

# MDX-C8500R/C8500X

## SERVICE MANUAL

Ver 1.1 2001.05

US Model  
MDX-C8500X

AEP Model  
UK Model  
MDX-C8500R



Photo: MDX-C8500X

Model Name Using Similar Mechanism	NEW
Base Mechanism Type	MG-164NV-138
Optical Pick-up Name	KMS-241C/J1NP

### SPECIFICATIONS

#### AUDIO POWER SPECIFICATIONS (MDX-C8500X)

##### POWER OUTPUT AND TOTAL HARMONIC DISTORTION

19 watts per channel minimum continuous average power into 4ohms, 4 channels driven from 10 Hz to 20 kHz with no more than 1% total harmonic distortion.

#### Other specifications

##### Disc player section

###### MD player

Signal-to-noise ratio 90 dB  
Frequency response 10 – 20,000 Hz  
Wow and flutter Below measurable limit

###### Laser Diode Properties

Material GaAlAs  
Wavelength 780 nm  
Emission Duration Continuous  
Laser output power Less than 44.6 W\*

\* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.

##### Tuner section

###### FM

Tuning range 87.5 – 107.9 MHz (MDX-C8500X)  
87.5 – 108.0 MHz (MDX-C8500R)  
Antenna terminal External antenna connector  
Intermediate frequency 10.7 MHz/450 kHz  
Usable sensitivity 8 dBf  
Selectivity 75 dB at 400 kHz  
Signal-to-noise ratio 66 dB (stereo),  
72 dB (mono)  
Harmonic distortion at 1 kHz  
0.6 % (stereo),  
0.3 % (mono)  
Separation 35 dB at 1 kHz  
Frequency response 30 – 15,000 Hz

###### AM (MDX-C8500X)

Tuning range 530 – 1,710 kHz  
Antenna terminal External antenna connector  
Intermediate frequency 10.7 MHz/450 kHz  
Sensitivity 30 µV

###### MW/LW (MDX-C8500R)

Tuning range MW: 531 – 1,602 kHz  
LW: 153 – 279 kHz  
Aerial terminal External aerial connector  
Intermediate frequency 10.7 MHz/450 kHz  
Sensitivity MW: 30 µV  
LW: 40 µV

##### Power amplifier section

Outputs Speaker outputs (sure seal connectors)  
Speaker impedance 4 – 8 ohms  
Maximum power output 50 W × 4 (at 4 ohms)

– Continued on next page –

## FM/AM(MW/LW) MINIDISC PLAYER

9-870-096-12

2001E0500-1

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Sony Corporation

e Vehicle Company

Shinagawa Tec Service Manual Production Group

# SONY®

**General**

Outputs	Audio outputs Power antenna relay control lead Power amplifier control lead Telephone ATT control lead
Power requirements	12 V DC car battery (negative ground)
Dimensions	Approx. 178 × 50 × 183 mm (7 <sup>1</sup> / <sub>8</sub> × 2 × 7 <sup>1</sup> / <sub>8</sub> in.) (w/h/d)
Mounting dimensions	Approx. 182 × 53 × 162 mm (7 <sup>1</sup> / <sub>4</sub> × 2 <sup>1</sup> / <sub>8</sub> × 6 <sup>3</sup> / <sub>8</sub> in.) (w/h/d)
Mass	Approx. 1.2 kg (2 lb 10 oz)
Supplied accessories	Card remote commander RM-X91 (MDX-C8500X) Parts for installation and connections (1 set) Front panel case (1)

*U.S. and foreign patents licensed from Dolby laboratories Licensing Corporation.*

*Design and specifications are subject to change without notice.*

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# SECTION 1 SERVICING NOTES

## NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.

During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.

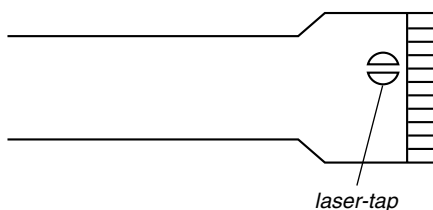
The flexible board is easily damaged and should be handled with care.

## NOTES ON LASER DIODE EMISSION CHECK

Never look into the laser diode emission from right above when checking it for adjustment. It is feared that you will lose your sight.

## NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK (KMS-241C/J1NP)

The laser diode in the optical pick-up block may suffer electrostatic break-down easily. When handling it, perform soldering bridge to the laser-tap on the flexible board. Also perform measures against electrostatic break-down sufficiently before the operation. The flexible board is easily damaged and should be handled with care.



**OPTICAL PICK-UP FLEXIBLE BOARD**

### Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

### Flexible Circuit Board Repairing

- Keep the temperature of the soldering iron around 270 °C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

### CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

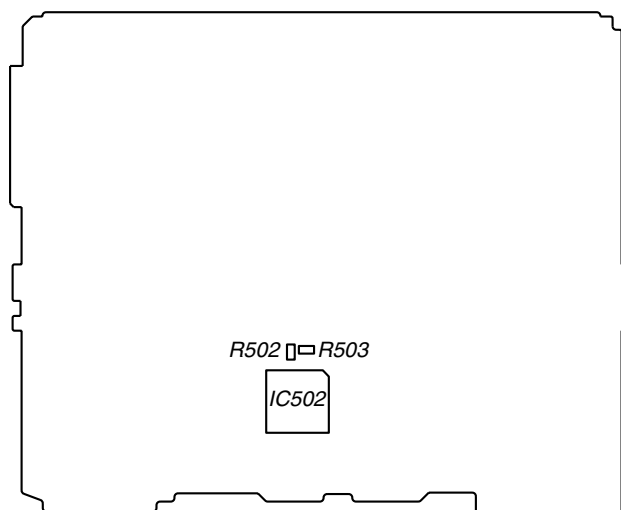
### SAFETY-RELATED COMPONENT WARNING!!

**COMPONENTS IDENTIFIED BY MARK  $\Delta$  OR DOTTED LINE WITH MARK  $\Delta$  ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

### • Model Identification

There are three types of main board in according of destination for MDX-C8500R.

### – MAIN BOARD (Component Side)

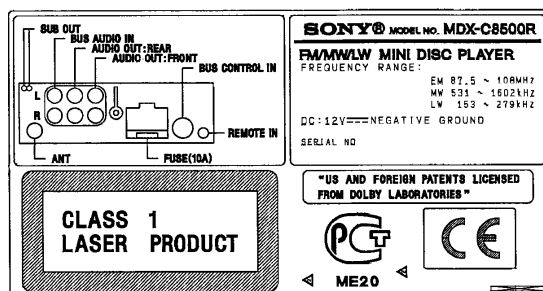


	R502	R503
TYPE A	○	×
TYPE B	×	○
TYPE C	○	○

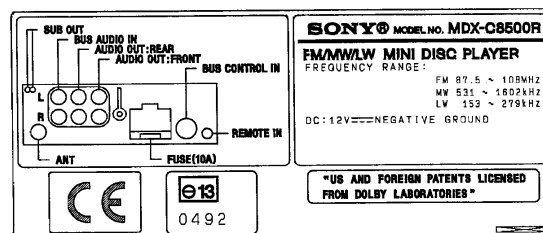
Type A, B and C can be identified by its model number label at the bottom of the set.

### – SPECIFICATION LABEL –

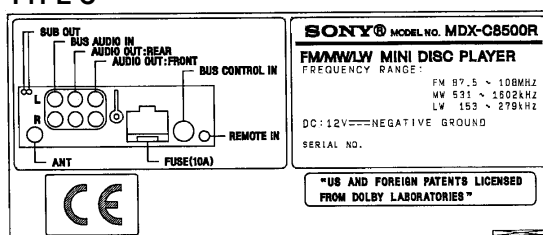
#### TYPE A



#### TYPE B



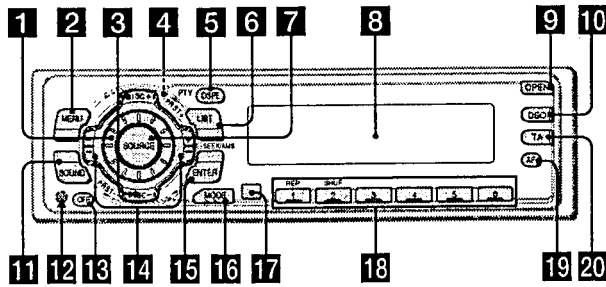
#### TYPE C



## SECTION 2 GENERAL

This section is extracted from instruction manual.

### Location of controls



Refer to the pages listed for details.

- 1** Volume control dial
- 2** MENU button 9, 13, 15, 16, 17, 18, 19, 21, 23, 24, 26, 27, 29, 30, 32, 33, 34, 38
- 3** DISC/PRST +/- (cursor up/down) button 9, 13, 15, 16, 17, 18, 19, 21, 23, 24, 26, 27, 29, 30, 32, 33, 34, 38  
During radio reception:  
Preset stations select 19, 25, 26, 27  
During CD/MD playback:  
Disc change 13
- 4** ▲ (eject) button (located on the front side of the unit behind the front panel) 10, 11
- 5** DSPL button (MDX-C8500X)  
DSPL/PTY (display mode change/programme type) button (MDX-C8500R) 12, 13, 15, 20, 24, 29
- 6** LIST button  
Disc Memo 15  
List-up 16, 28
- 7** SOURCE (Tuner/CD/MD) button 9, 11, 12, 13, 16, 18, 19, 25, 26, 30, 31, 32, 33, 34
- 8** Display window
- 9** OPEN button 8, 10, 11, 39
- 10** DSO button 32
- 11** SOUND button 30, 31, 32, 33
- 12** Reset button (located on the front side of the unit behind the front panel) 8
- 13** OFF button\* 8, 9, 11
- 14** SEEK/AMS +/- (cursor left/right) button 9, 13, 15, 17, 19, 21, 23, 24, 25, 29, 30, 31, 32, 33, 34, 38  
Seek 17, 18, 19, 25, 27  
Automatic Music Sensor 13  
Manual search 19
- 15** ENTER button 9, 10, 13, 15, 16, 17, 18, 19, 21, 23, 24, 26, 27, 28, 29, 30, 32, 33, 34
- 16** MODE button  
During radio reception:  
BAND select 18, 19, 22, 25  
During CD or MD playback:  
CD/MD unit select 12, 16
- 17** Receptor for the card remote commander
- 18** Number buttons  
During radio reception:  
Preset number select 18, 19, 21, 26, 27  
During CD/MD playback:  
① REP 14  
② SHUF 14
- 19** AF button 20, 21, 23 (MDX-C8500R)
- 20** TA button 22, 23 (MDX-C8500R)

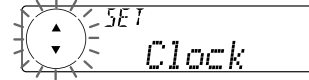
**\* Warning when installing in a car without ACC (accessory) position on the ignition key switch**  
Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine. When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

### Setting the clock

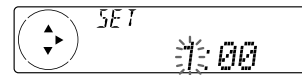
The clock uses a 12-hour digital indication.

Example: To set the clock to 10:08

- 1** Press (MENU), then press either side of (DISC/PRST) repeatedly until "Clock" appears.

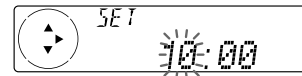


- 1** Press (ENTER).

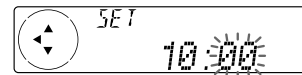


The hour indication flashes.

- 2** Press either side of (DISC/PRST) to set the hour.

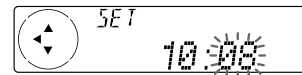


- 3** Press (+) side of (SEEK/AMS).



The minute indication flashes.

- 4** Press either side of (DISC/PRST) to set the minute.



- 2** Press (ENTER).



The clock starts.

After the clock setting is completed, the display returns to normal playback mode.

#### Tip

You can set the clock automatically with the RDS feature (see page 24). (MDX-C8500R)

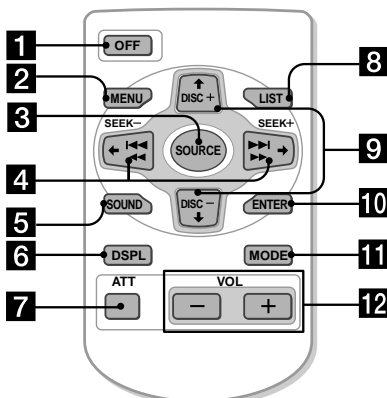
#### Note

In the initial setting, the clock indication appears while the unit is turned off.  
When you select the "on" setting of the "D.Info" item (page 29), you can see the clock indication in the upper part of the display while you are enjoying any source.

6

### Location of controls (MDX-C8500X)

Card remote commander RM-X91



The corresponding buttons of the card remote commander control the same functions as those on this unit.

- 1** OFF button
- 2** MENU button
- 3** SOURCE button
- 4** SEEK/AMS (cursor ←/→) buttons
- 5** SOUND button
- 6** DSPL button
- 7** ATT button
- 8** LIST button
- 9** DISC/PRST (cursor ↑/↓) buttons
- 10** ENTER button
- 11** MODE button
- 12** VOL buttons

4

# Installation

# Instalación

# Montering

# Instalação

# Установка

## Precautions

- Choose the installation location carefully so that the unit will not interfere with normal driving operations.
- Avoid installing the unit in areas subject to dust, dirt, excessive vibration, or high temperature, such as in direct sunlight or near heater ducts.
- Use only the supplied mounting hardware for a safe and secure installation.

## Mounting angle adjustment

CDX-C8000RX/CDX-C8000R:  
Adjust the mounting angle to less than 60°.  
MDX-C8500R:  
Adjust the mounting angle to less than 20°.

## Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no interfiera las funciones normales de conducción.
- Evite instalar la unidad donde pueda quedar sometida a altas temperaturas, como a la luz solar directa o al aire de calefacción, o a polvo, suciedad o vibraciones excesivas.
- Para realizar una instalación segura y firme, utilice solamente la ferretería de montaje suministrada.

Ajuste del ángulo de montaje  
CDX-C8000RX/CDX-C8000R:  
Ajuste el ángulo de montaje a menos de 60°.  
MDX-C8500R:  
Ajuste el ángulo de montaje a menos de 20°.

## Säkerhetsföreskrifter

- Var noga när du väljer var i bilen du monterar bilstereon, så att den inte sitter i vägen när du kör.
- Montera inte bilstereon där den utsätts för värme, t ex solsken eller varmluft, eller där den utsätts för damm, smuts och/eller vibrationer.
- Använd endast de medföljande monteringsföreskrifterna för att vara säker på att bilstereon monterats på ett säkert och korrekt sätt.

Tillåten monteringsvinkel  
CDX-C8000RX/CDX-C8000R:  
Monteringsvinkeln får inte vara större än 60°.  
MDX-C8500R:  
Monteringsvinkeln får inte vara större än 20°.

## Precauções

- Escolha com cuidado um local apropriado para a montagem do aparelho, para que este não interfira com as manobras necessárias à condução do veículo.
- Evite instalar o aparelho onde possa estar sujeito a altas temperaturas, como em locais expostos directamente à luz do sol, ao ar quente dos aquecimentos, ou sujeitos a pó, sujidade ou vibração excessiva.
- Para efectuar uma instalação segura utilize unicamente o material de montagem fornecido.

Ajuste do ângulo de montagem  
CDX-C8000RX/CDX-C8000R:  
Ajuste o ângulo de montagem para menos de 60°.  
MDX-C8500R:  
Ajuste o ângulo de montagem para menos de 20°.

## Меры предосторожности

- Место для установки магнитолы выбирайте тщательно, чтобы она не мешала нормальному управлению автомобилем.
- Не устанавливайте магнитолу там, где она будет подвержена воздействию пыли, грязи, чрезмерной вибрации или высоких температур, например в местах, попадающих под прямые солнечные лучи или находящихся вблизи вентиляционных решеток обогревателей.
- В целях обеспечения надежной и безопасной установки используйте лишь входящие в комплект монтажные детали.

Допустимый угол установки  
CDX-C8000RX/CDX-C8000R:  
Установите магнитолу под углом не более 60°.  
MDX-C8500R:  
Установите магнитолу под углом не более 20°.

## How to detach and attach the front panel

Before installing the unit, detach the front panel.

### A To detach

Before detaching the front panel, be sure to press **OFF**. Press **OPEN**, then slide the front panel to the right side, and pull out the left side.

### B To attach

Place the hole **A** in the front panel onto the spindle **B** on the unit as illustrated, then push the left side in.

## Forma de extraer e instalar el panel frontal

Antes de instalar la unidad, extraiga el panel frontal.

### A Para extraerlo

Antes de extraer el panel frontal, cerriórese de pulsar **OFF**. Pulse **OPEN** después, deslícelo hacia la derecha, y por último tire de su parte izquierda.

### B Para instalarlo

Coloque el orificio **A** del panel frontal en el eje **B** de la unidad, como se muestra en la ilustración, y después presione sobre la parte izquierda.

## Ta loss/fästa frontpanelen

Ta loss frontpanelen innan du monterar bilstereon.

### A Ta loss frontpanelen

Var noga med att trycka på **OFF** innan frontpanelen tas loss. Tryck därefter på **OPEN** för att öppna frontpanelen. Skjut frontpanelen åt höger och dra dess vänstra del utåt för att ta loss frontpanelen.

### B Fästa frontpanelen

Placera frontpanelen så att hålet **A** på frontpanelen träffar axeln **B** på bilstereon enligt illustrationen. Tryck därefter frontpanelens vänstra del inåt.

## Para retirar e colocar o painel frontal

Retire o painel frontal antes de iniciar a instalação do aparelho.

### A Para retirar

Antes de retirar o painel frontal, tem de carregar primeiro em **OFF**. A seguir, carregue em **OPEN** para soltar o painel frontal e empurre-o para a direita. Depois puxe o lado esquerdo do painel para fora.

### B Para colocar

Coloque o orifício **A** do painel frontal no eixo **B** do aparelho tal como ilustrado, e depois carregue no lado esquerdo para dentro.

## Порядок снятия и установки передней панели

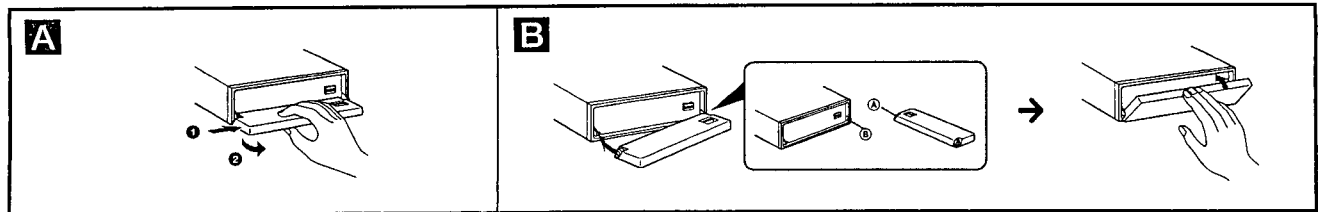
Перед установкой магнитолы снимите с нее переднюю панель.

### A Снятие панели

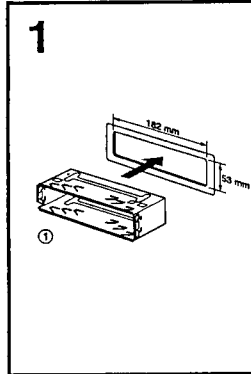
Прежде чем снимать переднюю панель, обязательно отключите магнитолу, нажав клавишу **OFF**. Затем нажмите **OPEN**, сдвиньте переднюю панель вправо и, потянув за левую часть панели, снимите ее.

### B Установка панели

Сначала совместите отверстие **A** на передней панели со штырьком **B** на магнитолу, как это показано на иллюстрации, а затем вдвиньте в паз левую часть панели.

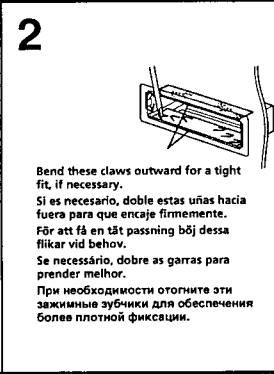


## Installation in the dashboard



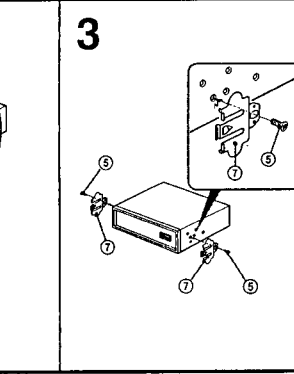
**Note**  
To prevent malfunction, install only with the supplied screws (1).

## Instalación en el salpicadero



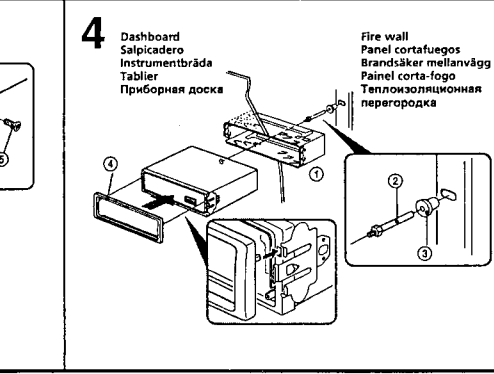
**Nota**  
Para evitar fallos de funcionamiento, realice la instalación únicamente con los tornillos suministrados (1).

## Montera på instrumentbrådan



**Observera**  
Använd bara de medföljande skruvarna (1), så undviker du onödiga fel.

## Instalação no tablier



**Nota**  
Para evitar avarias, instale o aparelho apenas com os parafusos fornecidos (1).

## Установка магнитолы в приборной доске

### Note on the mounting angle

When installing this unit: Depending on car type, the mounting angle may not allow the front panel to open easily. In such a case, remove the silver screw (2) shown below.

When screwing it on again, first lock the lever (3). Attaching the screw without doing so may cause the unit to break.

### Nota sobre el ángulo de montaje

Cuando instale esta unidad: Es posible que el ángulo de montaje (en función del tipo de automóvil) no permita que el panel frontal se abra con facilidad. En tal caso, extraiga el tornillo plateado (2) mostrado más abajo.

Cuando vuelva a tornillarla, bloquee primero la palanca (3). Si fija el tornillo sin realizar lo expuesto, la unidad podría romperse.

### Monteringsvinkeln

När du installerar den här enheten bör du tänka på att installationen görs beroende på biltyyp. Monteringsvinkeln kan göra att främpanelen inte går att öppna så lätt beroende på vilken bil det är. I så fall lösgör du den silverfärgade skruven (2) som visas nedan.

När du skruvar fast den igen var noga med att först låsa spak (3). Om du fäster skruven utan att låsa spaken kan det hända att enheten går sönder.

### Nota sobre o ângulo de montagem

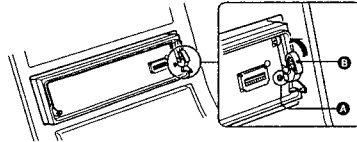
Quando instalar o aparelho: dependendo do tipo de automóvel, o ângulo de montagem pode impedir a abertura fácil do painel frontal. Se isso acontecer, retire o parafuso prateado (2) mostrado abaixo.

Quando voltar a colocá-lo, bloqueie primeiro a alavanca (3). Se colocar o parafuso sem o fazer pode partir o aparelho.

### Примечание об угле установки

При установке данного аппарата (в зависимости от типа автомобиля) угол установки может создать трудности для снятия передней панели. В таком случае вывинтите белый винт (2), изображенный на рисунке внизу.

Когда будет винчивать его обратно, сначала зафиксируйте в закрытом положении рычажок (3), поскольку если Вы этого не сделаете, при вкручивании винта может произойти поломка аппарата.



## Reset button

When the installation and connections are completed, be sure to press the reset button with a ballpoint pen, etc.

## Botón de reposición

Cuando finalice la instalación y las conexiones, cerciórese de pulsar el botón de reposición con un bolígrafo, etc.

## Nollställningsknappen

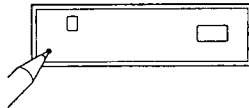
Kom ihåg att använda en penna eller något annat spetsigt föremål för att trycka på nollställningsknappen när anslutningen och monteringen är klar.

## Botão de reinicialização

Quando terminar a instalação e as ligações, não se esqueça de carregar no botão de reinicialização com a ponta de uma caneta, etc.

## Кнопка переустановки

По окончании установки и всех подсоединений не забудьте нажать кончиком шариковой ручки или иным аналогичным предметом кнопку переустановки.



## Warning when installing in a car without ACC (accessory) position on the ignition key switch

Be sure to press (OFF) on the unit for two seconds to turn off the clock display after turning off the engine.

When you press (OFF) only momentarily, the clock display does not turn off and this causes battery wear.

## Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (auxiliar) en el interruptor de la llave de encendido

Asegúrese de pulsar (OFF) en la unidad durante dos segundos para desactivar la indicación del reloj después de apagar el motor.

Si pulsa (OFF) sólo momentáneamente, la indicación del reloj no se desactivará y esto causará el desgaste de la batería.

## Var försiktig när du gör installationen i en bil där tändningslåset saknar tillbehörläge (ACC)

Glöm inte att stänga av klockvisningen när du har stängt av motorn. Du stänger av den genom att trycka på (OFF) på enheten under två sekunder.

Om du bara trycker på (OFF) ett kort ögonblick slöcknar inte klockans teckenfönster, vilket leder till att batteriet laddas ur.

## Aviso sobre a instalação num automóvel sem posição ACC (acessórios) na chave de ignição

Carregue em (OFF) no aparelho durante dois segundos para desligar o relógio, depois de desligar o motor.

Se carregar em (OFF) menos de dois segundos, o visor do relógio não se apaga o que provoca o desgaste da bateria.

## Предостережение относительно аппаратуры, установленной в автомобиле, замок зажигания в котором не имеет отпального положения (ACC) для отключения подсоединенной аппаратуры

После выключения двигателя не забывайте нажать на две секунды кнопку (OFF) на аппарате, с тем чтобы отключить циферблат часов.

При слишком кратком нажатии (OFF) циферблат не отключается, что ведет к разрядке аккумуляторной батареи.

# Connections

## Cautions

- This unit is designed for negative ground 12 V DC operation only.
- Be careful not to pinch any wires between the screw and the body of the car, or this unit, or between any moving parts such as the seat railing, etc.
- Connect the power connecting cord ⑩ to the unit and speakers before connecting it to the auxiliary power connector.
- Run all ground wires to a common ground point.
- Connect the yellow cord to a free car circuit rated higher than the unit's fuse rating. If you connect this unit in combination with other stereo components, the car circuit they are connected to must be rated higher than the sum of the individual components' fuse rating. If there are no car circuits rated as high as the unit's fuse rating, connect the unit directly to the battery. If no car circuits are available for connecting this unit, connect the unit to a car circuit rated higher than the unit's fuse rating in such a way that if the unit blows its fuse, no other circuits will be cut off.

## Notes of connection example

### Notes on the control leads

- The power aerial control lead (blue) supplies +12 V DC when you turn on the tuner or when you activate the AF (Alternative Frequency), TA (Traffic Announcement) function.
- A power aerial without a relay box cannot be used with this unit.
- When your car has built-in FM/MW/LW aerial in the rear/side glass, it is necessary to connect the power aerial control lead (blue) or the accessory power input lead (red) to the power terminal of the existing aerial booster. For details, consult your dealer.

### Warning

If you have a power aerial without a relay box, connecting this unit with the supplied power connecting cord ⑩ may damage the aerial.

### Memory hold connection

When the yellow power input lead is connected, power will always be supplied to the memory circuit even when the ignition switch is turned off.

### Notes on speaker connection

- Before connecting the speakers, turn the unit off.
- Use speakers with an impedance of 4 to 8 ohms, and with adequate power handling capacities. Otherwise, the speakers may be damaged.
- Do not connect the terminals of the speaker system to the car chassis, and do not connect the terminals of the right speaker with those of the left speaker.
- Do not attempt to connect the speakers in parallel.
- Do not connect any active speakers (with built-in amplifiers) to the speaker terminals of the unit. Doing so may damage the active speakers. Therefore, be sure to connect passive speakers to these terminals.

# Conexiones

## Precauciones

- Esta unidad ha sido diseñada para alimentarse con 12 V CC, negativo a masa, solamente.
- Tenga cuidado de no atrapar ningún cable entre algún tornillo y la carrocería del automóvil o esta unidad o entre las partes móviles, como por ejemplo los rielles del asiento, etc.
- Conecte el cable de conexión de alimentación ⑩ a la unidad y los altavoces antes de conectarlo al conector de alimentación auxiliar.
- Conecte todos los conductores de puesta a masa a un punto común.
- Conecte el cable amarillo a un circuito libre del automóvil de potencia nominal superior a la del fusible de la unidad. Si conecta esta unidad en combinación con otros componentes estéreo, la potencia nominal del circuito del automóvil a los que dichos componentes estén conectados debe ser superior a la suma de la potencia nominal del fusible de los componentes. Si no existen circuitos de automóvil de potencia nominal tan alta como la del fusible de la unidad, conecte ésta directamente a la batería. Si no hay circuitos de automóvil disponibles para conectar esta unidad, conecte la misma a un circuito de automóvil de potencia nominal superior a la del fusible de la unidad de forma que no se desactiven otros circuitos si el fusible de dicha unidad se funde.

## Notas de ejemplo de conexiones

### Notas sobre cables de control

- El cable (azul) de control de la antena motorizada suministra +12 V CC al encoder el sintonizador o al activar la función AF (Frecuencias alternativas) o TA (Anuncios de tráfico).
- Con esta unidad no podrá utilizarse una antena motorizada sin caja de relés.
- Si el automóvil dispone de una antena de FM/MW/LW incorporada en el cristal trasero/lateral, será necesario conectar el cable de control de antena motorizada (azul) o el cable de entrada de alimentación auxiliar (rojo) al terminal de alimentación del amplificador de antena existente. Para obtener información detallada, consulte a su proveedor.

### Advertencia

Si dispone de una antena motorizada sin dispositivo de relé, la conexión de esta unidad con el cable de conexión de alimentación ⑩ suministrado puede dañar la antena.

### Conexión para protección de la memoria

Si conecta el cable de entrada de alimentación amarillo, el circuito de la memoria recibirá siempre alimentación, incluso aunque ponga la llave de encendido en la posición de apagado.

### Notas sobre la conexión de los altavoces

- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
- Utilice altavoces con una impedancia admisible adecuada, ya que de lo contrario podría dañarlos.
- No conecte los terminales del sistema de altavoces al chasis del automóvil, ni los del altavoz izquierdo a los del derecho.
- No intente conectar los altavoces en paralelo.
- No conecte altavoces activos (con amplificadores incorporados) a los terminales de altavoces de la unidad. Si lo hiciera, podría dañar tales altavoces. Por lo tanto, asegúrese de conectar altavoces pasivos a estos terminales.

# Anslutning

## Säkerhetsföreskrifter

- Denna bilstering är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Var noga med att inga kablar kläms mellan någon skruv eller ått de blir klämda mellan rörliga delar som t.ex. bilsätet.
- Anslut strömkabeln ⑩ till enheten och högtalarna innan du ansluter den till den yttre strömanslutning.
- Dra samtliga jordförlingar till en och samma jordningspunkt.
- Anslut den gula kabeln till en ledig bilkreets med en högre ampere än enhetens. Om du serierkopplar enheten till andra stereokomponenter måste den bilkreets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilkreets med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilkreets finns för anslutning till enheten ska du ansluta enheten till en bilkreets med en högre ampere än enhetens styrka så att inga andra säkringar går om enhetens säkring smälter.

## Att observera angående anslutningsexemplen

### Att observera angående de olika styrkablarna

- Motorantennens styrkabel (blå) leder +12 V DC när du sår på ration och när du aktiverar någon av funktionerna AF (alternativ frekvens) eller TA (trafikmeddelanden).
- En motorantenn utan styrrelåda kan inte anslutas till denna bilstering.
- Om bilen har en FM/MW/LW-antenn inbyggd i bak- eller sidorutan måste du ansluta motorantennens styrkabel (blå) eller strömkabeln för tillbehör (röd) till strömterminalen på den befintliga antennförstärkaren. Din återförsäljare kan ge dig mer information om detta.

### Varning

Om du har en motorantenn utan relåda kan antennen skadas om du ansluter enheten med den medföljande strömkabeln ⑩.

### Anslutning för minnesöad

När du ansluter den gula, ingående strömkabeln försörjs minneskretsen med ström hela tiden, även när tändlåset slås ifrån.

### Att observera angående högtalarnas anslutning

- Slå av bilsterion innan du ansluter högtalarna.
- Anslut endast högtalare, vars impedans varierar från 4 till 8 ohm och som har tillräcklig effekthanteringskapacitet för att skydda högtalarna mot skador.
- Anslut inte något av högtalarna till bilens chassi. Anslut inte heller uttagen på höger högtalare till uttagen på vänster högtalare.
- Anslut inte högtalarna parallellt.
- Anslut inte aktiva högtalare (med inbyggda slutsteg) till bilsterions högtalarna, eftersom de kan skada de aktiva högtalarna. Var noga med att bara ansluta passiva högtalare till dessa uttag.

# Ligações

## Advertência

- Este aparelho foi concebido para funcionar somente com corrente contínua de 12 V com negativo à massa.
- Tenha cuidado para que os fios não fiquem enlaidados entre os parafusos e a carroçaria do automóvel ou a caixa do aparelho nem entre as peças móveis, por exemplo, as calhas dos bancos, etc.
- Ligue o cabo de alimentação de corrente ⑩ ao aparelho e aos altifalantes antes de o ligar ao conector de corrente auxiliar.
- Ligue todos os fios de terra num ponto de massa comum.
- Ligue o cabo amarelo a um circuito eléctrico livre do automóvel, cuja tensão seja superior à dos fusíveis do aparelho. Se ligar este aparelho em série com outros componentes estéreo, a tensão do circuito eléctrico do automóvel onde os ligar tem de ser superior à soma das tensões dos fusíveis de todos os componentes individuais. Se não houver nenhum circuito eléctrico do automóvel com uma tensão tão elevada como a dos fusíveis do aparelho, ligue-o directamente à bateria. Se não estiver disponível nenhum circuito eléctrico do automóvel para ligação deste aparelho, ligue-o a um circuito eléctrico do automóvel com uma potência nominal superior à dos fusíveis do aparelho, de tal modo que, se o aparelho reventar os fusíveis respectivos, nenhum outro circuito seja cortado.

## Notas sobre o exemplo de ligação

### Notas sobre os fios de controlo

- O fio de controlo da antena eléctrica (azul) fornece +12 V DC quando ligar o sintonizador ou quando activar a função AF (Frecuencia alternativa), TA (Informações sobre o trânsito).
- Com este aparelho, não pode utilizar uma antena eléctrica sem relé.
- Se o automóvel tiver uma antena FM/MW/LW-integrada no vidro traseiro/lateral, é necessário ligar o fio de controlo da antena eléctrica (azul) ou o cabo de alimentação para acessórios (vermelho) ao terminal eléctrico do amplificador de sinal de antena existente. Para obter mais informações, consulte o concessionário.

### Atenção

Se a antena eléctrica não tiver uma caixa de relé, o facto de ligar este aparelho com o cabo de alimentação ⑩ fornecido, pode provocar danos na antena.

### Ligação para alimentação continua da memória

Quando o fio amarelo de entrada de alimentação for ligado, os circuitos de memória ficarão com alimentação contínua, mesmo se a chave de ignição estiver desligada.

### Notas sobre a ligação dos altifalantes

- Antes de ligar os altifalantes, desligue o aparelho.
- Utilize altifalantes com impedância de 4 a 8 ohm, e com uma potência máxima admissível adequada. Caso contrário, os altifalantes poderão sofrer avarias.
- Não ligue os terminais do sistema de altifalantes ao chassi do automóvel, e não ligue os terminais do altifalante direito aos terminais do altifalante esquerdo.
- Não tente ligar os altifalantes em paralelo.
- Não ligue nenhum sistema de altifalantes activos (com amplificadores incorporados) aos terminais dos altifalantes do aparelho. Se o fizer, pode avariar o sistema de altifalantes activos. Portanto, não se esqueça de ligar altifalantes passivos a estes terminais.

# Подсоединение

## Предостережения

- Данная автомагнитола предназначена для подключения только к 12-вольтовой аккумуляторной постоянной тока с заземлением минусом на массу.
- Следите за тем, чтобы не защемили какие-либо провода между винтом и корпусом автомобиля или магнитолы либо между подвижными частями в салоне автомобиля, например, передним сиденьем и металлическими направляющими рейками под ним.
- Подсоедините шнур питания ⑩ сначала к магнитолы и громкоговорителям, а уже потом - к контактам внешнего источника питания.
- Подведите все провода заземления к одной и той же точке заземления.
- Подсоедините желтый провод к свободной электрической автомобильной с большой силой тока чем та, на которой рассчитан предохранитель магнитолы. Если Вы подсоединяете эту магнитолу в сочетании с другими компонентами стереосистемы, сила тока в электрической автомобильной, с которой они подключаются, должна быть больше суммы значений силы тока, на которую рассчитаны предохранители отдельных компонентов. В случае отсутствия в автомобиле контура со столь же высокой силой тока, как та, на которой рассчитан предохранитель магнитолы, подсоедините магнитолу напрямую к аккумулятору. В случае если в автомобиле нет свободных электрических для подсоединения магнитолы, подсоедините ее к автоэлектрике с силой тока выше того значения, на которое рассчитан предохранитель магнитолы, таким образом, чтобы если он перегорит, другие цепи не прервались.

## Примечания к примеру подсоединения

### О проводах управления

- По (синему) проводу питания антенны с электрическим приводом осуществляется подача постоянного тока напряжением +12 вольт при включении Вами радиоприемника или включения антенны функцией AF (альтернативные частоты), TA (дорожные сообщения).
- Если упрямодная антенна, не снабженная релеином блоком, с данной магнитолой используется не в момент.

- В случае если Ваш автомобиль оснащен УКВ/СВД антенной, встроенной в задневишное стекло, необходимо подсоединить провод управления электроприводной антенны (синий) или дополнительный провод подачи электризации антенны (красный) к гнезду питания на автомобильном антенном усилителе.
- За более подробными разъяснениями на этот счет обращайтесь к своему дилеру.

### Предостережение

Если Вы используете электроприводную антенну без релеиного блока, подсоединение данной магнитолы посредством прилагаемого шнура питания ⑩ может привести к повреждению антенны.

Подсоединение для поддержки памяти Когда к магнитолу подсоединен желтый электрический провод, блок памяти будет постоянно получать питание, даже при выключенном зажигании.

### О подсоединении громкоговорителей

- Прежде чем подсоединить громкоговорители, выключите магнитолу.
- Используйте громкоговорители с полным сопротивлением 4-8 Ом, обладающие способностью принимать достаточно мощный сигнал. В противном случае они могут быть повреждены.
- Не подсоединяйте контактные гнезда громкоговорителей к шасси автомобиля и не соединяйте гнезда правого громкоговорителя с гнездами левого.
- Не пытайтесь подсоединить громкоговорители параллельно.
- Не подсоединяйте к гнездам для громкоговорителей на магнитолу какие бы то ни было активные громкоговорители (со встроенными усилителями), поскольку это может привести к повреждению последних. Убедитесь в том, что подсоединяемые громкоговорители относятся к пассивному типу.

### Power connection diagram

Auxiliary power connector may vary depending on the car. Check your car's auxiliary power connector diagram to make sure the connections match correctly. There are three basic types (illustrated below). You may need to switch the positions of the red and yellow leads in the car stereo's power connecting cord. After matching the connections and switched power supply leads correctly, connect the unit to the car's power supply. If you have any questions and problems connecting your unit that are not covered in this manual, please consult the car dealer.

### Diagrama de conexión de alimentación

El conector de alimentación auxiliar puede variar en función del automóvil. Compruebe el diagrama del conector de alimentación auxiliar del automóvil para asegurarse de que las conexiones coincidan correctamente. Existen tres tipos básicos, ilustrados a continuación. Es posible que sea necesario cambiar las posiciones de los cables rojo y amarillo del cable de conexión de alimentación del sistema estéreo del automóvil. Después de hacer coincidir correctamente las conexiones y los cables de alimentación conmutada, conecte la unidad al suministro de alimentación del automóvil. Si desea realizar alguna consulta o solucionar algún problema referente a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

### Strömanslutningsschema

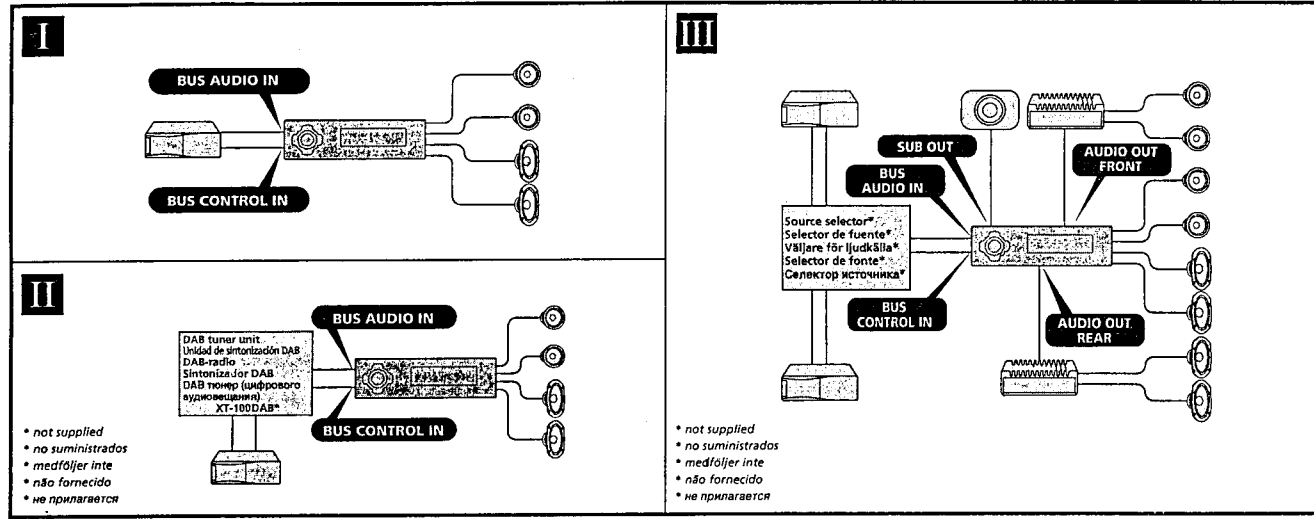
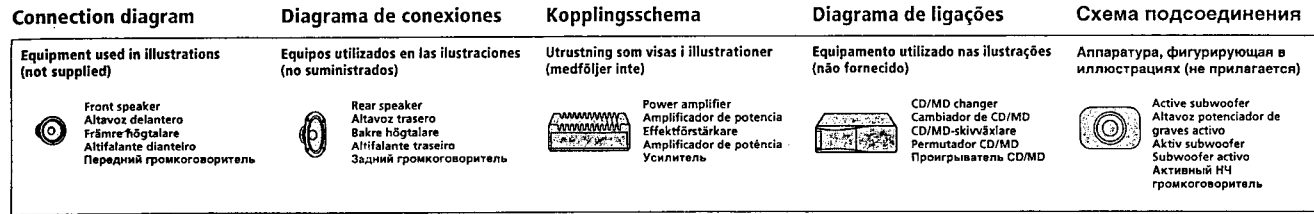
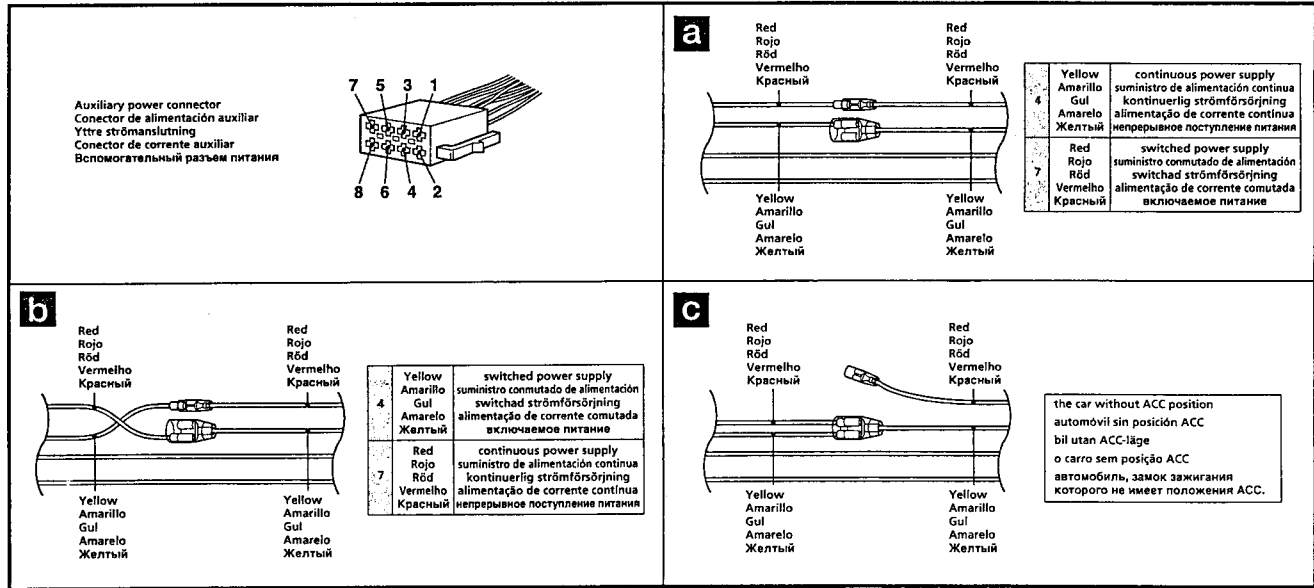
Kontakten för anslutning av tillbehör varierar från bil till bil. Kontrollera hur bilens anslutningskontakt är konstruerad så att du ansluter på rätt sätt. Det finns tre grundläggande typer (visas nedan). Du kan eventuellt behöva växla plats mellan de röda och gula ledningarna i bilstereos strömkabel. Passa ihop ledningarna korrekt. Och anslut sedan enheten till bilens strömanslutning. Om du får problem eller har frågor som inte besvaras i den här bruksanvisningen kan du kontakta bilutförsäljaren.

### Diagrama de ligação de corrente

O conector de corrente auxiliar pode variar de carro para carro. Verifique o diagrama do conector de corrente auxiliar para se certificar de que as ligações estão bem feitas. Existem três tipos de conectores (ilustrados abaixo). É possível que tenha de trocar as posições dos fios vermelho e amarelo do cabo de alimentação do autorádio. Depois de fazer a correspondência correta entre as ligações e os cabos de alimentação comutada, ligue o aparelho à fonte de alimentação do carro. Se tiver alguma dúvida ou problema relacionado com o aparelho que não esteja incluído neste manual, consulte o concessionário.

### Схема подключения ПИТАНИЯ

В разных автомобилях могут использоваться разные разъемы вспомогательного питания. Для того чтобы убедиться в правильности подсоединения, обязательно сверьтесь со схемой разъема подключения вспомогательного питания Вашего автомобиля. Есть три основных типа (как показано на рисунке ниже). Возможно, при подключении Вам придется поменять местами красный и желтый провода соединительного кабеля питания стереосистемы. После проверки соответствия разводки разъемов автомобильного электропитания и проводов питания магнитолы подключите магнитолу к автомобильному контуру электропитания. Если у Вас возникли какие-либо вопросы или проблемы, связанные с подключением магнитолы, которые не рассматриваются в настоящем руководстве, обратитесь за советом к дилеру автомобильной фирмы.



**Notes**

- For connecting two or more CD/MD changers, the source selector XA-C30 (optional) is necessary.
- Be sure to connect the ground cord before connecting the amplifier.
- If you connect an optional power amplifier and do not use the built-in amplifier, the beep sound will be deactivated.

**Notas**

- Si desea conectar dos o más cambiadores de CD/MD, necesitará el selector de fuente XA-C30 (opcional).
- Asegúrese de conectar primero el cable de puesta a masa antes de realizar la conexión al amplificador.
- Si conecta un amplificador de potencia opcional y no utiliza el incorporado, los pitidos se desactivarán.

**Obsevera**

- För anslutning av två eller flera CD/MD-skivväxlare krävs växlarna XA-C30 (tillval).
- Var noggräm med att först ansluta jorden, innan du ansluter förstärkaren.
- Om du väljer att använda en annan förstärkare i stället för den inbyggda, kommer ljudsignalen att avaktiveras.

**Notas**

- Para ligar um ou mais permutadores CD/MD, é necessário o selector de fonte XA-C30 (opcional).
- Antes de fazer a ligação ao amplificador, tem de ligar primeiro o cabo de ligação à massa.
- Se ligar um amplificador de potência opcional e não utilizar o amplificador integrado, desactiva o sinal sonoro.

**Примечания**

- Для подсоединения двух или более проигрывателей CD/MD необходим селектор источника XA-C30 (в комплект не входит).
- Прежде чем подключить магнитолу к усилителю, обязательно подсоедините провод заземления.
- Если Вы используете во встроенный усилитель, а дополнительный усилитель, звуковой сигнал будет отключен.



**Connection example**

\*1 Note for the aerial connecting  
If your car aerial is an ISO (International Organization for Standardization) type, use the supplied adaptor (C) to connect it. First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.  
\*2 RCA pin cord (not supplied)

**Ejemplo de conexiones**

\*1 Nota sobre la conexión de la antena  
Si la antena del automóvil es del tipo ISO (International Organization for Standardization), emplee el adaptador suministrado (C) para conectarla. En primer lugar, conecte la antena del automóvil al adaptador suministrado y, a continuación, a la toma de antena de la unidad principal.  
\*2 Cable con clavijas RCA (no suministrado)

**Anslutningarna enligt exemplet**

\*1 Angående antennanslutning  
Om motorantennen är av ISO-typ (International Organization for Standardization), använd du medföljande adapter (C) för att ansluta den. Anslut först motorantennen till medföljande adapter och därefter till antennuttaget på huvudenheten.  
\*2 Kabel med RCA-kgntakter (medföljer inte)

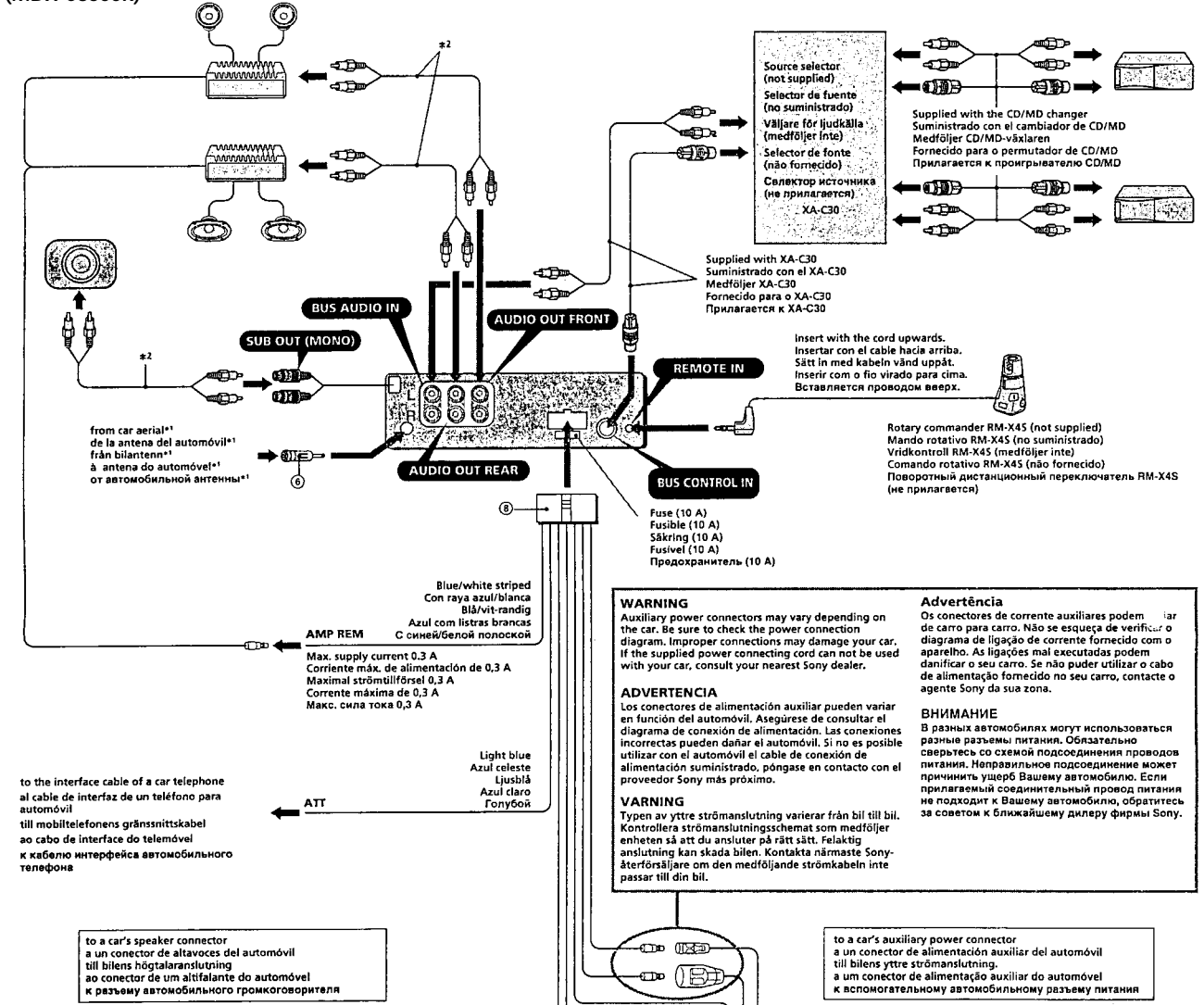
**Exemplo de ligações**

\*1 Nota referente à ligação da antena  
Se a antena do automóvel for uma antena de tipo ISO (International Organization for Standardization), utilize o adaptador fornecido (C) para fazer a ligação respectiva. Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.  
\*2 Cabo de terminais RCA (não fornecido)

**Пример подсоединения**

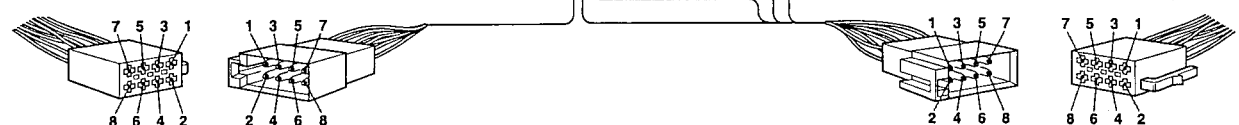
\*1 Примечание о подсоединении антенны  
Если антенна в Вашем автомобиле относится к типу, утвержденному ISO (Международной организацией для стандартизации), используйте для ее подсоединения переходник (C). Сначала подсоедините автомобильную антенну к прилагаемому переходнику, а затем - к антенному гнезду магнитолы.  
\*2 Шнур с контактными штырьками RCA (не прилагается)

(MDX-C8500R)



to the interface cable of a car telephone  
al cable de interfaz de un teléfono para automóvil  
till mobiltelefonens gränssnittskabel  
ao cabo de interface do telemóvel  
к кабелю интерфейса автомобильного телефона

to a car's speaker connector  
a un conector de altavoces del automóvil  
till bilens högtalanslutning  
ao conector de um altifalante do automóvel  
к разъему автомобильного громкоговорителя



**WARNING**  
Auxiliary power connectors may vary depending on the car. Be sure to check the power connection diagram. Improper connections may damage your car. If the supplied power connecting cord can not be used with your car, consult your nearest Sony dealer.

**ADVERTENCIA**  
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado, póngase en contacto con el proveedor Sony más próximo.

**WARNING**  
Typen av yttre strömanslutning varierar från bil till bil. Kontrollera strömanslutningsschemat som medföljer enheten så att du ansluter på rätt sätt. Felaktig anslutning kan skada bilen. Kontakta närmaste Sony-återförsäljare om den medföljande strömkabeln inte passar till din bil.

**Advertência**  
Os conectores de corrente auxiliares podem variar de carro para carro. Não se esqueça de verificar o diagrama de ligação de corrente fornecido com o aparelho. As ligações mal executadas podem danificar o seu carro. Se não puder utilizar o cabo de alimentação fornecido no seu carro, contacte o agente Sony da sua zona.

