

DESKTOP AUDIO SYSTEM

TSX-100

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.

■ CONTENTS

TO SERVICE PERSONNEL	2-4
PREVENTION OF ELECTROSTATIC DISCHARGE	5
FRONT PANELS	6-7
REAR PANELS	8-10
REMOTE CONTROL PANELS	11
SPECIFICATIONS / 参考仕様	11
INTERNAL VIEW	12
DISASSEMBLY PROCEDURES / 分解手順	12-15

TEST MODE	16
テストモード	17
BLOCK DIAGRAM	18
WIRING DIAGRAM	19
PRINTED CIRCUIT BOARDS	20-26
SCHEMATIC DIAGRAMS	27-31
REPLACEMENT PARTS LIST	32-36
REMOTE CONTROL	37-39



このサービスマニュアルは、エコマーク認定の再生紙を使用しています。
This Service Manual uses recycled paper.



■ TO SERVICE PERSONNEL

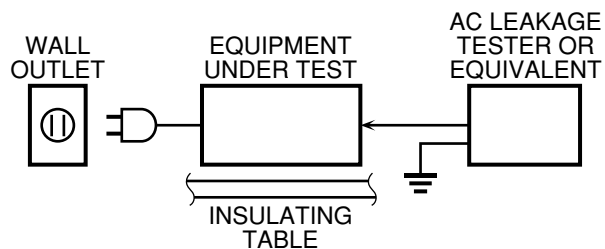
1. Critical Components Information

Components having special characteristics are marked  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.



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

WARNING: CHEMICAL CONTENT NOTICE!

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

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

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

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

About lead free solder / 無鉛ハンダについて

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

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

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

Caution:

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

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

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

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

注意：

無鉛ハンダの融点温度は通常の鉛入りハンダに比べ30～40℃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: Lithium batteries

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type.

WARNING: Lithium batteries are dangerous because they can be exploded by improper handling. Observe the following precautions when handling or replacing lithium batteries.

- Leave lithium battery replacement to qualified service personnel.
- Always replace with batteries of the same type.
- When installing on the PC board by soldering, solder using the connection terminals provided on the battery cells. Never solder directly to the cells. Perform the soldering as quickly as possible.
- Never reverse the battery polarities when installing.
- Do not short the batteries.
- Do not attempt to recharge these batteries.
- Do not disassemble the batteries.
- Never heat batteries or throw them into fire.

注意

正しい電池と交換しないと爆発が起きるおそれがあります。
同一型名または同等品以外の電池とは絶対に交換しないようにしてください。

ADVARSEL!

Lithiumbatteri –Eksplodingsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

VARNING

Explosionsfara vid felaktigt batteribyte. Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren. Kassera använt batteri enligt fabrikantens instruktion.

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin. Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

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 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.

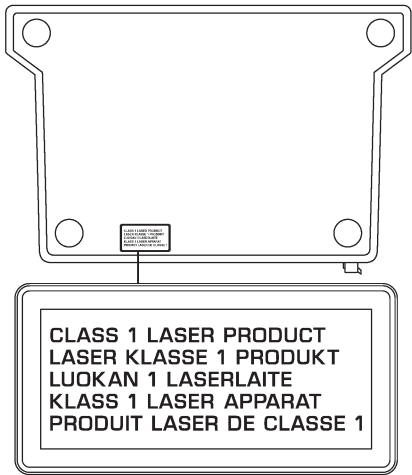
Laser Diode Properties

- Type GaAIAs
- Wave length 780 nm
- Emission duration continuous

- Laser output max. 44.6 μW *
* This output is the value measured at a distance of about 200 mm (7.9 in) from the objective lens surface on the optical pick-up block.

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

AVERTISSEMENT
L'utilisation de commandes et l'emploi de réglages ou de méthodes autres que ceux décrits ci-dessous, peuvent entraîner une exposition à un rayonnement dangereux.



CAUTION - INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED, AVOID EXPOSURE TO BEAM.

VORSICHT! UNSICHTBARE LASERSTRAHLUNG TRITTT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT DEM STRAHL AUSSETZEN!

VARNING - OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.

A technical line drawing of the TSX-100 laser diode assembly, showing a side view of the base and a top view of the cover. The cover is shown with a latch mechanism. A label is attached to the front of the base. The label contains the following text: CLASS 1 LASER PRODUCT, LASER KLASSE 1 PRODUKT, LUOKAN 1 LASERLAITE, KLAS 1 LASER APPARAT, and PRODUIT LASER DE CLASSE 1.

ADVARSEL - USYNLIG LASERSTRÅLNING VED ÅBNING, NÄR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDSÆTTELSE FOR STRÅLING.

VAROITUS! - SUOJAKOTELI OI EI SAA AVATA, LAITE SISÄLTÄÄ LASERDIOODIN, JOKA LÄHETTÄÄ (NÄKYMÄTÖNTÄ) SILMILLE VAARALLISTA LASERSÄTEILYÄ.

ADVARSEL - USYNLIG LASERBESTRÅLING NÄR DENNE DELEN ER ÅPEN OG SIKKERHETSPERRER ER UTKOBLET. UNNGÅ UTSETTELSE FOR STRÅLING.

CAUTION INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.

Warning for power supply

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

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

Note:

- The screws on the DVD mechanism may never be touched, removed or re-adjusted.
- Handle the DVD mechanism with care when the unit has to be exchanged!
- The DVD mechanism is very sensitive for dropping or giving shocks.

■ PREVENTION OF ELECTROSTATIC DISCHARGE

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

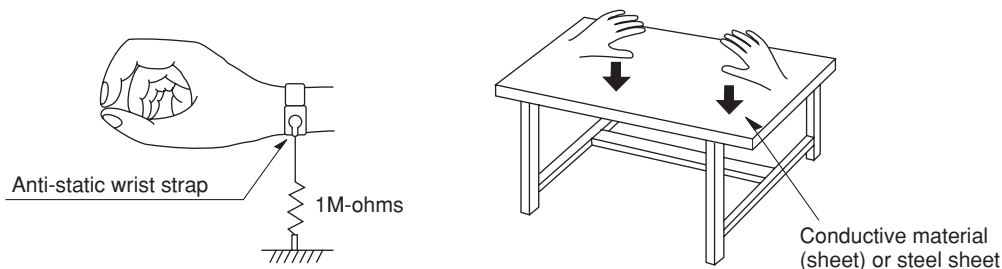
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior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

Grounding for electrostatic breakdown prevention

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

Caution:

