

SUPER AUDIO CD PLAYER

CD-S2000

SERVICE MANUAL

IMPORTANT NOTICE

This manual has been provided for the use of authorized YAMAHA Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically YAMAHA Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components, and failure of the product to perform as specified. For these reasons, we advise all YAMAHA product owners that any service required should be performed by an authorized YAMAHA Retailer or the appointed service representative.

IMPORTANT: The presentation or sale of this manual to any individual or firm does not constitute authorization, certification or recognition of any applicable technical capabilities, or establish a principle-agent relationship of any form.

The data provided is believed to be accurate and applicable to the unit(s) indicated on the cover. The research, engineering, and service departments of YAMAHA are continually striving to improve YAMAHA products. Modifications are, therefore, inevitable and specifications are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground buss in the unit (heavy gauge black wires connect to this buss).

IMPORTANT: Turn the unit OFF during disassembly and part replacement. Recheck all work before you apply power to the unit.

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07.12

■ TO SERVICE PERSONNEL

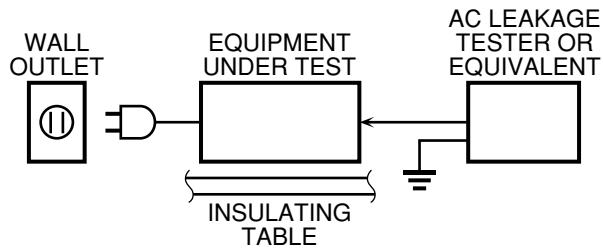
1. Critical Components Information

Components having special characteristics are marked \triangle and must be replaced with parts having specifications equal to those originally installed.

2. Leakage Current Measurement (For 120V Models Only)

When service has been completed, it is imperative to verify that all exposed conductive surfaces are properly insulated from supply circuits.

- Meter impedance should be equivalent to 1500 ohms shunted by $0.15\mu F$.



- Leakage current must not exceed 0.5mA.
- Be sure to test for leakage with the AC plug in both polarities.

WARNING: CHEMICAL CONTENT NOTICE!

This product contains chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

About lead free solder / 無鉛ハンダについて

All of the P.C.B.s installed in this unit and solder joints are soldered using the lead free solder.

Among some types of lead free solder currently available, it is recommended to use one of the following types for the repair work.

- Sn + Ag + Cu (tin + silver + copper)
- Sn + Cu (tin + copper)
- Sn + Zn + Bi (tin + zinc + bismuth)

Caution:

As the melting point temperature of the lead free solder is about 30°C to 40°C (50°F to 70°F) higher than that of the lead solder, be sure to use a soldering iron suitable to each solder.

本機に搭載されているすべての基板およびハンダ付けによる接合部は無鉛ハンダでハンダ付けされています。

無鉛ハンダにはいくつかの種類がありますが、修理時には下記のような無鉛ハンダの使用を推奨します。

- Sn+Ag+Cu(錫+銀+銅)
- Sn+Cu(錫+銅)
- Sn+Zn+Bi(錫+亜鉛+ビスマス)

注意 :

無鉛ハンダの融点温度は通常の鉛入りハンダに比べ30~40°C程度高くなっていますので、それぞれのハンダに合ったハンダごとをご使用ください。

WARNING: Laser Safety

This product contains a laser beam component. This component may emit invisible, as well as visible radiation, which may cause eye damage. To protect your eyes and skin from laser radiation, the following precautions must be used during servicing of the unit.

- When testing and/or repairing any component within the product, keep your eyes and skin more than 30 cm away from the laser pick-up unit at all times. Do not stare at the laser beam at any time.
- Do not attempt to readjust, disassemble or repair the laser pick-up, unless noted elsewhere in this manual.
- CAUTION : Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Emitting conditions:

- When the top cover is removed, and the STANDBY/ON SW is turned to the "ON" position, the laser component will emit a beam for several seconds to detect if a disc is present. During this time (5-10 sec.) the laser may radiate through the lens of the laser pick-up unit. Do not attempt any servicing during this period! If no disc is detected, the laser will stop emitting the beam. When a disc is loaded, you will not be exposed to any laser emissions.
- The laser power level can be adjusted with the VR on the pick-up PWB, however, this level has been set by the factory prior to shipping from the factory. Do not adjust this laser level control unless instruction is provided elsewhere in this manual. Adjustment of this control can increase the laser emission level from the device.

Laser Diode Properties

- Material:**

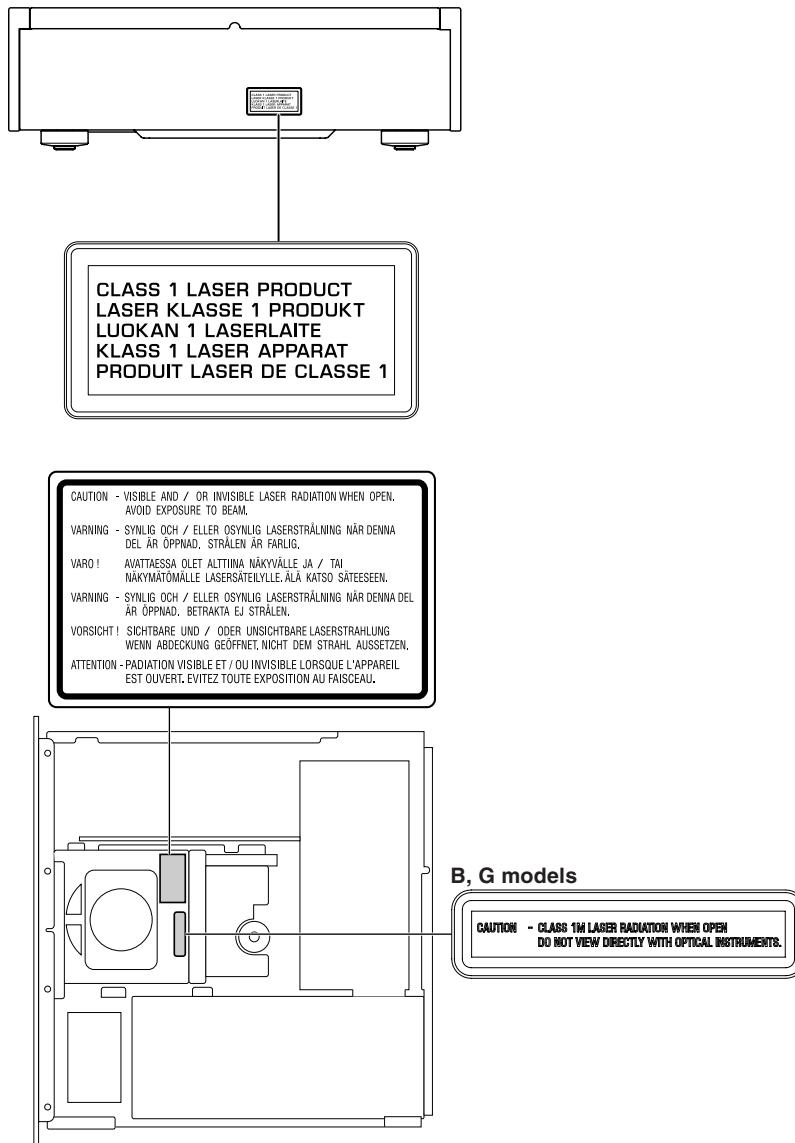
SA-CD	Semiconductor laser (AlGaInP)
CD	Semiconductor laser (AlGaAs)

- Wavelength:**

SA-CD	650 nm
CD	780 nm

- Laser Output:**

SA-CD	5 mW (max.)
CD	7 mW (max.)



Warning for power supply

The primary side of the power supply carries live mains voltage when the player is connected to the mains even when the player is switched off !

This primary area is not shielded so it is possible to touch copper tracks and/or components when servicing the player. Service personnel have to take precautions to prevent touching this area or components in this area.

Note:

The screws on the DVD mechanism may never be touched, removed or re-adjusted.

Handle the DVD mechanism with care when the unit has to be exchanged!

The DVD mechanism is very sensitive for dropping or giving shocks.

■ PREVENTION OF ELECTROSTATIC DISCHARGE

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

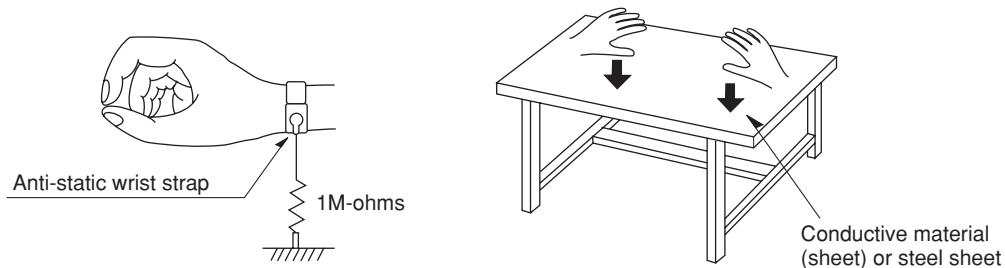
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.
 2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
 3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
 4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge sufficient to damage ES devices.
 5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
 6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
 7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.
- CAUTION:** Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as brushing together of your fabric clothes or lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

Grounding for electrostatic breakdown prevention

1. Human body grounding.
Use the antistatic wrist strap to discharge the static electricity from your body.
2. Work table grounding.
Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed and ground the sheet.

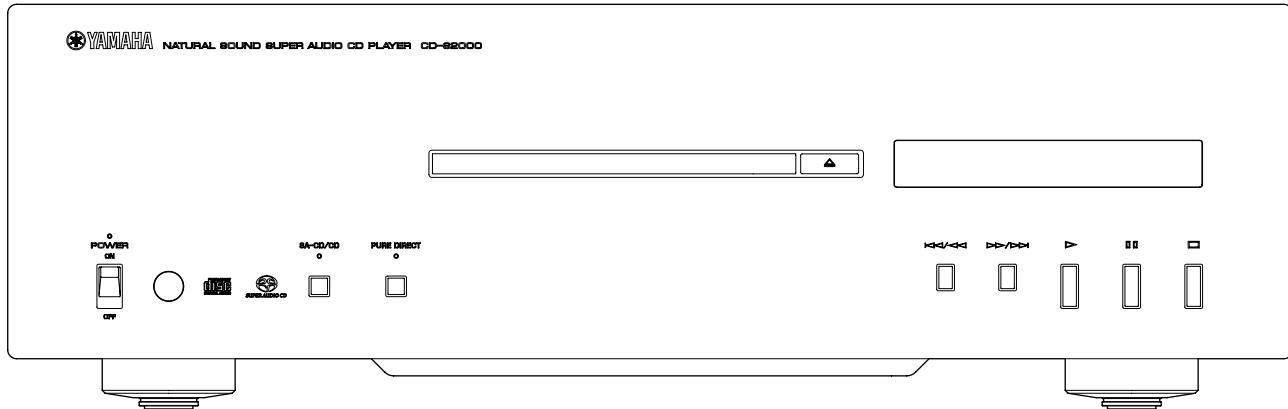
Caution:

The static electricity of your clothes will not be grounded through the wrist strap. So take care not to let your clothes touch the optical pickup.



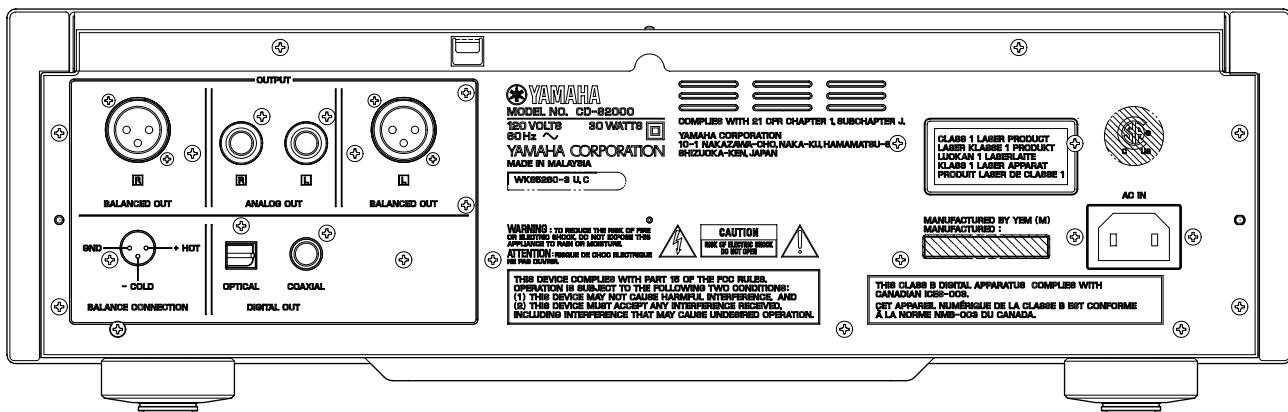
■ FRONT PANEL

CD-S2000 (U, C, R, T, K, A, B, G, L, J models)

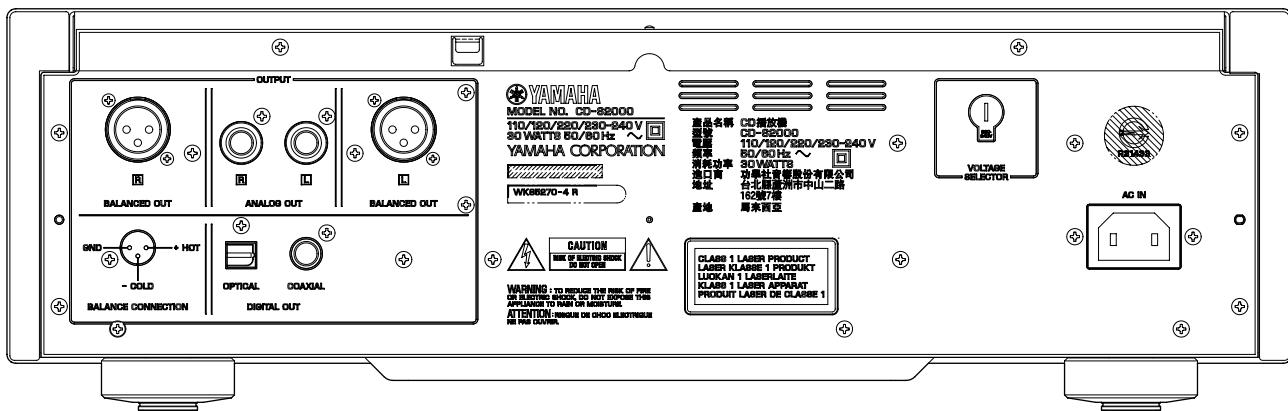


■ REAR PANELS

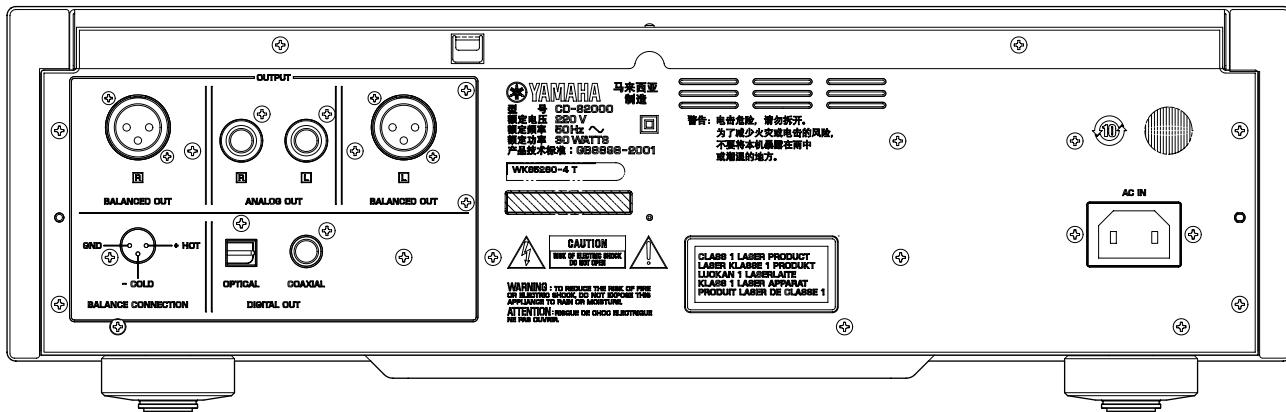
CD-S2000 (U, C models)



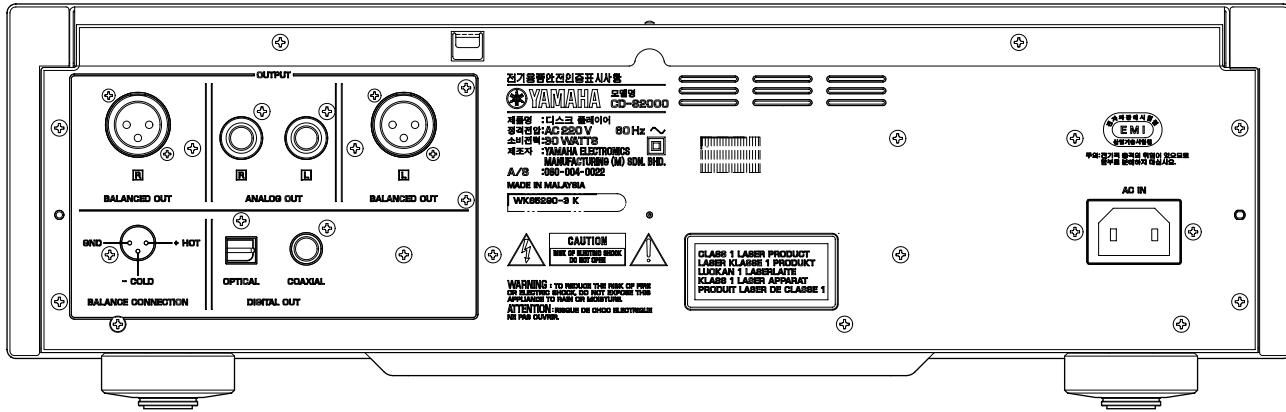
CD-S2000 (R model)



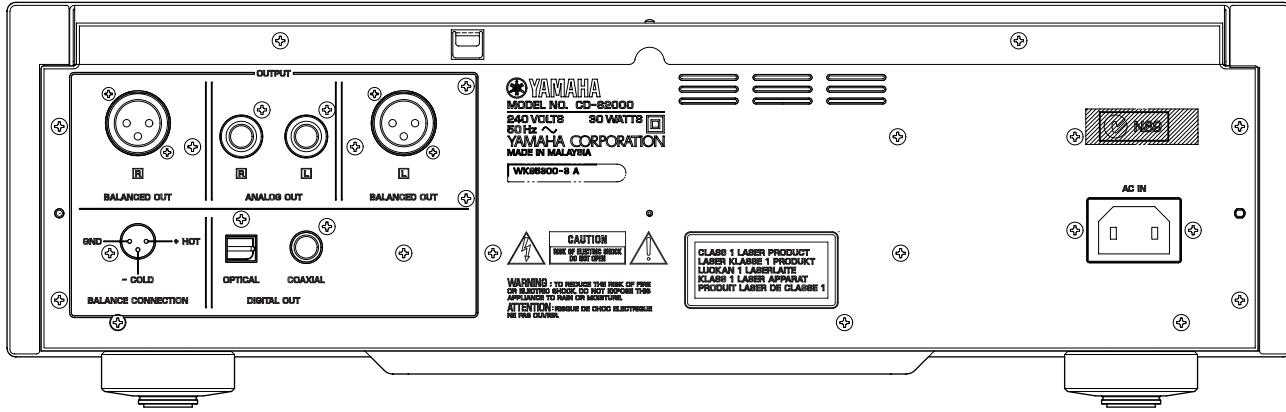
CD-S2000 (T model)



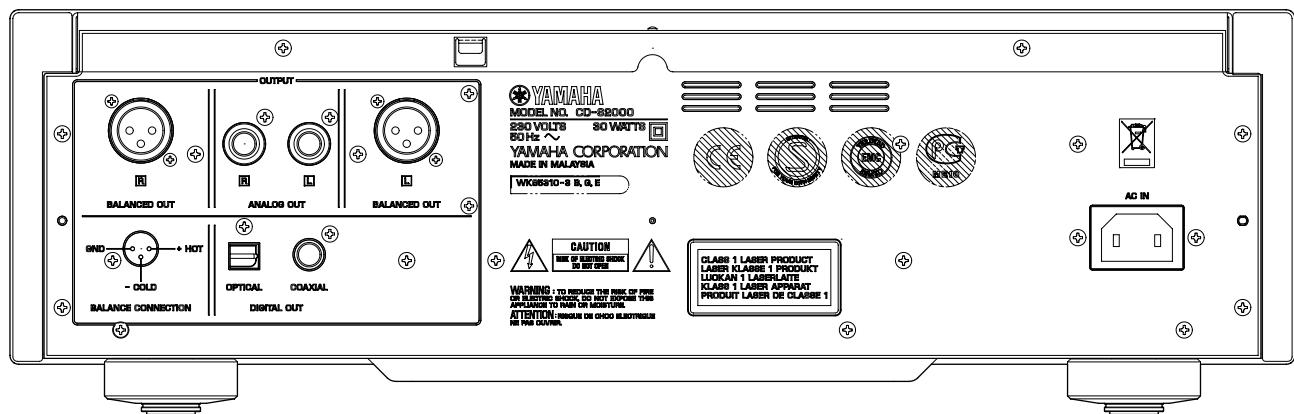
CD-S2000 (K model)



