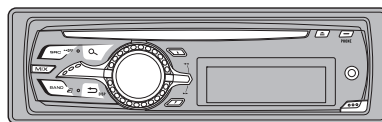


## Service Manual



DEH-6400BT/XSEW5

ORDER NO.  
**CRT4813**

CD RDS RECEIVER

# DEH-6400BT /XSEW5

## DEH-6450BT /XSES

## DEH-5450SD /XSES

This service manual should be used together with the following manual(s):

| Model No. | Order No. | Mech. Module | Remarks                                                                 |
|-----------|-----------|--------------|-------------------------------------------------------------------------|
| CX-3287   | CRT4759   | S11.6STD     | CD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly |



# SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

Where in a manufacturer's service documentation, for example in circuit diagrams or lists of components, a symbol is used to indicate that a specific component shall be replaced only by the component specified in that documentation for safety reasons, the following symbol shall be used:



## ● Safety Precautions for those who Service this Unit.

When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

### Caution:

1. During repair or tests, minimum distance of 13 cm from the focus lens must be kept.
2. During repair or tests, do not view laser beam for 10 seconds or longer.

**CAUTION:**  
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

### CAUTION

This product is a class 1 laser product classified under the Safety of laser products, IEC 60825-1:2007, and contains a class 1M laser module. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product. Refer all servicing to qualified personnel.

CLASS 1 LASER PRODUCT

CAUTION—CLASS 1M INVISIBLE LASER  
RADIATION WHEN OPEN, DO NOT VIEW  
DIRECTLY WITH OPTICAL INSTRUMENTS.

### WARNING!

The AEL (accessible emission level) of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.  
A specially instructed person should do servicing operation of the apparatus.

### Laser diode characteristics

Wave length : 785 nm to 814 nm

Maximum output : 1 190  $\mu$ W(Emitting period : unlimited)

### Additional Laser Caution

Transistors Q101 in PCB drive the laser diodes.  
When Q101 is shorted between their terminals, the laser diodes will radiate beam.  
If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

**CAUTION**

Danger of explosion if battery is incorrectly replaced.

Replaced only with the same or equivalent type recommended by the manufacture.

Discord used batteries according to the manufacture's instructions.

# CONTENTS

|   |                                                              |    |
|---|--------------------------------------------------------------|----|
|   | SAFETY INFORMATION.....                                      | 2  |
|   | 1. SERVICE PRECAUTIONS.....                                  | 5  |
| A | 1.1 SERVICE PRECAUTIONS .....                                | 5  |
|   | 1.2 NOTES ON SOLDERING .....                                 | 6  |
|   | 2. SPECIFICATIONS.....                                       | 7  |
|   | 2.1 SPECIFICATIONS .....                                     | 7  |
|   | 2.2 DISC/CONTENT FORMAT .....                                | 9  |
|   | 3. BASIC ITEMS FOR SERVICE.....                              | 10 |
|   | 3.1 CHECK POINTS AFTER SERVICING.....                        | 10 |
|   | 3.2 PCB LOCATIONS .....                                      | 10 |
|   | 3.3 JIGS LIST .....                                          | 11 |
|   | 3.4 CLEANING.....                                            | 11 |
|   | 4. BLOCK DIAGRAM.....                                        | 12 |
|   | 5. DIAGNOSIS.....                                            | 15 |
| B | 5.1 OPERATIONAL FLOWCHART .....                              | 15 |
|   | 5.2 ERROR CODE LIST .....                                    | 16 |
|   | 5.3 CONNECTOR FUNCTION DESCRIPTION.....                      | 17 |
|   | 6. SERVICE MODE .....                                        | 18 |
|   | 6.1 DISPLAY TEST MODE .....                                  | 18 |
|   | 6.2 CD TEST MODE.....                                        | 21 |
|   | 7. DISASSEMBLY .....                                         | 22 |
|   | 8. EACH SETTING AND ADJUSTMENT .....                         | 28 |
|   | 8.1 CD ADJUSTMENT.....                                       | 28 |
|   | 8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT..... | 29 |
|   | 8.3 PCL OUTPUT CONFIRMATION.....                             | 31 |
| C | 9. EXPLODED VIEWS AND PARTS LIST.....                        | 32 |
|   | 9.1 PACKING .....                                            | 32 |
|   | 9.2 EXTERIOR.....                                            | 36 |
|   | 9.3 CD MECHANISM MODULE.....                                 | 38 |
|   | 10. SCHEMATIC DIAGRAM.....                                   | 40 |
|   | 10.1 TUNER AMP UNIT(1/2) (GUIDE PAGE).....                   | 40 |
|   | 10.2 TUNER AMP UNIT(2/2) (GUIDE PAGE).....                   | 46 |
|   | 10.3 KEYBOARD UNIT .....                                     | 52 |
|   | 10.4 CD CORE UNIT (S11.6STD) .....                           | 54 |
|   | 10.5 WAVEFORMS.....                                          | 56 |
|   | 11. PCB CONNECTION DIAGRAM.....                              | 58 |
|   | 11.1 TUNER AMP UNIT.....                                     | 58 |
| D | 11.2 KEYBOARD UNIT .....                                     | 62 |
|   | 11.3 CD CORE UNIT (S11.6STD).....                            | 64 |
|   | 12. ELECTRICAL PARTS LIST .....                              | 66 |

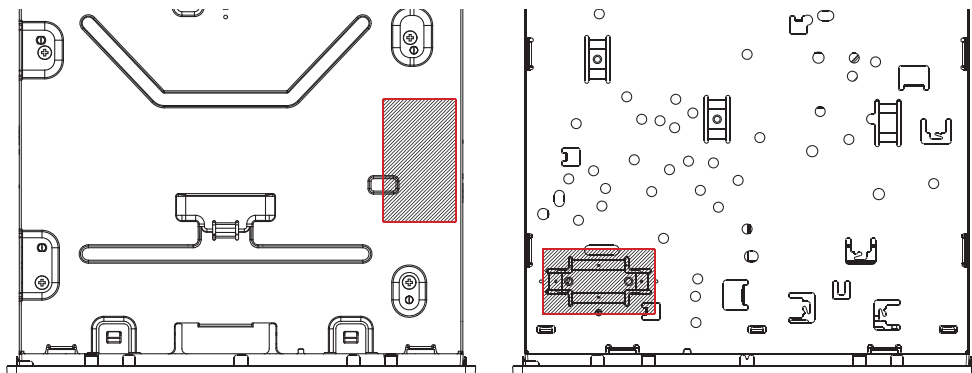


# 1. SERVICE PRECAUTIONS

## 1.1 SERVICE PRECAUTIONS



1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
4. After replacing the pickup unit, be sure to check the grating.
5. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
6.  area and a heat sink becomes hot areas. Be careful not to burn yourself.



### 7. Software update

|                  | Storing place | Board with IC  |
|------------------|---------------|----------------|
| System software  | IC601         | Tuner Amp Unit |
| Media software   | IC571         | Tuner Amp Unit |
| Display software | IC1901        | Keyboard Unit  |
| Picture software | IC1902        | Keyboard Unit  |

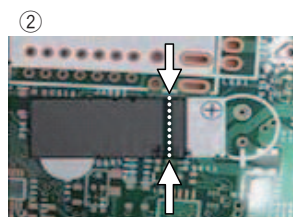
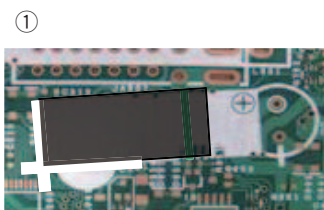
Please replace IC when making the version upgrade of software.

### 8. Capacitor Bond Lock (EW5)

Acetate Tape (GYH1026)

- ① Please stick acetate tape along white line.
- ② Please confirm line hiding with acetate tape.

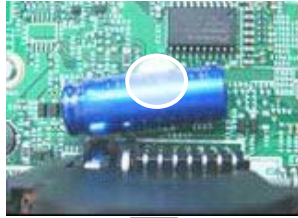
\* length of tape :  $24 \pm 4$  mm



## 9. Capacitor Bond Lock (ES)

Silicon Glue (GEM1017)

Place the capacitor in the center of the silk print, and confirm it does not touch to the connector. Then, apply silicon glue.



OK



NG

## 1.2 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.  
Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.
- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40°C. Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373°C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:  
GYP1006 1.0 in dia.  
GYP1007 0.6 in dia.  
GYP1008 0.3 in dia.

## 2. SPECIFICATIONS

### 2.1 SPECIFICATIONS

#### ●DEH-6400BT/XSEW5

##### General

|                                   |                                        |
|-----------------------------------|----------------------------------------|
| Power source .....                | 14.4 V DC (10.8 V to 15.1 V allowable) |
| Grounding system .....            | Negative type                          |
| Maximum current consumption ..... | 10.0 A                                 |
| Backup current.....               | 5.0 mA or less                         |
| Dimensions (W × H × D):           |                                        |
| DIN                               |                                        |
| Chassis .....                     | 178 mm × 50 mm × 165 mm                |
| Nose .....                        | 188 mm × 58 mm × 18 mm                 |
| D                                 |                                        |
| Chassis .....                     | 178 mm × 50 mm × 165 mm                |
| Nose .....                        | 170 mm × 46 mm × 18 mm                 |
| Weight .....                      | 1.2 kg                                 |

##### Audio

|                                       |                                                                      |
|---------------------------------------|----------------------------------------------------------------------|
| Maximum power output .....            | 50 W × 4                                                             |
|                                       | 50 W × 2/4Ω + 70 W × 1/2Ω (for subwoofer)                            |
| Continuous power output ..            | 22 W × 4 (50 Hz to 15 000 Hz, 5% THD, 4Ω load, both channels driven) |
| Load impedance .....                  | 4 Ω to 8 Ω × 4                                                       |
|                                       | 4 Ω to 8 Ω × 2 + 2 Ω × 1                                             |
| Preout maximum output level .....     | 4.0 V                                                                |
| Equalizer (5-Band Graphic Equalizer): |                                                                      |
| Frequency .....                       | 100 Hz/315 Hz/1.25 kHz/3.15 kHz/8 kHz                                |
| Gain .....                            | ±12 dB                                                               |
| HPF:                                  |                                                                      |
| Frequency .....                       | 50 Hz/63 Hz/80 Hz/100 Hz/125 Hz                                      |
| Slope .....                           | -12 dB/oct                                                           |
| Subwoofer (mono):                     |                                                                      |
| Frequency .....                       | 50 Hz/63 Hz/80 Hz/100 Hz/125 Hz                                      |
| Slope .....                           | -18 dB/oct                                                           |
| Gain .....                            | +6 dB to -24 dB                                                      |
| Phase .....                           | Normal/Reverse                                                       |
| Bass boost:                           |                                                                      |
| Gain .....                            | +12 dB to 0 dB                                                       |

##### CD player

|                             |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| System .....                | Compact disc audio system                                         |
| Usable discs .....          | Compact disc                                                      |
| Signal-to-noise ratio ..... | 94 dB (1 kHz) (IEC-A network)                                     |
| Number of channels .....    | 2 (stereo)                                                        |
| MP3 decoding format .....   | MPEG-1 & 2 Audio Layer 3                                          |
| WMA decoding format .....   | Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player) |
| AAC decoding format .....   | MPEG-4 AAC (iTunes encoded only) (.m4a) (Ver. 9.2 and earlier)    |

|                         |                                        |
|-------------------------|----------------------------------------|
| WAV signal format ..... | Linear PCM & MS ADPCM (Non-compressed) |
|-------------------------|----------------------------------------|

##### USB

|                                  |                                                                   |
|----------------------------------|-------------------------------------------------------------------|
| USB standard specification ..... | USB 2.0 full speed                                                |
| Maximum current supply .....     | 1 A                                                               |
| USB Class .....                  | MSC (Mass Storage Class)                                          |
| File system .....                | FAT12, FAT16, FAT32                                               |
| MP3 decoding format .....        | MPEG-1 & 2 Audio Layer 3                                          |
| WMA decoding format .....        | Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player) |
| AAC decoding format .....        | MPEG-4 AAC (iTunes encoded only) (.m4a) (Ver. 9.2 and earlier)    |
| WAV signal format .....          | Linear PCM & MS ADPCM (Non-compressed)                            |

##### SD

|                                  |                                                                   |
|----------------------------------|-------------------------------------------------------------------|
| Compatible physical format ..... | Version 2.00                                                      |
| Maximum memory capacity .....    | 32 GB (for SD and SDHC)                                           |
| File system .....                | FAT12, FAT16, FAT32                                               |
| MP3 decoding format .....        | MPEG-1 & 2 Audio Layer 3                                          |
| WMA decoding format .....        | Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch audio) (Windows Media Player) |
| AAC decoding format .....        | MPEG-4 AAC (iTunes encoded only) (.m4a) (Ver. 9.2 and earlier)    |
| WAV signal format .....          | Linear PCM & MS ADPCM (Non-compressed)                            |

##### FM tuner

|                             |                                       |
|-----------------------------|---------------------------------------|
| Frequency range .....       | 87.5 MHz to 108.0 MHz                 |
| Usable sensitivity .....    | 9 dBf (0.8 μV/75 Ω, mono, S/N: 30 dB) |
| Signal-to-noise ratio ..... | 72 dB (IEC-A network)                 |

##### MW tuner

|                             |                              |
|-----------------------------|------------------------------|
| Frequency range .....       | 531 kHz to 1 602 kHz (9 kHz) |
| Usable sensitivity .....    | 25 μV (S/N: 20 dB)           |
| Signal-to-noise ratio ..... | 62 dB (IEC-A network)        |

##### LW tuner

|                             |                       |
|-----------------------------|-----------------------|
| Frequency range .....       | 153 kHz to 281 kHz    |
| Usable sensitivity .....    | 28 μV (S/N: 20 dB)    |
| Signal-to-noise ratio ..... | 62 dB (IEC-A network) |

##### Bluetooth

|                    |                                |
|--------------------|--------------------------------|
| Version .....      | Bluetooth 3.0 certified        |
| Output power ..... | +4 dBm Maximum (Power class 2) |

##### Note

Specifications and the design are subject to modifications without notice. ■

## ●DEH-6450BT/XSES

## ●DEH-5450SD/XSES

### General

Rated power source ..... 14.4 V DC  
(allowable voltage range:  
12.0 V to 14.4 V DC)

Grounding system ..... Negative type

Maximum current consumption  
..... 10.0 A

Backup current ..... 5.0 mA or less

Dimensions (W × H × D):

DIN

Chassis ..... 178 mm × 50 mm ×  
165 mm

Nose ..... 188 mm × 58 mm ×  
18 mm

D

Chassis ..... 178 mm × 50 mm ×  
165 mm

Nose ..... 170 mm × 46 mm ×  
18 mm

Weight ..... 1.2 kg

### Audio

Maximum power output ... 50 W × 4  
50 W × 2/4 Ω + 70 W × 1/2 Ω  
(for subwoofer)

Continuous power output  
..... 22 W × 4 (50 Hz to 15 000 Hz,  
5 % THD, 4 Ω load, both chan-  
nels driven)

Load impedance ..... 4 Ω to 8 Ω × 4  
4 Ω to 8 Ω × 2 + 2 Ω × 1

Preout maximum output level  
..... 4.0 V

Equalizer (5-Band Graphic Equalizer):

Frequency ..... 100 Hz/315 Hz/1.25 kHz/  
3.15 kHz/8 kHz

Gain ..... ±12 dB

HPF:

Frequency ..... 50 Hz/63 Hz/80 Hz/100 Hz/  
125 Hz

Slope ..... -12 dB/oct

Subwoofer (mono):

Frequency ..... 50 Hz/63 Hz/80 Hz/100 Hz/  
125 Hz

Slope ..... -18 dB/oct

Gain ..... +6 dB to -24 dB

Phase ..... Normal/Reverse

Bass boost:

Gain ..... +12 dB to 0 dB

### CD player

System ..... Compact disc audio system

Usable discs ..... Compact disc

Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)

Number of channels ..... 2 (stereo)

MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3

WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch  
audio)  
(Windows Media Player)

AAC decoding format ..... MPEG-4 AAC (iTunes encoded  
only) (.m4a)  
(Ver. 9.2 and earlier)

WAV signal format ..... Linear PCM & MS ADPCM  
(Non-compressed)

### USB

USB standard specification

..... USB 2.0 full speed

Maximum current supply

..... 1 A

USB Class ..... MSC (Mass Storage Class)

File system ..... FAT12, FAT16, FAT32

MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3

WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch  
audio)  
(Windows Media Player)

AAC decoding format ..... MPEG-4 AAC (iTunes encoded  
only) (.m4a)  
(Ver. 9.2 and earlier)

WAV signal format ..... Linear PCM & MS ADPCM  
(Non-compressed)

### SD

Compatible physical format

..... Version 2.00

Maximum memory capacity

..... 32 GB (for SD and SDHC)

File system ..... FAT12, FAT16, FAT32

MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3

WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11, 12 (2 ch  
audio)  
(Windows Media Player)

AAC decoding format ..... MPEG-4 AAC (iTunes encoded  
only) (.m4a)  
(Ver. 9.2 and earlier)

WAV signal format ..... Linear PCM & MS ADPCM  
(Non-compressed)

### FM tuner

Frequency range ..... 87.5 MHz to 108.0 MHz  
Usable sensitivity ..... 9 dBf (0.8  $\mu$ V/75  $\Omega$  mono, S/N:  
30 dB)  
Signal-to-noise ratio ..... 72 dB (IEC-A network)

### AM tuner

Frequency range ..... 531 kHz to 1 602 kHz (9 kHz)  
530 kHz to 1 640 kHz (10 kHz)  
Usable sensitivity ..... 25  $\mu$ V (S/N: 20 dB)  
Signal-to-noise ratio ..... 62 dB (IEC-A network)

### Bluetooth (DEH-6450BT only)

Version ..... Bluetooth 3.0 certified  
Output power ..... +4 dBm Maximum  
(Power class 2)

### Note

Specifications and the design are subject to  
modifications without notice.

## 2.2 DISC/CONTENT FORMAT



The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc.  
and any use of such marks by Pioneer Corporation is under license.  
Other trademarks and trade names are those of their respective owners.

### 3. BASIC ITEMS FOR SERVICE

#### 3.1 CHECK POINTS AFTER SERVICING

A To keep the product quality after servicing, please confirm following check points.

| No. |             | Procedures                                                                                                                                         | Item to be confirmed                                                                           |
|-----|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| 1   |             | Confirm whether the customer complain has been solved.<br>If the customer complain occurs with the specific media, use it for the operation check. | The customer complain must not be reappeared.<br>Display, audio and operations must be normal. |
| 2   | CD          | Play back a CD.<br>(Track search)                                                                                                                  | No malfunction on display, audio and operation.                                                |
| 3   | FM/AM tuner | Check FM/AM tuner action.<br>(Seek, Preset)<br>Switch band to check both FM and AM.                                                                | Display, audio and operations must be normal.                                                  |
| 4   |             | Check whether no disc is inside the product.                                                                                                       | The media used for the operating check must be ejected.                                        |
| 5   |             | Appearance check                                                                                                                                   | No scratches or dirt on its appearance after receiving it for service.                         |

B

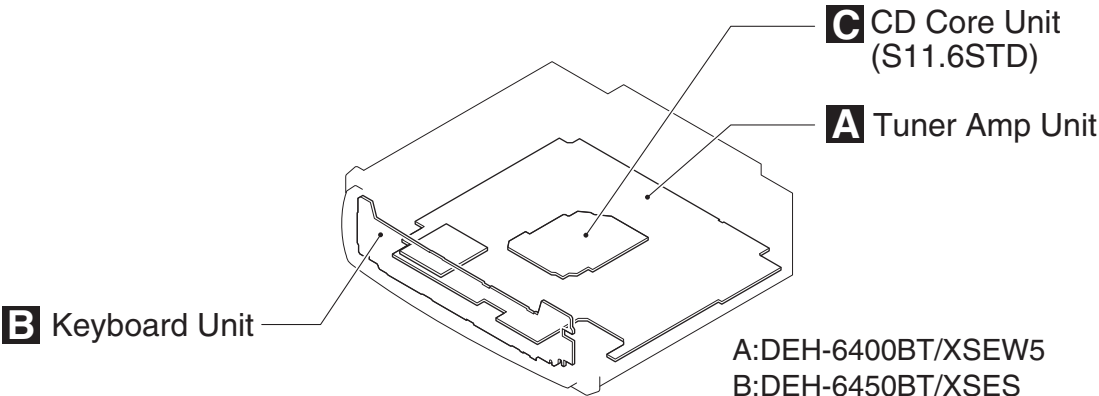
See the table below for the items to be checked regarding audio:

| Item to be checked regarding audio |
|------------------------------------|
| Distortion                         |
| Noise                              |
| Volume too low                     |
| Volume too high                    |
| Volume fluctuating                 |
| Sound interrupted                  |
|                                    |
|                                    |

C

#### 3.2 PCB LOCATIONS

D



E

A:DEH-6400BT/XSEW5  
B:DEH-6450BT/XSES  
C:DEH-5450SD/XSES

Unit Number : YWM5568(A)  
Unit Number : YWM5570(B)  
Unit Number : YWM5562(C)  
Unit Name : Tuner Amp Unit  
Unit Number : (A)  
Unit Number : (B)  
Unit Number : (C)  
Unit Name : Keyboard Unit  
Unit Number : CWX4023  
Unit Name : CD Core Unit (S11.6STD)

F

### 3.3 JIGS LIST

#### ● Jigs List

| Name         | Jig No. | Remarks                           |
|--------------|---------|-----------------------------------|
| 16P FFC      | GGD1310 | Tuner Amp Unit - CD Core Unit     |
| Test Disc    | TCD-782 | Checking the grating              |
| L.P.F.       |         | Checking the grating (Two pieces) |
| Acetate Tape | GYH1026 | Capacitor Bond Lock               |

#### ● Grease List

| Name         | Grease No. | Remarks             |
|--------------|------------|---------------------|
| Grease       | GEM1024    | CD Mechanism Module |
| Grease       | GEM1038    | CD Mechanism Module |
| Grease       | GEM1043    | CD Mechanism Module |
| Grease       | GEM1045    | CD Mechanism Module |
| Silicon Glue | GEM1017    | Capacitor Bond Lock |

### 3.4 CLEANING

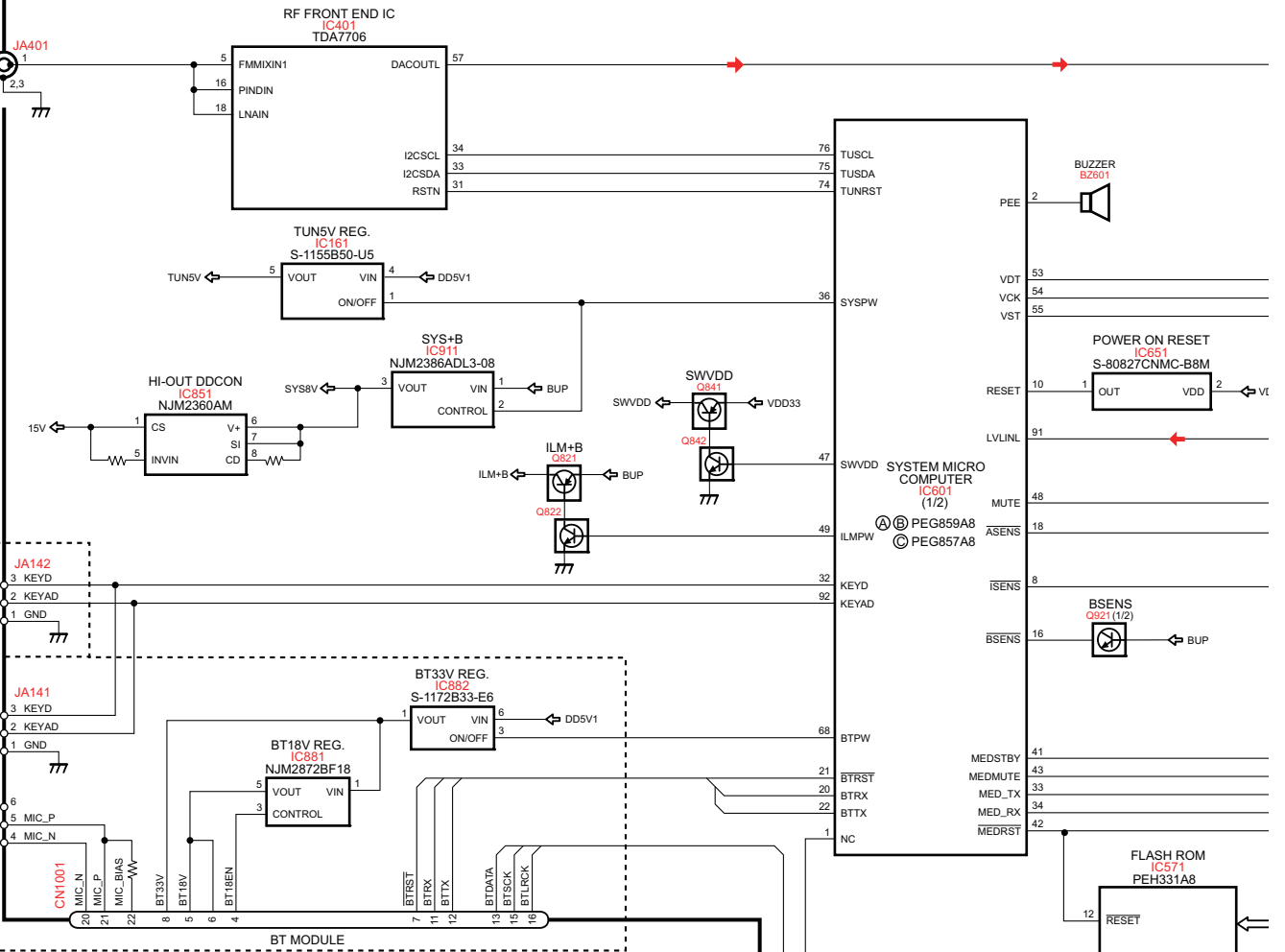


Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

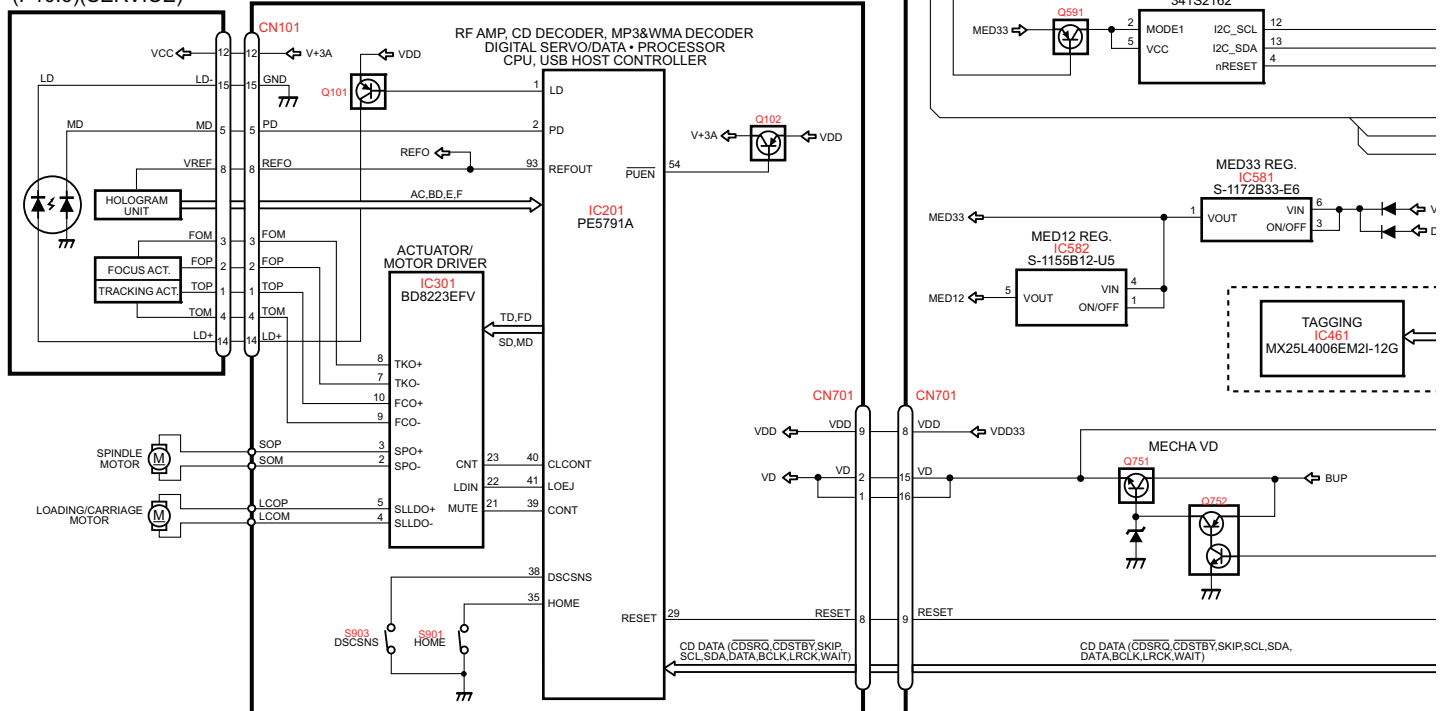
| Portions to be cleaned | Cleaning tools                                        |
|------------------------|-------------------------------------------------------|
| CD pickup lenses       | Cleaning liquid : GEM1004<br>Cleaning paper : GED-008 |

