

# MDX-C6400R/C6500R/C6500RX

## SERVICE MANUAL

Ver 1.2 2001.12

AEP Model  
MDX-C6400R/C6500R/C6500RX

UK Model  
MDX-C6500R/C6500RX



Photo: MDX-C6500R

|                                    |              |
|------------------------------------|--------------|
| Model Name Using Similar Mechanism | NEW          |
| Base Mechanism Type                | MG-164NZ-138 |
| Optical Pick-up Name               | KMS-241C     |

### SPECIFICATIONS

#### MD player section

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

#### Tuner section

|                              |                                 |
|------------------------------|---------------------------------|
| <b>FM</b>                    |                                 |
| Tuning range                 | 87.5 – 108.0 MHz                |
| Aerial terminal              | External aerial 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),<br>72 dB (mono) |
| Harmonic distortion at 1 kHz | 0.6 % (stereo),<br>0.3 % (mono) |
| Separation                   | 35 dB at 1 kHz                  |
| Frequency response           | 30 – 15,000 Hz                  |

#### MW/LW

|                        |  |
|------------------------|--|
| Tuning range           | MW: 531 – 1,602 kHz<br>LW: 153 – 279 kHz |
| Aerial terminal        | External aerial connector                |
| Intermediate frequency | 10.7 MHz/450 kHz                         |
| Sensitivity            | MW: 30 $\mu$ V<br>LW: 40 $\mu$ V         |

#### Power amplifier section

|                      |   |
|----------------------|---|
| Outputs              | Speaker outputs<br>(sure seal connectors) |
| Speaker impedance    | 4 – 8 ohms                                |
| Maximum power output | 50 W $\times$ 4 (at 4 ohms)               |

#### General

|                      |  |
|----------------------|--|
| Outputs              | Audio outputs*1<br>Power aerial relay control lead<br>Power amplifier control lead<br>Telephone ATT control lead*2 |
| Tone controls        | Bass $\pm$ 9 dB at 100 Hz<br>Treble $\pm$ 9 dB at 10 kHz   |
| Power requirements   | 12 V DC car battery<br>(negative ground)   |
| Dimensions           | Approx. 178 $\times$ 50 $\times$ 183 mm<br>(w/h/d)   |
| Mounting dimensions  | Approx. 182 $\times$ 53 $\times$ 162 mm<br>(w/h/d)   |
| Mass                 | Approx. 1.2 kg   |
| Supplied accessories | Parts for installation and connections (1 set)<br>Front panel case (1)   |

\*1 Equipped with front and rear outputs:  
MDX-C6500RX/C6500R only  
Equipped with rear outputs: MDX-C6400R  
\*2 MDX-C6500RX/C6500R only

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Design and specifications are subject to change without notice.

## FM/MW/LW MINIDISC PLAYER

9-870-051-13  
2001L0500-1  
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**Sony Corporation**  
e Vehicle Company  
Published by Sony Engineering Corporation

# SONY®

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### 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.

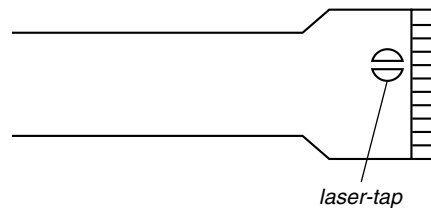
The flexible board is easily damaged and should be handled with care.

### 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.

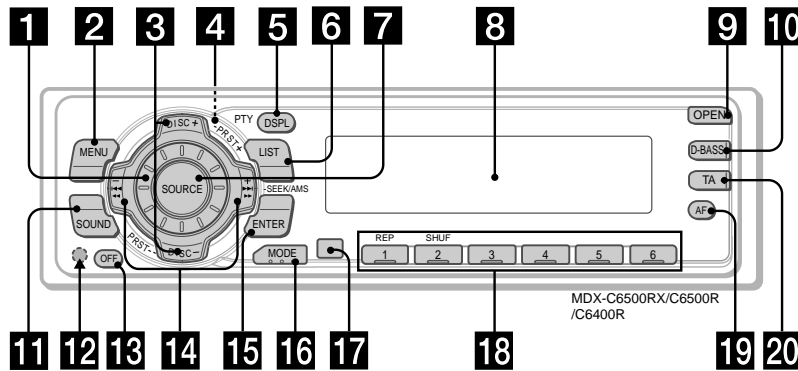
### SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK  $\triangle$  OR DOTTED LINE WITH MARK  $\triangle$  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.

# SECTION 1 GENERAL

This section is extracted from instruction manual.

## Location of controls



Refer to the pages listed for details.

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

\* **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

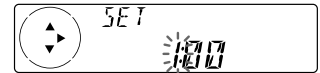
The clock uses a 24-hour digital indication.

Example: To set the clock to 10:08

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

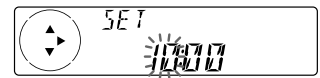


- 1** Press (ENTER).



The hour indication flashes.

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



- 3** Press the (+) 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 play mode.

*Tip*  
You can set the clock automatically with the RDS feature (see page 17).

*Note*  
In the initial setting, the clock indication appears while the unit is turned off.  
When the D.INFO mode is set to ON, the time is always displayed (page 24).

# 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

Adjust the mounting angle to less than 20°.

## Precauciones

- Elija cuidadosamente el lugar de montaje de forma que la unidad no dificulte 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

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 monteringsföremålen för att vara säkert på att bilstereon monteras på ett säkert och korrekt sätt.

## Tillåten monteringsvinkel

Monteringsvinkeln får inte vara större än 20 grader.

## 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

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 высокой температуре, 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

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 to 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, cerriérese 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 púise 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 hållet (A) på frontpanelen träffs över 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

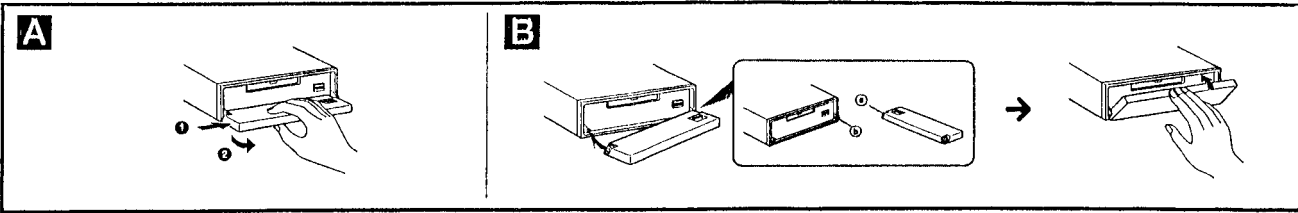
Перед установкой магнитолы снимите с нее переднюю панель.

### A Снятие панели

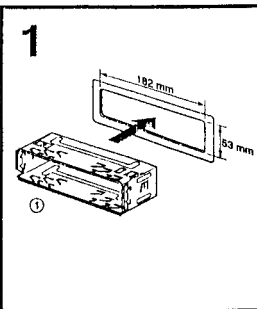
Прежде чем снимать переднюю панель, обязательно отключите магнитолу, нажав клавишу (OFF). Затем нажмите (OPEN), сдвиньте переднюю панель вправо и, потянув за левую часть панели, снимите ее.

### B Установка панели

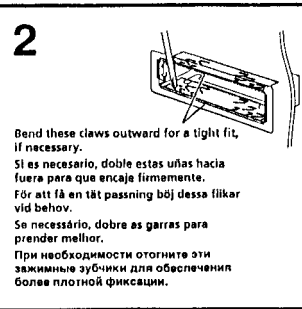
Сначала совместите отверстие (A) на передней панели со штырьком (B) на магнитоле, как это показано на иллюстрации, а затем вдавите в левую часть панели.



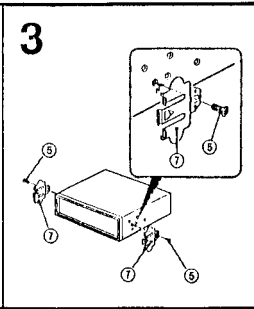
## Installation in the dashboard



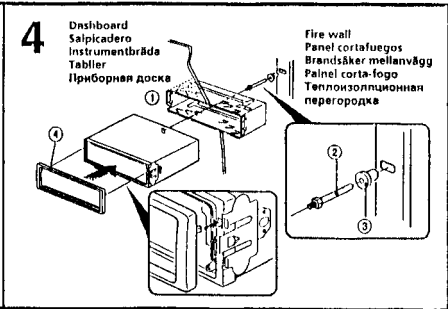
## Instalación en el salpicadero



## Montera på instrumentbrådan



## Instalação no tablier



## Reset button

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

## Botón de reposición

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

## Nullställningsknappen

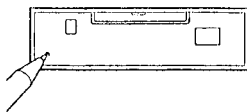
Kom ihåg att använda en pennspets eller något annat spetsigt föremål för att trycka på nullställningsknappen när anslutningen och monteringen är klar.

## 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.



# 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 (C) 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 and power supply 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) to the power terminal of the existing aerial booster. For details, consult your dealer.

### Warning

If you leave a power aerial without a relay box, connecting this unit with the supplied power connecting cord (C) 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.

### 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.

# 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 ralles del asiento, etc.
- Conecte el cable de conexión de alimentación (C) 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 esta 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.

## Notes de ejemplo de conexiones

### Notes sobre los cables de control y de suministro de alimentación

- El conductor (azul) de control de la antena motorizada suministra +12 V CC al encender 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 relé.
- 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 (C) suministrado puede dañar la antena.

### Conexión para protección de la memoria

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

### Notes sobre la conexión de los altavoces

- Antes de conectar los altavoces, desconecte la alimentación de la unidad.
- Utilice altavoces con una impedancia de 4 a 8 ohmios, y con la potencia máxima 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 hiciese, podría dañar tales altavoces. Por lo tanto, cerciórese de conectar altavoces pasivos a estos terminales.

**Advertencia sobre la instalación en un automóvil que no disponga de posición ACC (accesorios) 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.

# Anslutning

## Säkerhetsföreskrifter

- Denna bilsterio är endast avsedd för anslutning till ett negativt jordat, 12 V bilbatteri.
- Vär noga med att inga kablar kläms mellan vågorn skruv eller att de blir klämda mellan rörliga delar som tex. bilsätet.
- Anslut strömkabeln (C) till enheten och högtalarna innan du ansluter den till dess ytter strömanslutning.
- Dras samtliga jordledningar till en och samma jordningspunkt.
- Anslut den gula kabeln till en ledig bilrets med en högre ampere än enheten. Om du seriekopplar enheten till andra stereokomponenter måste den bilrets de kopplas till ha en högre ampere än summan av de enskilda delarnas amperestyrka. Om det inte finns några bilretsar med en så hög amperestyrka som enhetens ska du ansluta enheten direkt till batteriet. Om inga bilretsar finns för anslutning till enheten ska du ansluta enheten till en bilrets med en högre ampere än enhetens styrka så att inga andra skärningar går om enhetens säkring smälter.

## Att observera angående anslutningsexemplen

### Ledningarna för styrning och strömförsörjning

- Motorutrustens styrkabel (blå) leder +12 V DC när du sätter på radion och när du aktiverar någon av funktionerna AF (alternativ frekvens) eller TA (trafikmeddelanden).
- En motorantenn utan styrreläbox kan inte anslutas till denna bilsterio.
- 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 antenneförstärkaren. Den återförstärkaren kan ge dig mer information om detta.

### Varning

Om du har en motorantenn utan reläbox kan antennen skadas om du ansluter enheten med den medföljande strömkabeln (C).

### Anslutning för minnesöad

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

### Att observera angående högtalarnas anslutning

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

### 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 teckenförstär, vilket leder till att batteriet laddas ur.

# 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 entalados 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 (C) ao aparelho e aos altifalantes antes de ligar ao conector de corrente auxiliar.
- Ligue todos os fios de terra a um 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 reberitar os fusíveis respectivos, nenhum outro circuito seja cortado.

## Notas sobre o exemplo de ligação

### Notas sobre os fios de controlo e o cabo de alimentação

- O fio de controlo da antena eléctrica (azul) fornece +12 V CC quando ligar o sintonizador ou quando activar a função AF (Frequência 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 mais informações, consulte o seu agente.

### Atenção

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

### Ligação para alimentação contínua 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 capacidade admissível de potência adequada. Caso contrário, os altifalantes poderão sofrer avarias.
- Não ligue os terminais do sistema de altifalantes ao chassis 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 os altifalantes passivos a estes terminais.

**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.

# Подсоединение

## Предостережение

- Данный автоматизированный предназначен для подключения только к 12-вольтовому аккумулятору постоянного тока с заземлением минус на массу.
- Следите за тем, чтобы не защемить, 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 штурт питания (C) сначала к магнитолы и громкоговорителям, а уже потом - к контактам внешнего источника питания.
- Подведите все проводки заземления к одной и той же точке заземления.
- Подсоедините желтый провод к свободной электроцепи автомобиля с большей силой тока чем та, на которую рассчитан предохранитель магнитолы. Если Вы подсоедините эту магнитолу в сочетании с другими компонентами стереосистемы, сила тока в электроцепи автомобиля, к 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 которую рассчитан предохранитель магнитолы, подсоедините магнитолу напрямую к аккумулятору. В случае если в автомобиле нет свободных электроцепей для подсоединения магнитолы, подсоедините ее к автоэлектроцепи 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

### Примечания к проводкам управления и электропитания

- По (синему) проводу питания внешним с электрическим приподом осуществляется подача постоянного тока напряжением +12 вольт при включении Вами радиоприемника или зарядного контура со столь же высокой силой тока, как та, на которую рассчитан предохранитель магнитолы, подсоедините магнитолу напрямую к аккумулятору. В случае если в автомобиле нет свободных электроцепей для подсоединения магнитолы, подсоедините ее к автоэлектроцепи с силой тока выше того значения, на которое рассчитан предохранитель магнитолы, таким образом, чтобы если он перегорит, другие цепи не прервались.

### Предостережение

Если Вы используете электроприродную антенну без реле, подключение данной магнитолы к существующей приемной цепи питания (C) может привести к повреждению антенны.

Подсоединение для поддержки памяти  
Когда к магнитолы 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 В Ом, обладающие способностью принимать достаточную мощность сигнала. 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 магнитолы какие бы то ни было активные громкоговорители (со встроенными усилителями), поскольку это может привести к повреждению последним.
- Убедитесь в том, что подсоединяемые громкоговорители относятся к пассивному типу.

**Предостережение относительно автарауры, установленной в автомобиле с замком зажигания, в котором не имеет отдельного положения (ACC) для отключения подсоединенной аппаратуры.**  
После выключения двигателя не забывайте нажатие 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.



Connection diagram

Diagrama de conexiones

Kopplingschema

Diagrama de ligações

Схема подсоединения

Equipment used in illustrations (not supplied)

Equipo utilizado en las ilustraciones (no suministrado)

Utrustning som visas i illustrationer (medföljer inte)

Equipamento utilizado nas ilustrações (não fornecido)

Аппаратура, фигурирующая в иллюстрациях (не прилагаются)

Front speaker  
Altavoz delantero  
Främre högtalare  
Altifalante dianteiro  
Передний громкоговоритель

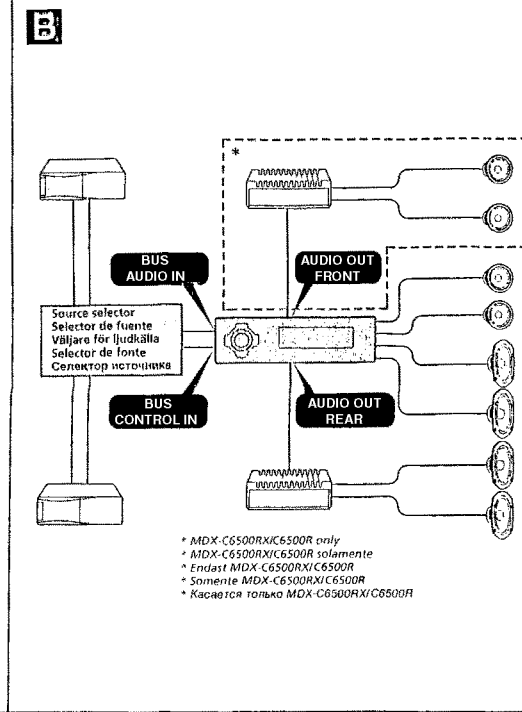
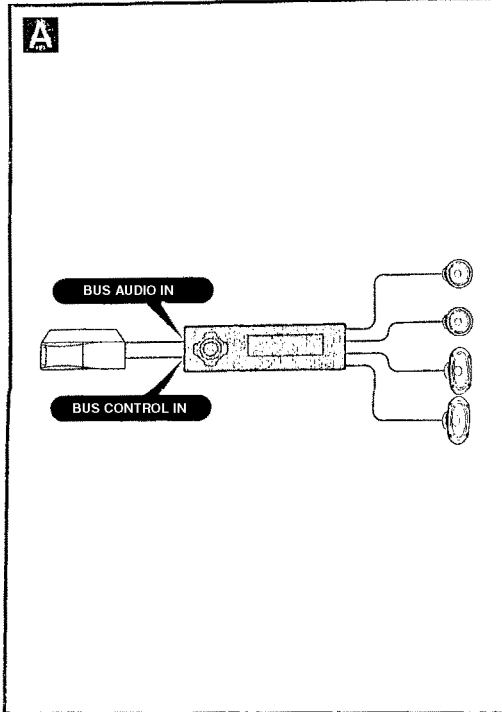
Rear speaker  
Altavoz trasero  
Bakre högtalare  
Altifalante traseiro  
Задний громкоговоритель



Power amplifier  
Amplificador de potencia  
Effektförstärkare  
Amplificador de potência  
Усилитель



CD/MD changer  
Cambiador de CD/MD  
CD/MD-skivväxlare  
Permutador de CD/MD  
Проигрыватель CD/MD



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.

Observera

- För anslutning av två eller flera CD/MD-skivväxlare krävs väjlara XA-C30 (tillval).
- Var noga 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 de 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 подключать магнитофу к усилителю, обязательно подсоедините провод заземления.
- Если Вы используете не встроенный усилитель, а дополнительный усилитель, звуковой сигнал будет отключен.

\* MDX-C6500RXIC6500R only  
\* MDX-C6500RXIC6500R solamente  
\* Endast MDX-C6500RXIC6500R  
\* Somente MDX-C6500RXIC6500R  
\* Касается только MDX-C6500RXIC6500R

**Connection example**

**Note for the aerial connecting**  
If your car aerial is an ISO (International Organisation for Standardisation) type, use the supplied adaptor ⑥ to connect it.  
First connect the car aerial to the supplied adaptor, then connect it to the aerial jack of the master unit.

**RCA pin cord (not supplied)**  
**MDX-C6500RX/C6500RV/C6500R only**

**Ejemplo de conexiones**

**Nota sobre la conexión de la antena**  
Si la antena del automóvil es del tipo ISO (International Organisation for Standardisation), emplee el adaptador suministrado ⑥ 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.

**Cable con clavijas RCA (no suministrado)**  
**MDX-C6500RX/C6500RV/C6500R solamente**

**Anslutningarna enligt exemplet**

**Angående antennanslutning**  
Om motorantennen är av ISO typ (International Organisation for Standardisation), använd den medföljande adapter ⑥ för att ansluta den.  
Anslut först motorantennen till medföljande adapter och därefter till antenntaget på huvudenheten.

**Kabel med RCA-kontakter (medföljer inte)**  
**Endast MDX-C6500RX/C6500RV/C6500R**

**Exemplo de ligações**

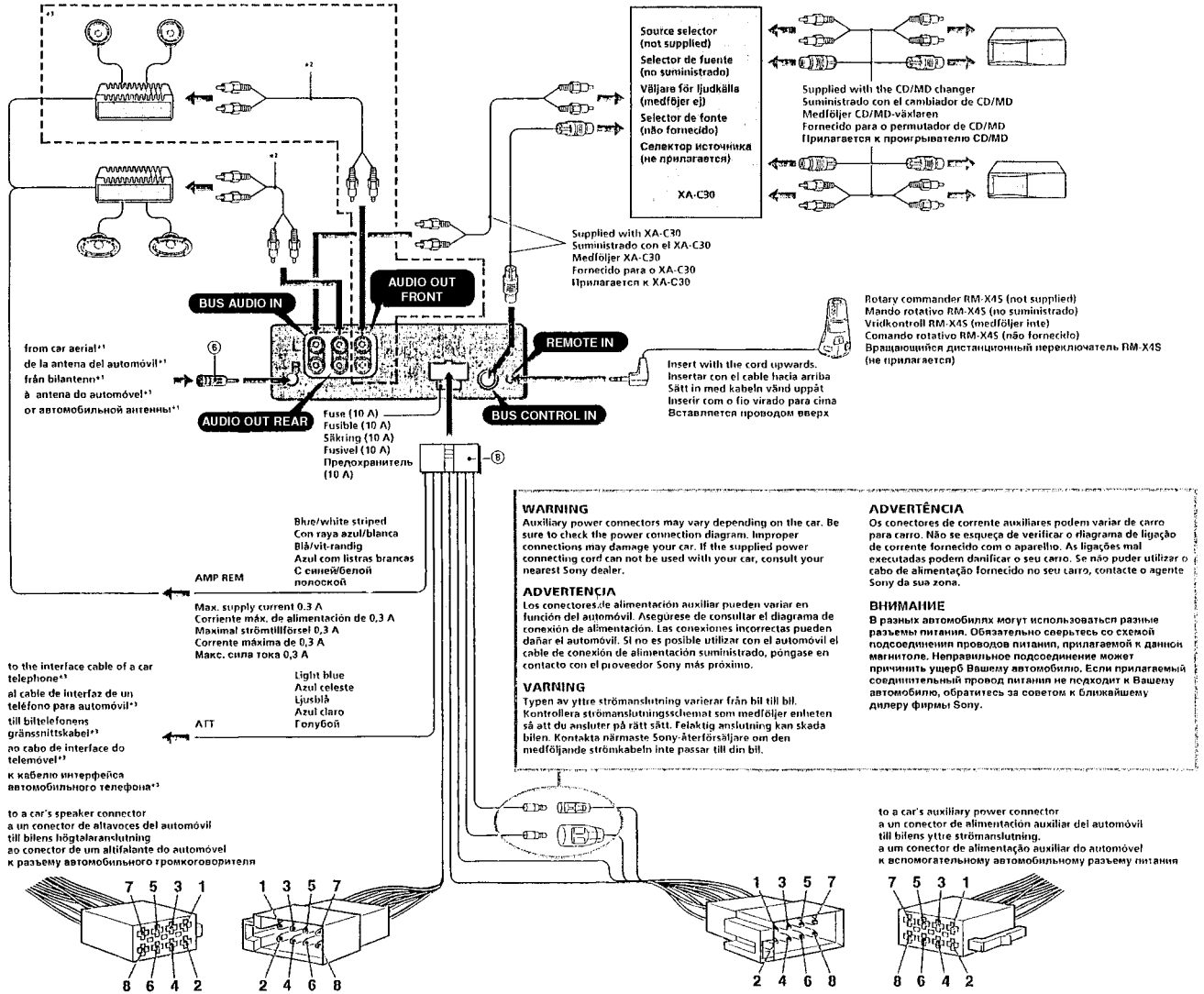
**Nota referente à ligação da antena**  
Se a antena do automóvel for uma antena de tipo ISO (International Organisation for Standardisation), utilize o adaptador fornecido ⑥ para fazer a ligação respectiva.  
Ligue primeiro a antena do automóvel ao adaptador fornecido e depois à ficha tipo jack de antena do sistema principal.

**Cabo de terminais RCA (não fornecido)**  
**Somente MDX-C6500RX/C6500RV/C6500R**

**Пример подсоединения**

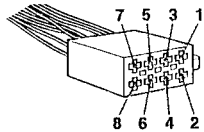
**Примечание о подсоединении антенны**  
Если антенна в Вашем автомобиле относится к типу, утвержденному ISO (Международной организацией по стандартизации), используйте для ее подсоединения переходник ⑥.  
Сначала подсоедините автомобильную антенну к прилагаемому переходнику, а затем - к винтовому гнезду магнитолы.

**Шнур с контактными штырьками RCA (не прилагается)**  
**Касается только MDX-C6500RX/C6500RV/C6500R**



to the interface cable of a car telephone  
al cable de interfaz de um telefone para automóvel  
till biltelefonens gränssnittskabel  
no cabo de interface do telemóvel  
к кабелю интерфейса автомобильного телефона

to a car's speaker connector  
a um conector de altavozes del automóvil  
till bilens högtalanslutning  
a 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.

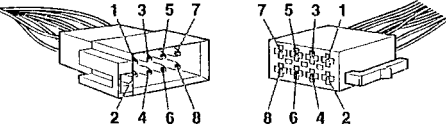
**ADVERTENCIA**  
Los conectores de alimentación auxiliar pueden variar en función del automóvil. Asegúrese de consultar el diagrama de conexión de alimentación. Las conexiones incorrectas pueden dañar el automóvil. Si no es posible utilizar con el automóvil el cable de conexión de alimentación suministrado,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

**ADVERTENCIA**  
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 типы питания. Обязательно сверьтесь со схемой подсоединения проводов питания, прилагаемой к данной магнитоле. Неправильное подсоединение может причинить ущерб Вашему автомобилю. Если прилагаемый соединительный провод питания не подходит к Вашему автомобилю, обратитесь за советом к ближайшему дилеру фирмы Sony.

to a car's auxiliary power connector  
a um conector de alimentação auxiliar del automóvil  
till bilens yttre strömanslutning  
a um conector de alimentação auxiliar do automóvel  
к вспомогательному автомобильному разъему питания



|   |   |   |   |                           |  |
|---|---|---|---|---------------------------|--|
| 1 | Purple<br>Púrpura<br>Violet<br>Фиолетовый | Speaker, Rear, Right<br>Altavoz, parte posterior, derecho<br>Högtalare, bakre, höger<br>Altifalante, Parte da trás, Direito<br>Громкоговоритель, задний, правый     | 5 | White<br>Branco<br>Белый  | Speaker, Front, Left<br>Altavoz, parte frontal, izquierdo<br>Högtalare, främre, vänster<br>Altifalante, Parte da frente, Esquerdo<br>Громкоговоритель, передний, левый |
| 2 |   | Speaker, Rear, Right<br>Altavoz, parte posterior, derecho<br>Högtalare, bakre, höger<br>Altifalante, Parte da trás, Direito<br>Громкоговоритель, задний, правый     | 6 |                           | Speaker, Front, Left<br>Altavoz, parte frontal, izquierdo<br>Högtalare, främre, vänster<br>Altifalante, Parte da frente, Esquerdo<br>Громкоговоритель, передний, левый |
| 3 | Grey<br>Gris<br>Grá<br>Синтено<br>Серый   | Speaker, Front, Right<br>Altavoz, parte frontal, derecho<br>Högtalare, främre, höger<br>Altifalante, Parte da frente, Direito<br>Громкоговоритель, передний, правый | 7 | Green<br>Verde<br>Зеленый | Speaker, Rear, Left<br>Altavoz, parte posterior, izquierdo<br>Högtalare, bakre, vänster<br>Altifalante, Parte da trás, Esquerdo<br>Громкоговоритель, задний, левый     |
| 4 |   | Speaker, Front, Right<br>Altavoz, parte frontal, derecho<br>Högtalare, främre, höger<br>Altifalante, Parte da frente, Direito<br>Громкоговоритель, передний, правый | 8 |                           | Speaker, Rear, Left<br>Altavoz, parte posterior, izquierdo<br>Högtalare, bakre, vänster<br>Altifalante, Parte da trás, Esquerdo<br>Громкоговоритель, задний, левый     |

|   |  |  |   |  |   |
|---|--|--|---|--|---|
| 4 | Yellow<br>Amarelo<br>Gel<br>Amarelo<br>Желтый  | continuous power supply<br>suministro de alimentación continua<br>kontinuerlig strömförsörjning<br>alimentação de corrente contínua<br>непрерывное поступление питания   | 7   | Red<br>Vermelho<br>Rouge<br>Красный        | switched power supply<br>suministro comutado de alimentación<br>switchad strömförsörjning<br>alimentação de corrente comutada<br>включаемое питание |
| 5 | Blue<br>Azul<br>Bla<br>Azul<br>Синий   | power aerial control<br>control de antena motorizada<br>styrning av motorantenn<br>antena eléctrica<br>антенна электрика   | 8   | Black<br>Negro<br>Svart<br>Preto<br>Черный | ground<br>masa<br>jord<br>Terra<br>земля  |
| 6 | Orange/White<br>Naranja/blanco<br>Orange/wit<br>Cor de laranja/branco<br>Оранжевый/белый | switched illumination power supply<br>fuente de alimentación de iluminación comutada<br>Switchad strömförsörjning till belysning<br>fonte de alimentação comutada para iluminação<br>подача питания подсветки от зажигания | Positions 1, 2 and 3 do not have pins.<br>Las posiciones 1, 2 y 3 no disponen de pines.<br>Positionerna 1, 2 och 3 saknar stift.<br>As posições 1, 2 e 3 não têm pines.<br>Позиции 1, 2 и 3 не имеют контактных штырьков. |  |   |

## 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 estereo del automóvil. Después de hacer conexión 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 referentes a la conexión de la unidad que no aparezcan en este manual, consulte con el concesionario automovilístico.

## Strömanslutningsschema

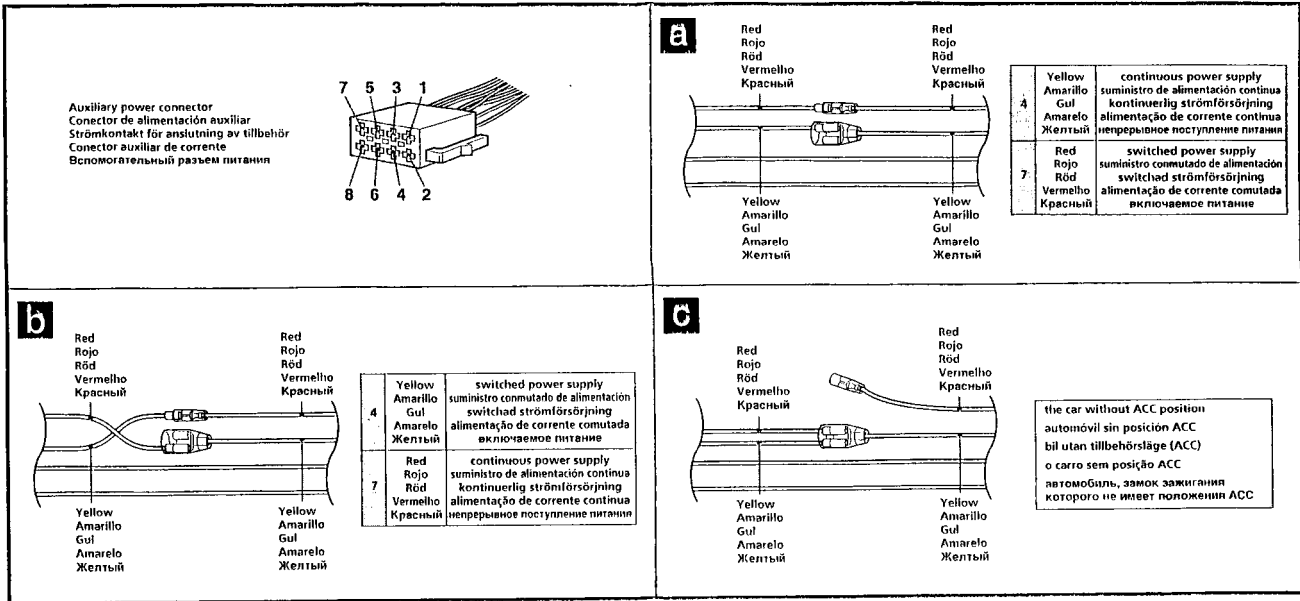
Kontakten för anslutning av tillbehör varierar från bil till bil. Kontrollera hur bilens anslutningskontakt är konstruerad så att du ansluter på rätt sätt. Det finns tre grundläggande typer (visas nedan). Du kan eventuellt behöva växla plats mellan de röda och gula ledningarna i bilens strömkabel. Passa 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 bilägarförsäljaren.