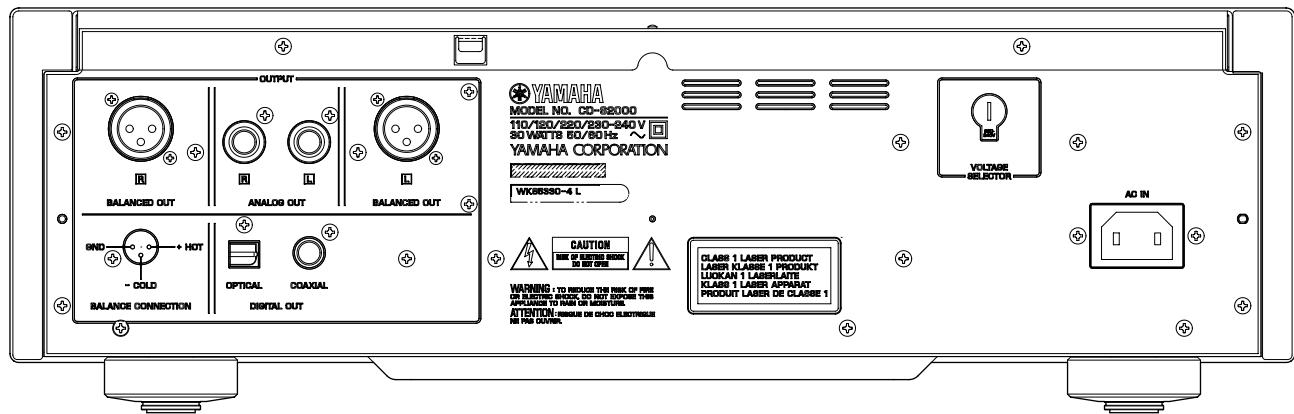
CD-S2000 (A model)



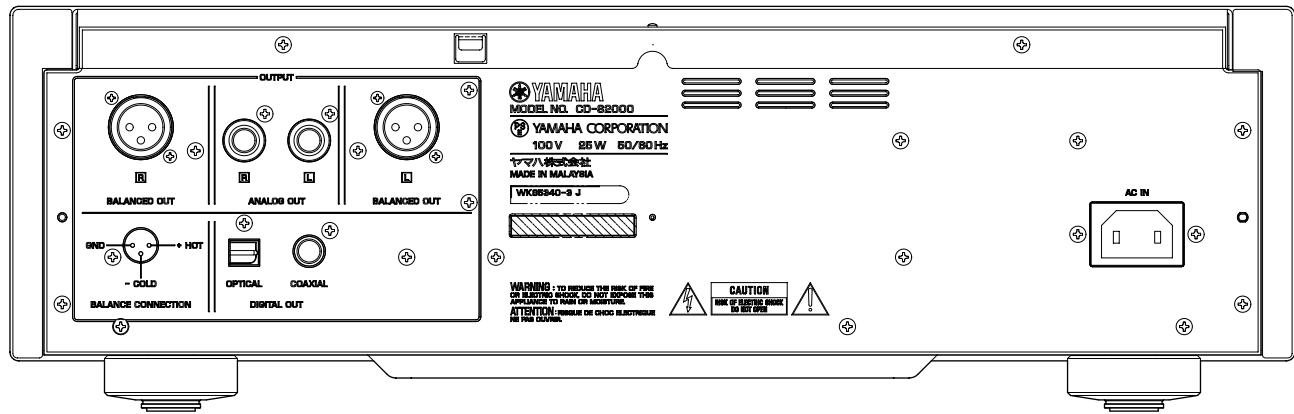
CD-S2000 (B, G models)



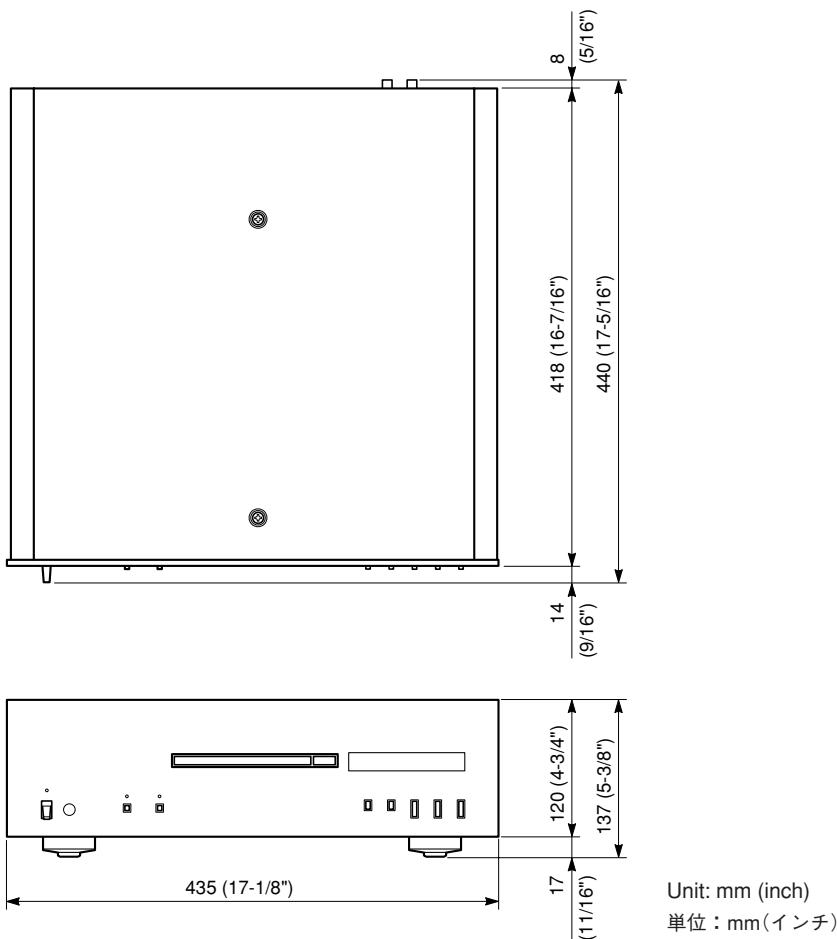
CD-S2000 (L model)



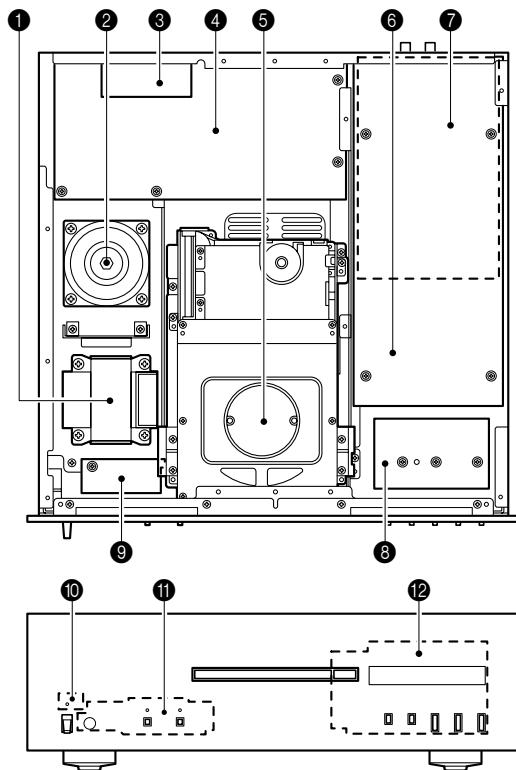
CD-S2000 (J model)



- DIMENSIONS / 寸法図



■ INTERNAL VIEW



- ① POWER TRANSFORMER for DIGITAL/ LOADER
- ② POWER TRANSFORMER for AUDIO
- ③ POWER (2) P.C.B. (R, L models)
- ④ POWER (1) P.C.B.
- ⑤ LOADER ASS'Y
- ⑥ AUDIO P.C.B.
- ⑦ DIGITAL (1) P.C.B.
- ⑧ DIGITAL (5) P.C.B.
- ⑨ POWER (3) P.C.B.
- ⑩ DIGITAL (4) P.C.B.
- ⑪ DIGITAL (3) P.C.B.
- ⑫ DIGITAL (2) P.C.B.

■ DISASSEMBLY PROCEDURES / 分解手順

(Remove parts in the order as numbered.)

Disconnect the power cable from the AC outlet.

1. Removal of Panel Side L/R

- Remove 2 screws (①), coned disc spring L and washer side. (Fig. 1)
- Lift the panel side L a little, release hooks at 3 locations and then remove the panel side L. (Fig. 1)
- Remove 2 screws (②) and then remove 2 washers. (Fig. 1)
- Lift the panel side R a little, release hooks at 3 locations and remove the panel side R. (Fig. 1)

2. Removal of Top Cover

- Remove 7 screws (③), 2 screws (④) and 2 screws (⑤). (Fig. 1)
- Remove the top cover. (Fig. 1)

(番号順に部品を取り外してください。)

AC電源コンセントから、電源コードを抜いてください。

1. パネルサイド L/R の外し方

- ①のネジ2本、サラバネL、ワッシャーサイドを外します。(Fig. 1)
- パネルサイドLを少し持ち上げ、3ヶ所のフックを外し、パネルサイドLを取り外します。(Fig. 1)
- ②のネジ2本を外し、ワッシャーサイド2個を外します。(Fig. 1)
- パネルサイドRを少し持ち上げ、3ヶ所のフックを外し、パネルサイドRを取り外します。(Fig. 1)

2. トップカバーの外し方

- ③ネジ7本、④のネジ2本、⑤のネジ2本を外します。(Fig. 1)
- トップカバーを取り外します。(Fig. 1)

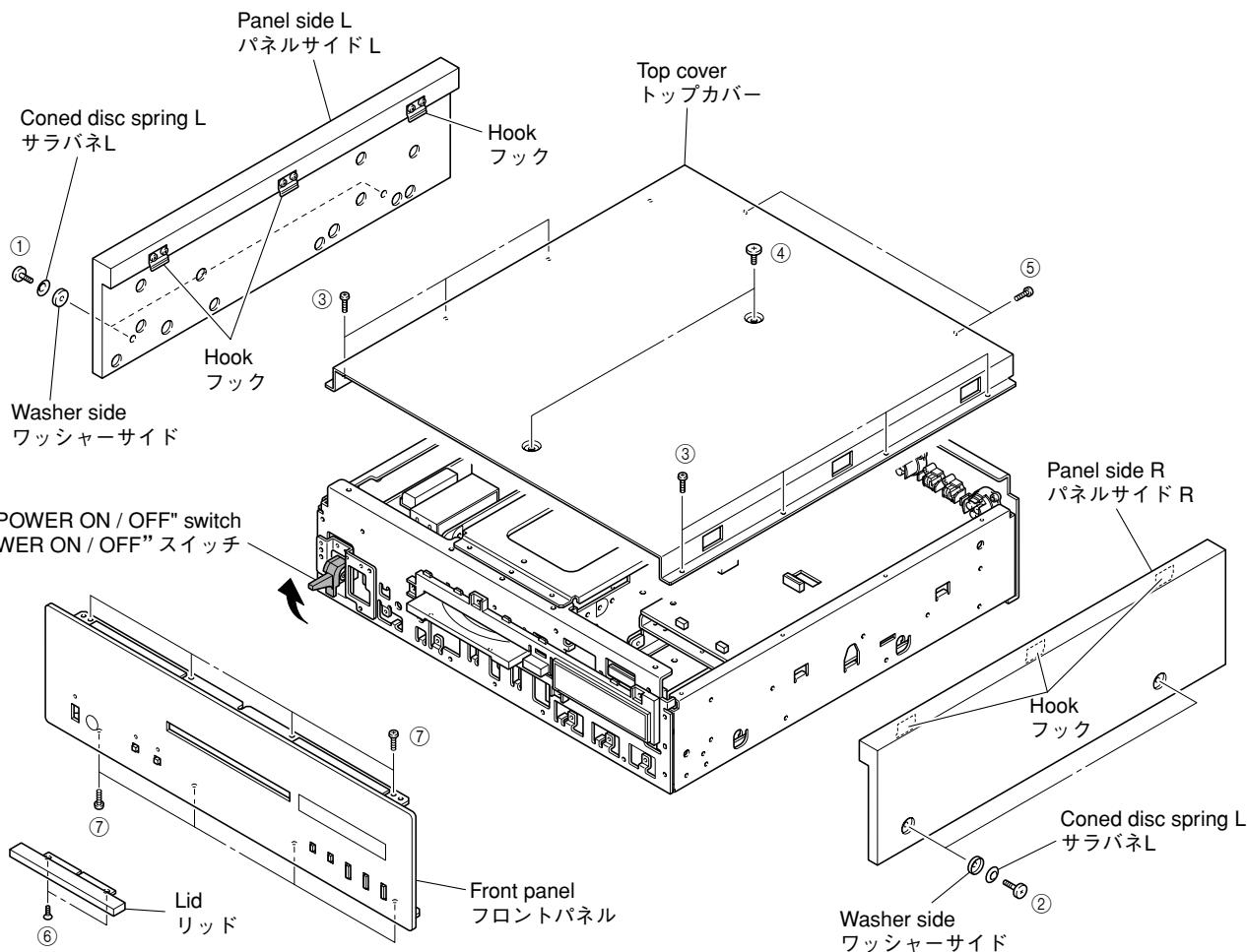


Fig. 1

3. Removal of Front Panel

- a. Using a flatblade screwdriver, move the slider at the bottom in the direction of the arrow shown below. (Fig. 2)

* At this time, the tray is not pushed out.
- b. Push out the tray by pushing its rear. (Fig. 3)
- c. Remove 2 screws (⑥) and then remove the lid. (Fig. 1)
- d. Close the tray by pushing its front.
- e. Remove 8 screws (⑦). (Fig. 1)
- f. Set the "POWER ON/OFF" switch to the ON position.
- g. Remove the front panel forward gradually, using care not to cause any damage to the "POWER ON/OFF" switch. (Fig. 1)

3. フロントパネルの外し方

- a. マイナスドライバーで底面のスライダーを下図の矢印の方向に動かします。(Fig. 2)
- ※ このとき、トレーは押し出されません。
- b. トレイの後方を押し、トレイを押し出します。(Fig. 3)
 - c. ⑥のネジ2本を外し、リッドを取り外します。(Fig. 1)
 - d. トレイの前方を押し、トレイを閉じます。
 - e. ⑦のネジ8本を外します。(Fig. 1)
 - f. "POWER ON/OFF"スイッチをONにします。
 - g. "POWER ON/OFF"スイッチに傷がつかないようフロントパネルを前方へゆっくり取り外します。(Fig. 1)

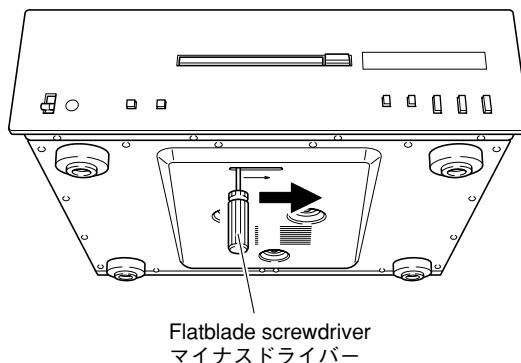


Fig. 2

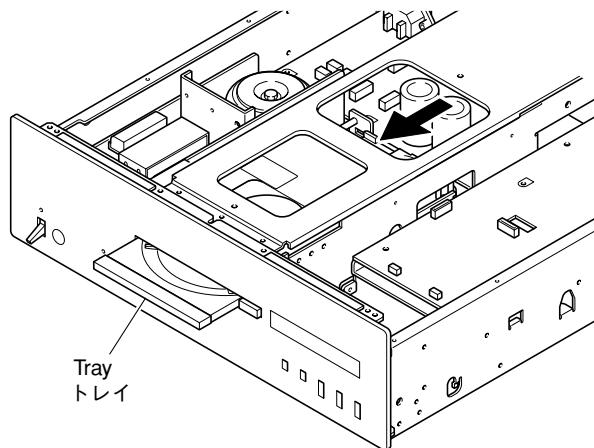


Fig. 3

4. Removal of Front Frame ass'y

- Remove 4 screws (⑧), 2 screws (⑨) (B, G models) and then remove the frame top. (Fig. 4)
- Remove 9 screws (⑩). (Fig. 4)
- Remove CB601 and CB902. (Fig. 4)
- Remove the front frame ass'y. (Fig. 4)

5. Removal of AUDIO P.C.B.

- Remove 6 screws (⑪). (Fig. 4)
- Remove 4 screws (⑫) and 4 screws (⑬). (Fig. 5)
- Remove CB1-2 and CB5-6. (Fig. 4)

* When installing CB5 and CB6, be sure to connect the Blue/Black color cable to CB5 and the Red/Black cable to the CB6.

- Lift the front of AUDIO P.C.B. and then remove it. (Fig. 4)

4. フロントフレームASSYの外し方

- ⑧のネジ4本、⑨のネジ2本を取り外します。 (Fig. 4)
- ⑩のネジ9本を取り外します。 (Fig. 4)
- CB601、CB902を取り外します。 (Fig. 4)
- フロントフレームASSYを取り外します。 (Fig. 4)

5. AUDIO P.C.B.の外し方

- ⑪のネジ6本を取り外します。 (Fig. 4)
- ⑫のネジ4本、⑬のネジ4本を取り外します。 (Fig. 5)
- CB1-2、CB5-6を取り外します。 (Fig. 4)

※ CB5、CB6を取り付ける場合、必ずCB5側へBlue/Black色のケーブル、CB6側へRed/Black色のケーブルを取り付けてください。

- AUDIO P.C.B.の前方を持ち上げ、取り外します。 (Fig. 4)

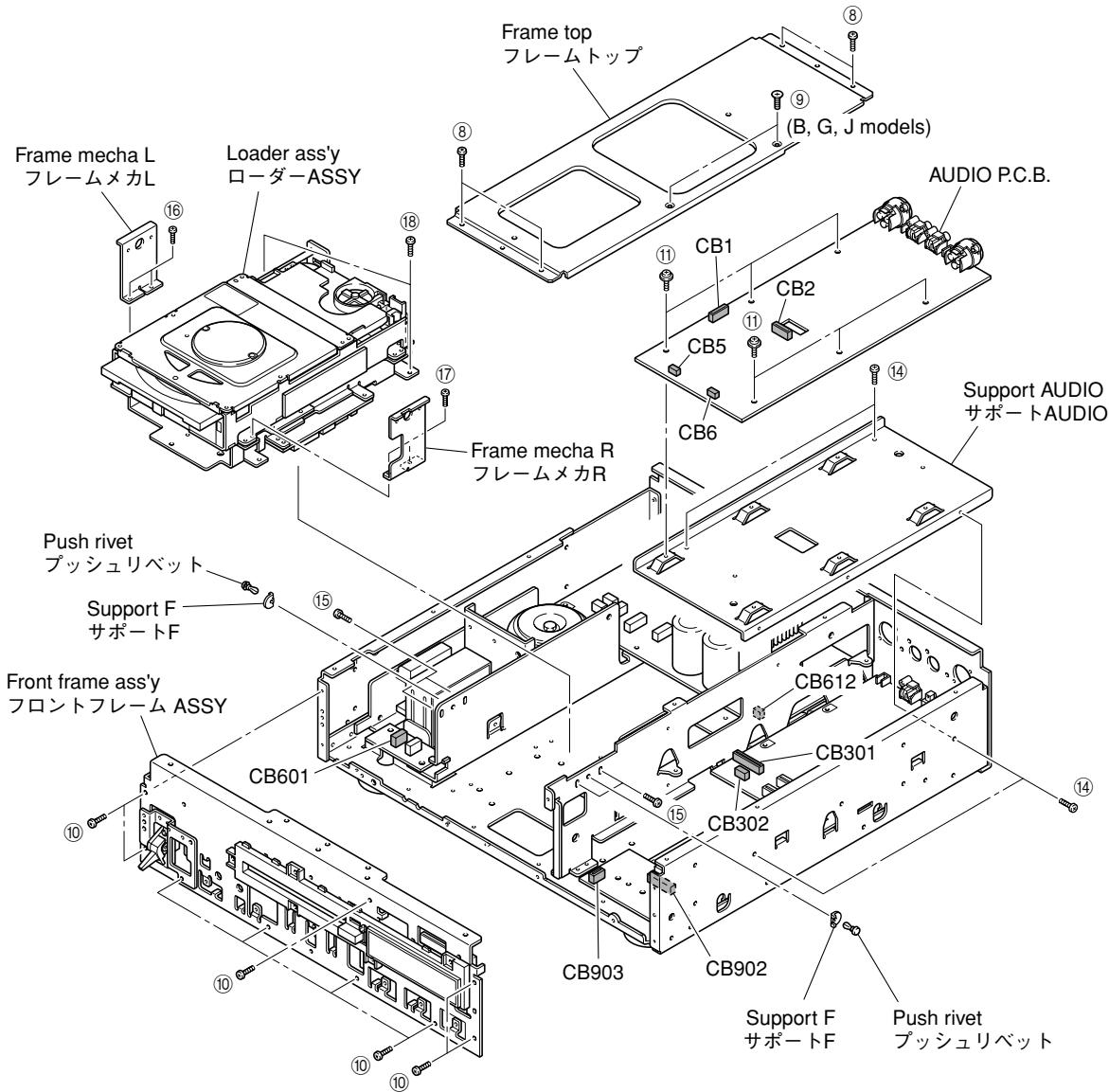


Fig. 4

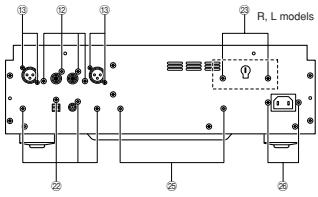


Fig. 5

When checking the AUDIO P.C.B.:

- Put the rubber sheet and cloth over this unit. Then place the P.C.B.s upside down on the cloth and check it. (Fig. 6)
- Reconnect all cables (connectors) that have been disconnected.
- Be sure to use the extension cable before servicing the following section.
AUDIO P.C.B.: CB2_DIGITAL P.C.B.: CB303
12P, 450mm P=1.25 (MF112450)
- When connecting the flexible flat cable, be careful with polarity.
- In this unit, the ground of P.C.B.s shown below is connected to the rear panel and chassis. When these P.C.B.s are removed from the rear panel, connect the ground point to the rear panel or chassis, using a ground lead wire or the like. (Fig. 6)

AUDIO P.C.B.をチェックする場合には：

- 本機の上にゴムシートと布を敷き、その上にP.C.B.を裏返しにしてチェックします。 (Fig. 6)
- 外したケーブル(コネクター)をすべて接続します。
ただし次の区間は、サービス用延長ケーブルを使用してください。
AUDIO P.C.B.: CB2_DIGITAL P.C.B.: CB303
12P, 450mm P=1.25 (MF112450)
- フラットケーブルを接続する際、極性に注意してください。
- 本機ではP.C.B.のアースがリアパネルおよびシャーシに接続されています。これらのP.C.B.をリアパネルより取り外した場合は、アース線等でアースポイントをリアパネルまたはシャーシに接続してください。 (Fig. 6)

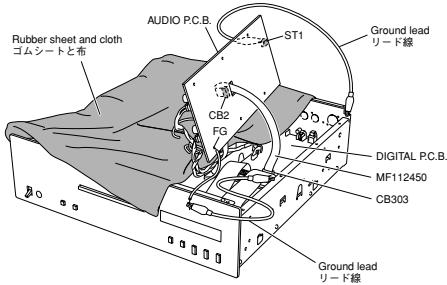


Fig. 6

6. Removal of Loader ass'y

- Remove 4 screws (⑯) and then remove the support audio. (Fig. 4)
- Remove CB301-302, CB612 and CB903. (Fig. 4)
- Remove 4 screws (⑰). (Fig. 4)
- Remove push rivet and then remove the support F. (Fig. 4)
- Remove 2 screws (⑯) and then the frame mecha L. (Fig. 4)
- Remove 2 screws (⑰) and then remove the frame mecha R. (Fig. 4)
- Remove 2 screws (⑯) and then remove the loader ass'y. (Fig. 4)

● When installing the Loader Ass'y:

When installing the loader ass'y, adjust the clearance between the front panel and lid so that it becomes equal at the top, bottom, right and left.