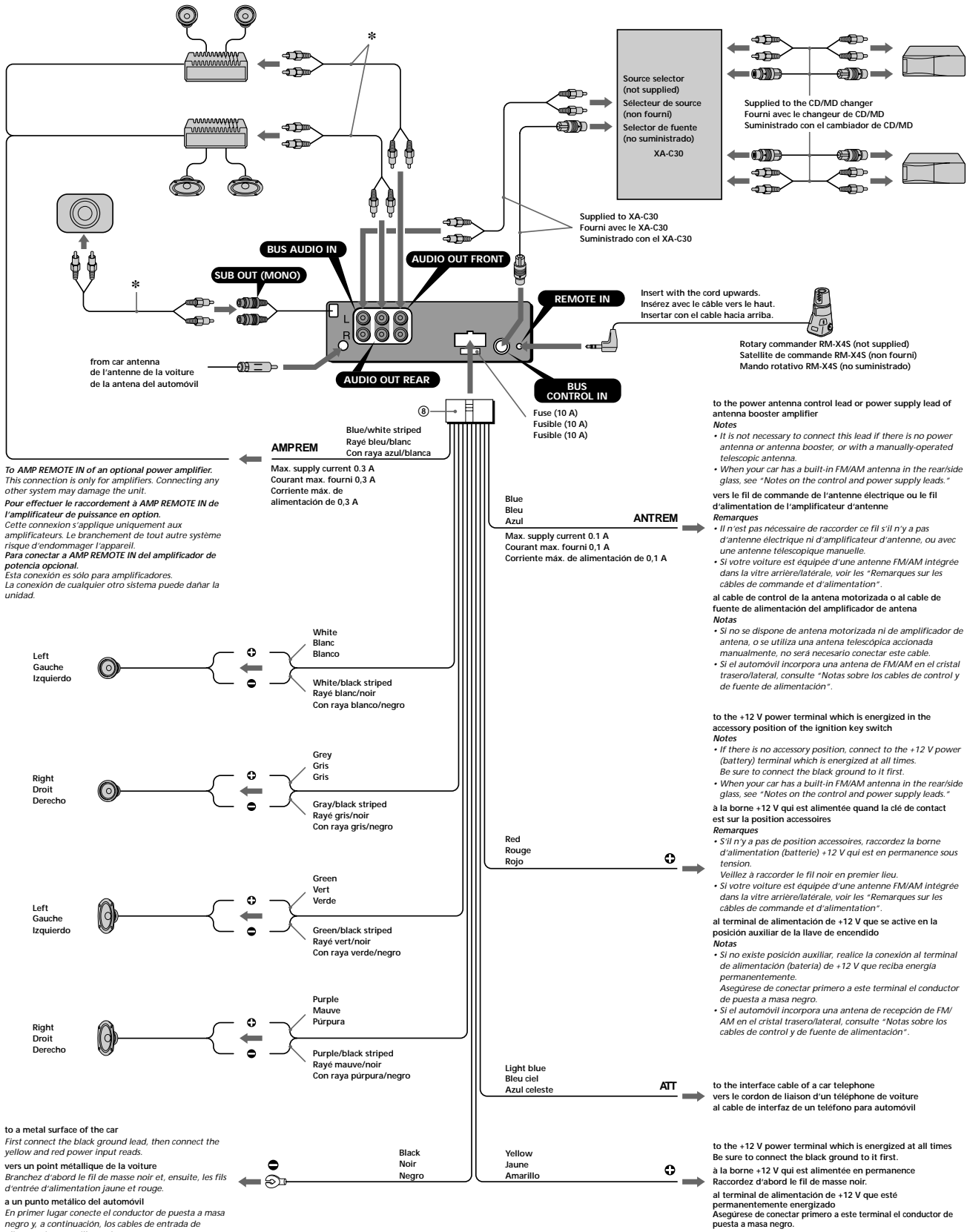
**ВНИМАНИЕ**  
В разных автомобилях могут использоваться разные разъемы питания. Обязательно сверьтесь со схемой подсоединения проводов питания. Неправильное подсоединение проводов питания может причинить ущерб Вашему автомобилю. Если прилагаемый соединительный провод питания не подходит к Вашему автомобилю, обратитесь за советом к ближайшему дилеру фирмы Sony.

1	Purple Púrpura Violetto Фиолетовый	Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	5	White Blanco Vite Белый	Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte de frente, Esquero Громкоговоритель, передний, левый
2		Speaker, Rear, Right Altavoz, parte posterior, derecho Högtalare, bakre, höger Altifalante, Parte de trás, Direito Громкоговоритель, задний, правый	6		Speaker, Front, Left Altavoz, parte frontal, izquierdo Högtalare, främre, vänster Altifalante, Parte de frente, Esquero Громкоговоритель, передний, левый
3	Grey Gris Grá Серый	Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito Громкоговоритель, передний, правый	7	Green Verde Grön Зеленый	Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquero Громкоговоритель, задний, левый
4		Speaker, Front, Right Altavoz, parte frontal, derecho Högtalare, främre, höger Altifalante, Parte da frente, Direito Громкоговоритель, передний, правый	8		Speaker, Rear, Left Altavoz, parte posterior, izquierdo Högtalare, bakre, vänster Altifalante, Parte de trás, Esquero Громкоговоритель, задний, левый

4	Yellow Amarillo Gul Amarelo Желтый	continuous power supply suministro de alimentación continua kontinuerlig strömförsörjning alimentação de corrente continua непрерывное поступление питания	7	Red Rojo Röd Vermelho Красный	switched power supply suministro conmutado de alimentación switchad strömförsörjning alimentação de corrente comutada включаемое питание
5	Blue Azul Blå Azul Синий	power aerial control control de antena motorizada styrning av motorantenn antena eléctrica антенная электрика	8	Black Negro Svart Preto Черный	ground toma de tierra jord terra земля
6	Orange/ White Naranja/ Blanco Orange/vit Cor de laranja/ branco Оранжевый/ белый	switched illumination power supply fuente de alimentación de iluminación comutada Switchad strömförsörjning till belysning fonte de alimentação comutada para iluminação подача питания подсветки от завжигания	Positions 1, 2 and 3 do not have pins. Las posiciones 1, 2 y 3 no disponen de pines. Positionerna 1, 2 och 3 saknar stift. As posições 1, 2 e 3 não têm pinos. Позиции 1, 2 и 3 не имеют контактных штырьков.		

**(MDX-C8500X)**  
**Connection example**  
**Exemple de connection**  
**Ejemplo de conexiones**

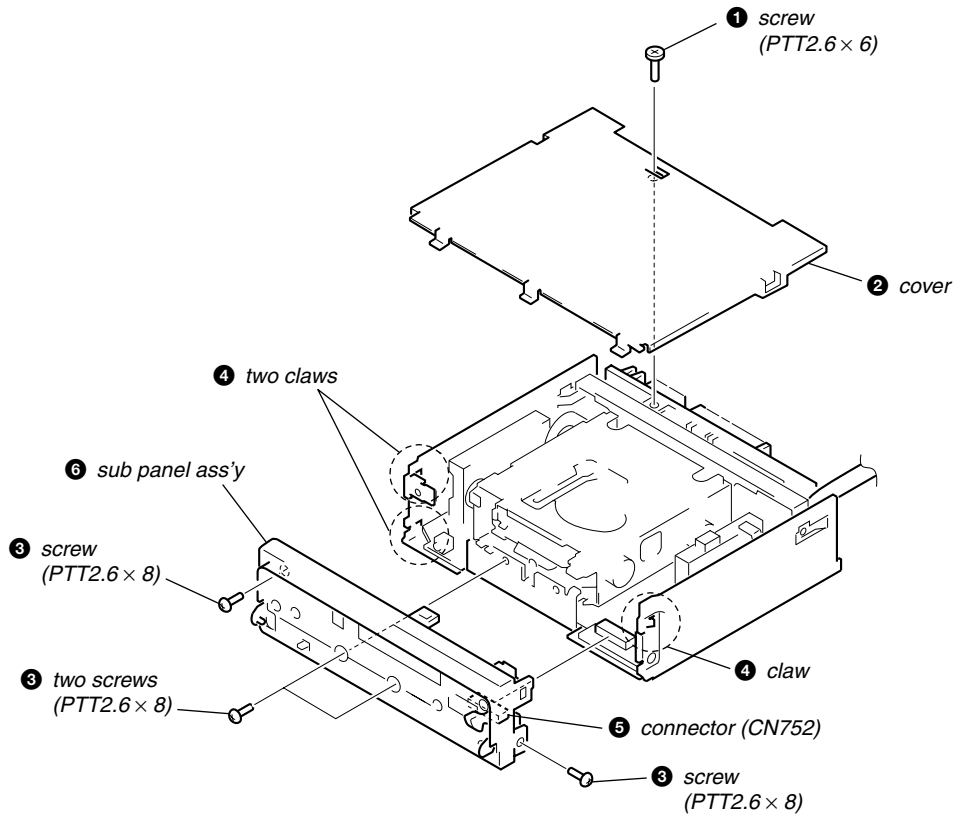
\* RCA pin cord (not supplied)  
 Cordon à broche RCA (non fourni)  
 Cable con pines RCA (no suministrado)



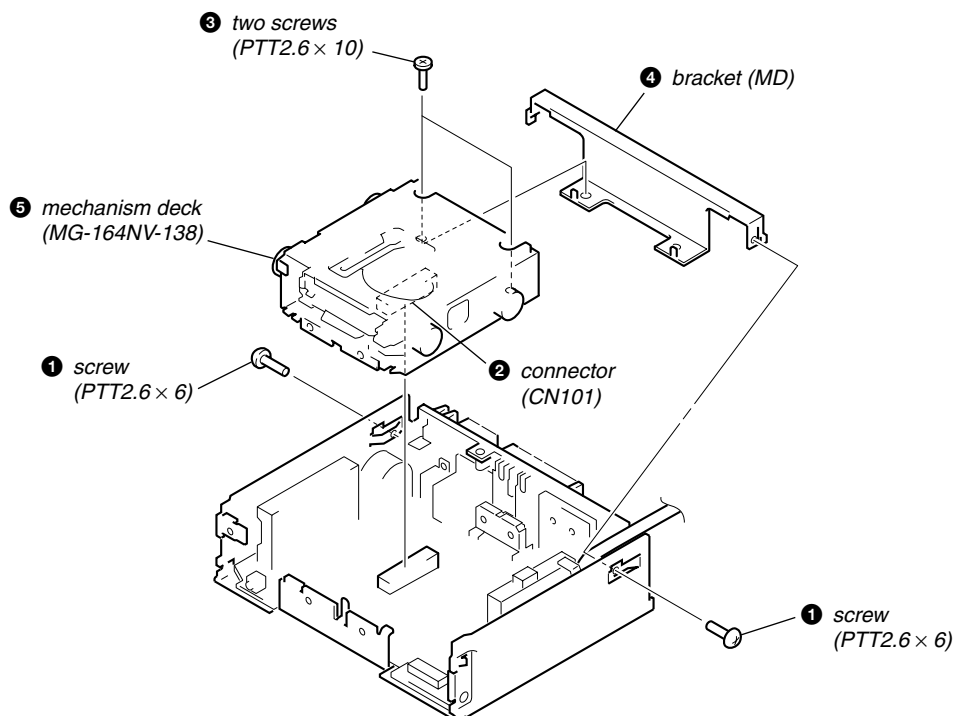
# SECTION 3 DISASSEMBLY

**Note:** Follow the disassembly procedure in the numerical order given.

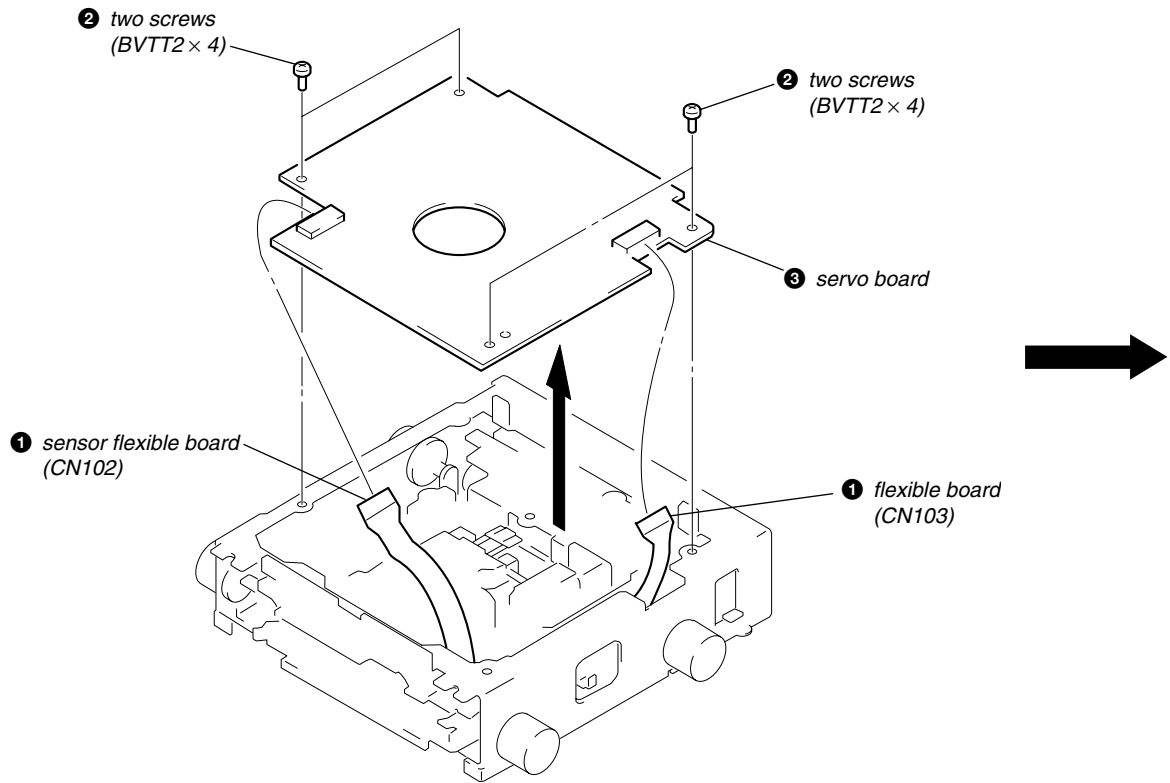
## SUB PANEL ASS'Y



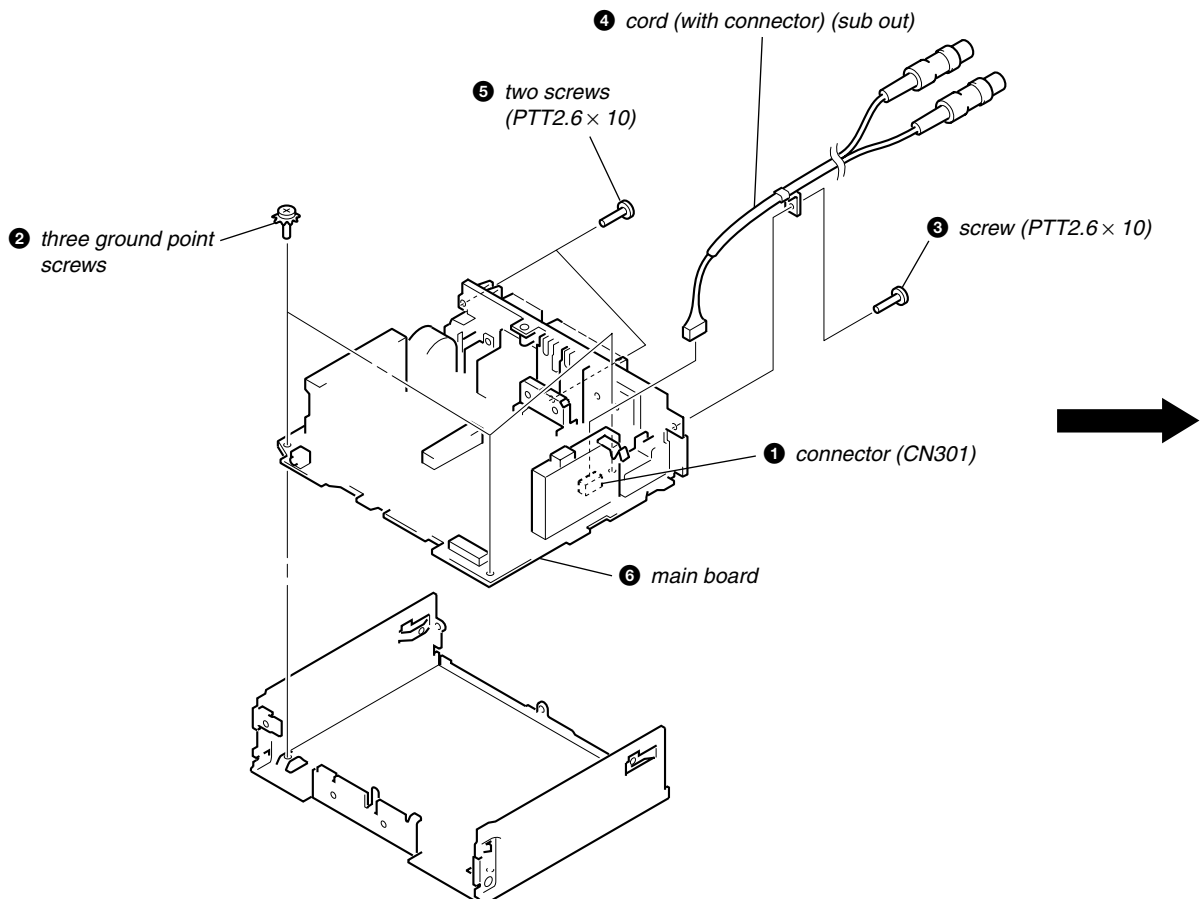
## MECHANISM DECK (MG-164NV-138)



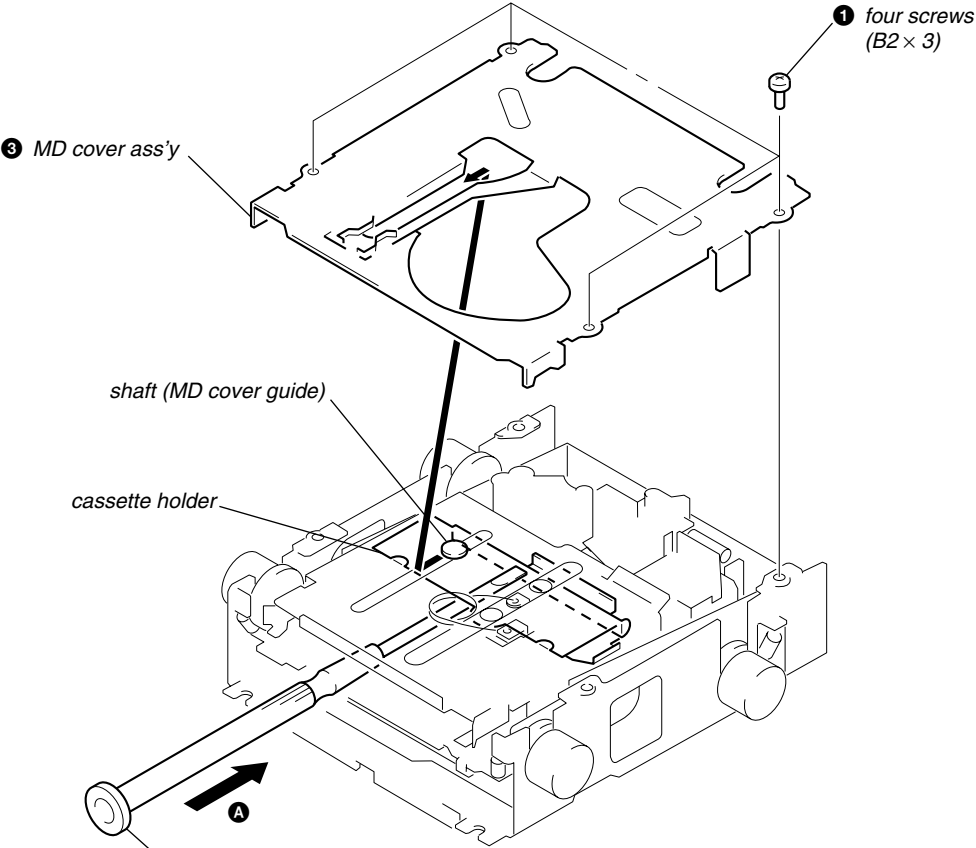
## SERVO BOARD



## MAIN BOARD



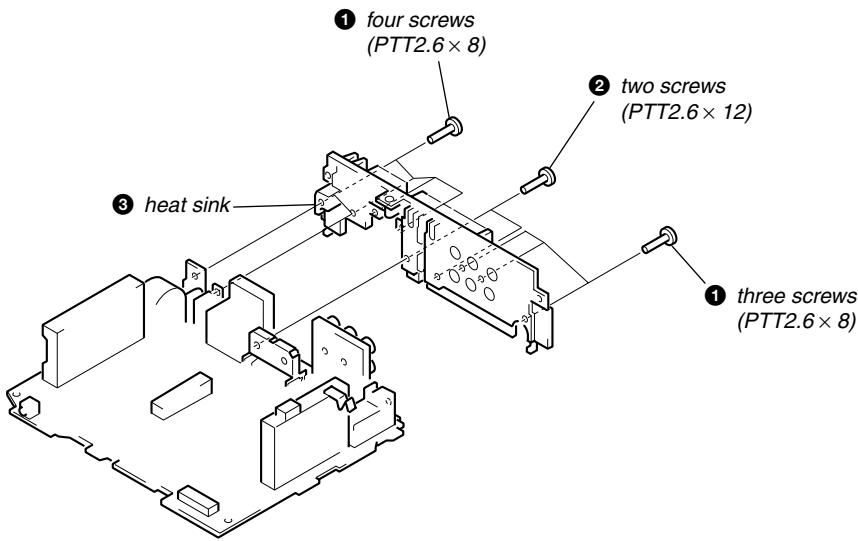
**MD COVER ASS'Y**



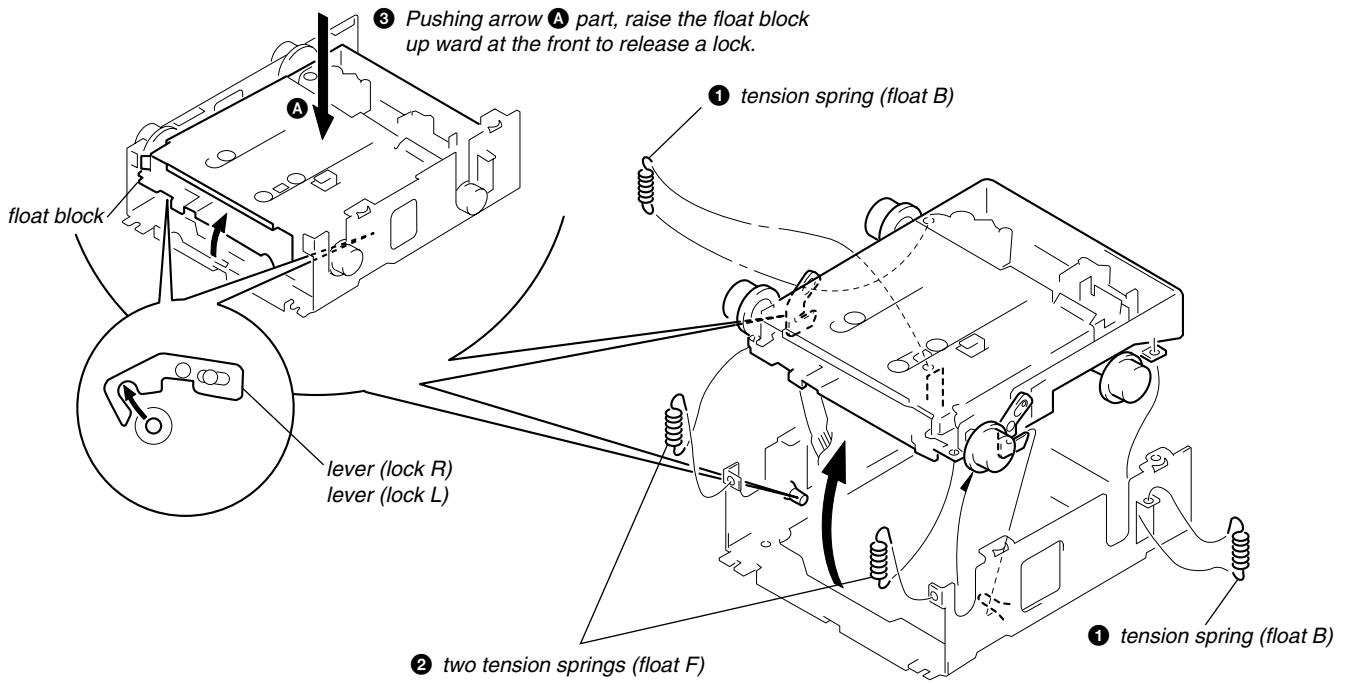
**2** Pushing the Cassette Holder in the direction of arrow **A** with a screwdriver, etc., disengage the Shaft (MD Cover Guide) from the slot in the MD Cover Assy.  
 Note: Take care not to scratch the optical Pick-up when pushing the Cassette Holder with a screwdriver, etc.



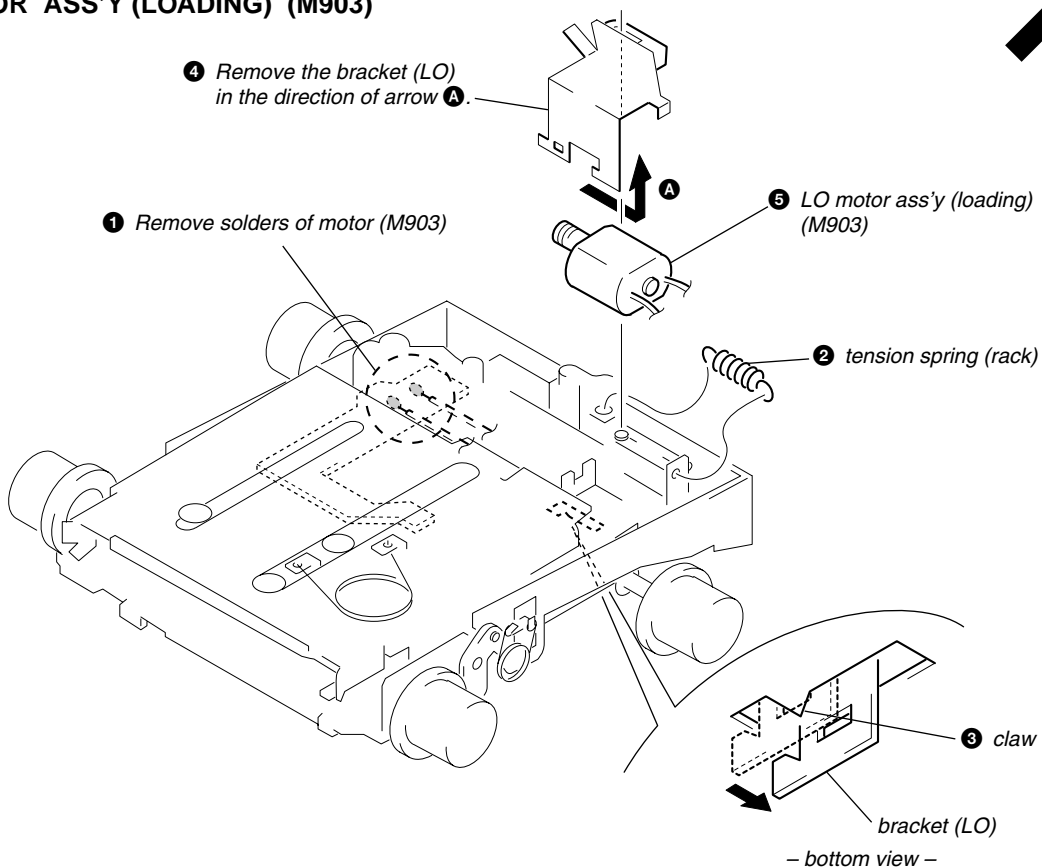
**HEAT SINK**



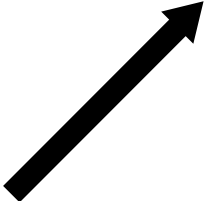
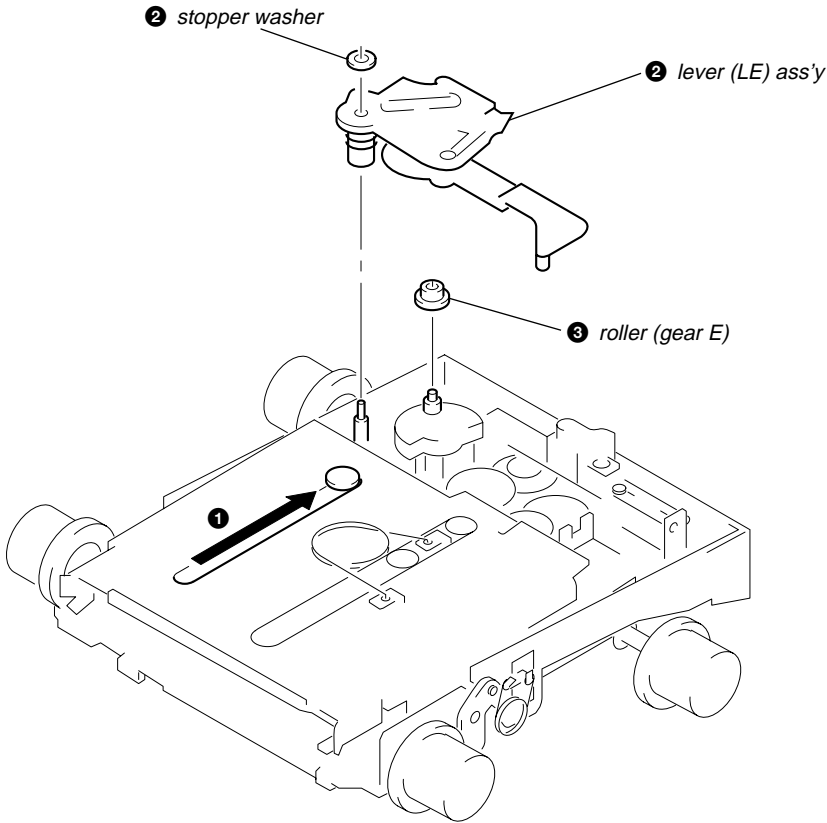
## FLOAT BLOCK



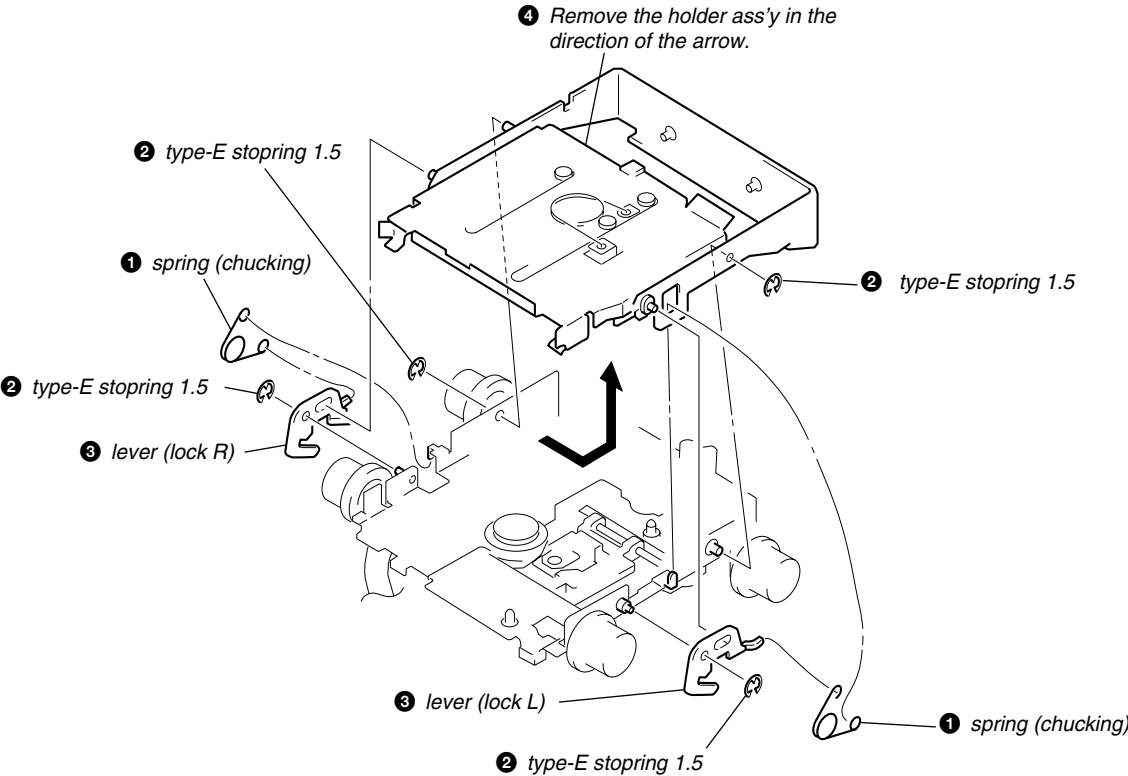
## LO MOTOR ASS'Y (LOADING) (M903)



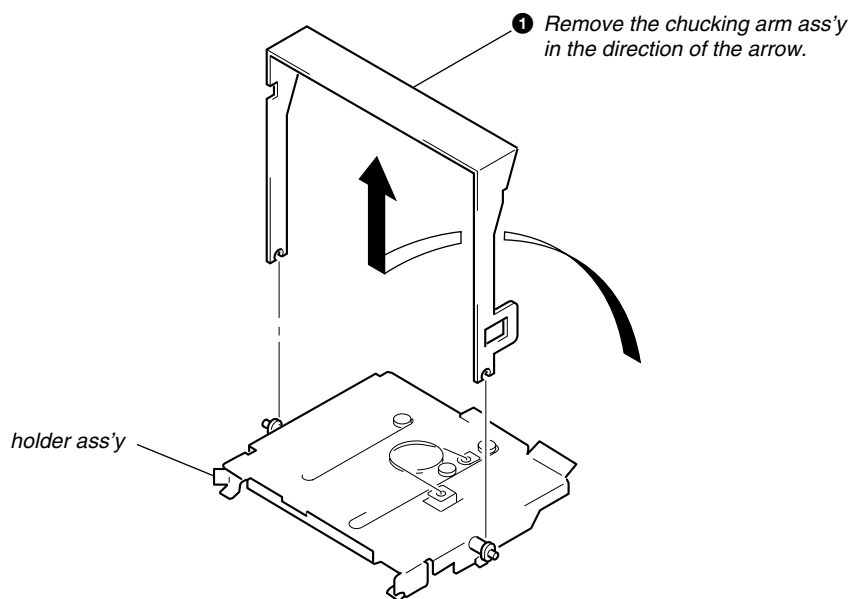
**LEVER (LE) ASS'Y**



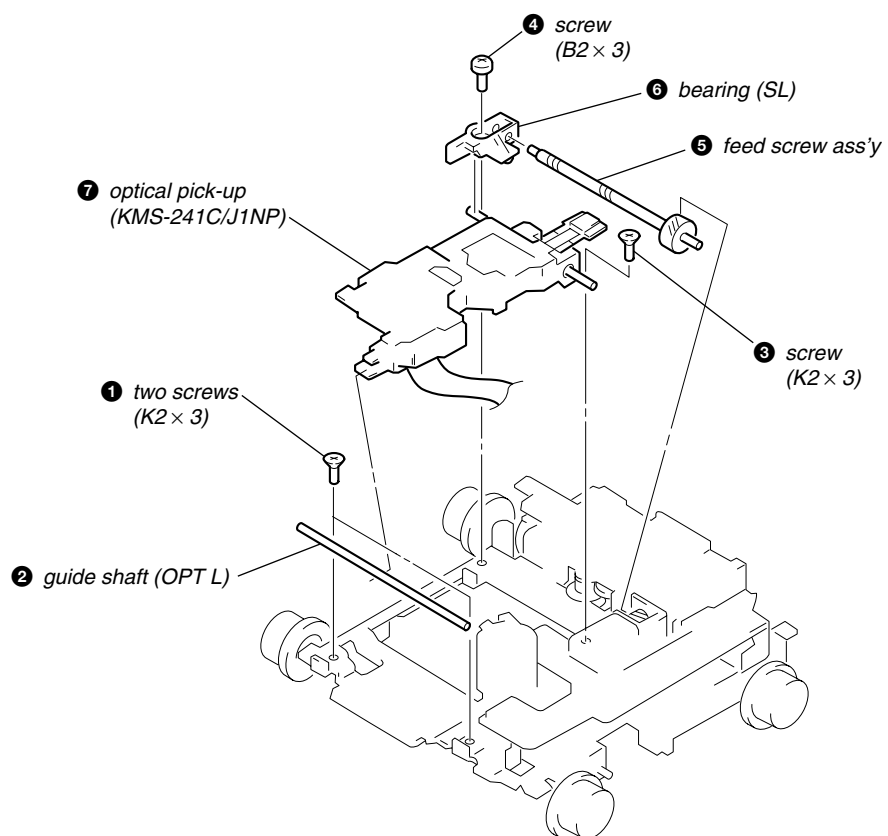
**HOLDER ASS'Y**



## CHUCKING ARM ASS'Y

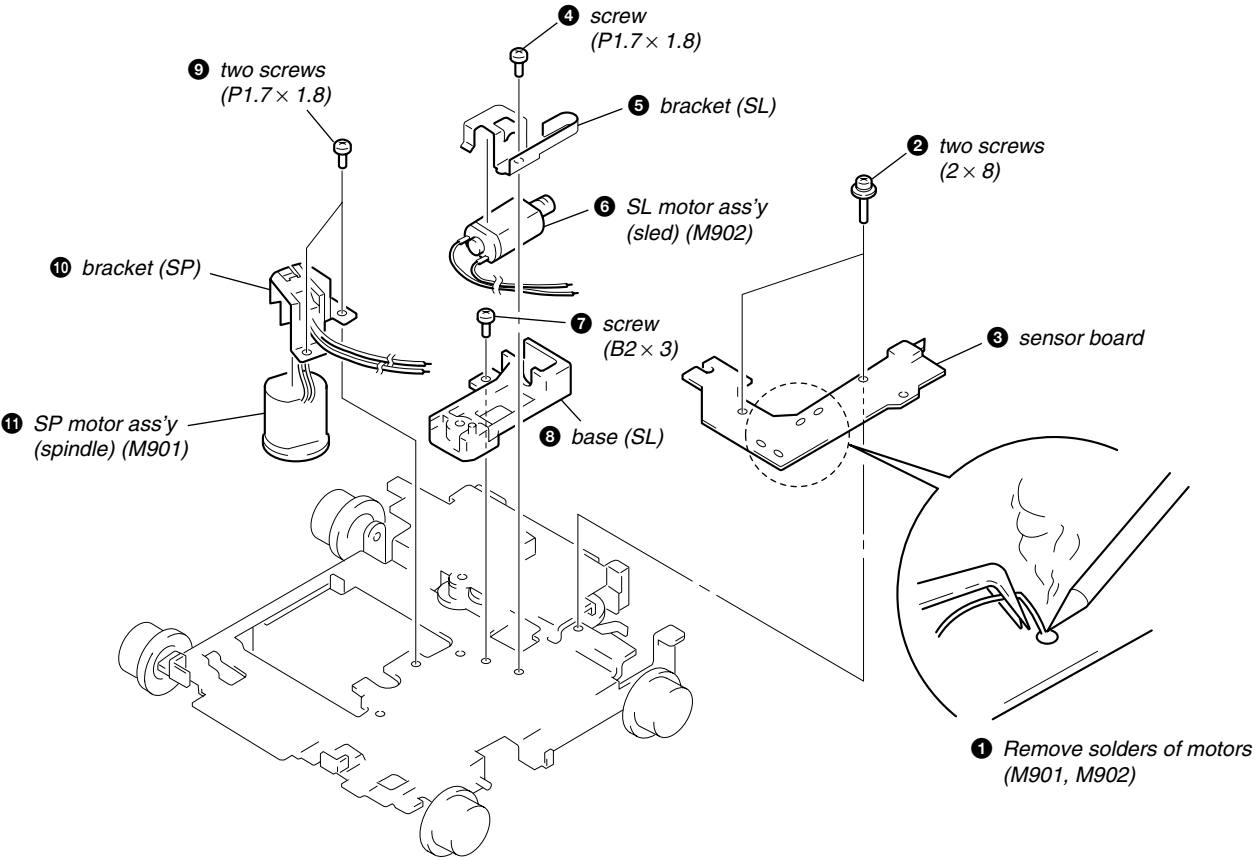


## OPTICAL PICK-UP (KMS-241C/J1NP)





**SL MOTOR ASS'Y (SLED) (M902), SP MOTOR ASS'Y (SPINDLE) (M901)**



## SECTION 4 ELECTRICAL ADJUSTMENTS

### TEST MODE

This set have the test mode function.

<Set the Test Mode>

1. Turn ON the regulated power supply. (The clock is displayed)  
**Note:** Press the  button, if the clock is not displayed.
2. Push the preset  button.
3. Push the preset  button.
4. Press the preset  button for more than two seconds.
5. Then the display indicates all lights, the test mode is set.

<Release the Test mode>

1. Push the  button.

### MD SECTION

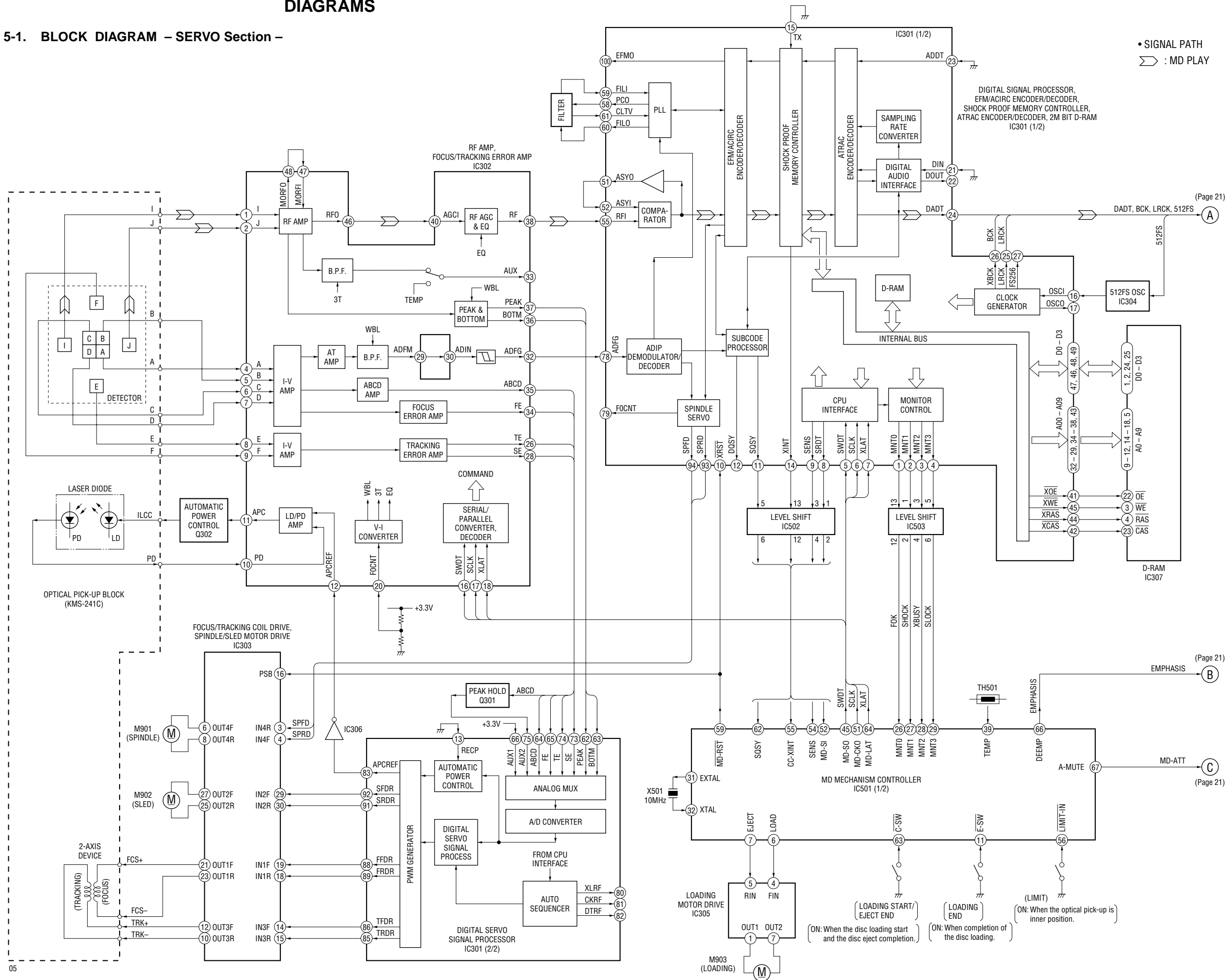
MD section adjustments are done automatically in this set.

### TUNER SECTION

Tuner section adjustments are done automatically in this set.

SECTION 5  
DIAGRAMS

5-1. BLOCK DIAGRAM - SERVO Section -



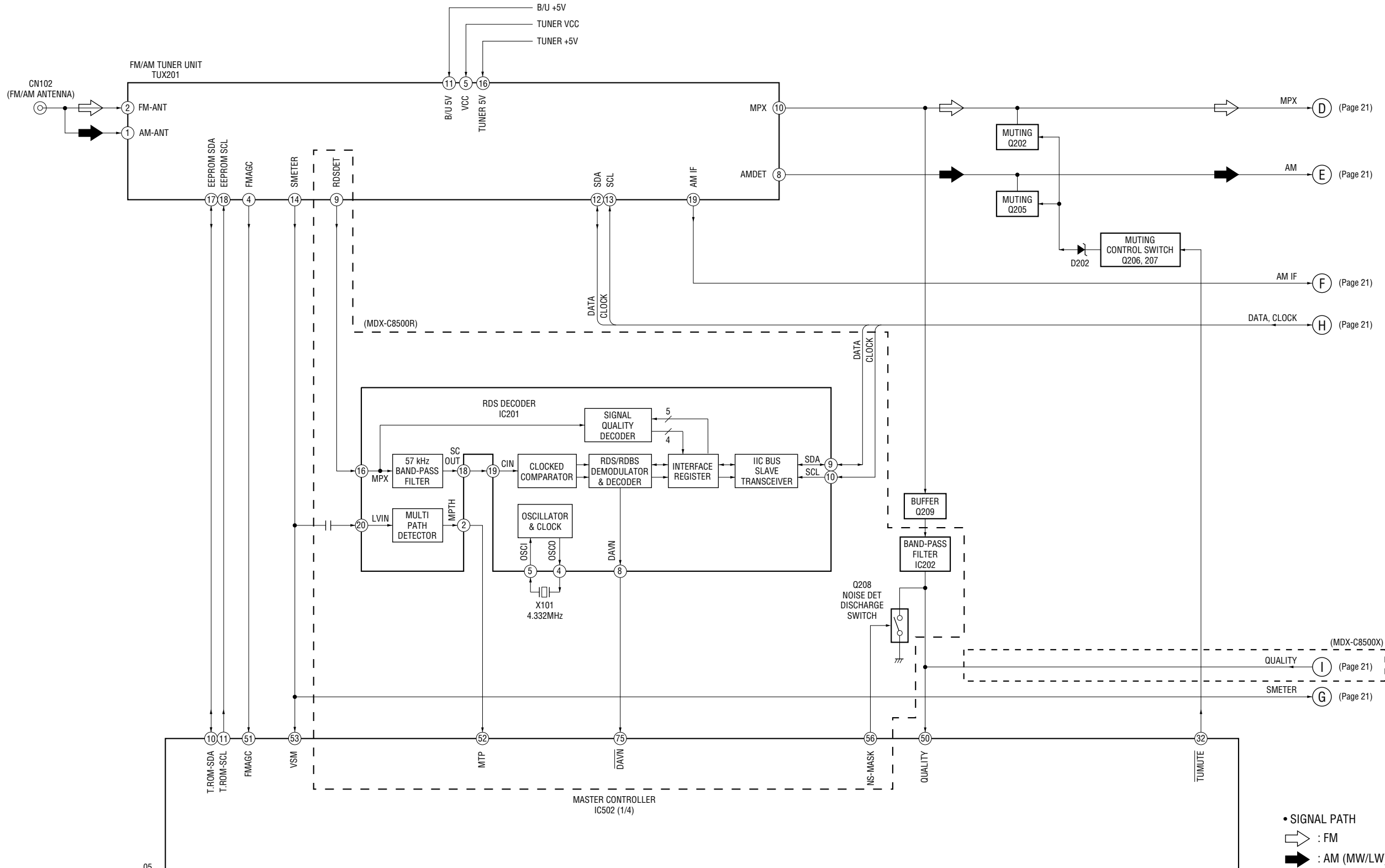
• SIGNAL PATH  
- - - : MD PLAY

(Page 21)

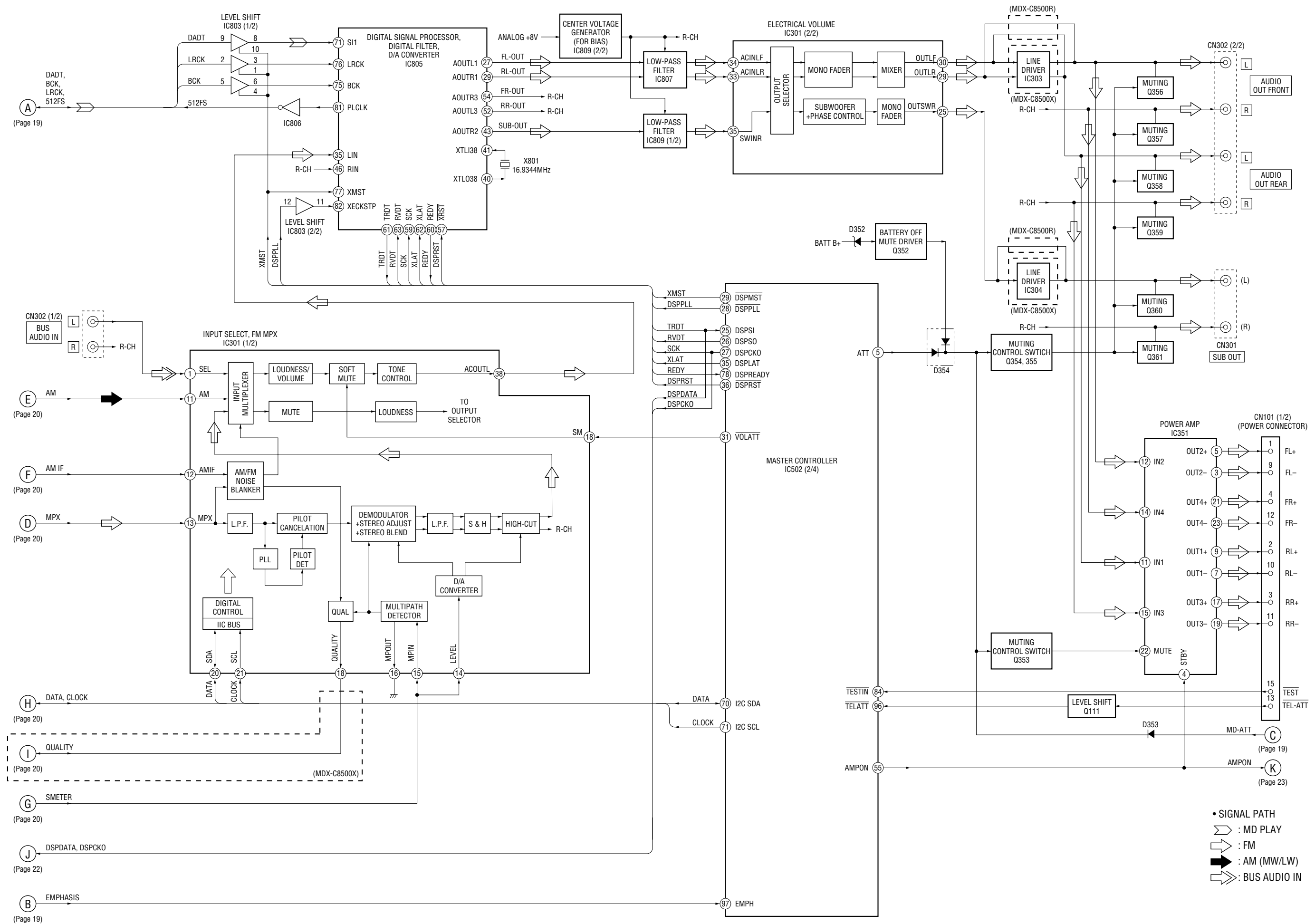
(Page 21)

(Page 21)

5-2. BLOCK DIAGRAM –TUNER Section –

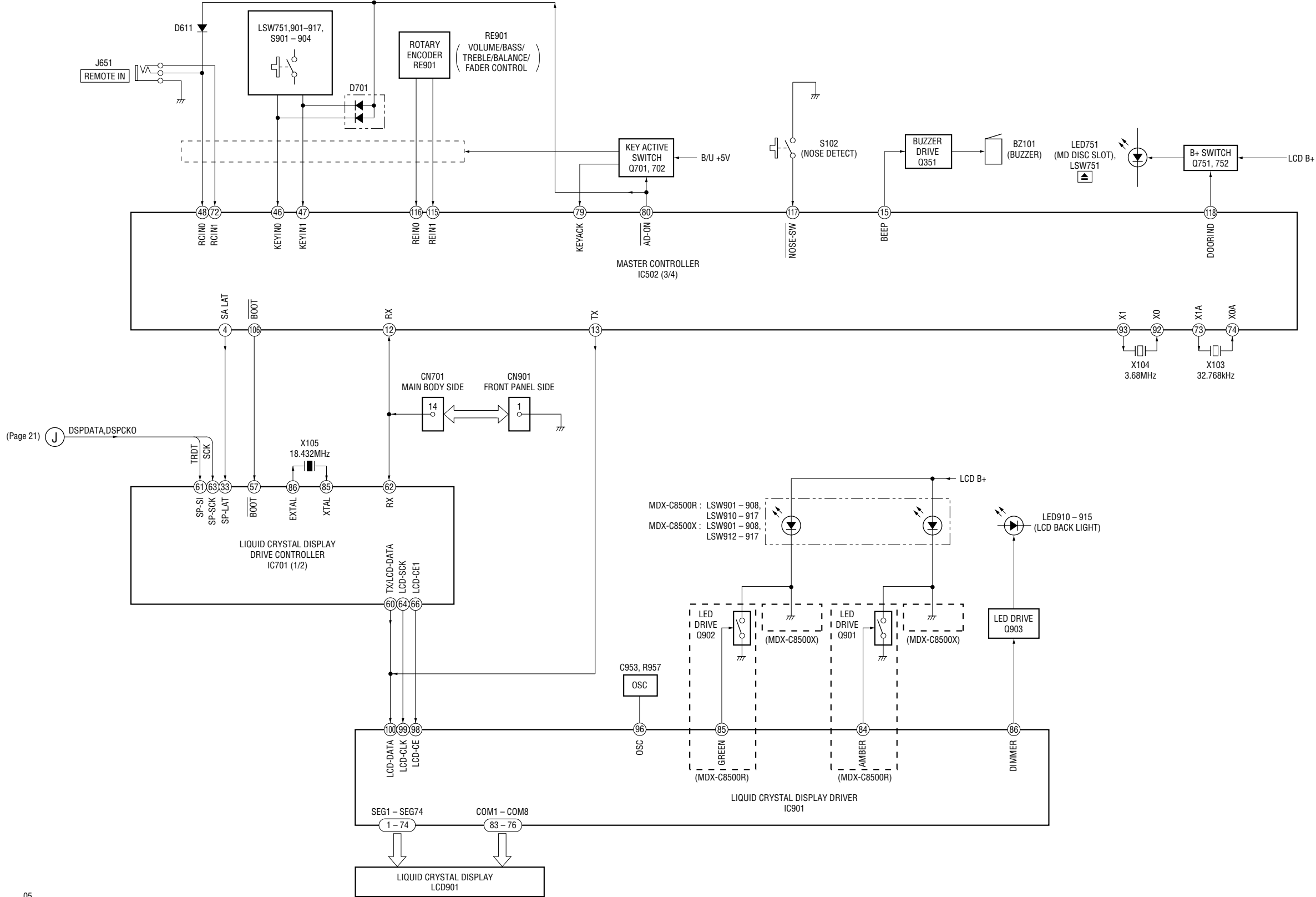


5-3. BLOCK DIAGRAM – MAIN Section –



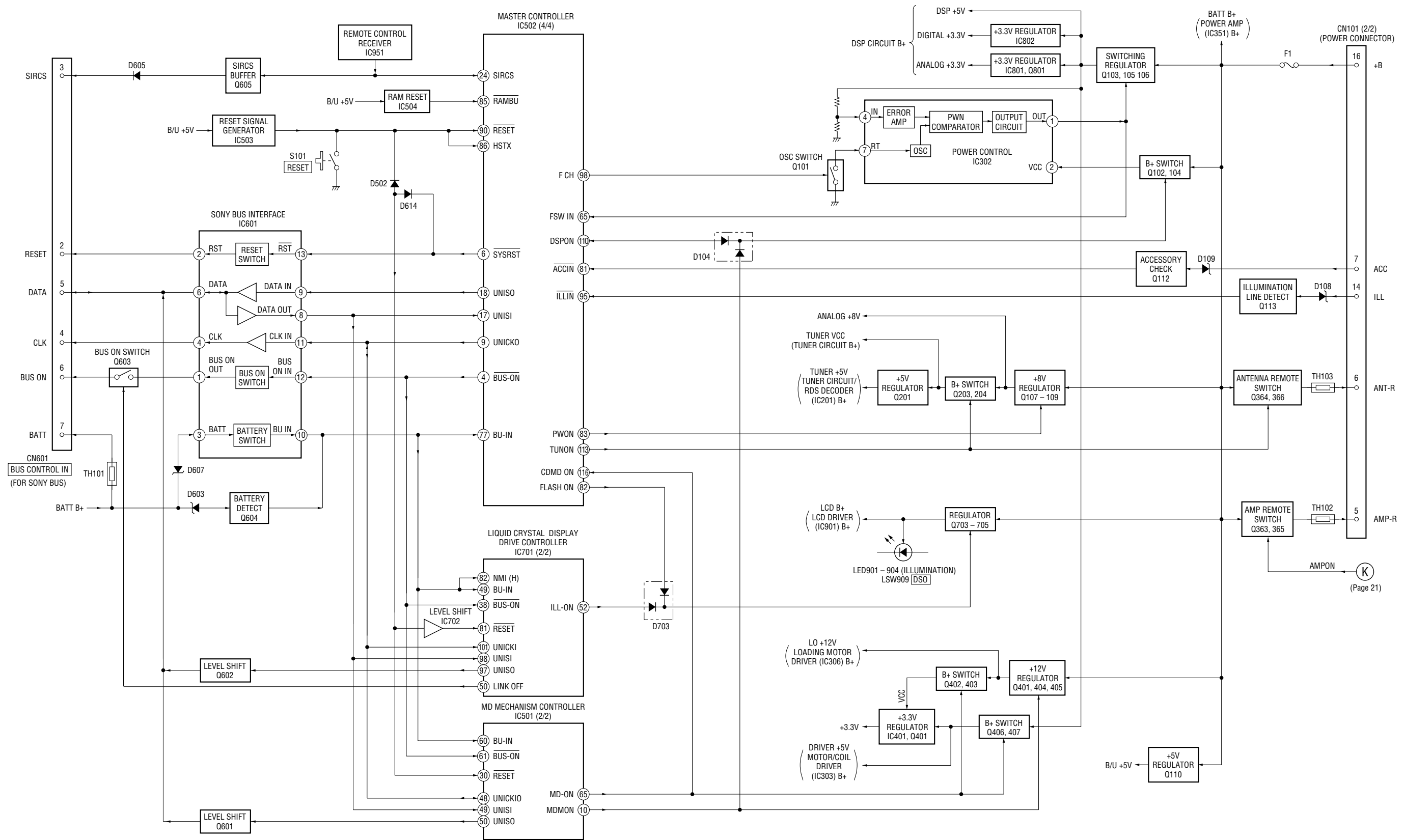
• SIGNAL PATH  
 ⇨ : MD PLAY  
 ⇨ : FM  
 ⇨ : AM (MW/LW)  
 ⇨ : BUS AUDIO IN

5-4. BLOCK DIAGRAM – DISPLAY/KEY CONTROL Section –



(Page 21) J DSPDATA, DSPCKO

5-5. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



## 5-6. NOTES FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

### Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- : Through hole.
- △ : internal component.
- ▨ : Pattern from the side which enables seeing.  
(The other layers' patterns are not indicated.)