## Diagrama de ligação de corrente

O conector auxiliar de corrente pode variar de carro para carro. Verifique o diagrama do conector auxiliar de corrente 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 correcta entre as ligações e os cabos de alimentação conmutada, 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.

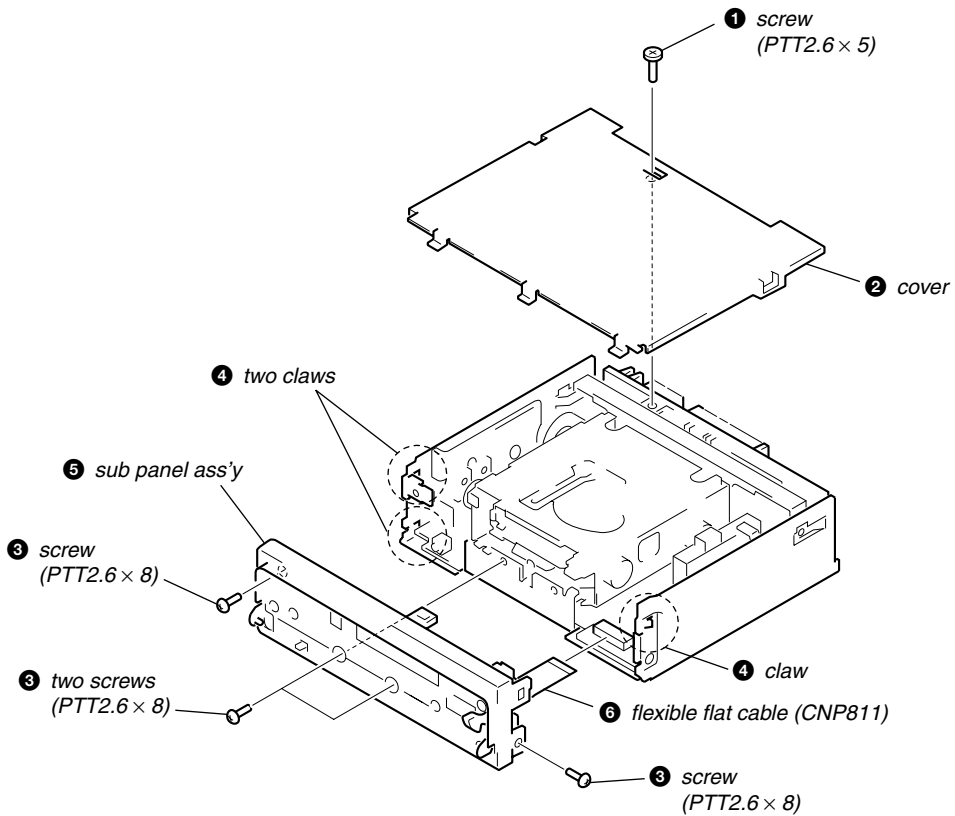




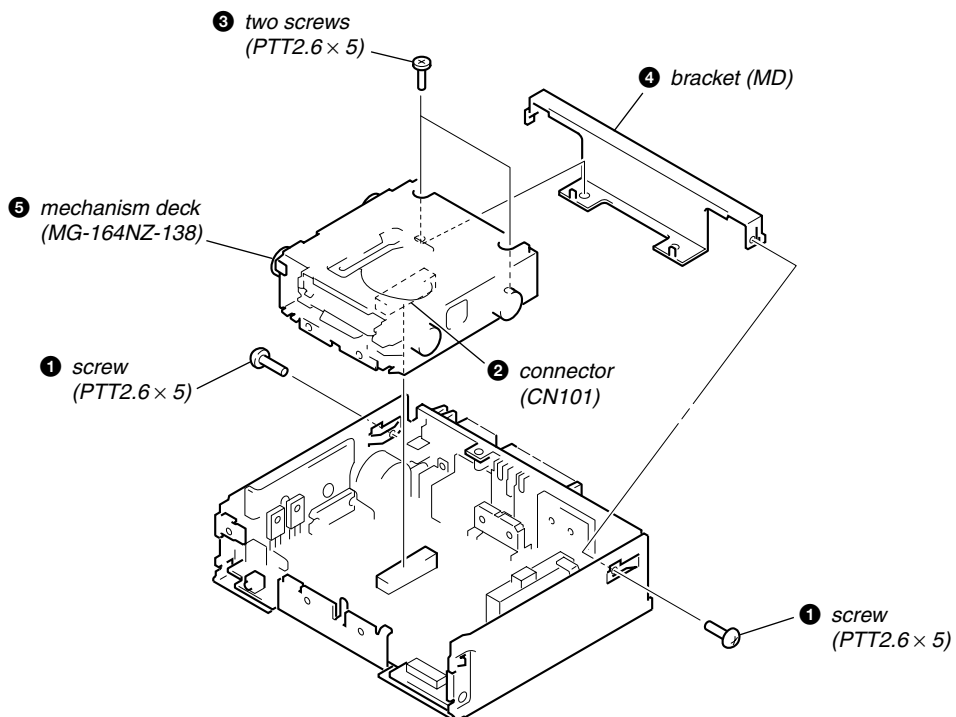
## SECTION 2 DISASSEMBLY

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

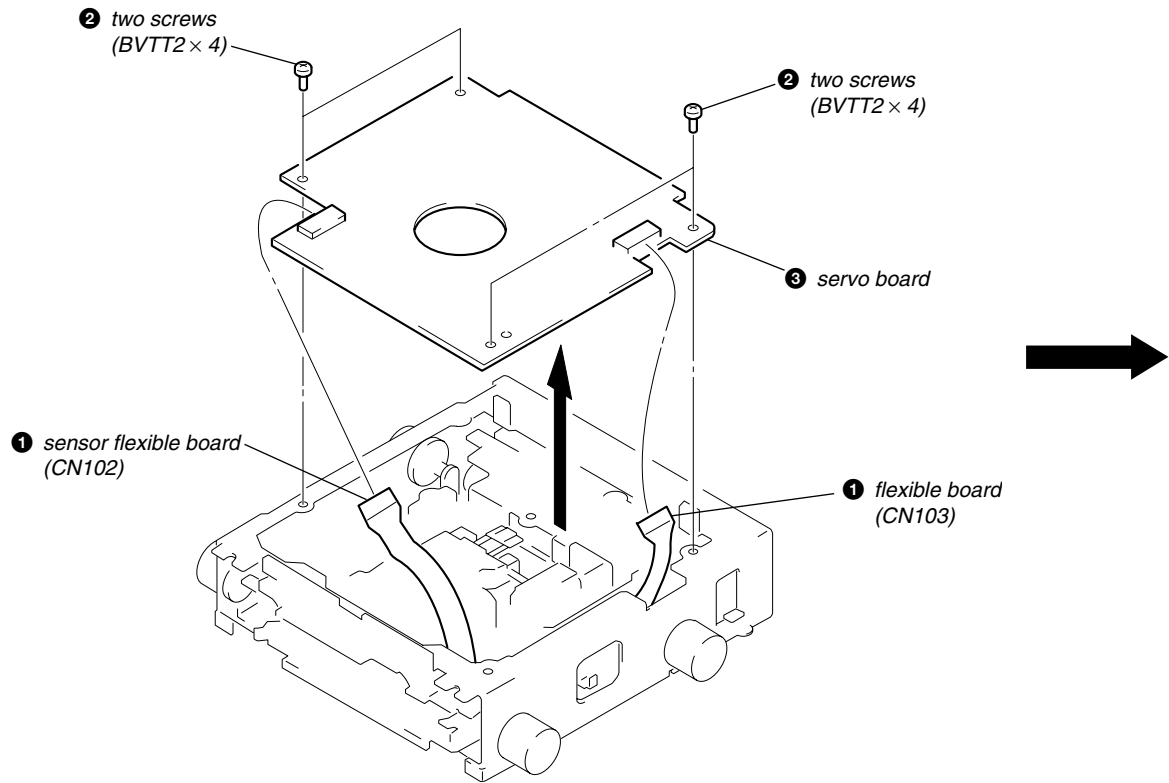
### SUB PANEL ASS'Y



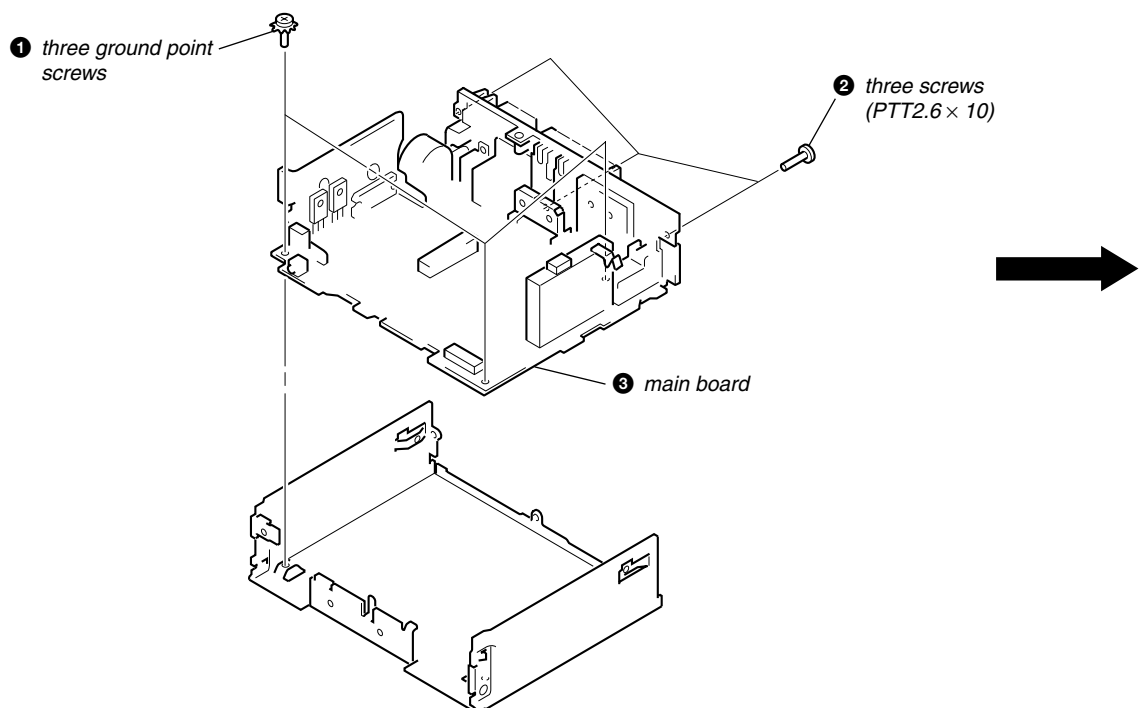
### MECHANISM DECK (MG-164NZ-138)



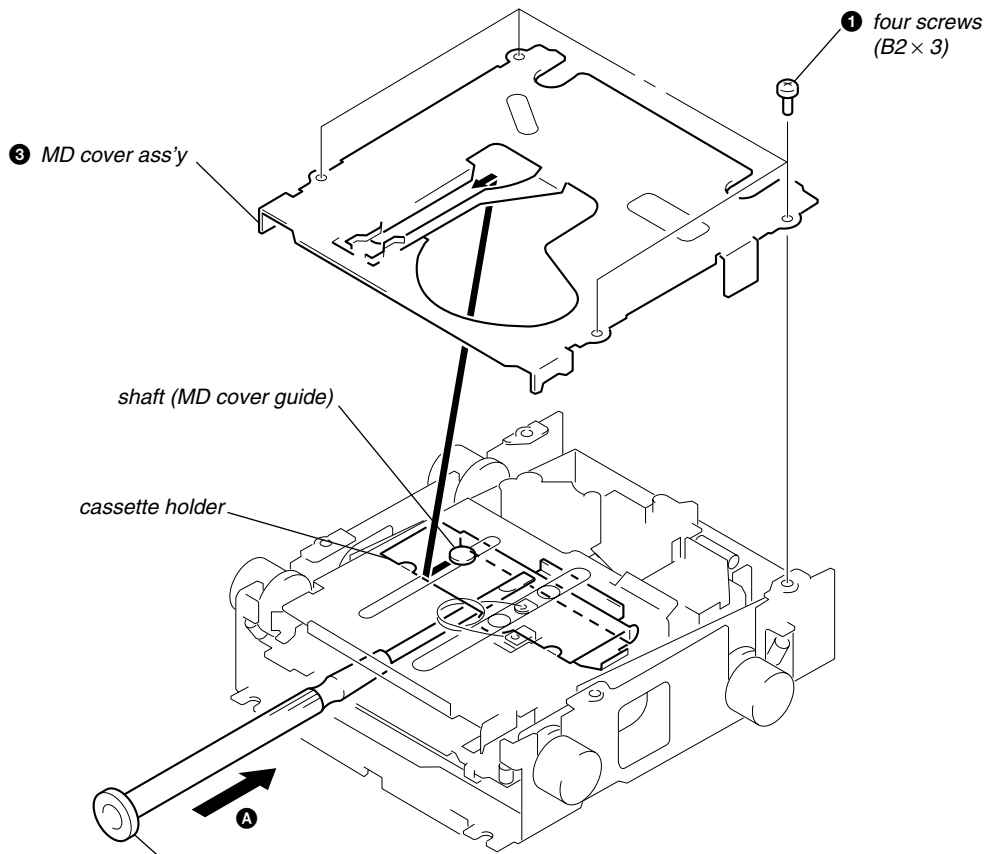
## SERVO BOARD



## MAIN BOARD



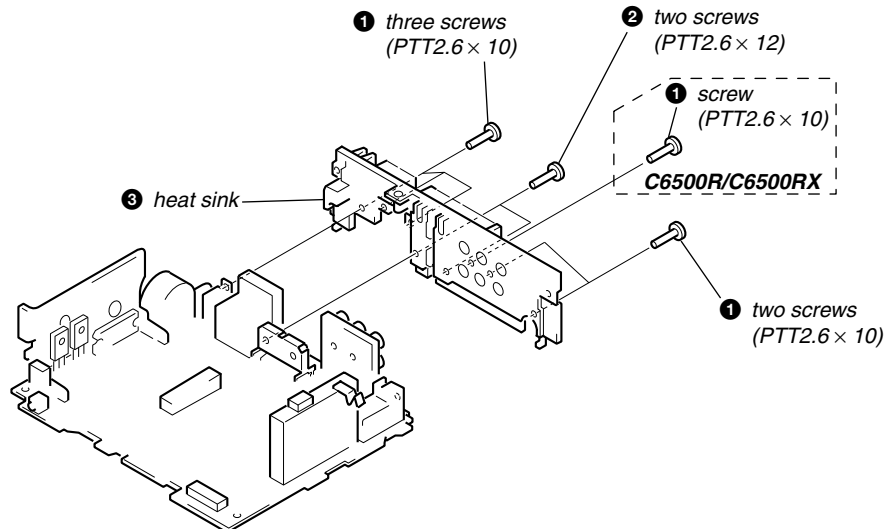
## MD COVER ASS'Y



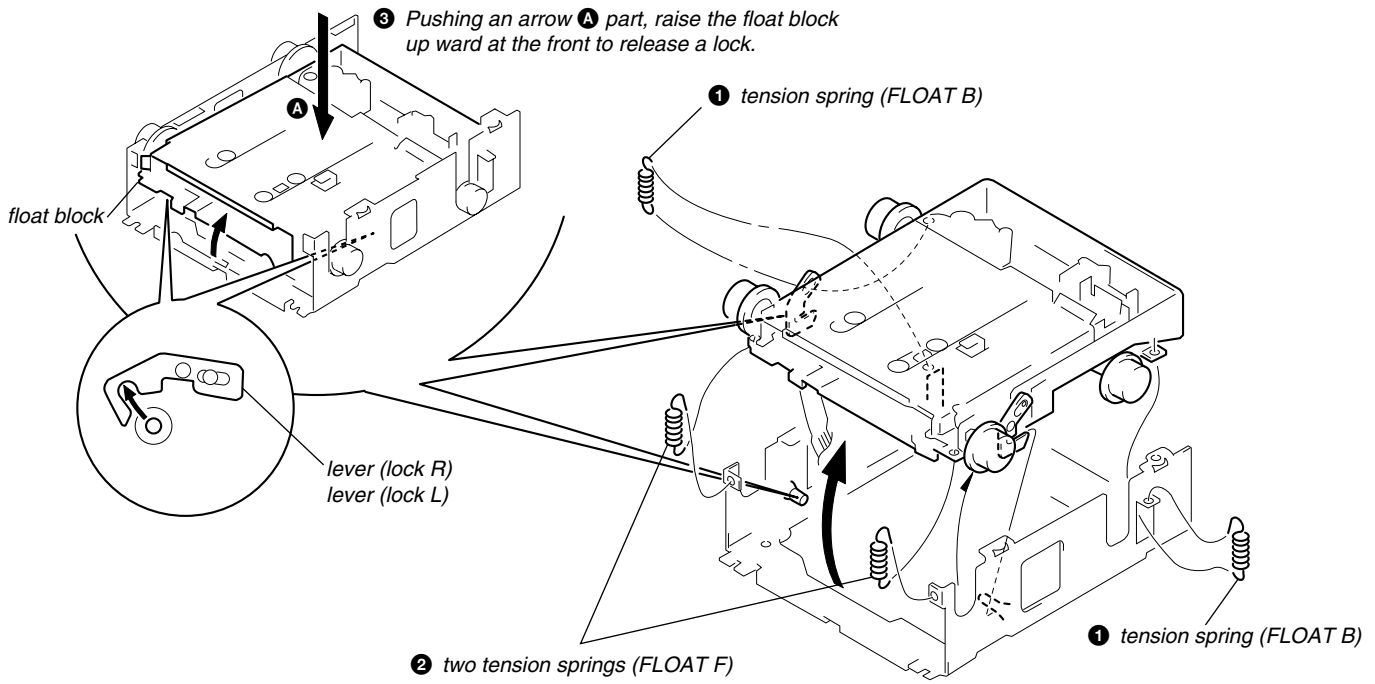
② Pushing the Cassette Holder in the direction of the arrow A with a screwdriver, etc., disengage the Shaft (MD Cover Guide) from the slot in the MD Cover Assy.

Note: Take care not to scratch the optical Pick-up when pushing the Cassette Holder with a screwdriver, etc.

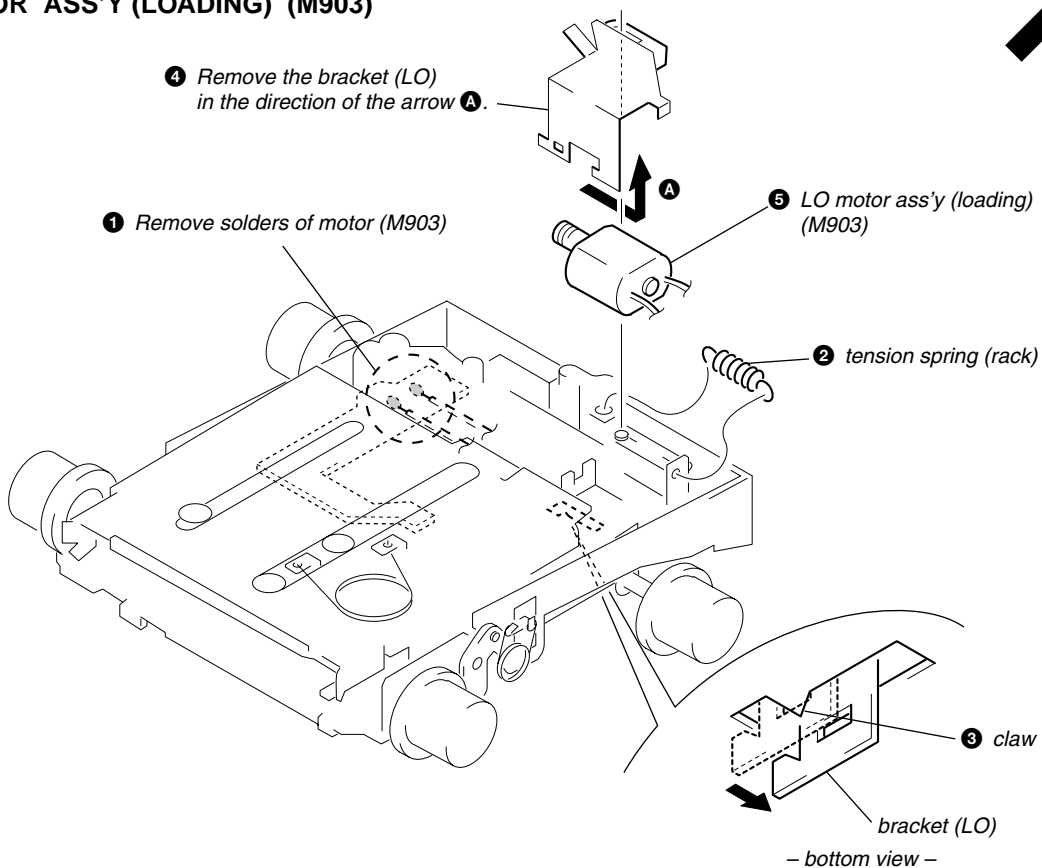
## HEAT SINK



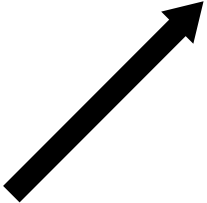
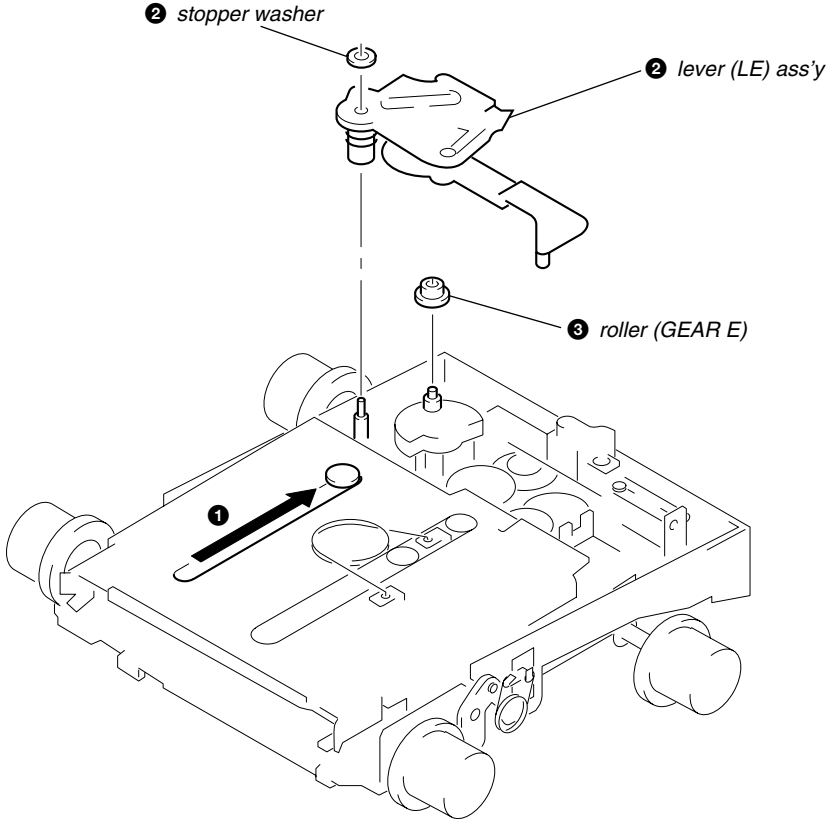
## FLOAT BLOCK



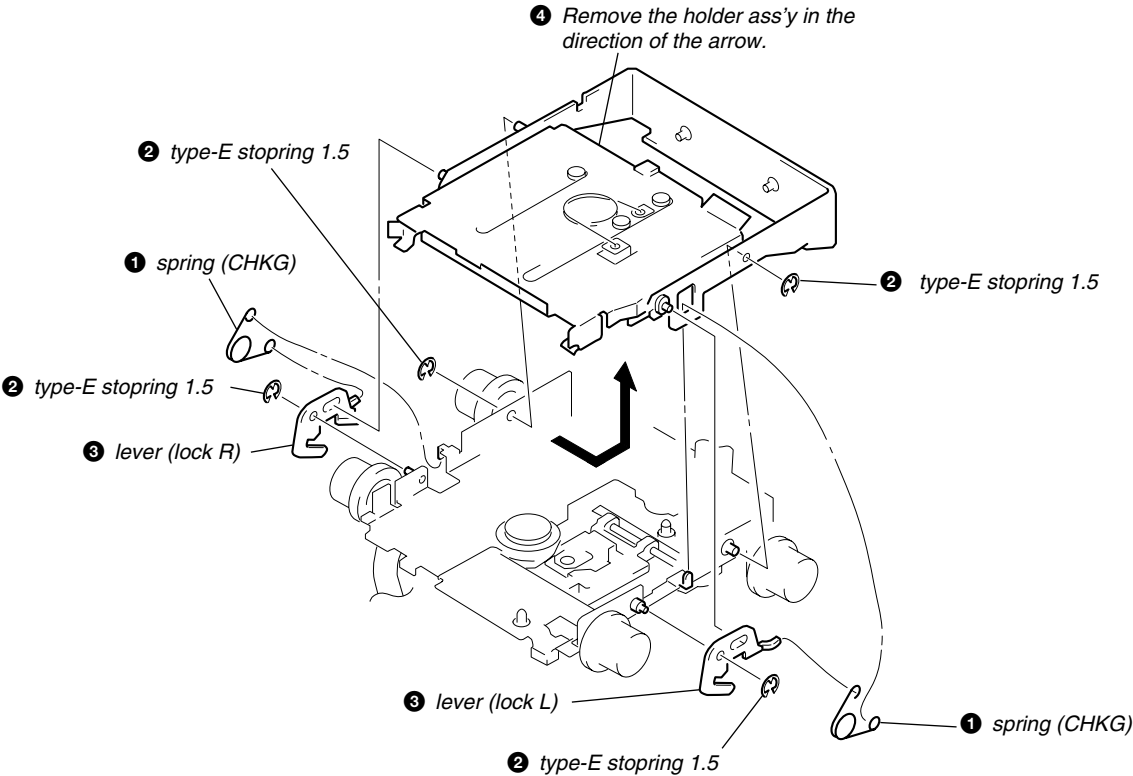
## LO MOTOR ASS'Y (LOADING) (M903)