- Loosen 2 screws (⑯) and 2 screws (⑰). (Fig. 7)
- Position the support F on both sides with its flat portion facing upward. (Fig. 7)
- Viewing from the front, confirm the lid position. (Fig. 7)
- Tighten the screws on the side with higher lid inclination (screws (⑰)) in the case shown below. (Fig. 7)
- Turn the support F on the side with lower lid inclination clockwise gradually until the lid is positioned horizontally. (Fig. 7)
- With the lid adjusted at the horizontal position, tighten other screws (screws (⑯)) in the case shown below. (Fig. 7) To change the position upward at this time, loosen screws (⑰) and then turn the support F clockwise gradually.
* Be sure to make adjustment from either side only.
- Repeat opening and closing the tray some times and confirm to make sure that the same clearance between the front panel and lid is obtained at the top, bottom, right and left.

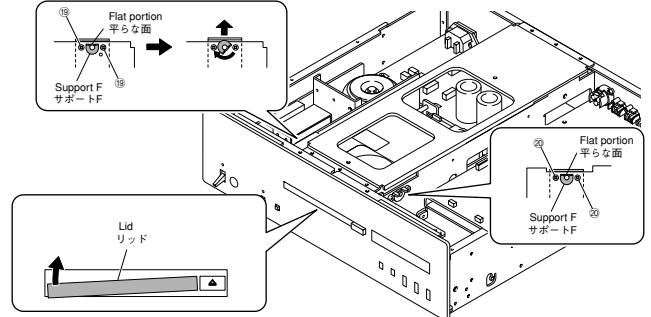


Fig. 7

6. ローダーASSYの外し方

- ⑯のネジ4本を外し、サポートAUDIOを取り外します。 (Fig. 4)
- CB301-302、CB612、CB903を外します。 (Fig. 4)
- ⑰のネジ4本を外します。 (Fig. 4)
- ブッシュリベットを外し、サポートFを取り外します。 (Fig. 4)
- ⑯のネジ2本を外し、フレームメカLを取り外します。 (Fig. 4)
- ⑰のネジ2本を外し、フレームメカRを取り外します。 (Fig. 4)
- ⑯のネジ2本を外し、ローダーASSYを取り外します。 (Fig. 4)

● ローダーASSYを取り付ける場合：

ローダーASSYを取り付ける場合には、フロントパネルとリッドの隙間が上下左右同じになるようにローダーASSYの傾きを調整してください。

- ⑯のネジ2本、⑰のネジ2本を締めます。 (Fig. 7)
 - サポートFの平らな面を上向きにします。 (Fig. 7)
 - 前面から見て、リッドの位置を確認します。 (Fig. 7)
 - リッドの傾斜が高い側のネジ(下図の場合、⑰のネジ)を締めます。 (Fig. 7)
 - リッドの傾斜が低い側のサポートFを時計回りにゆっくり回し、リッドの傾きが水平な位置になるようにします。 (Fig. 7)
 - リッドの位置が水平の位置でネジ(下図の場合、⑯のネジ)を締めます。 (Fig. 7)
 - このとき上方向へ位置を変更する場合には、次に⑯のネジを締め、サポートFを時計回りにゆっくり回します。
- * 調整は必ずどちらか一方から行ってください。
7. レイの開閉を数回行い、フロントパネルとリッドの隙間が上下左右同じであることを確認します。

7. Removal of DIGITAL P.C.B.

- a. Remove 3 screws (◎). (Fig. 8)
- b. Remove 4 screws (◎). (Fig. 5)
- c. Remove CB610-611 and CB901. (Fig. 8)
- d. Remove the DIGITAL P.C.B.. (Fig. 8)

**8. Removal of POWER (2) P.C.B.
(R and L models)**

- a. Remove 2 screws (◎). (Fig. 5)
- b. Remove CB602 and CB604. (Fig. 8)
- c. Remove the POWER (2) P.C.B.. (Fig. 8)

9. Removal of POWER (1) P.C.B.

- c. Remove 4 screws (◎). (Fig. 8)
- b. Remove 2 screws (◎) and 2 screws (◎). (Fig. 5)
- c. Remove CB603, CB605-607 and CB615. (Fig. 8)
- d. Remove the POWER (1) P.C.B.. (Fig. 8)

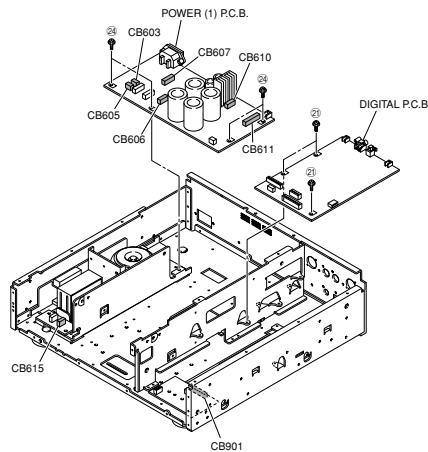


Fig. 8

7. DIGITAL P.C.B.の外し方

- a. ◎のネジ3本を外します。 (Fig. 8)
- b. ◎のネジ4本を外します。 (Fig. 5)
- c. CB610-611, CB901を外します。 (Fig. 8)
- d. DIGITAL P.C.B.を取り外します。 (Fig. 8)

8. POWER(1)P.C.B.の外し方

- a. ◎のネジ4本を外します。 (Fig. 8)
- b. ◎のネジ2本、◎のネジ2本を外します。 (Fig. 5)
- c. CB603, CB605-607, CB615を外します。 (Fig. 8)
- d. POWER(1)P.C.B.を取り外します。 (Fig. 8)

● Disassembly of Loader Ass'y**1. Removal of Module Board**

- a. Remove CN102 and CN103. (Fig. 9)
- b. Unlock CN101 and then disconnect the flexible flat cable, and ground the terminal face of the flexible flat cable with a clip or the like. (Fig. 9)
- c. Remove 5 screws (◎). (Fig. 9)
- d. Remove the module board. (Fig. 9)

● ローダーASSYの分解手順**1. モジュール基板の外し方**

- a. CN102-103を外します。 (Fig. 9)
- b. CN101のロックを解除してカード電線を外します。次に外したカード電線のクリップ等で端子面をアースします。 (Fig. 9)
- c. ◎のネジ5本を外します。 (Fig. 9)
- d. モジュール基板を取り外します。 (Fig. 9)

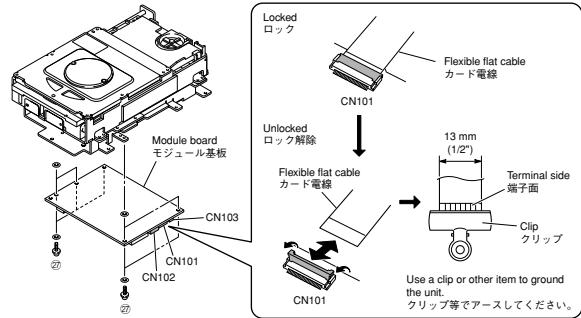


Fig. 9

2. Removal of DVD Traverse Mechanism and Stepping Motor.

- * When installing a new DVD traverse mechanism, remove the solder from the shorted point of pick up unit using an electrostatic shielding soldering iron.
- a. Remove 6 screws (②⑧) and then remove the clamp ass'y. (Fig. 10)
- b. Push out the tray by pushing its rear. (Fig. 10)
- c. Remove 2 screws (②⑨). (Fig. 10)
- d. Remove the DVD traverse mechanism together with the holder PU/SA-CD. (Fig. 10)
- e. Remove 4 screws (③⑩) and then remove the DVD traverse mechanism. (Fig. 10)
- f. Remove 2 screws (③⑪) and then remove the stepping motor. (Fig. 10)

2. DVD トラバースメカおよびステッピングモーターの外し方

※ 新しいDVD トラバースメカに交換する場合、ピックアップユニットのショート箇所のハンダを静電気対策ハンダごとで取り除いてください。

- a. ②⑧のネジ6本を外し、クランプASSYを取り外します。 (Fig. 10)
- b. トレイの後方を押し、トレイを押し出します。 (Fig. 10)
- c. ②⑨のネジ2本を外します。 (Fig. 10)
- d. DVD トラバースメカをホルダーPU/SA-CDと一緒に取り外します。 (Fig. 10)
- e. ③⑩のネジ4本を外し、DVD トラバースメカを取り外します。 (Fig. 10)
- f. ③⑪のネジ2本を外し、ステッピングモーターを取り外します。 (Fig. 10)

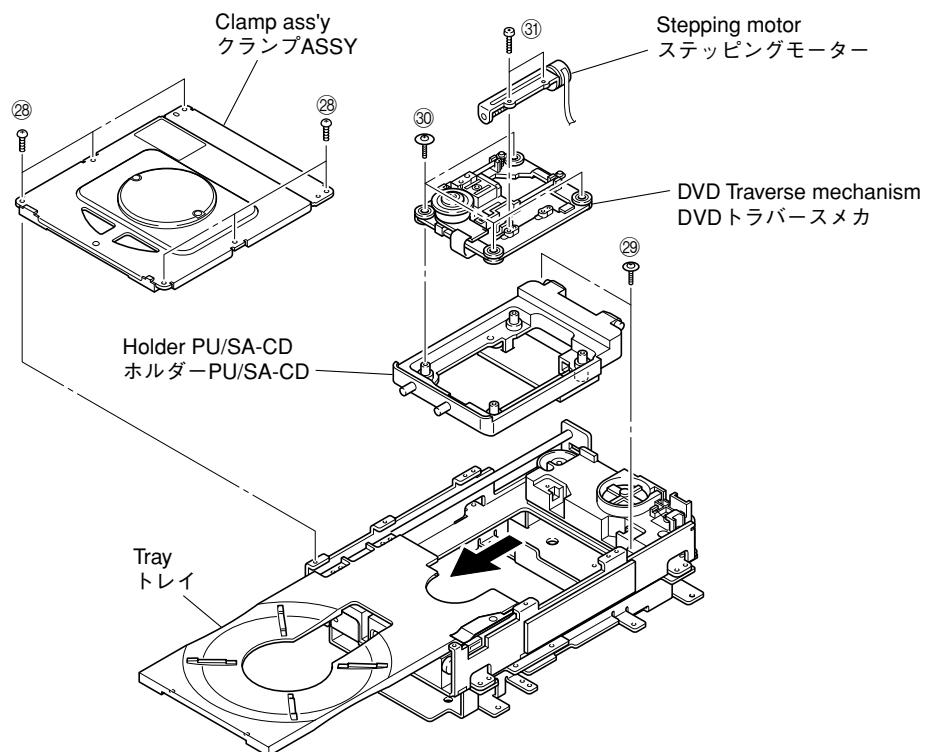


Fig. 10

- When installing a new Stepping Motor:**
Before installing a new stepping motor, apply grease to its screw.
- Recommended grease:**
PN-397 (Part No.: AAX89650)
- a. Apply grease to the screw at 3 points as shown below. (Fig. 11)
 - * Amount of grease to be applied:
 $3\text{mg} \pm 1\text{mg}$ at 3 points
- b. After applying grease, spread it evenly between A and B of the screw of the stepping motor. (Fig. 12)
 - * While spreading grease evenly, use full care not to cause damage to the screw.
 - * If waste thread, dust, etc. is attached, remove it.
- c. Apply grease to the DVD traverse mechanism as shown below. (Fig. 13)
 - * Amount of grease to be applied:
 $2\text{mg} \pm 1\text{mg}$ at 1 point

- Operation check after installing a new stepping motor**
After installing all parts, turn on the power and check for proper operation.
- 1. Load CD, repeat the search function between the first number and the last one some times so that the grease is settled.
- 2. Perform random playback and check for proper operation.



Fig. 11

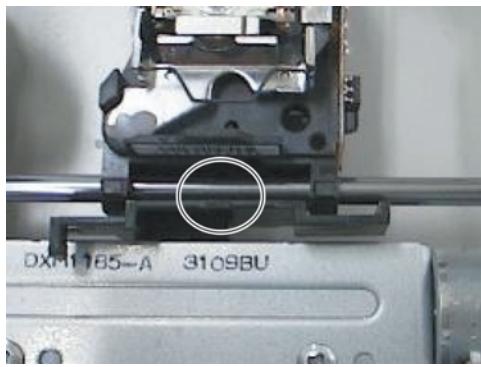


Fig. 13

- 新しいステッピングモーターを取り付ける場合：
新しいステッピングモーターを取り付ける場合には、新しいステッピングモーターのスクリュー部分にグリスを塗布します。
推奨グリス：PN-397(部品番号：AAX89650)
- a. スクリュー部の下図3ヶ所にグリスを塗布します。(Fig. 11)
※ 塗布量： $3\text{mg} \pm 1\text{mg} \times 3\text{ヶ所}$
- b. グリスを塗布した後、ステッピングモーターのスクリュー部A-B間にグリスを均一に伸ばします。(Fig. 12)
※ グリスを均一に伸ばす場合、スクリュー部にキズをつけないよう十分注意してください。
※ 糸くずやほこり等が付着した場合、糸くずやほこり等を取り除いてください。
- c. DVD トラバースメカの下図にグリスを塗布します。(Fig. 13)
※ 塗布量： $2\text{mg} \pm 1\text{mg} \times 1\text{ヶ所}$

- 新しいステッピングモーター取り付け後の動作確認
すべての部品を取り付けた後、電源を入れて動作確認を行います。
- 1. CDを入れて、1曲目と最終曲間のサーチを数回繰り返し、グリスを馴染ませます。
- 2. ランダム再生を行い、問題なく再生できるか確認します。

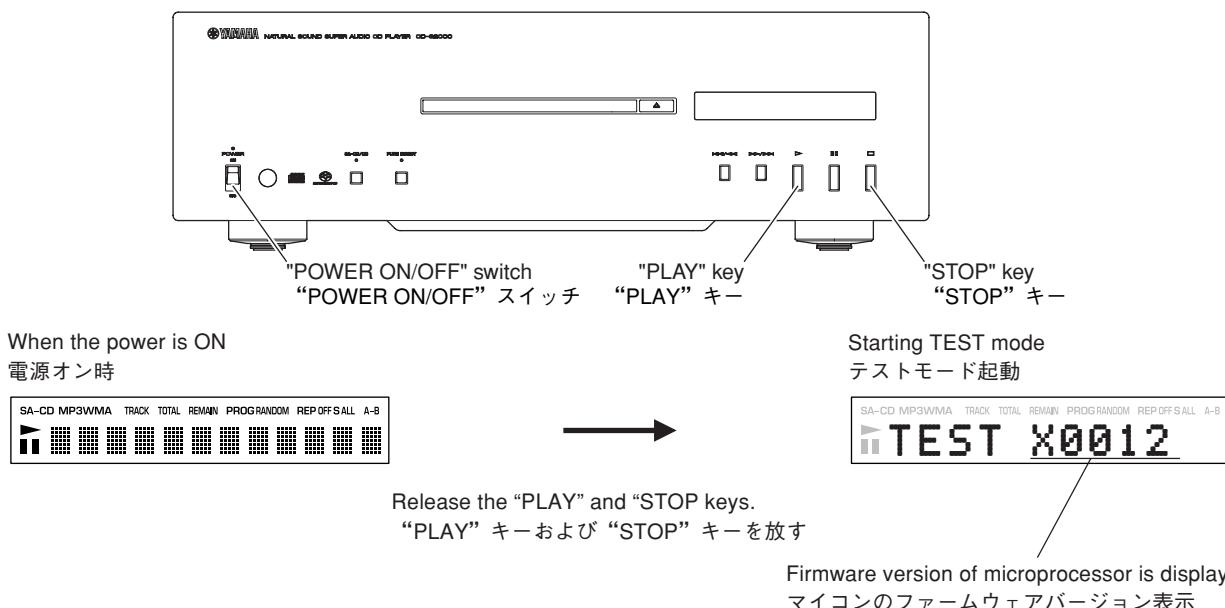


Fig. 12

■ TEST MODE / テストモード

● Starting Test Mode

To activate the TEST mode, set the "POWER ON/OFF" switch to the ON position while pressing the keys of this unit as shown below at the same time.



● Operating Test Mode

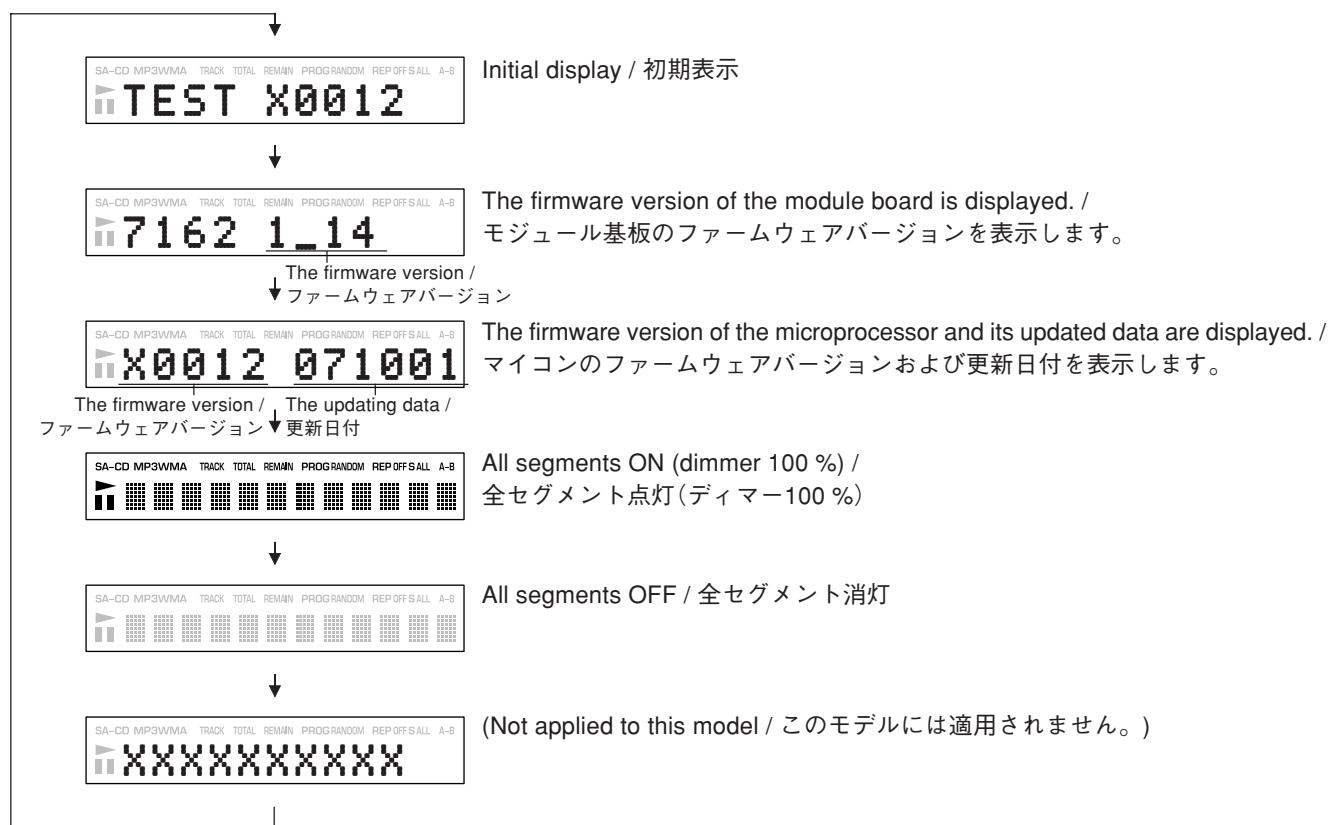
Press the "DISPLAY" key on the remote control, and the display changes in the order as shown below.