**Caution:**  
 Pattern face side: Parts on the pattern face side seen from  
 (Conductor Side) the pattern face are indicated.  
 Parts face side: Parts on the parts face side seen from  
 (Component Side) the parts face are indicated.

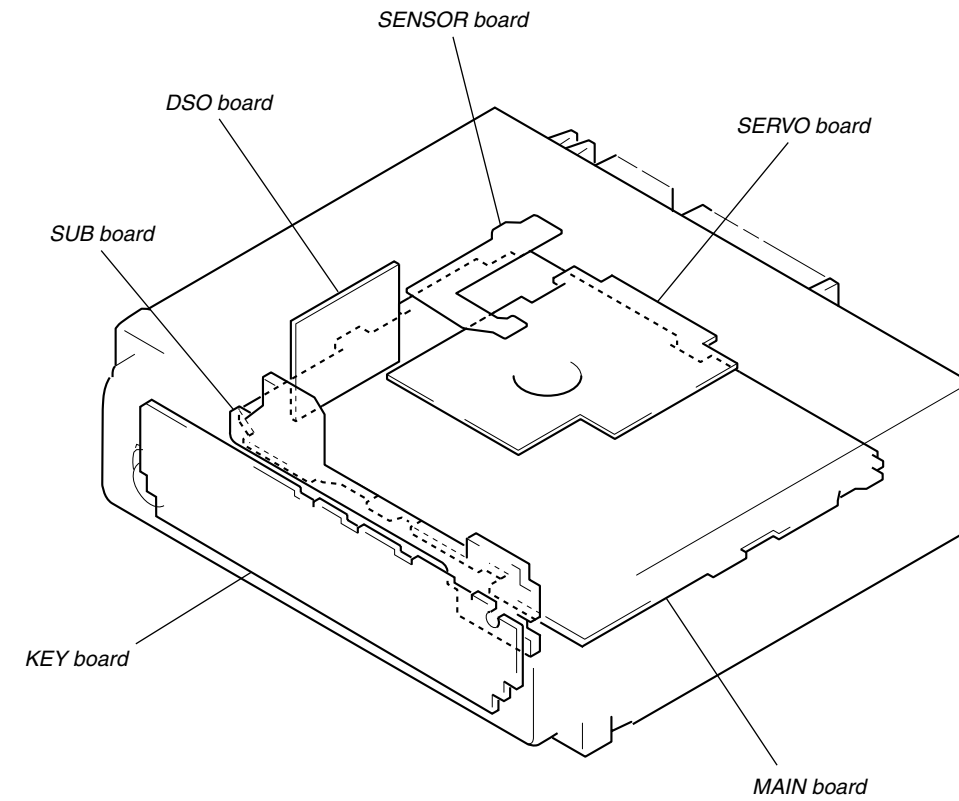
### Note on Schematic Diagram:

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- △ : internal component.
- □ : panel designation.

**Note:** The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

- [B+] : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM (MW/LW)
  - ⇨⇨ : BUS AUDIO IN
  - ∑ : MD PLAY
- Please refer to servicing notes (page 3) for system of TYPE A, B and C.

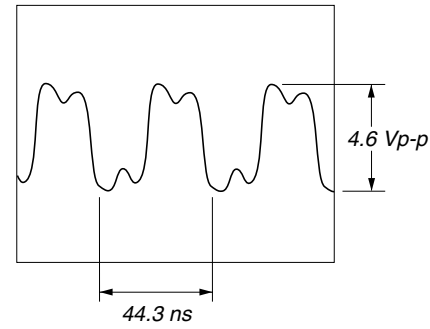
## • Circuit Boards Location



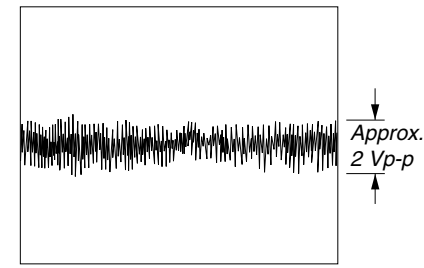


• Waveforms  
– SERVO Board –

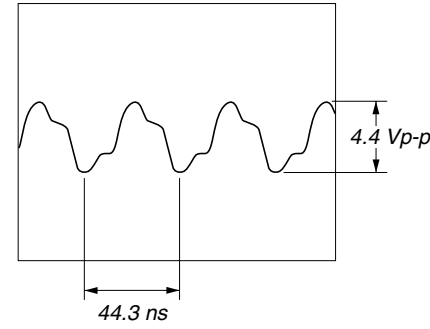
1 IC301 ⑩ (OSCI) (MD Play Mode)



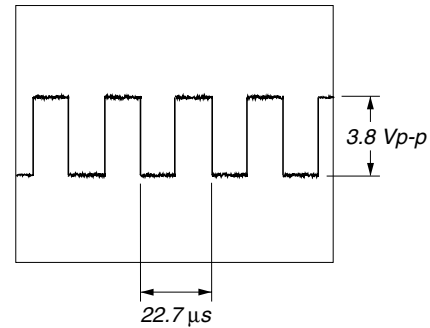
6 IC301 ⑩ (TE), IC302 ⑩ (TE) (MD Play Mode)



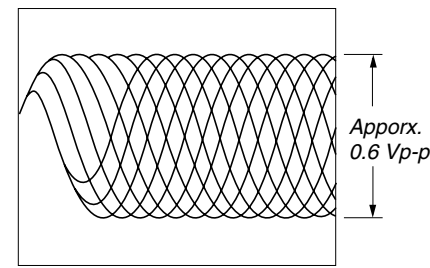
11 IC304 ⑦ (MD Play Mode)



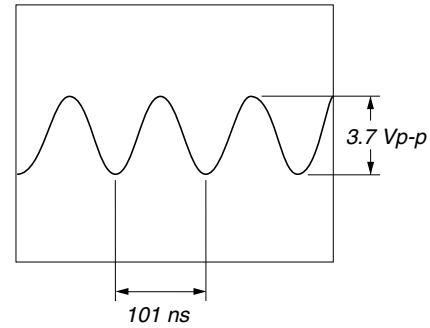
2 IC301 ⑩ (LRCK) (MD Play Mode)



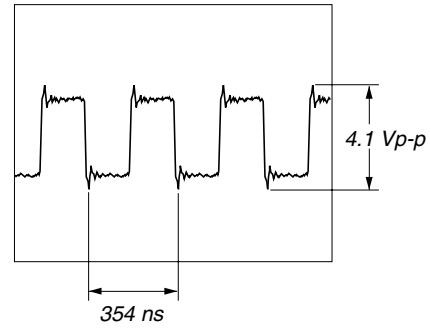
7 IC302 ①, ②, ⑩, ⑩ (I, J, AGCI, RFO) (MD Play Mode)



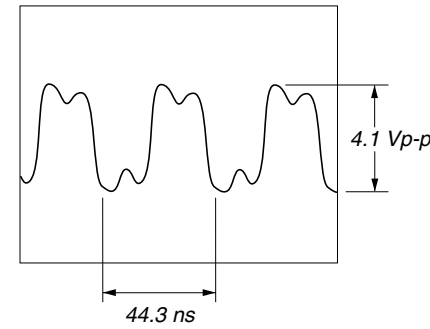
12 IC501 ⑩ (EXTAL)



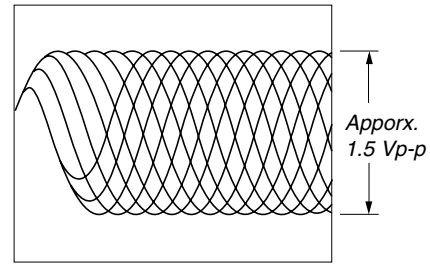
3 IC301 ⑩ (XBCK) (MD Play Mode)



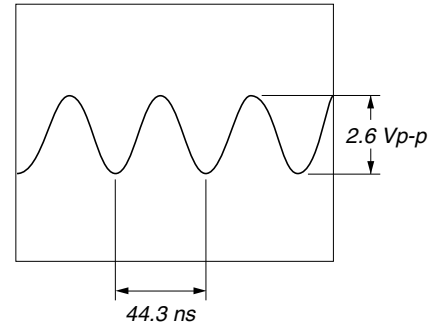
8 IC304 ①, ② (MD Play Mode)



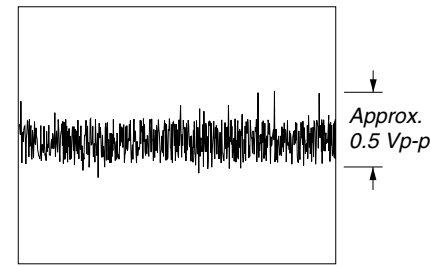
4 IC301 ⑩ (RFI), IC302 ⑩ (RF) (MD Play Mode)



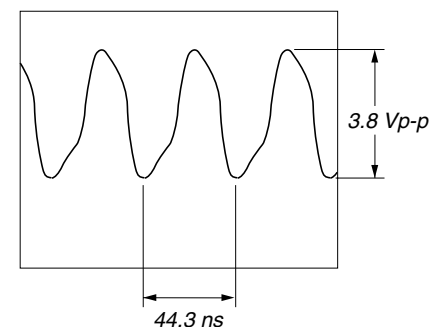
9 IC304 ③ (MD Play Mode)



5 IC301 ⑩ (FE), IC302 ⑩ (FE) (MD Play Mode)

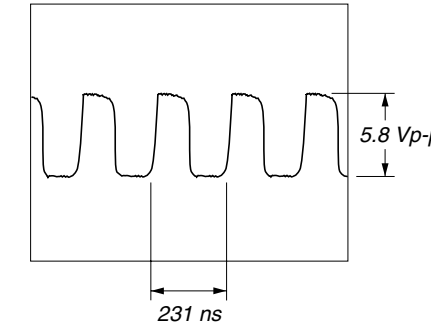


10 IC304 ⑤, ⑥ (MD Play Mode)

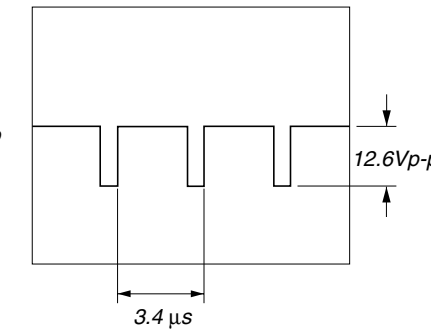


– MAIN Board –

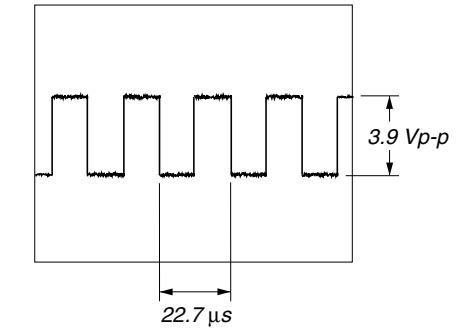
1 IC201 ④ (OSCO)



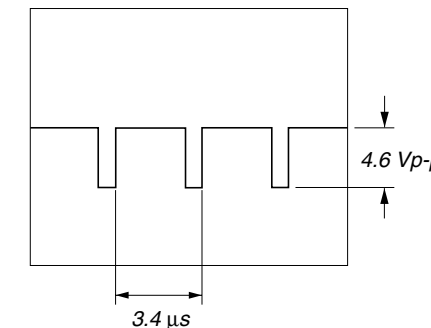
6 IC302 ① (OUT)



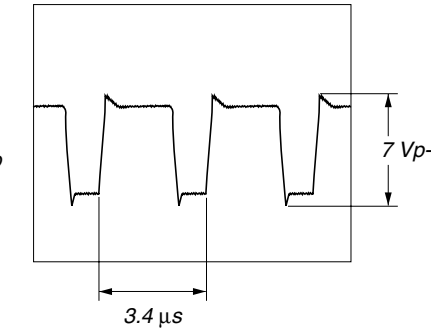
1 IC803 ③ (MD Play Mode)



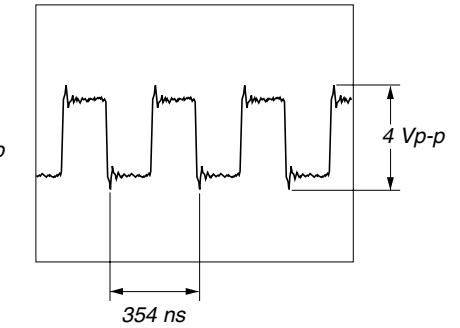
2 IC502 ⑩ (F OSC)



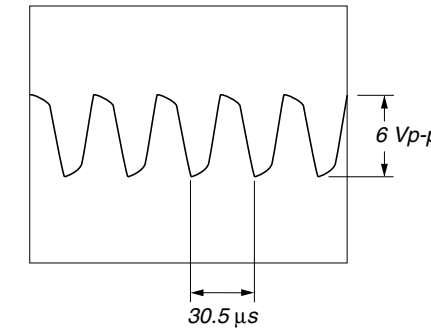
7 Q103, 106 (Base)



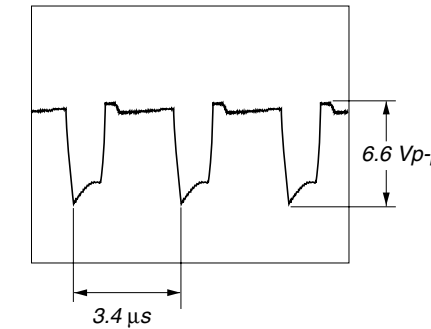
2 IC803 ⑥ (MD Play Mode)



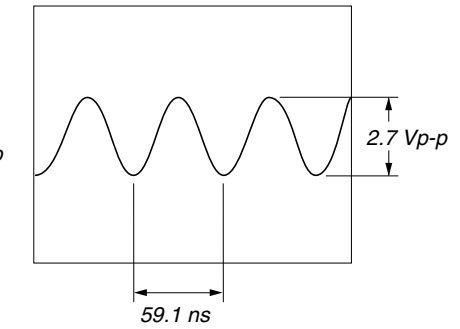
3 IC502 ⑩ (X1A)



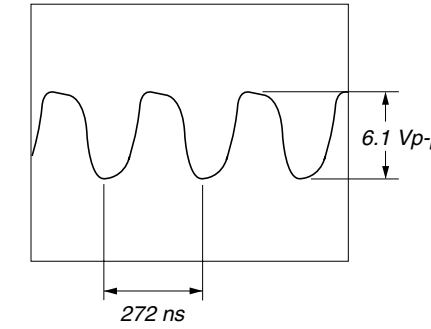
8 Q103, 106 (Emitter)



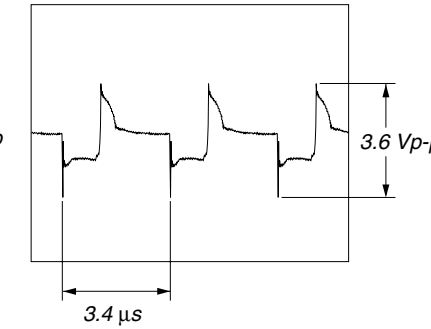
3 IC805 ④ (XTLI38)



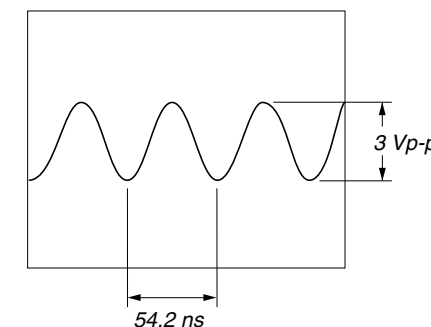
4 IC502 ⑩ (X1)



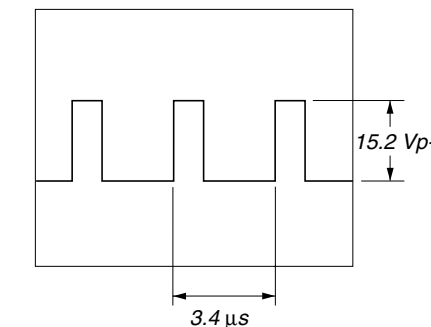
9 Q105 (Base)



5 IC701 ⑩ (EXTAL)

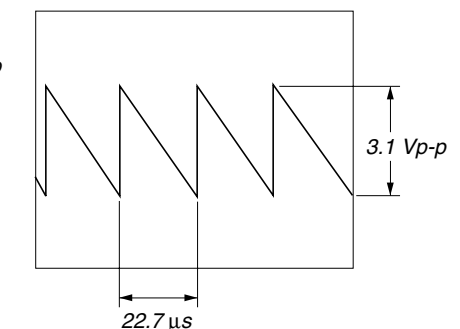


10 Q105 (Collector)

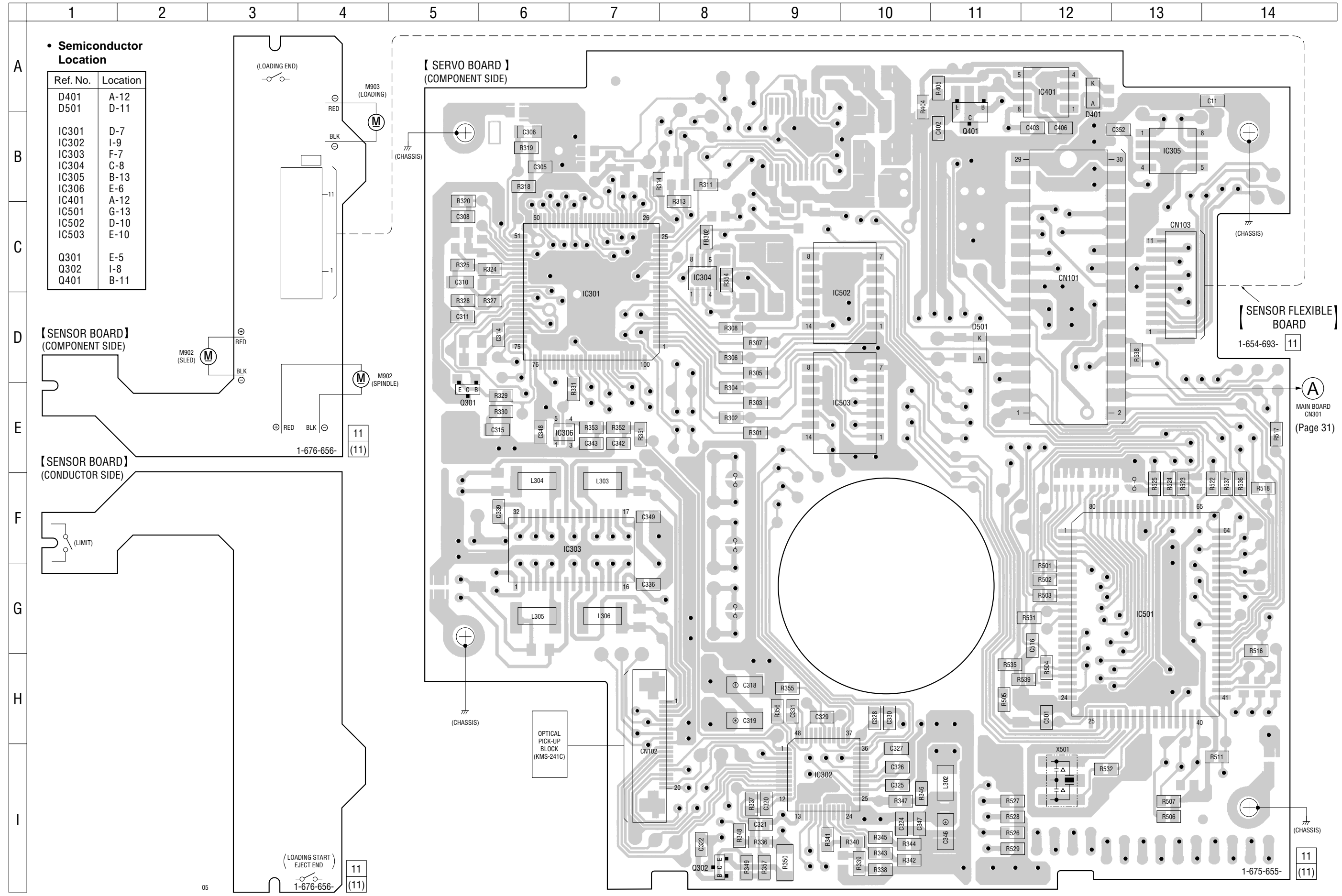


– KEY Board –

1 IC901 ⑩ (OSC)



5-7. PRINTED WIRING BOARDS – SERVO Board (Component Side)/SENSOR Board – • See page 24 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D401	A-12
D501	D-11
IC301	D-7
IC302	I-9
IC303	F-7
IC304	C-8
IC305	B-13
IC401	E-6
IC402	A-12
IC501	G-13
IC502	D-10
IC503	E-10
Q301	E-5
Q302	I-8
Q401	B-11

【 SERVO BOARD 】  
(COMPONENT SIDE)

【 SENSOR FLEXIBLE BOARD 】  
1-654-693- 11

【 SENSOR BOARD 】  
(COMPONENT SIDE)

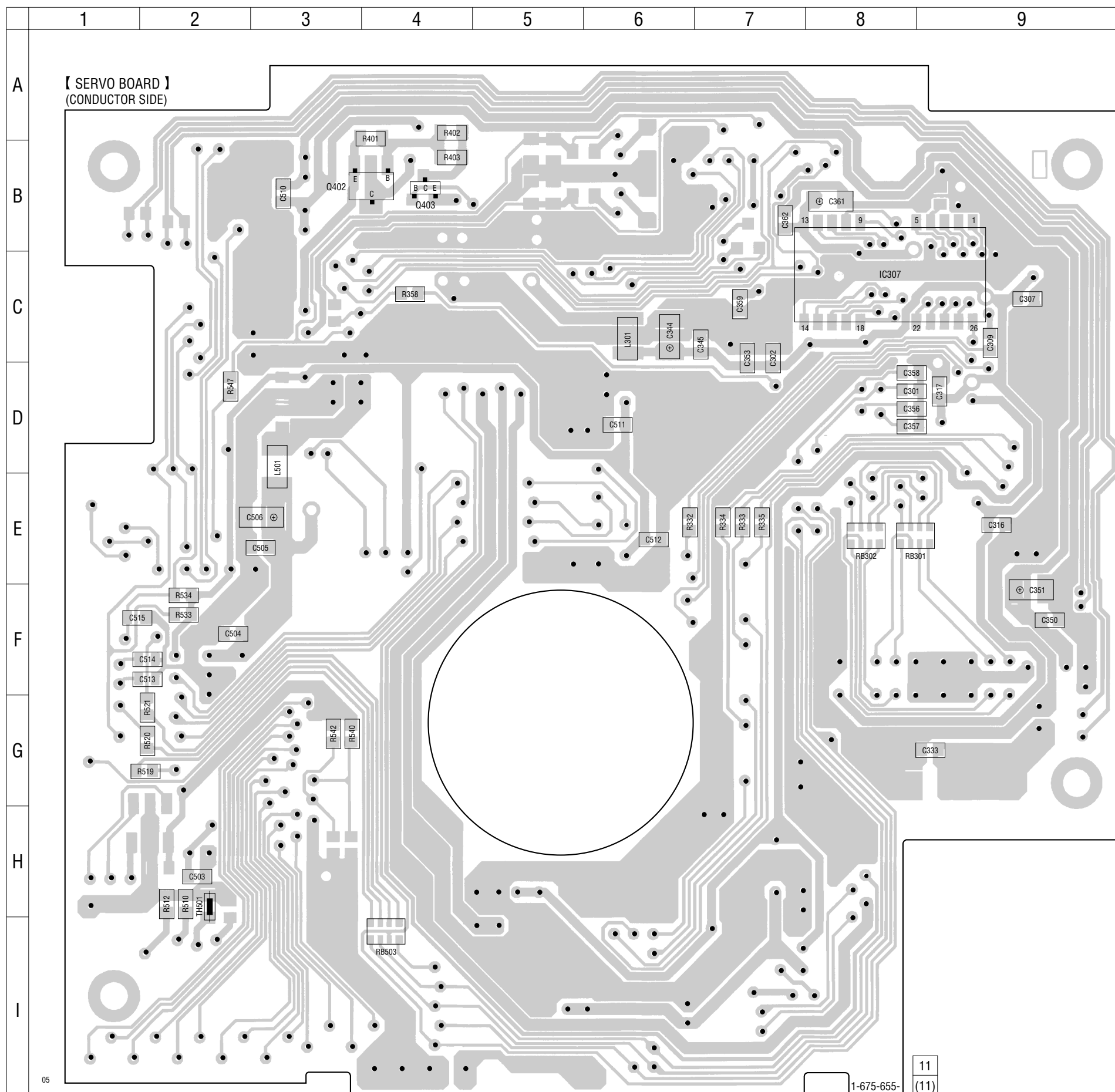
【 SENSOR BOARD 】  
(CONDUCTOR SIDE)

MAIN BOARD  
CN301  
(Page 31)

(LOADING START  
EJECT END)  
1-676-656- 11  
(11)

1-675-655- 11  
(11)

5-8. PRINTED WIRING BOARD – SERVO Board (Conductor Side) – • See page 24 for Circuit Boards Location.



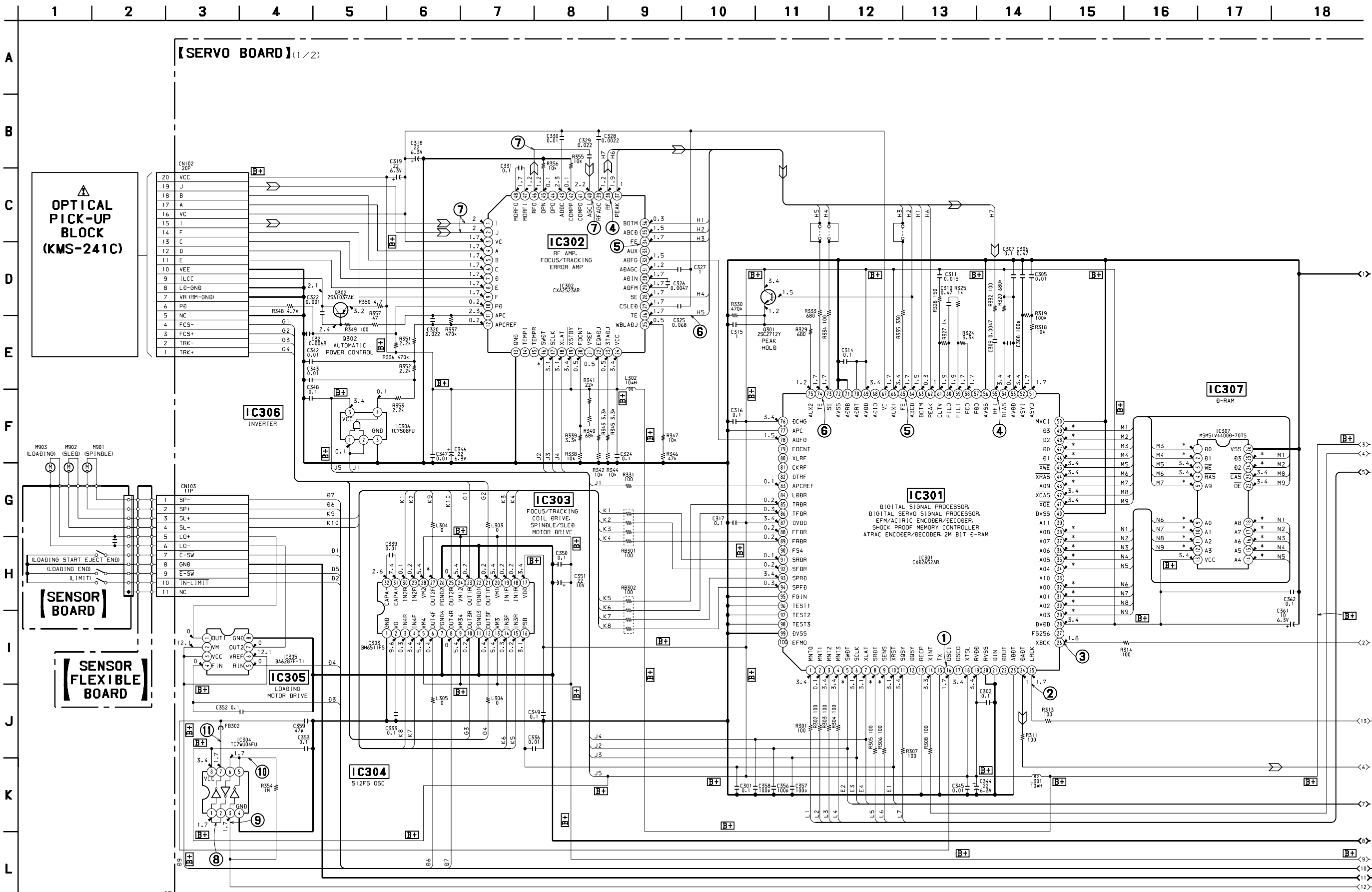
• Semiconductor Location

Ref. No.	Location
IC307	C-8
Q402	B-4
Q403	B-4

05

11  
1-675-655-  
(11)

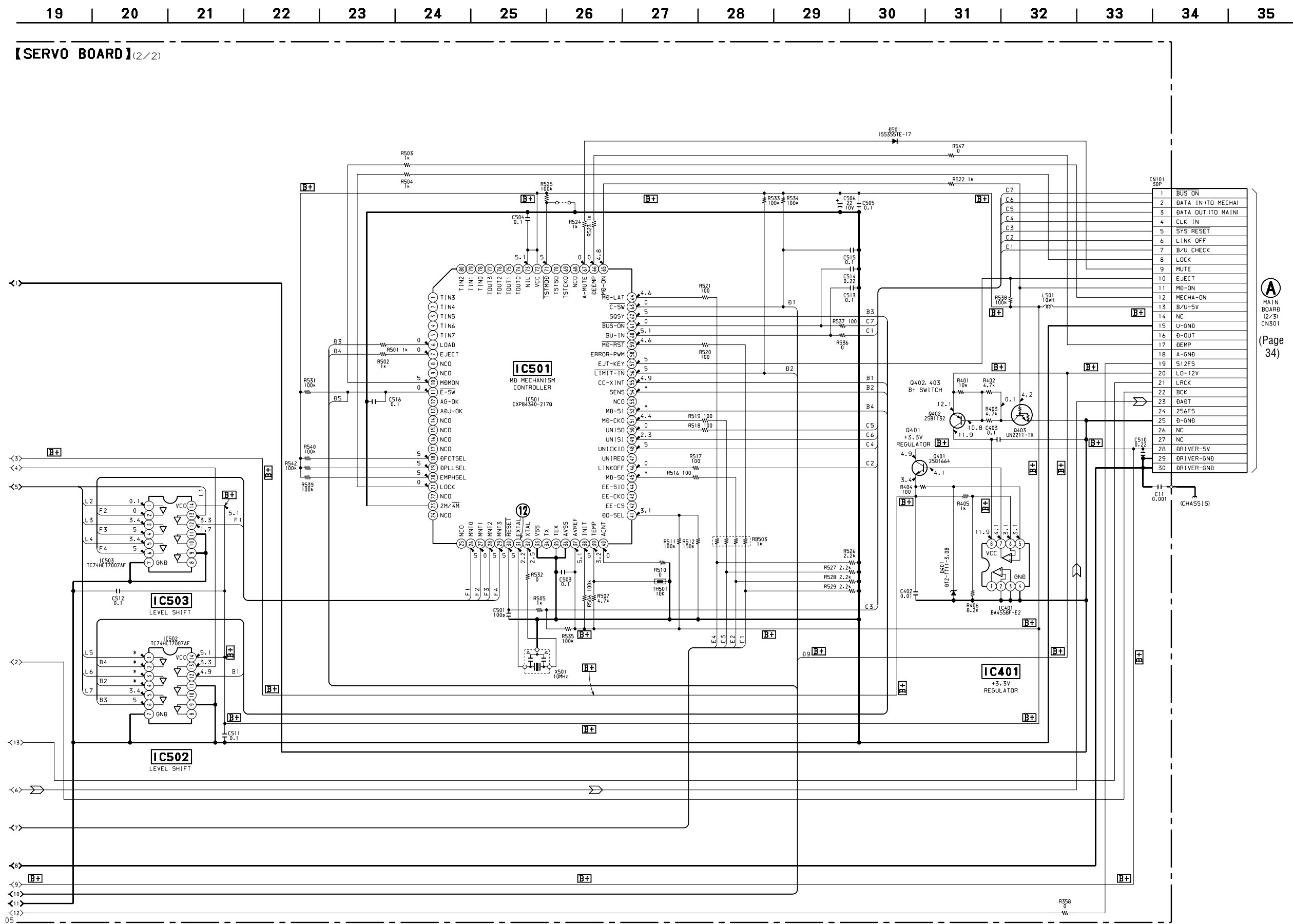
5-9. SCHEMATIC DIAGRAM – SERVO Board (1/2)/SENSOR Board – • See page 25 for Waveforms. • See page 42 for IC Block Diagrams.



• Voltages and waveforms are dc with respect to ground under no-signal conditions.  
 no mark : MD PLAY  
 \* : Impossible to measure

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety.  
 Replace only with part number specified.

5-10. SCHEMATIC DIAGRAM – SERVO Board (2/2) – • See page 25 for Waveforms.



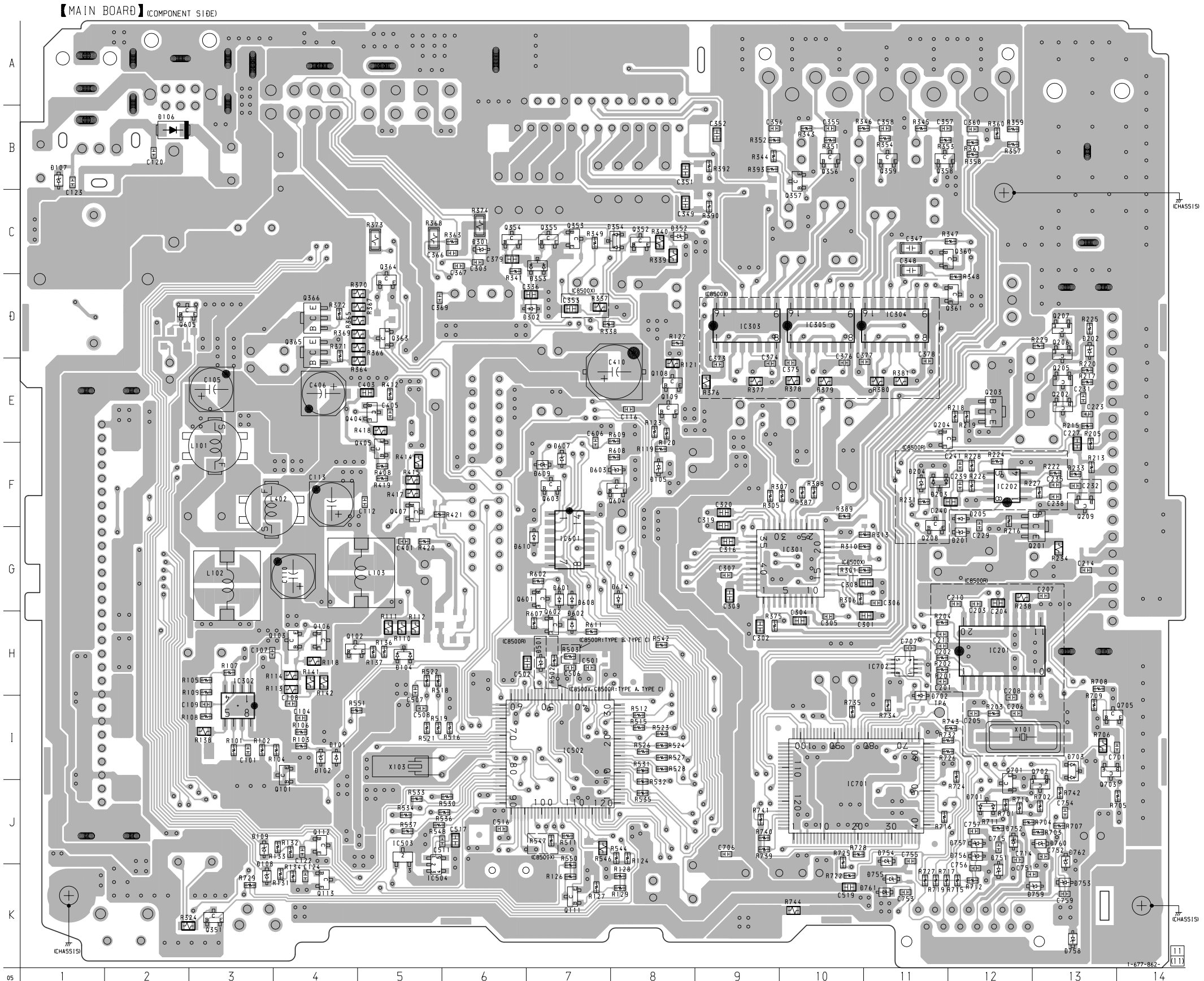
(Page 34)

• Voltages and waveforms are dc with respect to ground under no-signal conditions.  
no mark : MD PLAY  
\* : Impossible to measure

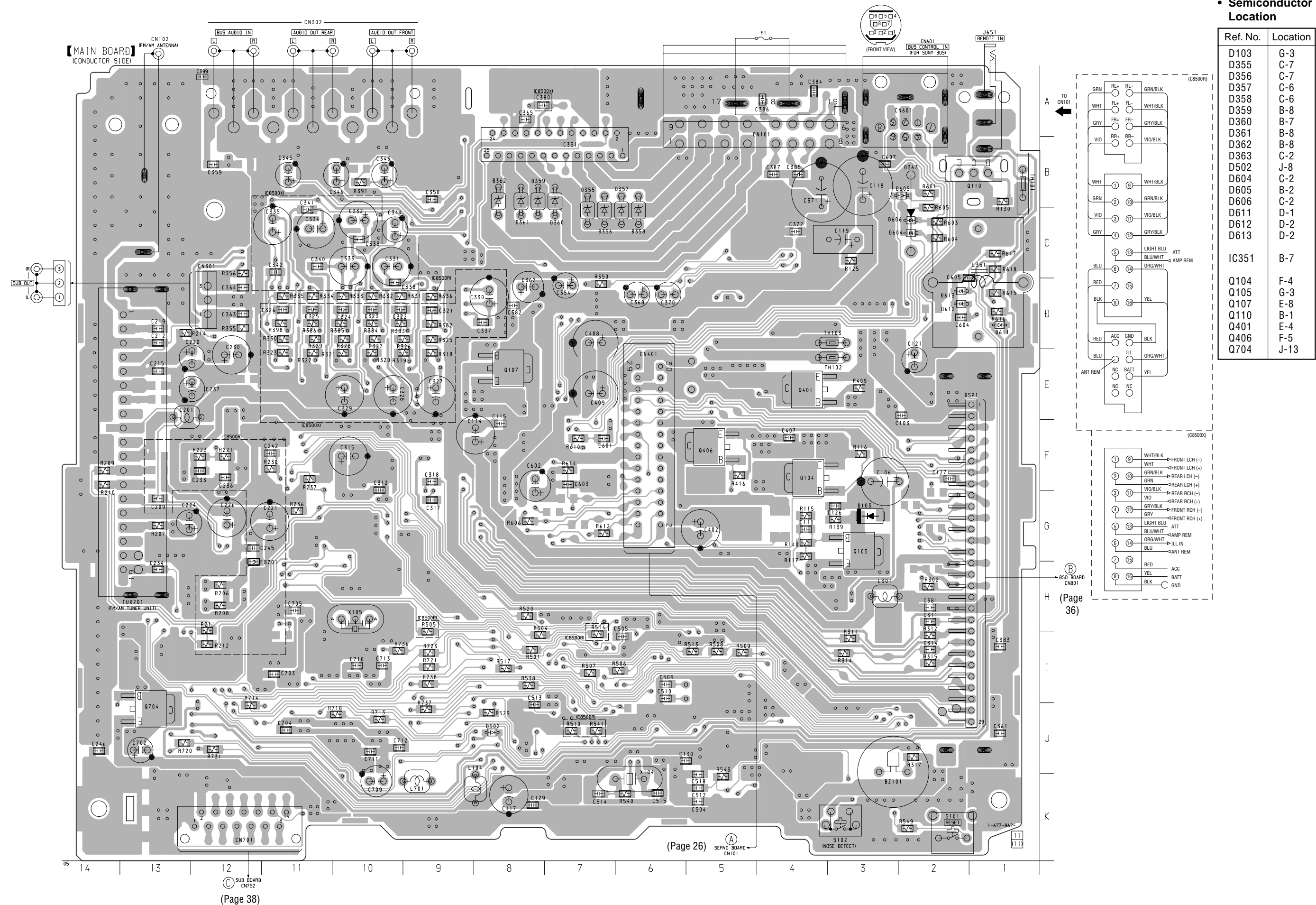
5-11. PRINTED WIRING BOARD – MAIN Board (Component Side) – • See page 24 for Circuit Boards Location.

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	I-4	IC503	J-5
D102	I-4	IC504	K-5
D104	H-5	IC601	G-7
D105	F-8	IC701	J-10
D106	B-2	IC702	H-11
D107	B-1		
D108	K-3	Q101	I-4
D109	J-3	Q102	H-4
D201	G-12	Q103	H-4
D202	D-13	Q106	H-4
D203	F-11	Q108	E-8
D204	F-11	Q109	E-8
D205	F-12	Q111	K-7
D301	C-6	Q112	J-4
D302	D-7	Q113	K-4
D352	C-8	Q201	G-13
D353	C-7	Q202	E-13
D354	C-8	Q203	E-12
D501	H-7	Q204	E-11
D601	G-7	Q205	E-13
D602	H-7	Q206	D-13
D603	F-8	Q207	D-13
D607	F-7	Q208	F-11
D608	G-7	Q209	F-13
D609	F-7	Q351	K-3
D610	G-7	Q352	C-8
D614	G-8	Q353	C-7
D701	J-12	Q354	C-6
D702	I-11	Q355	C-7
D703	I-13	Q356	B-10
D751	K-12	Q357	B-10
D752	J-12	Q358	B-11
D753	K-13	Q359	B-11
D754	J-11	Q360	C-12
D755	K-11	Q361	D-12
D756	J-12	Q363	D-5
D757	J-12	Q364	D-5
D758	K-13	Q365	D-4
D759	K-13	Q366	D-4
D760	J-13	Q404	E-5
D761	K-11	Q405	F-5
D762	J-13	Q407	F-5
IC201	H-12	Q601	G-7
IC202	F-12	Q602	H-7
IC301	G-10	Q603	F-7
IC302	I-3	Q604	F-8
IC303	D-9	Q701	J-12
IC304	D-11	Q702	J-13
IC305	D-10	Q703	I-13
IC502	I-7	Q705	I-13

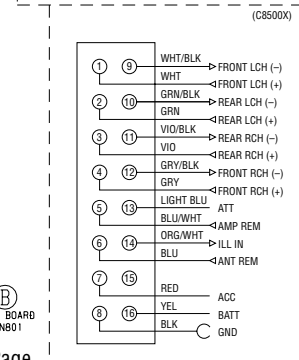
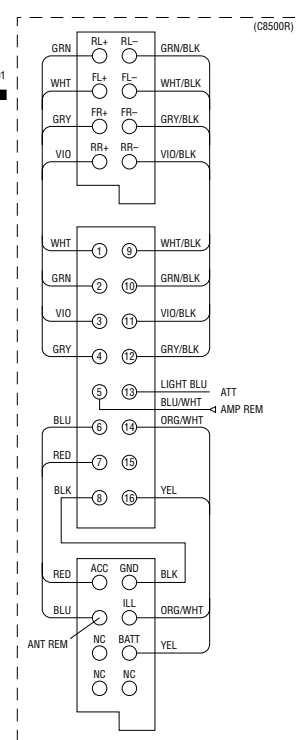


5-12. PRINTED WIRING BOARD – MAIN Board (Conductor Side) – • See page 24 for Circuit Boards Location.



• Semiconductor Location

Ref. No.	Location
D103	G-3
D355	C-7
D356	C-7
D357	C-6
D358	C-6
D359	B-8
D360	B-7
D361	B-8
D362	B-8
D363	C-2
D502	J-8
D604	C-2
D605	B-2
D606	C-2
D611	D-1
D612	D-2
D613	D-2
IC351	B-7
Q104	F-4
Q105	G-3
Q107	E-8
Q110	B-1
Q401	E-4
Q406	F-5
Q704	J-13



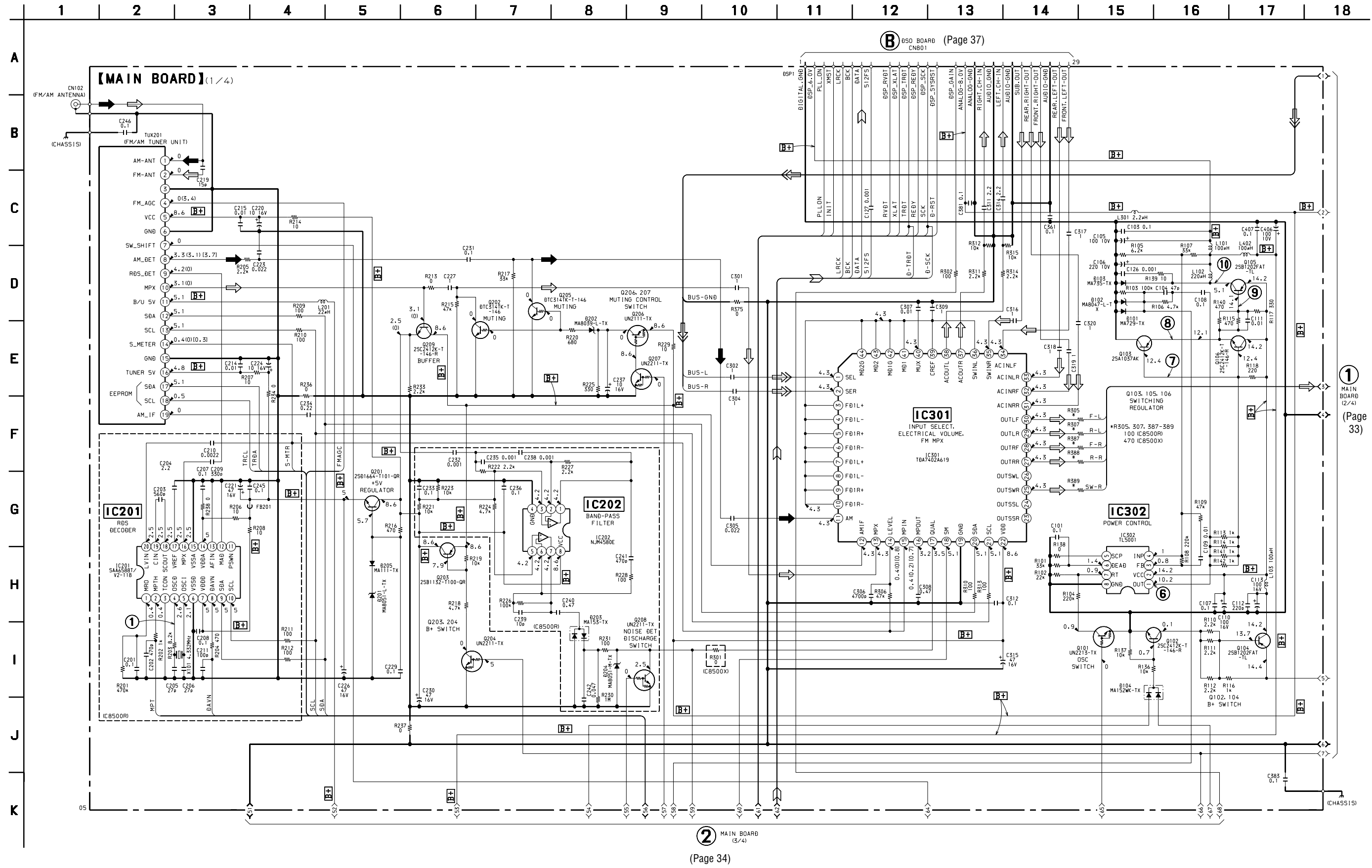
(Page 26) A SERVO BOARD CN101

(Page 36) B DSD BOARD CN801

(Page 38) C SUB BOARD CN752

MDX-C8500R/C8500X

5-13. SCHEMATIC DIAGRAM – MAIN Board (1/4) – • See page 25 for Waveforms. • See page 42 for IC Block Diagrams.



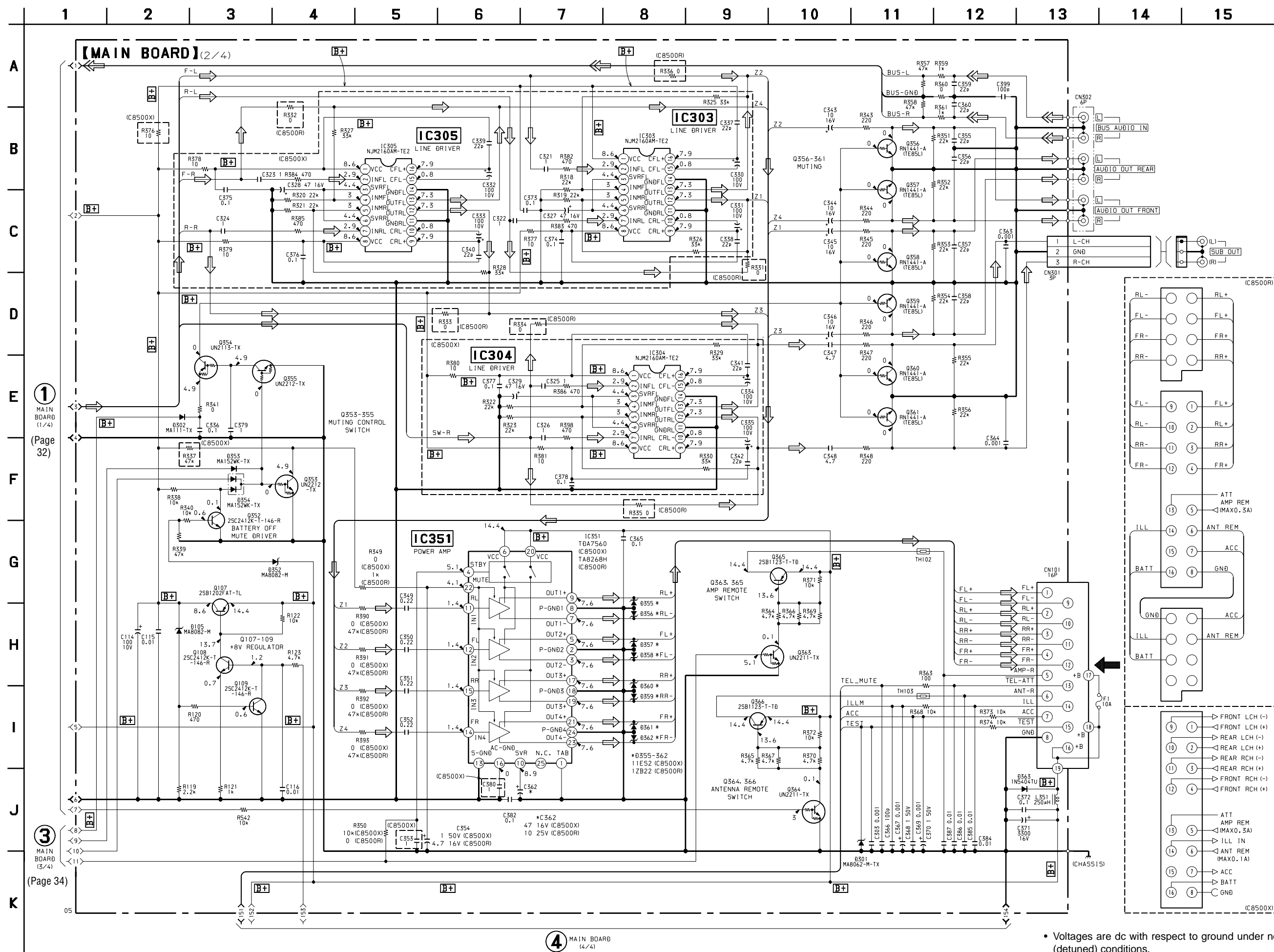
2 MAIN BOARD (3/4) (Page 34)

1 MAIN BOARD (2/4) (Page 33)

• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM  
( ) : AM (MW)  
[ ] : LW



5-14. SCHEMATIC DIAGRAM – MAIN Board (2/4) – • See page 42 for IC Block Diagrams.