**LEVER (LE) ASS'Y**

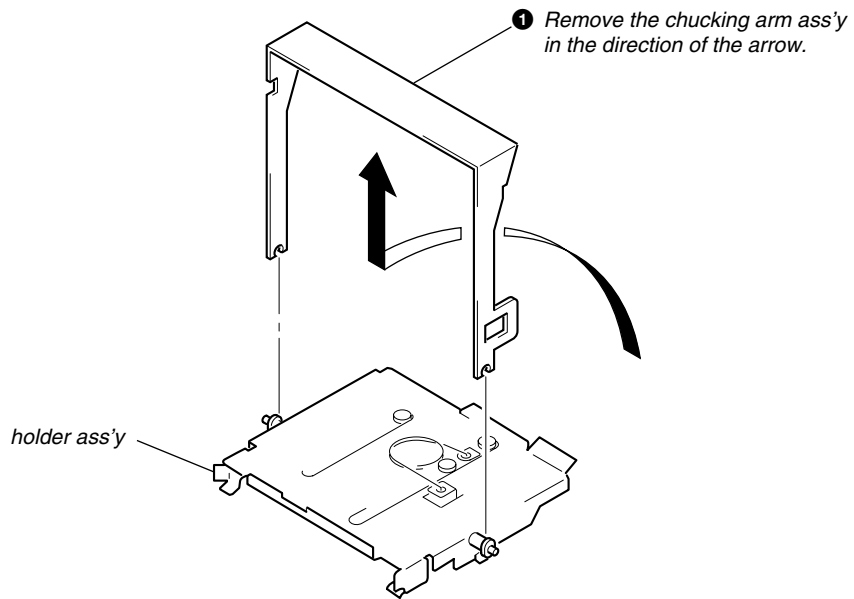


**HOLDER ASS'Y**

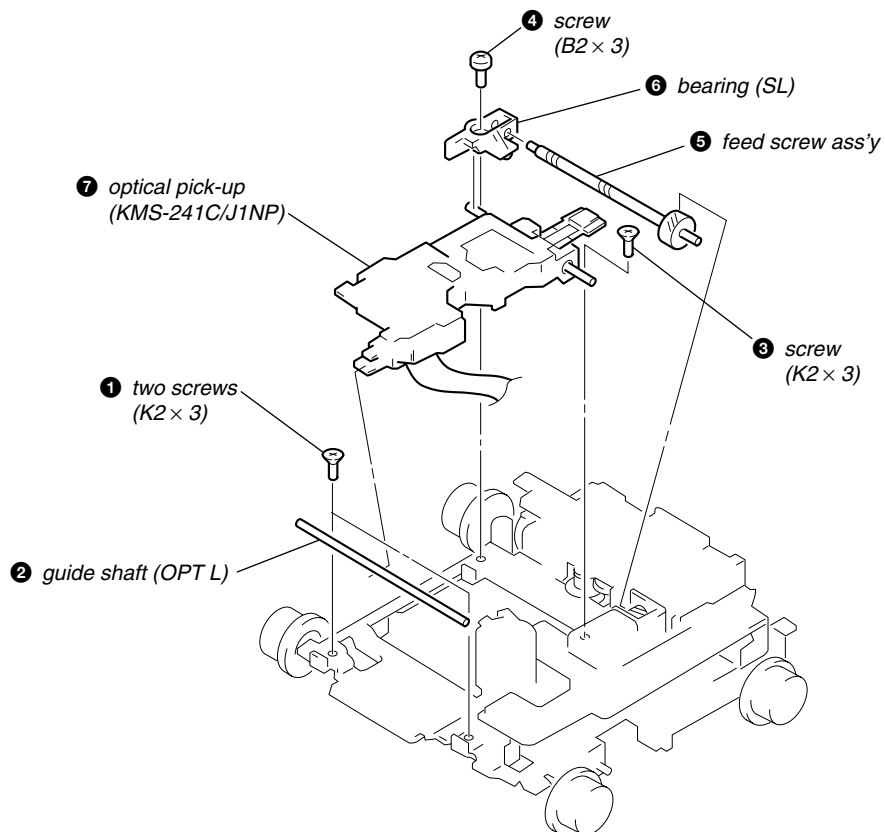




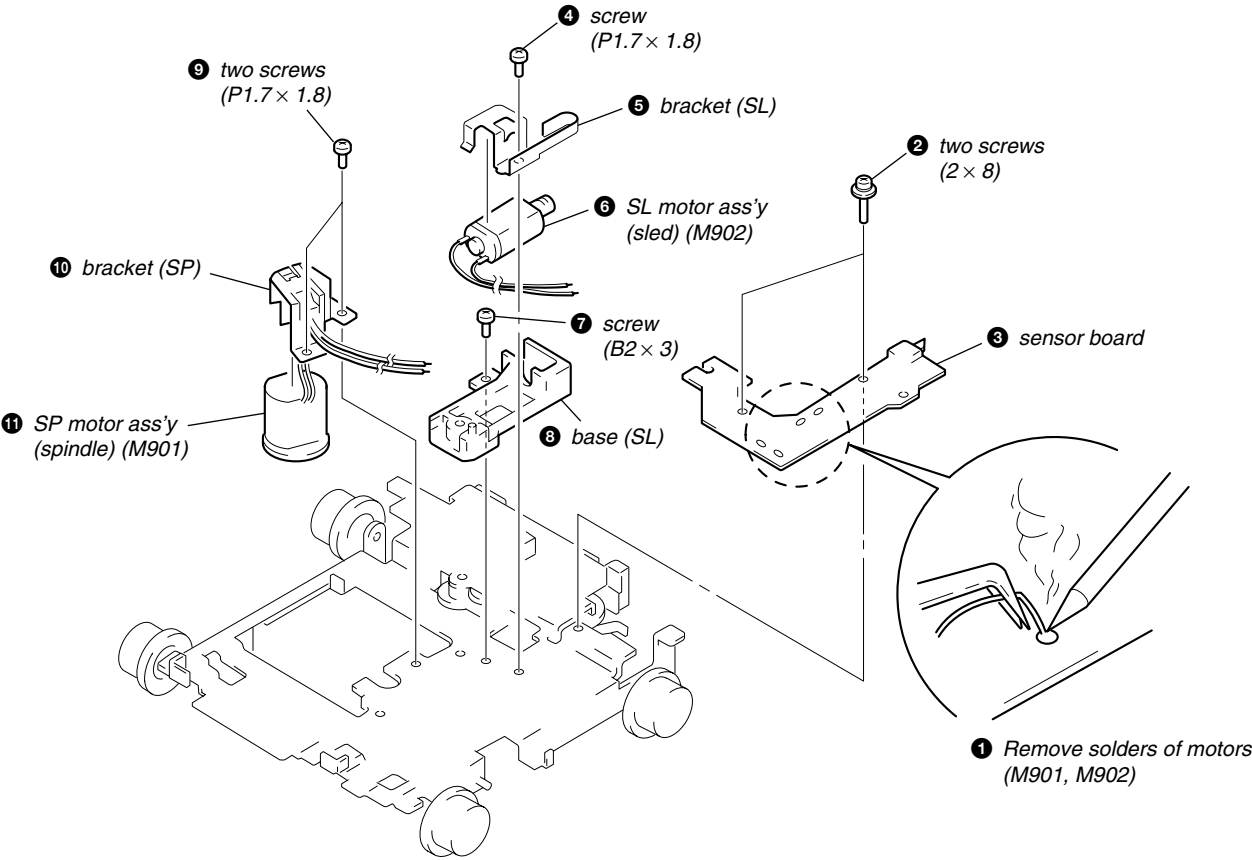
## CHUCKING ARM ASS'Y



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



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



## SECTION 3 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

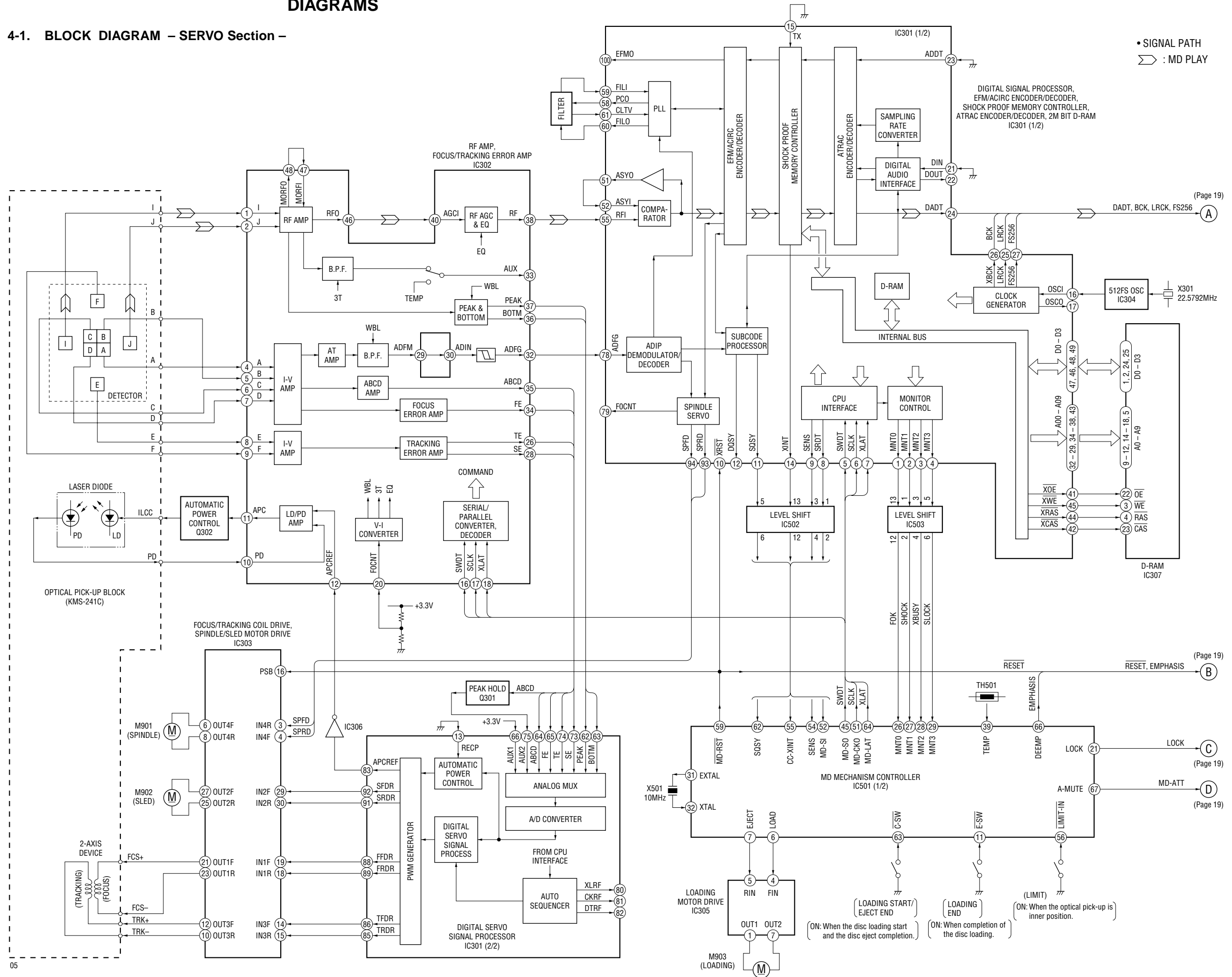
MD section adjustments are done automatically in this set.

### TUNER SECTION

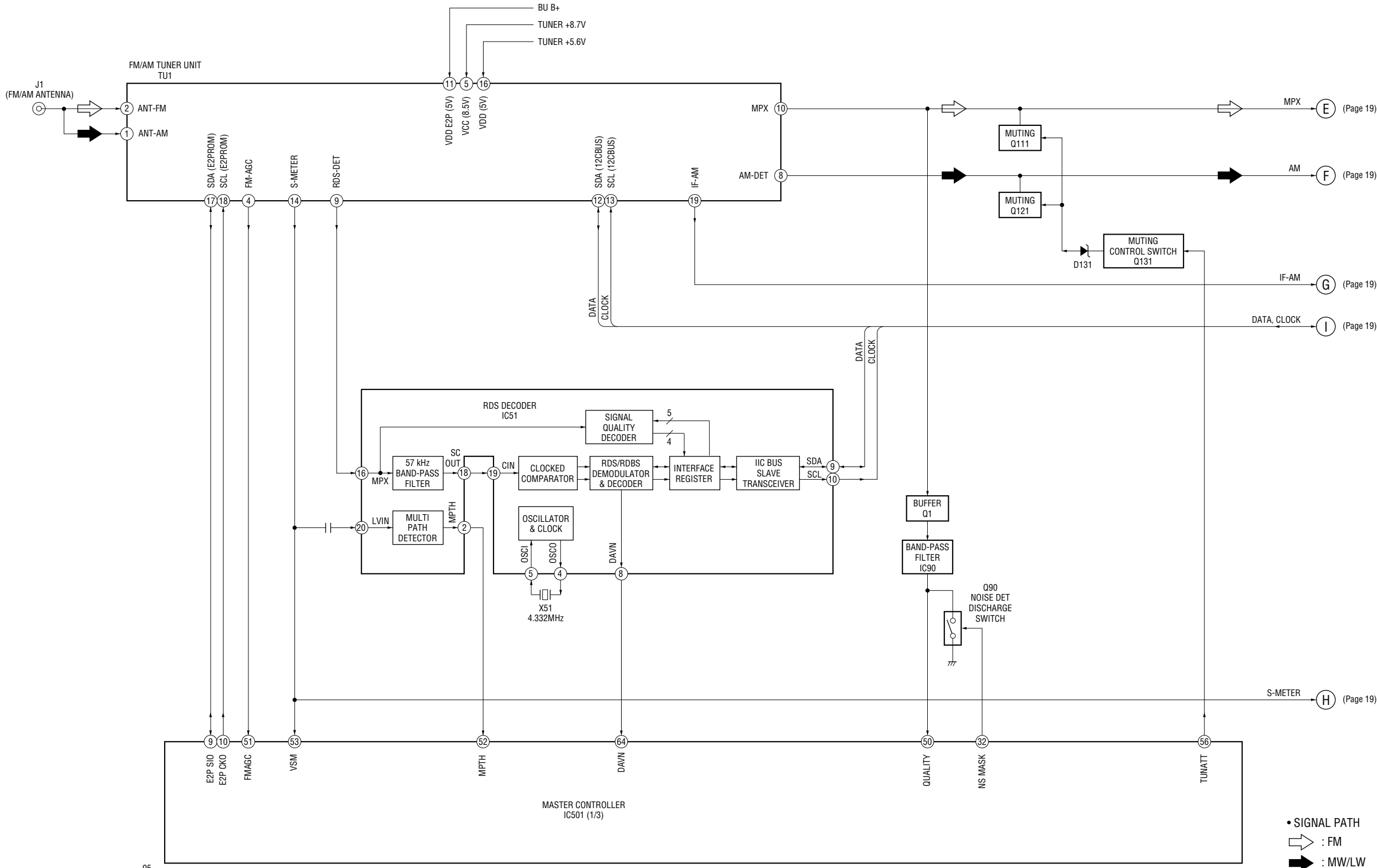
Tuner section adjustments are done automatically in this set.

SECTION 4  
DIAGRAMS

4-1. BLOCK DIAGRAM – SERVO Section –



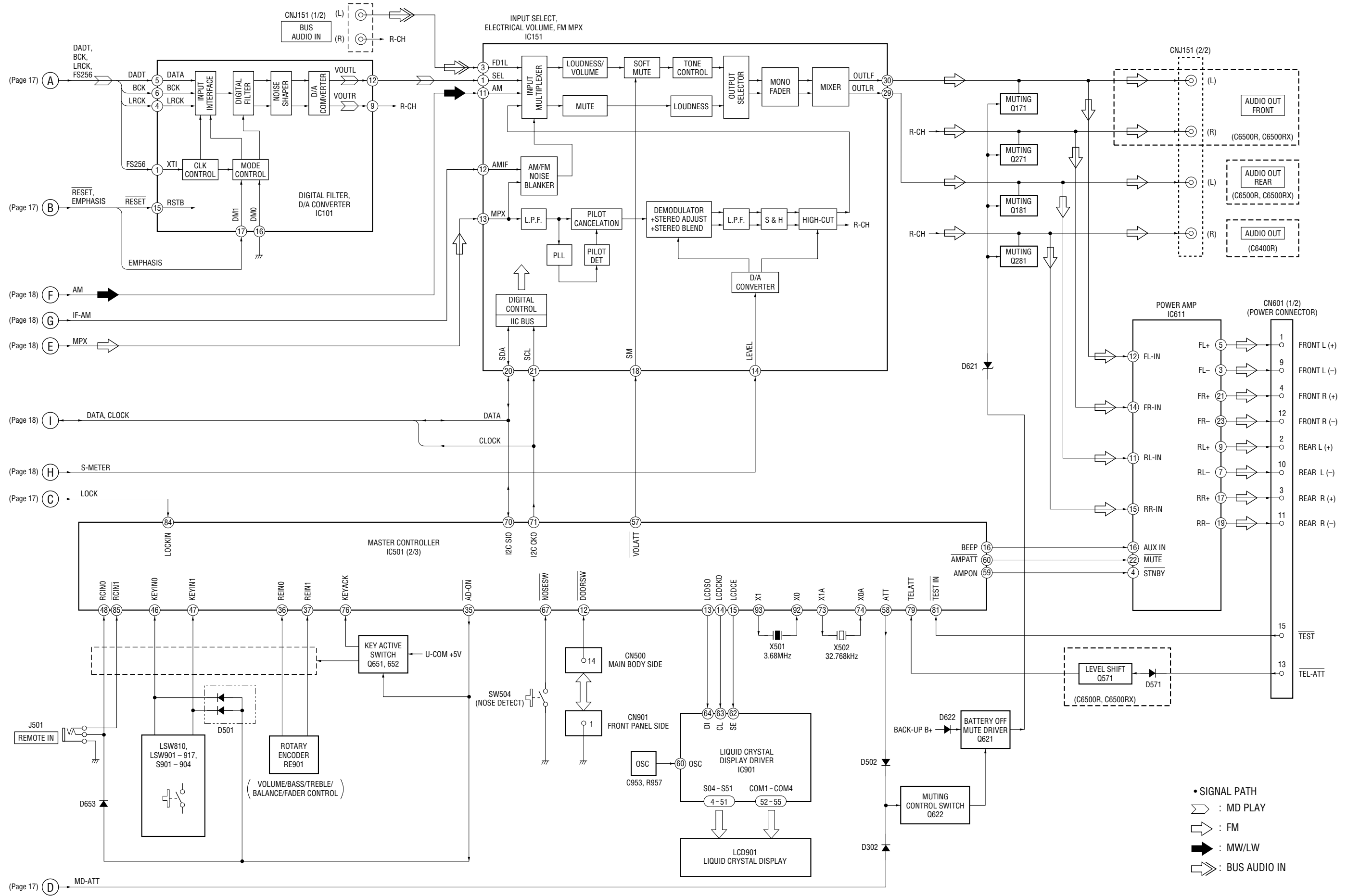
4-2. BLOCK DIAGRAM –TUNER Section –



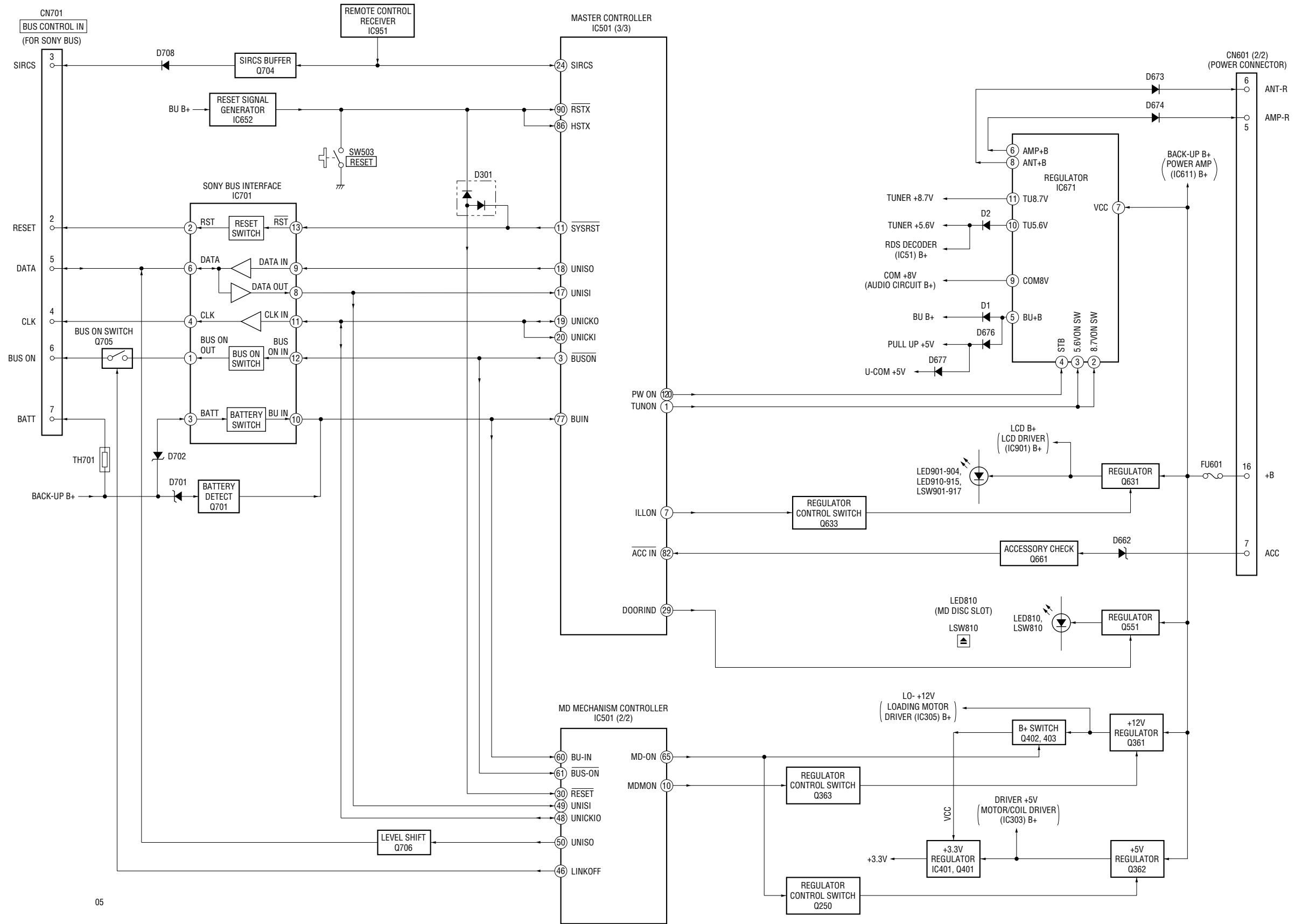
05



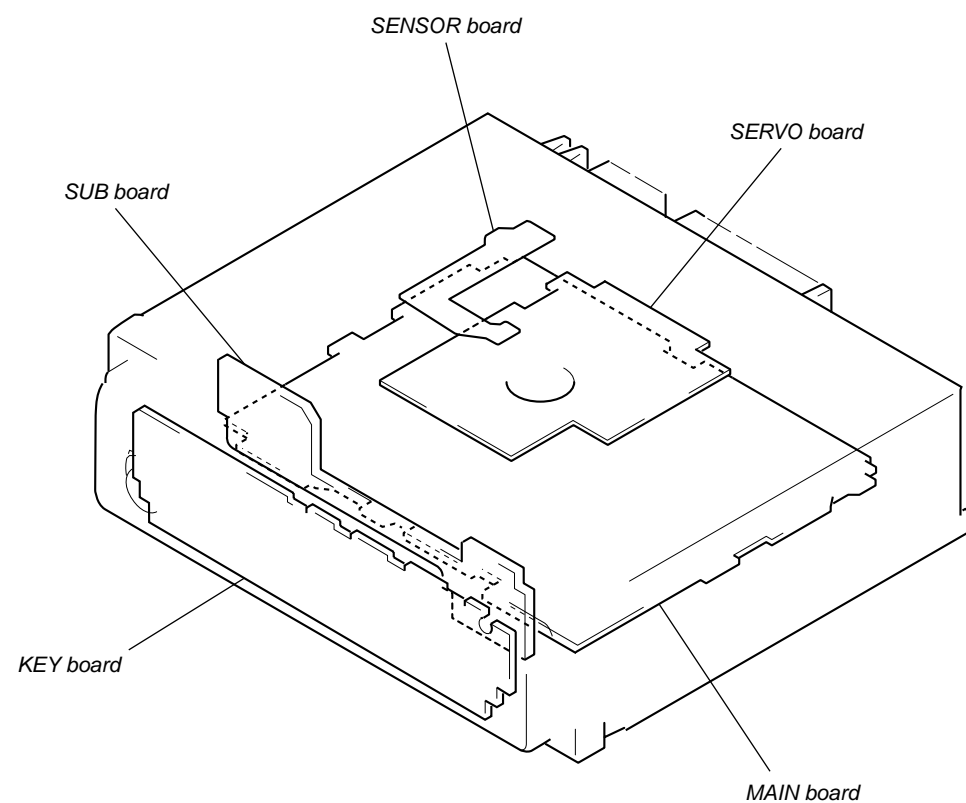
4-3. BLOCK DIAGRAM – MAIN Section –



4-4. BLOCK DIAGRAM – BUS CONTROL/POWER SUPPLY Section –



• Circuit Boards Location



4-5. 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.
- : 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.

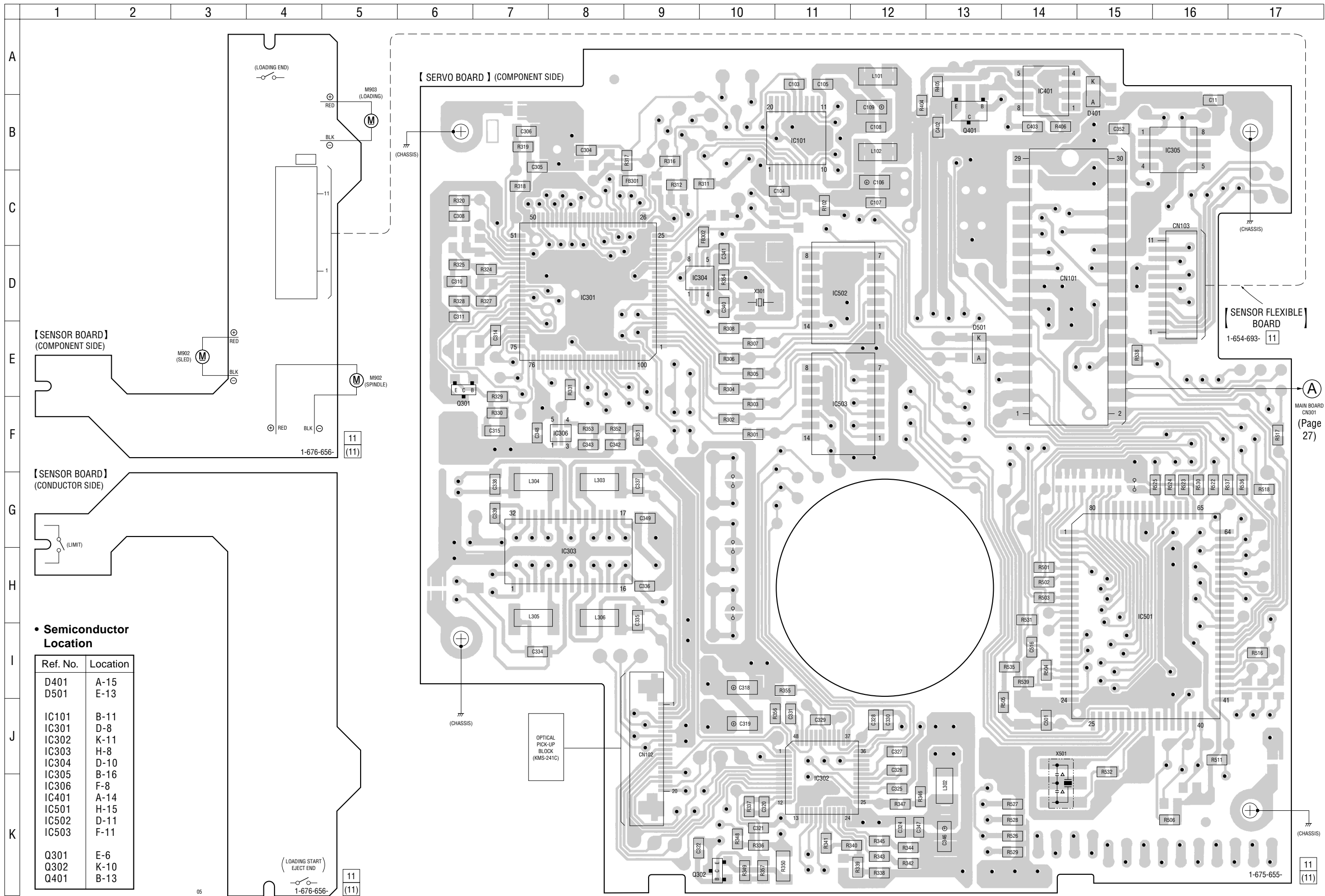
**Note on Schematic Diagram:**

- All capacitors are in  $\mu\text{F}$  unless otherwise noted. pF:  $\mu\text{pF}$  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.
- : indicates tolerance.
- : internal component.
- : panel designation.

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

- : 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.
  - : MD PLAY
  - : FM
  - : MW/LW
  - : BUS AUDIO IN

4-6. PRINTED WIRING BOARDS – SERVO Board (Component Side)/SENSOR Board – • See page 21 for Circuit Boards Location.



【SENSOR BOARD】  
(COMPONENT SIDE)

【SENSOR BOARD】  
(CONDUCTOR SIDE)

【SERVO BOARD】 (COMPONENT SIDE)

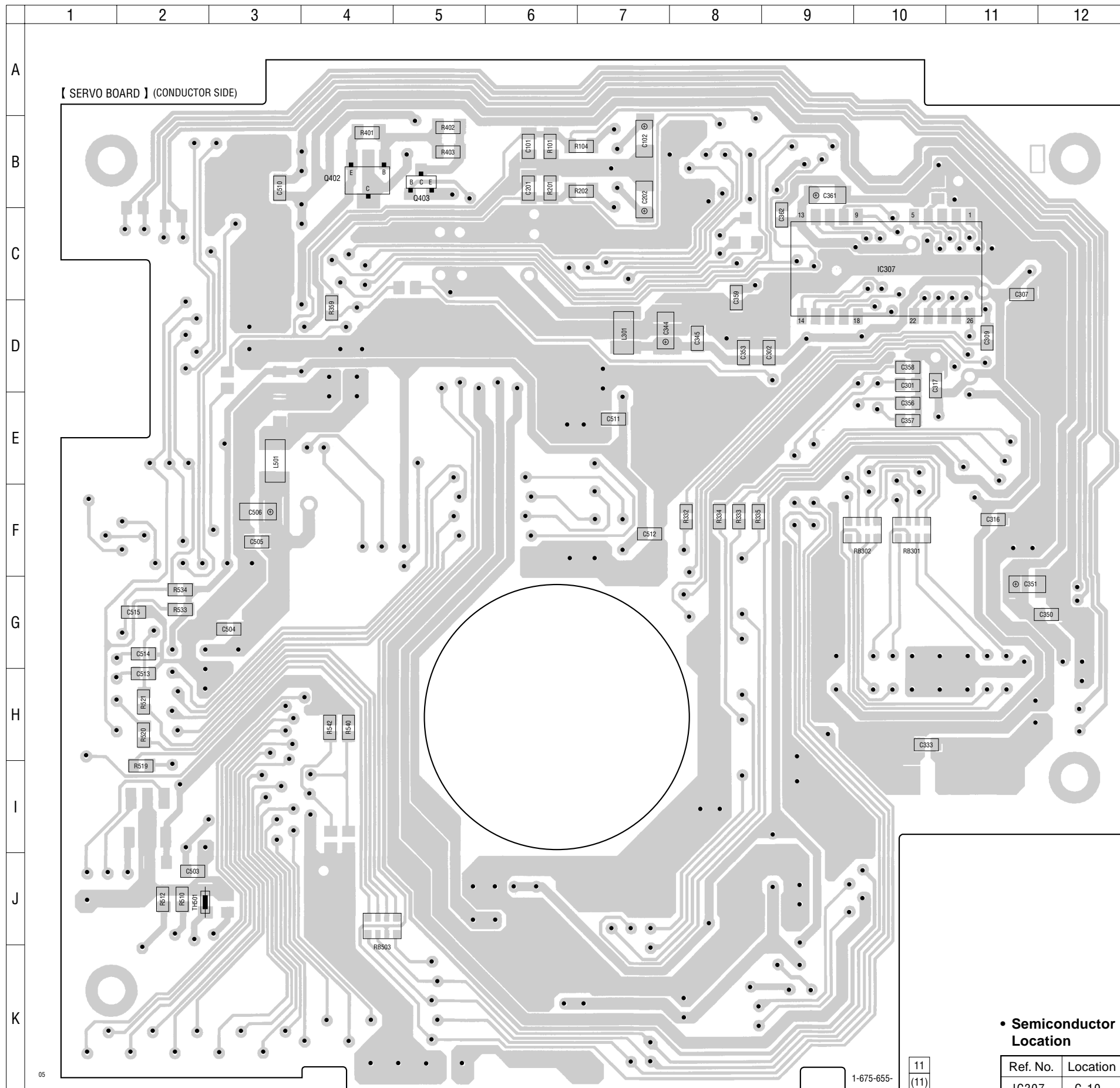
【SENSOR FLEXIBLE BOARD】  
1-654-693- 11

MAIN BOARD  
CN301  
(Page 27)

• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D401     | A-15     |
| D501     | E-13     |
| IC101    | B-11     |
| IC301    | D-8      |
| IC302    | K-11     |
| IC303    | H-8      |
| IC304    | D-10     |
| IC305    | B-16     |
| IC306    | F-8      |
| IC401    | A-14     |
| IC501    | H-15     |
| IC502    | D-11     |
| IC503    | F-11     |
| Q301     | E-6      |
| Q302     | K-10     |
| Q401     | B-13     |

4-7. PRINTED WIRING BOARD – SERVO Board (Conductor Side) – • See page 21 for Circuit Boards Location.