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



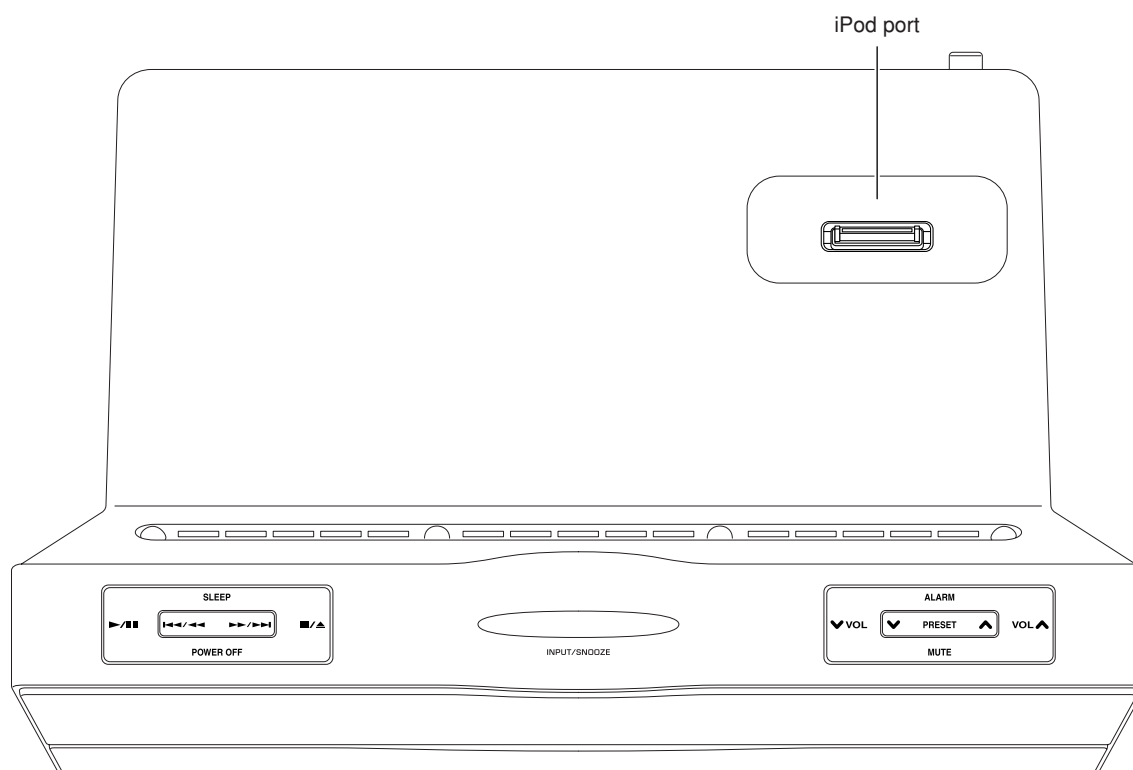
■ FRONT PANELS

Top view

R, B, G models

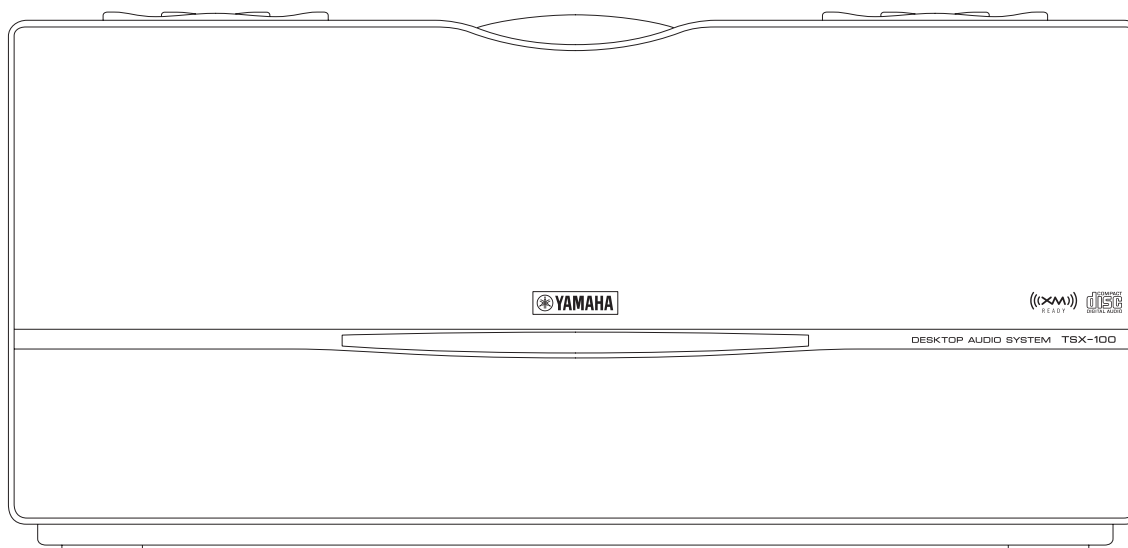


U, A, J models

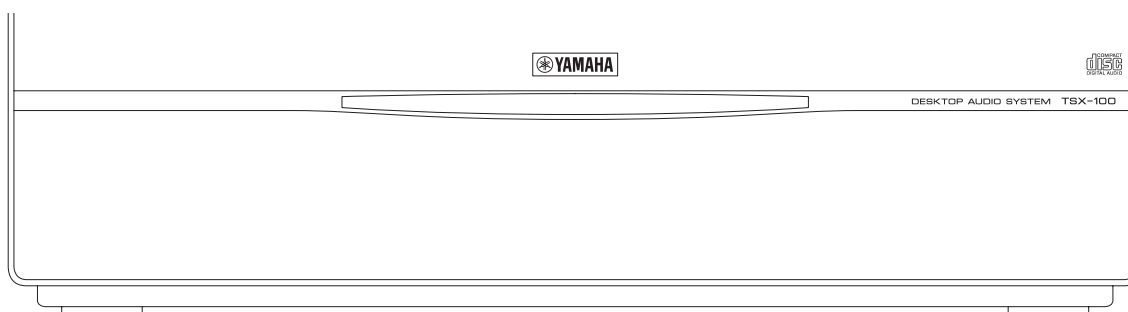


Front view

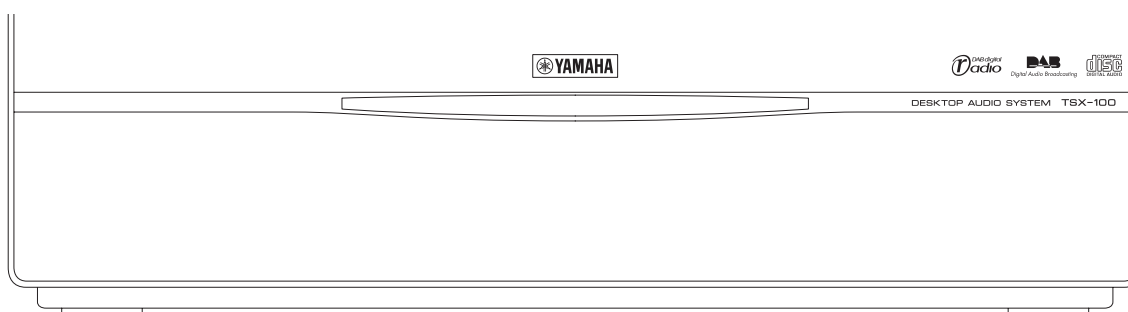
U model



R, A, G, J models



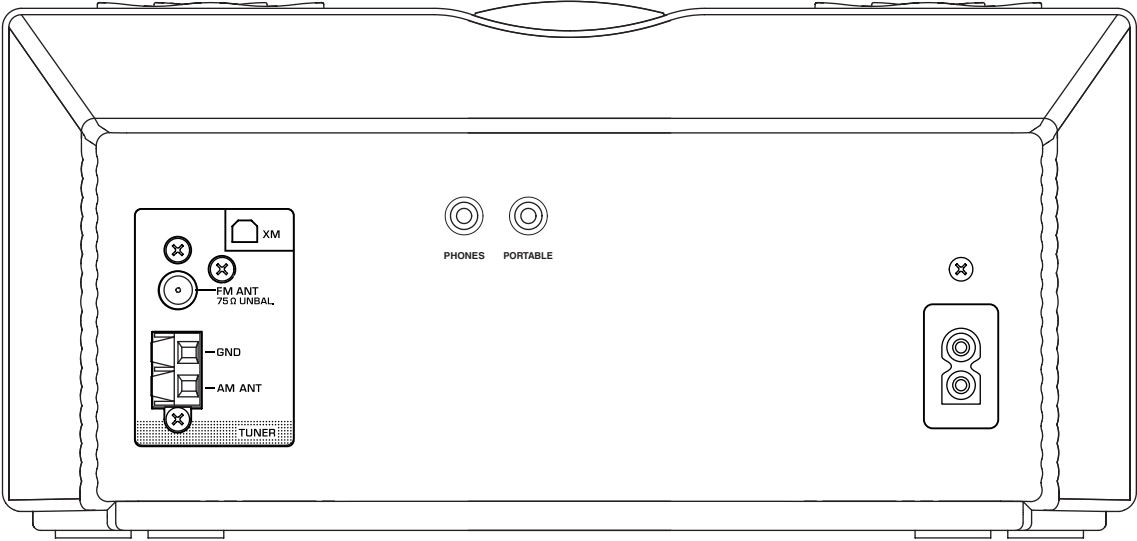
B model



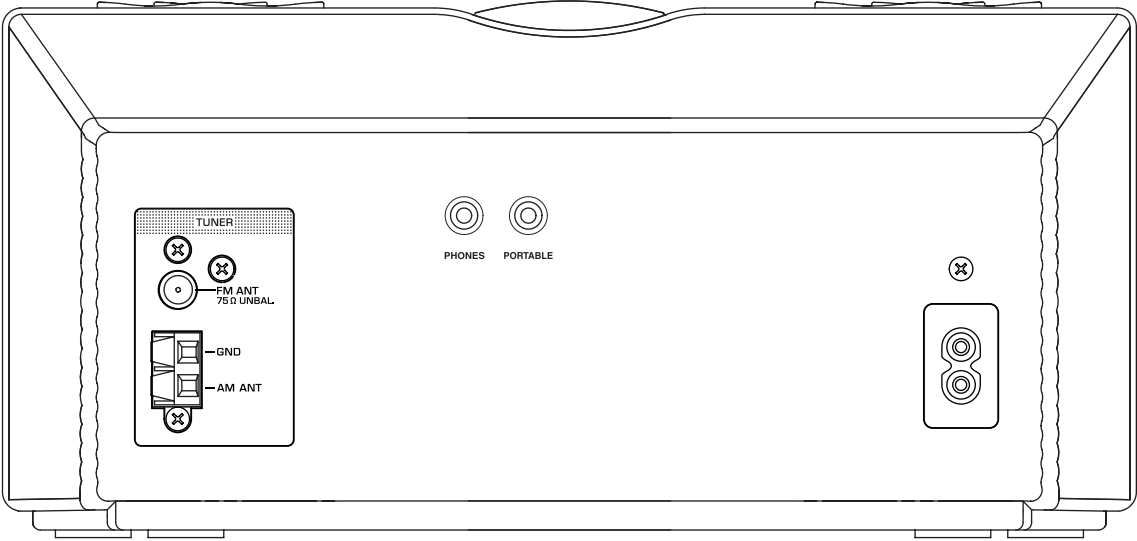
REAR PANELS

Rear view

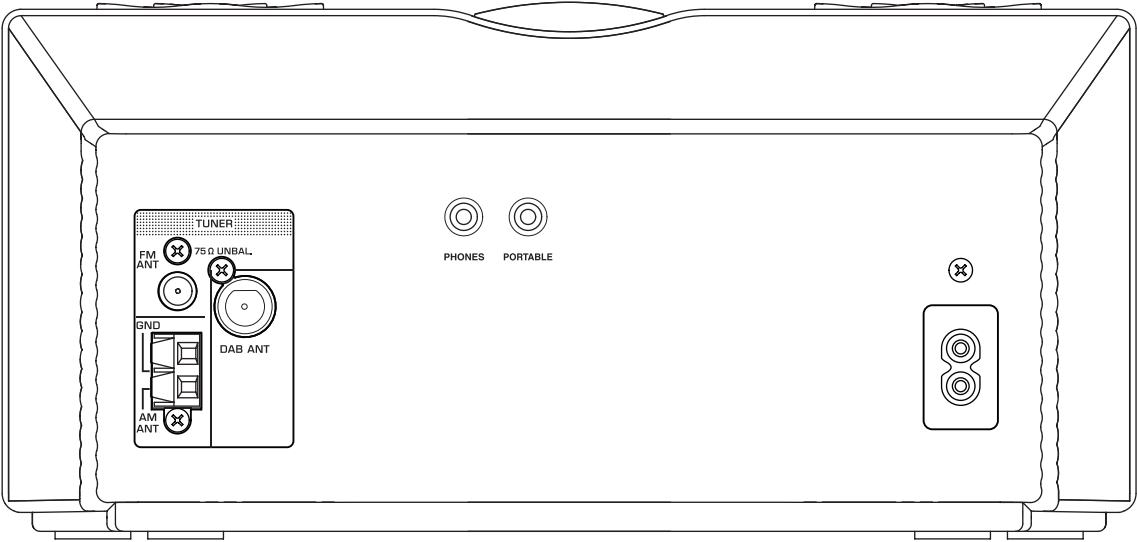
U model



R, A, G, J models

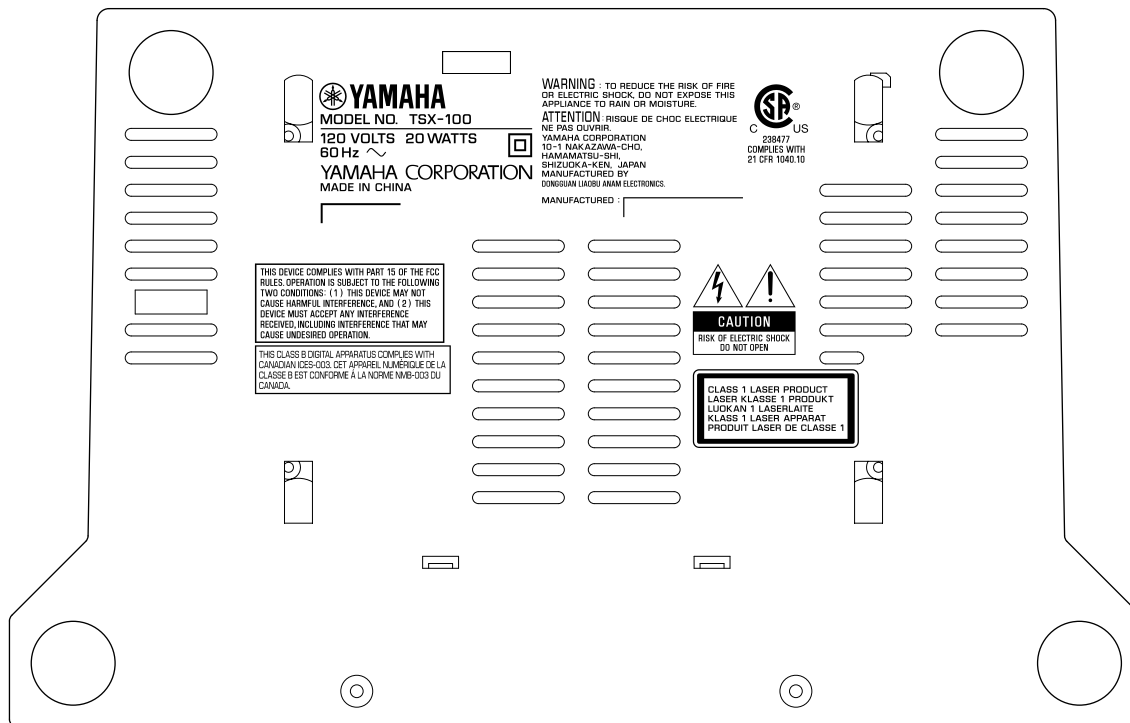


B model

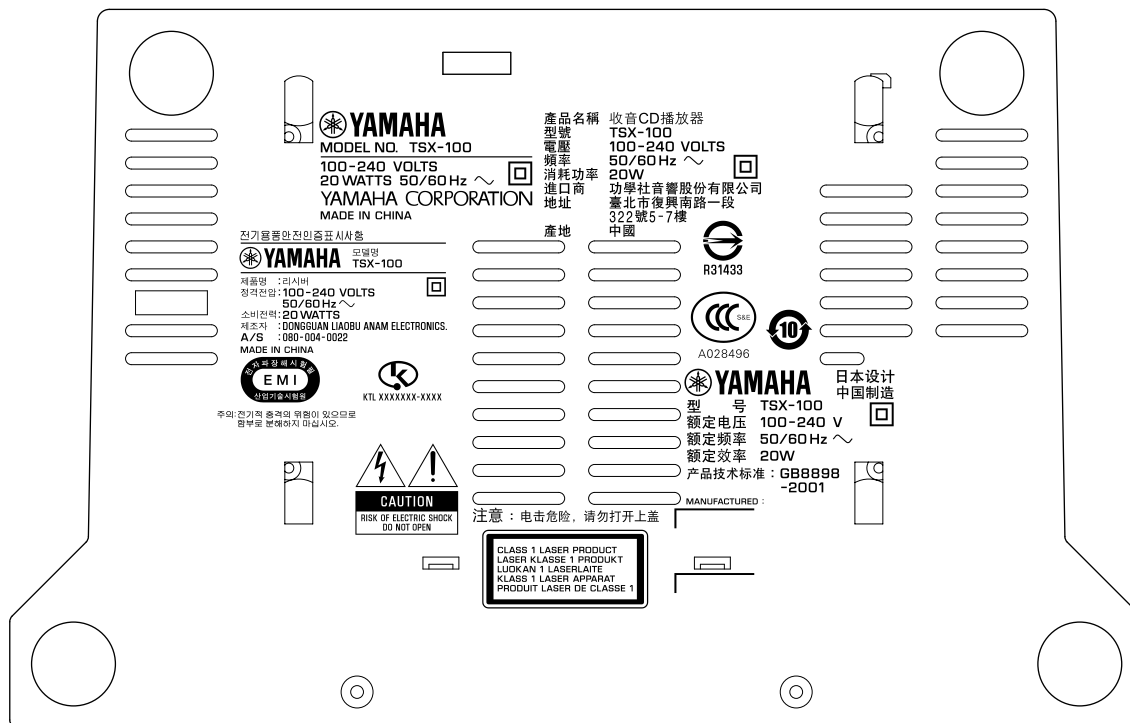


Bottom view

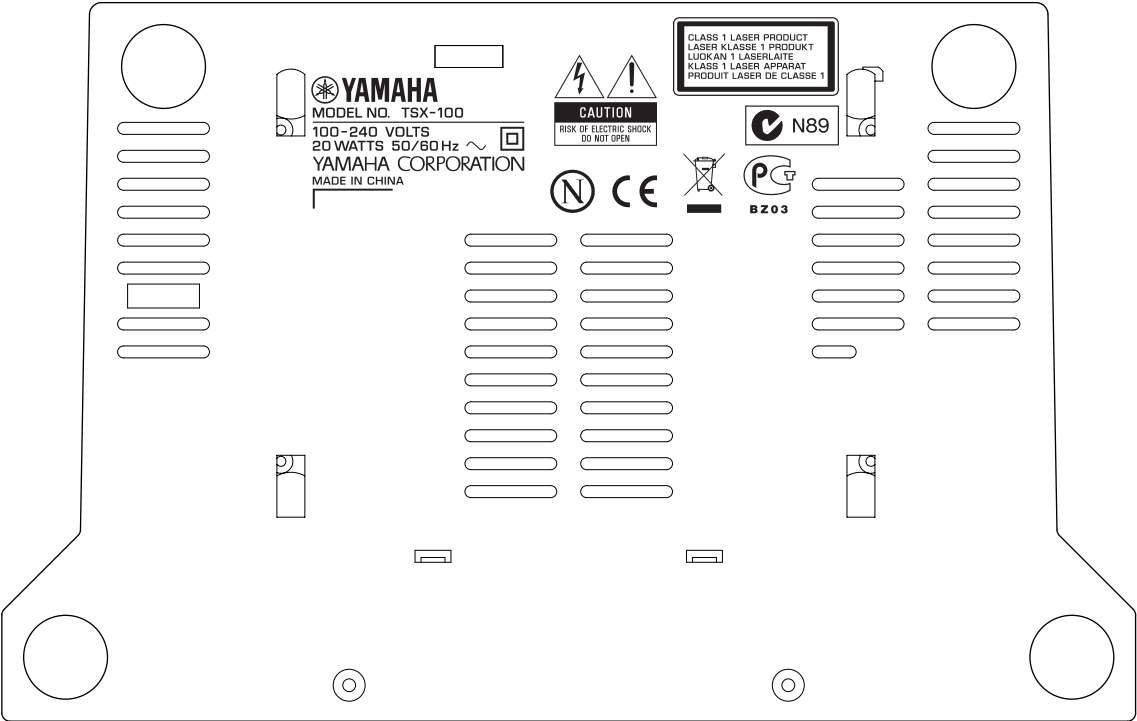
U model



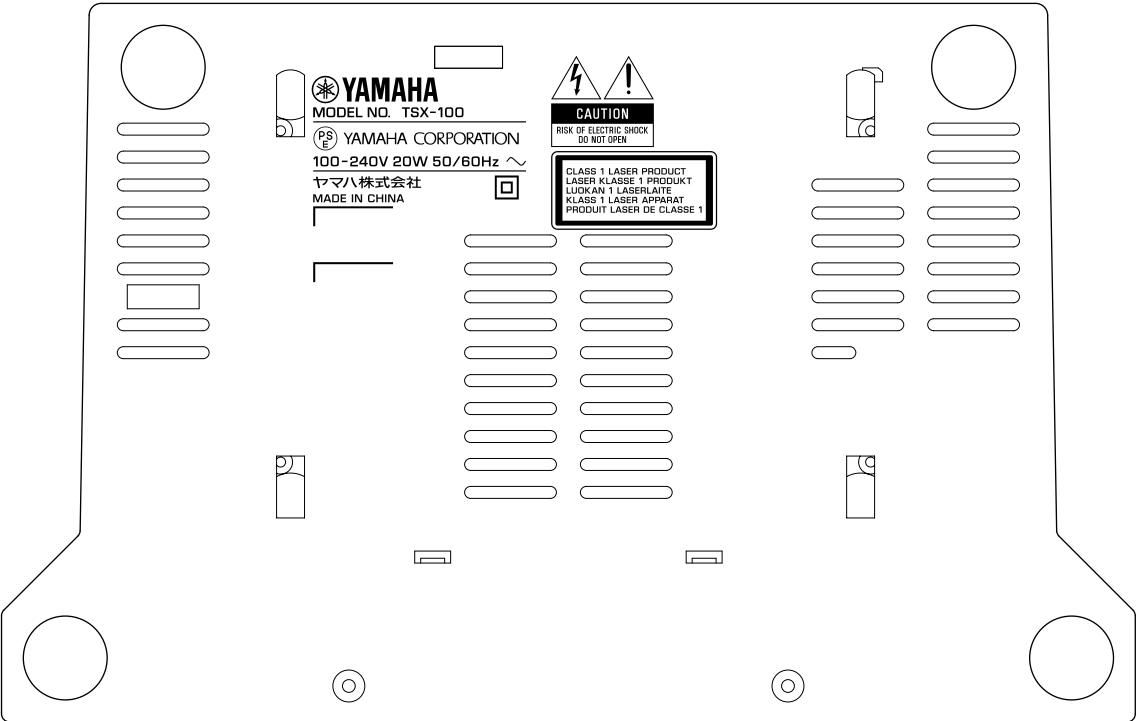
R model



A, B, G models

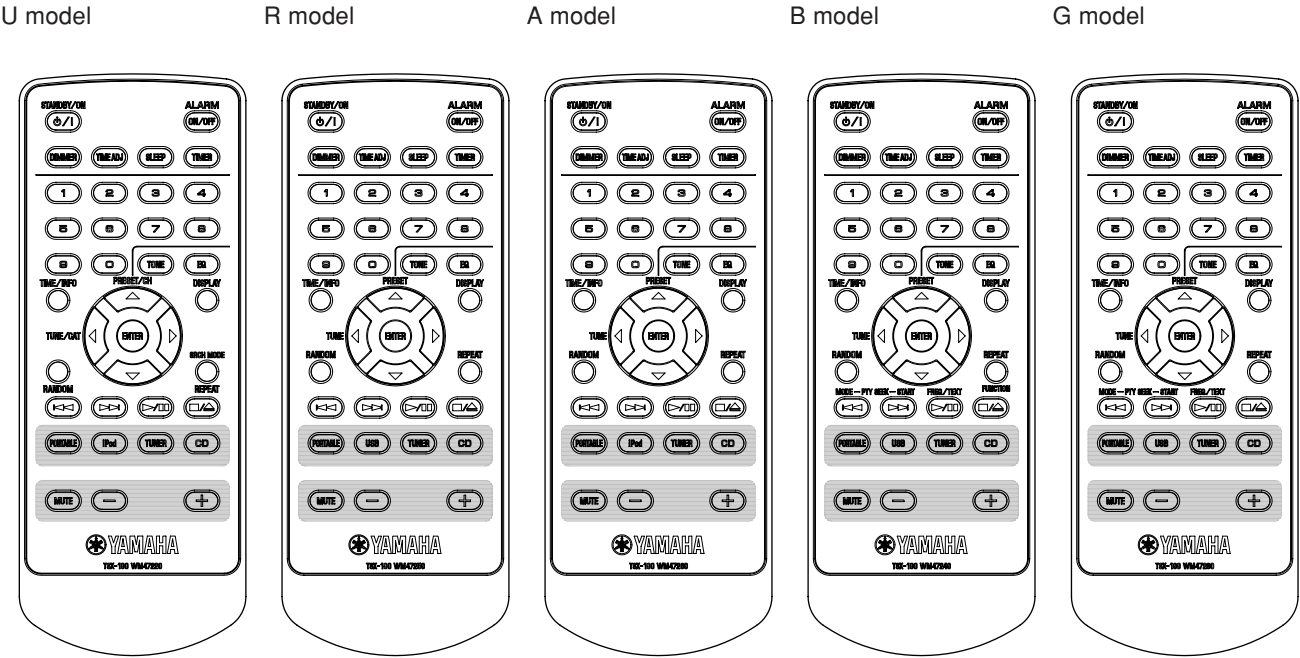


J model

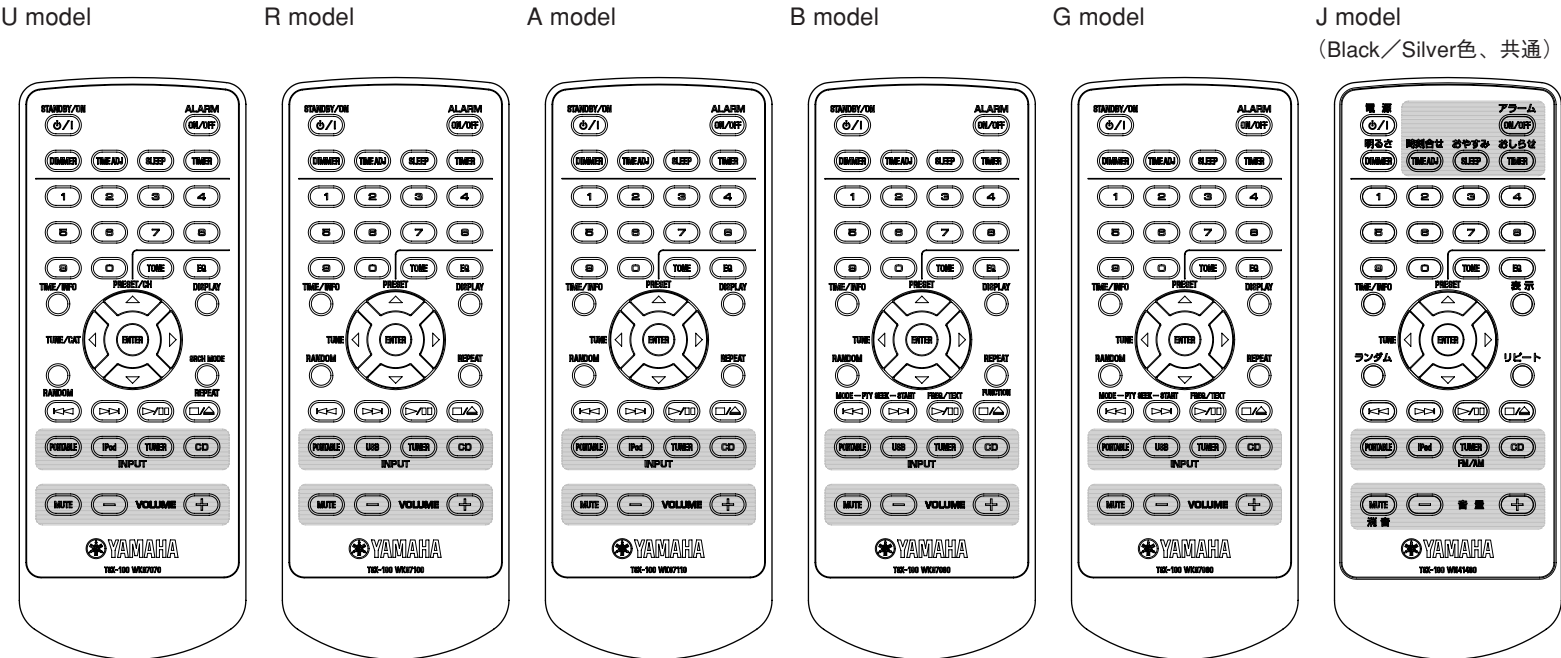


REMOTE CONTROL PANELS

– Black color –



– Silver color –



SPECIFICATIONS / 参考仕様

■ Player Section / プレーヤー部	
Playback system / 再生システム	CD, CD-R/RW
■ Amplifier Section / アンプ部	
Type / スピーカー形式	Twin SR-Bass Magnetic shielding type / 防磁型
Driver / スピーカーユニット	4.5 cm (1-3/4") Titanium cone full-range x 2
Minimum RMS output power per channel / 定格出力 (EIAJ)	10 W + 10 W
Input sensitivity/Impedance / 入力感度/インピーダンス	U, R, A, B, J models PORTABLE 300 mV/47 k-ohms G model AUX 300 mV/47 k-ohms
Output level/Impedance / 出力レベル/インピーダンス	PHONES (volume max.) U, R, A, G models 1 V/32 ohms B, J models 470 V/32 ohms
■ iPod Section / iPod部 [U, A, J models]	
Support iPod models / 対応iPod	iPod (Click and wheel), iPod mini, iPod nano, iPod touch
■ FM Tuner Section / FMチューナー部	
Tuning range / 受信周波数範囲	U model 87.5 to 107.9 MHz R, A, B, G models 87.50 to 108.00 MHz J model 76.0 to 108.0 MHz
■ AM Tuner Section / AMチューナー部	
Tuning range / 受信周波数範囲	U model 530 to 1,710 kHz R, A, B, G, J models 522 to 1,629 kHz
■ DAB Tuner Section [B model]	
Tuning range (BAND III)	174 MHz to 240 MHz
Sensitivity	-95 dB
Selectivity (for adjacent channel)	40 dB
Antenna input (unbalanced)	50 ohms
■ General / 総合	
Power supply / 電源電圧	U model AC 120 V, 60 Hz R, A, B, G, J models AC 100-240 V, 50/60 Hz
Power consumption / 消費電力	20 W
Standby power consumption / 待機時消費電力	1.0 W or less
Dimensions (W x H x D) / 寸法 (幅×高さ×奥行き)	300 x 141.5 x 200 mm (11-13/16" x 5-9/16" x 7-7/8")
Weight / 質量	2.7 kg (5 lbs. 15 oz.)
Finish / 仕上げ	Black color U, R, A, B, G, J models Silver color U, R, A, B, G, J models
Accessories / 付属品	Remote control x 1, Battery (Lithium, CR2025) x 1, AM loop antenna (2.0 m) x 1, Indoor FM antenna (1.5 m) x 1, Power cable (2 m) x 1, Indoor DAB antenna (2.0 m) x 1 (B model)

* 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。

U U.S.A. model
R General model
A Australian model
B British model
G European model
J Japanese model

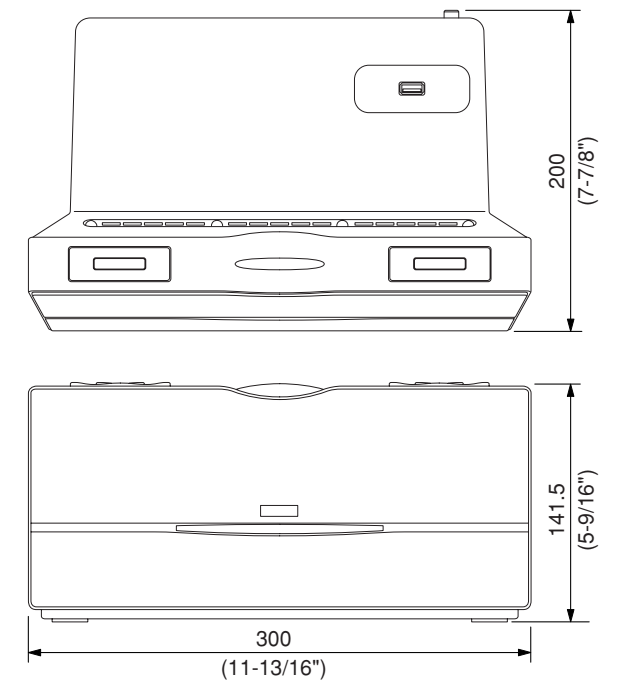
SR-Bass
“Swing Radiator Bass™” is a trademark of YAMAHA CORPORATION.
「Swing Radiator Bass™」は ヤマハ株式会社の登録商標です。

iPod™
“iPod” is a trademark of Apple Inc., registered in the U.S. and other countries.
「iPod」は、米国及びその他の国々で登録されたApple Inc.の商標または登録商標です。

XM Mini-Tuner
The XM name and related logos are registered trademarks of XM Satellite Radio Inc.

DAB
Digital Audio Broadcasting
This receiver supports DAB tuning.

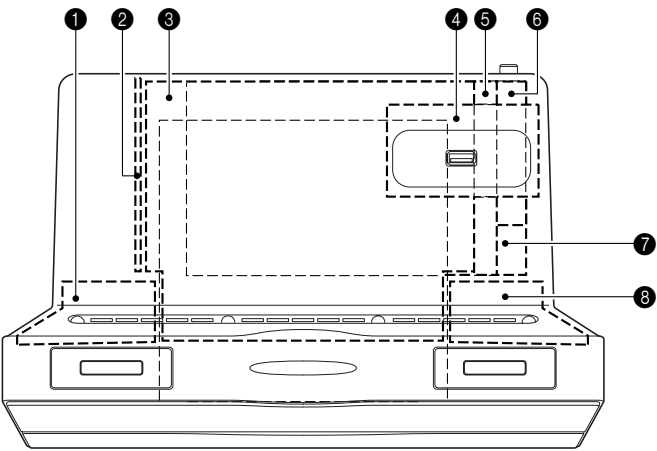
DIMENSIONS / 寸法図



Unit: mm (inch)
単位：mm (インチ)

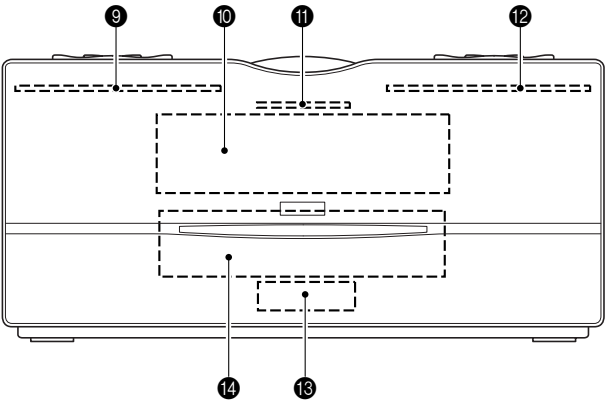
INTERNAL VIEW

Top view



- 1 SPEAKER L ASS'Y
- 2 SMPS P.C.B.
- 3 MAIN (1) P.C.B.
- 4 MAIN (4) P.C.B. (U, A, J models)
- 5 DAB MODULE (B model)
- 6 AM/FM TUNER MODULE
- 7 MAIN (2) P.C.B.
- 8 SPEAKER R ASS'Y
- 9 MAIN (8) P.C.B.
- 10 MAIN (3) P.C.B.
- 11 MAIN (5) P.C.B.
- 12 MAIN (9) P.C.B.
- 13 MAIN (10) P.C.B.
- 14 CD MECHANISM UNIT

Front view



DISASSEMBLY PROCEDURES / 分解手順

(Remove parts in the order as numbered.)
Disconnect the power cable from the AC outlet.