# 4. BLOCK DIAGRAM

## A TUNER AMP UNIT

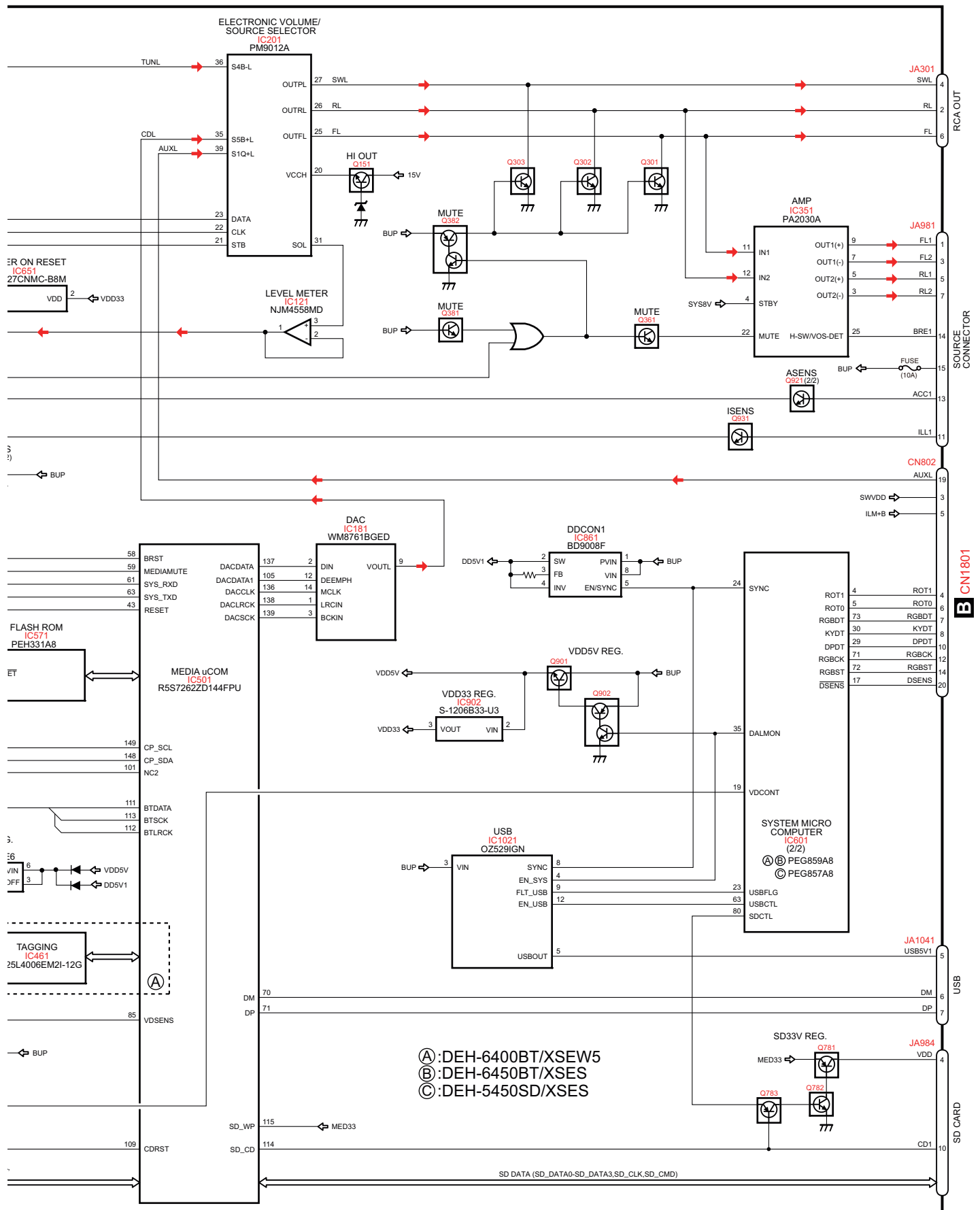


## C CD CORE UNIT(S11.6 STD)



DEH-6400BT/XSEW5





# B KEYBOARD UNIT

A

B

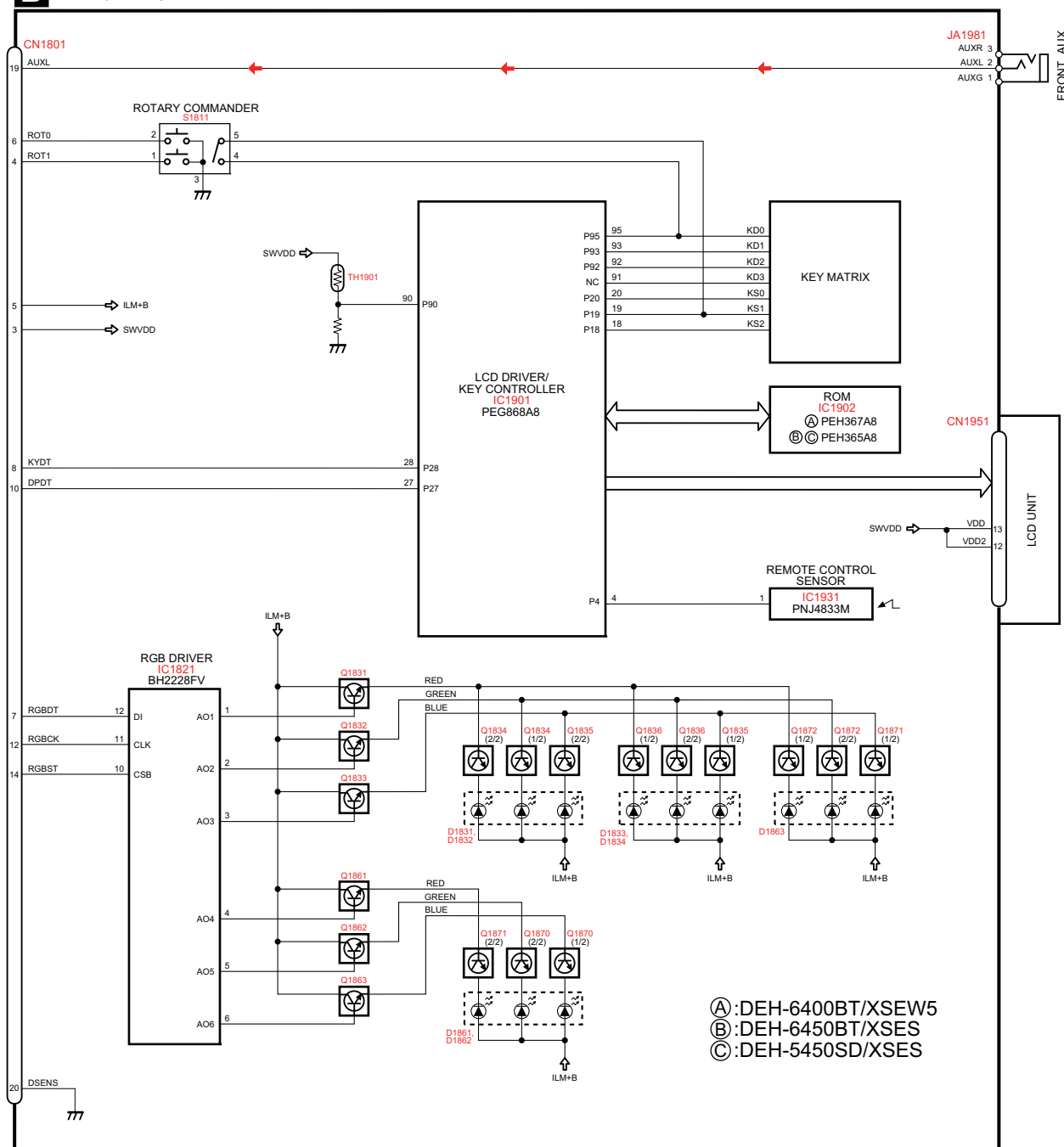
C

D

E

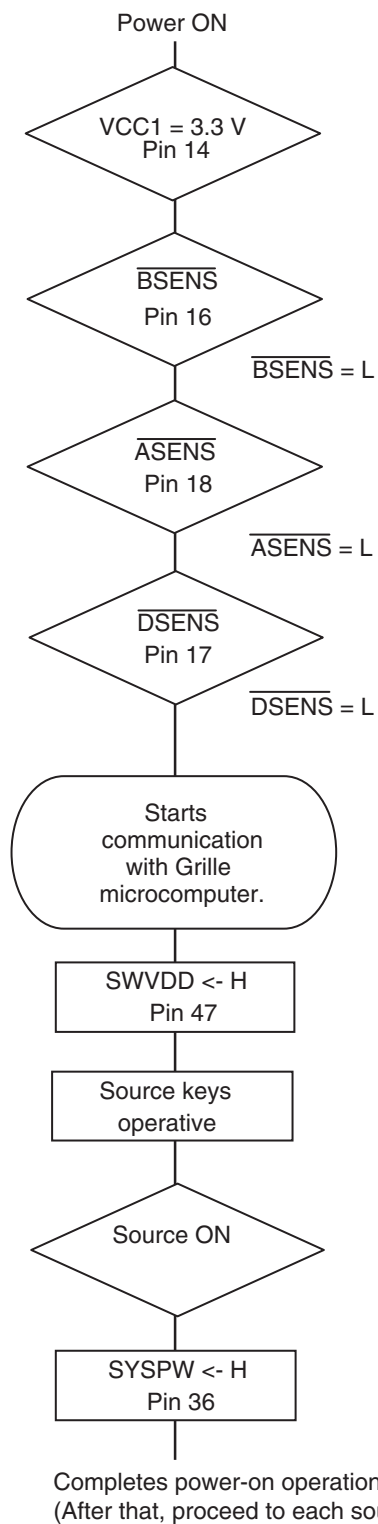
F

A CN802



# 5. DIAGNOSIS

## 5.1 OPERATIONAL FLOWCHART



In case of the above signal, the communication with Grille microcomputer may fail.  
If the time interval is not 500 msec, the oscillator may be defective.

## 5.2 ERROR CODE LIST

### Error Code

The error status occurs when CD/USB/SD cannot operate, or stop during operation due to an error.

The reason for such error is displayed with a numeral.

This intends to reduce the number of nonsense calls from users and to assist in analysis/repair in services.

#### 1. Basic display method

An error status (F0h) is entered in the Media status area of the source concerned, and the code in the minute/second area for notification.

E.g. For Read Error

Media status (disc) = 0xF0h

Minute (upper): FFh

Minute (lower): 07h

Second: 07h

- As for VD ERROR, the error status shall be 0xFB.

- Example of head unit display

The following occurs depending on the LCD display capability. The error No. comes in xx.

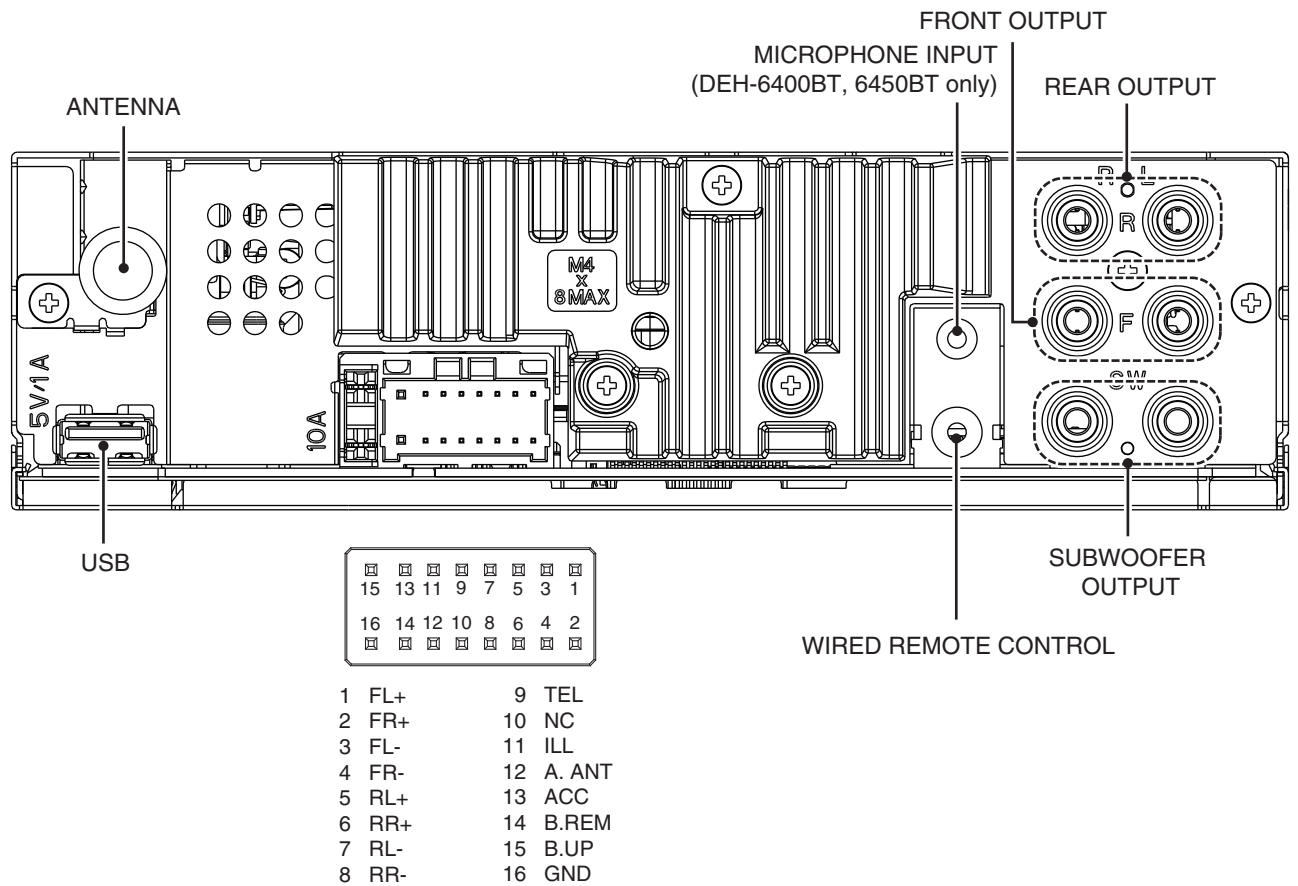
\* For OEM, the error shall be displayed as per the specification of the OEM destination.

| Display in 8 digits | Display in 6 digits | Display in 4 digits |
|---------------------|---------------------|---------------------|
| ERROR-xx            | ERR-xx              | E-xx                |

#### 2. List of error status codes

| Code | Source | Error status                                     | Details and reasons                                                                                                                                                                                                                                                                            |
|------|--------|--------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 07h  | CD     | Read_Error                                       | The CD mecha cannot read the Disc TOC<br>The TOC section of the PRD/Disc has been damaged                                                                                                                                                                                                      |
| 10h  | CD     | Carriage Home NG                                 | The CRG of the CD mecha cannot move to the inner perimeter<br>The CRG of the CD mecha cannot move from the inner perimeter<br>=> Failure in the HOME SWITCH of the CD mecha. Failure in CRG movement.<br>Failure in communication between the microcomputer and servo LSI.                     |
| 11h  | CD     | Focus_Error<br>(Focus Error in mechanism set up) | The CD mecha cannot take focus.<br>Dirt on the back of the disc and CD-RW. Significant vibration.                                                                                                                                                                                              |
| 12h  | CD     | Spindle Rock,<br>ID/SubCode Read Error/RF AMP NG | No spindle lock occurs in the CD mecha.<br>No sub-code can be read.<br>No appropriate RF AMP gain is set up.<br>=> Failure in the spindle. Scratches or dirt on the disc. Significant vibration.<br>CD-R with no written content. Occasionally the back of the disc.<br>CD signal abnormality. |
| 15h  | CD     | RF NG                                            | Failed to read RF<br>-> CD-R with no written content.<br>CD-RW with no written content.                                                                                                                                                                                                        |
| 17h  | CD     | Setup NG                                         | The AGC protection does not work. Easily become out of focus.<br>=> Scratches or dirt on the disc. Significant vibration. CD-RW                                                                                                                                                                |
| 23h  | CD     | File Format NG                                   | Written in the incompatible file format.<br>=> The CD-ROM recorded in a file format other than ISO 9660 Level 1 or 2 has been set (e.g.UDF).                                                                                                                                                   |
|      | USB    | File Format NG                                   | Written in the incompatible file format.<br>=> Recorded in a file format other than FAT 12/16/32                                                                                                                                                                                               |
|      | SD     | File Format NG                                   | Written in the incompatible file format.<br>=> Recorded in a file format other than FAT 12/16/32                                                                                                                                                                                               |
| 30h  | CD     | Search Time Out                                  | The CD mecha could not reach the target address<br>=> Failure in the CRG or tracking. Scratches on the disc                                                                                                                                                                                    |
| 50h  | CD     | Loading_Ejecting_Mecha_Error                     | Disc LoadNG/EjectNG<br>Foreign object inserted in the mecha. Disc stuck.                                                                                                                                                                                                                       |
| 16h  | USB    | Unsuccessful authentication of iPod              | Unsuccessful authentication of iPod (this occurs only with iPod)<br>=> In case authentication is attempted again and an error is turned back from the iPod or authentication IC during iPod authentication                                                                                     |
| 18h  | USB    | Incompatible device                              | Incompatible device connection detected<br>=> In case something other than mass storage or iPod is connected<br>In case incompatible iPod is connected. Or in case the connected iPod is compatible but has an incompatible firmware version.                                                  |
|      | SD     | Incompatible device                              | Incompatible card connected detected (e.g. incompatible MMC) etc.                                                                                                                                                                                                                              |
| 22h  | CD     | Not playable                                     | No playable file<br>The CD-ROM set has no MP3, WMA, AAC or WAV file.                                                                                                                                                                                                                           |
|      | USB    | Not playable                                     | No playable file<br>The USB device set has no MP3, WMA, AAC or WAV file.                                                                                                                                                                                                                       |
|      | SD     | Not playable                                     | No playable file<br>The SD card set has not MP3, WMA, AAC or WAV file.                                                                                                                                                                                                                         |
| 24h  | CD     | All DRM                                          | All playable files in the disc are DRM.                                                                                                                                                                                                                                                        |
|      | USB    | All DRM                                          | All playable files in the device are DRM.                                                                                                                                                                                                                                                      |
|      | SD     | All DRM                                          | All playable files in the SD card are DRM.                                                                                                                                                                                                                                                     |
| 19h  | USB    | Communication error                              | Cannot communicate with the device<br>=> In case the device failure or other reason prevents communication                                                                                                                                                                                     |
|      | SD     | Communication error                              | Cannot communicate with the SD card<br>=> In case the SD card failure or other reason prevents communication                                                                                                                                                                                   |

## 5.3 CONNECTOR FUNCTION DESCRIPTION



6. SERVICE MODE

6.1 DISPLAY TEST MODE

A

Service Display Test Mode

1. Overview

This is the test mode which summarized the confirmation of the system microcomputer version and the all light ON/OFF functions of a display part.

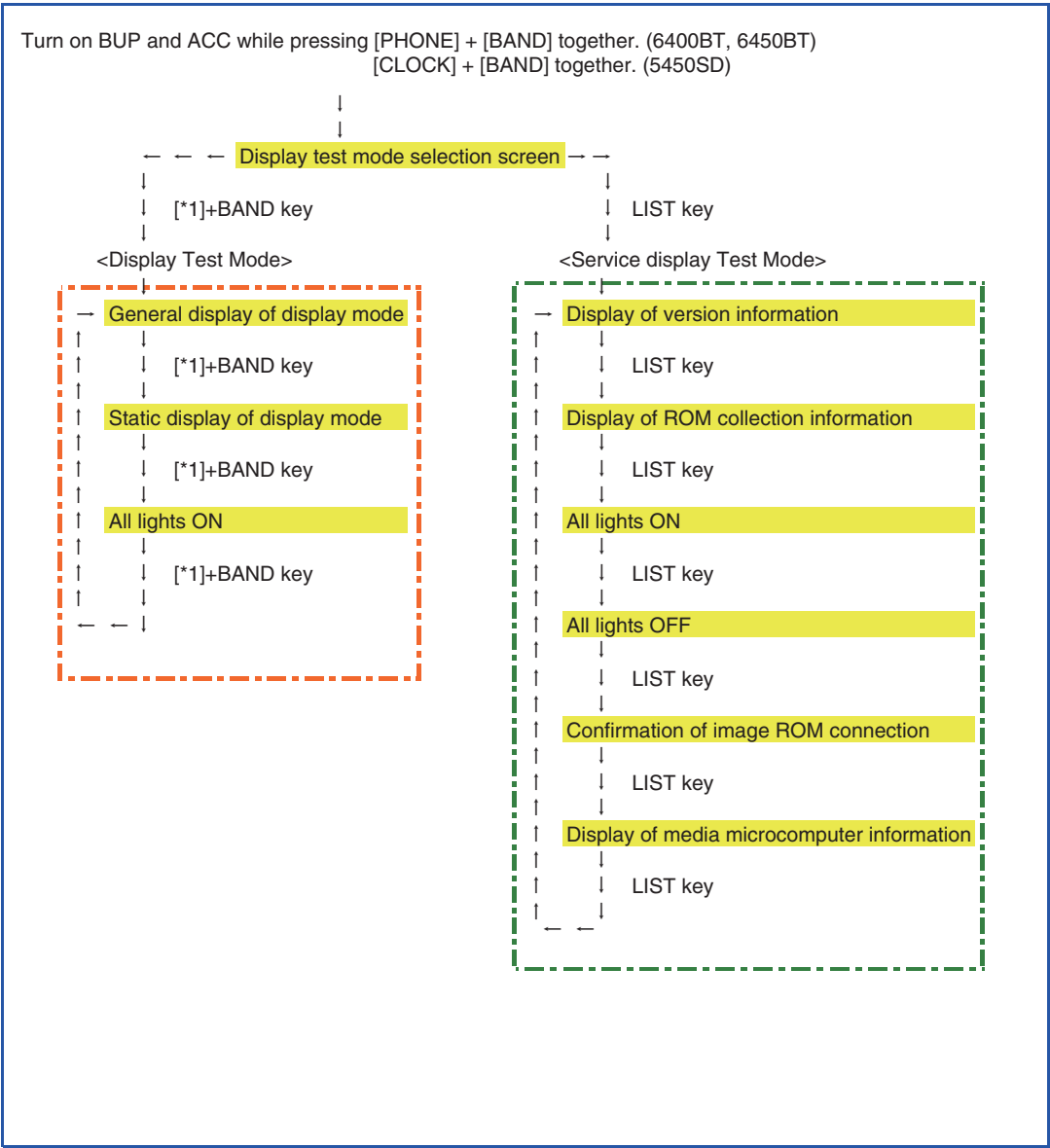
2. Operation method

B

C

D

E



F

Display test mode selection screen

|            |                                                                        |
|------------|------------------------------------------------------------------------|
| Slot model |                                                                        |
| 0          | 8 16 24 32 40 48 56 64 72 80 88 96 04 12 20 28 36 44 52 60 68 76 84 92 |
| 8          | TEST - Mode Select -                                                   |
| 16         |                                                                        |
| 24         | DISPLAY : [*1] + BAND                                                  |
| 32         |                                                                        |
| 40         | SERVICE : LIST                                                         |
| 48         |                                                                        |

|                |       |
|----------------|-------|
| [*1]Key        |       |
| 6400BT, 6450BT | PHONE |
| 5450SD         | CLOCK |



A

All lights OFF

| 0  | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 04 | 12 | 20 | 28 | 36 | 44 | 52 | 60 | 68 | 76 | 84 | 92 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
|    |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 8  |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 16 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 24 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 32 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 40 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 48 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

- If noise appears on the screen:  
There might be abnormality in the display microcomputer or a problem, for instance, in connection between the display microcomputer and the OEL driver.

B

Confirmation of image ROM connection

| 0  | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 04 | 12 | 20 | 28 | 36 | 44 | 52 | 60 | 68 | 76 | 84 | 92 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 8  | B | u  | s  |    | C  | o  | n  | n  | e  | c  | t  |    | T  | e  | s  | t  |    |    |    |    |    |    |    |    |
| 16 | - | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |    |    |    |    |
| 24 |   | D  | A  | T  | A  |    | B  | u  | s  |    | :  | #  | #  |    |    |    |    |    |    |    |    |    |    |    |
| 32 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 40 |   | A  | D  | R  | S  |    | B  | u  | s  |    | :  | #  | #  |    |    |    |    |    |    |    |    |    |    |    |
| 48 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

##:OK or NG

- If nothing appears on the screen:  
There might be a problem in communication or abnormality in the display microcomputer.

C

- If NG appears somewhere:  
There might be defective connection between the display microcomputer and image ROM.  
For instance, NG appearing with respect to the data bus does not necessarily mean data bus connection is definitely defective.  
Where the address bus is the reason for NG appearing, an error could still occur when checking the data bus.

Display of media microcomputer information

| 0  | 8 | 16 | 24 | 32 | 40 | 48 | 56 | 64 | 72 | 80 | 88 | 96 | 04 | 12 | 20 | 28 | 36 | 44 | 52 | 60 | 68 | 76 | 84 | 92 |
|----|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| 8  | M | E  | D  | I  | A  |    | I  | n  | f  | o  | .  |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 16 | - | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  | -  |
| 24 | P | D  |    |    |    | *  | *  | *  | *  | *  | *  |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 32 | U | N  | I  | T  |    | ○  | ?  | ?  | ?  | ?  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 40 | V | e  | r  |    |    | *  | *  | .  | *  | *  |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| 48 |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |

Description:  
UNITCaution: The display is blank because nothing is sent  
from the media microcomputer.

????:Media microcomputer unit number information

D

- If nothing appears on the screen:  
There might be a problem in communication to the display microcomputer, or abnormality in the display microcomputer itself.
- If an obviously weird numeral appears on the media microcomputer version:  
There might be a problem in communication between the system microcomputer and display microcomputer, or between the system and media microcomputer.

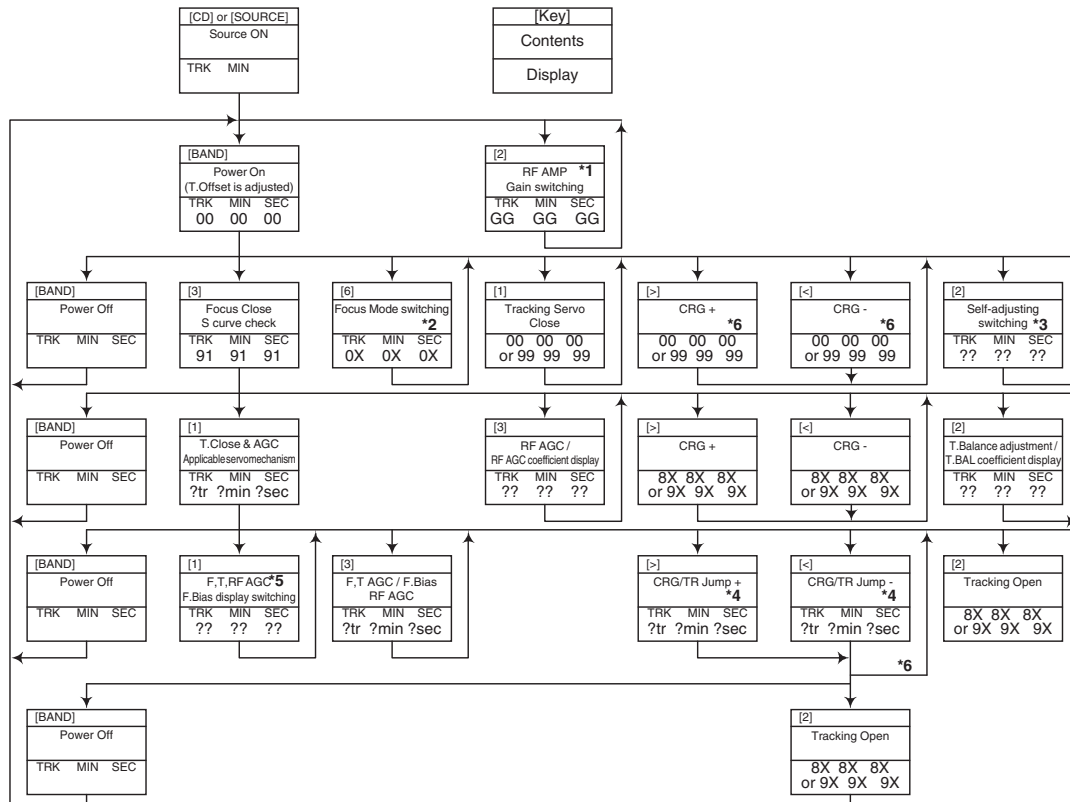
E

F



## ● Flow Chart

To enter the test mode: [EJECT] + [BAND] -> BUP + ACC ON  
Operate it with the Remote Control Unit after a shift in a test mode.



\*1) TYP — + 6 dB — + 12 dB  
TRK MIN SEC TRK MIN SEC TRK MIN SEC  
06 06 06 12 12 12

\*2) Focus Close — S. Curve — F EQ measurement setting  
TRK MIN SEC TRK MIN SEC TRK MIN SEC  
00 00 00 01 01 01 02 02 02  
(TRK 99 MIN 99 SEC 99)

\*3) F.Offset Display — RF.Offset — T.Offset Display — Switch to the order of the original display

\*4) 100TR Jump

\*5) TRK/MIN/SEC — F.AGC — T.AGC Gain — F.Bias — RF AGC

\*6) CRG motor voltage = 2 [V]

| [Key]  | Operation                                                                      |
|--------|--------------------------------------------------------------------------------|
|        | Test Mode                                                                      |
| [BAND] | Power On/Off                                                                   |
| [>]    | CRG + / TR Jump +<br>(Direction of the external surface)                       |
| [<]    | CRG - / TR Jump -<br>(Direction of the internal surface)                       |
| [1]    | T. CLS & AGC & Applicable servomechanism / AGC,AGC display setting             |
| [2]    | RF Gain switching / Offset adjustment display / T.Balance adjustment / T. Open |
| [3]    | F. Close,S. Curve / Rough Servo and RF AGC / F,T,RF AGC                        |
| [6]    | F. Mode switching / Tracking Close                                             |

- After the [EJECT] key is pressed keys other than the [EJECT] key should not be pressed, until disc ejection is complete.
- When the key [>] or [<] is pressed during the Focus Search, the power supply should be immediately turned off (otherwise the lens sticks to Wall, causing the actuator to be damaged).
- In the case of 100TR Jump, the mechanism shall be set to the Tracking Close mode when the key is released.
- When the power is turned on/off the gain of the RFAMP is reset to 0 dB. At the same time all the self-adjusting values shall return to the default setting.
- Do not do Tracking Servo Close before doing Focus Servo Close. (Because the overcurrent flows)

# 7. DISASSEMBLY

While the photograph shown is slightly different from this model in shape, the disassembly procedure is the same.

## ● Removing the Panel Assy (Fig.1)

- ➡ 1 Remove the two hooks.
- ➡ 2 Remove the two hooks and then remove the Panel Assy.

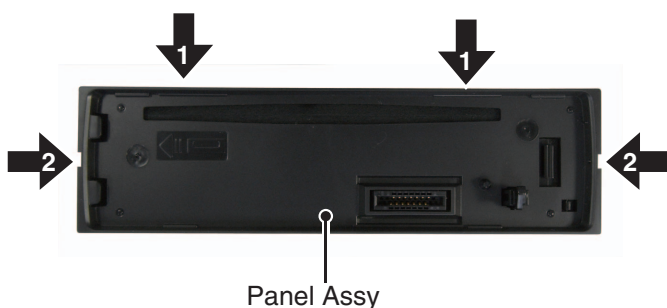


Fig.1

## ● Removing the CD Mechanism Module (Fig.2, 3, 4)

- ➡ 1 Remove the screw.
- ➡ 2 Remove the two screws.

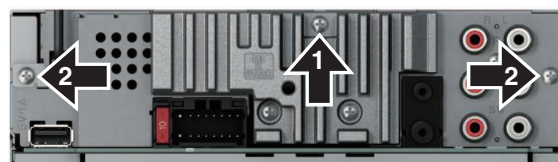


Fig.2

The CD Mechanism Module side is made a bottom.