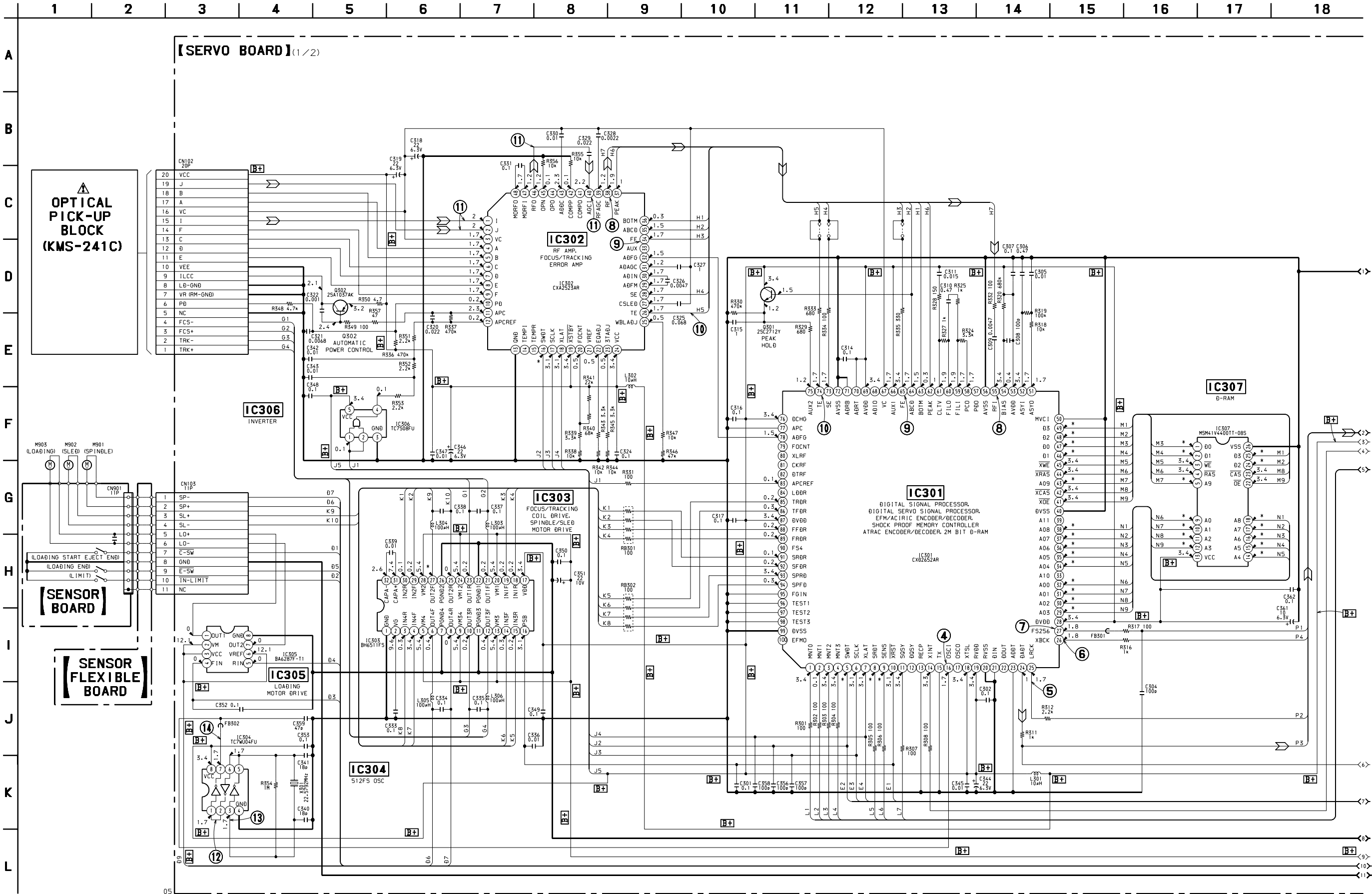


• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| IC307    | C-10     |
| Q402     | B-4      |
| Q403     | B-5      |



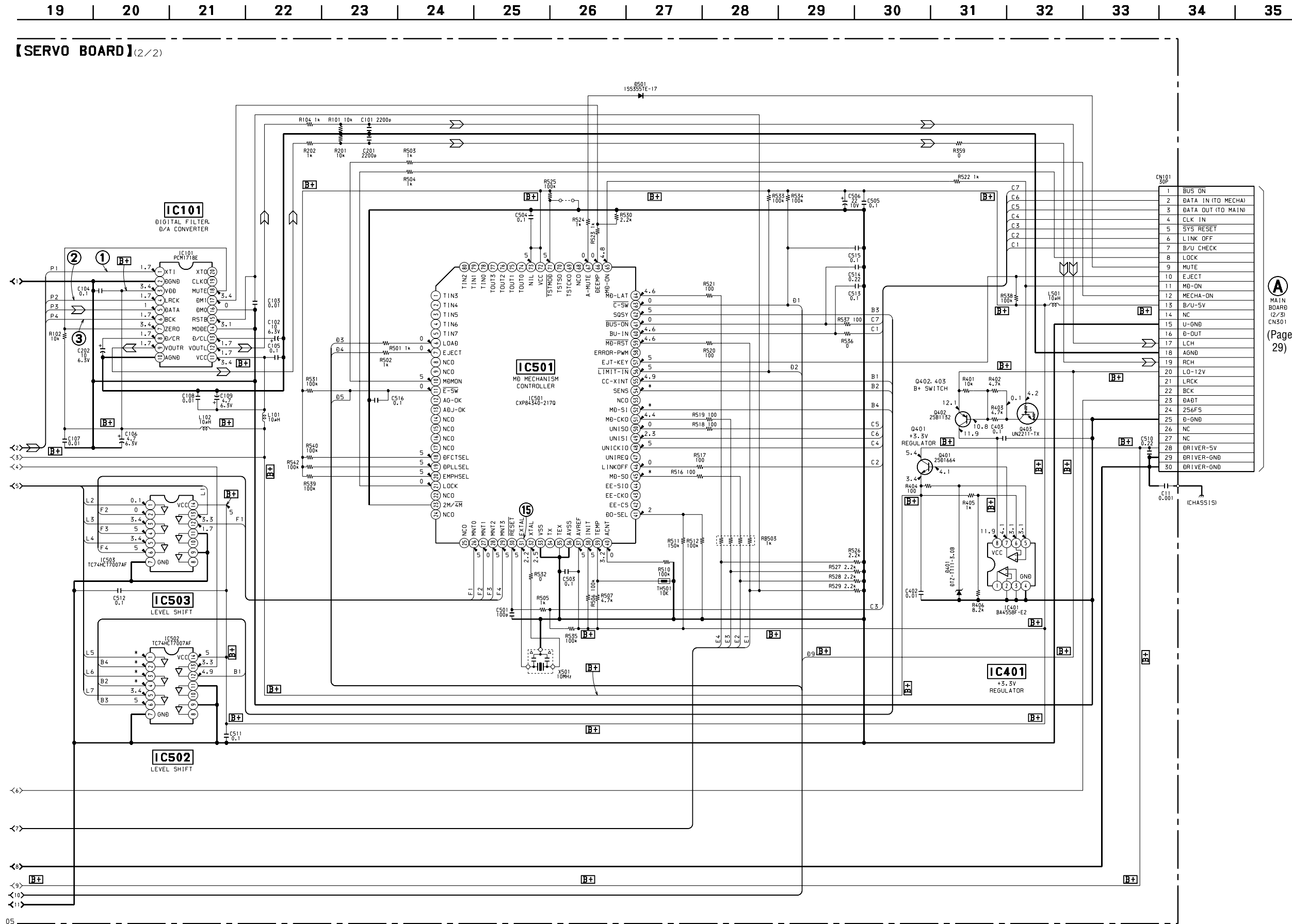
4-8. SCHEMATIC DIAGRAM – SERVO Board (1/2) – • See page 31 for Waveforms. • See page 36 for IC Block Diagrams.



• 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.

4-9. SCHEMATIC DIAGRAM – SERVO Board (2/2) – • See page 31 for Waveforms. • See page 36 for IC Block Diagram.



(A)  
MAIN BOARD (2/3)  
CN301  
(Page 29)

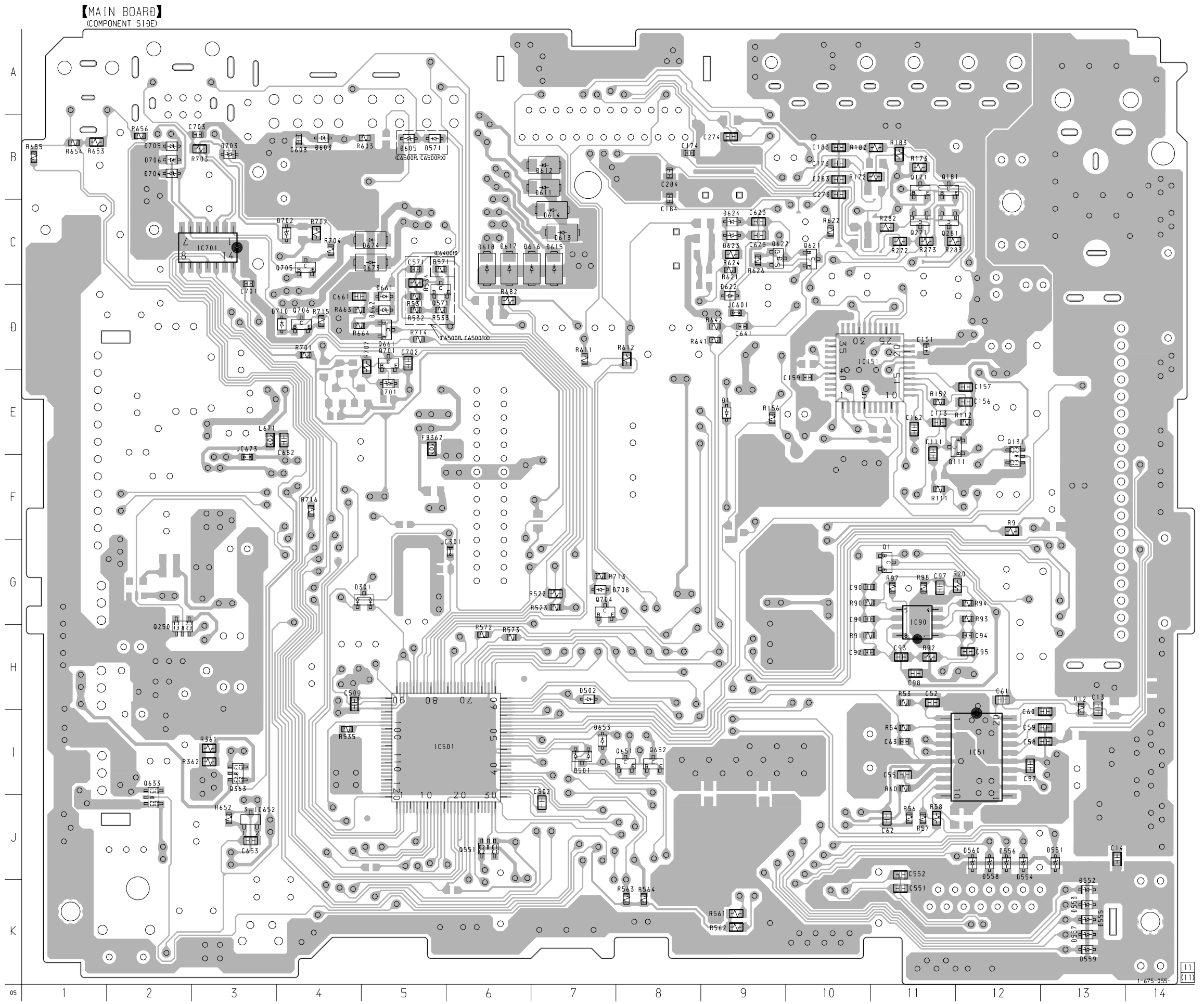
• Voltages and waveforms are dc with respect to ground under no-signal conditions.  
no mark : MD PLAY  
\* : Impossible to measure

MDX-C6400R/C6500R/C6500RX

4-10. PRINTED WIRING BOARD – MAIN Board (Component Side) – • See page 21 for Circuit Boards Location.

• Semiconductor Location

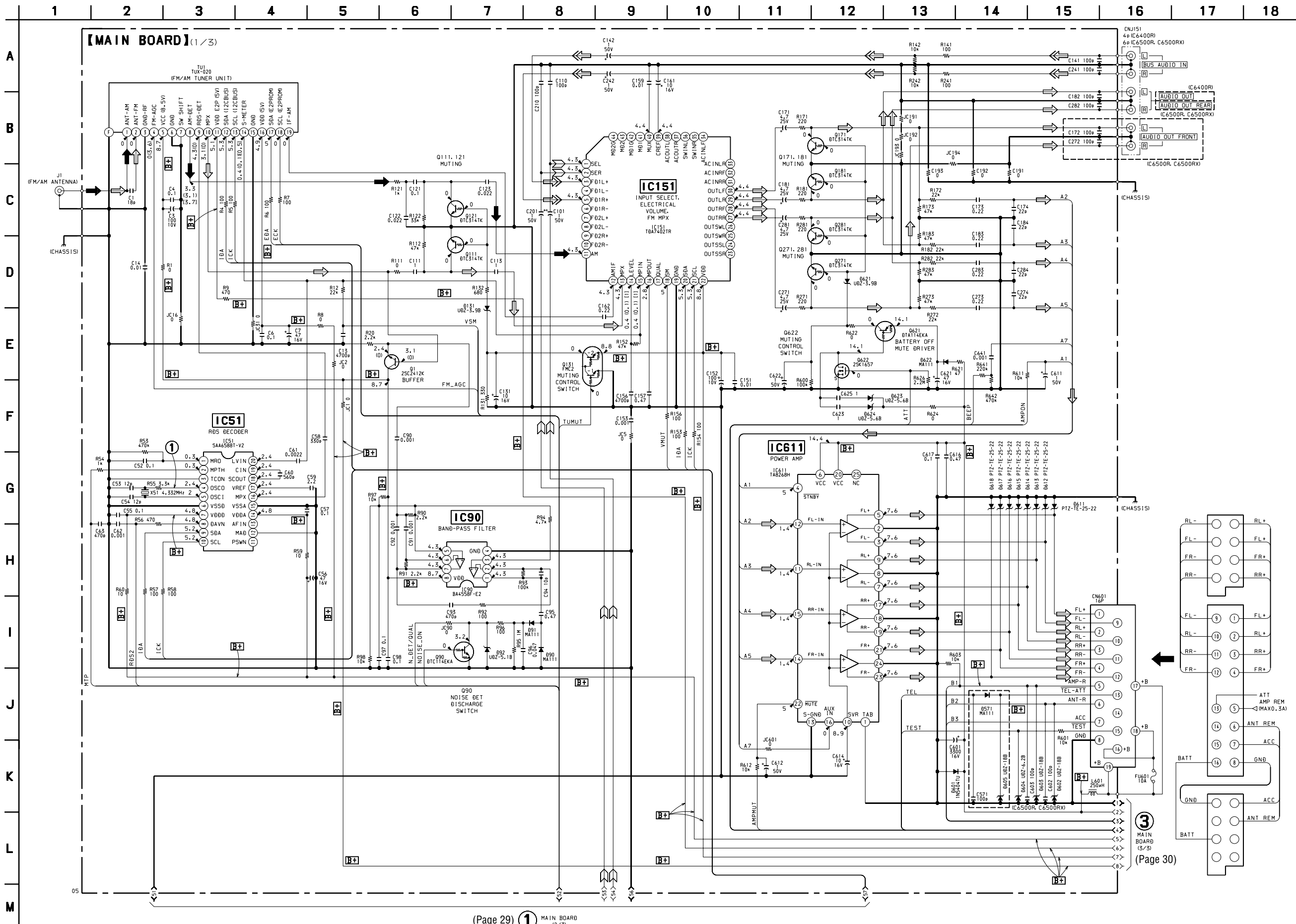
| Ref. No. | Location |
|----------|----------|
| D1       | E-9      |
| D301     | G-5      |
| D501     | I-7      |
| D502     | H-7      |
| D551     | J-13     |
| D552     | K-13     |
| D553     | K-13     |
| D554     | J-12     |
| D555     | K-13     |
| D556     | J-12     |
| D557     | K-13     |
| D558     | J-12     |
| D559     | K-13     |
| D560     | J-12     |
| D571     | B-5      |
| D603     | B-4      |
| D605     | B-5      |
| D611     | B-7      |
| D612     | B-7      |
| D613     | C-7      |
| D614     | C-7      |
| D615     | C-7      |
| D616     | C-7      |
| D617     | C-6      |
| D618     | C-6      |
| D622     | D-9      |
| D623     | C-9      |
| D624     | C-9      |
| D653     | I-7      |
| D661     | D-5      |
| D662     | D-5      |
| D673     | C-5      |
| D674     | C-5      |
| D701     | E-5      |
| D702     | C-4      |
| D703     | B-3      |
| D704     | B-2      |
| D705     | B-2      |
| D706     | B-2      |
| D708     | G-7      |
| D710     | D-4      |
| IC51     | I-12     |
| IC90     | G-11     |
| IC151    | D-10     |
| IC501    | I-5      |
| IC652    | J-3      |
| IC701    | C-3      |
| Q1       | G-11     |
| Q111     | E-12     |
| Q131     | F-12     |
| Q171     | B-11     |
| Q181     | B-11     |
| Q250     | H-2      |
| Q271     | C-11     |
| Q281     | C-11     |
| Q363     | I-3      |
| Q551     | J-6      |
| Q571     | D-5      |
| Q621     | C-10     |
| Q622     | C-9      |
| Q633     | J-2      |
| Q651     | I-8      |
| Q652     | I-8      |
| Q661     | D-5      |
| Q701     | D-5      |
| Q704     | G-7      |
| Q705     | C-4      |
| Q706     | D-4      |







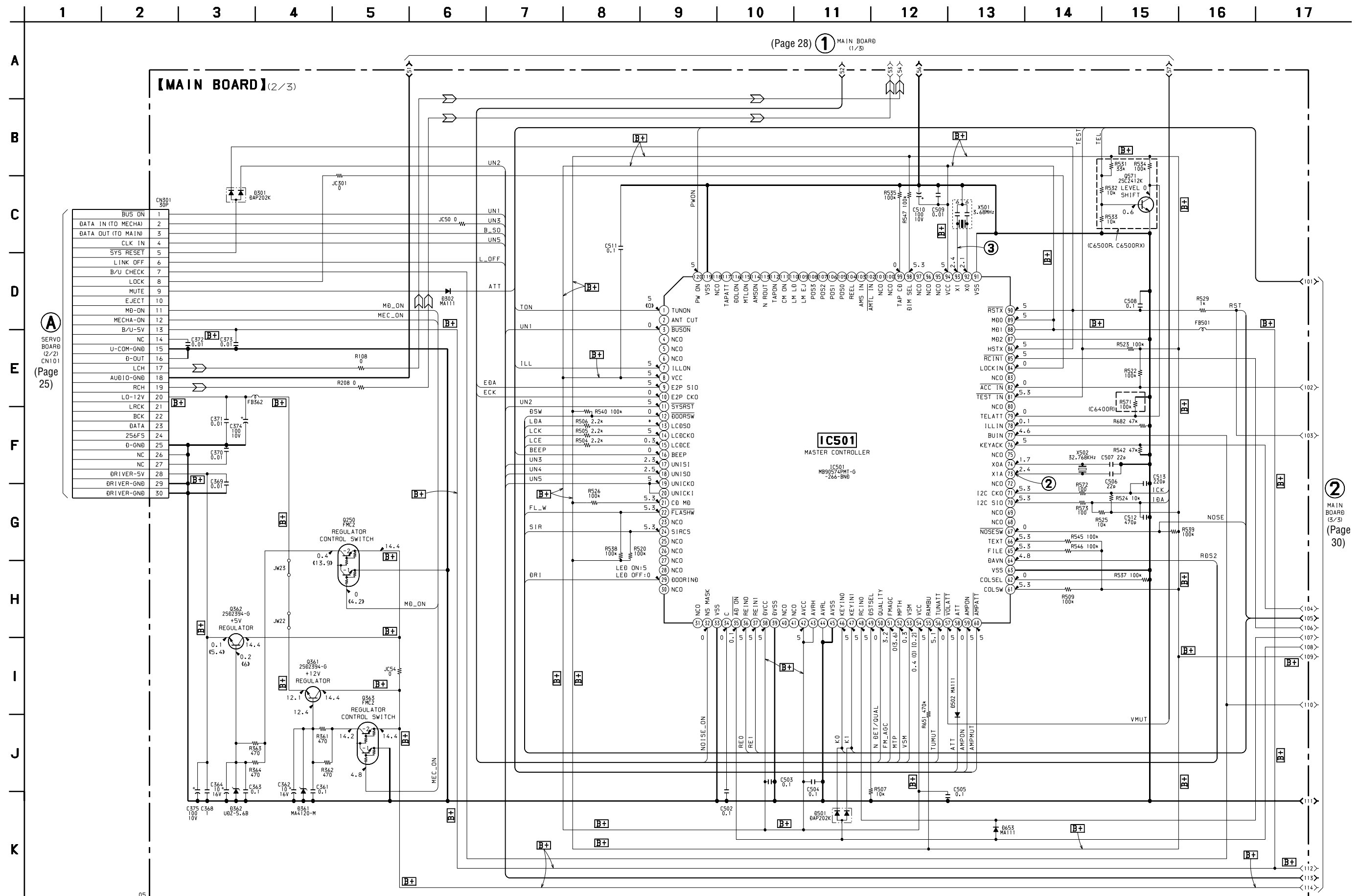
4-12. SCHEMATIC DIAGRAM – MAIN Board (1/3) – • See page 31 for Waveform. • See page 36 for IC Block Diagrams.



(Page 29) 1 MAIN BOARD (2/3)

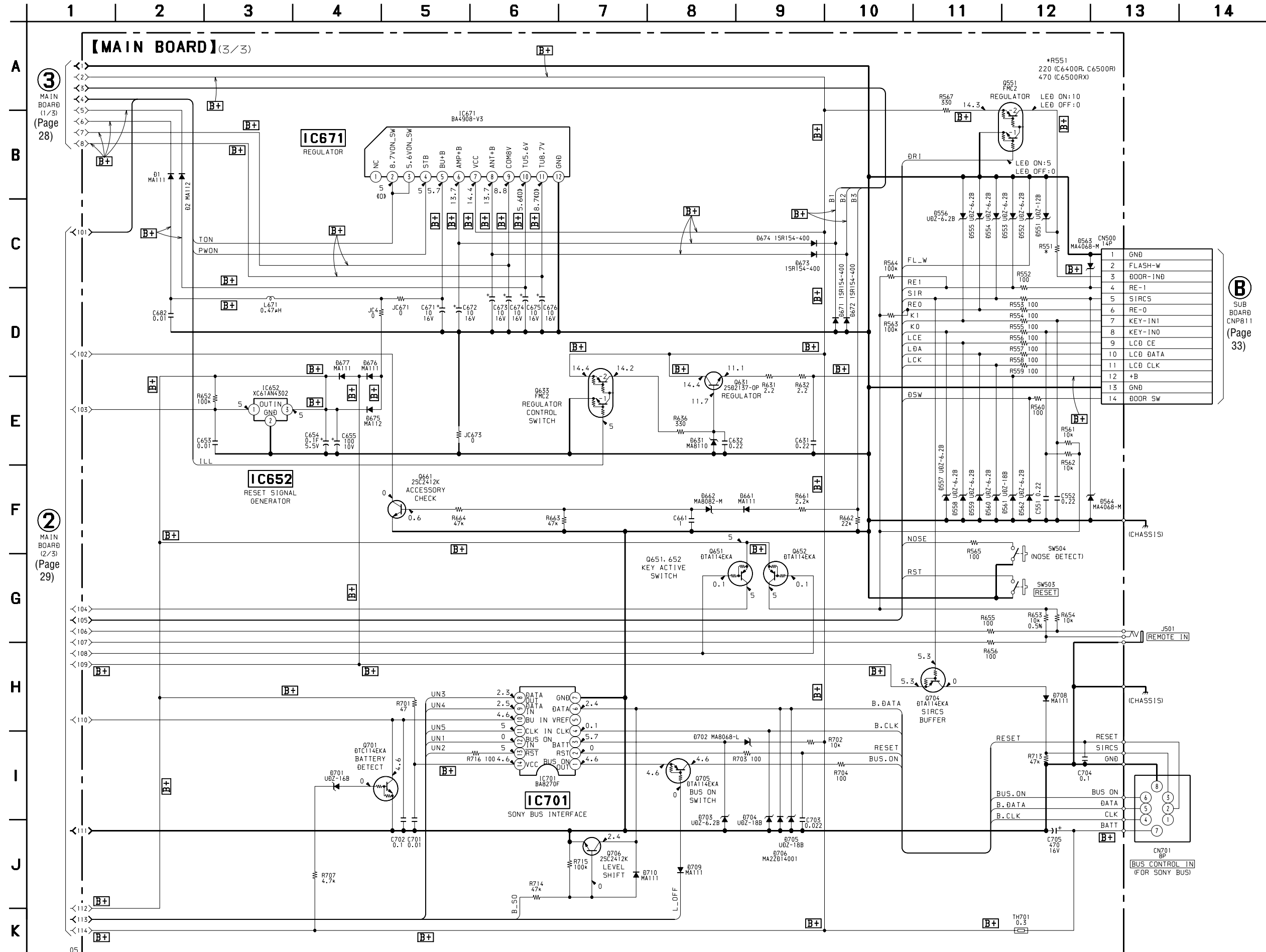
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
 no mark : FM  
 ( ) : MW  
 [ ] : LW

4-13. SCHEMATIC DIAGRAM – MAIN Board (2/3) – • See page 31 for Waveforms.



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

4-14. SCHEMATIC DIAGRAM – MAIN Board (3/3) – • See page 36 for IC Block Diagrams.

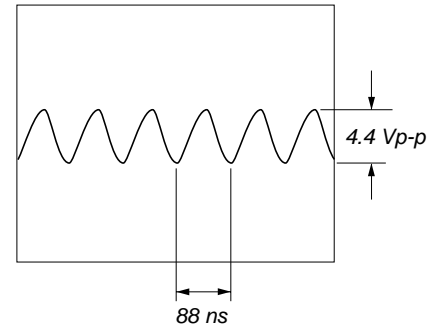


• Voltages are dc with respect to ground under no-signal (detuned) conditions.  
 no mark : FM  
 << >> : MD PLAY

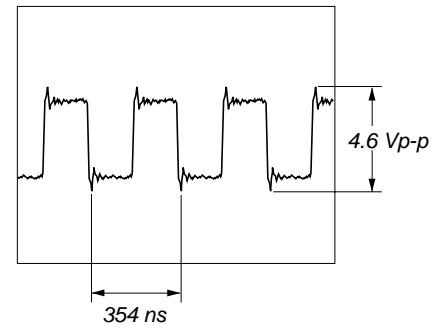


• Waveforms  
– SERVO Board –

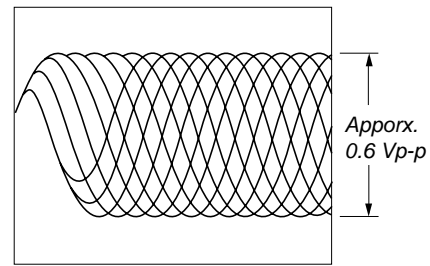
① IC101 ① (XTI) (MD Play Mode)



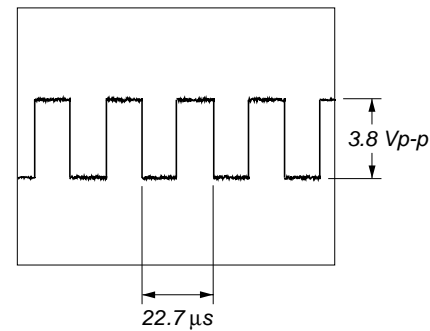
⑥ IC301 ②⑥ (XBCK) (MD Play Mode)



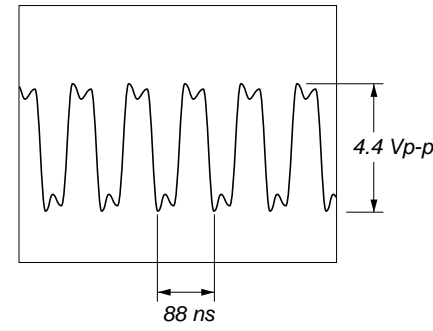
① IC302 ①, ②, ④⑥, ④⑥ (I, J, AGCI, RFO) (MD Play Mode)



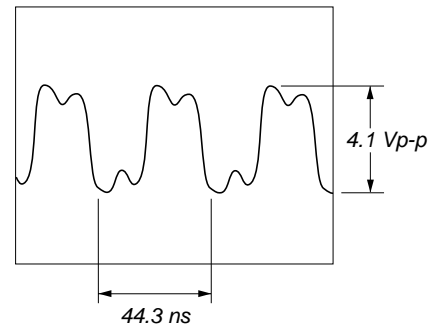
② IC101 ④ (LRCK) (MD Play Mode)



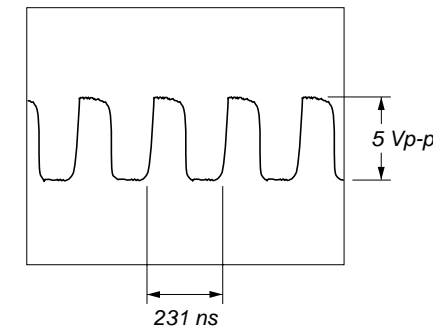
⑦ IC301 ②⑦ (FS256) (MD Play Mode)



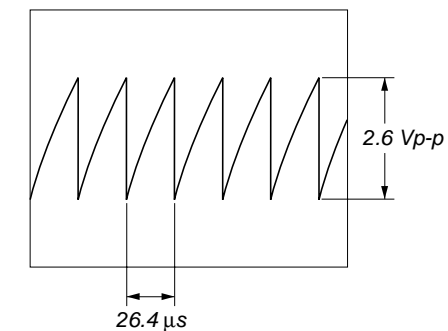
⑫ IC304 ①, ② (MD Play Mode)



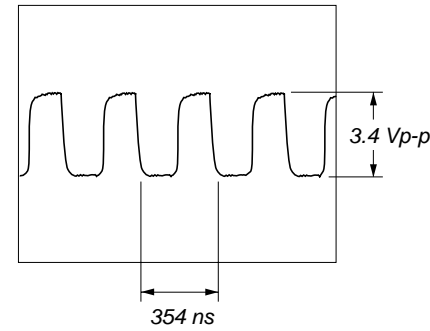
① IC51 ④ (OSCD)



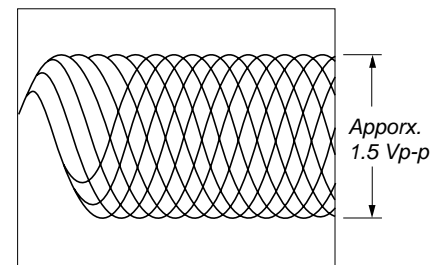
① IC901 ⑥⑩ (OSC)



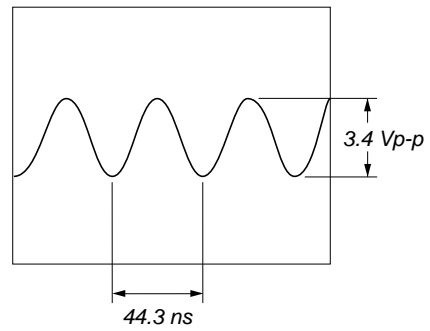
③ IC101 ⑤ (BCK) (MD Play Mode)



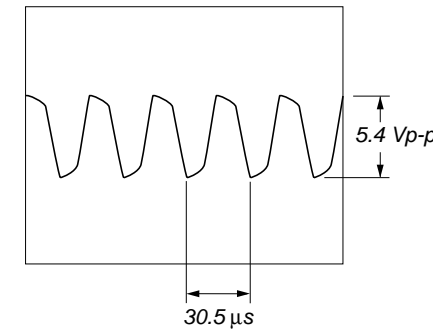
⑧ IC301 ⑤⑤ (RFI), IC302 ⑤⑤ (RF) (MD Play Mode)



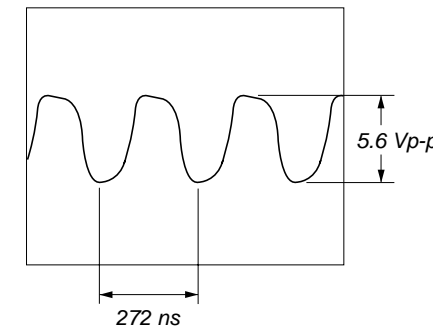
⑬ IC304 ③ (MD Play Mode)



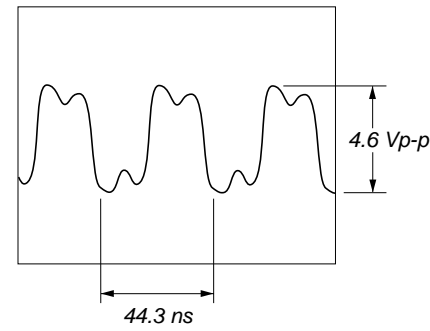
② IC501 ⑦③ (X1A)



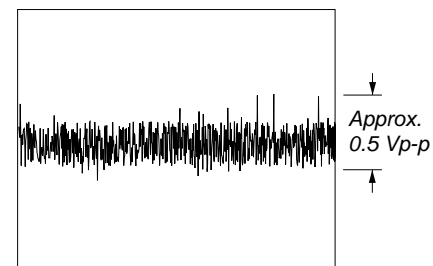
③ IC501 ⑧③ (X1A)