Safety Measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- C971 on the SMPS (2) P.C.B. is dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there. Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10 W) between terminals of the capacitor. The time required for discharging is about 30 seconds. After the repair work, also perform discharge in the same manner.

(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。

安全対策

- この製品の内部には高電圧部分があり危険です。修理の際は、絶縁性の手袋を使用などの安全対策を行ってください。
- SMPS (2) P.C.B.のC971には電源をOFFにした後も電荷が残り、高電圧が維持されており危険です。修理作業前に放電用抵抗 (5 kΩ/10 W) をコンデンサの端子間に接続して放電してください。放電所用時間は約30秒間です。また、修理後も同じ方法で放電してください。

1. Removal of Rear Cabinet Ass'y

- a. Remove 2 screws (1) and 6 screws (2). (Fig. 1)
- b. Pull out the rear cabinet rearward slowly. (Fig. 1)
- c. Remove CN17. (Fig. 1)
- d. Remove screw (3) and then remove the ground lead. (Fig. 1)
- e. Remove the rear cabinet ass'y. (Fig. 1)

2. Removal of Front Panel Unit

- a. Remove 2 screws (4). (Fig. 1)
- b. Remove CN18, CN82 and CN84. (Fig. 1)
- c. Remove the front panel unit forward. (Fig. 1)

3. Removal of Speaker L Ass'y and Speaker R Ass'y

- a. Remove 3 screws (5). (Fig. 1)
- b. Remove CN83. (Fig. 1)
- c. Remove the speaker L ass'y. (Fig. 1)
- d. Remove 3 screws (6). (Fig. 1)
- e. Remove CN85. (Fig. 1)
- f. Remove the speaker R ass'y. (Fig. 1)

1. リアキャビネットASSYの外し方

- a. ①のネジ2本、②のネジ6本を外します。(Fig. 1)
- b. リアキャビネットを後方に引き出します。(Fig. 1)
- c. CN17を外します。(Fig. 1)
- d. ③のネジ1本を外し、アース線を外します。(Fig. 1)
- e. リアキャビネットASSYを取り外します。(Fig. 1)

2. フロントパネルユニットの外し方

- a. ④のネジ2本を外します。(Fig. 1)
- b. CN18、CN82、CN84を外します。(Fig. 1)
- c. フロントパネルユニットを前方へ取り外します。(Fig. 1)

3. スピーカーL ASSY、スピーカーR ASSYの外し方

- a. ⑤のネジ3本を外します。(Fig. 1)
- b. CN83を外します。(Fig. 1)
- c. スピーカーL ASSYを取り外します。(Fig. 1)
- d. ⑥のネジ3本を外します。(Fig. 1)
- e. CN85を外します。(Fig. 1)
- f. スピーカーR ASSYを取り外します。(Fig. 1)

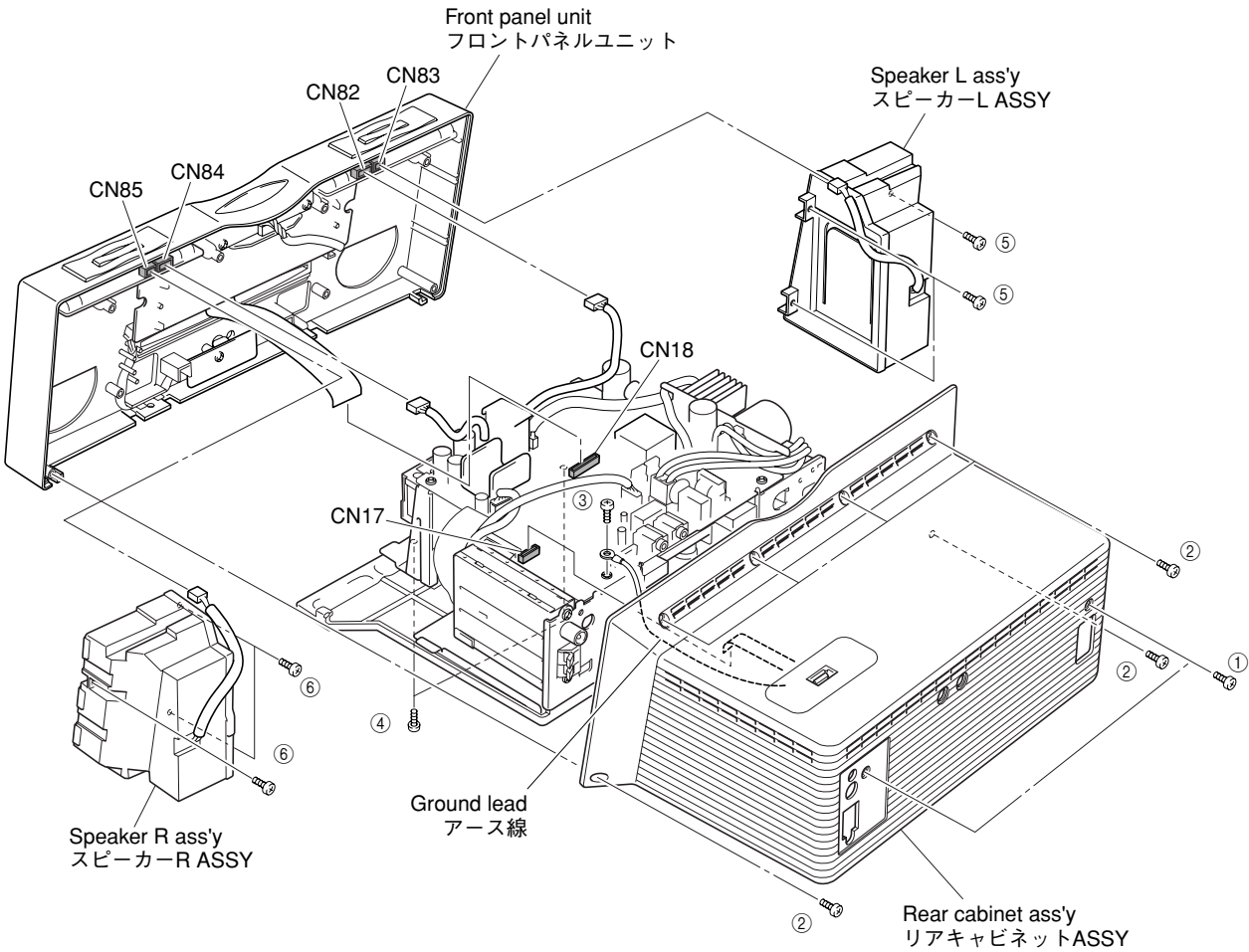


Fig. 1

4. Removal of AM/FM Tuner Module

- Remove 2 screws (⑦). (Fig. 2)
- Remove CN12. (Fig. 2)
- Remove the AM/FM tuner module. (Fig. 2)

5. Removal of MAIN(1) P.C.B.

- Remove 4 screws (⑧) and screw (⑨). (Fig. 2)
- Remove CN11, CN35, CN42, CN91-93 and CN95. (Fig. 2)
- Remove CN15. (Fig. 2) (B model)
- Remove the MAIN (1) P.C.B.. (Fig. 2)

6. Removal of CD Mechanism Unit and Optical Pick-Up

- Remove 4 screws (⑩). (Fig. 2)
- Remove CN31-33. (Fig. 2)
- Lift up the rear side of the CD mechanism unit, then remove it rearward. (Fig. 2)

* When installing the CD mechanism unit, install the flexible flat cable as shown in Fig. 3.

4. AM/FMチューナーの外し方

- ⑦のネジ2本を外します。(Fig. 2)
- CN12を外します。(Fig. 2)
- AM/FMチューナーを取り外します。(Fig. 2)

5. MAIN(1) P.C.B.の外し方

- ⑧のネジ4本、⑨のネジ1本を外します。(Fig. 2)
- CN11、CN35、CN42、CN91-93、CN95を外します。(Fig. 2)
- MAIN(1) P.C.B.を取り外します。(Fig. 2)

6. CDメカユニットおよびオプティカルピックアップの外し方

- ⑩のネジ4本を外します。(Fig. 2)
- CN31-33を外します。(Fig. 2)
- CDメカユニットの後ろを持ち上げ、後方へ取り外します。(Fig. 2)

* CDメカユニットを取り付ける場合、カード電線はFig. 3に示すように取り付けます。

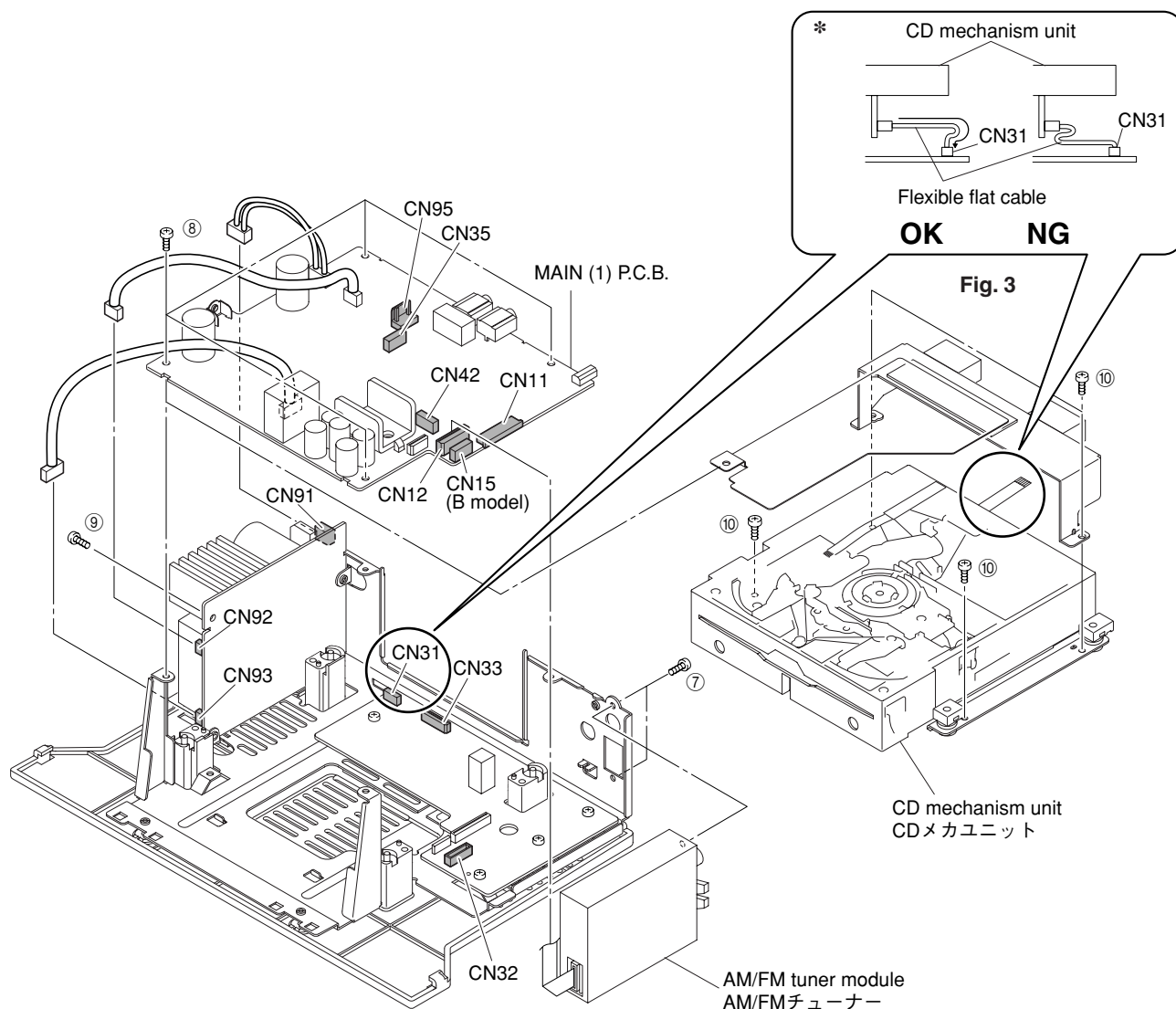


Fig. 2

- d. Remove 4 screws (⑪) and then remove the drive unit. (Fig. 4)
 - e. Remove flexible flat cable. (Fig. 4)
 - f. Remove stopper gear A and then remove the gear A. (Fig. 4)
 - g. Remove stopper sled shaft and then remove the sled shaft. (Fig. 4)
 - h. Remove the optical pick-up unit. (Fig. 4)
- * Never touch the potentiometer installed to the optical pick-up unit. (Fig. 5)

- d. ⑪のネジ4本を外し、ドライブユニットを取り外します。(Fig. 4)
 - e. カード電線を外します。(Fig. 4)
 - f. ギアAストッパーを外し、ギアAを取り外します。(Fig. 4)
 - g. スレッドシャフトストッパーを外し、スレッドシャフトを取り外します。(Fig. 4)
 - h. オプティカルピックアップユニットを取り外します。(Fig. 4)
- ※ オプティカルピックアップユニットに搭載されている可変抵抗は、絶対に触らないでください。(Fig. 5)

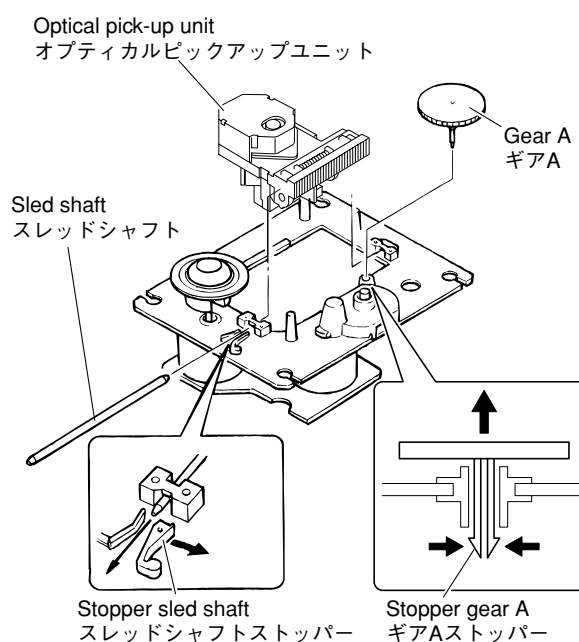
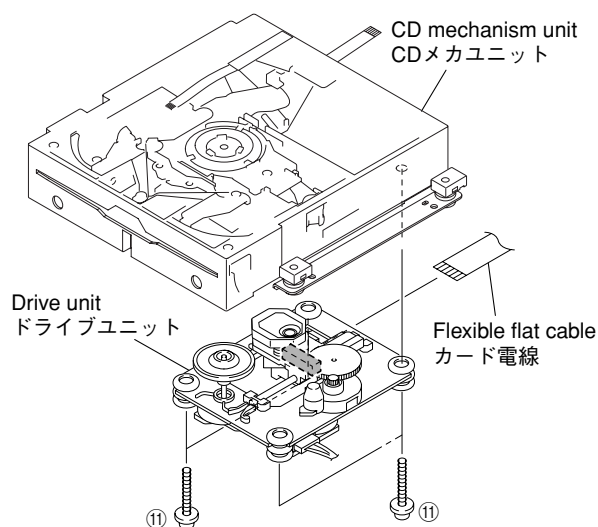


Fig. 4

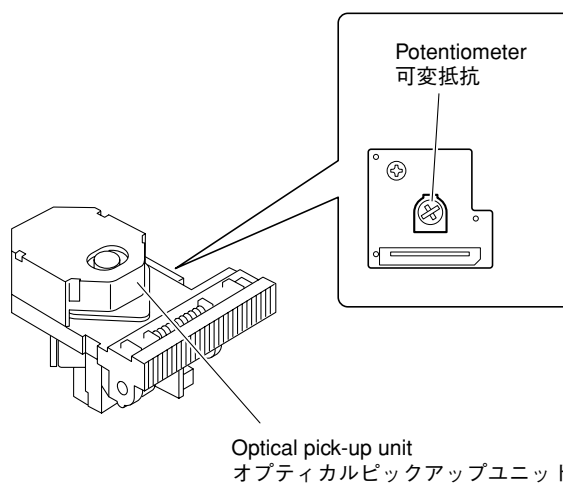


Fig. 5

● How to manually eject a disc

If the inserted disc cannot be ejected, it is possible to eject it manually.

- Remove the CD mechanism unit. (Refer to Disassembly Procedures)
- Turn the loading gear in the arrow direction until the disc is ejected. (Fig. 6)

● 手動でディスクを取り出す方法

挿入したディスクが取り出せない場合、手動で取り出すことができます。

- CDメカユニットを取り外します。(分解手順参照)
- ディスクが取り出せるまで、ローディングギアを矢印の方向に回します。(Fig. 6)

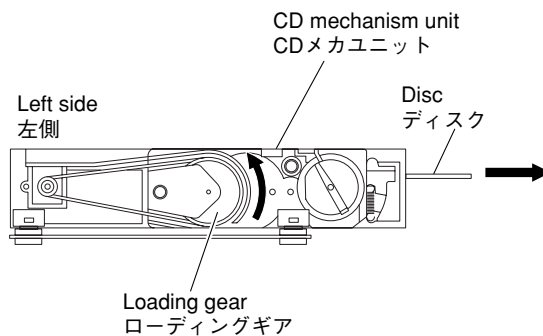


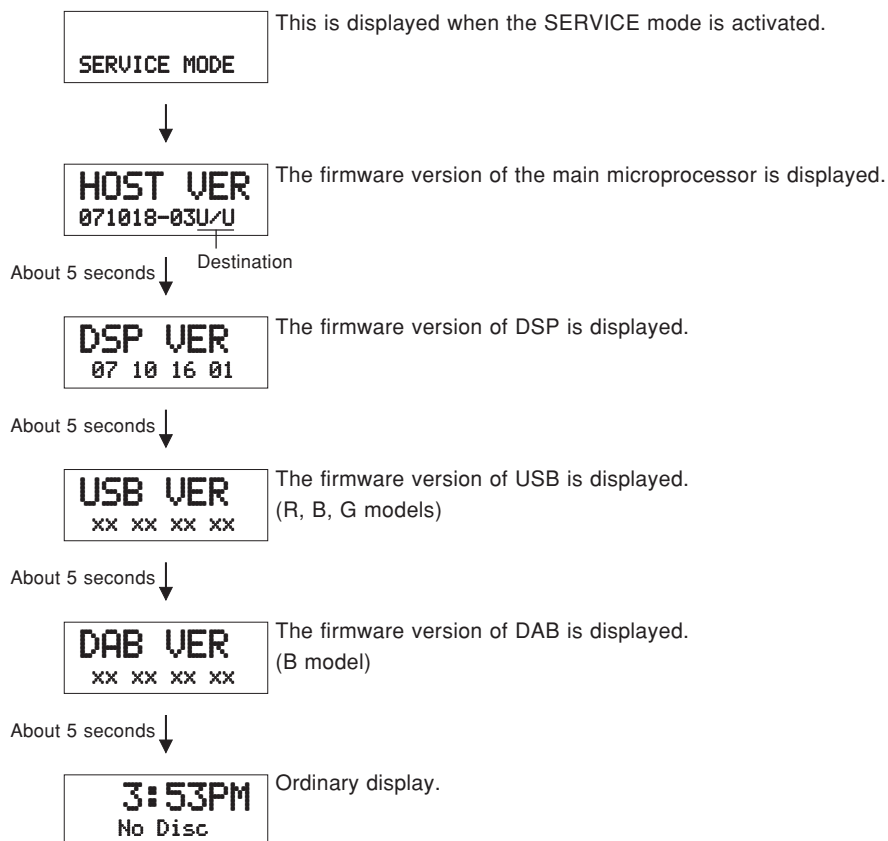
Fig. 6

■ TEST MODE

The firmware version is displayed.

● Starting Service Mode

- Connect the power cable of this unit to the AC power outlet.
- Press the “INPUT/SNOOZE” key of this unit to turn on the power.
- Press the “INPUT/SNOOZE” key of this unit repeatedly to select the CD.
Make sure that [No Disc] is displayed.
- * While the disc is being played, press the “■/▲ (STOP/EJECT)” key to eject the disc.
- While pressing the “MUTE” key of this unit, press the “■/▲ (STOP/EJECT)” key of this unit.
The SERVICE mode is activated and each firmware version is displayed at about 5 seconds intervals.



- Press the “POWER OFF” key of this unit to turn off the power.
- Disconnect the power cable of this unit from the AC power outlet.

● Starting Factory Reset

All settings are returned to initial settings.

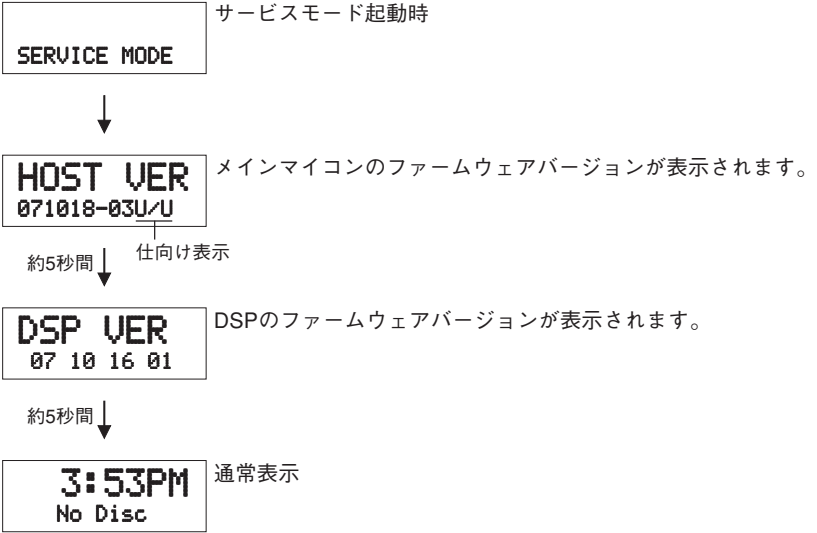
- Activate the Service Mode.
- While the firmware versions are displayed, press and hold the “INPUT/SNOOZE” key for longer than 4 seconds.
- [FACTORY SET] is displayed and the power is turned off automatically in about 4 seconds.

