

COMPACT DISC PLAYER CD-S300

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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This Service Manual uses recycled paper.



■ TO SERVICE PERSONNEL

1. Critical Components Information

Components having special characteristics are marked Δ 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 μ F.



“CAUTION”

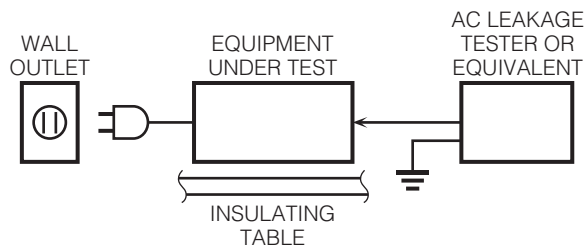
“F801: FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ONLY WITH SAME TYPE 500mA, 250V FUSE.”

CAUTION

F801: REPLACE WITH SAME TYPE 500mA, 250V FUSE.

ATTENTION

F801: UTILISER UN FUSIBLE DE RECHANGE DE MÊME TYPE DE 500mA, 250V.



- 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 WHATSOEVER!

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てをご使用ください。

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.

- 1) When testing and/or repairing any component within the product, keep your eyes and skin more than 30 cm/1 feet away from the laser pick-up unit at all times. Do not stare at the laser beam at any time.
- 2) Do not attempt to readjust, disassemble or repair the laser pick-up, unless noted elsewhere in this manual.
- 3) CAUTION: Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Laser Emitting conditions:

- 1) 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.
- 2) 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.

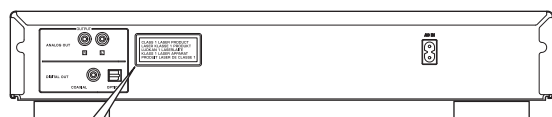
Laser Diode Properties

Type: GaAlAs

Wavelength: 790 nm

Laser output: max. 1.23 μ W *

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



R, A, G, L, J models

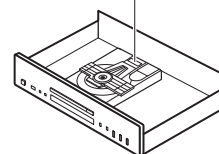
CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
PRODUIT LASER DE CLASSE 1

T model

CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT
PRODUIT LASER DE CLASSE 1
1 类激光产品

DANGER: AVOID DIRECT EXPOSURE TO THE BEAM
INVISIBLE LASER RADIATION WHEN OPEN

CAUTION: DO NOT STARE INTO BEAM
INVISIBLE LASER RADIATION WHEN OPEN



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 accidentally 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 electrostatic 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.

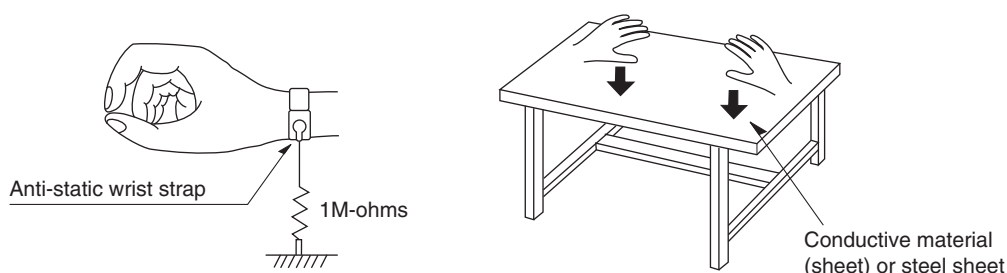
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as brushing together of your fabric clothes or lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

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.

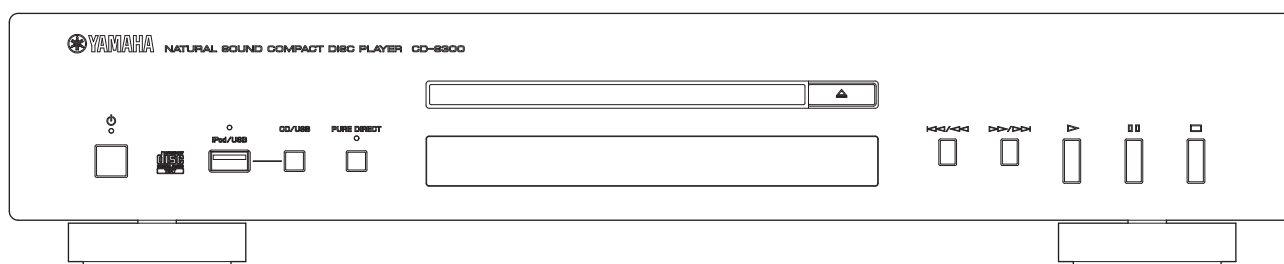
Caution:

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.



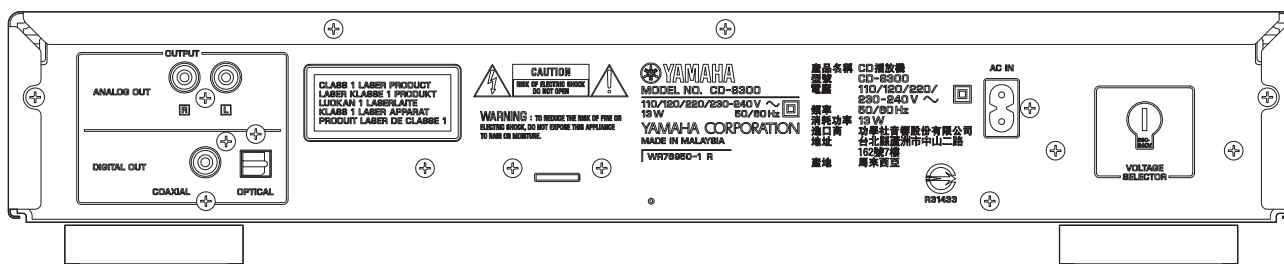
FRONT PANEL

R, T, A, G, L, J models

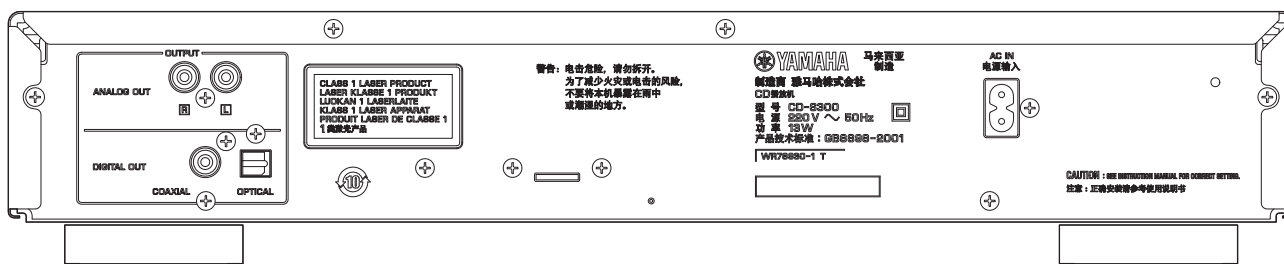


REAR PANELS

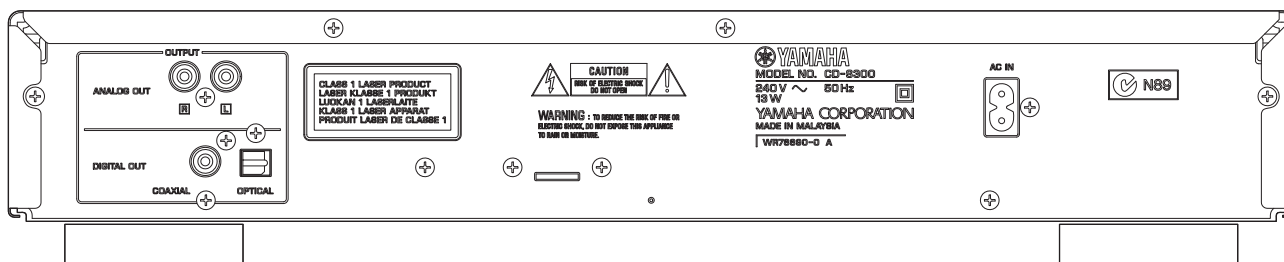
R model



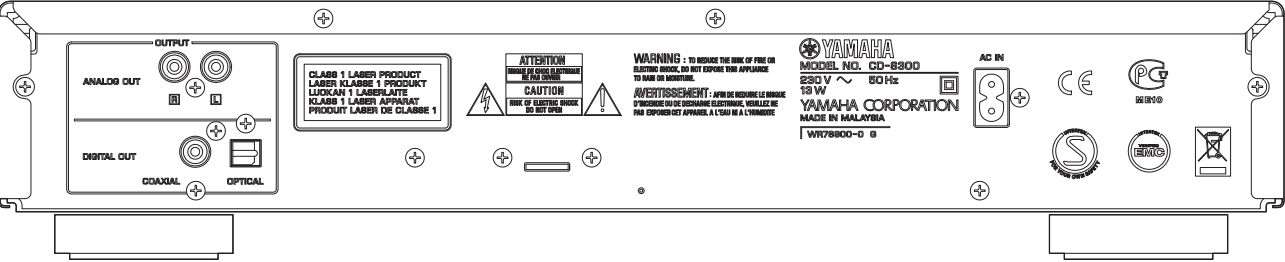
T model



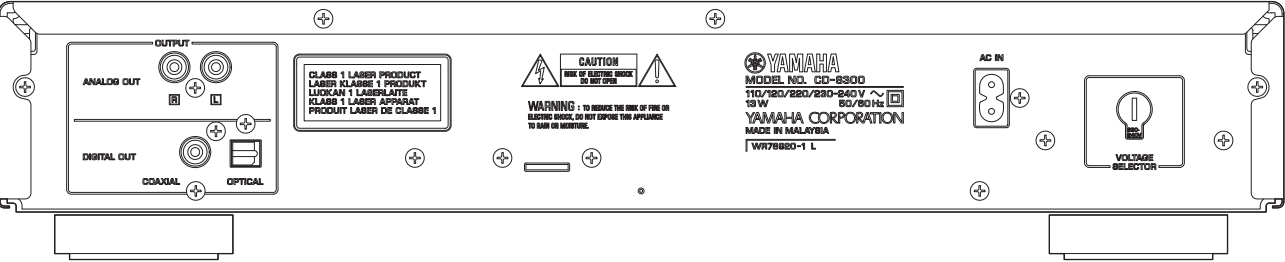
A model



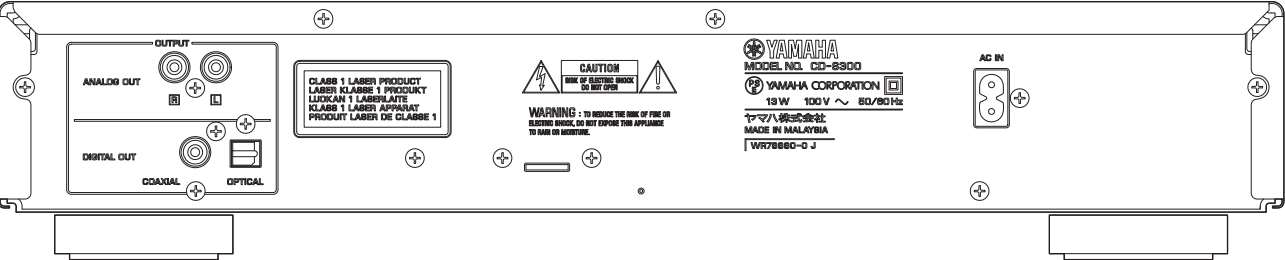
G model



L model

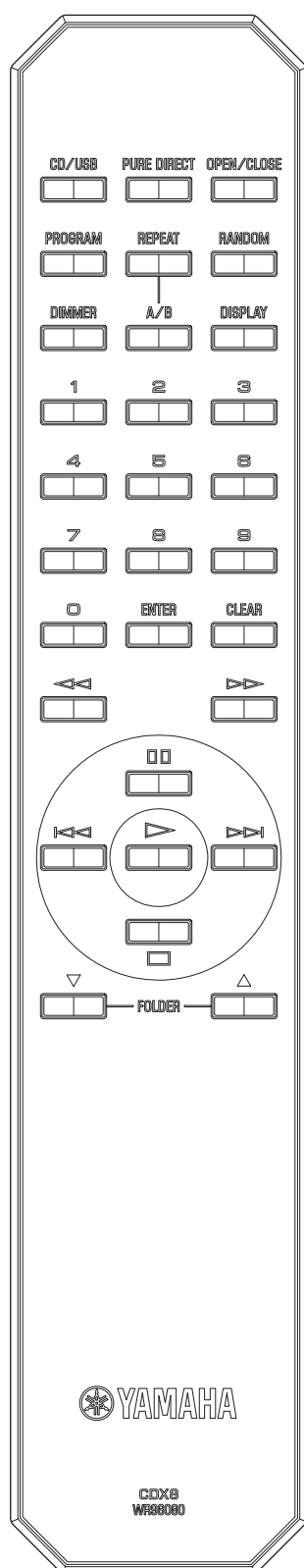


J model



■ REMOTE CONTROL PANEL

CDX8



SPECIFICATIONS / 参考仕様

Audio Section / オーディオ部

Output Level / 出力レベル (1 kHz, 0 dB)	2.0 ±0.3 V
Signal to Noise Ratio / 信号対雑音比	105 dB or more
Dynamic Range / ダイナミックレンジ	96 dB or more
Total Harmonic Distortion / 歪率 (1 kHz)	0.003 % or less
Frequency Response / 周波数特性 (2 Hz to 20 kHz)	±0.5 dB
Digital Output Terminal / デジタル出力端子	Optical x 1 Coaxial x 1
Other Output Terminal / その他の出力端子	Analog out L/R USB

General / 総合

Power Consumption / 消費電力	13 W
Power Supply / 電源電圧	R, L models AC 110/120/220/230-240 V, 50/60 Hz T model AC 220 V, 50 Hz A model AC 240 V, 50 Hz G model AC 230 V, 50 Hz J model AC 100 V, 50/60 Hz
Dimensions (W x H x D) / 寸法 (幅×高さ×奥行き)	435 x 86 x 260 mm (17-1/8" x 3-3/8" x 10-1/4")
Weight / 質量	3.5 kg (7.7 lbs.)
Finish / 仕上げ	Black color R, T, A, G, L, J models Silver color R, T, A, G, L, J models

Accessories / 付属品

Remote control (CDX8)	x 1
Battery (R6, AA, UM-3)	x 2
Audio pin cable (1.0 m)	x 1
Power cable (1.5 m)	x 1

* Specifications are subject to change without notice due to product improvements.

※ 参考仕様および外観は予告なく変更されることがあります。

R	General model	G	European model
T	Chinese model	L	Singapore model
A	Australian model	J	Japanese model

iPod™

"iPod" is a trademark of Apple Inc., registered in U.S. and other countries. "Made for iPod" means that an electronic accessory has been designed to connect specifically to iPod and has been certified by the developer to meet Apple performance standards.

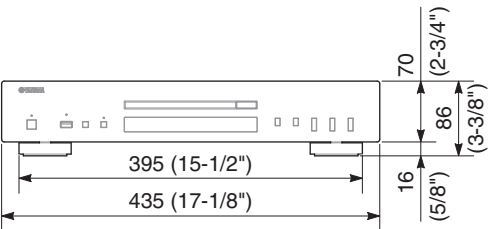
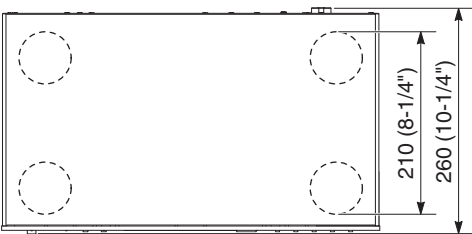
Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards.

iPod は、米国およびその他の国々で登録された Apple Computer, Inc. の商標または登録商標です。

「Made for iPod」とは、iPod 専用に接続するよう設計され、アップルが定める性能基準を満たしているとデベロッパーによって認定された電子アクセサリであることを示します。

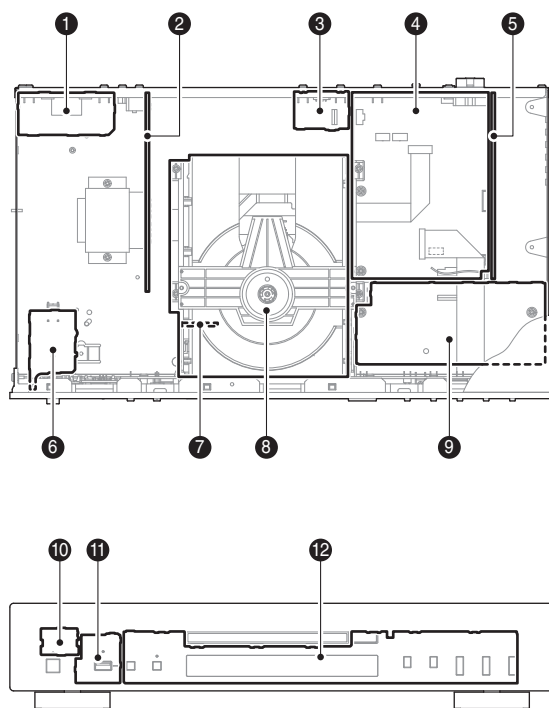
アップルは、これらの機器操作または、安全規制基準に関する一切の責任を負いません。

DIMENSIONS / 寸法図



Unit: mm (inch)
単位：mm (インチ)

■ INTERNAL VIEW



- ① OPERATION (7) P.C.B. (R, L models)
- ② OPERATION (5) P.C.B.
- ③ OPERATION (9) P.C.B.
- ④ MAIN P.C.B.
- ⑤ OPERATION (4) P.C.B.
- ⑥ OPERATION (6) P.C.B.
- ⑦ OPERATION (10) P.C.B.
- ⑧ Loader mechanism ass'y
- ⑨ OPERATION (8) P.C.B.
- ⑩ OPERATION (2) P.C.B.
- ⑪ OPERATION (3) P.C.B.
- ⑫ OPERATION (1) P.C.B.

■ DISASSEMBLY PROCEDURES / 分解手順

(Remove parts in the order as numbered.)

Disconnect the power cable from the AC outlet.

(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. Removal of Top Cover

- Remove 4 screws (①) and 2 screws (②). (Fig. 1)
- Remove the top cover. (Fig. 1)

1. トップカバーの外し方

- ①のネジ4本、②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)

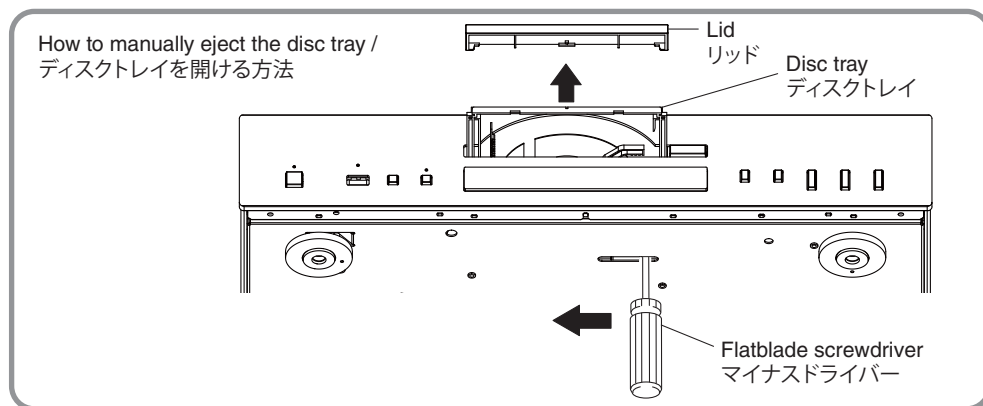
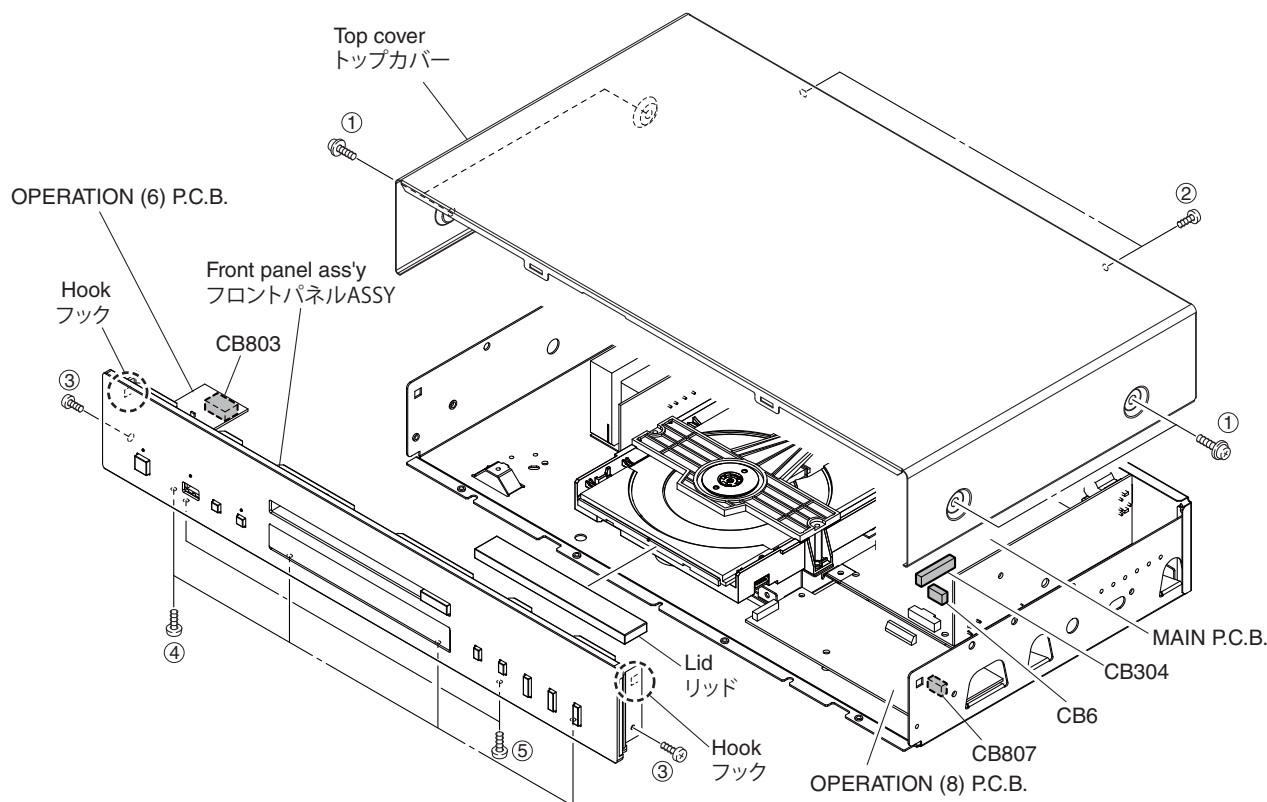


Fig. 1

2. Removal of Front Panel Ass'y

- Using a flatblade screwdriver, move the slider at the bottom in the direction of the arrow shown above. (Fig. 1)
Open the disc tray, remove the lid and close the disc tray. (Fig. 1)
- Remove 2 screws (③). (Fig. 1)

2. フロントパネル ASSY の外し方

- マイナスドライバーで底面のスライダーを上図の矢印の方向に動かします。(Fig. 1)
ディスクトレイを開けてリッドを取り外し、ディスクトレイを閉じます。(Fig. 1)
- ③のネジ2本を外します。(Fig. 1)

- c. Remove 4 screws (④) and 2 screws (⑤). (Fig. 2)
- d. Remove CB6, CB304, CB803 and CB807. (Fig. 1)
- e. Release 2 hooks and then remove the front panel ass'y. (Fig. 1)

- c. ④のネジ4本、⑤のネジ1本を外します。(Fig. 2)
- d. CB6、CB304、CB803、CB807を外します。(Fig. 1)
- e. フック2箇所を外し、フロントパネル ASSY を取り外します。(Fig. 1)

Bottom view

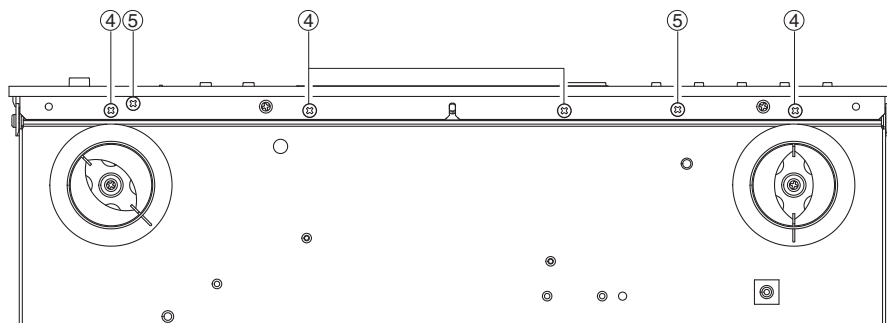


Fig. 2

3. Removal of Loader Mechanism Unit

- a. Remove 4 screws (⑥). (Fig. 3)
- b. Remove CB2 and CB3. (Fig. 3)
- c. Remove CB4 and ground the terminal side of the flexible flat cable with a clip or the like. (Fig. 3)
- d. Remove the loader mechanism unit. (Fig. 3)

3. ローダーメカユニットの外し方

- a. ⑥のネジ4本を外します。(Fig. 3)
- b. CB2、CB3を外します。(Fig. 3)
- c. CB4を外し、カード電線の端子面をクリップ等でアースします。(Fig. 3)
- d. ローダーメカユニットを取り外します。(Fig. 3)

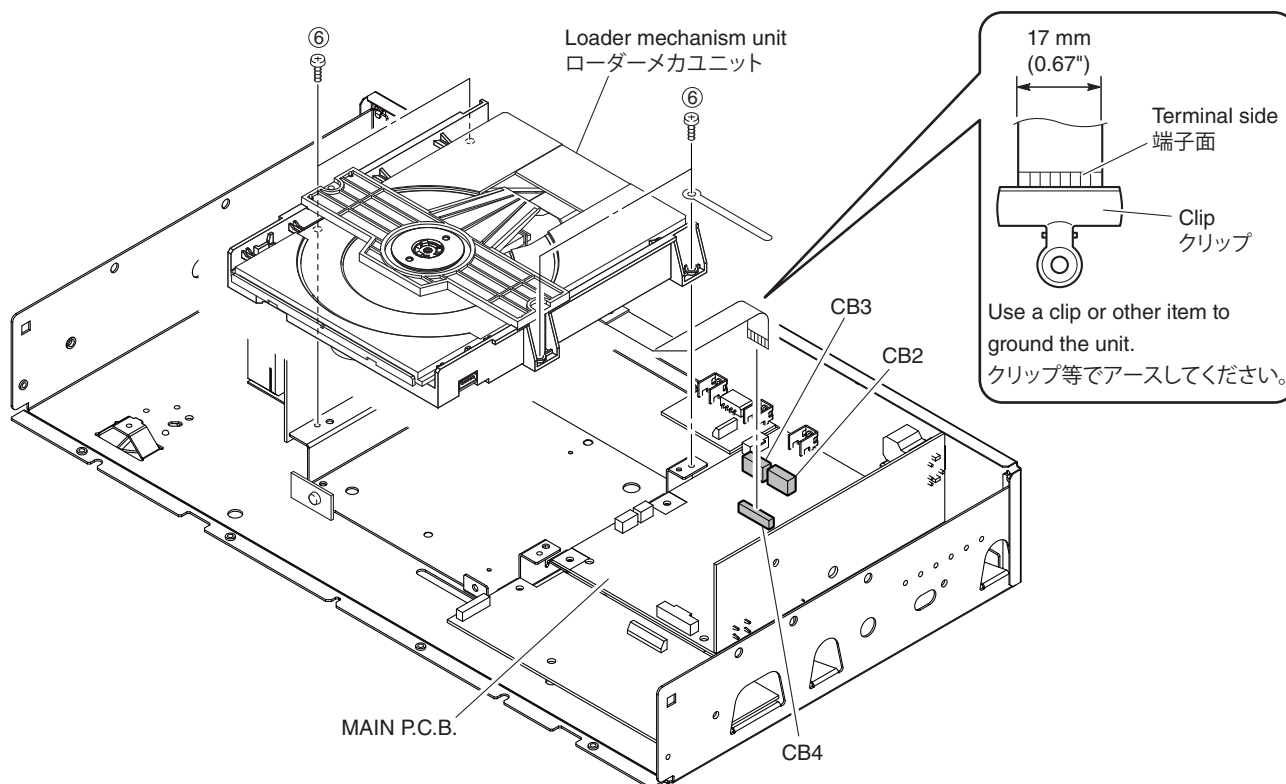


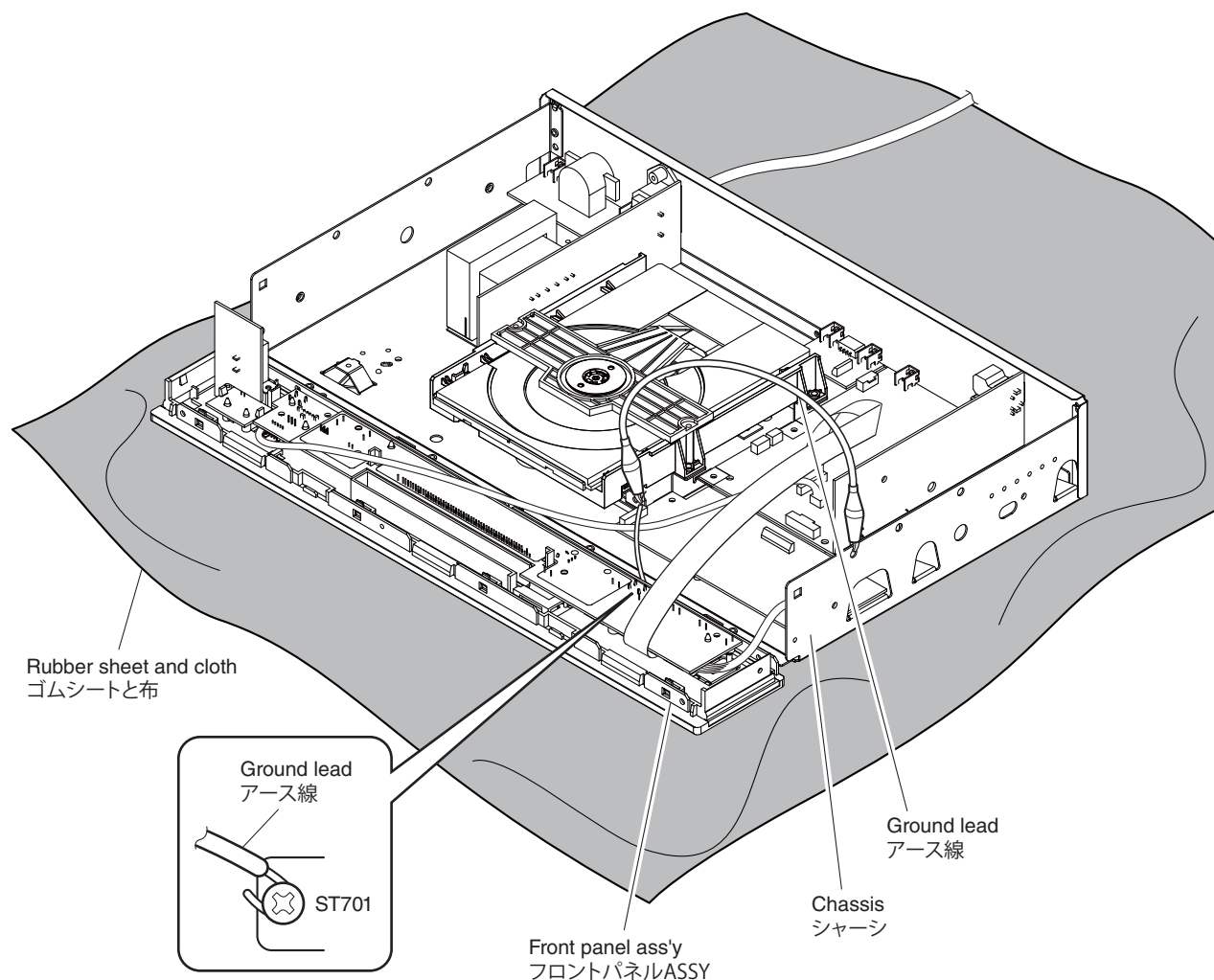
Fig. 3

When checking the P.C.B.s:

- Spread the rubber sheet and the cloth. Then place this unit on the cloth and check it. (Fig. 4)
- Connect the ground point (ST701) of the front panel ass'y to the chassis with a ground lead or the like. (Fig. 4)
- Reconnect all cables (connectors) that have been disconnected.
- When connecting the flexible flat cable, be careful with polarity.