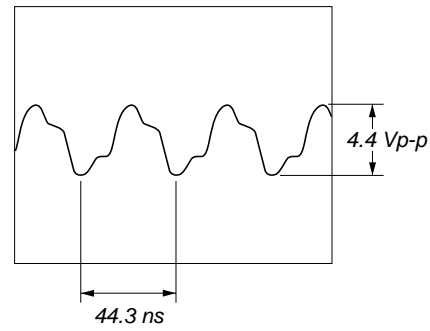
④ IC301 ①⑥ (OSCI) (MD Play Mode)



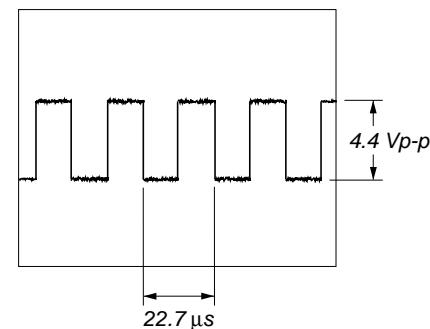
⑨ IC301 ⑥⑤ (FE), IC302 ⑥④ (FE) (MD Play Mode)



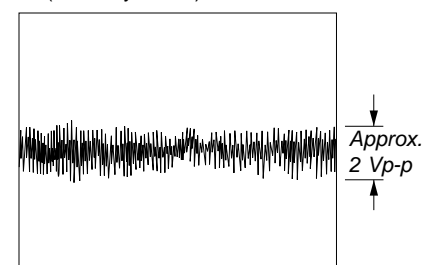
⑭ IC304 ⑦ (MD Play Mode)



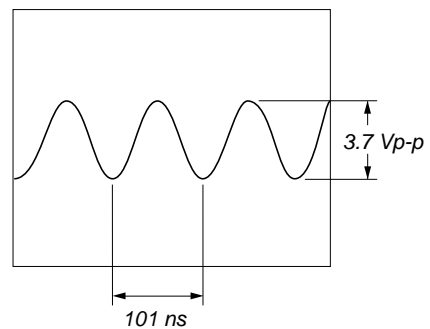
⑤ IC301 ②⑤ (LRCK) (MD Play Mode)



⑩ IC301 ⑦③ (TE), IC302 ②⑥ (TE) (MD Play Mode)



⑮ IC501 ⑧① (EXTAL)

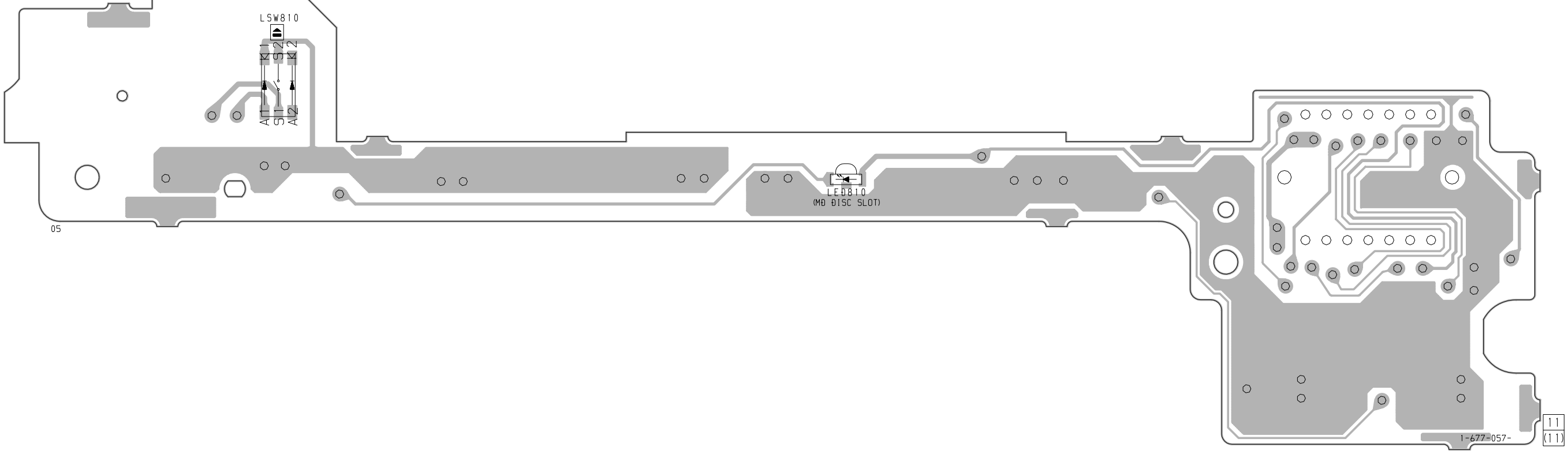


– MAIN Board –

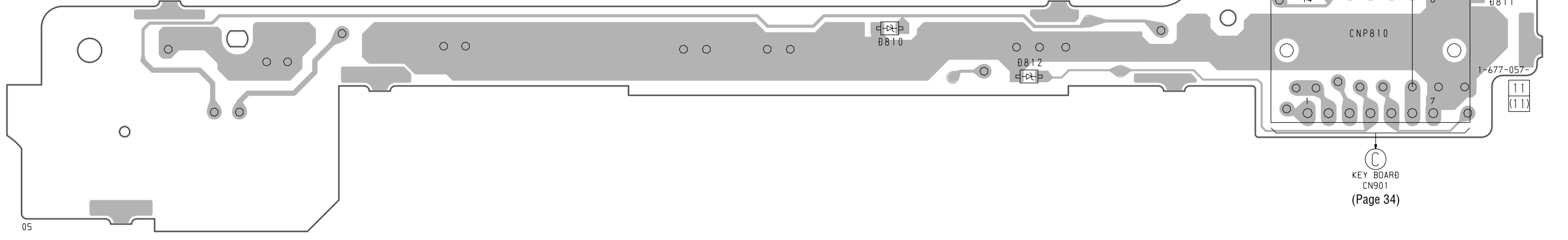
– KEY Board –

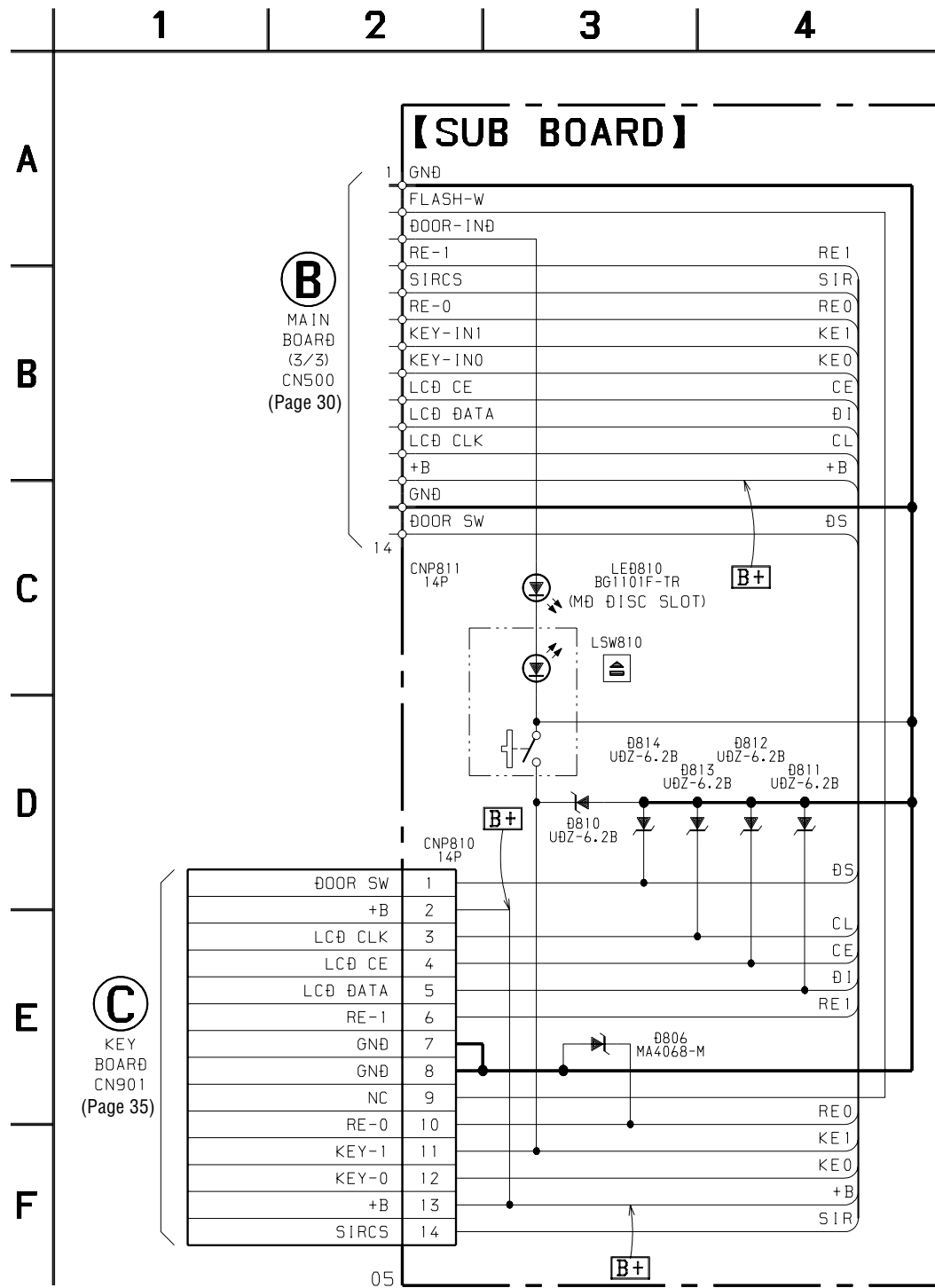
4-15. PRINTED WIRING BOARD – SUB Board – • See page 21 for Circuit Boards Location.

【SUB BOARD】(COMPONENT SIDE)



【SUB BOARD】(CONDUCTOR SIDE)

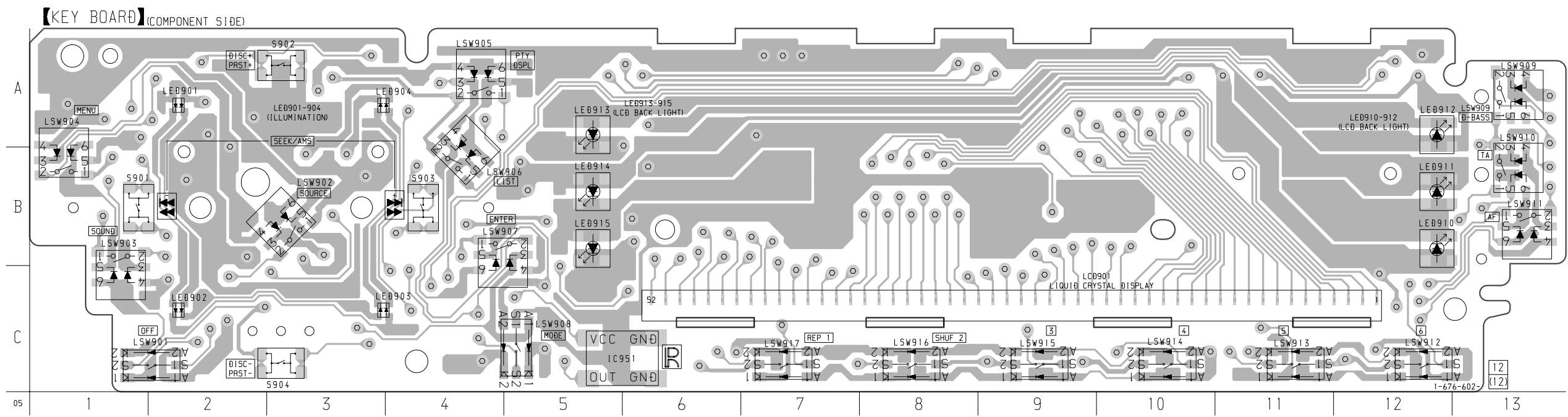




4-17. PRINTED WIRING BOARD – KEY Board – • See page 21 for Circuit Boards Location.

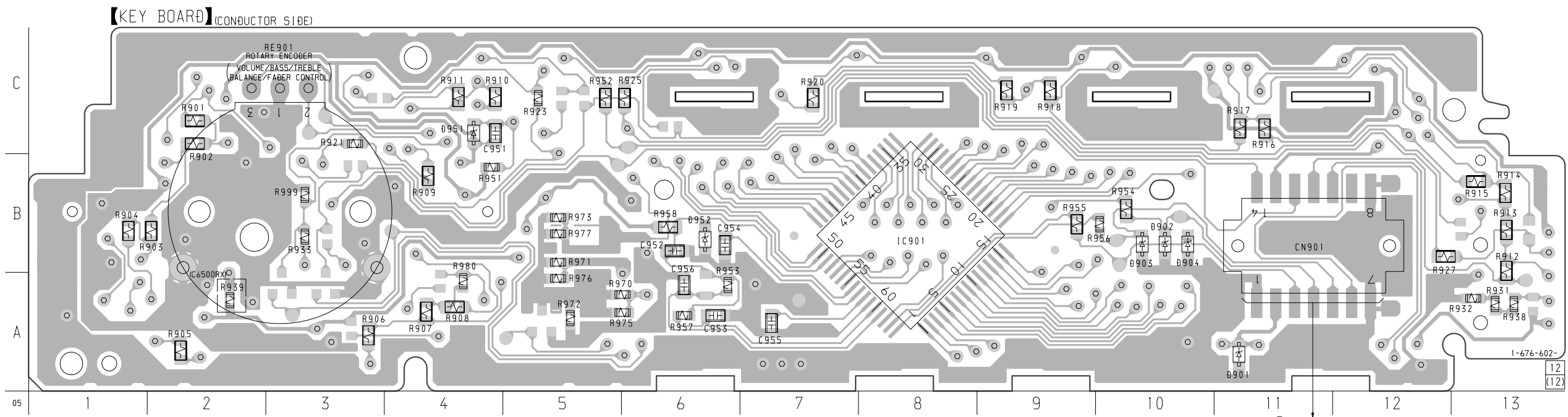
• Semiconductor Location

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



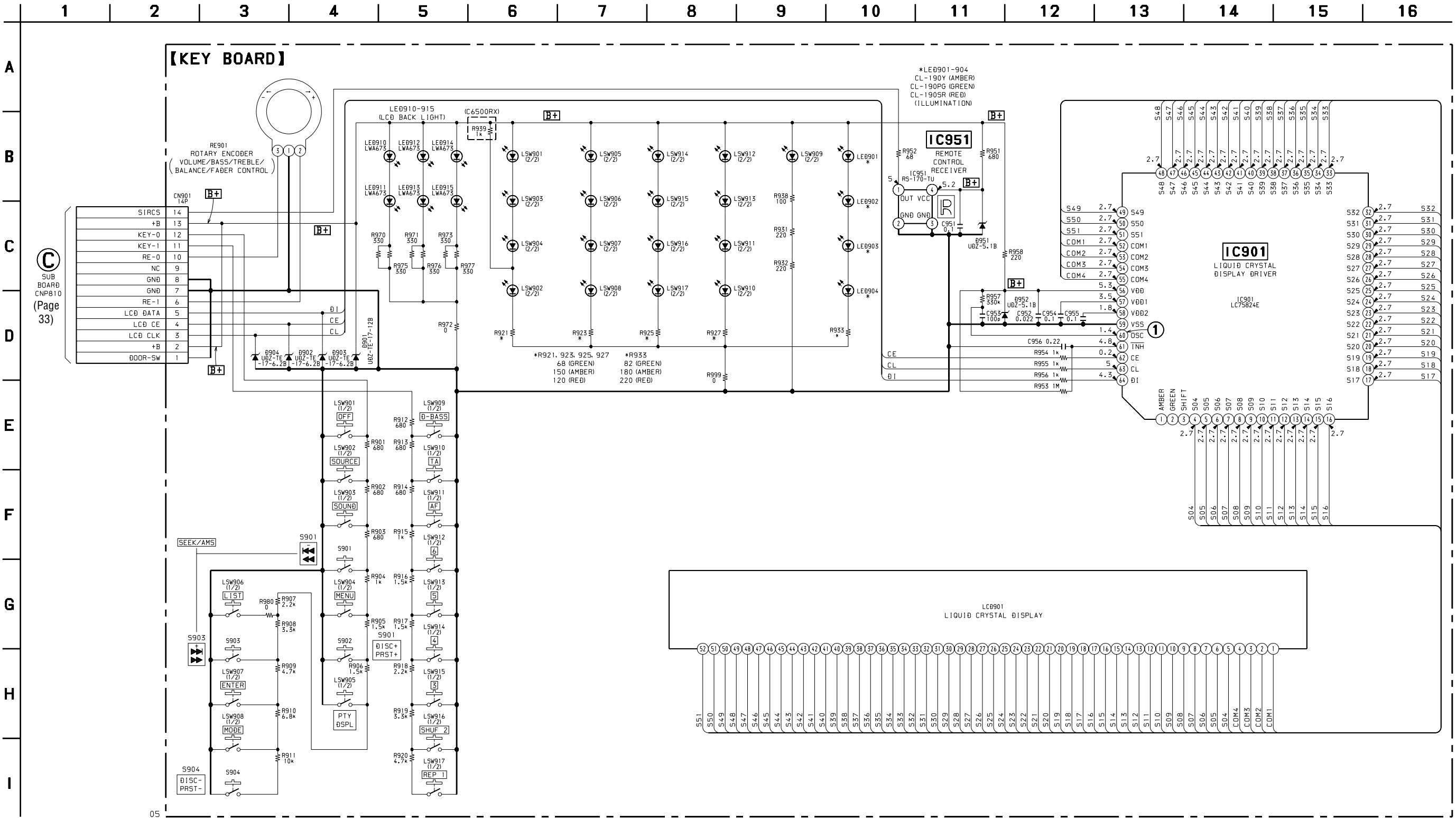
• Semiconductor Location

| Ref. No. | Location |
|----------|----------|
| D901     | A-11     |
| D902     | B-10     |
| D903     | B-10     |
| D904     | B-10     |
| D951     | C-4      |
| D952     | B-6      |
| IC901    | B-8      |



Ⓒ SUB BOARD CNP810  
(Page 32)

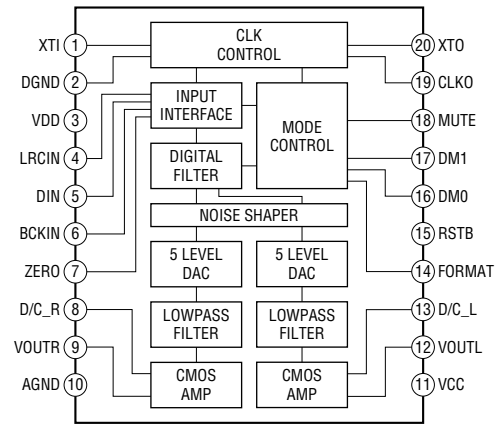
4-18. SCHEMATIC DIAGRAM – KEY Board – • See page 31 for Waveform.



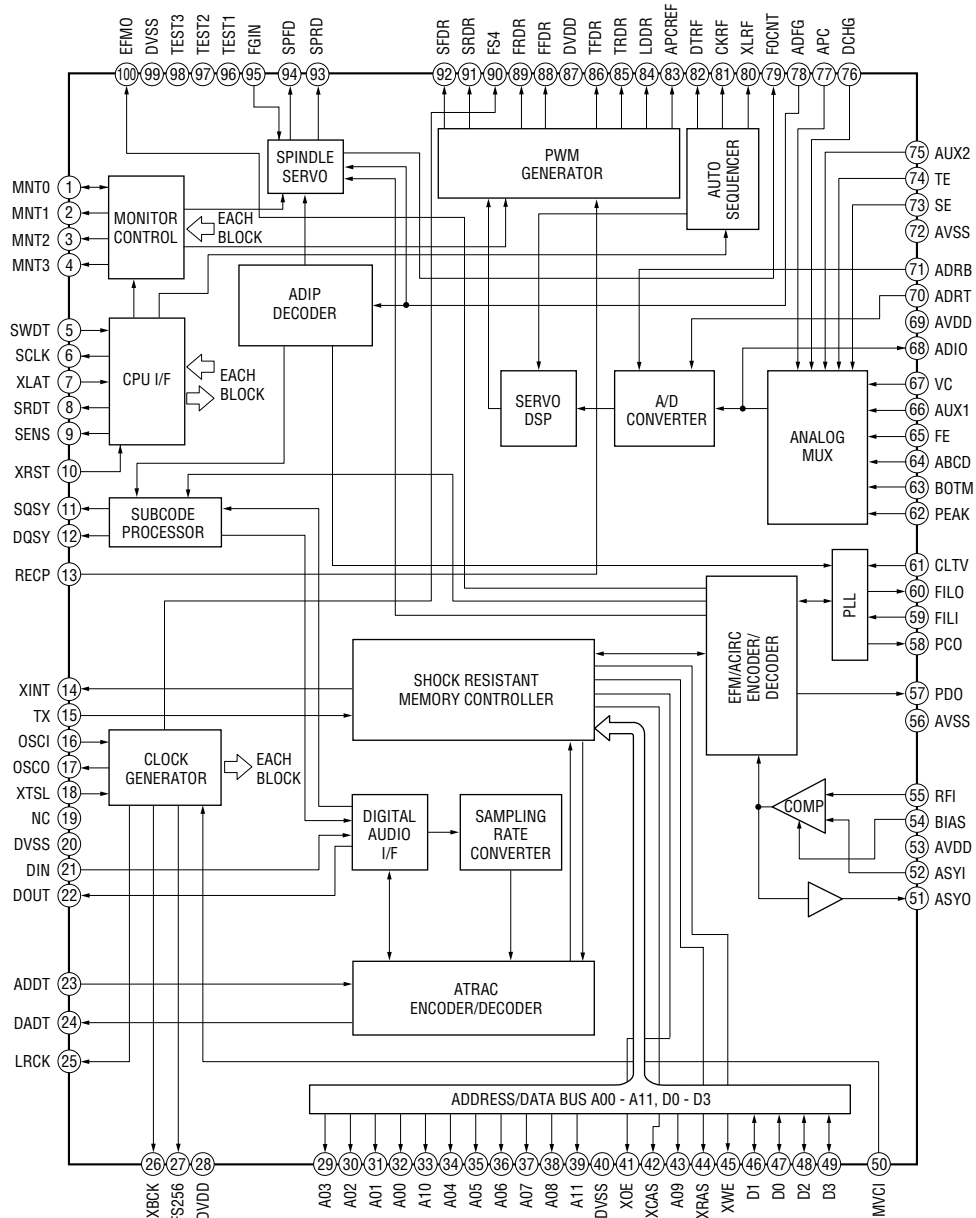
• Voltages and waveforms are dc with respect to ground under no-signal (detuned) conditions.  
 no mark : FM

