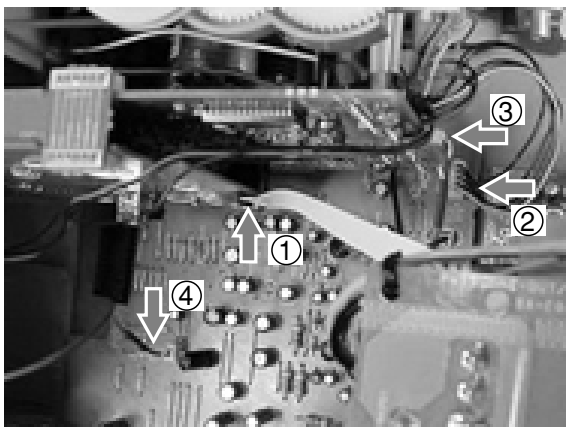
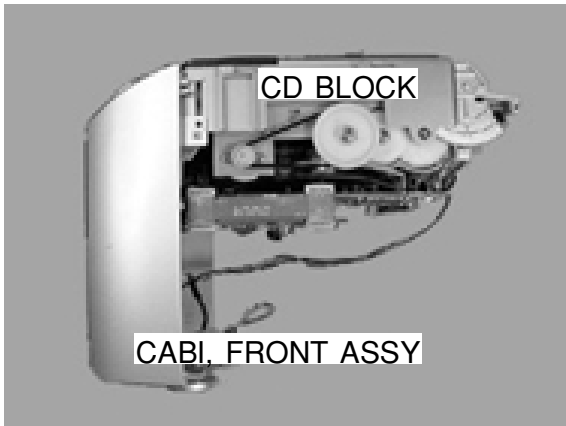
6) Remove the screw.



- 7) Remove the two screws ①, ②, and then remove the CABI, FRONT ASSY ③ with the whole CD block.

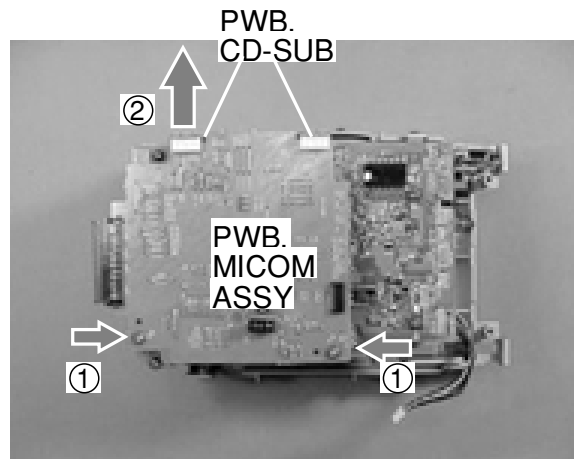


- 8) When removing the CABI, FRONT ASSY, disconnect the FFC ①, the connector ②, and the shield cables ③ and ④.

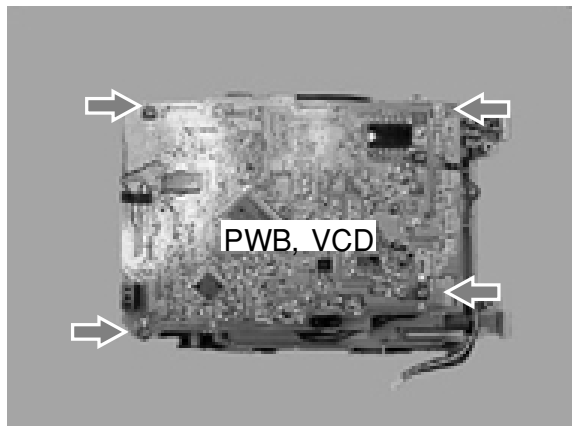


## 2. Removing the CD ASSY

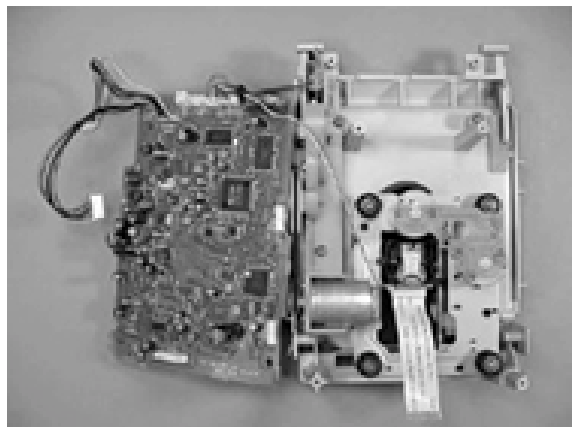
- 1) Remove the two screws ① and the PWB, CD-SUB ② and the PWB, MICOM ASSY.



- 2) Remove the four screws and remove the PWB, VCD.



- 3) This figure shows the state of the board removed.



## CD TEST MODE







### 1. How to Active CD Test Mode

While pressing the CD function button, insert the AC plug to the outlet.  
When the test mode starts, all indicators in the display will light.

### 2. How to Cancel CD Test Mode

Press other function button or power button, or disconnect the AC plug.

### 3. CD Test Mode functions

| No | MODE          | Operation  | FL display                              | Operation  | Checking item  |
|----|---------------|--|---|--|--|
| 1  | Start mode    |  | All light                               |  | <ul style="list-style-type: none"> <li>• FL item</li> <li>• Microprocessor</li> </ul>  |
| 2  | Search mode   |   | CD                                      | <ul style="list-style-type: none"> <li>• LD lights</li> <li>• Continuous focus search *1 *2</li> </ul>   | <ul style="list-style-type: none"> <li>• APC circuit</li> <li>• Laser current</li> <li>• Focus search waveform</li> <li>• Focus error waveform (FOK and FZC are not monitored in the search mode)</li> </ul> |
| 3  | Play mode     |   | Normal time display (spectrum analyzer) | <ul style="list-style-type: none"> <li>• Normal playback</li> <li>• If TOC cannot be read, focus search of 2 is continued</li> </ul>   | <ul style="list-style-type: none"> <li>• Focus servo</li> <li>• Tracking servo</li> <li>• Sled servo</li> <li>• Spindle servo</li> <li>• FOK</li> <li>• RF waveform</li> </ul>                               |
| 4  | Traverse mode |    | Normal time display                     | <ul style="list-style-type: none"> <li>• Turning off/on repeats each time tracking servo OFF/ON  is pressed</li> </ul> | <ul style="list-style-type: none"> <li>• Tracking servo</li> <li>• Traverse waveform</li> </ul>  |
| 5  | Sled mode     | <br> | CD TEST (00 00 00)                      | <ul style="list-style-type: none"> <li>• Pickup moves to the outermost track *3</li> <li>• Pickup moves to the innermost track (normal)</li> </ul>   | <ul style="list-style-type: none"> <li>• Sled circuit</li> <li>• Mechanism</li> </ul>  |

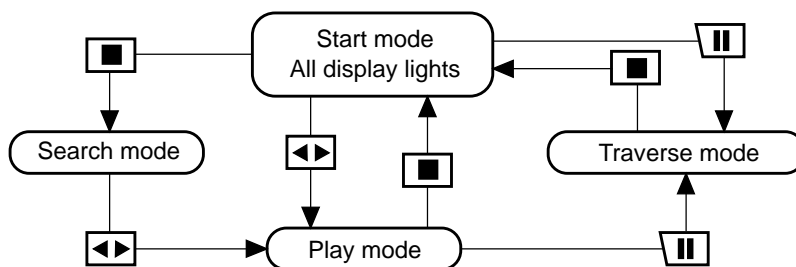
\* Note 1: The driver IC (IC501) heats up and the protection circuit starts working when the focus search is continued for 10 minutes or longer. There can be a case that operations cannot be performed correctly. In such a case, turn off the main power. After cooling down, restart the unit.

\* Note 2: When checking the lens operation by eye, slightly open the CD cover by hand: The search mode will be released if the CD cover is opened by pressing the OPEN button.

\* Note 3: Be careful not to damage the gear because the sled motor rotates while the FF or RWD button is being pressed even if the pickup is located in the innermost track or the outermost track.

### 4. Overview of Operation

The each mode can be operated one after another using each button in the order that is shown by arrow mark in the illustration from the Start mode.





| REF. NO   | PART NO.       | KANRI NO. | DESCRIPTION             | REF. NO | PART NO.       | KANRI NO. | DESCRIPTION                |
|-----------|----------------|-----------|-------------------------|---------|----------------|-----------|----------------------------|
| C621      | 87-010-234-080 |           | CAP 47-16               | C0717   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C622      | 87-012-286-080 |           | C-CAP,U 0.01-25 K B     | C0719   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C625      | 87-010-071-040 |           | CAP,E 1-50 M 5L SRE     | C0720   | 87-012-195-080 |           | C-CAP,U 100P-50 J CH       |
| C631      | 87-012-197-080 |           | C-CAP,U 150P-50 CH      | C0721   | 87-012-176-080 |           | C-CAP,U 15P-50 J CH        |
| C632      | 87-012-197-080 |           | C-CAP,U 150P-50 CH      | C0722   | 87-012-176-080 |           | C-CAP,U 15P-50 J CH        |
| C633      | 87-010-491-080 |           | CAP, ELECT 0.22-50V     | C0723   | 87-012-274-080 |           | C-CAP,U 1000P-50 K B       |
| C634      | 87-010-491-080 |           | CAP, ELECT 0.22-50V     | C0725   | 87-012-274-080 |           | C-CAP,U 1000P-50 K B       |
| C635      | 87-010-421-080 |           | CAP,E 4.7-50 5L         | C0727   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C636      | 87-010-421-080 |           | CAP,E 4.7-50 5L         | C0728   | 87-010-248-080 |           | CAP,E 220-10 M 11L SME     |
| C637      | 87-010-421-040 |           | CAP, ELECT 4.7-50V      | C0729   | 87-012-274-080 |           | C-CAP,U 1000P-50 K B       |
| C638      | 87-012-270-080 |           | C-CAP,U 470P-50 K B     | C0731   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C639      | 87-012-270-080 |           | C-CAP,U 470P-50 K B     | C0733   | 87-010-987-080 |           | C-CAP,S 1500P-50 J CH      |
| C640      | 87-010-785-080 |           | C-CAP,U 0.015-50 B      | C0734   | 87-010-987-080 |           | C-CAP,S 1500P-50 J CH      |
| C641      | 87-010-785-080 |           | C-CAP,U 0.015-50 B      | C0735   | 87-010-987-080 |           | C-CAP,S 1500P-50 J CH      |
| C642      | 87-010-785-080 |           | C-CAP,U 0.015-50 B      | C0736   | 87-010-987-080 |           | C-CAP,S 1500P-50 J CH      |
| C643      | 87-010-785-080 |           | C-CAP,U 0.015-50 B      | C0737   | 87-A10-592-080 |           | C-CAP,S 0.015-50 J B       |
| C644      | 87-010-421-080 |           | CAP, ELECT 4.7-50V      | C0738   | 87-A10-592-080 |           | C-CAP,S 0.015-50 J B       |
| C645      | 87-010-421-080 |           | CAP, ELECT 4.7-50V      | C0751   | 87-010-220-080 |           | C-CAP,S 0.018-25 K B       |
| C646      | 87-010-421-080 |           | CAP, ELECT 4.7-50V      | C0752   | 87-010-220-080 |           | C-CAP,S 0.018-25 K B       |
| C647      | 87-010-421-080 |           | CAP, ELECT 4.7-50V      | C0756   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C650      | 87-010-785-080 |           | C-CAP,U 0.015-50 B      | C0757   | 87-012-188-080 |           | C-CAP,U 47P-50 J CH        |
| C651      | 87-012-278-080 |           | C-CAP,U 2200P-50 B      | C0758   | 87-012-167-080 |           | C-CAP,U 5P-50 C CH         |
| C652      | 87-012-278-080 |           | C-CAP,U 2200P-50 B      | C0763   | 87-010-829-080 |           | C-CAP,U 0.047-16 Z F       |
| C653      | 87-010-234-080 |           | CAP 47-16               | C0764   | 87-012-337-080 |           | C-CAP,U 56P-50 J CH GRM    |
| C654      | 87-010-785-080 |           | C-CAP,U 0.015-50 B      | C0765   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C655      | 87-010-068-080 |           | CAP,E 0.22-50           | C0768   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C656      | 87-010-068-080 |           | CAP,E 0.22-50           | C0769   | 87-010-260-080 |           | CAP,E 47-25 M 11L SME      |
| C657      | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F      | C0770   | 87-010-829-080 |           | C-CAP,U 0.047-16 Z F       |
| C662      | 87-010-068-080 |           | CAP,E 0.22-50           | C0771   | 87-010-383-080 |           | CAP,E 33-25 M 11L SME      |
| C663      | 87-010-068-080 |           | CAP,E 0.22-50           | C0772   | 87-010-829-080 |           | C-CAP,U 0.047-16 Z F       |
| C666      | 87-015-680-080 |           | CAP,E 47-10 7L          | C0773   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C667      | 87-015-680-080 |           | CAP,E 47-10 7L          | C0774   | 87-010-263-080 |           | CAP,E 100-10 M 11L SME     |
| C674      | 87-012-172-080 |           | C-CAP,U 10P-50 D CH     | C0775   | 87-010-404-080 |           | CAP,E 4.7-50 M 11L SME     |
| C675      | 87-010-112-080 |           | CAP, ELECT 100-16V      | C0776   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C676      | 87-010-415-080 |           | CAP, ELECT 10-50V       | C0777   | 87-010-400-080 |           | CAP,E 0.47-50 M 11L SME    |
| C677      | 87-010-234-080 |           | CAP 47-16               | C0778   | 87-010-401-080 |           | CAP,E 1-50 M 11L SME       |
| C678      | 87-012-195-080 |           | C-CAP,U 100P-50 CH      | C0779   | 87-010-401-080 |           | CAP,E 1-50 M 11L SME       |
| C679      | 87-010-415-080 |           | CAP ELE SRE 10-50V      | C0780   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C680      | 87-010-415-080 |           | CAP ELE SRE 10-50V      | C0781   | 87-010-405-080 |           | CAP,E 10-50 M 11L SME      |
| C681      | 87-012-286-080 |           | C-CAP,U 0.01-25 K B     | C0782   | 87-010-405-080 |           | CAP,E 10-50 M 11L SME      |
| C682      | 87-012-286-080 |           | C-CAP,U 0.01-25 K B     | C0783   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C688      | 87-010-496-080 |           | CAP,E 3.3-50 M 5L SRE   | C0784   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| C689      | 87-010-496-080 |           | CAP,E 3.3-50 M 5L SRE   | C0785   | 87-010-401-080 |           | CAP,E 1-50 M 11L SME       |
| C692      | 87-010-421-080 |           | CAP,E 4.7-50 5L         | C0786   | 87-010-401-080 |           | CAP,E 1-50 M 11L SME       |
| C693      | 87-010-494-080 |           | CAP,E 1-50 M 5L SRE     | C0789   | 87-012-275-080 |           | C-CAP,U 1200P-50 K B GRM   |
| C694      | 87-010-494-080 |           | CAP,E 1-50 M 5L SRE     | C0790   | 87-012-275-080 |           | C-CAP,U 1200P-50 K B GRM   |
| CN320     | 87-A60-619-010 |           | CONN,2P V 2MM JMT       | C0791   | 87-010-405-080 |           | CAP,E 10-50 M 11L SME      |
| CN600     | 87-A60-770-010 |           | CONN,18P B TMC-D(X)     | C0793   | 87-012-273-080 |           | C-CAP,U 820P-50 K B        |
| CN603     | 87-A60-668-010 |           | CONN,4P H 2MM JMT       | C0794   | 87-010-406-080 |           | CAP,E 22-50 M 11L SME      |
| CN700     | 87-A60-622-010 |           | CONN,5P V 2MM JMT       | C0795   | 87-010-596-080 |           | C-CAP,S 0.047-16 K R C2012 |
| CNA1      | 88-805-033-030 |           | CONN ASSY,3P 300        | C0796   | 87-010-403-080 |           | CAP,E 3.3-50 M 11L SME     |
| CNA6      | 8A-CG6-655-010 |           | CONN ASSY,6P H POWER    | C0799   | 87-010-829-080 |           | C-CAP,U 0.047-16 Z F       |
| CNA101    | 88-805-020-890 |           | CONN ASSY,2P 80         | C0812   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| CNA604    | 8A-CL6-641-010 |           | CONN ASSY,8P V LINE-OUT | C0820   | 87-010-260-080 |           | CAP,E 47-25 M 11L SME      |
| J100      | 87-A60-238-010 |           | TERMINAL,SP 4P (MSC)    | C0821   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
| J102      | 87-009-216-010 |           | JACK, DIA 3.5           | C0822   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
|           |                |           |                         | C0823   | 87-012-286-080 |           | C-CAP,U 0.01-25 K B        |
|           |                |           |                         | C0828   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
|           |                |           |                         | C0829   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
|           |                |           |                         | C0959   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| TUNER C.B |                |           |                         | C0960   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C0701     | 87-010-381-080 |           | CAP,E 330-16 M SME      | C0961   | 87-012-170-080 |           | C-CAP,U 8P-50 D CH         |
| C0702     | 87-010-404-080 |           | CAP,E 4.7-50 M 11L SME  | C0963   | 87-010-196-080 |           | C-CAP,S 0.1-25 Z F C2012   |
| C0703     | 87-012-286-080 |           | C-CAP,U 0.01-25 K B     | CF0801  | 87-008-261-010 |           | FLTR,CF SFE10.7MA5         |
| C0704     | 87-012-286-080 |           | C-CAP,U 0.01-25 K B     | CF0802  | 87-008-261-010 |           | FLTR,CF SFE10.7MA5         |
| C0705     | 87-A10-592-080 |           | C-CAP,S 0.015-50 J B    | CN0701  | 87-A60-700-010 |           | CONN,13P H GRY TUC-P13X-C1 |
| C0706     | 87-A10-592-080 |           | C-CAP,S 0.015-50 J B    | FFE0801 | A8-8ZA-194-030 |           | 8ZA-1 FEMUNM               |
| C0709     | 87-012-195-080 |           | C-CAP,U 100P-50 J CH    | J0801   | 87-A60-702-010 |           | TERMINAL,ANT 4P CJ-9036    |
| C0711     | 87-010-260-080 |           | CAP,E 47-25 M 11L SME   | L0771   | 87-A50-266-010 |           | COIL,FM DET-2N(TOK)        |
| C0712     | 87-010-831-080 |           | C-CAP,U 0.1-16 Z F      | L0772   | 87-A91-110-010 |           | FLTR,PCFJZH-450 (TOK)      |
| C0714     | 87-012-286-080 |           | C-CAP,U 0.01-25 K B     |         |                |           |                            |