P.C.B. をチェックする場合には：

- ゴムシートと布を敷き、その上に本機を置いてチェックします。(Fig. 4)
- フロントパネル ASSY のアース (ST701) をアース線等でシャーシに接続してください。(Fig. 4)
- 外したケーブル (コネクター) をすべて接続します。
- 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。

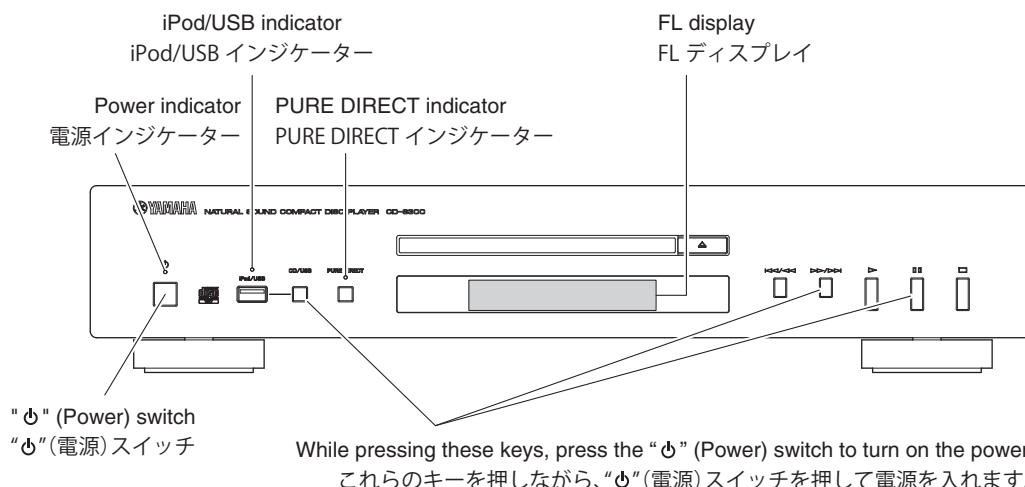
**Fig. 4**

■ TEST MODE / テストモード

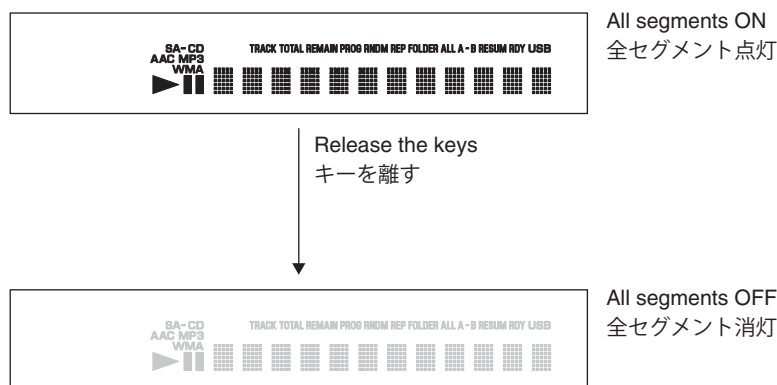
● Starting test mode

When starting the test mode, check the FL display and indicators for display/indication condition.

1. While pressing the "CD/USB", "⏮/⏭" (Skip/Search forward) and "⏸" (Pause) keys of this unit as shown in the figure below, press the "⏻" (Power) switch to turn on the power and keep pressing those 3 keys.



FL display / FL ディスプレイ表示



2. While keep pressing those 3 keys, check that all indicators (Power, iPod/USB, PURE DIRECT) are lit.
At the same time, check that all segments of the FL display are lit.
3. Release those 3 keys.
Then check that all indicators (Power, iPod/USB, PURE DIRECT) as well as all segments of the FL display are turned off.
4. The Test Mode is activated.

● テストモードの起動

テストモードの起動時に、FL ディスプレイとインジケータの表示状態をチェックします。

1. 本機の下図に示す "CD/USB" キー、"⏮/⏭" (頭出し/早送り) キー、"⏸" (ポーズ) キーを押しながら "⏻" (電源) スイッチを押して電源を入れ、3つのキーを押し続けます。

2. 3つのキーを押したまま、全てのインジケータ（電源、iPod/USB、PURE DIRECT）が点灯していることを確認します。
同時に、FL ディスプレイの全セグメントが点灯していることを確認します。
3. 3つのキーを離します。
全てのインジケータ（電源、iPod/USB、PURE DIRECT）と、FL ディスプレイの全セグメントが消灯していることを確認します。
4. テストモードが起動します。

● Operation Procedure of Test Mode

● テストモード時の操作

Function list of remote control keys / リモコンキーの機能一覧

Key / キー	Key code / キーコード	Function / 機能
OPEN/CLOSE	79-01	Disc tray open/close / ディスクトレイ オープン/クローズ
1	79-11	Laser on / レーザー オン
2	79-12	Laser off / レーザー オフ
3	79-13	Focus operation / フォーカス動作
4	79-14	Traverse in トラバース イン * Press the "5" key to stop traverse. ※ "5" キーを押してトラバースを停止してください。
5	79-15	Traverse stop / トラバース ストップ
6	79-16	Traverse out トラバース アウト * Press the "5" key to stop traverse. ※ "5" キーを押してトラバースを停止してください。
7	79-17	Spindle reverse スピンドル リバース * Press the "8" key to stop spindle. ※ "8" キーを押してスピンドルを停止してください。
8	79-18	Spindle off / スピンドル オフ
9	79-19	Spindle on / スピンドル オン * Press the "8" key to stop spindle. ※ "8" キーを押してスピンドルを停止してください。

● Canceling Test Mode

Press the "⏻" (Power) switch of this unit to turn off the power.

● テストモードの解除

本機の "⏻" (電源) スイッチを押して電源を切ります。

■ FACTORY MODE

● Starting Factory Mode

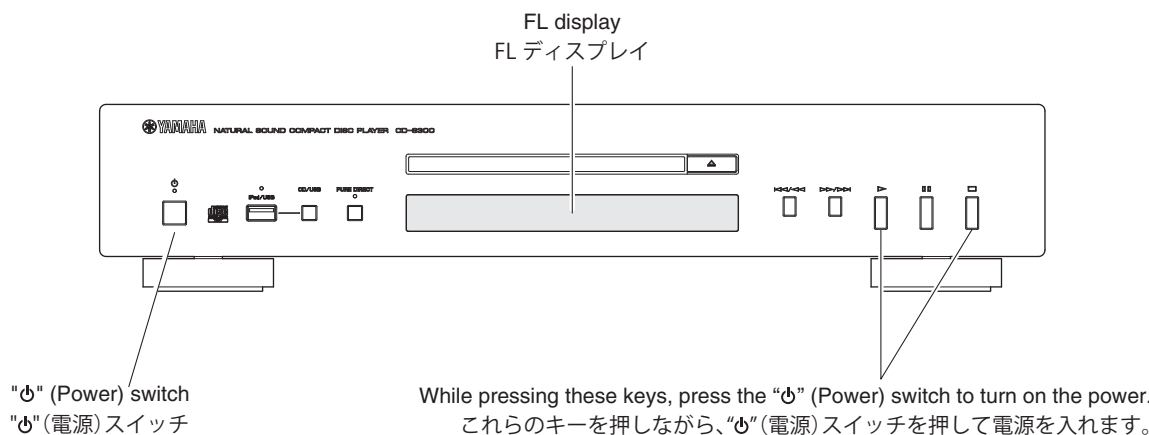
While pressing the “▶” (Play) and the “□” (Stop) keys of this unit as shown in the figure below, press the “⏻” (Power) switch to turn on the power.

The Factory Mode is activated.

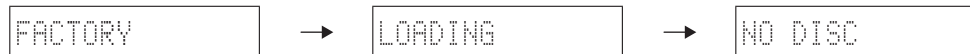
● ファクトリーモードの起動

本機の下図に示す“▶” (再生) キーと“□” (停止) キーを押しながら“⏻” (電源) スイッチを押して電源を入れます。

ファクトリーモードが起動します。



Display provided when factory mode started / ファクトリーモード起動時の表示



● Operation Procedure of Factory Mode

● ファクトリーモード時の操作

Function list of remote control keys / リモコンキーの機能一覧

Key キー	Key code キーコード	Function 機能
DISPLAY	79-0A	Firmware version of the microprocessor (IC305 of the MAIN P.C.B.) is displayed. マイコン (MAIN P.C.B.のIC305) のファームウェアバージョンが表示されます。 * Press the “CD/USB” key to select the CD mode ※ “CD/USB”キーを押して、CDモードを選択してください。
		Firmware version of the USB IC (IC7 of the MAIN P.C.B.) is displayed. USB IC (MAIN P.C.B.のIC7) のファームウェアバージョンが表示されます。 * Press the “CD/USB” key to select the USB mode ※ “CD/USB”キーを押して、USBモードを選択してください。
CLEAR	79-0D	EEPROM (IC304 of the MAIN P.C.B.) is initialized. EEPROM (MAIN P.C.B.のIC304) を初期化します。

● Canceling Factory Mode

Press the “⏻” (Power) switch of this unit to turn off the power.

● ファクトリーモードの起動

本機の“⏻” (電源) スイッチを押して電源を切ります。

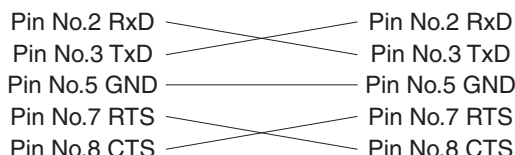
■ UPDATING FIRMWARE / ファームウェアの書き込み

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

MAIN P.C.B.
Microprocessor (IC305) of MAIN P.C.B.

● Required tools

- Firmware downloader program
..... FlashSta.exe
- Firmware
..... C5S3_XXXX.mot
..... C5S3_XXXX.id
- RS232C cross cable "D-sub 9 pin female"
(Specifications)



- RS232C conversion adaptor (Part No.: WR492800)

● Preparation and precautions

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

● Confirmation of firmware version

Before and after updating the firmware, check the firmware version by using the factory mode menu.

Start up the factory mode of this unit, and press the "DISPLAY" key of the remote control. The firmware version is displayed. (See "FACTORY MODE")

Note down the displayed firmware version.

OPE: v1.09

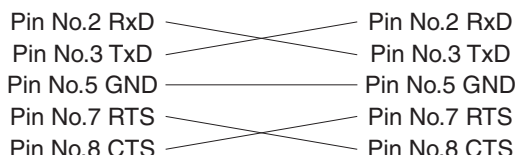
Firmware version

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。

MAIN P.C.B.
Microprocessor (IC305) of MAIN P.C.B.

● 必要なツール

- ファームウェア書き込み用プログラム
..... FlashSta.exe
- ファームウェア
..... C5S3_XXXX.mot
..... C5S3_XXXX.id
- RS232C クロスケーブル "D-sub 9pin メス"
(仕様)



- RS232C 変換アダプター (部品番号: WR492800)

● 準備と注意

- 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と最新のファームウェアを、PCの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。

● ファームウェアバージョンの確認

ファームウェアの書き込みの前後に、ファームウェアのバージョンをファクトリーモードで確認します。

本機のファクトリーモードを起動し、リモコンの"DISPLAY"キーを押すとファームウェアバージョンが表示されます。(「ファクトリーモード」参照)

表示されたファームウェアバージョンを書き留めます。

● Connection

1. Set the switch (SW7) of RS232C conversion adaptor to the "FLASH UCOM" position. (Fig. 1)
2. Connect the writing port (CB902 of OPERATION P.C.B.) located on the rear panel of this unit to the serial port (RS232C) of the PC with RS232C cross cable, RS232C conversion adaptor and flexible flat cable as shown below. (Fig. 1)

● 接続

1. RS232C 変換アダプターのスイッチ (SW7) "FLASH UCOM" 側に設定します。 (Fig. 1)
2. 本機の書き込み用ポート (OPERATION P.C.B. の CB902) 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)

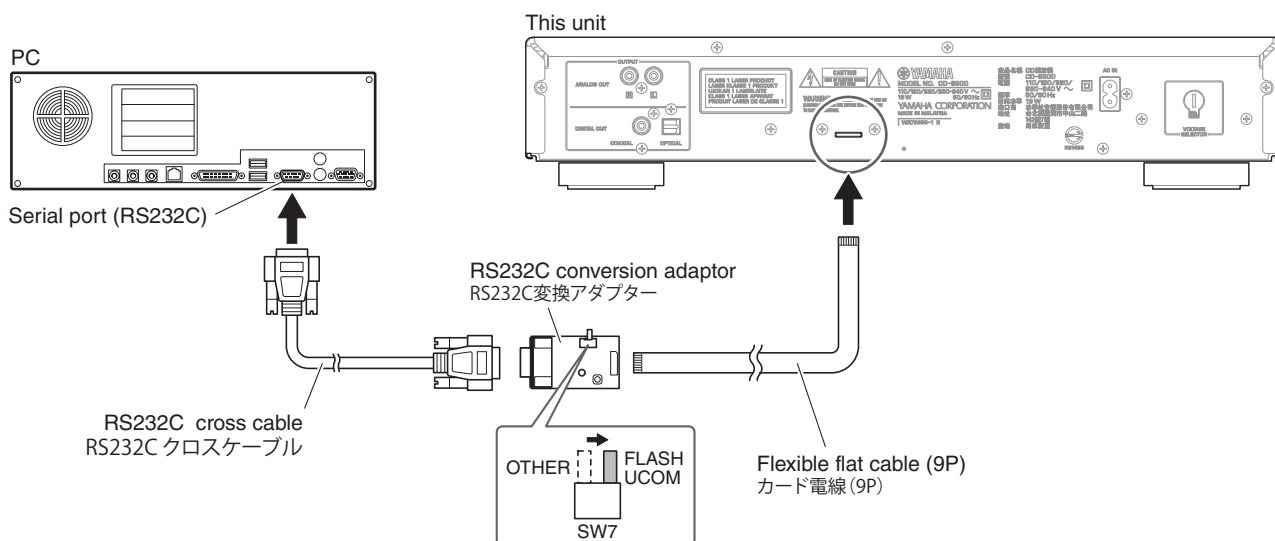


Fig. 1

● Operation procedures

1. Connect the power cable of this unit to the AC outlet.
2. Press the “” (Power) switch of this unit to turn on the power.
3. Start up FlashSta.exe. (Fig. 2)
The screen appears as shown below. (Fig. 2)
4. Select the data to be transmitted and port. (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.

● 操作方法

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 “” (電源) スイッチを押して電源を入れます。
3. FlashSta.exe を起動します。(Fig. 2)
下記の画面が表示されます。(Fig. 2)
4. 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-232 C 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。

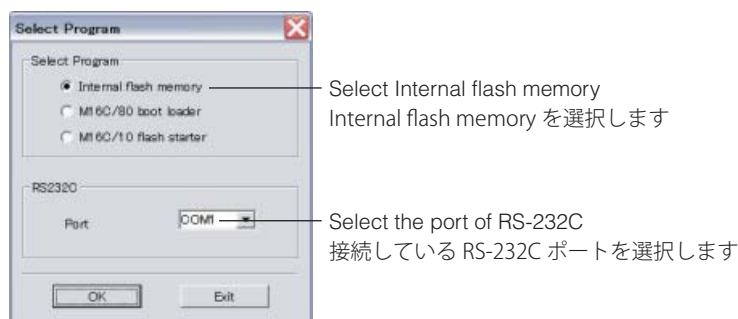


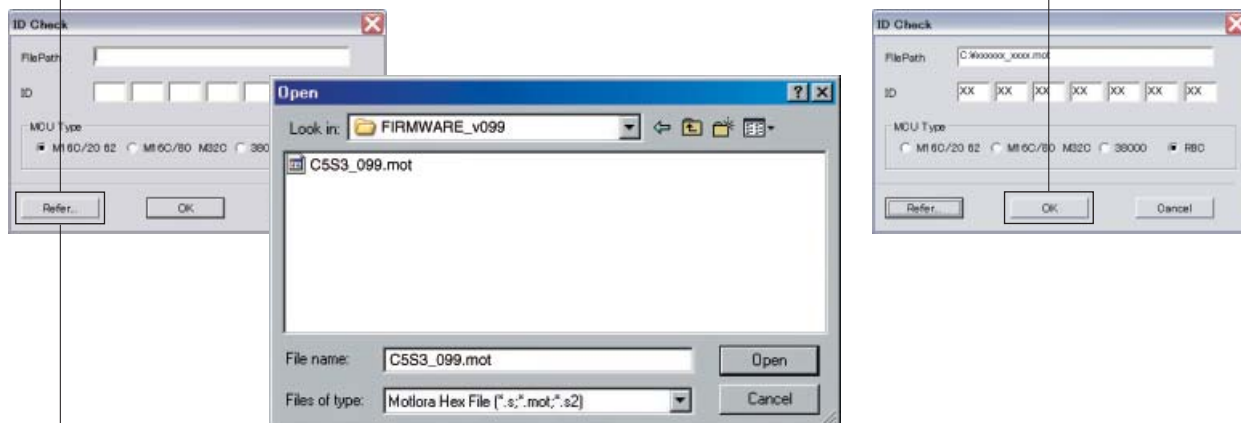
Fig. 2

5. Click [Refer...] and select the firmware name. (Fig. 3)

* The ID and MCU Type are loaded automatically when the file is selected. (Fig. 3)
Click [OK]. (Fig. 3)

5. [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後、自動的に取り込まれます。(Fig. 3)
[OK] をクリックします



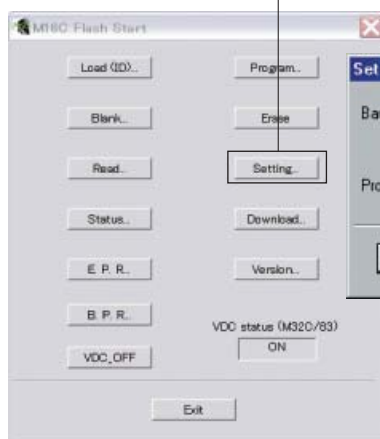
When [Refer...] is clicked, the “Open” screen appears.

[Refer...] をクリックすると「ファイルを開く」が表示されます

Fig. 3

6. Click [Setting], and set the baud rate. (Fig. 4)

6. [Setting] をクリックし、通信速度の設定を行います。(Fig.4)



Select 115200 bps for the baud rate and 40 ms for the program intervals.

* Reduce the baud rate if a transmission error occurs frequently.

通信速度は 115200bps、時間幅は 40ms を選択します。

※ 送信エラーが多発する場合は、通信速度を下げてください。

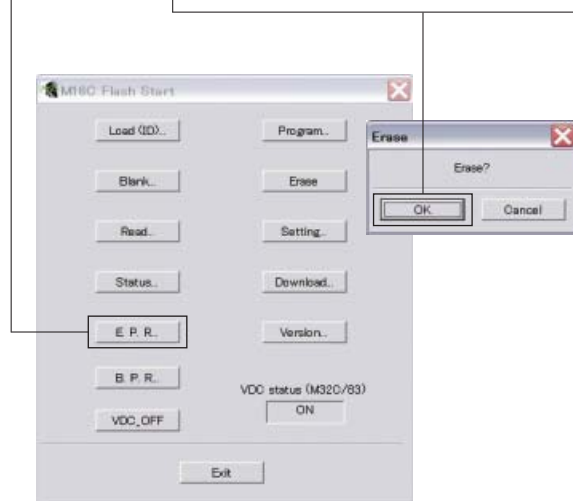
Fig. 4

7. Click [E.P.R.], then the "Erase" screen appears. (Fig. 5)

7. [E.P.R] をクリックすると、「Erase」画面が表示されます。(Fig. 5)

8. Click [OK] to start writing. (Fig. 5)

8. [OK]をクリックして書き込みを開始します。(Fig. 5)



Writing being executed.
書き込み中

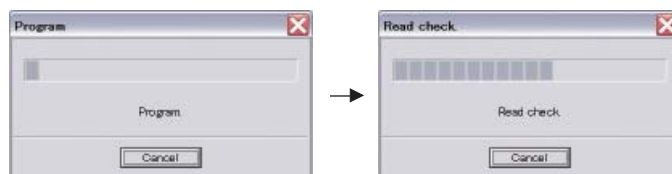


Fig. 5

9. When writing of the firmware is completed, the screen appears as shown below. (Fig. 6)
Click [OK]. (Fig. 6)

10. Click [Exit] to end FlashSta.exe. (Fig. 6)
9. ファームウェアの書き込みが完了すると、以下の画面が表示されます。
[OK] をクリックします。 (Fig. 6)

10. [Exit] をクリックし、FlashSta.exe を終了します。
(Fig. 6)

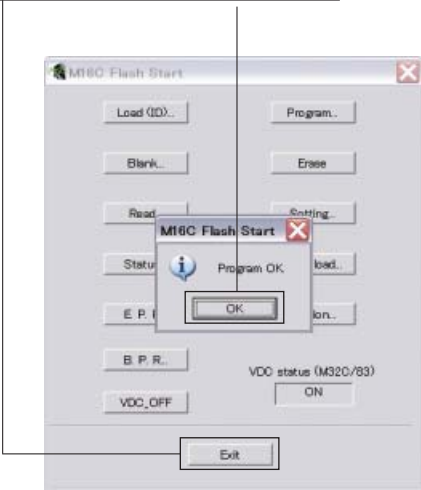


Fig. 6

11. Check that the firmware version is the same as written one by using the factory mode.
11. ファームウェアのバージョンが、書き込まれたものと同じであることをファクトリーモードで確認します。

OFE: v1.09

Firmware version

- * When the firmware version is different from written one, perform the “UPDATING FIRMWARE” procedure all over again.

12. Press the “” (Power) switch of this unit to turn off the power.

13. Disconnect the power cable of this unit from the AC outlet.
- ※ ファームウェアのバージョンが、書き込まれたものと異なる場合、「ファームウェアの書き込み」をもう一度やり直してください。

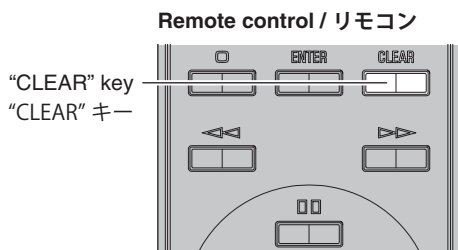
12. 本機の “” (電源) スイッチを押して電源を切ります。

13. 本機の電源コードを AC コンセントから抜きます。

● Initializing the EEPROM (IC304 of the MAIN P.C.B.)

Be sure to initialize the EEPROM (IC304 of the MAIN P.C.B.) by using the procedure below after updating the firmware, otherwise the set up information (CD/USB mode, PURE DIRECT ON/OFF, RS-232C ON/OFF, and DISC loaded/unloaded) can not be memorized properly.

1. Connect the power cable of this unit to the AC outlet.
2. While pressing the "▶" (Play) key and the "□" (Stop) key of this unit, press the "⏻" (Power) switch to turn on the power.
The Factory mode is activated.
3. Press the "CLEAR" key on the remote control.
The EEPROM (IC304 of the MAIN P.C.B.) is initialized, and "MEMORY CLEAR" is displayed.
4. Press "⏻" (Power) switch of this unit to turn off the power.
5. Disconnect the power cable of this unit from the AC outlet.



● EEPROM (MAIN P.C.B. の IC304) の初期化

ファームウェアのアップデート後、下記の手順でEEPROM (MAIN P.C.B. の IC304) を必ず初期化してください。でなければ、設定情報 (CD/USB モード、PURE DIRECT ON/OFF、RS-232C ON/OFF、DISC 有無) が正常に記憶されません。

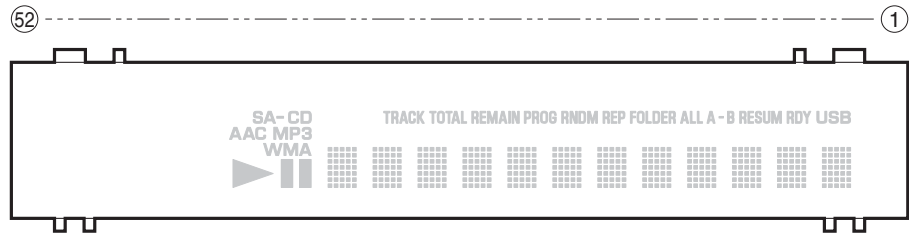
1. 本機の電源コードを AC コンセントに接続します。
2. 本機の "▶" (再生) キーと "□" (停止) キーを押しながら、"⏻" (電源) スイッチを押して電源を入れます。
ファクトリーモードが起動します。
3. リモコンの "CLEAR" キーを押します。
EEPROM (MAIN P.C.B. の IC304) が初期化され、"MEMORY CLEAR" が表示されます。
4. 本機の "⏻" (電源) スイッチを押して電源を切ります。
5. 本機の電源コードを AC コンセントから抜きます。

FL display / FLディスプレイ

MEMORY CLEAR

■ DISPLAY DATA

● V701: 14-ST-68GINK (OPERATION P.C.B.)