● テストモード起動

本機の下図に示すキーを同時に押しながら“POWER ON/OFF”スイッチをONにすると、テストモードが起動します。

● テストモードの操作方法

リモコンの“DISPLAY”キーを押すと、下図の順で表示が切り替わります。



■ UPDATING FIRMWARE / ファームウェアの書き込み

Writing to the microprocessor

After replacing the following parts with the replacement parts, update the latest firmware according to the following procedure.

DIGITAL P.C.B.

Microprocessor (IC302) of DIGITAL P.C.B.

マイコンへの書き込み

下記の部品をサービス部品に交換した場合、下記の手順により最新のファームウェアの書き込みを行ってください。

DIGITAL P.C.B.

DIGITAL P.C.B.のマイコン (IC302)

● Required tools

- Program downloader programs FlashSta.exe
- Firmware CDS2000xx.S
..... CDS2000xx.id
- RS232C cross cable “D-sub 9 pin female”
(Specifications)

Pin No.2 RxD		Pin No.2 RxD	
Pin No.3 TxD		Pin No.3 TxD	
Pin No.5 GND		Pin No.5 GND	
Pin No.7 RTS		Pin No.7 RTS	
Pin No.8 CTS		Pin No.8 CTS	
- RS232C conversion jig (Part No.: AAX88050)

● Preparation and precautions before starting the operation

- Download firmware downloader program and firmware from the specified source to the same folder of the PC.
- Prepare the above specified RS232C cross cable.
- While writing, keep the other application software on the PC closed.
It is also recommended to keep the software on the task tray closed as well.

● 必要なツール

- プログラム書き込み用プログラム FlashSta.exe
- ファームウェア CDS2000xx.S
..... CDS2000xx.id
- RS232Cクロスケーブル“D-sub 9pinメス”
(仕様)

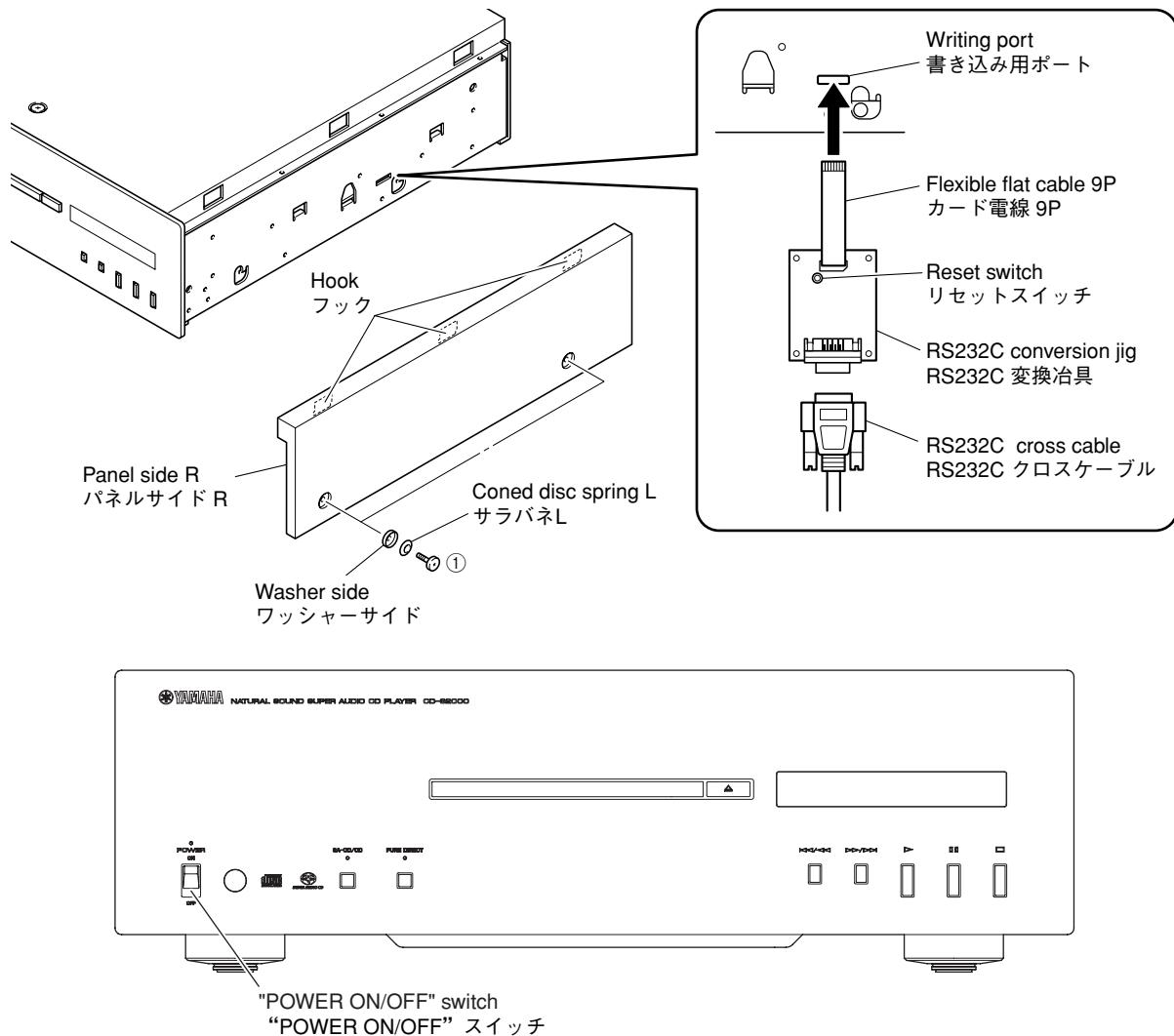
Pin No.2 RxD		Pin No.2 RxD	
Pin No.3 TxD		Pin No.3 TxD	
Pin No.5 GND		Pin No.5 GND	
Pin No.7 RTS		Pin No.7 RTS	
Pin No.8 CTS		Pin No.8 CTS	
- RS232C 変換治具 (部品番号 : AAX88050)

● 操作前の準備と注意

- PCへ指定のダウンロード先からファームウェア書き込み用プログラムおよび、ファームウェアを同じフォルダにダウンロードしてください。
- RS232Cクロスケーブルは必ず上記仕様のものを用意してください。
- 書き込み時は、PC上の他のアプリケーションソフトは閉じてください。
さらに、タスクトレイ上にあるソフトも閉じておくことを推奨します。

● Operation Procedure

1. Turn off the power of this unit and disconnect the power cable from the AC outlet.
2. Remove 2 screws (①). (Fig. 1)
3. Lift the panel side R a little, release hooks at 3 locations and then remove the panel side R. (Fig. 1)
4. Connect the writing port of the this unit to the serial port (RS232C) of the PC with RS232C cross cable, RS232C conversion jig and flexible flat cable as shown below. (Fig. 1)



● 操作方法

1. 本機の電源を切り、電源コードをACコンセントから抜きます。
2. ①のネジ2本を外します。(Fig. 1)
3. パネルサイドRを少し持ち上げ、フック3ヶ所を外し、パネルサイドRを取り外します。(Fig. 1)
4. 本機の書き込み用ポートとPCのシリアルポート(RS232C)を下記のように接続します。(Fig. 1)

Fig. 1

5. Connect the power cable to the AC outlet. (Fig. 1)
6. While pressing the reset switch of RS232C conversion jig, set the "POWER ON/OFF" switch of this unit to the ON position. (Fig. 1)
5. 電源コードをACコンセントに接続します。(Fig. 1)
6. RS232C変換治具のリセットスイッチを押しながら、本機の"POWER ON/OFF"スイッチをONにします。(Fig. 1)

7. Start up FlashSta.exe, the screen will appear as shown below. (Fig. 2)

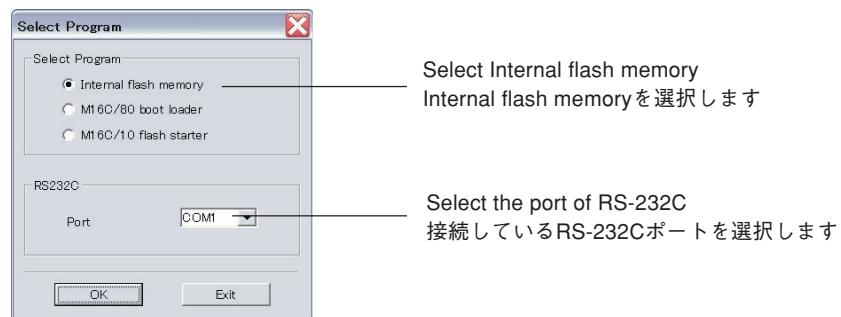


Fig. 2

8. Select the port and data to be transmitted. (Fig. 2)

- Select Program**

Select Internal flash memory

- RS232C**

Select the port of RS-232C

* For selection of the port, COM1 to 4 can be used.

As COM5 or higher port cannot be used, select out of COM 1 to 4 of the setting on the PC side.

9. Click [Refer...]. And select the firmware name. (Fig. 3)

* The ID code and MCU type are loaded when the file is selected. (Fig. 3)

Click [OK]. (Fig. 3)

8. 送信データ、ポートを選択します。 (Fig. 2)

- Select Program**

Internal flash memory を選択します。

- RS232C**

接続しているRS-232Cポートを選択します。

※ ポートの選択はCOM1～4までが使用できます。

COM5以上は使用できませんので、PC側の設定でCOM1～4を選択してください。

9. [Refer...]をクリックし、書き込むファームウェアを選択します。 (Fig. 3)

※ ID、およびMCU Typeは書き込みファイル選択時、自動的に取り込まれます。 (Fig. 3)

[OK]をクリックします。 (Fig. 3)

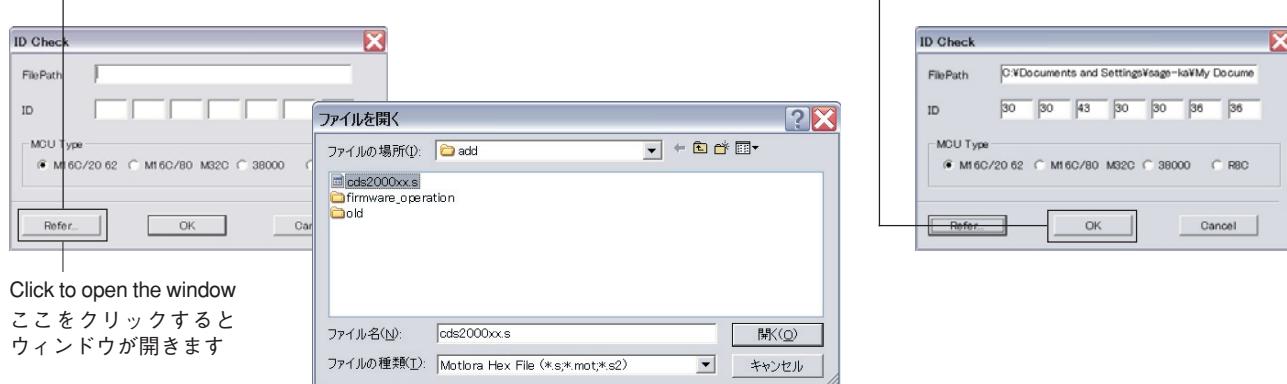
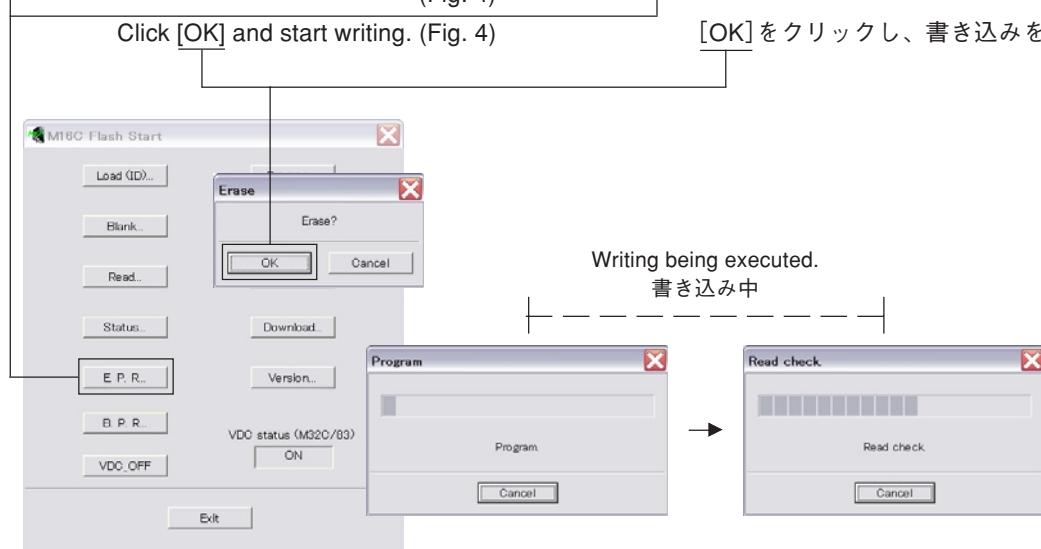


Fig. 3

10. Click [E.P.R.], the screen appears as shown below.

(Fig. 4)



10. [E.P.R.] をクリックすると、下記の画面が表示されます。

(Fig. 4)

[OK] をクリックし、書き込みを開始します。

(Fig. 4)

Fig. 4

11. When the program transmission is completed, the screen appears as shown below. (Fig. 5)

Click [OK] to end the procedure. (Fig. 5)

11. プログラムの送信が終了すると、下記の画面が表示さ

れます。(Fig. 5)

[OK] をクリックして完了します。(Fig. 5)

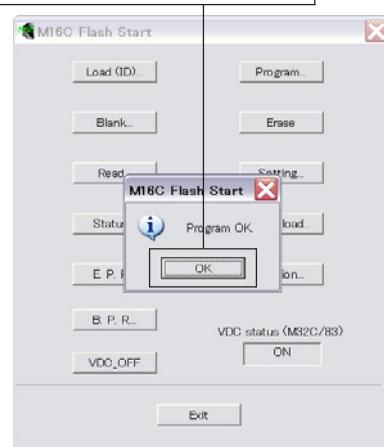


Fig. 5

12. Set the "POWER ON/OFF" switch of this unit to the OFF position.
13. Disconnect the power cable of this unit from the AC outlet.
14. End "FlashSta. exe."
15. Disconnect the RS232C cross cable, RS232C conversion jig and flexible flat cable.

• **Confirmation of firmware version**

Confirm the firmware is updated successfully from the test mode.

For more information, refer to "TEST MODE".

1. Reconnect the power cable of this unit to the AC outlet.
2. While pressing the "PLAY" and "STOP" keys of this unit, set the "POWER ON/OFF" switch to the ON position. Then the Test mode is activated. (Fig. 6)
3. Select the function to display the firmware version of the microprocessor. Check that the displayed firmware version is the same as the written firmware version.

12. 本機の"POWER ON/OFF"スイッチをOFFにします。
13. 本機の電源コードをACコンセントから抜きます。
14. "FlashSta.exe"を終了します。
15. RS232Cクロスケーブル、RS232C変換アダプターカード電線を取り外します。

• ファームウェアバージョンの確認

テストモードでファームウェアが正しく更新されたことを確認します。

テストモードの詳細は「テストモード」を参照してください。

1. 本機の電源コードをACコンセントに接続します。
2. 本機の"PLAY"キーと"STOP"キーを押しながら、"POWER ON/OFF"スイッチをONにします。(Fig. 6) テストモードが起動します。
3. マイコンのファームウェアバージョンの表示を選択します。

表示されたファームウェアのバージョンが書き込んだファームウェアのバージョンと同じであることを確認します。

Key of this unit / 本体キー

Set the "POWER ON/OFF" switch to the

ON position while pressing these keys.

これらのキーを同時に押しながら、
"POWER ON/OFF"スイッチをONにします。

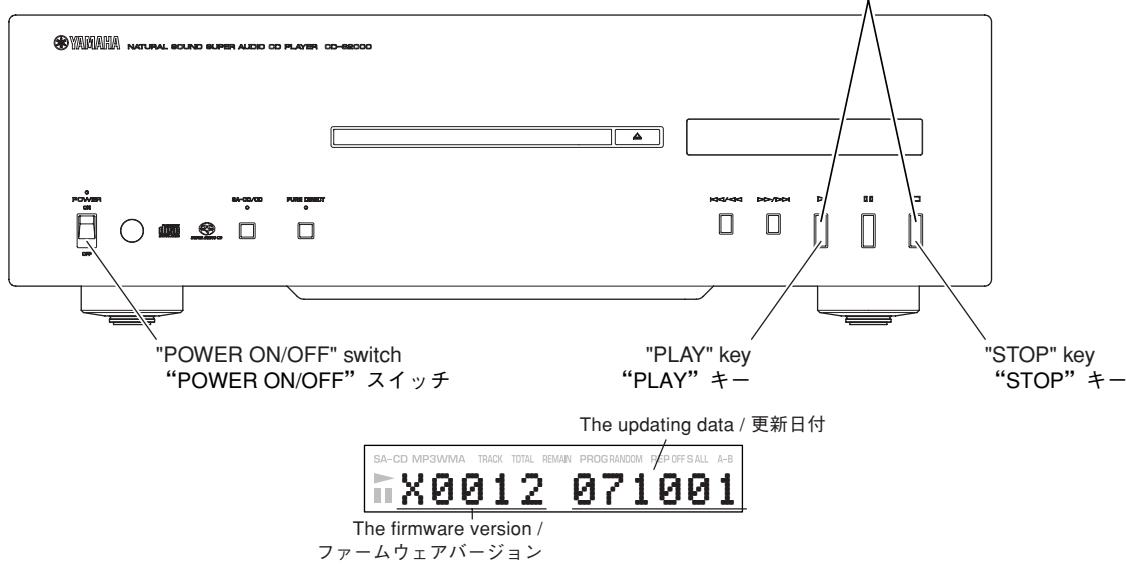


Fig. 6

- * When the displayed firmware version is different from written firmware version, follow the steps from 1 to 15 of "Writing to the microprocessor" again.

※ 表示されたファームウェアのバージョンが、書き込んだファームウェアのバージョンと異なる場合、"マイコンへの書き込み"の1から15までをもう一度実施してください。

Writing to the Module Board

After replacing the Module board with the replacement part, be sure to write the latest firmware.

● Required Tools

Firmware CD

- * To make the firmware CD, download the latest firmware from the specified download source to PC.

Firmware: S5JAxXX6.BIN

● Operation Procedures

CAUTION: Do not turn off the power while updating the firmware.

1. Connect the power cable to the AC outlet.
2. Set the “POWER ON/OFF” switch of this unit to the ON position. (Fig. 7)
3. Press the “OPEN/CLOSE” key of this unit to open the tray. (Fig. 7)

モジュール基板への書き込み

モジュール基板をサービス部品に交換した場合、最新のファームウェアの書き込みを行ってください。

● 必要なツール

ファームウェアCD

- * ファームウェアCDは、PCへ最新のファームウェアを指定のダウンロード先からダウンロードして制作してください。

ファームウェア：S5JAxXX6.BIN

● 操作方法

注意： ファームウェアの書き込み中に電源を切らないでください。

1. 電源コードをACコンセントに接続します。
2. 本機の“POWER ON/OFF”スイッチをONにします。(Fig. 7)
3. 本機の“OPEN/CLOSE”キーを押し、トレイを開きます。(Fig. 7)

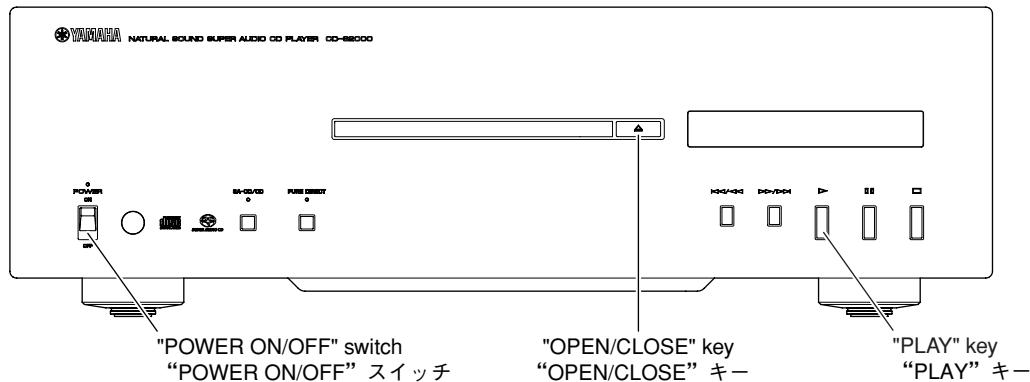


Fig. 7

4. Put the firmware CD on the tray and close the tray.
Then “UPGRADE?” is displayed.

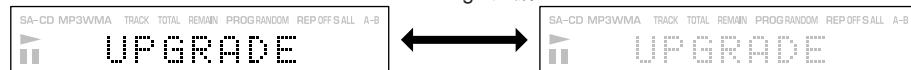
4. ファームウェアCDをトレーに載せ、トレーを閉じます。
すると、“UPGRADE?”が表示されます。



5. Press the “PLAY” key of this unit, and then writing of the firmware is started and “UPGRADE” flashes.

5. 本機の“PLAY”キーを押し、書き込みを開始します。
すると、“UPGRADE”が点滅します。

Flashing / 点滅



6. After about 5 seconds, the tray opens automatically.
Remove the firmware CD.
 - * At this time, do not turn off the power as writing of the firmware is going on in this unit.
 - * Writing takes about 1 minute.
7. When writing is completed, the tray closes automatically.
8. After "NO DISC" is displayed, set the "POWER ON/OFF" switch to the OFF position.

• **Confirmation of firmware version**

Confirm the firmware is updated successfully from the test mode.

For more information, refer to "TEST MODE".