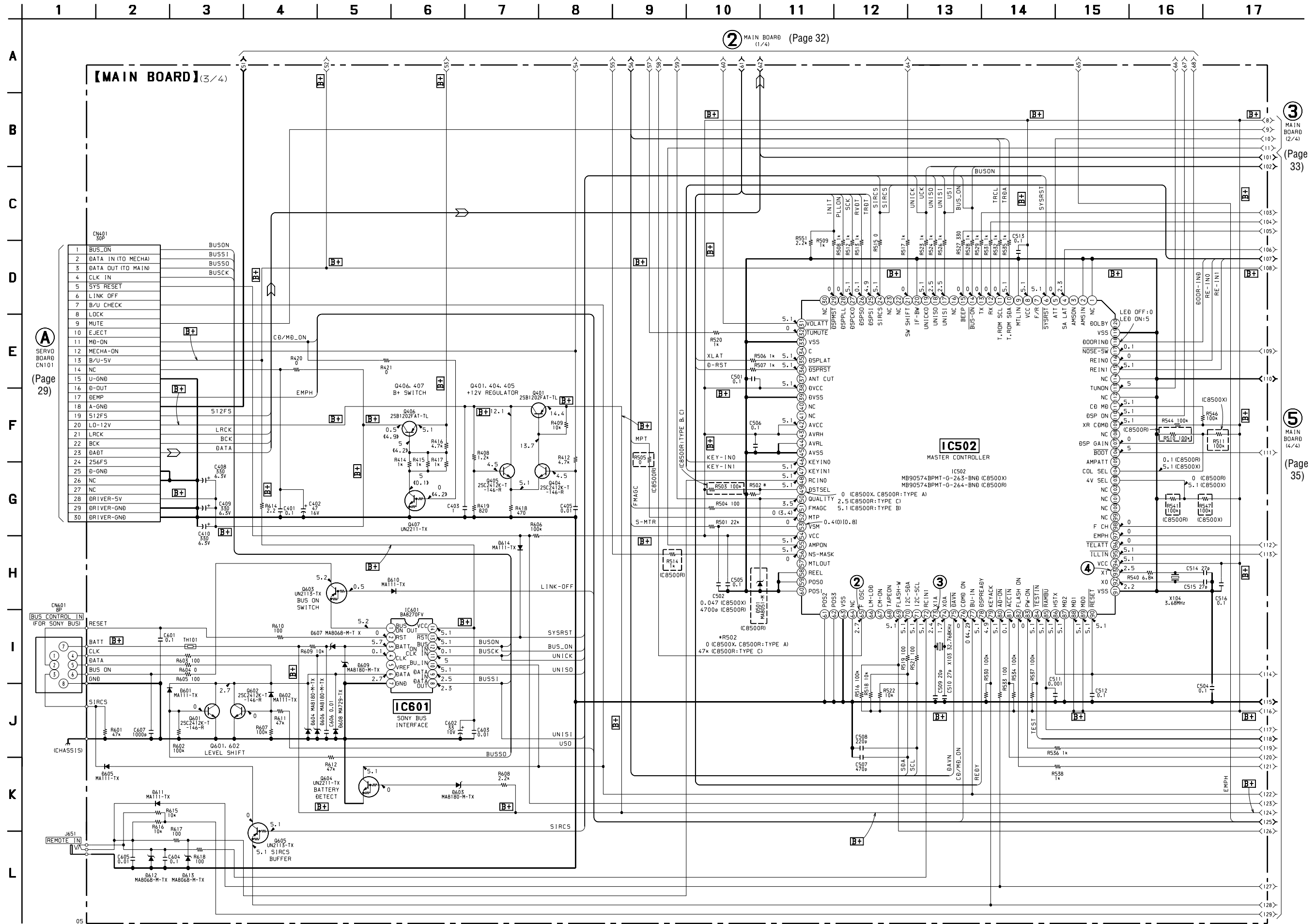


1 MAIN BOARD (1/4) (Page 32)

3 MAIN BOARD (3/4) (Page 34)

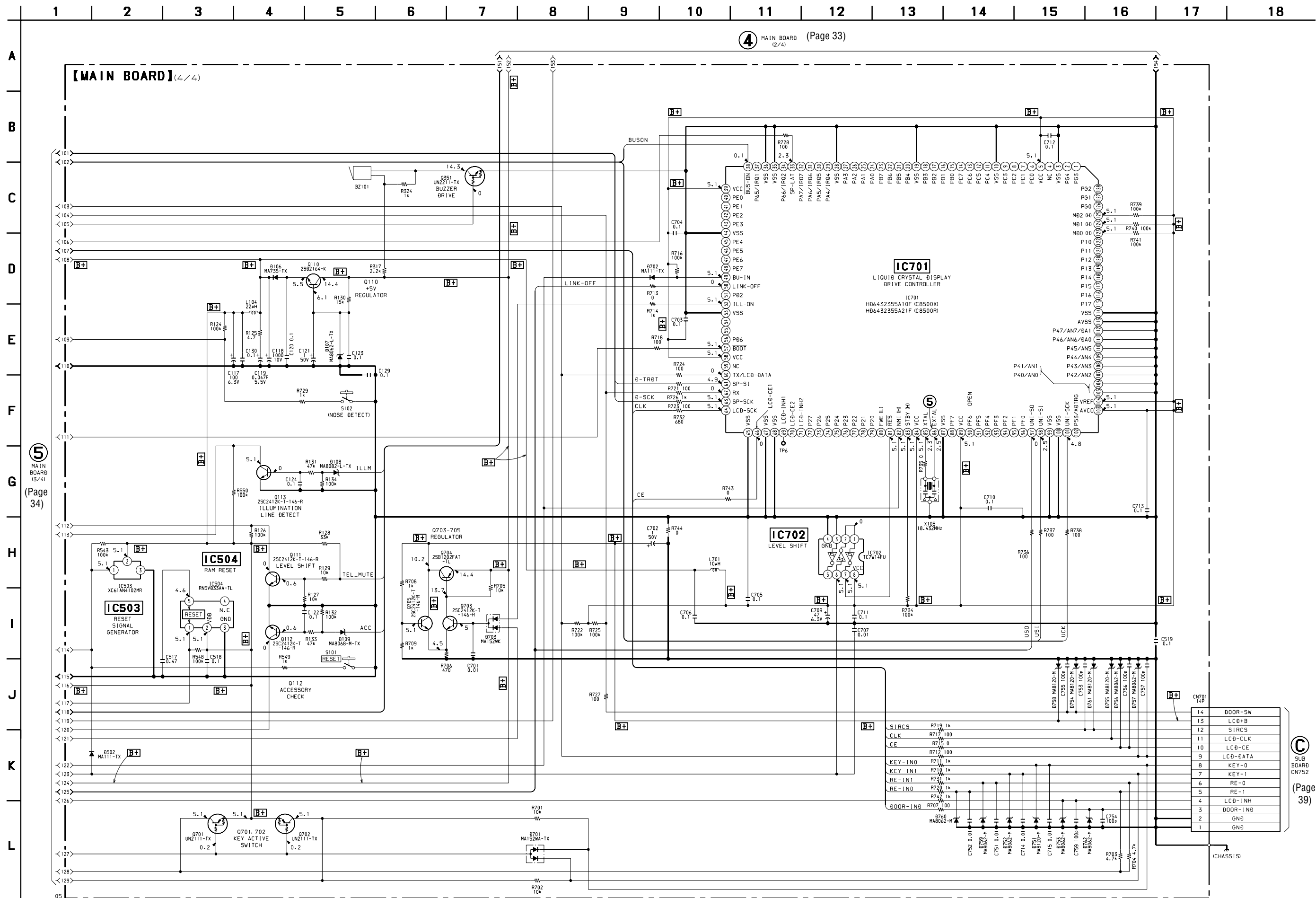
4 MAIN BOARD (4/4) (Page 35)

• Voltages are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM



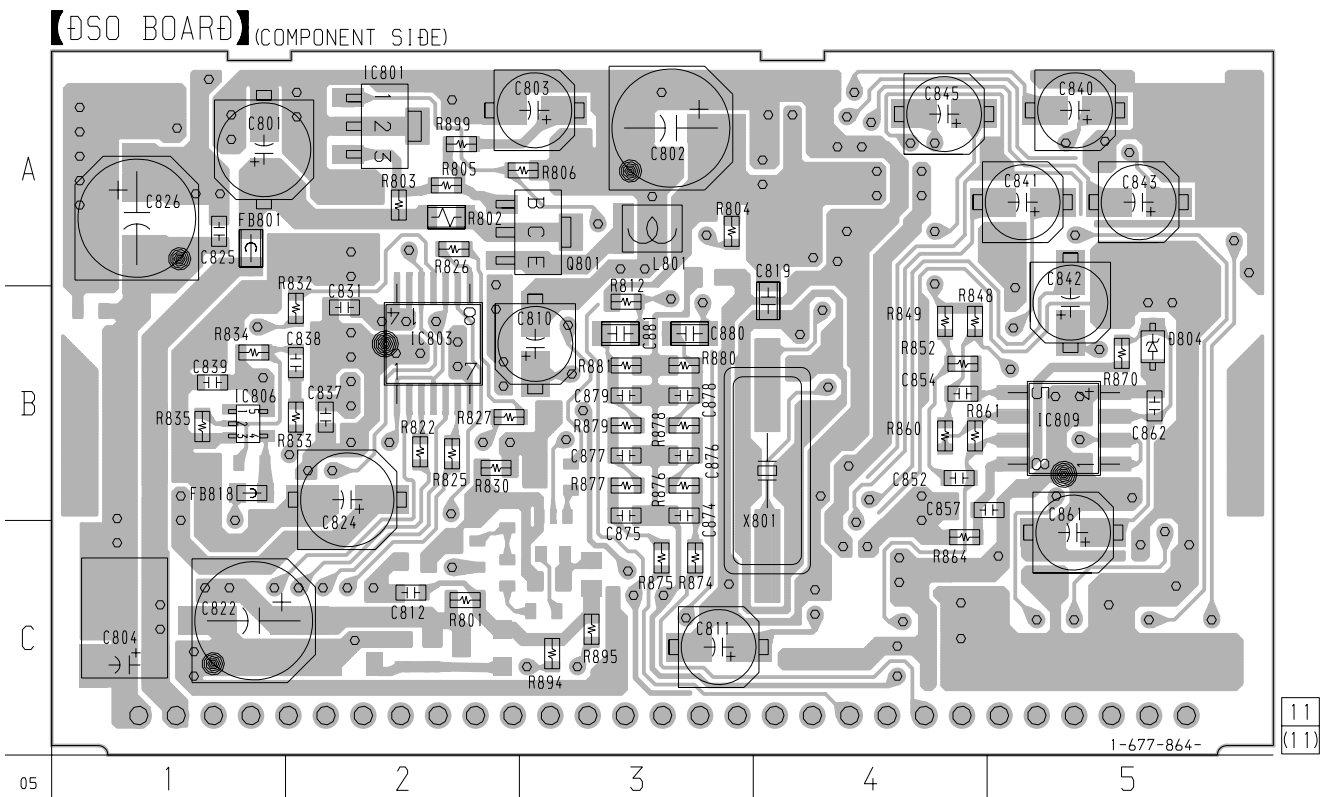
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM  
( ) : AM (MW)  
[ ] : LW  
<< >> : MD PLAY

5-16. SCHEMATIC DIAGRAM – MAIN Board (4/4) – • See page 25 for Waveforms.



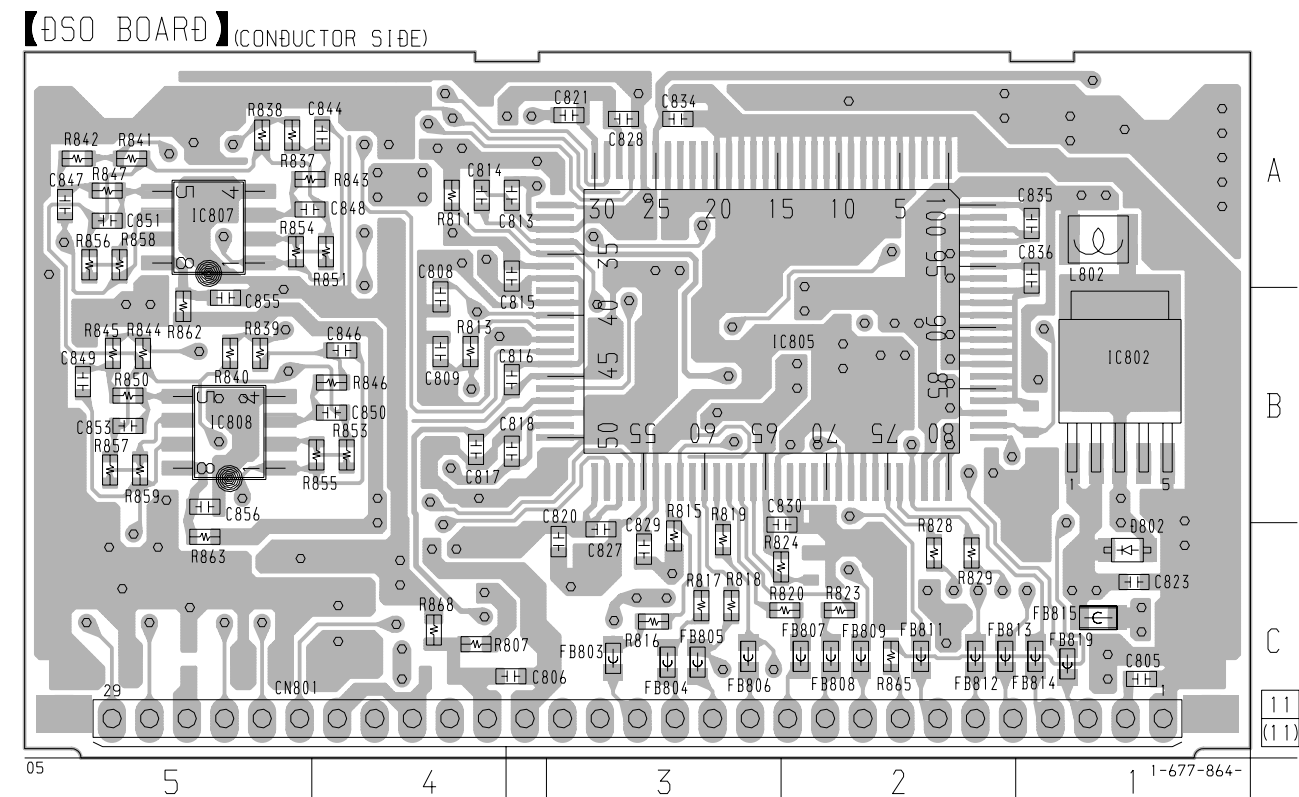
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM

5-17. PRINTED WIRING BOARD – DSO Board – • See page 24 for Circuit Boards Location.



• Semiconductor Location (Component Side)

Ref. No.	Location
D804	B-5
IC801	A-2
IC803	B-2
IC806	B-1
IC809	B-5
Q801	A-3

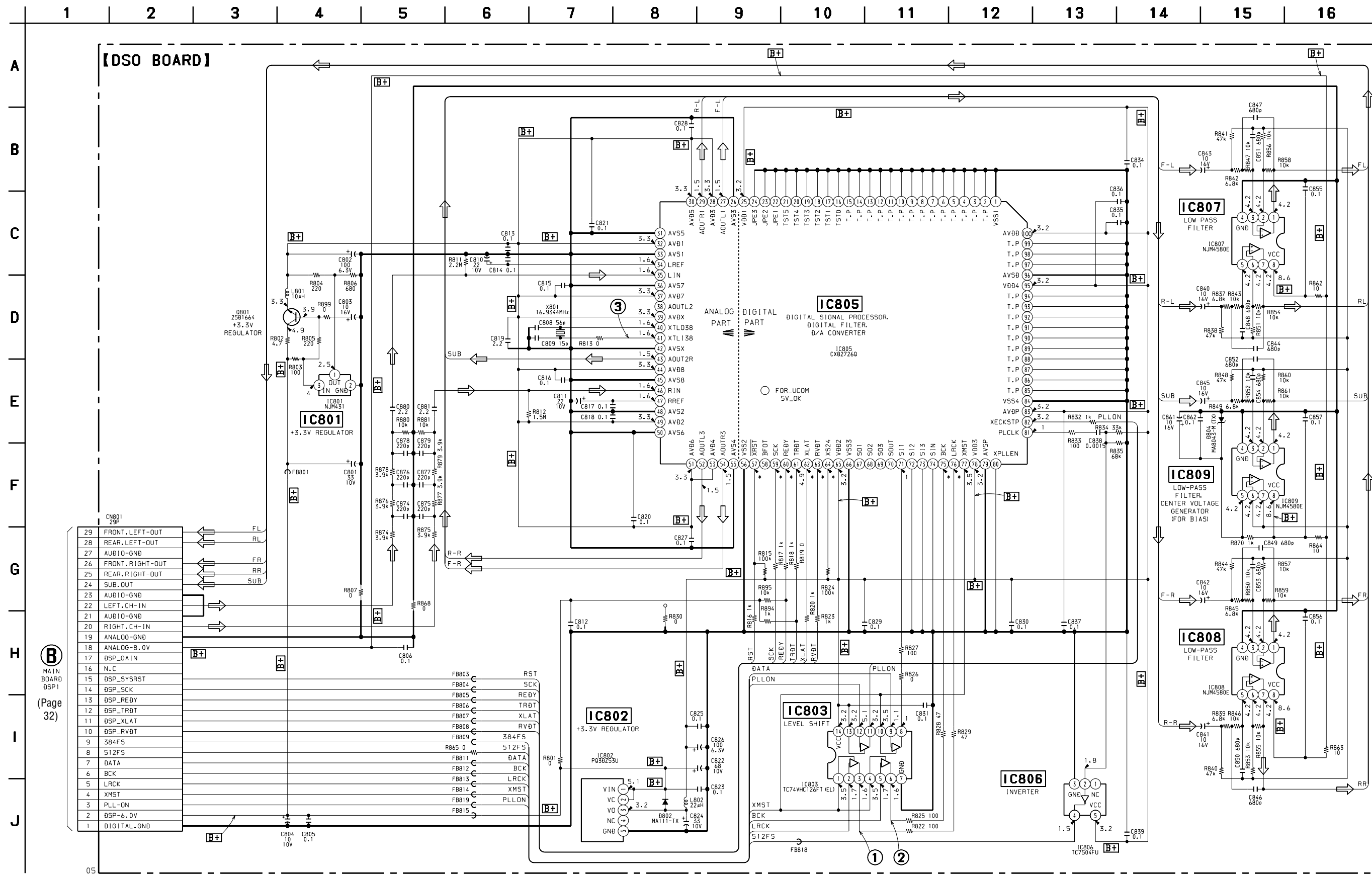


• Semiconductor Location (Conductor Side)

Ref. No.	Location
D802	C-1
IC802	B-1
IC805	B-3
IC807	A-5
IC808	B-5

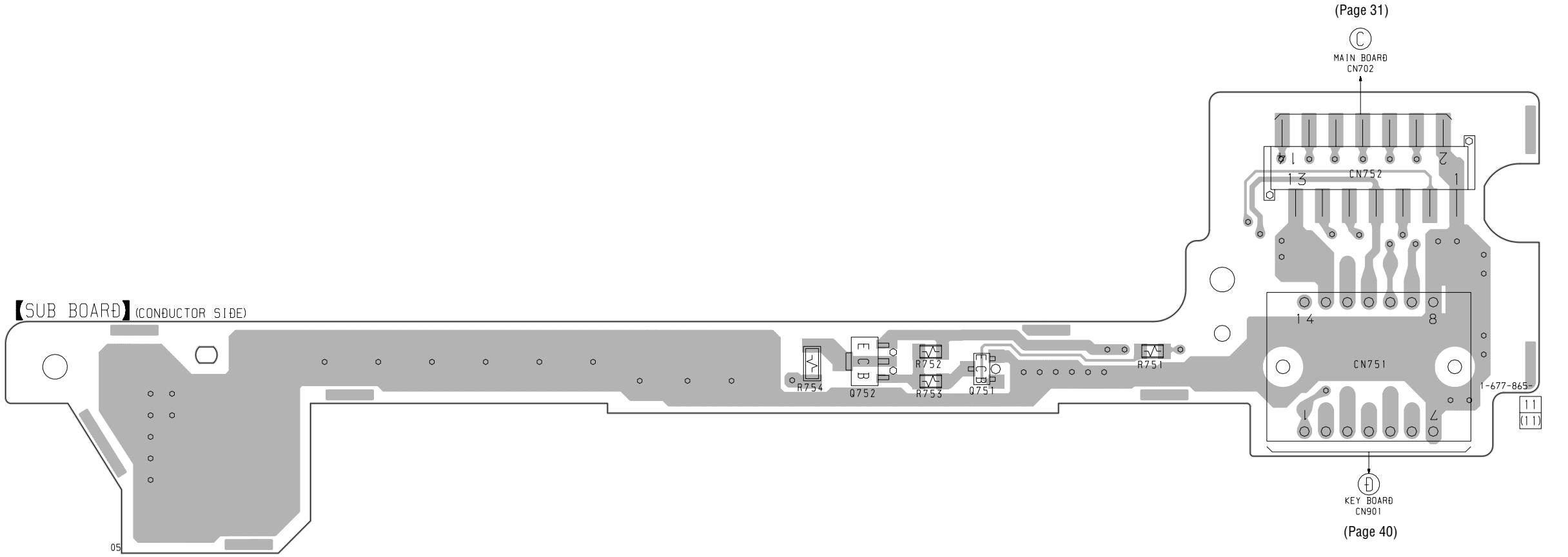
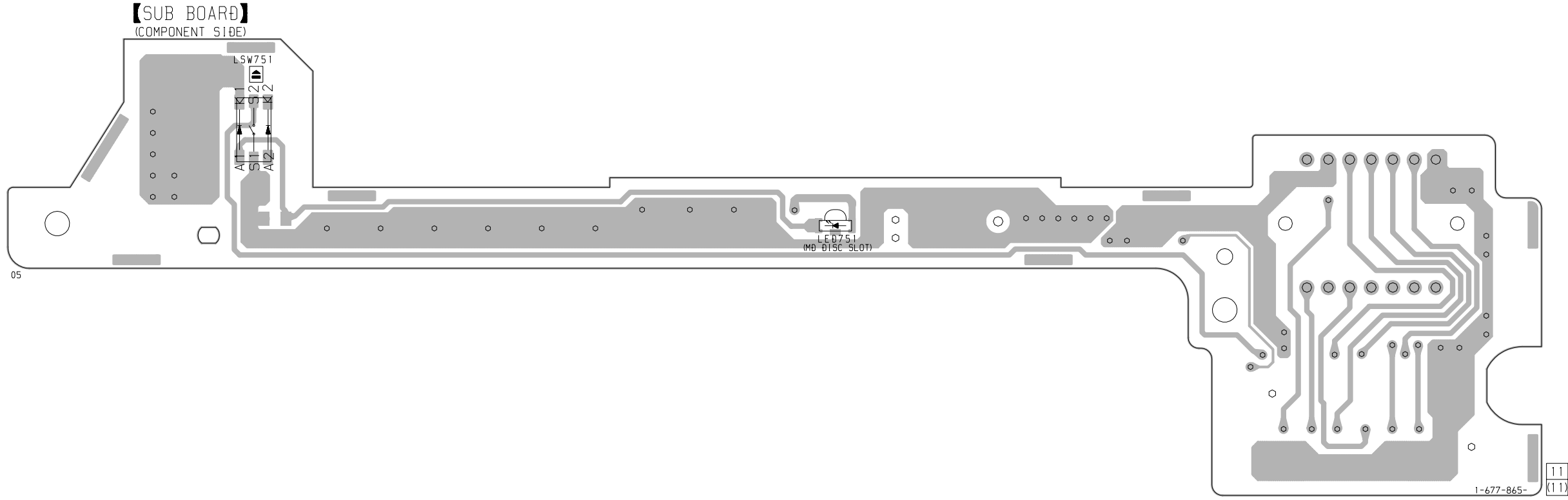
Ⓟ  
MAIN BOARD  
8SP1  
(Page 31)

5-18. SCHEMATIC DIAGRAM – DSO Board – • See page 25 for Waveforms. • See page 42 for IC Block Diagrams.

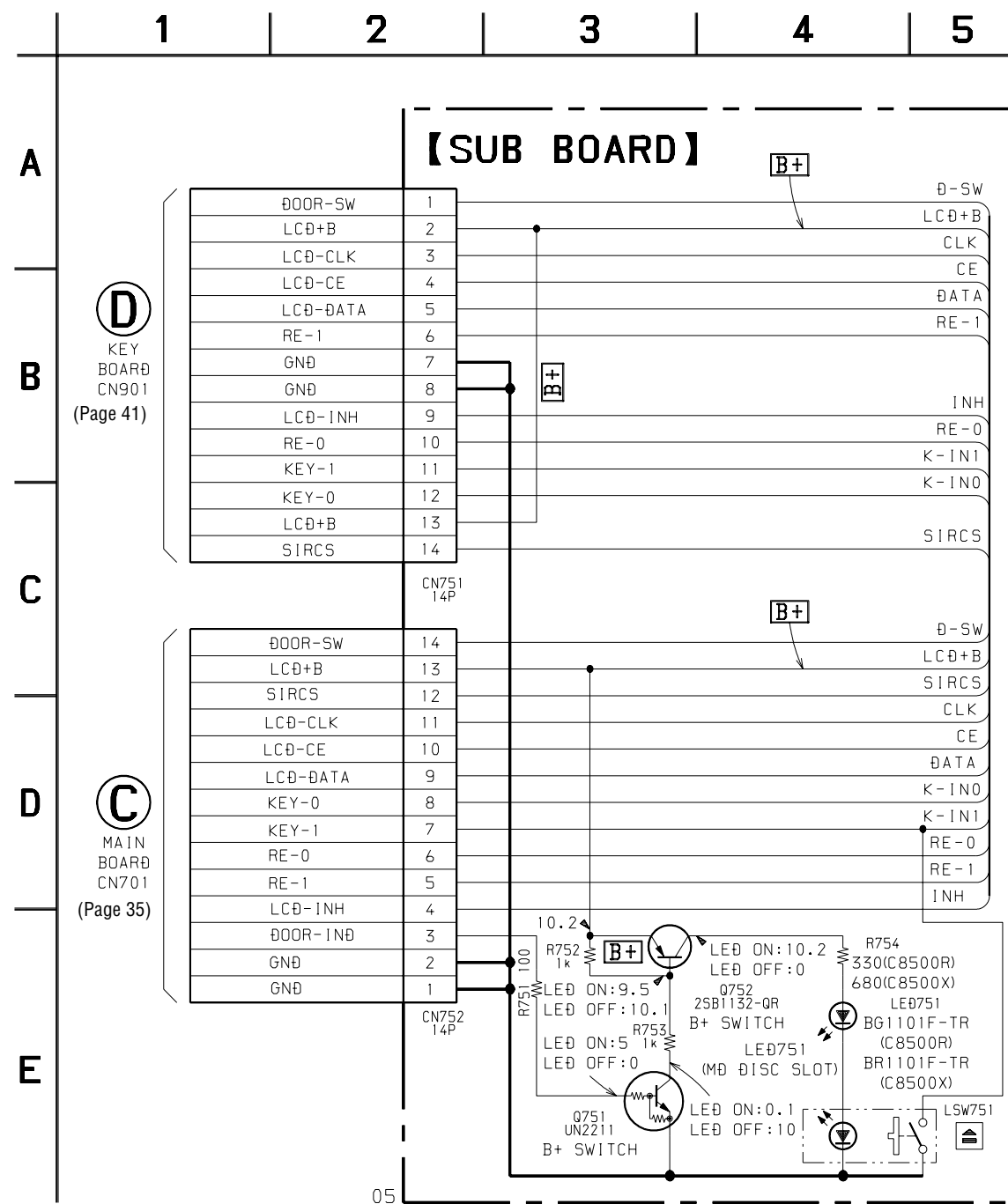


• Voltages and waveforms are dc with respect to ground under no-signal conditions.  
 no mark : MD PLAY  
 \* : Impossible to measure

5-19. PRINTED WIRING BOARD – SUB Board – • See page 24 for Circuit Boards Location.



5-20. SCHEMATIC DIAGRAM – SUB Board –

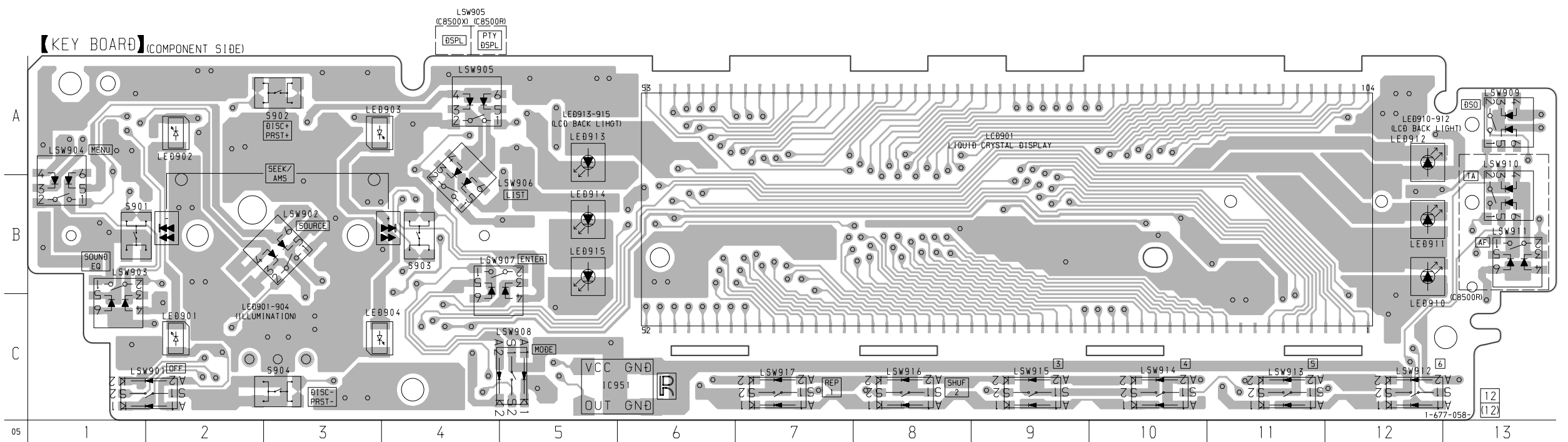


• Voltages are dc with respect to ground under no-signal (detuned) conditions.  
no mark : FM

5-21. PRINTED WIRING BOARD – KEY Board – • See page 24 for Circuit Boards Location.

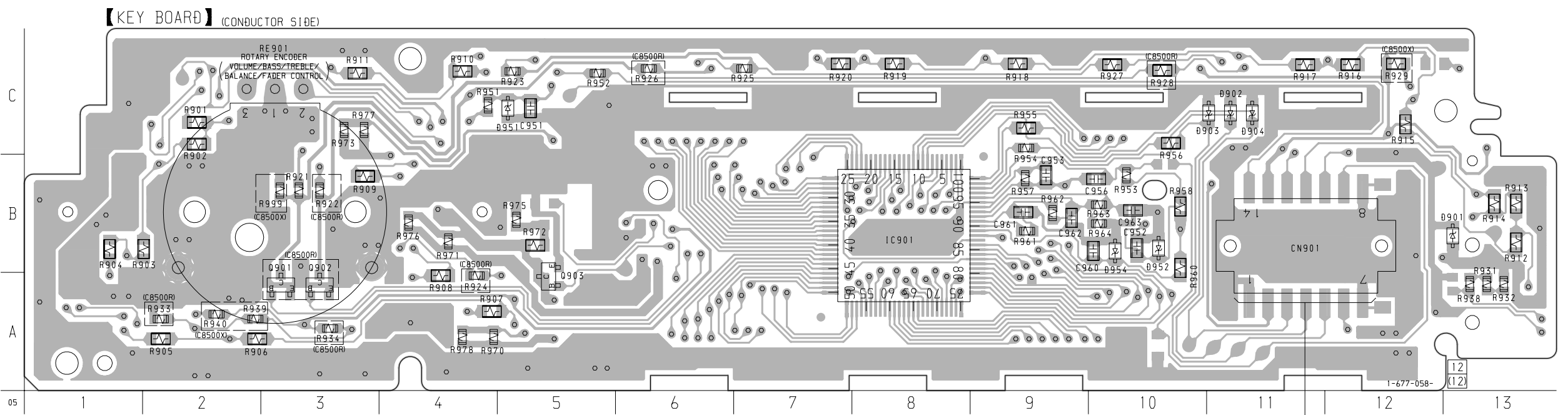
• Semiconductor Location (Component Side)

Ref. No.	Location
IC951	C-5
LED901	C-2
LED902	A-2
LED903	A-3
LED904	C-3
LED910	B-12
LED911	B-12
LED912	A-12
LED913	A-5
LED914	B-5
LED915	B-5



• Semiconductor Location (Conductor Side)

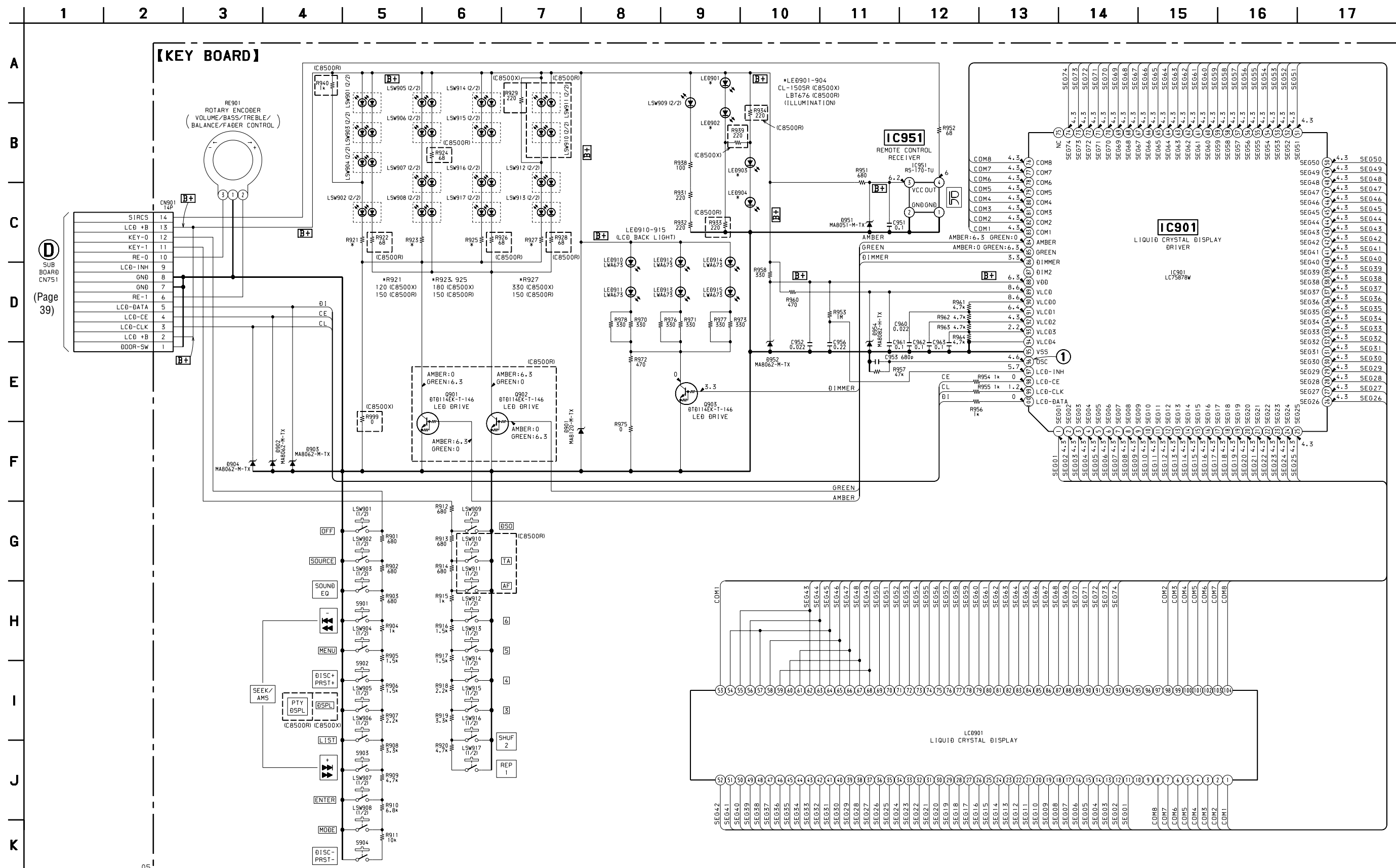
Ref. No.	Location
D901	B-13
D902	C-11
D903	C-11
D904	C-11
D951	C-5
D952	B-10
D954	B-10
IC901	B-8
Q901	A-3
Q902	A-3
Q903	A-5



Ⓧ SUB BOARD CN751  
(Page 38)



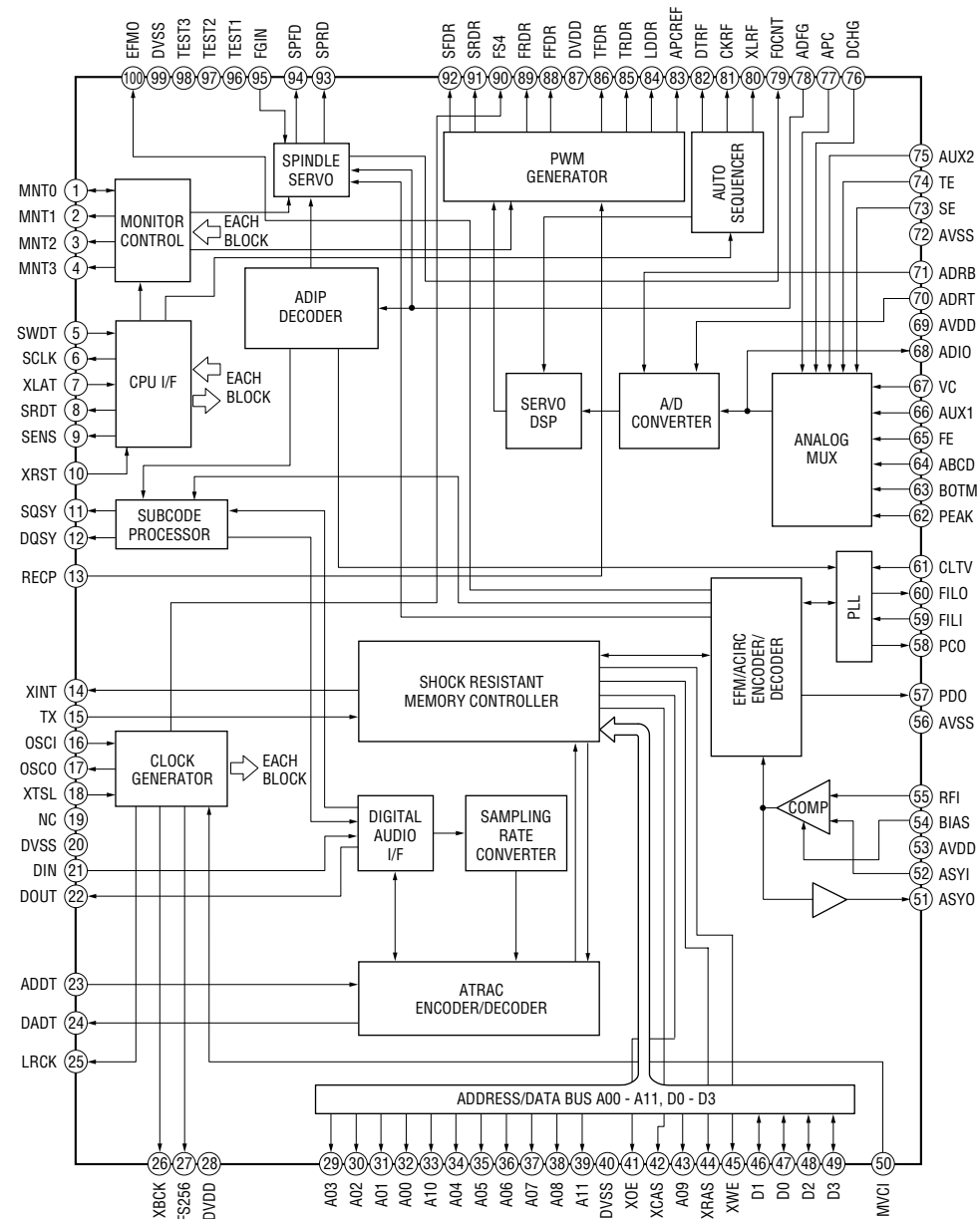
5-22. SCHEMATIC DIAGRAM – KEY Board – • See page 25 for Waveforms.



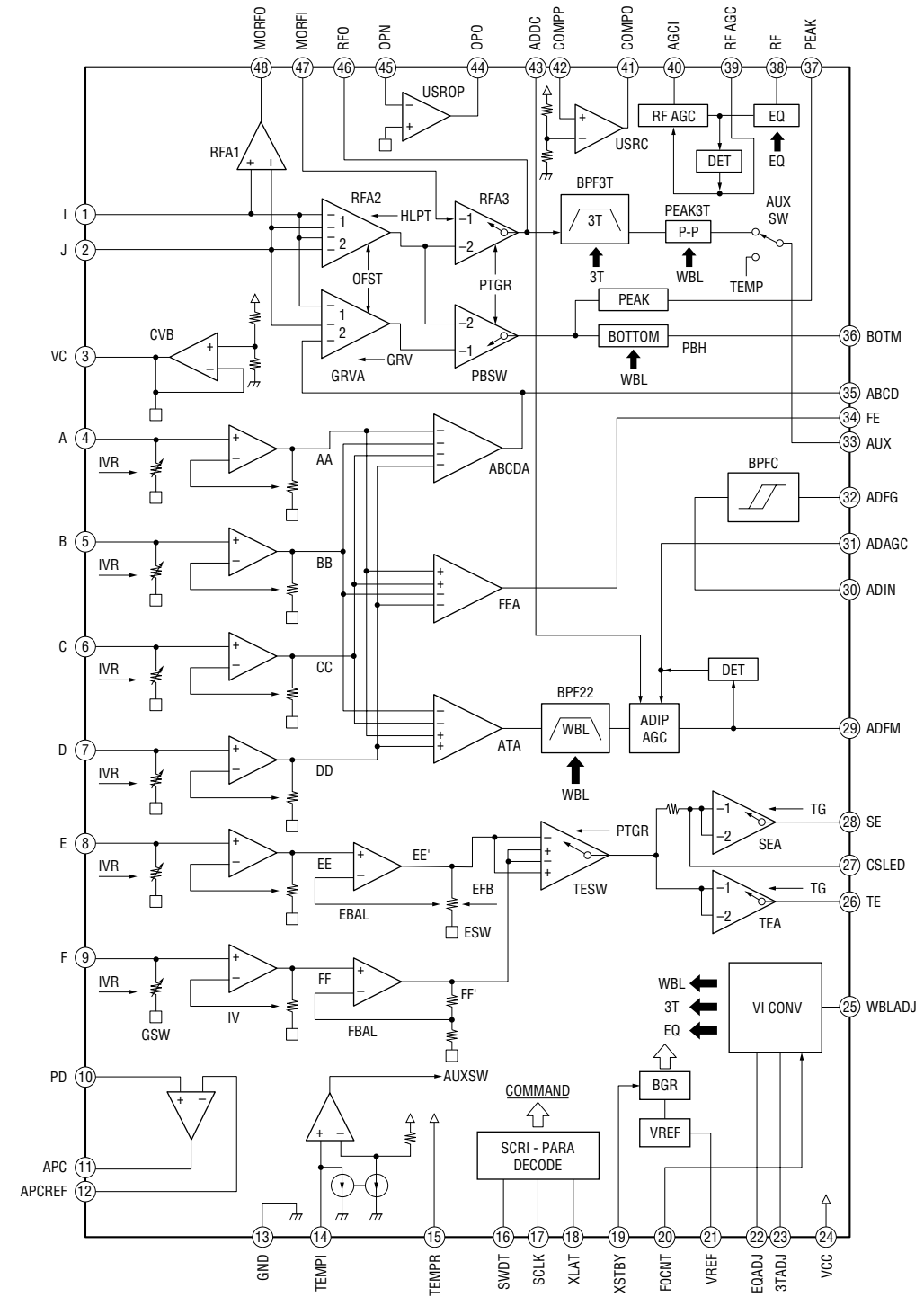
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions. no mark : FM

• IC Block Diagrams  
- SERVO Board -

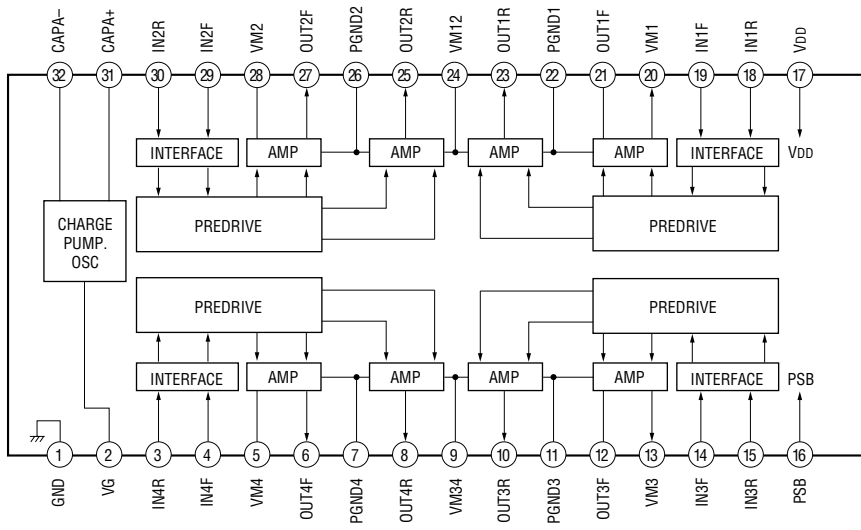
IC301 CDX2652AR



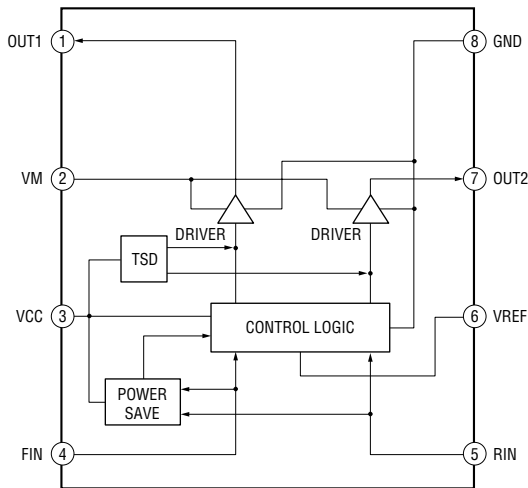
IC302 CXA2523AR



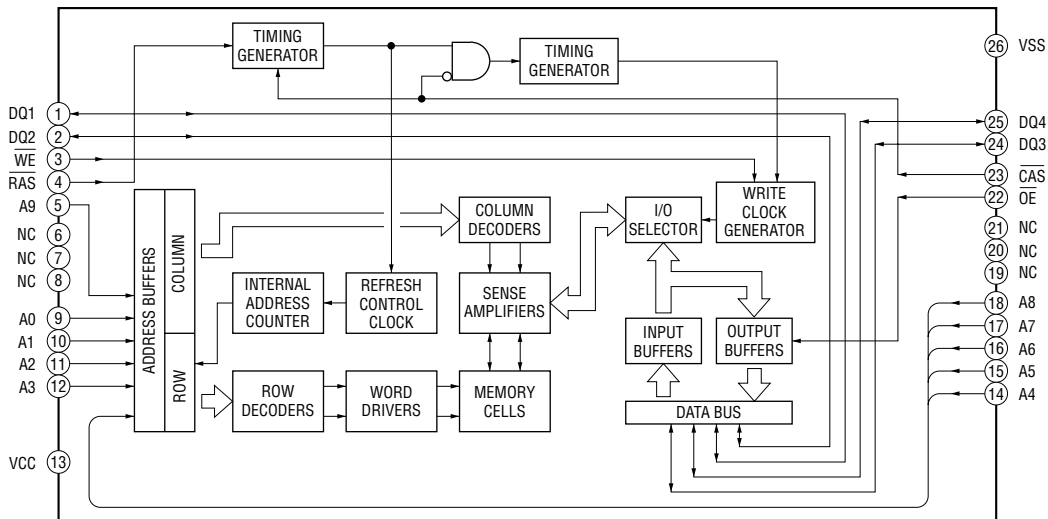
**IC303 BH6511FS**



**IC305 BA6287F**

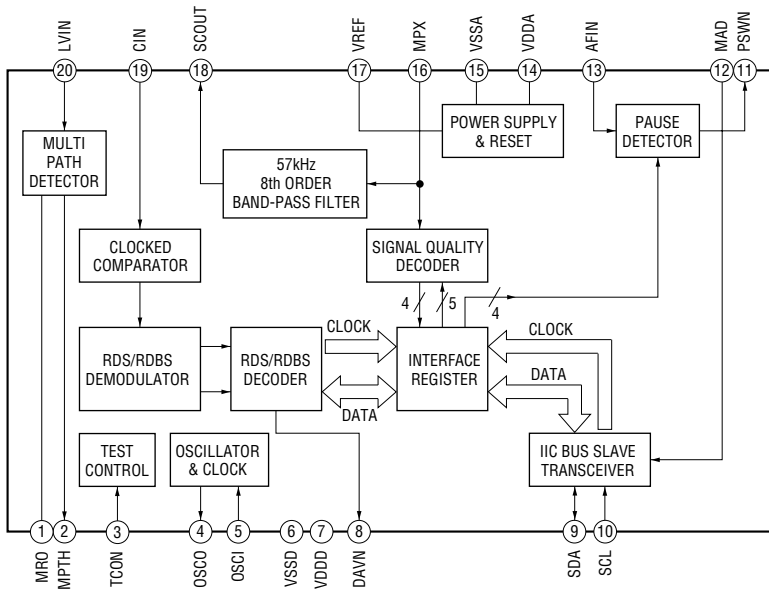


**IC307 MN41V4400TT-08S**

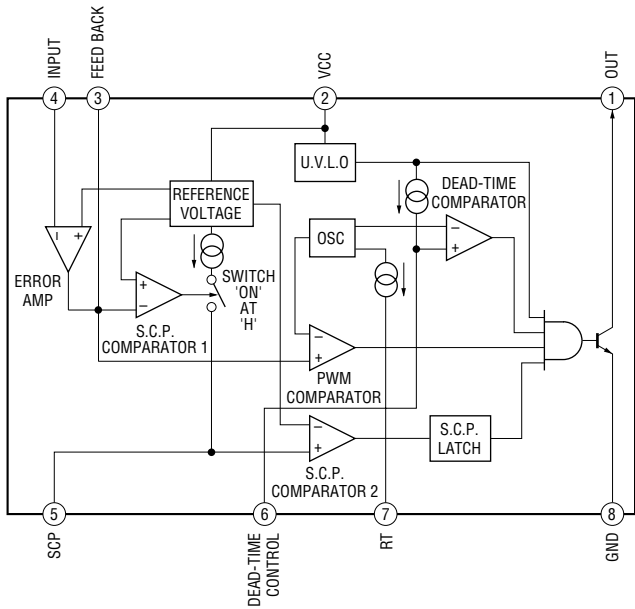


– MAIN Board –

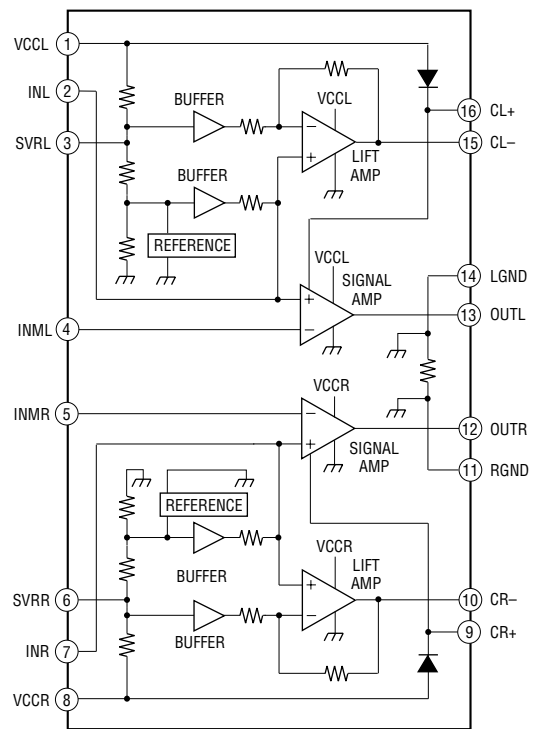
IC201 SAA6588T/V2-118



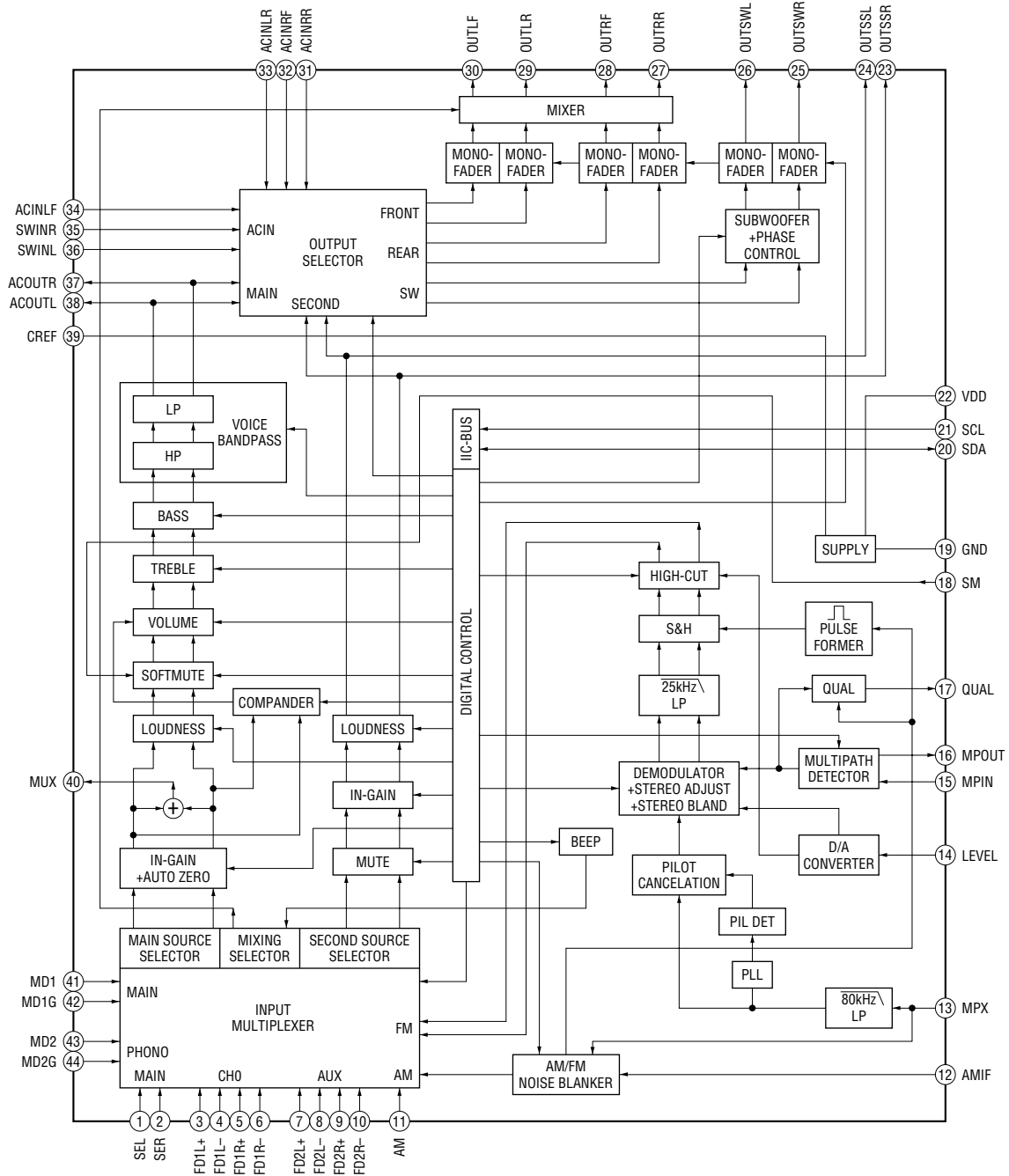
IC302 TL5001CD



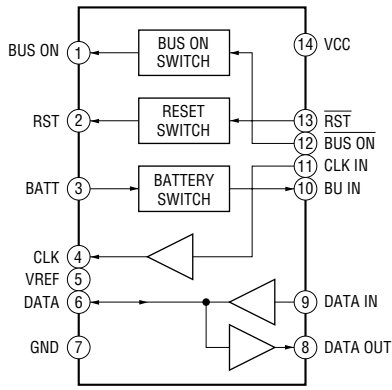
IC303 – 305 NJM2160AM-TE2



IC301 TDA7402TR

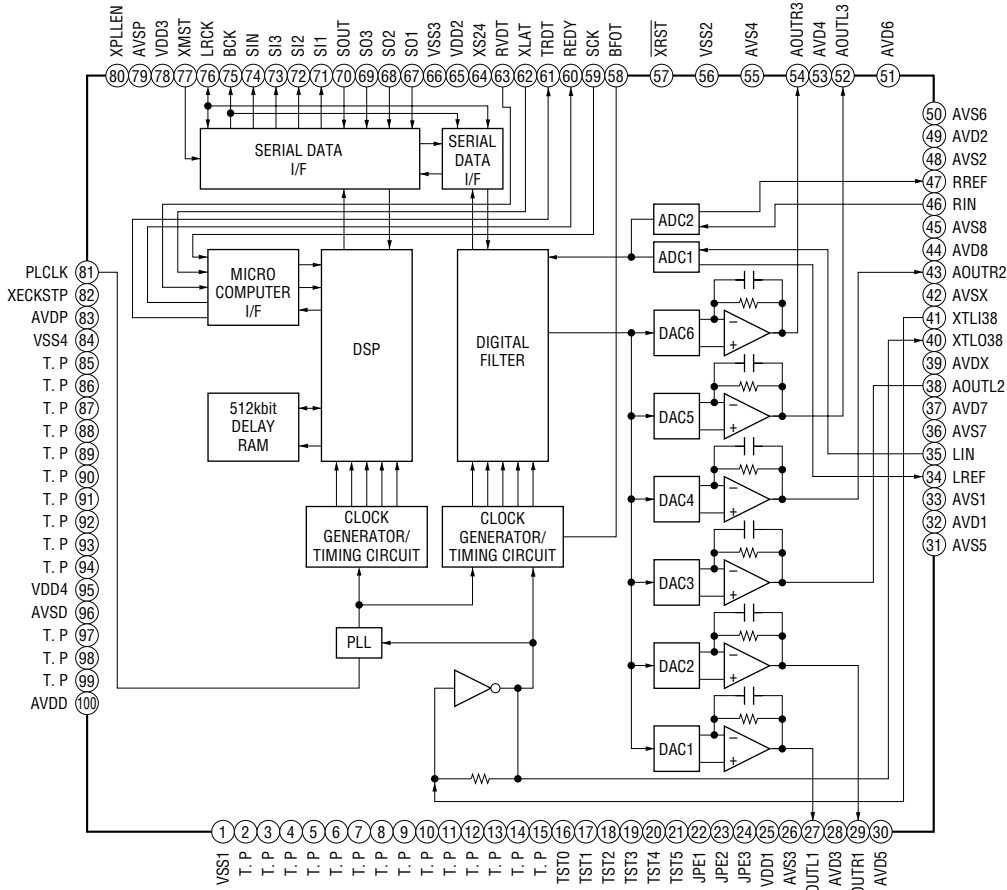


**IC601 BA8270F-E2**



**- DSO Board -**

**IC805 CXD2726Q-4**



### 5-23. IC PIN FUNCTION DESCRIPTION

#### • SERVO BOARD IC301 CXD2652AR

(DIGITAL SIGNAL PROCESSOR, DIGITAL SERVO PROCESSOR, EFM/ACIRC ENCODER/DECODER, SHOCK PROOF MEMORY CONTROLLER, ATRAC ENCODER/DECODER, 2M BIT D-RAM)

Pin No.	Pin Name	I/O	Description
1	MNT0	O	Focus OK signal output to the MD mechanism controller (IC501) “H” is output when focus is on (“L”: NG)
2	MNT1	O	Track jump detection signal output to the MD mechanism controller (IC501)
3	MNT2	O	Busy monitor signal output to the MD mechanism controller (IC501)
4	MNT3	O	Spindle servo lock status monitor signal output to the MD mechanism controller (IC501)
5	SWDT	I	Writing serial data signal input from the MD mechanism controller (IC501)
6	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
7	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
8	SRDT	O (3)	Reading serial data signal output to the MD mechanism controller (IC501)
9	SENS	O (3)	Internal status (SENSE) output to the MD mechanism controller (IC501)
10	$\overline{\text{XRST}}$	I	Reset signal input from the MD mechanism controller (IC501) “L”: reset
11	SQSY	O	Subcode Q sync (SCOR) output to the MD mechanism controller (IC501) “L” is output every 13.3 msec Almost all, “H” is output
12	DQSY	O	Digital In U-bit CD format subcode Q sync (SCOR) output terminal “L” is output every 13.3 msec Almost all, “H” is output Not used (open)
13	RECP	I	Laser power selection signal input terminal “L”: playback mode, “H”: recording mode (fixed at “L” in this set)
14	XINT	O	Interrupt status output to the MD mechanism controller (IC501)
15	TX	I	Recording data output enable signal input terminal Writing data transmission timing input (Also serves as the magnetic head on/off output) Not used (fixed at “L”)
16	OSCI	I	System clock signal (512Fs=22.5792 MHz) input from the oscillator circuit
17	OSCO	O	System clock signal (512Fs=22.5792 MHz) output terminal Not used (open)
18	XTSL	I	Input terminal for the system clock frequency setting “L”: 45.1584 MHz, “H”: 22.5792 MHz (fixed at “H” in this set)
19	RVDD	—	Power supply terminal (+3.3V) (digital system)
20	RVSS	—	Ground terminal (digital system)
21	DIN	I	Digital audio signal input terminal when recording mode Not used (fixed at “L”)
22	DOUT	O	Digital audio signal output terminal when playback mode Not used (open)
23	ADDT	I	Recording data input terminal Not used (fixed at “L”)
24	DADT	O	Playback data output to the CXD2726Q (IC805)
25	LRCK	O	L/R sampling clock signal (44.1 kHz) output to the CXD2726Q (IC805)
26	XBCK	O	Bit clock signal (2.8224 MHz) output to the CXD2726Q (IC805)
27	FS256	O	Clock signal (11.2896 MHz) output terminal Not used (open)
28	DVDD	—	Power supply terminal (+3.3V) (digital system)
29 to 32	A03 to A00	O	Address signal output to the D-RAM (IC307)
33	A10	O	Address signal output to the external D-RAM Not used (open)
34 to 38	A04 to A08	O	Address signal output to the D-RAM (IC307)
39	A11	O	Address signal output to the external D-RAM Not used (open)
40	DVSS	—	Ground terminal (digital system)
41	$\overline{\text{XOE}}$	O	Output enable signal output to the D-RAM (IC307) “L” active
42	$\overline{\text{XCAS}}$	O	Column address strobe signal output to the D-RAM (IC307) “L” active
43	A09	O	Address signal output to the D-RAM (IC307)
44	$\overline{\text{XRAS}}$	O	Row address strobe signal output to the D-RAM (IC307) “L” active
45	$\overline{\text{XWE}}$	O	Write enable signal output to the D-RAM (IC307) “L” active

Pin No.	Pin Name	I/O	Description
46	D1	I/O	Two-way data bus with the D-RAM (IC307)
47	D0	I/O	
48	D2	I/O	
49	D3	I/O	
50	MVCI	I	Digital in PLL oscillation input from the external VCO Not used (fixed at "L")
51	ASYO	O	Playback EFM full-swing output terminal
52	ASYI	I (A)	Playback EFM asymmetry comparator voltage input terminal
53	AVDD	—	Power supply terminal (+3.3V) (analog system)
54	BIAS	I (A)	Playback EFM asymmetry circuit constant current input terminal
55	RFI	I (A)	Playback EFM RF signal input from the CXA2523AR (IC302)
56	AVSS	—	Ground terminal (analog system)
57	PDO	O (3)	Phase comparison output for clock playback analog PLL of the playback EFM Not used (open)
58	PCO	O (3)	Phase comparison output for master clock of the recording/playback EFM master PLL
59	FILI	I (A)	Filter input for master clock of the recording/playback master PLL
60	FILO	O (A)	Filter output for master clock of the recording/playback master PLL
61	CLTV	I (A)	Internal VCO control voltage input of the recording/playback master PLL
62	PEAK	I (A)	Light amount signal (RF/ABCD) peak hold input from the CXA2523AR (IC302)
63	BOTM	I (A)	Light amount signal (RF/ABCD) bottom hold input from the CXA2523AR (IC302)
64	ABCD	I (A)	Light amount signal (ABCD) input from the CXA2523AR (IC302)
65	FE	I (A)	Focus error signal input from the CXA2523AR (IC302)
66	AUX1	I (A)	Auxiliary signal (I <sub>3</sub> signal/temperature signal) input terminal Not used (fixed at "H")
67	VC	I (A)	Middle point voltage (+1.65V) input from the CXA2523AR (IC302)
68	ADIO	O (A)	Monitor output of the A/D converter input signal Not used (open)
69	AVDD	—	Power supply terminal (+3.3V) (analog system)
70	ADRT	I (A)	A/D converter operational range upper limit voltage input terminal (fixed at "H" in this set)
71	ADRB	I (A)	A/D converter operational range lower limit voltage input terminal (fixed at "L" in this set)
72	AVSS	—	Ground terminal (analog system)
73	SE	I (A)	Sled error signal input from the CXA2523AR (IC302)
74	TE	I (A)	Tracking error signal input from the CXA2523AR (IC302)
75	AUX2	I (A)	Auxiliary signal input terminal Light amount signal input from the CXA2523AR (IC302)
76	DCHG	I (A)	Connected to the +3.3V power supply
77	APC	I (A)	Error signal input for the laser automatic power control Not used (fixed at "L")
78	ADFG	I	ADIP duplex FM signal (22.05 kHz ± 1 kHz) input from the CXA2523AR (IC302)
79	F0CNT	O	Filter f0 control signal output terminal Not used (open)
80	XLRF	O	Serial data latch pulse signal output terminal Not used (open)
81	CKRF	O	Serial data transfer clock signal output terminal Not used (open)
82	DTRF	O	Writing serial data output terminal Not used (open)
83	APCREF	O	Control signal output to the reference voltage generator circuit for the laser automatic power control
84	LDDR	O	PWM signal output for the laser automatic power control Not used (open)
85	TRDR	O	Tracking servo drive PWM signal (–) output to the BH6511FS (IC303)
86	TFDR	O	Tracking servo drive PWM signal (+) output to the BH6511FS (IC303)
87	DVDD	—	Power supply terminal (+3.3V) (digital system)
88	FFDR	O	Focus servo drive PWM signal (+) output to the BH6511FS (IC303)



Pin No.	Pin Name	I/O	Description
89	FRDR	O	Focus servo drive PWM signal (-) output to the BH6511FS (IC303)
90	FS4	O	Clock signal (176.4 kHz) output terminal (X'tal system) Not used (open)
91	SRDR	O	Sled servo drive PWM signal (-) output to the BH6511FS (IC303)
92	SFDR	O	Sled servo drive PWM signal (+) output to the BH6511FS (IC303)
93	SPRD	O	Spindle servo drive PWM signal (-) output to the BH6511FS (IC303)
94	SPFD	O	Spindle servo drive PWM signal (+) output to the BH6511FS (IC303)
95	FGIN	I	Not used (fixed at "L")
96	TEST1	I	Input terminal for the test (fixed at "L")
97	TEST2	I	
98	TEST3	I	
99	DVSS	—	Ground terminal (digital system)
100	EFMO	O	EFM signal output terminal when recording mode Not used (open)

\* I (A) for analog input, O (3) for 3-state output, and O (A) for analog output in the column I/O.