● PIN CONNECTION

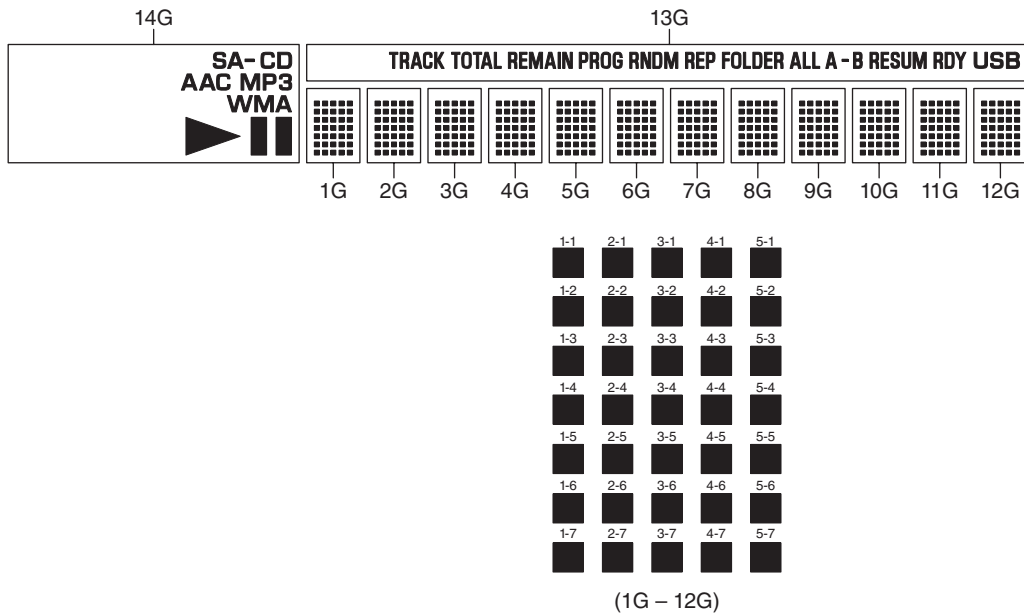
Pin No.	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	
Connection	F2	NP	NP	GND	VFL	VDDH	VDD	OSC	RESET	CS	CP	DA	TSA	TSB	NX	NX	NX	
Pin No.	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	
Connection	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	
Pin No.	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
Connection	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	NX	14G	13G	Q14G	Q13G	NP	NP	F1

Note: 1) F1, F2 Filament 2) NP No pin 3) NX No extended pin 4) GND GND pin 5) VFL VFD driving voltage sink pin

6) VDD Logic voltage supply pin 7) VDDH VFD driving voltage source pin 8) CP Shift register clock 9) DA Serial data input 10) TSA, TSB Test pin

11) CS Chip select input pin 12) RESET Reset input 13) OSC Pin for self-oscillation 14) 13G, 14G Grid 15) Q13G, Q14G Driver output port

● GRID ASSIGNMENT

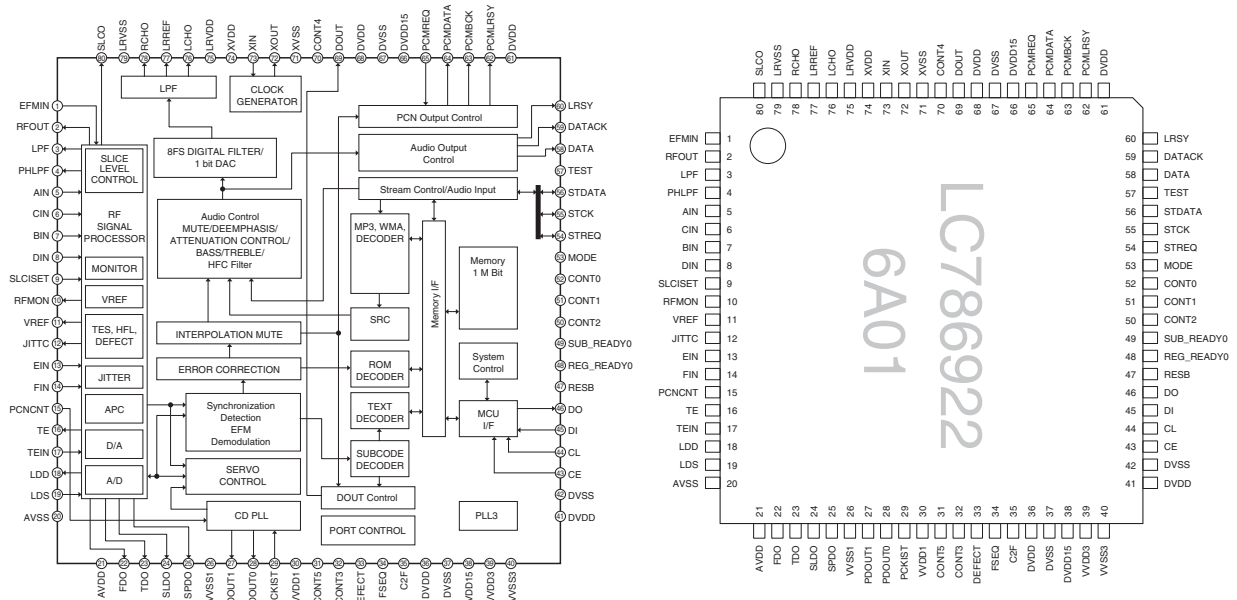


● ANODE CONNECTION

	1G - 12G	13G	14G		1G - 12G	13G	14G		1G - 12G	13G	14G
D0	1-1	—	—	D12	3-3	B	AAC	D24	5-5	—	—
D1	2-1	—	—	D13	4-3	RESUM	MP3	D25	1-6	—	—
D2	3-1	—	—	D14	5-3	RDY	WMA	D26	2-6	—	—
D3	4-1	TRACK	—	D15	1-4	USB	▶	D27	3-6	—	—
D4	5-1	TOTAL	—	D16	2-4	—	 	D28	4-6	—	—
D5	1-2	REMAIN	—	D17	3-4	—	—	D29	5-6	—	—
D6	2-2	PROG	—	D18	4-4	—	—	D30	1-7	—	—
D7	3-2	RNDM	—	D19	5-4	—	—	D31	2-7	—	—
D8	4-2	REP	—	D20	1-5	—	—	D32	3-7	—	—
D9	5-2	FOLDER	—	D21	2-5	—	—	D33	4-7	—	—
D10	1-3	ALL	SA-	D22	3-5	—	—	D34	5-7	—	—
D11	2-3	A-	CD	D23	4-5	—	—				

■ IC DATA

IC2: LC786922E-01UY-E (MAIN P.C.B.)
CMOS LSI compact disc player IC



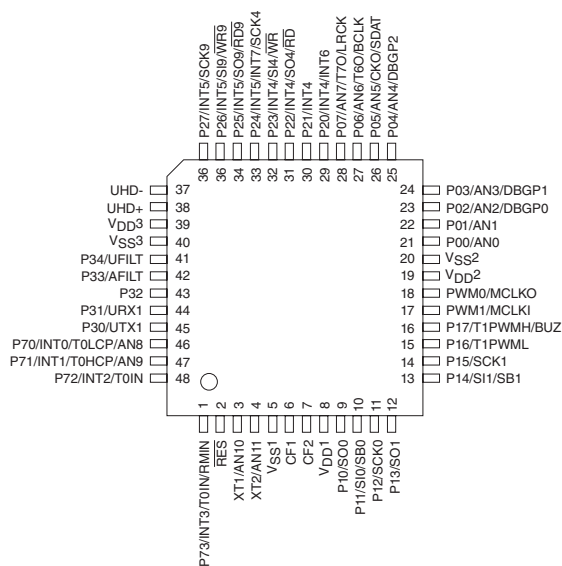
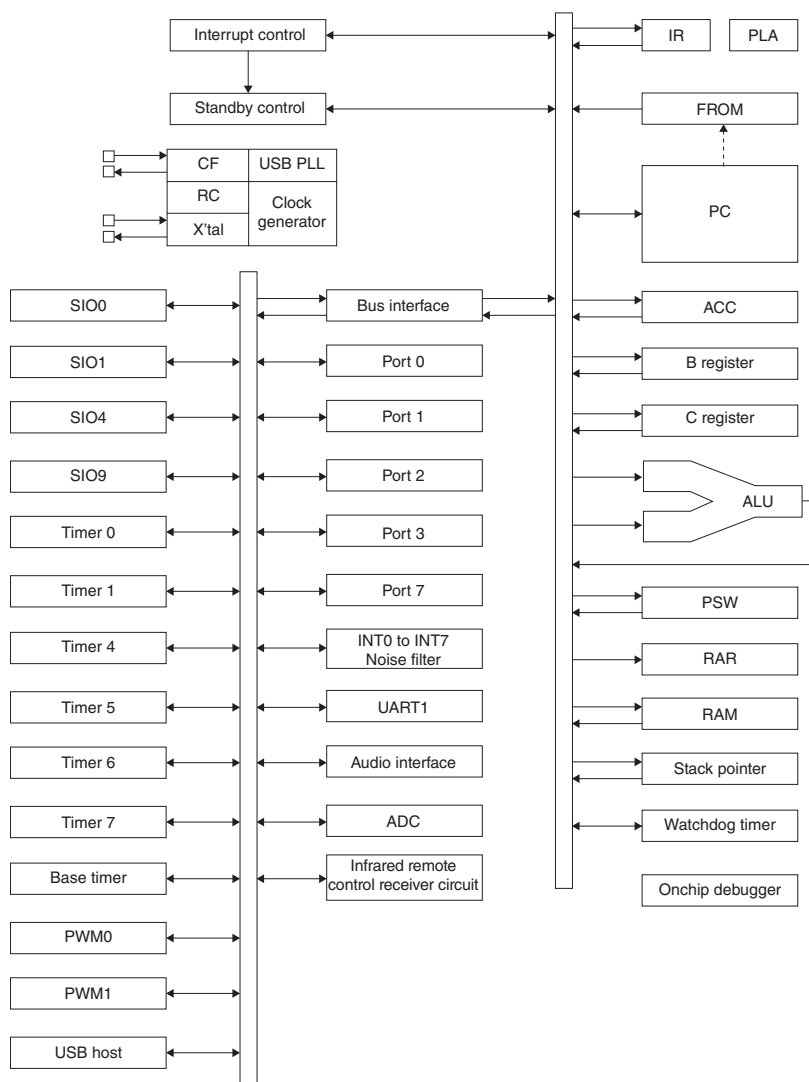
Pin No.	Function Name	I/O	State During a Reset	Detail of Function
1	EFMIN	AI	Input	RF signal input
2	RFOUT	AO	Undefined	RF signal output
3	LPF	AO	Undefined	RF signal DC level detection low-pass filter capacitor connection
4	PHLPF	AO	Undefined	Defect detection low-pass filter capacitor connection
5	AIN	AI	Input	A signal input
6	CIN	AI	Input	C signal input
7	BIN	AI	Input	B signal input
8	DIN	AI	Input	D signal input
9	SLCISSET	AI	Input	SLCO output current setting resistor connection
10	RFMON	AO	Undefined	IC internal analog signal monitor
11	VREF	AO	AVDD/2	VREF voltage output
12	JITTC	AO	Undefined	Jitter detection capacitor connection
13	EIN	AI	Input	E signal input
14	FIN	AI	Input	F signal input
15	PCNCNT	AI	Input	EFM PLL charge pump control voltage input
16	TE	AO	Undefined	TE signal output
17	TEIN	AI	Input	TE signal input used for TES signal generation
18	LDD	AO	Undefined	Laser power control signal output
19	LDS	AI	Input	Laser power detection signal input
20	AVSS	—	—	Analog system ground / This pin must be connected to the 0 V level
21	AVDD	—	—	Analog system power supply
22	FDO	AO	AVDD/2	Focus control signal output / D/A converter output
23	TDO	AO	AVDD/2	Tracking control signal output / D/A converter output
24	SLDO	AO	AVDD/2	Sled control signal output / D/A converter output
25	SPDO	AO	AVDD/2	Spindle control signal output / D/A converter output
26	VVSS1	—	—	Internal VCO ground / This pin must be connected to the 0 V level
27	PDOUT1	O	Undefined	Internal VCO control phase comparator output 1
28	PDOUT0	O	Undefined	Internal VCO control phase comparator output 0
29	PCKIST	AI	Input	PDOUT0, 1 output current setting resistor connection pin
30	VVDD1	—	—	Internal VCO power supply
31	CONT5	O	Low	General purpose output
32	CONT3	I/O	Input	General purpose input/output (Built-in pull-up resistor)
33	DEFECT	I/O	Input	Monitor output pin (Defect detection signal output : High-active)
34	FSEQ	I/O	Input	Monitor output pin (CD sync. signal detection output : High-active)
35	C2F	I/O	Input	Monitor output pin (C2 error signal output : High-active)

Pin No.	Function Name	I/O	State During a Reset	Detail of Function	
36	DVDD	—	—	Digital system power supply	
37	DVSS	—	—	Digital system ground / This pin must be connected to the 0 V level	
38	DVDD15	AO	High	Digital circuit power supply capacitor connection	
39	VVDD3	—	—	Internal PLL power supply	
40	VVSS3	—	—	Internal PLL ground / This pin must be connected to the 0 V level	
41	DVDD	—	—	Digital system power supply	
42	DVSS	—	—	Digital system ground / This pin must be connected to the 0 V level	
43	CE	I	Input	Host microprocessor interface	Host I/F : Chip enable signal input
44	CL	I	Input		Host I/F : Data transfer clock input
45	DI	I	Input		Host I/F : Data input
46	DO	O	Hi-Z (H)		Host I/F : Data output (Tri-state output)
47	RESB	I	—	IC reset input / This pin must be set low once after power is first applied	
48	REG_READY0	O	Low	Host microprocessor interface	Host I/F : REG_READY output (Nch-opendrain output)
49	SUB_READY0	O	Low		Host I/F : SUB_READY output (Nch-opendrain output)
50	CONT2	I/O	Input	General purpose input/output	
51	CONT1	I/O	Input	General purpose input/output	
52	CONT0	I/O	Input	General purpose input/output	
53	MODE	I	—	Set input / This pin must be connected to the DVDD	
54	STREQ	I/O	Input	Stream data demand signal output	
55	STCK	I/O	Input	Stream data bit clock input	
56	STDATA	I/O	Input	Stream data input	
57	TEST	I	—	Test input / This pin must be connected to the 0 V level	
58	DATA	I/O	Input	Monitor pin / Audio data output	
59	DATACK	I/O	Input	Monitor pin / Audio bit clock output	
60	LRSY	I/O	Input	Monitor pin / Audio Left/Right channel clock output	
61	DVDD	—	—	Digital system power supply	
62	PCMLRSY	O	Low	Monitor pin / Audio Left/Right channel clock output	
63	PCMBCK	O	Low	Monitor pin / Audio data shift clock output	
64	PCMDATA	O	Low	Monitor pin / Audio data serial output	
65	PCMREQ	I	Input	Monitor pin / Audio data output request signal input	
66	DVDD15	AO	High	Digital circuit power supply capacitor connection	
67	DVSS	—	—	Digital system ground / This pin must be connected to the 0 V level	
68	DVDD	—	—	Digital system power supply	
69	DOUT	O	Low	Monitor pin / Digital audio data output (EIAJ format)	
70	CONT4	I/O	Input (Low)	General purpose input/output 4 (Initial : Input, internal pull-down resistor ON)	
71	XVSS	—	—	Oscillator ground / This pin must be connected to the 0 V level	
72	XOUT	O	Oscillation	Oscillation	16.9344 MHz oscillation pins
73	XIN	I	Oscillation		16.9344 MHz oscillation pins
74	XVDD	—	—	Oscillator power supply	
75	LRVDD	—	—	D/A Converter	Left/Right channel power supply
76	LCHO	AO	LRVDD/2		Left channel output
77	LRREF	AO	LRVDD/2		Reference output for Left/Right channel
78	RCHO	AO	LRVDD/2		Right channel output
79	LRVSS	—	—		Left/Right channel ground
					This pin must be connected to the 0 V level
80	SLCO	AO	Undefined	Slice level control output	

Note

- ① For the unused pins:
 - The unused input pins must be connected to the GND (0 V) level
 - The unused output pins must be leave open (No connection)
 - The unused input/output pins must be connected to the GND (0 V) or power supply pin for I/O in input pin mode or must be left open (No connection) in output pin mode
- ② NC pins must be left open
- ③ For power supply pins:
 - Same voltage must be supplied to DVDD, AVDD, XVDD, LRVDD, VVDD1, VVDD3 power supply pins (Refer to allowable operating ranges)
- ④ MODE pin must be connected to the DVDD
- ⑤ TEST pins must be connected to GND (0 V)
- ⑥ During power-on, RESB pin must be set to "Low" for more than 20 ms
- ⑦ Nch-opendrain output pin must put the pull-up resistance outside

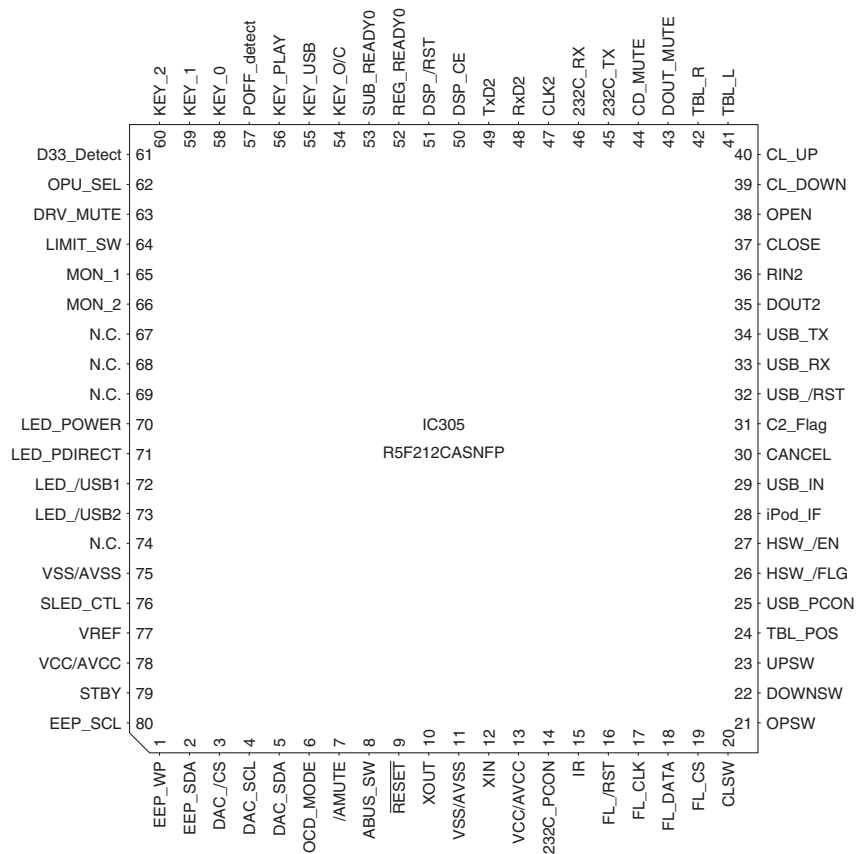
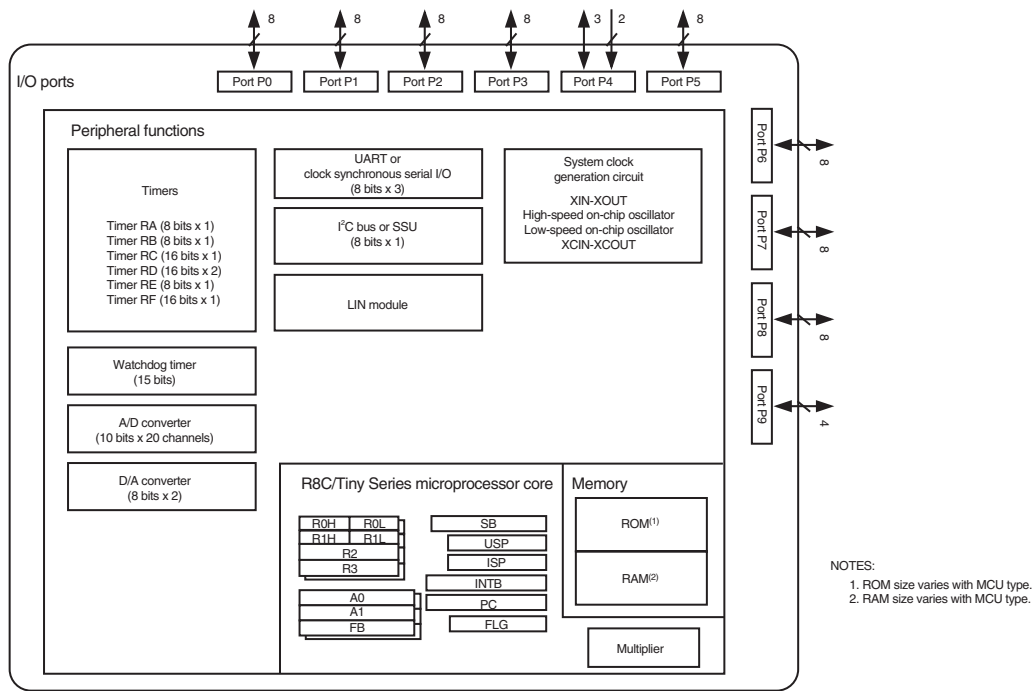
IC7: LC87F1HC8A (MAIN P.C.B.)
CMOS LSI



Pin No.	Function Name	I/O	Detail of Function	Option																														
5, 20, 40	VSS1, VSS2, VSS3	–	- power supply	No																														
8, 19	VDD1, VDD2	–	+ power supply	No																														
39	VDD3	–	USB reference voltage	Yes																														
21, 22, 23, 24, 25, 26, 27, 28	Port 0 P00 to P07	I/O	• 8-bit I/O ports • I/O specifiable in 4-bit units • Pull-up resistors can be turned on and off in 4-bit units • HOLD reset input • Port 0 interrupt input • Pin functions AD converter input ports : AN0 to AN7 (P00 to P07) On chip debugger pins : DBGP0 to DBGP2 (P02 to P04) P05 : System clock output/audio interface SDAT input/output P06 : Timer 6 toggle output/audio interface BCLK input/output P07 : Timer 7 toggle output/audio interface LRCK input/output	Yes																														
9, 10, 11, 12, 13, 14, 15, 16	Port 1 P10 to P17	I/O	• 8-bit I/O ports • I/O specifiable in 1-bit units • Pull-up resistors can be turned on and off in 1-bit units • Pin functions P10 : SIO0 data output P11 : SIO0 data input/bus input/output P12 : SIO0 clock input/output P13 : SIO1 data output P14 : SIO1 data input/bus input/output P15 : SIO1 clock input/output P16 : Timer 1 PWML output P17 : Timer 1 PWMH output/beeper output	Yes																														
29, 30, 31, 32, 33, 34, 35, 36	Port 2 P20 to P27	I/O	• 8-bit I/O ports • I/O specifiable in 1-bit units • Pull-up resistors can be turned on and off in 1-bit units • Pin functions P20 to P23 : INT4 input/HOLD reset input/timer 1 event input/timer 0L capture input/ timer 0H capture input P24 to P27 : INT5 input/HOLD reset input/timer 1 event input/timer 0L capture input/ timer 0H capture input P20 : INT6 input/timer 0L capture 1 input P22 : SIO4 data input/output/parallel interface $\overline{RD}$ output P23 : SIO4 data input/output/parallel interface $\overline{WR}$ output P24 : SIO4 clock input/output/INT7 input/timer 0H capture 1 input P25 : SIO9 data input/output/parallel interface $\overline{RD9}$ output P26 : SIO9 data input/output/parallel interface $\overline{WR9}$ output P27 : SIO9 clock input/output Interrupt acknowledge types <table><tr><td></td><td>Rising</td><td>Falling</td><td>Rising and Falling</td><td>H level</td><td>L level</td></tr><tr><td>INT4</td><td>enable</td><td>enable</td><td>enable</td><td>disable</td><td>disable</td></tr><tr><td>INT5</td><td>enable</td><td>enable</td><td>enable</td><td>disable</td><td>disable</td></tr><tr><td>INT6</td><td>enable</td><td>enable</td><td>enable</td><td>disable</td><td>disable</td></tr><tr><td>INT7</td><td>enable</td><td>enable</td><td>enable</td><td>disable</td><td>disable</td></tr></table>		Rising	Falling	Rising and Falling	H level	L level	INT4	enable	enable	enable	disable	disable	INT5	enable	enable	enable	disable	disable	INT6	enable	enable	enable	disable	disable	INT7	enable	enable	enable	disable	disable	Yes
	Rising	Falling	Rising and Falling	H level	L level																													
INT4	enable	enable	enable	disable	disable																													
INT5	enable	enable	enable	disable	disable																													
INT6	enable	enable	enable	disable	disable																													
INT7	enable	enable	enable	disable	disable																													
41, 42, 43, 44, 45	Port 3 P30 to P34	I/O	• 5-bit I/O ports • I/O specifiable in 1-bit units • Pull-up resistors can be turned on and off in 1-bit units • Pin functions P30 : UART1 transmit P31 : UART1 receive P33 : Audio interface PLL filter pin P34 : USB interface PLL filter pin	Yes																														

Pin No.	Function Name	I/O	Detail of Function	Option																														
1, 46, 47, 48	Port 7	I/O	• 4-bit I/O port • I/O specifiable in 1-bit units • Pull-up resistors can be turned on and off in 1-bit units • Pin functions P70 : INT0 input/HOLD reset input/timer 0L capture input/watchdog timer output P71 : INT1 input/HOLD reset input/timer 0H capture input P72 : INT2 input/HOLD reset input/timer 0 event input/timer 0L capture input/high speed clock counter input P73 : INT3 input (input with noise filter)/timer 0 event input/timer 0H capture input/IR remote control receiver input AD converter input ports : AN8 (P70), AN9 (P71) Interrupt acknowledge types <table><tr><td></td><td>Rising</td><td>Falling</td><td>Rising and Falling</td><td>H level</td><td>L level</td></tr><tr><td>INT0</td><td>enable</td><td>enable</td><td>disable</td><td>enable</td><td>enable</td></tr><tr><td>INT1</td><td>enable</td><td>enable</td><td>disable</td><td>enable</td><td>enable</td></tr><tr><td>INT2</td><td>enable</td><td>enable</td><td>enable</td><td>disable</td><td>disable</td></tr><tr><td>INT3</td><td>enable</td><td>enable</td><td>enable</td><td>disable</td><td>disable</td></tr></table>		Rising	Falling	Rising and Falling	H level	L level	INT0	enable	enable	disable	enable	enable	INT1	enable	enable	disable	enable	enable	INT2	enable	enable	enable	disable	disable	INT3	enable	enable	enable	disable	disable	No
				Rising	Falling	Rising and Falling	H level	L level																										
	INT0			enable	enable	disable	enable	enable																										
	INT1			enable	enable	disable	enable	enable																										
	INT2			enable	enable	enable	disable	disable																										
	INT3			enable	enable	enable	disable	disable																										
P70 to P73																																		
18 17	PWM0 PWM1	I/O	PWM0, PWM1 output port General-purpose input port • Pin functions PWM0 : Audio interface master clock output PWM1 : Audio interface master clock input	No																														
37	UHD-	I/O	USB data I/O pin UHD-/general-purpose I/O port	No																														
38	UHD+	I/O	USB data I/O pin UHD+/general-purpose I/O port	No																														
2	RES	I	Reset pin	No																														
3	XT1	I	• 32.768 kHz crystal oscillator input • Pin functions General-purpose input port AD converter input ports : AN10 Must be connected to VDD1 when not to be used	No																														
4	XT2	I/O	• 32.768 kHz crystal oscillator output • Pin functions General-purpose I/O AD converter input port : AN11 Must be set for oscillation and kept open if not to be used	No																														
6	CF1	I	Ceramic/crystal resonator input	No																														
7	CF2	I	Ceramic/crystal resonator output	No																														