1. Reconnect the power cable of this unit to the AC outlet.
2. While pressing the "PLAY" and "STOP" keys of this unit, set the "POWER ON/OFF" switch to the ON position. Then the Test mode is activated. (Fig. 8)
3. Select the function to display the firmware version of the module board. Check that the displayed firmware version is the same as the written firmware version.

6. 約5秒後、自動でトレイが開きます。
ファームウェアCDを取り出します。
※ このとき、本機はファームウェアの書き込みを継続しています。電源は切らないでください。
※ 書き込み時間は、約1分間ほどかかります。
7. 書き込み終了後、トレイが自動で閉じます。
8. "NO DISC"と表示された後、"POWER ON/OFF"スイッチをOFFにします。

• ファームウェアバージョンの確認

テストモードでファームウェアが正しく更新されたことを確認します。

テストモードの詳細は「テストモード」を参照してください。

1. 本機の電源コードをACコンセントに接続します。
2. 本機の"PLAY"キーと"STOP"キーを押しながら、"POWER ON/OFF"スイッチをONにします。(Fig. 8)
テストモードが起動します。
3. モジュール基板のファームウェアバージョンの表示を選択します。
表示されたファームウェアのバージョンが書き込んだファームウェアのバージョンと同じであることを確認します。

Key of this unit / 本体キー

Set the "POWER ON/OFF" switch to the ON position while pressing these keys.
これらのキーを同時に押しながら、"POWER ON/OFF"スイッチをONにします。

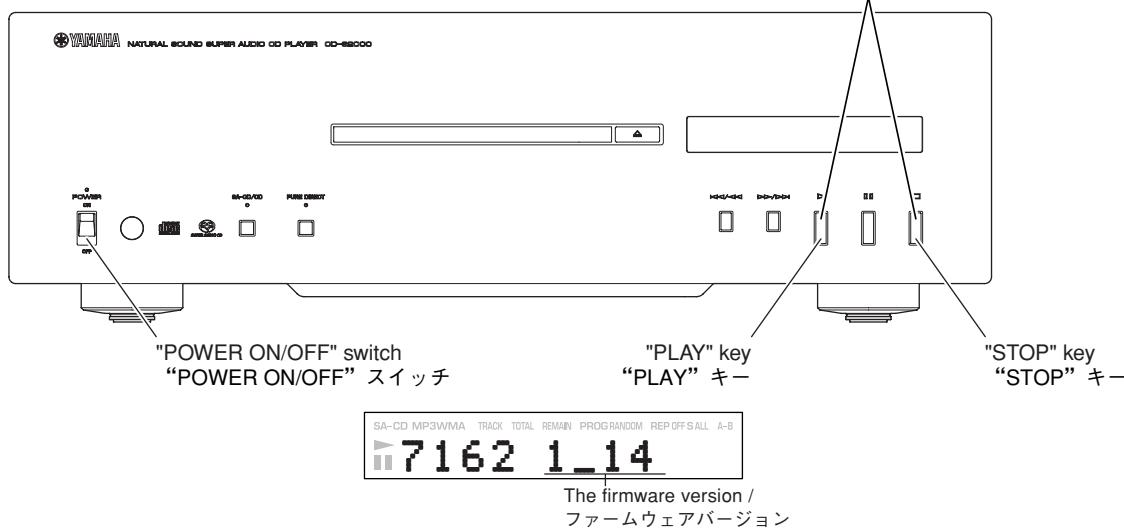


Fig. 8

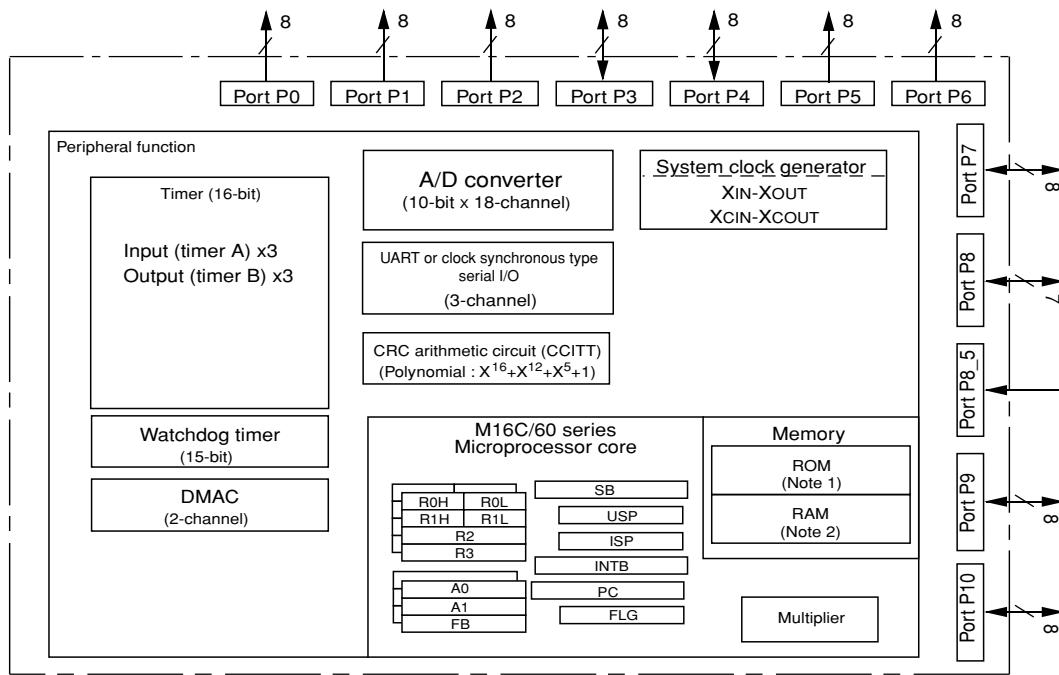
- * When the displayed firmware version is different from written firmware version, follow the steps from 1 to 8 of "Writing to the module board" again.

- * 表示されたファームウェアのバージョンが、書き込んだファームウェアのバージョンと異なる場合、「モジュール基板への書き込み」の1から8までをもう一度実施してください。

■ IC DATA

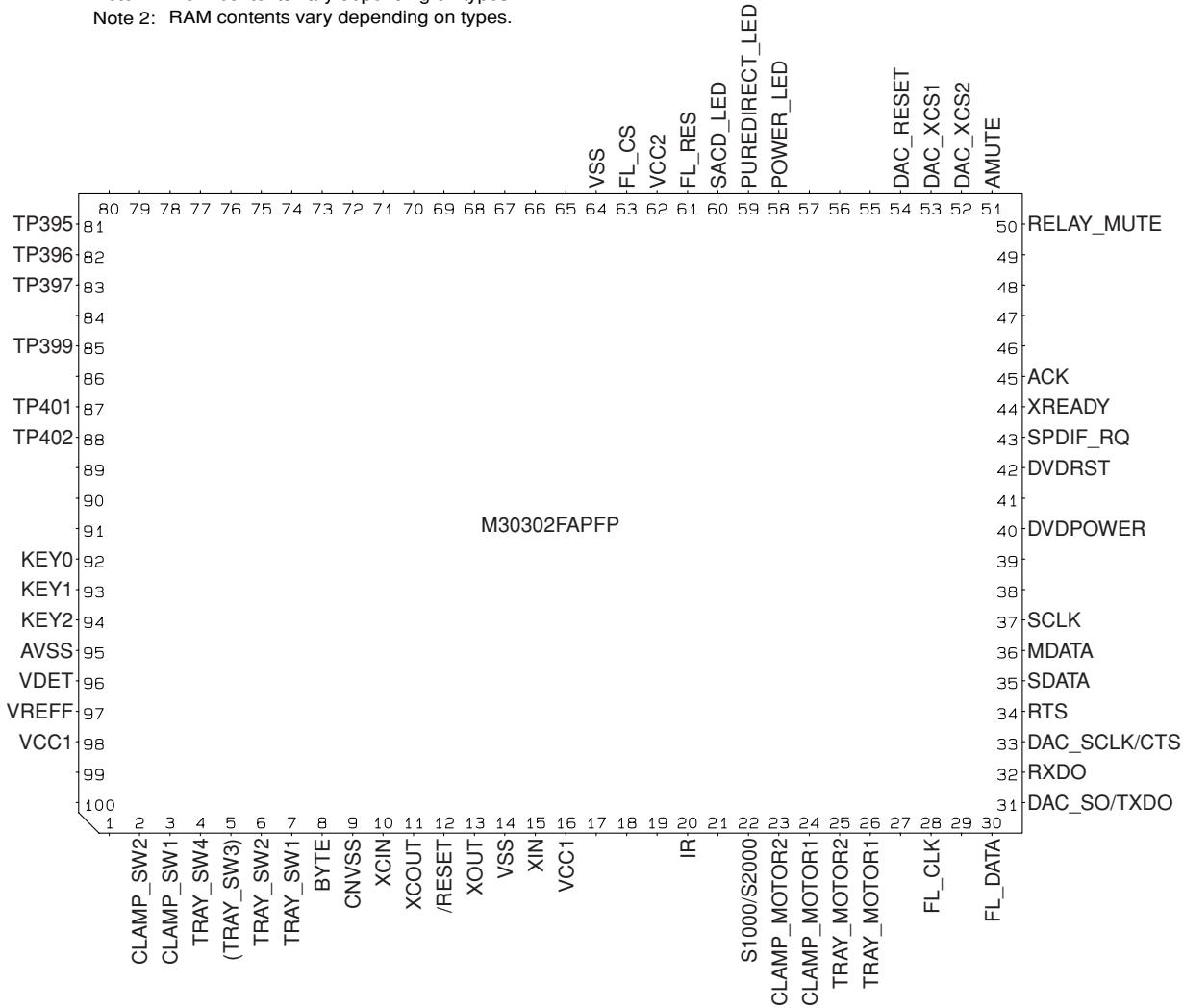
IC302: M30302FAPFP (DIGITAL (1) P.C.B.)

Single-chip 16-bit microprocessor



Note 1: ROM contents vary depending on types.

Note 2: RAM contents vary depending on types.



No.	Port Name	Function Name	I/O	Detail of Function
1	P9_6/ANEX1			(No connected)
2	P9_5/ANEX0	CLAMP_SW2	I	Clamp SW2
3	P9_4	CLAMP_SW1	I	Clamp SW1
4	P9_3	TRAY_SW4		
5	P9_2/TB2IN	TRAY_SW3	I	Tray SW3 / Loader mechanism specification confirm
6	P9_1/TB1IN	TRAY_SW2	I	Tray SW2
7	P9_0/TB0IN	TRAY_SW1	I	Tray SW1
8	BYTE		I	GND
9	CNVSS			Usually GND but VCC1 when writing FLASH
10	P8_7/XCIN			(No connected)
11	P8_6/XCOUT			(No connected)
12	/RESET	/RESET		
13	XOUT	XOUT		
14	VSS	VSS		GND
15	XIN	XIN		
16	VCC1	VCC1		
17	P8_5/NMI			Pull-up resistor required
18	P8_4/INT2			GND when writing FLASH
19	P8_3/INT1			(No connected)
20	P8_2/INT0	IR	I	Remote control
21	P8_1			(No connected)
22	P8_0	S1000/S2000		
23	P7_7	CLAMP_MOTOR2	O	Clamp motor 2
24	P7_6	CLAMP_MOTOR1	O	Clamp motor 1
25	P7_5/TA2IN	TRAY_MOTOR2	O	Tray motor 2
26	P7_4/TA2OUT	TRAY_MOTOR1	O	Tray motor 1
27	P7_3/CTS2/RTS2/TA1IN			(No connected)
28	P7_2/CLK2/TA1OUT	FL_CLK	O	FL control
29	P7_1/RXD2/SCL2/TA0IN			(No connected)
30	P7_0/TXD2/SDA2/TA0OUT	FL_DATA	O	FL control
31	P6_7/TXD1/SDA1	DAC_SO	O	TxD for DAC control / Rewriting FLASH commonly used
32	P6_6/RXD1/SCL1	RXDO	I	RxD for rewriting FLASH commonly used
33	P6_5/CLK1	DAC_SCLK	O	CTS for DAC control / Rewriting FLASH commonly used
34	P6_4/CTS1/RTS1/CTS0/CLKS1	RTS	I	RTS for rewriting FLASH commonly used
35	P6_3/TXD0/SDA0	SDATA	O	MODULE control
36	P6_2/RXD0/SCL0	MDATA	I	MODULE control
37	P6_1/CLK0	SCLK	I	MODULE control
38	P6_0/CTS0/RTS0			(No connected)
39	P5_7/RDY/CLKOUT			(No connected)
40	P5_6/ALE	DVDPOWER	O	MODULE control
41	P5_5/HOLD			GND when writing FLASH
42	P5_4/HLDA	XDVDRST	O	MODULE control
43	P5_3/BCLK	SPDIF_RQ	O	MODULE control
44	P5_2/RD	XREADY	O	MODULE control
45	P5_1/WRH/BHE	ACK	I	MODULE control
46	P5_0/WRL/WR			VCC1 when writing FLASH
47	P4_7/CS3			(No connected)
48	P4_6/CS2			(No connected)
49	P4_5/CS1			(No connected)
50	P4_4/CS0	RELAY_MUTE	O	output RELAY
51	P4_3/A19	AMUTE	O	Analog mute
52	P4_2/A18	DAC_XCS2	O	DAC control
53	P4_1/A17	DAC_XCS1	O	DAC control
54	P4_0/A16	DAC_RESET	O	DAC control
55	P3_7/A15			(No connected)
56	P3_6/A14			(No connected)

No.	Port Name	Function Name	I/O	Detail of Function
57	P3_5/A13			(No connected)
58	P3_4/A12	POWER_LED	O	Indicator of power supply
59	P3_3/A11	PUREDIRECT_LED	O	Indicator of pure direct
60	P3_2/A10	SACD_LED	O	Indicator of SACD
61	P3_1/A9	FL_RES	O	FL control
62	VCC2			
63	P3_0/A8	FL_CS	O	FL control
64	VSS	GND		
65	P2_7/A7			(No connected)
66	P2_6/A6			(No connected)
67	P2_5/A5			(No connected)
68	P2_4/A4			(No connected)
69	P2_3/A3			(No connected)
70	P2_2/A2			(No connected)
71	P2_1/A1			(No connected)
72	P2_0/A0			(No connected)
73	P1_7/D15			(No connected)
74	P1_6/D14/INT4			(No connected)
75	P1_5/D13/INT3			(No connected)
76	P1_4/D12			(No connected)
77	P1_3/D11			(No connected)
78	P1_2/D10			(No connected)
79	P1_1/D9			(No connected)
80	P1_0/D8			(No connected)
81	P0_7/AN0_7/D7	TP395	O	Test point
82	P0_6/AN0_6/D6	TP396	O	Test point
83	P0_5/AN0_5/D5	TP397	O	Test point
84	P0_4/AN0_4/D4	LOAD-	I	LOAD- monitor
85	P0_3/AN0_3/D3	TP399	O	Test point
86	P0_2/AN0_2/D2	LOAD+	I	LOAD+ monitor
87	P0_1/AN0_1/D1	TP401	O	Test point
88	P0_0/AN0_0/D0	TP402	O	Test point
89	P10_7/AN7/KI3			(No connected)
90	P10_6/AN6/KI2			(No connected)
91	P10_5/AN5/KI1			(No connected)
92	P10_4/AN4/KI0			(No connected)
93	P10_3/AN3	KEY0	I	Analog input
94	P10_2/AN2	KEY1	I	Analog input
95	P10_1/AN1	KEY2	I	Analog input
96	AVSS	GND		
97	P10_0/AN0	VDET	I	MODULE control
98	VREFF	VREFF		
99	AVCC	VCC1		
100	P9_7/ADTRG			(No connected)

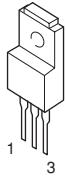
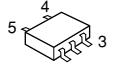
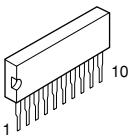
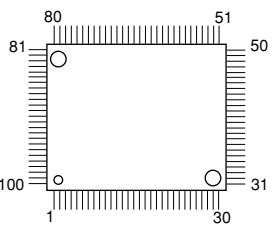
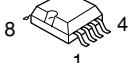
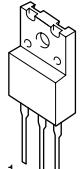
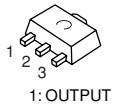
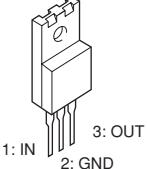
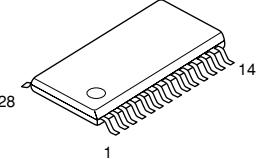
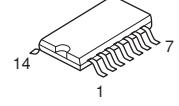
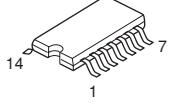
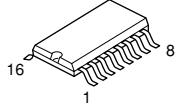
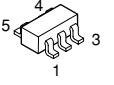
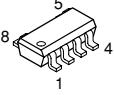
Key detection for AD port

Key input (A/D) pull-up resistance 10 k-ohms

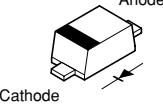
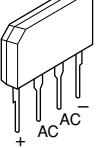
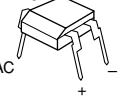
Ohm	+ 820	+ 3.3k	+ 12.0k
V	0 - 0.3	0.6 - 1.0	1.6 - 2.0
KEY0 (93 pin)	STOP	PAUSE	OPEN/CLOSE
KEY1 (94 pin)	PLAY	SEARCH+/SKIP+	SEARCH-/SKIP-
KEY2 (95 pin)	PURE DIRECT	SA-CD/CD	-

■ PIN CONNECTION DIAGRAMS

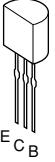
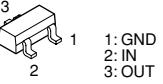
- ICs

BA08CC0T	BD4829G-TR	LB1641	M30302FAPFP	
				
NE5532DR	NJM7808FA	NJM78L12UA	NJM78M05FA	OP275GSR
	 1: INPUT 2: GND 3: OUTPUT	 1: OUTPUT 2: GND 3: INPUT	 1: IN 2: GND 3: OUT	
PCM1792ADBR	TC74VHC08F	TC74HCT08AF	TC74VHC157F	TC7SH08F TS7ST00F
				
TC7WU04F				
				

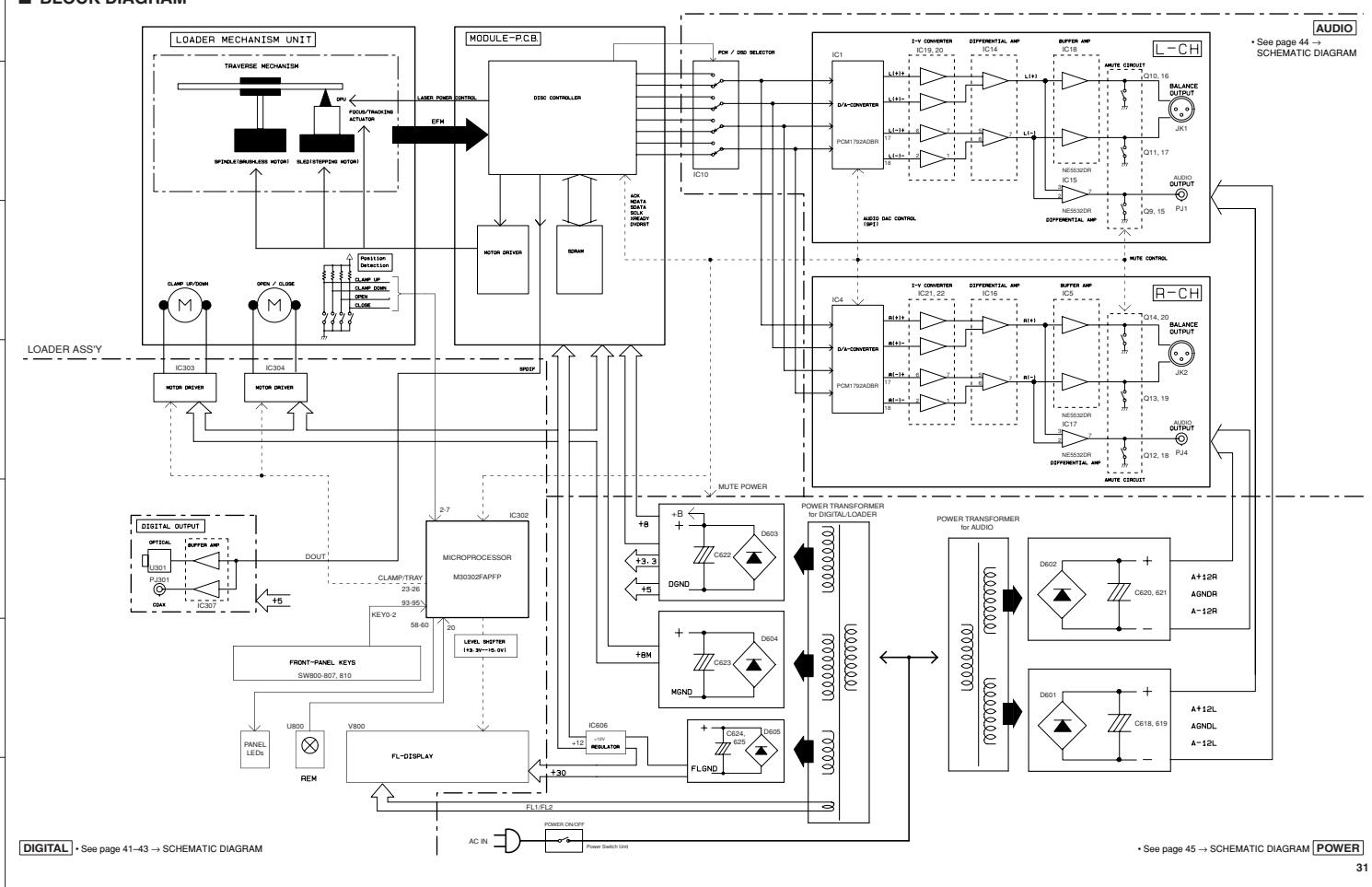
- Diodes

1SS355 MA8030 3.0V MA8047-H 4.9V MA8056-M 5.6V MA8062-M 6.2V MA8082-L 7.9V MA8120-L 11.7V MA8130-M 13.0V RB501V-40	D4SBN20-7101	RS203M-B-C-J80	S1NB20 1A 200V
 Anode Cathode	 + AC - AC	 + AC - AC	 AC AC +