• IC Block Diagrams  
- SERVO Board -

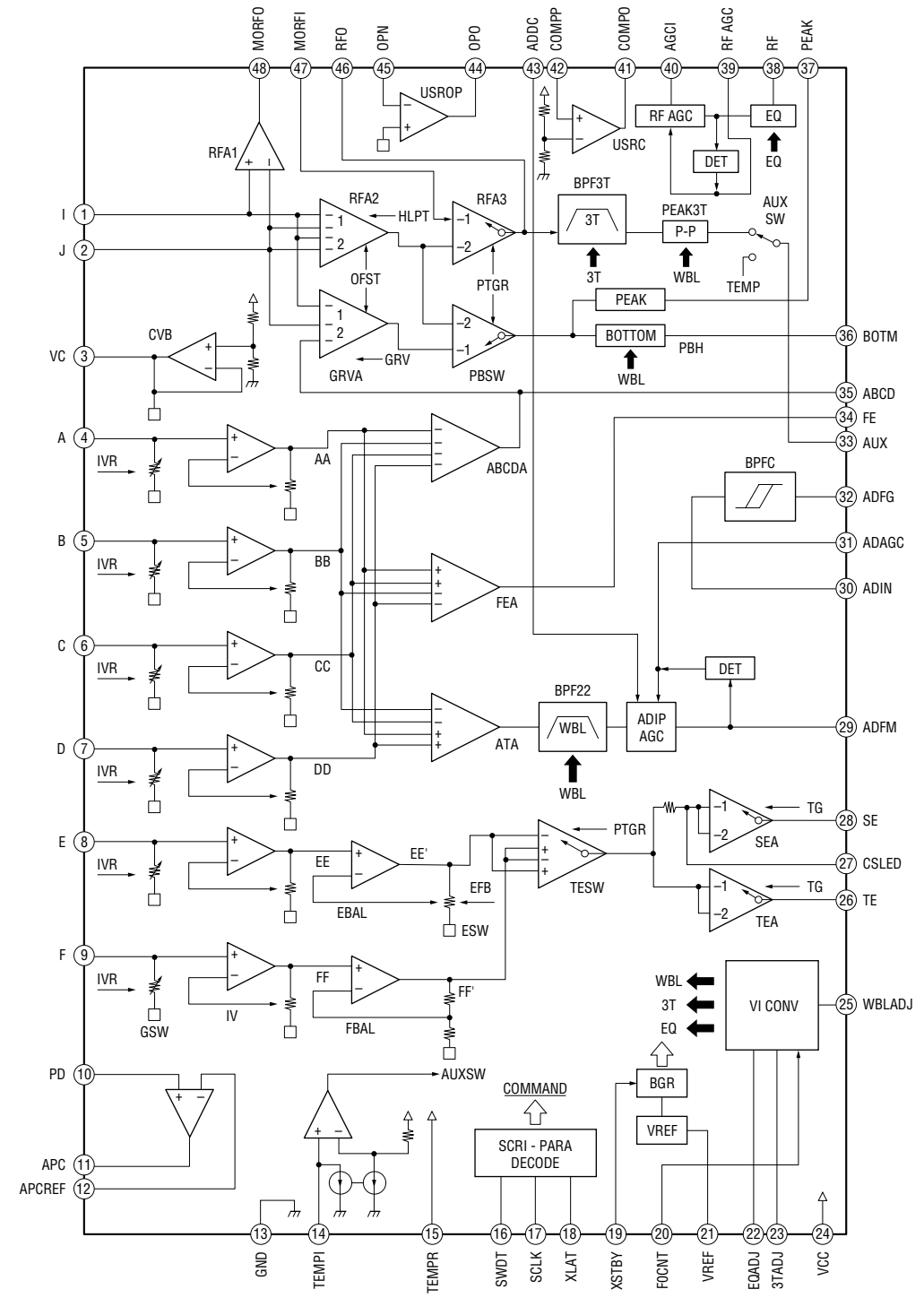
IC101 PCM1718E/2K



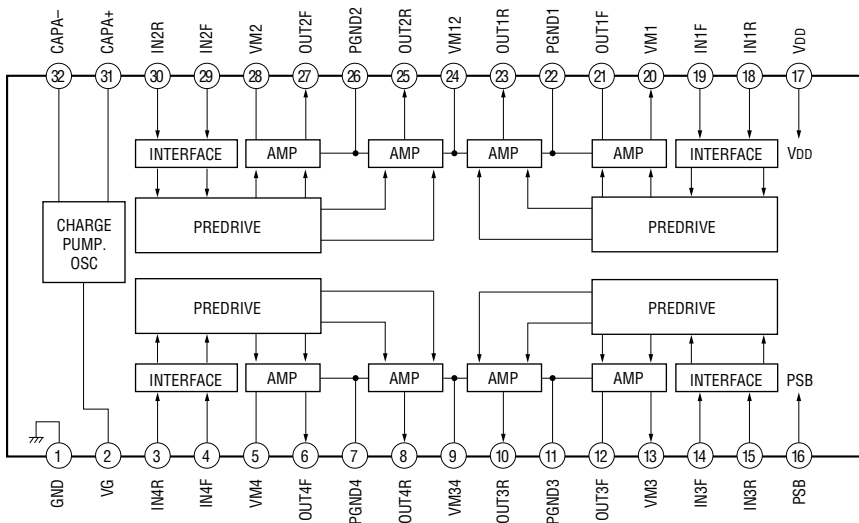
IC301 CXD2652AR



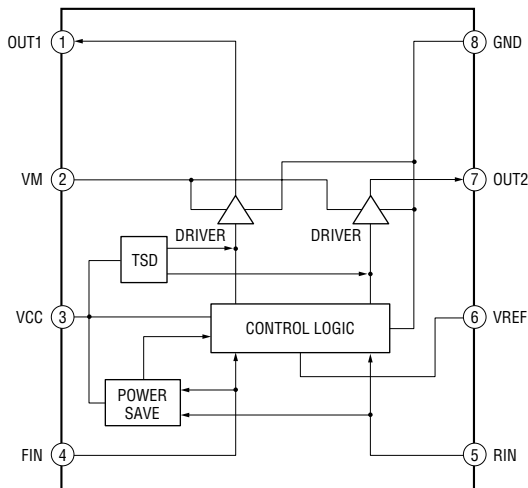
IC302 CXA2523AR



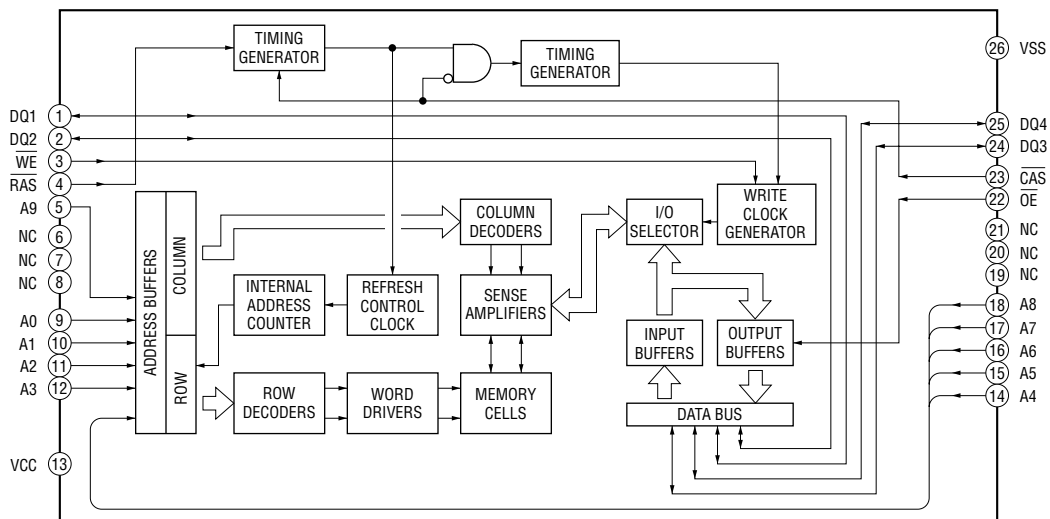
**IC303 BH6511FS-E2**



**IC305 BA6287F**



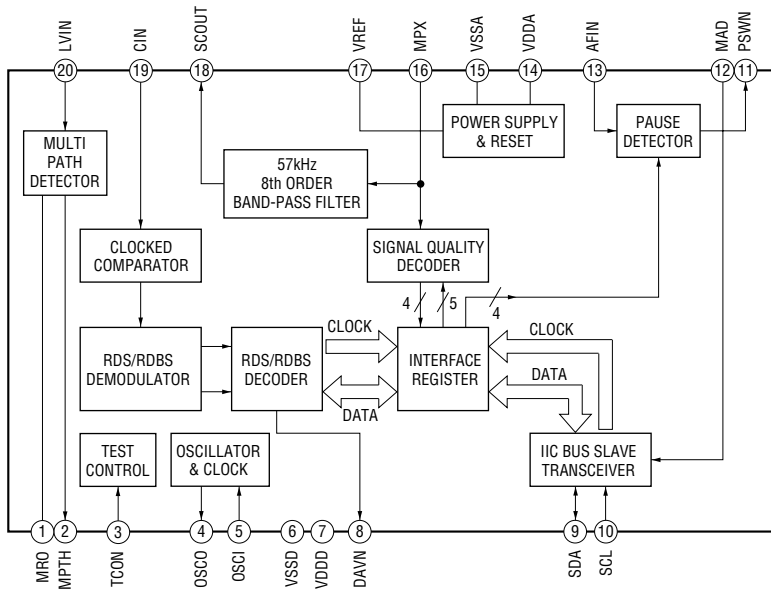
**IC307 MN41V4400TT-08S**



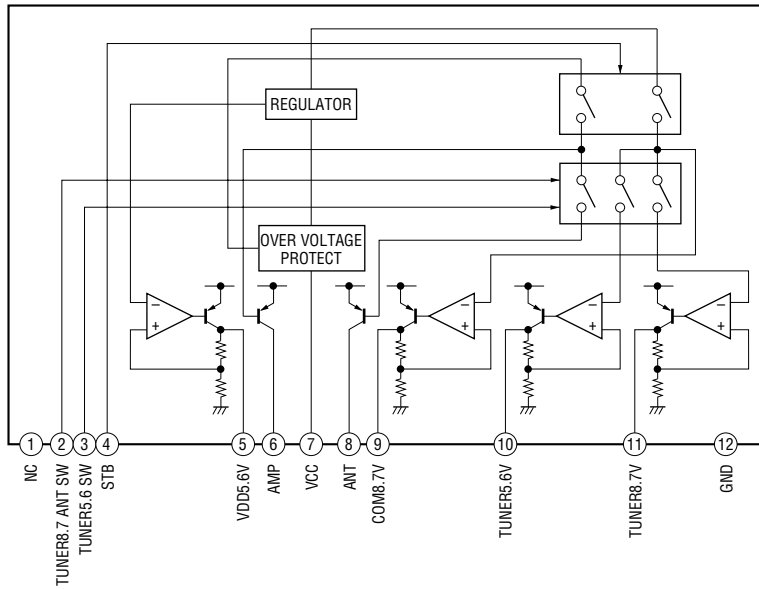


– MAIN Board –

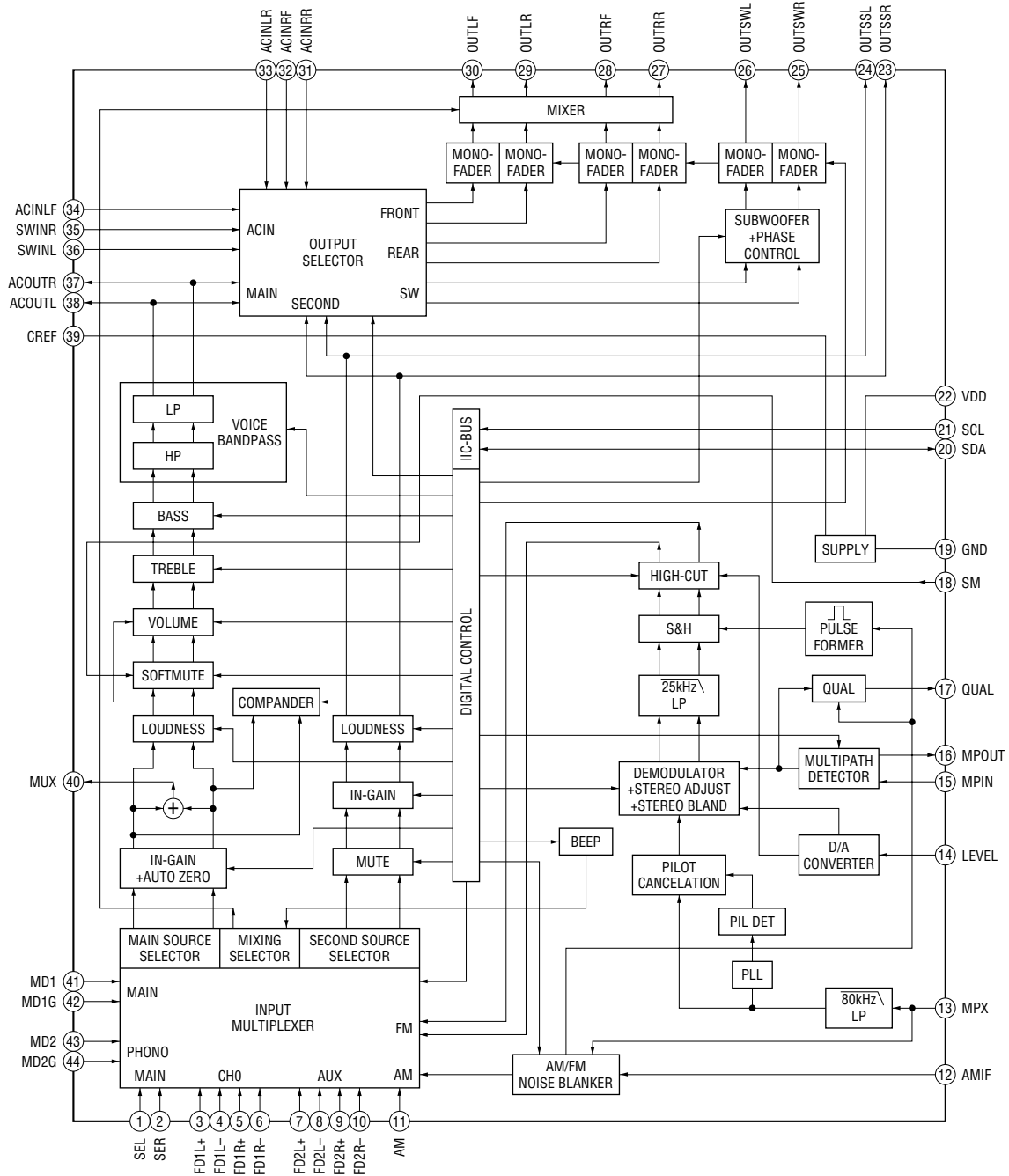
IC51 SAA6588T/V2-118



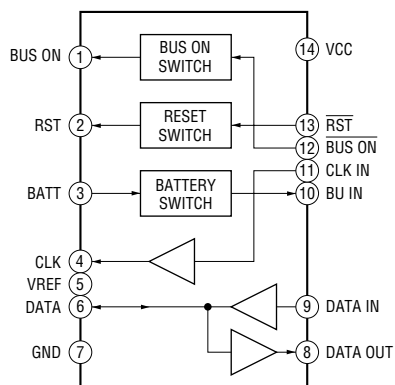
IC671 BA4908-V3



**IC151 TDA7402TR**



**IC701 BA8270F-E2**



#### 4-19. 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)<br>“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       | <u>XRST</u> | 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)<br>“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<br>“L” is output every 13.3 msec Almost all, “H” is output Not used (open)                              |
| 13       | RECP        | I     | Laser power selection signal input terminal<br>“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<br>Writing data transmission timing input (Also serves as the magnetic head on/off output)<br>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<br>“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 PCM1718E (IC101)   |
| 25       | LRCK        | O     | L/R sampling clock signal (44.1 kHz) output to the PCM1718E (IC101)  |
| 26       | XBCK        | O     | Bit clock signal (2.8224 MHz) output to the PCM1718E (IC101)   |
| 27       | FS256       | O     | Clock signal (11.2896 MHz) output to the PCM1718E (IC101)  |
| 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       | <u>XOE</u>  | O     | Output enable signal output to the D-RAM (IC307) “L” active  |
| 42       | <u>XCAS</u> | 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       | <u>XRAS</u> | O     | Row address strobe signal output to the D-RAM (IC307) “L” active   |
| 45       | <u>XWE</u>  | 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      | FOCNT    | 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 $\pm$ 1 kHz) output to the CXD2652AR (IC301)                            |
| 33      | AUX      | O   | Auxiliary signal (I <sub>s</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<br>“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<br>Not used (open)  |
| 14 to 17 | NCO                       | O   | Not used (open)   |
| 18       | DFCTSEL                   | I   | Select whether defect function is used for the CXD2652AR (IC301)<br>“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)<br>“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<br>“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 to the master controller (IC501) “H”: lock   |
| 22       | NCO                       | O   | Not used (open)   |
| 23       | 2M/4M                     | 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)<br>“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 (IC501), reset signal generator (IC652) and reset switch (SW503) “L”: reset<br>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)<br>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)  |
| 46       | LINKOFF                   | O   | Unilink on/off control signal output for the SONY bus “L”: link on, “H”: link off   |



| Pin No.  | Pin Name                     | I/O | Description   |
|----------|------------------------------|-----|---|
| 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 (IC501) or serial clock signal output to the SONY bus interface (IC701) and master controller (IC501) (for SONY bus) |
| 49       | UNISI                        | I   | Serial data input from the SONY bus interface (IC701)   |
| 50       | UNISO                        | O   | Serial data output to the SONY bus interface (IC701)  |
| 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<br>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       | 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 PCM1718E (IC101), CXD2652AR (IC301) and BH6511FS (IC303)<br>“L”: reset   |
| 60       | BU-IN                        | I   | Battery detect signal input from the SONY bus interface (IC600) and battery check circuit<br>“H”: battery on  |
| 61       | $\overline{\text{BUS-ON}}$   | I   | SONY bus on/off control signal input from the master controller (IC700) “L”: bus on   |
| 62       | SQSY                         | I   | Subcode Q sync (SCOR) input from the CXD2652AR (IC301)<br>“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<br>“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<br>“H”: power on   |
| 66       | DEEMP                        | O   | Emphasis on/off control signal output to the PCM1718E (IC101) “H”: emphasis on  |
| 67       | A-MUTE                       | O   | Audio muting on/off control signal output terminal  |
| 68       | NCO                          | O   | Not used (open)   |
| 69       | TSTCKO                       | O   | Output of clock signal for the test mode display Not used (open)  |
| 70       | $\overline{\text{TSTSO}}$    | O   | Output of data for the test mode display Not used (open)  |
| 71       | $\overline{\text{TSTM0D}}$   | 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 IC501 MB90574PMT-G-266-BND (MASTER CONTROLLER)

| Pin No.  | Pin Name                   | I/O | Description   |
|----------|----------------------------|-----|---|
| 1        | TUNON                      | O   | Tuner system power supply on/off control signal output to the BA4908 (IC671)<br>“H”: tuner power on   |
| 2        | ANT CUT                    | O   | Tuner system power supply on/off control signal output terminal “H”: tuner power on<br>Not used (open)  |
| 3        | $\overline{\text{BUSON}}$  | O   | Bus on/off control signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701) “L”: bus on  |
| 4 to 6   | NCO                        | O   | Not used (open)   |
| 7        | ILLON                      | O   | Power on/off control signal output of the illumination LED and liquid crystal display driver (IC901) “H”: power on  |
| 8        | VCC                        | —   | Power supply terminal (+5V)   |
| 9        | E2P SIO                    | I/O | Two-way data E2P bus with the FM/AM tuner unit (TU1)  |
| 10       | E2P CKO                    | O   | E2P bus clock signal output to the FM/AM tuner unit (TU1)   |
| 11       | $\overline{\text{SYSRST}}$ | O   | System reset signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701) “L”: reset   |
| 12       | $\overline{\text{DOORSW}}$ | I   | Front panel open/close detection signal input terminal<br>“L” is input when the front panel is closed   |
| 13       | LCDSO                      | O   | Serial data output to the liquid crystal display driver (IC901)   |
| 14       | LCDCKO                     | O   | Serial data transfer clock signal output to the liquid crystal display driver (IC901)   |
| 15       | LCDCE                      | O   | Chip enable signal output to the liquid crystal display driver (IC901) “H” active   |
| 16       | BEEP                       | O   | Beep sound drive signal output to the power amplifier (IC611)   |
| 17       | UNISI                      | I   | Serial data input from the SONY bus interface (IC701)   |
| 18       | UNISO                      | O   | Serial data output to the SONY bus interface (IC701)  |
| 19       | UNICKO                     | O   | Serial clock signal output to the MD mechanism controller (IC501) and SONY bus interface (IC701)  |
| 20       | UNICKI                     | I   | Serial clock signal input from the MD mechanism controller (IC501) (for SONY bus)   |
| 21       | CD MD                      | I   | Setting terminal for the internal mechanism CD or MD<br>“L”: CD, “H”: MD (fixed at “H” in this set)   |
| 22       | $\overline{\text{FLASHW}}$ | I   | Internal flash memory data write mode detection signal input terminal “L”: data write mode<br>Not used  |
| 23       | NCO                        | O   | Not used (open)   |
| 24       | SIRCS                      | I   | Sires remote control signal input from the remote control receiver (IC951)  |
| 25 to 28 | NCO                        | O   | Not used (open)   |
| 29       | DOORIND                    | O   | LED drive signal output of the MD disc slot illumination and $\blacktriangle$ indicator (LED810, LSW810)<br>“H”: LED on “H” is output to turn on LED when front panel is opened                                   |
| 30, 31   | NCO                        | O   | Not used (open)   |
| 32       | NS MASK                    | O   | Discharge control signal output for the noise detection circuit “H”: discharge  |
| 33       | VSS                        | —   | Ground terminal   |
| 34       | C                          | —   | Connected to coupling capacitor for the power supply  |
| 35       | $\overline{\text{AD ON}}$  | O   | A/D converter power control signal output terminal<br>When the KEYACK (pin 76) that controls reference voltage power for key A/D conversion input is active, “L” is output from this terminal to enable the input |
| 36       | REIN0                      | I   | Dial pulse input of the rotary encoder (RE901)<br>(for VOLUME/BASS/TREBLE/BALANCE/FADER control)  |
| 37       | REIN1                      | I   |   |
| 38       | DVCC                       | —   | Power supply terminal (+5V) (for D/A converter)   |
| 39       | DVSS                       | —   | Ground terminal (for D/A converter)   |
| 40, 41   | NCO                        | O   | Not used (open)   |
| 42       | AVCC                       | —   | Power supply terminal (+5V) (for analog system)   |

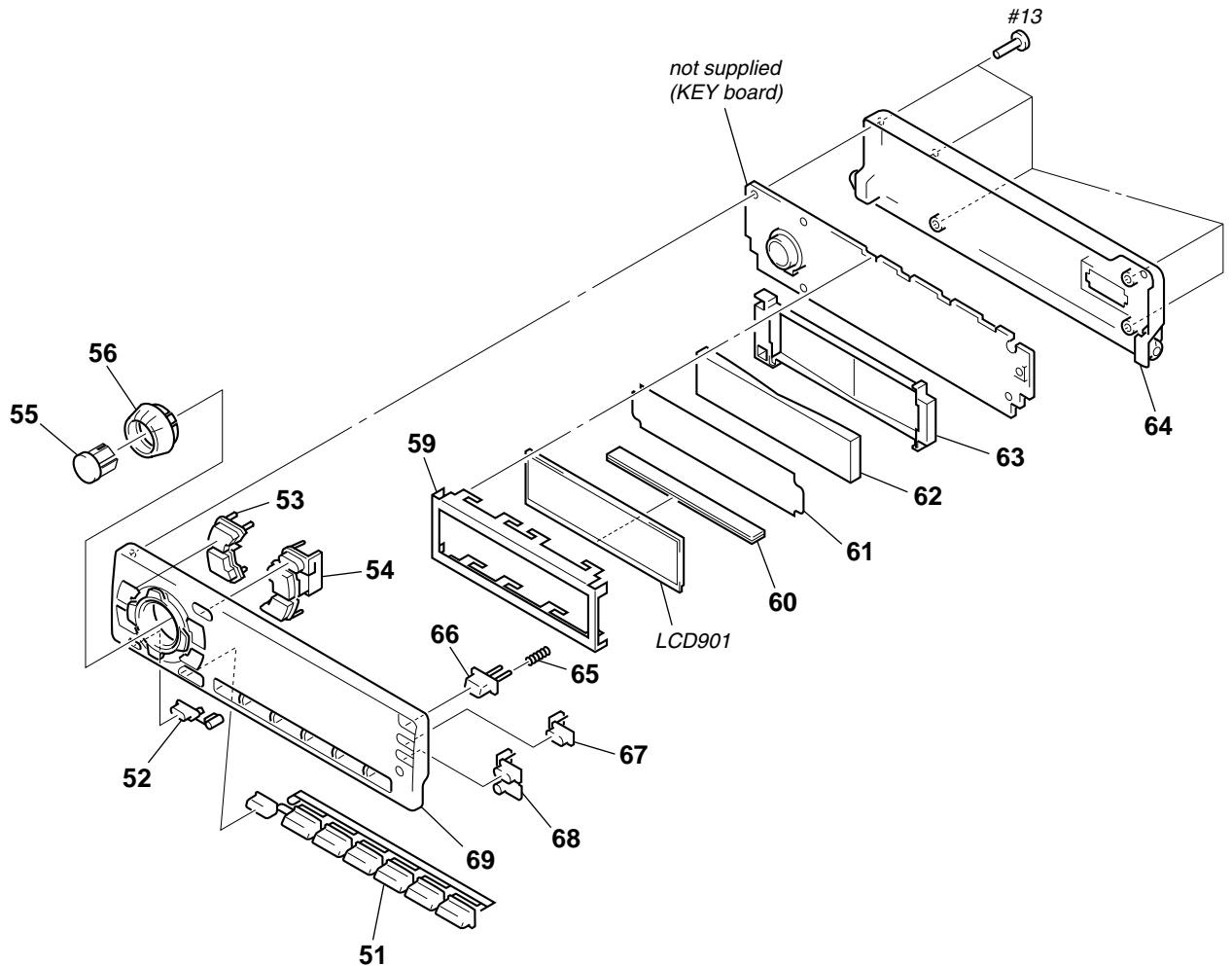
| Pin No. | Pin Name                   | I/O | Description   |
|---------|----------------------------|-----|---|
| 43      | AVRH                       | I   | Reference voltage (+5V) input terminal (for A/D converter)  |
| 44      | AVRL                       | I   | Reference voltage (0V) input terminal (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)<br>OFF, SOURCE, SOUND, MENU, PTY DSPL, LIST, ENTER, MODE,<br>SEEK/AMS - ◀◀◀ ◀◀ + ▶▶▶ ▶▶, DISC/PRST +, PRST/DISC - keys input                  |
| 47      | KEYIN1                     | I   | Key input terminal (A/D input) (LSW810, LSW909 to LSW917)<br>▲, D-BASS, TA, FA, 6 to 3 SHUF 2, REP 1 keys input   |
| 48      | RCIN0                      | I   | Rotary remote commander key input terminal (A/D input)  |
| 49      | DSTSEL                     | I   | Destination setting terminal (fixed at “L” in this set)   |
| 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 (TU1) (A/D input)   |
| 52      | MPTH                       | I   | Multi-path detection signal input from the RDS decoder (IC51) (A/D input)   |
| 53      | VSM                        | I   | FM and AM signal meter voltage detection input from the FM/AM tuner unit (TU1) (A/D input)  |
| 54      | VCC                        | —   | Power supply terminal (+5V)   |
| 55      | RAMBU                      | I   | Internal RAM reset detection signal input terminal<br>Input terminal to check that RAM data are not destroyed due to low voltage<br>This checking is made within 100 msec after reset Not used (fixed at “H”) |
| 56      | TUNATT                     | O   | Muting on/off control signal output of the FM/AM tuner signal “H”: muting on  |
| 57      | $\overline{\text{VOLATT}}$ | O   | Pre amplifier muting on/off control signal output to the electrical volume (IC151)<br>“L”: muting on  |
| 58      | ATT                        | O   | Audio line muting on/off control signal output terminal “H”: muting on  |
| 59      | AMPON                      | O   | Standby on/off control signal output to the power amplifier (IC611)<br>“L”: standby mode, “H”: amplifier on   |
| 60      | $\overline{\text{AMPATT}}$ | O   | Power amplifier muting on/off control signal output to the power amplifier (IC611)<br>“L”: muting on  |
| 61      | COLSW                      | I   | Setting terminal for the illumination color “L”: 2 color, “H”: 1 color (fixed at “H” in this set)   |
| 62      | COLSEL                     | I   | Setting terminal for the illumination color “L”: amber, “H”: green (fixed at “L” in this set)   |
| 63      | VSS                        | —   | Ground terminal   |
| 64      | DAVN                       | I   | Data transmit completed detection signal input from the RDS decoder (IC51) “H” active   |
| 65      | FILE                       | I   | Setting terminal for the custom file “L”: unavailable, “H”: available (fixed at “H” in this set)  |
| 66      | TEXT                       | I   | Setting terminal for the CD text “L”: unavailable, “H”: available (fixed at “H” in this set)  |
| 67      | $\overline{\text{NOSESW}}$ | I   | Front panel block remove/attach detection signal input from the nose detection switch (SW504)<br>“L”: front panel is attached   |
| 68, 69  | NCO                        | O   | Not used (open)   |
| 70      | I2C SIO                    | I/O | Two-way data I2C bus with the FM/AM tuner unit (TU1), RDS decoder (IC51) and electrical volume (IC151)  |
| 71      | I2C CKO                    | O   | I2C bus clock signal output to the FM/AM tuner unit (TU1), RDS decoder (IC51) and electrical volume (IC151)   |
| 72      | NCO                        | O   | Not used (open)   |
| 73      | X1A                        | O   | Sub system clock output terminal (32.768 kHz)   |
| 74      | X0A                        | I   | Sub system clock input terminal (32.768 kHz)  |
| 75      | NCO                        | O   | Not used (open)   |
| 76      | 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”  |
| 77      | BUIN                       | I   | Battery detection signal input from the SONY bus interface (IC701) and battery detect circuit<br>“L” is input at low voltage  |

| Pin No.  | Pin Name | I/O | Description   |
|----------|----------|-----|---|
| 78       | ILLIN    | I   | Auto dimmer control illumination line detection signal input terminal<br>“H” is input at dimmer detection Not used (fixed at “L”)   |
| 79       | TELATT   | I   | Telephone detection signal input terminal At input of “H”, the signal is attenuated by –20 dB<br>Used for the MDX-C6500R/C6500RX only (MDX-C6400R: fixed at “L”)  |
| 80       | NCO      | O   | Not used (open)   |
| 81       | TEST IN  | I   | Setting terminal for the test mode “L”: test mode, Normally: fixed at “H”   |
| 82       | ACC IN   | I   | Accessory detection signal input terminal “L”: accessory on   |
| 83       | NCO      | O   | Not used (open)   |
| 84       | LOCKIN   | I   | Mini-disc lock detection signal input from the MD mechanism controller (IC501) “H”: lock  |
| 85       | RCINI    | I   | Rotary remote commander shift key input terminal “L”: shift   |
| 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       | RSTX     | I   | System reset signal input from the reset signal generator (IC652) and reset switch (SW503)<br>“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 to 97 | NCO      | O   | Not used (open)   |
| 98       | DIM SEL  | I   | Setting terminal for the dimmer “L”: dimmer in, “H”: no dimmer (fixed at “H” in this set)   |
| 99       | TAP CD   | I   | Setting terminal for the internal mechanism tape or CD<br>“L”: CD, “H”: tape (fixed at “L” in this set)   |
| 100, 101 | NCO      | O   | Not used (open)   |
| 102      | AMTL IN  | I   | Auto metal detection signal input terminal “L”: auto metal Not used (open)  |
| 103      | AMS IN   | I   | Input terminal of whether a music is present or not is detected at auto music sensor<br>“L”: music is present, “H”: music is not present Not used (open)  |
| 104      | REEL     | I   | Rotation detect signal input terminal Not used (open)   |
| 105      | POS0     | I   | Tape position (EJECT/FF/REW/REV/ FWD mode) detect input from the tape operation switch on the deck mechanism<br>Not used this function (open)   |
| 106      | POS1     | I   |   |
| 107      | POS2     | I   |   |
| 108      | POS3     | I   |   |
| 109      | LM EJ    | O   | Loading motor control signal output terminal “H” active<br>(For the eject direction and reverse side operation) Not used (open)   |
| 110      | LM LD    | O   | Loading motor control signal output terminal “H” active<br>(For the loading direction and forward side operation) Not used (open)   |
| 111      | CM ON    | O   | Capstan/reel motor control signal output terminal “H”: motor on Not used (open)   |
| 112      | TAPON    | O   | Tape system power supply on/off control signal output terminal “H”: tape on Not used (open)   |
| 113      | N ROUT   | O   | Forward/reverse direction control signal output terminal<br>“L”: forward direction, “H”: reverse direction Not used (open)  |
| 114      | AMSON    | O   | Tape auto music sensor control signal output terminal<br>“L” is output to lower the gain for audio level at FF/REW mode Not used (open)   |
| 115      | MTLON    | I/O | METAL control in/out terminal<br>At initial mode: auto/manual mode selection input of METAL function (manual at “L” input)<br>At manual mode: METAL on/off control signal output terminal (METAL on at “H” output)<br>Not used this function (open) |

| Pin No. | Pin Name | I/O | Description   |
|---------|----------|-----|---|
| 116     | DOLON    | I/O | Dolby control in/out terminal<br>At initial mode: valid/invalid selection input of dolby function (valid at "L" input)<br>At normal mode: dolby on/off control signal output terminal (dolby on at "H" output)<br>Not used this function (open) |
| 117     | TAPATT   | O   | Audio signal select control signal output terminal Not used (open)  |
| 118     | NCO      | O   | Not used (open)   |
| 119     | VSS      | —   | Ground terminal   |
| 120     | PW ON    | O   | Main system power supply on/off control signal output to the BA4908 (IC671) "H": power on   |



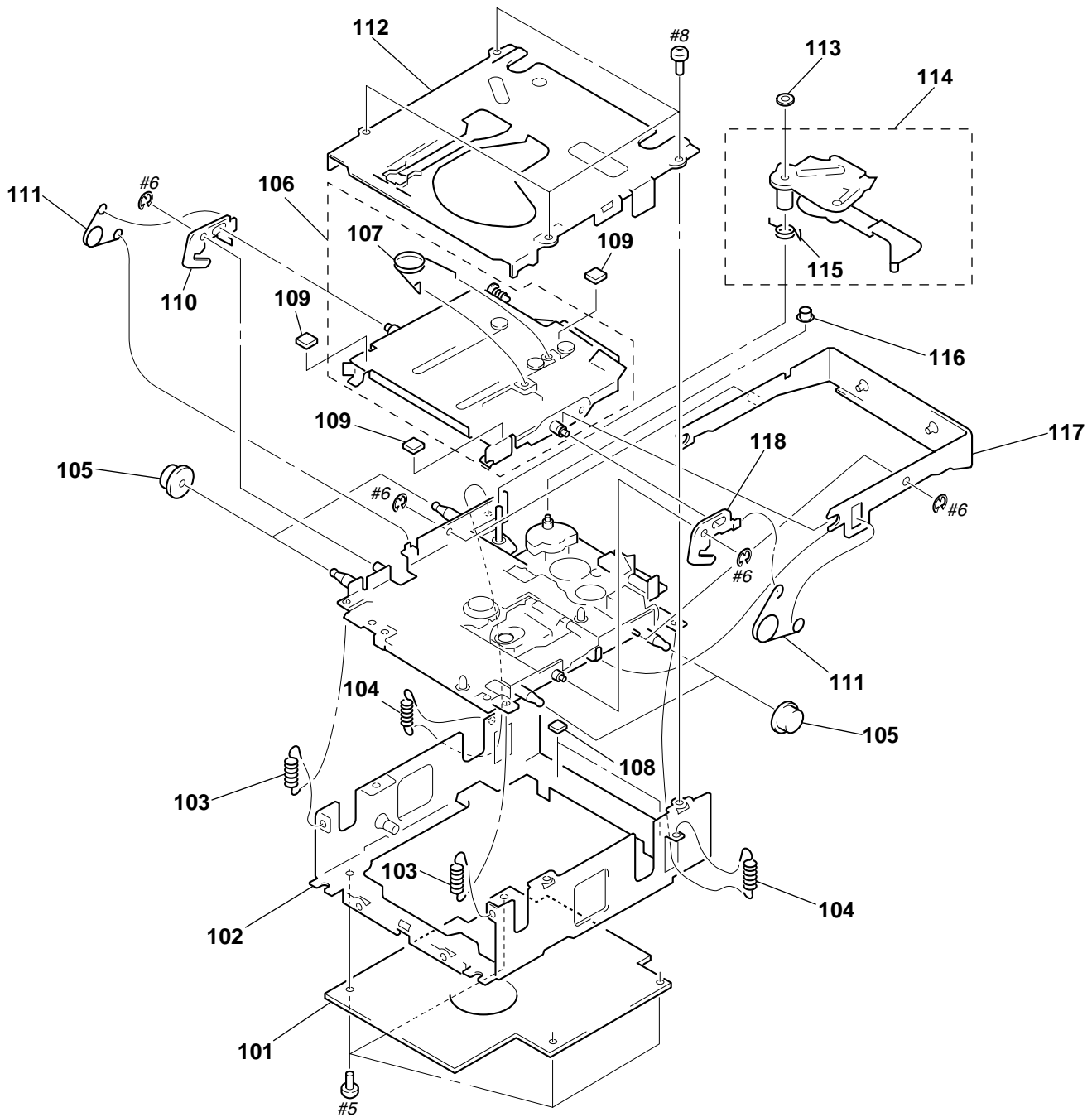
(2) FRONT PANEL SECTION



| Ref. No. | Part No.     | Description                             | Remark | Ref. No. | Part No.     | Description                             | Remark |
|----------|--------------|---|--------|----------|--------------|---|--------|
| 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)                          |        |
| 56       | 3-040-981-01 | KNOB (VOL)                              |        | 69       | X-3378-685-1 | FRONT PANEL (SV) ASSY (C6500R)          |        |
| * 59     | 3-040-997-01 | PLATE (LCD), GROUND                     |        | 69       | X-3378-686-1 | FRONT PANEL (SV) ASSY (C6400R)          |        |
| 60       | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION            |        | 69       | X-3378-688-1 | FRONT PANEL (SV) ASSY (C6500RX)         |        |
| * 61     | 3-041-371-01 | SHEET (REFLECTOR)                       |        | LCD901   | 1-803-906-11 | DISPLAY PANEL, LIQUID CRYSTAL           |        |
| * 62     | 3-040-993-01 | PLATE (LCD), LIGHT GUIDE                |        |          |              | (C6400R/C6500R)                         |        |
| * 63     | 3-040-992-01 | HOLDER (LCD)                            |        | LCD901   | 1-803-906-31 | DISPLAY PANEL, LIQUID CRYSTAL (C6500RX) |        |