| REF. NO              | PART NO.       | KANRI NO. | DESCRIPTION                   | REF. NO            | PART NO.       | KANRI NO. | DESCRIPTION                    |
|----------------------|----------------|-----------|-------------------------------|--------------------|----------------|-----------|--------------------------------|
| L0981                | 8Z-ZA1-667-010 |           | COIL,AM PACK 4F(TOK)          | C400               | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F             |
| X0721                | 87-A70-061-010 |           | VIB,XTAL 4.500MHZ CSA-309     | C401               | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F             |
| <b>TUNER-SUB C.B</b> |                |           |                               | C402               | 87-010-493-040 |           | CAP,E 0.47-50 GAS              |
| C335                 | 87-A11-132-080 |           | CAP,TC U 0.01-50 K B          | C403               | 87-A11-146-080 |           | CAP,TC U 0.022-50 Z F          |
| CN300                | 87-099-570-010 |           | CONN,13P TUC-P13P-B1          | C404               | 87-012-178-080 |           | C-CAP,U 18P-50 J CH            |
| CN605                | 87-A60-901-010 |           | CONN,12P V BLK FMN-BTRK       | C405               | 87-012-184-080 |           | C-CAP,U 33P-50 CH              |
| CNA603               | 88-805-041-230 |           | CONN ASSY,4P 120              | C407               | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F             |
| <b>V-OUT C.B</b>     |                |           |                               | C408               | 87-010-221-040 |           | CAP,E 470-10 SME               |
| CN101                | 87-A60-619-010 |           | CONN,2P V 2MM JMT             | C409               | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F             |
| CN810                | 87-A60-666-010 |           | CONN,2P H 2MM JMT             | C410               | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F             |
| J101                 | 87-099-801-010 |           | JACK,PIN 1P BLK               | C490               | 87-A12-058-040 |           | CAP,E 470-6.3 SMG              |
| J801                 | 87-009-502-010 |           | JACK,PIN 1P Y EARTH           | C491               | 87-012-274-080 |           | C-CAP,U 1000P-50 K B           |
| <b>FRONT C.B</b>     |                |           |                               | CN380              | 87-A61-404-010 |           | CONN,12P H BLK FMN-SSSTRK      |
| C302                 | 87-010-221-080 |           | CAP,E 470-10                  | CN400              | 87-099-719-010 |           | CONN,30P TYK-B(X)              |
| C303                 | 87-012-198-080 |           | C-CAP,U 180P-50 J CH          | CN420              | 87-099-554-010 |           | CONN,6P TUC-P6X-B1             |
| C304                 | 87-010-545-080 |           | CAP, ELECT 0.22-50V           | CN430              | 87-099-554-010 |           | CONN,6P TUC-P6X-B1             |
| C305                 | 87-010-260-080 |           | CAP, ELECT 47-25V             | FFC380             | 8A-CJ6-640-010 |           | FFC,12P-140 TU                 |
| C306                 | 87-010-545-080 |           | CAP, ELECT 0.22-50V           | L400               | 87-A50-333-010 |           | COIL,OSC 9.43MHZ               |
| C307                 | 87-010-545-080 |           | CAP, ELECT 0.22-50V           | <b>KEY C.B</b>     |                |           |                                |
| C308                 | 87-012-198-080 |           | C-CAP,U 180P-50 J CH          | C502               | 87-012-286-080 |           | C-CAP,U 0.01-25 K B            |
| C309                 | 87-010-404-080 |           | CAP, ELECT 4.7-50V            | C503               | 87-012-286-080 |           | C-CAP,U 0.01-25 K B            |
| C311                 | 87-012-278-080 |           | C-CAP,U 2200P-50 B            | CN502              | 87-A60-670-010 |           | CONN,6P H 2MM JMT              |
| C312                 | 87-010-404-080 |           | CAP, ELECT 4.7-50V            | S500               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C313                 | 87-010-401-080 |           | CAP,E 1-50 M 11L SME          | S501               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C314                 | 87-010-787-080 |           | C-CAP,U 0.022-25 K B          | S502               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C315                 | 87-010-787-080 |           | C-CAP,U 0.022-25 K B          | S507               | 87-A91-698-010 |           | SW,RTRY EC12E12403             |
| C316                 | 87-012-274-080 |           | C-CAP,U 1000P-50 K B          | S509               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C317                 | 87-012-286-080 |           | C-CAP,U 0.01-25 K B           | S510               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C318                 | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F            | S511               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C319                 | 87-010-260-080 |           | CAP, ELECT 47-25V             | S512               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C320                 | 87-A10-706-080 |           | C-CAP,U 0.33-16 Z F           | S513               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C321                 | 87-A10-706-080 |           | C-CAP,U 0.33-16 Z F           | S514               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C322                 | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F            | S515               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C323                 | 87-012-286-080 |           | C-CAP,U 0.01-25 K B           | S516               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C324                 | 87-012-274-080 |           | C-CAP,U 1000P-50 K B          | S517               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C325                 | 87-012-273-080 |           | C-CAP,U 820P-50 K B           | S518               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C326                 | 87-012-273-080 |           | C-CAP,U 820P-50 K B           | S519               | 87-A90-095-080 |           | SW,TACT EVQ11G04M              |
| C327                 | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F            | S520               | 87-A91-698-010 |           | SW,RTRY EC12E12403             |
| C328                 | 87-010-263-080 |           | CAP, ELECT 100-10V            | <b>LED-SUB C.B</b> |                |           |                                |
| C329                 | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F            | CN411              | 87-099-553-010 |           | CONN,4P TUC-P4X-B1             |
| C330                 | 87-010-235-080 |           | CAP,E 470-16 SME              | D503               | 87-A40-821-080 |           | LED,SMLS1BE16C BLU/UMB         |
| C331                 | 87-010-260-080 |           | CAP, ELECT 47-25V             | <b>MIC-SUB C.B</b> |                |           |                                |
| C332                 | 87-012-280-080 |           | C-CAP,3300P-50 K B            | CN310              | 87-A60-622-010 |           | CONN,5P V 2MM JMT              |
| C333                 | 87-018-209-080 |           | CAP,TC U 0.1-50 Z F UP050     | J301               | 87-009-216-010 |           | JACK, DIA 3.5                  |
| C500                 | 87-010-405-040 |           | CAP,E 10-50                   | JR303              | 87-A50-190-080 |           | C-COIL,S BLM21A102S            |
| C501                 | 87-012-274-080 |           | C-CAP,U 1000P-50 K B          | <b>CD-SUB C.B</b>  |                |           |                                |
| C504                 | 87-016-251-040 |           | CAP, ELECT 220-16             | CN421              | 87-099-565-010 |           | CONN,6P TUC-P6P-B1             |
| C506                 | 87-016-251-040 |           | CAP, ELECT 220-16             | CN431              | 87-099-565-010 |           | CONN,6P TUC-P6P-B1             |
| CN410                | 87-099-564-010 |           | CONN,4P TUC-P4P-B1            | CN711              | 87-099-565-010 |           | CONN,6P TUC-P6P-B1             |
| CN500                | 87-A60-778-010 |           | CONN,18P B TMC-D(P)           | CN721              | 87-099-565-010 |           | CONN,6P TUC-P6P-B1             |
| CN501                | 87-A60-899-010 |           | CONN,6P V BLK FMN-BTRK        | <b>CD-SW C.B</b>   |                |           |                                |
| CN503                | 87-099-720-010 |           | CONN,30P TYK-B(P)             | CNA705             | 8A-CJ6-639-010 |           | CONN ASSY,3P V CD-SW           |
| CNA310               | 8A-CG6-652-010 |           | CONN ASSY,5P MIC-IN           | S701               | 87-A90-117-010 |           | SW,PUSH 1-1-1 MPU10371MLBO MIC |
| CNA320               | 8A-CG6-650-010 |           | CONN ASSY,2P V-SHIELD MIC-SIG | S702               | 87-A90-117-010 |           | SW,PUSH 1-1-1 MPU10371MLBO MIC |
| CNA330               | 88-805-042-430 |           | CONN ASSY,4P 240              | <b>VCD C.B</b>     |                |           |                                |
| CNA501               | 88-805-061-230 |           | CONN ASSY,6P 120              | C701               | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F             |
| D500                 | 87-A40-317-080 |           | LED,SLR-342VCT31 RED          | C702               | 87-010-555-040 |           | CAP,E 100-10 GAS               |
| D502                 | 87-A40-821-080 |           | LED,SMLS1BE16C BLU/UMB        | C703               | 87-012-274-080 |           | C-CAP,U 1000P-50 K B           |
| L302                 | 87-005-495-080 |           | COIL,680UH J FLR50            | C704               | 87-010-555-040 |           | CAP,E 100-10 GAS               |
| S301                 | 8Z-CL5-642-010 |           | SW,SL 2-2-3 SS23D05           | <b>U-COM C.B</b>   |                |           |                                |
| VR302                | 8Z-CL5-643-010 |           | VR,RTRY 10KBX1 V              |                    |                |           |                                |
| VR303                | 8Z-CL5-644-010 |           | VR,RTRY 10KAX1 1 V            |                    |                |           |                                |

| REF. NO | PART NO.       | KANRI NO.            | DESCRIPTION | REF. NO | PART NO.       | KANRI NO.            | DESCRIPTION |
|---------|----------------|----------------------|-------------|---------|----------------|----------------------|-------------|
| C705    | 87-010-757-080 | C-CAP,0.047-25 Z F   |             | C824    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C706    | 87-010-757-080 | C-CAP,0.047-25 Z F   |             | C825    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C707    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C826    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C708    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C827    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C709    | 87-012-280-080 | C-CAP,3300P-50 K B   |             | C829    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C710    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C830    | 87-012-178-080 | C-CAP,U 18P-50 CH    |             |
| C711    | 87-010-757-080 | C-CAP,0.047-25 Z F   |             | C831    | 87-012-178-080 | C-CAP,U 18P-50 CH    |             |
| C712    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C832    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C713    | 87-010-787-080 | C-CAP,U 0.022-25 K B |             | C833    | 87-010-555-040 | CAP,E 100-10 GAS     |             |
| C714    | 87-012-172-080 | C-CAP,10P-50 D CH    |             | C834    | 87-010-260-080 | CAP, ELECT 47-25V    |             |
| C715    | 87-010-494-040 | CAP, ELECT 1-50V     |             | C835    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C716    | 87-010-788-080 | C-CAP,U 0.033-25     |             | C836    | 87-012-188-080 | C-CAP,U 47P-50 CH    |             |
| C717    | 87-010-788-080 | C-CAP,U 0.033-25     |             | C837    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C718    | 87-010-788-080 | C-CAP,U 0.033-25     |             | C838    | 87-016-044-040 | CAP, ELECT 100-16V   |             |
| C719    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C839    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C720    | 87-010-785-080 | C-CAP,U 0.015-25 K B |             | C840    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C721    | 87-010-981-040 | CAP, ELECT 22-35     |             | C841    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C722    | 87-010-492-040 | CAP, ELECT 0.33-50V  |             | C842    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C723    | 87-012-188-080 | C-CAP,U 47P-50 CH    |             | C843    | 87-012-197-080 | C-CAP,U 150P 50 CH   |             |
| C724    | 87-010-757-080 | C-CAP,0.047-25 Z F   |             | C844    | 87-012-268-080 | C-CAP,U 330P-50 CH   |             |
| C725    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C845    | 87-012-195-080 | C-CAP,U 100P-50 CH   |             |
| C726    | 87-010-788-080 | C-CAP,U 0.033-25     |             | C846    | 87-012-335-080 | C-CAP,U 270P SL      |             |
| C727    | 87-010-404-080 | CAP, ELECT 4.7-50V   |             | C849    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C728    | 87-012-269-080 | C-CAP,U 390P-50 CH   |             | C850    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C729    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C851    | 87-010-555-040 | CAP,E 100-10 GAS     |             |
| C730    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C852    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C731    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C853    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C732    | 87-012-278-080 | C-CAP,U 220P-50 B    |             | C854    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C733    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C855    | 87-010-555-040 | CAP,E 100-10 GAS     |             |
| C734    | 87-010-555-040 | CAP,E 100-10 GAS     |             | C856    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C735    | 87-010-555-040 | CAP,E 100-10 GAS     |             | C858    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C736    | 87-010-555-040 | CAP,E 100-10 GAS     |             | C859    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C737    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C860    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C738    | 87-010-555-040 | CAP,E 100-10 GAS     |             | C861    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C739    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C863    | 87-012-172-080 | C-CAP,U 10P-50 CH    |             |
| C740    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             | C864    | 87-012-172-080 | C-CAP,U 10P-50 CH    |             |
| C741    | 87-012-180-080 | C-CAP,U 22P-50V      |             | C869    | 87-012-188-080 | C-CAP,U 47P-50 CH    |             |
| C742    | 87-A10-463-080 | C-CAP,U 0.47-10 F Z  |             | C870    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C743    | 87-012-199-080 | C-CAP,U 220P-50 CH   |             | C871    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C745    | 87-A10-189-040 | CAP, ELECT 220-10V   |             | C872    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C746    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C873    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C747    | 87-012-280-080 | C-CAP,3300P-50 K B   |             | C874    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C748    | 87-010-757-080 | C-CAP,0.047-25 Z F   |             | C875    | 87-010-374-040 | CAP,E 47-10          |             |
| C749    | 87-010-757-080 | C-CAP,0.047-25 Z F   |             | C901    | 87-012-270-080 | C-CAP,U 470P-50 K B  |             |
| C750    | 87-012-172-080 | C-CAP,10P-50 D CH    |             | C902    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C753    | 87-012-270-080 | C-CAP,U 470P-50 K B  |             | C903    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C790    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C904    | 87-016-251-040 | CAP, ELECT 220-16    |             |
| C801    | 87-010-371-080 | CAP, ELECT 470-6.3V  |             | C905    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C802    | 87-010-494-040 | CAP,E 1-50 GAS       |             | C906    | 87-010-237-080 | CAP, ELECT 1000-16V  |             |
| C803    | 87-012-196-080 | C-CAP,U 120P-50 CH   |             | C907    | 87-010-235-080 | CAP,E 470-16 SME     |             |
| C804    | 87-A10-463-080 | C-CAP,U 0.47-10 F Z  |             | C908    | 87-016-251-040 | CAP, ELECT 220-16    |             |
| C805    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C909    | 87-016-044-040 | CAP, ELECT 100-16V   |             |
| C806    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C910    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C807    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C911    | 87-010-555-040 | CAP,E 100-10 GAS     |             |
| C808    | 87-012-182-080 | C-CAP,U 27P-50 CH    |             | C912    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C809    | 87-012-182-080 | C-CAP,U 27P-50 CH    |             | C913    | 87-010-555-040 | CAP,E 100-10 GAS     |             |
| C810    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C914    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C811    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C915    | 87-012-195-080 | C-CAP,U 100P-50 CH   |             |
| C812    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C916    | 87-012-195-080 | C-CAP,U 100P-50 CH   |             |
| C813    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C917    | 87-012-195-080 | C-CAP,U 100P-50 CH   |             |
| C814    | 87-010-404-080 | CAP, ELECT 4.7-50V   |             | C918    | 87-012-195-080 | C-CAP,U 100P-50 CH   |             |
| C815    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             | C919    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C816    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C921    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C817    | 87-010-549-040 | CAP,E 47-6.3 5L      |             | C922    | 87-012-274-080 | C-CAP,U 1000P-50 K B |             |
| C818    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C923    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C819    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             | C924    | 87-010-555-040 | CAP,E 100-10 GAS     |             |
| C820    | 87-012-188-080 | C-CAP,U 47P-50 CH    |             | C925    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C821    | 87-012-188-080 | C-CAP,U 47P-50 CH    |             | C926    | 87-012-286-080 | C-CAP,U 0.01-25 K B  |             |
| C822    | 87-010-560-080 | CAP, ELECT 10-50V    |             | C927    | 87-010-759-080 | C-CAP,U 0.1-25 Z F   |             |
| C823    | 87-010-560-080 | CAP, ELECT 10-50V    |             | C928    | 87-016-044-040 | CAP, ELECT 100-16V   |             |

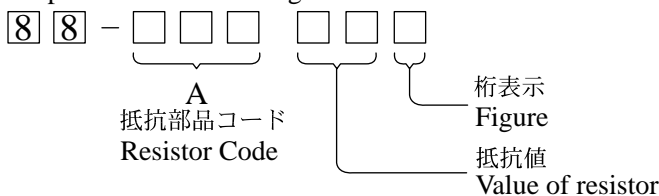
| REF. NO | PART NO.       | KANRI NO. | DESCRIPTION          | REF. NO   | PART NO.       | KANRI NO. | DESCRIPTION                  |
|---------|----------------|-----------|----------------------|-----------|----------------|-----------|------------------------------|
| C929    | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F   | C19       | 87-018-209-080 |           | CAP,TC U 0.1-50 Z F UP050    |
| C930    | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F   | C200      | 87-015-997-080 |           | CAP,E 2200-16 SME            |
| C931    | 87-010-759-080 |           | C-CAP,U 0.1-25 Z F   | C201      | 87-010-073-080 |           | CAP,E 3.3-50 5L              |
| C950    | 87-012-274-080 |           | C-CAP,U 1000P-50 K B | △C202     | 87-A10-479-080 |           | CAP,CER 2200P-250 M E KH     |
| CN330   | 87-A60-621-010 |           | CONN,4P V 2MM JMT    | △C203     | 87-A10-479-080 |           | CAP,CER 2200P-250 M E KH     |
| CN704   | 87-A60-619-010 |           | CONN,2P V 2MM JMT    | C670      | 87-010-182-080 |           | C-CAP,S 2200P-50 B           |
| CN705   | 87-A60-620-010 |           | CONN,3P V 2MM JMT    | C671      | 87-010-182-080 |           | C-CAP,S 2200P-50 B           |
| CN707   | 87-A60-424-010 |           | CONN,16P V TOC-B     | C672      | 87-010-182-080 |           | C-CAP,S 2200P-50 B           |
| CN710   | 87-099-554-010 |           | CONN,6P H TUC-P6X-B1 | C673      | 87-010-182-080 |           | C-CAP,S 2200P-50 B           |
| CN720   | 87-099-554-010 |           | CONN,6P H TUC-P6X-B1 | C690      | 87-016-081-080 |           | C-CAP,S 0.1-16 K R GRM       |
| CN800   | 87-A60-666-010 |           | CONN,2P H 2MM JMT    | CN6       | 87-099-417-010 |           | CONN,6P H WHT EH             |
| CNA700  | 88-805-051-240 |           | CONN ASSY,5P 120     | CN604     | 87-A60-625-010 |           | CONN,8P V 2MM JMT            |
| CNA706  | 88-805-061-220 |           | CONN ASSY,6P 120     | J601      | 87-099-814-010 |           | JACK,PIN 3P WWW              |
| FFC707  | 8A-CJ6-643-010 |           | FF-CABLE,16P-70      | J602      | 87-099-813-010 |           | JACK,PIN 3P RRR              |
| L701    | 87-005-196-080 |           | COIL,10UH            | JR606     | 87-A50-190-080 |           | C-COIL,S BLM21A102S          |
| L801    | 87-005-817-080 |           | C-COIL, 33UH J FLC32 | △PR202    | 87-A90-091-080 |           | PROTECTOR,2A 491             |
| L802    | 87-005-204-080 |           | COIL,47UH            | △PR203    | 87-A90-091-080 |           | PROTECTOR,2A 491             |
| L803    | 87-005-204-080 |           | COIL,47UH            | △PT200    | 8A-CJ6-673-010 |           | PT,H ACJ-6                   |
| L804    | 87-005-204-080 |           | COIL,47UH            | △PT201    | 8Z-NF8-663-010 |           | PT,SUB ZNF-8(H)              |
| L805    | 87-005-187-080 |           | COIL,1.8UH           | △RY200    | 87-A91-281-010 |           | RELAY,AC DC12V OSA-SS-212DM5 |
| L806    | 87-005-189-080 |           | COIL 2.7UH           | △S200     | 87-036-235-010 |           | SW SLIDE ESD269              |
| L807    | 87-005-204-080 |           | COIL,47UH            | △T201     | 87-A60-317-010 |           | TERMINAL, 1P MSC             |
| L901    | 87-A50-095-010 |           | COIL,68UH RCR875D    | △T202     | 87-A60-317-010 |           | TERMINAL, 1P MSC             |
| L902    | 87-005-426-080 |           | COIL,3.3UH K FLR50   |           |                |           |                              |
| △PR901  | 87-026-689-080 |           | PROTECTOR,1A 60V 491 |           |                |           |                              |
| X801    | 87-A70-046-010 |           | VIB,XTAL 16.934MHZ   |           |                |           |                              |
| X802    | 87-A70-125-080 |           | VIB,XTAL 27MHZ 50PPM |           |                |           |                              |
| X901    | 87-A70-124-080 |           | VIB,CER 8.0MHZ       |           |                |           |                              |
|         |                |           |                      | MOTOR C.B |                |           |                              |
|         |                |           |                      | M2        | S0-M10-A09-700 |           | MOTOR SLED ASSY              |
|         |                |           |                      | PIN3      | S2-369-750-000 |           | PLUG, 6P                     |
|         |                |           |                      | SW1       | S4-S13-A01-600 |           | SW,LEAF                      |

LINE-OUT/PT C.B

- Regarding connectors, they are not stocked as they are not the initial order items. The connectors are available after they are supplied from connector manufacturers upon the order is received.