• Transistors

2SA1037K	2SA2168 2SC5291	2SC2412K	2SC2878	2SD1938F
				
2SD2014	2SK208-Y	DTA114EKA DTC114EKA	KTC3198	

■ BLOCK DIAGRAM

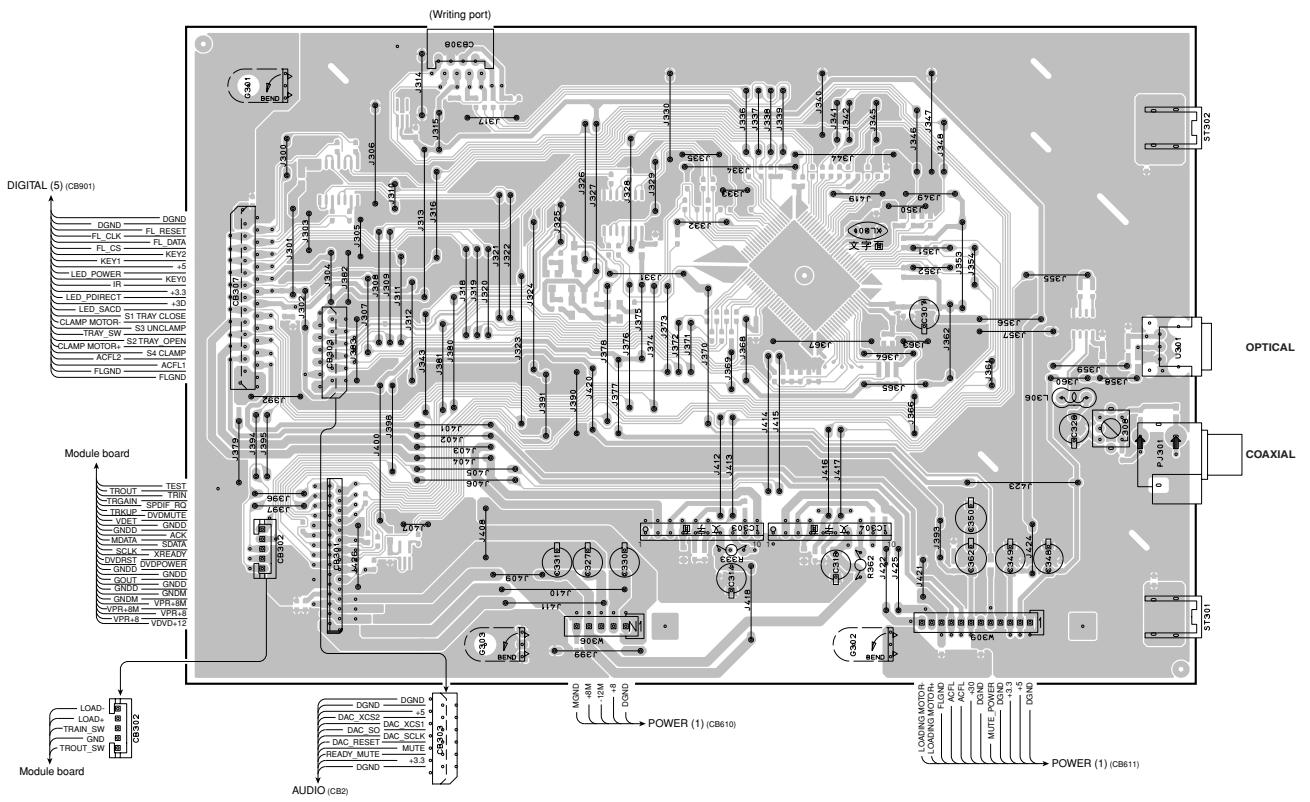


CD-S2000

■ PRINTED CIRCUIT BOARDS

DIGITAL (1) P.C.B. (Side A)

Ref no.	Location	Ref no.	Location
IC303	F5	IC304	G5



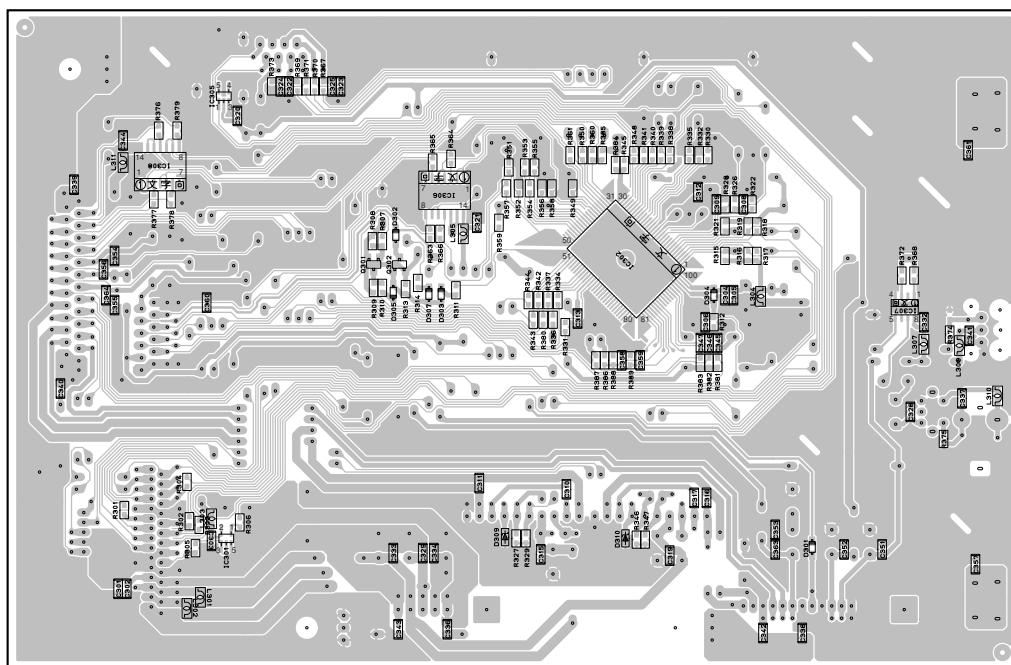
A | B | C | D | E | F | G | H | I | J

CD-S2000

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DIGITAL (1) P.C.B. (Side B)

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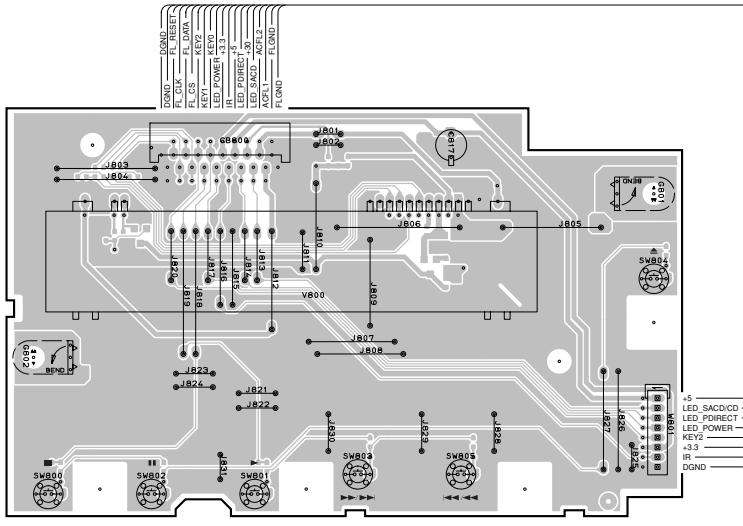
• Semiconductor Location

Ref no.	Location	Ref no.	Location
D301	H6	IC301	D5
D302	E3	IC302	F4
D303	E4	IC305	D3
D304	G4	IC306	E3
D305	E4	IC307	H4
D307	E4	IC308	C3
D309	F5	Q301	E4
D310	F5	Q302	E4

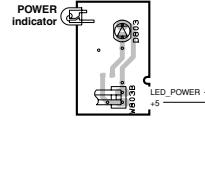
A B C D E F G H I J
CD-S2000

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DIGITAL (2) P.C.B. (Side A)



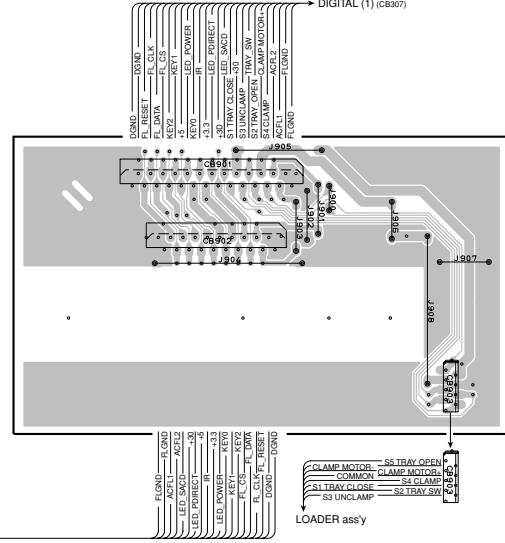
DIGITAL (4) P.C.B. (Side A)



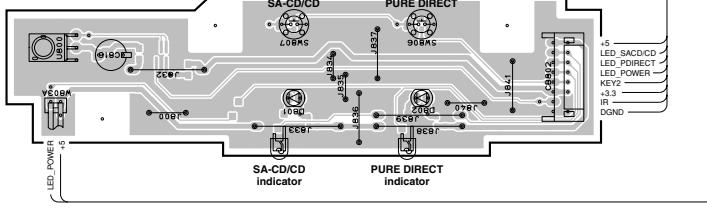
• Semiconductor Location

Ref no.	Location	Ref no.	Location
D801	C6	D803	G2
D802	D6		

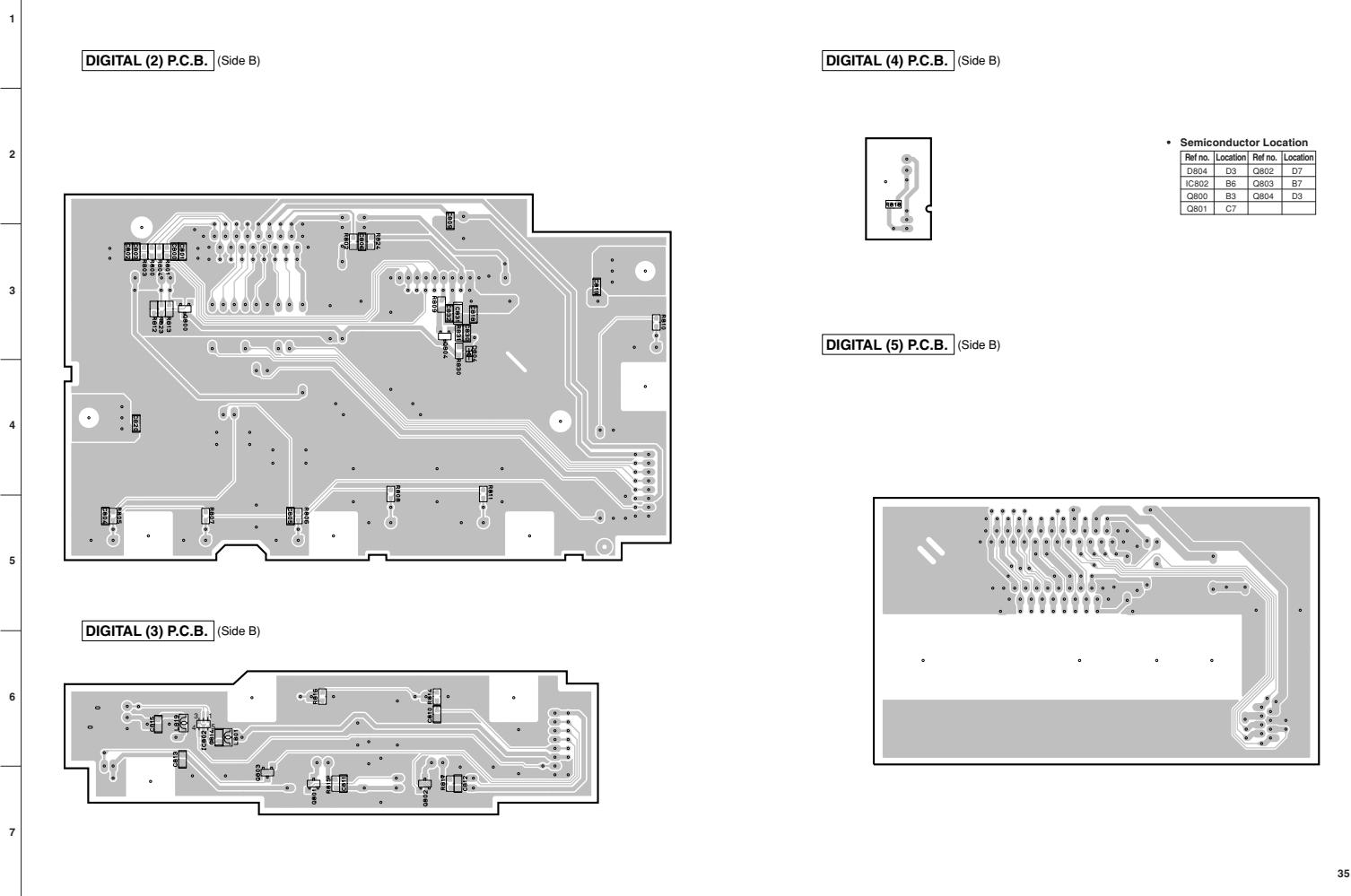
DIGITAL (5) P.C.B. (Side A)



DIGITAL (3) P.C.B. (Side A)

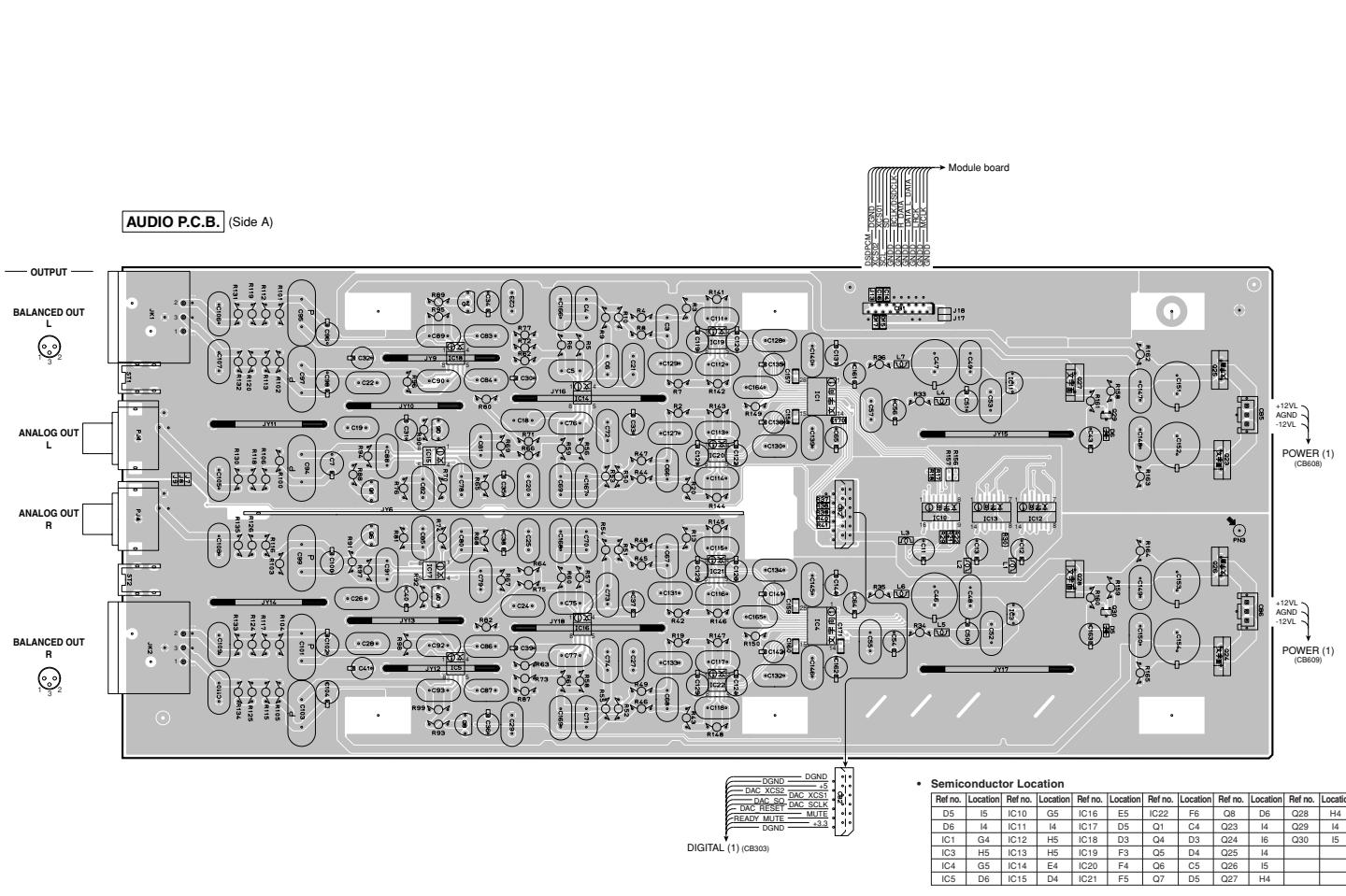


A | B | C | D | E | F | G | H | I | J



A B C D E F G H I J

CD-S2000



A | B | C | D | E | F | G | H | I | J

CD-S2000

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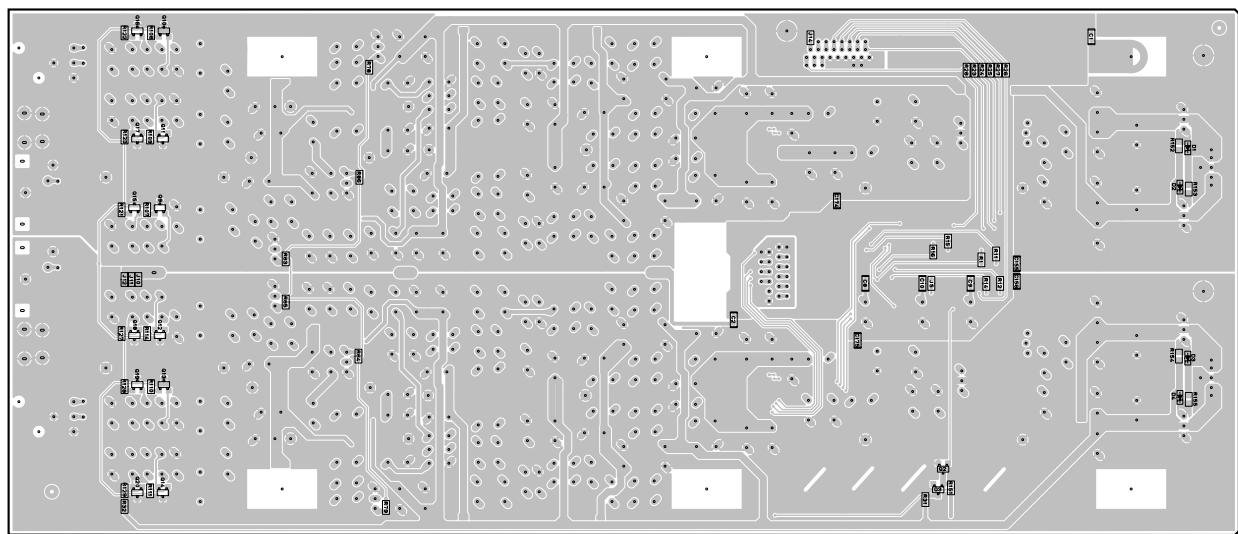
6