■ テストモード

ファームウェアバージョンを表示します。

● サービスモードの起動

- a. 本機の電源コードをACコンセントに接続します。
- b. 本機の“INPUT/SNOOZE”キーを押し、電源オンします。
- c. 本機の“INPUT/SNOOZE”キーを繰り返し押して、CDを選択します。
[No Disc]が表示されていることを確認します。
※ ディスクが再生されている場合は、本機の“■/▲(STOP/EJECT)”キーを押し、ディスクを取り出します。
- d. 本機の“MUTE”キーを押しながら“■/▲(STOP/EJECT)”キーを押します。
サービスモードが起動し、各ファームウェアバージョンが約5秒間隔で表示されます。

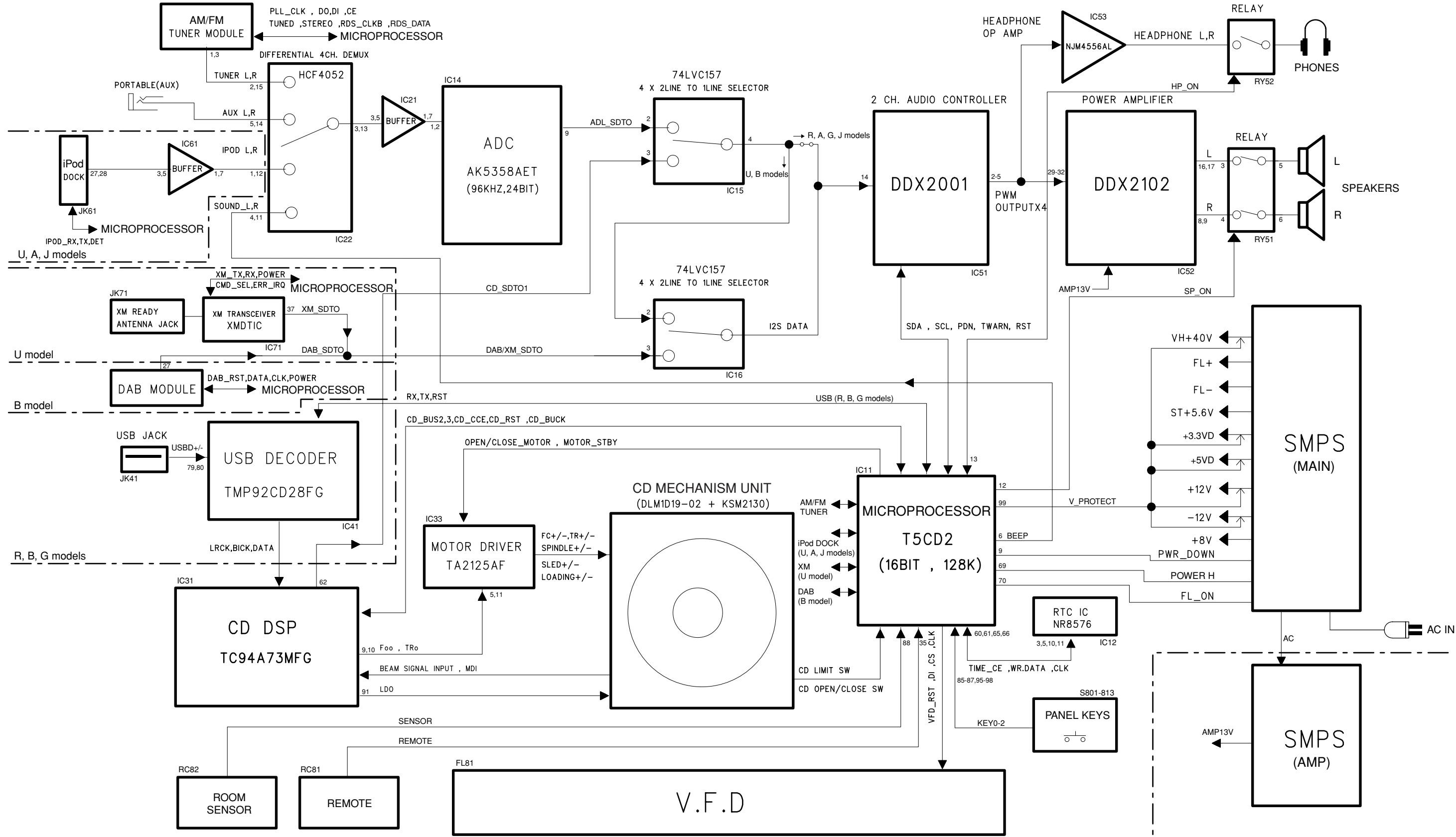


- e. 本機の“POWER OFF”キーを押し、電源オフします。
- f. ACコンセントから本機の電源コードを抜きます。

● ファクトリーリセットの起動

- すべての設定を初期設定に戻します。
- a. サービスモードを起動します。
 - b. ファームウェアバージョンを表示している間に、“INPUT/SNOOZE”キーを4秒以上押し続けます。
 - c. [FACTORY SET]が表示され、約4秒後に自動で電源オフします。

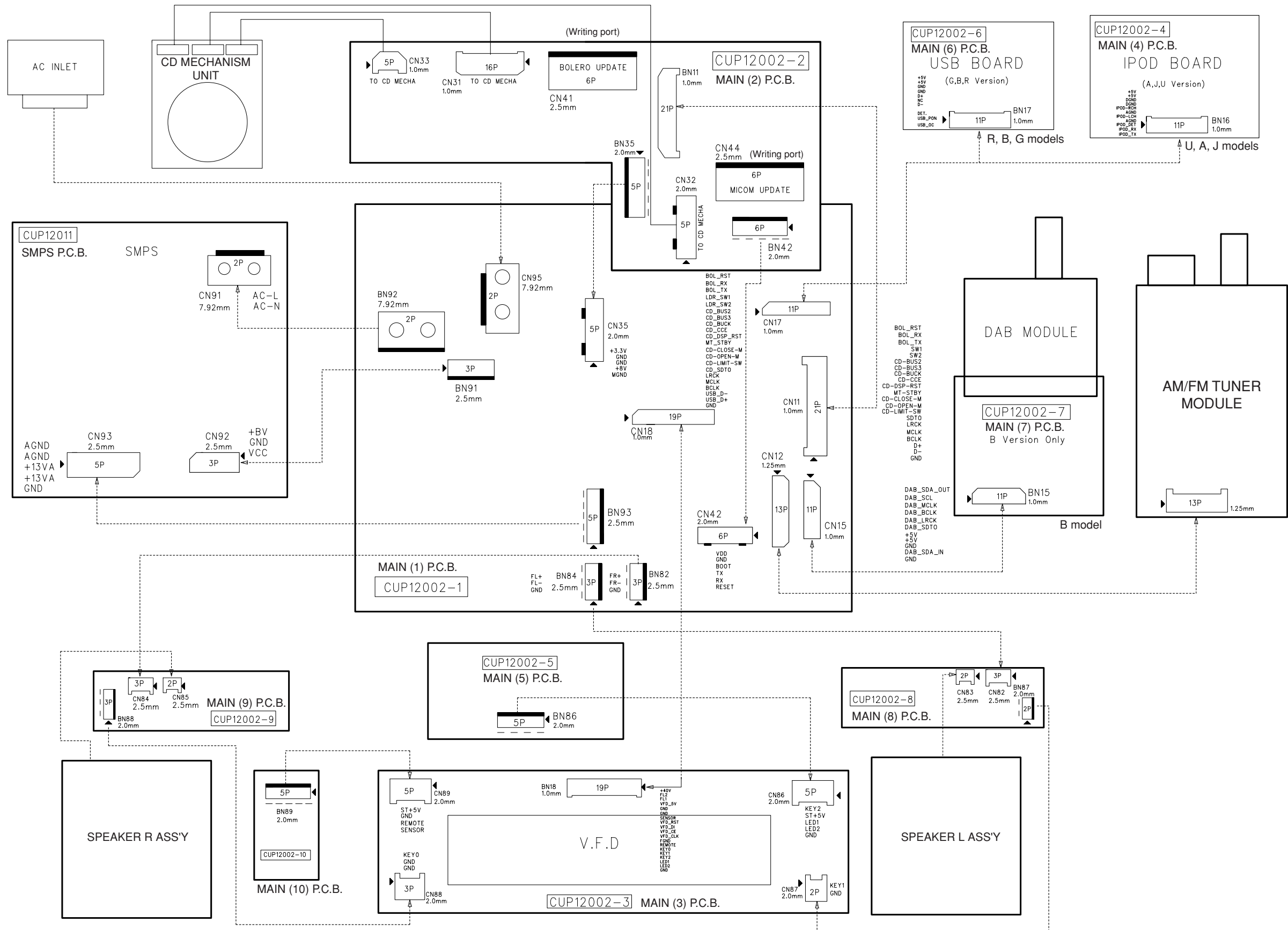
■ BLOCK DIAGRAM



MAIN • See page 27-30 →
SCHEMATIC DIAGRAM

SMPS • See page 31 →
SCHEMATIC DIAGRAM

WIRING DIAGRAM

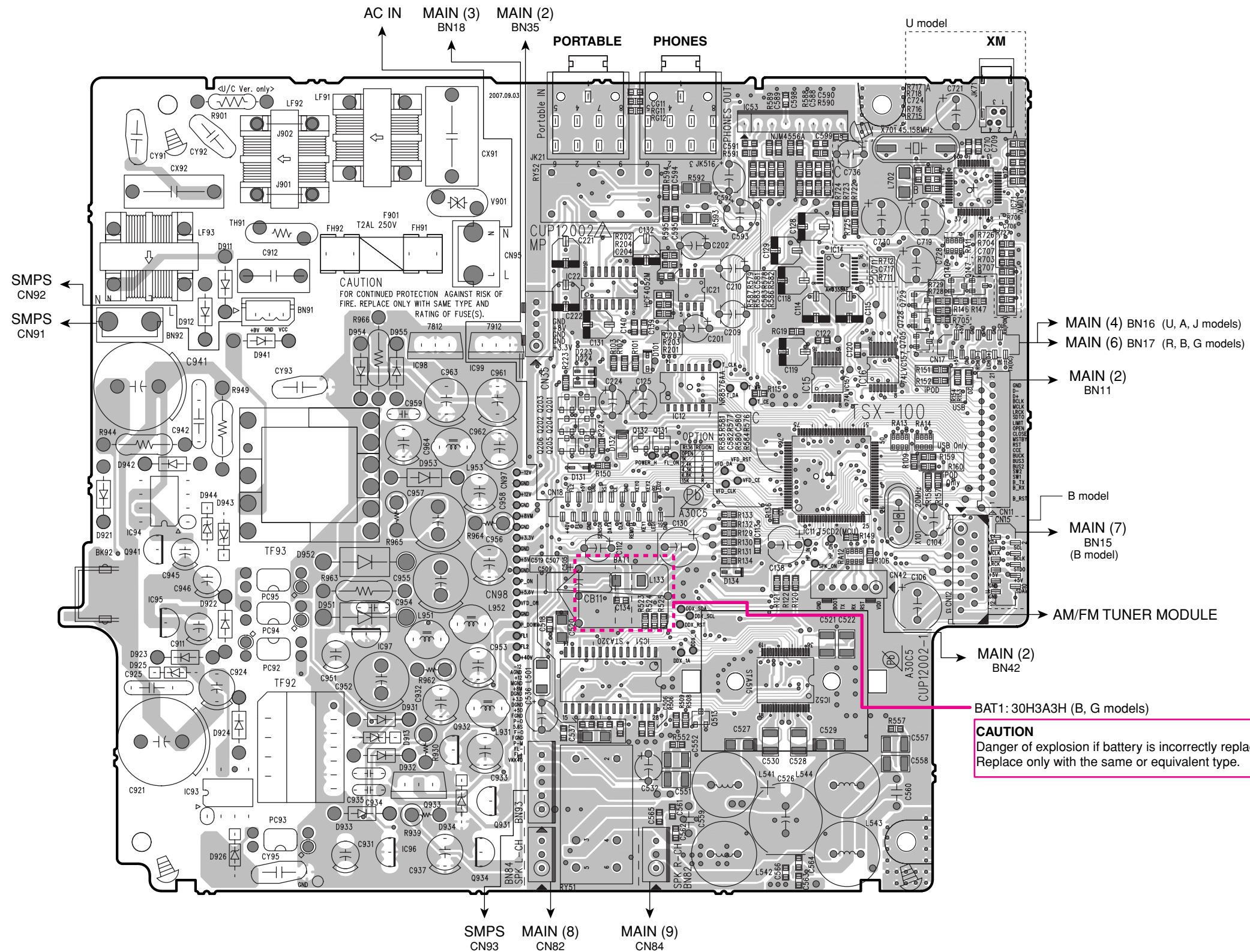


■ PRINTED CIRCUIT BOARDS

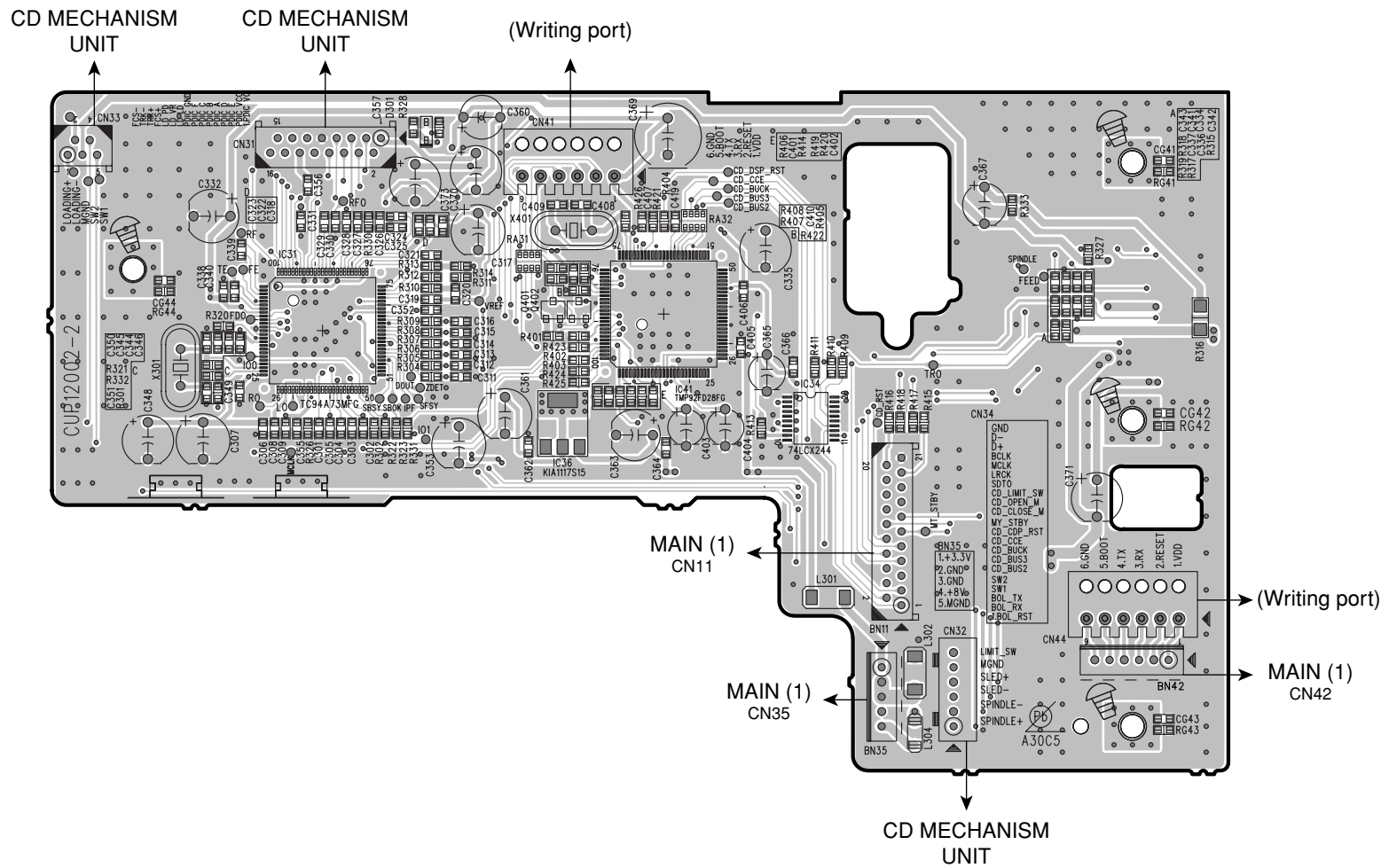
MAIN (1) (Top view)

Note) The electrical parts available as servicing parts are those in the replacement parts list only.
When replacement of any electrical part other than those in the list is necessary, replace the P.C.B. assembly which includes that part.

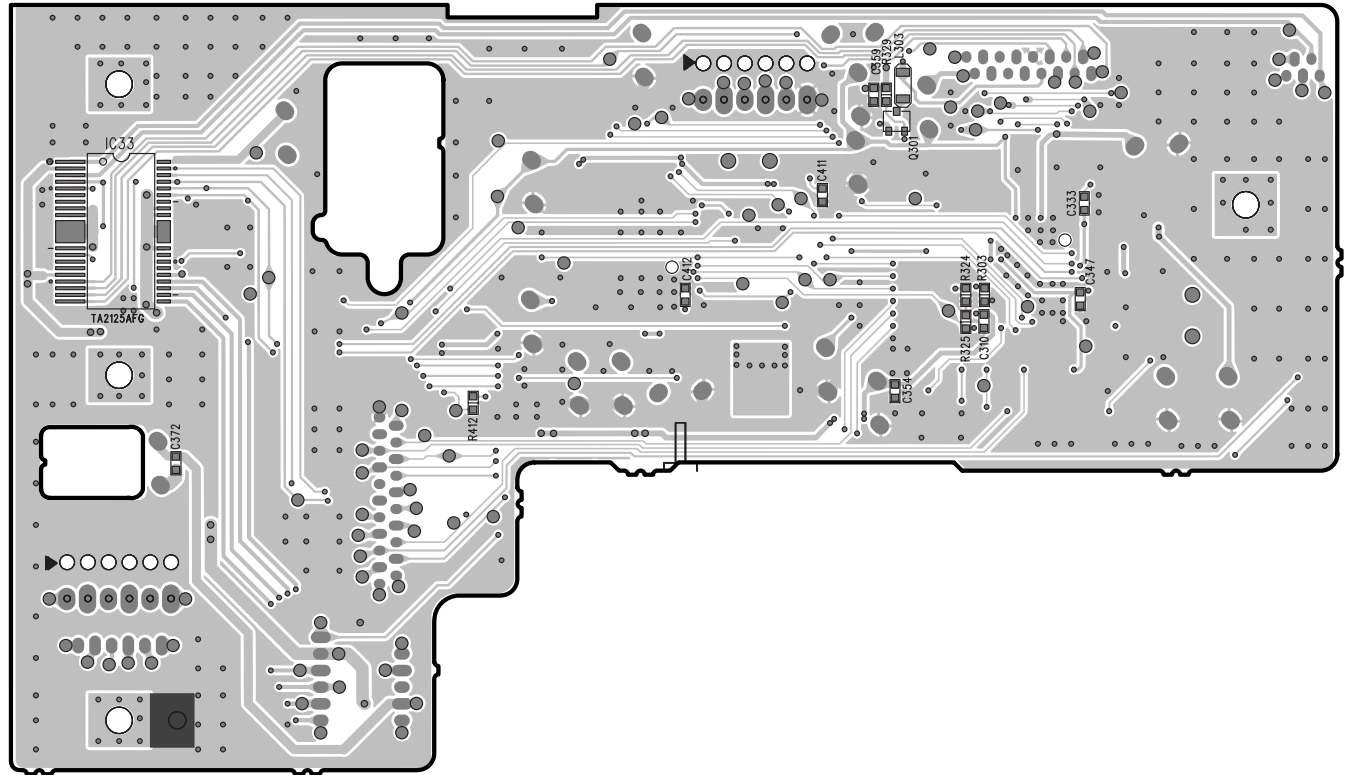
注) 電気部品リストに記載されている電気部品のみ、サービス部品として供給できます。
電気部品リストに記載されていない電気部品の交換が必要な場合は、その電気部品を搭載している「P.C.B. ASSY」を交換してください。