○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

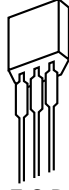
| 容量<br>Wattage | 種類<br>Type | 許容誤差<br>Tolerance | 記号<br>Symbol | 寸法/Dimensions (mm) |     |      | 抵抗コード : A<br>Resistor Code : A |     |
|---------------|------------|-------------------|--------------|--------------------|-----|------|--------------------------------|-----|
|               |            |                   |              | 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  
KTC3198



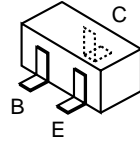
E C B

DTC124ES

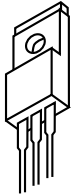


E C B

2SA1357

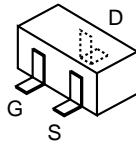


2SA1162  
2SA1235  
2SC2712  
2SC2714  
2SC3052  
2SD1306  
DTA123JK  
DTA124EK  
DTA124XK  
DTA144TK  
DTC124EK  
DTC124XK  
RT1N141C  
RT1P144C  
RT1P441C



B C E

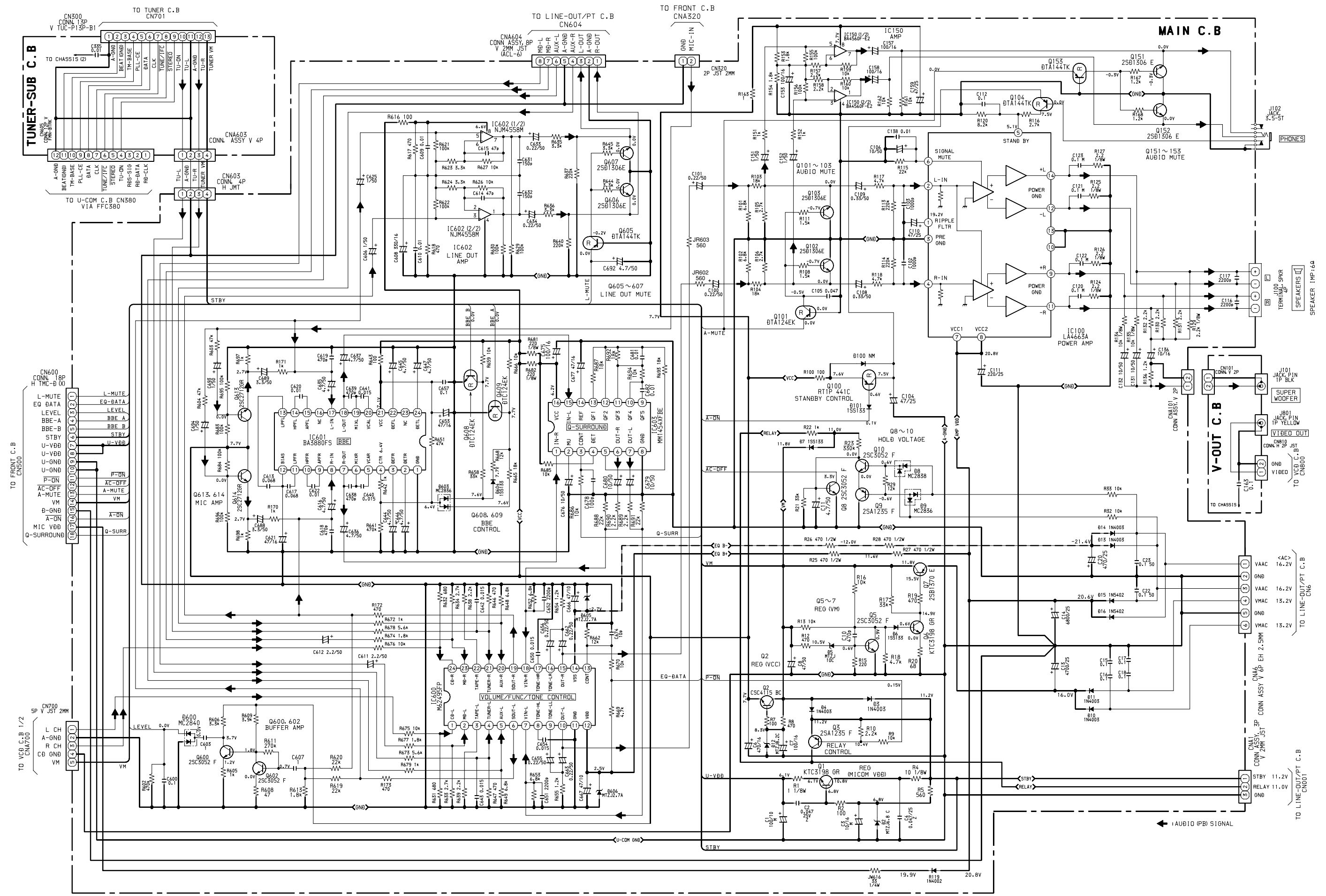
2SB1370



2SK2158



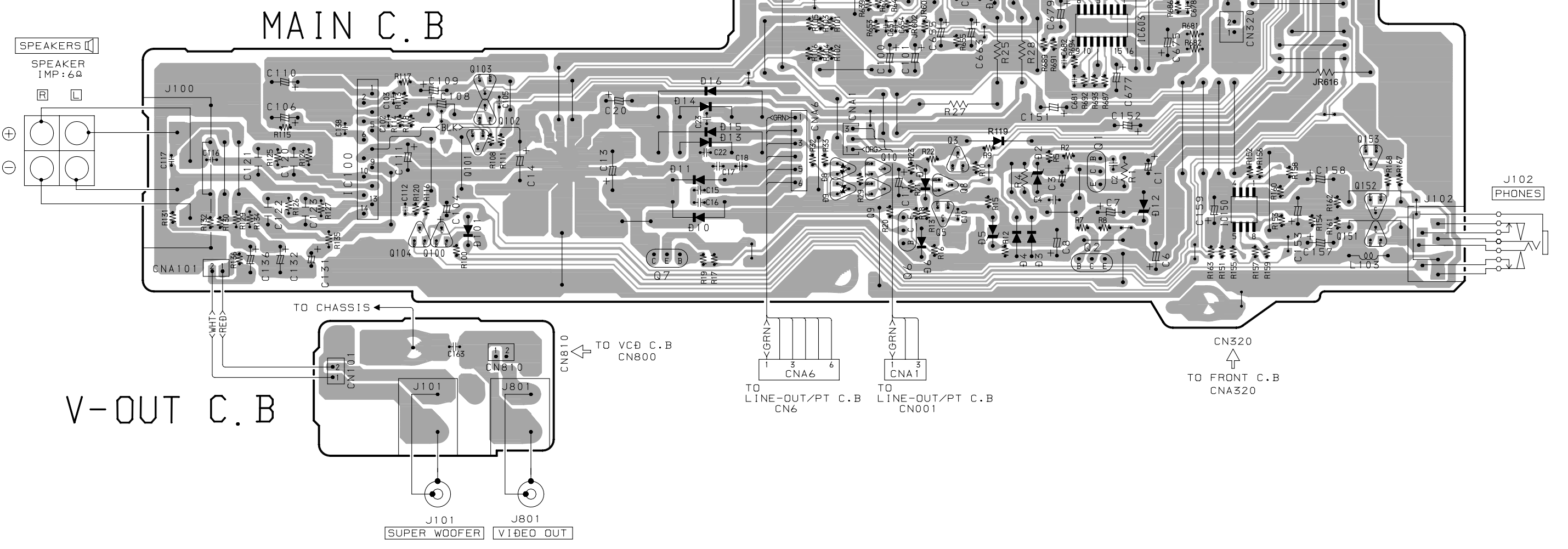
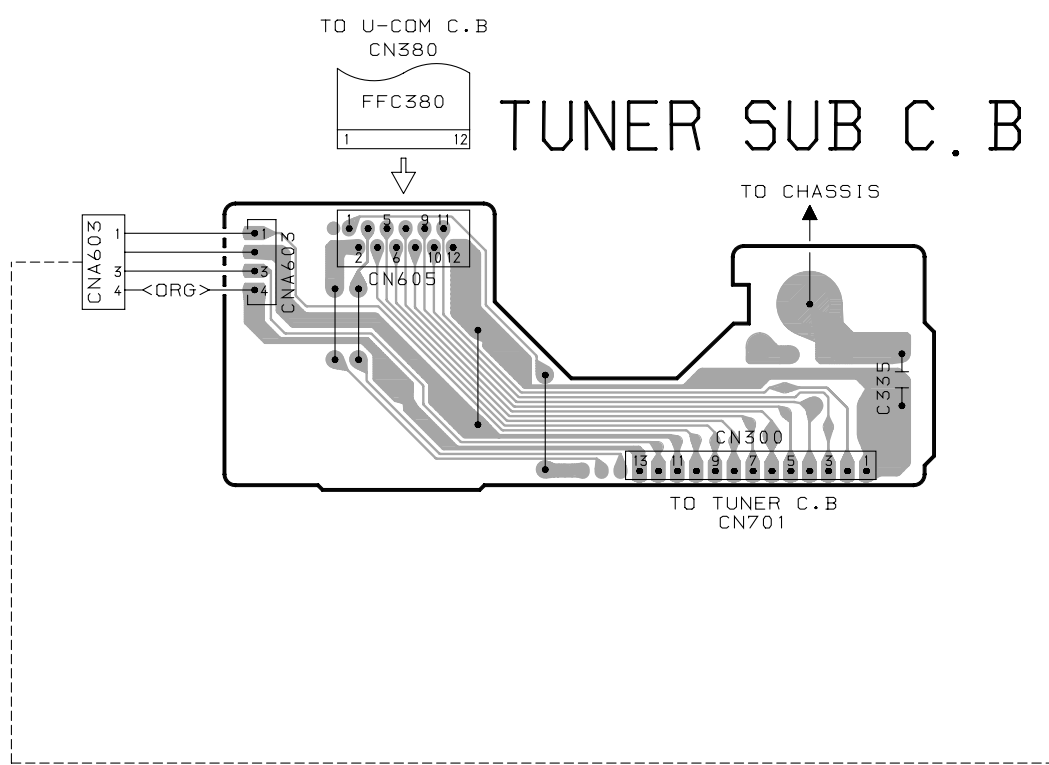
SCHEMATIC DIAGRAM - 2 (MAIN, TUNER-SUB, V-OUT SECTION)



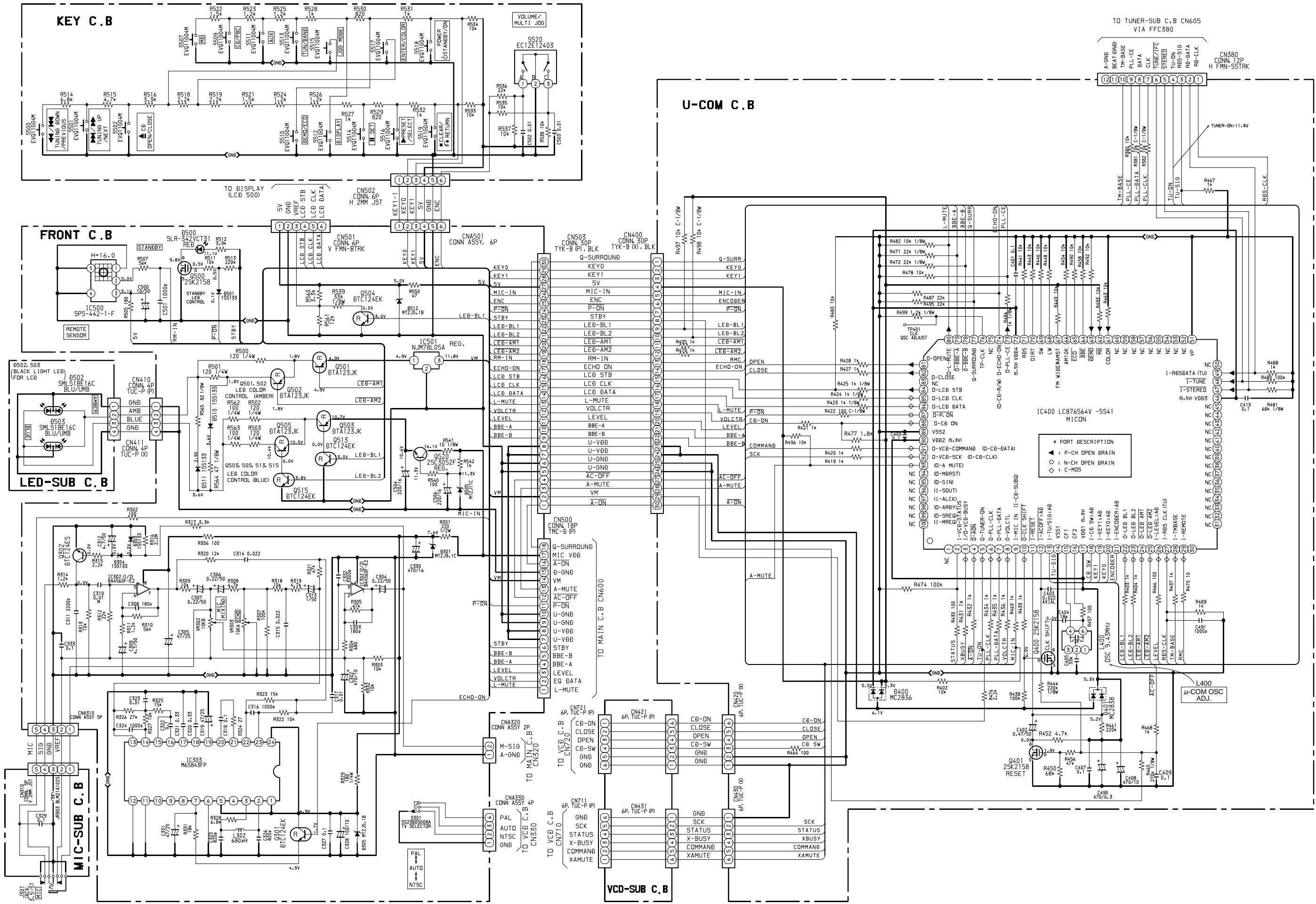
WIRING - 2 (MAIN, TUNER-SUB, V-OUT C.B.)

|    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |   |   |   |   |   |   |   |   |   |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
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SCHEMATIC DIAGRAM - 3 (KEY, FRONT, LED-SUB, MIC-SUB, VCD-SUB, U-COM SECTION)

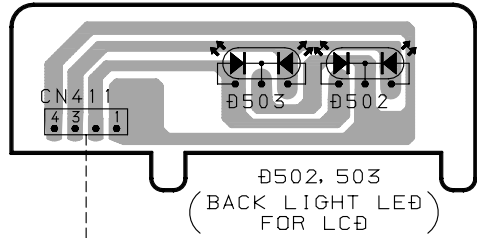




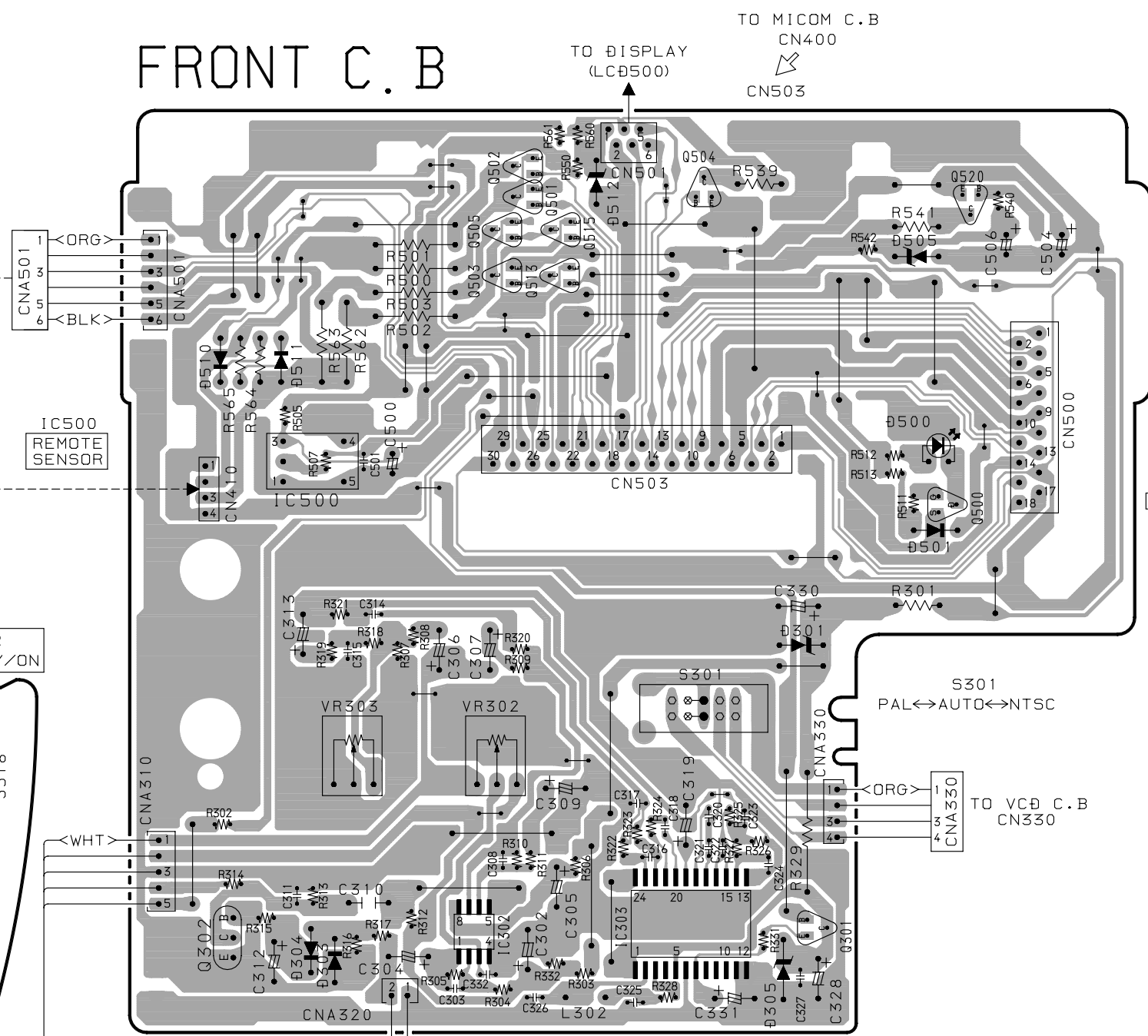
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| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