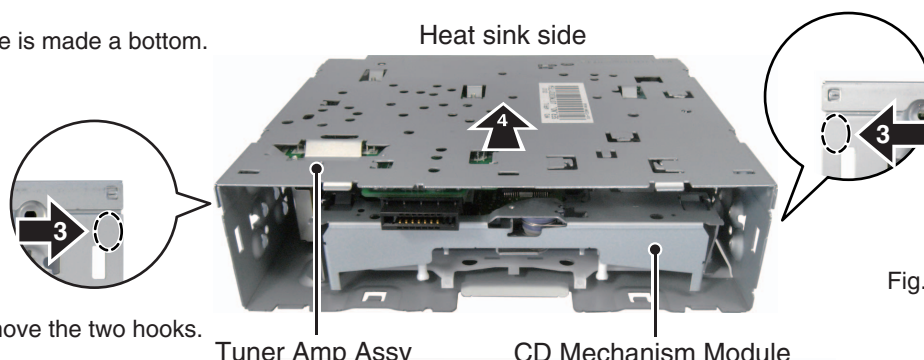


Fig.3

- ➡ 3 Push the area and remove the two hooks.

- ➡ 4 Slide the Tuner Amp Assy in the direction of the arrow and then remove the hooks of upper and lower.

Lift off the Tuner Amp Assy from the Heat sink side.

- ➡ 5 The Tuner Amp Assy is fixed into the ditch.

- ➡ 6 Disconnect the FFC and then remove the CD Mechanism Module.

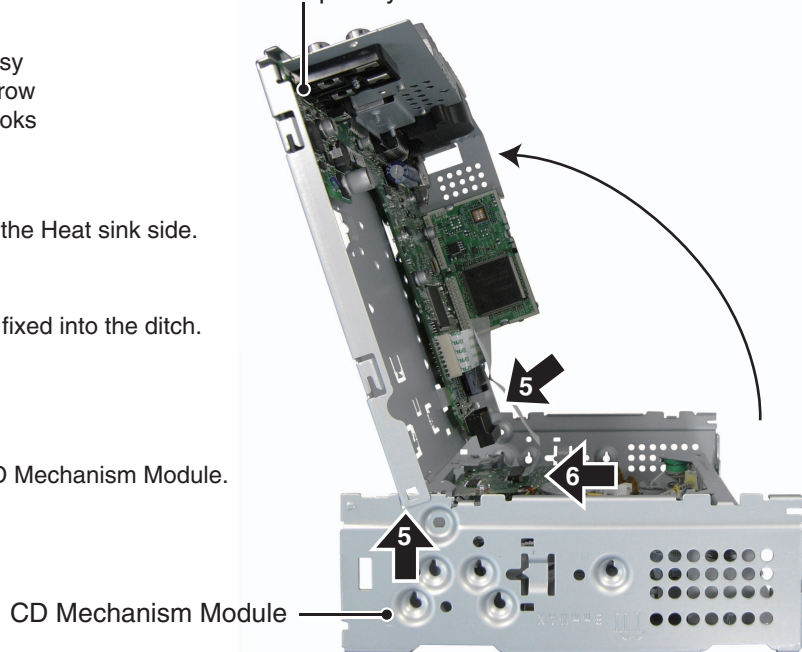


Fig.4

## ● Removing the Tuner Amp Unit (Fig.5)

- ➡ 1 Remove the two screws.
- ➡ 2 Remove the two screws.
- ➡ 3 Straighten the tabs at three locations indicated and then remove the Tuner Amp Unit.

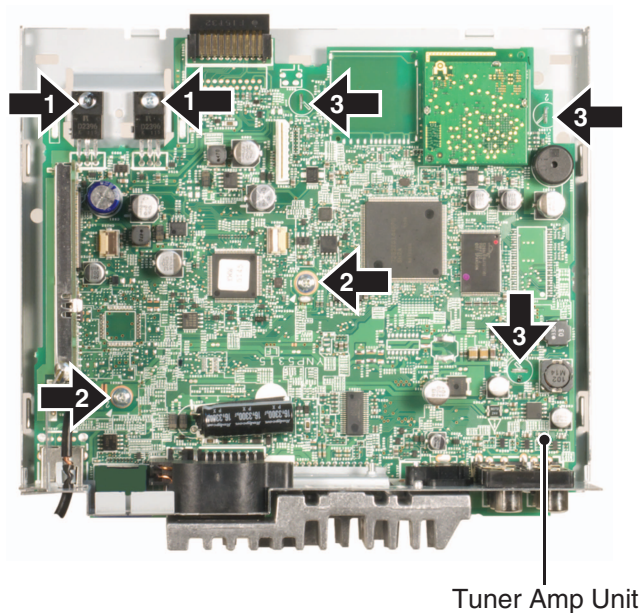


Fig.5

## ● Attention of removing (Fig.6)

Don't remove this screws excluding the dismantlement of the CD Mechanism Module.

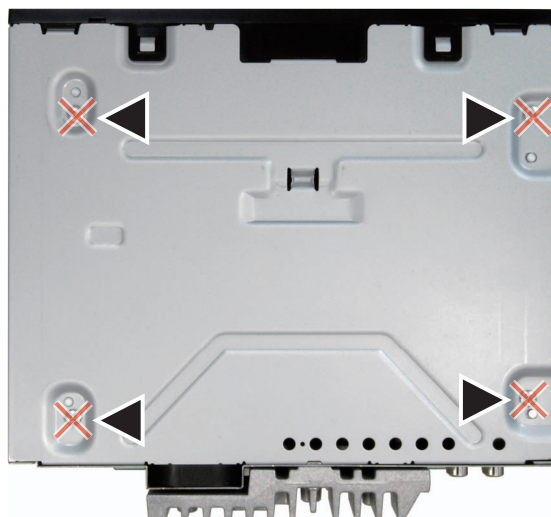


Fig.6

## ● Disassembling the Panel Part (Fig.7, 8)

1. Remove the arm while bending the rib of the panel upward.

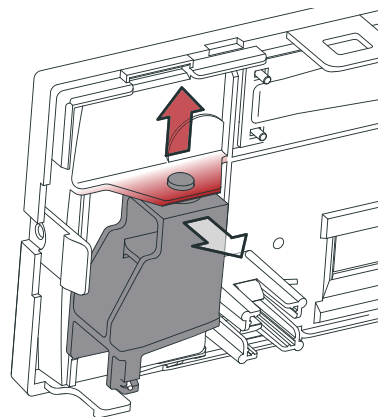


Fig.7

2. Press the upside hook and the bottom side hook of the button at the same time, and pull out the button.

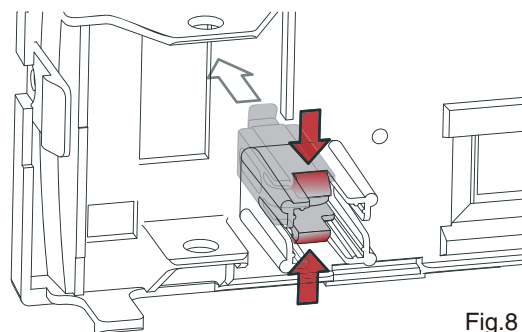


Fig.8

## ● Assembling the Panel Part (Fig.9, 10, 11)

1. Attach the button from the front side of the panel.

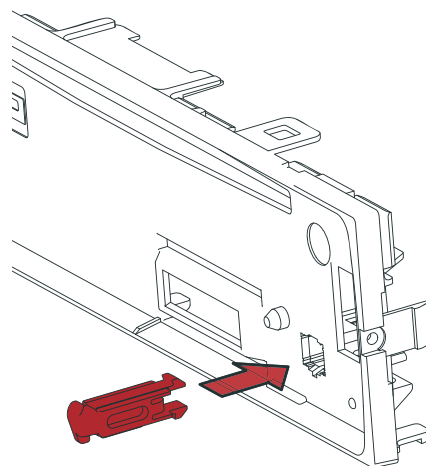


Fig.9

2. Attach the spring to the arm as shown in the figure.

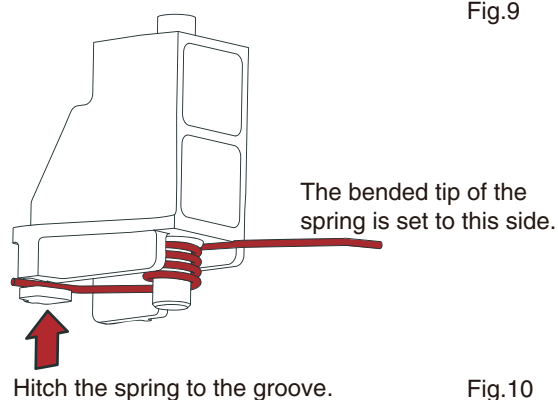


Fig.10

3. Fit the spring in the groove at the position shown in the figure.
4. Fit the boss on the lower side of the arm in the lower hole of the panel, and then warp the rib on the panel in the direction shown in the figure and fit the boss of the arm in the panel.

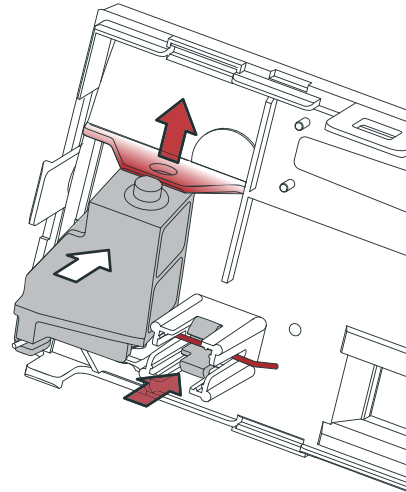


Fig.11

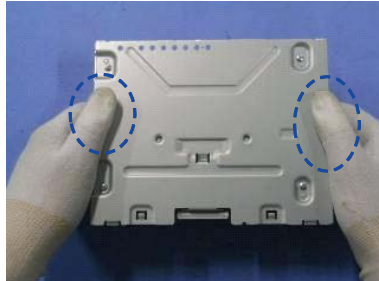


## ● How to carry the mecha unit

A

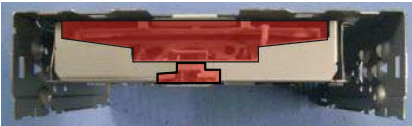
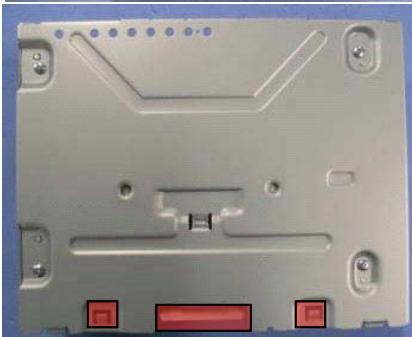
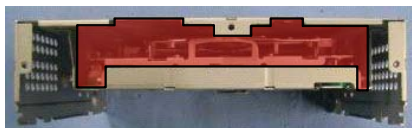
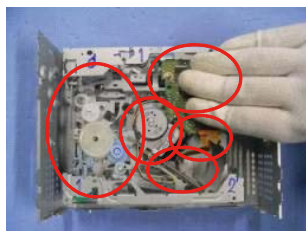
1. Hold the designated points (shown with dashed lines) of the upper chassis and the front/rear bracket.
2. Be careful not to hold the solid line portions or the CRG mecha part or insert foreign substances, to prevent distortion.
3. When holding the sides of the upper chassis, do not apply excessive force to prevent distortion. (Approx. 8N or less)

Handling OK



B

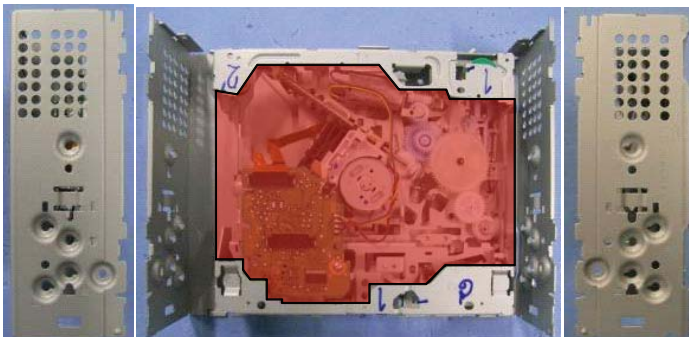
C



D

E

F



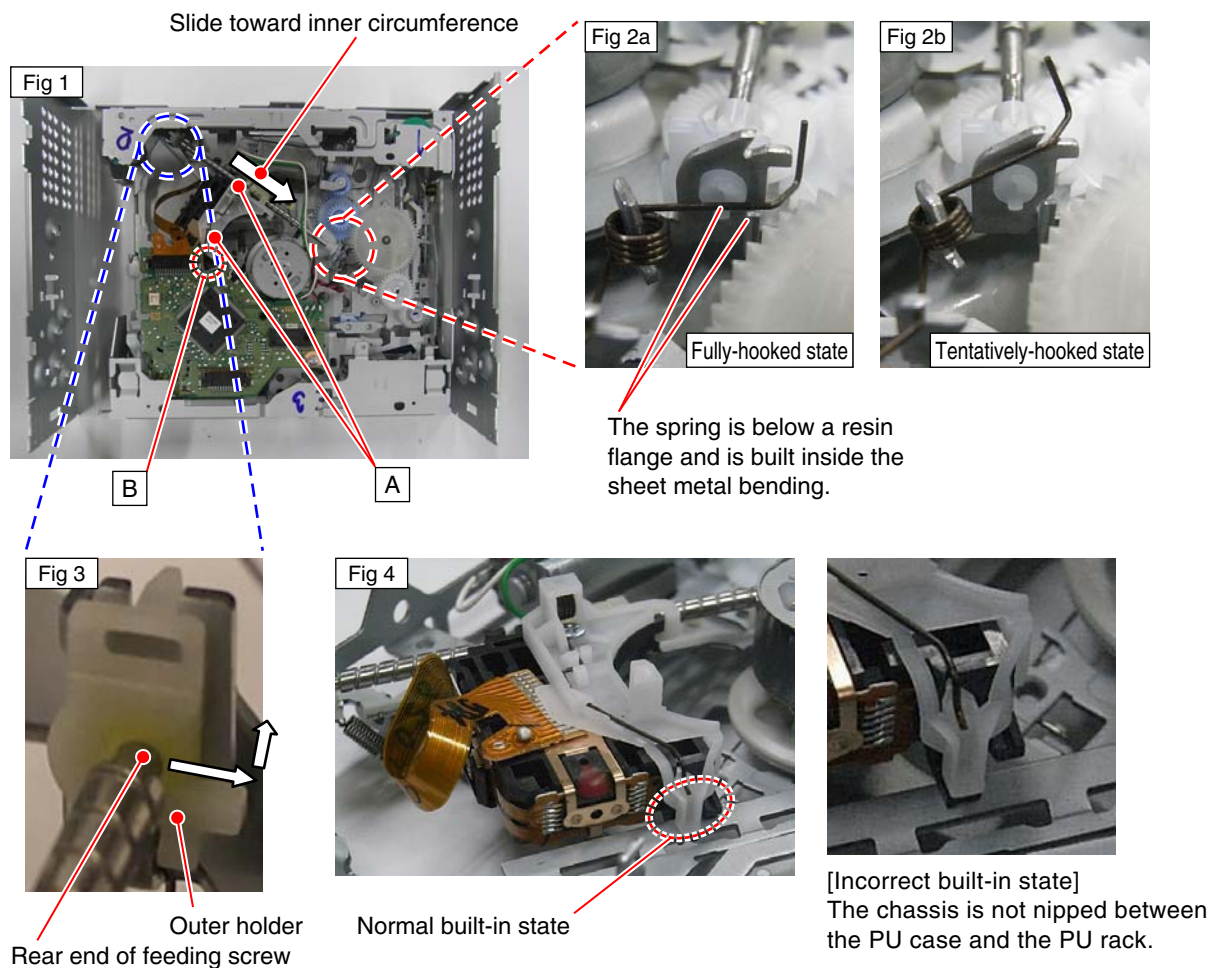
## ● How to remove the PU unit

1. Create an empty-clamp state according to "How to create empty clamp state (motor drive)".
2. Hook the feeding screw biasing spring to a tentative hooking portion (Fig 2b). Be careful not to get injured by the spring edge.
3. Hold the PU at the position A as shown in Fig 1. Slide the PU as far as possible toward the holder in the feeding screw so that a joint on the outer end of the feeding screw is loosened.
4. As shown in Fig 3, move the rear end of the feeding screw laterally and then upward, to remove it from the outer holder.
5. Lift the PU unit to disengage it from Part B of the chassis (Fig 4), and remove the PU unit.

(Cautions) When re-installing the PU, be sure to first nip the chassis and the PU unit (Fig 4) at the position B.

Also, make sure to fully hook the feeding screw biasing spring (Fig 2a).

Please follow the service manual for adjustment of the PU unit after the re-installation.



# 8. EACH SETTING AND ADJUSTMENT

## 8.1 CD ADJUSTMENT

### 1) Cautions on adjustments

- In this product the single voltage (3.3 V) is used for the regulator. The reference voltage is the REFO1 (1.65 V) instead of the GND.

If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:

a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments.

Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.

b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.

c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

- Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

- For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

- In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

- The RFAGC and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

- The load and eject operation is not guaranteed with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

### 2) Test mode

This mode is used to adjust the CD mechanism module.

- To enter the test mode.

[EJECT] + [BAND] -> BUP + ACC ON

- To exit from the test mode.

Turn off the ACC and back up.

#### Notes:

a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.

b. If you have pressed the (>) key or (<) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.

c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.

d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.

e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0 dB, and the auto-adjustment values are reset to the default settings.



## 8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT



### • Note :

The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

### • Purpose :

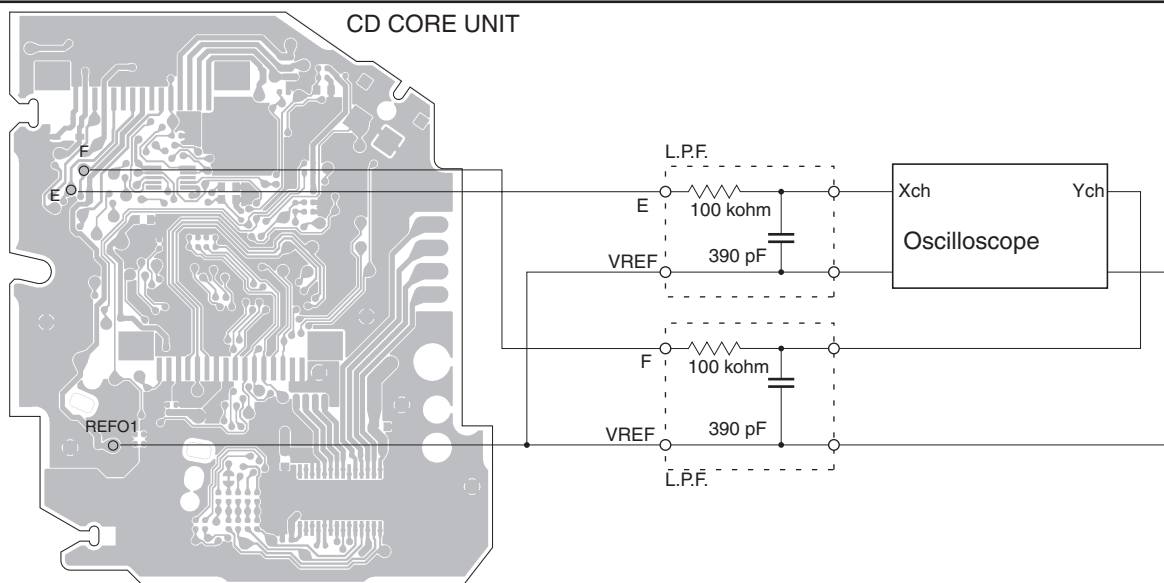
To check that the grating is within an acceptable range when the PU unit is changed.

### • Symptoms of Mal-adjustment :

If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

### • Method :

- |                       |                            |
|-----------------------|----------------------------|
| • Measuring Equipment | • Oscilloscope, Two L.P.F. |
| • Measuring Points    | • E, F, REFO1              |
| • Disc                | • TCD-782                  |
| • Mode                | • TEST MODE                |



### • Checking Procedure

1. In test mode, load the disc and switch the 3 V regulator on.
2. Using the right and left buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within  $75^\circ$ . Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than  $75^\circ$  try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than  $75^\circ$  then the mechanism should be judged to be at fault.

### • Note

Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" ( the phase difference changes as the disc rotates). The angle specified above indicates the average angle.

### • Hint

Reloading the disc changes the clamp position and may decrease the "wobble".

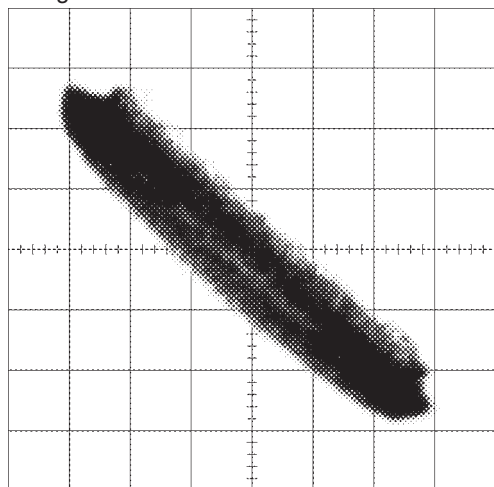
**Grating waveform**

Ech -&gt; Xch 20 mV/div, AC

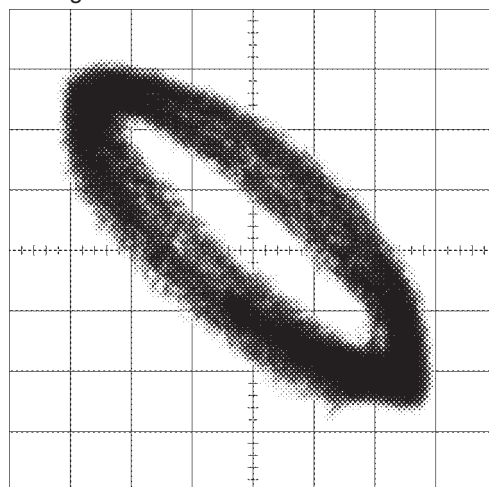
Fch -&gt; Ych 20 mV/div, AC

A

0 degrees

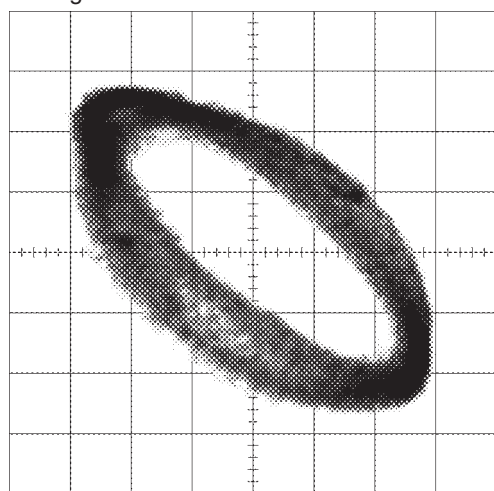


30 degrees



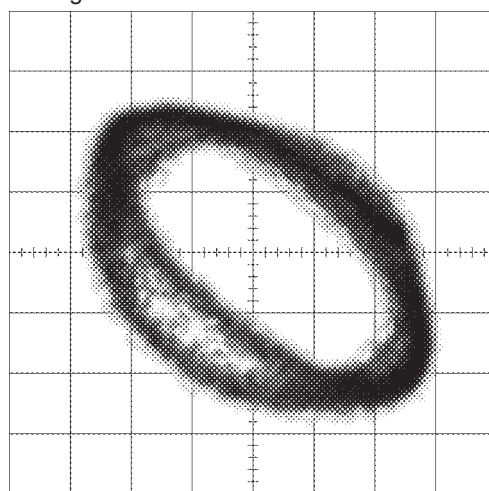
B

45 degrees



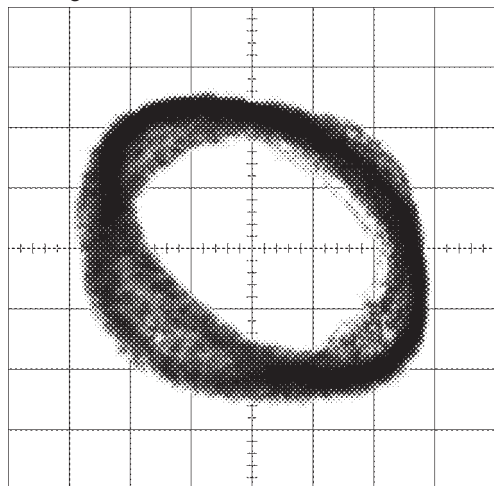
C

60 degrees



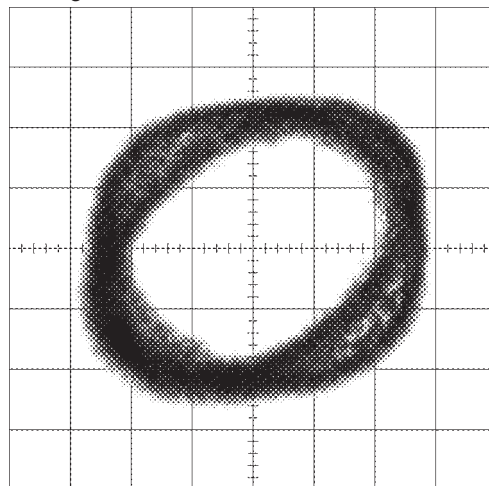
D

75 degrees



E

90 degrees



F

## 8.3 PCL OUTPUT CONFIRMATION



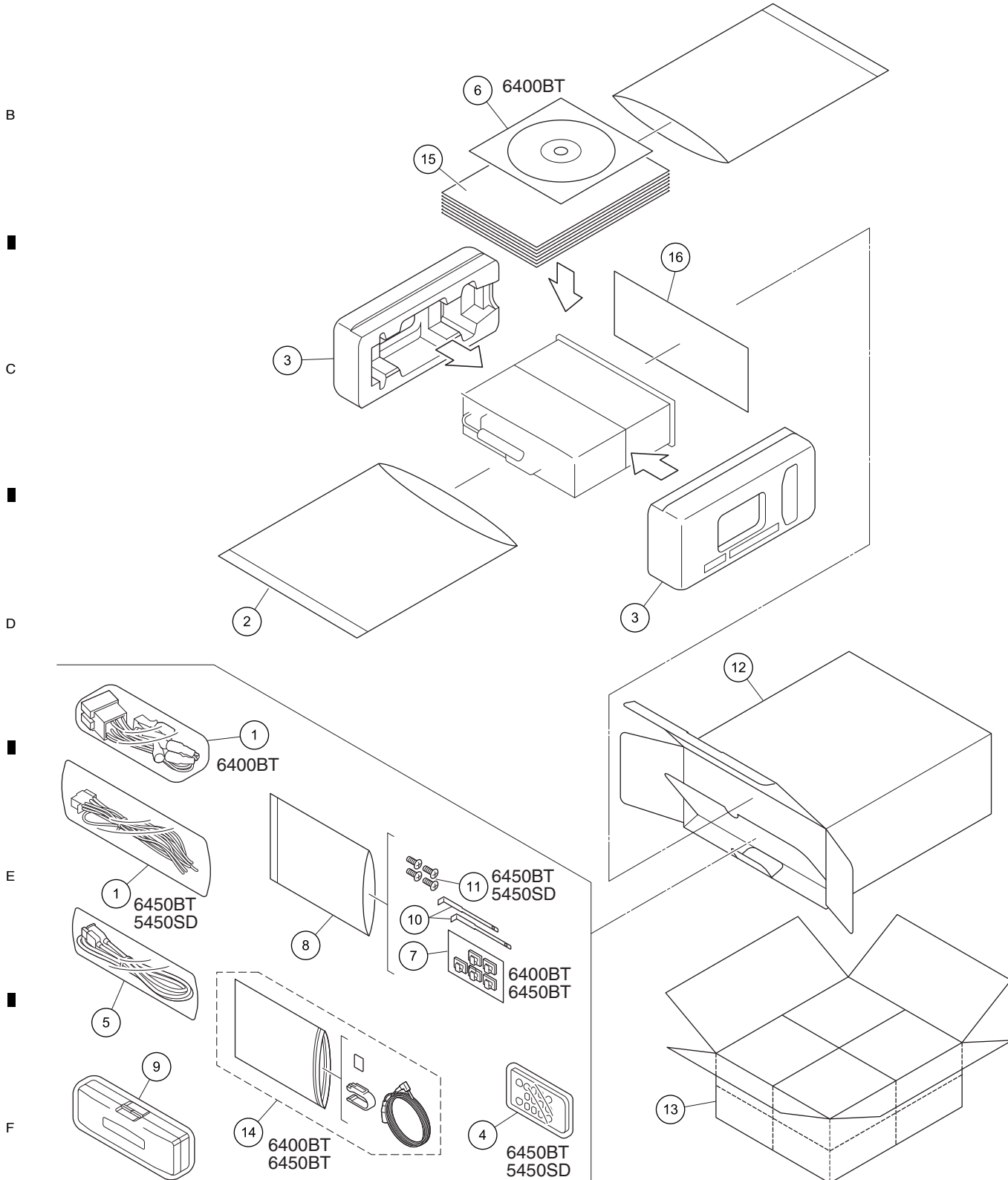
### ● PCL Output

With the TESTIN (61 pin) status of IC601(TP:TEST1) to be “H”, it is shifted to PCL Output Test mode after reset started. Check that square wave of 625.0 kHz is output from PCL (37 Pin) of IC601(TP:PCL1). If clock signal is out of this range, this resonator (X601) must be changed for a new one.

## 9. EXPLODED VIEWS AND PARTS LIST

- NOTES :
- Parts marked by " \* " are generally unavailable because they are not in our Master Spare Parts List.
  - The  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
  - Screw adjacent to  mark on the product are used for disassembly.
  - For the applying amount of lubricants or glue, follow the instructions in this manual.  
(In the case of no amount instructions, apply as you think it appropriate.)