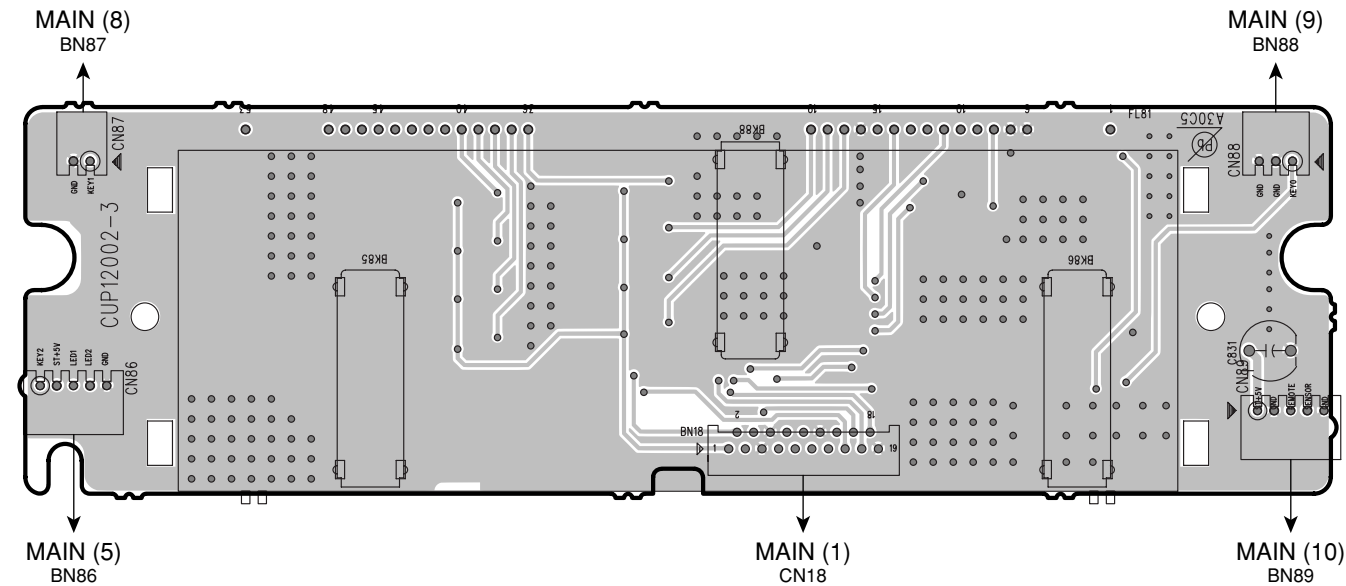
MAIN (2) (Top view)



MAIN (2) (Bottom view)

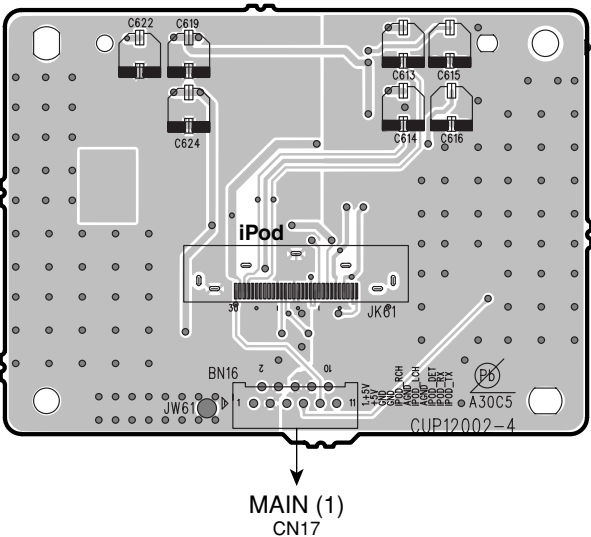


MAIN (3) (Top view)

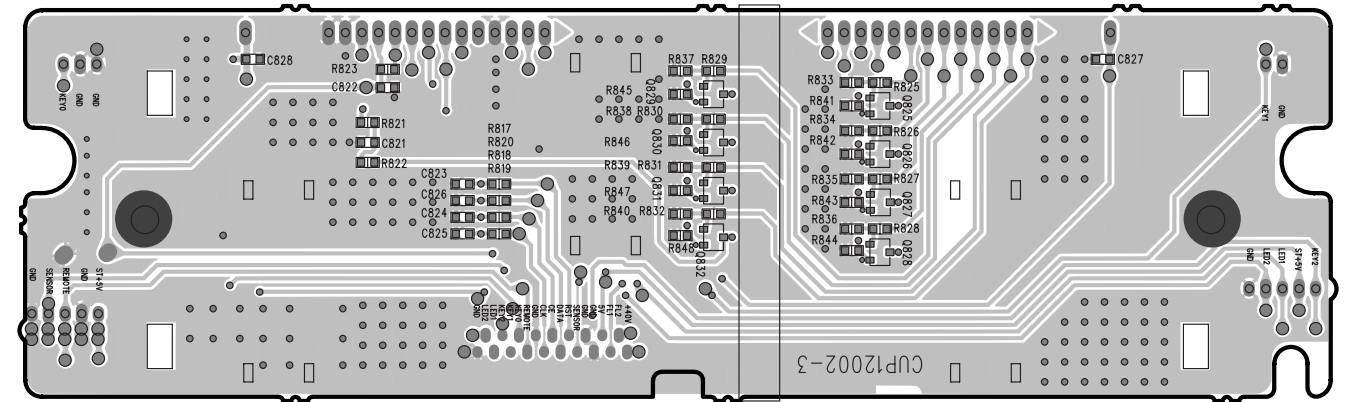


MAIN (4) (Top view)

U, A, J models

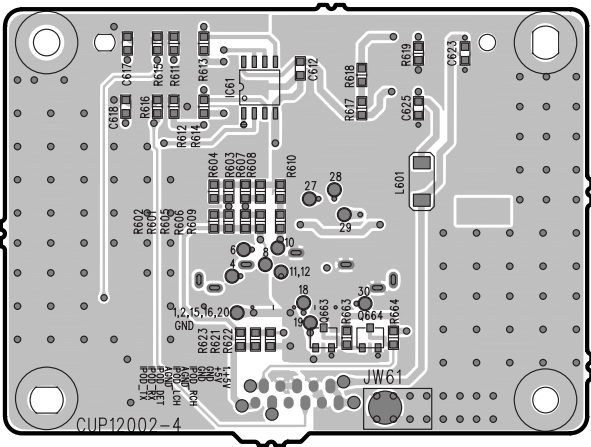


MAIN (3) (Bottom view)



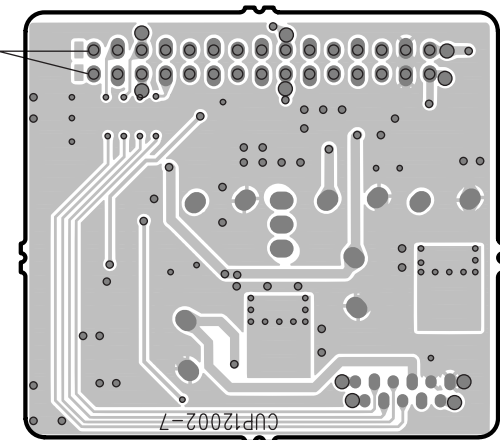
MAIN (4) (Bottom view)

U, A, J models

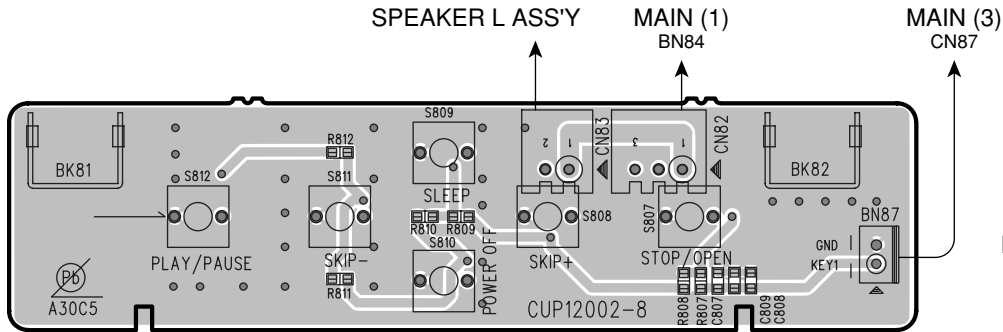


MAIN (7) (Bottom view)

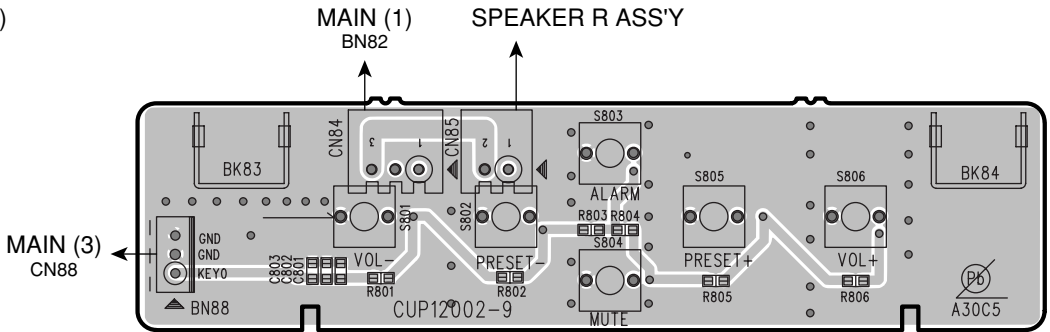
B model



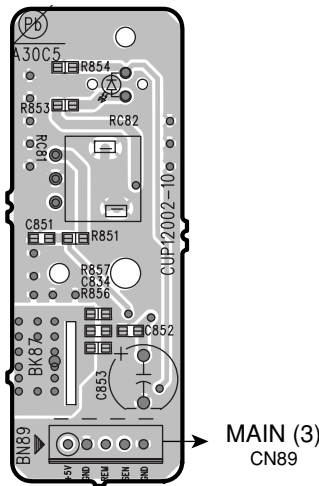
MAIN (8) (Top view)



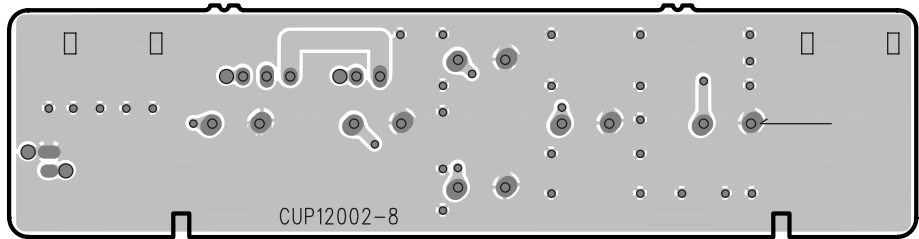
MAIN (9) (Top view)



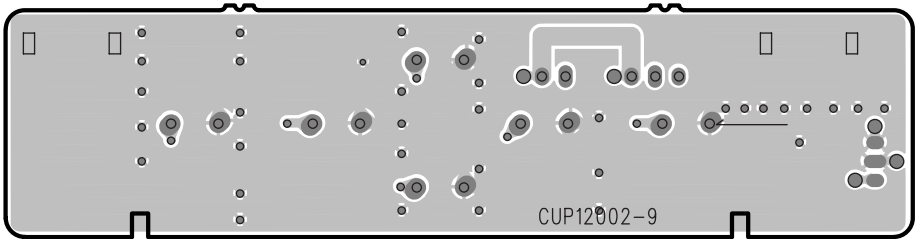
MAIN (10) (Top view)



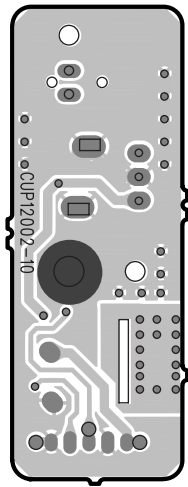
MAIN (8) (Bottom view)



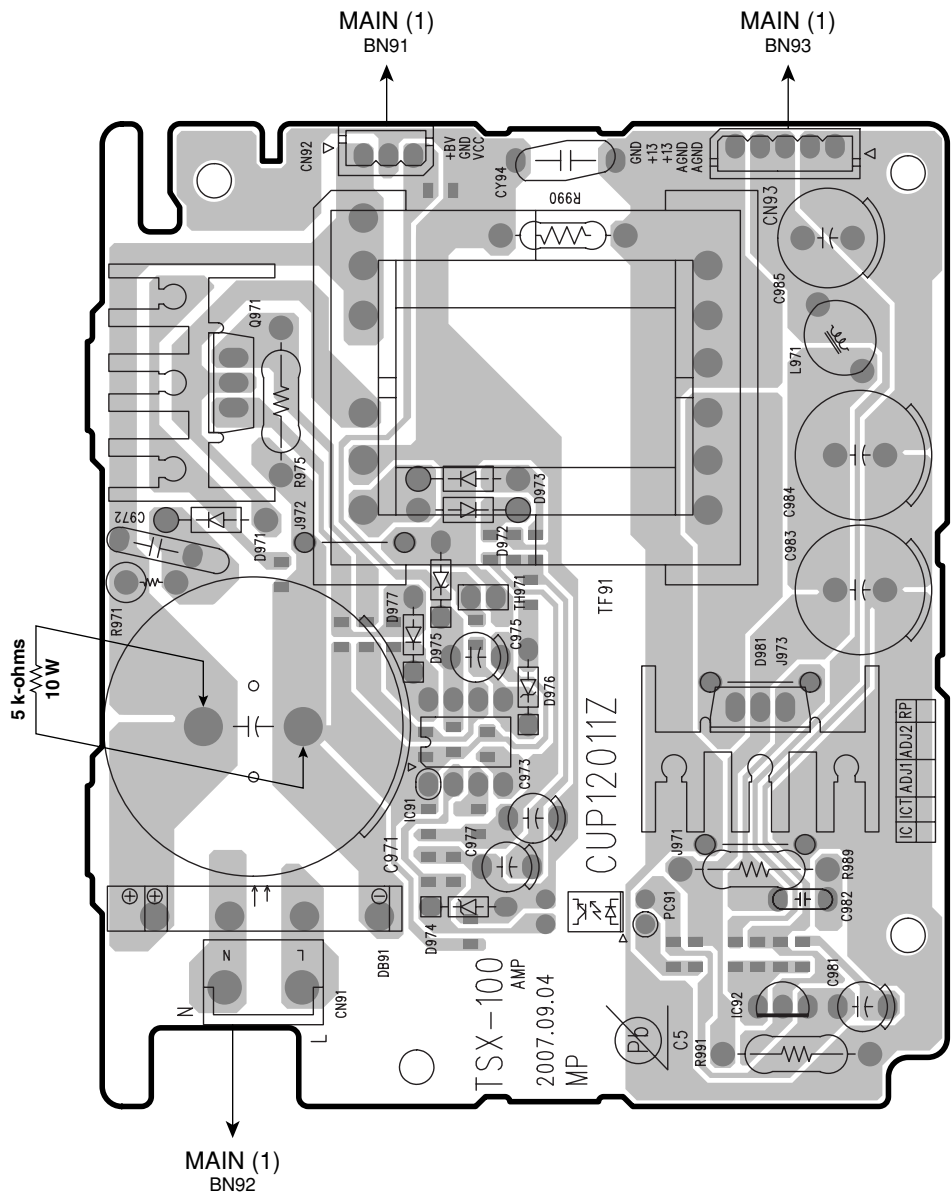
MAIN (9) (Bottom view)



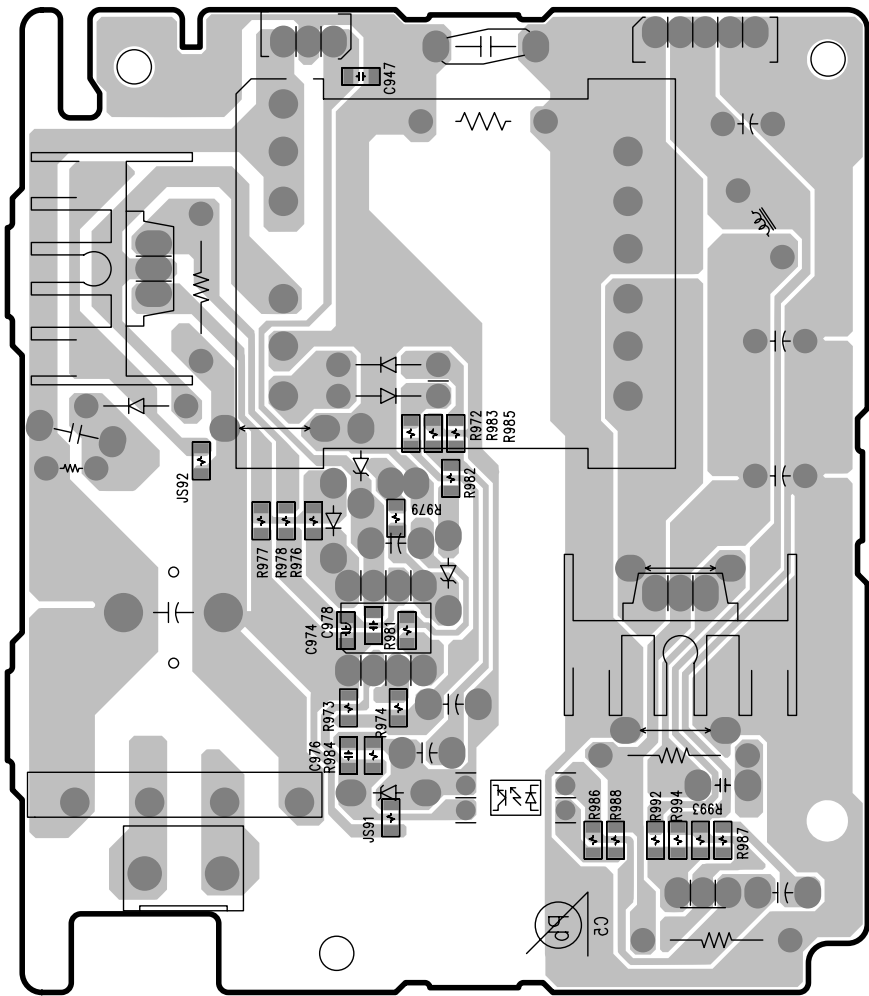
MAIN (10) (Bottom view)



SMPS (Side A)



SMPS (Side B)



Safety Measures

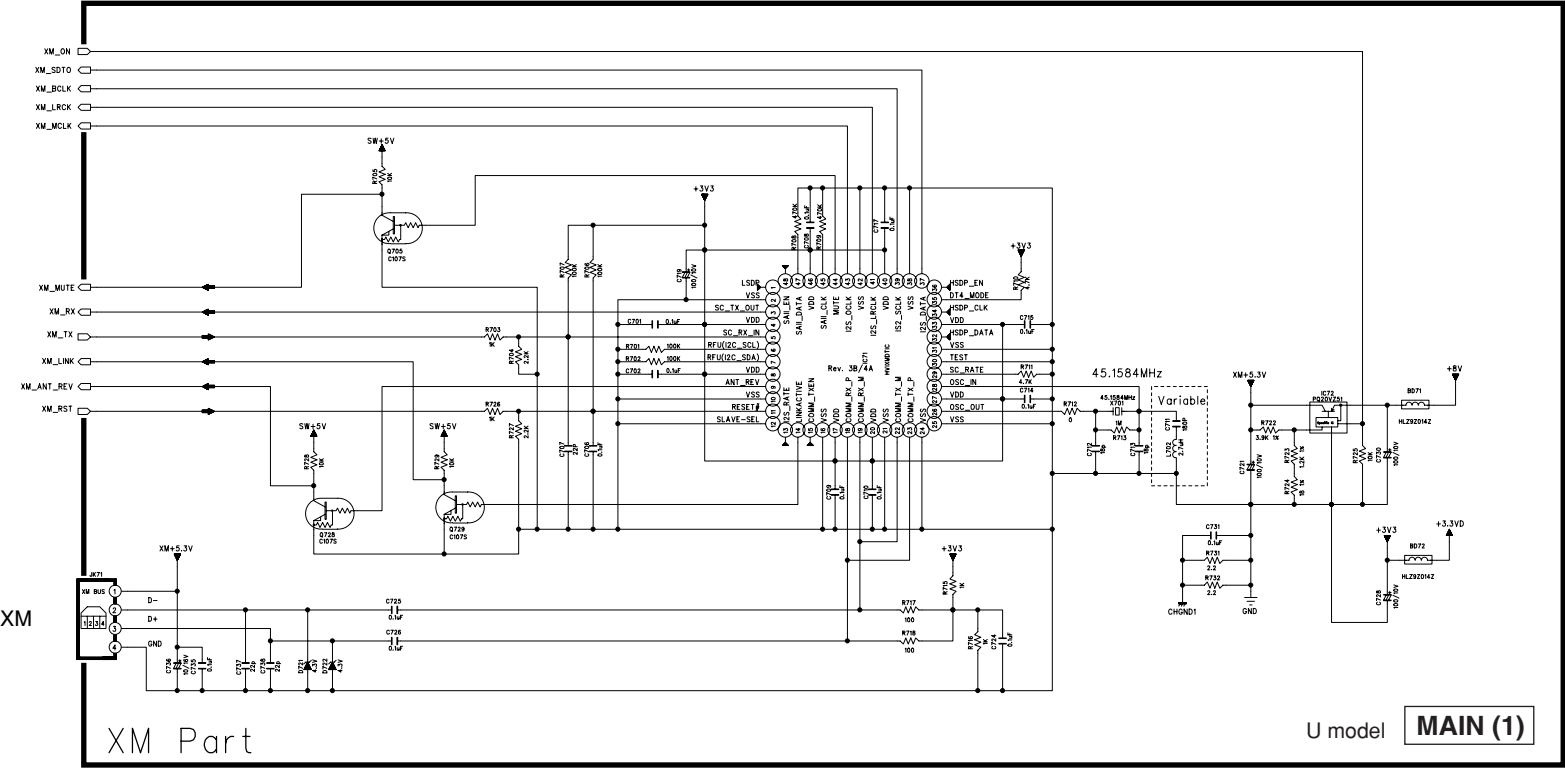
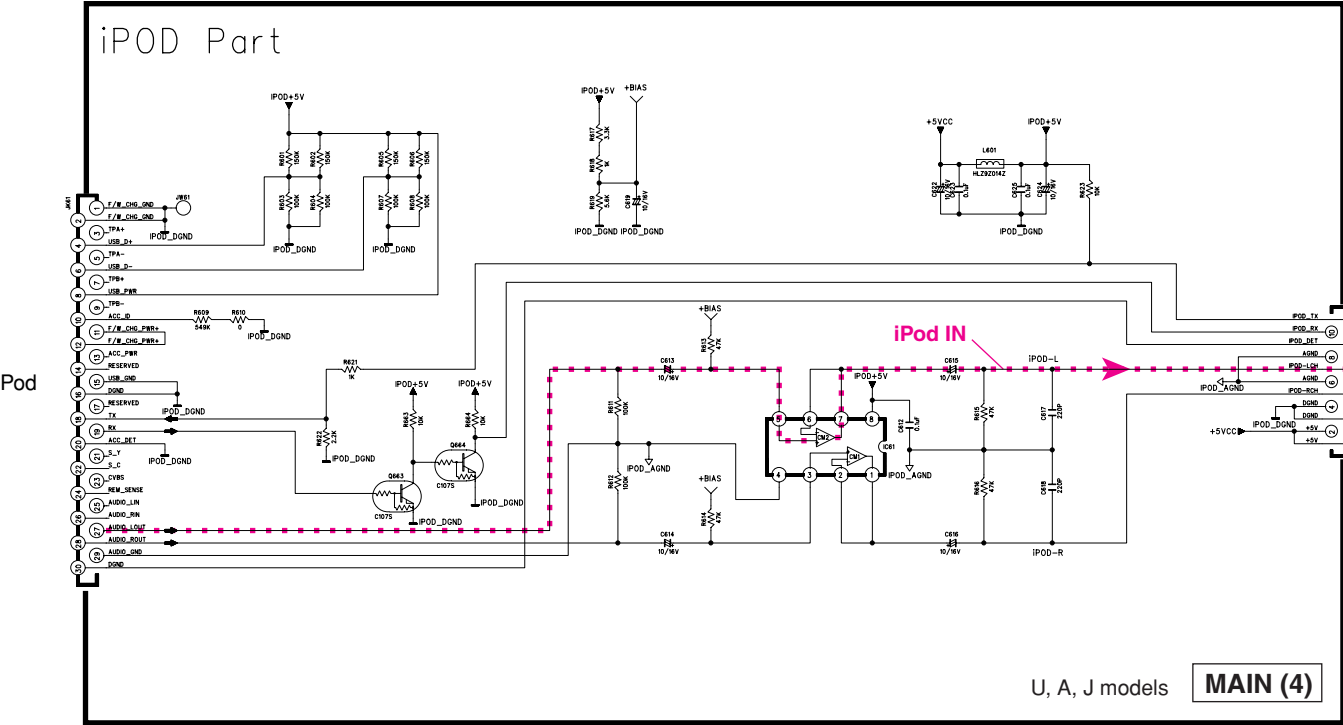
- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
- C971 on the SMPS (2) P.C.B. is dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there.
Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10 W) between terminals of the capacitor. The time required for discharging is about 30 seconds.
After the repair work, also perform discharge in the same manner.