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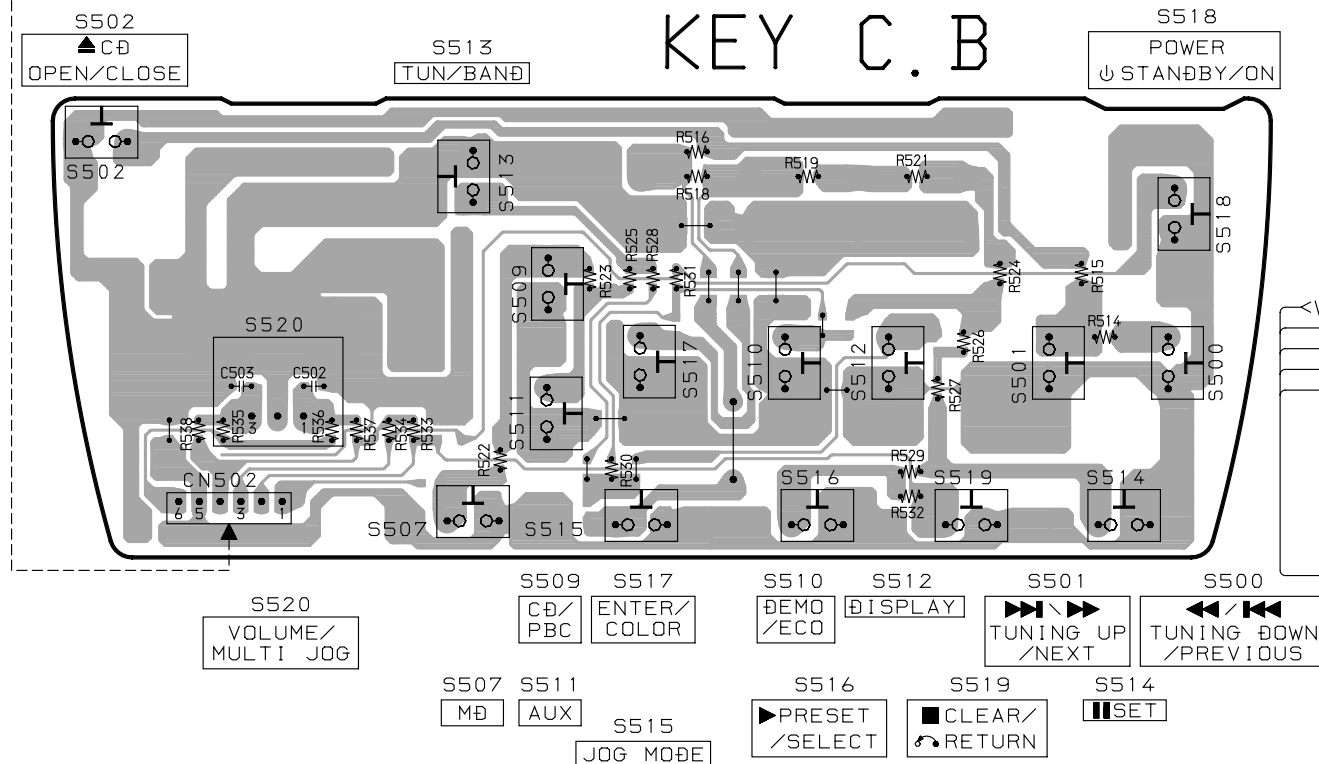
### LED SUB C.B



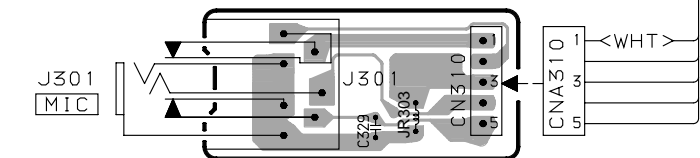
### FRONT C.B



### KEY C.B

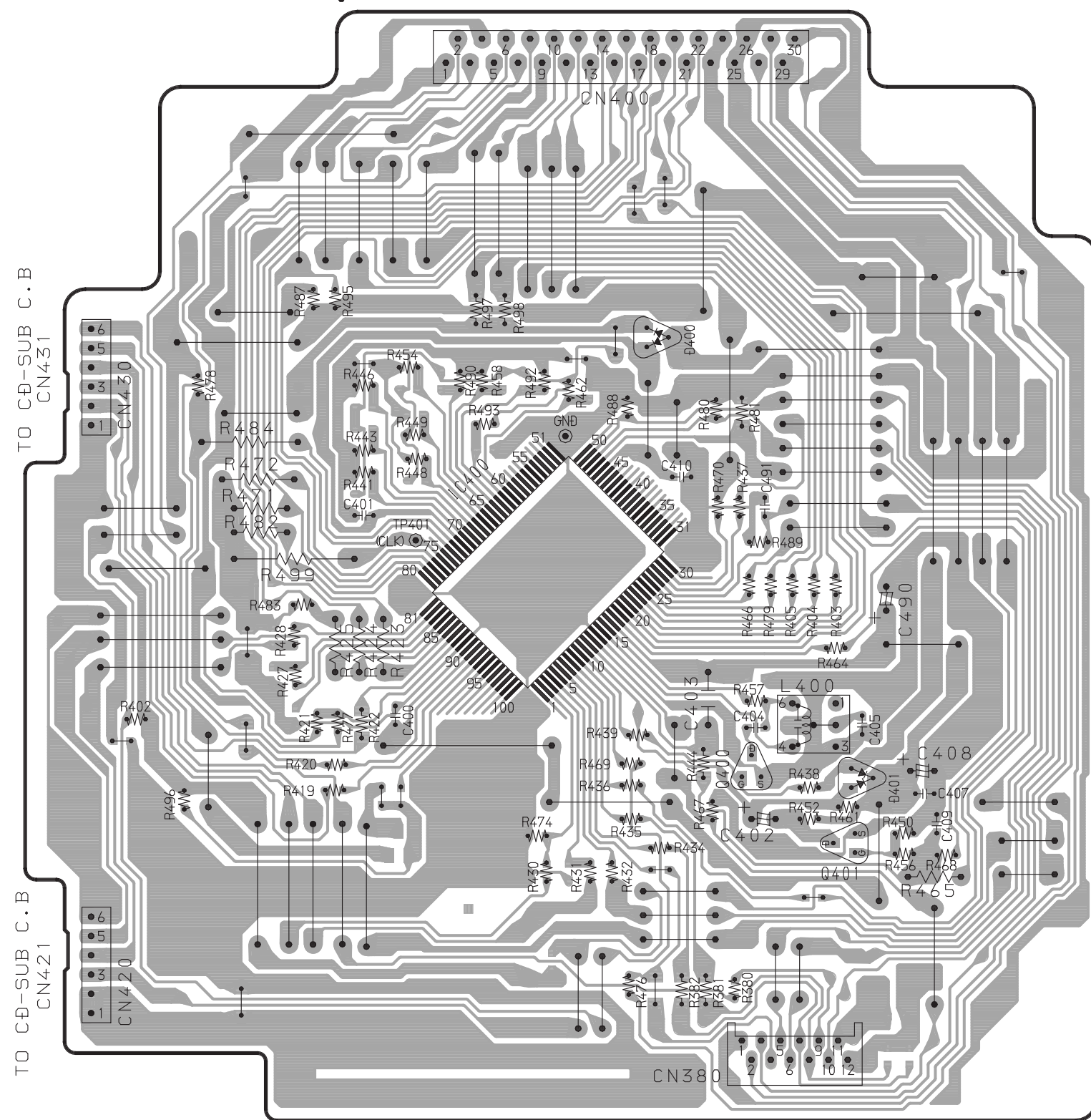


### MIC SUB C.B



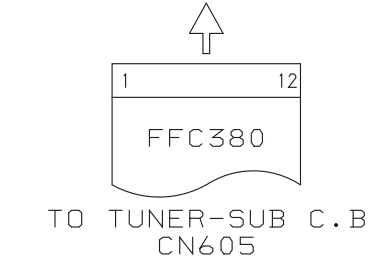
# U-COM C.B

TO FRONT C.B  
CN503



TO CØ-SUB C.B  
CN431

TO CØ-SUB C.B  
CN421



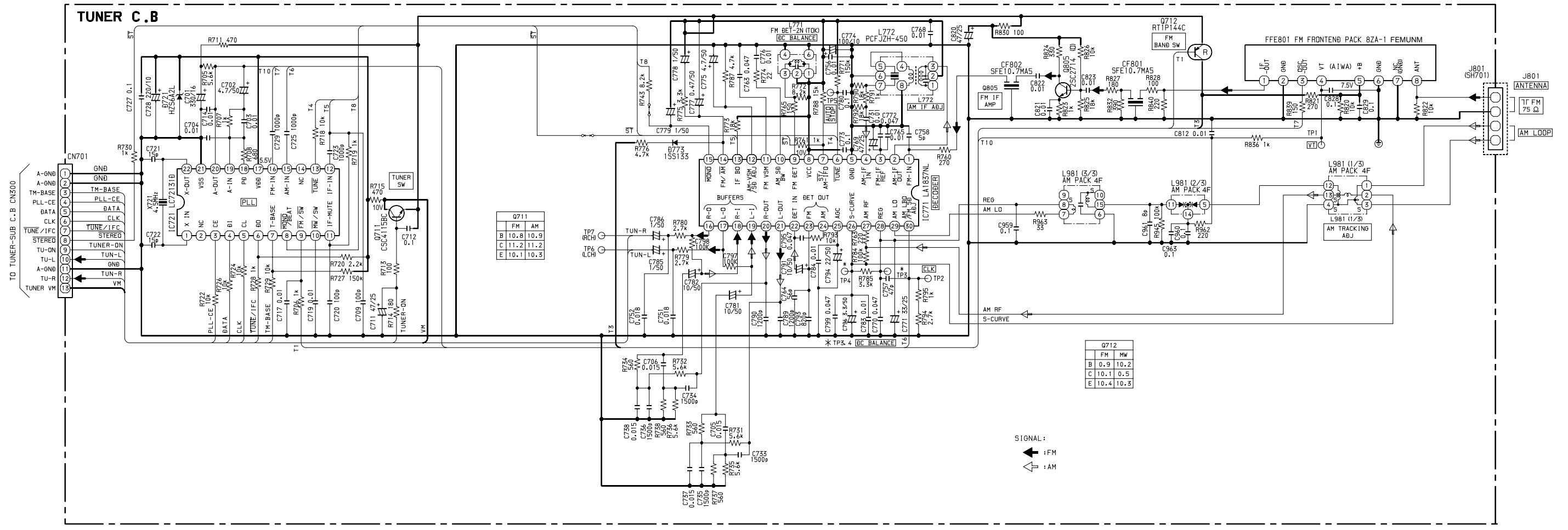
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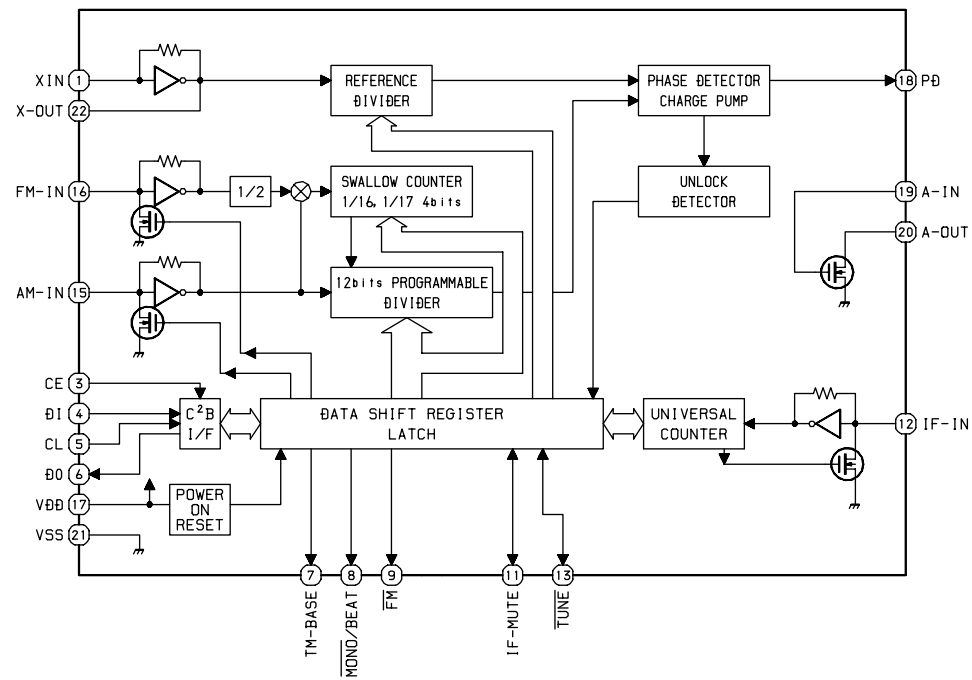


SCHEMATIC DIAGRAM - 6 (TUNER SECTION)

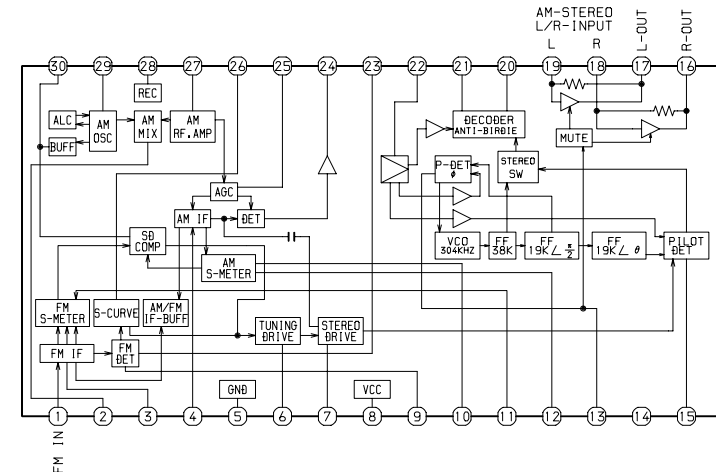


IC BLOCK DIAGRAM - 1

IC, LC72131D



IC, LA1837NL

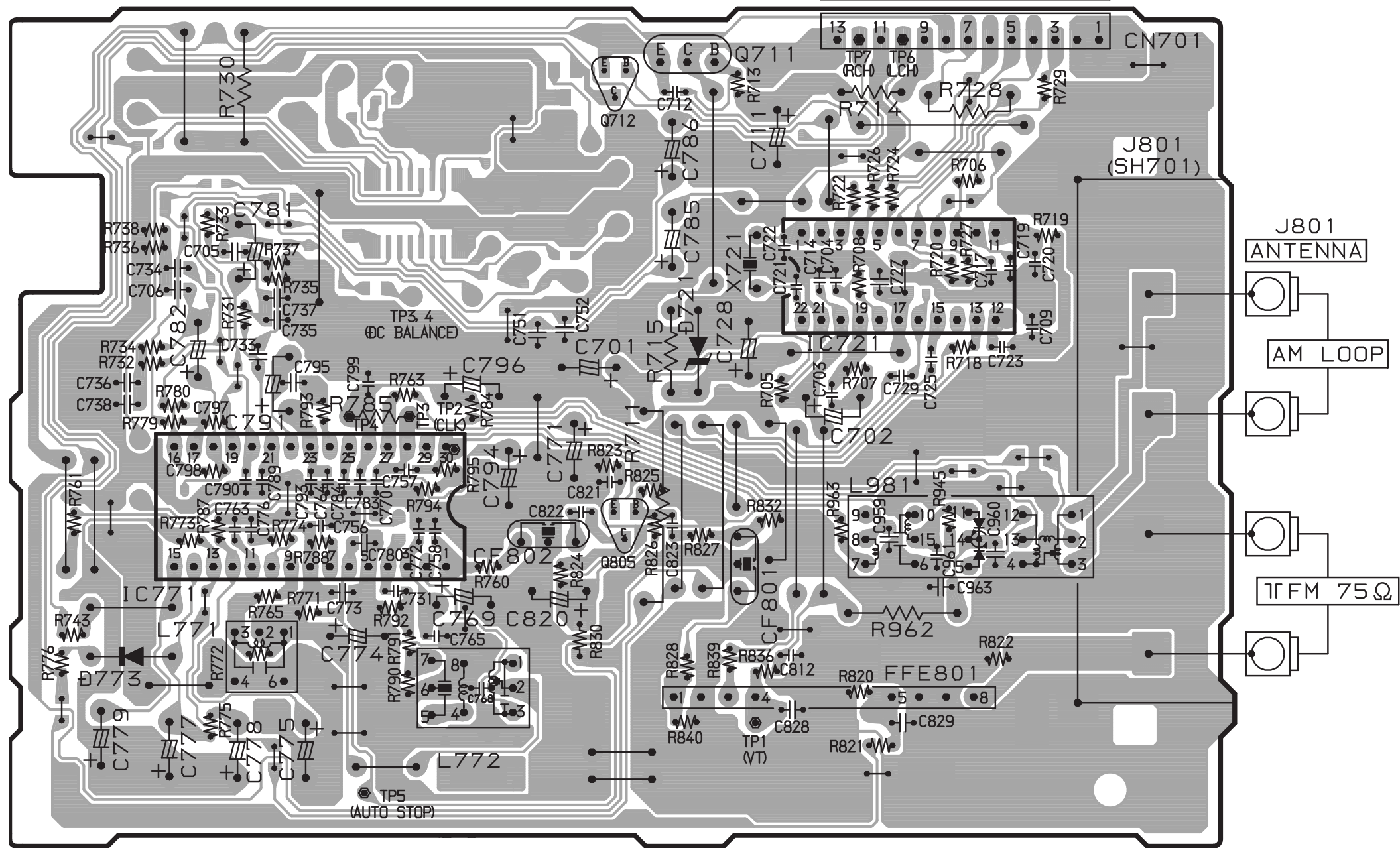




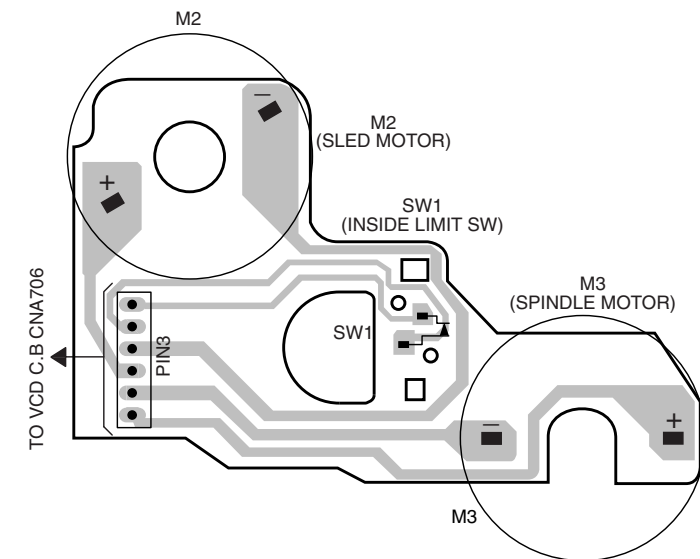
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|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|
| 32 | 31 | 30 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 | 19 | 18 | 17 | 16 | 15 | 14 | 13 | 12 | 11 | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|---|---|---|---|---|---|---|---|---|