7

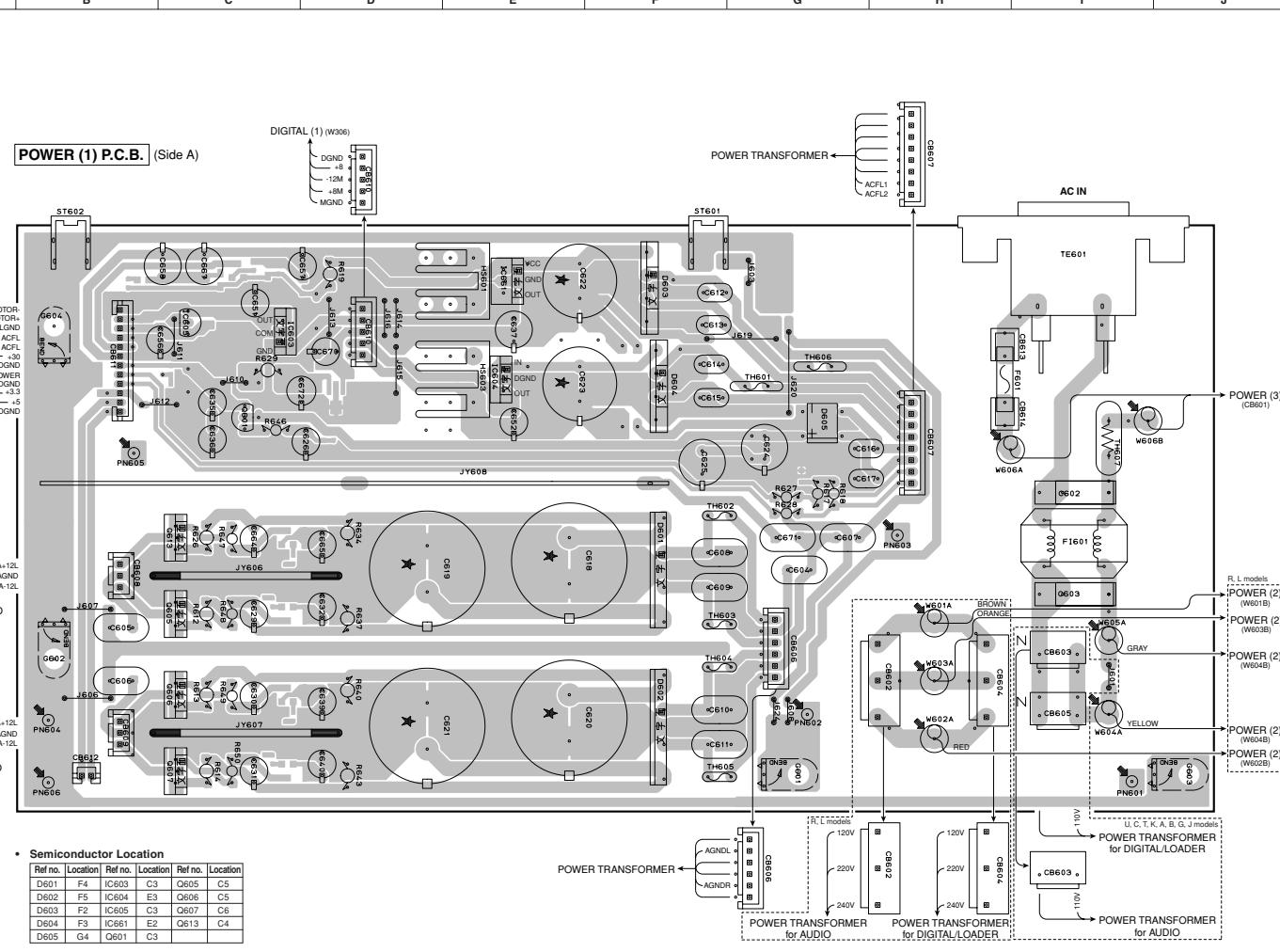
• Semiconductor Location

Ref no.	Location	Ref no.	Location
D1	I4	Q12	C5
D2	I4	Q13	C5
D3	I5	Q14	C6
D4	I5	Q15	C4
Q2	H6	Q16	C3
Q3	H6	Q17	C4
Q9	C4	Q18	C5
Q10	C3	Q19	C5
Q11	C4	Q20	C6

AUDIO P.C.B. (Side B)



CD-S2000



A | B | C | D | E | F | G | H | I | J

CD-S2000

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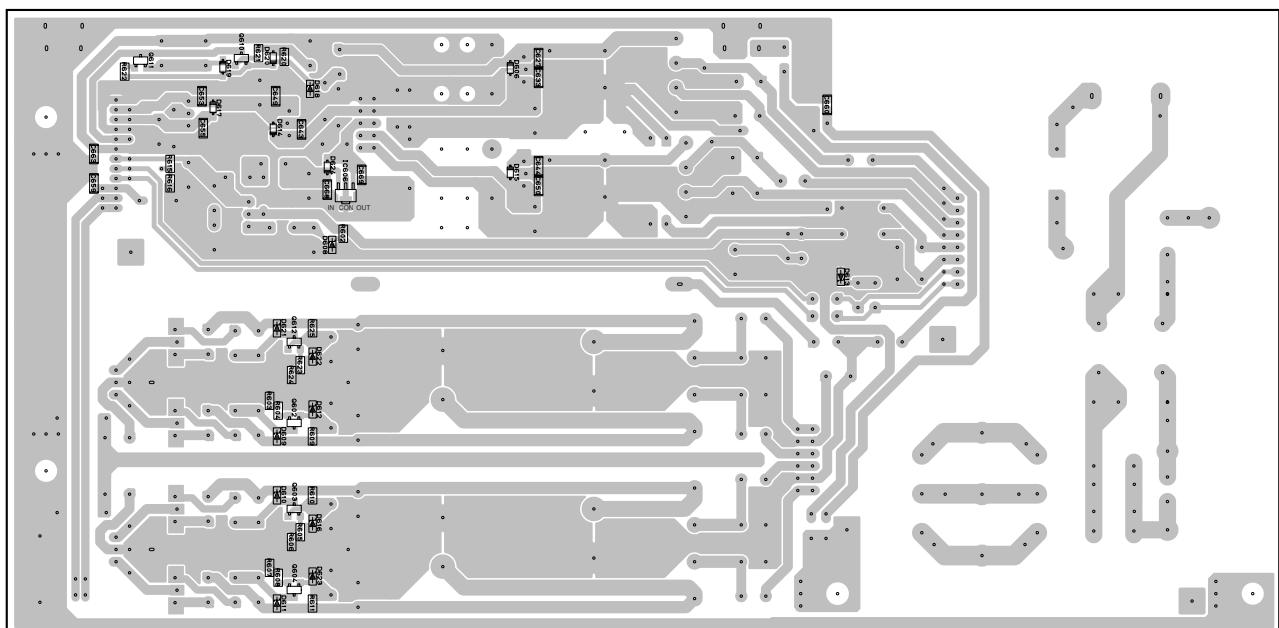
4

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POWER (1) P.C.B. (Side B)



• Semiconductor Location

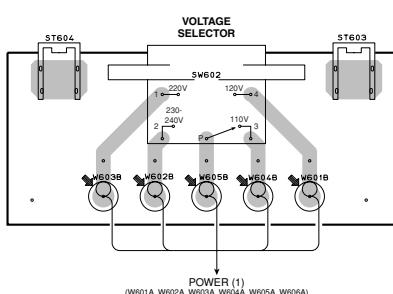
Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location	Ref no.	Location
D606	E3	D612	C5	D617	C3	D622	C4	Q603	C5
D608	D4	D613	G4	D618	C3	D623	C6	Q604	C6
D609	C5	D614	C3	D619	C3	D624	D3	Q610	C2
D610	C5	D615	E3	D620	C2	IC806	D3	Q611	B3
D611	C6	D616	C6	D621	C4	Q602	C5	Q612	C4

A B C D E F G H I J

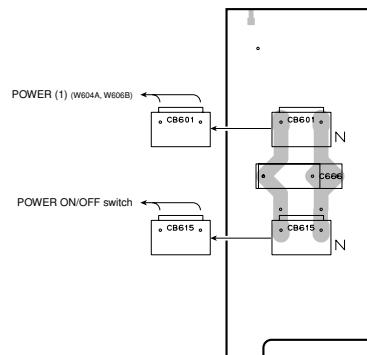
CD-S2000

1 **POWER (2) P.C.B.** (Side A)

R, L models

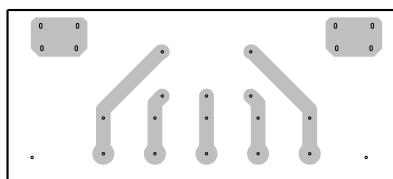


2 **POWER (3) P.C.B.** (Side A)

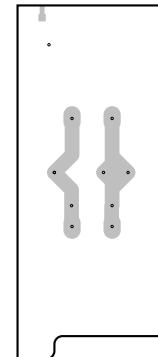


3 **POWER (2) P.C.B.** (Side B)

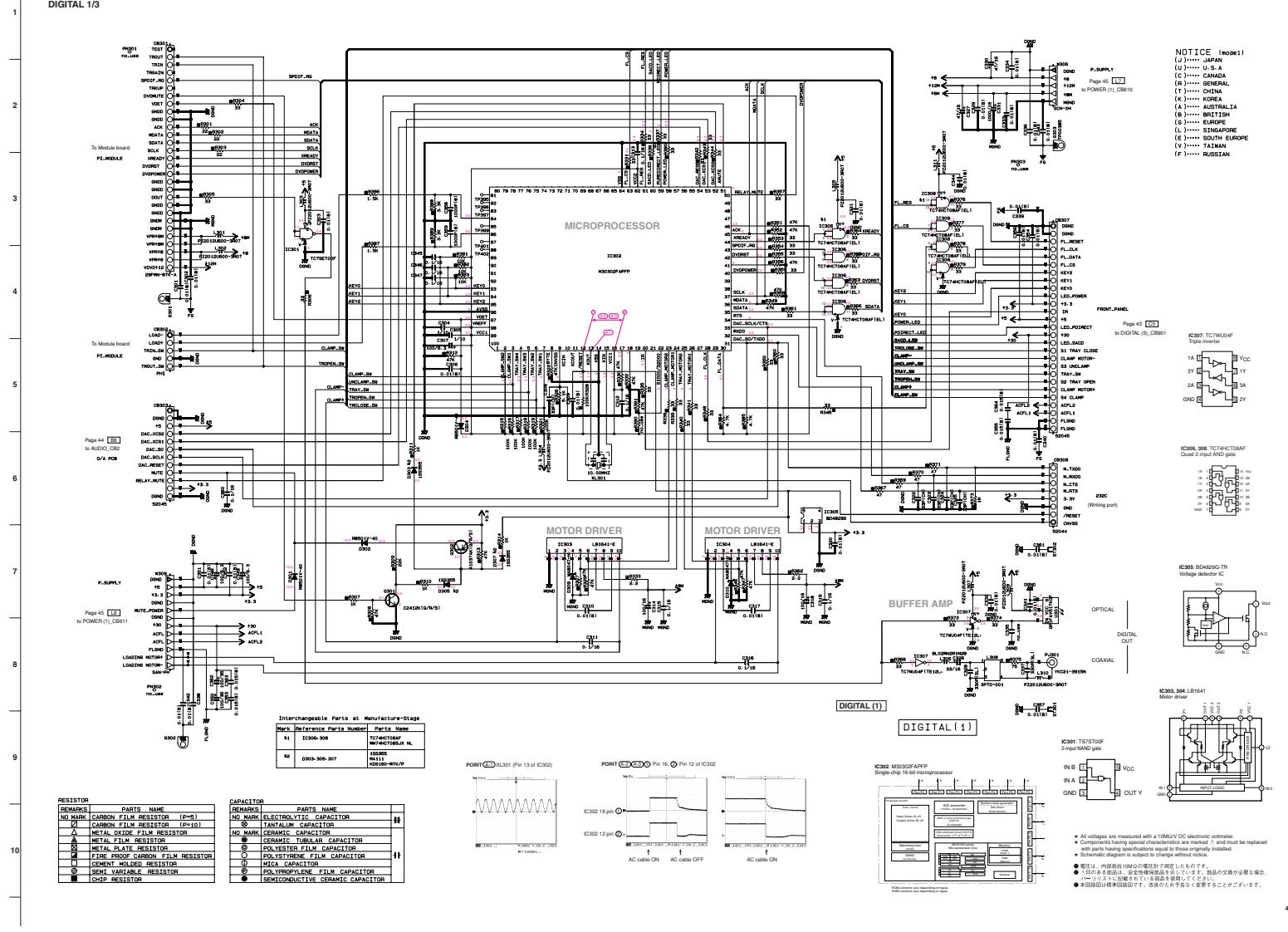
R, L models

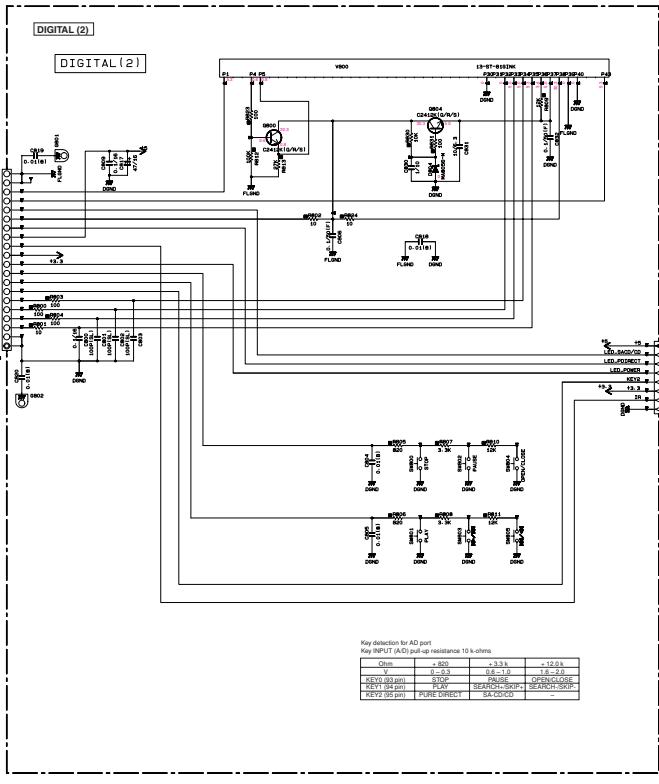


4 **POWER (3) P.C.B.** (Side B)



■ SCHEMATIC DIAGRAMS
DIGITAL 1/3

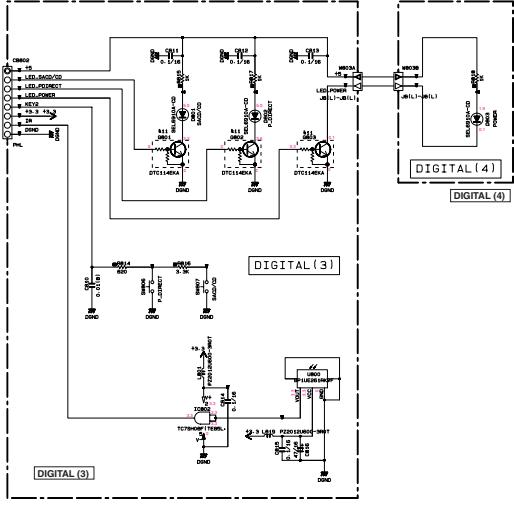
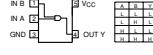




REMARKS		PARTS NAME
NO MARK	CARBON FILM RESISTOR (PWR)	[REDACTED]
NO MARK	METAL OXIDE FILM RESISTOR (PWR)	[REDACTED]
△	METAL OXIDE FILM RESISTOR	[REDACTED]
△	METAL FILM RESISTOR	[REDACTED]
△	PLATE RESISTOR	[REDACTED]
■	FIRE PROOF CARBON FILM RESISTOR	[REDACTED]
■	RESISTANCE RESISTOR	[REDACTED]
○	SEMI VARIABLE RESISTOR	[REDACTED]
■	CHIP RESISTOR	[REDACTED]

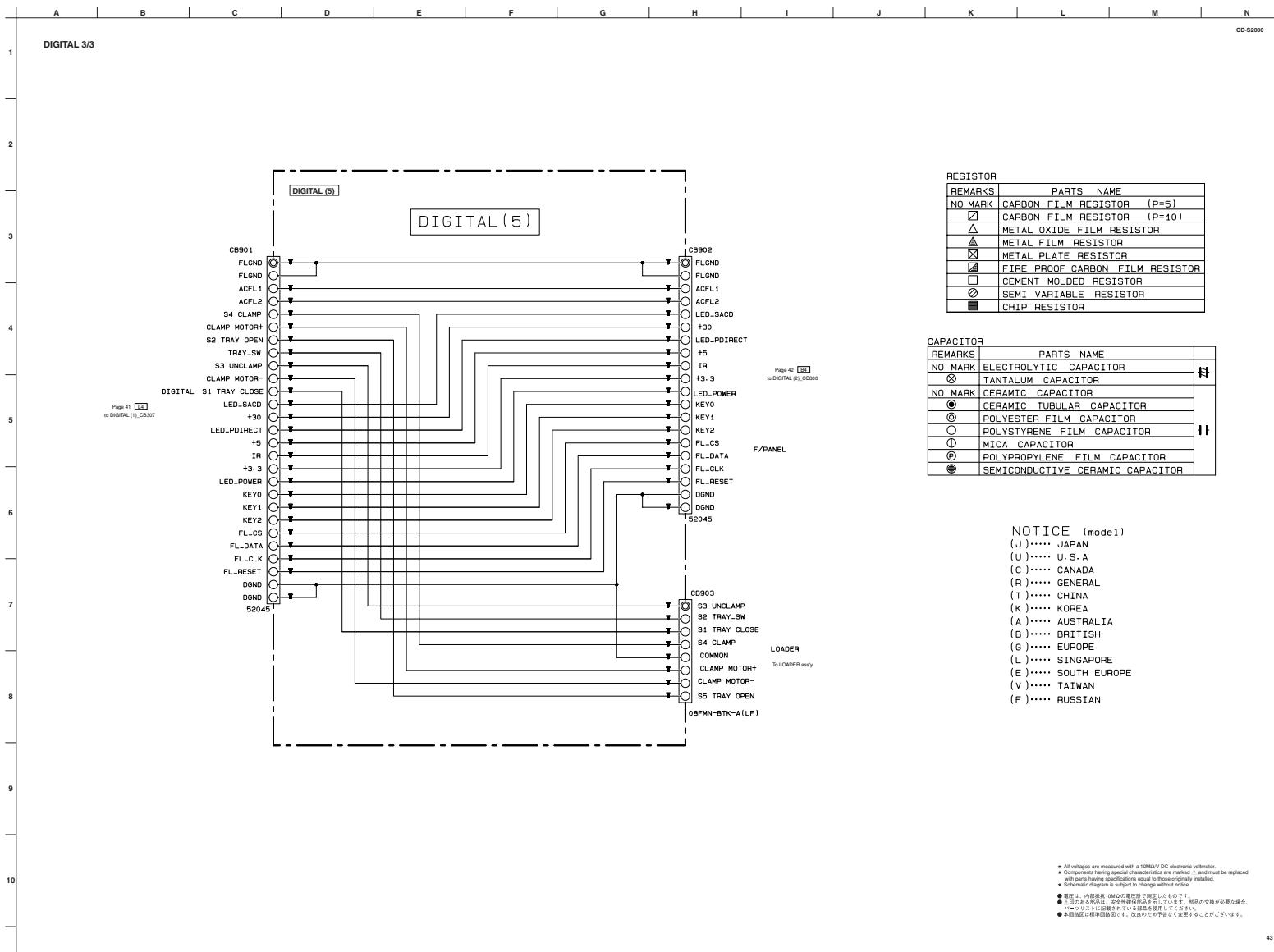
Interchangeable Parts at Manufacture Stage		
No.	Reference Parts Number	Parts Name
411	081-013	081-013
	081-014	081-014

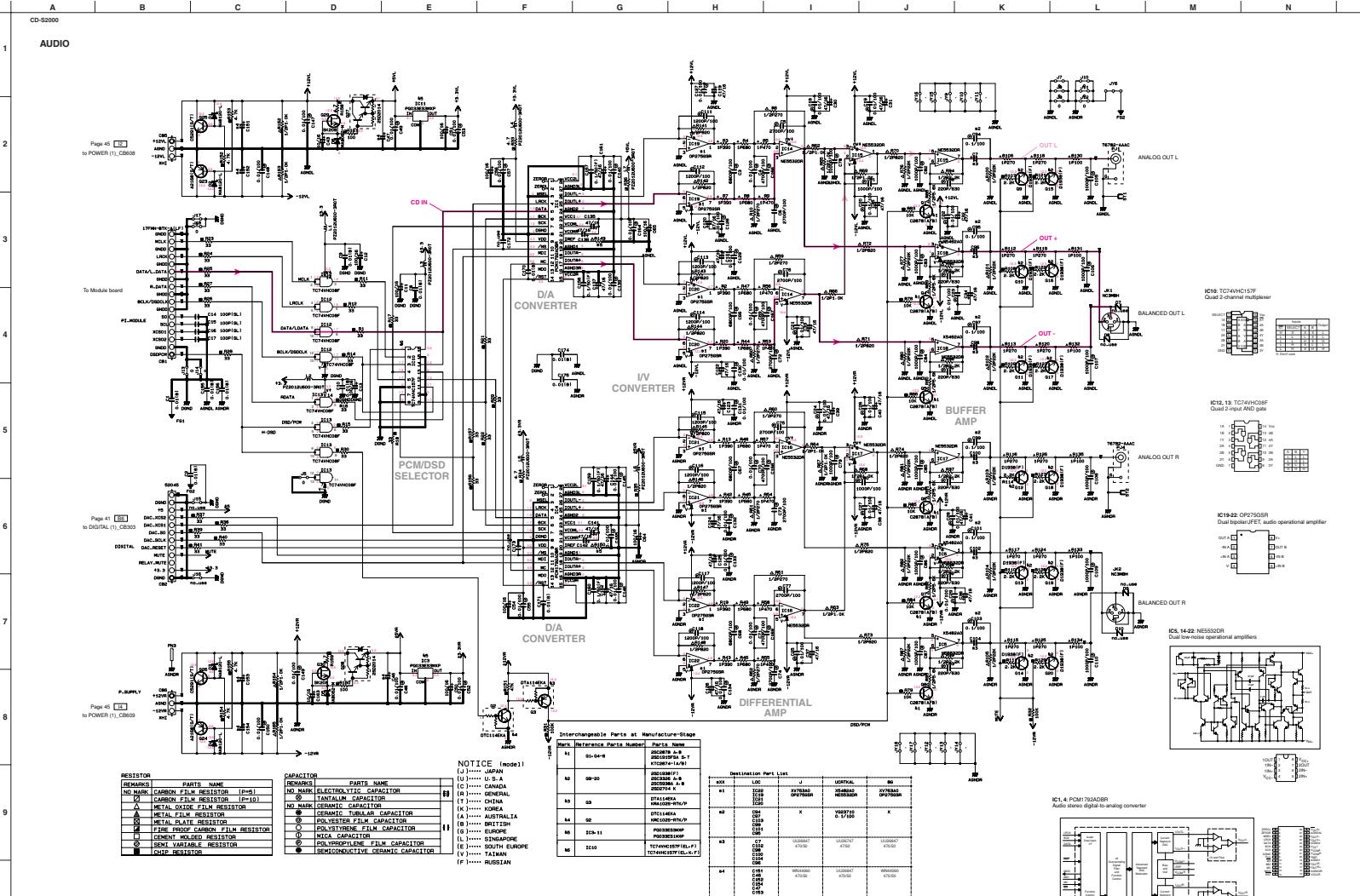
NOTICE (model)
(J)..... JAPAN
(U)..... U.S.A.
(C)..... CANADA
(B)..... GENERAL
(H)..... HONG KONG
(K)..... KOREA
(A)..... AUSTRALIA
(T)..... THAILAND
(G)..... EUROPE
(L)..... SINGAPORE
(M)..... MALAYSIA & INDONESIA
(V)..... TAIWAN
(F)..... RUSSIAN