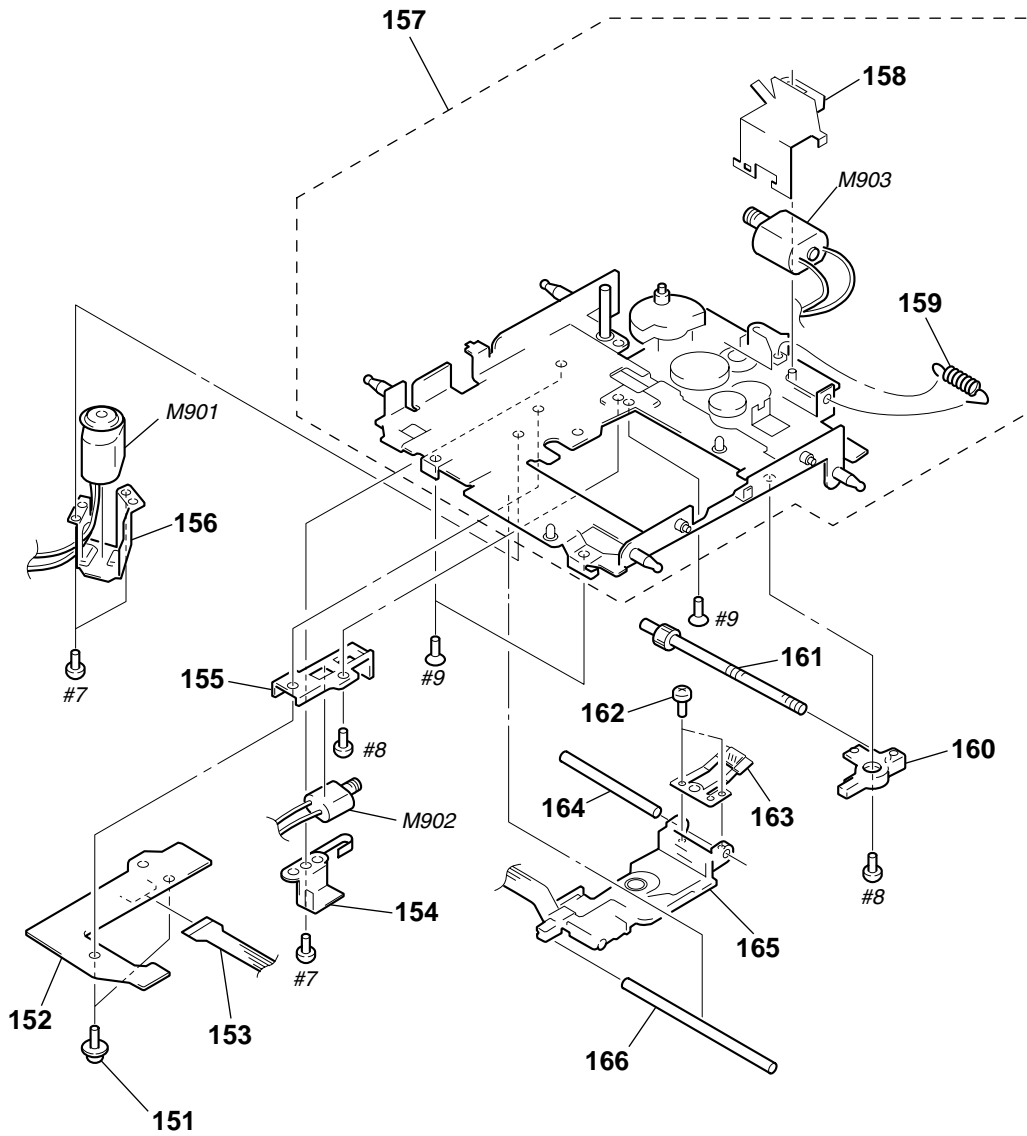


**(3) MECHANISM DECK SECTION-1  
(MG-164NZ-138)**



| Ref. No. | Part No.     | Description               | Remark | Ref. No. | Part No.     | Description        | Remark |
|----------|--------------|---------------------------|--------|----------|--------------|--------------------|--------|
| * 101    | A-3326-036-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-164NZ-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-3326-034-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)           |        |                 |              |                               |        |

**KEY**

**SECTION 6  
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

- 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 |
|----------|--------------|---|--------|
|          |              | KEY BOARD<br>*****                                |        |
|          | 1-694-660-11 | CONDUCTIVE BOARD, CONNECTION                      |        |
| *        | 3-040-992-01 | HOLDER (LCD)                                      |        |
| *        | 3-040-993-01 | PLATE (LCD), LIGHT GUIDE                          |        |
| *        | 3-040-997-01 | PLATE (LCD), GROUND                               |        |
| *        | 3-041-371-01 | 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     | 1-163-251-11 | CERAMIC CHIP 100PF 5% 50V                         |        |
| C954     | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V                        |        |
| C955     | 1-164-004-11 | CERAMIC CHIP 0.1uF 10% 25V                        |        |
| C956     | 1-164-489-11 | CERAMIC CHIP 0.22uF 10% 16V                       |        |
|          |              | < CONNECTOR >                                     |        |
| CN901    | 1-794-065-21 | PLUG, CONNECTOR 14P                               |        |
|          |              | < DIODE >   |        |
| D901     | 8-719-158-49 | DIODE UDZ-TE-17-12B                               |        |
| D902     | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                              |        |
| D903     | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                              |        |
| D904     | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                              |        |
| D951     | 8-719-976-99 | DIODE UDZ-TE-17-5.1B                              |        |
| D952     | 8-719-976-99 | DIODE UDZ-TE-17-5.1B                              |        |
|          |              | < IC >  |        |
| IC901    | 8-759-366-34 | IC LC75824E                                       |        |
| IC951    | 8-749-012-25 | IC RS-170-TU<br>(REMOTE CONTROL RECEIVER)         |        |
|          |              | < LIQUID CRYSTAL DISPLAY >                        |        |
| LCD901   | 1-803-906-11 | DISPLAY PANEL, LIQUID CRYSTAL<br>(C6400R, C6500R) |        |
| LCD901   | 1-803-906-31 | DISPLAY PANEL, LIQUID CRYSTAL (C6500RX)           |        |
|          |              | < LED >   |        |
| LED901   | 8-719-038-03 | LED CL-190Y-CD-T (ILLUMINATION) (AMBER)           |        |
| LED901   | 8-719-038-07 | LED CL-190PG-CD-T (ILLUMINATION)<br>(GREEN)       |        |
| LED901   | 8-719-061-16 | LED CL-190SR-CD-T (ILLUMINATION) (RED)            |        |
| LED902   | 8-719-038-03 | LED CL-190Y-CD-T (ILLUMINATION) (AMBER)           |        |

| Ref. No. | Part No.     | Description  | Remark |
|----------|--------------|--|--------|
| LED902   | 8-719-038-07 | LED CL-190PG-CD-T (ILLUMINATION)<br>(GREEN)        |        |
| LED902   | 8-719-061-16 | LED CL-190SR-CD-T (ILLUMINATION) (RED)             |        |
| LED903   | 8-719-038-03 | LED CL-190Y-CD-T (ILLUMINATION) (AMBER)            |        |
| LED903   | 8-719-038-07 | LED CL-190PG-CD-T (ILLUMINATION)<br>(GREEN)        |        |
| LED903   | 8-719-061-16 | LED CL-190SR-CD-T (ILLUMINATION) (RED)             |        |
| LED904   | 8-719-038-03 | LED CL-190Y-CD-T (ILLUMINATION) (AMBER)            |        |
| LED904   | 8-719-038-07 | LED CL-190PG-CD-T (ILLUMINATION)<br>(GREEN)        |        |
| LED904   | 8-719-061-16 | LED CL-190SR-CD-T (ILLUMINATION) (RED)             |        |
| 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)                 |        |
| LED914   | 8-719-078-19 | LED LWA673-R1S2*1 (LCD BACK LIGHT)                 |        |
| LED915   | 8-719-078-19 | LED LWA673-R1S2*1 (LCD BACK LIGHT)                 |        |
|          |              | < SWITCH >   |        |
| LSW901   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (OFF) (GREEN)           |        |
| LSW901   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (OFF) (AMBER)           |        |
| LSW901   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (OFF) (RED)             |        |
| LSW902   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (SOURCE)<br>(AMBER)   |        |
| LSW902   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (SOURCE)<br>(GREEN)   |        |
| LSW902   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (SOURCE)<br>(RED)     |        |
| LSW903   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (SOUND)<br>(AMBER)    |        |
| LSW903   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (SOUND)<br>(GREEN)    |        |
| LSW903   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (SOUND)<br>(RED)      |        |
| LSW904   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (MENU)<br>(AMBER)     |        |
| LSW904   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (MENU)<br>(GREEN)     |        |
| LSW904   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (MENU)<br>(RED)       |        |
| LSW905   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (PTY DSPL)<br>(AMBER) |        |
| LSW905   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (PTY DSPL)<br>(GREEN) |        |
| LSW905   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (PTY DSPL)<br>(RED)   |        |

**KEY**

| Ref. No. | Part No.     | Description                               | Remark          | Ref. No. | Part No.     | Description | Remark          |
|----------|--------------|---|-----------------|----------|--------------|-------------|-----------------|
| LSW906   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (LIST)       |                 | R909     | 1-216-667-11 | METAL CHIP  | 4.7K 0.5% 1/10W |
|          |              | (AMBER)                                   |                 | R910     | 1-216-671-11 | METAL CHIP  | 6.8K 0.5% 1/10W |
| LSW906   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (LIST)       |                 | R911     | 1-208-806-11 | RES, CHIP   | 10K 2% 1/10W    |
|          |              | (GREEN)                                   |                 | R912     | 1-216-647-11 | METAL CHIP  | 680 0.5% 1/10W  |
| LSW906   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (LIST)       |                 | R913     | 1-216-647-11 | METAL CHIP  | 680 0.5% 1/10W  |
|          |              | (RED)                                     |                 | R914     | 1-216-647-11 | METAL CHIP  | 680 0.5% 1/10W  |
| LSW907   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (ENTER)      |                 | R915     | 1-216-651-11 | METAL CHIP  | 1K 0.5% 1/10W   |
|          |              | (AMBER)                                   |                 | R916     | 1-216-655-11 | METAL CHIP  | 1.5K 0.5% 1/10W |
| LSW907   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (ENTER)      |                 | R917     | 1-216-655-11 | METAL CHIP  | 1.5K 0.5% 1/10W |
|          |              | (GREEN)                                   |                 | R918     | 1-216-659-11 | METAL CHIP  | 2.2K 0.5% 1/10W |
| LSW907   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (ENTER)      |                 | R919     | 1-216-663-11 | METAL CHIP  | 3.3K 0.5% 1/10W |
|          |              | (RED)                                     |                 | R920     | 1-216-667-11 | METAL CHIP  | 4.7K 0.5% 1/10W |
| LSW908   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (MODE)         |                 | R921     | 1-216-807-11 | METAL CHIP  | 68 5% 1/16W     |
|          |              | (GREEN)                                   |                 |          |              |             | (GREEN)         |
| LSW908   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (MODE)         |                 | R921     | 1-216-810-11 | METAL CHIP  | 120 5% 1/16W    |
|          |              | (AMBER)                                   |                 |          |              |             | (RED)           |
| LSW908   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (MODE) (RED)   |                 | R921     | 1-216-811-11 | METAL CHIP  | 150 5% 1/16W    |
| LSW909   | 1-762-737-11 | SWITCH, KEY BOARD (WITH LED) (D-BASS)     |                 |          |              |             | (AMBER)         |
| LSW910   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (TA)         |                 | R923     | 1-216-807-11 | METAL CHIP  | 68 5% 1/16W     |
|          |              | (AMBER)                                   |                 |          |              |             | (GREEN)         |
| LSW910   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (TA)         |                 | R923     | 1-216-811-11 | METAL CHIP  | 150 5% 1/16W    |
|          |              | (GREEN)                                   |                 |          |              |             | (AMBER)         |
| LSW910   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (TA) (RED)   |                 | R923     | 1-216-812-11 | METAL CHIP  | 180 5% 1/16W    |
| LSW911   | 1-762-617-21 | SWITCH, KEY BOARD (WITH LED) (AF)         |                 |          |              |             | (RED)           |
|          |              | (AMBER)                                   |                 | R925     | 1-216-021-00 | METAL CHIP  | 68 5% 1/10W     |
| LSW911   | 1-762-619-21 | SWITCH, KEY BOARD (WITH LED) (AF)         |                 |          |              |             | (GREEN)         |
|          |              | (GREEN)                                   |                 | R925     | 1-216-029-00 | METAL CHIP  | 150 5% 1/10W    |
|          |              |   |                 |          |              |             | (AMBER)         |
| LSW911   | 1-771-476-11 | SWITCH, KEY BOARD (WITH LED) (AF) (RED)   |                 | R925     | 1-216-031-00 | METAL CHIP  | 180 5% 1/10W    |
| LSW912   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (6) (GREEN)    |                 |          |              |             | (RED)           |
| LSW912   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (6) (AMBER)    |                 | R927     | 1-216-021-00 | METAL CHIP  | 68 5% 1/10W     |
| LSW912   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (6) (RED)      |                 |          |              |             | (GREEN)         |
| LSW913   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (5) (GREEN)    |                 | R927     | 1-216-029-00 | METAL CHIP  | 150 5% 1/10W    |
|          |              |   |                 |          |              |             | (AMBER)         |
| LSW913   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (5) (AMBER)    |                 | R927     | 1-216-031-00 | METAL CHIP  | 180 5% 1/10W    |
| LSW913   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (5) (RED)      |                 |          |              |             | (RED)           |
| LSW914   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (4) (GREEN)    |                 | R931     | 1-216-813-11 | METAL CHIP  | 220 5% 1/16W    |
| LSW914   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (4) (AMBER)    |                 | R932     | 1-216-813-11 | METAL CHIP  | 220 5% 1/16W    |
| LSW914   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (4) (RED)      |                 | R933     | 1-216-808-11 | METAL CHIP  | 82 5% 1/16W     |
|          |              |   |                 |          |              |             | (GREEN)         |
| LSW915   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (3) (GREEN)    |                 | R933     | 1-216-812-11 | METAL CHIP  | 180 5% 1/16W    |
| LSW915   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (3) (AMBER)    |                 |          |              |             | (AMBER)         |
| LSW915   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (3) (RED)      |                 | R933     | 1-216-813-11 | METAL CHIP  | 220 5% 1/16W    |
| LSW916   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (SHUF 2)       |                 |          |              |             | (RED)           |
|          |              | (GREEN)                                   |                 | R938     | 1-216-809-11 | METAL CHIP  | 100 5% 1/16W    |
| LSW916   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (SHUF 2)       |                 | R939     | 1-216-821-11 | METAL CHIP  | 1K 5% 1/16W     |
|          |              | (AMBER)                                   |                 |          |              |             | (C6500RX)       |
| LSW916   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (SHUF 2) (RED) |                 | R951     | 1-216-819-11 | METAL CHIP  | 680 5% 1/16W    |
| LSW917   | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (REP 1)        |                 |          |              |             |                 |
|          |              | (GREEN)                                   |                 | R952     | 1-216-021-00 | METAL CHIP  | 68 5% 1/10W     |
| LSW917   | 1-771-882-21 | SWITCH, TACTILE (WITH LED) (REP 1)        |                 | R953     | 1-216-857-11 | METAL CHIP  | 1M 5% 1/16W     |
|          |              | (AMBER)                                   |                 | R954     | 1-216-049-11 | RES, CHIP   | 1K 5% 1/10W     |
| LSW917   | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (REP 1) (RED)  |                 | R955     | 1-216-049-11 | RES, CHIP   | 1K 5% 1/10W     |
|          |              |   |                 | R956     | 1-216-821-11 | METAL CHIP  | 1K 5% 1/16W     |
|          |              | < RESISTOR >                              |                 | R957     | 1-216-851-11 | METAL CHIP  | 330K 5% 1/16W   |
| R901     | 1-216-647-11 | METAL CHIP                                | 680 0.5% 1/10W  | R958     | 1-216-033-00 | METAL CHIP  | 220 5% 1/10W    |
| R902     | 1-216-647-11 | METAL CHIP                                | 680 0.5% 1/10W  | R970     | 1-216-815-11 | METAL CHIP  | 330 5% 1/16W    |
| R903     | 1-216-647-11 | METAL CHIP                                | 680 0.5% 1/10W  | R971     | 1-216-815-11 | METAL CHIP  | 330 5% 1/16W    |
| R904     | 1-216-651-11 | METAL CHIP                                | 1K 0.5% 1/10W   | R972     | 1-216-864-11 | METAL CHIP  | 0 5% 1/16W      |
| R905     | 1-216-655-11 | METAL CHIP                                | 1.5K 0.5% 1/10W | R973     | 1-216-815-11 | METAL CHIP  | 330 5% 1/16W    |
| R906     | 1-216-655-11 | METAL CHIP                                | 1.5K 0.5% 1/10W | R975     | 1-216-815-11 | METAL CHIP  | 330 5% 1/16W    |
| 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 |          |              |             |                 |

|            |             |
|------------|-------------|
| <b>KEY</b> | <b>MAIN</b> |
|------------|-------------|

| Ref. No.            | Part No.     | Description  | Remark            |
|---------------------|--------------|--|-------------------|
| R976                | 1-216-815-11 | METAL CHIP   | 330 5% 1/16W      |
| R977                | 1-216-815-11 | METAL CHIP   | 330 5% 1/16W      |
| R980                | 1-216-864-11 | METAL CHIP   | 0 5% 1/16W        |
| R999                | 1-216-864-11 | METAL CHIP   | 0 5% 1/16W        |
| < ROTARY ENCODER >  |              |  |                   |
| RE901               | 1-475-014-12 | ENCODER, ROTARY (VOLUME/BASS/TREBLE/<br>BALANCE/FADER CONTROL) |                   |
| < SWITCH >          |              |  |                   |
| S901                | 1-771-884-21 | SWITCH, TACTILE (WITH LED)<br>(SEEK/AMS - ◀◀◀ ▶▶▶)             |                   |
| S902                | 1-771-884-21 | SWITCH, TACTILE (WITH LED)<br>(DISC +, PRST +)                 |                   |
| S903                | 1-771-884-21 | SWITCH, TACTILE (WITH LED)<br>(SEEK/AMS + ▶▶▶ ◀◀◀)             |                   |
| S904                | 1-771-884-21 | SWITCH, TACTILE (WITH LED)<br>(DISC -, PRST -)                 |                   |
| *****               |              |  |                   |
| *                   | A-3294-867-A | MAIN BOARD, COMPLETE (C6400R)                                  |                   |
| *                   | A-3294-868-A | MAIN BOARD, COMPLETE (C6500RX)                                 |                   |
| *                   | A-3294-943-A | MAIN BOARD, COMPLETE (C6500R)                                  |                   |
| *****               |              |  |                   |
| *                   | 3-040-996-11 | HEAT SINK (2P) (C6400R)  |                   |
| *                   | 3-040-996-21 | HEAT SINK (2P) (C6500R, C6500RX)                               |                   |
| *                   | 3-040-998-01 | BRACKET (IC)   |                   |
| *                   | 3-041-011-01 | HEAT SINK (REG)  |                   |
|                     | 7-685-647-79 | SCREW +BVTP 3X10 TYPE2 IT-3                                    |                   |
|                     | 7-685-793-09 | SCREW +PTT 2.6X8 (S)   |                   |
|                     | 7-685-795-09 | SCREW +PTT 2.6X12 (S)  |                   |
| < CAPACITOR/SHORT > |              |  |                   |
| C1                  | 1-163-233-11 | CERAMIC CHIP   | 18PF 5% 50V       |
| C3                  | 1-124-584-00 | ELECT  | 100uF 20% 10V     |
| C4                  | 1-164-004-11 | CERAMIC CHIP   | 0.1uF 10% 25V     |
| C6                  | 1-164-004-11 | CERAMIC CHIP   | 0.1uF 10% 25V     |
| C7                  | 1-124-589-11 | ELECT  | 47uF 20% 16V      |
| C13                 | 1-163-017-00 | CERAMIC CHIP   | 0.0047uF 5% 50V   |
| C14                 | 1-163-021-11 | CERAMIC CHIP   | 0.01uF 10% 50V    |
| C52                 | 1-164-004-11 | CERAMIC CHIP   | 0.1uF 10% 25V     |
| C53                 | 1-163-229-11 | CERAMIC CHIP   | 12PF 5% 50V       |
| C54                 | 1-163-229-11 | CERAMIC CHIP   | 12PF 5% 50V       |
| C55                 | 1-164-004-11 | CERAMIC CHIP   | 0.1uF 10% 25V     |
| C56                 | 1-124-589-11 | ELECT  | 47uF 20% 16V      |
| C57                 | 1-164-004-11 | CERAMIC CHIP   | 0.1uF 10% 25V     |
| C58                 | 1-163-263-11 | CERAMIC CHIP   | 330PF 5% 50V      |
| C59                 | 1-164-505-11 | CERAMIC CHIP   | 2.2uF 16V         |
| C60                 | 1-163-135-00 | CERAMIC CHIP   | 560PF 5% 50V      |
| C61                 | 1-164-161-11 | CERAMIC CHIP   | 0.0022uF 10% 100V |
| C62                 | 1-163-009-11 | CERAMIC CHIP   | 0.001uF 10% 50V   |
| C63                 | 1-164-315-11 | CERAMIC CHIP   | 470PF 5% 50V      |
| C90                 | 1-162-964-11 | CERAMIC CHIP   | 0.001uF 10% 50V   |
| C91                 | 1-162-964-11 | CERAMIC CHIP   | 0.001uF 10% 50V   |
| C92                 | 1-162-964-11 | CERAMIC CHIP   | 0.001uF 10% 50V   |
| C93                 | 1-163-133-00 | CERAMIC CHIP   | 470PF 5% 50V      |
| C94                 | 1-162-915-11 | CERAMIC CHIP   | 10PF 0.5PF 50V    |
| C95                 | 1-107-823-11 | CERAMIC CHIP   | 0.47uF 10% 16V    |

| Ref. No.          | Part No.     | Description  | Remark          |
|-------------------|--------------|--------------|-----------------|
| C96               | 1-163-809-11 | CERAMIC CHIP | 0.047uF 10% 25V |
| C97               | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V   |
| C98               | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V   |
| C101              | 1-126-160-11 | ELECT        | 1uF 20% 50V     |
| C110              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| C111              | 1-109-982-11 | CERAMIC CHIP | 1uF 10% 10V     |
| C113              | 1-109-982-11 | CERAMIC CHIP | 1uF 10% 10V     |
| C121              | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V   |
| C122              | 1-163-037-11 | CERAMIC CHIP | 0.022uF 10% 25V |
| C123              | 1-163-037-11 | CERAMIC CHIP | 0.022uF 10% 25V |
| C131              | 1-124-233-11 | ELECT        | 10uF 20% 16V    |
| C141              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| C142              | 1-126-160-11 | ELECT        | 1uF 20% 50V     |
| C151              | 1-162-970-11 | CERAMIC CHIP | 0.01uF 10% 25V  |
| C152              | 1-124-584-00 | ELECT        | 100uF 20% 10V   |
| C153              | 1-163-009-11 | CERAMIC CHIP | 0.001uF 10% 50V |
| C156              | 1-163-017-00 | CERAMIC CHIP | 0.0047uF 5% 50V |
| C157              | 1-107-823-11 | CERAMIC CHIP | 0.47uF 10% 16V  |
| C159              | 1-162-970-11 | CERAMIC CHIP | 0.01uF 10% 25V  |
| C161              | 1-124-233-11 | ELECT        | 10uF 20% 16V    |
| C162              | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V  |
| C171              | 1-126-163-11 | ELECT        | 4.7uF 20% 50V   |
| C172              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| (C6500R, C6500RX) |              |              |                 |
| C173              | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V  |
| C174              | 1-162-919-11 | CERAMIC CHIP | 22PF 5% 50V     |
| C181              | 1-126-163-11 | ELECT        | 4.7uF 20% 50V   |
| C182              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| C183              | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V  |
| C184              | 1-162-919-11 | CERAMIC CHIP | 22PF 5% 50V     |
| C191              | 1-216-295-00 | SHORT        | 0               |
| C192              | 1-216-295-00 | SHORT        | 0               |
| C193              | 1-216-295-00 | SHORT        | 0               |
| C201              | 1-126-160-11 | ELECT        | 1uF 20% 50V     |
| C210              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| C241              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| C242              | 1-126-160-11 | ELECT        | 1uF 20% 50V     |
| C271              | 1-126-163-11 | ELECT        | 4.7uF 20% 50V   |
| C272              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| (C6500R, C6500RX) |              |              |                 |
| C273              | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V  |
| C274              | 1-163-235-11 | CERAMIC CHIP | 22PF 5% 50V     |
| C281              | 1-126-163-11 | ELECT        | 4.7uF 20% 50V   |
| C282              | 1-163-251-11 | CERAMIC CHIP | 100PF 5% 50V    |
| C283              | 1-164-489-11 | CERAMIC CHIP | 0.22uF 10% 16V  |
| C284              | 1-162-919-11 | CERAMIC CHIP | 22PF 5% 50V     |
| C361              | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V   |
| C362              | 1-126-157-11 | ELECT        | 10uF 20% 16V    |
| C363              | 1-164-004-11 | CERAMIC CHIP | 0.1uF 10% 25V   |
| C364              | 1-126-157-11 | ELECT        | 10uF 20% 16V    |
| C368              | 1-109-982-11 | CERAMIC CHIP | 1uF 10% 10V     |
| C369              | 1-163-021-11 | CERAMIC CHIP | 0.01uF 10% 50V  |
| C370              | 1-163-021-11 | CERAMIC CHIP | 0.01uF 10% 50V  |
| C371              | 1-163-021-11 | CERAMIC CHIP | 0.01uF 10% 50V  |
| C372              | 1-163-021-11 | CERAMIC CHIP | 0.01uF 10% 50V  |
| C373              | 1-163-021-11 | CERAMIC CHIP | 0.01uF 10% 50V  |
| C374              | 1-124-584-00 | ELECT        | 100uF 20% 10V   |
| C375              | 1-124-584-00 | ELECT        | 100uF 20% 10V   |





# MAIN

| Ref. No. | Part No.     | Description                       | Remark | Ref. No. | Part No.     | Description                                       | Remark |
|----------|--------------|-----------------------------------|--------|----------|--------------|---|--------|
| D703     | 8-719-056-82 | DIODE UDZ-TE-17-6.2B              |        | Q121     | 8-729-920-21 | TRANSISTOR DTC314TK-T-146                         |        |
| D704     | 8-719-056-93 | DIODE UDZ-TE-17-18B               |        | Q131     | 8-729-921-25 | TRANSISTOR FMC2-T148                              |        |
| D705     | 8-719-056-93 | DIODE UDZ-TE-17-18B               |        | Q171     | 8-729-920-21 | TRANSISTOR DTC314TK-T-146                         |        |
| D706     | 8-719-072-70 | DIODE MA2ZD14001S0                |        | Q181     | 8-729-920-21 | TRANSISTOR DTC314TK-T-146                         |        |
| D708     | 8-719-073-01 | DIODE MA111-TX                    |        | Q250     | 8-729-921-25 | TRANSISTOR FMC2-T148                              |        |
| D709     | 8-719-073-01 | DIODE MA111-TX                    |        | Q271     | 8-729-920-21 | TRANSISTOR DTC314TK-T-146                         |        |
| D710     | 8-719-073-01 | DIODE MA111-TX                    |        | Q281     | 8-729-920-21 | TRANSISTOR DTC314TK-T-146                         |        |
|          |              | < COIL >                          |        | Q361     | 8-729-019-00 | TRANSISTOR 2SD2394-G                              |        |
| FB362    | 1-414-233-22 | INDUCTOR CHIP 0uH                 |        | Q362     | 8-729-019-00 | TRANSISTOR 2SD2394-G                              |        |
| FB501    | 1-414-233-22 | INDUCTOR CHIP 0uH                 |        | Q363     | 8-729-921-25 | TRANSISTOR FMC2-T148                              |        |
|          |              | < FUSE >                          |        | Q551     | 8-729-921-25 | TRANSISTOR FMC2-T148                              |        |
| FU601    | 1-532-877-11 | FUSE (BLADE TYPE) (AUTO FUSE) 10A |        | Q571     | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR<br>(C6500R, C6500RX) |        |
|          |              | < IC >                            |        | Q621     | 8-729-027-23 | TRANSISTOR DTA114EKA-T146                         |        |
| IC51     | 8-759-650-68 | IC SAA6588T/V2-118                |        | Q622     | 8-729-021-94 | FET 2SK1657-T1B                                   |        |
| IC90     | 8-759-909-71 | IC BA4558F-E2                     |        | Q631     | 8-729-423-99 | TRANSISTOR 2SD2137-OP-TA                          |        |
| IC151    | 8-759-653-27 | IC TDA7402TR                      |        | Q633     | 8-729-921-25 | TRANSISTOR FMC2-T148                              |        |
| IC501    | 8-759-663-56 | IC MB90574PMT-G-266-BND           |        | Q651     | 8-729-027-23 | TRANSISTOR DTA114EKA-T146                         |        |
| IC611    | 8-759-663-88 | IC TA8268H                        |        | Q652     | 8-729-027-23 | TRANSISTOR DTA114EKA-T146                         |        |
| IC652    | 8-759-574-61 | IC XC61AN4302MR                   |        | Q661     | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR                      |        |
| IC671    | 8-759-661-47 | IC BA4908-V3                      |        | Q701     | 8-729-900-53 | TRANSISTOR DTC114EKA-T146                         |        |
| IC701    | 8-759-449-89 | IC BA8270F-E2                     |        | Q704     | 8-729-027-23 | TRANSISTOR DTA114EKA-T146                         |        |
|          |              | < JACK >                          |        | Q705     | 8-729-027-23 | TRANSISTOR DTA114EKA-T146                         |        |
| J1       | 1-764-808-21 | JACK (ANT) (FM/AM ANTENNA)        |        | Q706     | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR                      |        |
| J501     | 1-566-822-41 | JACK (REMOTE IN)                  |        |          |              | < RESISTOR >                                      |        |
|          |              | < RESISTOR >                      |        | R1       | 1-216-295-00 | SHORT 0   |        |
| JC1      | 1-216-296-00 | SHORT 0                           |        | R4       | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| JC2      | 1-216-296-00 | SHORT 0                           |        | R5       | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| JC4      | 1-216-296-00 | SHORT 0                           |        | R6       | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| JC5      | 1-216-296-00 | SHORT 0                           |        | R7       | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| JC16     | 1-216-295-00 | SHORT 0                           |        | R8       | 1-216-295-00 | SHORT 0   |        |
| JC31     | 1-216-295-00 | SHORT 0                           |        | R9       | 1-216-041-00 | METAL CHIP 470 5% 1/10W                           |        |
| JC50     | 1-216-295-00 | SHORT 0                           |        | R12      | 1-216-837-11 | METAL CHIP 22K 5% 1/16W                           |        |
| JC54     | 1-216-295-00 | SHORT 0                           |        | R20      | 1-216-057-00 | METAL CHIP 2.2K 5% 1/10W                          |        |
| JC90     | 1-216-295-00 | SHORT 0                           |        | R53      | 1-216-853-11 | METAL CHIP 470K 5% 1/16W                          |        |
| JC191    | 1-216-295-00 | SHORT 0                           |        | R54      | 1-216-821-11 | METAL CHIP 1K 5% 1/16W                            |        |
| JC192    | 1-216-295-00 | SHORT 0                           |        | R55      | 1-216-061-00 | METAL CHIP 3.3K 5% 1/10W                          |        |
| JC193    | 1-216-295-00 | SHORT 0                           |        | R56      | 1-216-817-11 | METAL CHIP 470 5% 1/16W                           |        |
| JC194    | 1-216-295-00 | SHORT 0                           |        | R57      | 1-216-809-11 | METAL CHIP 100 5% 1/16W                           |        |
| JC301    | 1-216-864-11 | METAL CHIP 0 5% 1/16W             |        | R58      | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| JC601    | 1-216-864-11 | METAL CHIP 0 5% 1/16W             |        | R59      | 1-216-001-00 | METAL CHIP 10 5% 1/10W                            |        |
| JC671    | 1-216-295-00 | SHORT 0                           |        | R60      | 1-216-797-11 | METAL CHIP 10 5% 1/16W                            |        |
| JC673    | 1-216-864-11 | METAL CHIP 0 5% 1/16W             |        | R90      | 1-216-825-11 | METAL CHIP 2.2K 5% 1/16W                          |        |
|          |              | < COIL >                          |        | R91      | 1-216-825-11 | METAL CHIP 2.2K 5% 1/16W                          |        |
| L601     | 1-419-476-21 | COIL, CHOKE (2000) 250uH          |        | R92      | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| L671     | 1-410-989-11 | INDUCTOR CHIP 0.47uH              |        | R93      | 1-216-845-11 | METAL CHIP 100K 5% 1/16W                          |        |
|          |              | < TRANSISTOR >                    |        | R94      | 1-216-829-11 | METAL CHIP 4.7K 5% 1/16W                          |        |
| Q1       | 8-729-120-28 | TRANSISTOR 2SC2412K-T-146-QR      |        | R95      | 1-216-121-00 | RES, CHIP 1M 5% 1/10W                             |        |
| Q90      | 8-729-900-53 | TRANSISTOR DTC114EKA-T146         |        | R96      | 1-216-025-00 | RES, CHIP 100 5% 1/10W                            |        |
| Q111     | 8-729-920-21 | TRANSISTOR DTC314TK-T-146         |        | R97      | 1-216-833-11 | RES, CHIP 10K 5% 1/16W                            |        |
|          |              |                                   |        | R98      | 1-216-833-11 | RES, CHIP 10K 5% 1/16W                            |        |
|          |              |                                   |        | R108     | 1-216-295-00 | SHORT 0   |        |
|          |              |                                   |        | R111     | 1-216-864-11 | METAL CHIP 0 5% 1/16W                             |        |
|          |              |                                   |        | R112     | 1-216-841-11 | METAL CHIP 47K 5% 1/16W                           |        |
|          |              |                                   |        | R121     | 1-216-049-11 | RES, CHIP 1K 5% 1/10W                             |        |
|          |              |                                   |        | R122     | 1-216-085-00 | METAL CHIP 33K 5% 1/10W                           |        |