安全対策

- この製品の内部には高電圧部分があり危険です。修理の際は、絶縁性の手袋を使用などの安全対策を行ってください。
- SMPS(2)P.C.B.のC971には電源をOFFにした後も電荷が残り、高電圧が維持されており危険です。
修理作業前に放電用抵抗(5 kΩ/10 W)をコンデンサの端子間に接続して放電してください。放電所用時間は約30秒間です。
また、修理後も同じ方法で放電してください。

SCHEMATIC DIAGRAMS

MAIN 1/4

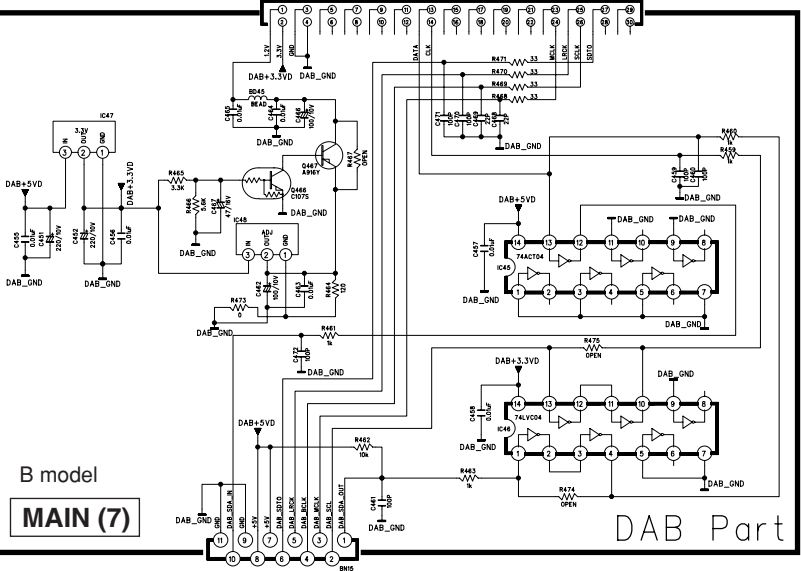
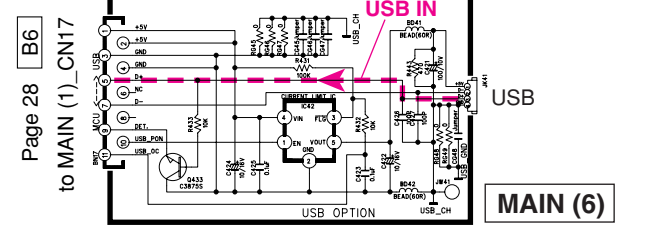
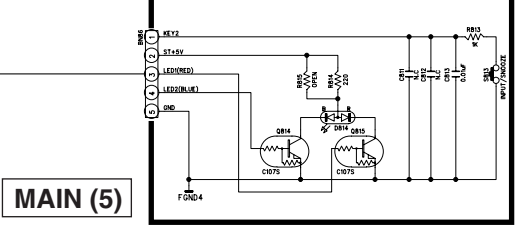
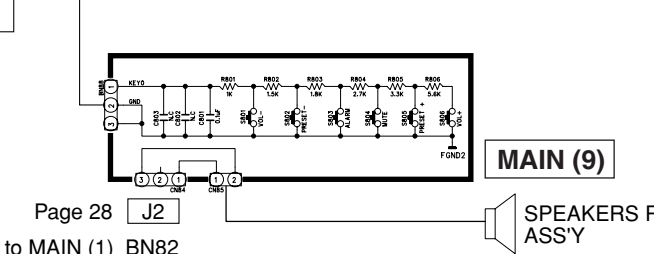
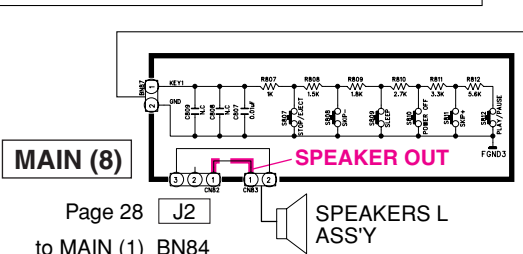
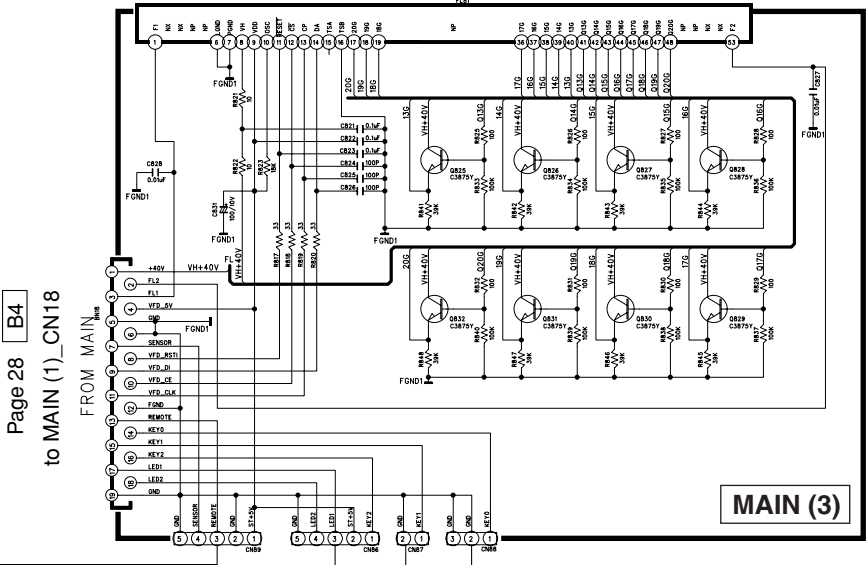
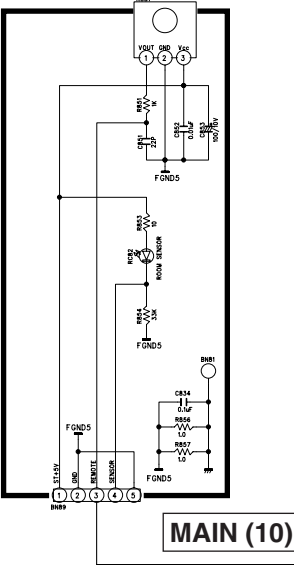


★ Components having special characteristics are marked  and must be replaced with parts having specifications equal to those originally installed.
★ Schematic diagram is subject to change without notice.
★ 印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
★ 本回路図は標準回路図です。改良のため予告なく変更することがございます。

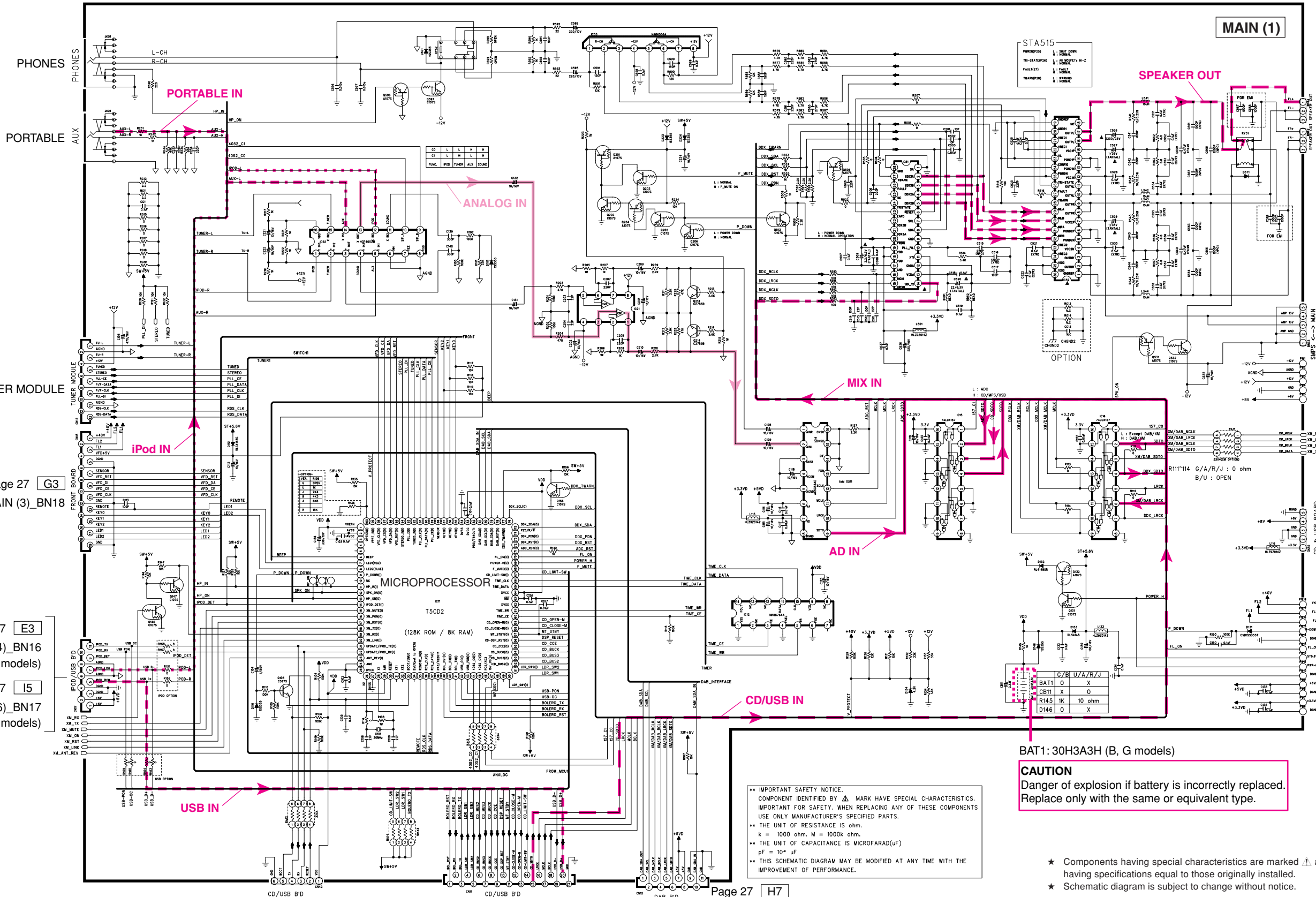
★ IMPORTANT SAFETY NOTICE.
COMPONENT IDENTIFIED BY  MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
★ THE UNIT OF RESISTANCE IS ohm.
k = 1000 ohm. M = 1000k ohm.
★ THE UNIT OF CAPACITANCE IS MICROFARAD(uF)
pF = 10⁻⁴ uF
★ THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE.

Note) The electrical parts available as servicing parts are those in the replacement parts list only.
When replacement of any electrical part other than those in the list is necessary, replace the P.C.B.
assembly which includes that part.

注) 電気部品リストに記載されている電気部品のみ、サービス部品として供給できます。
電気部品リストに記載されていない電気部品の交換が必要な場合は、その電気部品を搭載している「P.C.B. ASSY」を交換してください。



Page 28 F7 to MAIN (1)_CN15



Page 27 **G4**
to MAIN (8)_CN82

Page 27 **I4**
to MAIN (9)_CN84

Page 31 **H3**
to SMPS_CN93

Page 30 **I3**
to MAIN (1)_CN97

Page 29 **B3**
to MAIN (2)_BN35

Page 30 **I4**
to MAIN (1)_CN98

Page 29 **G7**
to MAIN (2)_BN42

Page 29 **E2**
to MAIN (2)_BN11

Page 27 **H7**
to MAIN (7)_BN15
(B model)

- ★ 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.
- ★ Δ 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 3/4

Page 28 E7
to MAIN (1)_CN11

Page 28 J5
to MAIN (1)_CN35

Page 28 C7
to MAIN (1)_CN42

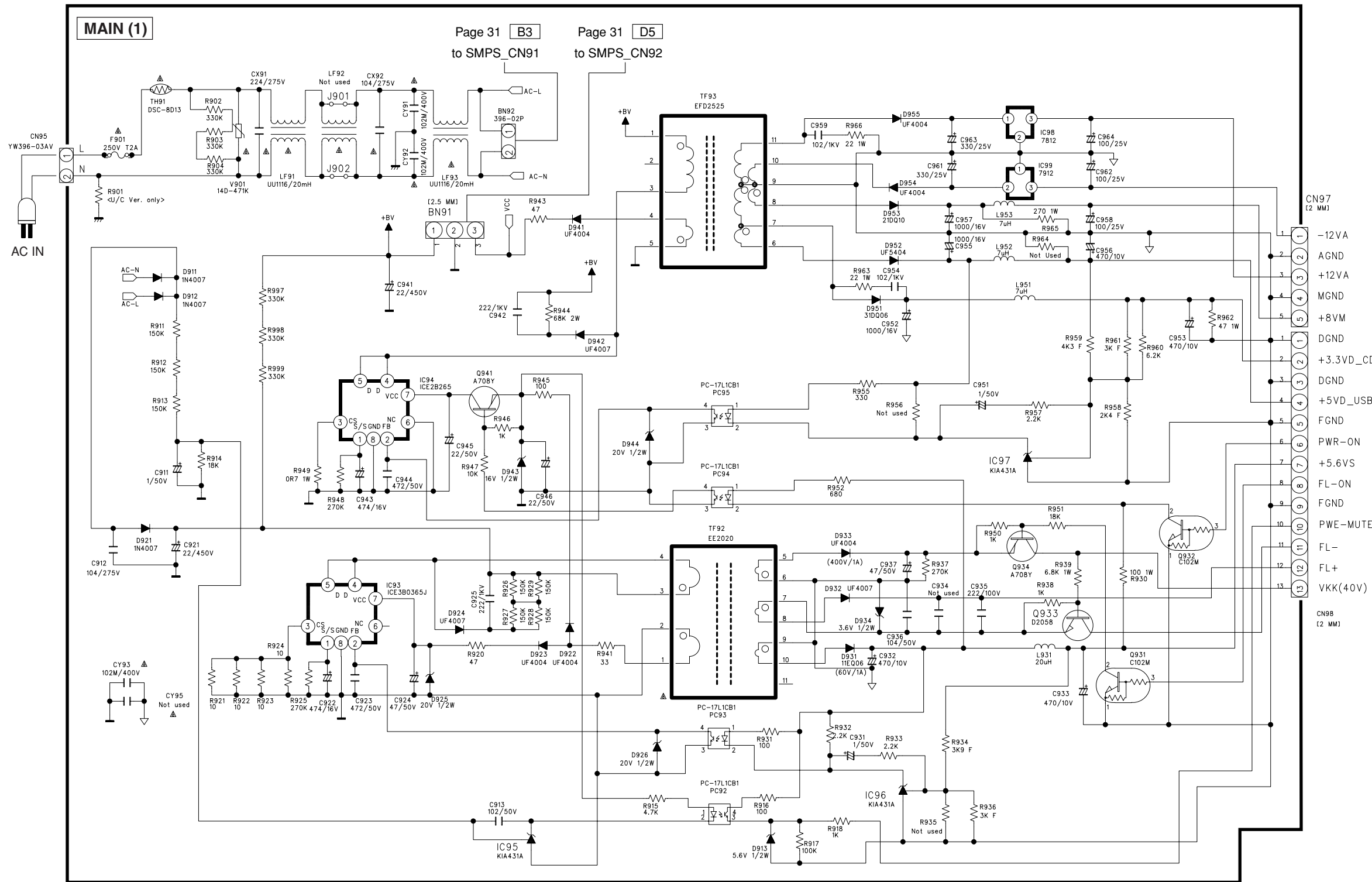
(Writing port)

Page 28 C7
to MAIN (1)_CN42

MAIN (2)

△ IMPORTANT SAFETY NOTICE.
COMPONENT IDENTIFIED BY △ MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
△ THE UNIT OF RESISTANCE IS ohm.
k = 1000 ohm, M = 1000k ohm.
△ THE UNIT OF CAPACITANCE IS MICROFARAD(μF)
pF = 10⁻⁴ μF
△ THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE.