• SERVO BOARD IC302 CXA2523AR (RF AMP, FOCUS/TRACKING ERROR AMP)

Pin No.	Pin Name	I/O	Description
1	I	I	I-V converted RF signal I input from the optical pick-up block detector
2	J	I	I-V converted RF signal J input from the optical pick-up block detector
3	VC	O	Middle point voltage (+1.65V) generation output terminal
4 to 9	A to F	I	Signal input from the optical pick-up detector
10	PD	I	Light amount monitor input from the optical pick-up block laser diode
11	APC	O	Laser amplifier output terminal to the automatic power control circuit
12	APCREF	I	Reference voltage input terminal for setting laser power
13	GND	—	Ground terminal
14	TEMPI	I	Connected to the temperature sensor Not used (open)
15	TEMPR	O	Output terminal for a temperature sensor reference voltage Not used (open)
16	SWDT	I	Writing serial data input from the MD mechanism controller (IC501)
17	SCLK	I	Serial data transfer clock signal input from the MD mechanism controller (IC501)
18	XLAT	I	Serial data latch pulse signal input from the MD mechanism controller (IC501)
19	XSTBY	I	Standby signal input terminal “L”: standby (fixed at “H” in this set)
20	F0CNT	I	Center frequency control voltage input terminal of internal circuit (BPF22, BPF3T, EQ) input terminal
21	VREF	O	Reference voltage output terminal Not used (open)
22	EQADJ	I	Center frequency setting terminal for the internal circuit (EQ)
23	3TADJ	I	Center frequency setting terminal for the internal circuit (BPF3T)
24	VCC	—	Power supply terminal (+3.3V)
25	WBLADJ	I	Center frequency setting terminal for the internal circuit (BPF22)
26	TE	O	Tracking error signal output to the CXD2652AR (IC301)
27	CSLED	I	Connected to the external capacitor for low-pass filter of the sled error signal
28	SE	O	Sled error signal output to the CXD2652AR (IC301)
29	ADFM	O	FM signal output of the ADIP
30	ADIN	I	Receives a ADIP FM signal in AC coupling
31	ADAGC	I	Connected to the external capacitor for ADIP AGC
32	ADFG	O	ADIP duplex signal (22.05 kHz ± 1 kHz) output to the CXD2652AR (IC301)
33	AUX	O	Auxiliary signal (I <sub>3</sub> signal/temperature signal) output terminal Not used (open)
34	FE	O	Focus error signal output to the CXD2652AR (IC301)
35	ABCD	O	Light amount signal (ABCD) output to the CXD2652AR (IC301)
36	BOTM	O	Light amount signal (RF/ABCD) bottom hold output to the CXD2652AR (IC301)
37	PEAK	O	Light amount signal (RF/ABCD) peak hold output to the CXD2652AR (IC301)
38	RF	O	Playback EFM RF signal output to the CXD2652AR (IC301)
39	RFAGC	I	Connected to the external capacitor for RF auto gain control circuit
40	AGCI	I	Receives a RF signal in AC coupling
41	COMPO	O	User comparator output terminal Not used (open)
42	COMPP	I	User comparator input terminal Not used (fixed at “L”)
43	ADDC	I	Connected to the external capacitor for cutting the low band of the ADIP amplifier
44	OPO	O	User operational amplifier output terminal Not used (open)
45	OPN	I	User operational amplifier inversion input terminal Not used (fixed at “L”)
46	RFO	O	RF signal output terminal
47	MORFI	I	Receives a MO RF signal in AC coupling
48	MORFO	O	MO RF signal output terminal

• SERVO BOARD IC501 CXP84340-217Q (MD MECHANISM CONTROLLER)

Pin No.	Pin Name	I/O	Description
1 to 5	TIN3 to TIN7	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)
6	LOAD	O	Loading motor control signal output to the motor driver (IC305) “H” active *1
7	EJECT	O	Loading motor control signal output to the motor driver (IC305) “H” active *1
8, 9	NCO	O	Not used (open)
10	MDMON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply and loading motor drive (IC305) power supply “H”: power on
11	$\overline{\text{E-SW}}$	I	Inputs the disc loading completion detect switch detection signal “L”: When completed of the disc loading operation
12	AG-OK	O	Output of aging status in test mode “L”: under aging, “H”: aging completed Not used (open)
13	ADJ-OK	O	Output of status when aging completed in test mode “L”: aging NG, “H”: aging OK Not used (open)
14 to 17	NCO	O	Not used (open)
18	DFCTSEL	I	Select whether defect function is used for the CXD2652AR (IC301) “L”: used this function, “H”: not used this function (fixed at “H” in this set)
19	DPLLSEL	I	Select whether digital PLL function is used for the CXD2652AR (IC301) “L”: used this function, “H”: not used this function (fixed at “H” in this set)
20	EMPHSEL	I	Select whether emphasis signal output from pin or unilink data “L”: outputs from both pin and unilink data, “H”: output from pin only (fixed at “H” in this set)
21	LOCK	O	Mini-disc lock detection signal output terminal “H”: lock Not used
22	NCO	O	Not used (open)
23	$2\text{M}/4\text{M}$	I	Select whether D-RAM capacitance 2M bit or 4M bit “L”: 4M bit (external D-RAM), “H”: 2M bit (internal D-RAM of CXD2652AR) (fixed at “L” in this set)
24, 25	NCO	O	Not used (open)
26	MNT0	I	Focus OK signal input from the CXD2652AR (IC301) “H” is input when focus is on (“L”: NG)
27	MNT1	I	Track jump detection signal input from the CXD2652AR (IC301)
28	MNT2	I	Busy monitor signal input from the CXD2652AR (IC301)
29	MNT3	I	Spindle servo lock status monitor signal input from the CXD2652AR (IC301)
30	$\overline{\text{RESET}}$	I	System reset signal input from the master controller (IC502), reset signal generator (IC503) and reset switch (S101) “L”: reset For several hundreds msec. after the power supply rises, “L” is input, then it changes to “H”
31	EXTAL	O	Main system clock output terminal (10 MHz)
32	XTAL	I	Main system clock input terminal (10 MHz)
33	VSS	—	Ground terminal
34	TX	O	Sub system clock output terminal (32.768 kHz) Not used (open)
35	TEX	I	Sub system clock input terminal (32.768 kHz) Not used (fixed at “L”)
36	AVSS	—	Ground terminal (for A/D converter)
37	AVREF	I	Reference voltage input terminal (+5V) (for A/D converter)
38	INIT	I	Initial reset signal input terminal (A/D input) (fixed at “H”)
39	TEMP	I	Temperature sensor (TH501) input terminal (A/D input)
40	ACNT	I	Select the number of load/eject aging times (A/D input) 0H – 54H (30 times), 55H – OA9H (20 times), OAAH – OFFH (10 times)
41	DO-SEL	I	Select the digital output bits (A/D input)
42	EE-CS	O	Chip select signal output to the external EEPROM device Not used (open)
43	EE-CKO	O	Serial data transfer clock signal output to the external EEPROM device Not used (open)
44	EE-SIO	I/O	Two way data bus with the external EEPROM device Not used (open)
45	MD-SO	O	Writing serial data signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)

Pin No.	Pin Name	I/O	Description
46	LINKOFF	O	Unilink on/off control signal output for the SONY bus “L”: link on, “H”: link off Not used
47	UNIREQ	O	Data request signal output terminal (for SONY bus) “H”: request on Not used (open)
48	UNICKIO	I/O	Serial clock signal input from the master controller (IC502) or serial clock signal output to the SONY bus interface (IC601) and liquid crystal display drive controller (IC701) (for SONY bus)
49	UNISI	I	Serial data input from the SONY bus interface (IC601)
50	UNISO	O	Serial data output to the SONY bus interface (IC601)
51	MD-CKO	O	Serial data transfer clock signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
52	MD-SI	I	Reading serial data signal input from the CXD2652AR (IC301)
53	NCO	O	Not used (open)
54	SENS	I	Internal status (SENSE) input from the CXD2652AR (IC301)
55	CC-XINT	I	Interrupt status input from the CXD2652AR (IC301)
56	$\overline{\text{LIMIT-IN}}$	I	Detection input from the sled limit-in detect switch The optical pick-up is inner position when “L”
57	EJT-KEY	I	Eject request signal input terminal “L”: eject on Not used (fixed at “H”)
58	$\overline{\text{ERROR-PWM}}$	O	PWM error monitor output terminal (C1 and ATER is output when test mode) Not used (open)
59	$\overline{\text{MD-RST}}$	O	Reset signal output to the CXD2652AR (IC301) and BH6511FS (IC303) “L”: reset
60	$\overline{\text{BU-IN}}$	I	Battery detect signal input from the SONY bus interface (IC601) and battery check circuit “H”: battery on
61	$\overline{\text{BUS-ON}}$	I	SONY bus on/off control signal input from the master controller (IC502) “L”: bus on
62	SQSY	I	Subcode Q sync (SCOR) input from the CXD2652AR (IC301) “L” is input every 13.3 msec Almost all, “H” is input
63	$\overline{\text{C-SW}}$	I	Inputs the disc loading start or disc eject completion detect switch detection signal “L”: When start or eject completed of the disc loading operation
64	MD-LAT	O	Serial data latch pulse signal output to the CXD2652AR (IC301) and CXA2523AR (IC302)
65	MD-ON	O	Power supply on/off control signal output of the MD mechanism deck section main power supply “H”: power on
66	DEEMP	O	Emphasis on/off control signal output to the master controller (IC502) “H”: emphasis on
67	A-MUTE	O	Audio muting on/off control signal output terminal “H”: muting on
68	NCO	O	Not used (open)
69	TSTCKO	O	Output of clock signal for the test mode display Not used (open)
70	TSTSO	O	Output of data for the test mode display Not used (open)
71	$\overline{\text{TSTMOD}}$	I	Setting terminal for the test mode “L”: test mode, “H”: normal mode
72	VCC	—	Power supply terminal (+5V)
73	NIL	I	Not used (fixed at “H”)
74 to 77	TOUT0 to TOUT3	O	Output of the 4×8 matrix test keys Not used (open)
78 to 80	TIN0 to TIN2	I/O	Input of the 4×8 matrix test keys (“L” is always output, except in test mode) Not used (open)

\*1 Loading motor (M903) control

Terminal \ Operation	IN	OUT	BRAKE	STOP
LOAD (pin ⑥)	“H”	“L”	“H”	“L”
EJECT (pin ⑦)	“L”	“H”	“H”	“L”

• MAIN BOARD IC502 (MASTER CONTROLLER)

MB90574BPMT-G-263-BND (MDX-C8500X) MB90574BPMT-G-264-BND (MDX-C8500R)

Pin No.	Pin Name	I/O	Description
1	NC	I	Not used (fixed at "L")
2	AMSIN	I	Input terminal of whether a music is present or not is detected at auto music sensor "L": music is not present, "H": music is present Not used (fixed at "L")
3	$\overline{\text{AMSON}}$	O	Tape auto music sensor control signal output terminal "L" is output to lower the gain for audio level at FF/REW mode Not used (open)
4	SA LAT	O	Serial data latch pulse output for spectrum analyzer section to the liquid crystal display drive controller (IC701)
5	ATT	O	Audio line muting on/off control signal output terminal "H": muting on
6	$\overline{\text{SYSRST}}$	O	System reset signal output to the MD mechanism controller (IC501), liquid crystal display drive controller (IC701) and SONY bus interface (IC601) "L": reset
7	$\overline{\text{F}}\overline{\text{R}}$	O	Tape detection signal output terminal "L": reverse side, "H": forward side Not used (open)
8	VCC	—	Power supply terminal (+5V)
9	MTLIN	I	Auto metal detection signal input terminal Not used (fixed at "L")
10	T.ROM-SDA	I/O	Two-way data bus for tuner EEPROM with the FM/AM tuner unit (TUX201)
11	T.ROM-SCL	O	Tuner EEPROM bus clock signal output to the FM/AM tuner unit (TUX201)
12	RX	I	Input terminal at the flash memory data write mode Front panel open/close detection signal input terminal "L" is input when the front panel is closed
13	TX	O	Output terminal at the flash memory data write mode Display serial data output to the liquid crystal display driver (IC901)
14	$\overline{\text{BUS-ON}}$	O	Bus on/off control signal output to the MD mechanism controller (IC501), liquid crystal display drive controller (IC701) and SONY bus interface (IC601) "L": bus on
15	BEEP	O	Beep sound drive signal output terminal
16	NC	O	Not used (open)
17	UNISI	I	Serial data input from the SONY bus interface (IC601)
18	UNISO	O	Serial data output to the SONY bus interface (IC601)
19	UNICKO	O	Serial clock signal output to the MD mechanism controller (IC501), liquid crystal display drive controller (IC701) and SONY bus interface (IC601)
20	IF-BW	I	Tuner wide/narrow select signal input terminal "L": wide, "H": narrow Not used (fixed at "L")
21	SW SHIFT	O	Not used
22, 23	NC	O	Not used (open)
24	SIRCS	I	Sircs remote control signal input from the remote control receiver (IC951)
25	DSPSI	I	Serial data input from the CXD2726Q (IC805)
26	DSPSO	O	Serial data output to the CXD2726Q (IC805)
27	DSPCKO	O	Serial data transfer clock signal output to the CXD2726Q (IC805) and liquid crystal display drive controller (IC701)
28	DSPPLL	O	PLL clock control signal output to the CXD2726Q (IC805) At "L" is output: fixed at "L" is PLCLK (pin ⑧) of IC805 CXD2726Q) At "H" is output: PLL clock signal output to the PLCLK (pin ⑧) of IC805 CXD2726Q)
29	$\overline{\text{DSPMST}}$	O	Bit clock (BCK) and L/R sampling (LRCK) signal master/slave mode selection signal output to the CXD2726Q (IC805) "L": master mode, "H": slave mode
30	NC	O	Not used (open)
31	$\overline{\text{VOLATT}}$	O	Pre amplifier muting on/off control signal output to the electrical volume (IC301) "L": muting on
32	$\overline{\text{TUMUTE}}$	O	Muting on/off control signal output of the FM/AM tuner signal "L": muting on
33	VSS	—	Ground terminal
34	C	—	Connected to coupling capacitor for the power supply Not used (open)

Pin No.	Pin Name	I/O	Description
35	DSPLAT	O	Serial data latch pulse output to the CXD2726Q (IC805)
36	DSPRST	O	Reset signal output to the CXD2726Q (IC805) "L": reset
37	ANT CUT	O	Tuner system power supply on/off control signal output terminal "H": tuner power on Not used (open)
38	DVCC	—	Power supply terminal (+5V) (for D/A converter)
39	DVSS	—	Ground terminal (for D/A converter)
40, 41	NC	O	Not used (open)
42	AVCC	—	Power supply terminal (+5V) (for analog system)
43	AVRH	I	Reference voltage (+5V) input terminal (for A/D converter)
44	AVRL	I	Reference voltage (0V) input terminal (for A/D converter)
45	AVSS	—	Ground terminal (for analog system)
46	KEYIN0	I	Key input terminal (A/D input) (LSW901 to LSW908, S901 to S904) OFF, SOURCE, SOUND EQ, MENU, PTY DSPL (MDX-C8500R), DSPL (MDX-C8500X), LIST, ENTER, MODE, SEEK/AMS - ◀◀ ◀◀ + ▶▶ ▶▶, DISC/PRST +, PRST/DISC - keys input
47	KEYIN1	I	Key input terminal (A/D input) (LSW751, LSW909 to LSW917) ▲, DSO, TA, AF, 6 to 3 SHUF 2, REP 1 keys input (LSW910 TA, LSW911 AF: MDX-C8500R ONLY)
48	RCIN0	I	Rotary remote commander key input terminal (A/D input)
49	DSTSEL	I	Destination setting terminal (A/D input) "L": MDX-C8500X/C8500R (TYPE A), "M": MDX-C8500R (TYPE C), "H": MDX-C8500R (TYPE B)
50	QUALITY	I	Noise level detection signal input at SEEK mode (A/D input)
51	FMAGC	I	FM AGC detection signal input from the FM/AM tuner unit (TUX201) (A/D input)
52	MTP	I	Multi-path detection signal input from the RDS decoder (IC201) (A/D input) Used for the MDX-C8500R only (MDX-C8500X: Not used open)
53	VSM	I	FM and AM signal meter voltage detection input from the FM/AM tuner unit (TUX201) (A/D input)
54	VCC	—	Power supply terminal (+5V)
55	AMPON	O	Standby on/off control signal output terminal "L": standby mode, "H": amplifier on
56	NS-MASK	O	Discharge control signal output for the noise detection circuit "H": discharge Used for the MDX-C8500R only (MDX-C8500X: Not used open)
57	MTLOUT	O	METAL output terminal (METAL on at "L" output) Not used (open)
58	REEL	I	Rotation detect signal input terminal Not used (fixed at "L")
59	POS0	I	Tape position (EJECT/FF/REW/REV/ FWD mode) detect input from the tape operation switch on the deck mechanism Not used this function (fixed at "L")
60	POS1	I	
61	POS2	I	
62	POS3	I	
63	VSS	—	Ground terminal
64	NC	I	Not used (fixed at "L")
65	F OSC	I	Frequency count terminal from power control (IC302)
66	LM-LOD	O	Loading motor control signal output terminal "H" active (For the loading direction and forward side operation) Not used (open)
67	CM ON	O	Capstan/reel motor control signal output terminal "H": motor on Not used (open)
68	TAPE ON	O	Tape system power supply on/off control signal output terminal "H": tape on Not used (open)
69	FLASH-W	I	Internal flash memory data write mode detection signal input terminal Not used
70	I2C SDA	I/O	Two-way data I2C bus with the FM/AM tuner unit (TUX201), RDS decoder (IC201) and electrical volume (IC301) (RDS decoder is MDX-C8500R only)
71	I2C CKO	O	I2C bus clock signal output to the FM/AM tuner unit (TUX201), RDS decoder (IC201) and electrical volume (IC301) (RDS decoder is MDX-C8500R only)

Pin No.	Pin Name	I/O	Description
72	RCIN1	I	Rotary remote commander shift key input terminal
73	X1A	O	Sub system clock output terminal (32.768 kHz)
74	X0A	I	Sub system clock input terminal (32.768 kHz)
75	$\overline{\text{DAVN}}$	I	Data transmit completed detection signal input from the RDS decoder (IC201) "L" active Used for the MDX-C8500R only (MDX-C8500X: Not used open)
76	CDMD ON	I	CD/MD on/off control signal input from the MD mechanism controller (IC501)
77	BU-IN	I	Battery detection signal input from the SONY bus interface (IC601) and battery detect circuit "L" is input at low voltage
78	DSPREADY	I	Transfer enable signal input from the CXD2726Q (IC805) "L": transfer prohibition, "H": transfer permission
79	KEYACK	I	Input of acknowledge signal for the key entry Acknowledge signal is input to accept function and eject keys in the power off status On at input of "H"
80	$\overline{\text{AD ON}}$	O	A/D converter power control signal output terminal When the KEYACK (pin 79) that controls reference voltage power for key A/D conversion input is active, "L" is output from this terminal to enable the input
81	$\overline{\text{ACCIN}}$	I	Accessory detection signal input terminal "L": accessory on
82	FLASH ON	O	Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901) "H": power on
83	PW-ON	O	Main system power supply on/off control signal output terminal "H": power on
84	$\overline{\text{TESTIN}}$	I	Setting terminal for the test mode "L": test mode, Normally: fixed at "H"
85	$\overline{\text{RAMBU}}$	I	Internal RAM reset detection signal input from the RN5VD33AA (IC504) Input terminal to check that RAM data are not destroyed due to low voltage This checking is made within 100 msec after reset
86	HSTX	I	Hardware standby input terminal "L": hardware standby mode Reset signal input in this set
87	MD2	I	Setting terminal for the CPU operational mode (fixed at "L" in this set)
88	MD1	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
89	MD0	I	Setting terminal for the CPU operational mode (fixed at "H" in this set)
90	$\overline{\text{RESET}}$	I	System reset signal input from the reset signal generator (IC503) and reset switch (S101) "L": reset "L" is input for several 100 msec after power on, then it changes to "H"
91	VSS	—	Ground terminal
92	X0	I	Main system clock input terminal (3.68 MHz)
93	X1	O	Main system clock output terminal (3.68 MHz)
94	VCC	—	Power supply terminal (+5V)
95	$\overline{\text{ILLIN}}$	I	Auto dimmer control illumination line detection signal input terminal "L" is input at dimmer detection
96	$\overline{\text{TELATT}}$	I	Telephone detection signal input terminal At input of "H", the signal is attenuated by -20 dB
97	EMPH	I	Emphasis control signal input from the MD Mechanism controller (IC501)
98	F CH	O	Frequency changing terminal from the power control (IC302) "H": frequency change
99 to 102	NC	O	Not used (open)
103	4V SEL	I	Input terminal of whether line driver is mounted or not is detected "L": line driver is not mounted (MDX-C8500R), "H": line driver is mounted (MDX-C8500X)
104	COL SEL	I	Setting terminal for the illumination color "L": 2 color (MDX-C8500R), "H": 1 (red) color (MDX-C8500X)
105	AMPATT	O	Power amplifier muting on/off control signal output terminal "H": muting on
106	$\overline{\text{BOOT}}$	O	Serial data output to the liquid crystal display drive controller (IC701)
107	DSP GAIN	O	Not used (open)
108	NC	O	Not used (open)
109	XR CDMD	I	Setting terminal for the internal mechanism tape or CD/MD "L": tape, "H": CD/MD (fixed at "H" in this set)
110	DSP ON	O	Power supply on/off control signal output for the CXD2726Q (IC805) "H": DSP on

Pin No.	Pin Name	I/O	Description
111	CD MD	I	Setting terminal for the internal mechanism CD or MD “L”: CD, “H”: MD (fixed at “H” in this set)
112	NC	I	Not used (fixed at “L”)
113	TUNON	O	Tuner system power supply on/off control signal output terminal “H”: tuner power on
114	NC	I	Not used (fixed at “L”)
115	REIN1	I	Dial pulse input of the rotary encoder (RE901) (A phase input) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
116	REIN0	I	Dial pulse input of the rotary encoder (RE901) (B phase input) (for VOLUME/BASS/TREBLE/BALANCE/FADER control)
117	$\overline{\text{NOSE-SW}}$	I	Front panel block remove/attach detection signal input from the nose detection switch (S102) “L”: front panel is attached
118	DOORIND	O	LED drive signal output of the MD disc slot illumination and ▲ indicator (LED751, LSW751) “H”: LED on “H” is output to turn on LED when front panel is opened
119	VSS	—	Ground terminal
120	DOLBY	O	Dolby control terminal “H”: dolby on Not used (open)



• DSO BOARD IC805 CXD2726Q-4 (DIGITAL SIGNAL PROCESSOR, DIGITAL FILTER, D/A CONVERTER)

Pin No.	Pin Name	I/O	Description
1	VSS1	—	Ground terminal (digital system)
2 to 15	T.P	I	Input terminal for the test (fixed at “L”)
16 to 21	TST0 to TST5	I	Input terminal for the test (fixed at “L”)
22 to 24	JPE1 to JPE3	I	External condition jump terminal “H”: condition jump (fixed at “L”)
25	VDD1	—	Power supply terminal (+3.3V) (digital system)
26	AVS3	—	Ground terminal (for D/A converter 1) (analog system)
27	AOUTL1	O	D/A converter 1 (L-ch side) output terminal Analog signal output for front side (L-ch side) output in this set
28	AVD3	—	Power supply terminal (+3.3V) (for D/A converter 1) (analog system)
29	AOUTR1	O	D/A converter 1 (R-ch side) output terminal Analog signal output for rear side (L-ch side) output in this set
30	AVD5	—	Power supply terminal (+3.3V) (for D/A converter 1) (analog system)
31	AVS5	—	Ground terminal (for D/A converter 1) (analog system)
32	AVD1	—	Power supply terminal (+3.3V) (for L-ch side A/D converter) (analog system)
33	AVS1	—	Ground terminal (for L-ch side A/D converter) (analog system)
34	LREF	O	Connected to the bus control for A/D converter (for L-ch side)
35	LIN	I	A/D converter (L-ch side) analog input terminal Tuner and bus audio input signal (L-ch side) in this set
36	AVS7	—	Ground terminal (for D/A converter 2) (analog system)
37	AVD7	—	Power supply terminal (+3.3V) (for D/A converter 2) (analog system)
38	AOUTL2	O	D/A converter 2 (L-ch side) output terminal Not used (open)
39	AVDX	—	Power supply terminal (+3.3V) (for master clock) (analog system)
40	XTLO38	O	System clock output terminal (16.9344 MHz)
41	XTLI38	I	System clock input terminal (16.9344 MHz)
42	AVSX	—	Ground terminal (for master clock) (analog system)
43	AOUTR2	O	D/A converter 2 (R-ch side) output terminal Analog signal output for sub woofer output in this set
44	AVD8	—	Power supply terminal (+3.3V) (for D/A converter 2) (analog system)
45	AVS8	—	Ground terminal (for D/A converter 2) (analog system)
46	RIN	I	A/D converter (R-ch side) analog input terminal Tuner and bus audio input signal (R-ch side) in this set
47	RREF	O	Connected to the bus control for A/D converter (for R-ch side)
48	AVS2	—	Ground terminal (for R-ch side A/D converter) (analog system)
49	AVD2	—	Power supply terminal (+3.3V) (for R-ch side A/D converter) (analog system)
50	AVS6	—	Ground terminal (for D/A converter 3) (analog system)
51	AVD6	—	Power supply terminal (+3.3V) (for D/A converter 3) (analog system)
52	AOUTL3	O	D/A converter 3 (L-ch side) output terminal Analog signal output for rear side (R-ch side) output in this set
53	AVD4	—	Power supply terminal (+3.3V) (for D/A converter 3) (analog system)
54	AOUTR3	O	D/A converter 3 (R-ch side) output terminal Analog signal output for front side (R-ch side) output in this set
55	AVS4	—	Ground terminal (for D/A converter 3) (analog system)
56	VSS2	—	Ground terminal (digital system)
57	XRST	I	System reset signal input from the master controller (IC502) “L”: reset
58	BFOT	O	Master clock signal output terminal Not used (open)
59	SCK	I	Serial data transfer clock signal input from the master controller (IC502) and liquid crystal display drive controller (IC701)

Pin No.	Pin Name	I/O	Description
60	REDY	O	Transfer enable signal output to the master controller (IC502) “L”: transfer prohibition
61	TRDT	O	Serial data output to the master controller (IC502) and liquid crystal display drive controller (IC701)
62	XLAT	I	Serial data latch pulse input from the master controller (IC502)
63	RVDT	I	Serial data input from the master controller (IC502)
64	XS24	I	Serial data 24/32 bit slot selection signal input terminal “L”: 24 bit slot, “H”: 32 bit slot (validity at slave mode) (fixed at “H” in this set)
65	VDD2	—	Power supply terminal (+3.3V) (digital system)
66	VSS3	—	Ground terminal (digital system)
67 to 69	SO1 to SO3	O	Serial data output terminal Not used (open)
70	SOUT	O	Serial data output terminal Not used (open)
71	SI1	I	Serial data input from the CXD2652AR (IC301)
72, 73	SI2, SI3	I	Serial data input terminal Not used (fixed at “L”)
74	SIN	I	Serial data input terminal Not used (fixed at “L”)
75	BCK	I	Bit clock signal (2.8224 MHz) input from the CXD2652AR (IC301)
76	LRCK	I	L/R sampling clock signal (44.1 kHz) input from the CXD2652AR (IC301)
77	XMST	I	Bit clock (BCK) and L/R sampling clock (LRCK) signal master/slave mode selection signal input from the master controller (IC502) “L”: master mode, “H”: slave mode
78	VDD3	—	Power supply terminal (+3.3V) (digital system)
79	AVSP	—	Ground terminal (PLL system)
80	XPLEN	I	PLL enable signal input terminal Normally: fixed at “L”
81	PLCLK	O	PLL clock signal output terminal (22.5792 MHz)
82	XECKSTP	I	PLL clock output control signal input from the master controller (IC502) At “L” is input: fixed at “L” is PLCLK (pin ⑧) At “H” is input: PLL clock signal output from the PLCLK (pin ⑧)
83	AVDP	—	Power supply terminal (+3.3V) (PLL system)
84	VSS4	—	Ground terminal (digital system)
85 to 94	T.P	I	Input terminal for the test Normally: fixed at “L”
95	VDD4	—	Power supply terminal (+3.3V) (digital system)
96	AVSD	—	Ground terminal (for D-RAM)
97 to 99	T.P	I	Input terminal for the test Normally: fixed at “L”
100	AVDD	—	Power supply terminal (+3.3V) (for D-RAM)

## SECTION 6 EXPLODED VIEWS

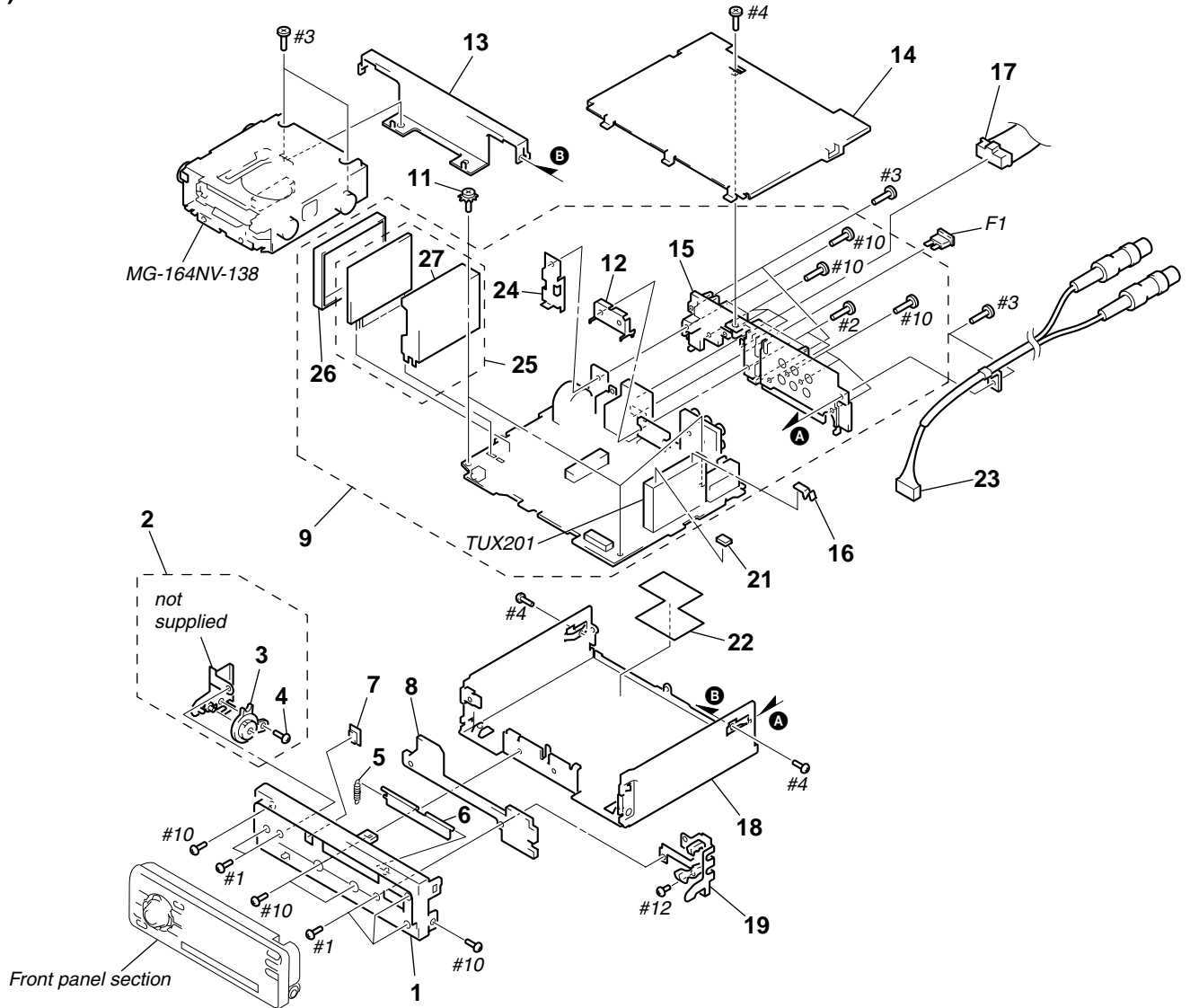
**NOTE:**

- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts  
Example:  
KNOB, BALANCE (WHITE) . . . (RED)  
  ↑  ↑  
  Parts Color Cabinet's Color

- Items marked "\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of the electrical parts list.
- Please refer to servicing notes (page 3) for system of TYPE A, B and C.

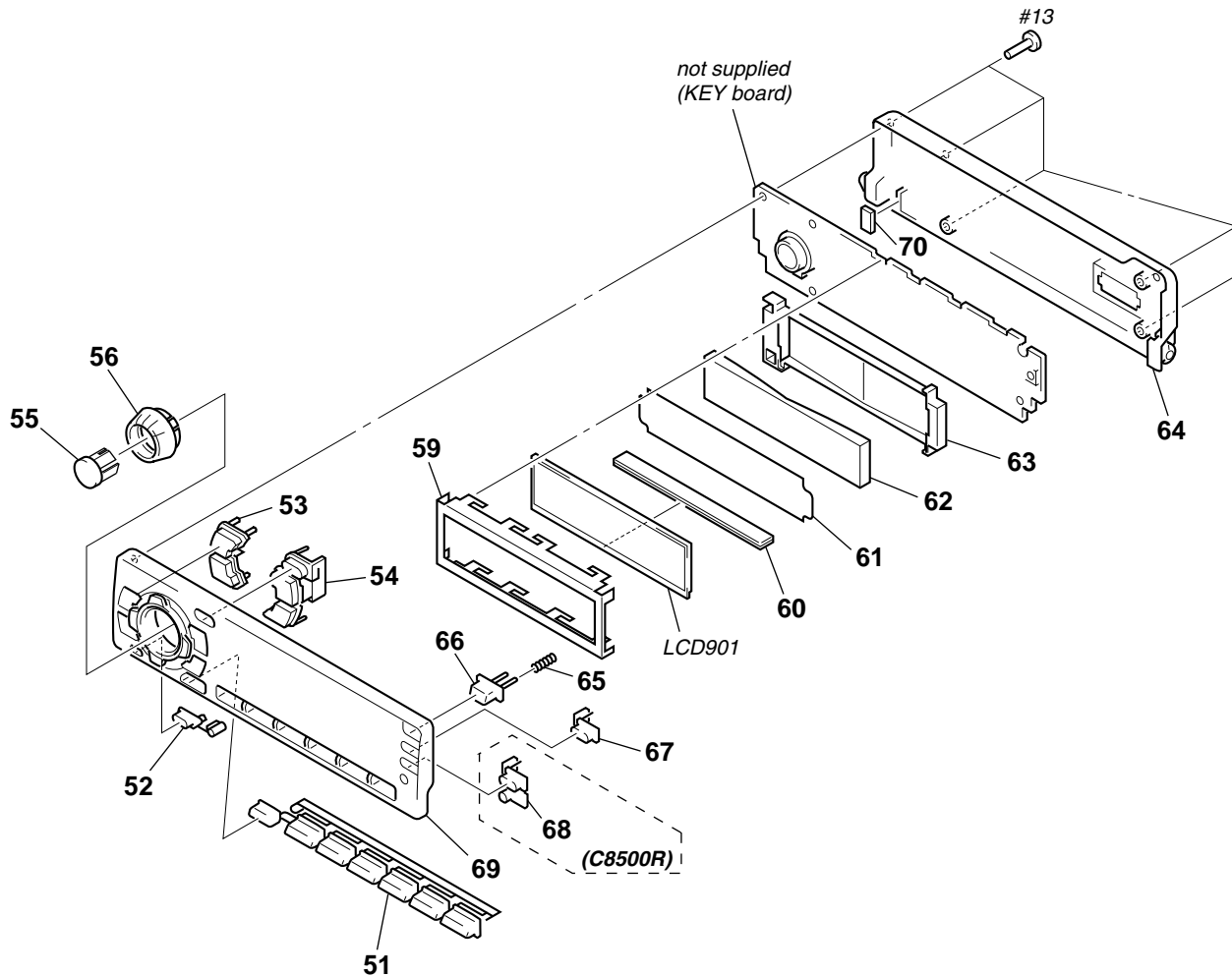
The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

**(1) GENERAL SECTION**



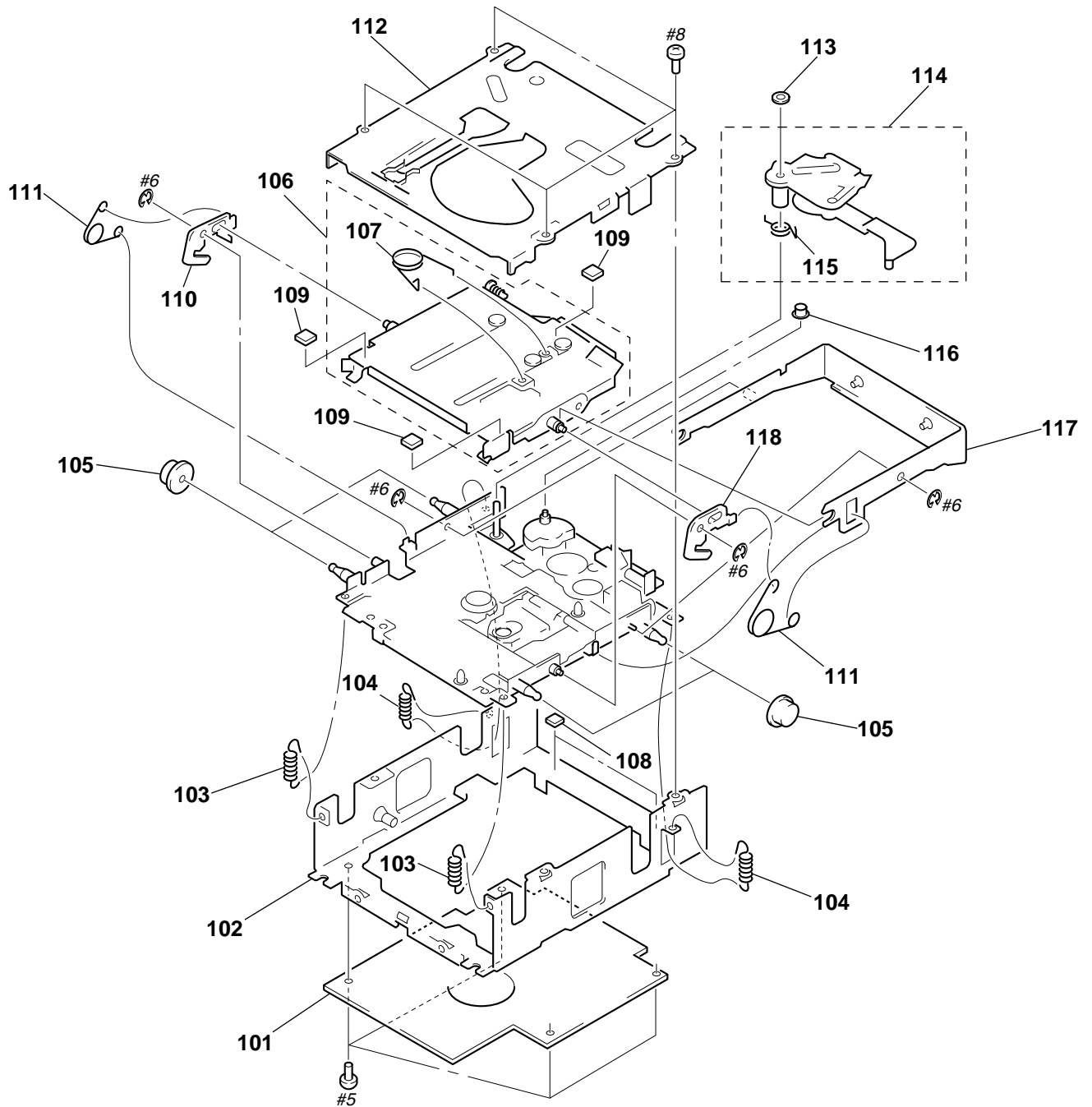
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
1	X-3378-458-2	PANEL ASSY, SUB		* 15	3-040-996-01	HEAT SINK (2P)	
2	X-3376-699-2	GEAR ASSY		* 16	3-045-878-01	PLATE (TU), GROUND	
3	3-030-909-02	DAMPER, OIL		17	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	(C8500R)
4	3-713-786-51	SCREW +P 2X3		17	1-792-194-11	CORD (WITH CONNECTOR) (POWER)	(C8500X)
5	3-034-086-01	SPRING (DOOR)		* 18	3-040-994-21	CHASSIS	
6	3-033-750-02	DOOR (MD)		19	X-3377-621-2	LOCK ASSY	
7	3-040-990-01	BUTTON (EJECT) ( $\blacktriangle$ )		* 21	3-045-877-01	CUSHION (TU)	
* 8	1-677-865-11	SUB BOARD		* 22	3-047-865-01	SHEET (MAIN), INSULATING	
* 9	A-3294-906-A	MAIN BOARD, COMPLETE (C8500X)		23	1-792-602-11	CORD (WITH CONNECTOR) (SUB OUT)	
* 9	A-3294-915-A	MAIN BOARD, COMPLETE (C8500R: TYPE A)		* 24	3-041-261-01	BRACKET (TR)	
* 9	A-3294-918-A	MAIN BOARD, COMPLETE (C8500R: TYPE B)		* 25	A-3294-916-A	DSO BOARD, COMPLETE	
* 9	A-3294-919-A	MAIN BOARD, COMPLETE (C8500R: TYPE C)		* 26	3-045-994-01	COVER (DSP), SHIELD	
11	3-376-464-11	SCREW (+PTT 2.6X6), GROUND POINT		* 27	3-045-138-01	CASE (DSP), SHIELD	
* 12	3-040-998-01	BRACKET (IC)		F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
* 13	3-041-017-01	BRACKET (MD)		TUX201	A-3320-738-A	TUNER UNIT (TUX-020)	
* 14	3-040-995-01	COVER					

## (2) FRONT PANEL SECTION



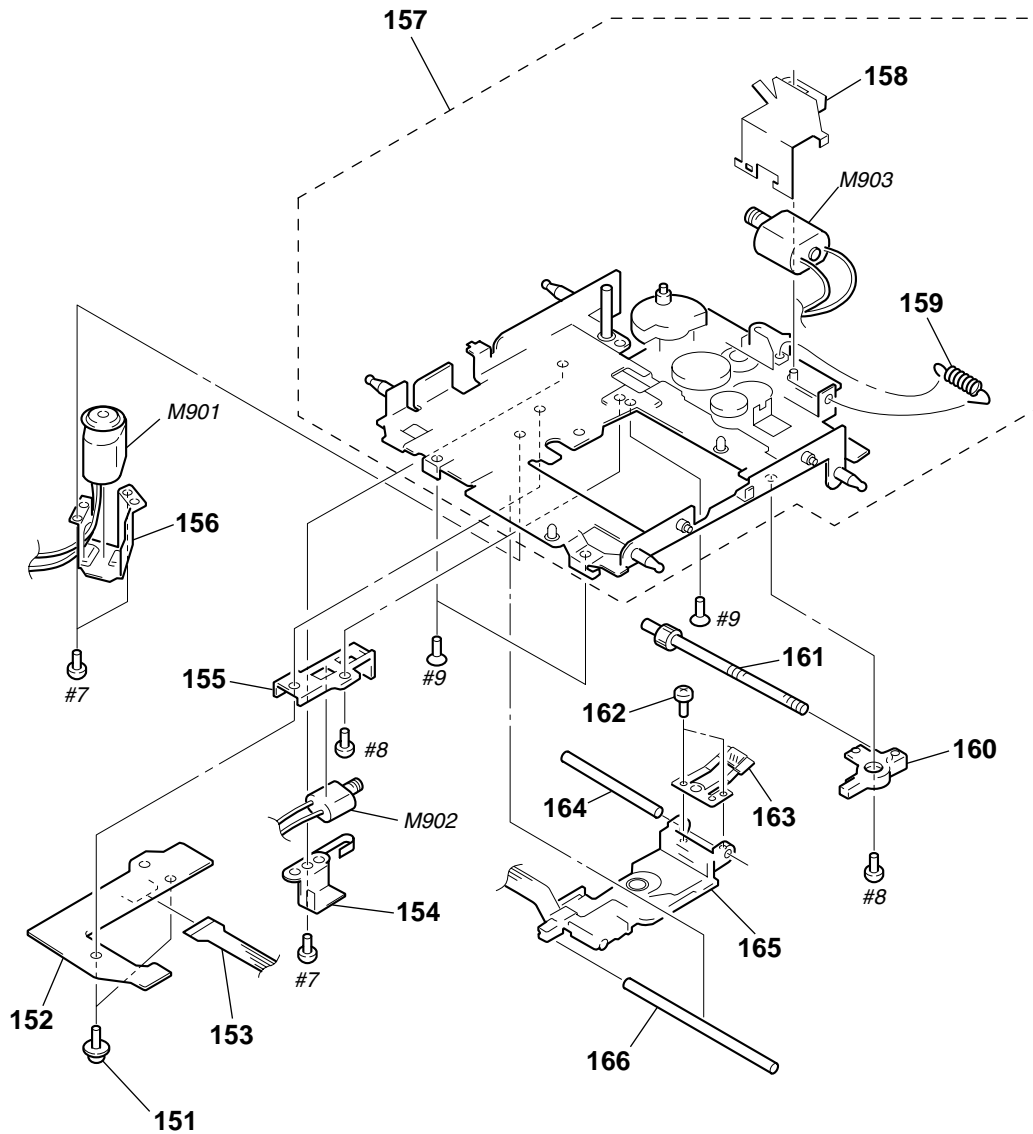
<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
51	3-041-010-01	BUTTON (1-6/M) (MODE. 1. 2. 3. 4. 5. 6)		64	X-3378-398-1	PANEL ASSY, FRONT BACK	
52	3-040-987-01	BUTTON (OFF)		65	3-935-151-01	SPRING (OPEN)	
53	3-040-986-01	BUTTON (MENU/SOUND)		66	3-040-989-01	BUTTON (OPEN)	
54	3-041-003-01	BUTTON (LIST/ENTER) (DSPL. LIST. ENTER)		67	3-041-005-11	BUTTON (D) (D-BASS)	
55	3-040-980-01	BUTTON (SOURCE)		68	3-041-006-01	BUTTON (AF/TA) (C8500R)	
56	3-042-458-01	KNOB (VOL-DSO)		69	X-3379-021-1	PANEL SUB ASSY (C8500R)	
* 59	3-040-997-01	PLATE (LCD), GROUND		69	X-3379-022-1	PANEL SUB ASSY (C8500X)	
60	1-694-660-11	CONDUCTIVE BOARD, CONNECTION		70	3-045-596-01	CUSHION (OFF)	
* 61	3-041-371-02	SHEET (REFLECTOR)		LCD901	1-803-915-11	DISPLAY PANEL, LIQUID CRYSTAL (C8500R)	
* 62	3-040-993-01	PLATE (LCD), LIGHT GUIDE		LCD901	1-803-915-21	DISPLAY PANEL, LIQUID CRYSTAL (C8500X)	
* 63	3-040-992-02	HOLDER (LCD)					

**(3) MECHANISM DECK SECTION-1  
(MG-164NV-138)**



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
* 101	A-3326-039-A	SERVO BOARD, COMPLETE		* 110	3-032-712-01	LEVER (LOCK R)	
* 102	X-3376-799-1	CHASSIS ASSY, MD		111	3-919-281-01	SPRING (CHUCKING)	
103	3-032-714-02	SPRING (FLOAT F), TENSION		* 112	X-3376-800-1	COVER ASSY, MD	
104	3-921-111-01	SPRING (FLOAT B), TENSION		113	3-035-932-01	WASHER, STOPPER	
105	3-919-273-01	DAMPER, OIL		* 114	X-3376-797-3	LEVER (LE) ASSY	
* 106	X-3376-796-3	HOLDER ASSY		115	3-032-707-01	SPRING (LEVER LE)	
107	3-032-682-01	SPRING (HOLDER)		116	3-925-034-01	ROLLER (GEAR E)	
* 108	3-034-301-01	CUSHION (EJ2)		* 117	X-3376-798-1	ARM ASSY, CHUCKING	
* 109	3-034-302-01	CUSHION (EJ3)		* 118	3-032-711-01	LEVER (LOCK L)	

**(4) MECHANISM DECK SECTION-2  
(MG-164NV-138)**



The components identified by mark  $\triangle$  or dotted line with mark  $\triangle$  are critical for safety. Replace only with part number specified.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
151	2-626-617-01	SCREW (2X8)		161	X-3373-213-1	SCREW ASSY, FEED	
152	A-3326-037-A	SENSOR BOARD, COMPLETE		162	3-939-590-07	SCREW (IB LOCK)	
153	1-654-693-11	SENSOR FLEXIBLE BOARD		163	3-010-091-01	SPRING (SL FEED)	
154	3-919-283-01	BRACKET (SL)		164	3-919-293-01	SHAFT (OPT S), GUIDE	
* 155	3-032-704-01	BASE (SL)		$\triangle$ 165	8-583-065-03	OPTICAL PICK-UP KMS-241C/J1RP	
156	3-919-297-01	BRACKET (SP)		166	3-920-537-01	SHAFT (OPT L), GUIDE	
157	A-3301-750-A	CHASSIS (OP) ASSY		M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
158	3-032-660-01	BRACKET (LO)		M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
159	3-032-669-01	SPRING (RACK), TENSION		M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	
* 160	3-032-705-01	BEARING (SL)					

# SECTION 7 ELECTRICAL PARTS LIST

DSO

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable
- Please refer to servicing notes (page 3) for system of TYPE A, B and C.

- Items marked “\*” are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA. . . :  $\mu$ A. . .      uPA. . . :  $\mu$ PA. . .  
uPB. . . :  $\mu$ PB. . .    uPC. . . :  $\mu$ PC. . .  
uPD. . . :  $\mu$ PD. . .
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

The components identified by mark  $\Delta$  or dotted line with mark  $\Delta$  are critical for safety. Replace only with part number specified.