### 9.1 PACKING



### (1) PACKING SECTION PARTS LIST

| <u>Mark No.</u> | <u>Description</u>       | <u>Part No.</u>        | <u>Mark No.</u> | <u>Description</u>  | <u>Part No.</u>        |
|-----------------|--------------------------|------------------------|-----------------|---------------------|------------------------|
| 1               | Cord Assy                | See Contrast table (2) | 13              | Contain Box         | See Contrast table (2) |
| 2               | Polyethylene Bag         | QEG3001                | 14              | Microphone Assy     | See Contrast table (2) |
| 3               | Protector                | QHP3016                | * 15-1          | Warranty Card       | See Contrast table (2) |
| 4               | Card Remote Control Unit | See Contrast table (2) |                 |                     |                        |
| 5               | USB Cable                | YDP5047                | * 15-2          | Caution Card        | See Contrast table (2) |
|                 |                          |                        | * 15-3          | Caution Card        | See Contrast table (2) |
| 6               | IM CD ROM                | See Contrast table (2) | * 15-4          | Caution Card        | See Contrast table (2) |
| 7               | Cord Clamper Assy        | See Contrast table (2) | 15-5            | Installation Manual | See Contrast table (2) |
| 8               | Polyethylene Bag         | See Contrast table (2) | 15-6            | Guide               | See Contrast table (2) |
| 9               | Case Assy                | YXA5856                |                 |                     |                        |
| 10              | Handle                   | QNC3021                | 15-7            | Owner's Manual      | See Contrast table (2) |
|                 |                          |                        | 15-8            | Caution Card        | YRP5030                |
| 11              | Screw                    | See Contrast table (2) | 16              | Cover               | YEG5008                |
| 12              | Unit Box                 | See Contrast table (2) |                 |                     |                        |

### (2) CONTRAST TABLE

DEH-6400BT/XSEW5, DEH-6450BT/XSES and DEH-5450SD/XSES are constructed the same except for the following:

| Mark | No.  | Description              | DEH-6400BT/XSEW5 | DEH-6450BT/XSES | DEH-5450SD/XSES |
|------|------|--------------------------|------------------|-----------------|-----------------|
|      | 1    | Cord Assy                | QDP3024          | CDP1484         | CDP1484         |
|      | 4    | Card Remote Control Unit | Not used         | QXE1044         | QXE1047         |
|      | 6    | IM CD ROM                | YPJ5015          | Not used        | Not used        |
|      | 7    | Cord Clamper Assy        | CEA4636          | CEA4636         | Not used        |
|      | 8    | Polyethylene Bag         | Not used         | CEG1160         | CEG1160         |
|      | 11   | Screw                    | Not used         | TRZ50P080FTC    | TRZ50P080FTC    |
|      | 12   | Unit Box                 | YHG5658          | YHG5657         | YHG5656         |
|      | 13   | Contain Box              | YHL5658          | YHL5657         | YHL5656         |
|      | 14   | Microphone Assy          | YPM5003          | YPM5003         | Not used        |
| *    | 15-1 | Warranty Card            | CRY1316          | Not used        | Not used        |
| *    | 15-2 | Caution Card             | YRP5029          | Not used        | Not used        |
| *    | 15-3 | Caution Card             | CRP1438          | Not used        | Not used        |
| *    | 15-4 | Caution Card             | CRP1441          | Not used        | Not used        |
|      | 15-5 | Installation Manual      | YRD5360          | Not used        | Not used        |
|      | 15-6 | Quick Start Guide        | YRD5361          | Not used        | Not used        |
|      | 15-7 | Owner's Manual           | Not used         | YRD5363         | YRD5363         |

### Owner's Manual,Installation Manual

| Part No. | Language                                                                       |
|----------|--------------------------------------------------------------------------------|
| YRD5360  | English, French, Italian, Spanish(Espanol), German, Dutch, Russian             |
| YRD5361  | English, French, Italian, Spanish(Espanol), German, Dutch, Russian             |
| YRD5363  | English, Spanish(Espanol), Portuguese(B), Traditional Chinese, Arabic, Persian |

CONTENTS OF CD-ROM (Operation Manual), YPJ5015

| Part No.  | Language         |
|-----------|------------------|
| * YRB5235 | English          |
| * YRB5236 | French           |
| * YRB5237 | Italian          |
| * YRB5238 | Spanish(Espanol) |
| * YRB5239 | German           |
| * YRB5240 | Dutch            |
| * YRB5241 | Russian          |
| * YRB5242 | Swedish          |
| * YRB5243 | Norwegian        |
| * YRB5244 | Finnish          |
| * YRB5245 | Danish           |
| * YRB5246 | Portuguese       |
| * YRB5247 | Greek            |
| * YRB5248 | Turkish          |

All operation manuals are supplied in PDF files by the CD-ROM.  
Regarding the availability of paper manual, contact Pioneer Service representative in your region.

■

5

■

6

■

7

■

8

■

A

■

B

■

C

■

D

■

E

■

F

■

5

■

6

■

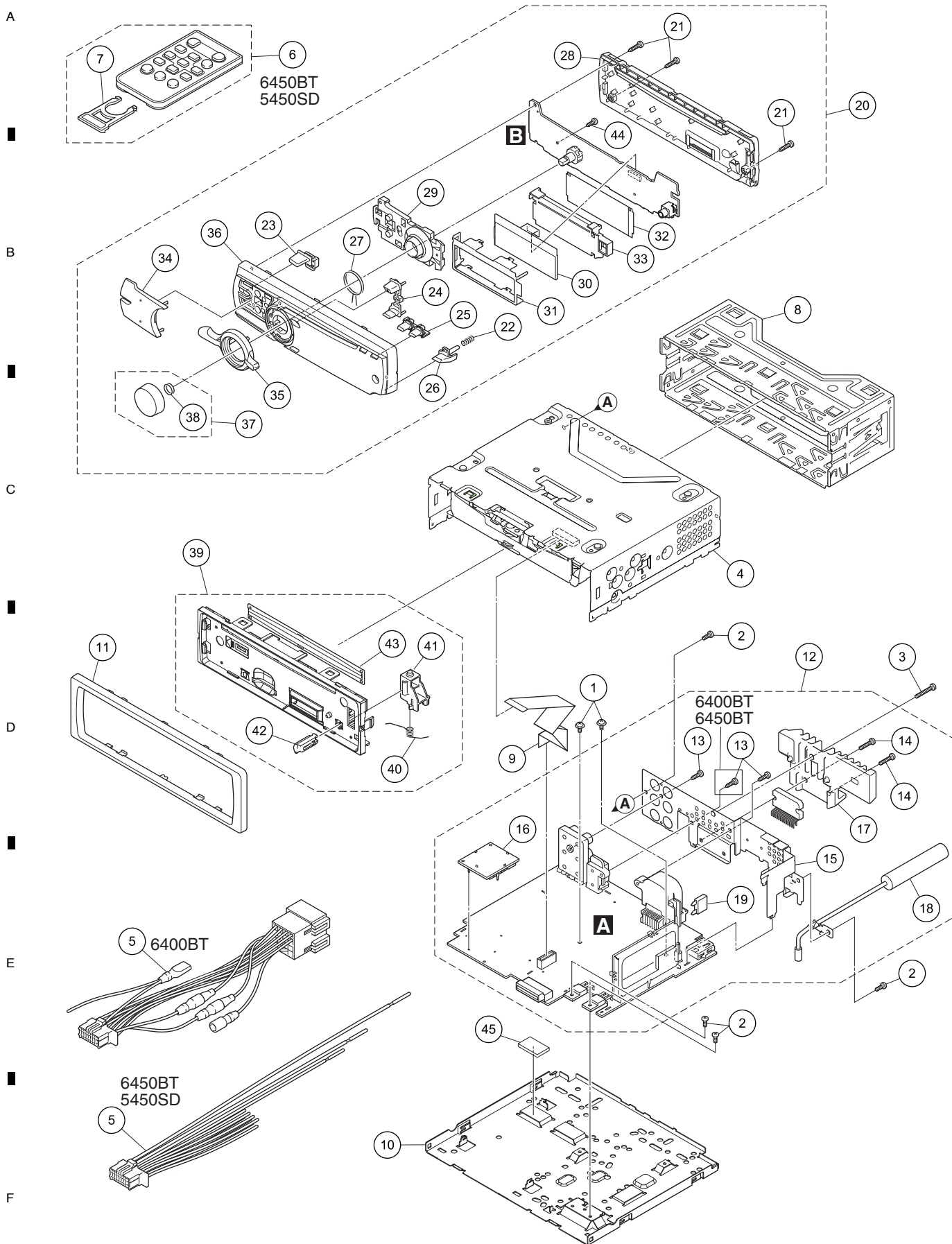
7

■

8

■

## 9.2 EXTERIOR



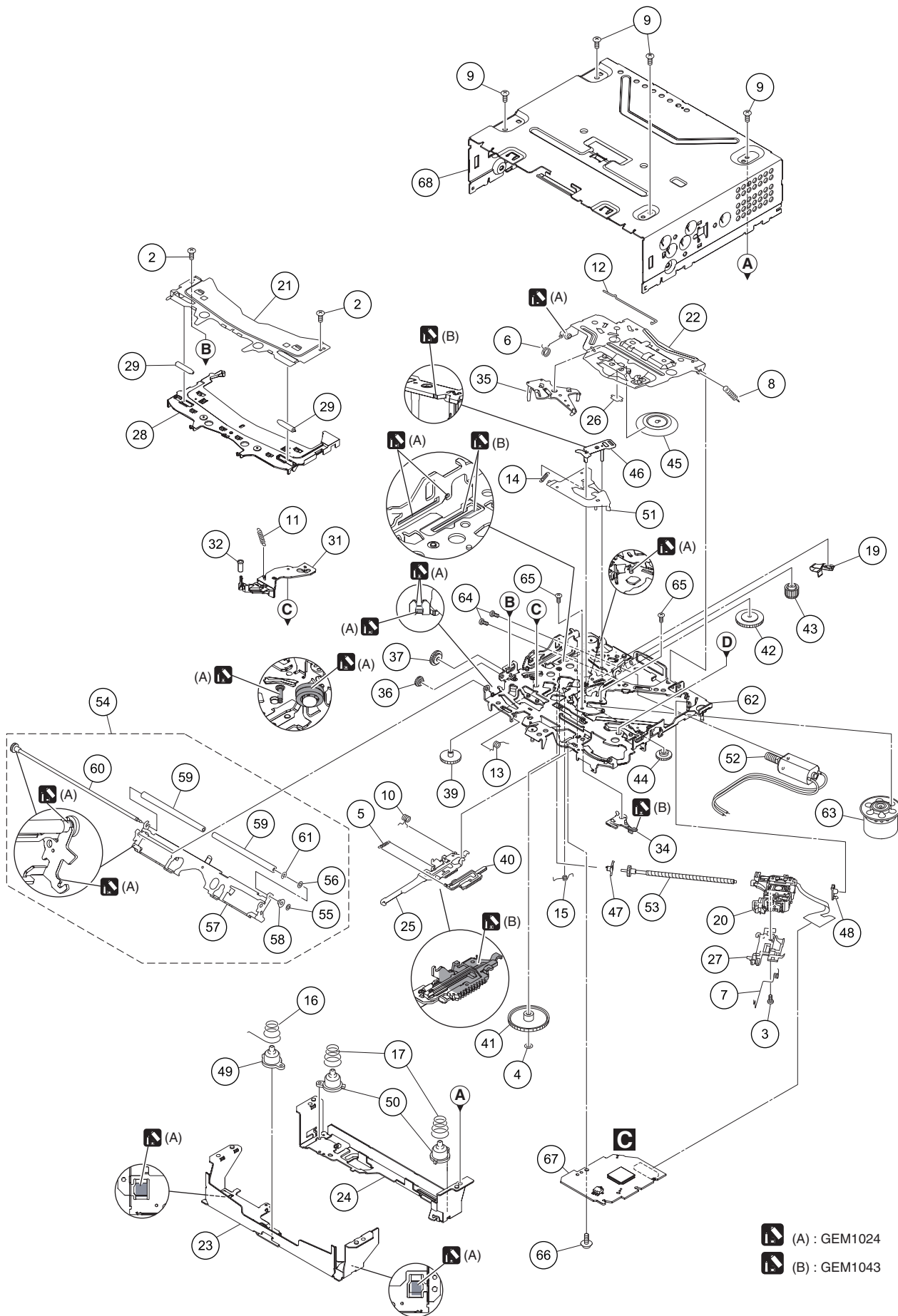


| Mark No. | Description                 | Part No.               | Mark No. | Description                           | Part No.               |
|----------|-----------------------------|------------------------|----------|---------------------------------------|------------------------|
| 1        | Screw                       | ASZ26P050FTC           | 24       | Button (UP, DOWN)                     | YAC5450                |
| 2        | Screw                       | BSZ26P060FTC           | 25       | Button (EJECT, PHONE)(6400BT, 6450BT) | YAC5451                |
| 3        | Screw                       | BSZ26P120FTC           |          | Button (EJECT, CLOCK)(5450SD)         |                        |
| 4        | CD Mechanism Module (S11.6) | CXK5804                | 26       | Button (DETACH)                       | YAC5452                |
| 5        | Cord Assy                   | See Contrast table (2) | 27       | Coil Spring                           | YBH5018                |
| 6        | Card Remote Control Unit    | See Contrast table (2) | 28       | Cover                                 | YNS5666                |
| 7        | Cover                       | See Contrast table (2) | 29       | Lighting Conductor                    | YNV5227                |
| 8        | Holder                      | QNC3020                | 30       | STN LCD                               | YAW5112                |
| 9        | FFC                         | YDE5096                | 31       | Holder                                | YNC5101                |
| 10       | Case                        | YNB5080                | 32       | Sheet                                 | YNM5187                |
| 11       | Panel                       | YNS5668                | 33       | Plate Unit                            | YXA5835                |
| 12       | Tuner Amp Unit              | See Contrast table (2) | 34       | Button Unit (SRC, BAND)               | YXA5812                |
| 13       | Screw                       | See Contrast table (2) | 35       | Lever Unit                            | YXA5815                |
| 14       | Screw                       | BSZ26P120FTC           | 36       | Grille Unit                           | See Contrast table (2) |
| 15       | Holder                      | See Contrast table (2) | 37       | Knob Unit                             | YXC5158                |
| 16       | BT Module                   | See Contrast table (2) | 38       | Spring                                | YBL5010                |
| 17       | Heat Sink                   | QNR3002                | 39       | Panel Unit                            | YXA5831                |
| 18       | Antenna Attached Cable      | YDH5001                | 40       | Spring                                | QBH3001                |
| ⚠ 19     | Fuse (10 A)                 | YEK5001                | *        | 41 Arm                                | QNV3025                |
| 20       | Detachable Grille Assy      | See Contrast table (2) | *        | 42 Button                             | QNV3026                |
| 21       | Screw                       | BPZ20P100FTC           | *        | 43 Cover                              | CNN1665                |
| 22       | Spring                      | CBH2210                | 44       | Screw                                 | BPZ20P060FTC           |
| 23       | Button (MIX)                | YAC5449                | 45       | Sheet                                 | YNM5198                |

**(2) CONTRAST TABLE**  
 DEH-6400BT/XSEW5, DEH-6450BT/XSES and DEH-5450SD/XSES are constructed the same except for the following:

| Mark | No. | Description              | DEH-6400BT/XSEW5  | DEH-6450BT/XSES   | DEH-5450SD/XSES   |
|------|-----|--------------------------|-------------------|-------------------|-------------------|
|      | 5   | Cord Assy                | QDP3024           | CDP1484           | CDP1484           |
|      | 6   | Card Remote Control Unit | Not used          | QXE1044           | QXE1047           |
|      | 7   | Cover                    | Not used          | CNS7068           | CNS7068           |
|      | 12  | Tuner Amp Unit           | YWM5568           | YWM5570           | YWM5562           |
|      | 13  | Screw                    | BPZ26P080FTC (x3) | BPZ26P080FTC (x3) | BPZ26P080FTC (x2) |
|      | 15  | Holder                   | YNC5108           | YNC5108           | YNC5109           |
|      | 16  | BT Module                | CWX4188           | CWX4188           | Not used          |
|      | 20  | Detachable Grille Assy   | YXA5825           | YXA5826           | YXA5822           |
|      | 36  | Grille Unit              | YXA5841           | YXA5842           | YXA5844           |

## 9.3 CD MECHANISM MODULE



DEH-6400BT/XSEW5

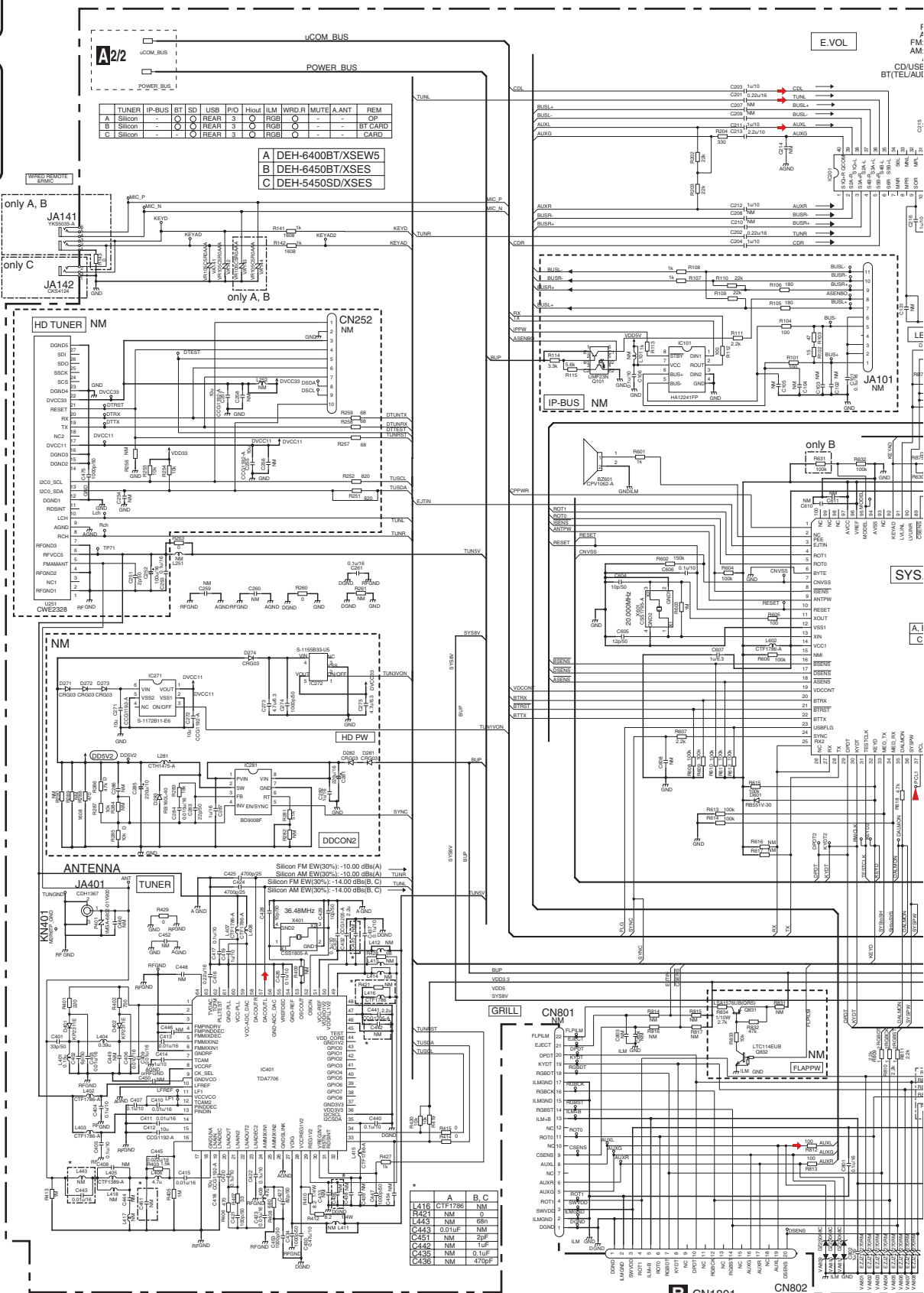
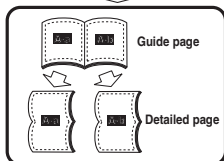
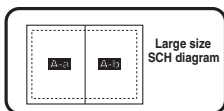
| <u>Mark No.</u> | <u>Description</u>          | <u>Part No.</u> | <u>Mark No.</u> | <u>Description</u>       | <u>Part No.</u> |   |
|-----------------|-----------------------------|-----------------|-----------------|--------------------------|-----------------|---|
| 1               | .....                       |                 | 50              | Damper                   | CNW1198         |   |
| 2               | Screw                       | BSZ20P040FTC    | 51              | Arm                      | CNW1726         | A |
| 3               | Screw(M2 x 4)               | CBA1835         | 52              | Motor Unit(M2)(LOAD/CRG) | CXC4026         |   |
| 4               | Washer                      | CBF1038         | 53              | Screw Unit               | CXC8894         |   |
| 5               | Spring                      | CBH3010         | 54              | Arm Assy                 | CXE4840         |   |
| 6               | Spring                      | CBH2855         | 55              | Washer                   | CBF1037         |   |
| 7               | Spring                      | CBH2856         |                 |                          |                 |   |
| 8               | Spring                      | CBH2860         | 56              | Washer                   | CBF1038         |   |
| 9               | Screw                       | BSZ26P060FTC    | 57              | Arm                      | CND6242         |   |
| 10              | Spring                      | CBH3011         | 58              | Collar                   | CNV6906         |   |
| 11              | Coil Spring                 | CBH3095         | 59              | Roller                   | CNW1196         |   |
| 12              | Spring                      | CBH3014         | 60              | Gear Unit                | CXC8893         | B |
| 13              | Spring                      | CBH3015         | 61              | Washer                   | YE15FTC         |   |
| 14              | Spring                      | CBH3016         | 62              | Chassis Unit             | CXE4528         |   |
| 15              | Spring                      | CBH3017         | 63              | Motor Unit(M1)(SPDL)     | CXE2273         |   |
| 16              | Spring                      | CBH3086         | 64              | Screw                    | JFZ20P025FTC    |   |
| 17              | Spring                      | CBH3019         | 65              | Screw                    | JGZ17P022FTC    |   |
| 18              | .....                       |                 | 66              | Screw                    | EBA1028         |   |
| 19              | Leaf Spring                 | CBL1824         | 67              | CD Core Unit (S11.6STD)  | CWX4023         |   |
| 20              | Pickup Unit(P10.6)(Service) | CXX3556         | 68              | Chassis                  | CNA3181         | C |
| 21              | Bracket                     | CND4553         |                 |                          |                 |   |
| 22              | Arm                         | CND6406         |                 |                          |                 |   |
| 23              | Bracket                     | CND6127         |                 |                          |                 |   |
| 24              | Bracket                     | CND5710         |                 |                          |                 |   |
| 25              | Lever                       | CND5398         |                 |                          |                 |   |
| 26              | Sheet                       | CNN3678         |                 |                          |                 |   |
| 27              | Rack                        | CNV8342         |                 |                          |                 |   |
| 28              | Guide                       | CNW2240         |                 |                          |                 |   |
| 29              | Roller                      | CNW1172         |                 |                          |                 | D |
| 30              | .....                       |                 |                 |                          |                 |   |
| 31              | Arm                         | CNW2241         |                 |                          |                 |   |
| 32              | Roller                      | CNW1175         |                 |                          |                 |   |
| 33              | .....                       |                 |                 |                          |                 |   |
| 34              | Arm                         | CNW1177         |                 |                          |                 |   |
| 35              | Arm                         | CNW1178         |                 |                          |                 |   |
| 36              | Gear                        | CNW1180         |                 |                          |                 |   |
| 37              | Gear                        | CNW1181         |                 |                          |                 |   |
| 38              | .....                       |                 |                 |                          |                 | E |
| 39              | Gear                        | CNW1183         |                 |                          |                 |   |
| 40              | Rack                        | CNW1184         |                 |                          |                 |   |
| 41              | Gear                        | CNW1185         |                 |                          |                 |   |
| 42              | Gear                        | CNW1186         |                 |                          |                 |   |
| 43              | Gear                        | CNW1187         |                 |                          |                 |   |
| 44              | Gear                        | CNW2287         |                 |                          |                 |   |
| 45              | Clamper                     | CNW1190         |                 |                          |                 |   |
| 46              | Arm                         | CNW1192         |                 |                          |                 |   |
| 47              | Holder                      | CNW1193         |                 |                          |                 | F |
| 48              | Holder                      | CNW1194         |                 |                          |                 |   |
| 49              | Damper                      | CNW1197         |                 |                          |                 |   |

# 10. SCHEMATIC DIAGRAM

## 10.1 TUNER AMP UNIT(1/2) (GUIDE PAGE)

A-a 1/2

Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



A1/2

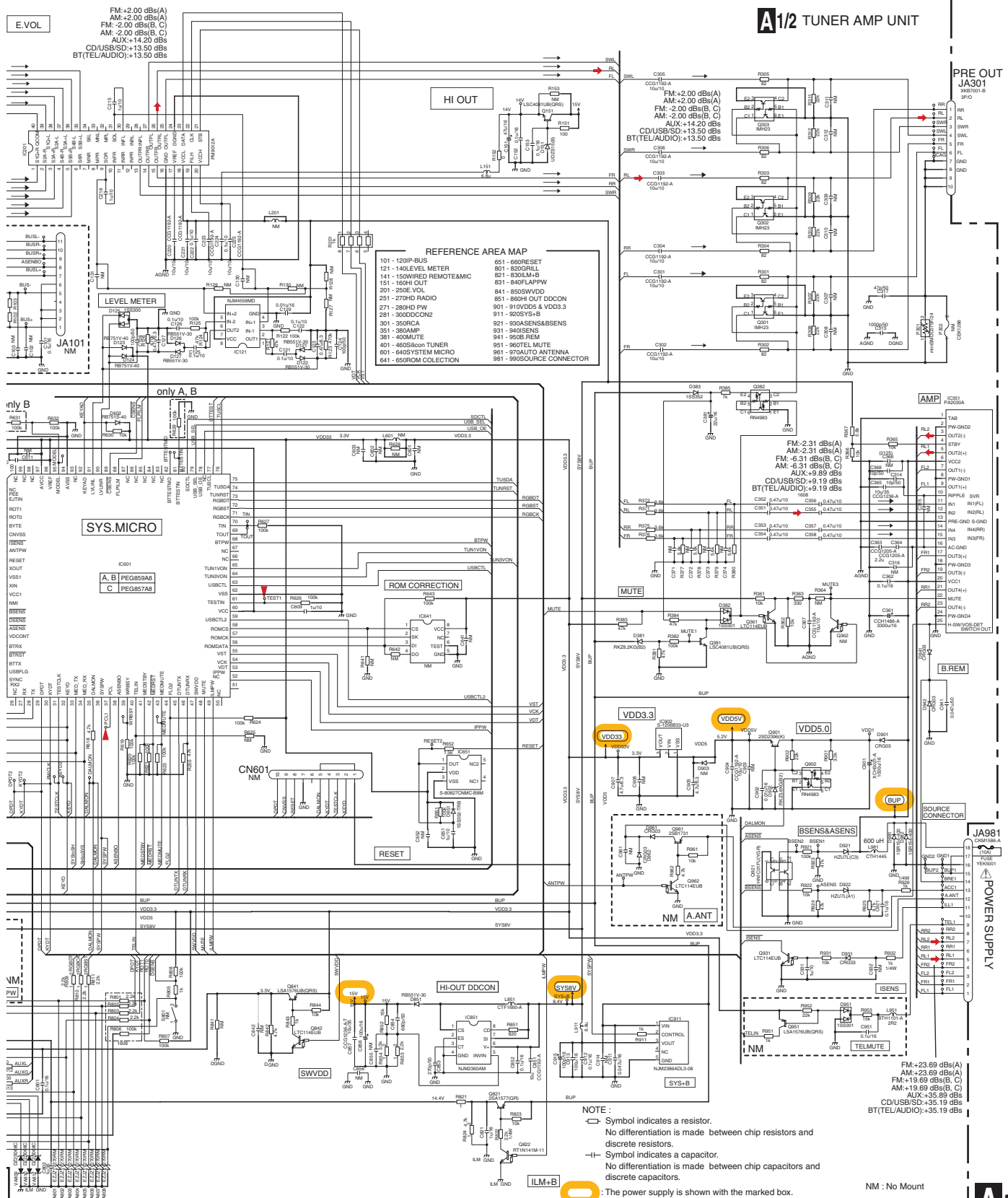
DEH-6400BT/XSEW5

B CN1801

CN802

A-b 1/2

## A1/2 TUNER AMP UNIT



A1/2

FM: +2.00 dBs(A)  
AM: +2.00 dBs(A)  
FM: -2.00 dBs(B, C)  
AM: -2.00 dBs(B, C)  
AUX: +14.20 dBs  
CD/USB/SD: +13.50 dBs  
(TEL/AUDIO): +13.50 dBs

A-b 1/2

FM: +2.00 dBs(A)  
AM: +2.00 dBs(A)  
FM: -2.00 dBs(B, C)  
AM: -2.00 dBs(B, C)  
AUX: +14.20 dBs  
CD/USB/SD: +13.50 dBs  
(TEL/AUDIO): +13.50 dBs

HI OUT

| REFERENCE AREA MAP |                  |
|--------------------|------------------|
| 101 - 120          | IP-BUS           |
| 121 - 140          | LEVEL METER      |
| 141 - 150          | WIRED REMOTE&MIC |
| 151 - 160          | HI OUT           |
| 201 - 250          | E.VOL            |
| 251 - 270          | HD RADIO         |
| 271 - 280          | HD PW            |
| 281 - 300          | DDCON2           |
| 301 - 350          | RCA              |
| 351 - 380          | AMP              |
| 381 - 400          | MUTE             |
| 401 - 460          | Silicon TUNER    |
| 601 - 640          | SYSTEM MICRO     |
| 641 - 650          | ROM COLLECTION   |
| 651 - 660          | RESET            |
| 801 - 820          | GRILL            |
| 821 - 830          | ILM+P            |
| 831 - 840          | FLAPPW           |
| 841 - 850          | SWDD             |
| 851 - 860          | HI OUT DCON      |
| 901 - 910          | VDD5 & VDD3.3    |
| 911 - 920          | SYS+B            |
| 921 - 930          | ASENS&BSENS      |
| 931 - 940          | ISENS            |
| 941 - 960          | B.REM            |
| 961 - 970          | TEL MUTE         |
| 981 - 990          | AUTO ANTENNA     |
|                    | SOURCE CONNECTOR |

LEVEL METER

only A, B

SYS.MICRO

A, B | PEG859A8  
C | PEG857A8

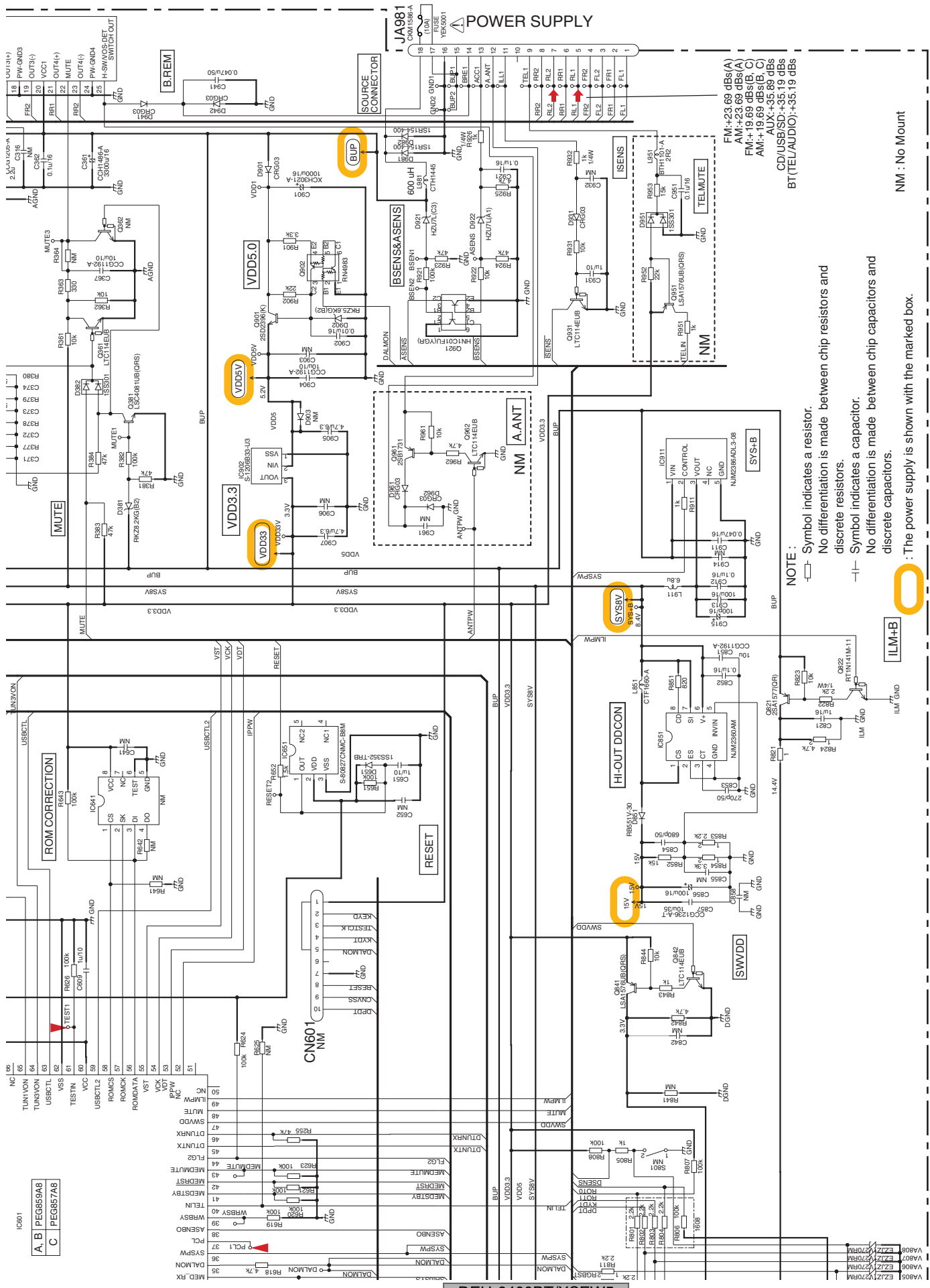
A1/2 TUNER AMP UNIT

PRE OUT  
JA301  
XAV50016  
3P10

AMP  
IC351  
PA259A

ROM CORRECTION

MUTE



DEH-6400BT/XSEW5

NOTE :  
- Symbol indicates a resistor.  
No differentiation is made between chip resistors and discrete resistors.  
- Symbol indicates a capacitor.  
No differentiation is made between chip capacitors and discrete capacitors.  
- The power supply is shown with the marked box.