IC305: R5F212CASNFP (MAIN P.C.B.)
Single chip 16-bit microprocessor



Pin No.	Function Name	I/O	Detail of Function
1	EEP_WP	O	Wright protection of EEPROM (IC304)
2	EEP_SDA	O	Serial data to EEPROM (IC304)
3	DAC_/CS	O	Chip select to audio DAC (IC302)
4	DAC_SCL	O	Serial clock to audio DAC (IC302)
5	DAC_SDA	O	Serial data output to audio DAC (IC302)
6	OCD_MODE	I	Input High --> Normal, Low --> Writing ROM mode
7	/AMUTE	O	Muting control signal to audio circuit High --> Muting is active
8	ABUS_SW	O	No use
9	RESET	I	Input RESET signal of IC305
10	XOUT	O	Oscillator OUT
11	VSS/AVSS	GND	DGND
12	XIN	I	Oscillator IN
13	VCC/AVCC	Power	D+3.3V
14	232C_PCON	O	
15	IR	I	Input the signal from remote control
16	FL_/RST	O	RESET signal to FL-display
17	FL_CLK	O	Serial clock to FL-display (V701)
18	FL_DATA	O	Serial data output to FL-display (V701)
19	FL_CS	O	Chip select to FL-display (V701)
20	CLSW	I	
21	OPSW	I	Detect OPEN SW of CD-loader mechanism
22	DOWNSW	I	
23	UPSW	I	Detect CLAMP-UP SW of CD-Loader mechanism
24	TBL_POS	I	
25	USB_PCON	O	Control IC301(DC/DC converter) and USB+5V is ON/OFF High --> USB+5V is supplied
26	HSW_/FLG	I	Detect the status of IC6 (current limiter) High --> Normal, Low --> Over current
27	HSW_/EN	O	Control IC6 (current limiter) Low --> Enable output
28	iPod_IF	I	Control signal from iPod to change communication format
29	USB_IN	I	Detect to plug in USB memory or iPod High --> Detect USB memory or iPod
30	CANCEL	I	Request signal for cancel busy condition
31	C2_Flag	I	Input FMON2 (C2F) signal from CD-DSP (IC2)
32	USB_/RST	O	RESET signal to USB-ucom (IC7)
33	USB_RX	I	RX signal from USB-ucom (IC7)
34	USB_TX	O	TX signal to USB-ucom (IC7)
35	DOUT2	O	Reserved (for 232C)
36	RIN2	I	Reserved (for 232C)
37	CLOSE	O	Control signal for closing tray
38	OPEN	O	Control signal for opening tray
39	CL_DOWN	O	
40	CL_UP	O	
41	TBL_L	O	
42	TBL_R	O	
43	DOUT_MUTE	O	Muting digital-out signal on pure direct Low --> Digital-output signal is muting
44	CD_MUTE	I	Detect the muting control signal from CD-DSP (IC2) during loading disc or searching track
45	232C_TX	O	
46	232C_RX	I	
47	CLK2	O	Output the clock signal to CD-DSP
48	RxD2	I	Input the status signal from CD-DSP
49	TxD2	O	Output the status signal to CD-DSP
50	DSP_CE	O	Output chip_enable signal to CD-DSP

Pin No.	Function Name	I/O	Detail of Function
51	DSP_/RST	O	Reset signal to CD-DSP
52	REG_READY0	I	Input R_RDY signal from CD-DSP
53	SUB_READY0	I	Input S_RDY signal from CD-DSP
54	KEY_O/C	I	
55	KEY_USB	I	
56	KEY_PLAY	I	
57	POFF_detect	I	Detect PRIMARY_POWER_OFF condition
58	KEY_0	I	Detect KEY_0 signal on front-panel STOP, PAUSE, O/C
59	KEY_1	I	Detect KEY_1 signal on front-panel PLAY, SKIP+, SKIP-
60	KEY_2	I	Detect KEY_2 signal on front-panel Pure direct, CD/USB
61	D33 Detect	I	Reserved (Detect D+3.3)
62	OPU_SEL	I	Input the signal to select OPU 0V : CD traverse 3.3V : DVD/CD traverse 1.65V : DVD/CD traverse
63	DRV_MUTE	O	Mute control to actuator driver (IC1) Low --> Muting output on actuator driver
64	LIMIT_SW	I	Detect inner position SW on CD-traverse mechanism
65	MON_1	I	Input FMON0 (defect) signal from CD-DSP (IC2)
66	MON_2	I	Input FMON1(FSEQ) signal from CD-DSP (IC2)
67	N.C.		
68	N.C.		
69	N.C.		
70	LED_POWER	O	Control LED_POWER on front-panel
71	LED_PDIRECT	O	Control LED_PURE DIRECT on front-panel
72	LED_USB1	O	Control LED_USB (orange) on front-panel
73	LED_USB2	O	Control LED_USB (green) on front-panel
74	N.C.		
75	VSS/AVSS	GND	DGND
76	SLED_CTL	O	Reserved
77	VREF	Power	Input the reference voltage (D+3.3V) for A/D port (pin 58–60, pin 62)
78	VCC/AVCC	Power	Input D+3.3V
79	STBY	O	
80	EEP_SCL	O	Serial clock to EEPROM (IC304)

Key detection for A/D port

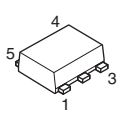
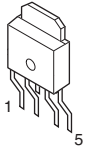
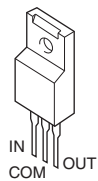
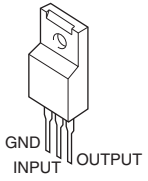
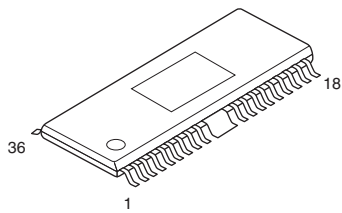
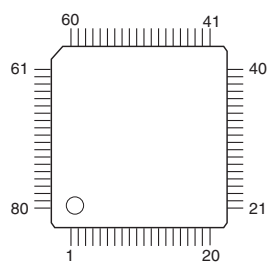
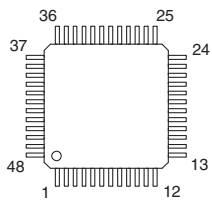
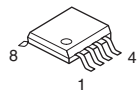
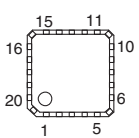
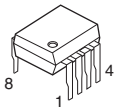
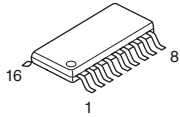
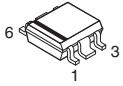
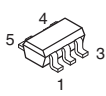
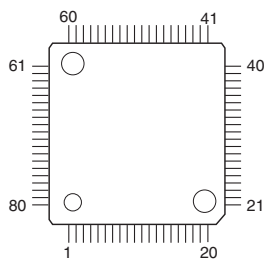
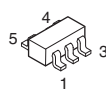
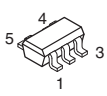
Key input (A/D) pull-up resistance 10 k-ohms

Ohm	0	+820	+3.3 k	+12.0 k
V	0	0.2–0.3	0.9–1.0	2.0–2.1
A/D value (3.3 V = 255)	0	15–25	70–78	153–162
KEY0 (58 pin)	—	STOP	PAUSE	OPEN/CLOSE
KEY1 (59 pin)	—	PLAY	SKIP +/SEARCH +	SKIP -/SEARCH -

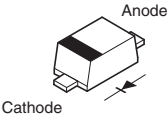
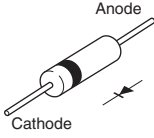
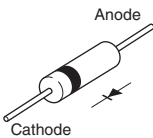
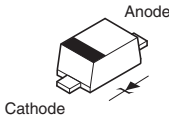
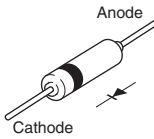
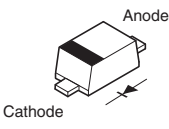
Ohm	0	+100	+3.3 k	+12.0 k
V	0	0.03–0.1	0.8–0.9	2.0–2.1
A/D value (3.3 V = 255)	0	3–7	60–70	150–160
KEY2 (60 pin)	—	PURE DIRECT	CD/USB	—

PIN CONNECTION DIAGRAMS

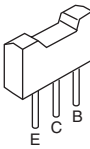
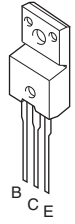
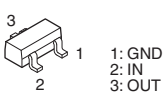
• ICs

BD5229G-TR 	BD9870FPS-E2 	KIA7805API 	KIA79M05PI-U 
LA6565-TE-L-E 	LC786922E-01UY-E 	LC87F1HC8A-F5AL1-E 	LE24C023M-TLM-E 
MFI341S2161 	NJM2068D-D 	PCM1780DBQR 	R1172S331B-E2-F 
R5523N001A-TR-F 	R5F212CASNFP 	TC7SH08F 	TC7SH08FU 

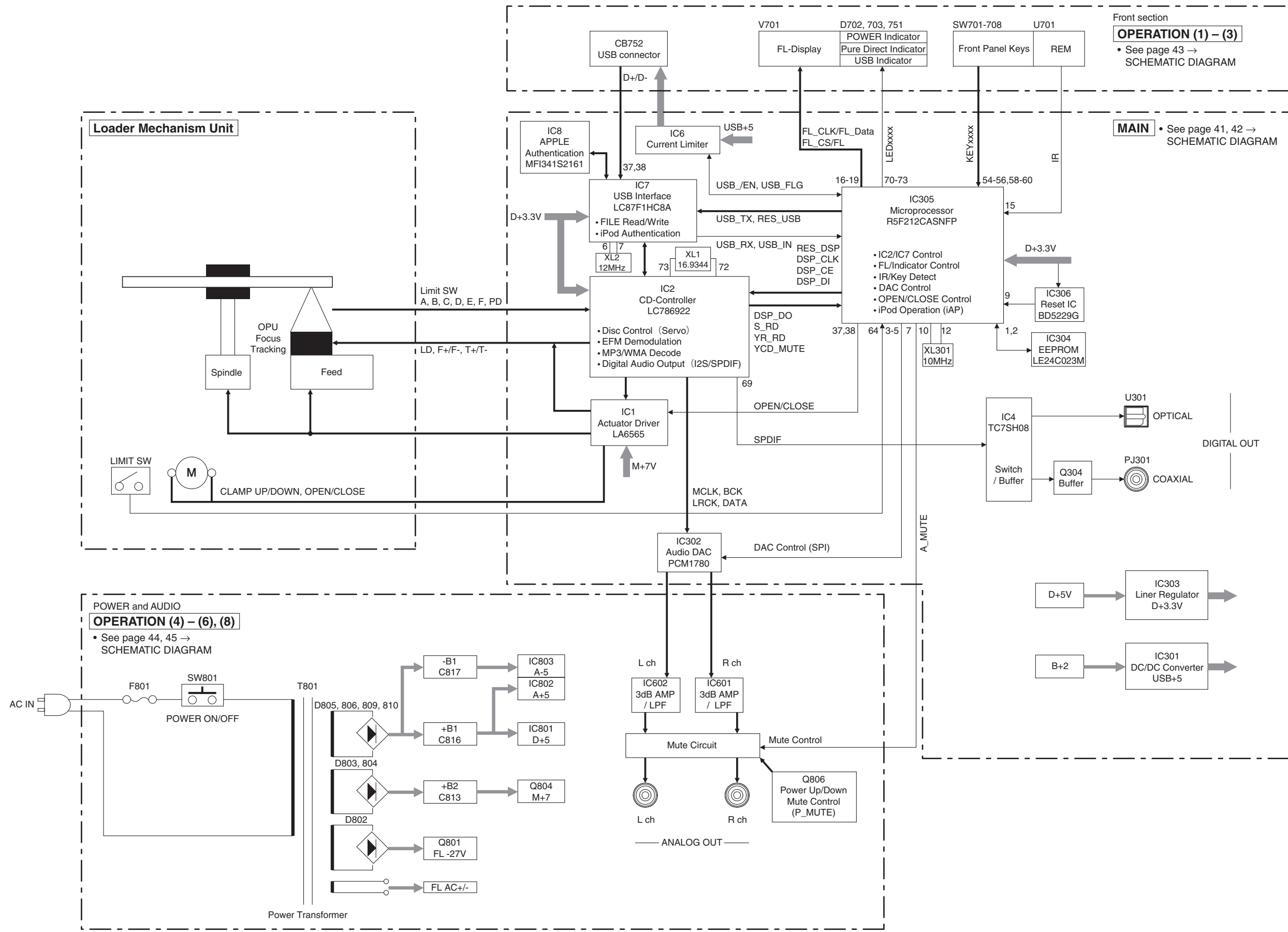
• Diodes

1SS355 	1T2 	2A02-05 XO 	MAZ8047GHL 4.9V 
MTZJ5.6B 5.6V MTZJ6.2B 6.2V MTZJ7.5B 7.5V MTZJ8.2A 8.2V MTZJ30A 30V 	RB050LA-40TR TP RB501V-40 		

• Transistors

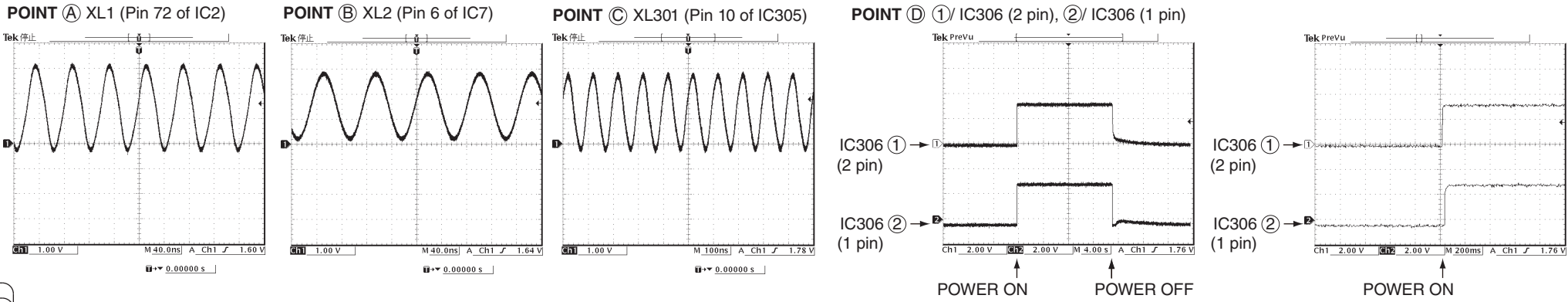
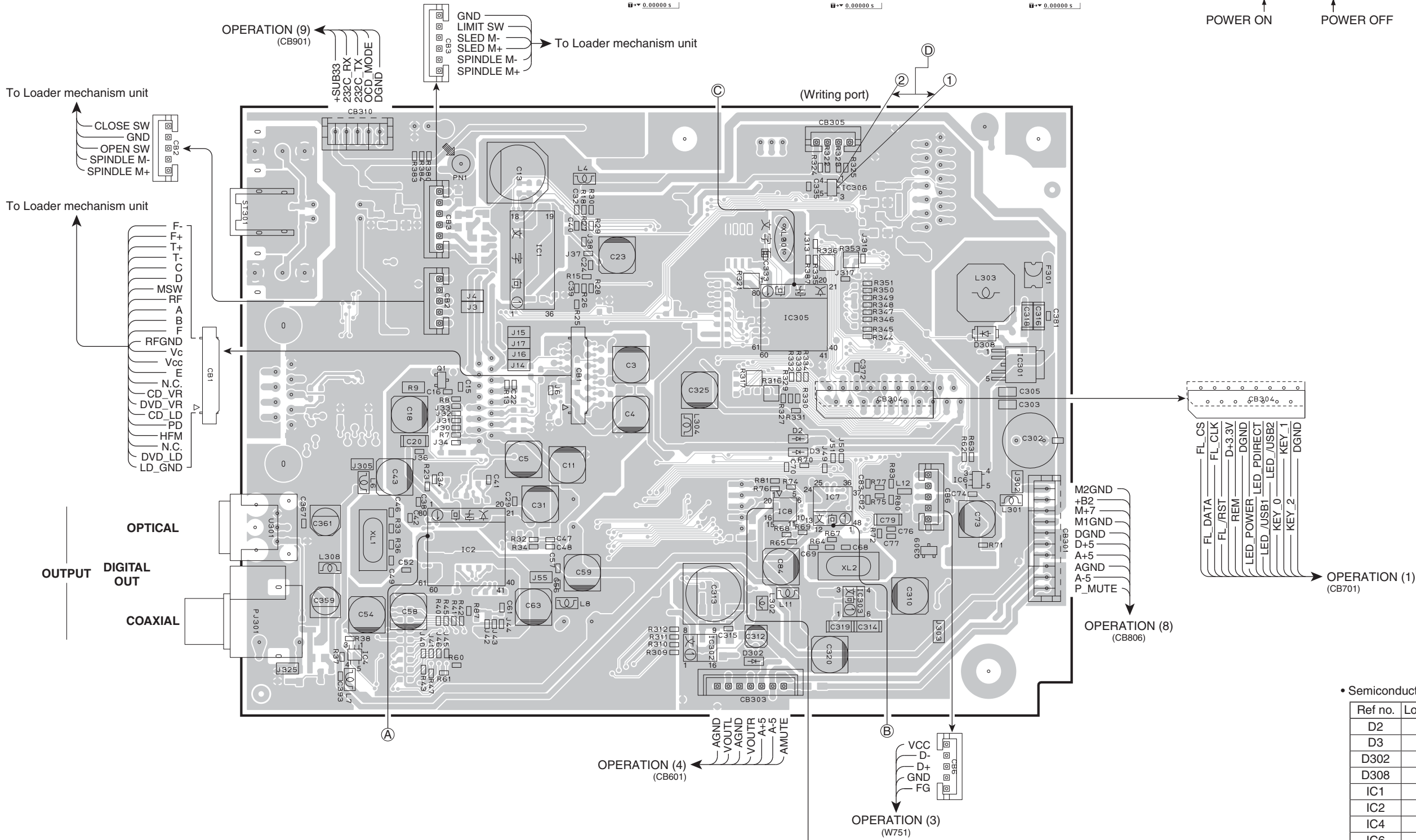
2SA1037K 	2SA1708 	2SC2412K 	2SC3852 
2SD1938F 	2SD2394 	12A01C-TB-E 	DTA114EKA DTC114EKA DTC144EKA 

■ BLOCK DIAGRAM



PRINTED CIRCUIT BOARDS

MAIN P.C.B. (Side A)

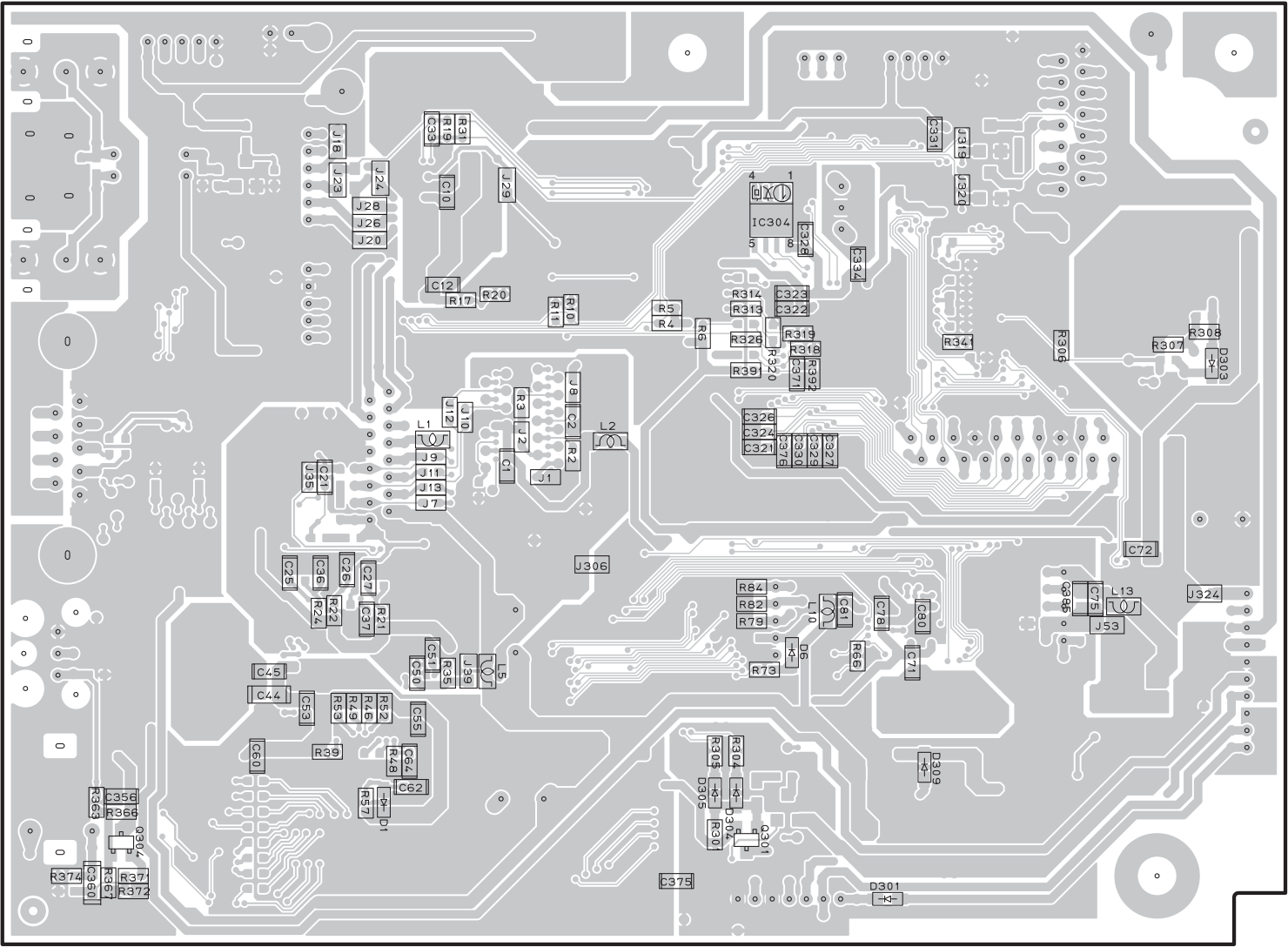


• Semiconductor Location

Ref no.	Location	Ref no.	Location
D2	E5	IC8	E5
D3	E5	IC301	G4
D302	E6	IC302	E6
D308	F4	IC303	F6
IC1	D4	IC305	E4
IC2	C5	IC306	F3
IC4	C6	Q1	C4
IC6	F5	Q309	F5
IC7	F5		

No replacement part available.
サービス部品供給なし

MAIN P.C.B. (Side B)



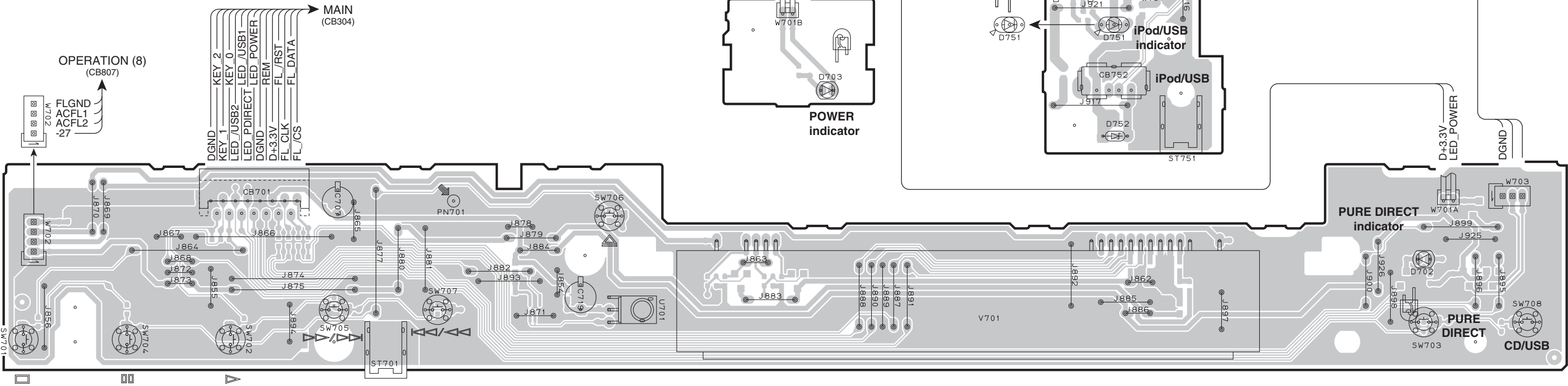
• Semiconductor Location

Ref no.	Location
D1	C6
D6	E5
D301	E6
D303	G4
D304	E6
D305	E6
D309	E6
IC304	E3
Q301	E6
Q304	B6

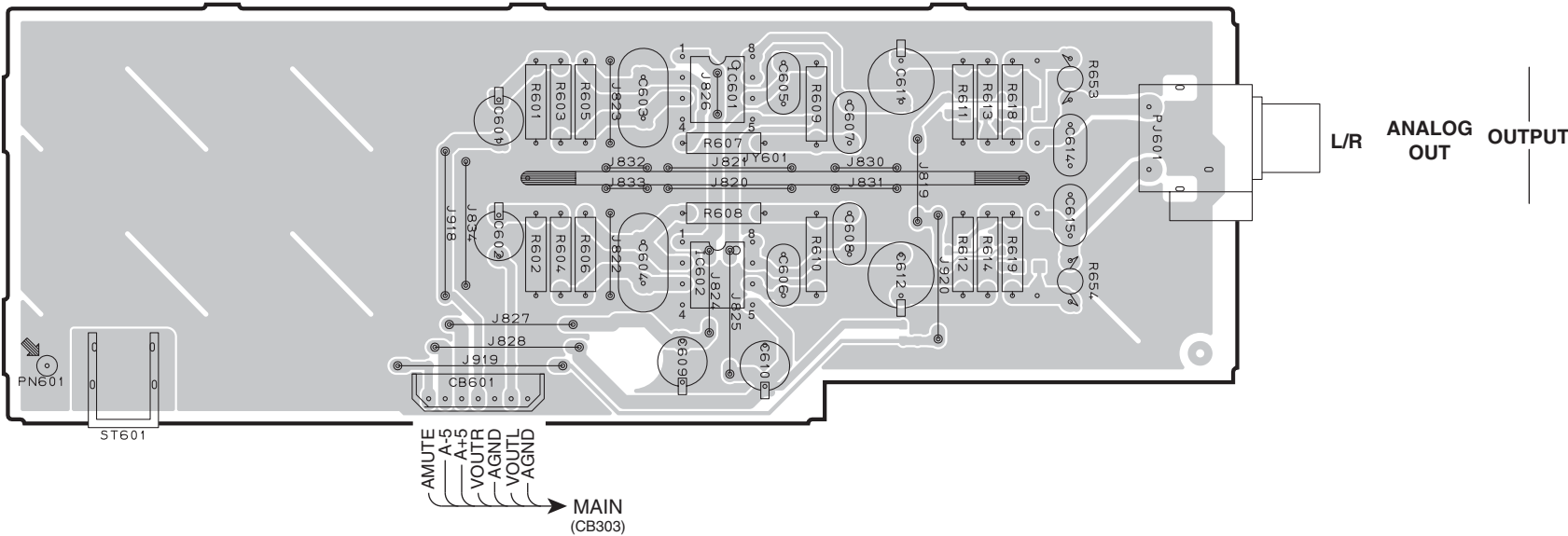
OPERATION (1) P.C.B. (Side A)

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

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



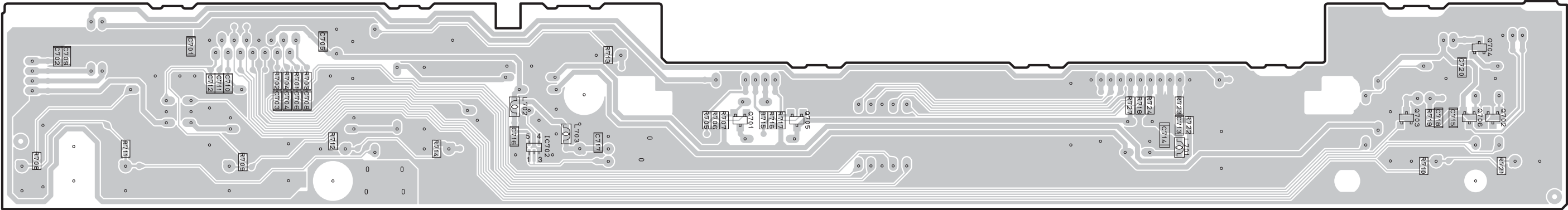
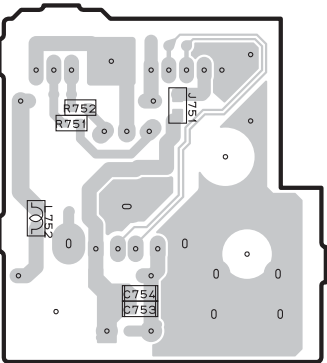
OPERATION (4) P.C.B. (Side A)