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3294-916-A	DSO BOARD, COMPLETE *****		C842	1-126-394-11	ELECT CHIP 10uF 20%	16V
				C843	1-126-394-11	ELECT CHIP 10uF 20%	16V
*	3-045-138-01	CASE (DSP), SHIELD  < CAPACITOR >		C844	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
				C845	1-126-394-11	ELECT CHIP 10uF 20%	16V
				C846	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
				C847	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
				C848	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C801	1-126-393-11	ELECT CHIP 33uF	20% 10V	C849	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C802	1-126-392-11	ELECT CHIP 100uF	20% 6.3V	C850	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C803	1-126-394-11	ELECT CHIP 10uF	20% 16V	C851	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C804	1-117-709-11	ELECT CHIP 10uF	20% 10V	C852	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C805	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C853	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C806	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C854	1-115-412-11	CERAMIC CHIP 680PF 5%	25V
C808	1-162-924-11	CERAMIC CHIP 56PF	5% 50V	C855	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C809	1-162-917-11	CERAMIC CHIP 15PF	5% 50V	C856	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C810	1-128-993-21	ELECT CHIP 22uF	20% 10V	C857	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C811	1-128-993-21	ELECT CHIP 22uF	20% 10V	C861	1-126-394-11	ELECT CHIP 10uF 20%	16V
C812	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C862	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V
C813	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C874	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C814	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C875	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C815	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C876	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C816	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C877	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C817	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C878	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C818	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C879	1-164-230-11	CERAMIC CHIP 220PF 5%	50V
C819	1-125-838-11	CERAMIC CHIP 2.2uF	10% 6.3V	C880	1-125-838-11	CERAMIC CHIP 2.2uF 10%	6.3V
C820	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	C881	1-125-838-11	CERAMIC CHIP 2.2uF 10%	6.3V
C821	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V			< CONNECTOR >	
C822	1-128-415-11	ELECT CHIP 68uF	20% 10V	CN801	1-794-320-11	PIN, CONNECTOR (PC BOARD) 29P	
C823	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V			< DIODE >	
C824	1-126-393-11	ELECT CHIP 33uF	20% 10V	D802	8-719-073-01	DIODE MA111-TX	
C825	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	D804	8-719-421-82	DIODE MA8043-M (TX)	
C826	1-126-392-11	ELECT CHIP 100uF	20% 6.3V			< FERRITE BEAD >	
C827	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB801	1-414-235-22	FERRITE BEAD INDUCTOR CHIP	
C828	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB803	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C829	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB804	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C830	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB805	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C831	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB806	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C834	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB807	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C835	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB808	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C836	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V	FB809	1-414-760-21	FERRITE BEAD INDUCTOR CHIP	
C837	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V				
C838	1-162-965-11	CERAMIC CHIP 0.0015uF	10% 50V				
C839	1-107-826-11	CERAMIC CHIP 0.1uF	10% 16V				
C840	1-126-394-11	ELECT CHIP 10uF	20% 16V				
C841	1-126-394-11	ELECT CHIP 10uF	20% 16V				

<b>DSO</b>	<b>KEY</b>
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Ref. No.	Part No.	Description	Remark
FB811	1-414-760-21	FERRITE BEAD INDUCTOR CHIP	
FB812	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
FB813	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
FB814	1-414-760-21	FERRITE BEAD INDUCTOR CHIP	
FB815	1-414-235-22	FERRITE BEAD INDUCTOR CHIP	
FB818	1-414-760-21	FERRITE BEAD INDUCTOR CHIP	
FB819	1-414-760-21	FERRITE BEAD INDUCTOR CHIP	
< IC >			
IC801	8-759-710-88	IC NJM431U-TE2	
IC802	8-759-431-14	IC PQ3DZ53U	
IC803	8-759-524-05	IC TC74VHC126FT (EL)	
IC805	8-752-402-48	IC CXD2726Q-4	
IC806	8-759-058-58	IC TC7S04FU (TE85R)	
IC807	8-759-711-82	IC NJM4580E (T1)	
IC808	8-759-711-82	IC NJM4580E (T1)	
IC809	8-759-711-82	IC NJM4580E (T1)	
< COIL >			
L801	1-412-058-11	INDUCTOR CHIP 10uH	
L802	1-412-060-11	INDUCTOR CHIP 22uH	
< TRANSISTOR >			
Q801	8-729-920-85	TRANSISTOR 2SD1664-T101-QR	
< RESISTOR >			
R801	1-216-864-11	METAL CHIP 0	5% 1/16W
R802	1-216-308-00	METAL CHIP 4.7	5% 1/10W
R803	1-216-809-11	METAL CHIP 100	5% 1/16W
R804	1-219-274-11	RES, CHIP 220	2% 1/16W
R805	1-216-813-11	METAL CHIP 220	5% 1/16W
R806	1-219-286-11	RES, CHIP 680	2% 1/16W
R807	1-216-864-11	METAL CHIP 0	5% 1/16W
R811	1-216-861-11	METAL CHIP 2.2M	5% 1/16W
R812	1-216-859-11	RES, CHIP 1.5M	5% 1/16W
R813	1-216-864-11	METAL CHIP 0	5% 1/16W
R815	1-216-845-11	METAL CHIP 100K	5% 1/16W
R816	1-216-821-11	METAL CHIP 1K	5% 1/16W
R817	1-216-821-11	METAL CHIP 1K	5% 1/16W
R818	1-216-821-11	METAL CHIP 1K	5% 1/16W
R819	1-216-864-11	METAL CHIP 0	5% 1/16W
R820	1-216-821-11	METAL CHIP 1K	5% 1/16W
R822	1-216-809-11	METAL CHIP 100	5% 1/16W
R823	1-216-821-11	METAL CHIP 1K	5% 1/16W
R824	1-216-845-11	METAL CHIP 100K	5% 1/16W
R825	1-216-809-11	METAL CHIP 100	5% 1/16W
R826	1-216-864-11	METAL CHIP 0	5% 1/16W
R827	1-216-809-11	METAL CHIP 100	5% 1/16W
R828	1-216-805-11	METAL CHIP 47	5% 1/16W
R829	1-216-805-11	METAL CHIP 47	5% 1/16W
R830	1-216-864-11	METAL CHIP 0	5% 1/16W
R832	1-216-821-11	METAL CHIP 1K	5% 1/16W
R833	1-216-809-11	METAL CHIP 100	5% 1/16W
R834	1-216-839-11	METAL CHIP 33K	5% 1/16W
R835	1-216-843-11	METAL CHIP 68K	5% 1/16W
R837	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R838	1-216-841-11	METAL CHIP 47K	5% 1/16W

Ref. No.	Part No.	Description	Remark
R839	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R840	1-216-841-11	METAL CHIP 47K	5% 1/16W
R841	1-216-841-11	METAL CHIP 47K	5% 1/16W
R842	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R843	1-216-833-11	RES, CHIP 10K	5% 1/16W
R844	1-216-841-11	METAL CHIP 47K	5% 1/16W
R845	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R846	1-216-833-11	RES, CHIP 10K	5% 1/16W
R847	1-216-833-11	RES, CHIP 10K	5% 1/16W
R848	1-216-841-11	METAL CHIP 47K	5% 1/16W
R849	1-216-831-11	METAL CHIP 6.8K	5% 1/16W
R850	1-216-833-11	RES, CHIP 10K	5% 1/16W
R851	1-216-833-11	RES, CHIP 10K	5% 1/16W
R852	1-216-833-11	RES, CHIP 10K	5% 1/16W
R853	1-216-833-11	RES, CHIP 10K	5% 1/16W
R854	1-216-833-11	RES, CHIP 10K	5% 1/16W
R855	1-216-833-11	RES, CHIP 10K	5% 1/16W
R856	1-216-833-11	RES, CHIP 10K	5% 1/16W
R857	1-216-833-11	RES, CHIP 10K	5% 1/16W
R858	1-216-833-11	RES, CHIP 10K	5% 1/16W
R859	1-216-833-11	RES, CHIP 10K	5% 1/16W
R860	1-216-833-11	RES, CHIP 10K	5% 1/16W
R861	1-216-833-11	RES, CHIP 10K	5% 1/16W
R862	1-216-797-11	METAL CHIP 10	5% 1/16W
R863	1-216-797-11	METAL CHIP 10	5% 1/16W
R864	1-216-797-11	METAL CHIP 10	5% 1/16W
R865	1-216-864-11	METAL CHIP 0	5% 1/16W
R868	1-216-864-11	METAL CHIP 0	5% 1/16W
R870	1-216-821-11	METAL CHIP 1K	5% 1/16W
R874	1-216-828-11	METAL CHIP 3.9K	5% 1/16W
R875	1-216-828-11	METAL CHIP 3.9K	5% 1/16W
R876	1-216-828-11	METAL CHIP 3.9K	5% 1/16W
R877	1-216-828-11	METAL CHIP 3.9K	5% 1/16W
R878	1-216-828-11	METAL CHIP 3.9K	5% 1/16W
R879	1-216-828-11	METAL CHIP 3.9K	5% 1/16W
R880	1-216-833-11	RES, CHIP 10K	5% 1/16W
R881	1-216-833-11	RES, CHIP 10K	5% 1/16W
R894	1-216-821-11	METAL CHIP 1K	5% 1/16W
R895	1-216-833-11	RES, CHIP 10K	5% 1/16W
R899	1-216-864-11	METAL CHIP 0	5% 1/16W
< VIBRATOR >			
X801	1-767-467-11	VIBRATOR, CRYSTAL (16.9344MHZ)	
*****			
KEY BOARD			
*****			
	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
*	3-040-992-02	HOLDER (LCD)	
*	3-040-993-01	PLATE (LCD), LIGHT GUIDE	
*	3-040-997-01	PLATE (LCD), GROUND	
*	3-041-371-02	SHEET (REFLECTOR)	
< CAPACITOR >			
C951	1-164-004-11	CERAMIC CHIP 0.1uF	10% 25V
C952	1-163-037-11	CERAMIC CHIP 0.022uF	10% 25V
C953	1-163-137-00	CERAMIC CHIP 680PF	5% 50V
C956	1-164-489-11	CERAMIC CHIP 0.22uF	10% 16V



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C960	1-163-037-11	CERAMIC CHIP 0.022uF 10%	25V	LSW903	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOUND EQ) (C8500X)	
C961	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V	LSW904	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MENU) (C8500R)	
C962	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V	LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MENU) (C8500X)	
C963	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V	LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (PTY, DSPL) (C8500R)	
		< CONNECTOR >		LSW905	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (DSPL) (C8500X)	
CN901	1-794-065-21	PLUG, CONNECTOR 14P		LSW906	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (LIST) (C8500R)	
		< DIODE >		LSW906	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (LIST) (C8500X)	
D901	8-719-423-32	DIODE MA8120-M-TX		LSW907	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (ENTER) (C8500R)	
D902	8-719-422-64	DIODE MA8062-M-TX		LSW907	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (ENTER) (C8500X)	
D903	8-719-422-64	DIODE MA8062-M-TX		LSW908	1-771-610-11	SWITCH, TACTILE (WITH LED) (MODE) (C8500R)	
D904	8-719-422-64	DIODE MA8062-M-TX		LSW908	1-771-883-11	SWITCH, TACTILE (WITH LED) (MODE) (C8500X)	
D951	8-719-420-90	DIODE MA8051-M-TX		LSW909	1-762-737-11	SWITCH, KEYBOARD (LED) (DSO)	
D952	8-719-422-64	DIODE MA8062-M-TX		LSW910	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (TA) (C8500R)	
D954	8-719-422-89	DIODE MA8082-H-TX		LSW911	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (AF) (C8500R)	
		< IC >		LSW912	1-771-610-11	SWITCH, TACTILE (WITH LED) (6) (C8500R)	
IC901	8-759-653-26	IC LC75878W		LSW912	1-771-883-11	SWITCH, TACTILE (WITH LED) (6) (C8500X)	
IC951	8-749-012-25	IC RS-170-TU		LSW913	1-771-610-11	SWITCH, TACTILE (WITH LED) (5) (C8500R)	
		< LIQUID CRYSTAL DISPLAY >		LSW913	1-771-883-11	SWITCH, TACTILE (WITH LED) (5) (C8500X)	
LCD901	1-803-915-11	DISPLAY PANEL, LIQUID CRYSTAL (C8500R)		LSW914	1-771-610-11	SWITCH, TACTILE (WITH LED) (4) (C8500R)	
LCD901	1-803-915-21	DISPLAY PANEL, LIQUID CRYSTAL (C8500X)		LSW914	1-771-883-11	SWITCH, TACTILE (WITH LED) (4) (C8500X)	
		< LED >		LSW915	1-771-610-11	SWITCH, TACTILE (WITH LED) (3) (C8500R)	
LED901	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION) (C8500X)		LSW915	1-771-883-11	SWITCH, TACTILE (WITH LED) (3) (C8500X)	
LED901	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION) (C8500R)		LSW916	1-771-610-11	SWITCH, TACTILE (WITH LED) (SHUF 2) (C8500R)	
LED902	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION) (C8500X)		LSW916	1-771-883-11	SWITCH, TACTILE (WITH LED) (SHUF 2) (C8500X)	
LED902	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION) (C8500R)		LSW917	1-771-610-11	SWITCH, TACTILE (WITH LED) (REP 1) (C8500R)	
LED903	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION) (C8500X)		LSW917	1-771-883-11	SWITCH, TACTILE (WITH LED) (REP 1) (C8500X)	
LED903	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION) (C8500R)				< TRANSISTOR >	
LED904	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION) (C8500X)		Q901	8-729-904-75	TRANSISTOR DTD114EK-T-146 (C8500R)	
LED904	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION) (C8500R)		Q902	8-729-904-75	TRANSISTOR DTD114EK-T-146 (C8500R)	
LED910	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)		Q903	8-729-904-75	TRANSISTOR DTD114EK-T-146	
LED911	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)				< RESISTOR >	
LED912	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)		R901	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
LED913	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)		R902	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
LED914	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)		R903	1-216-647-11	METAL CHIP 680 0.5% 1/10W	
LED915	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)		R904	1-216-651-11	METAL CHIP 1K 0.5% 1/10W	
		< SWITCH >		R905	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
LSW901	1-771-610-11	SWITCH, TACTILE (WITH LED) (OFF) (C8500R)		R906	1-216-655-11	METAL CHIP 1.5K 0.5% 1/10W	
LSW901	1-771-883-11	SWITCH, TACTILE (WITH LED) (OFF) (C8500X)		R907	1-216-659-11	METAL CHIP 2.2K 0.5% 1/10W	
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE) (C8500R)		R908	1-216-663-11	METAL CHIP 3.3K 0.5% 1/10W	
LSW902	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOURCE) (C8500X)		R909	1-216-667-11	METAL CHIP 4.7K 0.5% 1/10W	
LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOUND EQ) (C8500R)		R910	1-216-671-11	METAL CHIP 6.8K 0.5% 1/10W	



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C119	1-125-701-11	DOUBLE LAYER	0.047F	5.5V	C241	1-164-315-11	CERAMIC CHIP 470PF 5% 50V (C8500R)
C120	1-164-360-11	CERAMIC CHIP	0.1uF	16V	C242	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V (C8500R)
C121	1-104-942-11	ELECT	1uF	20% 50V	C245	1-107-725-11	CERAMIC CHIP 0.1uF 10% 16V (C8500R)
C122	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C246	1-163-038-00	CERAMIC CHIP 0.1uF 25V
C123	1-164-360-11	CERAMIC CHIP	0.1uF	16V	C301	1-164-346-11	CERAMIC CHIP 1uF 16V
C124	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C302	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C126	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	C303	1-162-964-11	CERAMIC CHIP 0.001uF 10% 50V
C127	1-163-009-11	CERAMIC CHIP	0.001uF	10% 50V	C304	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C129	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C305	1-164-227-11	CERAMIC CHIP 0.022uF 10% 25V
C130	1-163-038-00	CERAMIC CHIP	0.1uF	25V	C306	1-162-968-11	CERAMIC CHIP 0.0047uF 10% 50V
C201	1-164-156-11	CERAMIC CHIP	0.1uF	25V (C8500R)	C307	1-162-970-11	CERAMIC CHIP 0.01uF 10% 25V
C202	1-162-962-11	CERAMIC CHIP	470PF	10% 50V (C8500R)	C308	1-107-823-11	CERAMIC CHIP 0.47uF 10% 16V
C203	1-164-739-11	CERAMIC CHIP	560PF	5% 50V (C8500R)	C309	1-164-346-11	CERAMIC CHIP 1uF 16V
C204	1-164-505-11	CERAMIC CHIP	2.2uF	16V (C8500R)	C311	1-125-838-11	CERAMIC CHIP 2.2uF 10% 6.3V
C205	1-162-920-11	CERAMIC CHIP	27PF	5% 50V (C8500R)	C312	1-107-725-11	CERAMIC CHIP 0.1uF 10% 16V
C206	1-162-920-11	CERAMIC CHIP	27PF	5% 50V (C8500R)	C314	1-125-838-11	CERAMIC CHIP 2.2uF 10% 6.3V
C207	1-164-156-11	CERAMIC CHIP	0.1uF	25V (C8500R)	C315	1-124-589-11	ELECT 47uF 20% 16V
C208	1-164-156-11	CERAMIC CHIP	0.1uF	25V (C8500R)	C316	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C209	1-163-263-11	CERAMIC CHIP	330PF	5% 50V (C8500R)	C317	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C210	1-162-966-11	CERAMIC CHIP	0.0022uF	10% 50V (C8500R)	C318	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C211	1-162-927-11	CERAMIC CHIP	100PF	5% 50V (C8500R)	C319	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C214	1-162-970-11	CERAMIC CHIP	0.01uF	10% 25V	C320	1-127-573-11	CERAMIC CHIP 1uF 10% 16V
C215	1-163-021-11	CERAMIC CHIP	0.01uF	10% 50V	C321	1-127-573-11	CERAMIC CHIP 1uF 10% 16V (C8500X)
C219	1-163-231-11	CERAMIC CHIP	15PF	5% 50V	C322	1-127-573-11	CERAMIC CHIP 1uF 10% 16V (C8500X)
C220	1-126-157-11	ELECT	10uF	20% 16V	C323	1-127-573-11	CERAMIC CHIP 1uF 10% 16V (C8500X)
C221	1-124-589-11	ELECT	47uF	20% 16V (C8500R)	C324	1-127-573-11	CERAMIC CHIP 1uF 10% 16V (C8500X)
C223	1-164-227-11	CERAMIC CHIP	0.022uF	10% 25V	C325	1-127-573-11	CERAMIC CHIP 1uF 10% 16V (C8500X)
C224	1-126-157-11	ELECT	10uF	20% 16V	C326	1-127-573-11	CERAMIC CHIP 1uF 10% 16V (C8500X)
C226	1-124-589-11	ELECT	47uF	20% 16V	C327	1-124-589-11	ELECT 47uF 20% 16V (C8500X)
C227	1-127-573-11	CERAMIC CHIP	1uF	10% 16V	C328	1-124-589-11	ELECT 47uF 20% 16V (C8500X)
C229	1-164-156-11	CERAMIC CHIP	0.1uF	25V	C329	1-124-589-11	ELECT 47uF 20% 16V (C8500X)
C230	1-124-589-11	ELECT	47uF	20% 16V	C330	1-124-584-00	ELECT 100uF 20% 10V (C8500X)
C231	1-107-826-11	CERAMIC CHIP	0.1uF	10% 16V	C331	1-124-584-00	ELECT 100uF 20% 10V (C8500X)
C232	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V (C8500R)	C332	1-124-584-00	ELECT 100uF 20% 10V (C8500X)
C233	1-163-038-00	CERAMIC CHIP	0.1uF	25V (C8500R)	C333	1-124-584-00	ELECT 100uF 20% 10V (C8500X)
C234	1-164-489-11	CERAMIC CHIP	0.22uF	10% 16V	C334	1-124-584-00	ELECT 100uF 20% 10V (C8500X)
C235	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V (C8500R)	C335	1-124-584-00	ELECT 100uF 20% 10V (C8500X)
C236	1-163-038-00	CERAMIC CHIP	0.1uF	25V (C8500R)	C336	1-107-725-11	CERAMIC CHIP 0.1uF 10% 16V
C237	1-126-157-11	ELECT	10uF	20% 16V	C337	1-163-235-11	CERAMIC CHIP 22PF 5% 50V (C8500X)
C238	1-162-964-11	CERAMIC CHIP	0.001uF	10% 50V (C8500R)	C338	1-163-235-11	CERAMIC CHIP 22PF 5% 50V (C8500X)
C239	1-162-915-11	CERAMIC CHIP	10PF	0.5PF 50V (C8500R)			
C240	1-164-005-11	CERAMIC CHIP	0.47uF	25V (C8500R)			







Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R202	1-216-821-11	METAL CHIP	1K 5% 1/16W (C8500R)	R307	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500X)
R203	1-216-832-11	METAL CHIP	8.2K 5% 1/16W (C8500R)	R310	1-216-809-11	METAL CHIP	100 5% 1/16W
R204	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500R)	R311	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R205	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R312	1-216-073-00	METAL CHIP	10K 5% 1/10W
R206	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500R)	R313	1-216-809-11	METAL CHIP	100 5% 1/16W
R207	1-216-001-00	METAL CHIP	10 5% 1/10W	R314	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R208	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500R)	R315	1-216-073-00	METAL CHIP	10K 5% 1/10W
R209	1-216-025-00	RES, CHIP	100 5% 1/10W	R317	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
R210	1-216-025-00	RES, CHIP	100 5% 1/10W	R318	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500X)
R211	1-216-025-00	RES, CHIP	100 5% 1/10W (C8500R)	R319	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500X)
R212	1-216-025-00	RES, CHIP	100 5% 1/10W (C8500R)	R320	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500X)
R213	1-216-864-11	METAL CHIP	0 5% 1/16W	R321	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500X)
R214	1-216-001-00	METAL CHIP	10 5% 1/10W	R322	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500X)
R215	1-216-841-11	METAL CHIP	47K 5% 1/16W	R323	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500X)
R216	1-216-817-11	METAL CHIP	470 5% 1/16W	R324	1-216-049-11	RES, CHIP	1K 5% 1/10W
R217	1-216-839-11	METAL CHIP	33K 5% 1/16W	R325	1-216-085-00	METAL CHIP	33K 5% 1/10W (C8500X)
R218	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	R326	1-216-085-00	METAL CHIP	33K 5% 1/10W (C8500X)
R219	1-216-833-11	RES, CHIP	10K 5% 1/16W	R327	1-216-085-00	METAL CHIP	33K 5% 1/10W (C8500X)
R220	1-216-819-11	METAL CHIP	680 5% 1/16W	R328	1-216-085-00	METAL CHIP	33K 5% 1/10W (C8500X)
R221	1-216-073-00	METAL CHIP	10K 5% 1/10W (C8500R)	R329	1-216-085-00	METAL CHIP	33K 5% 1/10W (C8500X)
R222	1-216-825-11	METAL CHIP	2.2K 5% 1/16W (C8500R)	R330	1-216-085-00	METAL CHIP	33K 5% 1/10W (C8500X)
R223	1-216-073-00	METAL CHIP	10K 5% 1/10W (C8500R)	R331	1-216-295-00	SHORT	0 (C8500R)
R224	1-216-829-11	METAL CHIP	4.7K 5% 1/16W (C8500R)	R332	1-216-295-00	SHORT	0 (C8500R)
R225	1-216-815-11	METAL CHIP	330 5% 1/16W	R333	1-216-295-00	SHORT	0 (C8500R)
R226	1-216-845-11	METAL CHIP	100K 5% 1/16W (C8500R)	R334	1-216-295-00	SHORT	0 (C8500R)
R227	1-216-825-11	METAL CHIP	2.2K 5% 1/16W (C8500R)	R335	1-216-295-00	SHORT	0 (C8500R)
R228	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R336	1-216-295-00	SHORT	0 (C8500R)
R229	1-216-797-11	METAL CHIP	10 5% 1/16W	R337	1-216-089-00	RES, CHIP	47K 5% 1/10W (C8500X)
R230	1-216-121-00	RES, CHIP	1M 5% 1/10W (C8500R)	R338	1-216-833-11	RES, CHIP	10K 5% 1/16W
R231	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R339	1-216-089-00	RES, CHIP	47K 5% 1/10W
R233	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	R340	1-216-073-00	METAL CHIP	10K 5% 1/10W
R234	1-216-295-00	SHORT	0	R341	1-216-864-11	METAL CHIP	0 5% 1/16W
R236	1-216-295-00	SHORT	0	R343	1-216-813-11	METAL CHIP	220 5% 1/16W
R237	1-216-295-00	SHORT	0	R344	1-216-813-11	METAL CHIP	220 5% 1/16W
R238	1-216-295-00	SHORT	0 (C8500R)	R345	1-216-813-11	METAL CHIP	220 5% 1/16W
R301	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500X)	R346	1-216-813-11	METAL CHIP	220 5% 1/16W
R302	1-216-025-00	RES, CHIP	100 5% 1/10W	R347	1-216-813-11	METAL CHIP	220 5% 1/16W
R305	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R348	1-216-813-11	METAL CHIP	220 5% 1/16W
R305	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500X)	R349	1-216-821-11	METAL CHIP	1K 5% 1/16W (C8500R)
R306	1-216-841-11	METAL CHIP	47K 5% 1/16W	R349	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500X)
R307	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R350	1-216-295-00	SHORT	0 (C8500R)
				R350	1-216-073-00	METAL CHIP	10K 5% 1/10W (C8500X)











# MDX-C8500R/C8500X

Ver 1.1 2001.05

## SUB

Ref. No.	Part No.	Description	Remark
R754	1-216-186-00	RES, CHIP	330 5% 1/8W (C8500R)
R754	1-216-194-00	METAL CHIP	680 5% 1/8W (C8500X)
*****			
MISCELLANEOUS			
*****			
17	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	(C8500R)
17	1-792-194-11	CORD (WITH CONNECTOR) (POWER) (C8500X)	
23	1-792-602-11	CORD (WITH CONNECTOR) (SUB OUT)	
60	1-694-660-11	CONDUCTIVE BOARD, CONNECTION	
153	1-654-693-11	SENSOR FLEXIBLE BOARD	
△ 165	8-583-065-03	OPTICAL PICK-UP KMS-241C/J1RP	
F1	1-532-877-11	FUSE (BLADE TYPE) (AUTO FUSE) (10A)	
LCD901	1-803-915-11	DISPLAY PANEL, LIQUID CRYSTAL (C8500R)	
LCD901	1-803-915-21	DISPLAY PANEL, LIQUID CRYSTAL (C8500X)	
M901	A-3301-407-A	MOTOR ASSY, SP (SPINDLE)	
M902	A-3291-190-A	MOTOR ASSY, SL (SLED)	
M903	A-3291-191-A	MOTOR ASSY, LO (LOADING)	

\*\*\*\*\*

\*\*\*\*\*  
HARDWARE LIST  
\*\*\*\*\*

#1	7-621-772-20	SCREW +B 2X5
#2	7-685-795-09	SCREW +PTT 2.6X12 (S)
#3	7-685-794-09	SCREW +PTT 2.6X10 (S)
#4	7-685-792-09	SCREW +PTT 2.6X6 (S)
#5	7-685-851-04	SCREW +BVTT 2X4 (S)
#6	7-624-102-04	STOP RING 1.5, TYPE -E
#7	7-627-852-37	PRECISION SCREW +P 1.7X1.8 TYPE3
#8	7-621-772-08	SCREW +B 2X3
#9	7-621-555-10	SCREW +K 2X3
#10	7-685-793-09	SCREW +PTT 2.6X8 (S)
#12	7-627-553-28	SCREW, PRECISION +P 2X2.5
#13	7-685-106-19	SCREW +P 2X10 TYPE2 NON-SLIT

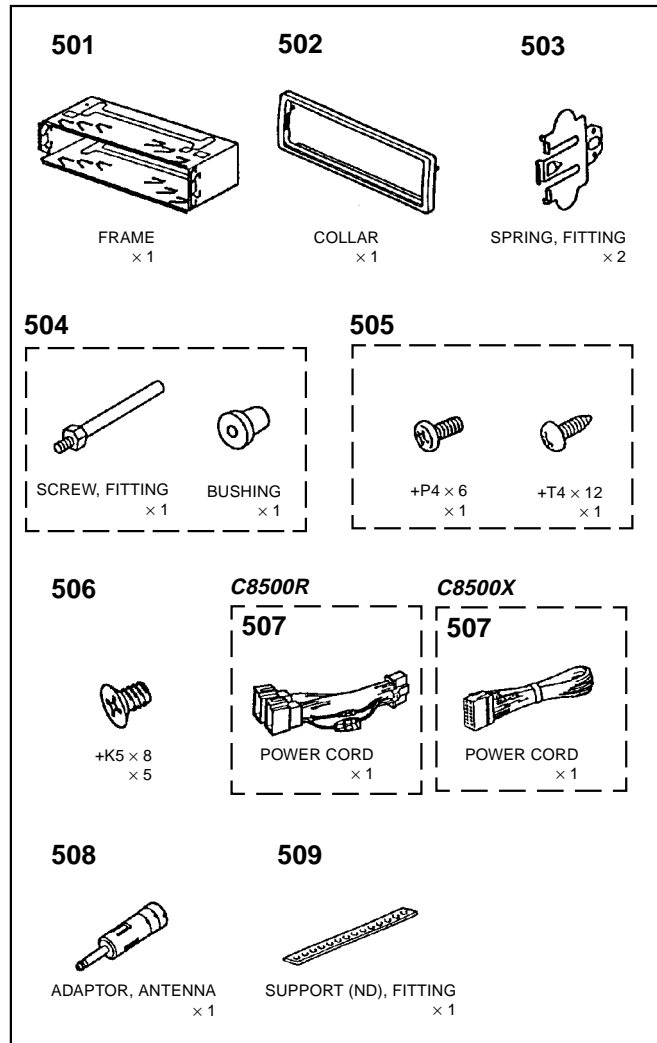
\*\*\*\*\*

ACCESSORIESE & PACKING MATERIALS  
\*\*\*\*\*

1-418-812-11	REMOTE COMMANDER (RM-X91) (C8500X)
3-044-623-01	LID, BATTERY CASE (for RM-X91) (C8500X)
3-045-190-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH) (US)
3-045-191-11	MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)
3-045-191-21	MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (AEP)
3-045-191-31	MANUAL, INSTRUCTION (GERMAN) (German)
3-045-193-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, FRENCH, SPANISH) (US)
3-045-194-11	MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)
3-045-194-21	MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (German, AEP)
X-3378-490-1	CASE (PANEL) ASSY

\*\*\*\*\*

Ref. No.	Part No.	Description	Remark
PARTS FOR INSTALLATION AND CONNECTION			
*****			
501	3-012-360-31	FRAME	
502	3-040-979-01	COLLAR	
503	3-233-644-01	SPRING, FITTING	
504	X-3366-405-1	SCREW ASSY (EXP), FITTING (C8500R)	
505	X-3368-725-1	SCREW ASSY, FITTING (C8500X)	
506	X-3371-913-1	SCREW ASSY (J) (C8500R)	
507	1-776-527-71	CORD (WITH CONNECTOR) (ISO) (POWER)	(C8500R)
507	1-792-194-11	CORD (WITH CONNECTOR) (POWER)	(C8500X)
508	1-465-459-21	ADAPTOR, ANTENNA (C8500R)	
509	3-924-961-01	SUPPORT (ND), FITTING (C8500X)	



The components identified by mark △ or dotted line with mark △ are critical for safety. Replace only with part number specified.

# MDX-C8500R/C8500X

**SONY**<sup>®</sup>

## SERVICE MANUAL

*US Model*  
MDX-C8500X  
*AEP Model*  
*UK Model*  
MDX-C8500R

### SUPPLEMENT-1

File this supplement with the service manual.

**Subject:**

- 1. Correction**
- 2. Board Modification**

(ECN-CSA02398/CSA02816/CSA02817)

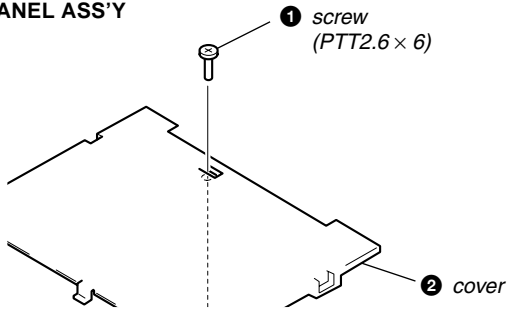
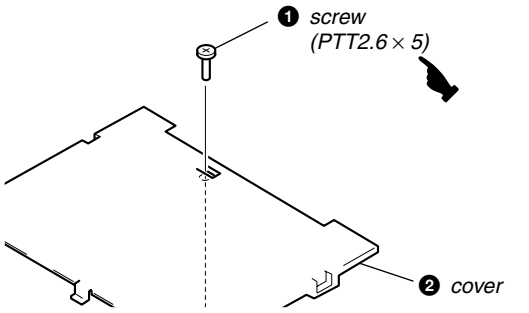
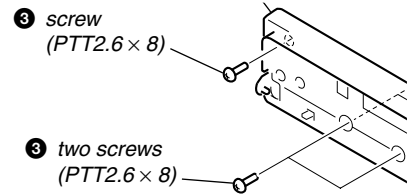
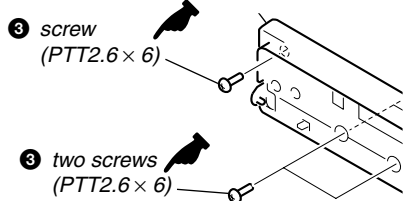
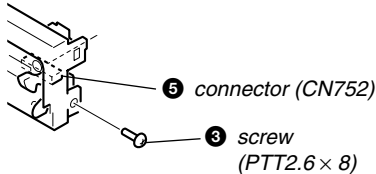
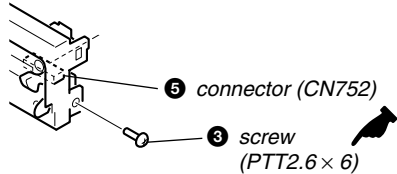
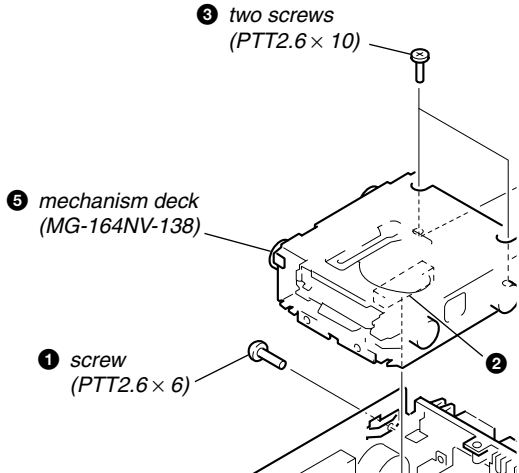
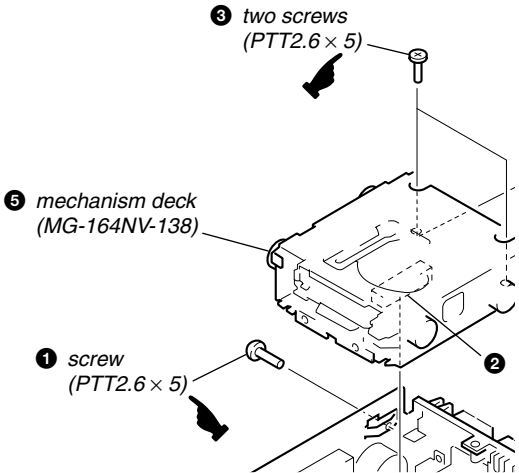
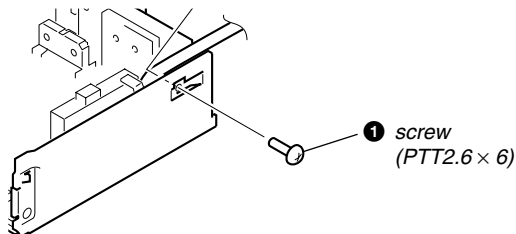
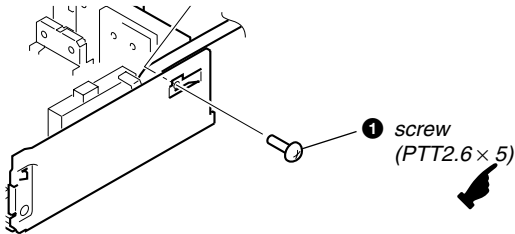
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# 1. CORRECTION

## • DISASSEMBLY

 : Indicates corrected portion.

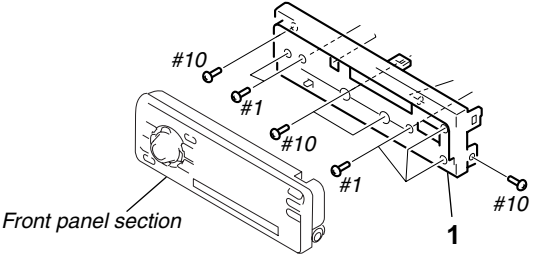
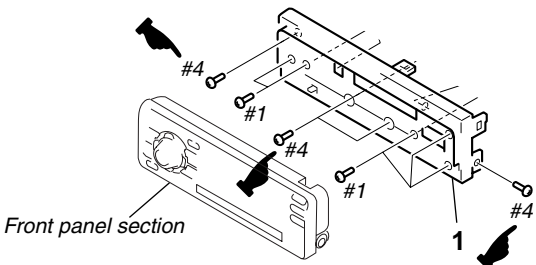
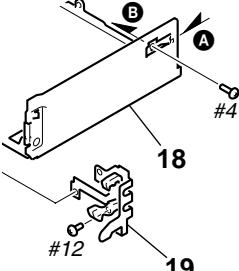
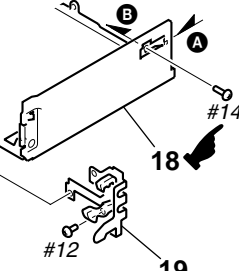
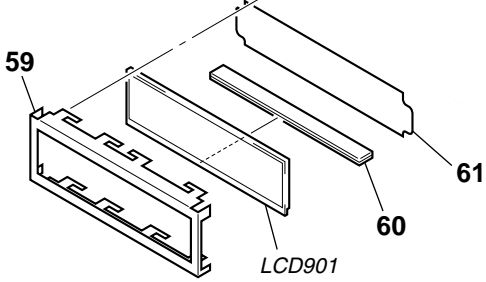
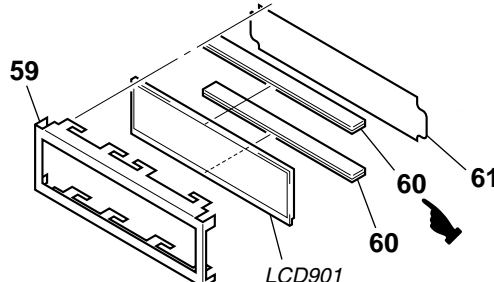
Page	INCORRECT	CORRECT
	<p><b>SUB PANEL ASS'Y</b></p>  <p>1 screw (PTT2.6 x 6)</p> <p>2 cover</p>	<p><b>SUB PANEL ASS'Y</b></p>  <p>1 screw (PTT2.6 x 5)</p> <p>2 cover</p>
	<p><b>SUB PANEL ASS'Y</b></p>  <p>3 screw (PTT2.6 x 8)</p> <p>3 two screws (PTT2.6 x 8)</p>	<p><b>SUB PANEL ASS'Y</b></p>  <p>3 screw (PTT2.6 x 6)</p> <p>3 two screws (PTT2.6 x 6)</p>
	<p><b>SUB PANEL ASS'Y</b></p>  <p>5 connector (CN752)</p> <p>3 screw (PTT2.6 x 8)</p>	<p><b>SUB PANEL ASS'Y</b></p>  <p>5 connector (CN752)</p> <p>3 screw (PTT2.6 x 6)</p>
11	<p><b>MECHANISM DECK (MG-164NV-138)</b></p>  <p>3 two screws (PTT2.6 x 10)</p> <p>5 mechanism deck (MG-164NV-138)</p> <p>1 screw (PTT2.6 x 6)</p> <p>2</p>	<p><b>MECHANISM DECK (MG-164NV-138)</b></p>  <p>3 two screws (PTT2.6 x 5)</p> <p>5 mechanism deck (MG-164NV-138)</p> <p>1 screw (PTT2.6 x 5)</p> <p>2</p>
	<p><b>MECHANISM DECK (MG-164NV-138)</b></p>  <p>1 screw (PTT2.6 x 6)</p>	<p><b>MECHANISM DECK (MG-164NV-138)</b></p>  <p>1 screw (PTT2.6 x 5)</p>

• EXPLODED VIEWS

✎ : Indicates corrected portion.

Page	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
	* 15	3-040-996-01	HEAT SINK (2P)		* 15	3-040-996-32	HEAT SINK (2P) (C8500R)	
					* 15	3-040-996-72	HEAT SINK (2P) (C8500X)	
	23	1-792-602-11	CORD (WITH CONNECTOR) (SUB OUT)		23	1-790-355-52	CORD (WITH CONNECTOR) (RCA) (SUB OUT)	
					* 28	3-049-439-02	SHEET (IC), RADIATION	
					* 29	3-049-650-01	SHEET (TR), RADIATION (C8500R)	
					* 30	3-049-651-01	SHEET (B), RADIATION (C8500R)	
59								















- Continued on next page -

Page	INCORRECT	CORRECT																
	 <p>Front panel section</p>	 <p>Front panel section</p>																
59																		
	<table border="1"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>65</td> <td>3-935-151-01</td> <td>SPRING (OPEN)</td> <td></td> </tr> </tbody> </table>	Ref. No.	Part No.	Description	Remark	65	3-935-151-01	SPRING (OPEN)		<table border="1"> <thead> <tr> <th>Ref. No.</th> <th>Part No.</th> <th>Description</th> <th>Remark</th> </tr> </thead> <tbody> <tr> <td>65</td> <td>3-037-267-01</td> <td>SPRING (OPEN)</td> <td></td> </tr> </tbody> </table>	Ref. No.	Part No.	Description	Remark	65	3-037-267-01	SPRING (OPEN)	
Ref. No.	Part No.	Description	Remark															
65	3-935-151-01	SPRING (OPEN)																
Ref. No.	Part No.	Description	Remark															
65	3-037-267-01	SPRING (OPEN)																
60	 <p>LCD901</p>	 <p>LCD901</p>																



• ELECTRICAL PARTS LIST

 : Indicates corrected portion.

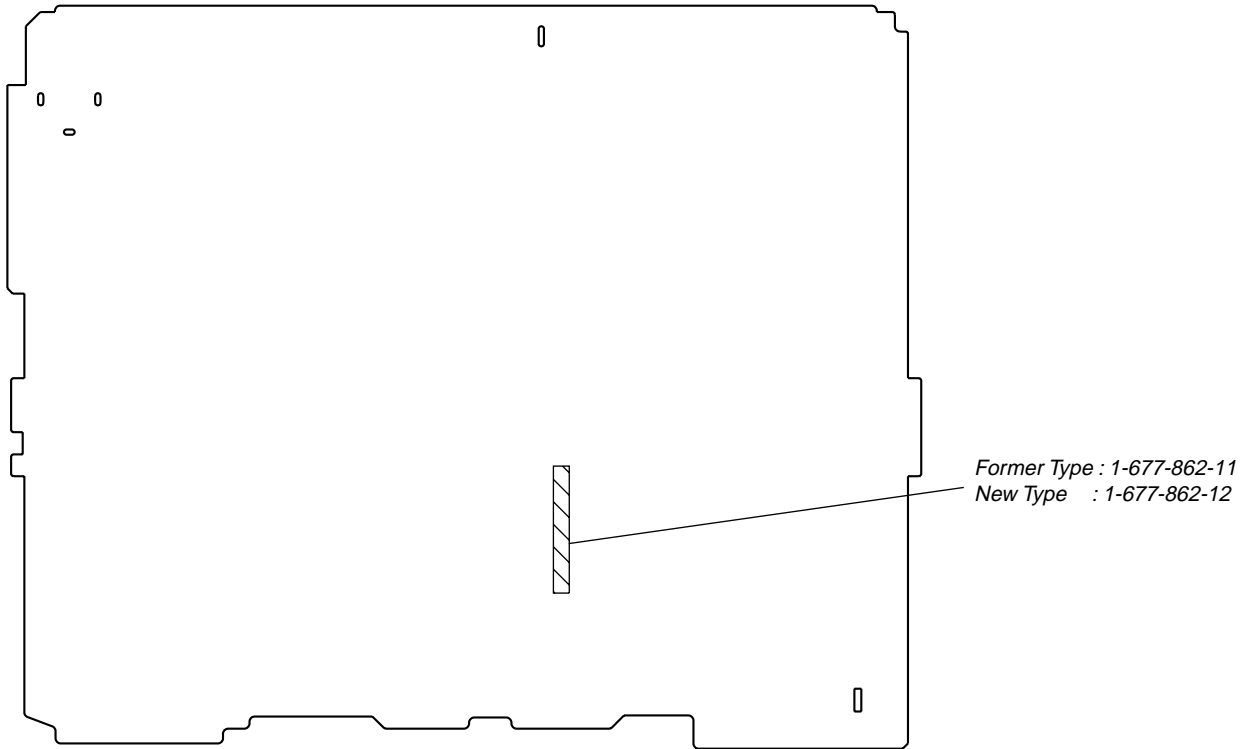
Page	INCORRECT				CORRECT			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
63					*	3-045-994-01	COVER (DSP), SHIELD	
66	*	3-040-996-01	HEAT SINK (2P)		*	3-040-996- <del>32</del>	HEAT SINK (2P) (C8500R)	
					*	3-040-996-72	HEAT SINK (2P) (C8500X)	
	*	3-045-994-01	COVER (DSP), SHIELD					
			MISCELLANEOUS *****				MISCELLANEOUS *****	
	23	1-792-602-11	CORD (WITH CONNECTOR) (SUB OUT)		23	1-790-335-52	CORD (WITH CONNECTOR) (RCA) (SUB OUT)	
			***** ***** HARD WARE LIST *****				***** ***** HARD WARE LIST *****	
	#2	7-685-795-09	SCREW+PTT2.6x12 (S)		#2	7-685-793-09	SCREW+PTT2.6x8 (S)	
	#10	7-685-793-09	SCREW+PTT2.6x8 (S)		#10	7-685-795-09	SCREW+PTT2.6x12 (S)	
			*****		#14	7-685-791-09	SCREW+PTT2.6x5 (S)	
			***** ACCESSORIES & PACKING MATERIALS *****				***** ACCESSORIES & PACKING MATERIALS *****	
76	3-045-191-11		MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)		3-045- <del>187</del> -11		MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)	
	3-045-191-21		MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (AEP)		3-045- <del>187</del> -21		MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (AEP)	
	3-045-191-31		MANUAL, INSTRUCTION (GERMAN) (German)		3-045- <del>187</del> -31		MANUAL, INSTRUCTION (GERMAN) (German)	
	3-045-194-11		MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)		3-045- <del>198</del> -11		MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) (AEP, UK)	
	3-045-194-21		MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (German, AEP)		3-045- <del>198</del> -21		MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK) (German, AEP)	
			***** PARTS FOR INSTALLATION AND CONNECTION *****				***** PARTS FOR INSTALLATION AND CONNECTION *****	
	501	3-012-360-31	FRAME		501	X-3373-602-1	FRAME ASSY	
	506	X-3371-913-1	SCREW ASSY (J) (C8500R)		506	3-934-325-01	SCREW +K (5x8) TAPPING	

## 2. BOARD MODIFICATION

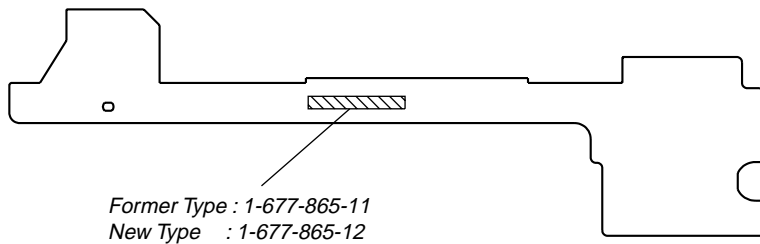
In this set, MAIN, DSO, SUB and KEY boards have been changed in the midway of production. This supplement contains only a difference portion.

### 2-1. New/Former Type Discrimination

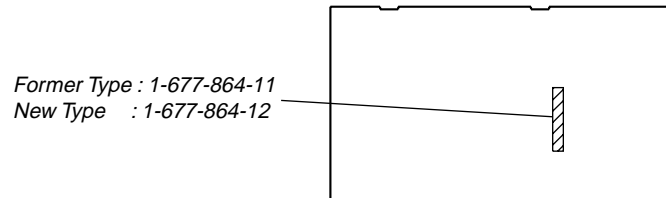
#### – MAIN BOARD (Component Side) –



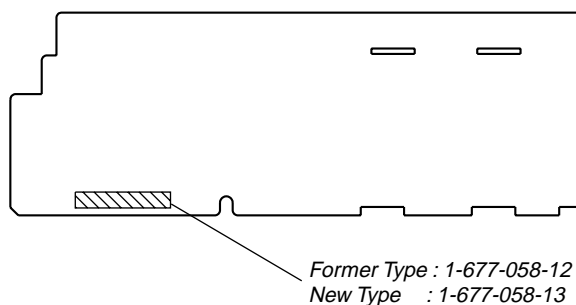
#### – SUB BOARD (Component Side) –



#### – DSO BOARD (Component Side) –



#### – KEY BOARD (Conductor Side) –

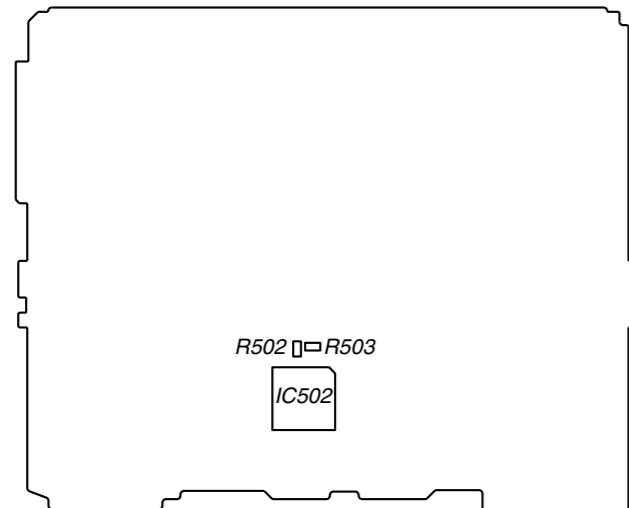


## 2-2. SERVICING NOTES

### • Model Identification

There are three types of main board in according of destination for MDX-C8500R.

### – MAIN BOARD (Component Side)

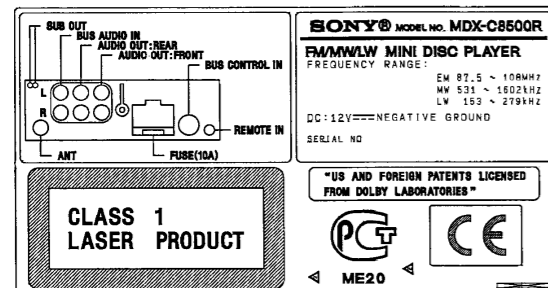


	R502	R503
TYPE A	○	×
TYPE B	×	○
TYPE C	○	○

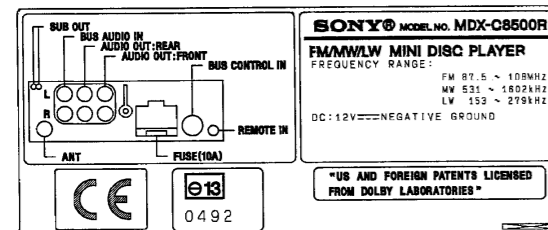
Type A, B and C can be identified by its model number label at the bottom of the set.

### – SPECIFICATION LABEL –

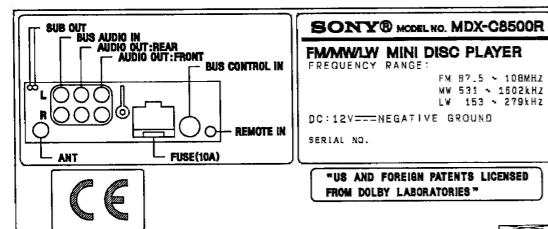
#### TYPE A



#### TYPE B



#### TYPE C



## 2-3. NOTE FOR PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

### Note on Printed Wiring Board:

- : parts extracted from the component side.
- : parts extracted from the conductor side.
- △ : internal component.
- ▒ : Pattern from the side which enables seeing. (The other layers' patterns are not indicated.)