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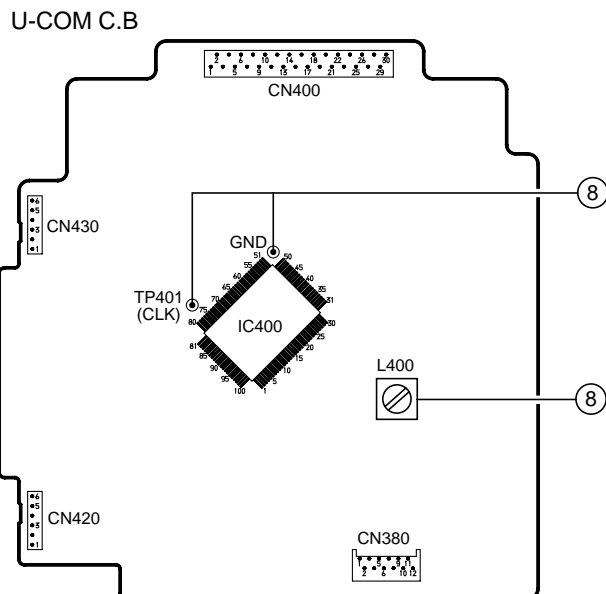
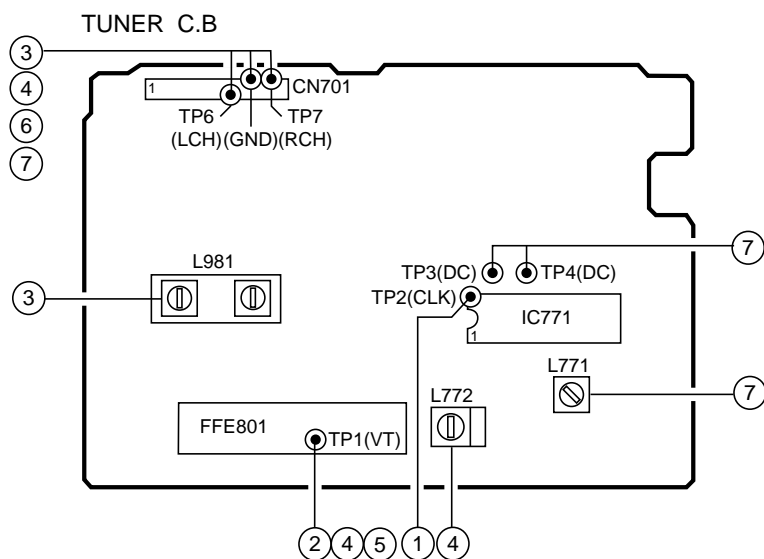
# TUNER C.B



# MOTOR C.B



## ADJUSTMENT <TUNER, U-COM SECTION>



### 1. Clock Frequency Check

Settings : • Test point : TP2 (CLK)

Method : Set to MW 160kHz and check that the test point is  $2052\text{kHz} \pm 45\text{Hz}$ .

### 2. MW VT Check

Settings : • Test point : TP1 (VT)

Method : Set to MW 160kHz 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 : TP6 (Lch), TP7 (Rch)

• Adjustment location : L981 (1/3)

Method : Set to MW 999kHz and adjust L981 (1/3) so that the test point becomes maximum.

### 4. AM IF Adjustment

Settings : • Test point : TP6 (Lch), TP7 (Rch)

• Adjustment location :

L772 ..... 450kHz

### 5. 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 87.5 MHz and check that the test point is more than 0.5V.

### 6. FM Tracking Check

Settings : • Test point : TP6 (Lch), TP7 (Rch)

Method : Set to FM 98.0MHz and check that the test point is less than 13dB $\mu$ V.

### 7. DC Balance / Mono Distortion Adjustment

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

TP6 (Lch), TP7 (Rch) (Distortion)

• Adjustment location : L771

• Input level : 60dB $\mu$ V

Method : Set to FM 98.0MHz and adjust L771 so that the voltage between TP3 and TP4 becomes  $0\text{V} \pm 0.04\text{V}$ . Next, check that the distortion is less than 1.3%.

### 8. U-COM OSC Adjustment

Settings : • Test point : TP401

• Adjustment location : L400

Method : Insert AC plug with pressing TUNER function key. Adjust L400 so that frequency across the test point is  $97.207 \pm 0.048 \text{ Hz}$  (10.292 ~ 10.282 ms)



## IC DESCRIPTION

IC, CXA1992AR

| Pin No. | Pin Name | I/O | Description  |
|---------|----------|-----|--|
| 1       | FEO      | O   | Output terminal for focus error amplifier. Internally connected to window comparator input for bias condition.                 |
| 2       | FEI      | I   | Input terminal for focus error.  |
| 3       | FDFACT   | I   | Capacitor connection terminal for time constant used when there is defect.   |
| 4       | FGD      | I   | This pin is connected to GND via capacitor when high frequency gain of the focus servo is attenuated.                          |
| 5       | FLB      | I   | This is a pin where the time constant is externally connected to raise the low frequency gain of the focus servo.              |
| 6       | FEO      | O   | Focus drive output.  |
| 7       | FEM      | I   | Focus amplifier inverted input.  |
| 8       | SRCH     | I   | This is a pin where the time constant is externally connected to generate the focus search waveform.                           |
| 9       | TGU      | I   | This is a pin where the selection time constant is externally connected to set the tracking servo the high frequency gain.     |
| 10      | TG2      | I   | This is a pin where the selection time constant is externally connected to set the tracking high frequency gain.               |
| 11      | FSET     | I   | Pin for setting peak of the phase compensator of the focus tracking.   |
| 12      | TAM      | I   | Tracking amplifier inverted input.   |
| 13      | TAO      | O   | Tracking drive output.   |
| 14      | SLP      | I   | Sled amplifier non-inverted input.   |
| 15      | SLM      | I   | Sled amplifier inverted input.   |
| 16      | SLO      | O   | Sled drive output.   |
| 17      | ISET     | I   | The current which determines height of the focus search, track jump and sled kick is input with external resistance connected. |
| 18      | VCC      | I   | Power supply.  |
| 19      | LOCK     | I   | “L” setting starts sled disorder-prevention circuit. (No pull-up resistance) (Connected to VC)                                 |
| 20      | CLK      | I   | Clock input for serial data transfer from CPU. (No pull-up resistance)   |
| 21      | XLT      | I   | Latch input from CPU. (No pull-up resistance)  |
| 22      | DATA     | I   | Serial data input from CPU. (No pull-up resistance)  |
| 23      | XRST     | I   | Reset system at “L” setting. (No pull-up resistance)   |
| 24      | COUT     | O   | Signal output for track number counting.   |
| 25      | SENS1    | O   | FZC, DFCT1, TZC, BALH, TGH, FOH, or ATSC is output depending on the command from CPU.  |
| 26      | SENS2    | O   | DFCT2, MIRR, BALL, TGL or FOL is output depending on the command from CPU.   |
| 27      | FOK      | O   | Output terminal for focus OK comparator.   |
| 28      | CC2      | I   | Input pin where the DEFECT bottom hold output is capacitance coupled.  |
| 29      | CC1      | O   | DEFECT bottom-hold output terminal. Internally connected to interruption comparator input.                                     |
| 30      | CB       | I   | Connection terminal for DEFECT bottom-hold capacitor.  |
| 31      | CP       | I   | Connection terminal for MIRR hold-capacitor. Anti-reverse input terminal for MIRR comparator.                                  |
| 32      | RFI      | I   | Input terminal by capacity combination of RF summing amplifier.  |
| 33      | RFO      | O   | Output terminal of RF summing amplifier. Checkpoint of Eye pattern.  |

| Pin No. | Pin Name  | I/O | Description   |
|---------|-----------|-----|---|
| 34      | RFM       | I   | Anti-reverse input terminal for RF summing amplifier. The gain of RF amplifier is decided by the connection resistance between RF-M and RF-O terminals. |
| 35      | RFTC      | I   | This is a pin where the selection time constant is externally connected to control the RF level.  |
| 36      | LD        | O   | APC amplifier output terminal.  |
| 37      | PD        | I   | APC amplifier input terminal.   |
| 38 ~ 39 | PD1 ~ PD2 | I   | RFI-V amplifier inverted input pin. These pins are connected to the A+C and B+C pins of the optical pickup, receiving by currents input.                |
| 40      | FEBIAS    | I/O | Bias adjustment pin of the focus error amplifier. (Not used)  |
| 41 ~ 42 | F ~ E     | I   | F and EIV amplifier inverted input pins. These pins are connected to the F and E of the optical pickup, receiving by current input.                     |
| 43      | EI        | -   | Gain adjustment pin of the I-V amplifier E. (When not in use of BAL automatic adjustment)<br>(Not used)   |
| 44      | VEE       | -   | GND connection pin.   |
| 45      | TEO       | O   | Output terminal for tracking-error amplifier. Output E-F signal.  |
| 46      | LPFI      | I   | BAL adjustment comparator input pin. (Input through LPF from TEO)   |
| 47      | TEI       | I   | Input terminal for tracking error.  |
| 48      | ATSC      | I   | Window-comparator input terminal for detecting ATSC.  |
| 49      | TZC       | I   | Input terminal for tracking-zero cross comparator.  |
| 50      | TDFCT     | I   | Capacitor connection pin for the time constant used when there is defect.   |
| 51      | VC        | O   | Output terminal for DC voltage reduced to half of VCC+VEE.  |
| 52      | FZC       | I   | Input terminal for focus-zero cross comparator.   |

## IC, LC876564V-5S41

| Pin No. | Pin Name                        | I/O | Description  |
|---------|---------------------------------|-----|--|
| 1       | NC                              | O   | Not connected  |
| 2       | I-VCD-STATUS                    | I   | Judge signal of VCD or CD-DA from VCD MICON.                         |
| 3       | I/O VCD BUSY                    | I/O | Interface to VCD MICON   |
| 4       | $\overline{\text{O-A-ON}}$      | O   | Power on control output to POWER AMP IC (LA4663A). "L" = POWER ON.   |
| 5       | O-TUNER-ON                      | O   | TUNER power supply control output. "H" = POWER ON.                   |
| 6       | O-PLL-CLK                       | O   | Clock output to TUNER PLL IC (LC72131D).                             |
| 7       | O-PLL-DATA                      | O   | Data output to TUNER PLL IC (LC72131D).                              |
| 8       | O-VOLCTL                        | O   | Connect to VOLUME/FUNCTION/TONE CONTROL IC (M62495FP) pin 13 (CONT). |
| 9       | I-MIC IN                        | I   | Sensor of MIC-PLUG   |
| 10      | $\overline{\text{O-CLK SHIFT}}$ | O   | Clock shift output for FM-BEAT.                                      |
| 11      | $\overline{\text{I-RESET}}$     | I   | Reset input.   |
| 12      | $\overline{\text{I-ACOFF:AD}}$  | I   | Power failure detection/HOLD input.                                  |
| 13      | I-TU-SIG:AD                     | I   | RDS signal input.  |
| 14      | VSS1                            | -   | GND.   |
| 15      | CF1                             | I   | Crystal oscillator input for system clock (9.43MHz).                 |
| 16      | CF2                             | O   | Crystal oscillator output for system clock (9.43MHz).                |
| 17      | VDD1                            | -   | Power supply (+5.6V).  |
| 18      | I-CD SW:AD                      | I   | CD tray (open/close) position detection input.                       |
| 19      | I-KEY1:AD                       | I   | Tact key A/D level input 1.  |
| 20      | I-KEY0:AD                       | I   | Tact key A/D level input 0.  |
| 21      | I-ENCODER:AD                    | I   | A/D input from rotary encoder.                                       |
| 22      | $\overline{\text{O-LED BL1}}$   | O   | LED control output for LCD back light.                               |
| 23      | $\overline{\text{O-LED BL2}}$   | O   | LED control output for LCD back light.                               |
| 24      | $\overline{\text{O-LED AM1}}$   | O   | LED control output for LCD back light.                               |
| 25      | $\overline{\text{O-LED AM2}}$   | O   | LED control output for LCD back light.                               |
| 26      | I-LEVEL:AD                      | I   | A/D input from AMP for level meter display.                          |
| 27      | I-RDS-CLK (TU)                  | I   | RDS clock input.   |
| 28      | I-TMBASE                        | I   | Time base input from TUNER PLL IC (LC72131D).                        |
| 29      | I-REMOTE                        | I   | Remote control signal input.   |
| 30 ~ 45 | NC                              | -   | Not connected.   |
| 46      | VDD3                            | -   | Power supply (+5.6V).  |
| 47      | $\overline{\text{I-STEREO}}$    | I   | TUNER stereo-mode input. "L" = STEREO.                               |
| 48      | $\overline{\text{I-TUNE}}$      | I   | TUNER TUNE-IF count input. "L" = TUNE.                               |
| 49      | I-RDS-DATA (TU)                 | I   | RDS data input.  |
| 50      | NC                              | -   | Not connected.   |
| 51      | VP                              | -   | Connected to GND.  |
| 52 ~ 60 | NC                              | -   | Not connected.   |
| 61      | COLOR                           | O   | Not used.  |
| 62      | $\overline{\text{MD}}$          | I   | Initial setting selector. "L" = MD.                                  |
| 63      | $\overline{\text{DEMO}}$        | I   | Initial setting selector. "L" = DEMO.                                |
| 64      | $\overline{\text{BBE}}$         | I   | Initial setting selector. "L" = BBE.                                 |

| Pin No. | Pin Name                             | I/O | Description   |
|---------|--------------------------------------|-----|---|
| 65      | $\overline{\text{ECO}}$              | I   | Initial setting selector. "L" = ECO mode setting.                                     |
| 66      | AM10K                                | I   | Initial setting selector. "H" = AM10kHz step. (Not used)                              |
| 67      | $\overline{\text{FM WIDE/AMST-SEL}}$ | I   | Initial setting selector. "L" = FM WIDE BAND & AM-STEREO. (Not used)                  |
| 68      | LW                                   | I   | Initial setting selector. "H" = TUNER-LW. (Not used)                                  |
| 69      | SW                                   | I   | Initial setting selector. "H" = TUNER-SW. (Not used)                                  |
| 70      | OIRT                                 | I   | Initial setting selector. "H" = TUNER-FM OIRT. (Not used)                             |
| 71      | RDS                                  | I   | Initial setting selector. "H" = TUNER-FM RDS. (Not used)                              |
| 72      | VDD4                                 | –   | Power supply (+5.6V).   |
| 73      | O-PLL-CE                             | O   | Chip enable output to TUNER PLL IC (LC72131D).  |
| 74      | O-ECHO-ON                            | O   | ECHO-IC-ON control signal   |
| 75      | NC                                   | –   | Not connected.  |
| 76      | TP-CLK                               | O   | Test point for micon clock adjust. (Frequency division of micon clock: Approx. 1kHz.) |
| 77      | Q-SURROUND                           | O   | Q-SURROUND output.  |
| 78      | $\overline{\text{O-BBE-B}}$          | O   | BBE IC (BA3880FS) control output-B  |
| 79      | $\overline{\text{O-BBE-A}}$          | O   | BBE IC (BA3880FS) control output-A.   |
| 80      | O-L-MUTE                             | O   | Line out mute output.   |
| 81      | O-OPEN                               | O   | CD tray (open) control output. "H" = OPEN.  |
| 82      | O-CLOSE                              | O   | CD tray (close) control output. "H" = CLOSE.  |
| 83      | NC                                   | –   | Not connected.  |
| 84      | O-LCD STB                            | O   | Strobe output control for LCD driver.   |
| 85      | O-LCD CLK                            | O   | Clock output control for LCD driver.  |
| 86      | O-LCD DATA                           | O   | Data output control for LCD driver.   |
| 87      | $\overline{\text{O-P-ON}}$           | O   | Main AC ON/OFF control output. "L" = POWER ON.  |
| 88      | O-CD-ON                              | O   | CD power supply ON/OFF control output. "H" = POWER ON.                                |
| 89      | VSS2                                 | –   | GND.  |
| 90      | VDD2                                 | –   | Power supply (+5.6V).   |
| 91      | O-VCD-COMMAND                        | O   | Command for VCD MICON   |
| 92      | O VCD SCK                            | O   | System clock for VCD MICON  |
| 93      | O-A MUTE                             | O   | Audio mute control output for POWER AMP input signal. "H" = MUTE ON.                  |
| 94      | O-MD RESET                           | O   | Reset output to MD unit. (Not used)   |
| 95      | O-SIN                                | O   | Serial data control output to MD unit. (Not used)                                     |
| 96      | I-SOUT                               | I   | Serial data control input from MD unit. (Not used)                                    |
| 97      | I-ACLK                               | I   | Latch clock input from MD unit. (Not used)  |
| 98      | O-ARDY                               | O   | Serial data ready port control output to MD unit. (Not used)                          |
| 99      | O-SREQ                               | O   | Serial data transfer request control output to MD unit. (Not used)                    |
| 100     | I-MREQ                               | I   | Serial data transfer request control input from MD unit. (Not used)                   |