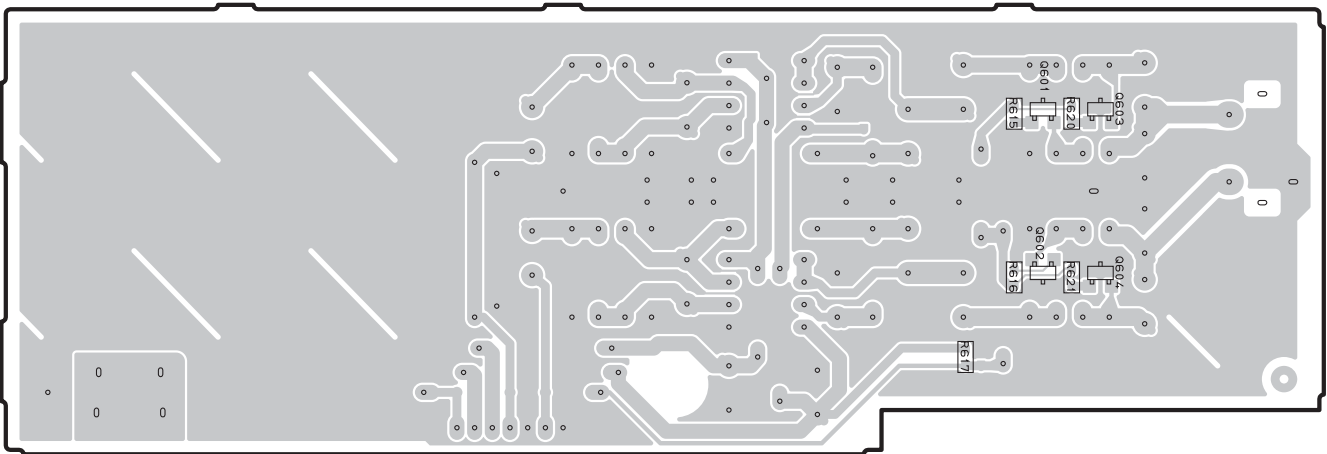
• Semiconductor Location

Ref no.	Location
D702	I4
D703	F3
D751	H2
D752	H3
IC601	D6
IC602	D6

OPERATION (3) P.C.B. (Side B)



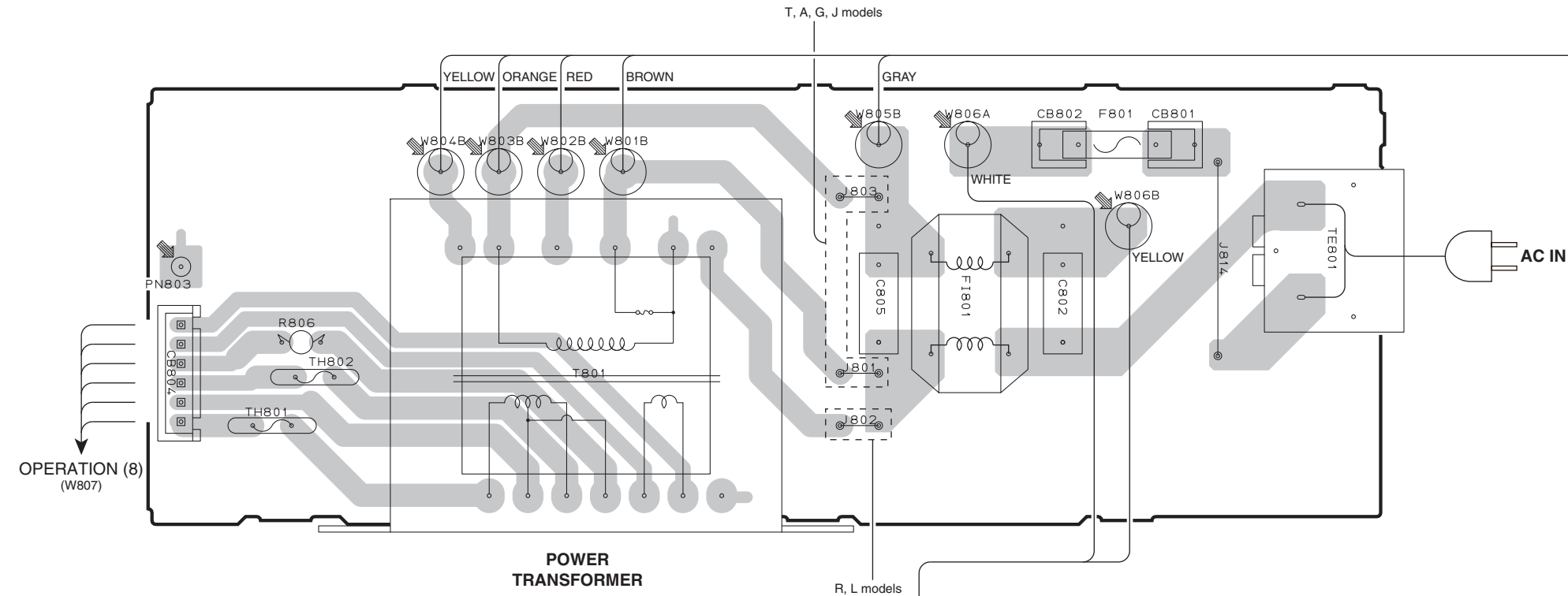
OPERATION (4) P.C.B. (Side B)



- Semiconductor Location

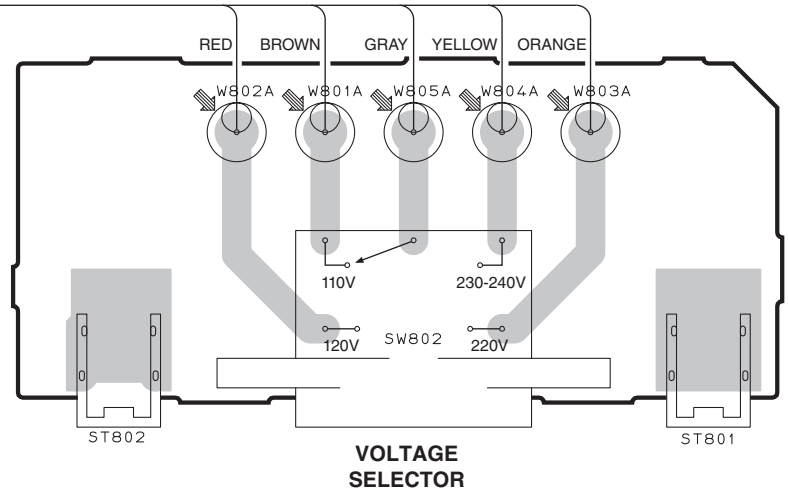
Ref no.	Location
IC702	D4
Q601	E6
Q602	E6
Q603	E6
Q604	E6
Q701	E4
Q702	J4
Q703	I4
Q704	J3
Q705	F4
Q706	J4

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

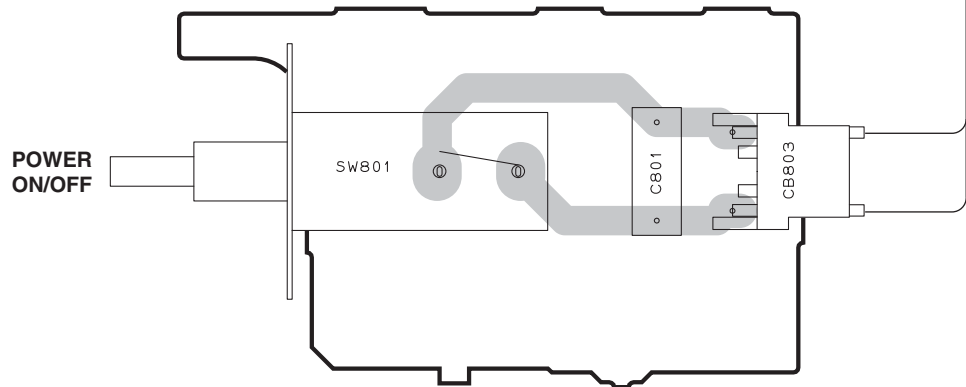


OPERATION (7) P.C.B. (Side A)

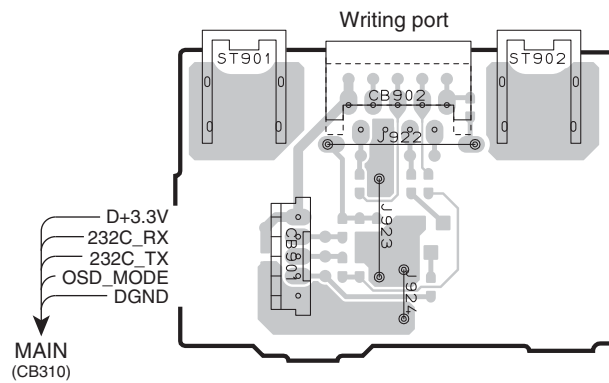
R, L models



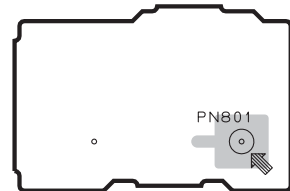
OPERATION (6) P.C.B. (Side A)



OPERATION (9) P.C.B. (Side A)

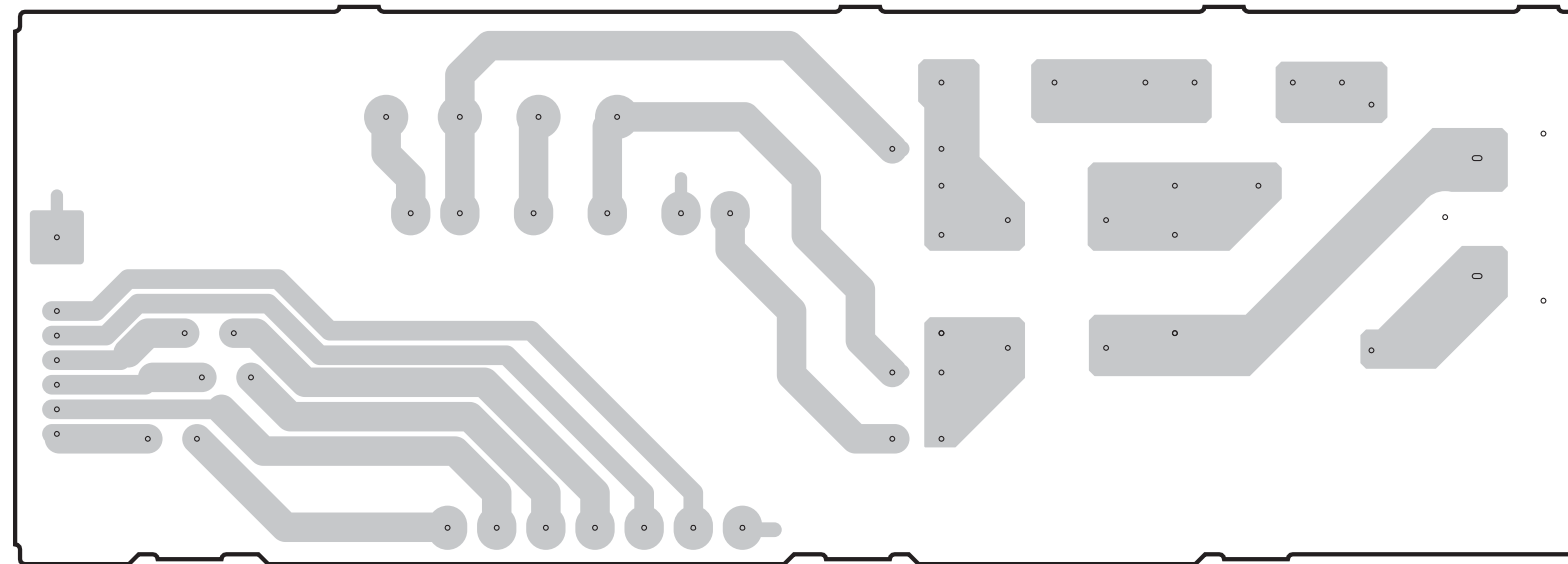


OPERATION (10) P.C.B. (Side A)



1

OPERATION (5) P.C.B. (Side B)

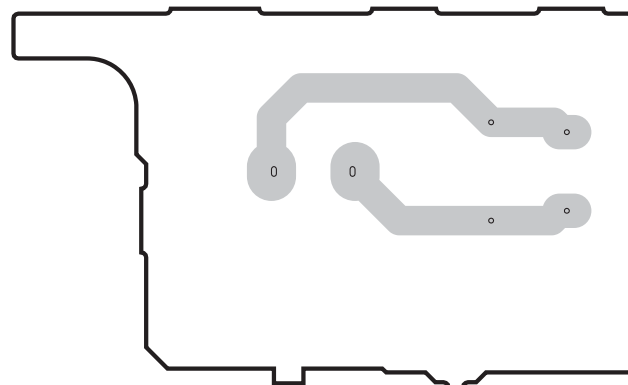


2

3

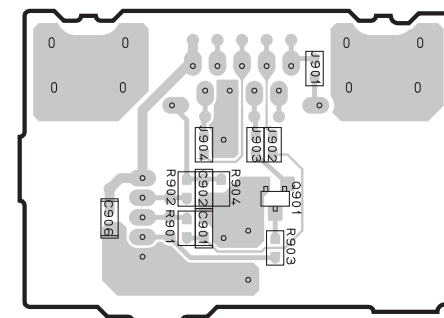
4

OPERATION (6) P.C.B. (Side B)



5

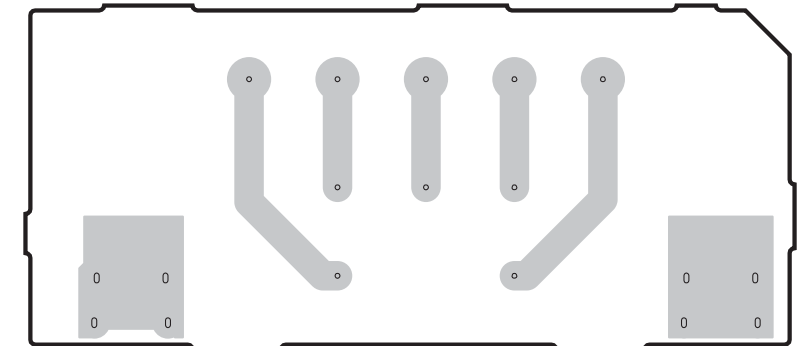
OPERATION (9) P.C.B. (Side B)



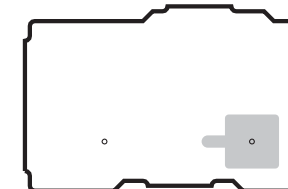
6

OPERATION (7) P.C.B. (Side B)

R, L models



OPERATION (10) P.C.B. (Side B)

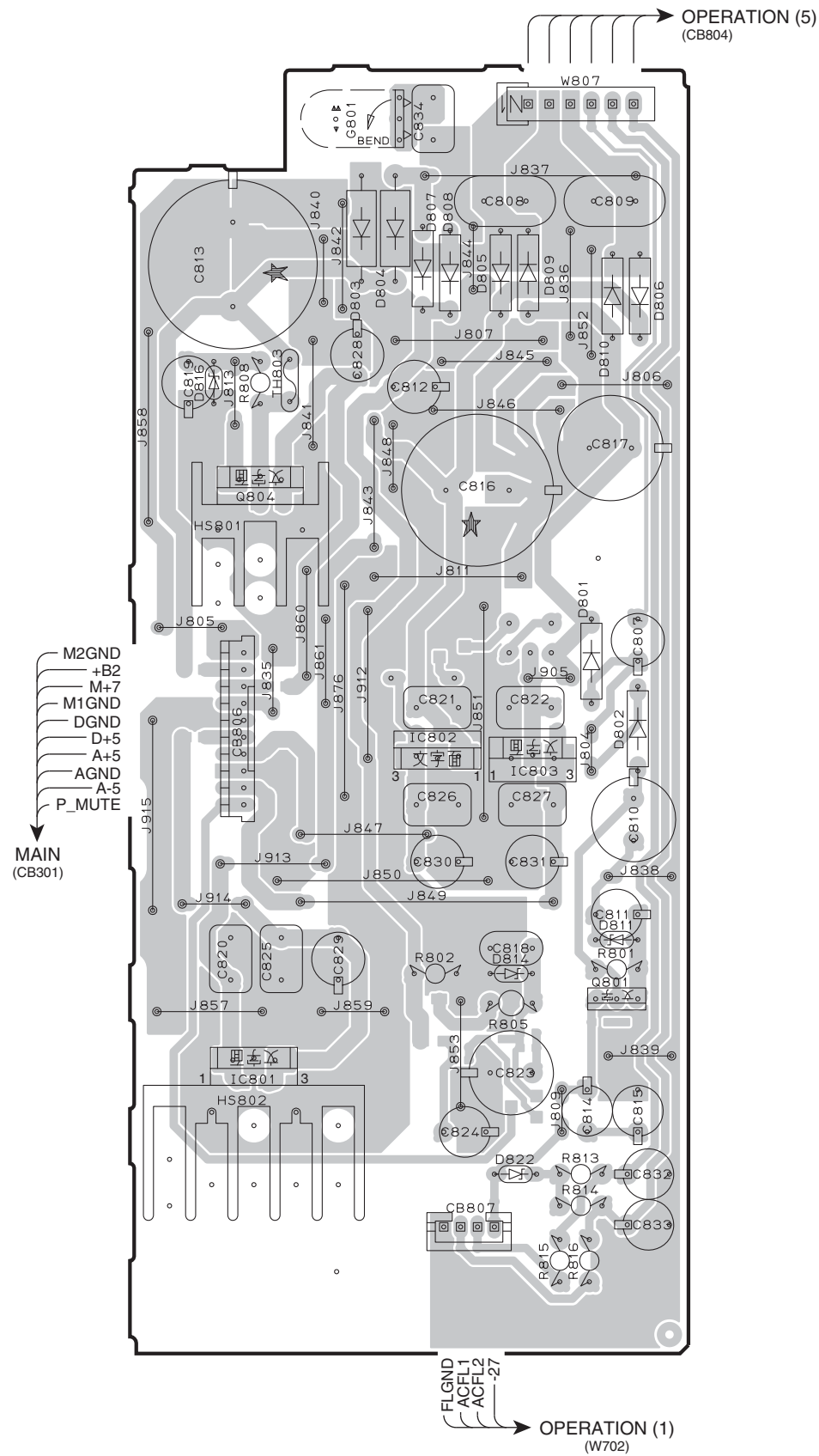


7

- Semiconductor Location

Ref no.	Location
Q901	F6

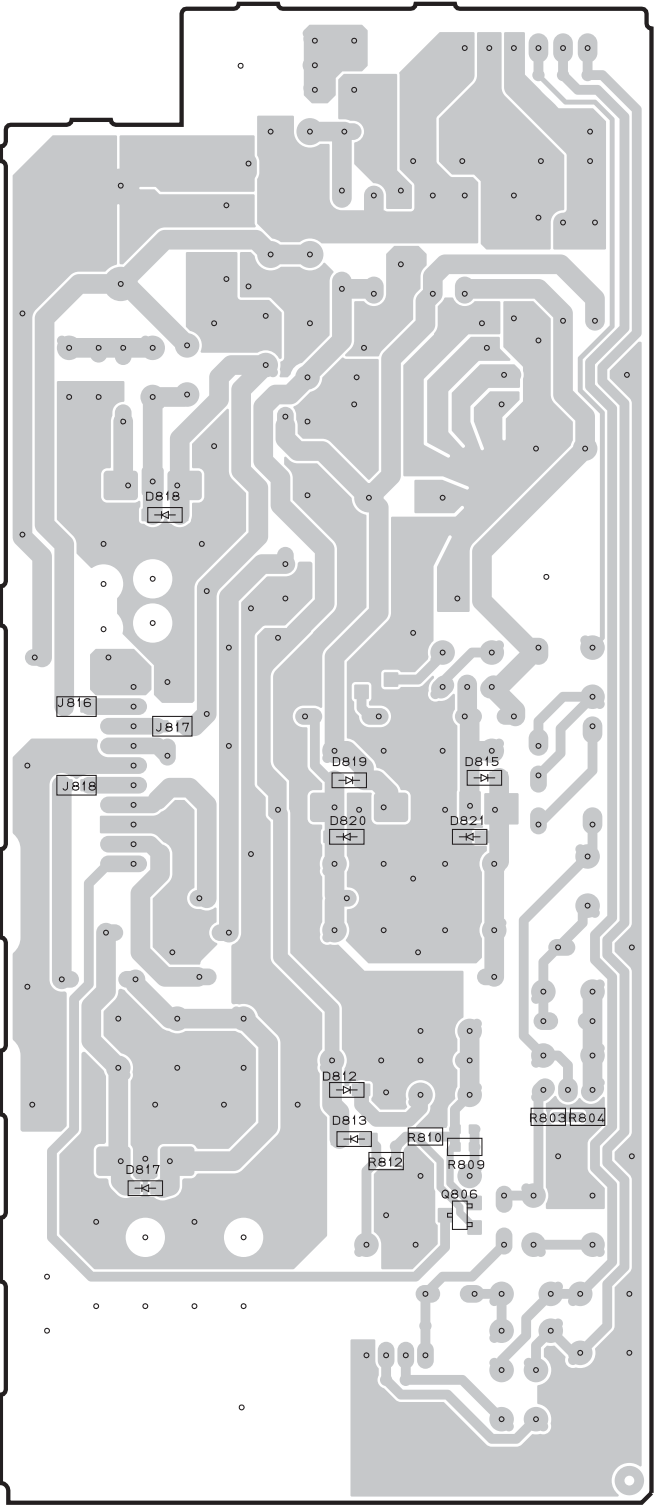
OPERATION (8) P.C.B. (Side A)



• Semiconductor Location

Ref no.	Location
D801	D4
D802	D4
D803	C2
D804	C2
D805	C3
D806	D3
D807	C3
D808	C3
D809	C3
D810	D3
D811	D5
D812	H5
D813	H6
D814	C5
D815	H4
D816	B3
D817	G6
D818	G3
D819	H4
D820	H5
D821	H5
D822	C6
IC801	B6
IC802	C4
IC803	C4
Q801	D5
Q804	B3
Q806	H6

OPERATION (8) P.C.B. (Side B)



SCHEMATIC DIAGRAMS

MAIN 1/2

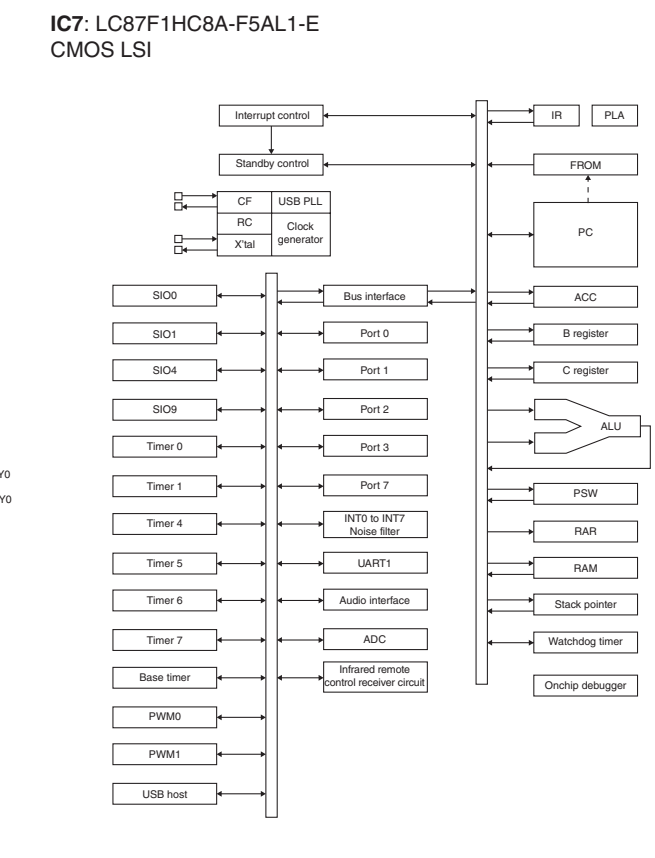
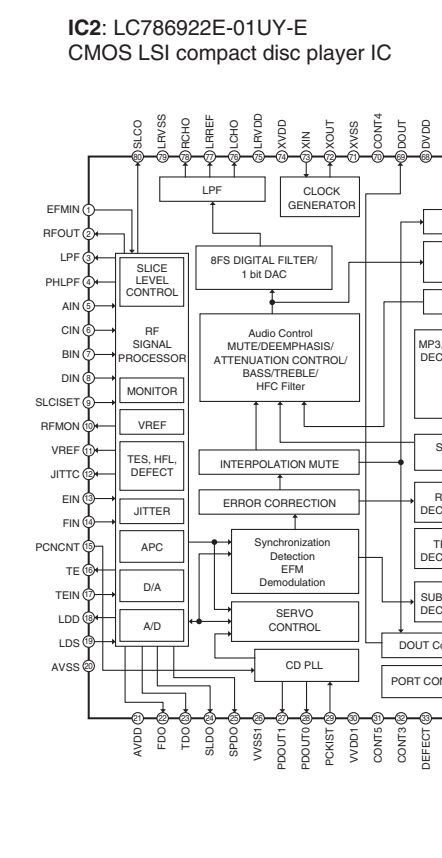
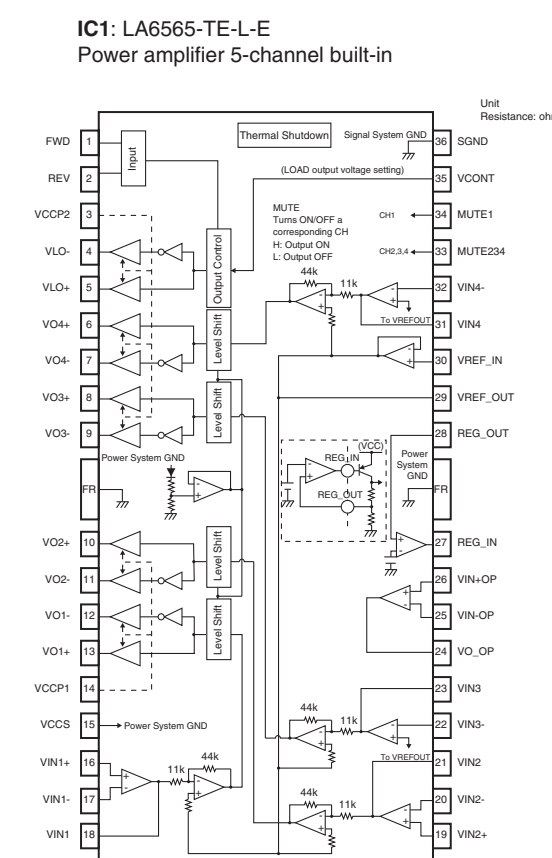
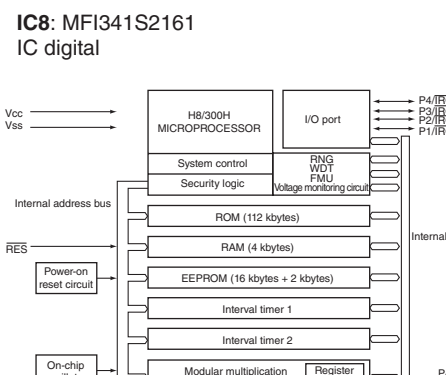
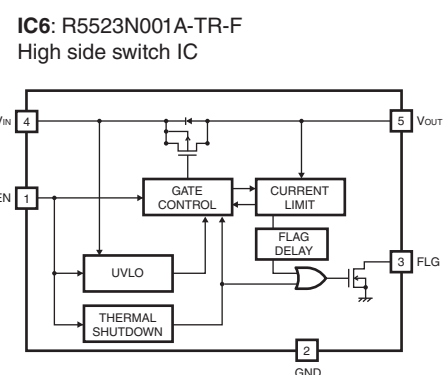
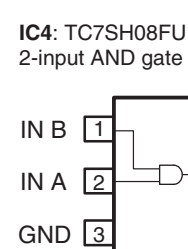
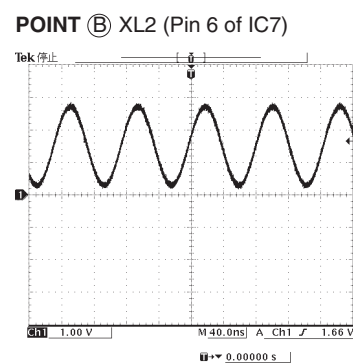
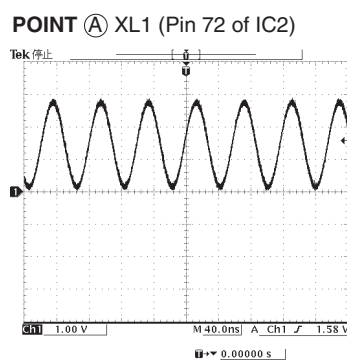
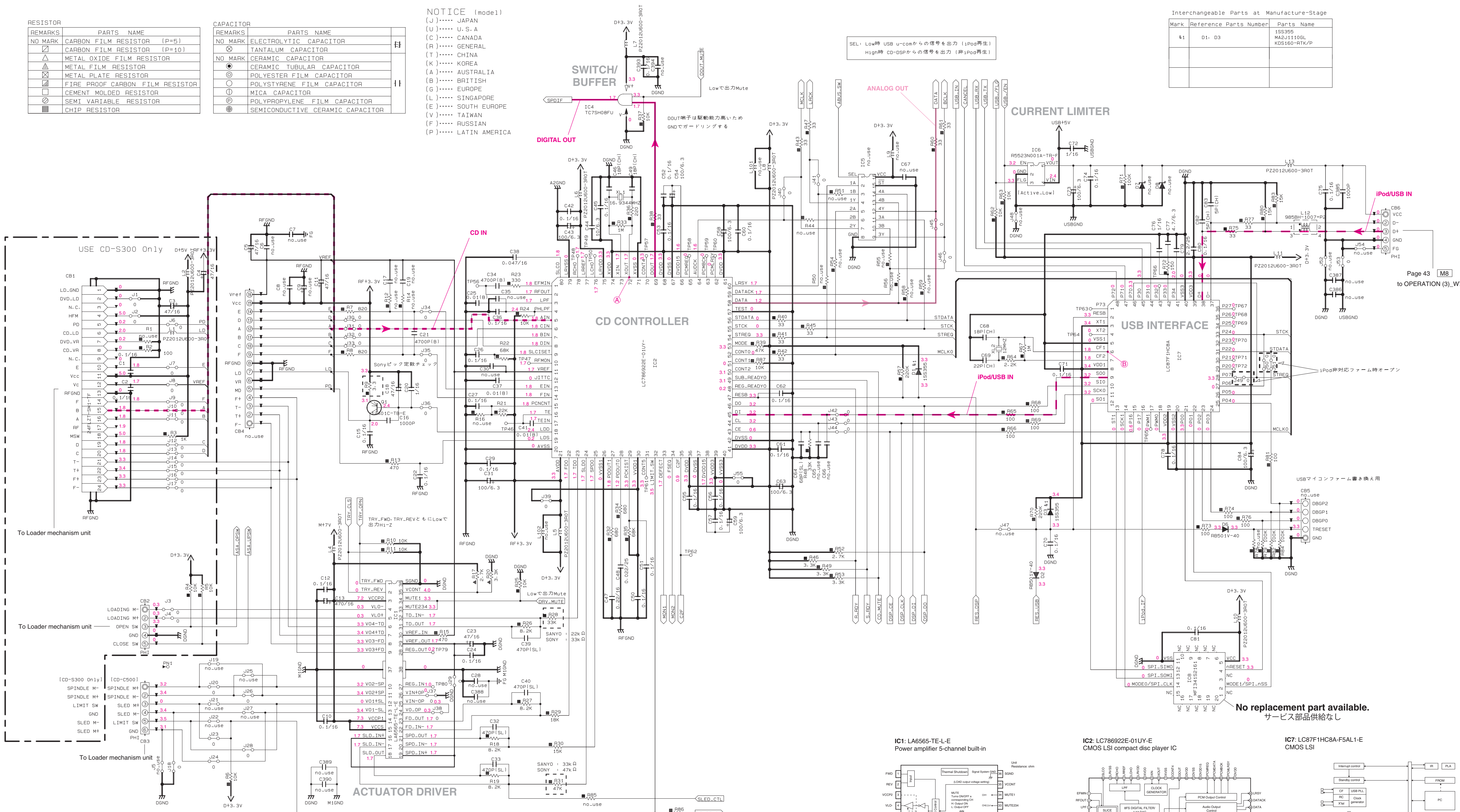
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
△	CARBON FILM RESISTOR (P=10)
□	METAL OXIDE FILM RESISTOR
△	METAL FILM RESISTOR
⊗	POLYESTER FILM RESISTOR
⊠	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
●	CERAMIC TUBULAR CAPACITOR
⊗	POLYESTER FILM CAPACITOR
⊠	POLYSTYRENE FILM CAPACITOR
○	MICA CAPACITOR
⊖	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR

NOTICE (model)

(J)..... JAPAN
(U)..... U. S. A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN
(F)..... RUSSIAN
(P)..... LATIN AMERICA

Mark	Reference Parts Number	Parts Name
41	D1- D3	ISS385 MA2J11106L KDS160-RTK/P



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ 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.

●電圧は、内部抵抗 10MΩの電圧計で測定したものです。
●△印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
●本回路図は標準回路図です。改良のため予告なく変更することがございます。

MAIN 2/2

RESISTOR		CAPACITOR	
REMARKS	PARTS NAME	REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)	NO MARK	ELECTROLYTIC CAPACITOR
	CARBON FILM RESISTOR (P=10)		TANTALUM CAPACITOR
	METAL OXIDE FILM RESISTOR	NO MARK	CERAMIC CAPACITOR
	METAL FILM RESISTOR		CERAMIC TUBULAR CAPACITOR
	METAL PLATE RESISTOR		POLYESTER FILM CAPACITOR
	FIRE PROOF CARBON FILM RESISTOR		POLYSTYRENE FILM CAPACITOR
	CEMENT MOLDED RESISTOR		MICA CAPACITOR
	SEMI VARIABLE RESISTOR		POLYPROPYLENE FILM CAPACITOR
	CHIP RESISTOR		SEMICONDUCTIVE CERAMIC CAPACITOR

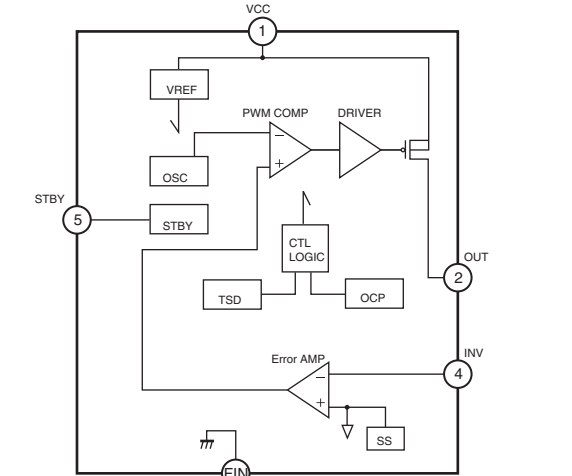
NOTICE (model)

(J)..... JAPAN
(U)..... U.S.A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
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(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN
(F)..... RUSSIAN
(P)..... LATIN AMERICA

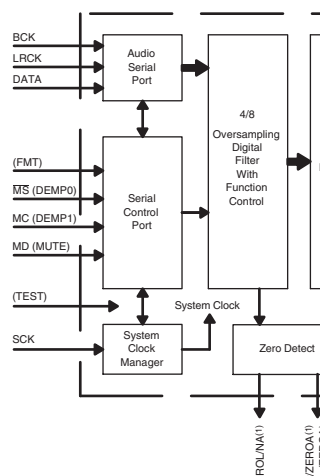
Page 45 [M4]
to OPERATION (8)_CB806

Page 44 [B6]
to OPERATION (4)_CB601

IC301: BD9870FPS-E2
High stand voltage 1 channel step-down switching regulator



IC302: PCM1780DBQR
Audio digital-to-analog converter

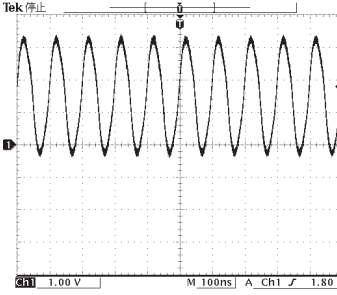


(1) Open-drain output for the PCM1782
NOTE: Signal names in parentheses () are for the PCM1781.

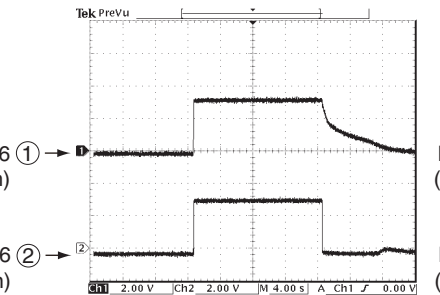
- ★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
- ★ Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- ★ Schematic diagram is subject to change without notice.

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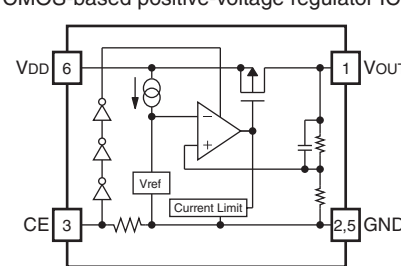
POINT © XL301 (Pin 10 of IC305)



POINT D ①/ IC306 (2 pin), ②/ CB306 (1 pin)

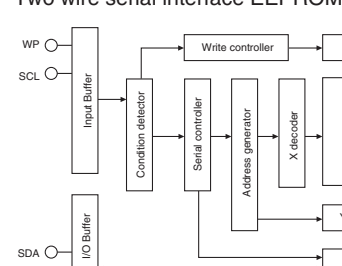


IC303: R1172S331B-E2-F
CMOS-based positive-voltage regulator IC



Pin No.	Symbol	Description
1	VDD	Output Pin of Voltage Regulator
2, 5	GND	Ground Pin
3	CE	Chip Enable Pin
4	NC	No Connection
6	VDD	Input Pin

IC304: LE24C023M-TLM-E
Two wire serial interface EEPROM

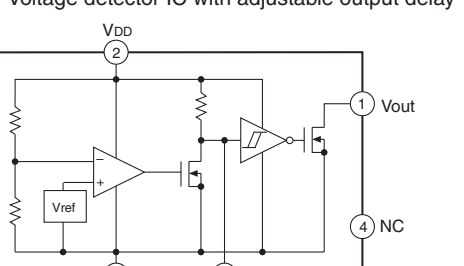


Key detection for A/D port			
Key input (A/D) pull-up resistance 10 k-ohms			
Ohm	0	+ 820	+ 3.3 k
V	0	0.2 - 0.3	0.9 - 1.0
A/D value (3.3V=255)	0	15 - 25	153 - 162
KEY1 (59 pin)	-	STOP	PAUSE
KEY2 (60 pin)	-	PLAY	SKIP + SEARCH + SKIP - SEARCH

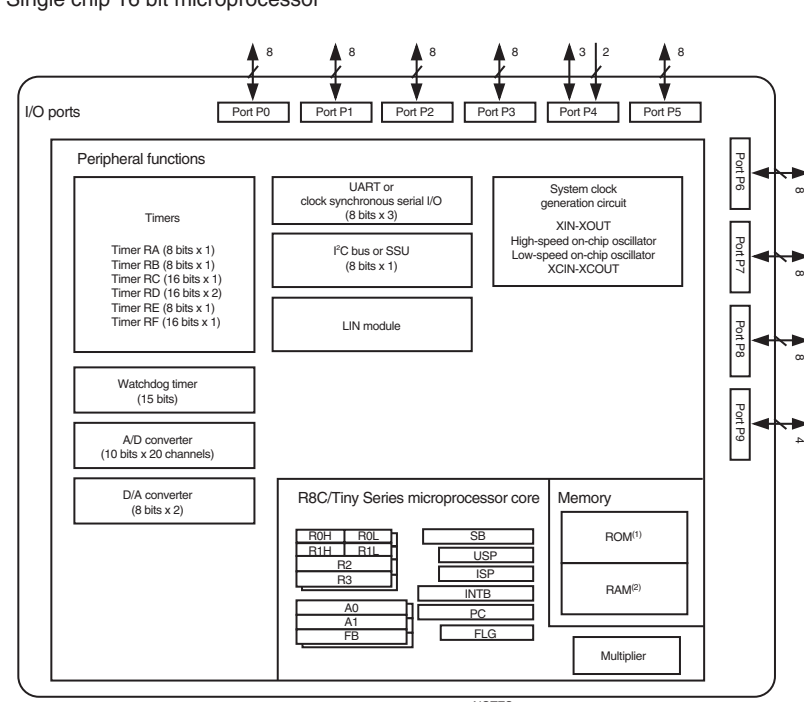
Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
Δ1	D303 - D305- D309	1SS395 MA2J1110GL KD5160-RTK/P
Δ2	Q309	DT144KA KIC1045-RTK/P

IC306: BD5229G-TR
Voltage detector IC with adjustable output delay



IC305: R5F212CASNFP
Single chip 16 bit microprocessor



NOTES
1. ROM size varies with MCU type.
2. RAM size varies with MCU type.

Page 43 [B5]
to OPERATION (1)_CB701

MICROPROCESSOR

IC305: R5F212CASNFP

RESET IC

IC306: BD5229G-TR

Page 44 [B3]
to OPERATION (9)_CB901

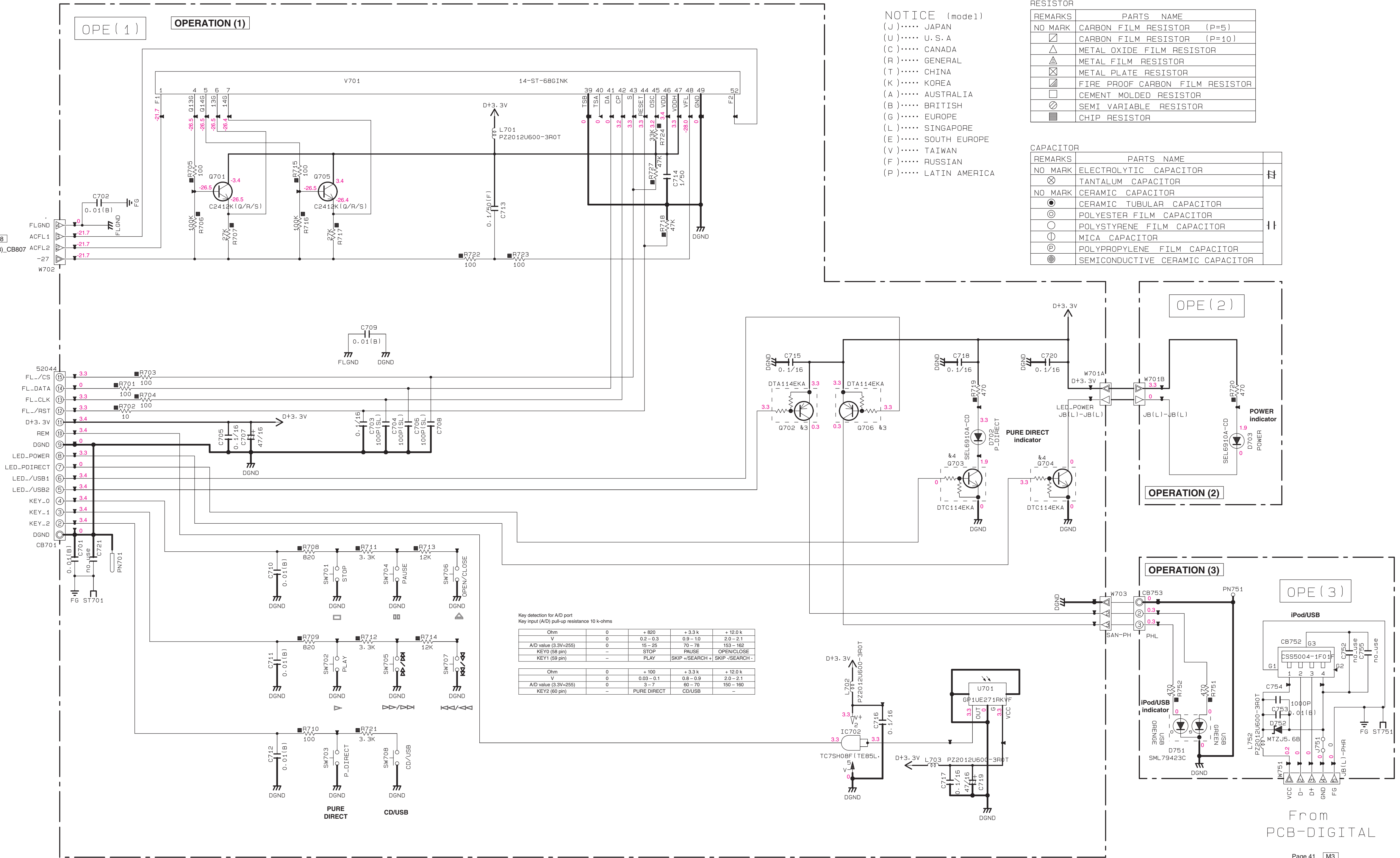
DIGITAL OUT

OUTPUT

COAXIAL

CD-C600 only

OPERATION 1/3



NOTICE (model)

(J)..... JAPAN
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(F)..... RUSSIAN
(P)..... LATIN AMERICA

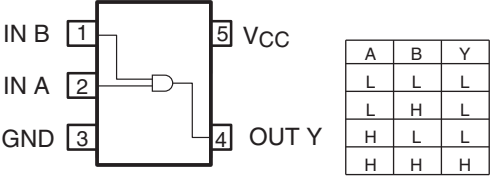
RESISTOR		
REMARKS	PARTS NAME	
NO MARK	CARBON FILM RESISTOR	(P=5)
	CARBON FILM RESISTOR	(P=10)
	METAL OXIDE FILM RESISTOR	
	METAL FILM RESISTOR	
	METAL PLATE RESISTOR	
	FIRE PROOF CARBON FILM RESISTOR	
	CEMENT MOLDED RESISTOR	
	SEMI VARIABLE RESISTOR	
	CHIP RESISTOR	

CAPACITOR		
REMARKS	PARTS NAME	
NO MARK	ELECTROLYTIC CAPACITOR	
	TANTALUM CAPACITOR	
NO MARK	CERAMIC CAPACITOR	
	CERAMIC TUBULAR CAPACITOR	
	POLYESTER FILM CAPACITOR	
	POLYSTYRENE FILM CAPACITOR	
	MICA CAPACITOR	
	POLYPROPYLENE FILM CAPACITOR	
	SEMICONDUCTIVE CERAMIC CAPACITOR	

Interchangeable Parts at Manufacture-Stage

Mark	Reference Parts Number	Parts Name
&3	Q702, Q706	DTA114EKA KRA102S-RTK/P
&4	Q703, Q704	DTC114EKA KRC102S-RTK/P

IC702: TC7SH08F
2-input AND gate

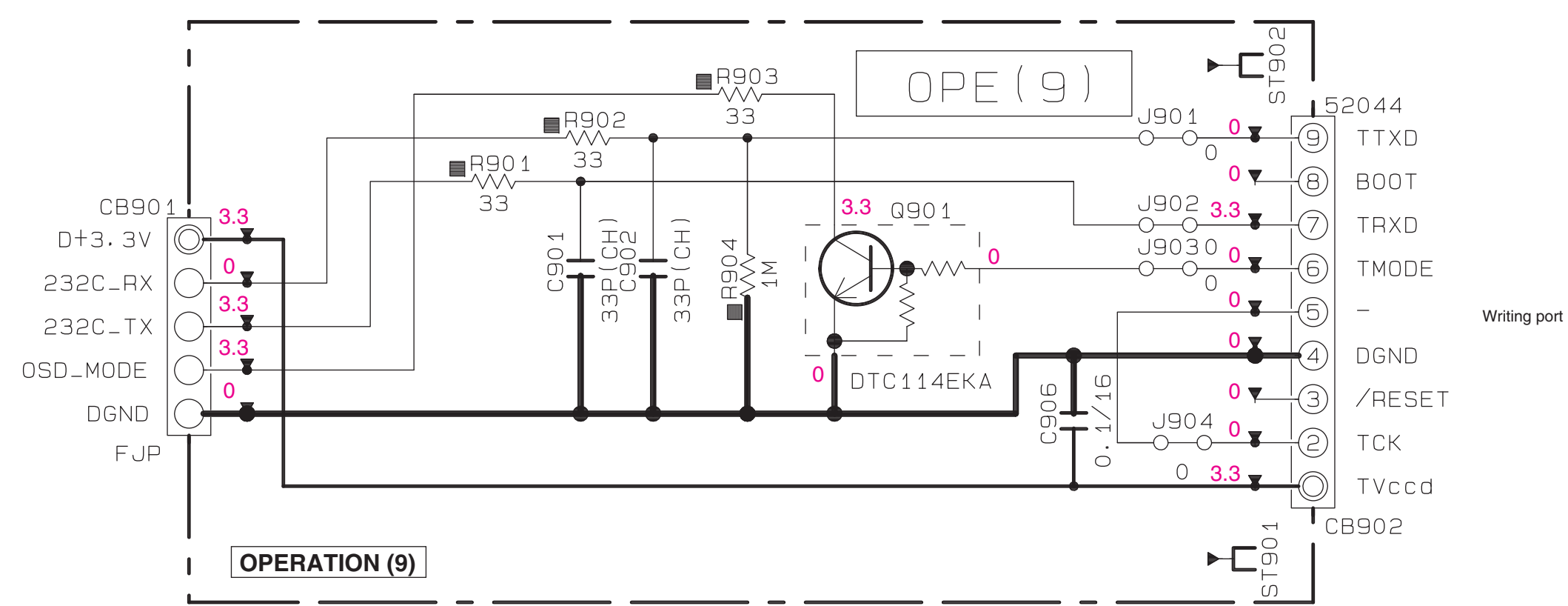


★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
★ Components having special characteristics are marked Δ, and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.

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OPERATION 2/3

Page 42 [K2]
to MAIN_CB310

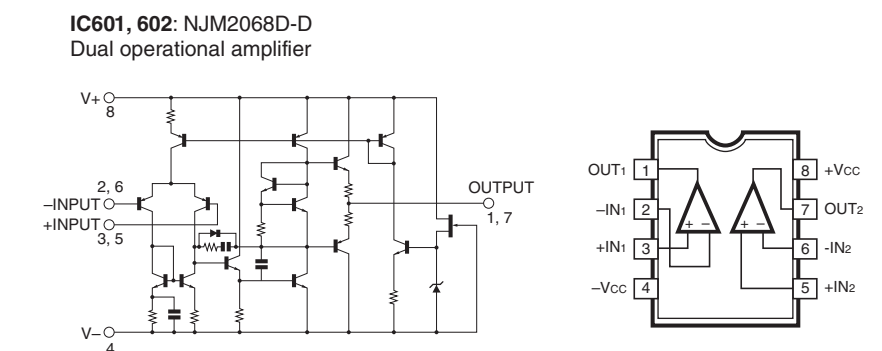
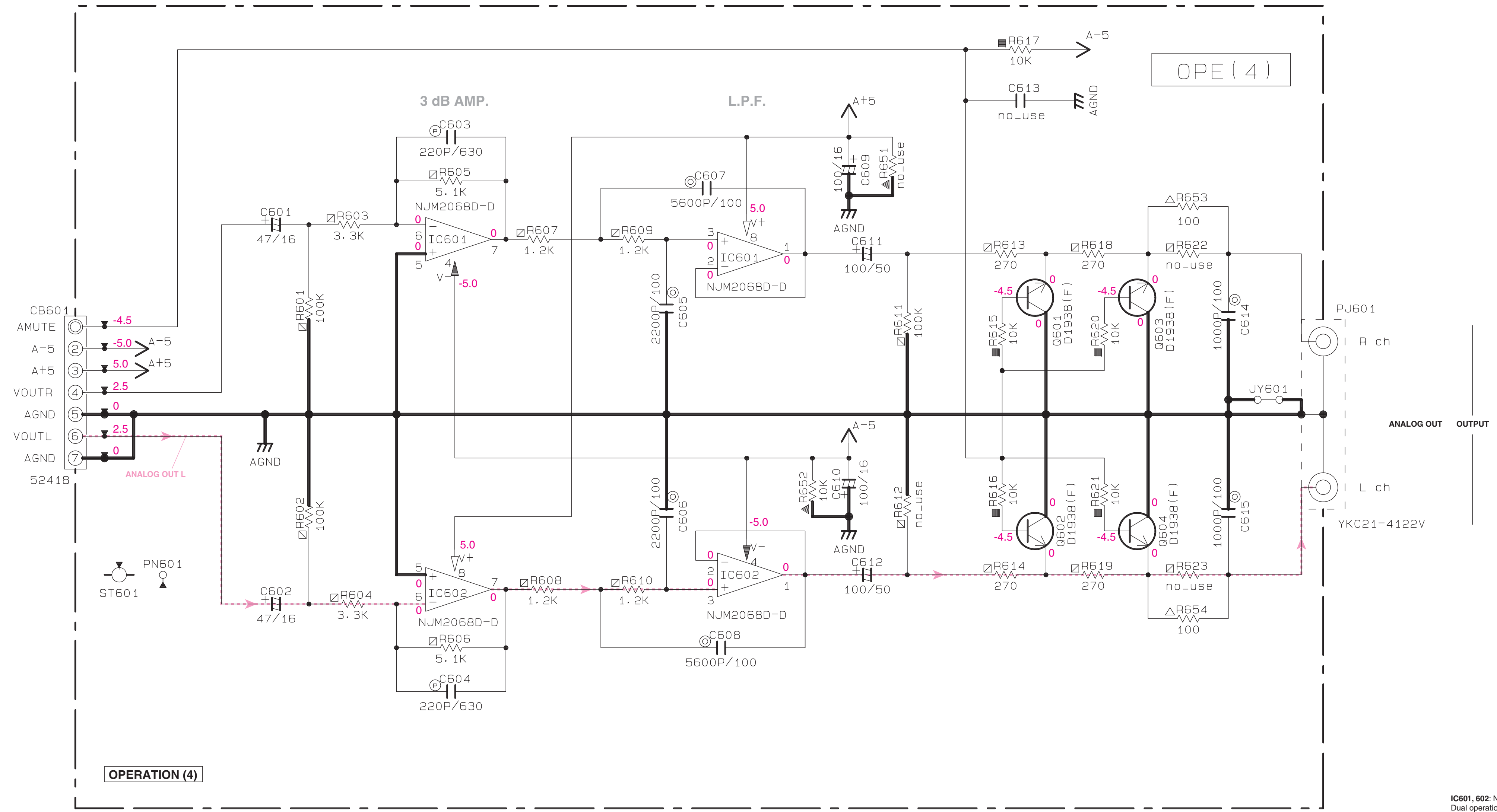


NOTICE (model)
(J)..... JAPAN
(U)..... U.S. A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(G)..... EUROPE
(L)..... SINGAPORE
(E)..... SOUTH EUROPE
(V)..... TAIWAN
(F)..... RUSSIAN
(P)..... LATIN AMERICA

RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
⊠	METAL PLATE RESISTOR
▨	FIRE PROOF CARBON FILM RESISTOR
□	CEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
●	CERAMIC TUBULAR CAPACITOR
◎	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
①	MICA CAPACITOR
⊖	POLYPROPYLENE FILM CAPACITOR
⊕	SEMICONDUCTIVE CERAMIC CAPACITOR

Page 42 [B7]
to MAIN_CB303



★ All voltages are measured with a 10MΩ/V DC electronic voltmeter.
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OPERATION 3/3