Caution:  
 Pattern face side: Parts on the pattern face side seen from the pattern face are indicated. (Conductor Side)  
 Parts face side: Parts on the parts face side seen from the parts face are indicated. (Component Side)

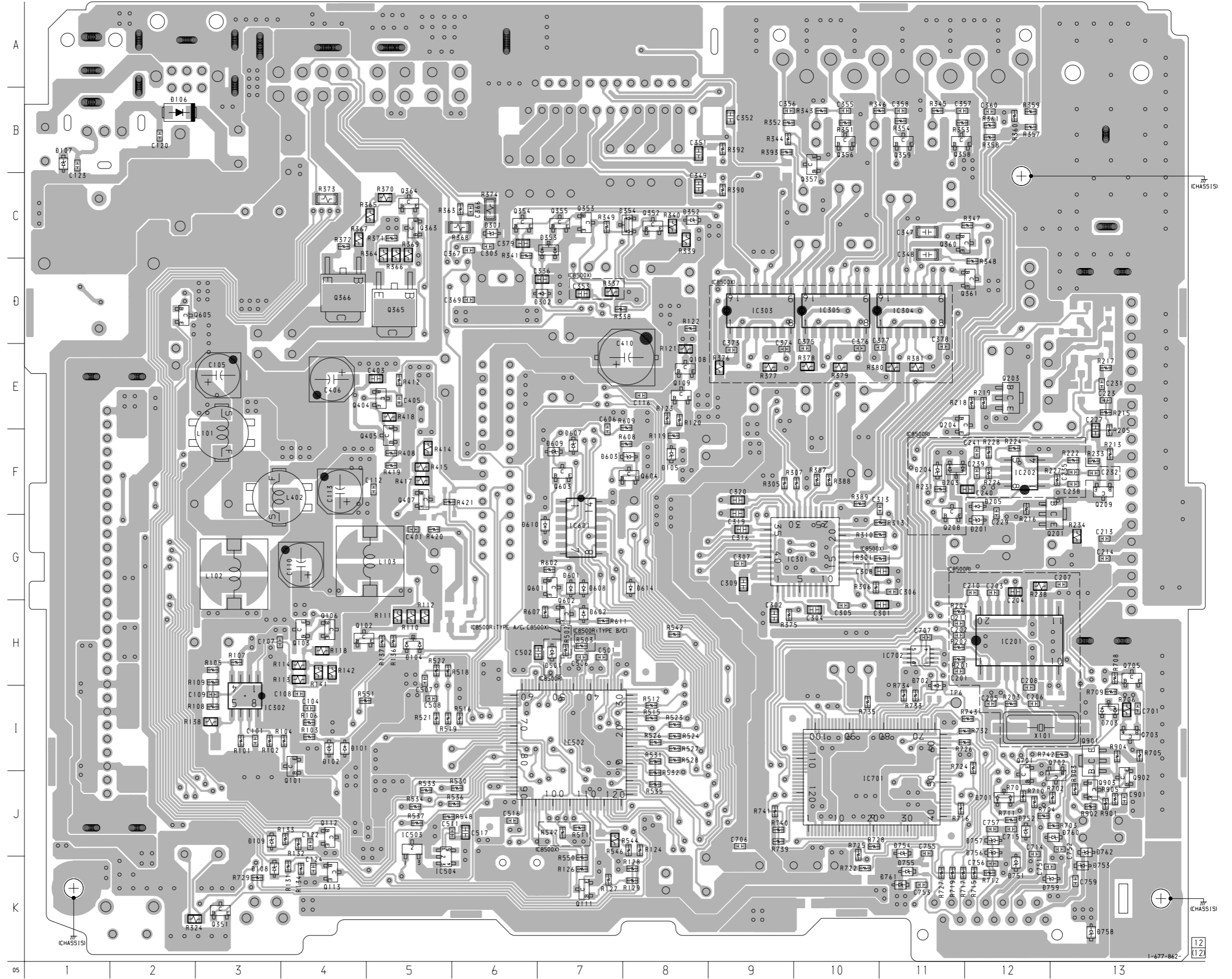
### Note on Schematic Diagram:

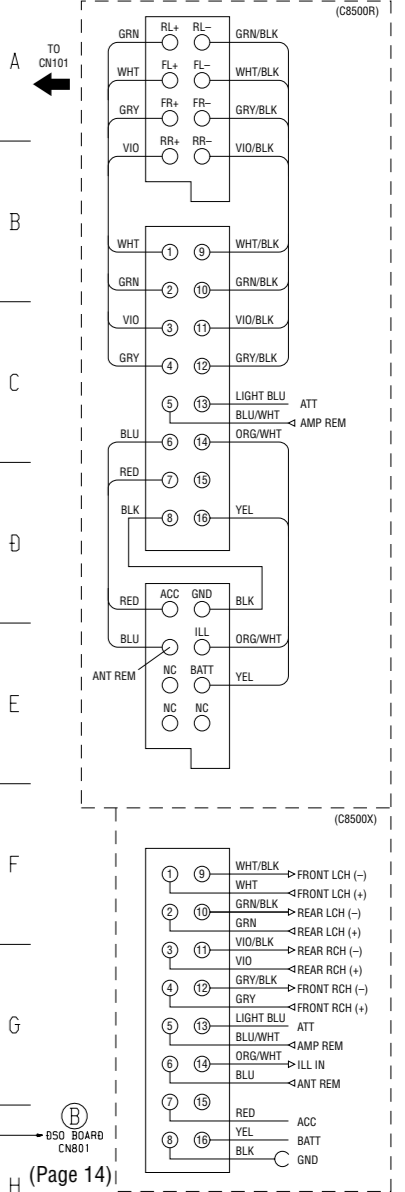
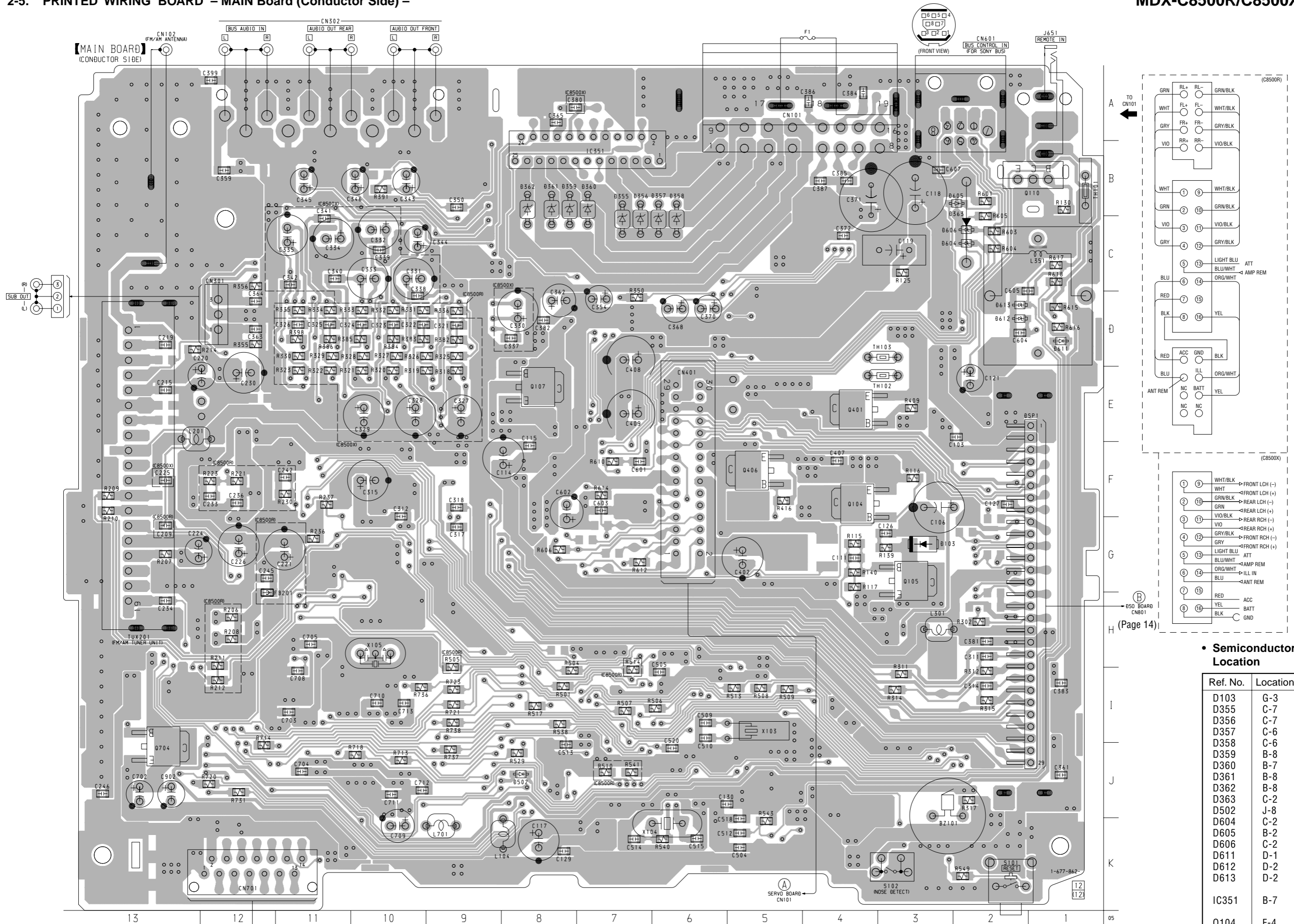
- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\text{F}$  50 WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in  $\Omega$  and  $1/4\text{W}$  or less unless otherwise specified.
- △ : internal component.
- : panel designation.
- [B+] : B+ Line.
- Power voltage is dc 14.4V and fed with regulated dc power supply from ACC and BATT cords.
- Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.
  - no mark : FM
  - ( ) : AM(MW/LW)
  - [ ] : LW
  - << >> : MD PLAY
- Voltages are taken with a VOM (Input impedance 10 M $\Omega$ ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  - ⇨ : FM
  - ➡ : AM(MW/LW)
  - ⇨⇨ : BUS AUDIO IN
  - ⇨⇨ : MD PLAY
- Please refer to servicing notes for system of TYPE A, B and C.

【MAIN BOARD】(COMPONENT SIDE)

• Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D101	I-4	IC503	J-5
D102	I-4	IC504	K-5
D104	H-5	IC601	G-7
D105	F-8	IC701	J-10
D106	B-2	IC702	H-11
D107	B-1		
D108	K-3	Q101	I-4
D109	J-3	Q102	H-4
D201	G-12	Q103	H-4
D203	F-11	Q106	H-4
D204	F-11	Q108	E-8
D205	F-12	Q109	E-8
D301	C-6	Q111	K-7
D302	D-7	Q112	J-4
D352	C-8	Q113	K-4
D353	C-7	Q201	G-13
D354	C-8	Q203	E-12
D501	H-11	Q204	E-11
D601	G-7	Q208	F-11
D602	H-7	Q209	F-13
D603	F-8	Q351	K-3
D607	F-7	Q352	C-8
D608	G-7	Q353	C-7
D609	F-7	Q354	C-6
D610	G-7	Q355	C-7
D614	G-8	Q356	B-10
D701	J-12	Q357	B-10
D702	I-11	Q358	B-11
D703	I-13	Q359	B-11
D751	K-12	Q360	C-11
D752	J-12	Q361	D-12
D753	K-13	Q363	C-5
D754	J-11	Q364	C-5
D755	K-11	Q365	D-5
D756	J-12	Q366	D-4
D757	J-12	Q404	E-5
D758	K-13	Q405	F-5
D759	K-13	Q407	F-5
D760	J-13	Q601	G-7
D761	K-11	Q602	H-7
D762	J-13	Q603	F-7
		Q604	F-8
		Q605	D-2
IC201	H-12	Q701	J-12
IC202	F-12	Q702	J-13
IC301	G-10	Q703	I-13
IC302	I-3	Q705	H-13
IC303	D-9	Q901	I-13
IC304	D-11	Q902	J-13
IC305	D-10	Q903	J-13
IC502	I-7		

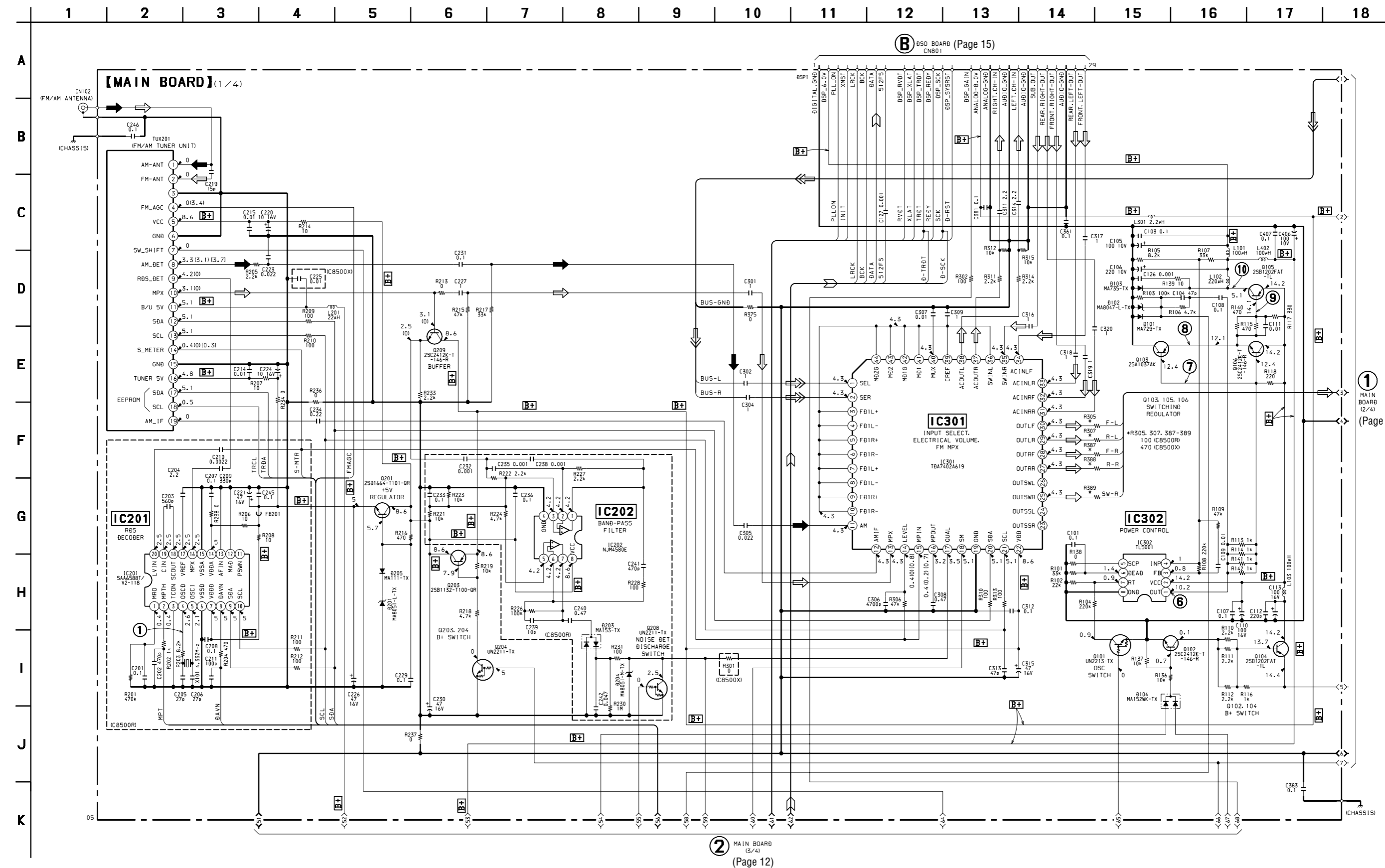




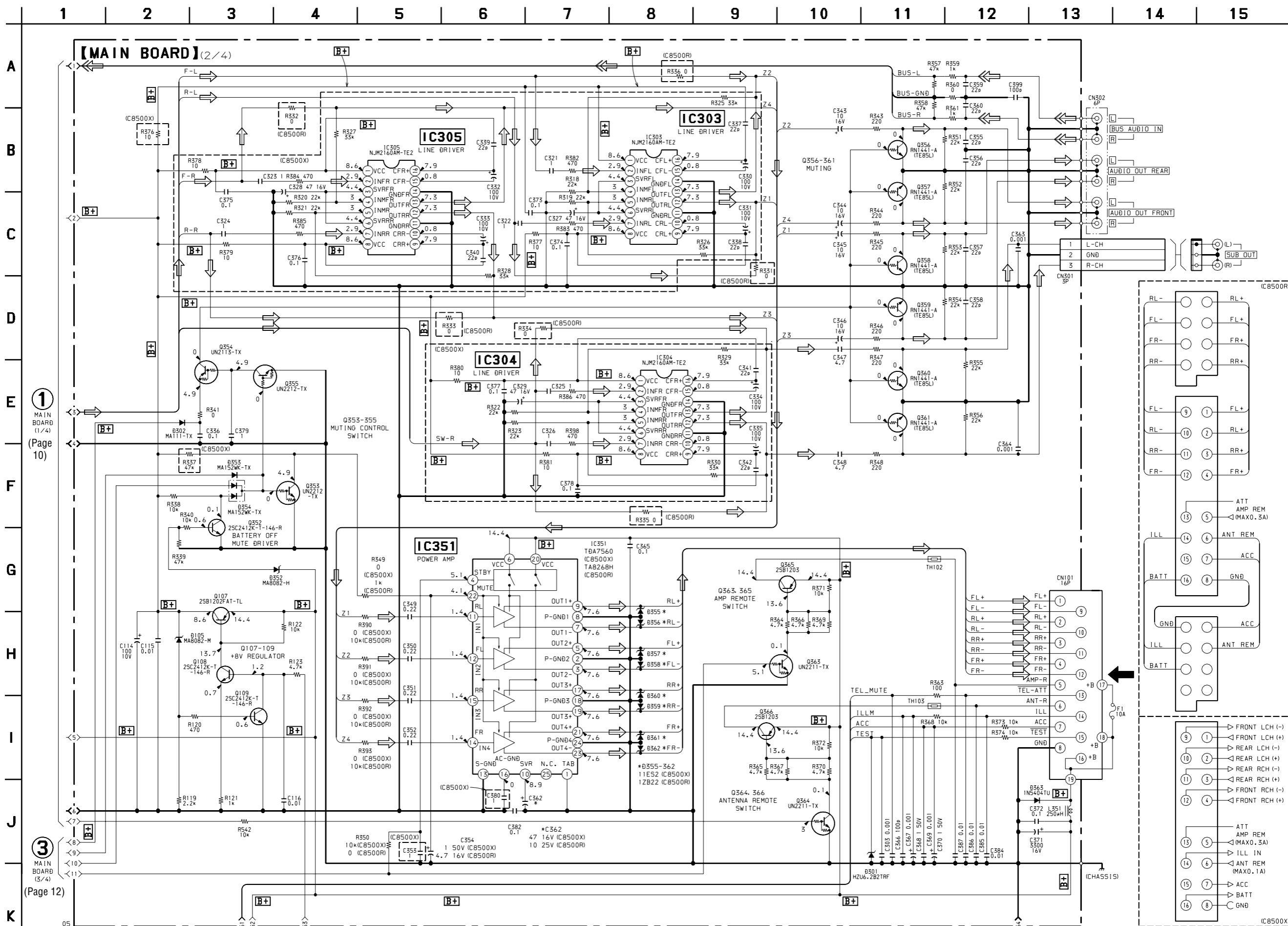
• Semiconductor Location

Ref. No.	Location
D103	G-3
D355	C-7
D356	C-7
D357	C-6
D358	C-6
D359	B-8
D360	B-7
D361	B-8
D362	B-8
D363	C-2
D502	J-8
D604	C-2
D605	B-2
D606	C-2
D611	D-1
D612	D-2
D613	D-2
IC351	B-7
Q104	F-4
Q105	G-3
Q107	E-8
Q110	B-1
Q401	E-4
Q406	F-5
Q704	J-13

2-6. SCHEMATIC DIAGRAM - MAIN Board (1/4) -



2-7. SCHEMATIC DIAGRAM - MAIN Board (2/4) -



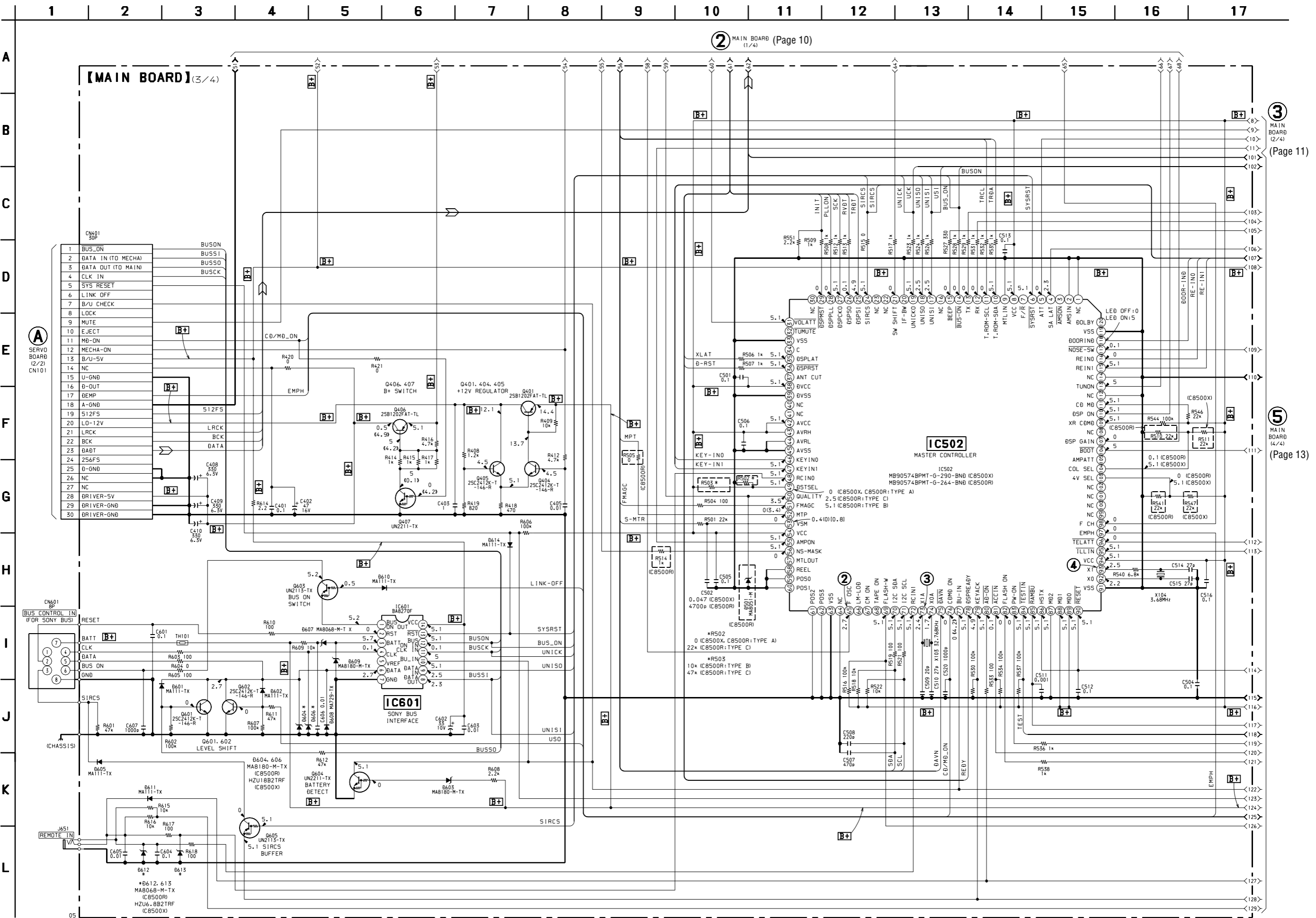
1 MAIN BOARD (1/4) (Page 10)

3 MAIN BOARD (3/4) (Page 12)

4 MAIN BOARD (4/4) (Page 13)

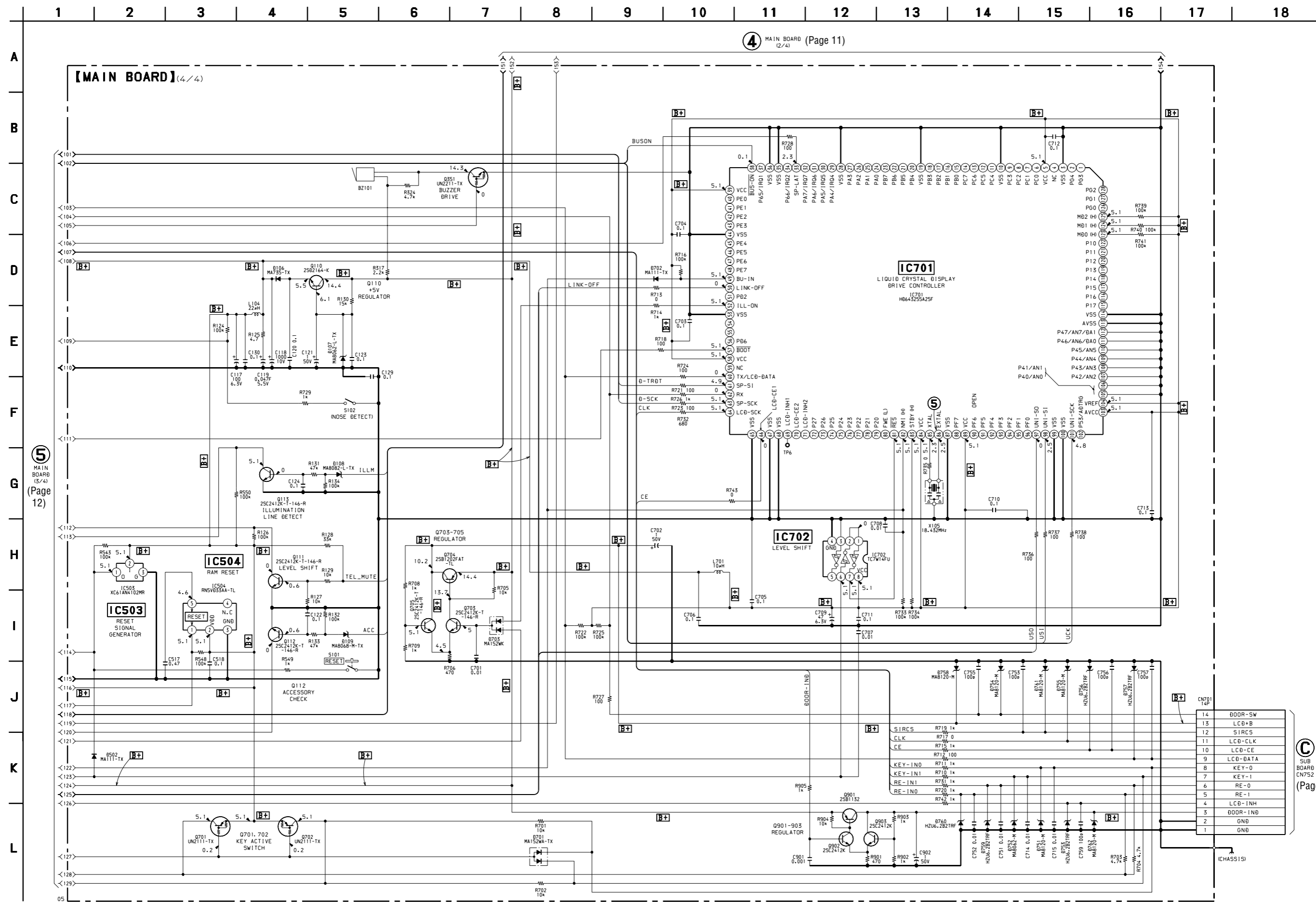
MDX-C8500R/C8500X

2-8. SCHEMATIC DIAGRAM – MAIN Board (3/4) –

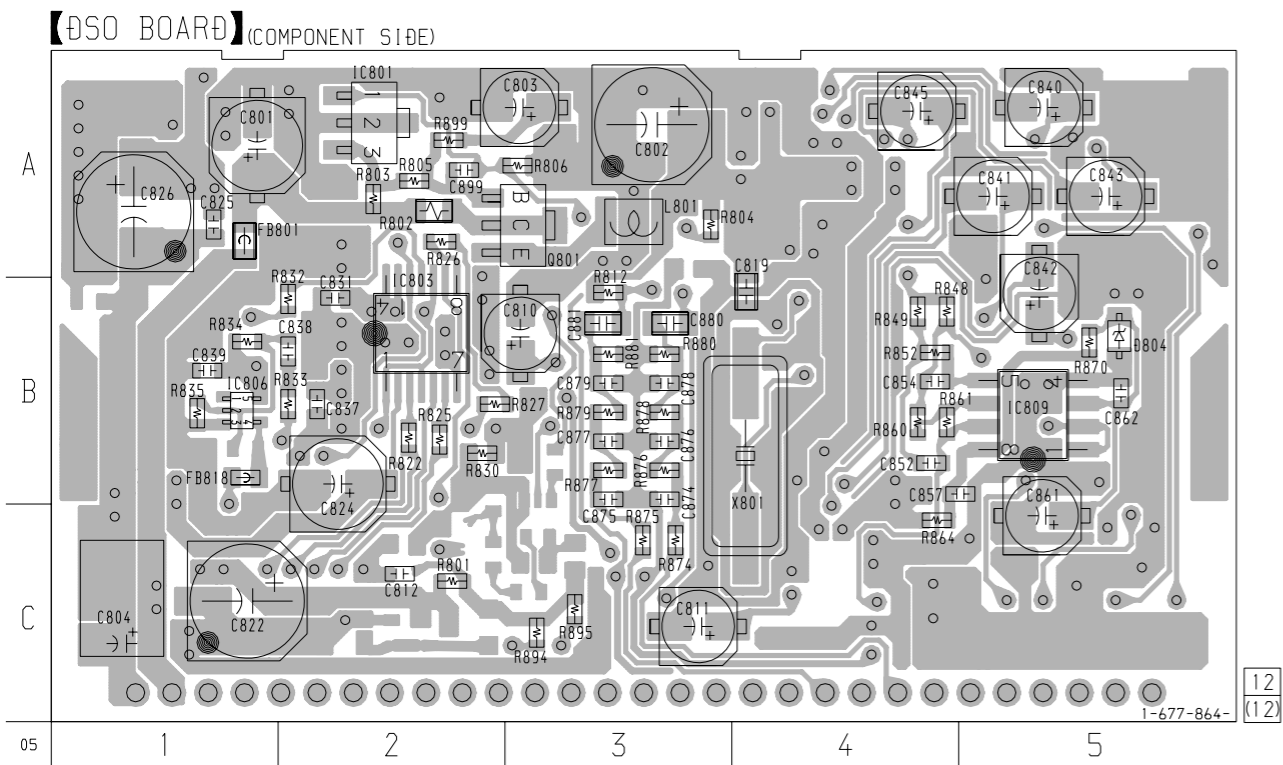




2-9. SCHEMATIC DIAGRAM – MAIN Board (4/4) –

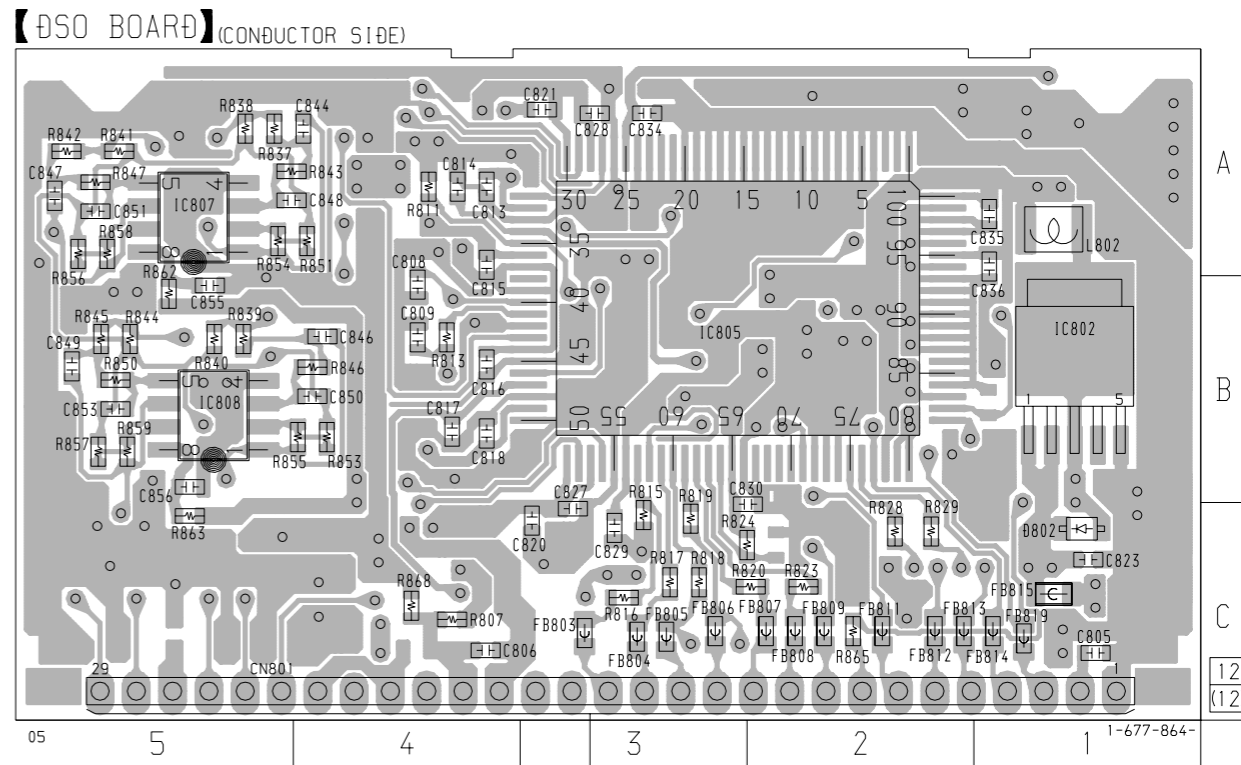


2-10. PRINTED WIRING BOARD – DSO Board –



• Semiconductor Location

Ref. No.	Location
D804	B-5
IC801	A-2
IC803	B-3
IC806	B-1
IC809	B-5
Q801	A-3

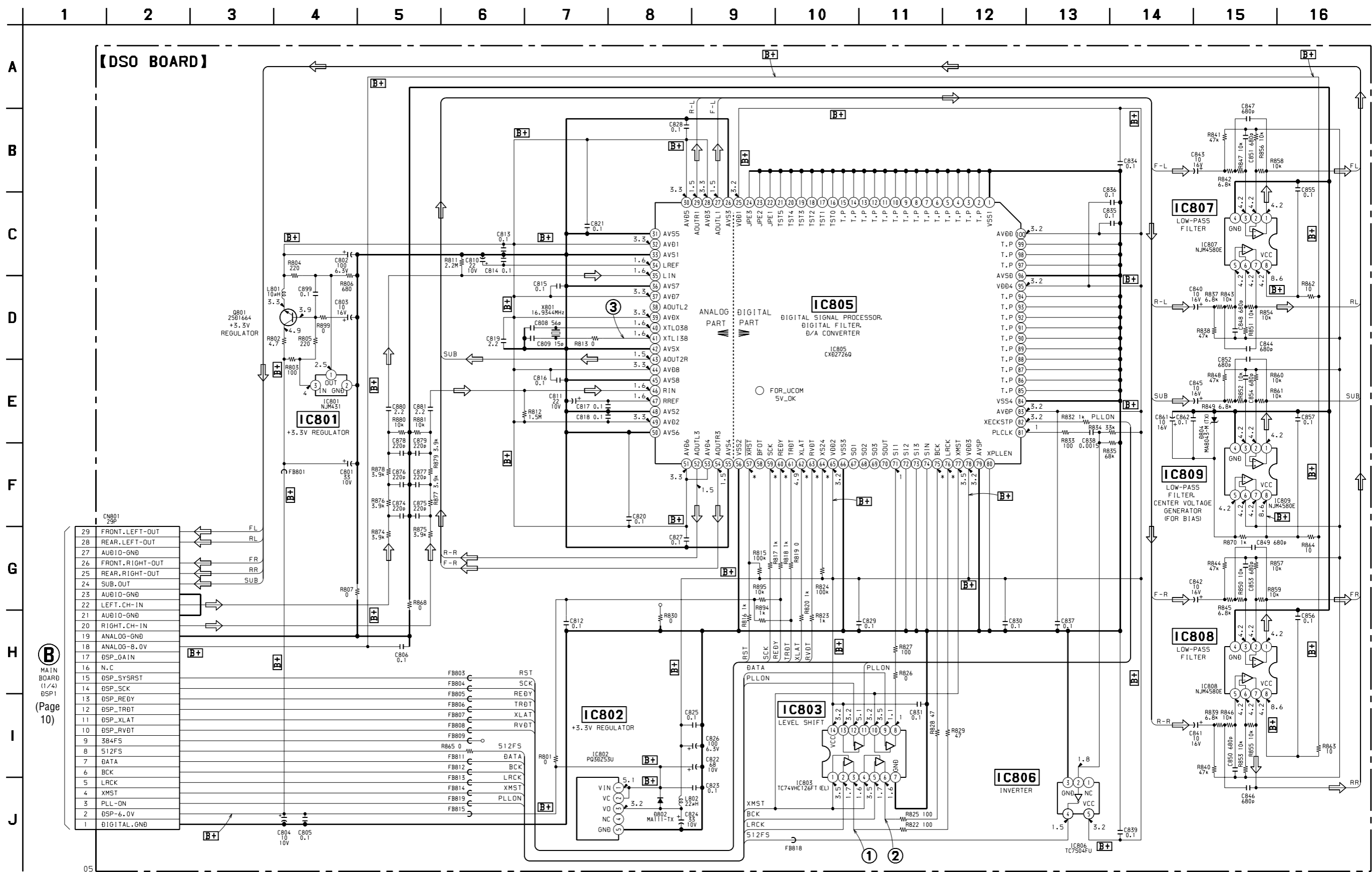


ⓑ MAIN BOARD  
DSP1  
(Page 9)

• Semiconductor Location

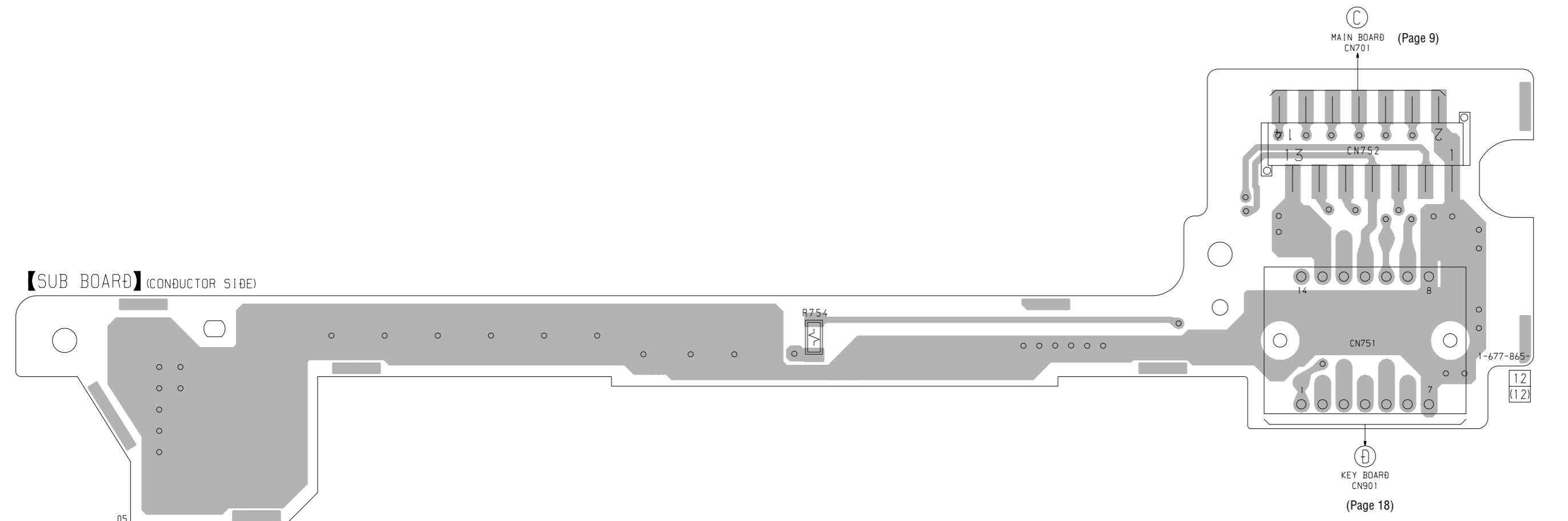
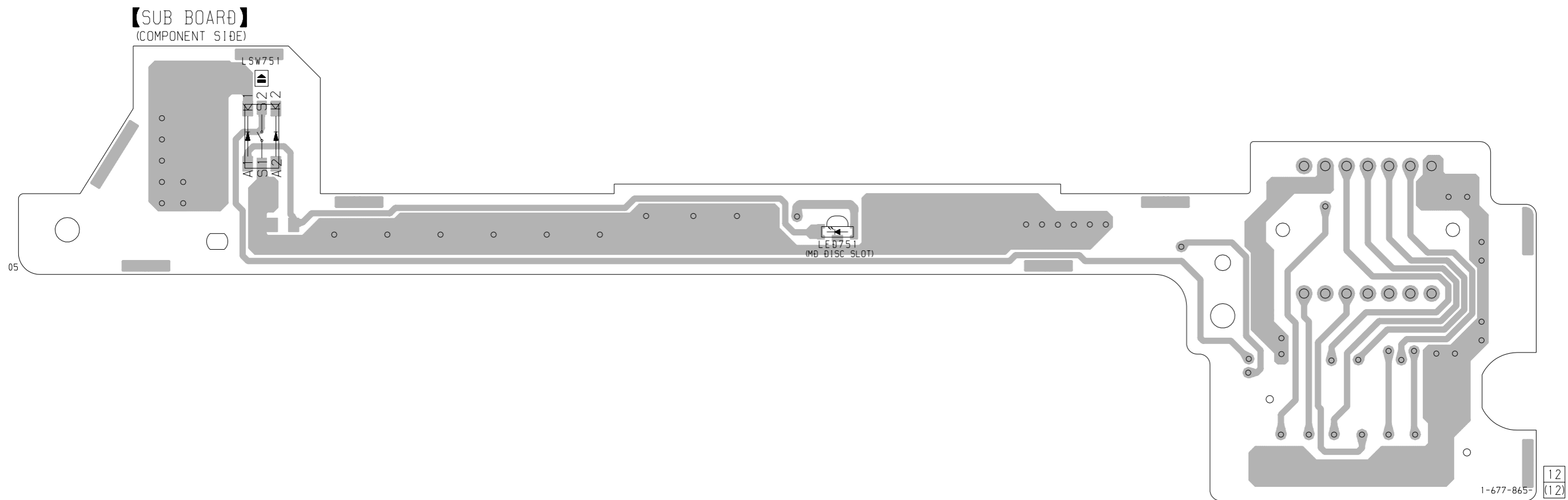
Ref. No.	Location
D802	C-1
IC802	B-1
IC805	B-3
IC807	A-5
IC808	B-5

2-11. SCHEMATIC DIAGRAM – DSO Board –

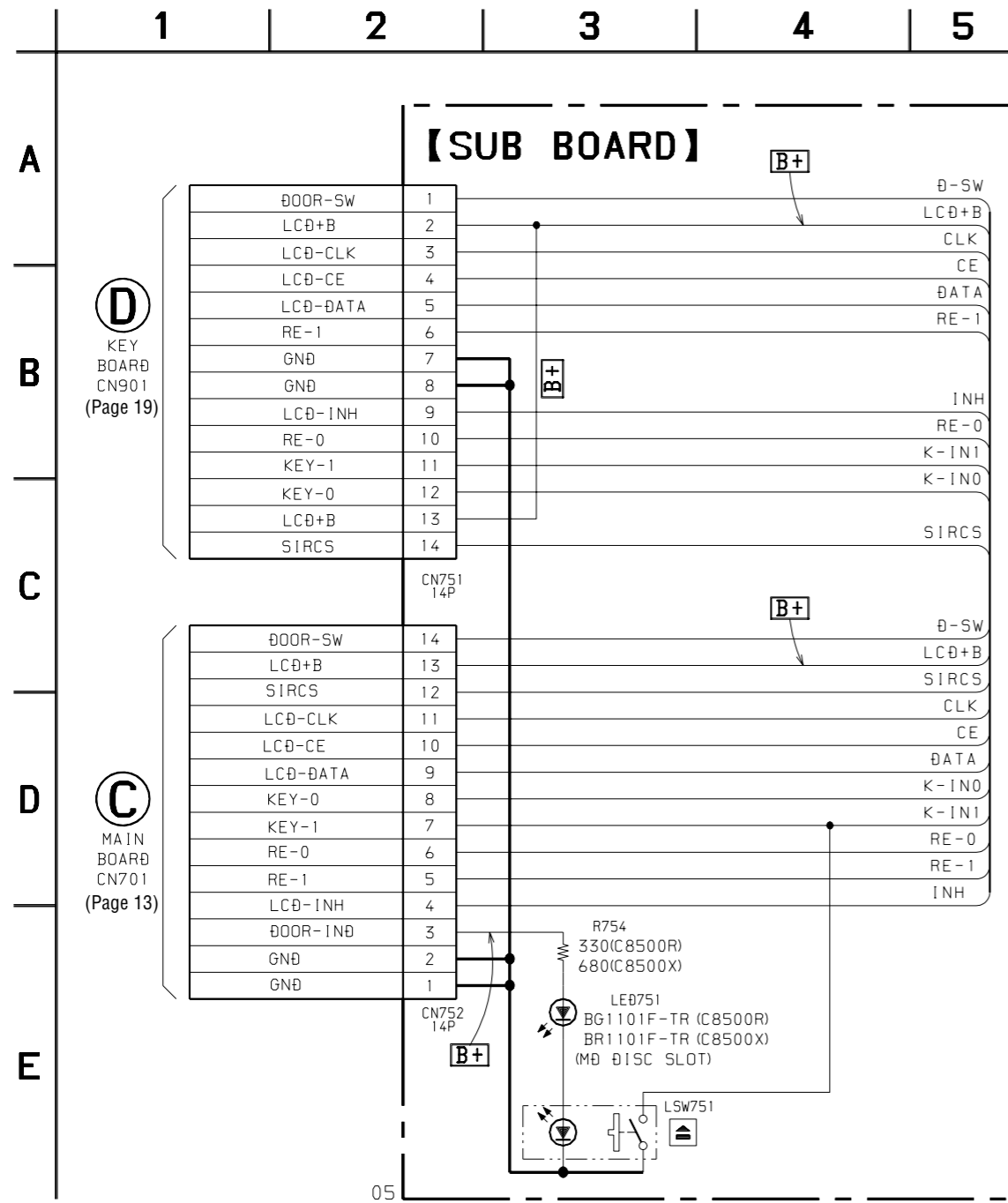


- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- no mark : MD PLAY
- \* : Impossible to measure

2-12. PRINTED WIRING BOARD – SUB Board –



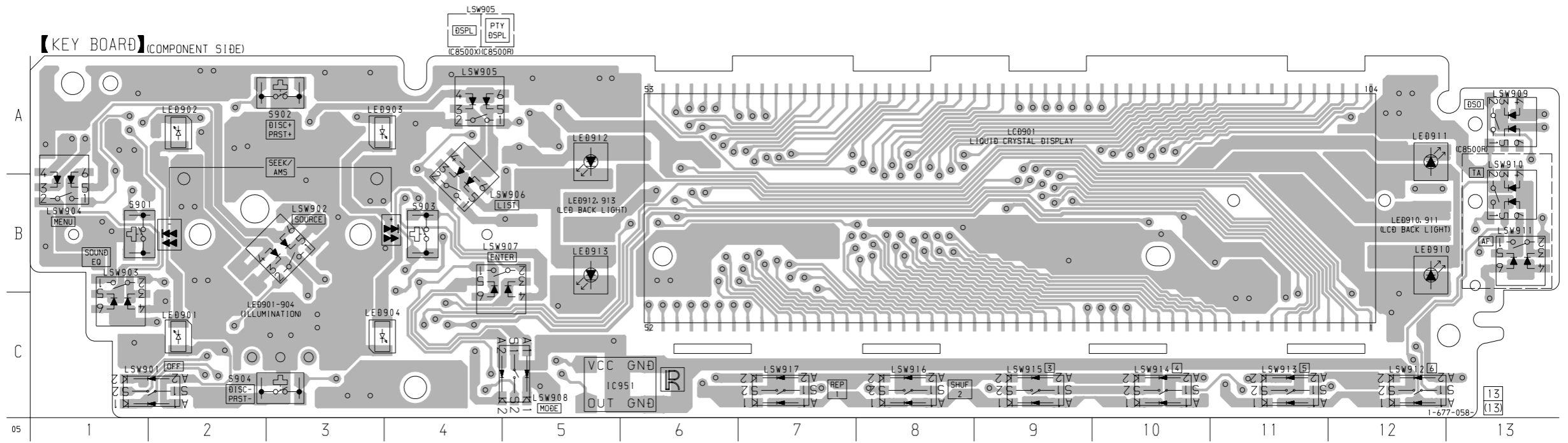
2-13. SCHEMATIC DIAGRAM – SUB Board –



2-14. PRINTED WIRING BOARD – KEY Board –

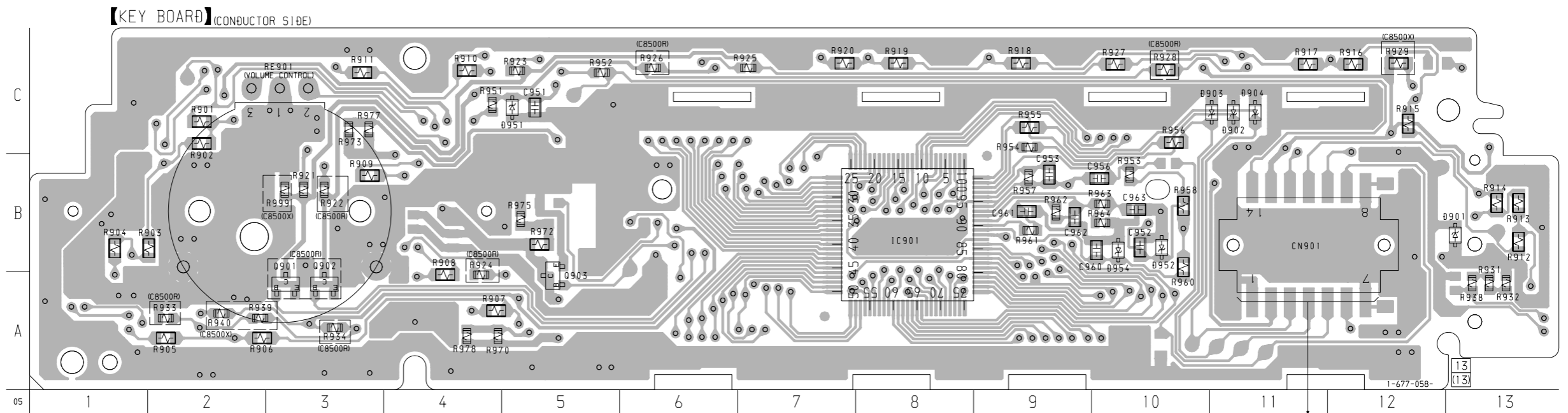
• Semiconductor Location

Ref. No.	Location
IC951	C-6
LED901	C-2
LED902	A-2
LED903	A-3
LED904	C-3
LED910	B-12
LED911	A-12
LED912	A-5
LED913	B-5



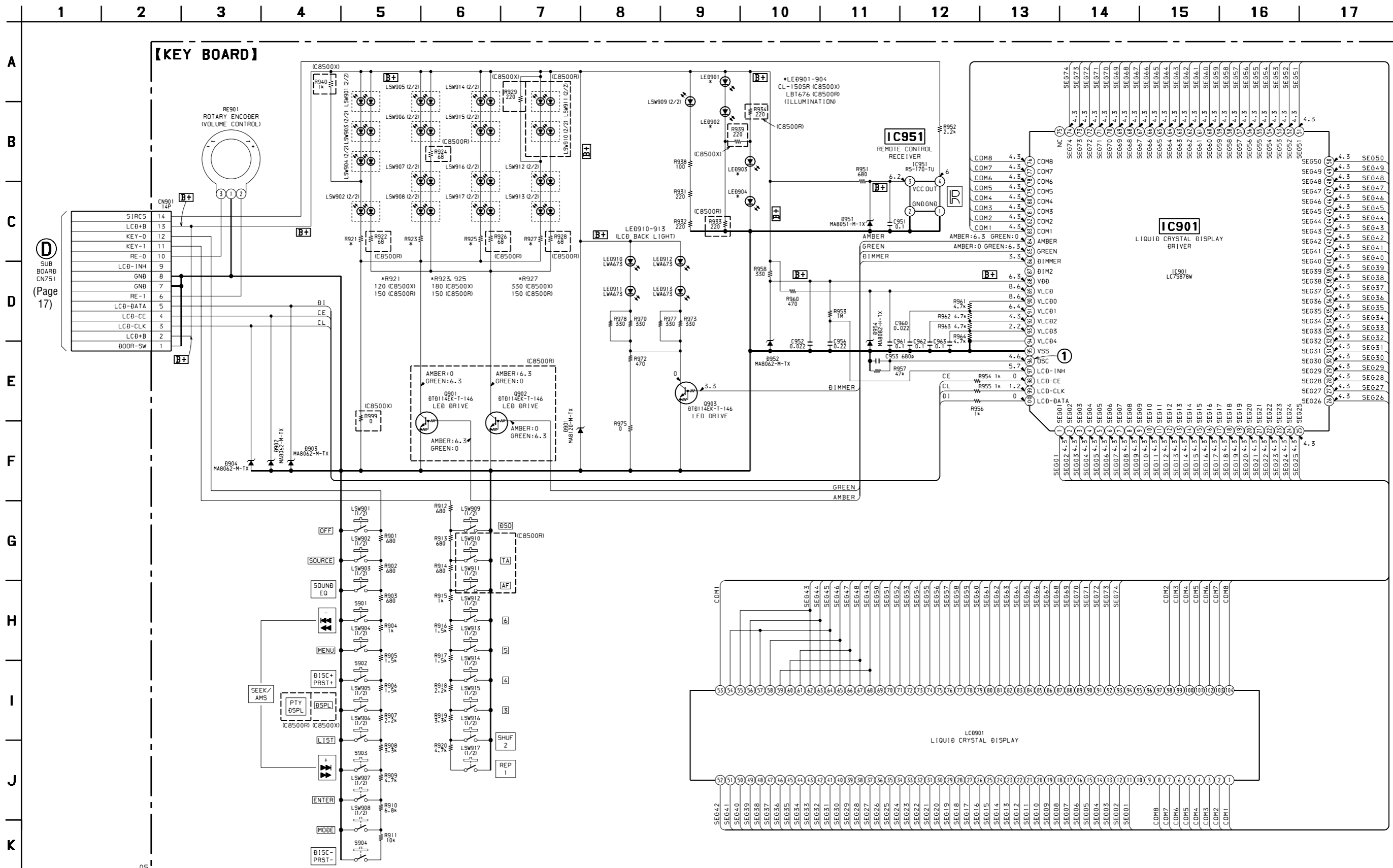
• Semiconductor Location

Ref. No.	Location
D901	B-13
D902	C-11
D903	C-11
D904	C-11
D951	C-5
D952	B-10
D954	B-10
IC901	B-8
Q901	A-3
Q902	A-3
Q903	A-5



Ⓟ SUB BOARD CN751  
(Page 16)

2-15. SCHEMATIC DIAGRAM - KEY Board -



(Page 17)

**DSO**

**2-16. EXPLODED VIEWS**

: Changed portion.

Page	Former type				New type			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
59	* 8	1-677-865-11	SUB BOARD		* 8	1-677-865-12	SUB BOARD	
60	* 61	3-041-371-02	SHEET (REFLECTOR)		* 61	3-041-371-11	SHEET (REFLECTOR)	

**2-17. ELECTRICAL PARTS LIST**

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS  
All resistors are in ohms.  
METAL: Metal-film resistor.  
METAL OXIDE: Metal oxide-film resistor.  
F: nonflammable
- Please refer to servicing notes (page 7) for system of TYPE A, B and C.

- Items marked "\*\*\*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS  
In each case, u:  $\mu$ , for example:  
uA . . . :  $\mu$ A . . .      uPA . . . :  $\mu$ PA . . .  
uPB . . . :  $\mu$ PB . . .    uPC . . . :  $\mu$ PC . . .  
uPD . . . :  $\mu$ PD . . .
- CAPACITORS  
uF:  $\mu$ F
- COILS  
uH:  $\mu$ H

When indicating parts by reference number, please include the board.