FM: +23.69 dBs(A)  
AM: +23.69 dBs(A)  
FM: +19.69 dBs(B, C)  
AM: +19.69 dBs(B, C)  
AUX: +35.89 dBs  
CD/USB/SD: +35.19 dBs  
BT (TEL/AUDIO): +35.19 dBs

NM : No Mount

A-b 1/2

A-a A-b

D

E

F

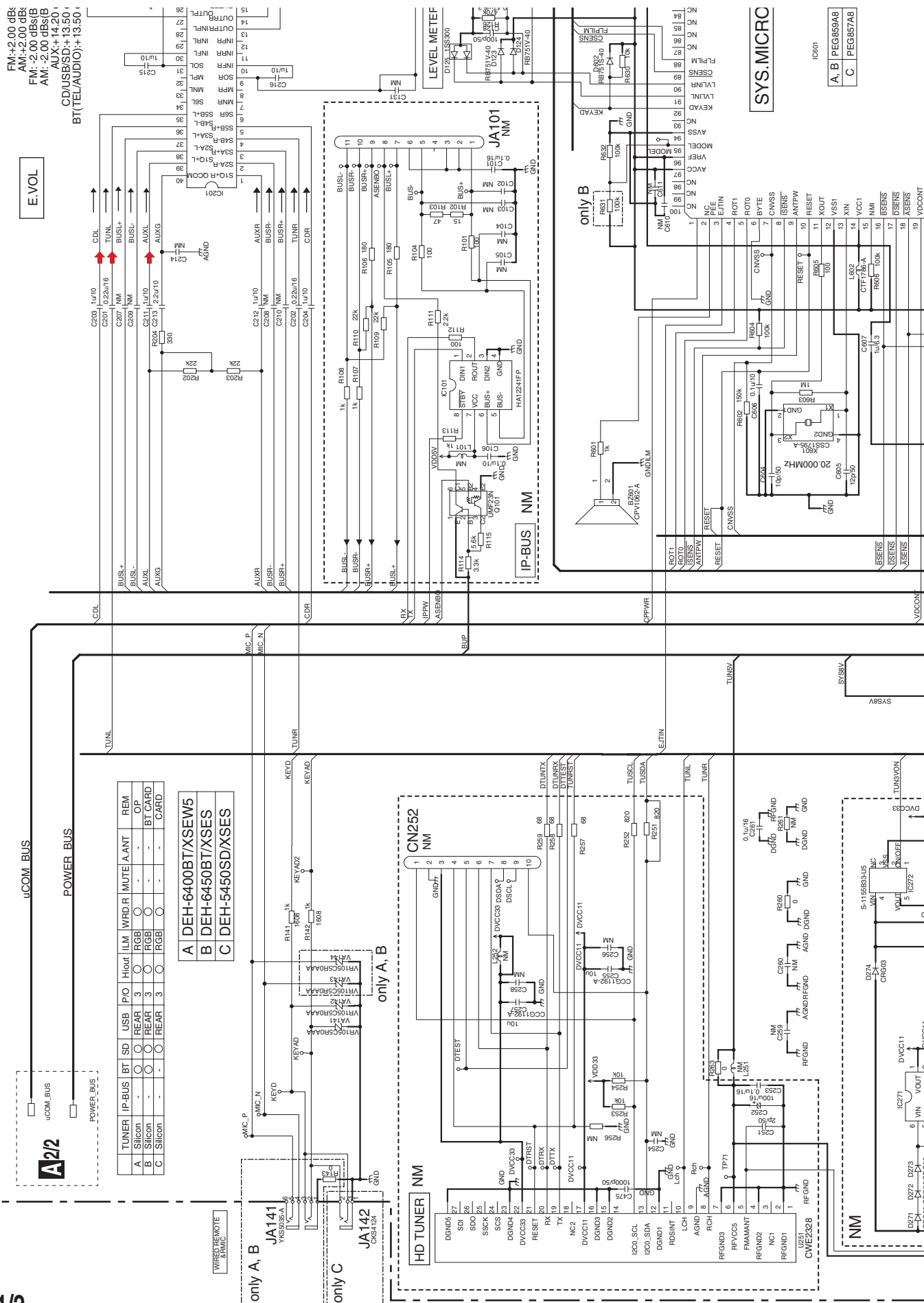
A B C D E F



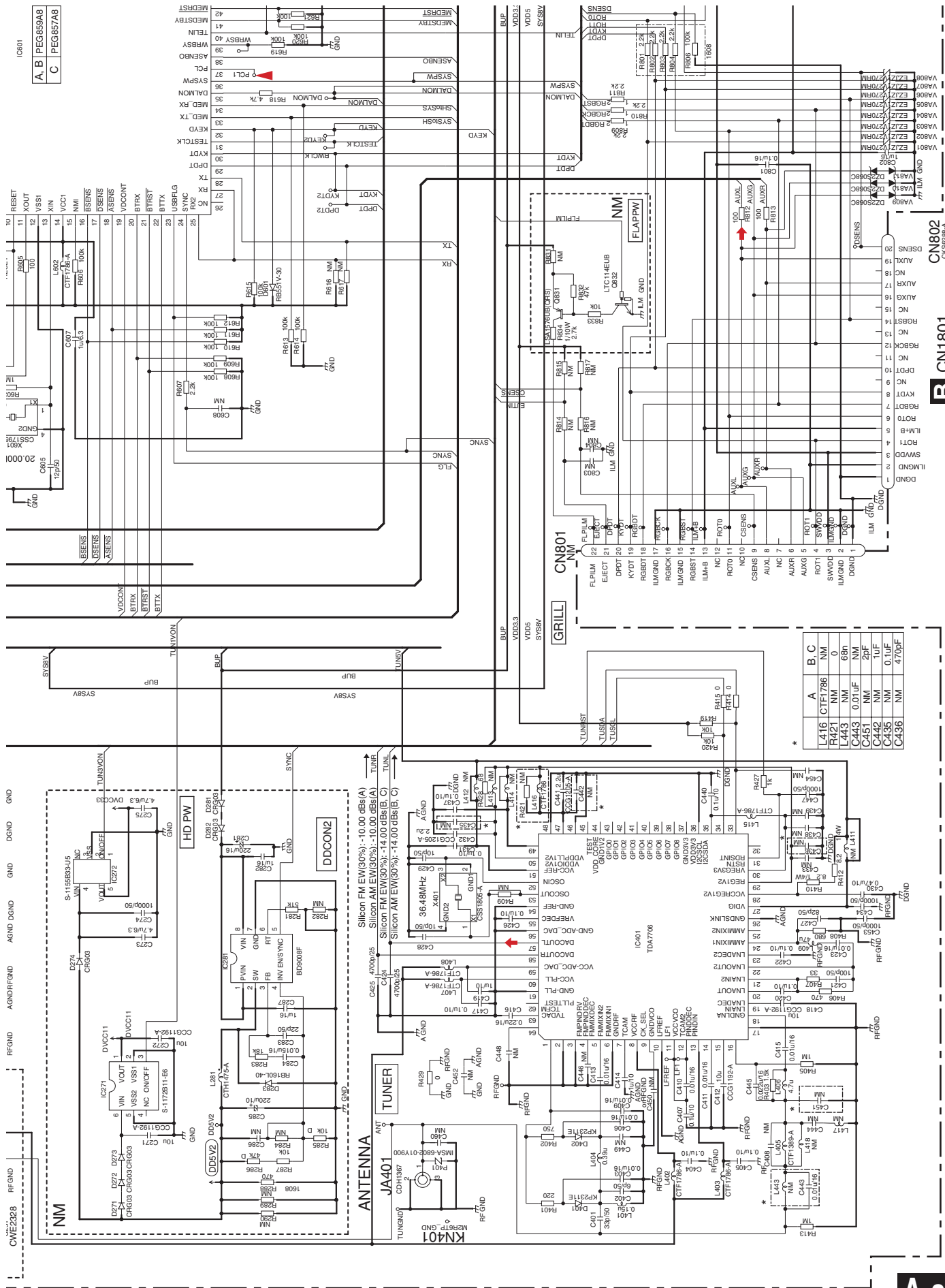
A-a A-b

A-a 1/2

A-b 1/2







A-b 1/2

B CN1801

| A    | B,C        |
|------|------------|
| L416 | CTF1786 NM |
| R421 | NM         |
| C443 | NM         |
| C451 | NM         |
| C452 | NM         |
| C453 | NM         |
| C456 | NM         |

A-a A-b

D

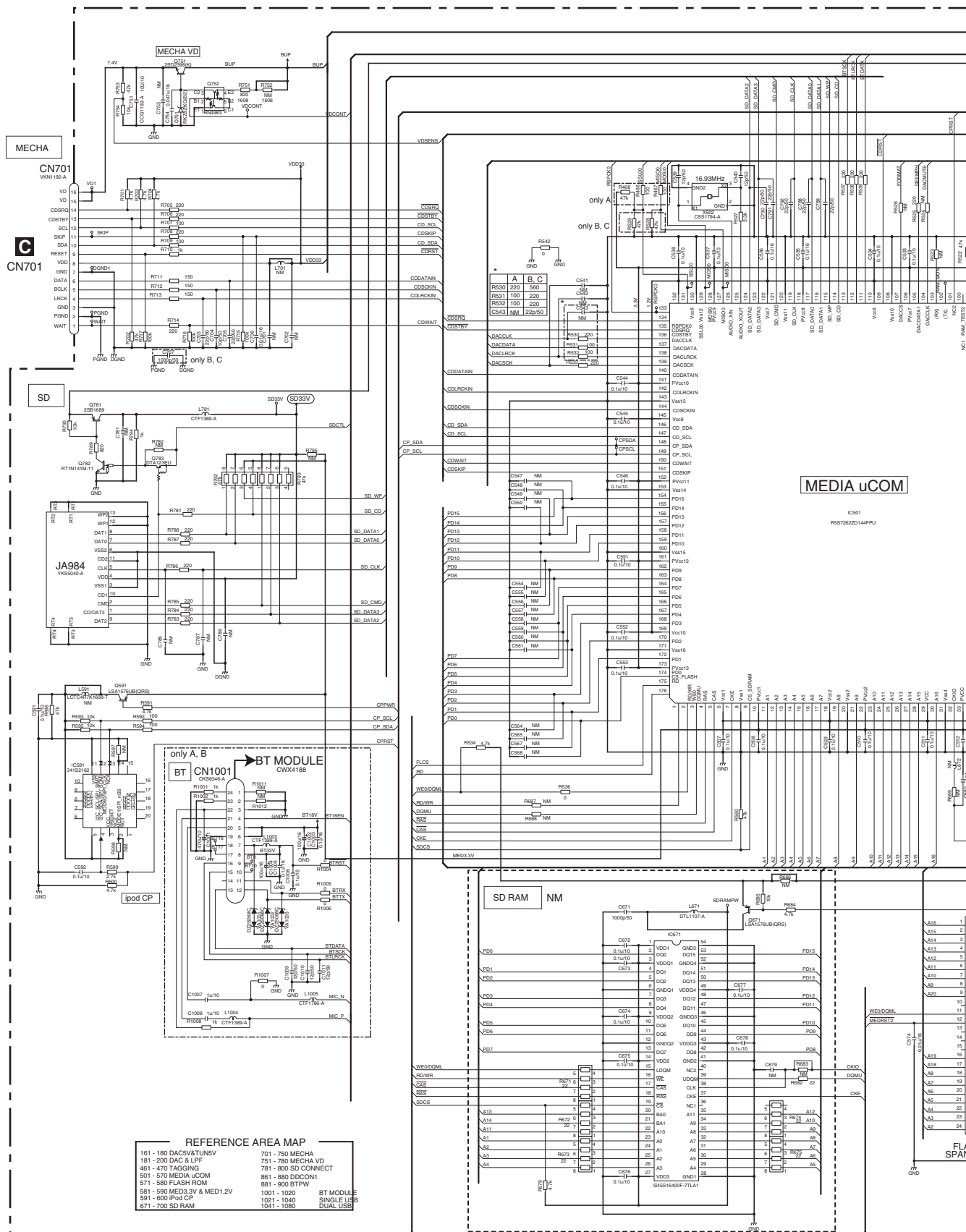
E

F

A-a 1/2

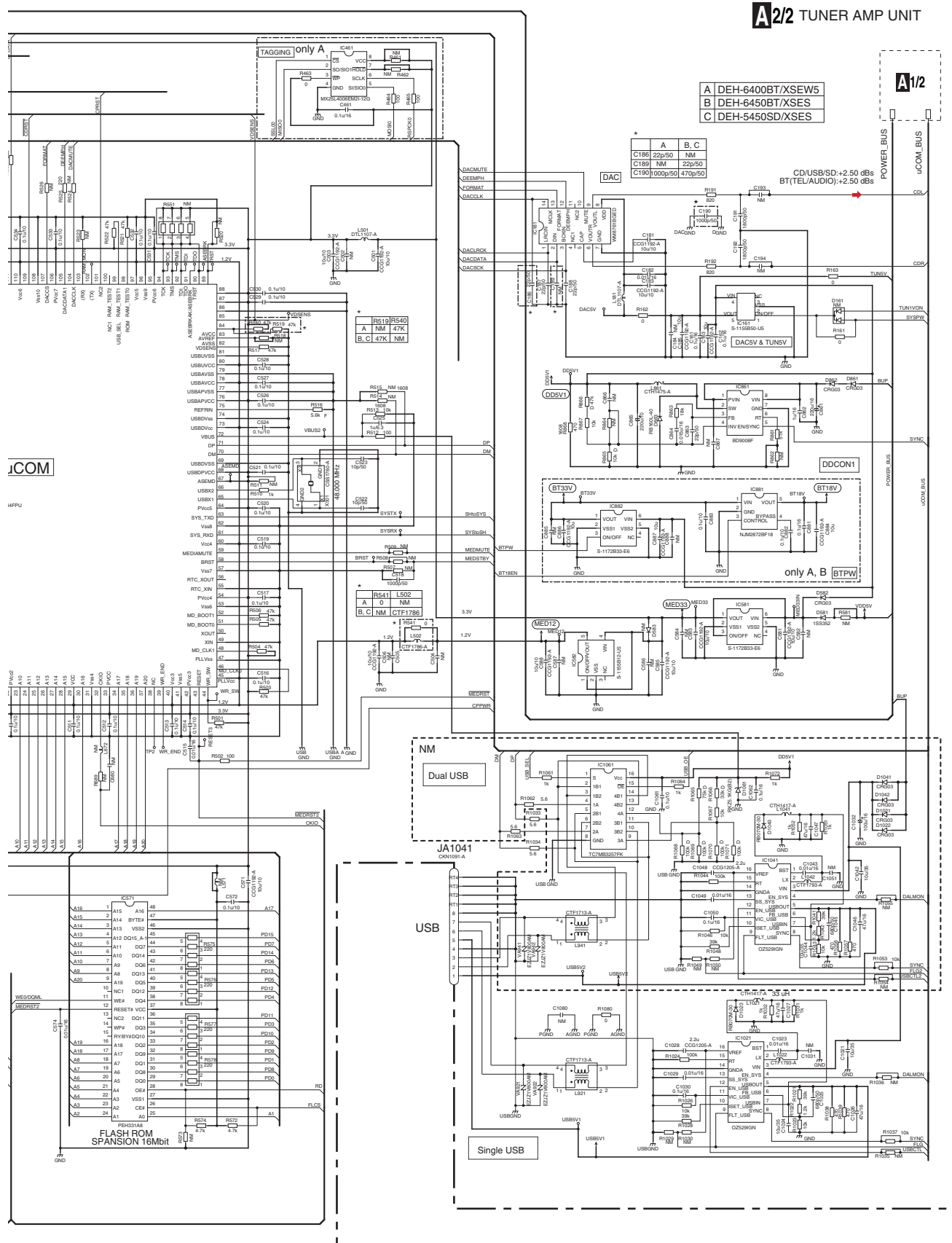
# 10.2 TUNER AMP UNIT(2/2) (GUIDE PAGE)

A-a 2/2



A-b 2/2

## A/2 TUNER AMP UNIT



DEH-6400BT/XSEW5

A/2

# A2/2 TUNER AMP UNIT

A1/2

|   |                  |
|---|------------------|
| A | DEH-6400BT/XSEW5 |
| B | DEH-6450BT/XSES  |
| C | DEH-5450SD/XSES  |

|      | A        | B C     |
|------|----------|---------|
| C186 | 22p/50   | NM      |
| C187 | NM       | 22p/50  |
| C190 | 1000p/50 | 470p/50 |

CD/USB/SD+2.50 dBs  
BT(TEL/AUDIO)+2.50 dBs

DAC

DAC5V

DAC3V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

DAC18V

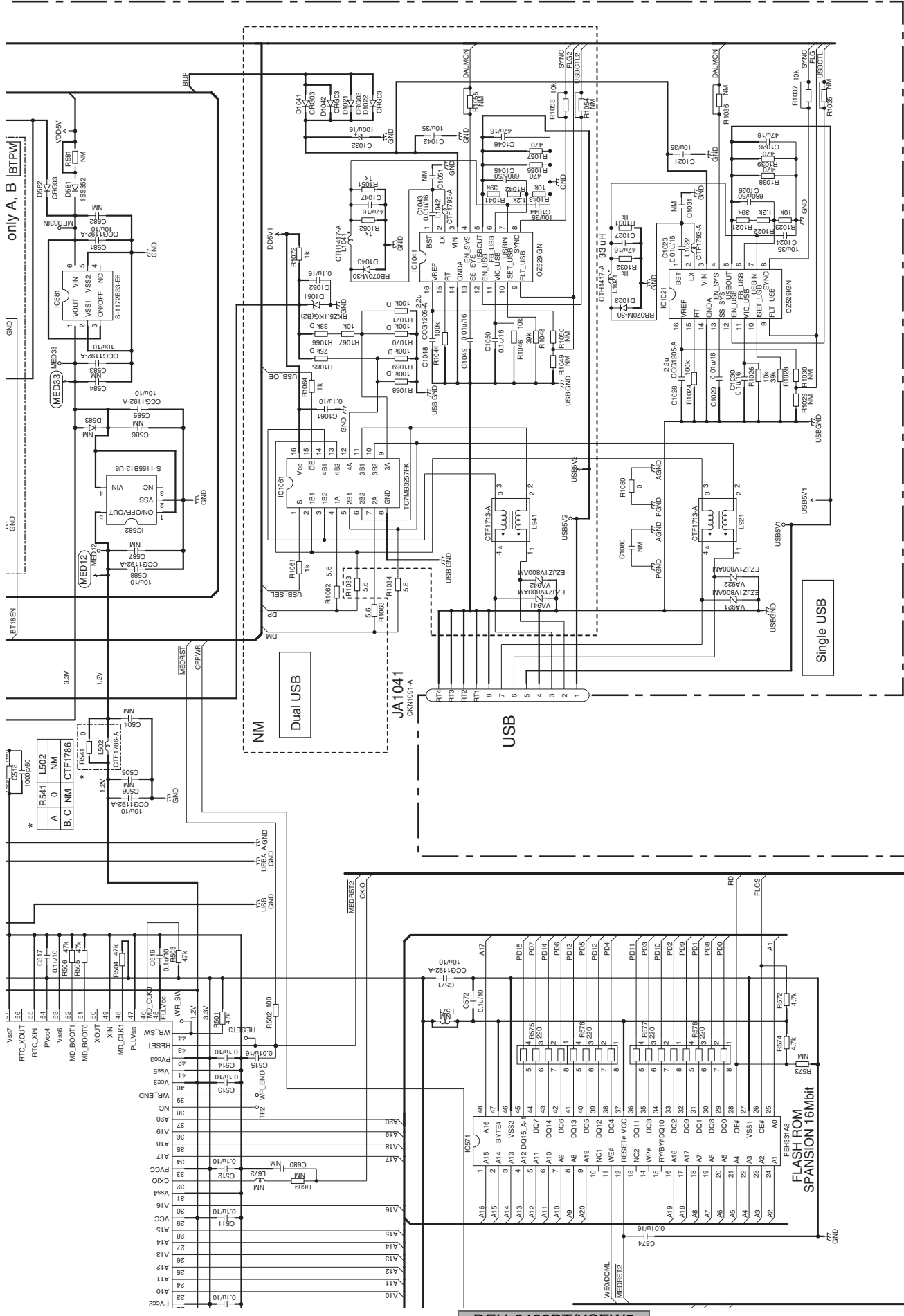
DAC18V

DAC18V

DEH-6400BT/XSEW5

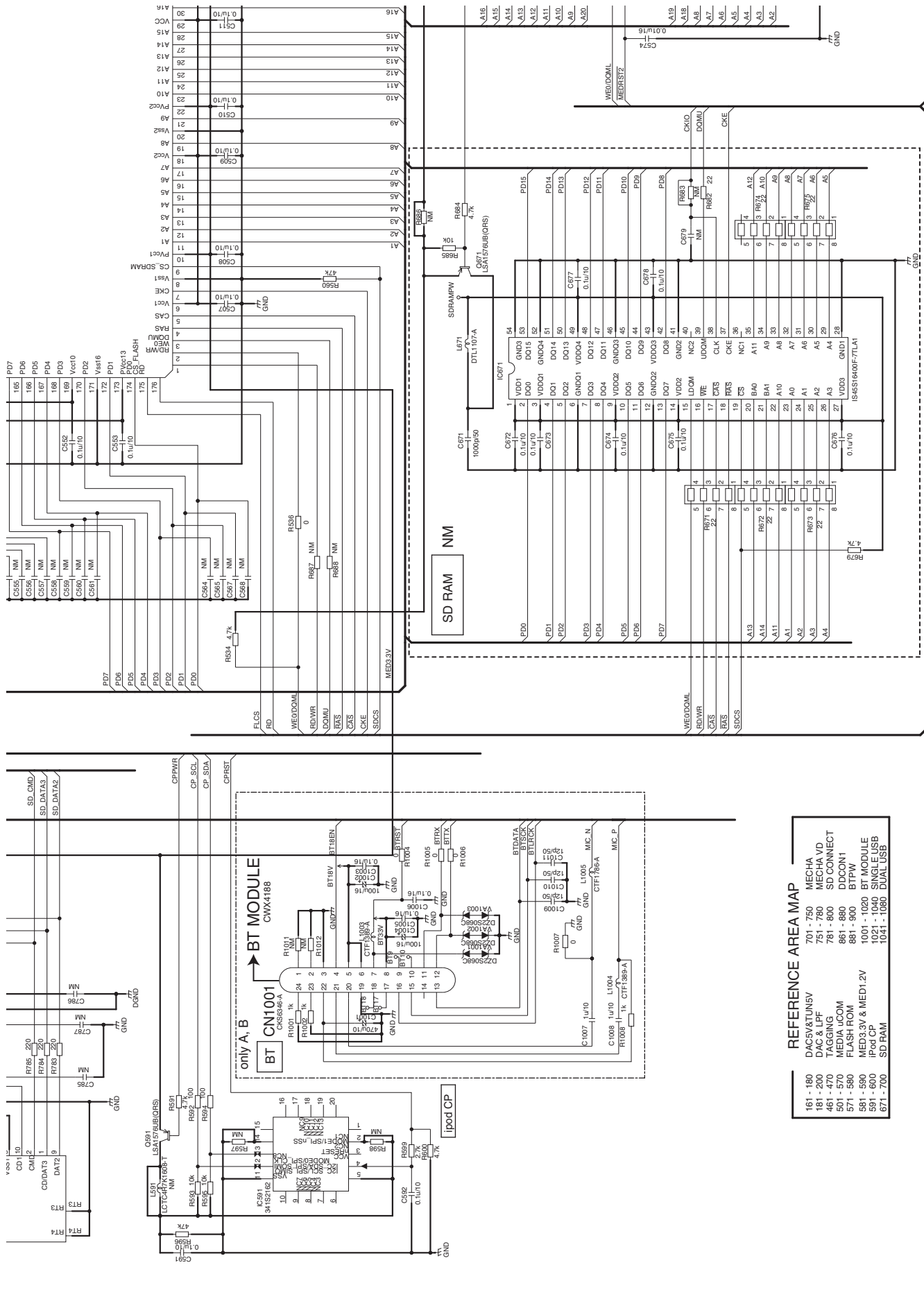
JCOM

4FPU



A-b 2/2





| REFERENCE AREA MAP |             |
|--------------------|-------------|
| 161 - 180          | DAC5V&TUN5V |
| 181 - 200          | DAC & LPF   |
| 461 - 470          | TAGGING     |
| 501 - 570          | MEDIA uCOM  |
| 571 - 580          | FLASH ROM   |
| 581 - 590          | MEDIA uCOM  |
| 591 - 600          | BT MODULE   |
| 601 - 610          | BT MODULE   |
| 611 - 620          | BT MODULE   |
| 621 - 630          | BT MODULE   |
| 631 - 640          | BT MODULE   |
| 641 - 650          | BT MODULE   |
| 651 - 660          | BT MODULE   |
| 661 - 670          | BT MODULE   |
| 671 - 700          | BT MODULE   |