| Ref. No. | Part No.     | Description | Quantity | Unit | Remark                        | Ref. No. | Part No.     | Description | Quantity | Unit | Remark               |
|----------|--------------|-------------|----------|------|-------------------------------|----------|--------------|-------------|----------|------|----------------------|
| R131     | 1-216-037-00 | METAL CHIP  | 330      |      | 5% 1/10W                      | R551     | 1-249-413-11 | CARBON      | 470      |      | 5% 1/4W<br>(C6500RX) |
| R132     | 1-216-045-00 | METAL CHIP  | 680      |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R141     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W                      | R552     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R142     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W                      | R553     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
|          |              |             |          |      |                               | R554     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R152     | 1-216-841-11 | METAL CHIP  | 47K      |      | 5% 1/16W                      | R555     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R153     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W                      | R556     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R154     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R156     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W                      | R557     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R171     | 1-216-033-00 | METAL CHIP  | 220      |      | 5% 1/10W                      | R558     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
|          |              |             |          |      |                               | R559     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R172     | 1-216-081-00 | METAL CHIP  | 22K      |      | 5% 1/10W                      | R560     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R173     | 1-216-089-00 | RES, CHIP   | 47K      |      | 5% 1/10W                      | R561     | 1-208-806-11 | RES, CHIP   | 10K      |      | 0.5% 1/10W           |
| R181     | 1-216-033-00 | METAL CHIP  | 220      |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R182     | 1-216-081-00 | METAL CHIP  | 22K      |      | 5% 1/10W                      | R562     | 1-208-806-11 | RES, CHIP   | 10K      |      | 0.5% 1/10W           |
| R183     | 1-216-089-00 | RES, CHIP   | 47K      |      | 5% 1/10W                      | R563     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W             |
|          |              |             |          |      |                               | R564     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W             |
| R208     | 1-216-295-00 | SHORT       | 0        |      |                               | R565     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R241     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W                      | R567     | 1-249-411-11 | CARBON      | 330      |      | 5% 1/4W              |
| R242     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R271     | 1-216-033-00 | METAL CHIP  | 220      |      | 5% 1/10W                      | R571     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W<br>(C6400R) |
| R272     | 1-216-081-00 | METAL CHIP  | 22K      |      | 5% 1/10W                      |          |              |             |          |      |                      |
|          |              |             |          |      |                               | R572     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W             |
| R273     | 1-216-089-00 | RES, CHIP   | 47K      |      | 5% 1/10W                      | R573     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W             |
| R281     | 1-216-033-00 | METAL CHIP  | 220      |      | 5% 1/10W                      | R600     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W             |
| R282     | 1-216-081-00 | METAL CHIP  | 22K      |      | 5% 1/10W                      | R601     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W             |
| R283     | 1-216-089-00 | RES, CHIP   | 47K      |      | 5% 1/10W                      | R603     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W             |
| R361     | 1-216-041-00 | METAL CHIP  | 470      |      | 5% 1/10W                      |          |              |             |          |      |                      |
|          |              |             |          |      |                               | R611     | 1-216-833-11 | RES, CHIP   | 10K      |      | 5% 1/16W             |
| R362     | 1-216-041-00 | METAL CHIP  | 470      |      | 5% 1/10W                      | R612     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W             |
| R363     | 1-216-041-00 | METAL CHIP  | 470      |      | 5% 1/10W                      | R621     | 1-216-805-11 | METAL CHIP  | 47       |      | 5% 1/16W             |
| R364     | 1-216-041-00 | METAL CHIP  | 470      |      | 5% 1/10W                      | R622     | 1-216-864-11 | METAL CHIP  | 0        |      | 5% 1/16W             |
| R504     | 1-216-057-00 | METAL CHIP  | 2.2K     |      | 5% 1/10W                      | R624     | 1-216-295-00 | SHORT       | 0        |      |                      |
| R505     | 1-216-057-00 | METAL CHIP  | 2.2K     |      | 5% 1/10W                      |          |              |             |          |      |                      |
|          |              |             |          |      |                               | R626     | 1-216-861-11 | METAL CHIP  | 2.2M     |      | 5% 1/16W             |
| R506     | 1-216-057-00 | METAL CHIP  | 2.2K     |      | 5% 1/10W                      | R631     | 1-249-385-11 | CARBON      | 2.2      |      | 5% 1/6W              |
| R507     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W                      | R632     | 1-249-385-11 | CARBON      | 2.2      |      | 5% 1/6W              |
| R509     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R636     | 1-216-037-00 | METAL CHIP  | 330      |      | 5% 1/10W             |
| R520     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R641     | 1-216-849-11 | METAL CHIP  | 220K     |      | 5% 1/16W             |
| R522     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      |          |              |             |          |      |                      |
|          |              |             |          |      |                               | R642     | 1-216-853-11 | METAL CHIP  | 470K     |      | 5% 1/16W             |
| R523     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W                      | R651     | 1-216-113-00 | METAL CHIP  | 470K     |      | 5% 1/10W             |
| R524     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W                      | R652     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W             |
| R525     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W                      | R653     | 1-208-806-11 | RES, CHIP   | 10K      |      | 0.5% 1/10W           |
| R526     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R654     | 1-216-833-11 | RES, CHIP   | 10K      |      | 5% 1/16W             |
| R529     | 1-216-049-11 | RES, CHIP   | 1K       |      | 5% 1/10W                      |          |              |             |          |      |                      |
|          |              |             |          |      |                               | R655     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W             |
| R531     | 1-216-839-11 | METAL CHIP  | 33K      |      | 5% 1/16W<br>(C6500R, C6500RX) | R656     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W             |
|          |              |             |          |      |                               | R661     | 1-249-421-11 | CARBON      | 2.2K     |      | 5% 1/4W              |
| R532     | 1-216-833-11 | RES, CHIP   | 10K      |      | 5% 1/16W<br>(C6500R, C6500RX) | R662     | 1-216-081-00 | METAL CHIP  | 22K      |      | 5% 1/10W             |
|          |              |             |          |      |                               | R663     | 1-216-841-11 | METAL CHIP  | 47K      |      | 5% 1/16W             |
| R533     | 1-216-833-11 | RES, CHIP   | 10K      |      | 5% 1/16W<br>(C6500R, C6500RX) |          |              |             |          |      |                      |
|          |              |             |          |      |                               | R664     | 1-216-841-11 | METAL CHIP  | 47K      |      | 5% 1/16W             |
| R534     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W<br>(C6500R, C6500RX) | R682     | 1-216-089-00 | RES, CHIP   | 47K      |      | 5% 1/10W             |
|          |              |             |          |      |                               | R701     | 1-216-805-11 | METAL CHIP  | 47       |      | 5% 1/16W             |
| R535     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W                      | R702     | 1-216-073-00 | METAL CHIP  | 10K      |      | 5% 1/10W             |
|          |              |             |          |      |                               | R703     | 1-216-025-00 | RES, CHIP   | 100      |      | 5% 1/10W             |
| R537     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R538     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R704     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W             |
| R539     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R707     | 1-216-065-00 | RES, CHIP   | 4.7K     |      | 5% 1/10W             |
| R540     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R713     | 1-216-841-11 | METAL CHIP  | 47K      |      | 5% 1/16W             |
| R542     | 1-216-089-00 | RES, CHIP   | 47K      |      | 5% 1/10W                      | R714     | 1-216-841-11 | METAL CHIP  | 47K      |      | 5% 1/16W             |
|          |              |             |          |      |                               | R715     | 1-216-845-11 | METAL CHIP  | 100K     |      | 5% 1/16W             |
| R545     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R546     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      | R716     | 1-216-809-11 | METAL CHIP  | 100      |      | 5% 1/16W             |
| R547     | 1-216-097-00 | RES, CHIP   | 100K     |      | 5% 1/10W                      |          |              |             |          |      |                      |
| R551     | 1-249-409-11 | CARBON      | 220      |      | 5% 1/4W<br>(C6400R, C6500R)   |          |              |             |          |      |                      |

**MAIN**      **SENSOR**      **SERVO**

| Ref. No.   | Part No.     | Description                       | Remark |
|--|--------------|-----------------------------------|--------|
|  |              | < SWITCH >                        |        |
| SW503  | 1-692-431-21 | SWITCH, TACTILE (RESET)           |        |
| SW504  | 1-771-540-11 | SWITCH, PUSH (1KEY) (NOSE DETECT) |        |
|  |              | < THERMISTOR >                    |        |
| TH701  | 1-803-350-21 | THERMISTOR, POSITIVE              |        |
|  |              | < TUNER >                         |        |
| TU1  | A-3220-812-A | TUNER UNIT (TUX-020)              |        |
|  |              | < VIBRATOR >                      |        |
| X51  | 1-579-242-41 | VIBRATOR, CRYSTAL (4.332MHz)      |        |
| X501   | 1-767-833-21 | VIBRATOR, CERAMIC (3.68MHz)       |        |
| X502   | 1-567-098-41 | VIBRATOR, CRYSTAL (32.768kHz)     |        |
| *****  |              |                                   |        |
|  | A-3326-034-A | SENSOR BOARD, COMPLETE            |        |
| *****  |              |                                   |        |
| For the parts on the SENSOR board, replace the entire mounted board. |              |                                   |        |
| *****  |              |                                   |        |
| *  | A-3326-036-A | SERVO BOARD, COMPLETE             |        |
| *****  |              |                                   |        |
|  |              | < CAPACITOR >                     |        |
| C11  | 1-162-964-11 | CERAMIC CHIP 0.001uF 10%          | 50V    |
| C101   | 1-104-543-11 | FILM CHIP 0.0022uF 5%             | 50V    |
| C102   | 1-135-259-11 | TANTALUM CHIP 10uF 20%            | 6.3V   |
| C103   | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C104   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C105   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C106   | 1-135-181-21 | TANTALUM CHIP 4.7uF 20%           | 6.3V   |
| C107   | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C108   | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C109   | 1-135-181-21 | TANTALUM CHIP 4.7uF 20%           | 6.3V   |
| C201   | 1-104-543-11 | FILM CHIP 0.0022uF 5%             | 50V    |
| C202   | 1-135-259-11 | TANTALUM CHIP 10uF 20%            | 6.3V   |
| C301   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C302   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C304   | 1-162-927-11 | CERAMIC CHIP 100PF 5%             | 50V    |
| C305   | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C306   | 1-107-823-11 | CERAMIC CHIP 0.47uF 10%           | 16V    |
| C307   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C308   | 1-162-927-11 | CERAMIC CHIP 100PF 5%             | 50V    |
| C309   | 1-162-968-11 | CERAMIC CHIP 0.0047uF 10%         | 50V    |
| C310   | 1-107-823-11 | CERAMIC CHIP 0.47uF 10%           | 16V    |
| C311   | 1-164-245-11 | CERAMIC CHIP 0.015uF 10%          | 25V    |
| C314   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C315   | 1-109-982-11 | CERAMIC CHIP 1uF 10%              | 10V    |
| C316   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C317   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C318   | 1-104-852-11 | TANTALUM CHIP 22uF 20%            | 6.3V   |
| C319   | 1-104-852-11 | TANTALUM CHIP 22uF 20%            | 6.3V   |
| C320   | 1-164-227-11 | CERAMIC CHIP 0.022uF 10%          | 25V    |
| C321   | 1-162-969-11 | CERAMIC CHIP 0.0068uF 10%         | 25V    |
| C322   | 1-162-964-11 | CERAMIC CHIP 0.001uF 10%          | 50V    |
| C324   | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |

| Ref. No. | Part No.     | Description                       | Remark |
|----------|--------------|-----------------------------------|--------|
| C325     | 1-110-563-11 | CERAMIC CHIP 0.068uF 10%          | 16V    |
| C326     | 1-162-968-11 | CERAMIC CHIP 0.0047uF 10%         | 50V    |
| C327     | 1-109-982-11 | CERAMIC CHIP 1uF 10%              | 10V    |
| C328     | 1-162-966-11 | CERAMIC CHIP 0.0022uF 10%         | 50V    |
| C329     | 1-164-227-11 | CERAMIC CHIP 0.022uF 10%          | 25V    |
| C330     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C331     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C333     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C334     | 1-164-004-11 | CERAMIC CHIP 0.1uF 10%            | 25V    |
| C335     | 1-164-004-11 | CERAMIC CHIP 0.1uF 10%            | 25V    |
| C336     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C337     | 1-164-004-11 | CERAMIC CHIP 0.1uF 10%            | 25V    |
| C338     | 1-164-004-11 | CERAMIC CHIP 0.1uF 10%            | 25V    |
| C339     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C340     | 1-162-918-11 | CERAMIC CHIP 18PF 5%              | 50V    |
| C341     | 1-162-918-11 | CERAMIC CHIP 18PF 5%              | 50V    |
| C342     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C343     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C344     | 1-104-852-11 | TANTALUM CHIP 22uF 20%            | 10V    |
| C345     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C346     | 1-104-852-11 | TANTALUM CHIP 22uF 20%            | 6.3V   |
| C347     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C348     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C349     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C350     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C351     | 1-104-852-11 | TANTALUM CHIP 22uF 20%            | 10V    |
| C352     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C353     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C356     | 1-162-927-11 | CERAMIC CHIP 100PF 5%             | 50V    |
| C357     | 1-162-927-11 | CERAMIC CHIP 100PF 5%             | 50V    |
| C358     | 1-162-927-11 | CERAMIC CHIP 100PF 5%             | 50V    |
| C359     | 1-162-923-11 | CERAMIC CHIP 47PF 5%              | 50V    |
| C361     | 1-135-259-11 | TANTALUM CHIP 10uF 20%            | 6.3V   |
| C362     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C402     | 1-162-970-11 | CERAMIC CHIP 0.01uF 10%           | 25V    |
| C403     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C501     | 1-162-927-11 | CERAMIC CHIP 100PF 5%             | 50V    |
| C503     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C504     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C505     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C506     | 1-104-852-11 | TANTALUM CHIP 22uF 20%            | 10V    |
| C510     | 1-115-467-11 | CERAMIC CHIP 0.22uF 10%           | 10V    |
| C511     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C512     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C513     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C514     | 1-115-467-11 | CERAMIC CHIP 0.22uF 10%           | 10V    |
| C515     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
| C516     | 1-107-826-11 | CERAMIC CHIP 0.1uF 10%            | 16V    |
|          |              | < CONNECTOR >                     |        |
| CN101    | 1-764-616-12 | HOUSING, CONNECTOR (PC BOARD) 30P |        |
| CN102    | 1-573-929-21 | CONNECTOR, FFC/FPC (ZIF) 20P      |        |
| CN103    | 1-764-439-21 | CONNECTOR, FPC 11P                |        |
|          |              | < DIODE >                         |        |
| D401     | 8-719-157-93 | DIODE DTZ-TT11-3.0B               |        |
| D501     | 8-719-988-61 | DIODE 1SS355TE-17                 |        |

| Ref. No. | Part No.     | Description                  | Remark | Ref. No. | Part No.     | Description         | Remark |
|----------|--------------|------------------------------|--------|----------|--------------|---------------------|--------|
|          |              | < FERRITE BEAD >             |        |          |              |                     |        |
| FB301    | 1-414-235-22 | FERRITE BEAD INDUCTOR CHIP   | 0uH    | R324     | 1-216-827-11 | METAL CHIP 3.3K 5%  | 1/16W  |
| FB302    | 1-414-760-21 | FERRITE BEAD INDUCTOR CHIP   | 0uH    | R325     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
|          |              | < IC >                       |        | R327     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
| IC101    | 8-759-571-84 | IC PCM1718E/2K               |        | R328     | 1-216-811-11 | METAL CHIP 150 5%   | 1/16W  |
| IC301    | 8-752-384-47 | IC CXD2652AR                 |        | R329     | 1-216-819-11 | METAL CHIP 680 5%   | 1/16W  |
| IC302    | 8-752-080-95 | IC CXA2523AR                 |        |          |              |                     |        |
| IC303    | 8-759-430-25 | IC BH6511FS-E2               |        | R330     | 1-216-853-11 | METAL CHIP 470K 5%  | 1/16W  |
| IC304    | 8-759-096-87 | IC TC7WU04FU (TE12R)         |        | R331     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        | R332     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
| IC305    | 8-759-040-83 | IC BA6287F                   |        | R333     | 1-216-819-11 | METAL CHIP 680 5%   | 1/16W  |
| IC306    | 8-759-058-62 | IC TC7S08FU (TE85R)          |        | R334     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
| IC307    | 8-759-368-16 | IC MN41V4400TT-08S           |        |          |              |                     |        |
| IC401    | 8-759-909-71 | IC BA4558F-E2                |        | R335     | 1-216-815-11 | METAL CHIP 330 5%   | 1/16W  |
| IC501    | 8-752-909-21 | IC CXP84340-217Q             |        | R336     | 1-216-853-11 | METAL CHIP 470K 5%  | 1/16W  |
|          |              |                              |        | R337     | 1-216-853-11 | METAL CHIP 470K 5%  | 1/16W  |
| IC502    | 8-759-238-47 | IC TC74HCT7007AF (EL)        |        | R338     | 1-216-833-11 | RES, CHIP 10K 5%    | 1/16W  |
| IC503    | 8-759-238-47 | IC TC74HCT7007AF (EL)        |        | R339     | 1-216-827-11 | METAL CHIP 3.3K 5%  | 1/16W  |
|          |              | < COIL >                     |        |          |              |                     |        |
| L101     | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R340     | 1-216-843-11 | METAL CHIP 68K 5%   | 1/16W  |
| L102     | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R341     | 1-216-837-11 | METAL CHIP 22K 5%   | 1/16W  |
| L301     | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R342     | 1-216-833-11 | RES, CHIP 10K 5%    | 1/16W  |
| L302     | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R343     | 1-216-827-11 | METAL CHIP 3.3K 5%  | 1/16W  |
| L303     | 1-412-039-51 | INDUCTOR CHIP 100uH          |        | R344     | 1-216-833-11 | RES, CHIP 10K 5%    | 1/16W  |
|          |              |                              |        |          |              |                     |        |
| L304     | 1-412-039-51 | INDUCTOR CHIP 100uH          |        | R345     | 1-216-827-11 | METAL CHIP 3.3K 5%  | 1/16W  |
| L305     | 1-412-039-51 | INDUCTOR CHIP 100uH          |        | R346     | 1-216-841-11 | METAL CHIP 47K 5%   | 1/16W  |
| L306     | 1-412-039-51 | INDUCTOR CHIP 100uH          |        | R347     | 1-216-833-11 | RES, CHIP 10K 5%    | 1/16W  |
| L501     | 1-412-058-11 | INDUCTOR CHIP 10uH           |        | R348     | 1-218-863-11 | RES, CHIP 4.7K 0.5% | 1/16W  |
|          |              |                              |        | R349     | 1-216-025-00 | RES, CHIP 100 5%    | 1/10W  |
|          |              | < TRANSISTOR >               |        |          |              |                     |        |
| Q301     | 8-729-230-49 | TRANSISTOR 2SC2712Y-TE85L    |        | R350     | 1-216-142-00 | RES, CHIP 4.7 5%    | 1/8W   |
| Q302     | 8-729-026-49 | TRANSISTOR 2SA1037AK-T146-QR |        | R351     | 1-218-855-11 | RES, CHIP 2.2K 0.5% | 1/16W  |
| Q401     | 8-729-920-85 | TRANSISTOR 2SD1664-T101-QR   |        | R352     | 1-218-855-11 | RES, CHIP 2.2K 0.5% | 1/16W  |
| Q402     | 8-729-106-60 | TRANSISTOR 2SB1132-T101-QR   |        | R353     | 1-218-855-11 | RES, CHIP 2.2K 0.5% | 1/16W  |
| Q403     | 8-729-421-22 | TRANSISTOR UN2211-TX         |        | R354     | 1-216-857-11 | METAL CHIP 1M 5%    | 1/16W  |
|          |              | < RESISTOR >                 |        |          |              |                     |        |
| R101     | 1-216-073-00 | METAL CHIP 10K 5%            | 1/10W  | R355     | 1-216-833-11 | RES, CHIP 10K 5%    | 1/16W  |
| R102     | 1-216-833-11 | RES, CHIP 10K 5%             | 1/16W  | R356     | 1-216-833-11 | RES, CHIP 10K 5%    | 1/16W  |
| R104     | 1-216-049-11 | RES, CHIP 1K 5%              | 1/10W  | R357     | 1-216-017-00 | RES, CHIP 47 5%     | 1/10W  |
| R201     | 1-216-073-00 | METAL CHIP 10K 5%            | 1/10W  | R359     | 1-216-864-11 | METAL CHIP 0 5%     | 1/16W  |
| R202     | 1-216-049-11 | RES, CHIP 1K 5%              | 1/10W  | R401     | 1-216-073-00 | METAL CHIP 10K 5%   | 1/10W  |
|          |              |                              |        |          |              |                     |        |
| R301     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R402     | 1-216-065-00 | RES, CHIP 4.7K 5%   | 1/10W  |
| R302     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R403     | 1-216-065-00 | RES, CHIP 4.7K 5%   | 1/10W  |
| R303     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R404     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
| R304     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R405     | 1-218-847-11 | RES, CHIP 1K 0.5%   | 1/16W  |
| R305     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R406     | 1-218-869-11 | RES, CHIP 8.2K 0.5% | 1/16W  |
|          |              |                              |        |          |              |                     |        |
| R306     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R501     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
| R307     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R502     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
| R308     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R503     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
| R311     | 1-216-821-11 | METAL CHIP 1K 5%             | 1/16W  | R504     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
| R312     | 1-216-825-11 | METAL CHIP 2.2K 5%           | 1/16W  | R505     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
|          |              |                              |        |          |              |                     |        |
| R316     | 1-216-821-11 | METAL CHIP 1K 5%             | 1/16W  | R506     | 1-216-845-11 | METAL CHIP 100K 5%  | 1/16W  |
| R317     | 1-216-809-11 | METAL CHIP 100 5%            | 1/16W  | R507     | 1-218-863-11 | RES, CHIP 4.7K 0.5% | 1/16W  |
| R318     | 1-216-833-11 | RES, CHIP 10K 5%             | 1/16W  | R510     | 1-216-845-11 | METAL CHIP 100K 5%  | 1/16W  |
| R319     | 1-216-845-11 | METAL CHIP 100K 5%           | 1/16W  | R511     | 1-216-847-11 | METAL CHIP 150K 5%  | 1/16W  |
| R320     | 1-216-855-11 | METAL CHIP 680K 5%           | 1/16W  | R512     | 1-216-845-11 | METAL CHIP 100K 5%  | 1/16W  |
|          |              |                              |        |          |              |                     |        |
|          |              |                              |        | R516     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        | R517     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        | R518     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        | R519     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        | R520     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        |          |              |                     |        |
|          |              |                              |        | R521     | 1-216-809-11 | METAL CHIP 100 5%   | 1/16W  |
|          |              |                              |        | R522     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |
|          |              |                              |        | R523     | 1-216-821-11 | METAL CHIP 1K 5%    | 1/16W  |

**SERVO**      **SUB**

| Ref. No.                      | Part No.     | Description                              | Remark           |
|-------------------------------|--------------|--|------------------|
| R524                          | 1-216-821-11 | METAL CHIP                               | 1K 5% 1/16W      |
| R525                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R526                          | 1-216-825-11 | METAL CHIP                               | 2.2K 5% 1/16W    |
| R527                          | 1-216-825-11 | METAL CHIP                               | 2.2K 5% 1/16W    |
| R528                          | 1-216-825-11 | METAL CHIP                               | 2.2K 5% 1/16W    |
| R529                          | 1-216-825-11 | METAL CHIP                               | 2.2K 5% 1/16W    |
| R530                          | 1-216-825-11 | METAL CHIP                               | 2.2K 5% 1/16W    |
| R531                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R532                          | 1-216-864-11 | METAL CHIP                               | 0 5% 1/16W       |
| R533                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R534                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R535                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R536                          | 1-216-864-11 | METAL CHIP                               | 0 5% 1/16W       |
| R537                          | 1-216-809-11 | METAL CHIP                               | 100 5% 1/16W     |
| R538                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R539                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R540                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| R542                          | 1-216-845-11 | METAL CHIP                               | 100K 5% 1/16W    |
| < COMPOSITION CIRCUIT BLOCK > |              |  |                  |
| RB301                         | 1-233-576-11 | RES, CHIP NETWORK 100                    |                  |
| RB302                         | 1-233-576-11 | RES, CHIP NETWORK 100                    |                  |
| RB503                         | 1-233-412-11 | RES, CHIP NETWORK 1K (3216)              |                  |
| < THERMISTOR >                |              |  |                  |
| TH501                         | 1-810-421-11 | THERMISTOR NTH5G36B103K01TE              |                  |
| < VIBRATOR >                  |              |  |                  |
| X301                          | 1-767-429-21 | VIBRATOR, CRYSTAL (22.5792MHZ)           |                  |
| X501                          | 1-760-365-11 | VIBRATOR, CERAMIC (10MHZ)                |                  |
| *****                         |              |  |                  |
| *                             | 1-677-057-11 | SUB BOARD                                |                  |
| *****                         |              |  |                  |
| < CONNECTOR >                 |              |  |                  |
| CNP810                        | 1-794-064-11 | SOCKET, CONNECTOR 14P                    |                  |
| CNP811                        | 1-792-195-11 | CABLE, FLEXIBLE FLAT                     |                  |
| < DIODE >                     |              |  |                  |
| D806                          | 8-719-109-97 | DIODE RD6.8ESB2                          |                  |
| D810                          | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                     |                  |
| D811                          | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                     |                  |
| D812                          | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                     |                  |
| D813                          | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                     |                  |
| D814                          | 8-719-056-82 | DIODE UDZ-TE-17-6.2B                     |                  |
| < LED >                       |              |  |                  |
| LED810                        | 8-719-077-75 | LED BR1101F-TR (MD DISC SLOT) (C6500RX)  |                  |
| LED810                        | 8-719-077-78 | LED BG1101F-TR (MD DISC SLOT)            | (C6400R, C6500R) |
| < SWITCH >                    |              |  |                  |
| LSW810                        | 1-771-609-11 | SWITCH, TACTILE (WITH LED) (▲)           | (C6400R, C6500R) |
| LSW810                        | 1-771-883-21 | SWITCH, TACTILE (WITH LED) (▲) (C6500RX) |                  |
| *****                         |              |  |                  |

| Ref. No.                                  | Part No.     | Description   | Remark                          |
|---|--------------|---|---------------------------------|
|   |              | MISCELLANEOUS   |                                 |
|   |              | *****   |                                 |
| 17  | 1-776-527-51 | CORD (WITH CONNECTOR) (ISO) (POWER)   | (C6400R)                        |
| 17  | 1-776-527-61 | CORD (WITH CONNECTOR) (ISO) (POWER)   | (C6500R/C6500RX)                |
| 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   |                                 |
| CNP811                                    | 1-792-195-11 | CABLE, FLEXIBLE, FLAT   |                                 |
| 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)  |                                 |
| LCD901                                    | 1-803-906-11 | DISPLAY PANEL, LIQUID CRYSTAL   | (C6400R/C6500R)                 |
| LCD901                                    | 1-803-906-31 | DISPLAY PANEL, LIQUID CRYSTAL (C6500RX)                                       |                                 |
| *****                                     |              |   |                                 |
| *****<br>HARDWARE LIST<br>*****           |              |   |                                 |
| #1  | 7-621-772-20 | SCREW +B 2X5  |                                 |
| #2  | 7-685-795-09 | SCREW +PTT 2.6X12 (S)   |                                 |
| #3  | 7-685-793-09 | SCREW +PTT 2.6X8 (S)  |                                 |
| #4  | 7-685-647-79 | SCREW +BVPT 3X10 TYPE2 IT-3   |                                 |
| #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 TYPE 3   |                                 |
| #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)  |                                 |
| #11                                       | 7-685-791-09 | SCREW +PTT 2.6X5 (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<br>***** |              |   |                                 |
| 3-044-659-11                              |              | MANUAL, INSTRUCTION (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN)          | (C6500R/C6500RX: AEP, UK)       |
| 3-044-659-21                              |              | MANUAL, INSTRUCTION (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK)                   | (C6400R/C6500R/C6500RX: AEP)    |
| 3-044-659-31                              |              | MANUAL, INSTRUCTION (GERMAN)  | (C6400R/C6500R/C6500RX: German) |
| 3-044-660-11                              |              | MANUAL, INSTRUCTION, INSTALL (ENGLISH, SPANISH, SWEDISH, PORTUGUESE, RUSSIAN) | (C6500R/C6500RX: AEP, UK)       |
| 3-044-660-21                              |              | MANUAL, INSTRUCTION, INSTALL (FRENCH, GERMAN, DUTCH, ITALIAN, GREEK)          | (C6400R/C6500R/C6500RX: AEP)    |
| X-3378-490-1                              |              | CASE (PANEL) ASSY   |                                 |
| *****                                     |              |   |                                 |

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

| Ref. No.                              | Part No.     | Description                         | Remark           |
|---------------------------------------|--------------|-------------------------------------|------------------|
| PARTS FOR INSTALLATION AND CONNECTION |              |                                     |                  |
| *****                                 |              |                                     |                  |
| 501                                   | 1-465-459-21 | ADAPTER, ANTENNA                    |                  |
| 502                                   | 3-012-360-31 | FRAME                               |                  |
| 503                                   | 3-040-979-01 | COLLAR                              |                  |
| 504                                   | 3-233-644-01 | SPRING, FITTING                     |                  |
| 505                                   | 3-934-325-01 | SCREW, +K (5X8) TAPPING             |                  |
| 506                                   | X-3366-405-1 | SCREW ASSY (EXP), FITTING           |                  |
| 507                                   | 1-776-527-51 | CORD (WITH CONNECTOR) (ISO) (POWER) | (C6400R)         |
| 507                                   | 1-776-527-61 | CORD (WITH CONNECTOR) (ISO) (POWER) | (C6500R/C6500RX) |