## IC, CL680-D1

| Pin No. | Pin Name                  | I/O | Description                       |
|---------|---------------------------|-----|-----------------------------------|
| 1       | NC                        | —   | No connection.                    |
| 2       | VSS                       | —   | GND.                              |
| 3       | CD BCK                    | I   | Bit clock input from CD DSP.      |
| 4       | CD DATA                   | I   | Data input from CD DSP.           |
| 5       | CD LRCK                   | I   | LRCK input from CD DSP.           |
| 6       | CD C2PO                   | I   | C2 pointer input from CD DSP.     |
| 7-9     | NC                        | —   | No connection.                    |
| 10-15   | MD0-MD5                   | I/O | DRAM/ROM interface. (DATA)        |
| 16      | VSS                       | —   | Ground.                           |
| 17      | MD6                       | I/O | DRAM/ROM interface. (DATA)        |
| 18      | VDD3                      | —   | Power supply 3.3V.                |
| 19      | MD7                       | I/O | DRAM/ROM interface. (DATA)        |
| 20      | VSS                       | —   | Ground.                           |
| 21      | MD8                       | I/O | DRAM/ROM interface. (DATA)        |
| 22      | VDD3                      | —   | Power supply 3.3V.                |
| 23-29   | MD9-MD15                  | I/O | DRAM/ROM interface. (DATA)        |
| 30-36   | NC                        | —   | No connection.                    |
| 37      | $\overline{\text{MCE}}$   | —   | ROM chip enable.                  |
| 38      | $\overline{\text{MWE}}$   | O   | DRAM write enable.                |
| 39      | VSS                       | —   | Ground.                           |
| 40      | $\overline{\text{CAS}}$   | O   | DRAM/ROM interface.               |
| 41      | VDD3                      | —   | Power supply 3.3V.                |
| 42      | $\overline{\text{RAS0}}$  | O   | DRAM/ROM interface.               |
| 43      | $\overline{\text{RAS1}}$  | O   |                                   |
| 44-46   | MA10-MA8                  | O   | DRAM/ROM interface. (Address)     |
| 47      | VSS                       | —   | Ground.                           |
| 48      | MA7                       | O   | DRAM/ROM interface. (Address)     |
| 49      | VDD3                      | —   | Power supply 3.3V.                |
| 50-52   | MA6-MA4                   | O   | DRAM/ROM interface. (Address)     |
| 53      | VSS                       | —   | Ground.                           |
| 54      | MA3                       | O   | DRAM/ROM interface. (Address)     |
| 55      | VDD3                      | —   | Power supply 3.3V.                |
| 56-58   | MA2-MA0                   | O   | DRAM/ROM interface. (Address)     |
| 59      | PGIO7                     | I/O | Programmable I/O.                 |
| 60      | $\overline{\text{RESET}}$ | I   | Reset input.                      |
| 61      | VDD MAX IN                | —   | Power supply - VDDMAX. (5.0V)     |
| 62-64   | NC                        | —   | No connection.                    |
| 65      | AGND DAC                  | —   | Analog ground.                    |
| 66      | A VDD DAC                 | —   | Analog power supply (DAC) : 3.3V. |
| 67      | COMP OUT                  | O   | Composite out.                    |
| 68      | AGND DAC                  | —   | Analog ground.                    |

| Pin No. | Pin Name                               | I/O | Description                                    |
|---------|--|-----|--|
| 69      | Y OUT                                  | O   | Video signal “Y” OUT.                          |
| 70      | AVDD DAC                               | —   | Analog power supply (DAC) 3.3V.                |
| 71      | AGND DAC                               | —   | Analog ground.                                 |
| 72      | R REF                                  | I   | Reference resistor input.                      |
| 73      | V REF                                  | I   | Voltage reference input.                       |
| 74      | AVDD DAC                               | —   | Analog power supply (DAC) 3.3V.                |
| 75      | C OUT                                  | O   | Video signal “C” out.                          |
| 76      | AGND DAC                               | —   | Analog ground.                                 |
| 77-79   | CLK SEL0-2                             | I   | Clock selection input.                         |
| 80      | VSS                                    | —   | Ground.  |
| 81      | CLK SEL3                               | I   | Clock selection input.                         |
| 82      | VDD3                                   | —   | Power supply 3.3V.                             |
| 83, 84  | CLK SEL4, 5                            | I   | Clock selection input.                         |
| 85      | AGND PLL                               | —   | Analog ground.                                 |
| 86      | DA XCK                                 | I   | DA XCK (16.933MHz) input.                      |
| 87      | AVDD PLL                               | —   | Analog power supply 3.3V.                      |
| 88      | DA EMP                                 | O   | DAC-emphasis output.                           |
| 89, 90  | PGIO5, O6                              | I/O | Programmable I/O.                              |
| 91      | PGIO0                                  | I/O |  |
| 92      | PGIO8                                  | I/O |  |
| 93      | $\overline{\text{VSYNC}}/\text{CSYNC}$ | O   | $\overline{\text{VSYNC}}/\text{CSYNC}$ output. |
| 94      | AVDD PLL                               | —   | Analog power supply (PLL) 3.3V.                |
| 95      | VID_DAC_CK                             | O   | Video DAC clock.                               |
| 96      | PROC_CK                                | O   | Processor clock.                               |
| 97      | AUD_XCK                                | O   | Audio XCK.                                     |
| 98      | AGND PLL                               | —   | Analog ground.                                 |
| 99      | VSS                                    | —   | Ground.  |
| 100     | NC                                     | —   | No connection.                                 |
| 101     | $\overline{\text{HSYNC}}$              | O   | $\overline{\text{HSYNC}}$ output.              |
| 102     | VDD3                                   | —   | Power supply 3.3V.                             |
| 103     | VCK OUT                                | O   | VCK out.                                       |
| 104     | VSS                                    | —   | Ground.  |
| 105     | GCK                                    | I   | Global clock signal input. (42.3MHz)           |
| 106     | VCK IN                                 | I   | Video clock signal input. (27.0MHz)            |
| 107     | GCK OUT                                | O   | Global clock signal output. (27.0MHz)          |
| 108     | DA LRCK                                | O   | DAC-LRCK output.                               |
| 109     | VDD MAX OUT                            | —   | Power supply (VDD MAX) : 5.0V.                 |
| 110     | DA DATA                                | O   | DAC-PCM data output.                           |
| 111     | DA BCK                                 | O   | DAC-BIT clock output.                          |
| 112     | HD OUT                                 | O   | Micon interface. (Data out)                    |
| 113     | HRDY                                   | O   | Micon interface. (Host ready)                  |

| Pin No. | Pin Name                 | I/O | Description                       |
|---------|--------------------------|-----|-----------------------------------|
| 114     | $\overline{\text{HINT}}$ | O   | Micon interface. (Host interrupt) |
| 115     | CDG SCK                  | I   | CD-G serial clock input.          |
| 116     | VSS                      | —   | Ground.                           |
| 117     | HCK                      | I   | Micon interface. (Host clock)     |
| 118     | VDD3                     | —   | Power supply 3.3V.                |
| 119     | HD IN                    | I   | Micon interface. (Host data in)   |
| 120     | VDD3                     | —   | Power supply 3.3V.                |
| 121     | HSEL                     | I   | Micon interface. (Host select in) |
| 122     | CDG SDATA                | I   | CD-G data input.                  |
| 123     | CDG VFSY                 | I   | CD-G VFSY input.                  |
| 124     | CDG SOSI                 | I   | CD-G SOSI input.                  |
| 125     | DSP-XCK                  | O   | DSP-XCK output.                   |
| 126-128 | NC                       | —   | No connection.                    |

IC, CXD2540Q

| Pin No. | Pin Name | I/O | Description  |
|---------|----------|-----|--|
| 1       | FOK      | I   | Focus OK input. Used for SENS output and the servo auto sequencer.   |
| 2       | FSW      | O   | Spindle motor output filter switching output.  |
| 3       | MON      | O   | Spindle motor on/off control output.   |
| 4       | MDP      | O   | Spindle motor servo control.   |
| 5       | MDS      | O   |  |
| 6       | LOCK     | O   | High, when sampled value of GFS at 460Hz is high.<br>Low, when sampled value of GFS at 460Hz is low by 8 times successively. |
| 7       | NC       | —   | Not used.  |
| 8       | VCOO     | O   | Analog EFM PLL oscillation circuit output.   |
| 9       | VCOI     | I   | Analog EFM PLL oscillation circuit input. f <sub>LOCK</sub> =8.6436MHz.  |
| 10      | TEST     | I   | TEST pin.  |
| 11      | PDO      | O   | Analog EFM PLL charge pump output.   |
| 12      | VSS      | —   | GND.   |
| 13      | PWMI     | I   | Spindle motor external control input.  |
| 14      | V16M     | O   | VCO2 oscillation output for the wide-band EFM PLL.   |
| 15      | VCTL     | I   | VCO2 control voltage input for the wide-band EFM PLL.  |
| 16      | VPCO     | O   | Wide-band EFM PLL charge pump output.  |
| 17      | VCKI     | I   | VCO2 oscillation input for the wide-band EFM PLL.  |
| 18      | FILO     | O   | Multiplier PLL (slave=digital PLL) filter output.  |
| 19      | FILI     | I   | Multiplier PLL filter input.   |
| 20      | PCO      | O   | Multiplier PLL charge pump output.   |
| 21      | AVSS     | —   | Analog GND.  |
| 22      | CLTV     | I   | Multiplier VCO1 control voltage input.   |
| 23      | AVDD     | —   | Analog power supply (5V).  |
| 24      | RF       | I   | EFM signal input.  |
| 25      | BIAS     | I   | Constant current input of the asymmetry circuit.   |
| 26      | ASYI     | I   | Asymmetry comparator voltage input.  |
| 27      | ASYO     | O   | EFM full-swing output.   |
| 28      | ASYE     | I   | Low: asymmetry circuit off; high: asymmetry circuit on.  |
| 29      | NC       | —   | Not used.  |
| 30      | PSSL     | I   | Audio data output mode switching input. Low: serial output; high: parallel output.   |
| 31      | WDCK     | O   | D/A interface for 48-bit slot. Word clock f=2Fs.   |
| 32      | LRCK     | O   | D/A interface for 48-bit slot. LR clock f=Fs.  |
| 33      | VDD      | —   | Power supply (5V).   |
| 34      | DA16     | O   | DA16 (MSB) output when PSSL=1.<br>48-bit slot serial data (two's complement, MSB first) when PSSL=0.                         |
| 35      | DA15     | O   | DA15 output when PSSL=1. 48-bit slot bit clock when PSSL=0.  |
| 36      | DA14     | O   | DA14 output when PSSL=1.<br>64-bit slot serial data (two's complement, LSB first) when PSSL=0.                               |
| 37      | DA13     | O   | DA13 output when PSSL=1. 64-bit slot bit clock when PSSL=0.  |
| 38      | DA12     | O   | DA12 output when PSSL=1. 64-bit slot LR clock when PSSL=0.   |



| Pin No. | Pin Name | I/O | Description   |
|---------|----------|-----|---|
| 39      | DA11     | O   | DA11 output when PSSL=1. GTOP output when PSSL=0.   |
| 40      | DA10     | O   | DA10 output when PSSL=1. XUGF output when PSSL=0.   |
| 41      | DA09     | O   | DA09 output when PSSL=1. XPLCK output when PSSL=0.  |
| 42      | DA08     | O   | DA08 output when PSSL=1. GFS output when PSSL=0.  |
| 43      | DA07     | O   | DA07 output when PSSL=1. RFCK output when PSSL=0.   |
| 44      | DA06     | O   | DA06 output when PSSL=1. C2PO output when PSSL=0.   |
| 45      | DA05     | O   | DA05 output when PSSL=1. XRAOF output when PSSL=0.  |
| 46      | DA04     | O   | DA04 output when PSSL=1. MNT3 output when PSSL=0.   |
| 47      | DA03     | O   | DA03 output when PSSL=1. MNT2 output when PSSL=0.   |
| 48      | DA02     | O   | DA02 output when PSSL=1. MNT1 output when PSSL=0.   |
| 49      | DA01     | O   | DA01 output when PSSL=1. MNT0 output when PSSL=0.   |
| 50      | APTR     | O   | Aperture compensation control output.<br>This pin outputs a high signal when the right channel is used. |
| 51      | APTL     | O   | Aperture compensation control output.<br>This pin outputs a high signal when the left channel is used.  |
| 52      | VSS      | —   | GND.  |
| 53      | XTAI     | I   | Crystal oscillation circuit input.  |
| 54      | XTAO     | O   | Crystal oscillation circuit output.   |
| 55      | XTSL     | I   | Crystal selector input.   |
| 56      | FSTT     | O   | 2/3 frequency divider output for Pins 53 and 54.  |
| 57      | FSOF     | O   | 1/4 frequency divider output for Pins 53 and 54.  |
| 58      | C16M     | O   | 16.9344MHz output. (V16M output in CLV-W and CAV-W modes)   |
| 59      | MD2      | I   | Digital-out on/off control. High: on; low: off  |
| 60      | DOUT     | O   | Digital-out output.   |
| 61      | EMPH     | O   | Outputs a high signal when the playback disc has emphasis, and a low signal when there is no emphasis.  |
| 62      | WFCK     | I   | WFCK (write frame clock) output.  |
| 63      | SCOR     | O   | Outputs a high signal when either subcode sync S0 or S1 is detected.                                    |
| 64      | SBSO     | O   | Sub P to W serial output.   |
| 65      | EXCK     | I   | SBSO readout clock input.   |
| 66      | SQSO     | O   | Sub Q 80-bit and PCM peak, level meter and internal status outputs.                                     |
| 67      | SQCK     | I   | SQSO readout clock input.   |
| 68      | MUTE     | I   | High: mute; low: release  |
| 69      | SENS     | —   | SENS output to CPU.   |
| 70      | XRST     | I   | System reset. Reset when low.   |
| 71      | DATA     | O   | Serial data input from CPU.   |
| 72      | XLAT     | O   | Latch input from CPU. Serial data is latched at the falling edge.                                       |
| 73      | VDD      | —   | Power supply (5V).  |
| 74      | CLOK     | O   | Serial data transfer clock input from CPU.  |
| 75      | SEIN     | I   | SENS input from SSP.  |
| 76      | CNIN     | I   | Track jump count signal input.  |

| Pin No. | Pin Name | I/O | Description  |
|---------|----------|-----|--|
| 77      | DATO     | O   | Serial data output to SSP.   |
| 78      | XLTO     | O   | Serial data latch output to SSP. Latched at the falling edge.  |
| 79      | CLKO     | O   | Serial data transfer clock output to SSP.  |
| 80      | MIRR     | I   | Mirror signal input. Used when the number of tracks is 128 or more for the 2N-track jump and M track move of the auto sequencer. |

Notes)

- The 64-bit slot is an LSB first, two's complement output, and the 48-bit slot is an MSB first, two's complement output.
- GTOP is used to monitor the frame sync protection status. (High: sync protection window open.)
- XUGF is the negative pulse for the frame sync obtained from the EFM signal. It is the signal before sync protection.
- XPLCK is the inverse of the EFM PLL clock. The PLL is designed so that the falling edge and the EFM signal transition point coincide.
- GFS goes high when the frame sync and the insertion protection timing match.
- RFCK is derived from the crystal accuracy, and has a cycle of 136 $\mu$ .
- C2PO represents the data error status.
- XRAOF is generated when the 32K RAM exceeds the  $\pm 28F$  jitter margin.

IC, LC74781M

| Pin No. | Pin Name               | I/O | Description  |
|---------|------------------------|-----|--|
| 1       | VSS1                   | —   | GND connection terminal. (Digital ground terminal).  |
| 2       | Xtal IN                | I   | External X'tal and capacitor for internal sync generator, or the external clock are connected to this terminal. (2fsc or 4fsc).  |
| 3       | Xtal OUT               | O   |  |
| 4       | CTRL1                  | I   | Either the external clock input mode or the X'tal generator mode is selected by this selector terminal. L: X'tal generator mode, H: External clock input.  |
| 5       | BLANK                  | O   | Blank signal (character and the green ORed signal) is output from this terminal. (MODE 0: composite sync signal is output at H.) When reset ( $\overline{\text{RST}}$ terminal = L), the X'tal clock signal is output. (It is not output when reset by the reset command).   |
| 6       | OSC IN                 | I   | External coil and capacitor for the character output dot clock generator are connected to this terminal.   |
| 7       | OSC OUT                | O   |  |
| 8       | CHARA                  | O   | The character signal is output from this terminal. (MOD 0: when H, the external sync signal identification signal is output from this terminal. This output signal tells whether the external sync signal is present or not. When external sync signal is present, H is output.) When reset ( $\overline{\text{RST}}$ terminal = L), the dot clock signal (LC oscillator) is output. (It is not output when reset by the reset command). |
| 9       | $\overline{\text{CS}}$ | I   | Enable signal for the serial data input is input to this terminal. The serial data input is enabled at L. Pull-up resistor is built-in. (Hysteresis input).  |
| 10      | SCLK                   | I   | Clock of the serial data input is input to this terminal. Pull-up resistor is built-in. (Hysteresis input).  |
| 11      | SIN                    | I   | Serial data input terminal. Pull-up resistor is built-in. (Hysteresis input).  |
| 12      | VDD2                   | —   | Power supply for the composite video signal level adjustment. (Analog power supply).   |
| 13      | CV OUT                 | O   | Composite video signal output terminal.  |
| 14      | NC                     | —   | Connected to GND or not connected.   |
| 15      | CV IN                  | I   | Composite video signal input terminal.   |
| 16      | VDD1                   | —   | Power supply (+5V digital power supply).   |
| 17      | SYN IN                 | I   | Video signal for the internal sync separator circuit is input to this terminal. (When the internal sync separator circuit is not used, the horizontal sync signal or composite sync signal is input to this terminal).   |
| 18      | SEP C                  | —   | Internal sync separator circuit bias voltage monitoring terminal.  |
| 19      | SEP OUT                | O   | The composite sync output signal of the internal sync separator circuit is output from this terminal. (H: MOD 1. H: during internal sync mode. L: during external sync mode.) (When internal sync separator circuit is not used, the SYN IN input signal is output from this terminal).  |
| 20      | SEP IN                 | I   | The output signal of the SEP OUT terminal is integrated so that the vertical sync signal is input to this terminal. An integrator circuit must be connected between the SEP OUT terminal and this terminal. When this terminal is not used, it must be connected to VDD1.  |
| 21      | CTRL2                  | I   | When selecting any of the NTSC or PAL or PAL-M or PAL-N system, the pin setting has priority. When L, the NTSC system is selected after resetting. Selection of either NTSC or PAL or PAL-M or PAL-N system by the command becomes effective. H: PAL-M system.   |
| 22      | CTRL3                  | I   | Controls whether or not to input the $\overline{\text{VSYNC}}$ signal to the SEPIN input. L: to input the $\overline{\text{VSYNC}}$ signal. H: not to input the $\overline{\text{VSYNC}}$ signal.  |

| Pin No. | Pin Name                | I/O | Description  |
|---------|-------------------------|-----|--|
| 23      | $\overline{\text{RST}}$ | I   | System reset input terminal. Pull-up resistor is built-in. (Hysteresis input). |
| 24      | VDD1                    | —   | Power supply. (+5V digital power supply).                                      |

## IC, SM5878M

| Pin No. | Pin Name | I/O | Description  |
|---------|----------|-----|--|
| 1       | MUTE     | I   | MODE = H: Soft mute ON/OFF terminal. (Mute at H).<br>MODE = L: Attenuator level DOWN/UP terminal. (DOWN at H). |
| 2       | DEEM     | I   | De-emphasis ON/OFF terminal. (De-emphasis ON at H).  |
| 3       | MCKO     | O   | Oscillator clock output. (16.9344 MHz).  |
| 4       | DVSS     | —   | Digital VSS terminal.  |
| 5       | BCKI     | I   | Bit clock input terminal.  |
| 6       | DI       | I   | Serial data input terminal.  |
| 7       | DVDD     | —   | Digital VDD terminal.  |
| 8       | LRCI     | I   | Sample rate clock (fs) input terminal. (H = L ch/L = R ch).  |
| 9       | TSTN     | I   | Test input. ("H" or open during normal operation)  |
| 10      | TO1      | O   | Test output 1. (Normally low level output).  |
| 11      | AVDDL    | —   | Analog VDD terminal. (For L ch).   |
| 12      | LO       | O   | Left channel analog output terminal.   |
| 13      | AVSS     | —   | Analog VSS terminal.   |
| 14      | RO       | O   | Right channel analog output terminal.  |
| 15      | AVDDR    | —   | Analog VDD terminal. (For R ch).   |
| 16      | MUTEO    | O   | Infinity zero detection output.  |
| 17      | XVDD     | —   | X'tal system VDD terminal.   |
| 18      | XTI      | I   | X'tal oscillator terminal. (Or external clock input terminal of 16.9344 MHz).                                  |
| 19      | XTO      | O   | X'tal oscillator terminal.   |
| 20      | XVSS     | —   | X'tal system VSS terminal.   |
| 21      | DS       | I   | Double-speed/normal playback selection. (Double-speed at H).   |
| 22      | RSTN     | I   | Reset terminal. (Reset at L).  |
| 23      | MODE     | I   | Soft mute/Attenuator mode selection. (Soft mute at H).   |
| 24      | ATCK     | I   | Attenuator level setup clock (Ignored when MODE = H).  |