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
*	A-3294-916-A	DSO BOARD, COMPLETE *****		C841	1-126-394-11	ELECT CHIP	10uF 20% 16V
				C842	1-126-394-11	ELECT CHIP	10uF 20% 16V
				C843	1-126-394-11	ELECT CHIP	10uF 20% 16V
				C844	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
*	3-045-138-01	CASE (DSP), SHIELD		C845	1-126-394-11	ELECT CHIP	10uF 20% 16V
*	3-045-994-01	COVER (DSP), SHIELD		C846	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
		< CAPACITOR >		C847	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C801	1-126-393-11	ELECT CHIP	33uF 20% 10V	C848	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C802	1-126-392-11	ELECT CHIP	100uF 20% 6.3V	C849	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C803	1-126-394-11	ELECT CHIP	10uF 20% 16V	C850	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C804	1-117-709-11	ELECT CHIP	10uF 20% 10V	C851	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C805	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C852	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C806	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C853	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C808	1-162-924-11	CERAMIC CHIP	56PF 5% 50V	C854	1-115-412-11	CERAMIC CHIP	680PF 5% 25V
C809	1-162-917-11	CERAMIC CHIP	15PF 5% 50V	C855	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C810	1-128-993-21	ELECT CHIP	22uF 20% 10V	C856	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C811	1-128-993-21	ELECT CHIP	22uF 20% 10V	C857	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C812	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C861	1-126-394-11	ELECT CHIP	10uF 20% 16V
C813	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C862	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C814	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C874	1-164-230-11	CERAMIC CHIP	220PF 5% 50V
C815	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C875	1-164-230-11	CERAMIC CHIP	220PF 5% 50V
C816	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C876	1-164-230-11	CERAMIC CHIP	220PF 5% 50V
C817	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C877	1-164-230-11	CERAMIC CHIP	220PF 5% 50V
C818	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C878	1-164-230-11	CERAMIC CHIP	220PF 5% 50V
C819	1-125-838-11	CERAMIC CHIP	2.2uF 10% 6.3V	C879	1-164-230-11	CERAMIC CHIP	220PF 5% 50V
C820	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C880	1-125-838-11	CERAMIC CHIP	2.2uF 10% 6.3V
C821	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	C881	1-125-838-11	CERAMIC CHIP	2.2uF 10% 6.3V
C822	1-128-415-11	ELECT CHIP	68uF 20% 10V	C899	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
C823	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V			< CONNECTOR >	
C824	1-126-393-11	ELECT CHIP	33uF 20% 10V	CN801	1-794-320-11	PIN, CONNECTOR (PC BOARD) 29P	
C825	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V			< DIODE >	
C826	1-126-392-11	ELECT CHIP	100uF 20% 6.3V	D802	8-719-073-01	DIODE MA111-TX	
C827	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	D804	8-719-421-82	DIODE MA8043-M (TX)	
C828	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V			< FERRITE BEAD >	
C829	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	FB801	1-414-235-22	FERRITE BEAD INDUCTOR CHIP	
C830	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	FB803	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C831	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	FB804	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C834	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	FB805	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C835	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	FB806	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C836	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
C837	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V	FB807	1-500-329-21	FERRITE BEAD INDUCTOR CHIP	
C838	1-162-965-11	CERAMIC CHIP	0.0015uF 10% 50V				
C839	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V				
C840	1-126-394-11	ELECT CHIP	10uF 20% 16V				



Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
FB808	1-500-329-21	FERRITE BEAD INDUCTOR CHIP		R838	1-216-841-11	METAL CHIP	47K 5% 1/16W
FB809	1-414-760-21	FERRITE BEAD INDUCTOR CHIP		R839	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
FB811	1-414-760-21	FERRITE BEAD INDUCTOR CHIP		R840	1-216-841-11	METAL CHIP	47K 5% 1/16W
FB812	1-500-329-21	FERRITE BEAD INDUCTOR CHIP		R841	1-216-841-11	METAL CHIP	47K 5% 1/16W
				R842	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
FB813	1-500-329-21	FERRITE BEAD INDUCTOR CHIP		R843	1-216-833-11	METAL CHIP	10K 5% 1/16W
FB814	1-414-760-21	FERRITE BEAD INDUCTOR CHIP		R844	1-216-841-11	METAL CHIP	47K 5% 1/16W
FB815	1-414-235-22	FERRITE BEAD INDUCTOR CHIP		R845	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
FB818	1-414-760-21	FERRITE BEAD INDUCTOR CHIP		R846	1-216-833-11	METAL CHIP	10K 5% 1/16W
FB819	1-414-760-21	FERRITE BEAD INDUCTOR CHIP		R847	1-216-833-11	METAL CHIP	10K 5% 1/16W
		< IC >		R848	1-216-841-11	METAL CHIP	47K 5% 1/16W
IC801	8-759-710-88	IC NJM431U-TE2		R849	1-216-831-11	METAL CHIP	6.8K 5% 1/16W
IC802	8-759-431-14	IC PQ3DZ53U		R850	1-216-833-11	METAL CHIP	10K 5% 1/16W
IC803	8-759-524-05	IC TC74VHC126FT (EL)		R851	1-216-833-11	METAL CHIP	10K 5% 1/16W
IC805	8-752-402-48	IC CXD2726Q-4		R852	1-216-833-11	METAL CHIP	10K 5% 1/16W
IC806	8-759-058-58	IC TC7S04FU (TE85R)		R853	1-216-833-11	METAL CHIP	10K 5% 1/16W
IC807	8-759-711-82	IC NJM4580E (T1)		R854	1-216-833-11	METAL CHIP	10K 5% 1/16W
IC808	8-759-711-82	IC NJM4580E (T1)		R855	1-216-833-11	METAL CHIP	10K 5% 1/16W
IC809	8-759-711-82	IC NJM4580E (T1)		R856	1-216-833-11	METAL CHIP	10K 5% 1/16W
		< COIL >		R857	1-216-833-11	METAL CHIP	10K 5% 1/16W
L801	1-412-058-11	INDUCTOR CHIP 10uH		R858	1-216-833-11	METAL CHIP	10K 5% 1/16W
L802	1-412-060-11	INDUCTOR CHIP 22uH		R859	1-216-833-11	METAL CHIP	10K 5% 1/16W
		< TRANSISTOR >		R860	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q801	8-729-920-85	TRANSISTOR 2SD1664-T101-QR		R861	1-216-833-11	METAL CHIP	10K 5% 1/16W
		< RESISTOR >		R862	1-216-797-11	METAL CHIP	10 5% 1/16W
R801	1-216-864-11	METAL CHIP	0 5% 1/16W	R863	1-216-797-11	METAL CHIP	10 5% 1/16W
R802	1-216-308-00	METAL CHIP	4.7 5% 1/10W	R864	1-216-797-11	METAL CHIP	10 5% 1/16W
R803	1-216-809-11	METAL CHIP	100 5% 1/16W	R865	1-216-864-11	METAL CHIP	0 5% 1/16W
R804	1-219-274-11	RES, CHIP	220 2% 1/16W	R868	1-216-864-11	METAL CHIP	0 5% 1/16W
R805	1-216-813-11	METAL CHIP	220 5% 1/16W	R870	1-216-821-11	METAL CHIP	1K 5% 1/16W
R806	1-219-286-11	RES, CHIP	680 2% 1/16W	R874	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R807	1-216-864-11	METAL CHIP	0 5% 1/16W	R875	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R811	1-216-861-11	METAL CHIP	2.2M 5% 1/16W	R876	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R812	1-216-859-11	RES, CHIP	1.5M 5% 1/16W	R877	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R813	1-216-864-11	METAL CHIP	0 5% 1/16W	R878	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R815	1-216-845-11	METAL CHIP	100K 5% 1/16W	R879	1-216-828-11	METAL CHIP	3.9K 5% 1/16W
R816	1-216-821-11	METAL CHIP	1K 5% 1/16W	R880	1-216-833-11	METAL CHIP	10K 5% 1/16W
R817	1-216-821-11	METAL CHIP	1K 5% 1/16W	R881	1-216-833-11	METAL CHIP	10K 5% 1/16W
R818	1-216-821-11	METAL CHIP	1K 5% 1/16W	R894	1-216-821-11	METAL CHIP	1K 5% 1/16W
R819	1-216-864-11	METAL CHIP	0 5% 1/16W	R895	1-216-833-11	METAL CHIP	10K 5% 1/16W
R820	1-216-821-11	METAL CHIP	1K 5% 1/16W	R899	1-216-864-11	METAL CHIP	0 5% 1/16W
R822	1-216-809-11	METAL CHIP	100 5% 1/16W			< VIBRATOR >	
R823	1-216-821-11	METAL CHIP	1K 5% 1/16W	X801	1-767-467-11	VIBRATOR, CRYSTAL (16.9344MHz)	
R824	1-216-845-11	METAL CHIP	100K 5% 1/16W	*****			
R825	1-216-809-11	METAL CHIP	100 5% 1/16W			KEY BOARD	
						*****	
R826	1-216-864-11	METAL CHIP	0 5% 1/16W			1-694-660-1	CONDUCTIVE BOARD, CONNECTION
R827	1-216-809-11	METAL CHIP	100 5% 1/16W	*	3-040-992-0	HOLDER (LCD)	
R828	1-216-805-11	METAL CHIP	47 5% 1/16W	*	3-040-993-0	PLATE (LCD), LIGHT GUIDE	
R829	1-216-805-11	METAL CHIP	47 5% 1/16W	*	3-040-997-0	PLATE (LCD), GROUND	
R830	1-216-864-11	METAL CHIP	0 5% 1/16W	*	3-041-371-1	SHEET (REFLECTOR)	
R832	1-216-821-11	METAL CHIP	1K 5% 1/16W			< CAPACITOR >	
R833	1-216-809-11	METAL CHIP	100 5% 1/16W	C951	1-164-004-11	CERAMIC CHIP	0.1uF 10% 25V
R834	1-216-839-11	METAL CHIP	33K 5% 1/16W	C952	1-163-037-11	CERAMIC CHIP	0.022uF 10% 25V
R835	1-216-843-11	METAL CHIP	68K 5% 1/16W	C953	1-163-137-00	CERAMIC CHIP	680PF 5% 50V
R837	1-216-831-11	METAL CHIP	6.8K 5% 1/16W				

**KEY**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>				<u>Remark</u>
C956	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V	
C960	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V	
C961	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C962	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
C963	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V	
< CONNECTOR >						
CN901	1-794-065-21	PLUG, CONNECTOR 14P				
< DIODE >						
D901	8-719-423-32	DIODE MA8120-M-TX				
D902	8-719-422-64	DIODE MA8062-M-TX				
D903	8-719-422-64	DIODE MA8062-M-TX				
D904	8-719-422-64	DIODE MA8062-M-TX				
D951	8-719-420-90	DIODE MA8051-M-TX				
D952	8-719-422-64	DIODE MA8062-M-TX				
D954	8-719-422-89	DIODE MA8082-H-TX				
< IC >						
IC901	8-759-653-26	IC LC75878W				
IC951	8-749-012-25	IC RS-170-TU				
< LIQUID CRYSTAL DISPLAY >						
LCD901	1-803-915-11	DISPLAY PANEL, LIQUID CRYSTAL (C8500R)				
LCD901	1-803-915-21	DISPLAY PANEL, LIQUID CRYSTAL (C8500X)				
< LED >						
LED901	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION)				
		(C8500X)				
LED901	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION)				
		(C8500R)				
LED902	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION)				
		(C8500X)				
LED902	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION)				
		(C8500R)				
LED903	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION)				
		(C8500X)				
LED903	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION)				
		(C8500R)				
LED904	8-719-026-38	LED CL-150SR-CD-T (ILLUMINATION)				
		(C8500X)				
LED904	8-719-064-68	LED LBT676-J2/K1/K2 (ILLUMINATION)				
		(C8500R)				
LED910	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)				
LED911	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)				
LED912	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)				
LED913	8-719-078-19	LED LWA673-R1S2*1 (LCD BACK LIGHT)				
< SWITCH >						
LSW901	1-771-610-11	SWITCH, TACTILE (WITH LED) (OFF) (C8500R)				
LSW901	1-771-883-11	SWITCH, TACTILE (WITH LED) (OFF) (C8500X)				
LSW902	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (SOURCE)				
		(C8500R)				
LSW902	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (SOURCE)				
		(C8500X)				
LSW903	1-762-620-21	SWITCH, KEY BOARD (WITH LED)				
		(SOUND EQ) (C8500R)				

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>				<u>Remark</u>
LSW903	1-771-476-11	SWITCH, KEY BOARD (WITH LED)				
		(SOUND EQ) (C8500X)				
LSW904	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (MENU)				
		(C8500R)				
LSW904	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (MENU)				
		(C8500X)				
LSW905	1-762-620-21	SWITCH, KEY BOARD (WITH LED)				
		(PTY, DSPL) (C8500R)				
LSW905	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (DSPL)				
		(C8500X)				
LSW906	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (LIST)				
		(C8500R)				
LSW906	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (LIST)				
		(C8500X)				
LSW907	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (ENTER)				
		(C8500R)				
LSW907	1-771-476-11	SWITCH, KEY BOARD (WITH LED) (ENTER)				
		(C8500X)				
LSW908	1-771-610-11	SWITCH, TACTILE (WITH LED) (MODE)				
		(C8500R)				
LSW908	1-771-883-11	SWITCH, TACTILE (WITH LED) (MODE)				
		(C8500X)				
LSW909	1-762-737-11	SWITCH, KEYBOARD (LED) (DSO)				
LSW910	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (TA)				
		(C8500R)				
LSW911	1-762-620-21	SWITCH, KEY BOARD (WITH LED) (AF)				
		(C8500R)				
LSW912	1-771-610-11	SWITCH, TACTILE (WITH LED) (6) (C8500R)				
LSW912	1-771-883-11	SWITCH, TACTILE (WITH LED) (6) (C8500X)				
LSW913	1-771-610-11	SWITCH, TACTILE (WITH LED) (5) (C8500R)				
LSW913	1-771-883-11	SWITCH, TACTILE (WITH LED) (5) (C8500X)				
LSW914	1-771-610-11	SWITCH, TACTILE (WITH LED) (4) (C8500R)				
LSW914	1-771-883-11	SWITCH, TACTILE (WITH LED) (4) (C8500X)				
LSW915	1-771-610-11	SWITCH, TACTILE (WITH LED) (3) (C8500R)				
LSW915	1-771-883-11	SWITCH, TACTILE (WITH LED) (3) (C8500X)				
LSW916	1-771-610-11	SWITCH, TACTILE (WITH LED) (SHUF 2)				
		(C8500R)				
LSW916	1-771-883-11	SWITCH, TACTILE (WITH LED) (SHUF 2)				
		(C8500X)				
LSW917	1-771-610-11	SWITCH, TACTILE (WITH LED) (REP 1)				
		(C8500R)				
LSW917	1-771-883-11	SWITCH, TACTILE (WITH LED) (REP 1)				
		(C8500X)				
< TRANSISTOR >						
Q901	8-729-904-75	TRANSISTOR	DTD114EK-T-146	(C8500R)		
Q902	8-729-904-75	TRANSISTOR	DTD114EK-T-146	(C8500R)		
Q903	8-729-904-75	TRANSISTOR	DTD114EK-T-146			
< RESISTOR >						
R901	1-216-647-11	METAL CHIP	680	0.5%	1/10W	
R902	1-216-647-11	METAL CHIP	680	0.5%	1/10W	
R903	1-216-647-11	METAL CHIP	680	0.5%	1/10W	
R904	1-216-651-11	METAL CHIP	1K	0.5%	1/10W	
R905	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R906	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R907	1-216-659-11	METAL CHIP	2.2K	0.5%	1/10W	
R908	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W	
R909	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	
R910	1-216-671-11	METAL CHIP	6.8K	0.5%	1/10W	

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
R911	1-208-806-11	RES, CHIP	10K 2% 1/10W	R972	1-216-041-00	METAL CHIP	470 5% 1/10W
R912	1-216-647-11	METAL CHIP	680 0.5% 1/10W				
R913	1-216-647-11	METAL CHIP	680 0.5% 1/10W	R973	1-216-815-11	METAL CHIP	330 5% 1/16W
R914	1-216-647-11	METAL CHIP	680 0.5% 1/10W	R975	1-216-864-11	METAL CHIP	0 5% 1/16W
R915	1-216-651-11	METAL CHIP	1K 0.5% 1/10W	R977	1-216-815-11	METAL CHIP	330 5% 1/16W
				R978	1-216-815-11	METAL CHIP	330 5% 1/16W
R916	1-216-655-11	METAL CHIP	1.5K 0.5% 1/10W	R999	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500X)
R917	1-216-655-11	METAL CHIP	1.5K 0.5% 1/10W			< ROTARY ENCODER >	
R918	1-216-659-11	METAL CHIP	2.2K 0.5% 1/10W	RE901	1-475-014-11	ENCODER, ROTARY (VOLUME CONTROL)	
R919	1-216-663-11	METAL CHIP	3.3K 0.5% 1/10W			< SWITCH >	
R920	1-216-667-11	METAL CHIP	4.7K 0.5% 1/10W				
R921	1-216-810-11	METAL CHIP	120 5% 1/16W (C8500X)	S901	1-771-884-11	SWITCH, TACTILEILE (SEEK/AMS - ◀◀◀ ◀◀)	
R921	1-216-811-11	METAL CHIP	150 5% 1/16W (C8500R)	S902	1-771-884-11	SWITCH, TACTILEILE (DISC +, PRST +)	
R922	1-216-807-11	METAL CHIP	68 5% 1/16W (C8500R)	S903	1-771-884-11	SWITCH, TACTILEILE (SEEK/AMS + ▶▶▶ ▶▶▶)	
R923	1-216-811-11	METAL CHIP	150 5% 1/16W (C8500R)	S904	1-771-884-11	SWITCH, TACTILEILE (DISC -, PRST -)	
R923	1-216-812-11	METAL CHIP	180 5% 1/16W (C8500X)	*****			
				*	A-3294-906-A	MAIN BOARD, COMPLETE (C8500X)	
R924	1-216-807-11	METAL CHIP	68 5% 1/16W (C8500R)	*	A-3294-915-A	MAIN BOARD, COMPLETE (C8500R: TYPE A)	
R925	1-216-811-11	METAL CHIP	150 5% 1/16W (C8500R)	*	A-3294-918-A	MAIN BOARD, COMPLETE (C8500R: TYPE B)	
R925	1-216-812-11	METAL CHIP	180 5% 1/16W (C8500X)	*	A-3294-919-A	MAIN BOARD, COMPLETE (C8500R: TYPE C)	
R926	1-216-807-11	METAL CHIP	68 5% 1/16W (C8500R)			*****	
R927	1-216-029-00	METAL CHIP	150 5% 1/10W (C8500R)	*	3-040-996-32	HEAT SINK (2P) (C8500R)	
				*	3-040-996-72	HEAT SINK (2P) (C8500X)	
R927	1-216-037-00	METAL CHIP	330 5% 1/10W (C8500X)	*	3-040-998-01	BRACKET (IC)	
R928	1-216-021-00	METAL CHIP	68 5% 1/10W (C8500R)	*	3-041-261-01	BRACKET (TR)	
R929	1-216-033-00	METAL CHIP	220 5% 1/10W (C8500X)		7-685-793-09	SCREW +PTT 2.6X8 (S)	
R931	1-216-813-11	METAL CHIP	220 5% 1/16W		7-685-795-09	SCREW +PTT 2.6X12 (S)	
R932	1-216-813-11	METAL CHIP	220 5% 1/16W			< BUZZER >	
R933	1-216-813-11	METAL CHIP	220 5% 1/16W (C8500R)	BZ101	1-504-920-11	BUZZER	
R934	1-216-813-11	METAL CHIP	220 5% 1/16W (C8500R)			< CAPACITOR >	
R938	1-216-809-11	METAL CHIP	100 5% 1/16W	C101	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
R939	1-216-813-11	METAL CHIP	220 5% 1/16W (C8500X)	C103	1-107-725-11	CERAMIC CHIP	0.1uF 10% 16V
R940	1-216-821-11	METAL CHIP	1K 5% 1/16W (C8500X)	C104	1-162-923-11	CERAMIC CHIP	47PF 5% 50V
				C105	1-131-661-21	ELECT CHIP	100uF 20% 10V
R951	1-216-819-11	METAL CHIP	680 5% 1/16W	C106	1-126-176-11	ELECT	220uF 20% 10V
R952	1-216-825-11	METAL CHIP	2.2K 5% 1/16W	C107	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
R953	1-216-857-11	METAL CHIP	1M 5% 1/16W	C108	1-107-826-11	CERAMIC CHIP	0.1uF 10% 16V
R954	1-216-821-11	METAL CHIP	1K 5% 1/16W	C109	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R955	1-216-049-11	RES, CHIP	1K 5% 1/10W	C110	1-117-681-11	ELECT CHIP	100uF 20% 16V
				C111	1-163-021-11	CERAMIC CHIP	0.01uF 10% 50V
R956	1-216-049-11	RES, CHIP	1K 5% 1/10W	C112	1-164-816-11	CERAMIC CHIP	220PF 2% 50V
R957	1-216-841-11	METAL CHIP	47K 5% 1/16W	C113	1-117-681-11	ELECT CHIP	100uF 20% 16V
R958	1-216-037-00	METAL CHIP	330 5% 1/10W	C114	1-124-584-00	ELECT	100uF 20% 10V
R960	1-216-041-00	METAL CHIP	470 5% 1/10W	C115	1-163-031-11	CERAMIC CHIP	0.01uF 50V
R961	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C116	1-162-970-11	CERAMIC CHIP	0.01uF 10% 25V
R962	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C117	1-124-584-00	ELECT	100uF 20% 10V
R963	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C118	1-126-926-11	ELECT	1000uF 20% 10V
R964	1-216-829-11	METAL CHIP	4.7K 5% 1/16W	C119	1-125-701-11	DOUBLE LAYER	0.047F 5.5V
R970	1-216-815-11	METAL CHIP	330 5% 1/16W	C120	1-164-360-11	CERAMIC CHIP	0.1uF 16V
				C121	1-104-942-11	ELECT	1uF 20% 50V
				C122	1-164-156-11	CERAMIC CHIP	0.1uF 25V
				C123	1-164-360-11	CERAMIC CHIP	0.1uF 16V
				C124	1-164-156-11	CERAMIC CHIP	0.1uF 25V
				C126	1-163-009-11	CERAMIC CHIP	0.001uF 10% 50V

MAIN

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>
C127	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C129	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C130	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C201	1-164-156-11	CERAMIC CHIP	0.1uF		25V (C8500R)
C202	1-162-962-11	CERAMIC CHIP	470PF	10%	50V (C8500R)
C203	1-164-739-11	CERAMIC CHIP	560PF	5%	50V (C8500R)
C204	1-164-505-11	CERAMIC CHIP	2.2uF		16V (C8500R)
C205	1-162-920-11	CERAMIC CHIP	27PF	5%	50V (C8500R)
C206	1-162-920-11	CERAMIC CHIP	27PF	5%	50V (C8500R)
C207	1-164-156-11	CERAMIC CHIP	0.1uF		25V (C8500R)
C208	1-164-156-11	CERAMIC CHIP	0.1uF		25V (C8500R)
C209	1-163-263-11	CERAMIC CHIP	330PF	5%	50V (C8500R)
C210	1-162-966-11	CERAMIC CHIP	0.0022uF	10%	50V (C8500R)
C211	1-162-927-11	CERAMIC CHIP	100PF	5%	50V (C8500R)
C214	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C215	1-163-021-11	CERAMIC CHIP	0.01uF	10%	50V
C219	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C220	1-126-157-11	ELECT	10uF	20%	16V
C221	1-124-589-11	ELECT	47uF	20%	16V (C8500R)
C223	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C224	1-126-157-11	ELECT	10uF	20%	16V
C225	1-163-031-11	CERAMIC CHIP	0.01uF		50V (C8500X)
C226	1-124-589-11	ELECT	47uF	20%	16V
C227	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C229	1-164-156-11	CERAMIC CHIP	0.1uF		25V
C230	1-124-589-11	ELECT	47uF	20%	16V
C231	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C232	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (C8500R)
C233	1-163-038-11	CERAMIC CHIP	0.1uF		25V (C8500R)
C234	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C235	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (C8500R)
C236	1-163-038-11	CERAMIC CHIP	0.1uF		25V (C8500R)
C238	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V (C8500R)
C239	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V (C8500R)
C240	1-164-005-11	CERAMIC CHIP	0.47uF		25V (C8500R)
C241	1-164-315-11	CERAMIC CHIP	470PF	5%	50V (C8500R)
C242	1-163-809-11	CERAMIC CHIP	0.047uF	10%	25V (C8500R)
C245	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V (C8500R)

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>
C246	1-163-038-11	CERAMIC CHIP	0.1uF		25V
C301	1-164-346-11	CERAMIC CHIP	1uF		16V
C302	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C303	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C304	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C305	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C306	1-162-968-11	CERAMIC CHIP	0.0047uF	10%	50V
C307	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C308	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C309	1-164-346-11	CERAMIC CHIP	1uF		16V
C311	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C312	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C313	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C314	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C315	1-124-589-11	ELECT	47uF	20%	16V
C316	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C317	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C318	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C319	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C320	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C321	1-127-573-11	CERAMIC CHIP	1uF	10%	16V
C322	1-127-573-11	CERAMIC CHIP	1uF	10%	16V (C8500X)
C323	1-127-573-11	CERAMIC CHIP	1uF	10%	16V (C8500X)
C324	1-127-573-11	CERAMIC CHIP	1uF	10%	16V (C8500X)
C325	1-127-573-11	CERAMIC CHIP	1uF	10%	16V (C8500X)
C326	1-127-573-11	CERAMIC CHIP	1uF	10%	16V (C8500X)
C327	1-124-589-11	ELECT	47uF	20%	16V (C8500X)
C328	1-124-589-11	ELECT	47uF	20%	16V (C8500X)
C329	1-124-589-11	ELECT	47uF	20%	16V (C8500X)
C330	1-124-584-00	ELECT	100uF	20%	10V (C8500X)
C331	1-124-584-00	ELECT	100uF	20%	10V (C8500X)
C332	1-124-584-00	ELECT	100uF	20%	10V (C8500X)
C333	1-124-584-00	ELECT	100uF	20%	10V (C8500X)
C334	1-124-584-00	ELECT	100uF	20%	10V (C8500X)
C335	1-124-584-00	ELECT	100uF	20%	10V (C8500X)
C336	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C337	1-163-235-11	CERAMIC CHIP	22PF	5%	50V (C8500X)
C338	1-163-235-11	CERAMIC CHIP	22PF	5%	50V (C8500X)
C339	1-163-235-11	CERAMIC CHIP	22PF	5%	50V (C8500X)
C340	1-163-235-11	CERAMIC CHIP	22PF	5%	50V (C8500X)
C341	1-163-235-11	CERAMIC CHIP	22PF	5%	50V (C8500X)

Ref. No.	Part No.	Description				Remark	Ref. No.	Part No.	Description				Remark
C342	1-163-235-11	CERAMIC CHIP	22PF	5%	50V	(C8500X)	C386	1-163-031-11	CERAMIC CHIP	0.01uF			50V
							C387	1-163-031-11	CERAMIC CHIP	0.01uF			50V
							C399	1-163-251-11	CERAMIC CHIP	100PF	5%		50V
C343	1-126-157-11	ELECT	10uF	20%	16V		C401	1-164-360-11	CERAMIC CHIP	0.1uF			16V
C344	1-126-157-11	ELECT	10uF	20%	16V		C402	1-124-589-11	ELECT	47uF	20%		16V
C345	1-126-157-11	ELECT	10uF	20%	16V								
C346	1-126-157-11	ELECT	10uF	20%	16V		C403	1-127-573-11	CERAMIC CHIP	1uF	10%		16V
C347	1-164-506-11	CERAMIC CHIP	4.7uF		16V		C405	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
							C406	1-131-661-21	ELECT CHIP	100uF	20%		10V
C348	1-164-506-11	CERAMIC CHIP	4.7uF		16V		C407	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C349	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V		C408	1-128-057-11	ELECT	330uF	20%		6.3V
C350	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V								
C351	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V		C409	1-128-057-11	ELECT	330uF	20%		6.3V
C352	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V		C410	1-135-474-21	ELECT	330uF	20%		6.3V
							C501	1-164-360-11	CERAMIC CHIP	0.1uF			16V
C353	1-127-573-11	CERAMIC CHIP	1uF	10%	16V	(C8500X)	C502	1-104-760-11	CERAMIC CHIP	0.047uF	10%		50V
C354	1-104-942-11	ELECT	1uF	20%	50V	(C8500X)							(C8500X)
							C502	1-163-017-00	CERAMIC CHIP	0.0047uF	5%		50V
C354	1-124-259-11	ELECT	4.7uF	20%	16V	(C8500R)							(C8500R)
							C504	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C355	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C505	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C356	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C506	1-164-360-11	CERAMIC CHIP	0.1uF			16V
							C507	1-164-315-11	CERAMIC CHIP	470PF	5%		50V
C357	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C508	1-164-816-11	CERAMIC CHIP	220PF	2%		50V
C358	1-162-919-11	CERAMIC CHIP	22PF	5%	50V								
C359	1-163-235-11	CERAMIC CHIP	22PF	5%	50V		C509	1-163-234-11	CERAMIC CHIP	20PF	5%		50V
C360	1-162-919-11	CERAMIC CHIP	22PF	5%	50V		C510	1-163-237-11	CERAMIC CHIP	27PF	5%		50V
C361	1-163-038-11	CERAMIC CHIP	0.1uF		25V		C511	1-162-964-11	CERAMIC CHIP	0.001uF	10%		50V
							C512	1-107-725-11	CERAMIC CHIP	0.1uF	10%		16V
C362	1-124-261-00	ELECT	10uF	20%	50V	(C8500R)	C513	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C362	1-124-589-11	ELECT	47uF	20%	16V	(C8500X)	C514	1-163-237-11	CERAMIC CHIP	27PF	5%		50V
							C515	1-163-237-11	CERAMIC CHIP	27PF	5%		50V
C363	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V		C516	1-164-156-11	CERAMIC CHIP	0.1uF			25V
C364	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V		C517	1-107-823-11	CERAMIC CHIP	0.47uF	10%		16V
C365	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V		C518	1-107-725-11	CERAMIC CHIP	0.1uF	10%		16V
C366	1-162-927-11	CERAMIC CHIP	100PF	5%	50V		C520	1-163-009-11	CERAMIC CHIP	0.001uF	10%		50V
C367	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C601	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C368	1-104-942-11	ELECT	1uF	20%	50V		C602	1-124-229-00	ELECT	33uF	20%		10V
C369	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V		C603	1-163-021-11	CERAMIC CHIP	0.01uF	10%		50V
C370	1-104-942-11	ELECT	1uF	20%	50V		C604	1-107-725-11	CERAMIC CHIP	0.1uF	10%		16V
C371	1-135-473-21	ELECT	3300uF	20%	16V		C605	1-163-021-11	CERAMIC CHIP	0.01uF	10%		50V
C372	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V		C606	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C373	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(C8500X)	C607	1-163-009-11	CERAMIC CHIP	0.001uF	10%		50V
							C701	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C374	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(C8500X)	C702	1-104-942-11	ELECT	1uF	20%		50V
C375	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(C8500X)	C703	1-163-038-11	CERAMIC CHIP	0.1uF			25V
							C704	1-163-038-11	CERAMIC CHIP	0.1uF			25V
							C705	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C376	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(C8500X)	C706	1-107-826-11	CERAMIC CHIP	0.1uF	10%		16V
							C707	1-162-974-11	CERAMIC CHIP	0.01uF			50V
C377	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(C8500X)							
							C708	1-163-031-11	CERAMIC CHIP	0.01uF			50V
C378	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V	(C8500X)	C709	1-126-154-11	ELECT	47uF	20%		6.3V
							C710	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C379	1-127-573-11	CERAMIC CHIP	1uF	10%	16V		C711	1-107-725-11	CERAMIC CHIP	0.1uF	10%		16V
C380	1-127-573-11	CERAMIC CHIP	1uF	10%	16V	(C8500X)	C712	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C381	1-163-038-11	CERAMIC CHIP	0.1uF		25V		C713	1-163-038-11	CERAMIC CHIP	0.1uF			25V
C382	1-163-038-11	CERAMIC CHIP	0.1uF		25V		C714	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C383	1-163-038-11	CERAMIC CHIP	0.1uF		25V		C715	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C384	1-163-031-11	CERAMIC CHIP	0.01uF		50V		C751	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
C385	1-163-031-11	CERAMIC CHIP	0.01uF		50V		C752	1-162-970-11	CERAMIC CHIP	0.01uF	10%		25V
							C753	1-162-927-11	CERAMIC CHIP	100PF	5%		50V

**MAIN**

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
C755	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	D604	8-719-057-80	DIODE MA8180-M-TX (C8500R)	
C756	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	D604	8-719-071-25	DIODE HZU18B2TRF (C8500X)	
C757	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	D605	8-719-073-01	DIODE MA111-TX	
C759	1-162-927-11	CERAMIC CHIP 100PF 5%	50V	D606	8-719-057-80	DIODE MA8180-M-TX (C8500R)	
C901	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V	D606	8-719-071-25	DIODE HZU18B2TRF (C8500X)	
C902	1-104-942-11	ELECT 1uF 20%	50V	D607	8-719-977-12	DIODE MA8068-M-TX	
< CONNECTOR/JACK >							
CN101	1-774-701-11	PIN, CONNECTOR 16P		D608	8-719-420-51	DIODE MA729-TX	
CN102	1-764-808-21	JACK (ANT) (FM/AM ANTENNA)		D609	8-719-057-80	DIODE MA8180-M-TX	
* CN301	1-564-506-11	PLUG, CONNECTOR 3P		D610	8-719-073-01	DIODE MA111-TX	
CN302	1-774-700-11	JACK, PIN 6P		D611	8-719-073-01	DIODE MA111-TX	
		(BUS AUDIO IN, AUDIO OUT REAR/FRONT)		D612	8-719-064-08	DIODE HZU6.8B2TRF (C8500X)	
CN401	1-764-617-12	PIN, CONNECTOR (PC BOARD) 30P		D612	8-719-977-12	DIODE MA8068-M-TX (C8500R)	
CN601	1-580-907-31	PLUG, CONNECTOR (BUS CONTROL IN)		D613	8-719-064-08	DIODE HZU6.8B2TRF (C8500X)	
CN701	1-770-408-11	CONNECTOR, BOARD TO BOARD 14P		D613	8-719-977-12	DIODE MA8068-M-TX (C8500R)	
				D614	8-719-073-01	DIODE MA111-TX	
< DIODE >							
D101	8-719-420-51	DIODE MA729-TX		D701	8-719-400-20	DIODE MA152WA-TX	
D102	8-719-422-29	DIODE MA8047-L-TX		D702	8-719-073-01	DIODE MA111-TX	
D103	8-719-060-81	DIODE MA735-TX		D703	8-719-801-78	DIODE MA152WK-TX	
D104	8-719-801-78	DIODE MA152WK-TX		D751	8-719-423-32	DIODE MA8120-M-TX	
D105	8-719-420-14	DIODE MA8082-M (TX)		D752	8-719-422-64	DIODE MA8062-M-TX	
D106	8-719-060-81	DIODE MA735-TX		D753	8-719-105-99	DIODE RD6.2M-B1	
D107	8-719-422-62	DIODE MA8062-L-TX		D754	8-719-423-32	DIODE MA8120-M-TX	
D108	8-719-422-86	DIODE MA8082-L-TX		D755	8-719-423-32	DIODE MA8120-M-TX	
D109	8-719-977-12	DIODE MA8068-M-TX		D756	8-719-4105-99	DIODE RD6.2M-B1	
D201	8-719-422-41	DIODE MA8051-L-TX		D757	8-719-105-99	DIODE RD6.2M-B1	
D203	8-719-800-76	DIODE MA153-TX (C8500R)		D758	8-719-423-32	DIODE MA8120-M-TX	
D204	8-719-420-90	DIODE MA8051-M-TX (C8500R)		D759	8-719-105-99	DIODE RD6.2M-B1	
D205	8-719-073-01	DIODE MA111-TX		D760	8-719-105-99	DIODE RD6.2M-B1	
D301	8-719-105-99	DIODE RD6.2M-B1		D761	8-719-423-32	DIODE MA8120-M-TX	
D302	8-719-073-01	DIODE MA111-TX		D762	8-719-423-32	DIODE MA8120-M-TX	
< FERRITE BEAD >							
D352	8-719-422-89	DIODE MA8082-H-TX		FB201	1-500-245-11	FERRITE BEAD INDUCTOR CHIP (C8500R)	
D353	8-719-801-78	DIODE MA152WK-TX		< IC >			
D354	8-719-801-78	DIODE MA152WK-TX		IC201	8-759-492-59	IC SAA6588T/V2-118 (C8500R)	
D355	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC202	8-759-711-82	IC NJM4580E (T1) (C8500R)	
D355	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC301	8-759-653-27	IC TDA7402TR	
D356	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC302	8-759-521-35	IC TL5001CDR	
D356	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC303	8-759-593-97	IC NJM2160AM-TE2 (C8500X)	
D357	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC304	8-759-593-97	IC NJM2160AM-TE2 (C8500X)	
D357	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC305	8-759-593-97	IC NJM2160AM-TE2 (C8500X)	
D358	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC351	8-759-660-96	IC TDA7560 (C8500X)	
D358	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC351	8-759-663-88	IC TA8268H (C8500R)	
D359	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC502	8-759-670-67	IC MB90574BPMT-G-264-BND (C8500R)	
D359	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC502	8-759-686-86	IC MB90574BPMT-G-290-BND (C8500X)	
D360	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC503	8-759-581-75	IC XC61AN4102MR	
D360	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC504	8-759-495-76	IC RN5VD33AA-TL	
D361	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		IC601	8-759-449-89	IC BA8270F-E2	
D361	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		IC701	8-759-686-87	IC HD643255A25F	
D362	8-719-079-66	DIODE 1ZB22 (TP5.SONY) (C8500R)		< JACK >			
D362	8-719-200-82	DIODE 11ES2-TB5 (C8500X)		J651	1-566-822-41	JACK (REMOTE IN)	
D363	8-719-049-38	DIODE 1N5404TU		< COIL >			
D501	8-719-420-90	DIODE MA8051-M-TX (C8500R)		L101	1-469-673-21	INDUCTOR 100uH	
D502	8-719-073-01	DIODE MA111-TX					
D601	8-719-073-01	DIODE MA111-TX					
D602	8-719-073-01	DIODE MA111-TX					
D603	8-719-057-80	DIODE MA8180-M-TX					

Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
L102	1-469-674-21	INDUCTOR	220uH	Q901	8-729-106-60	TRANSISTOR	2SB1132-T101-QR
L103	1-469-675-21	INDUCTOR	100uH	Q902	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R
L104	1-414-185-51	INDUCTOR	22uH				
L201	1-414-185-51	INDUCTOR	22uH	Q903	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R
L301	1-414-179-51	INDUCTOR	2.2uH			< RESISTOR >	
L351	1-419-476-11	COIL, CHOKE	250uH	R101	1-216-839-11	METAL CHIP	33K 5% 1/16W
L402	1-469-673-21	INDUCTOR	100uH	R102	1-218-879-11	METAL CHIP	22K 0.5% 1/16W
L701	1-414-856-51	INDUCTOR	10uH	R103	1-216-845-11	METAL CHIP	100K 5% 1/16W
		< TRANSISTOR >		R104	1-218-903-11	METAL CHIP	220K 0.5% 1/16W
Q101	8-729-421-19	TRANSISTOR	UN2213-TX	R105	1-218-832-11	METAL CHIP	8.2K 5% 1/16W
Q102	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R106	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q103	8-729-026-49	TRANSISTOR	2SA1037AK-T146-R	R107	1-216-839-11	METAL CHIP	33K 5% 1/16W
Q104	8-729-019-03	TRANSISTOR	2SB1202FA-T-TL	R108	1-216-849-11	METAL CHIP	220K 5% 1/16W
Q105	8-729-019-03	TRANSISTOR	2SB1202FA-T-TL	R109	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q106	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R110	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q107	8-729-019-03	TRANSISTOR	2SB1202FA-T-TL	R111	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q108	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R112	1-216-057-00	METAL CHIP	2.2K 5% 1/10W
Q109	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R113	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q110	8-729-040-17	TRANSISTOR	2SD2164-K	R114	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q111	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R115	1-216-041-00	METAL CHIP	470 5% 1/10W
Q112	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R116	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q113	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R117	1-216-037-00	METAL CHIP	330 5% 1/10W
Q201	8-729-920-85	TRANSISTOR	2SD1664-T101-QR	R118	1-216-033-00	METAL CHIP	220 5% 1/10W
Q203	8-729-106-60	TRANSISTOR	2SB1132-T101-QR	R119	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q204	8-729-421-22	TRANSISTOR	UN2211-TX	R120	1-216-817-11	METAL CHIP	470 5% 1/16W
Q208	8-729-421-22	TRANSISTOR	UN2211-TX (C8500R)	R121	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q209	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R122	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q351	8-729-421-22	TRANSISTOR	UN2211-TX	R123	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
Q352	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R124	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q353	8-729-424-59	TRANSISTOR	UN2212-TX	R125	1-216-308-00	METAL CHIP	4.7 5% 1/10W
Q354	8-729-424-18	TRANSISTOR	UN2113-TX	R126	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q355	8-729-424-59	TRANSISTOR	UN2212-TX	R127	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q356	8-729-021-95	TRANSISTOR	RN1441-A (TE85L)	R128	1-216-839-11	METAL CHIP	33K 5% 1/16W
Q357	8-729-021-95	TRANSISTOR	RN1441-A (TE85L)	R129	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q358	8-729-021-95	TRANSISTOR	RN1441-A (TE85L)	R130	1-216-077-00	RES, CHIP	15K 5% 1/10W
Q359	8-729-021-95	TRANSISTOR	RN1441-A (TE85L)	R131	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q360	8-729-021-95	TRANSISTOR	RN1441-A (TE85L)	R132	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q361	8-729-021-95	TRANSISTOR	RN1441-A (TE85L)	R133	1-216-841-11	METAL CHIP	47K 5% 1/16W
Q363	8-729-421-22	TRANSISTOR	UN2211-TX	R134	1-216-845-11	METAL CHIP	100K 5% 1/16W
Q364	8-729-421-22	TRANSISTOR	UN2211-TX	R136	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q365	8-729-821-63	TRANSISTOR	2SB1203T-TL	R137	1-216-833-11	METAL CHIP	10K 5% 1/16W
Q366	8-729-821-63	TRANSISTOR	2SB1203T-TL	R138	1-216-295-11	SHORT	0
Q401	8-729-019-03	TRANSISTOR	2SB1202FA-T-TL	R139	1-216-001-00	METAL CHIP	10 5% 1/10W
Q404	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R140	1-216-041-00	METAL CHIP	470 5% 1/10W
Q405	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R141	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q406	8-729-019-03	TRANSISTOR	2SB1202FA-T-TL	R142	1-216-049-11	RES, CHIP	1K 5% 1/10W
Q407	8-729-421-22	TRANSISTOR	UN2211-TX	R201	1-216-853-11	METAL CHIP	470K 5% 1/16W (C8500R)
Q601	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R202	1-216-821-11	METAL CHIP	1K 5% 1/16W (C8500R)
Q602	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R	R203	1-216-832-11	METAL CHIP	8.2K 5% 1/16W (C8500R)
Q603	8-729-424-18	TRANSISTOR	UN2113-TX	R204	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500R)
Q604	8-729-421-22	TRANSISTOR	UN2211-TX	R205	1-216-825-11	METAL CHIP	2.2K 5% 1/16W
Q605	8-729-424-18	TRANSISTOR	UN2113-TX	R206	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500R)
Q701	8-729-424-08	TRANSISTOR	UN2111-TX	R207	1-216-001-00	METAL CHIP	10 5% 1/10W
Q702	8-729-424-08	TRANSISTOR	UN2111-TX				
Q703	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R				
Q704	8-729-019-03	TRANSISTOR	2SB1202FA-T-TL				
Q705	8-729-120-28	TRANSISTOR	2SC2412K-T-146-R				

**MAIN**

<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>			<u>Remark</u>
R208	1-216-001-00	METAL CHIP	10	5%	1/10W (C8500R)	R320	1-216-081-00	METAL CHIP	22K	5%	1/10W (C8500X)
R209	1-216-025-11	RES, CHIP	100	5%	1/10W	R321	1-216-081-00	METAL CHIP	22K	5%	1/10W (C8500X)
R210	1-216-025-11	RES, CHIP	100	5%	1/10W	R322	1-216-081-00	METAL CHIP	22K	5%	1/10W (C8500X)
R211	1-216-025-11	RES, CHIP	100	5%	1/10W (C8500R)	R323	1-216-081-00	METAL CHIP	22K	5%	1/10W (C8500X)
R212	1-216-025-11	RES, CHIP	100	5%	1/10W (C8500R)	R324	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
R213	1-216-864-11	METAL CHIP	0	5%	1/16W	R325	1-216-085-00	METAL CHIP	33K	5%	1/10W (C8500X)
R214	1-216-001-00	METAL CHIP	10	5%	1/10W	R326	1-216-085-00	METAL CHIP	33K	5%	1/10W (C8500X)
R215	1-216-841-11	METAL CHIP	47K	5%	1/16W	R327	1-216-085-00	METAL CHIP	33K	5%	1/10W (C8500X)
R216	1-216-817-11	METAL CHIP	470	5%	1/16W	R328	1-216-085-00	METAL CHIP	33K	5%	1/10W (C8500X)
R217	1-216-839-11	METAL CHIP	33K	5%	1/16W	R329	1-216-085-00	METAL CHIP	33K	5%	1/10W (C8500X)
R218	1-216-829-11	METAL CHIP	4.7K	5%	1/16W	R330	1-216-085-00	METAL CHIP	33K	5%	1/10W (C8500X)
R219	1-216-833-11	METAL CHIP	10K	5%	1/16W	R331	1-216-295-11	SHORT	0 (C8500R)		
R221	1-216-073-00	METAL CHIP	10K	5%	1/10W (C8500R)	R332	1-216-295-11	SHORT	0 (C8500R)		
R222	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (C8500R)	R333	1-216-295-11	SHORT	0 (C8500R)		
R223	1-216-073-00	METAL CHIP	10K	5%	1/10W (C8500R)	R334	1-216-295-11	SHORT	0 (C8500R)		
R224	1-216-829-11	METAL CHIP	4.7K	5%	1/16W (C8500R)	R335	1-216-295-11	SHORT	0 (C8500R)		
R226	1-216-845-11	METAL CHIP	100K	5%	1/16W (C8500R)	R336	1-216-295-11	SHORT	0 (C8500R)		
R227	1-216-825-11	METAL CHIP	2.2K	5%	1/16W (C8500R)	R337	1-216-089-11	RES, CHIP	47K	5%	1/10W (C8500X)
R228	1-216-809-11	METAL CHIP	100	5%	1/16W (C8500R)	R338	1-216-833-11	METAL CHIP	10K	5%	1/16W
R230	1-216-121-11	RES, CHIP	1M	5%	1/10W (C8500R)	R339	1-216-089-11	RES, CHIP	47K	5%	1/10W
R231	1-216-809-11	METAL CHIP	100	5%	1/16W (C8500R)	R340	1-216-073-00	METAL CHIP	10K	5%	1/10W
R233	1-216-825-11	METAL CHIP	2.2K	5%	1/16W	R341	1-216-864-11	METAL CHIP	0	5%	1/16W
R234	1-216-295-11	SHORT	0			R343	1-216-813-11	METAL CHIP	220	5%	1/16W
R236	1-216-295-11	SHORT	0			R344	1-216-813-11	METAL CHIP	220	5%	1/16W
R237	1-216-295-11	SHORT	0			R345	1-216-813-11	METAL CHIP	220	5%	1/16W
R238	1-216-295-11	SHORT	0 (C8500R)			R346	1-216-813-11	METAL CHIP	220	5%	1/16W
R301	1-216-864-11	METAL CHIP	0	5%	1/16W (C8500X)	R347	1-216-813-11	METAL CHIP	220	5%	1/16W
R302	1-216-025-11	RES, CHIP	100	5%	1/10W	R348	1-216-813-11	METAL CHIP	220	5%	1/16W
R305	1-216-809-11	METAL CHIP	100	5%	1/16W (C8500R)	R349	1-216-821-11	METAL CHIP	1K	5%	1/16W (C8500R)
R305	1-216-817-11	METAL CHIP	470	5%	1/16W (C8500X)	R349	1-216-864-11	METAL CHIP	0	5%	1/16W (C8500X)
R306	1-216-841-11	METAL CHIP	47K	5%	1/16W	R350	1-216-073-00	METAL CHIP	10K	5%	1/10W (C8500X)
R307	1-216-809-11	METAL CHIP	100	5%	1/16W (C8500R)	R350	1-216-295-11	SHORT	0 (C8500R)		
R307	1-216-817-11	METAL CHIP	470	5%	1/16W (C8500X)	R351	1-216-837-11	METAL CHIP	22K	5%	1/16W
R310	1-216-809-11	METAL CHIP	100	5%	1/16W	R352	1-216-837-11	METAL CHIP	22K	5%	1/16W
R311	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R353	1-216-837-11	METAL CHIP	22K	5%	1/16W
R312	1-216-073-00	METAL CHIP	10K	5%	1/10W	R354	1-216-837-11	METAL CHIP	22K	5%	1/16W
R313	1-216-809-11	METAL CHIP	100	5%	1/16W	R355	1-216-081-00	METAL CHIP	22K	5%	1/10W
R314	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R356	1-216-081-00	METAL CHIP	22K	5%	1/10W
R315	1-216-073-00	METAL CHIP	10K	5%	1/10W	R357	1-216-841-11	METAL CHIP	47K	5%	1/16W
R317	1-216-057-00	METAL CHIP	2.2K	5%	1/10W	R358	1-216-841-11	METAL CHIP	47K	5%	1/16W
R318	1-216-081-00	METAL CHIP	22K	5%	1/10W (C8500X)	R359	1-216-821-11	METAL CHIP	1K	5%	1/16W
R319	1-216-081-00	METAL CHIP	22K	5%	1/10W (C8500X)	R360	1-216-864-11	METAL CHIP	0	5%	1/16W
						R361	1-216-821-11	METAL CHIP	1K	5%	1/16W
						R363	1-216-809-11	METAL CHIP	100	5%	1/16W
						R364	1-216-065-00	RES, CHIP	4.7K	5%	1/10W
						R365	1-216-065-00	RES, CHIP	4.7K	5%	1/10W



<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>	<u>Ref. No.</u>	<u>Part No.</u>	<u>Description</u>	<u>Remark</u>
R366	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R409	1-216-073-00	METAL CHIP	10K 5% 1/10W
R367	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R412	1-216-829-11	METAL CHIP	4.7K 5% 1/16W
R368	1-216-222-00	RES, CHIP	10K 5% 1/8W	R414	1-216-049-11	RES, CHIP	1K 5% 1/10W
R369	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R415	1-216-049-11	RES, CHIP	1K 5% 1/10W
R370	1-216-065-00	RES, CHIP	4.7K 5% 1/10W	R416	1-216-065-00	RES, CHIP	4.7K 5% 1/10W
R371	1-216-833-11	METAL CHIP	10K 5% 1/16W	R417	1-216-049-11	RES, CHIP	1K 5% 1/10W
R372	1-216-833-11	METAL CHIP	10K 5% 1/16W	R418	1-216-041-00	METAL CHIP	470 5% 1/10W
R373	1-216-222-00	RES, CHIP	10K 5% 1/8W	R419	1-216-820-11	METAL CHIP	820 5% 1/16W
R374	1-216-222-00	RES, CHIP	10K 5% 1/8W	R420	1-216-864-11	METAL CHIP	0 5% 1/16W
R375	1-216-864-11	METAL CHIP	0 5% 1/16W	R421	1-216-864-11	METAL CHIP	0 5% 1/16W
R376	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500X)	R501	1-216-081-00	METAL CHIP	22K 5% 1/10W
R377	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500X)	R502	1-216-837-11	METAL CHIP	22K 5% 1/16W (C8500R: TYPE C)
R378	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500X)	R502	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500R: TYPE A, C8500X)
R379	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500X)	R503	1-216-833-11	METAL CHIP	10K 5% 1/16W (C8500R: TYPE B)
R380	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500X)	R503	1-216-841-11	METAL CHIP	47K 5% 1/16W (C8500R: TYPE C)
R381	1-216-001-00	METAL CHIP	10 5% 1/10W (C8500X)	R504	1-216-025-11	RES, CHIP	100 5% 1/10W
R382	1-216-041-00	METAL CHIP	470 5% 1/10W (C8500X)	R505	1-216-295-11	SHORT	0 (C8500R)
R383	1-216-041-00	METAL CHIP	470 5% 1/10W (C8500X)	R506	1-216-049-11	RES, CHIP	1K 5% 1/10W
R384	1-216-041-00	METAL CHIP	470 5% 1/10W (C8500X)	R507	1-216-049-11	RES, CHIP	1K 5% 1/10W
R385	1-216-041-00	METAL CHIP	470 5% 1/10W (C8500X)	R508	1-216-049-11	RES, CHIP	1K 5% 1/10W
R386	1-216-041-00	METAL CHIP	470 5% 1/10W (C8500X)	R509	1-216-049-11	RES, CHIP	1K 5% 1/10W
R387	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R510	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500R)
R387	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500X)	R511	1-216-837-11	METAL CHIP	22K 5% 1/16W (C8500X)
R388	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R512	1-216-821-11	METAL CHIP	1K 5% 1/16W
R388	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500X)	R513	1-216-049-11	RES, CHIP	1K 5% 1/10W
R389	1-216-809-11	METAL CHIP	100 5% 1/16W (C8500R)	R514	1-216-049-11	RES, CHIP	1K 5% 1/10W (C8500R)
R389	1-216-817-11	METAL CHIP	470 5% 1/16W (C8500X)	R515	1-216-864-11	METAL CHIP	0 5% 1/16W
R390	1-216-833-11	METAL CHIP	10K 5% 1/16W (C8500R)	R516	1-216-845-11	METAL CHIP	100K 5% 1/16W
R390	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500X)	R517	1-216-049-11	RES, CHIP	1K 5% 1/10W
R391	1-216-073-00	METAL CHIP	10K 5% 1/10W (C8500R)	R518	1-216-833-11	METAL CHIP	10K 5% 1/16W
R391	1-216-295-11	SHORT	0 (C8500X)	R519	1-216-809-11	METAL CHIP	100 5% 1/16W
R392	1-216-833-11	METAL CHIP	10K 5% 1/16W (C8500R)	R521	1-216-809-11	METAL CHIP	100 5% 1/16W
R392	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500X)	R522	1-216-833-11	METAL CHIP	10K 5% 1/16W
R393	1-216-833-11	METAL CHIP	10K 5% 1/16W (C8500R)	R523	1-216-821-11	METAL CHIP	1K 5% 1/16W
R393	1-216-864-11	METAL CHIP	0 5% 1/16W (C8500X)	R524	1-216-821-11	METAL CHIP	1K 5% 1/16W
R398	1-216-041-00	METAL CHIP	470 5% 1/10W (C8500X)	R526	1-216-821-11	METAL CHIP	1K 5% 1/16W
R408	1-216-822-11	METAL CHIP	1.2K 5% 1/16W	R527	1-216-815-11	METAL CHIP	330 5% 1/16W
				R528	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R529	1-216-049-11	RES, CHIP	1K 5% 1/10W
				R530	1-216-845-11	METAL CHIP	100K 5% 1/16W
				R531	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R532	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R533	1-216-809-11	METAL CHIP	100 5% 1/16W
				R534	1-216-845-11	METAL CHIP	100K 5% 1/16W
				R535	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R536	1-216-821-11	METAL CHIP	1K 5% 1/16W
				R537	1-216-845-11	METAL CHIP	100K 5% 1/16W
				R538	1-216-049-11	RES, CHIP	1K 5% 1/10W
				R540	1-216-069-00	METAL CHIP	6.8K 5% 1/10W
				R541	1-216-081-00	METAL CHIP	22K 5% 1/10W (C8500R)
				R542	1-216-833-11	METAL CHIP	10K 5% 1/16W

# MDX-C8500R/C8500X

MAIN

SUB

Ref. No.	Part No.	Description	Quantity	Power	Remark
R543	1-216-097-11	RES, CHIP	100K	5%	1/10W
R544	1-216-845-11	METAL CHIP	100K	5%	1/16W
R546	1-216-081-00	METAL CHIP	22K	5%	1/10W
R547	1-216-837-11	METAL CHIP	22K	5%	1/16W
					(C8500X)
R548	1-216-845-11	METAL CHIP	100K	5%	1/16W
R549	1-216-049-11	RES, CHIP	1K	5%	1/10W
R550	1-216-845-11	METAL CHIP	100K	5%	1/16W
R551	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R601	1-216-089-11	RES, CHIP	47K	5%	1/10W
R602	1-216-845-11	METAL CHIP	100K	5%	1/16W
R603	1-216-025-11	RES, CHIP	100	5%	1/10W
R604	1-216-295-11	SHORT	0		
R605	1-216-025-11	RES, CHIP	100	5%	1/10W
R606	1-216-097-11	RES, CHIP	100K	5%	1/10W
R607	1-216-845-11	METAL CHIP	100K	5%	1/16W
R608	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R609	1-216-833-11	METAL CHIP	10K	5%	1/16W
R610	1-216-025-11	RES, CHIP	100	5%	1/10W
R611	1-216-841-11	METAL CHIP	47K	5%	1/16W
R612	1-216-089-11	RES, CHIP	47K	5%	1/10W
R614	1-216-298-00	METAL CHIP	2.2	5%	1/10W
R615	1-216-073-00	METAL CHIP	10K	5%	1/10W
R616	1-208-806-11	METAL CHIP	10K	0.5%	1/10W
R617	1-216-025-11	RES, CHIP	100	5%	1/10W
R618	1-216-025-11	RES, CHIP	100	5%	1/10W
R701	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R702	1-218-871-11	METAL CHIP	10K	0.5%	1/16W
R703	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R704	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R705	1-216-833-11	METAL CHIP	10K	5%	1/16W
R706	1-216-041-00	METAL CHIP	470	5%	1/10W
R708	1-216-821-11	METAL CHIP	1K	5%	1/16W
R709	1-216-821-11	METAL CHIP	1K	5%	1/16W
R710	1-216-821-11	METAL CHIP	1K	5%	1/16W
R711	1-216-821-11	METAL CHIP	1K	5%	1/16W
R712	1-216-809-11	METAL CHIP	100	5%	1/16W
R713	1-216-295-11	SHORT	0		
R714	1-216-049-11	RES, CHIP	1K	5%	1/10W
R715	1-216-049-11	RES, CHIP	1K	5%	1/10W
R716	1-216-845-11	METAL CHIP	100K	5%	1/16W
R717	1-216-864-11	METAL CHIP	0	5%	1/16W
R718	1-216-025-11	RES, CHIP	100	5%	1/10W
R719	1-216-821-11	METAL CHIP	1K	5%	1/16W
R720	1-216-049-11	RES, CHIP	1K	5%	1/10W
R721	1-216-025-11	RES, CHIP	100	5%	1/10W
R722	1-216-845-11	METAL CHIP	100K	5%	1/16W
R723	1-216-025-11	RES, CHIP	100	5%	1/10W
R724	1-216-809-11	METAL CHIP	100	5%	1/16W
R725	1-216-845-11	METAL CHIP	100K	5%	1/16W
R726	1-216-821-11	METAL CHIP	1K	5%	1/16W
R727	1-216-809-11	METAL CHIP	100	5%	1/16W
R728	1-216-809-11	METAL CHIP	100	5%	1/16W
R729	1-216-821-11	METAL CHIP	1K	5%	1/16W
R731	1-216-049-11	RES, CHIP	1K	5%	1/10W
R732	1-216-819-11	METAL CHIP	680	5%	1/16W
R733	1-216-845-11	METAL CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description	Quantity	Power	Remark
R734	1-216-845-11	METAL CHIP	100K	5%	1/16W
R735	1-216-864-11	METAL CHIP	0	5%	1/16W
R736	1-216-025-11	RES, CHIP	100	5%	1/10W
R737	1-216-025-11	RES, CHIP	100	5%	1/10W
R738	1-216-025-11	RES, CHIP	100	5%	1/10W
R739	1-216-845-11	METAL CHIP	100K	5%	1/16W
R740	1-216-845-11	METAL CHIP	100K	5%	1/16W
R741	1-216-845-11	METAL CHIP	100K	5%	1/16W
R742	1-216-821-11	METAL CHIP	1K	5%	1/16W
R743	1-216-864-11	METAL CHIP	0	5%	1/16W
R901	1-216-817-11	METAL CHIP	470	5%	1/16W
R902	1-216-821-11	METAL CHIP	1K	5%	1/16W
R903	1-216-821-11	METAL CHIP	1K	5%	1/16W
R904	1-216-833-11	METAL CHIP	10K	5%	1/16W
R905	1-216-821-11	METAL CHIP	1K	5%	1/16W
		< SWITCH >			
S101	1-692-431-21	SWITCH, TACTILE (RESET)			
S102	1-771-540-11	SWITCH, PUSH (1 KEY) (NOSE DETECT)			
		< THERMISTOR >			
TH101	1-801-792-21	THERMISTOR, POSITIVE			
TH102	1-810-940-11	THERMISTOR, POSITIVE			
TH103	1-810-940-11	THERMISTOR, POSITIVE			
		< TUNER UNIT >			
TUX201	A-3320-738-A	FM/AM TUNER UNIT (TUX-020)			
		< VIBRATOR >			
X101	1-767-853-21	VIBRATOR, CRYSTAL (4.332MHz) (C8500R)			
X103	1-567-098-41	VIBRATOR, CRYSTAL (32.768kHz)			
X104	1-767-993-41	VIBRATOR, CRYSTAL (3.68MHz)			
X105	1-781-822-21	VIBRATOR, CERAMIC (18.432MHz)			
*****					
*	1-677-865-12	SUB BOARD			
		*****			
*	3-039-443-11	SHEET (CONNECTOR)			
		< CONNECTOR >			
CN751	1-794-064-11	SOCKET, CONNECTOR 14P			
CN752	1-770-736-21	SOCKET, CONNECTOR 14P			
		< LED >			
LED751	8-719-077-75	LED BR1101F-TR (MD DISC SLOT) (C8500X)			
LED751	8-719-077-78	LED BG1101F-TR (MD DISC SLOT) (C8500R)			
		< SWITCH >			
LSW751	1-771-609-11	SWITCH, TACTILE (WITH LED) (▲) (C8500R)			
LSW751	1-771-883-11	SWITCH, TACTILE (WITH LED) (▲) (C8500X)			
		< RESISTOR >			
R754	1-216-186-00	RES, CHIP	330	5%	1/8W
					(C8500R)
R754	1-216-194-00	METAL CHIP	680	5%	1/8W
					(C8500X)

MEMO