IC982: TC75H08F
2-input AND gate

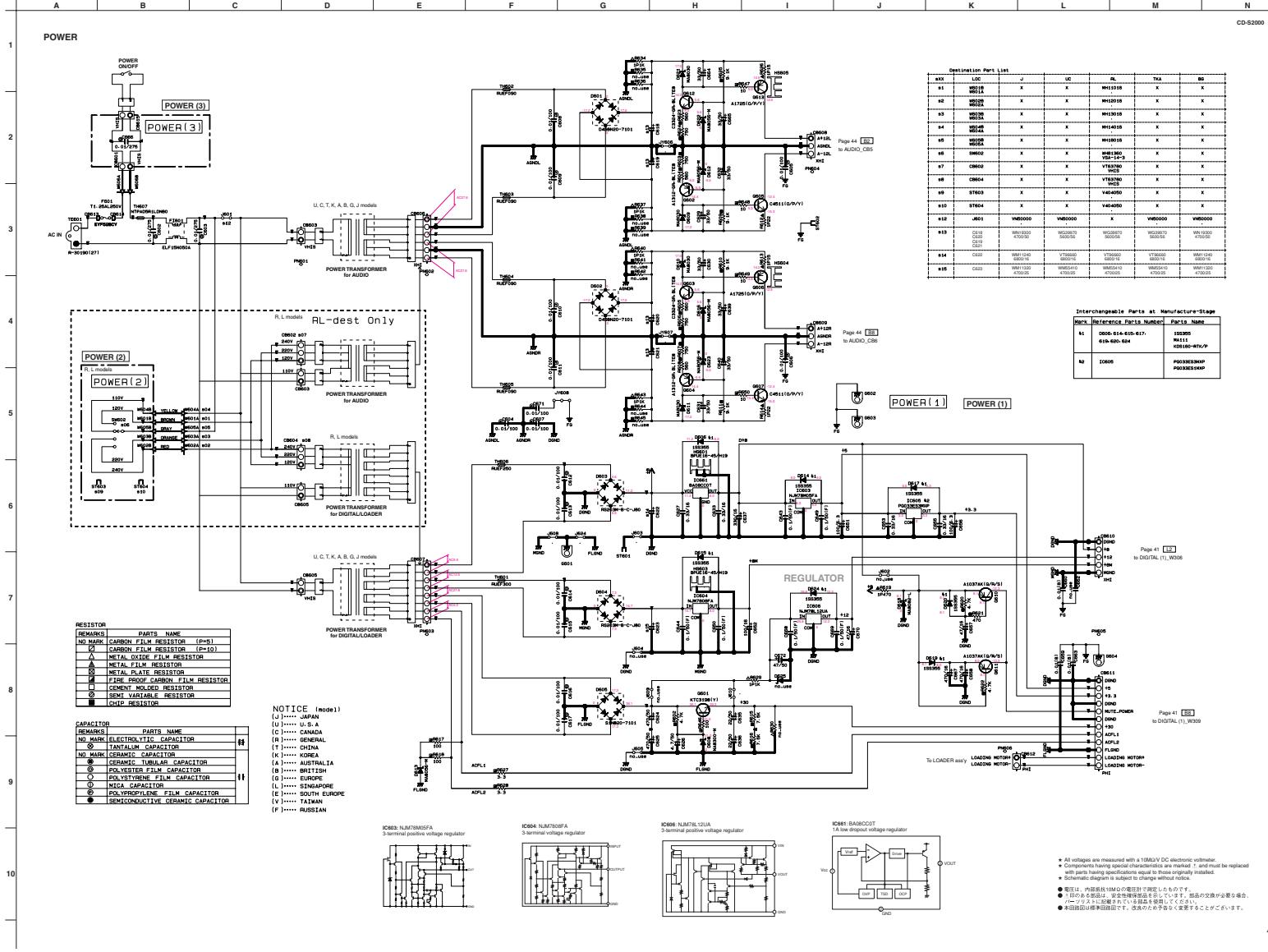
All voltages are measured with a 10MΩ/DC electronic ohmmeter.
Components having special characteristics are marked [†] and must be replaced with parts having specifications equal to those originally installed.
Schematic diagram is subject to change without notice.

● 本図は、内部部品のOMOの端子番号で示しています。
● 1番の△は部品は、安全性保証品を示しています。部品の交換が必要な場合、
ソリューションに記載されている部品を接着してください。
● 本図は、IC982: TC75H08F 2-input AND gateです。





All voltages are measured with a 100M Ω DC electronic voltmeter.
Components having special characteristics are marked \star , and must be replaced with parts having specifications equal to those originally installed.
Schematic diagram is subject to change without notice.



P.C.B. AUDIO and P.C.B. POWER

Ref No.	Part No.	Description	Remarks	Markets	部品名	ランク	
R124-126	WA621700	R.MTL.FLM	270Ω 1W		金属被膜抵抗		
R130-135	V8070900	R.MTL.FLM	100Ω 1W		金属被膜抵抗	01	
R141-148	WA621900	R.MTL.FLM	820Ω 1W		金属被膜抵抗		
R149	WN448800	R.MTL.OXD	10KΩ 1W	JBG	酸化金属被膜抵抗		
R149	HL007100	R.MTL.OXD	10KΩ 1/2W	UCRTKAL	酸化金属被膜抵抗		
R150	WN448800	R.MTL.OXD	10KΩ 1W	JBG	酸化金属被膜抵抗		
R150	HL007100	R.MTL.OXD	10KΩ 1/2W	UCRTKAL	酸化金属被膜抵抗		
R158-159	HV753470	R.CAR.FP	4.7Ω 1/4W		不燃化カーボン抵抗	01	
R160-161	HV755100	R.CAR.FP	100Ω 1/4W		不燃化カーボン抵抗	01	
R162-165	HL006100	R.MTL.OXD	1KΩ 1/2W		酸化金属被膜抵抗		
ST1-2	WG095100	SCR.TERM	M3		スクリューターミナル	01	
*	WM128600	P.C.B.	POWER	J	P C B POWER		
*	WM128700	P.C.B.	POWER	UC	P C B POWER		
*	WM128800	P.C.B.	POWER	RL	P C B POWER		
*	WM128900	P.C.B.	POWER	TKA	P C B POWER		
*	WM129000	P.C.B.	POWER	BG	P C B POWER		
CB601	VG879900	CN.BS.PIN	2P		ベースピン	01	
CB602	VT637800	CN.BS.PIN	3P	RL	ベース付ポスト	01	
CB603	VG879900	CN.BS.PIN	2P		ベースピン	01	
CB604	VT637800	CN.BS.PIN	3P	RL	ベース付ポスト	01	
CB605	VG879900	CN.BS.PIN	2P		ベースピン	01	
CB606	VL845000	CN.BS.PIN	6P		ベース付ポスト	01	
CB607	VL845200	CN.BS.PIN	8P		ベース付ポスト	01	
CB608-609	VL844700	CN.BS.PIN	3P		ベース付ポスト	01	
CB610	VL844900	CN.BS.PIN	5P		ベース付ポスト	01	
CB611	VB390800	CN.BS.PIN	12P		コネクタベースポスト	01	
CB612	VB389800	CN.BS.PIN	2P		ベースピン	01	
CB613-614	WC050700	CLIP.FUSE	EYF-52BCY		ヒューズクリップ	01	
CB615	VG879900	CN.BS.PIN	2P		ベースピン	01	
C602-603	V6185300	C.CE.SAFTY	0.01uF 275V		規格認定コンデンサ	01	
C604-611	WE102900	C.PP	0.01uF 100V		P P コン		
C612-617	VR325100	C.MYLAR	0.01uF 100V		マイラーコン	01	
*	C618	WN193000	C.EL	4700uF 50V	JBG	ケミコン	
*	C618	WG399700	C.EL	5600uF 56V	UCRTKAL	ケミコン	
*	C619	WN193000	C.EL	4700uF 50V	JBG	ケミコン	
*	C619	WG399700	C.EL	5600uF 56V	UCRTKAL	ケミコン	
*	C620	WN193000	C.EL	4700uF 50V	JBG	ケミコン	
*	C620	WG399700	C.EL	5600uF 56V	UCRTKAL	ケミコン	
*	C621	WN193000	C.EL	4700uF 50V	JBG	ケミコン	
*	C621	WG399700	C.EL	5600uF 56V	UCRTKAL	ケミコン	
*	C622	WM112400	C.EL	6800uF 16V	JBG	ケミコン KW	
*	C622	VT966600	C.EL	6800uF 16V	UCRTKAL	ケミコン	03
*	C623	WM113200	C.EL	4700uF 25V	JBG	ケミコン KW	
*	C623	WM554100	C.EL	4700uF 25V	UCRTKAL	ケミコン	
C624-625	UR268470	C.EL	470uF 50V		ケミコン		
C626	UR266470	C.EL	4.7uF 50V		ケミコン		
C627	US135330	C.CE.CHP	0.33uF 16V		チップセラコン	01	
C629-632	UU267330	C.EL	33uF 50V		ケミコン FW	01	
C633	US135330	C.CE.CHP	0.33uF 16V		チップセラコン	01	
C635-636	UR267220	C.EL	22uF 50V		ケミコン	01	
*	C637	WM553800	C.EL	330uF 16V		ケミコン	
C639-640	UU267330	C.EL	33uF 50V		ケミコン FW	01	

* New Parts * 新規部品

P.C.B. POWER

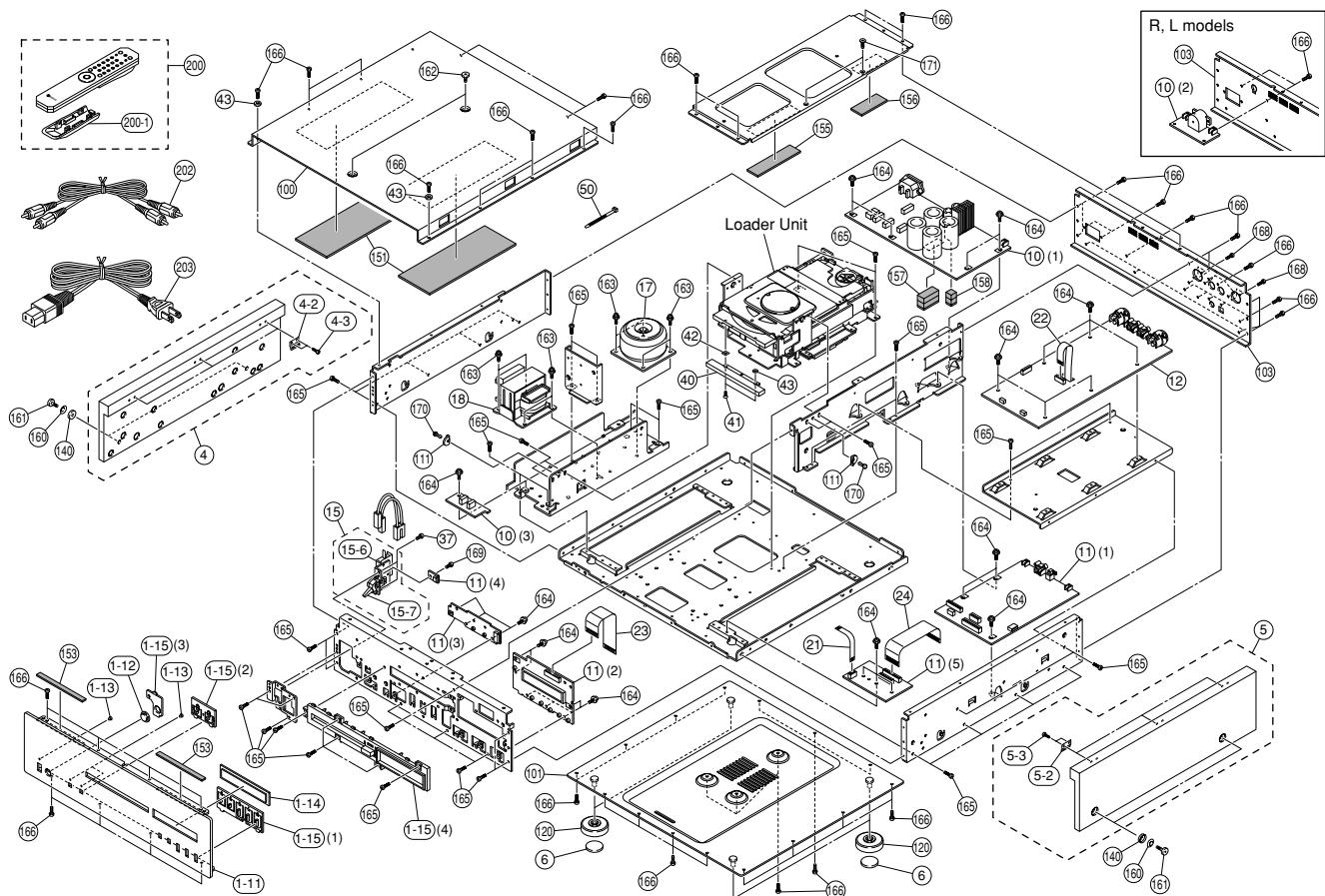
Ref No.	Part No.	Description		Remarks	Markets	部品名	ランク
R619	V8071300	R. MTL. FLM	470Ω	1W		金属被膜抵抗	
R626	V8070400	R. MTL. FLM	15Ω	1W		金属被膜抵抗	
R627-628	HV753330	R. CAR. FP	3.3Ω	1/4W		不燃化カーボン抵抗	
R629	V8071600	R. MTL. OXD	1KΩ	1W		金属被膜抵抗	
R634	V8071600	R. MTL. OXD	1KΩ	1W		金属被膜抵抗	
R637	V8071600	R. MTL. OXD	1KΩ	1W		金属被膜抵抗	
R640	V8071600	R. MTL. OXD	1KΩ	1W		金属被膜抵抗	
R643	V8071600	R. MTL. OXD	1KΩ	1W		金属被膜抵抗	
R646	HV755100	R. CAR. FP	100Ω	1/4W		不燃化カーボン抵抗	01
R647-650	HV754100	R. CAR. FP	10Ω	1/4W		不燃化カーボン抵抗	01
ST601-602	WG095100	SCR. TERM	M3			スクリューターミナル	01
ST603-604	V4040500	SCR. TERM	M3			スクリュー／ターミナル	01
SW602	WH813600	VOLT. SELCT	VSA-14-3		RL	電圧切替器	
TE601	WB893300	AC INLET	R-30190		RL	A C インレット 2 P	03
TH601	VV458100	SW. POLY	RUE300 3.A 30V			ポリスイッチ	03
TH602-605	VV457600	SW. POLY	RUE090 0.90A 30V			ポリスイッチ	02
TH606	VV458000	SW. POLY	RUE250 2.50A 30V			ポリスイッチ	03
TH607	WF544600	POSISTOR	NTPAD5R1LDNB0 5.1			サーミスタ	03
	WE983600	SCR. BND. HD	3x8 MFZN2B3			バインド小ネジ	01
	WF558000	NUT	M3			ナット	01

* New Parts * 新規部品

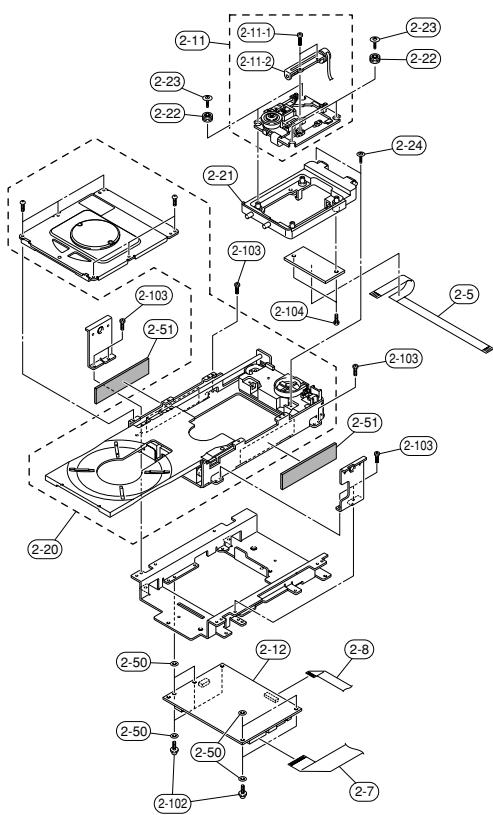
A B C D E F G H I J

CD-S2000

1 • OVERALL ASS'Y



1 • LOADER UNIT

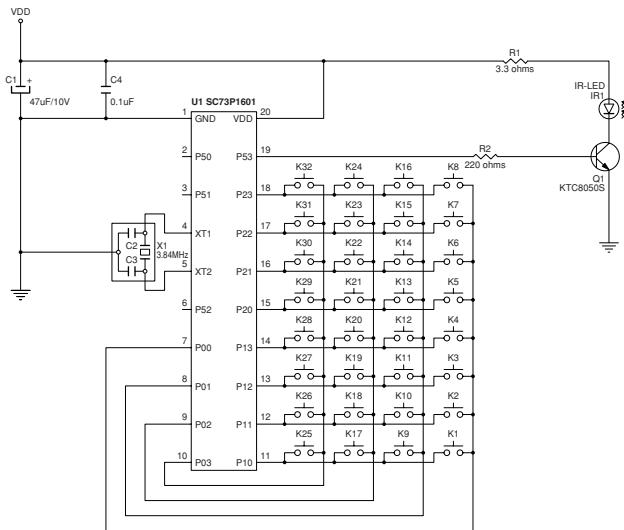


Ref No.	Part No.	Description	Remarks	Markets	部品名	ランク
*	2-5	WK899500 FLEXIBLE FLAT CABLE	24P 240mm P=0.5		カード電線	
*	2-7	WM099500 FLEXIBLE FLAT CABLE	29P 190mm P=1		カード電線	
*	2-8	WM099600 FLEXIBLE FLAT CABLE	17P 170mm P=1		DVDドライブスメカ	
*	2-11	WK823500 DVD TRAVERSE MECHANISM	0B-VTV733	DBA1205	ステッパーねじR7C	
*	2-11-1	AAX84090 STEPPER SCREW R7C		DMX1201	ステッピングモータVK1	
*	2-11-2	AAX84100 STEPPING MOTOR VK1			モジュール基板	
*	2-12	X9062A00 MODULE BOARD	0B-APB101		ローダーメカASSY	
*	2-20	WK897600 LOADER MECHANISM ASS'Y	YVC-L-1		ホルダーPU SA-CD	
*	2-21	WK896000 HOLDER PU SA-CD			ダンパーSA-CD	
*	2-22	WK896200 DAMPER SA-CD			皿Pタイトネジ	
*	2-23	WK891700 FLAT HEAD P-TIGHT SCREW	2x8	MFN133	PWPタイトネジ	
*	2-24	WK891600 PW HEAD P-TIGHT SCREW	2x7	MFN133	ワッシャー	
*	2-50	WN075900 WASHER			ダンパー	
*	2-51	WMT72800 DAMPER	100x25x2		PWヘッドBタイトネジ	01
2-	VT669300 PW HEAD B-TIGHT SCREW	3x8-8	MFC2		バインドBタイトネジ	01
2-103	WE774300 BIND HEAD B-TIGHT SCREW	3x8	MFZN2W3		バインドBタイトネジ	
2-104	WE961700 BIND HEAD B-TIGHT SCREW	2.6x8	MFZN2B3			

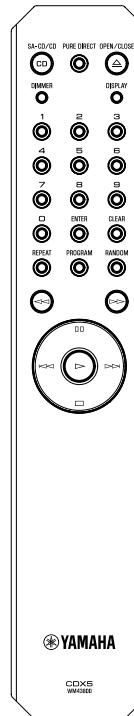
* New Parts * 新規部品

■ REMOTE CONTROL

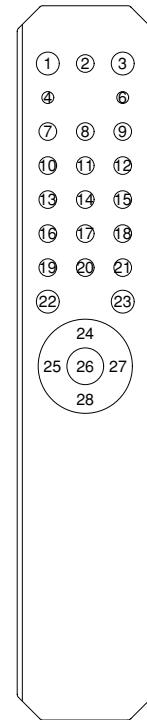
• SCHEMATIC DIAGRAM



• PANEL



• KEY LAYOUT



• KEY CODE

No.	Customer code	Data code	Function
1	79	6D	SA-CD/CD
2	79	6E	PURE DIRECT
3	79	01	OPEN/CLOSE
4	79	54	DIMMER
5	—	—	—
6	79	0A	DISPLAY
7	79	11	1
8	79	12	2
9	79	13	3
10	79	14	4
11	79	15	5
12	79	16	6
13	79	17	7
14	79	18	8
15	79	19	9
16	79	10	0
17	79	3F	ENTER
18	79	0D	CLEAR
19	79	08	REPEAT
20	79	0C	PROGRAM
21	79	1B	RANDOM
22	79	05	◀(SEARCH-)
23	79	06	▶(SEARCH+)
24	79	55	■(PAUSE)
25	79	04	◀(SKIP-)
26	79	02	▶(PLAY)
27	79	07	▶(SKIP+)
28	79	56	■(STOP)

CD-S2000