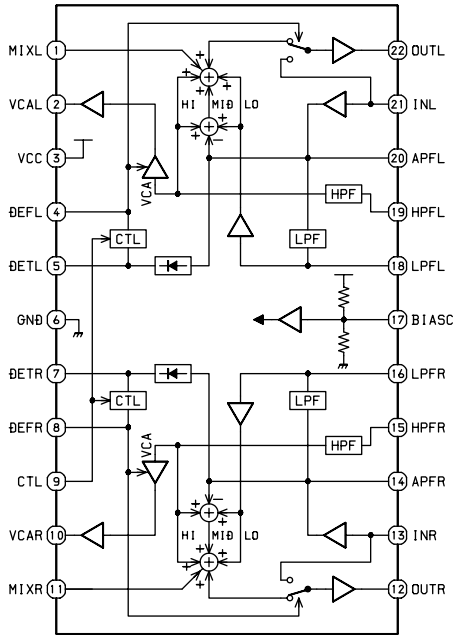
IC,  $\mu$ PD78016FGC

| Pin No. | Pin Name | I/O | Description                                  |
|---------|----------|-----|--|
| 1       | RBPLS    | O   | RADIAL BALANCE PLUS.                         |
| 2       | AMUTE    | O   | AUDIO ANALOG MUTE (H=MUTE ON).               |
| 3       | GFS      | I   | GFS.   |
| 4       | XVCDMD   | O   | AUDIO/VIDEO CD MODE (L=VCD=SPINDLE GAIN UP). |
| 5       | MD2      | O   | DOUT MUTE CONT.                              |
| 6       | EMPH     | I   | EMPHASIS.                                    |
| 7       | SQSO     | I   | SQDATA FROM CD.                              |
| 8       | SQCK     | O   | SQCLK TO CD.                                 |
| 9       | VSS      | —   | GND.   |
| 10      | SWNT     | I   | SW TV OUT MODE (L=NTSC).                     |
| 11      | SWAUTO   | I   | SW TV OUT MODE (L=NTSC/PAL AUTO).            |
| 12      | SWPAL    | I   | SW TV OUT MODE (L=PAL).                      |
| 13      | EMERG    | I   | POWER EMERGENCY STOP (L $\neq$ 3sec=STOP).   |
| 14      | SHUT SEL | I   | SHUT SELECT INPUT.(L=WITH SHUT)              |
| 15      | NC       | I   | Not used.                                    |
| 16      | LPCSEL   | I   | “LPC ON/OFF (H=ON, NORMAL)”.                 |
| 17      | LOCK     | O   | GFS (FRAME SYNC) LOCK (NO USE=H).            |
| 18      | DMUTE    | O   | DIGITAL DATA OUT MUTE.                       |
| 19      | SENS     | I   | DSP SENS1 FROM CD.                           |
| 20      | XCDRST   | O   | CD RESET.                                    |
| 21      | DATA     | O   | DATA TO CD.                                  |
| 22      | XLAT     | O   | XLT TO CD.                                   |
| 23      | CLOK     | O   | CLK TO CD.                                   |
| 24      | VSS      | —   | GND.   |
| 25      | FOK      | I   | FOCUS OK.                                    |
| 26      | SENS2    | I   | SSP SENS2 FROM CD.                           |
| 27      | XBUSY    | I/O | READY/BUSY I/O TO HOST OD.                   |
| 28      | CD-RW    | O   | CD-RW SELECT1 L=CD-RW                        |
| 29      | NC       | —   | Not connected                                |
| 30      | NC       | —   | Not connected                                |
| 31      | TST0     | I/O | CHECK LAND.                                  |
| 32      | TST1     | I/O |  |
| 33      | TST2     | I/O |  |
| 34      | TST3     | I/O |  |
| 35      | RESET    | I   | RESET.                                       |
| 36      | HRDY     | I   | HRDY FROM CL680.                             |
| 37      | XHINT    | I   | XHINT FROM CL680.                            |
| 38      | NC       | —   | Not connected                                |
| 39      | SCOR     | I/O | SCOR FROM CD.                                |
| 40      | VDD      | —   | 5.0VDD.                                      |
| 41      | XO       | O   | 8.0MHz CERALOCK.                             |

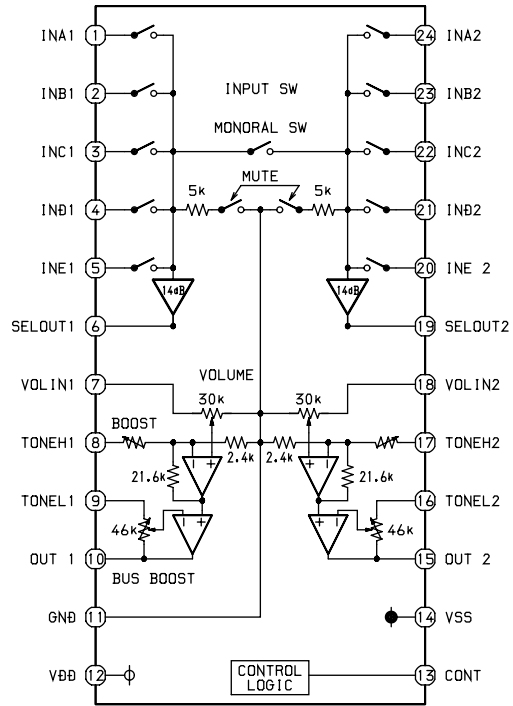
| Pin No. | Pin Name | I/O | Description                     |
|---------|----------|-----|---------------------------------|
| 42      | XI       | I   | 8.0MHz CERALOCK.                |
| 43      | VSS      | —   | GND.                            |
| 44      | XT2      | —   | Not used.                       |
| 45      | XT1      | I   | 5.0VDD.                         |
| 46      | AVSS     | —   | GND.                            |
| 47      | XMPGRST  | O   | MPEG BLOCK IC RESET.            |
| 48      | HSEL     | O   | ADDRESS/DATA SEL TO CL680.      |
| 49      | INLSW    | I   | INSIDE LIMIT SW .               |
| 50      | NC       | —   | Not used.                       |
| 51      | OSDXCS   | O   | OSD CHIP SELECT.                |
| 52      | ABSEL    | I   | CXA1992A/B SELECT (L=CXA1992A). |
| 53      | CLVSEL   | I   | CLV MODE SELECT (H=CLV-N).      |
| 54      | AADSEL   | I   | AUTO ADJUST SELECT (H=AUTO ON). |
| 55      | AVDD     | —   | 5.0VDD.                         |
| 56      | AVREF    | —   |                                 |
| 57      | HDOUT    | I   | HD-OUT FROM CL680.              |
| 58      | HDIN     | O   | HD-IN FROM CL680.               |
| 59      | HCK      | O   | HCK TO CL680.                   |
| 60      | OSDDATA  | O   | OSD DATA.                       |
| 61      | OSDCLK   | O   | OSD CLOCK.                      |
| 62      | COMMAND  | I   | COMMAND FROM HOST .             |
| 63      | STATUS   | O   | STATUS TO HOST.                 |
| 64      | SCK      | I   | SCK FROM HOST.                  |

## IC BLOCK DIAGRAM-2

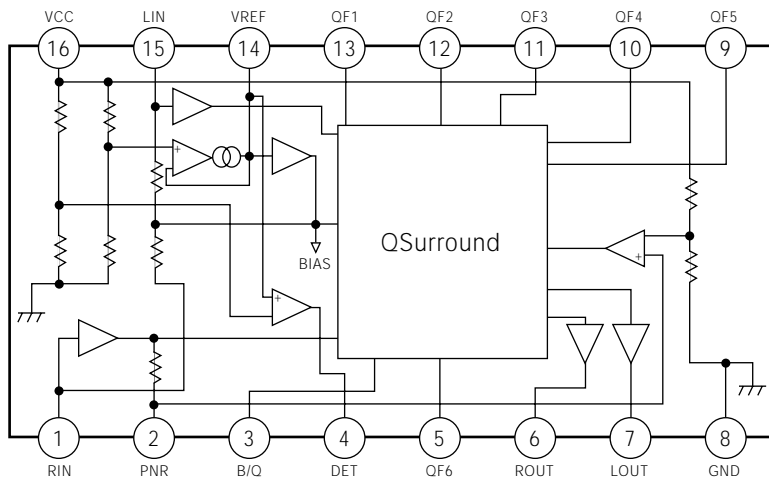
IC, BA3880FS



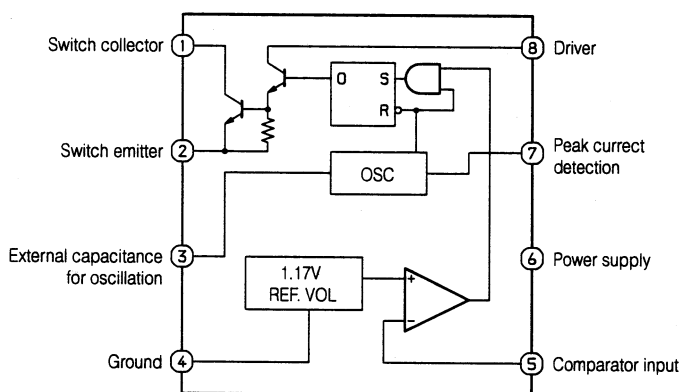
IC, M62495FP



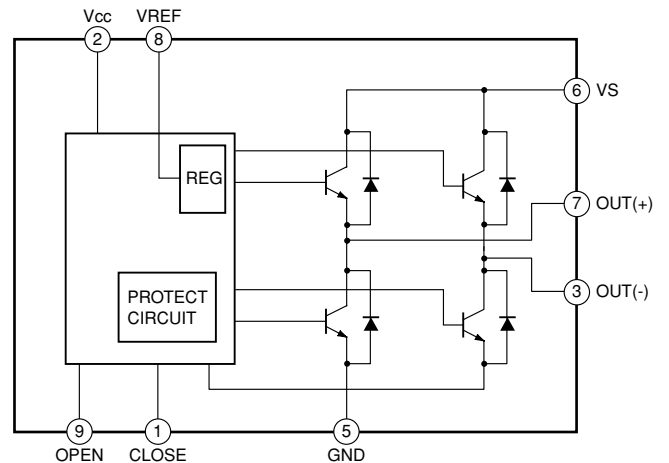
IC, MM1454XFBE



IC, M5291FP

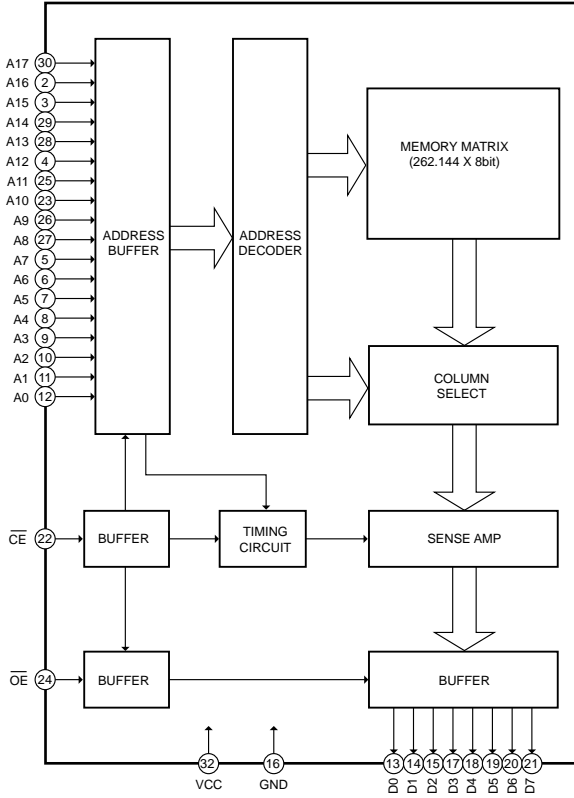


IC, TA7291S

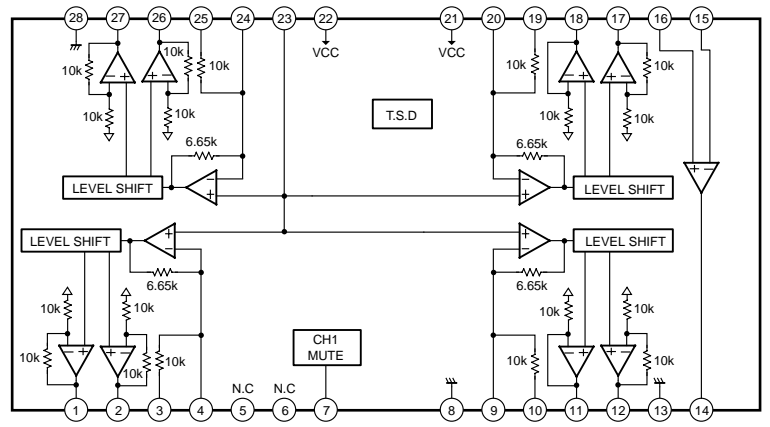




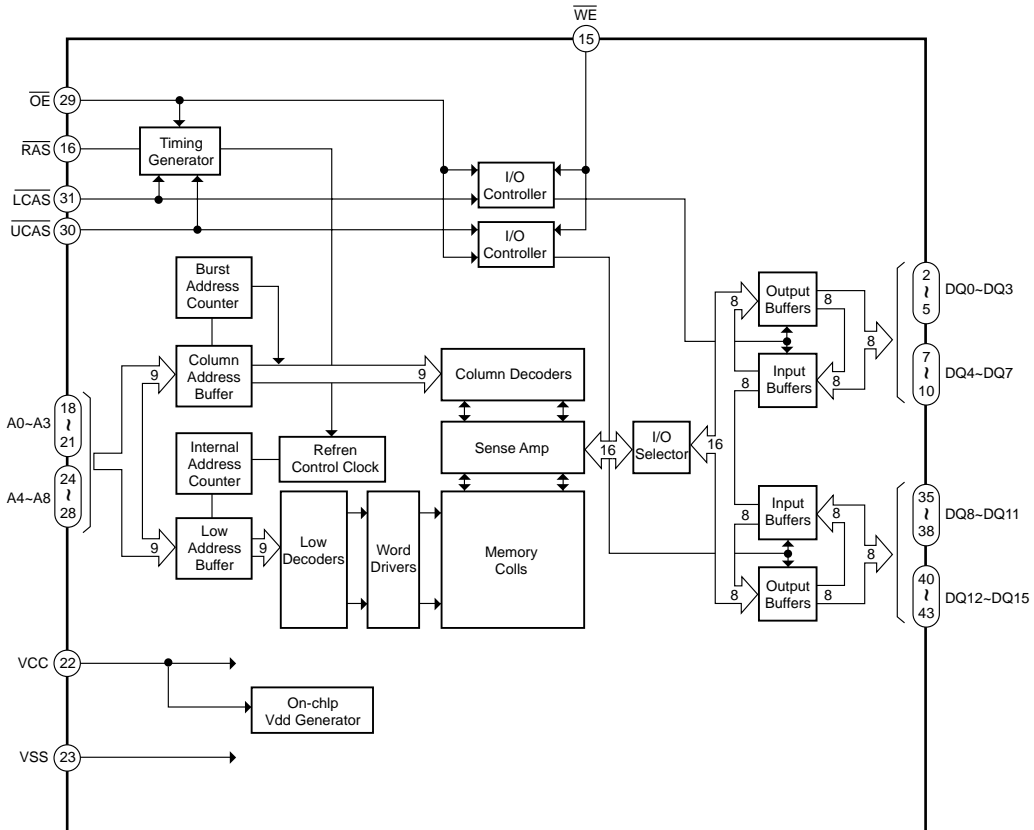
IC, LH5V2RN1



IC, BA5915FP



IC, MSM54V16258B/BSL



LCD DISPLAY

DDRAM ADDRESS (11 DIGIT X 1 ROW)

02 03 04 05 06 07 08 09 0A 0B 0C

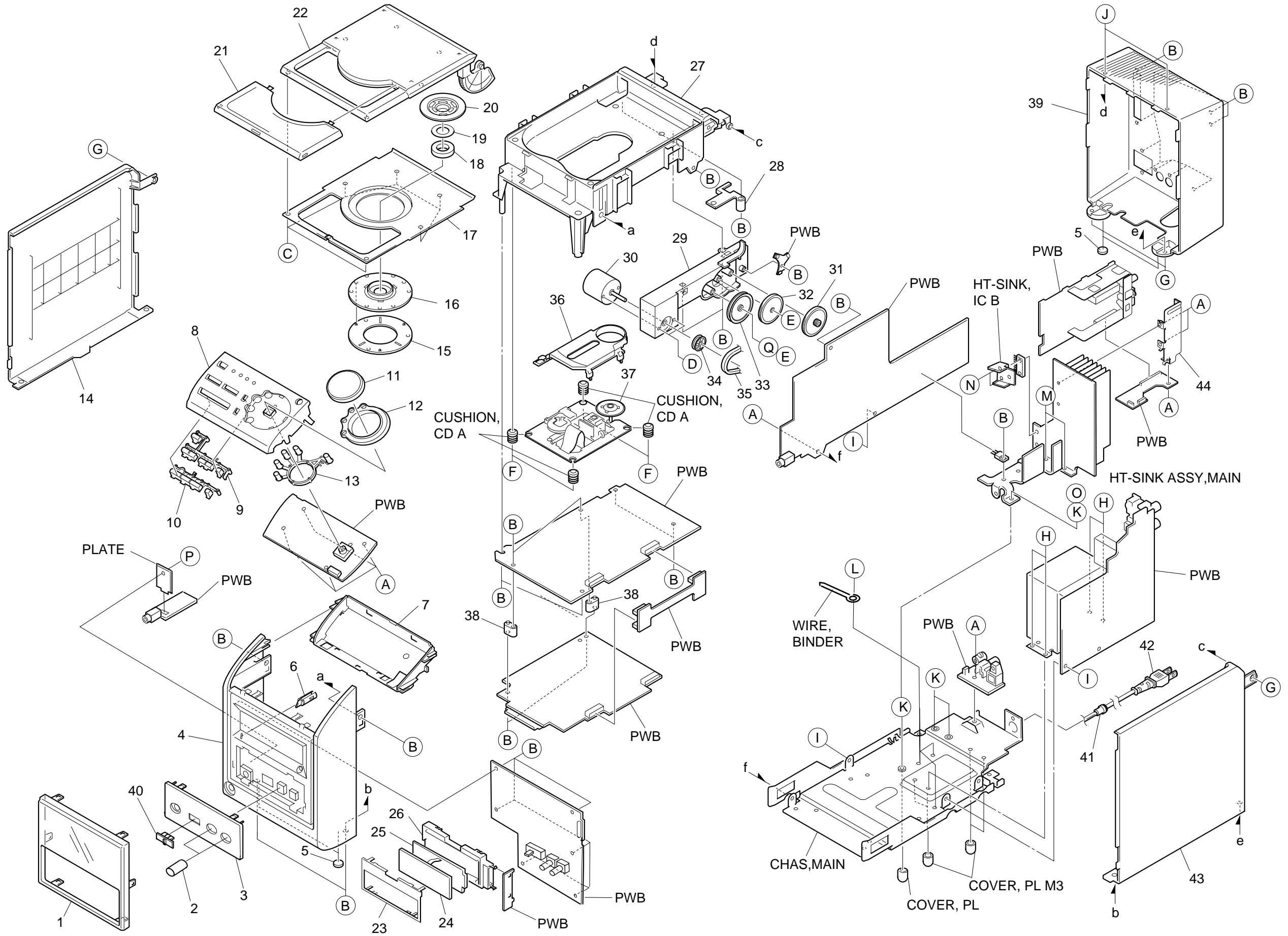
(b) (8) AUTO VF AG EON RDS RT (REC) SLEEP AUTO MARK TIME MARK (MD) REC

BBE Q SURROUND MONO RANDOM 1 2 3 4 5 6 7 8 9 10

T-BASS ROCK POP JAZZ PRGM EDIT 11 12 13 14 15 16 17 18 19 20

| PGRAM ADDRESS |    |    |    |    |  | PGRAM DATA |      |      |      |        |
|---------------|----|----|----|----|--|------------|------|------|------|--------|
| H1            | L4 | L3 | L2 | L1 |  | b4         | b3   | b2   | b1   | b0     |
| 0             | 0  | 0  | 0  | 0  |  | ③          | #    | b    | BBE  | T-BASS |
| 0             | 0  | 0  | 0  | 1  |  | ①          | MD   | ⑥    | ⑤    | ④      |
| 0             | 0  | 0  | 1  | 0  |  | ⑤          | ④    | AUTO |      | ②      |
| 0             | 0  | 0  | 1  | 1  |  |            |      |      | ROCK | ⑥      |
| 0             | 0  | 1  | 0  | 0  |  |            |      |      |      |        |
| 0             | 0  | 1  | 0  | 1  |  |            |      |      |      | POP    |
| 0             | 0  | 1  | 1  | 0  |  | MONO       |      |      |      | ((Ⓞ))  |
| 0             | 0  | 1  | 1  | 1  |  |            | JAZZ |      |      |        |
| 0             | 1  | 0  | 0  | 0  |  |            |      |      |      |        |
| 0             | 1  | 0  | 0  | 1  |  |            |      |      |      |        |
| 0             | 1  | 0  | 1  | 0  |  | 12         | 11   |      |      | 1      |
| 0             | 1  | 0  | 1  | 1  |  |            | 14   | 13   |      |        |
| 0             | 1  | 1  | 0  | 0  |  |            | 15   |      |      |        |
| 0             | 1  | 1  | 0  | 1  |  | 17         | 16   |      |      |        |
| 0             | 1  | 1  | 1  | 0  |  | 20         |      |      |      |        |
| 0             | 1  | 1  | 1  | 1  |  |            |      |      | 18   | 19     |