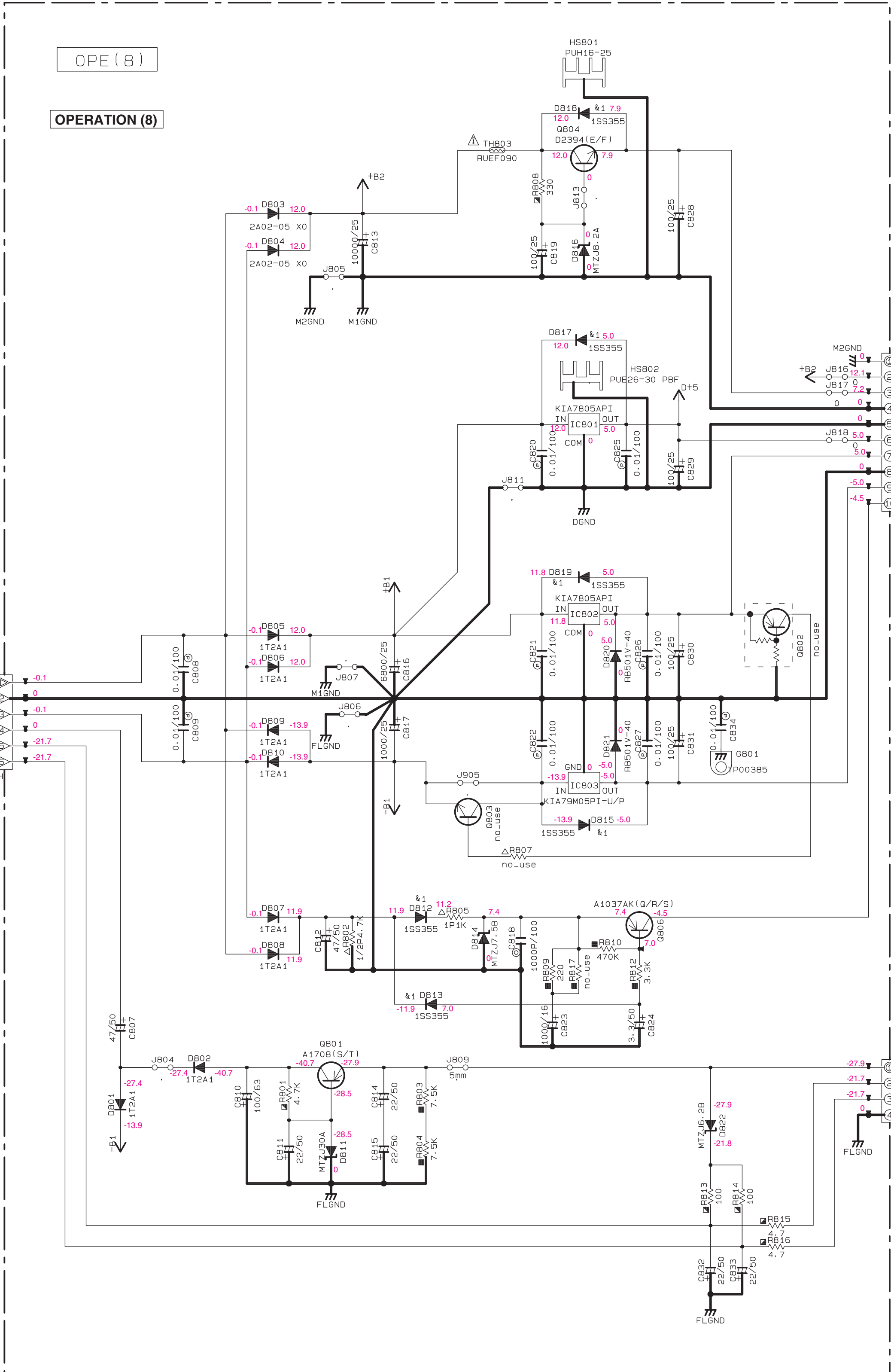
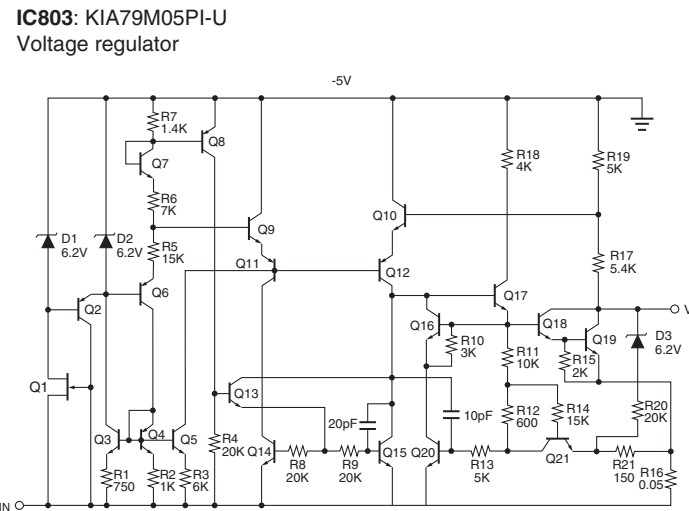
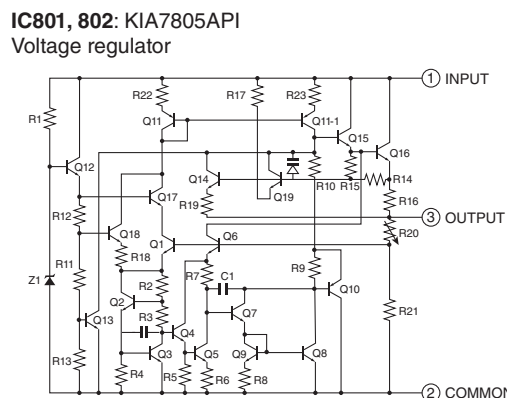
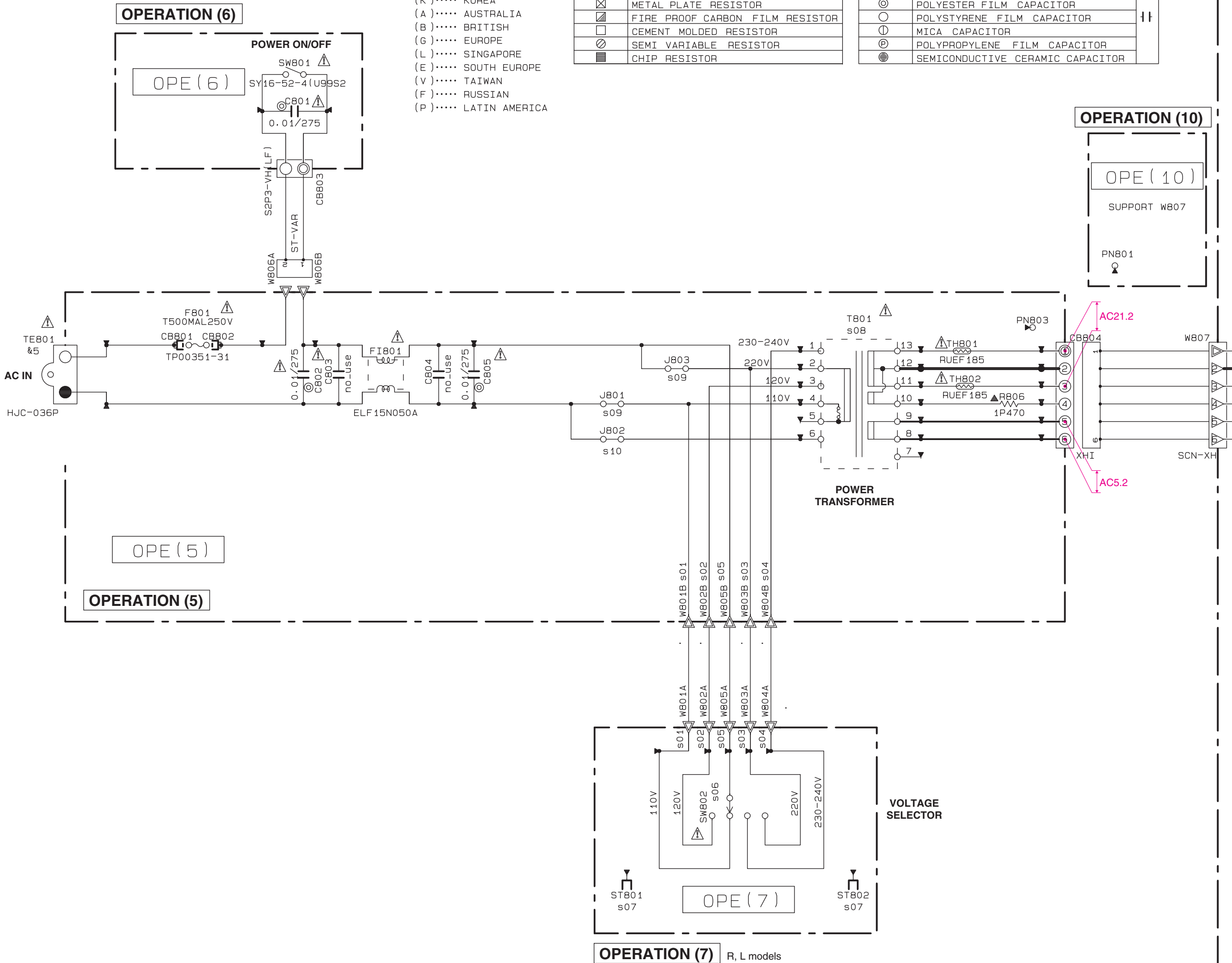
Destination Part List						
sXX	LOC	J	RL	T	A	G
s1	WB01A WB01B	X	MH11025	X	X	X
s2	WB02A WB02B	X	MH12025	X	X	X
s3	WB03A WB03B	X	MH13025	X	X	X
s4	WB04A WB04B	X	MH14025	X	X	X
s5	WB05B WB05A	X	MH18025	X	X	X
s6	SWB02	X	WHB1360 VSA-14-3	X	X	X
s7	STB01 STB02	X	V404050	X	X	X
s8	TB01	YA770A0 YA770	YA772A0 YA772	YA773A0 YA773	YA775A0 YA775	YA774A0 YA774
s9	JB03 JB01	VN50000	X	VN50000	VN50000	VN50000
s10	JB02	X	VN50000	X	X	X

Interchangeable Parts at Manufacture-Stage		
Mark	Reference Parts Number	Parts Name
&1	DB12, DB13, DB15 DB17 - DB19	1SS355 MA2J1110GL KDS160-RTK/P
&5	TB01	HJC-036P AC-020

NOTICE (mode1)
(J)..... JAPAN
(U)..... U.S.A
(C)..... CANADA
(R)..... GENERAL
(T)..... CHINA
(K)..... KOREA
(A)..... AUSTRALIA
(B)..... BRITISH
(L)..... EUROPE
(E)..... SINGAPORE
(V)..... TAIWAN
(F)..... RUSSIAN
(P)..... LATIN AMERICA

RESISTOR	
REMARKS	PARTS NAME
NO MARK	CARBON FILM RESISTOR (P=5)
□	CARBON FILM RESISTOR (P=10)
△	METAL OXIDE FILM RESISTOR
▲	METAL FILM RESISTOR
▣	METAL PLATE RESISTOR
▤	FIRE PROOF CARBON FILM RESISTOR
▥	CEMENT MOLDED RESISTOR
⊗	SEMI VARIABLE RESISTOR
■	CHIP RESISTOR

CAPACITOR	
REMARKS	PARTS NAME
NO MARK	ELECTROLYTIC CAPACITOR
⊗	TANTALUM CAPACITOR
NO MARK	CERAMIC CAPACITOR
●	CERAMIC TUBULAR CAPACITOR
⊙	POLYESTER FILM CAPACITOR
○	POLYSTYRENE FILM CAPACITOR
①	MICA CAPACITOR
⊖	POLYPROPYLENE FILM CAPACITOR
●	SEMICONDUCTIVE CERAMIC CAPACITOR



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- ★ 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.
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- △印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
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■ REPLACEMENT PARTS LIST

• ELECTRICAL COMPONENT PARTS

WARNING

- Components having special characteristics are marked Δ and must be replaced with parts having specifications equal to those originally installed.
- Δ 印のある部分は、安全確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- 部品価格ランクは、予告なく変更することがあります。

ABBREVIATIONS IN THIS LIST ARE AS FOLLOWS:

C.A.EL.CHP	: CHIP ALUMI.ELECTROLYTIC CAP	L.EMIT	: LIGHT EMITTING MODULE
C.CE	: CERAMIC CAP	LED.DSPLY	: LED DISPLAY
C.CE.ARRAY	: CERAMIC CAP ARRAY	LED.INFRD	: LED,INFRARED
C.CE.CHP	: CHIP CERAMIC CAP	MODUL.RF	: MODULATOR,RF
C.CE.ML	: MULTILAYER CERAMIC CAP	PHOT.CPL	: PHOTO COUPLER
C.CE.M.CHP	: CHIP MULTILAYER CERAMIC CAP	PHOT.INTR	: PHOTO INTERRUPTER
C.CE.SAFTY	: RECOGNIZED CERAMIC CAP	PHOT.RFLCT	: PHOTO REFLECTOR
C.CE.TUBLR	: CERAMIC TUBULAR CAP	PIN.TEST	: PIN,TEST POINT
C.CE.SMI	: SEMI CONDUCTIVE CERAMIC CAP	PLST.RIVET	: PLASTIC RIVET
C.EL	: ELECTROLYTIC CAP	R.ARRAY	: RESISTOR ARRAY
C.MICA	: MICA CAP	R.CAR.	: CARBON RESISTOR
C.ML.FLM	: MULTILAYER FILM CAP	R.CAR.CHP	: CHIP RESISTOR
C.MP	: METALLIZED PAPER CAP	R.CAR.FP	: FLAME PROOF CARBON RESISTOR
C.MYLAR	: MYLAR FILM CAP	R.FUS	: FUSABLE RESISTOR
C.MYLAR.ML	: MULTILAYER MYLAR FILM CAP	R.MTL.CHP	: CHIP METAL FILM RESISTOR
C.PAPER	: PAPER CAPACITOR	R.MTL.FLM	: METAL FILM RESISTOR
C.PLS	: POLYSTYRENE FILM CAP	R.MTL.OXD	: METAL OXIDE FILM RESISTOR
C.POL	: POLYESTER FILM CAP	R.MTL.PLAT	: METAL PLATE RESISTOR
C.POLY	: POLYETHYLENE FILM CAP	RSNR.CE	: CERAMIC RESONATOR
C.PP	: POLYPROPYLENE FILM CAP	RSNR.CRYS	: CRYSTAL RESONATOR
C.TNTL	: TANTALUM CAP	R.TW.CEM	: TWIN CEMENT FIXED RESISTOR
C.TNTL.CHP	: CHIP TANTALUM CAP	R.CEMENT	: CEMENT RESISTOR
C.TRIM	: TRIMMER CAP	SCR.BND.HD	: BIND HEAD B-TIGHT SCREW
CN	: CONNECTOR	SCR.BW.HD	: BW HEAD TAPPING SCREW
CN.BS.PIN	: CONNECTOR,BASE PIN	SCR.CUP	: CUP TIGHT SCREW
CN.CANNON	: CONNECTOR,CANNON	SCR.TERM	: SCREW TERMINAL
CN.DIN	: CONNECTOR,DIN	SCR.TR	: SCREW,TRANSISTOR
CN.FLAT	: CONNECTOR,FLAT CABLE	SUPRT.PCB	: SUPPORT,P.C.B.
CN.POST	: CONNECTOR,BASE POST	SURG.PRTCT	: SURGE PROTECTOR
COIL.MX.AM	: COIL,AM MIX	SW.TACT	: TACT SWITCH
COIL.AT.FM	: COIL,FM ANTENNA	SW.LEAF	: LEAF SWITCH
COIL.DT.FM	: COIL,FM DETECT	SW.LEVER	: LEVER SWITCH
COIL.MX.FM	: COIL,FM MIX	SW.MICRO	: MICRO SWITCH
COIL.OUTPT	: OUTPUT COIL	SW.PUSH	: PUSH SWITCH
DIOD.ARRAY	: DIODE ARRAY	SW.RT.ENC	: ROTARY ENCODER
DIODE.BRG	: DIODE BRIDGE	SW.RT.MTR	: ROTARY SWITCH WITH MOTOR
DIODE.CHP	: CHIP DIODE	SW.RT	: ROTARY SWITCH
DIODE.VAR	: VARACTOR DIODE	SW.SLIDE	: SLIDE SWITCH
DIOD.Z.CHP	: CHIP ZENER DIODE	TERM.SP	: SPEAKER TERMINAL
DIODE.ZENR	: ZENER DIODE	TERM.WRAP	: WRAPPING TERMINAL
DSCR.CE	: CERAMIC DISCRIMINATOR	THRMST.CHP	: CHIP THERMISTOR
FER.BEAD	: FERRITE BEADS	TR.CHP	: CHIP TRANSISTOR
FER.CORE	: FERRITE CORE	TR.DGT	: DIGITAL TRANSISTOR
FET.CHP	: CHIP FET	TR.DGT.CHP	: CHIP DIGITAL TRANSISTOR
FL.DSPLY	: FLUORESCENT DISPLAY	TRANS	: TRANSFORMER
FLTR.CE	: CERAMIC FILTER	TRANS.PULS	: PULSE TRANSFORMER
FLTR.COMB	: COMB FILTER MODULE	TRANS.PWR	: POWER TRANSFORMER ASS'Y
FLTR.LC.RF	: LC FILTER,EMI	TUNER.AM	: TUNER PACK,AM
GND.MTL	: GROUND PLATE	TUNER.FM	: TUNER PACK,FM
GND.TERM	: GROUND TERMINAL	TUNER.PK	: FRONT-ENDTUNER PACK
HOLDER.FUS	: FUSE HOLDER	VR	: ROTARY POTENTIOMETER
IC.PRTCT	: IC PROTECTOR	VR.MTR	: POTENTIOMETER WITH MOTOR
JUMPER.CN	: JUMPER CONNECTOR	VR.SW	: POTENTIOMETER WITH ROTARY SW
JUMPER.TST	: JUMPER,TEST POINT	VR.SLIDE	: SLIDE POTENTIOMETER
L.DTCT	: LIGHT DETECTING MODULE	VR.TRIM	: TRIMMER POTENTIOMETER

P.C.B. MAIN

Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
*	WS176200	P. C. B.	MAIN		P C B M A I N	
CB1	WQ289300	CN	24P TE		F F C / F P C コネクタ	04
CB2	VB390100	CN. BS. PIN	5P		ベースピン	01
CB3	VB390200	CN. BS. PIN	6P		コネクタベースポスト	01
CB6	VB390100	CN. BS. PIN	5P		ベースピン	01
CB301	VK217300	CN	10P		F J リセブタクル	01
CB303	VQ962800	CN. BS. PIN	7P		ウエハー	02
CB304	VM859600	CN. BS. PIN	15P		F F C コネクター	01
CB305	VB390000	CN. BS. PIN	4P		ベースピン	01
CB310	VP768200	CN	5P		F J リセブタクル	01
C1-2	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C3-5	UF437470	C. EL. CHP	47uF 16V		チップケミコン	01
C10	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C11	UF437470	C. EL. CHP	47uF 16V		チップケミコン	01
C12	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C13	WC892500	C. EL. CHP	470uF 16V		チップケミコン	01
C15	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C16	US163100	C. CE. CHP	1000pF 50V		チップセラコン	01
C18	UF437470	C. EL. CHP	47uF 16V		チップケミコン	01
C20	WC666800	C. CE. CHP	1uF 16V		チップセラコン	01
C21	US063470	C. CE. CHP	4700pF 50V B		チップセラコン	01
C22	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C23	UF437470	C. EL. CHP	47uF 16V		チップケミコン	01
C24	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C25	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C26-27	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C29	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C31	WC890400	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C32-33	US062470	C. CE. CHP	470pF 50V B		チップセラコン	01
C34	US063470	C. CE. CHP	4700pF 50V B		チップセラコン	01
C36	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C37	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C38	US034470	C. CE. CHP	0. 047uF 16V B		チップセラコン	01
C39-40	US062470	C. CE. CHP	470pF 50V B		チップセラコン	01
C41	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C42	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C43	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
* C44	WP882000	C. CE. CHP	10uF 6. 3V		チップセラコン	
C45	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C46	US061180	C. CE. CHP	18pF 50V B		チップセラコン	01
C47	US135220	C. CE. CHP	0. 22uF 16V		チップセラコン	01
C48	US044220	C. CE. CHP	0. 022uF 25V B		チップセラコン	01
C49	US061180	C. CE. CHP	18pF 50V B		チップセラコン	01
C50-53	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C54	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C55-57	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C58-59	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C60-62	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C63	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C64	US061680	C. CE. CHP	68pF 50V B		チップセラコン	01
C68	US061180	C. CE. CHP	18pF 50V B		チップセラコン	01
C69	US061220	C. CE. CHP	22pF 50V B		チップセラコン	01
C70-71	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C72	WJ881200	C. CE. CHP	1uF 16V		チップセラコン	01
C73	WC890400	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C74-75	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C76	WJ881200	C. CE. CHP	1uF 16V		チップセラコン	01

* New Parts * 新規部品

P.C.B. MAIN

Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
C77	WG251600	C. CE. CHP	4. 7uF 6. 3V		チップセラコン	01
C78	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C79	WP258700	C. CE. CHP	2. 2uF 25V		チップセラコン	01
C80-81	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C82-83	US060500	C. CE. CHP	5pF 50V B		チップセラコン	01
C84	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C302	UR249100	C. EL.	1000uF 25V		ケミコン	01
C303	WF547900	C. CE. CHP	10uF 25V		チップセラコン	01
C305	WF547900	C. CE. CHP	10uF 25V		チップセラコン	01
C310	UF438100	C. EL. CHP	100uF 16V		チップケミコン	01
* C312	WC891800	C. EL. CHP	10uF 16V		チップケミコン	
C313	WC892500	C. EL. CHP	470uF 16V		チップケミコン	01
C314	WK004400	C. CE. M. CHP	10uF 16V		チップ積層セラコン	01
C315	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C316	WK004400	C. CE. M. CHP	10uF 16V		チップ積層セラコン	01
C318	WK004400	C. CE. M. CHP	10uF 16V		チップ積層セラコン	01
* C319	WP882000	C. CE. CHP	10uF 6. 3V		チップセラコン	
C320	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C321-324	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C325	UF418100	C. EL. CHP	100uF 6. 3V		チップケミコン	01
C326-327	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C328	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C329-330	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C331	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C333-334	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C335	US063220	C. CE. CHP	2200pF 50V B		チップセラコン	01
C356	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
* C359	UF417470	C. EL. CHP	47uF 6. 3V		チップケミコン	
C360	WC666800	C. CE. CHP	1uF 16V		チップセラコン	01
* C361	UF417470	C. EL. CHP	47uF 6. 3V		チップケミコン	
C367	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C371	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C372	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C375	US064100	C. CE. CHP	0. 01uF 50V B		チップセラコン	01
C376	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
C381	US163100	C. CE. CHP	1000pF 50V		チップセラコン	01
C385	US163100	C. CE. CHP	1000pF 50V		チップセラコン	01
C393	US135100	C. CE. CHP	0. 1uF 16V		チップセラコン	01
D1	VT332900	DIODE	1SS355		ダイオード	01
D2	VV220700	DIODE. SHOT	RB501V-40		ショットキーダイオード	01
D3	VT332900	DIODE	1SS355		ダイオード	01
D6	VV220700	DIODE. SHOT	RB501V-40		ショットキーダイオード	01
D301-302	VV220700	DIODE. SHOT	RB501V-40		ショットキーダイオード	01
D303-305	VT332900	DIODE	1SS355		ダイオード	01
* D308	WP292300	DIODE	RB050LA-40TR TP		ダイオード	
D309	VT332900	DIODE	1SS355		ダイオード	01
F301	WH983200	SW. POLY	MINISMD C110F/24-2		ポリスイッチ	02
* IC1	YA727A00	IC	LA6565		ドライバ I C	
* IC2	YA748A00	IC. CD	LC786922	(MASKROM)	I C	
IC4	XR680A00	IC	TC7SH08FU (TE85L, JF)		ロジック I C	01
IC6	X8096A00	IC	R5523N001A-TR-F		電源 I C	03
* IC7	YA724A00	IC. USB	LC87F1HC8A	(written)	I C	
IC301	X9850A00	IC	BD9870FPS		電源 I C	05
IC302	X7356A00	IC	PCM1780DBQR		I C	04
IC303	X8897A00	IC	R1172S331B-E2-F		電源 I C	03
* IC304	YA765A00	IC	LE24C023M		I C	
* IC305	YA749A00	IC. CPU	R5F212CASNFP CPU	(unwritten)	C P U I C	

* New Parts * 新規部品

P.C.B. MAIN and P.C.B. OPERATION

Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
IC306	YA514A00	IC	BD5229G-TR		リセット I C	01
PJ301	V2283400	JACK. PIN	1P		ピンジャック	04
* Q1	WS074200	TR	12A01C PNP		トランジスタ	
Q301	VV556500	TR	2SA1037K Q, R, S		トランジスタ	01
Q304	VV556400	TR	2SC2412K Q, R, S		トランジスタ	01
Q309	VV655700	TR. DGT	DTC144EKA		デジタルトランジスタ	01
U301	WH536900	CN. PHOTO. T	1P GP1FAV51TK0F		光ファイバー送信器	04
XL1	WB872100	RSNR. CRYST	16.9344MHz		水晶振動子	03
XL2	WG538400	RSNR. CRYST	12MHz		水晶振動子	
XL301	V8222200	RSNR. CE	10MHz CSTLS10M0		セラミック振動子	01
* * * * *	WS176300	P. C. B.	OPERATION	J	PCB OPERATION	
	WS176400	P. C. B.	OPERATION	RL	PCB OPERATION	
	WS176500	P. C. B.	OPERATION	T	PCB OPERATION	
	WS176600	P. C. B.	OPERATION	A	PCB OPERATION	
	WS176700	P. C. B.	OPERATION	G	PCB OPERATION	
CB601	VQ961000	CN. BS. PIN	7P		ハウジング	02
CB701	VM929900	CN. BS. PIN	15P		F P Cコネクター	01
CB752	WP170400	CN. USB	CSS5004-1F01 4P TE		USBコネクタ	04
CB753	VB858200	CN. BS. PIN	3P		ベースピン	01
CB801-802	WN103000	CLIP. FUSE	TP00351-31		ヒューズクリップ	01
CB803	VP245700	CN. BS. PIN	VA 2P SE		ベースツキポスト	01
CB804	LB918060	CN. BS. PIN	6P		ベース付ポスト	01
CB806	VK216500	CN	10P		F J - L プラグ	02
CB807	VB390000	CN. BS. PIN	4P		ベースピン	01
CB901	VP768100	CN. BS. PIN	5P		F J コネクタープラグ	01
CB902	VQ044400	CN. BS. PIN	9P		F F Cコネクター	01
C601-602	UU237470	C. EL	47uF 16V		ケミコン FW	01
C603-604	WE100900	C. PP	220pF 630V		P P コン	02
* C605-606	WJ609300	C. MYLAR	2200pF 100V		マイラーコン	
* C607-608	WJ609800	C. MYLAR	5600pF 100V		マイラーコン	
C609-610	UU238100	C. EL	100uF 16V		ケミコン	01
C611-612	WQ331800	C. EL	100uF 50V		ケミコン	01
C614-615	WJ608900	C. MYLAR	1000pF 100V		マイラーコン	01
C701-702	US064100	C. CE. CHP	0.01uF 50V B		チップセラコン	01
C703	US135100	C. CE. CHP	0.1uF 16V		チップセラコン	01
C704	US062100	C. CE. CHP	100pF 50V B		チップセラコン	01
C705	US135100	C. CE. CHP	0.1uF 16V		チップセラコン	01
C706	US062100	C. CE. CHP	100pF 50V B		チップセラコン	01
C707	WG780700	C. EL	47uF 16V		ケミコン	01
C708	US062100	C. CE. CHP	100pF 50V B		チップセラコン	01
C709-712	US064100	C. CE. CHP	0.01uF 50V B		チップセラコン	01
C713	US065100	C. CE. CHP	0.1uF 50V B		チップセラコン	01
C714	WF752900	C. CE. M. CHP	1uF 50V Z		チップ積層セラコン	01
C715-718	US135100	C. CE. CHP	0.1uF 16V		チップセラコン	01
C719	WG780700	C. EL	47uF 16V		ケミコン	01
C720	US135100	C. CE. CHP	0.1uF 16V		チップセラコン	01
C753	US064100	C. CE. CHP	0.01uF 50V B		チップセラコン	01
C754	US163100	C. CE. CHP	1000pF 50V		チップセラコン	01
△ C801-802	V6185300	C. CE. SAFTY	0.01uF 275V		規格認定コンデンサ	01
△ C805	V6185300	C. CE. SAFTY	0.01uF 275V		規格認定コンデンサ	01
C807	UR267470	C. EL	47uF 50V		ケミコン	01
C808-809	WE102900	C. PP	0.01uF 100V		P P コン	
C810	UR278100	C. EL	100uF 63V		ケミコン	01
C811	UR267220	C. EL	22uF 50V		ケミコン	01