A-b 2/2

A-a A-b

D

E

F

# 10.3 KEYBOARD UNIT

A

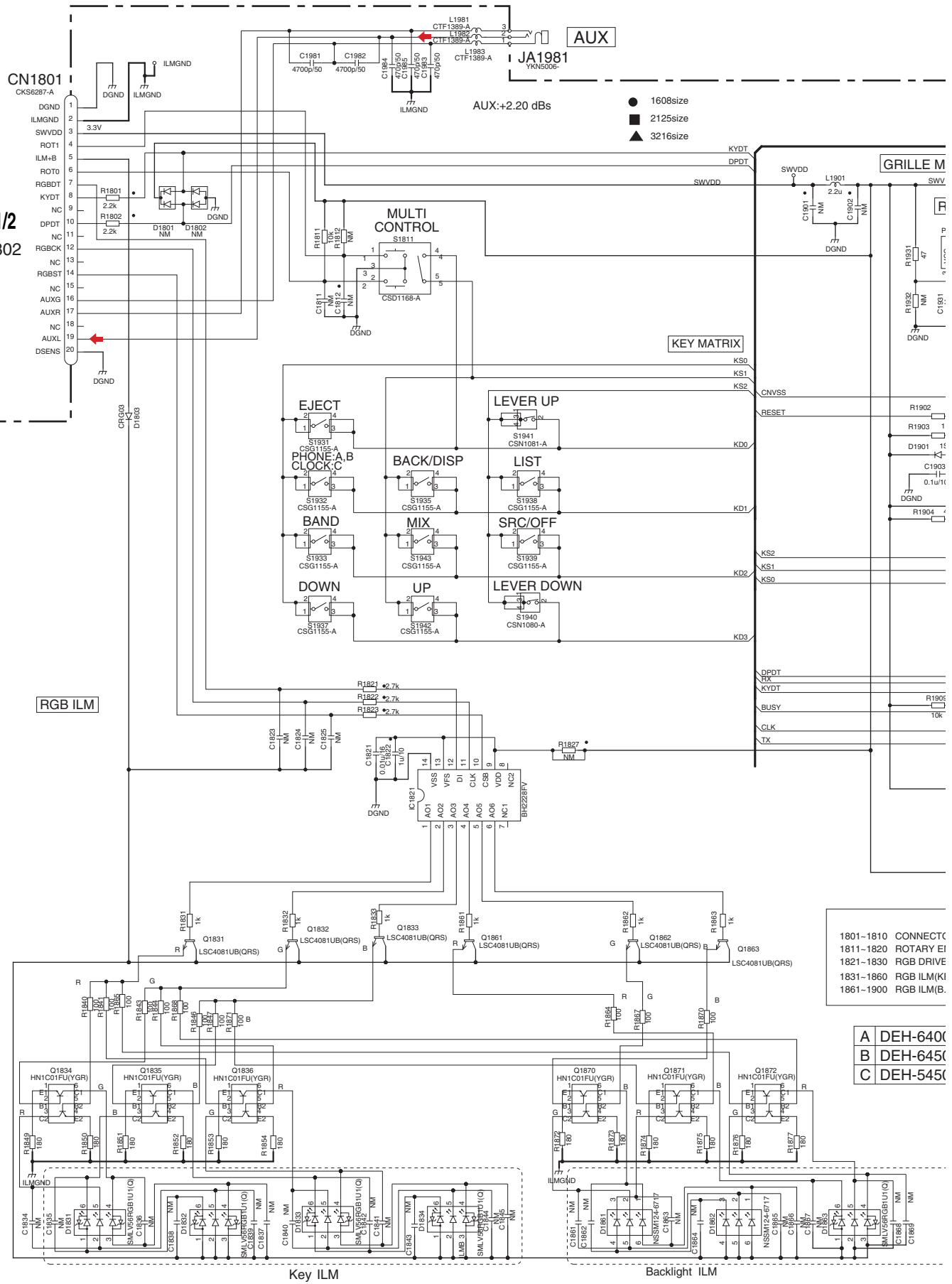
B

C

D

E

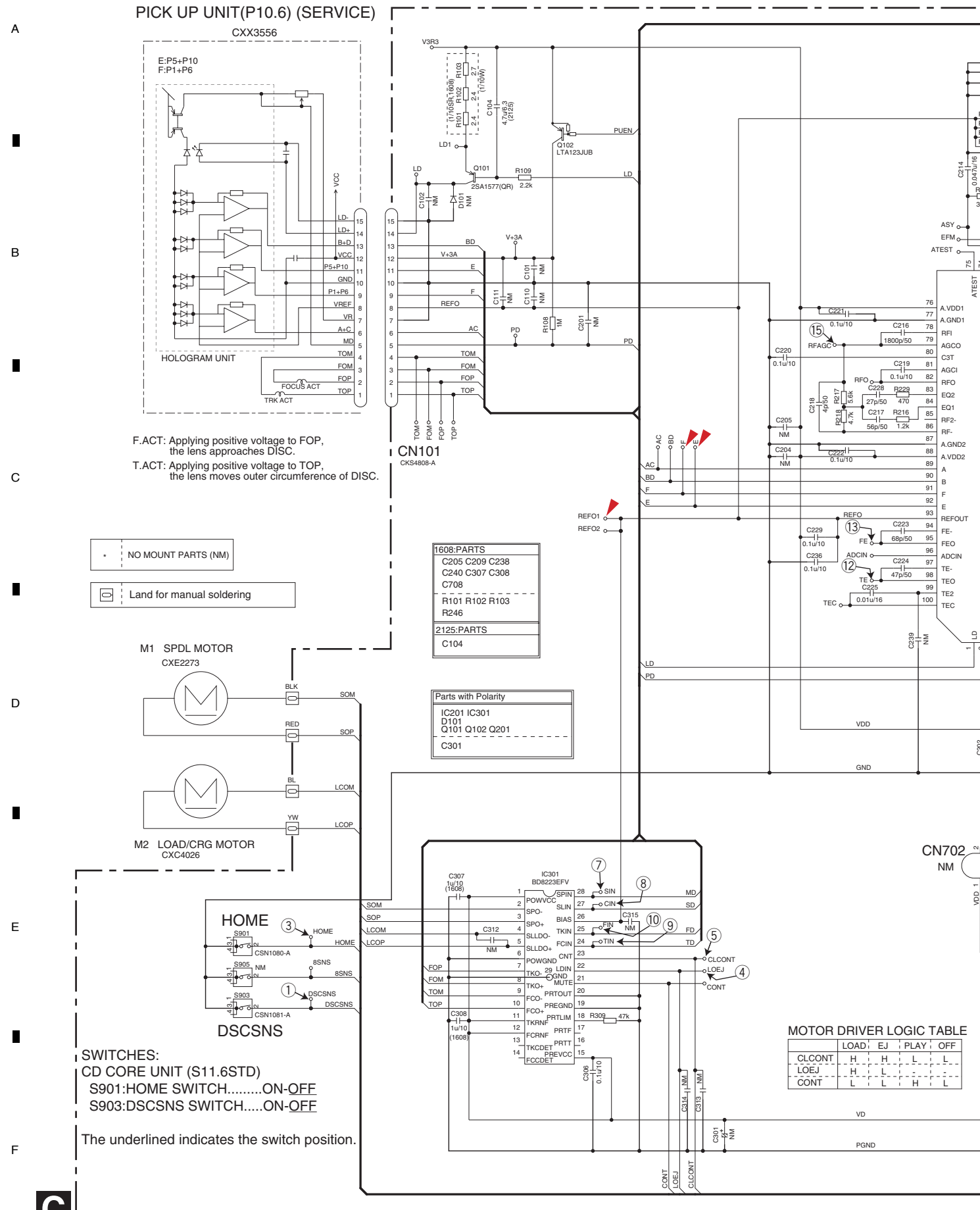
F





## F

# 10.4 CD CORE UNIT (S11.6STD)



## A

C

D

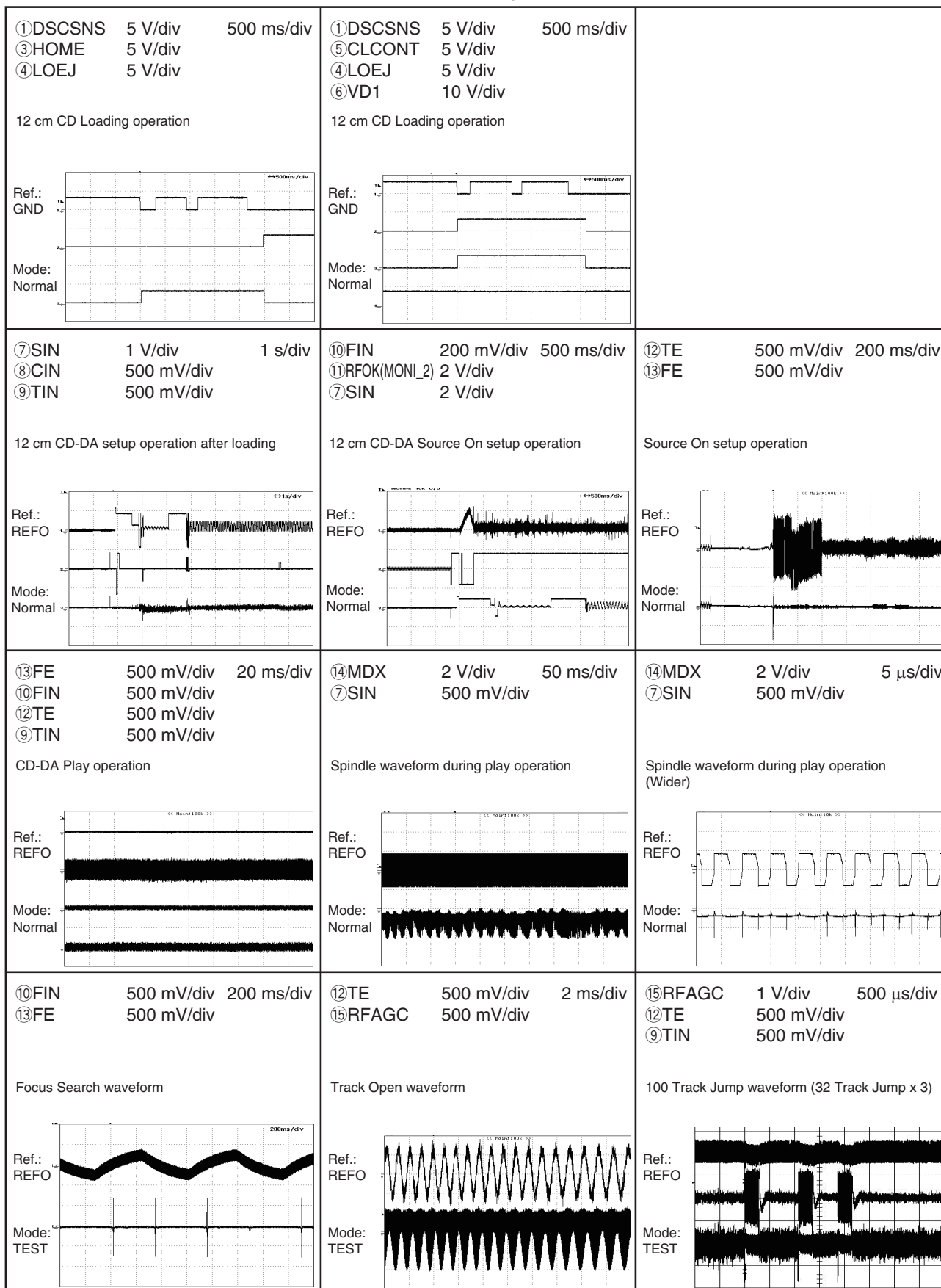
E

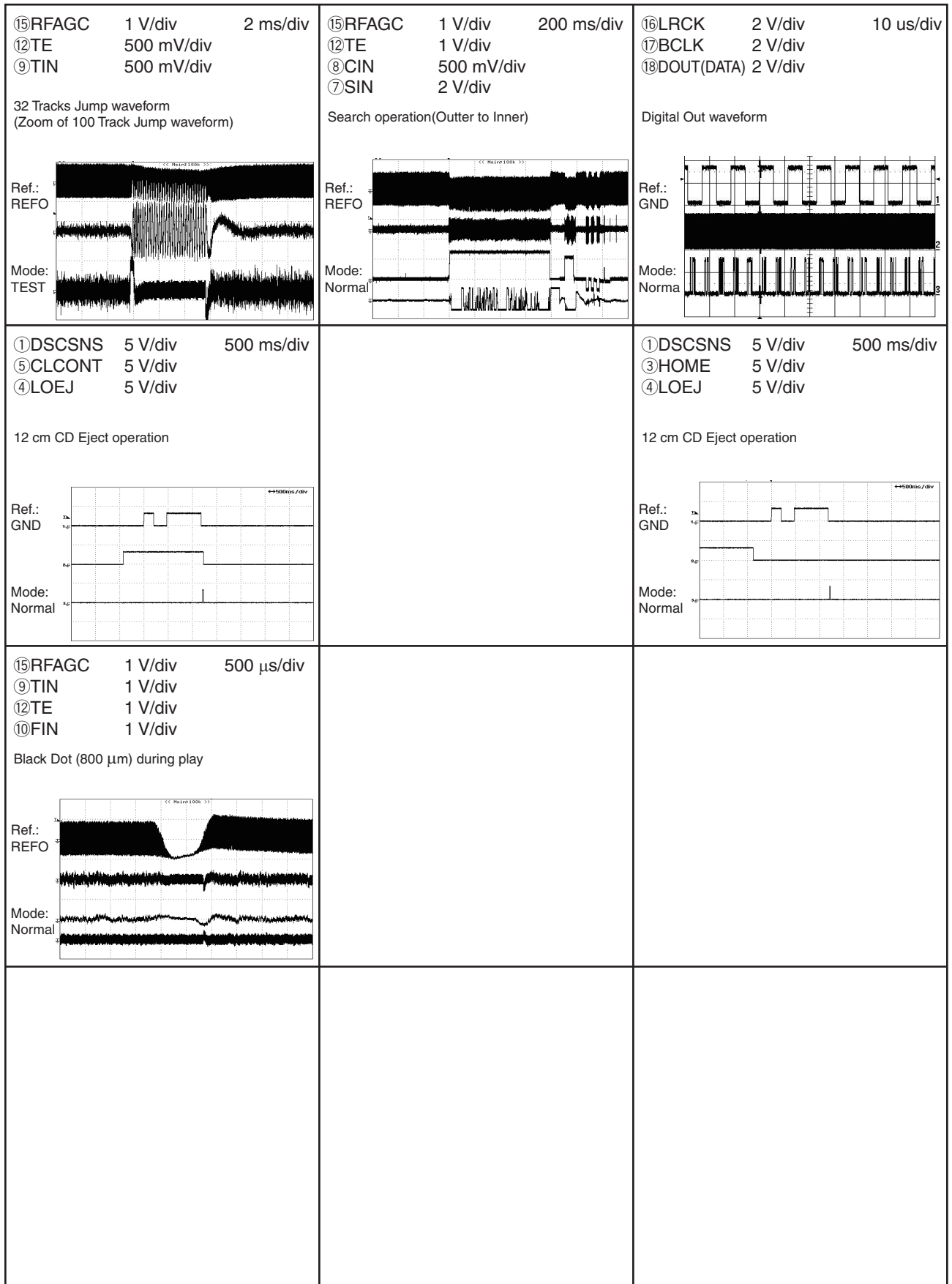
F

# 10.5 WAVEFORMS

## ● CD CORE UNIT(S11.6STD)

Note : 1. The encircled numbers denote measuring points in the circuit diagram.  
2. Reference voltage REFO1(1.65 V)





## 11. PCB CONNECTION DIAGRAM

### 11.1 TUNER AMP UNIT

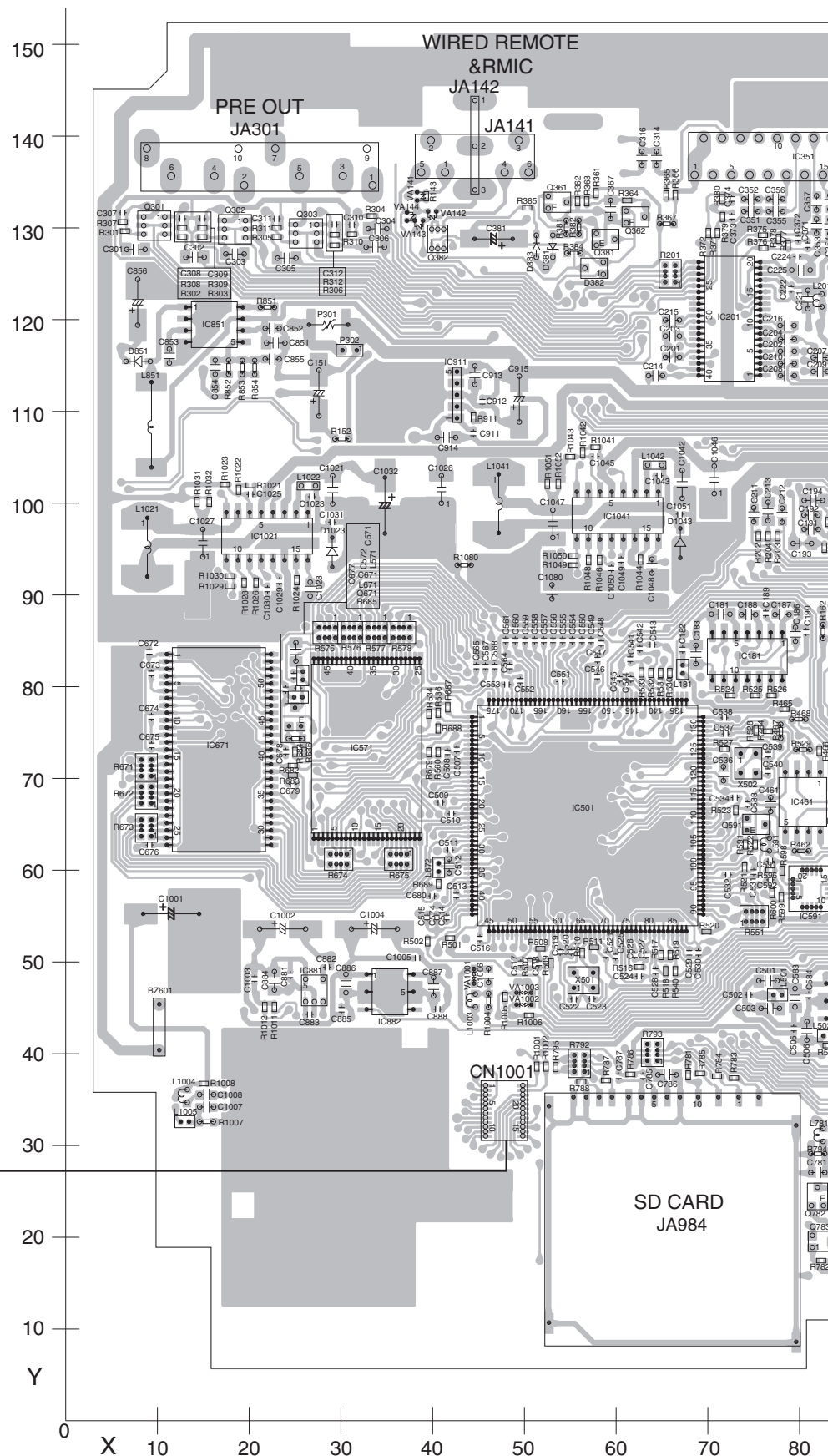
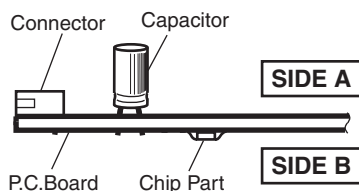
## A TUNER AMP UNIT

### NOTE FOR PCB DIAGRAMS

1. The parts mounted on this PCB include all necessary parts for several destination.

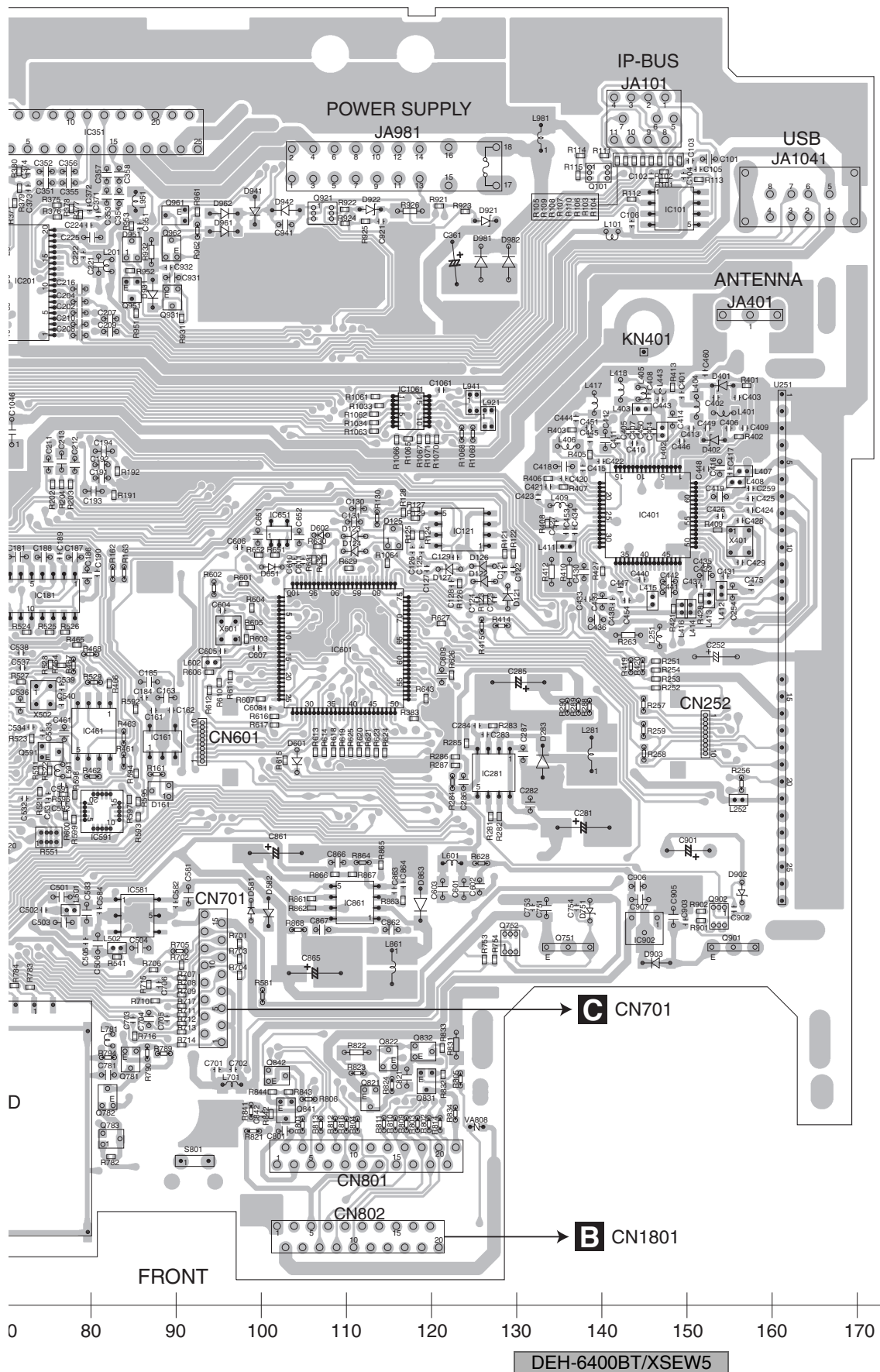
For further information for respective destinations, be sure to check with the schematic diagram.