| PGRAM ADDRESS |    |    |    |    |  | PGRAM DATA |        |        |      |                  |
|---------------|----|----|----|----|--|------------|--------|--------|------|------------------|
| H1            | L4 | L3 | L2 | L1 |  | b4         | b3     | b2     | b1   | b0               |
| 1             | 0  | 0  | 0  | 0  |  | ③'         | [ ](#) | [ ](b) |      |                  |
| 1             | 0  | 0  | 0  | 1  |  | ①'         | CD     | ⑥'     | ⑤'   | ④'               |
| 1             | 0  | 0  | 1  | 0  |  | ⑤          | ④      | AUTO   |      | ②'               |
| 1             | 0  | 0  | 1  | 1  |  |            | EON    |        | AG   | ③                |
| 1             | 0  | 1  | 0  | 0  |  |            |        | RDS    |      | Q SURROUND       |
| 1             | 0  | 1  | 0  | 1  |  |            |        |        |      | RT               |
| 1             | 0  | 1  | 1  | 0  |  | Ⓞ          |        |        |      | REC              |
| 1             | 0  | 1  | 1  | 1  |  |            | SLEEP  |        |      |                  |
| 1             | 1  | 0  | 0  | 0  |  | ARC        |        |        |      | RANDOM           |
| 1             | 1  | 0  | 0  | 1  |  |            | ↶      | EDIT   | PRGM |                  |
| 1             | 1  | 0  | 1  | 0  |  | 2          | 1      |        |      | AUTO             |
| 1             | 1  | 0  | 1  | 1  |  |            | 4      | 3      |      | MARK (AUTO MARK) |
| 1             | 1  | 1  | 0  | 0  |  |            | 5      |        |      | TIME             |
| 1             | 1  | 1  | 0  | 1  |  | 7          | 6      |        |      | MARK (TIME MARK) |
| 1             | 1  | 1  | 1  | 0  |  | 10         |        | MD REC |      |                  |
| 1             | 1  | 1  | 1  | 1  |  |            |        |        | 8    | 9                |



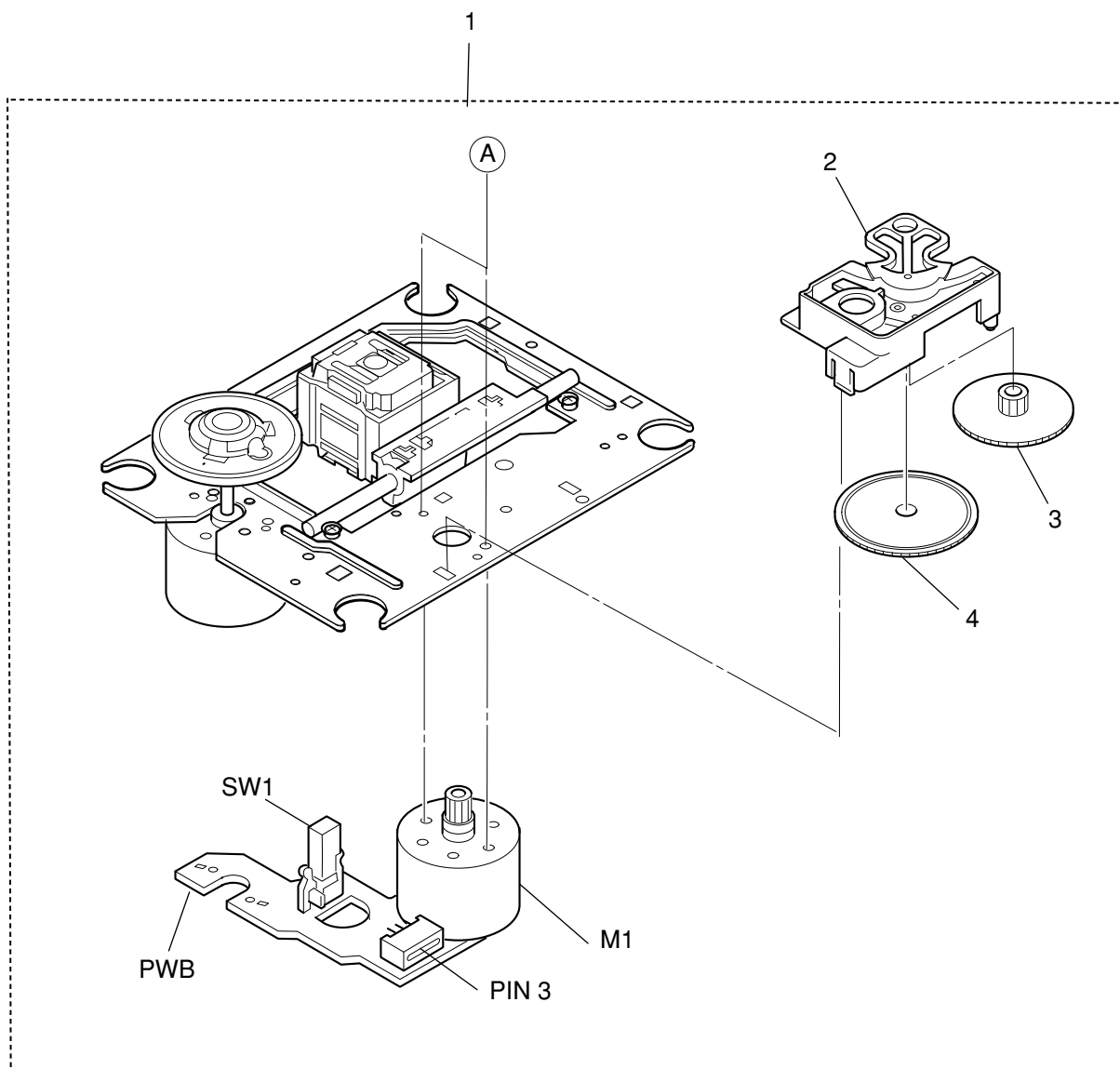
# MECHANICAL MAIN PARTS LIST 1/1

| REF. NO | PART NO.       | KANRI NO. | DESCRIPTION         | REF. NO | PART NO.       | KANRI NO.      | DESCRIPTION                 |
|---------|----------------|-----------|---------------------|---------|----------------|----------------|-----------------------------|
| 1       | 8A-CJ6-009-010 |           | WINDOW, FR          | 36      | 8Z-CDB-169-010 |                | PANEL, CD SANYO             |
| 2       | 8Z-CLF-025-010 |           | KNOB, RTRY MIC/ECHO | 37      | M8-ZZK-E90-070 |                | DA11T3C                     |
| 3       | 8A-CG6-001-010 |           | PANEL, VCD          | 38      | 8A-CJ6-213-010 |                | HLDR, PWB                   |
| 4       | 8A-CG6-002-010 |           | CABI, FR G6         | 39      | 8A-CG6-003-010 |                | CABI, REAR G6-H             |
| 5       | 8A-CJ6-219-010 |           | CUSH, FOOT DIA 8-3  | 40      | 8Z-CLF-024-010 |                | KNOB, SL SYSTEM SW          |
| 6       | 8A-CJ6-019-010 |           | REFLECTOR, STAND BY | △       | 41             | 87-085-185-010 | BUSHING, AC CORD (E)        |
| 7       | 8A-CJ6-211-010 |           | HLDR, FUN           | △       | 42             | 87-A80-092-010 | AC CORD ASSY, E BLK SUN FAI |
| 8       | 8A-CG6-006-010 |           | PANEL, FUN G6 EX    | 43      | 8A-CJ6-006-010 |                | PANEL, SIDE R               |
| 9       | 8A-CJ6-015-010 |           | KEY, POWER          | 44      | 8A-CJ6-206-010 |                | HLDR, TUNER                 |
| 10      | 8A-CJ6-025-010 |           | KEY, PLAY           | A       | 87-067-579-010 |                | TAPPING SCREW, BVT2+3-8     |
| 11      | 8A-CJ6-017-010 |           | KNOB, RTRY VOL      | B       | 87-067-703-010 |                | TAPPING SCREW, BVT2+3-10    |
| 12      | 8A-CJ6-008-010 |           | PANEL, VOL          | C       | 87-264-529-310 |                | V 1.7-4 SCREWS              |
| 13      | 8A-CL6-026-010 |           | KEY, OPEN CD L6     | D       | 87-261-092-410 |                | V+3-4 GLD                   |
| 14      | 8A-CJ6-005-010 |           | PANEL, SIDE L       | E       | 87-761-096-410 |                | VFT2+3-10 GLD               |
| 15      | 8Z-CH4-212-010 |           | RING, CHUCK         | F       | 8Z-CK5-222-010 |                | S-SCREW, CD+2.6-6 F9        |
| 16      | 8Z-CH4-211-010 |           | BASE, CHUCK         | G       | 87-721-096-410 |                | QT2+3-10 GLD                |
| 17      | 8A-CJ6-011-010 |           | HLDR, CHUCK B       | H       | 87-B10-318-010 |                | BVIT3C+4-8 R W/O            |
| 18      | 83-ZG3-604-010 |           | RING, MAG 2         | I       | 87-NF4-224-010 |                | S-SCREW, IT3B+3-8 CU        |
| 19      | 84-CD5-217-010 |           | PLATE, MAGNET       | J       | 87-723-096-410 |                | QT2+3-10W/O SLOT BL         |
| 20      | 8Z-CH4-225-110 |           | HLDR, CHUCK A(S)    | K       | 87-067-130-010 |                | FW, 3-8-1                   |
| 21      | 8A-CJ6-010-010 |           | WINDOW, CD          | L       | 87-067-584-010 |                | BVT2+3-6 W/O SLOT           |
| 22      | 8A-CG6-004-010 |           | LID, CD G6          | M       | 87-067-633-010 |                | BVT2+3-8 W/O CONVEX         |
| 23      | 8A-CJ6-212-010 |           | HLDR, LCD           | N       | 87-067-758-010 |                | BVT2+3-12 W/O SLOT          |
| 24      | 8A-CJ6-620-010 |           | LCD ASSY, ACJ-6     | O       | 87-B10-316-010 |                | BVIT3B+3-10 R W/O           |
| 25      | 8A-CJ6-021-010 |           | REFLECTOR, LCD      | P       | 88-AR1-217-010 |                | S-SCREW, BFT2+3-8           |
| 26      | 8A-CJ6-202-010 |           | GUIDE, LCD          | Q       | 87-WA5-253-010 |                | W, 3.3-10-0.8               |
| 27      | 8A-CJ6-003-010 |           | CABI, CD            |         |                |                |                             |
| 28      | 8A-CJ6-020-010 |           | COVER, CD L         |         |                |                |                             |
| 29      | 8A-CJ6-022-010 |           | HLDR, GEAR          |         |                |                |                             |
| 30      | 87-A91-069-010 |           | MOT, RF-370CA15370  |         |                |                |                             |
| 31      | 8Z-CL5-207-010 |           | GEAR, CD            |         |                |                |                             |
| 32      | 8Z-CL5-206-010 |           | GEAR, MID CD        |         |                |                |                             |
| 33      | 8Z-CL5-205-010 |           | PULLEY, GEAR CD     |         |                |                |                             |
| 34      | 8Z-CL5-208-010 |           | PULLEY, MOTOR       |         |                |                |                             |
| 35      | 8Z-CL5-217-010 |           | BELT, PULLEY        |         |                |                |                             |

### 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        |                    |                    |

# CD MECHANISM EXPLODED VIEW 1/1 <DA11T3C>



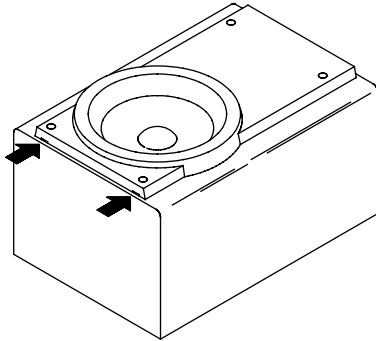
## CD MECHANISM MAIN PARTS LIST 1/1 <DA11T3C>

| REF. NO | PART NO.       | KANRI NO. | DESCRIPTION     |
|---------|----------------|-----------|-----------------|
| 1       | M8-ZZK-E90-070 | 2B        | DA11T3C         |
| 2       | S2-121-A28-400 | 1A        | COVER GEAR      |
| 3       | S2-511-A21-000 | 0E        | GEAR MIDDLE     |
| 4       | S2-511-A21-100 | 1A        | GEAR, DRIVE     |
| M1      | S0-M10-A09-700 | 1H        | MOTOR SLED ASSY |
| PIN3    | S2-369-750-000 | 0E        | PLUG, 6P        |
| SW1     | S4-S13-A01-600 | 0E        | SW, LEAF        |
| A       | S1-PN2-03R-OSE | 0E        | SCR PAN PCS 2-3 |

# SPEAKER DISASSEMBLY INSTRUCTIONS

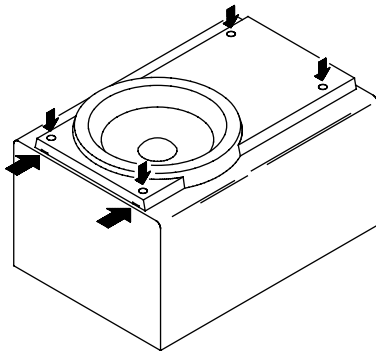
## Type.1

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



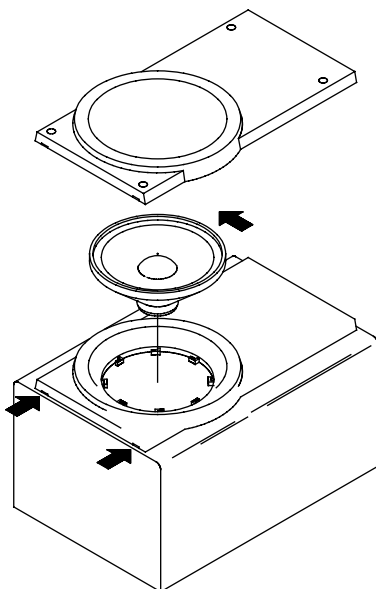
## Type.2

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

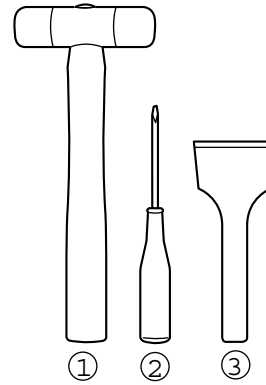


## Type.3

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



## Type.4



### TOOLS

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

## How to Remove the PANEL, FR

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

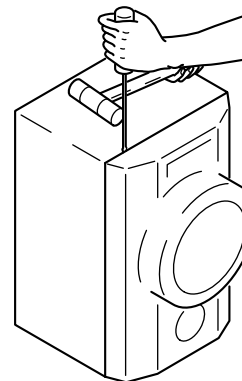


Fig-1

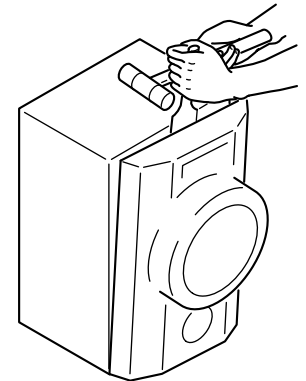


Fig-2

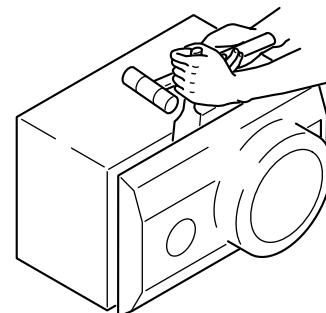


Fig-3

## How to Attach the PANEL, FR

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

# SPEAKER MAIN PARTS LIST 1/1 <SX-M310YL>

| REF. NO | PART NO.       | KANRI<br>NO. | DESCRIPTION       |
|---------|----------------|--------------|-------------------|
| 1       | 8A-CJ6-402-010 |              | PANEL,FR          |
| 2       | 8A-CJ6-406-010 |              | GRILLE,FRAME ASSY |
| 3       | 8A-CJ6-403-010 |              | PANEL,SP          |
| 4       | 8A-CJ6-404-010 |              | PANEL,TW          |
| 5       | 8A-CJ6-417-010 |              | SPKR, W 100 L     |
| 6       | 8A-CJ6-416-010 |              | SPKR, TW 20       |
| 7       | 8A-CJ5-415-010 |              | TERMINAL,         |

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**AIWA CO.,LTD.** 2-11, IKENOHATA 1-CHOME, TAITO-KU, TOKYO 110-8710, JAPAN TEL:03 (3827) 3111