- ★ 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.
- ★ △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。



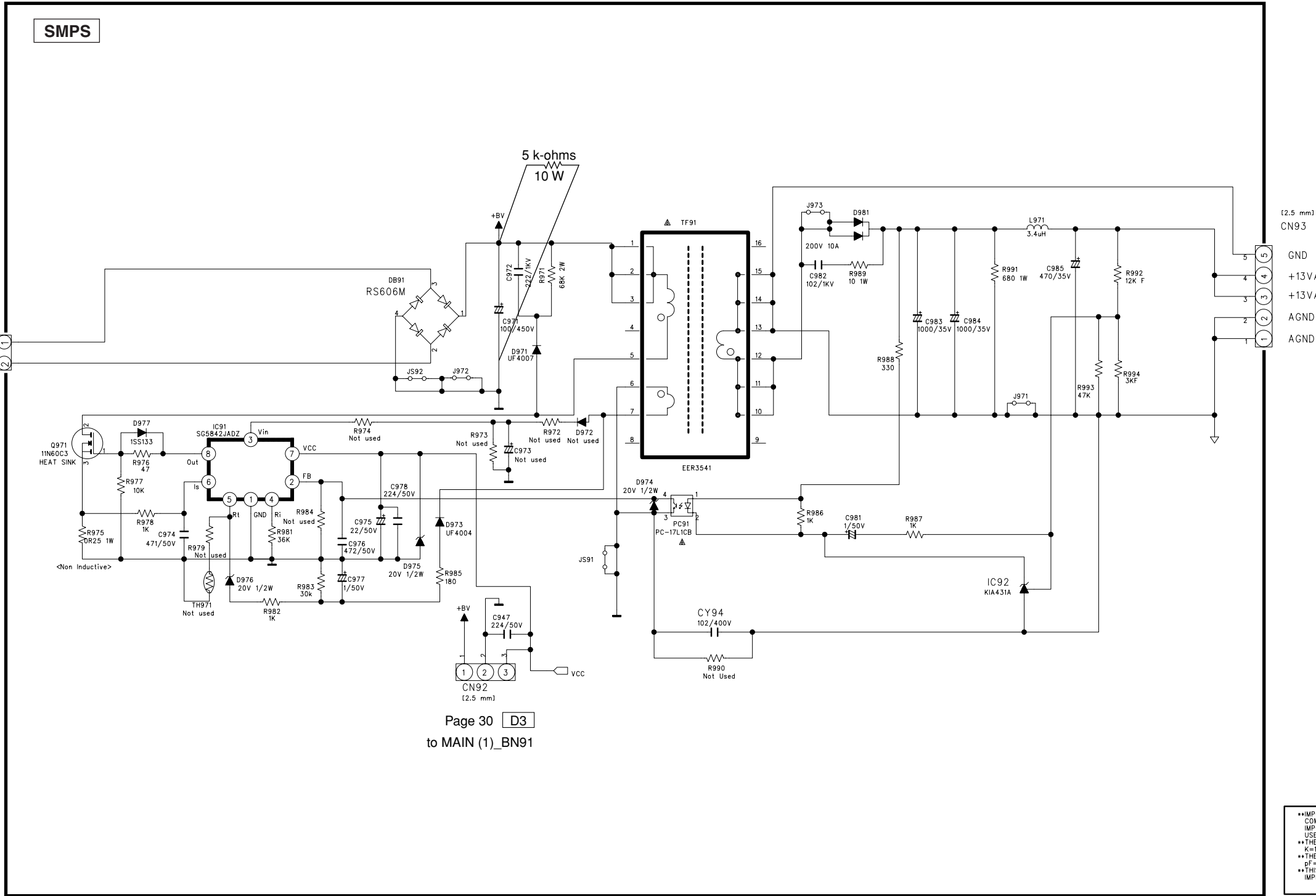
- ★ Components having special characteristics are marked and must be replaced with parts having specifications equal to those originally installed.
- ★ Schematic diagram is subject to change without notice.
- ★ 印のある部品は、安全性確保部品を示しています。部品の交換が必要な場合、パーツリストに記載されている部品を使用してください。
- ★ 本回路図は標準回路図です。改良のため予告なく変更することがございます。

••IMPORTANT SAFETY NOTICE. COMPONENTS IDENTIFIED BY MARK HAVE SPECIAL CHARACTERISTICS. IMPORTANT FOR SAFETY, WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY MANUFACTURER'S SPECIFIED PARTS.
••THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM
••THE UNIT OF CAPACITANCE IS MICROFARAD (uF)
pF=10⁻¹² uF
••THIS SCHEMATIC DIAGRAM MAY BE MODIFIED AT ANY TIME WITH THE IMPROVEMENT OF PERFORMANCE

SMPS

- ★ 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.
- ★ 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。

Page 30  to MAIN (1)_BN92



Page 30  to MAIN (1)_BN91

Page 28  to MAIN (1)_BN93

***IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY  MARK HAVE SPECIAL CHARACTERISTICS.
IMPORTANT FOR SAFETY: WHEN REPLACING ANY OF THESE COMPONENTS,
USE ONLY MANUFACTURER'S SPECIFIED PARTS.
**THE UNIT OF RESISTANCE IS OHM.
K=1000 OHM, M=1000 KOHM
**THE UNIT OF CAPACITANCE IS MICROFARAD (uF)
pF=10⁻¹² uF
**THIS SCHEMATIC DIAGRAM MAY MODIFIED AT ANY TIME WITH THE
IMPROVEMENT OF PERFORMANCE

Safety Measures

- Some internal parts in this product contain high voltages and are dangerous. Be sure to take safety measures during servicing, such as wearing insulating gloves.
 - C971 on the SMPS (2) P.C.B. is dangerous even after the power is turned off because an electric charge remains and a high voltage continues to exist there.
- Before starting any repair work, perform discharge by connecting a discharge resistor (5k-ohms/10 W) between terminals of the capacitor. The time required for discharging is about 30 seconds.
- After the repair work, also perform discharge in the same manner.

安全対策

- この製品の内部には高電圧部分があり危険です。修理の際は、絶縁性の手袋を使用するなどの安全対策を行ってください。
 - SMPS(2)P.C.B.のC971には電源をOFFにした後も電荷が残り、高電圧が維持されており危険です。
- 修理作業前に放電用抵抗 (5 kΩ/10 W) をコンデンサの端子間に接続して放電してください。放電所用時間は約30秒間です。
- また、修理後と同じ方法で放電してください。

REPLACEMENT PARTS LIST

ELECTRICAL COMPONENT PARTS

WARNING

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

Note) The electrical parts available as servicing parts are those in the replacement parts list only.
When replacement of any electrical part other than those in the list is necessary, replace the P.C.B. assembly which includes that part.

注) 電気部品リストに記載されている電気部品のみ、サービス部品として供給できます。
電気部品リストに記載されていない電気部品の交換が必要な場合は、その電気部品を搭載している「P.C.B. ASSY」を交換してください。

	Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
*		AAX88200	P.C.B.	MAIN	COP12002G	J	P C B M A I N	
*		AAX88170	P.C.B.	MAIN	COP12002D	U	P C B M A I N	
*		AAX88190	P.C.B.	MAIN	COP12002F	R	P C B M A I N	
*		AAX88180	P.C.B.	MAIN	COP12002E	A	P C B M A I N	
*		AAX88160	P.C.B.	MAIN	COP12002C	B	P C B M A I N	
*		AAX87070	P.C.B.	MAIN	COP12002B	G	P C B M A I N	
*	BAT1	AAX88880	BATTTERY	30H3A3H	CAB30H3A3H	BG	リチウム電池	
*	C509	AAX88870	C.CHIP	2. 2F 6. 3V	CCSJA0J2R2B		チップコンデンサ	
*	C520	AAX88860	C.CHIP	22F 6. 3V	CCSJA0J220B		チップコンデンサ	
*	C526	AAX88810	C.EL	2200uF 25V	CCEA1EKLH222EKS		ケミコン	
*	C527	AAX88850	C.CHIP	1F 35V	CCSJA1V1R0B		チップコンデンサ	
*	C529	AAX88850	C.CHIP	1F 35V	CCSJA1V1R0B		チップコンデンサ	
*	CX91	AAX88770	C.PP	F2E224KZE	CC0F2E224KZE		P P コン	
*	CX92	AAX88780	C.PP	F2E104KZE	HC0F2E104KZE		P P コン	
*	CY91-94	AAX88840	C.CE	2G102M10FF7	CCKDHS102ME		セラコン	
*	D814	AAX88760	LED	2-COLOR RED/BLUE	CVD1L0392S1B11MA402		L E D	
*	F901	AAX87280	FUSE	T2A 250V	KBA2C2000TLEY		ヒューズ	
*	FH91-92	AAX87380	HOLDER		KJCFCS5		ヒューズホルダー	
*	FL81	AAX87090	FL.DSPLY	FV891G1ND	CFLFV891G1ND		V F D	
*	IC12	AAX86970	IC	NR8576AAGET	CV1NR8576AAGET		I C	
*	IC14	AAX86930	IC	AK5358AET	CV1AK5358AET		I C	
*	IC15	AAX88750	IC	SN74LVC157APW-EL2	HV1SN74LVC157AP	JRAG	I C	
*	IC21	AAX77190	IC	BA4560RF	HV1BA4560RF		アンプ I C	
*	IC22	AAX86940	IC	HCF4052M013T	CV1HCF4052M013T		I C	
*	IC31	AAX87000	IC	TC94A73FG	CV1TC94A73FG		I C	
*	IC33	AAX83140	IC	TA2125AFG	HV1TA2125AFG		I C	07
*	IC34	AAX87010	IC	74LCX244T	HV174LCX244T		I C	
*	IC36	AAX86960	IC	K1A1117S15	CV1K1A1117S15		I C	
*	IC42	AAX83060	IC	RT9702APB	CV1RT9702APB	RBG	I C	04
*	IC45	AAX83110	IC	74ACT04MTR	HV174ACT04MTR		I C	03
*	IC51	AAX86980	IC	STA320	CV1STA320		I C	
*	IC52	AAX86990	IC	STA515	CV1STA515		I C	
*	IC53	AAX87020	IC	NJM4556AL	HV1NJM4556AL		I C	
*	IC91	AAX88730	IC	SG5842JADZ	CV1SG5842JADZ		I C	
*	IC92	AAX81040	IC	K1A431BAT	HV1K1A431BAT		I C	
*	IC93	AAX80950	IC	ICE3B0365J	CV1ICE3B0365J		I C	
*	IC94	AAX86950	IC	ICE2B265	CV1ICE2B265		I C	
*	IC95	AAX81040	IC	K1A431BAT	HV1K1A431BAT		I C	
*	IC96	AAX81040	IC	K1A431BAT	HV1K1A431BAT		I C	
*	IC97	AAX81040	IC	K1A431BAT	HV1K1A431BAT		I C	
*	IC98	AAX77360	IC	K1A7812AP1	HV1K1A7812AP1		電源 I C	
*	IC99	AAX77370	IC	K1A7912P1	HV1K1A7912P1		電源 I C	
*	JK21	AAX87240	JACK	PORTABLE	HJJ2E027Z		ジャック	
*	JK41	AAX83300	JACK	4P	CJJ9X003Y	RBG	U S B 端子	03

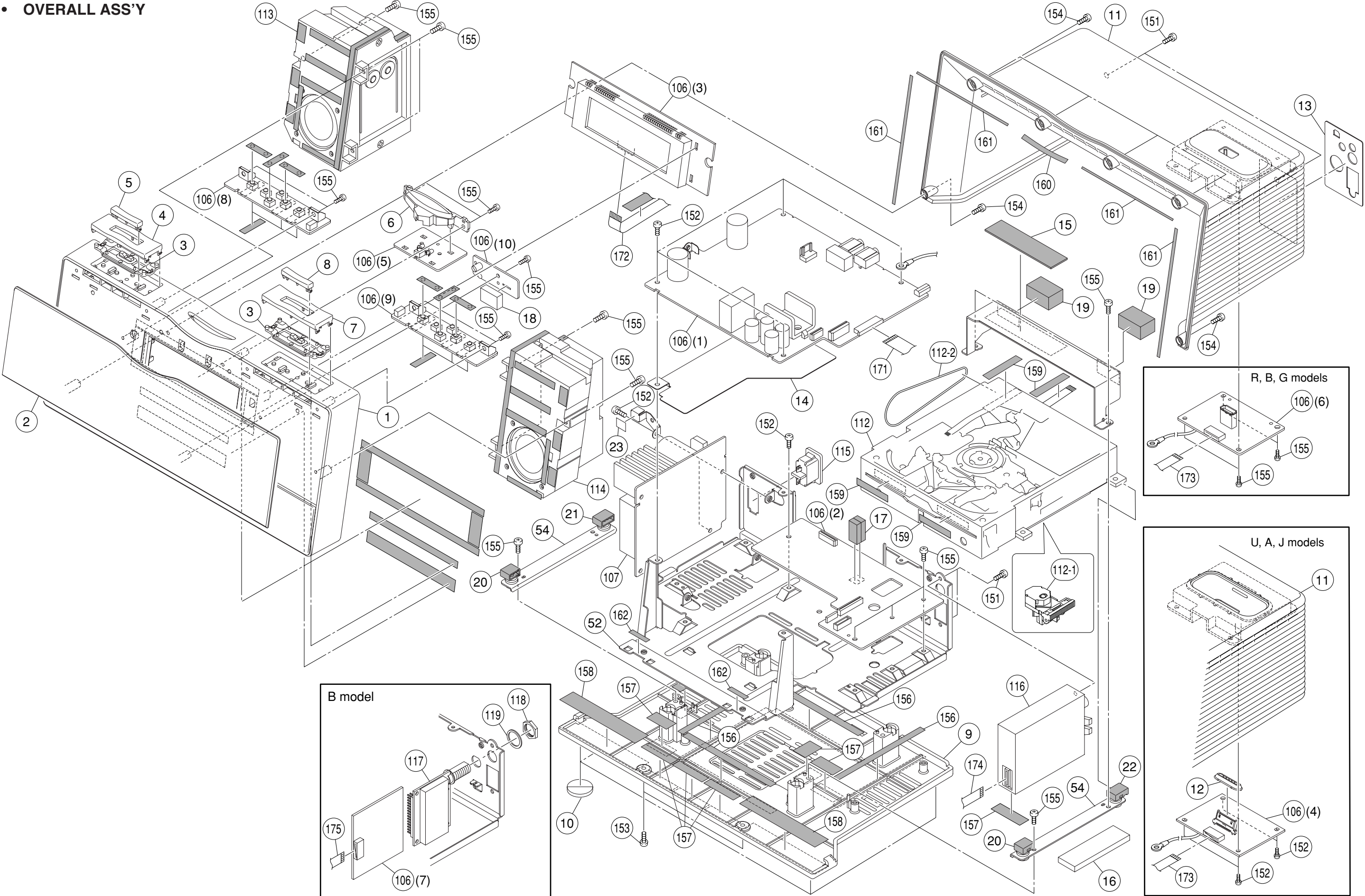
* New Parts * 新規部品

P.C.B. MAIN and P.C.B. SMPS

Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
*	JK51	AAX87240	JACK	PHONES	HJJ2E027Z	ジャック	
*	LF91	AAX88910	FILTER	UU1116 20mH	CLZ9Z065Z	ラインフィルタ	
*	LF93	AAX88910	FILTER	UU1116 20mH	CLZ9Z065Z	ラインフィルタ	
	PC91	AAX81120	IC. PHOTO	PC17L1CB	HVIPC17L1CB	I C	
	PC92	AAX81120	IC. PHOTO	PC17L1CB	HVIPC17L1CB	I C	
	PC93	AAX81120	IC. PHOTO	PC17L1CB	HVIPC17L1CB	I C	
	PC94	AAX81120	IC. PHOTO	PC17L1CB	HVIPC17L1CB	I C	
	PC95	AAX81120	IC. PHOTO	PC17L1CB	HVIPC17L1CB	I C	
	RC81	AAX84540	SENS. RC	KSM603TH2E	CRVKSM603TH2E	リモコン受光器	
*	RC82	AAX88920	SENS	PT337P11A	CRVPT337P11A	光センサー	
	RY51	AAX79390	RELAY	G5PA28	CSL3A017ZU	リレー	04
	RY52	AAX83560	RELAY	DC12V 2C2P	CSL4A016ZU	リレー	04
	S801-813	AAX74630	SW. TACT	SKHV10910G	CST1A012ZT	タクトスイッチ	01
*	TF91	AAX87490	TRANS. PWR	MAIN EER3541	CLT9Z041ZE	電源トランス	
*	TF92	AAX87470	TRANS. PWR	SUB EFD2525	CLT9Z039ZE	電源トランス	
*	TF93	AAX87480	TRANS. PWR	FL EE2020	CLT9Z040ZE	電源トランス	
*	TH91	AAX88820	THERM.	DSC-8D13MSFB	KRT8D13MSFB	サーミスタ	
*	V901	AAX88890	VARISTOR	SVC471D14A	CRVSVC471D14A	バリスタ	
*	X101	AAX88940	RSNR. CRY	20MHz	HOX20000E220TF	水晶振動子	
*	X301	AAX88930	RSNR. CRY	16.934MHz	HOX16934A120C	水晶振動子	
*	X401	AAX88950	RSNR. CRY	9MHz	COX09000E150C	水晶振動子	
*		AAX87080	P.C.B.	SMPS	COP12011B	P C B S M P S	
*	IC91	AAX88730	IC	SG5842JADZ	CVISG5842JADZ	I C	
	IC92	AAX81040	IC	KIA431BAT	HVIKIA431BAT	I C	
	PC91	AAX81120	IC. PHOTO	PC17L1CB	HVIPC17L1CB	I C	
*	Q971	AAX88740	IC	SPP11N60C3	CVISPP11N60C3	I C	
*	TF91	AAX87490	TRANS. PWR	EER3541	CLT9Z041ZE	電源トランス	

※ New Parts * 新規部品

• OVERALL ASS'Y



	Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
*	1	AAX87060	FRONT PANEL ASS'Y		CGW1A439ZA	フロントパネルA S S Y	
*	2	AAX87100	WINDOW	BL	CGU1A409Y	ウィンドウ	05
*	2	AAX89820	WINDOW	BL	CGU1A409U	ウィンドウ	
*	2	AAX89840	WINDOW	BL	CGU1A409W	ウィンドウ	
*	2	AAX87110	WINDOW	SI	CGU1A409Z	ウィンドウ	05
*	2	AAX89830	WINDOW	SI	CGU1A409V	ウィンドウ	
*	2	AAX89850	WINDOW	SI	CGU1A409X	ウィンドウ	
*	3	AAX88480	FUNCTION RUBBER		CHG1A380	ボタン受けゴム	
*	4	AAX87400	BUTTON	POWER	CBT1A1053ZC22	ボタン	
*	5	AAX87420	BUTTON	SKIP	CBT1A1054ZC22	ボタン	
*	6	AAX88500	LENS BUTTON ASS'Y		CBT1A1055	レンズボタンA S S Y	
*	7	AAX87390	BUTTON	MUTE	CBT1A1053YC22	ボタン	
*	8	AAX87410	BUTTON	PRESET	CBT1A1054YC22	ボタン	
*	9	AAX88220	COVER BOTTOM		CKD1A064VK128	ボトムカバー	
*	9	AAX88240	COVER BOTTOM		CKD1A064XK128	ボトムカバー	
*	9	AAX88230	COVER BOTTOM		CKD1A064WK128	ボトムカバー	
*	9	AAX87160	COVER BOTTOM		CKD1A064ZK128	ボトムカバー	
*	10	AAX87450	FOOT	D21 t=2	CHG1A369	脚	
*	11	AAX89730	REAR CABINET ASS'Y	BL	CKD1A065B27YA	リアキャビネットA S S Y	
*	11	AAX89740	REAR CABINET ASS'Y	BL	CKD1A065B27ZA	リアキャビネットA S S Y	
*	11	AAX89750	REAR CABINET ASS'Y	SI	CKD1A065W2YA	リアキャビネットA S S Y	
*	11	AAX89760	REAR CABINET ASS'Y	SI	CKD1A065W2ZA	リアキャビネットA S S Y	
*	12	AAX88340	SLEEVE	BL	CMH1A281Y	スリーブ	
*	12	AAX88350	SLEEVE	SI	CMH1A281Z	スリーブ	
*	13	AAX87330	PLATE NAME	BL	CGX1A393Y	ネームプレート	
*	13	AAX88390	PLATE NAME	BL	CGX1A393W	ネームプレート	
*	13	AAX88370	PLATE NAME	BL	CGX1A393U	ネームプレート	
*	13	AAX87340	PLATE NAME	SI	CGX1A393Z	ネームプレート	
*	13	AAX88400	PLATE NAME	SI	CGX1A393X	ネームプレート	
*	13	AAX88380	PLATE NAME	SI	CGX1A393V	ネームプレート	
*	14	AAX88830	COVER SHIELD		CMX1A233	シールドカバー	
*	15	AAX88250	CUSHION A		CHG1A218Z	クッションA	
*	16	AAX88460	RUBBER A		CHG1A400	ラバーA	
*	17	AAX88330	EVA CUSHION		CHG2A405	EVAクッション	
*	17	AAX88320	EVA CUSHION		CHG1A405	EVAクッション	
*	18	AAX88450	RUBBER B		CHG1A304Z	ラバーB	
*	19	AAX88470	RUBBER C		CHG1A401	ラバーC	
*	20	AAX89700	CUSHION FRONT		CHG1A378	クッションF R O N T	
*	21	AAX89710	CUSHION REAR L		CHG1A379	クッションR E A R L	
*	22	AAX89720	CUSHION REAR R		CHG1A384	クッションR E A R R	
*	23	AAX88210	INSULATOR		CMX1A234	インシュレータ	
*	52	AAX87360	PLATE BOTTOM		CUA1A276	プレート ボトム	
*	55	AAX88900	BRACKET CD MECHANISM		CMD1A640	ブラケット C D メカ	
*	106	AAX88200	P.C.B. ASS'Y	MAIN	COP12002G	P C B M A I N	
*	106	AAX88170	P.C.B. ASS'Y	MAIN	COP12002D	P C B M A I N	
*	106	AAX88190	P.C.B. ASS'Y	MAIN	COP12002F	P C B M A I N	
*	106	AAX88180	P.C.B. ASS'Y	MAIN	COP12002E	P C B M A I N	
*	106	AAX88160	P.C.B. ASS'Y	MAIN	COP12002C	P C B M A I N	
*	106	AAX87070	P.C.B. ASS'Y	MAIN	COP12002B	P C B M A I N	
* 1	107	AAX87080	P.C.B. ASS'Y	SMPS	COP12011B	P C B S M P S	
*	112	AAX86920	CD MECHANISM UNIT	SLOT IN TYPE	CJDDL2130CCM	C D メカユニット	
	112-1	AAX82720	OPTICAL PICK UP UNIT	KSS-213C	KSM2130CCM	オプティカルピックアップ	
	112-2	AAX78500	BELT		9A07980900	ベルト	04
*	113	AAX90040	SPEAKER L ASS'Y	L	CASTSX100JLSPK	スピーカーL A S S Y	
*	113	AAX87250	SPEAKER L ASS'Y	L	CASTSX100LSPK	スピーカーL A S S Y	
*	114	AAX90050	SPEAKER R ASS'Y	R	CASTSX100JRSPK	スピーカーR A S S Y	