## 2. Viewpoint of PCB diagrams

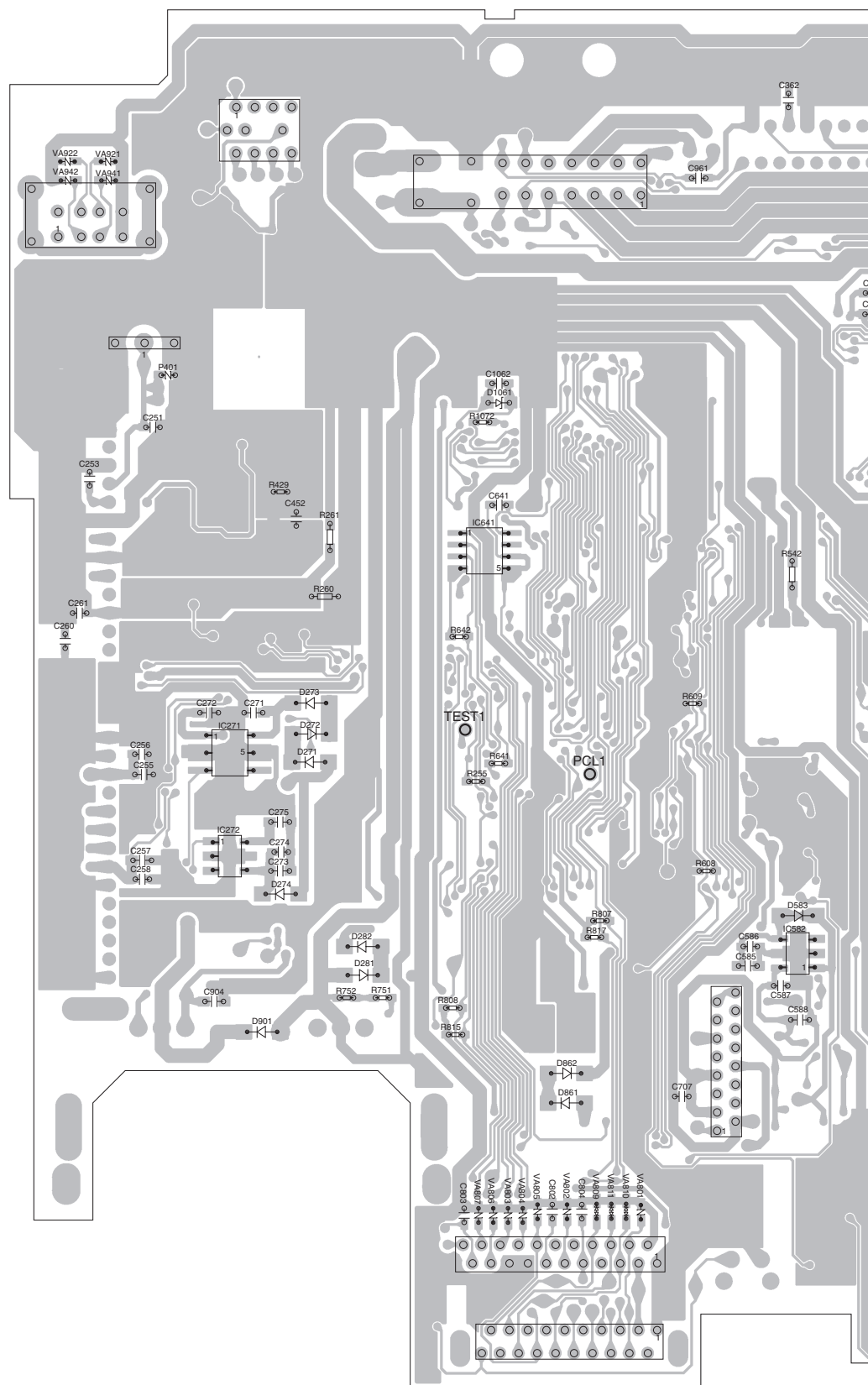




SIDE A



## A TUNER AMP UNIT



170 160 150 140 130 120 110 100 90 80

DEH-6400BT/XSEW5



## SIDE B

A

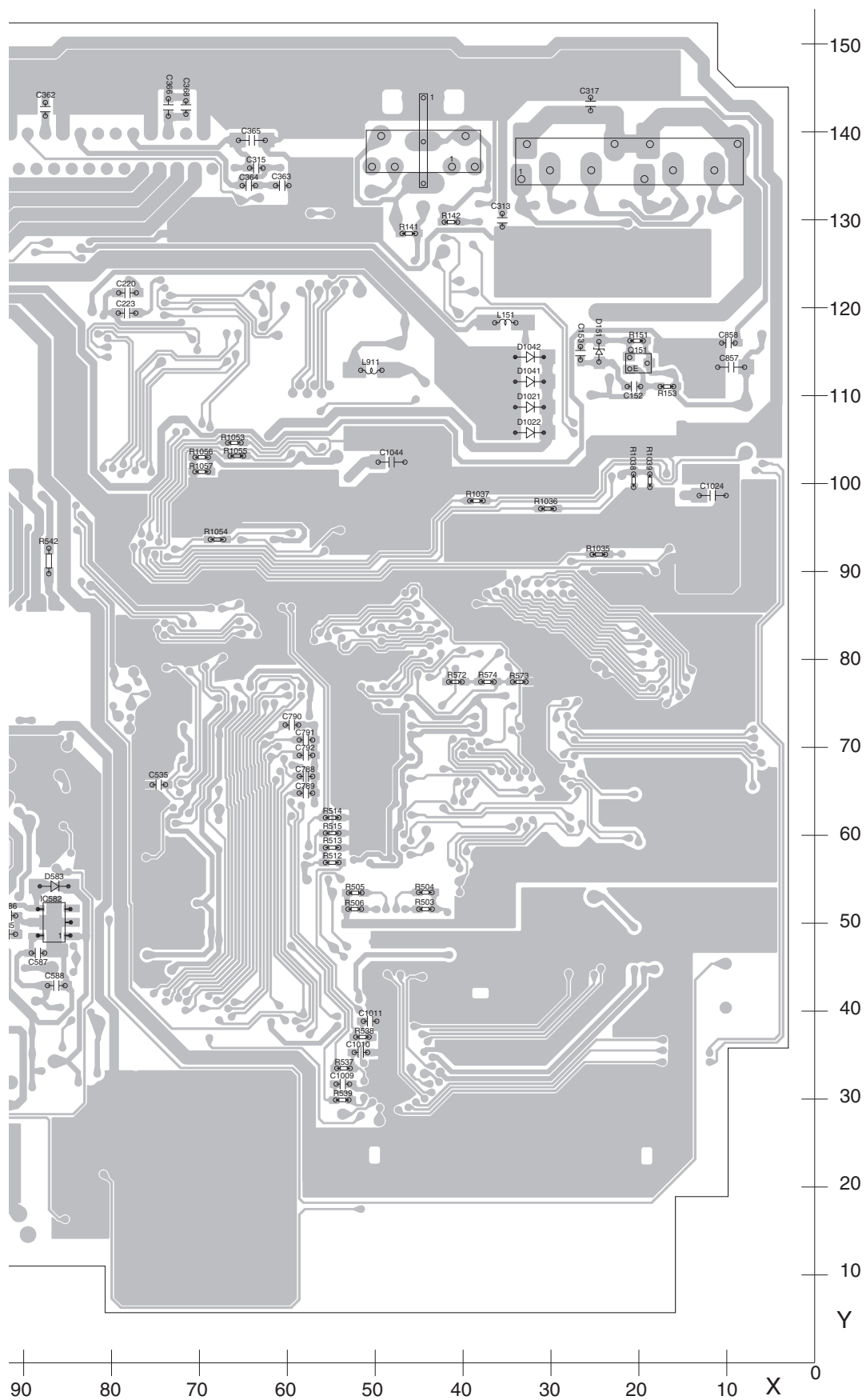
B

C

D

E

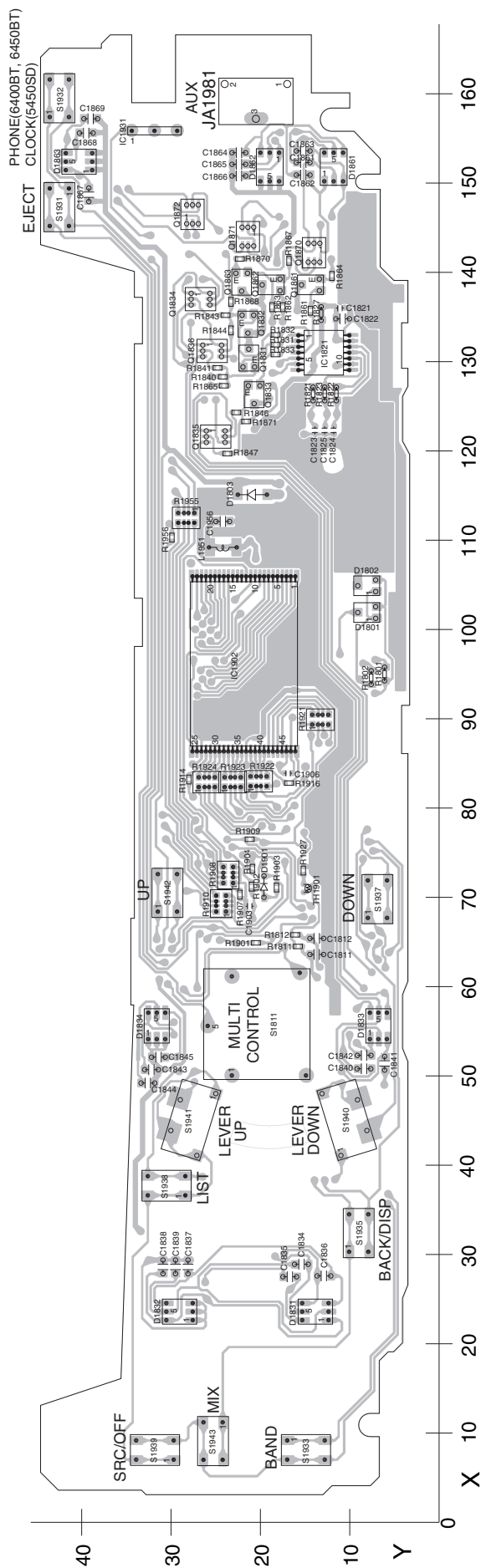
F



## 11.2 KEYBOARD UNIT

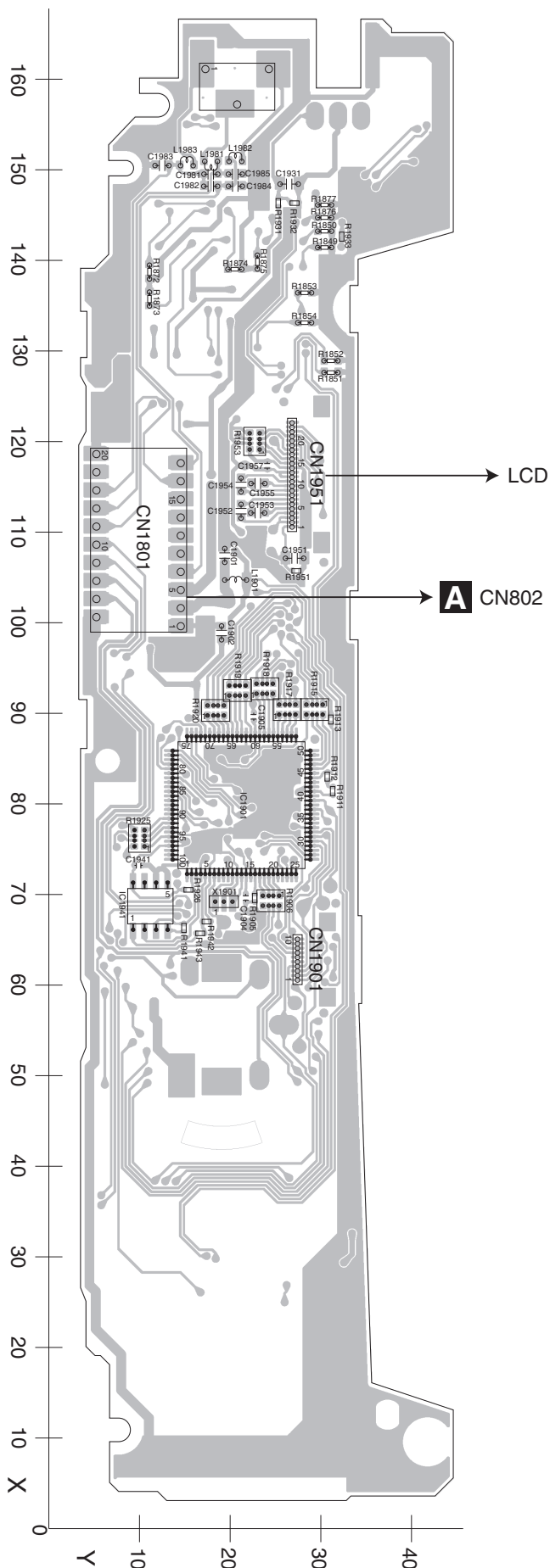
## B KEYBOARD UNIT

## SIDE A



# B KEYBOARD UNIT

SIDE B



DEH-6400BT/XSEW5

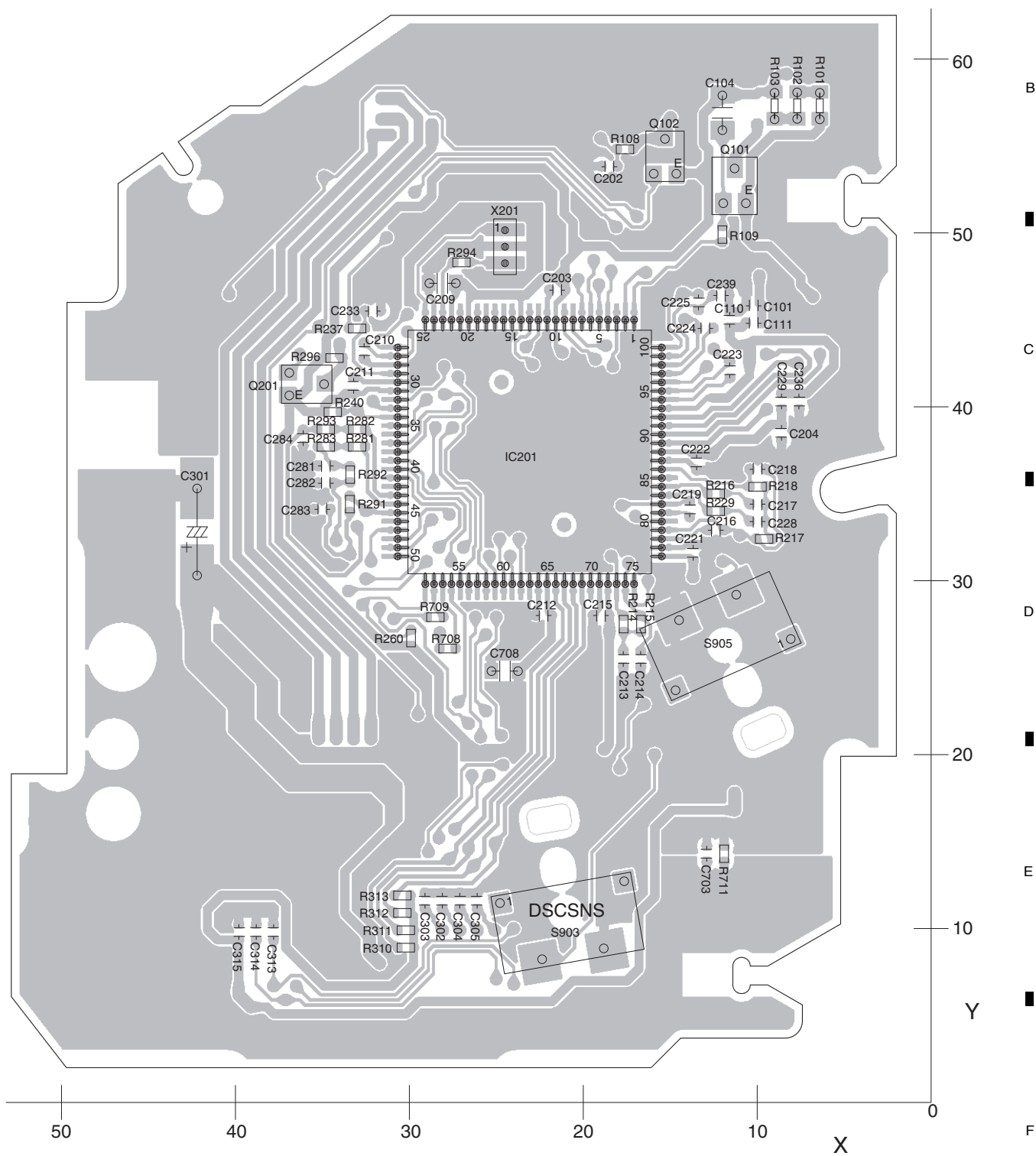
B



**C** CD CORE UNIT (S11.6STD)

## SIDE B

A



## 12. ELECTRICAL PARTS LIST

### NOTE:

- Parts whose parts numbers are omitted are subject to being not supplied.
- The part numbers shown below indicate chip components.

#### Chip Resistor

RS1/○○○○○J, RS1/○○○○○J

#### Chip Capacitor (except for CQS.....)

CKS....., CCS....., CSZS.....

- The  $\triangle$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Meaning of the figures and others in the parentheses in the parts list.

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

- The expression of the unit in this manual is shown by u instead of  $\mu$ . Please do not make a mistake.

|   | <u>Circuit Symbol and No.</u>              | <u>Part No.</u> | <u>Circuit Symbol and No.</u> | <u>Part No.</u>                      |
|---|--------------------------------------------|-----------------|-------------------------------|--------------------------------------|
| A | <b>A:DEH-6400BT/XSEW5</b>                  |                 | IC 582                        | (B,87,50) IC S-1155B12-U5            |
|   | <b>B:DEH-6450BT/XSES</b>                   |                 | IC 591                        | (A,81,58) IC 341S2162                |
|   | <b>C:DEH-5450SD/XSES</b>                   |                 | IC 601                        | (A,110,77) IC(A,B) PEG859A8          |
| C | <b>Unit Number : YWM5568(A)</b>            |                 |                               | (A,110,77) IC(C) PEG857A8            |
|   | <b>Unit Number : YWM5570(B)</b>            |                 | IC 651                        | (A,102,91) IC S-80827CNMC-B8M        |
|   | <b>Unit Number : YWM5562(C)</b>            |                 | IC 851                        | (A,16,119) IC NJM2360AM              |
| D | <b>Unit Name : Tuner Amp Unit</b>          |                 | IC 861                        | (A,111,47) IC BD9008F                |
|   | <b>Unit Number : (A)</b>                   |                 | IC 881                        | (A,27,47) IC(A,B) NJM2872BF18        |
|   | <b>Unit Number : (B)</b>                   |                 | IC 882                        | (A,35,47) IC(A,B) S-1172B33-E6       |
| E | <b>Unit Number : (C)</b>                   |                 | IC 902                        | (A,145,44) IC S-1206B33-U3           |
|   | <b>Unit Name : Keyboard Unit</b>           |                 | IC 911                        | (A,37,112) IC NJM2386ADL3-08         |
|   | <b>Unit Number : CWX4023</b>               |                 | IC 1021                       | (A,22,96) IC OZ529IGN                |
| F | <b>Unit Name : CD Core Unit (S11.6STD)</b> |                 | Q 151                         | (B,20,114) Transistor LSC4081UB      |
|   |                                            |                 | Q 301                         | (A,10,130) Transistor IMH23          |
|   |                                            |                 | Q 302                         | (A,18,130) Transistor IMH23          |
| A |                                            |                 | Q 303                         | (A,26,129) Transistor IMH23          |
|   |                                            |                 | Q 361                         | (A,54,133) Transistor LTC114EUB      |
|   |                                            |                 | Q 381                         | (A,59,129) Transistor LSC4081UB      |
| B |                                            |                 | Q 382                         | (A,41,129) Chip Transistor RN4983    |
|   |                                            |                 | Q 591                         | (A,75,65) Transistor LSA1576UB       |
|   |                                            |                 | Q 751                         | (A,136,41) Transistor 2SD2396        |
| C |                                            |                 | Q 752                         | (A,129,43) Chip Transistor RN4983    |
|   |                                            |                 | Q 781                         | (A,85,29) Chip Transistor 2SB1689    |
|   |                                            |                 | Q 782                         | (A,82,24) Transistor RT1N141M-11     |
| D |                                            |                 | Q 783                         | (A,82,20) Transistor DTA123EU        |
|   |                                            |                 | Q 821                         | (A,113,24) Transistor 2SA1577        |
|   |                                            |                 | Q 822                         | (A,115,29) Transistor RT1N141M-11    |
| E |                                            |                 | Q 841                         | (A,103,23) Transistor LSA1576UB      |
|   |                                            |                 | Q 842                         | (A,102,27) Transistor LTC114EUB      |
|   |                                            |                 | Q 901                         | (A,155,41) Transistor 2SD2396        |
| F |                                            |                 | Q 902                         | (A,154,46) Chip Transistor RN4983    |
|   |                                            |                 | Q 921                         | (A,107,128) Chip Transistor HN1C01FU |
|   |                                            |                 | Q 931                         | (A,90,118) Transistor LTC114EUB      |
| A | IC 121 (A,124,91) IC NJM4558MD             |                 | D 121                         | (A,129,83) Diode RB551V-30           |
|   | IC 161 (A,88,66) IC S-1155B50-U5           |                 | D 122                         | (A,126,85) Diode RB551V-30           |
|   | IC 181 (A,74,83) IC WM8761BGED             |                 | D 123                         | (A,111,90) Diode RB751V-40           |
| B | IC 201 (A,72,120) IC PM9012A               |                 | D 124                         | (A,111,89) Diode RB751V-40           |
|   | IC 351 (A,81,142) IC PA2030A               |                 | D 125                         | (A,116,90) Diode 1SS300              |
|   | IC 401 (A,145,93) IC TDA7706               |                 | D 126                         | (A,126,87) Diode RB551V-30           |
| C | IC 461 (A,80,67) IC(A) MX25L4006EM2I-12G   |                 | D 127                         | (A,122,86) Diode RB551V-30           |
|   | IC 501 (A,57,66) IC R5S7262ZD144FPU        |                 |                               |                                      |
|   | IC 571 (A,33,73) IC PEH331A8               |                 |                               |                                      |
| D | IC 581 (A,85,46) IC S-1172B33-E6           |                 |                               |                                      |
|   |                                            |                 |                               |                                      |
|   |                                            |                 |                               |                                      |

### MISCELLANEOUS

| 5                                     | 6               | 7                                                                                               | 8                  |
|---------------------------------------|-----------------|-------------------------------------------------------------------------------------------------|--------------------|
| <u>Circuit Symbol and No.</u>         | <u>Part No.</u> | <u>Circuit Symbol and No.</u>                                                                   | <u>Part No.</u>    |
| D 151 (B,25,115) Diode                | UDZS15(B)       | X 601 (A,96,79) Oscillator 20.000 MHz                                                           | CSS1795            |
| D 381 (A,53,128) Diode                | RKZ8.2KG(B2)    | P 301 (A,29,119) Poly Switch                                                                    | MINISMD C075F/24-2 |
| D 382 (A,58,126) Diode                | 1SS301          | P 401 (B,155,113) Surge Protector                                                               | IMSA-6802-01Y900   |
| D 383 (A,51,128) Diode                | 1SS352          | BZ601 (A,10,43) Buzzer                                                                          | CPV1062            |
| D 401 (A,154,108) Diode               | KP2311E         | VA141 (A,38,133) Varistor                                                                       | VR105C5R0AAA       |
| D 402 (A,153,102) Diode               | KP2311E         | VA142 (A,40,132) Varistor                                                                       | VR105C5R0AAA       |
| D 581 (A,99,46) Diode                 | 1SS352          | VA143 (A,39,131) Varistor(A,B)                                                                  | VR105C5R0AAA       |
| D 582 (A,101,46) Diode                | CRG03           | VA144 (A,37,131) Varistor(A,B)                                                                  | VR105C5R0AAA       |
| D 601 (A,104,64) Diode                | RB551V-30       | VA801 (B,104,22) Varistor                                                                       | EZJZ1V270RM        |
| D 602 (A,107,90) Diode                | RB751S-40       | VA802 (B,112,22) Varistor                                                                       | EZJZ1V270RM        |
| D 651 (A,101,87) Diode                | 1SS352          | VA803 (B,118,22) Varistor                                                                       | EZJZ1V270RM        |
| D 751 (A,139,46) Diode                | RKZ8.2KG(B2)    | VA804 (B,116,22) Varistor                                                                       | EZJZ1V270RM        |
| D 851 (A,8,115) Diode                 | RB551V-30       | VA805 (B,115,22) Varistor                                                                       | EZJZ1V270RM        |
| D 861 (B,112,34) Diode                | CRG03           | VA806 (B,120,22) Varistor                                                                       | EZJZ1V270RM        |
| D 862 (B,112,37) Diode                | CRG03           | VA807 (B,121,22) Varistor                                                                       | EZJZ1V270RM        |
| D 863 (A,119,47) Diode                | RB160L-40       | VA808 (A,125,21) Varistor                                                                       | EZJZ1V270RM        |
| D 901 (B,145,42) Diode                | CRG03           | VA809 (B,108,22) Diode                                                                          | DZ2S068C           |
| D 902 (A,156,48) Diode                | RKZ5.6KG(B2)    | VA810 (B,105,22) Diode                                                                          | DZ2S068C           |
| D 921 (A,126,127) Diode               | HZU7L(C3)       | VA811 (B,107,22) Diode                                                                          | DZ2S068C           |
| D 922 (A,113,129) Diode               | HZU7L(A1)       | VA921 (B,161,136) Varistor                                                                      | EZJZ1V800AM        |
| D 931 (A,87,119) Diode                | CRG03           | VA922 (B,166,136) Varistor                                                                      | EZJZ1V800AM        |
| D 941 (A,99,129) Diode                | CRG03           | VA1001 (A,45,48) Diode(A,B)                                                                     | DZ2S068C           |
| D 942 (A,103,129) Diode               | CRG03           | VA1002 (A,50,45) Diode(A,B)                                                                     | DZ2S068C           |
| D 981 (A,126,122) Diode               | 1SR154-400      | VA1003 (A,50,47) Diode(A,B)                                                                     | DZ2S068C           |
| D 982 (A,129,122) Diode               | 1SR154-400      | CN701 (A,94,38) Connector                                                                       | VKN1192            |
| D 1021 (B,32,109) Diode               | CRG03           | CN802 (A,111,4) Connector                                                                       | CKS6288            |
| D 1022 (B,32,106) Diode               | CRG03           | CN1001 (A,48,34) Connector(A,B)                                                                 | CKS6346            |
| D 1023 (A,29,95) Diode                | DB2X41400       | JA141 (A,45,141) Jack(A,B)                                                                      | YKS5035            |
| D 1061 (B,119,110) Diode              | RKZ5.1KG(B2)    | JA142 (A,45,139) Connector(C)                                                                   | CKS4124            |
| L 151 (B,35,118) Inductor             | LCTAW6R8J2520   | JA301 (A,21,141) Pin Jack                                                                       | YKB5016            |
| L 181 (A,67,82) Chip Ferrite Bead     | DTL1107         | JA981 (A,116,141) Plug                                                                          | CKM1586            |
| L 401 (A,154,105) Chip Coil           | LCTAWR15J2520   | JA984 (A,66,21) Connector                                                                       | YKS5040            |
| L 402 (A,147,103) Inductor            | CTF1786         | JA1041 (A,163,135) Jack                                                                         | CKN1091            |
| L 403 (A,145,105) Inductor            | CTF1786         |  Fuse (10 A) | YEK5001            |
| L 404 (A,151,106) Chip Coil           | LCTAWR39J2520   | <b>RESISTORS</b>                                                                                |                    |
| L 405 (A,144,107) Inductor            | CTF1389         | R 121 (A,129,88)                                                                                | RS1/16SS473J       |
| L 406 (A,136,101) Chip Coil           | LCTAW4R7J2520   | R 122 (A,130,88)                                                                                | RS1/16SS104J       |
| L 407 (A,157,98) Inductor             | CTF1786         | R 123 (A,126,83)                                                                                | RS1/16SS474J       |
| L 408 (A,156,97) Inductor             | CTF1786         | R 124 (A,119,90)                                                                                | RS1/16SS473J       |
| L 409 (A,135,94) Chip Coil            | LCTAW470J2520   | R 125 (A,118,90)                                                                                | RS1/16SS104J       |
| L 415 (A,146,83) Inductor             | CTF1786         | R 126 (A,123,85)                                                                                | RS1/16SS474J       |
| L 416 (A,149,82) Inductor(A)          | CTF1786         | R 141 (B,46,128)                                                                                | RS1/10SR102J       |
| L 443 (A,147,107) Inductor(B,C)       | LCYB68NJ1005    | R 142 (B,41,130)                                                                                | RS1/10SR102J       |
| L 501 (A,78,46) Chip Ferrite Bead     | DTL1107         | R 143 (A,39,133) (A,B)                                                                          | RS1/16SS0R0J       |
| L 502 (A,83,42) Inductor(B,C)         | CTF1786         | R 151 (B,20,116)                                                                                | RS1/10SR101J       |
| L 602 (A,94,76) Inductor              | CTF1786         | R 152 (A,30,107)                                                                                | RS1/10SR0R0J       |
| L 781 (A,83,31) Inductor              | CTF1389         | R 161 (A,88,62)                                                                                 | RS1/10SR0R0J       |
| L 851 (A,9,109) Inductor              | CTF1660         | R 162 (A,83,86)                                                                                 | RS1/10SR0R0J       |
| L 861 (A,115,40) Coil                 | CTH1475         | R 163 (A,84,86)                                                                                 | RS1/10SR0R0J       |
| L 911 (B,50,113) Inductor             | LCTAW6R8J2520   | R 191 (A,83,95)                                                                                 | RS1/16SS821J       |
| L 921 (A,127,104) Inductor            | CTF1713         | R 192 (A,83,98)                                                                                 | RS1/16SS821J       |
| L 981 (A,114,141) Choke Coil 600 uH   | CTH1432         | R 201 (A,66,125)                                                                                | RAB4CQ102J         |
| L 1003 (A,45,46) Inductor(A,B)        | CTF1389         | R 202 (A,76,96)                                                                                 | RS1/16SS223J       |
| L 1004 (A,13,35) Inductor(A,B)        | CTF1389         | R 203 (A,78,96)                                                                                 | RS1/16SS223J       |
| L 1005 (A,13,33) Inductor(A,B)        | CTF1786         | R 204 (A,77,96)                                                                                 | RS1/16SS331J       |
| L 1021 (A,9,95) Choke Coil 33 uH      | CTH1417         | R 255 (B,121,69)                                                                                | RS1/10SR473J       |
| L 1022 (A,26,102) Inductor            | CTF1793         | R 260 (B,138,89)                                                                                | RS1/4SA0R0J        |
| X 401 (A,156,90) Oscillator 36.48 MHz | CSS1805         | R 263 (A,143,79)                                                                                | RS1/4SA0R0J        |
| X 501 (A,56,48) Oscillator 48.000 MHz | CSS1760         |                                                                                                 |                    |
| X 502 (A,74,72) Oscillator 16.93 MHz  | CSS1794         |                                                                                                 |                    |

|   | 1                             | 2               | 3                             | 4               |
|---|-------------------------------|-----------------|-------------------------------|-----------------|
|   | <u>Circuit Symbol and No.</u> | <u>Part No.</u> | <u>Circuit Symbol and No.</u> | <u>Part No.</u> |
|   | R 301 (A,6,130)               | RS1/16SS820J    | R 510 (A,56,51)               | RS1/16SS102J    |
|   | R 302 (A,13,129)              | RS1/16SS820J    | R 512 (B,55,57)               | RS1/10SR101J    |
|   | R 303 (A,15,129)              | RS1/16SS820J    | R 513 (B,55,59)               | RS1/10SR103J    |
| A | R 304 (A,33,131)              | RS1/16SS820J    | R 516 (A,63,49)               | RS1/16SS5601F   |
|   | R 305 (A,23,129)              | RS1/16SS820J    | R 517 (A,65,51)               | RS1/16SS473J    |
|   | R 306 (A,29,128)              | RS1/16SS820J    | R 519 (A,66,51) (C)           | RS1/16SS473J    |
|   | R 307 (A,6,131)               | RS1/16SS223J    | R 521 (A,74,60)               | RS1/16SS473J    |
|   | R 308 (A,13,130)              | RS1/16SS223J    | R 522 (A,75,63)               | RS1/16SS473J    |
|   | R 309 (A,15,130)              | RS1/16SS223J    | R 525 (A,75,79)               | RS1/16SS221J    |
|   | R 310 (A,31,129)              | RS1/16SS223J    | R 527 (A,72,73)               | RS1/16SS332J    |
|   | R 311 (A,23,130)              | RS1/16SS223J    | R 528 (A,75,75) (B,C)         | RS1/16SS473J    |
|   | R 312 (A,29,129)              | RS1/16SS223J    | R 529 (A,80,73) (B,C)         | RS1/10SR473J    |
|   | R 361 (A,58,134)              | RS1/16SS103J    | R 530 (A,66,82)               | RS1/16SS221J    |
| B | R 362 (A,56,133)              | RS1/16SS103J    | R 531 (A,65,82) (A)           | RS1/16SS101J    |
|   | R 363 (A,57,133)              | RS1/16SS331J    | (A,65,82) (B,C)               | RS1/16SS221J    |
|   | R 365 (A,65,134)              | RS1/16SS103J    | R 532 (A,64,82) (A)           | RS1/16SS101J    |
|   | R 366 (A,66,134)              | RS1/16SS103J    | (A,64,82) (B,C)               | RS1/16SS221J    |
|   | R 367 (A,66,130)              | RS1/10SR562J    | R 533 (A,63,82)               | RS1/16SS221J    |
|   | R 371 (A,71,129)              | RS1/16SS362J    | R 534 (A,40,77)               | RS1/16SS472J    |
|   | R 372 (A,70,129)              | RS1/16SS362J    | R 536 (A,41,77)               | RS1/16SS0R0J    |
|   | R 375 (A,76,129)              | RS1/16SS362J    | R 537 (B,54,34)               | RS1/10SR221J    |
|   | R 376 (A,76,128)              | RS1/16SS362J    | R 538 (B,51,37)               | RS1/10SR221J    |
|   | R 377 (A,79,128)              | RS1/16SS562J    | R 539 (B,54,30)               | RS1/10SR221J    |
|   | R 378 (A,78,129)              | RS1/16SS562J    | R 540 (A,66,49) (A,B)         | RS1/16SS473J    |
| C | R 379 (A,72,131)              | RS1/16SS562J    | R 541 (A,83,41) (A)           | RS1/16SS0R0J    |
|   | R 380 (A,72,133)              | RS1/16SS562J    | R 542 (B,87,91)               | RS1/4SA0R0J     |
|   | R 381 (A,55,130)              | RS1/10SR473J    | R 560 (A,41,73)               | RS1/16SS473J    |
|   | R 382 (A,56,130)              | RS1/10SR104J    | R 572 (B,41,77)               | RS1/10SR472J    |
|   | R 383 (A,118,69)              | RS1/16SS473J    | R 574 (B,37,77)               | RS1/10SR472J    |
|   | R 384 (A,55,127)              | RS1/10SR473J    | R 575 (A,29,86)               | RAB4CQ221J      |
|   | R 385 (A,50,132)              | RS1/16SS102J    | R 576 (A,31,86)               | RAB4CQ221J      |
|   | R 401 (A,157,108)             | RS1/16SS221J    | R 577 (A,34,86)               | RAB4CQ221J      |
|   | R 402 (A,156,102)             | RS1/16SS751J    | R 578 (A,37,86)               | RAB4CQ221J      |
|   | R 403 (A,137,103)             | RS1/16SS152J    | R 591 (A,74,63)               | RS1/16SS472J    |
|   | R 405 (A,139,100)             | RS1/16SS105J    | R 592 (A,85,70)               | RS1/16SS101J    |
| D | R 406 (A,134,97)              | RS1/16SS471J    | R 593 (A,86,57)               | RS1/16SS103J    |
|   | R 407 (A,136,96)              | RS1/16SS330J    | R 594 (A,85,62)               | RS1/16SS101J    |
|   | R 408 (A,134,92)              | RS1/16SS681J    | R 595 (A,86,59)               | RS1/16SS103J    |
|   | R 410 (A,136,86)              | RS1/4SA8R2J     | R 596 (A,77,60)               | RS1/16SS473J    |
|   | R 412 (A,134,86)              | RS1/4SA8R2J     | R 599 (A,78,57)               | RS1/16SS272J    |
|   | R 413 (A,148,108)             | RS1/16SS105J    | R 600 (A,77,58)               | RS1/16SS472J    |
|   | R 414 (A,128,80)              | RS1/10SR0R0J    | R 601 (A,98,85)               | RS1/16SS102J    |
|   | R 415 (A,126,80)              | RS1/10SR0R0J    | R 602 (A,94,84)               | RS1/10SR154J    |
|   | R 419 (A,143,75)              | RS1/10SR103J    | R 603 (A,98,78)               | RS1/16SS105J    |
|   | R 420 (A,145,75)              | RS1/10SR103J    | R 604 (A,99,82)               | RS1/16SS104J    |
| E | R 421 (A,148,82) (B,C)        | RS1/16SS0R0J    | R 605 (A,99,80)               | RS1/16SS101J    |
|   | R 427 (A,140,86)              | RS1/16SS102J    | R 606 (A,94,74)               | RS1/16SS104J    |
|   | R 428 (A,152,83)              | RS1/16SS680J    | R 607 (A,100,71)              | RS1/16SS222J    |
|   | R 463 (A,84,67) (A)           | RS1/10SR0R0J    | R 608 (B,96,59)               | RS1/10SR104J    |
|   | R 464 (A,77,75) (A)           | RS1/16SS101J    | R 609 (B,98,77)               | RS1/10SR104J    |
|   | R 465 (A,78,78) (A)           | RS1/16SS101J    | R 610 (A,95,73)               | RS1/16SS104J    |
|   | R 466 (A,82,73) (A)           | RS1/16SS101J    | R 611 (A,96,74)               | RS1/16SS104J    |
|   | R 467 (A,78,75) (A)           | RS1/10SR101J    | R 612 (A,94,72)               | RS1/16SS104J    |
|   | R 468 (A,80,76) (A)           | RS1/10SR473J    | R 613 (A,106,65)              | RS1/16SS104J    |
|   | R 501 (A,42,53)               | RS1/16SS473J    | R 614 (A,107,65)              | RS1/16SS104J    |
|   | R 502 (A,39,52)               | RS1/16SS101J    | R 615 (A,103,64)              | RS1/16SS104J    |
| F | R 503 (B,44,52)               | RS1/10SR473J    | R 618 (A,109,65)              | RS1/16SS472J    |
|   | R 504 (B,44,54)               | RS1/10SR473J    | R 619 (A,110,65)              | RS1/16SS104J    |
|   | R 505 (B,52,53)               | RS1/10SR473J    | R 620 (A,112,65)              | RS1/16SS104J    |
|   | R 506 (B,52,52)               | RS1/10SR473J    | R 621 (A,113,65)              | RS1/16SS104J    |