* New Parts * 新規部品

P.C.B. OPERATION

Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
C812	UR267470	C. EL 47uF 50V			ケミコン	01
C813	UR04A100	C. EL 10000uF 25V			ケミコン	07
C814-815	UR267220	C. EL 22uF 50V			ケミコン	01
C816	WQ785400	C. EL 6800uF 25V			ケミコン	
C817	UR249100	C. EL 1000uF 25V			ケミコン	01
C818	WJ608900	C. MYLAR 1000pF 100V			マイラーコン	01
C819	UR248100	C. EL 100uF 25V			ケミコン	
C820-822	WN165300	C. PP 0.01uF 100V			PPコン	01
C823	UR239100	C. EL 1000uF 16V			ケミコン	
C824	UR266330	C. EL 3.3uF 50V			ケミコン	
C825-827	WN165300	C. PP 0.01uF 100V			PPコン	01
C828-831	UR248100	C. EL 100uF 25V			ケミコン	
C832-833	UR267220	C. EL 22uF 50V			ケミコン	01
C834	WE102900	C. PP 0.01uF 100V			PPコン	01
C901-902	US061330	C. CE. CHP 33pF 50V B			チップセラコン	01
C906	US135100	C. CE. CHP 0.1uF 16V			チップセラコン	01
D702-703	WA467800	LED SEL6910A-CD			LED	01
D751	WP947300	LED ORANGE/GREEN			2色LED	01
D752	VG437700	DIODE. ZENR MTZJ5.6B 5.6V			ツェナーダイオード	01
D801-802	VS997800	DIODE 1T2			ダイオード	01
D803-804	VV731400	DIODE 2A02M			ダイオード	01
D805-810	VS997800	DIODE 1T2			ダイオード	01
D811	VG443200	DIODE. ZENR MTZJ30A 30V			ツェナーダイオード	01
D812-813	VT332900	DIODE 1SS355			ダイオード	01
D814	VG438600	DIODE. ZENR MTZJ7.5B 7.5V			ツェナーダイオード	01
D815	VT332900	DIODE 1SS355			ダイオード	01
D816	VG438800	DIODE. ZENR MTZJ8.2A 8.2V			ツェナーダイオード	01
D817-819	VT332900	DIODE 1SS355			ダイオード	01
D820-821	VV220700	DIODE. SHOT RB501V-40			ショットキーダイオード	01
D822	VG438000	DIODE. ZENR MTZJ6.2B 6.2V			ツェナーダイオード	01
△ F801	KB000710	FUSE 500mA 250V			ヒューズ 250V	02
IC601-602	XA987A00	IC NJM2068D-D			IC	01
IC702	X2656A00	IC TC7SH08F AND			ロジック IC	01
IC801-802	X4928A00	IC KIA7805API 5V			電源 IC	02
IC803	X7973A00	IC KIA79M05PI-U			電源 IC	02
* PJ601	WS071500	JACK. PIN 2P YKC21-4122V			ピンジャック	
Q601-604	VZ725900	TR 2SD1938F S, T			トランジスタ	01
Q701	VV556400	TR 2SC2412K Q, R, S			トランジスタ	01
Q702	VV655000	TR. DGT DTA114EKA			デジタルトランジスタ	01
Q703-704	VV655400	TR. DGT DTC114EKA			デジタルトランジスタ	01
Q705	VV556400	TR 2SC2412K Q, R, S			トランジスタ	01
Q706	VV655000	TR. DGT DTA114EKA			デジタルトランジスタ	01
Q801	VP872600	TR 2SA1708 S, T			トランジスタ	01
Q804	VS883400	TR 2SD2394 E, F			トランジスタ	02
Q806	VV556500	TR 2SA1037K Q, R, S			トランジスタ	01
Q901	VV655400	TR. DGT DTC114EKA			デジタルトランジスタ	01
R653-654	WQ835800	R. MTL. OXD 100Ω 1W			酸化金属被膜抵抗	
R801	HV756470	R. CAR. FP 4.7KΩ 1/4W			不燃化カーボン抵抗	01
* R802	HL006470	R. MTL. OXD 4.7KΩ 1/2W			酸化金属被膜抵抗	
R805	V8071600	R. MTL. FLM 1KΩ 1W			金属被膜抵抗	01
R806	V8071300	R. MTL. FLM 470Ω 1W			金属被膜抵抗	
R808	HV755330	R. CAR. FP 330Ω 1/4W			不燃化カーボン抵抗	01
R813-814	HV755100	R. CAR. FP 100Ω 1/4W			不燃化カーボン抵抗	01
R815-816	HV753470	R. CAR. FP 4.7Ω 1/4W			不燃化カーボン抵抗	01
ST601	WA246200	SCR. TERM 3.5			スクリューターミナル	
ST701	V4040500	SCR. TERM M3			スクリューターミナル	01
ST751	V4040500	SCR. TERM M3			スクリューターミナル	01

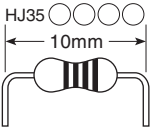
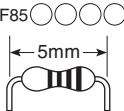
* New Parts * 新規部品

P.C.B. OPERATION

	Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
	ST801-802	V4040500	SCR. TERM	M3		スクリューターミナル	01
	ST901-902	V4040500	SCR. TERM	M3		スクリューターミナル	01
	SW701-708	WD483100	SW. TACT	SKRGAAD010		タクト SW	01
△	SW801	V8377400	SW. POWER	SY16-52-4		パワースイッチ	
△	SW802	WH813600	VOLT. SELCT	VSA-14-3	RL	電圧切替器	
△ *	T801	YA770A00	TRANS. PWR		J	電源トランス	
△ *	T801	YA772A00	TRANS. PWR		RL	電源トランス	
△ *	T801	YA773A00	TRANS. PWR		T	電源トランス	
△ *	T801	YA775A00	TRANS. PWR		A	電源トランス	
△ *	T801	YA774A00	TRANS. PWR		G	電源トランス	
△ *	TE801	WS090800	INLET. AC	2P HJC-036P		A C インレット	
△	TH801-802	VU847300	POSISTOR	RUE185 1.85A 30V		ポリスイッチ	03
△	TH803	VV457600	SW. POLY	RUE090 0.90A 30V		ポリスイッチ	02
	U701	WK918500	L. DTCT	GP1UE271RKVF		リモコン受光ユニット	03
*	V701	WR861000	FL. DSPLY	14-ST-68G1NK		蛍光表示管	
*		WS050700	SHEET. FL	118x20.5		F L シート	
		V6203300	SPACER. FL			スペーサー F L	01
		WE983600	SCR. BND. HD	3x8 MFZN2B3		パインド小ネジ	01

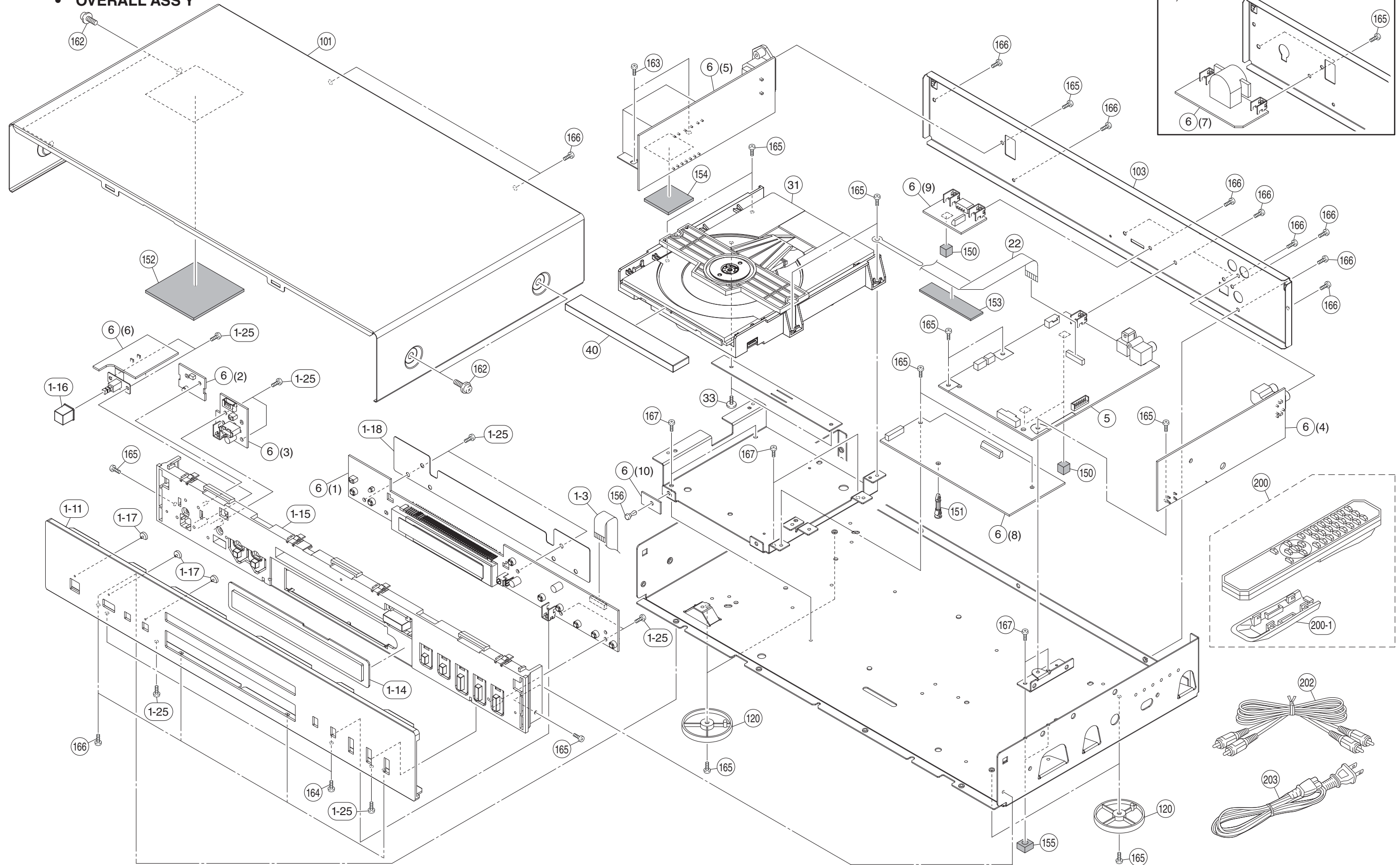
* New Parts * 新規部品

Carbon Resistors

Value	1/4W Type Part No.	1/6W Type Part No.	Value	1/4W Type Part No.	1/6W Type Part No.
1.0 Ω	HJ35 3100	HF85 3100	11 kΩ	HF45 7110	HF45 7110
1.8 Ω	HJ35 3180	※	12 kΩ	HJ35 7120	HF85 7120
2.2 Ω	HJ35 3220	HF85 3220	13 kΩ	HF45 7130	HF45 7130
3.3 Ω	HJ35 3330	HF85 3330	15 kΩ	HF45 7150	HF45 7150
4.7 Ω	HJ35 3470	HF85 3470	18 kΩ	HF45 7180	HF45 7180
5.6 Ω	HJ35 3560	HF85 3560	22 kΩ	HF45 7220	HF45 7220
10 Ω	HF45 4100	HF45 4100	24 kΩ	HF45 7240	HF45 7240
15 Ω	HJ35 4150	HF85 4150	27 kΩ	HJ35 7270	HF85 7270
22 Ω	HF45 4220	HF45 4220	30 kΩ	HF45 7300	HF45 7300
27 Ω	HJ35 4270	HF85 4270	33 kΩ	HF45 7330	HF45 7330
33 Ω	HF45 4330	HF45 4330	36 kΩ	HF45 7360	HF45 7360
39 Ω	HJ35 4470	HF85 4390	39 kΩ	HF45 7390	HF45 7390
47 Ω	HF45 4470	HF45 4470	47 kΩ	HF45 7470	HF45 7470
56 Ω	HF45 4560	HF45 4560	51 kΩ	HF45 7510	HF45 7510
68 Ω	HF45 4680	HF45 4680	56 kΩ	HF45 7560	HF45 7560
75 Ω	HF45 4750	HF45 4750	62 kΩ	HF45 7620	HF45 7620
82 Ω	HF45 4820	HF45 4820	68 kΩ	HF45 7680	HF45 7680
91 Ω	HF45 4910	HF45 4910	82 kΩ	HF45 7820	HF45 7820
100 Ω	HF45 5100	HF45 5100	91 kΩ	HF45 7910	HF45 7910
110 Ω	HJ35 5110	HF85 5110	100 kΩ	HF45 8100	HF45 8100
120 Ω	HF45 5120	HF45 5120	110 kΩ	HF45 8110	HF45 8110
150 Ω	HF45 5150	HF45 5150	120 kΩ	HF45 8120	HF45 8120
160 Ω	HJ35 5160	※	130 kΩ	HF45 8130	※
180 Ω	HF45 5180	HF45 5180	150 kΩ	HF45 8150	HF45 8150
200 Ω	HF45 5200	HF45 5200	180 kΩ	HF45 8180	HF45 8180
220 Ω	HF45 5220	HF45 5220	220 kΩ	HJ35 8220	HF85 8220
270 Ω	HF45 5270	HF45 5270	270 kΩ	HF45 8270	HF45 8270
330 Ω	HF45 5330	HF45 5330	300 kΩ	HF45 8300	HF45 8300
390 Ω	HF45 5390	HF45 5390	330 kΩ	HF45 8330	HF45 8330
430 Ω	HF45 5430	HF45 5430	390 kΩ	HJ35 8390	HF85 8390
470 Ω	HF45 5470	HF45 5470	470 kΩ	HF45 8470	HF45 8470
510 Ω	HF45 5510	HF45 5510	560 kΩ	HJ35 8560	HF85 8560
560 Ω	HF45 5560	HF45 5560	680 kΩ	HJ35 8680	HF85 8680
680 Ω	HF45 5680	HF45 5680	820 kΩ	HJ35 8820	HF85 8820
820 Ω	HF45 5820	HF45 5820	1.0 MΩ	HF45 9100	HF45 9100
910 Ω	HF45 5910	HF45 5910	1.2 MΩ	HJ35 9120	※
1.0 kΩ	HF45 6100	HF45 6100	1.5 MΩ	HJ35 9150	HF85 9150
1.2 kΩ	HF45 6120	HF45 6120	1.8 MΩ	HJ35 9180	HF85 9180
1.5 kΩ	HF45 6150	HF45 6150	2.2 MΩ	HJ35 9220	HF85 9220
1.8 kΩ	HF45 6180	HF45 6180	3.3 MΩ	HJ35 9330	HF85 9330
2.0 kΩ	HJ35 6200	HF85 6200	3.9 MΩ	HJ35 9390	※
2.2 kΩ	HF45 6220	HF45 6220	4.7 MΩ	HJ35 9470	HF85 9470
2.4 kΩ	HJ35 6240	HF85 6240			
2.7 kΩ	HF45 6270	HF45 6270			
3.0 kΩ	HF45 6300	HF45 6300		1/4W Type HJ35○○○○ ←10mm→  1/4W Type HF45○○○○ 1/6W Type HF85○○○○ ←5mm→ 	
3.3 kΩ	HF45 6330	HF45 6330			
3.6 kΩ	HJ35 6360	HF85 6360			
3.9 kΩ	HF45 6390	HF45 6390			
4.7 kΩ	HF45 6470	HF45 6470			
5.1 kΩ	HF45 6510	HF45 6510			
5.6 kΩ	HF45 6560	HF45 6560			
6.8 kΩ	HF45 6680	HF45 6680			
8.2 kΩ	HF45 6820	HF45 6820			
9.1 kΩ	HF45 6910	HF45 6910			
10 kΩ	HF45 7100	HF45 7100			

※ : Not available

- **OVERALL ASS'Y**



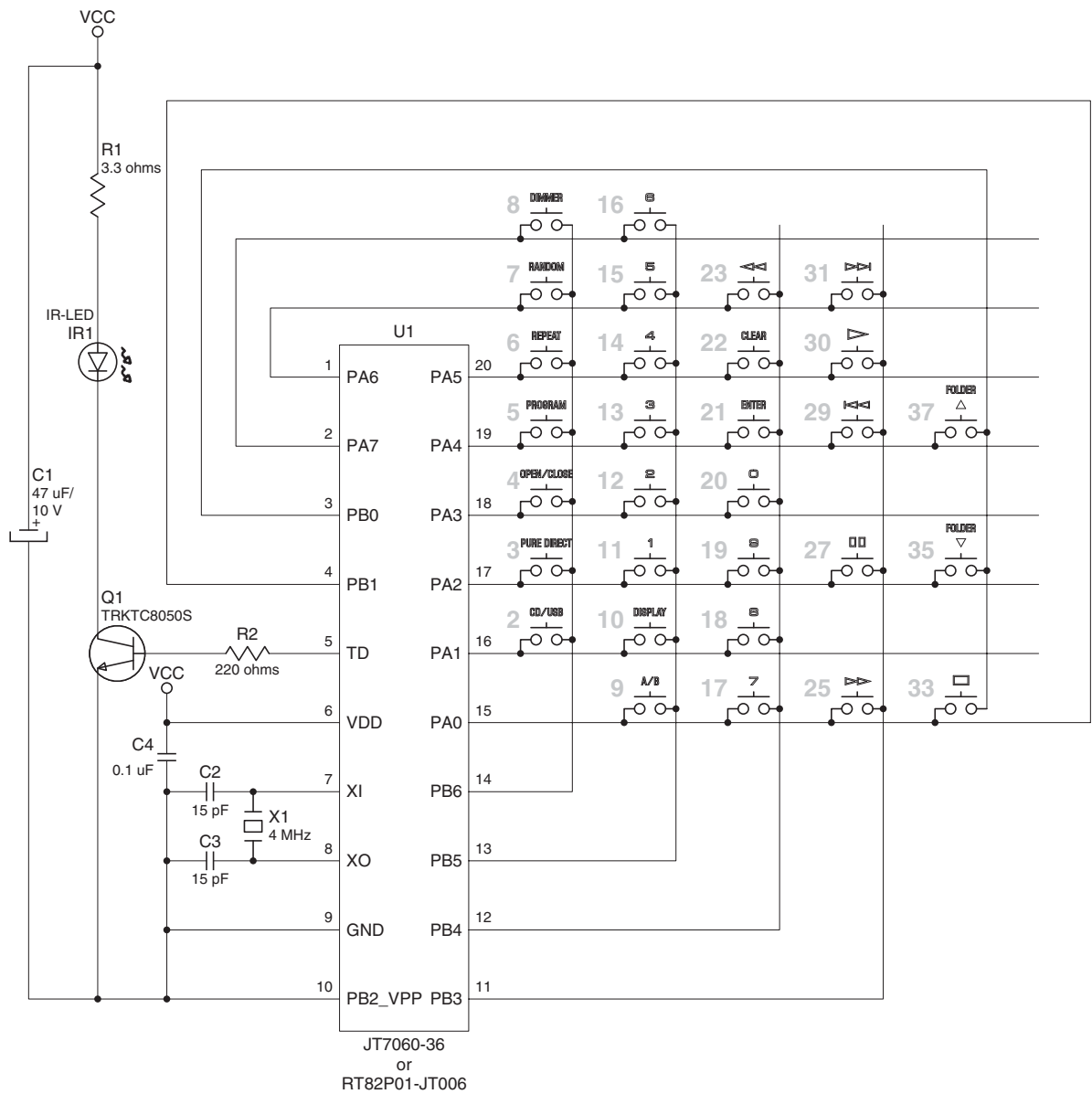
	Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
	1-3	MF115200	FLEXIBLE FLAT CABLE	15P 200mm P=1.25		カード電線	02
*	1-11	WR787900	FRONT PANEL	BL		フロントパネル	
*	1-11	WR787700	FRONT PANEL	SI		フロントパネル	
*	1-14	WR791700	WINDOW PANEL LID			ウインドウ	
*	1-15	WR788500	SUB PANEL	BL		サブパネル	
*	1-15	WR788400	SUB PANEL	SI		サブパネル	
	1-16	WQ433100	CAP	POWER ON/OFF		キャップ	03
	1-16	WQ433000	CAP	POWER ON/OFF		キャップ	04
	1-17	WP080600	LENS LED			レンズLED	01
*	1-18	WS217600	BARRIER			バリアー	
	1-25	WE774800	BIND HEAD P-TIGHT SCREW	3x8 MFZN2W3		バインドPタイトネジ	01
*	5	WS176200	P.C.B. ASS'Y	MAIN		PCB MAIN	
*	6	WS176300	P.C.B. ASS'Y	OPERATION	J	PCB OPERATION	
*	6	WS176400	P.C.B. ASS'Y	OPERATION	RL	PCB OPERATION	
*	6	WS176500	P.C.B. ASS'Y	OPERATION	T	PCB OPERATION	
*	6	WS176600	P.C.B. ASS'Y	OPERATION	A	PCB OPERATION	
*	6	WS176700	P.C.B. ASS'Y	OPERATION	G	PCB OPERATION	
	22	WK899500	FLEXIBLE FLAT CABLE	24P 240mm P=0.5		カード電線	01
*	31	WU088700	LOADER MECHANISM UNIT			ローダーメカユニット	
	33	WR513400	SCREW LOADER	MFZN2W3		ローダースクリュー	01
*	40	WR788300	LID	BL		リッド	
*	40	WR788200	LID	SI		リッド	
	101	WF481100	TOP COVER	BL		トップカバー	08
*	101	WS325300	TOP COVER	SI		トップカバー	
*	103	WR788800	REAR PANEL		J	リアパネル	
*	103	WR789500	REAR PANEL		R	リアパネル	
*	103	WR789300	REAR PANEL		T	リアパネル	
*	103	WR788900	REAR PANEL		A	リアパネル	
*	103	WR789000	REAR PANEL		G	リアパネル	
*	103	WR789200	REAR PANEL		L	リアパネル	
	120	VQ982800	LEG	D60xH16		レッグ	01
	150	VQ861500	CUSHION	SHEET		クッション シート	01
	151	VG854200	SPACER PCB	KGLS-10RT		ロッキングカードスパーサ	01
*	152	WT769600	DAMPER	70x70x2		ダンパー	
*	153	WT974600	DAMPER	20x70x2		ダンパー	
*	154	WT769700	DAMPER	32x32x2		ダンパー	
	155	WC879000	DAMPER	SCREW MASK		ダンパー	
	156	VQ368600	PUSH RIVET	P3555-B		ブッシュリベット	01
	162	VH313200	PW HEAD S-TIGHT SCREW	4x8-10 MFN13BL	BL	PWヘッドSタイトネジ	01
	162	VDO69600	PW HEAD S-TIGHT SCREW	4x8-10 MFN133	SI	PWヘッドSタイトネジ	01
	163	WF821300	BIND HEAD S-TIGHT SCREW	4x7 MFZN2W3		バインドSタイトネジ	01
	164	WF787100	BIND HEAD BONDING B-T. SCREW	3x12 MFZN2B3		ボンディングBタイトネジ	01
	165	WE774300	BIND HEAD B-TIGHT SCREW	3x8 MFZN2W3		バインドBタイトネジ	01
	166	WE774100	BIND HEAD BONDING B-T. SCREW	3x8 MFZN2B3		ボンディングBタイトネジ	01
	167	WE877900	BIND HEAD S-TIGHT SCREW	3x6 MFZN2W3		バインドSタイトネジ	01
			ACCESSORIES			付属品	
*	200	WR960800	REMOTE CONTROL	CDX8		リモコン	
*	200-1	WT816600	BATTERY COVER	dark gray	60050010	電池蓋	
	202	VY952200	RCA STEREO CABLE	2P 1m 1pc		ステレオピンケーブル	04
△ *	203	WS184300	POWER CABLE	1.5m 1pc	J	電源コード	
△ *	203	WS171100	POWER CABLE	1.5m 1pc	R	電源コード	
△ *	203	WS184400	POWER CABLE	1.5m 1pc	T	電源コード	

* New Parts * 新規部品

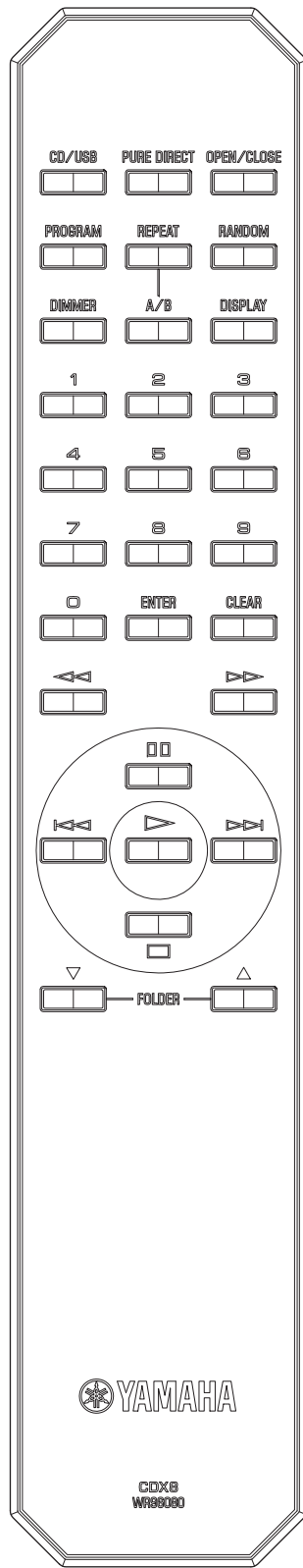
	Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
△ *	203	WS184100	POWER CABLE	1.5m 1pc		電源コード	
△ *	203	WS171200	POWER CABLE BATTERY	1.5m 1pc R6, AA, UM-3 2pcs	GL	電源コード 単3乾電池	
		WR492800	SERVICE TOOL RS232C CONVERSION ADAPTOR	3.3Vtype with FFC9P		RS 2 3 2 C変換アダプタ	

* New Parts * 新規部品

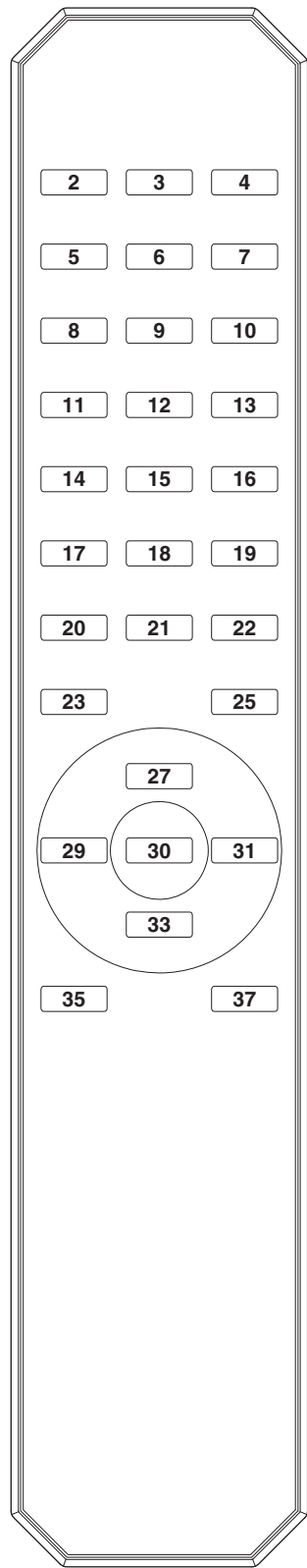
REMOTE CONTROL
SCHEMATIC DIAGRAM



PANEL



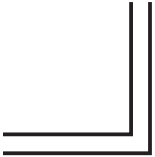
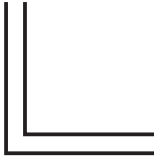
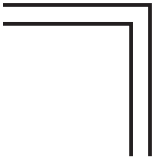
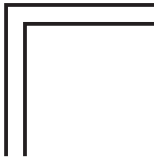
KEY LAYOUT



KEY CODE

Key No.	Function	Customer Code	Data Code
2	CD/USB	79	6F
3	PURE DIRECT	79	6E
4	OPEN/CLOSE	79	01
5	PROGRAM	79	0C
6	REPEAT	79	08
7	RANDOM	79	1B
8	DIMMER	79	54
9	A/B	79	09
10	DISPLAY	79	0A
11	1	79	11
12	2	79	12
13	3	79	13
14	4	79	14
15	5	79	15
16	6	79	16
17	7	79	17
18	8	79	18
19	9	79	19
20	0	79	10
21	ENTER	79	3F
22	CLEAR	79	0D
23	◀◀	79	05
25	▶▶	79	06
27	■	79	55
29	◀◀	79	04
30	▶	79	02
31	▶▶	79	07
33	■	79	56
35	FOLDER ▼	79	6A
37	FOLDER ▲	79	69

MEMO



CD-S300



YAMAHA