* New Parts * 新規部品

	Ref No.	Part No.	Description	Remarks	Markets	部 品 名	ランク
*	114	AAX87260	SPEAKER R ASS'Y	R	CASTSX100RSPK	スピーカーR A S S Y	
*	115	AAX89690	INLET	BL	HJJ8A003Z	I N L E T	
*	115	AAX89800	INLET	BL	CJJ8A004X	I N L E T	
*	115	AAX89680	INLET	SI	CJJ8A003Y	I N L E T	
*	115	AAX89810	INLET	SI	CJJ8A004Y	I N L E T	
*	116	AAX89960	AM/FM TUNER MODULE		CNVMV016MA1-17	AM/FMチューナー	
*	116	AAX89950	AM/FM TUNER MODULE		CNVMV014MA1-17	AM/FMチューナー	
*	116	AAX89940	AM/FM TUNER MODULE		CNVMV014MA0-17	AM/FMチューナー	
*	116	AAX83400	AM/FM TUNER MODULE		CNVMV114MA1-17	AM/FMチューナー	15
*	117	AAX89790	DAB MODULE		CNVFS2025V22A	D A B モジュール	
	118	AAX84530	NUT DAB		CNE1A009	ナット	
	119	AAX84550	WASHER		CNW1A038	ワッシャー	
	151	AAX78380	BIND HEAD B-TIGHT SCREW	BL 3x8 MFZN2B3	CTB3+8JFZR	バインドBタイツネジ	01
	151	AAX73500	BIND HEAD B-TIGHT SCREW	SI 3x8 MFZN2W3	CTB3+8JFC	バインドBタイツネジ	01
	152	AAX78380	BIND HEAD B-TIGHT SCREW	3x8 MFZN2B3	CTB3+8JFZR	バインドBタイツネジ	01
	153	AAX84370	BIND HEAD B-TIGHT SCREW	3x10 MFZN2B3	CTB3+10JFZR	バインドBタイツネジ	
	154	AAX78400	BIND HEAD P-TIGHT SCREW	BL 3x10 MFZN2B3	CTB3+10GFZR	バインドPタイツネジ	01
	154	AAX82020	BIND HEAD P-TIGHT SCREW	SI 3x10 MFZN2W3	CTB3+10GFC	バインドPタイツネジ	01
	155	AAX78400	BIND HEAD P-TIGHT SCREW	3x10 MFZN2B3	CTB3+10GFZR	バインドPタイツネジ	01
*	156	AAX88260	CUSHION B	10x100x1	CHG1A389	クッションB	
*	157	AAX88300	CUSHION C	15x30x1	CHG1A395	クッションC	
*	158	AAX88270	CUSHION D	16x83x1	CHG1A391	クッションD	
*	159	AAX88280	CUSHION E	8x40x1	CHG1A392	クッションE	
*	160	AAX88290	CUSHION F	8x40x1	CHG1A392Z	クッションF	
*	161	AAX88310	CUSHION G	4x100x1	CHG1A404	クッションG	
*	162	AAX89890	HIMELON TAPE	4x25x0.5	CHS1A163	H I M E L O N テープ	
*	171	AAX87150	FLEXIBLE FLAT CABLE	21P 100mm	CWC4F2A21A100B	カード電線	
*	171	AAX89900	FLEXIBLE FLAT CABLE	21P 80mm	CWC4F2A21A080B	カード電線	
*	172	AAX87140	FLEXIBLE FLAT CABLE	19P 150mm	CWC4F2A19A150B	カード電線	
*	173	AAX87130	FLEXIBLE FLAT CABLE	11P 100mm	CWC4F2A11A100B	カード電線	
*	174	AAX89970	FLEXIBLE FLAT CABLE	13P 100mm	CWC4C4A13B100B	カード電線	
*	175	AAX89980	FLEXIBLE FLAT CABLE	11P 100mm	CWCTSX100BN15	カード電線	

* New Parts * 新規部品

1

• ACCESSORIES

2

3

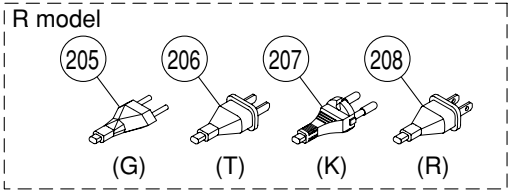
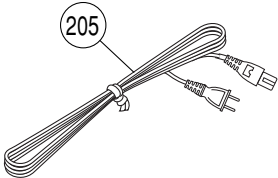
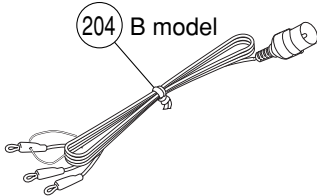
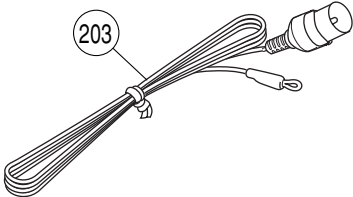
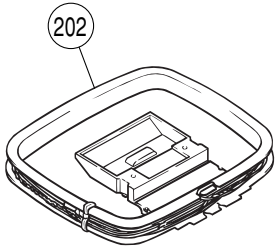
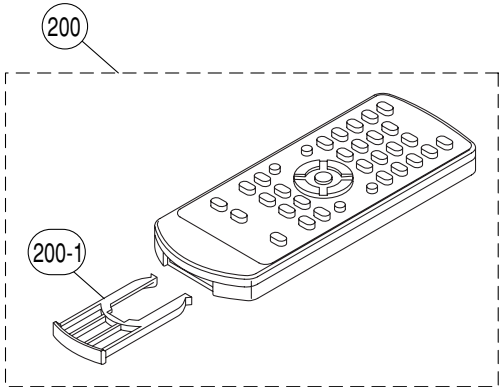
4

5

6

7

TSX-100

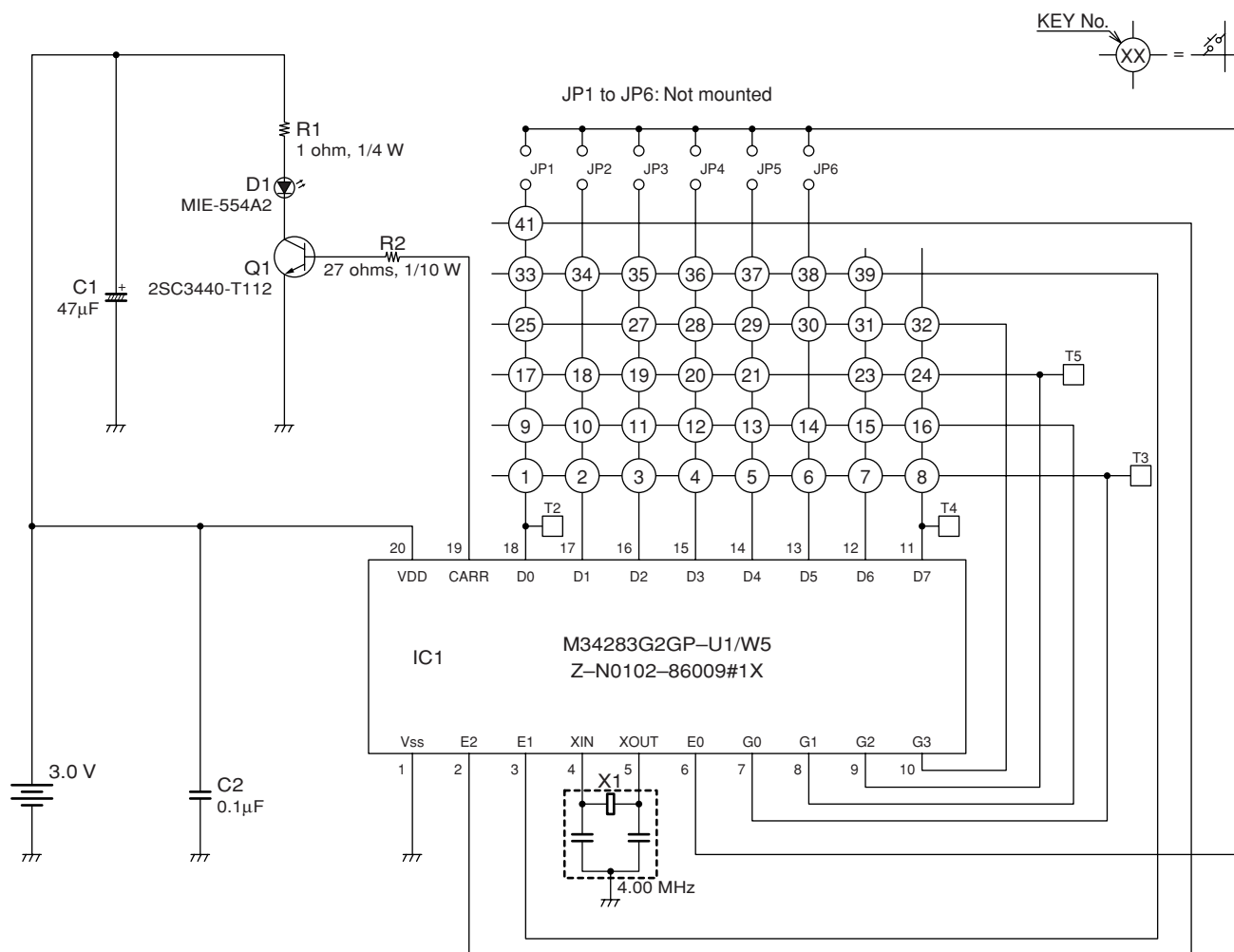


Ref No.	Part No.	Description		Remarks	Markets	部 品 名	ランク
* 200	WN414800	REMOTE CONTROL	BL, SI		J	リモコン	
* 200	WM472200	REMOTE CONTROL	BL		U	リモコン	
* 200	WM472500	REMOTE CONTROL	BL		R	リモコン	
* 200	WM472600	REMOTE CONTROL	BL		A	リモコン	
* 200	WM472400	REMOTE CONTROL	BL		B	リモコン	
* 200	WM472300	REMOTE CONTROL	BL		G	リモコン	
* 200	WK970700	REMOTE CONTROL	SI		U	リモコン	
* 200	WK971000	REMOTE CONTROL	SI		R	リモコン	
* 200	WK971100	REMOTE CONTROL	SI		A	リモコン	
* 200	WK970900	REMOTE CONTROL	SI		B	リモコン	
* 200	WK970800	REMOTE CONTROL	SI		G	リモコン	
* 200-1	AAX89770	BATTERY HOLDER	BL	103RRS-162-01E	URABG	電池蓋	
* 200-1	AAX89780	BATTERY HOLDER	SI	103RRS-162-50E		電池蓋	
	202	AAX73180	AM LOOP ANTENNA	2.0m 1pc	CSA1A020Z	A Mループアンテナ	04
	203	AAX76680	INDOOR FM ANTENNA	1.5m 1pc	CSA1A019Z	F M簡易アンテナ	03
	203	AAX73240	INDOOR FM ANTENNA	1.5m 1pc	CSA1A018Z	F M簡易アンテナ	03
	204	AAX84630	INDOOR DAB ANTENNA	2.0m 1pc	CSA1A27Z	D A Bワイヤアンテナ	
⚠	205	AAX80650	POWER CABLE	BL 2m 1pc	CJA2J091Z	電源コード	07
⚠	205	AAX80620	POWER CABLE	BL 2m 1pc	CJA2A085Z	電源コード	
⚠	205	AAX80630	POWER CABLE	BL 2m 1pc	CJA2B020Z	電源コード	
⚠	205	AAX80680	POWER CABLE	BL 2m 1pc	CJA2S088Z	電源コード	
* ⚠	205	AAX88530	POWER CABLE	BL 2m 1pc	CJA2E079Z	電源コード	
* ⚠	205	AAX88540	POWER CABLE	SI 2m 1pc	CJA2J091Y	電源コード	
* ⚠	205	AAX88510	POWER CABLE	SI 2m 1pc	CJA2A085Y	電源コード	
* ⚠	205	AAX87460	POWER CABLE	SI 2m 1pc	CJA2B020Y	電源コード	
* ⚠	205	AAX88550	POWER CABLE	SI 2m 1pc	CJA2S088Y	電源コード	
* ⚠	205	AAX88520	POWER CABLE	SI 2m 1pc	CJA2E079Y	電源コード	
⚠	206	AAX80670	POWER CABLE	BL 2m 1pc	CJA2N078Z	電源コード	
* ⚠	206	AAX90080	POWER CABLE	SI 2m 1pc	CJA2N078Y	電源コード	
⚠	207	AAX80640	POWER CABLE	BL 2m 1pc	CJA2D089Z	電源コード	
* ⚠	207	AAX90060	POWER CABLE	SI 2m 1pc	CJA2D089Y	電源コード	
⚠	208	AAX80660	POWER CABLE	BL 2m 1pc	CJA2L090Z	電源コード	
* ⚠	208	AAX90070	POWER CABLE	SI 2m 1pc	CJA2L090Y	電源コード	
		LITHIUM BATTERY	CR2025 1pc			リチウム電池	

※ New Parts ※ 新規部品

■ REMOTE CONTROL

• SCHEMATIC DIAGRAM



• PANELS

– Black color –

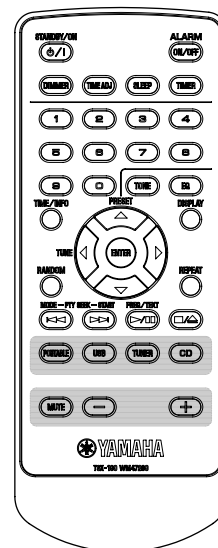
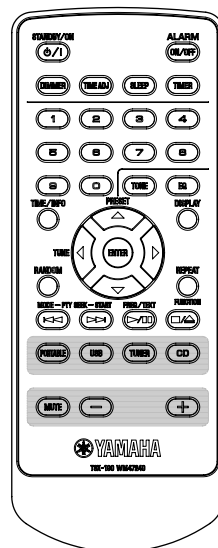
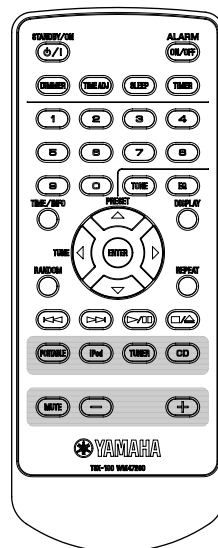
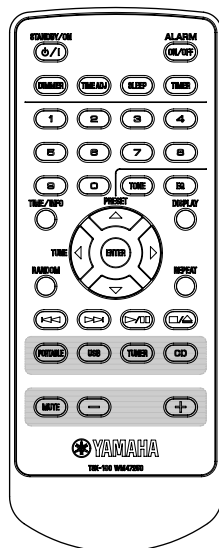
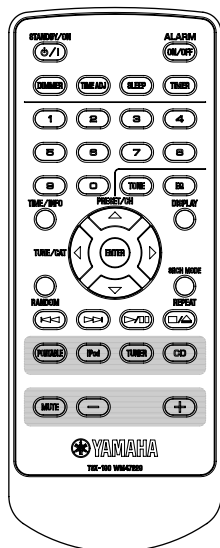
U model

R model

A model

B model

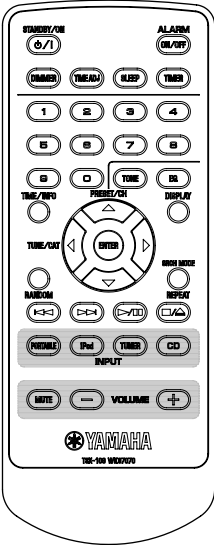
G model



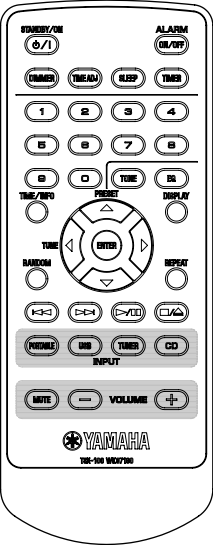
• KEY LAYOUT

– Silver color –

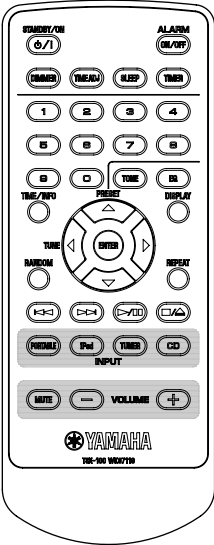
U model



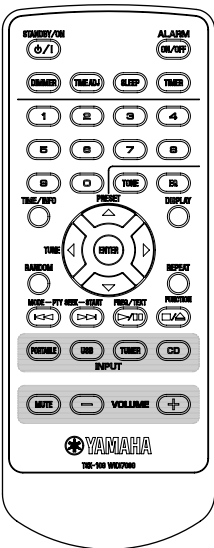
R model



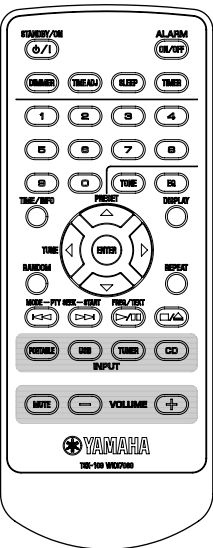
A model



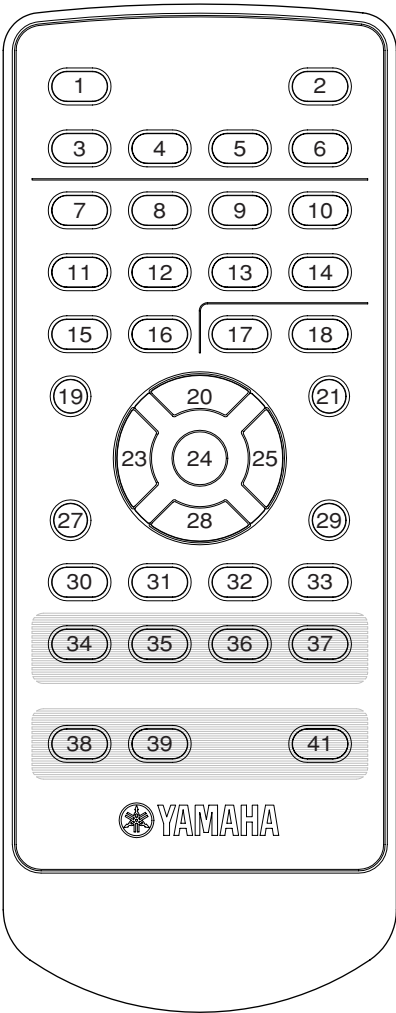
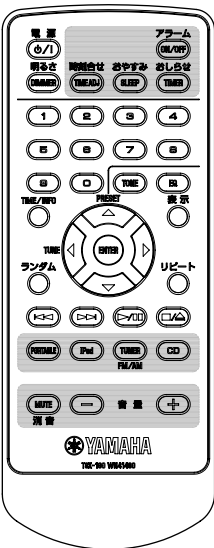
B model



G model



J model
(Black/Silver色、共通)



• KEY CODE

Key No.	Key Name						Custom Code	Data Code
	U model	R model	A model	B model	G model	J model		
1	STANDBY/ON	STANDBY/ON	STANDBY/ON	STANDBY/ON	STANDBY/ON	電源	78-87	0F
2	ALARM / ON/OFF	ALARM / ON/OFF	ALARM / ON/OFF	ALARM / ON/OFF	ALARM / ON/OFF	アラーム / ON/OFF	78-87	A0
3	DIMMER	DIMMER	DIMMER	DIMMER	DIMMER	明るさ / DIMMER	78-87	BA
4	TIME ADJ	TIME ADJ	TIME ADJ	TIME ADJ	TIME ADJ	時刻合わせ / TIME ADJ	78-87	A1
5	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	おやすみ / SLEEP	78-87	4F
6	TIMER	TIMER	TIMER	TIMER	TIMER	おしらせ / TIMER	78-87	20
7	1	1	1	1	1	1	78-87	11
8	2	2	2	2	2	2	78-87	12
9	3	3	3	3	3	3	78-87	13
10	4	4	4	4	4	4	78-87	14
11	5	5	5	5	5	5	78-87	15
12	6	6	6	6	6	6	78-87	16
13	7	7	7	7	7	7	78-87	17
14	8	8	8	8	8	8	78-87	18
15	9	9	9	9	9	9	78-87	19
16	0	0	0	0	0	0	78-87	10
17	TONE	TONE	TONE	TONE	TONE	TONE	78-87	84
18	EQ	EQ	EQ	EQ	EQ	EQ	78-87	5A
19	TIME/INFO	TIME/INFO	TIME/INFO	TIME/INFO	TIME/INFO	TIME/INFO	78-87	0A
20	PRESET/CH / ▲	PRESET / ▲	PRESET / ▲	PRESET / ▲	PRESET / ▲	PRESET / ▲	78-87	8E
21	DISPLAY	DISPLAY	DISPLAY	DISPLAY	DISPLAY	表示	78-87	4E
23	TUNE/CAT / ◀	TUNE / ◀	TUNE / ◀	TUNE / ◀	TUNE / ◀	TUNE / ◀	78-87	9F
24	ENTER	ENTER	ENTER	ENTER	ENTER	ENTER	78-87	C1
25	▶	▶	▶	▶	▶	▶	78-87	9E
27	RANDOM	RANDOM	RANDOM	RANDOM	RANDOM	ランダム	78-87	07
28	▼	▼	▼	▼	▼	▼	78-87	8F
29	SRCH MODE / REPEAT	REPEAT	REPEAT	REPEAT / FUNCTION	REPEAT	リピート	78-87	0C
30	◀◀	◀◀	◀◀	MODE-PTY SEEK-START ◀◀	MODE-PTY SEEK-START ◀◀	◀◀	78-87	04
31	▶▶	▶▶	▶▶	MODE-PTY SEEK-START ▶▶	MODE-PTY SEEK-START ▶▶	▶▶	78-87	03
32	▶ /	▶ /	▶ /	FREQ/TEXT / ▶ /	FREQ/TEXT / ▶ /	▶ /	78-87	02
33	■ / ▲	■ / ▲	■ / ▲	■ / ▲	■ / ▲	■ / ▲	78-87	01
34	PORTABLE	PORTABLE	PORTABLE	PORTABLE	PORTABLE	PORTABLE	78-87	DF
35	iPod	USB	iPod	USB	USB	iPod	78-87	BC
36	TUNER	TUNER	TUNER	TUNER	TUNER	TUNER / FM/AM	78-87	4B
37	CD	CD	CD	CD	CD	CD	78-87	4A
38	MUTE	MUTE	MUTE	MUTE	MUTE	MUTE / 消音	78-87	9C
39	—	—	—	—	—	—	78-87	1F
41	+	+	+	+	+	+	78-87	1E

TSX-100



YAMAHA