| 5                             |                  | 6               |  | 7                             |                      | 8               |   |
|-------------------------------|------------------|-----------------|--|-------------------------------|----------------------|-----------------|---|
| <u>Circuit Symbol and No.</u> |                  | <u>Part No.</u> |  | <u>Circuit Symbol and No.</u> |                      | <u>Part No.</u> |   |
| R 623                         | (A,114,65)       | RS1/16SS104J    |  | R 842                         | (A,101,22)           | RS1/16SS472J    |   |
| R 624                         | (A,115,65)       | RS1/16SS104J    |  | R 843                         | (A,103,25)           | RS1/16SS102J    |   |
| R 626                         | (A,122,74)       | RS1/16SS104J    |  | R 844                         | (A,101,25)           | RS1/16SS103J    |   |
| R 627                         | (A,121,80)       | RS1/16SS104J    |  | R 851                         | (A,22,121)           | RS1/10SR821J    | A |
|                               |                  |                 |  | R 852                         | (A,18,115)           | RS1/10SR153J    |   |
| R 629                         | (A,110,87) (A,B) | RS1/16SS104J    |  |                               |                      |                 |   |
| R 630                         | (A,107,89)       | RS1/16SS103J    |  | R 853                         | (A,19,115)           | RS1/10SR222J    |   |
| R 631                         | (A,106,88) (B)   | RS1/16SS104J    |  | R 854                         | (A,21,115)           | RS1/10SR332J    |   |
| R 632                         | (A,107,88)       | RS1/16SS104J    |  | R 861                         | (A,106,48)           | RS1/16SS513J    |   |
| R 643                         | (A,119,71)       | RS1/16SS104J    |  | R 863                         | (A,117,48)           | RS1/16SS183J    |   |
| R 651                         | (A,102,88)       | RS1/16SS104J    |  | R 865                         | (A,114,52)           | RS1/16SS1002D   |   |
|                               |                  |                 |  |                               |                      |                 |   |
| R 652                         | (A,100,88)       | RS1/16SS152J    |  | R 866                         | (A,109,51)           | RS1/16SS4702F   |   |
| R 701                         | (A,97,43)        | RS1/16SS472J    |  | R 867                         | (A,111,51)           | RS1/16SS103J    |   |
| R 702                         | (A,91,40)        | RS1/16SS473J    |  | R 868                         | (A,104,44)           | RS1/10SR471J    |   |
| R 703                         | (A,97,41)        | RS1/16SS472J    |  | R 901                         | (A,152,45)           | RS1/16SS332J    |   |
| R 704                         | (A,97,39)        | RS1/16SS472J    |  | R 902                         | (A,152,46)           | RS1/16SS223J    | B |
|                               |                  |                 |  |                               |                      |                 |   |
| R 705                         | (A,90,42)        | RS1/10SR221J    |  | R 911                         | (A,44,109)           | RS1/16SS102J    |   |
| R 706                         | (A,87,39)        | RS1/16SS221J    |  | R 921                         | (A,121,129)          | RS1/16SS104J    |   |
| R 707                         | (A,91,38)        | RS1/16SS101J    |  | R 922                         | (A,110,129)          | RS1/16SS103J    |   |
| R 708                         | (A,91,37)        | RS1/16SS221J    |  | R 923                         | (A,124,128)          | RS1/16SS473J    |   |
| R 709                         | (A,91,36)        | RS1/16SS101J    |  | R 924                         | (A,110,127)          | RS1/16SS473J    |   |
|                               |                  |                 |  |                               |                      |                 |   |
| R 710                         | (A,88,36)        | RS1/16SS102J    |  | R 925                         | (A,112,127)          | RS1/16SS472J    |   |
| R 711                         | (A,91,34)        | RS1/16SS151J    |  | R 926                         | (A,117,129)          | RS1/4SA102J     |   |
| R 712                         | (A,91,33)        | RS1/16SS151J    |  | R 931                         | (A,91,116)           | RS1/16SS103J    |   |
| R 713                         | (A,91,32)        | RS1/16SS151J    |  | R 932                         | (A,87,124)           | RS1/4SA102J     |   |
| R 714                         | (A,91,31)        | RS1/16SS221J    |  | R 1001                        | (A,51,39) (A,B)      | RS1/16SS102J    | C |
|                               |                  |                 |  |                               |                      |                 |   |
| R 715                         | (A,87,38)        | RS1/16SS104J    |  | R 1002                        | (A,52,39) (A,B)      | RS1/16SS102J    |   |
| R 716                         | (A,85,32)        | RS1/16SS104J    |  | R 1004                        | (A,46,46) (A,B)      | RS1/10SR0R0J    |   |
| R 717                         | (A,91,35)        | RS1/16SS104J    |  | R 1005                        | (A,48,46) (A,B)      | RS1/16SS0R0J    |   |
| R 751                         | (B,132,45)       | RS1/10SR821J    |  | R 1006                        | (A,51,44) (A,B)      | RS1/16SS0R0J    |   |
| R 753                         | (A,126,41)       | RS1/16SS473J    |  | R 1007                        | (A,15,33) (A,B)      | RS1/10SR0R0J    |   |
|                               |                  |                 |  |                               |                      |                 |   |
| R 754                         | (A,127,41)       | RS1/16SS103J    |  | R 1008                        | (A,15,37) (A,B)      | RS1/16SS102J    |   |
| R 781                         | (A,68,38)        | RS1/16SS221J    |  | R 1021                        | (A,20,102)           | RS1/16SS3902D   |   |
| R 783                         | (A,73,37)        | RS1/16SS221J    |  | R 1022                        | (A,19,101)           | RS1/16SS1201D   |   |
| R 784                         | (A,71,38)        | RS1/16SS221J    |  | R 1023                        | (A,17,102)           | RS1/16SS1002D   |   |
| R 785                         | (A,69,38)        | RS1/16SS221J    |  | R 1024                        | (A,25,92)            | RS1/16SS104J    |   |
|                               |                  |                 |  |                               |                      |                 |   |
| R 786                         | (A,62,38)        | RS1/16SS221J    |  | R 1026                        | (A,21,91)            | RS1/16SS103J    | D |
| R 787                         | (A,59,37)        | RS1/16SS221J    |  | R 1028                        | (A,19,91)            | RS1/16SS393J    |   |
| R 788                         | (A,56,37)        | RS1/16SS221J    |  | R 1031                        | (A,14,100)           | RS1/16SS102J    |   |
| R 789                         | (A,89,30)        | RS1/10SR821J    |  | R 1032                        | (A,16,100)           | RS1/16SS102J    |   |
| R 790                         | (A,87,30)        | RS1/10SR103J    |  | R 1033                        | (A,114,106)          | RS1/16SS5R6J    |   |
|                               |                  |                 |  |                               |                      |                 |   |
| R 792                         | (A,56,39)        | RAB4CQ473J      |  | R 1034                        | (A,113,104)          | RS1/16SS5R6J    |   |
| R 793                         | (A,64,40)        | RAB4CQ473J      |  | R 1037                        | (B,39,98)            | RS1/10SR103J    |   |
| R 794                         | (A,82,29)        | RS1/10SR102J    |  | R 1038                        | (B,21,100)           | RS1/10SR471J    |   |
| R 801                         | (A,105,21)       | RS1/10SR222J    |  | R 1039                        | (B,19,100)           | RS1/10SR471J    |   |
| R 802                         | (A,120,21)       | RS1/10SR222J    |  | R 1072                        | (B,121,108)          | RS1/10SR102J    |   |
|                               |                  |                 |  |                               |                      |                 |   |
| R 803                         | (A,118,21)       | RS1/10SR222J    |  | <b><u>CAPACITORS</u></b>      |                      |                 | E |
| R 804                         | (A,111,21)       | RS1/10SR222J    |  | C 121                         | (A,129,86)           | CKSSYB104K10    |   |
| R 805                         | (A,123,27)       | RS1/10SR102J    |  | C 122                         | (A,130,86)           | CKSSYB104K10    |   |
| R 806                         | (A,106,24)       | RS1/10SR104J    |  | C 123                         | (A,127,83)           | CKSSYB474K6R3   |   |
| R 807                         | (B,108,54)       | RS1/10SR104J    |  | C 124                         | (A,125,83)           | CCSSCH101J50    |   |
|                               |                  |                 |  | C 125                         | (A,119,89)           | CKSSYB104K10    |   |
| R 808                         | (B,124,44)       | RS1/10SR104J    |  |                               |                      |                 |   |
| R 809                         | (A,117,21)       | RS1/10SR222J    |  | C 126                         | (A,118,89)           | CKSSYB104K10    |   |
| R 810                         | (A,116,21)       | RS1/10SR222J    |  | C 127                         | (A,119,87)           | CKSSYB474K6R3   |   |
| R 811                         | (A,114,21)       | RS1/10SR222J    |  | C 128                         | (A,122,85)           | CCSSCH101J50    |   |
| R 812                         | (A,109,21)       | RS1/10SR101J    |  | C 129                         | (A,123,88)           | CKSSYB103K16    |   |
|                               |                  |                 |  | C 151                         | (A,28,112) Capacitor | CEVW470M16      |   |
| R 813                         | (A,107,21)       | RS1/10SR101J    |  |                               |                      |                 | F |
| R 821                         | (A,99,20)        | RS1/10SR1R0J    |  | C 152                         | (B,21,111)           | CKSRYB104K16    |   |
| R 822                         | (A,111,30)       | RS1/4SA222J     |  | C 153                         | (B,27,115)           | CKSRYB104K16    |   |
| R 823                         | (A,111,27)       | RS1/10SR103J    |  | C 161                         | (A,87,70)            | CKSSYB104K16    |   |
| R 824                         | (A,115,26)       | RS1/10SR472J    |  |                               |                      |                 |   |

1

2

3

4

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

C 162 (A,89,70) CKSSYB104K16  
 C 163 (A,89,71) 10 uF CCG1192

A C 181 (A,71,88) 10 uF CCG1192  
 C 182 (A,67,84) CKSSYB103K16  
 C 183 (A,69,84) 10 uF CCG1192  
 C 185 (A,87,73) 10 uF CCG1192  
 C 186 (A,80,86) (A) CCSRCH220J50

C 406 (A,155,103) CKSSYB103K16  
 C 407 (A,144,103) CKSSYB104K10

C 409 (A,157,103) CKSSYB103K16  
 C 410 (A,144,101) CKSSYB103K16  
 C 411 (A,142,102) CKSSYB103K16  
 C 412 (A,140,102) 10 uF CCG1192  
 C 413 (A,151,103) CKSSYB103K16

C 187 (A,78,88) CCSRCH220J50  
 C 188 (A,74,88) CCSRCH220J50  
 C 189 (A,76,88) (B,C) CCSSCH220J50  
 C 190 (A,81,86) (A) CKSSYB102K50  
 (A,81,86) (B,C) CKSSYB471K50  
 C 191 (A,81,97) CCSRCH182J50  
 C 192 (A,81,99) CCSRCH182J50

C 414 (A,148,104) CKSRYB105K10  
 C 415 (A,138,98) CKSSYB103K16  
 C 416 (A,154,98) CKSRYB224K16  
 C 417 (A,155,98) CKSSYB104K10  
 C 418 (A,136,99) 10 uF CCG1192

B C 201 (A,66,116) CKSRYB224K16  
 C 202 (A,79,117) CKSRYB224K16  
 C 203 (A,66,118) CKSRYB105K10  
 C 204 (A,79,118) CKSRYB105K10  
 C 211 (A,75,99) CKSRYB105K10

C 419 (A,154,95) CKSRYB105K10  
 C 420 (A,136,97) CKSSYB104K10  
 C 421 (A,134,96) CCSSCH101J50  
 C 422 (A,140,99) CKSSYB104K10  
 C 423 (A,133,95) CKSSYB103K16

C 212 (A,78,99) CKSRYB105K10  
 C 213 (A,77,99) CKSQYB225K10  
 C 215 (A,66,120) CKSRYB105K10  
 C 216 (A,79,119) CKSRYB105K10  
 C 220 (B,78,122) 10 uF CCG1192

C 424 (A,157,93) CKSSYB472K25  
 C 425 (A,157,95) CKSSYB472K25  
 C 426 (A,154,93) CKSSYB104K10  
 C 427 (A,135,92) CCSSCH820J50  
 C 428 (A,156,92) CCSSCH100D50

C C 221 (A,81,122) 10 uF CCG1192  
 C 222 (A,79,123) CKSSYB104K10  
 C 223 (B,78,119) 10 uF CCG1192  
 C 224 (A,80,127) CKSSYB104K10  
 C 225 (A,80,125) 10 uF CCG1192

C 429 (A,156,87) CCSSCH100D50  
 C 430 (A,138,86) CKSRYB474K10  
 C 431 (A,155,86) CKSSYB104K10  
 C 432 (A,152,86) 2.2 uF CCG1205  
 C 434 (A,137,91) CKSSYB102K50  
 C 435 (A,152,87) (B,C) CKSSYB104K10  
 C 436 (A,139,81) (B,C) CCSRCH471J50

C 261 (B,164,87) CKSRYB104K16  
 C 301 (A,8,128) 10 uF CCG1192  
 C 302 (A,14,127) 10 uF CCG1192  
 C 303 (A,18,127) 10 uF CCG1192  
 C 304 (A,34,130) 10 uF CCG1192

C 437 (A,151,85) CKSSYB104K10  
 C 440 (A,145,85) CKSSYB104K10  
 C 441 (A,148,84) 2.2 uF CCG1205  
 C 442 (A,148,85) (B,C) CKSRYB105K10  
 C 443 (A,147,106) (A) CKSSYB103K16  
 C 445 (A,139,102) CKSSYB223K16

D C 305 (A,24,127) 10 uF CCG1192  
 C 306 (A,34,128) 10 uF CCG1192  
 C 313 (B,36,130) CKSRYB102K50  
 C 314 (A,64,138) CCSRCH100D50

C 447 (A,142,84) CKSSYB102K50  
 C 451 (A,139,103) (B,C) CCSSCK2R0C50  
 C 452 (B,141,97) (B,C) CCSRCK2R0C50  
 C 453 (A,136,91) CKSSYB102K50  
 C 461 (A,77,67) (A) CKSRYB104K16  
 C 501 (A,77,48) 10 uF CCG1192  
 C 503 (A,77,45) 10 uF CCG1192

C 317 (B,26,143) CCSRCH470J50  
 C 351 (A,75,132) CKSRYB474K10  
 C 352 (A,75,133) CKSRYB474K10  
 C 353 (A,82,130) CKSRYB474K10

C 506 (A,81,43) 10 uF CCG1192  
 C 507 (A,43,73) CKSSYB104K10  
 C 508 (A,42,73) CKSSYB104K10  
 C 509 (A,41,67) CKSSYB104K10  
 C 510 (A,42,66) CKSSYB104K10

C 354 (A,83,130) CKSRYB474K10  
 C 355 (A,77,132) CKSRYB474K10  
 C 356 (A,77,133) CKSRYB474K10  
 C 357 (A,82,133) CKSRYB474K10  
 E C 358 (A,83,133) CKSRYB474K10

C 511 (A,42,62) CKSSYB104K10  
 C 512 (A,42,60) CKSRYB104K16  
 C 513 (A,43,57) CKSSYB104K10  
 C 514 (A,42,55) CKSSYB104K10  
 C 515 (A,39,55) CKSSYB103K16

C 361 (A,123,122) 3 300 uF/16 V CCH1486  
 C 362 (B,88,143) CKSRYB104K16  
 C 363 (B,61,134) 2.2 uF CCG1205  
 C 364 (B,64,134) 2.2 uF CCG1205  
 C 365 (B,64,139) 10 uF CCG1236

C 516 (A,45,53) CKSSYB104K10  
 C 517 (A,50,50) CKSSYB104K10  
 C 518 (A,52,50) CKSSYB102K50  
 C 519 (A,54,51) CKSSYB104K10  
 C 520 (A,55,51) CKSSYB104K10

C 367 (A,59,132) 10 uF CCG1192  
 C 368 (B,72,143) CCSRCH100D50  
 C 381 (A,47,129) Capacitor CEVW220M16  
 C 401 (A,149,107) CCSSCH330J50  
 F C 402 (A,153,107) CCSSCH6R0D50

C 521 (A,59,51) CKSSYB104K10  
 C 522 (A,55,46) CCSSCH100D50  
 C 523 (A,57,46) CCSSCH100D50  
 C 524 (A,63,48) CKSSYB104K10

C 403 (A,156,107) CKSSYB103K16  
 C 404 (A,146,103) CKSSYB104K10  
 C 405 (A,143,103) CKSSYB104K10

1

2

3

4



1

2

3

4

**Circuit Symbol and No.****Part No.****Circuit Symbol and No.****Part No.**

Q 1832 (A,134,21) Transistor LSC4081UB  
 Q 1833 (A,126,21) Transistor LSC4081UB  
 Q 1834 (A,137,27) Chip Transistor HN1C01FU  
 Q 1835 (A,122,25) Chip Transistor HN1C01FU  
 Q 1836 (A,131,25) Chip Transistor HN1C01FU

R 1850 (B,143,30)  
 R 1851 (B,128,31)  
 R 1852 (B,129,31)  
 R 1853 (B,136,28)

RS1/10SR181J  
 RS1/10SR181J  
 RS1/10SR181J  
 RS1/10SR181J

Q 1861 (A,139,14) Transistor LSC4081UB  
 Q 1862 (A,139,19) Transistor LSC4081UB  
 Q 1863 (A,139,22) Transistor LSC4081UB  
 Q 1870 (A,142,14) Chip Transistor HN1C01FU  
 Q 1871 (A,144,21) Chip Transistor HN1C01FU

R 1854 (B,133,28)  
 R 1861 (A,136,14)  
 R 1862 (A,136,18)  
 R 1863 (A,136,19)  
 R 1864 (A,140,12)

RS1/10SR181J  
 RS1/16SS102J  
 RS1/16SS102J  
 RS1/16SS102J  
 RS1/16SS101J

Q 1872 (A,147,28) Chip Transistor HN1C01FU  
 D 1803 (A,115,21) Diode CRG03  
 D 1831 (A,24,14) LED SMLV56RGB1U1(Q)  
 D 1832 (A,24,29) LED SMLV56RGB1U1(Q)  
 D 1833 (A,56,7) LED SMLV56RGB1U1(Q)

R 1865 (A,127,24)  
 R 1867 (A,141,17)  
 R 1868 (A,137,23)  
 R 1870 (A,142,22)  
 R 1871 (A,123,22)

RS1/16SS101J  
 RS1/16SS101J  
 RS1/16SS101J  
 RS1/16SS101J  
 RS1/16SS101J

D 1834 (A,56,32) LED SMLV56RGB1U1(Q)  
 D 1861 (A,152,12) LED NSSM124-6717  
 D 1862 (A,152,19) LED NSSM124-6717  
 D 1863 (A,152,40) LED SMLV56RGB1U1(Q)  
 D 1901 (A,71,20) Diode 1SS352

R 1872 (B,139,11)  
 R 1873 (B,136,11)  
 R 1874 (B,139,21)  
 R 1875 (B,140,23)  
 R 1876 (B,145,30)

RS1/10SR181J  
 RS1/10SR181J  
 RS1/10SR181J  
 RS1/10SR181J  
 RS1/10SR181J

L 1901 (B,105,21) Inductor LCTAW2R2J2520  
 L 1981 (B,151,18) Inductor CTF1389  
 L 1982 (B,151,21) Inductor CTF1389  
 L 1983 (B,150,15) Inductor CTF1389

R 1877 (B,146,30)  
 R 1901 (A,65,21)  
 R 1902 (A,71,21)  
 R 1903 (A,71,18)  
 R 1904 (A,73,21)

RS1/10SR181J  
 RS1/16SS472J  
 RS1/16SS102J  
 RS1/16SS154J  
 RS1/16SS473J

TH1901 (A,71,15) Thermistor CCX1079  
 X 1901 (B,69,19) Ceramic Resonator 16.000 MHz CSS1616  
 S 1811 (A,56,19) Encoder(MULTI CONTROL) CSD1168  
 S 1931 (A,147,43) Push Switch CSG1155

R 1905 (B,70,23)  
 R 1906 (B,69,25)  
 R 1907 (A,70,22)  
 R 1908 (A,73,24)  
 R 1909 (A,77,21)

RS1/16SS103J  
 RAB4CQ102J  
 RS1/16SS103J  
 RAB4CQ103J  
 RS1/16SS103J

S 1932 (A,160,43) Push Switch CSG1155  
 S 1933 (A,8,15) Push Switch CSG1155  
 S 1935 (A,32,9) Push Switch CSG1155  
 S 1937 (A,70,7) Push Switch CSG1155  
 S 1938 (A,38,31) Push Switch CSG1155

R 1910 (A,69,24)  
 R 1911 (B,81,31)  
 R 1912 (B,83,31)  
 R 1914 (A,83,28)  
 R 1915 (B,90,29)

RAB4CQ473J  
 RS1/16SS473J  
 RS1/16SS473J  
 RS1/16SS101J  
 RAB4CQ101J

S 1939 (A,8,32) Push Switch CSG1155  
 S 1940 (A,45,12) Spring Switch CSN1080  
 S 1941 (A,45,26) Spring Switch CSN1081  
 S 1942 (A,71,30) Push Switch CSG1155  
 S 1943 (A,9,25) Push Switch CSG1155

R 1916 (A,83,17)  
 R 1917 (B,90,26)  
 R 1918 (B,93,24)  
 R 1919 (B,93,21)  
 R 1920 (B,90,18)

RS1/16SS101J  
 RAB4CQ101J  
 RAB4CQ101J  
 RAB4CQ101J  
 RAB4CQ101J

CN1801 (B,109,10) Connector CKS6287  
 CN1951 (B,116,30) Connector CKS6228  
 JA1981 (A,161,21) Jack YKN5006

R 1921 (A,90,13)  
 R 1922 (A,83,20)  
 R 1923 (A,83,23)  
 R 1924 (A,83,26)  
 R 1925 (B,76,10)

RAB4CQ101J  
 RAB4CQ101J  
 RAB4CQ101J  
 RAB4CQ101J  
 RAB4CQ102J

**RESISTORS**

R 1801 (A,95,6) RS1/10SR222J  
 R 1802 (A,95,8) RS1/10SR222J  
 R 1811 (A,65,16) RS1/16SS103J  
 R 1821 (A,126,14) RS1/10SR272J  
 R 1822 (A,126,12) RS1/10SR272J

R 1926 (B,71,15)  
 R 1927 (A,73,15)  
 R 1931 (B,146,25)  
 R 1953 (B,120,23)  
 R 1955 (A,113,28)

RS1/16SS104J  
 RS1/16SS2202F  
 RS1/16SS470J  
 RAB4CQ473J  
 RAB4CQ101J

R 1823 (A,126,13) RS1/10SR272J  
 R 1831 (A,132,18) RS1/16SS102J  
 R 1832 (A,133,18) RS1/16SS102J  
 R 1833 (A,131,18) RS1/16SS102J  
 R 1840 (A,128,24) RS1/16SS101J

**CAPACITORS**

C 1821 (A,136,11)  
 C 1822 (A,135,11)  
 C 1903 (A,69,21)  
 C 1904 (B,70,22)  
 C 1905 (B,90,23)

CKSSYB103K16  
 CKSRYB105K10  
 CKSSYB104K10  
 CKSSYB103K16  
 CKSSYB103K16

R 1841 (A,129,25) RS1/16SS101J  
 R 1843 (A,135,24) RS1/16SS101J  
 R 1844 (A,134,23) RS1/16SS101J  
 R 1846 (A,124,23) RS1/16SS101J  
 R 1847 (A,120,24) RS1/16SS101J

C 1906 (A,84,17)  
 C 1931 (B,148,27) 10 uF  
 C 1951 (B,107,27)

CKSSYB103K16  
 CCG1192  
 CKSQYB334K50

R 1849 (B,141,30) RS1/10SR181J

1

2

3

4

| 5                             |            |        | 6               |  |  | 7                             |           |  | 8               |  |   |
|-------------------------------|------------|--------|-----------------|--|--|-------------------------------|-----------|--|-----------------|--|---|
| <u>Circuit Symbol and No.</u> |            |        | <u>Part No.</u> |  |  | <u>Circuit Symbol and No.</u> |           |  | <u>Part No.</u> |  |   |
| C 1952                        | (B,112,21) | 4.7 uF | CCG1212         |  |  | R 303                         | (A,27,11) |  | RS1/16SS123J    |  |   |
| C 1953                        | (B,112,23) | 4.7 uF | CCG1212         |  |  | R 304                         | (A,28,11) |  | RS1/16SS123J    |  |   |
|                               |            |        |                 |  |  | R 305                         | (A,26,9)  |  | RS1/16SS102J    |  |   |
| C 1954                        | (B,115,21) | 4.7 uF | CCG1212         |  |  | R 306                         | (A,26,11) |  | RS1/16SS472J    |  | A |
| C 1955                        | (B,115,23) | 4.7 uF | CCG1212         |  |  | R 307                         | (A,25,9)  |  | RS1/16SS102J    |  |   |
| C 1957                        | (B,117,24) |        | CKSSYB105K6R3   |  |  |                               |           |  |                 |  |   |
| C 1981                        | (B,150,18) |        | CKSRYB472K50    |  |  | R 308                         | (A,25,11) |  | RS1/16SS472J    |  |   |
| C 1982                        | (B,148,18) |        | CKSRYB472K50    |  |  | R 309                         | (A,35,6)  |  | RS1/16SS473J    |  |   |
|                               |            |        |                 |  |  | R 310                         | (B,30,9)  |  | RS1/16SS472J    |  |   |
| C 1983                        | (B,150,12) |        | CCSRCH471J50    |  |  | R 311                         | (B,30,10) |  | RS1/16SS472J    |  |   |
| C 1984                        | (B,148,21) |        | CCSRCH471J50    |  |  | R 312                         | (B,30,11) |  | RS1/16SS472J    |  |   |
| C 1985                        | (B,149,21) |        | CCSRCH471J50    |  |  |                               |           |  |                 |  |   |
|                               |            |        |                 |  |  | R 313                         | (B,30,12) |  | RS1/16SS472J    |  |   |
|                               |            |        |                 |  |  | R 701                         | (A,21,38) |  | RS1/16SS101J    |  |   |
|                               |            |        |                 |  |  | R 702                         | (A,23,38) |  | RS1/16SS101J    |  |   |
|                               |            |        |                 |  |  | R 706                         | (A,32,42) |  | RS1/16SS221J    |  |   |
|                               |            |        |                 |  |  | R 708                         | (B,28,26) |  | RS1/16SS0R0J    |  | B |
|                               |            |        |                 |  |  |                               |           |  |                 |  |   |
|                               |            |        |                 |  |  | R 709                         | (B,29,28) |  | RS1/16SS0R0J    |  |   |



**Unit Number : CWX4023**

**Unit Name : CD Core Unit (S11.6STD)**

### MISCELLANEOUS

|        |           |                              |           |
|--------|-----------|------------------------------|-----------|
| IC 201 | (B,23,37) | IC                           | PE5791A   |
| IC 301 | (A,37,11) | IC                           | BD8223EFV |
| Q 101  | (B,11,53) | Transistor                   | 2SA1577   |
| Q 102  | (B,15,54) | Chip Digital Transistor      | LTA123JUB |
| X 201  | (B,25,49) | Ceramic Resonator 16.934 MHz | CSS1603   |
| S 901  | (A,42,53) | Spring Switch(HOME)          | CSN1080   |
| S 903  | (B,21,12) | Spring Switch(DSCSNS)        | CSN1081   |
| CN101  | (A,16,58) | Connector                    | CKS4808   |
| CN701  | (A,25,29) | Connector                    | CKS6146   |

### RESISTORS

|       |           |              |
|-------|-----------|--------------|
| R 101 | (B,6,57)  | RS1/10SR2R4J |
| R 102 | (B,8,57)  | RS1/10SR2R4J |
| R 103 | (B,9,57)  | RS1/10SR2R7J |
| R 108 | (B,18,55) | RS1/16SS105J |
| R 109 | (B,12,50) | RS1/16SS222J |
| R 201 | (A,24,11) | RS1/16SS0R0J |
| R 202 | (A,23,9)  | RS1/16SS0R0J |
| R 214 | (B,18,28) | RS1/16SS103J |
| R 215 | (B,17,28) | RS1/16SS393J |
| R 216 | (B,12,35) | RS1/16SS122J |
| R 217 | (B,10,32) | RS1/16SS562J |
| R 218 | (B,10,35) | RS1/16SS472J |
| R 229 | (B,12,34) | RS1/16SS471J |
| R 232 | (A,31,54) | RS1/16SS0R0J |
| R 237 | (B,33,45) | RS1/16SS221J |
| R 240 | (B,34,40) | RS1/16SS473J |
| R 245 | (A,34,46) | RS1/16SS104J |
| R 254 | (A,37,56) | RS1/16SS104J |
| R 260 | (B,30,27) | RS1/16SS103J |
| R 264 | (A,22,9)  | RS1/16SS102J |
| R 281 | (B,33,38) | RS1/16SS560J |
| R 282 | (B,33,39) | RS1/16SS560J |
| R 283 | (B,35,38) | RS1/16SS0R0J |
| R 291 | (B,33,34) | RS1/16SS560J |
| R 292 | (B,33,36) | RS1/16SS0R0J |
| R 293 | (B,35,39) | RS1/16SS0R0J |
| R 294 | (B,27,48) | RS1/16SS471J |
| R 296 | (B,34,43) | RS1/16SS0R0J |
| R 301 | (A,27,9)  | RS1/16SS0R0J |
| R 302 | (A,28,9)  | RS1/16SS0R0J |

### CAPACITORS

|       |           |               |
|-------|-----------|---------------|
| C 104 | (B,12,57) | CKSQYB475K6R3 |
| C 203 | (B,22,47) | CKSSYB104K10  |
| C 209 | (B,28,47) | CKSRYB104K16  |
| C 210 | (B,33,43) | CKSSYB104K10  |
| C 211 | (B,33,41) | CKSSYB104K10  |
| C 212 | (B,22,28) | CKSSYB104K10  |
| C 213 | (B,18,26) | CKSSYB332K50  |
| C 214 | (B,17,26) | CKSSYB473K16  |
| C 215 | (B,19,28) | CKSSYB104K10  |
| C 216 | (B,12,33) | CKSSYB182K50  |
| C 217 | (B,10,34) | CCSSCH560J50  |
| C 218 | (B,10,36) | CCSSCH4R0C50  |
| C 219 | (B,14,34) | CKSSYB104K10  |
| C 220 | (A,18,38) | CKSSYB104K10  |
| C 221 | (B,14,32) | CKSSYB104K10  |
| C 222 | (B,13,37) | CKSSYB104K10  |
| C 223 | (B,12,42) | CCSSCH680J50  |
| C 224 | (B,13,45) | CCSSCH470J50  |
| C 225 | (B,13,46) | CKSSYB103K16  |
| C 228 | (B,10,33) | CCSSCH270J50  |
| C 229 | (B,9,40)  | CKSSYB104K10  |
| C 233 | (B,32,46) | CKSSYB103K16  |
| C 236 | (B,8,40)  | CKSSYB104K10  |
| C 238 | (A,25,44) | CKSRYB104K16  |
| C 299 | (A,26,41) | CKSSYB104K10  |
| C 302 | (B,28,12) | CKSSYB102K50  |
| C 303 | (B,29,12) | CKSSYB102K50  |
| C 304 | (B,27,12) | CKSSYB223K16  |
| C 305 | (B,26,12) | CKSSYB104K10  |
| C 306 | (A,31,7)  | CKSSYB104K10  |
| C 307 | (A,41,19) | CKSRYB105K10  |
| C 308 | (A,31,15) | CKSRYB105K10  |
| C 710 | (A,34,42) | CKSSYB102K50  |

### **Miscellaneous Parts List**

|     |                             |         |
|-----|-----------------------------|---------|
| M 1 | Pickup Unit(P10.6)(Service) | CXX3556 |
| M 2 | Motor Unit(SPDL)            | CXE2273 |
|     | Motor Unit(LOAD/CRG)        | CXC4026 |