

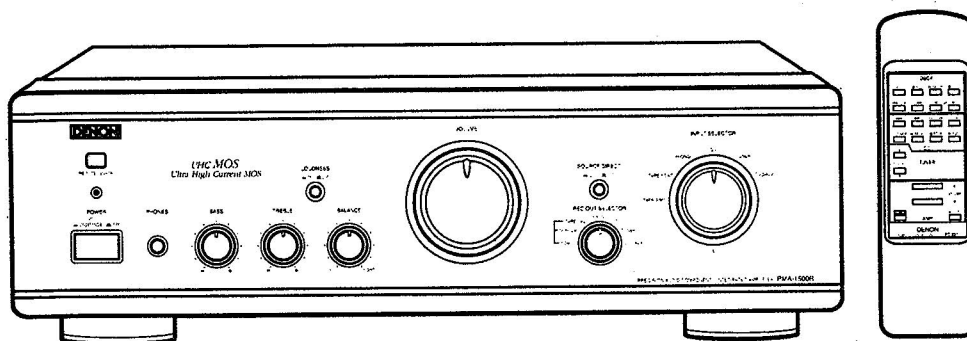
DENON

Hi-Fi Integrated Stereo Amplifier

SERVICE MANUAL

MODEL PMA-1500R

INTEGRATED STEREO AMPLIFIER



— TABLE OF CONTENTS —

OPERATING INSTRUCTIONS	2~8
DISASSEMBLY	9,10
BLOCK AND LEVEL DIAGRAM	11
ADJUSTMENT	12
SEMICONDUCTORS	13~16
PRINTED WIRING BOARD	17,18
NOTE FOR PARTS LIST	19
PARTS LIST OF P.W.BOARD	20~23
EXPLODED VIEW	24
PARTS LIST OF EXPLODED VIEW	25
WIRING DIAGRAM	26
SCHEMATIC DIAGRAM	27

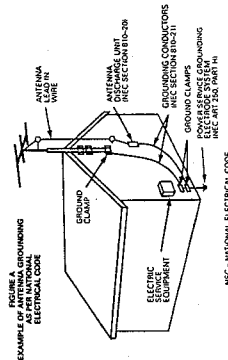
• Some illustration using in this service manual is slightly different from the actual set.

NIPPON COLUMBIA CO., LTD.

OPERATING INSTRUCTIONS

SAFETY INSTRUCTIONS

- Read Instructions - All the safety and operating instructions should be read before the appliance is operated.
- Retain Instructions - The safety and operating instructions should be retained for future reference.
- Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
- Follow Instructions - All operating and use instructions should be followed.
- Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, swimming pool, and the like.
- Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
- Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
- Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
- Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
- Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
- Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.



SAFETY PRECAUTIONS

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of "uninsulated" dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

FOR U.S.A. & CANADA MODEL ONLY

CAUTION
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT USE THIS POLARIZED PLUG WITH AN EX-TENSION CORD OR STRIP ADAPTER, UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

ATTENTION
POUR RÉDUIRE LES RISQUES D'ÉLECTRICITÉ ET D'INCENDIE, NE PAS DÉMONTÉR LE COUVERCLE (OU LE DOS) DE L'APPAREIL. AUCUNE PARTIE N'EST PAS RÉPARABLE EN LAIS-SANT AUCUNE PARTIE À DÉCOUVRIR.

安全注意事項

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN

注意：為減少觸電危險，切勿折下機殼（或機背）。機身內並無用戶修理用零件。請交由專業修理人員修理本機。

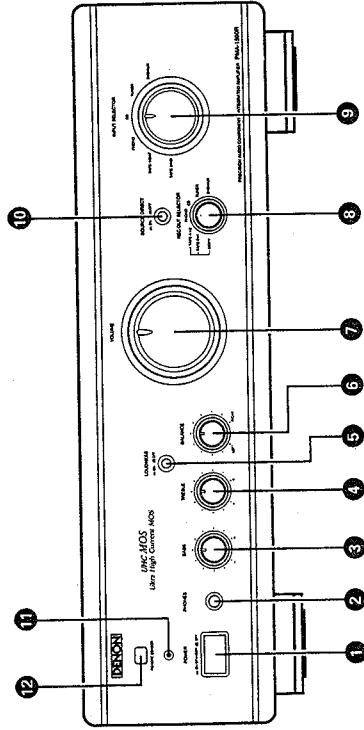
三角形內有箭頭的閃電符號旨在提醒用戶，本產品機殼內有未經絕緣的危險電壓，其幅度足以使人觸電而發生危險。

三角形內加感嘆號旨在提醒用戶，有重要的操作與維修說明書配合本機。

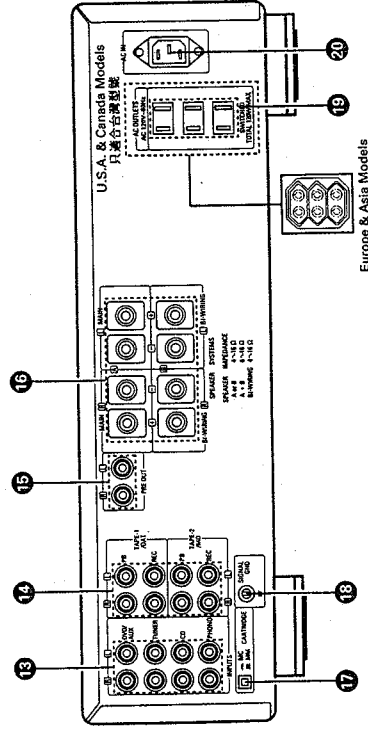
警告：為減少著火或觸電危險，切勿讓本機受雨淋濕或受潮。

DECLARATION OF CONFORMITY
We declare under our sole responsibility that the product, to which this declaration refers, is in conformity with the EMC Directive 89/332/EEC, 89/333/EEC, 89/334/EEC, 89/335/EEC, 89/336/EEC, 89/337/EEC, 89/338/EEC, 89/339/EEC, 89/340/EEC, 89/341/EEC, 89/342/EEC, 89/343/EEC, 89/344/EEC, 89/345/EEC, 89/346/EEC, 89/347/EEC, 89/348/EEC, 89/349/EEC, 89/350/EEC, 89/351/EEC, 89/352/EEC, 89/353/EEC, 89/354/EEC, 89/355/EEC, 89/356/EEC, 89/357/EEC, 89/358/EEC, 89/359/EEC, 89/360/EEC, 89/361/EEC, 89/362/EEC, 89/363/EEC, 89/364/EEC, 89/365/EEC, 89/366/EEC, 89/367/EEC, 89/368/EEC, 89/369/EEC, 89/370/EEC, 89/371/EEC, 89/372/EEC, 89/373/EEC, 89/374/EEC, 89/375/EEC, 89/376/EEC, 89/377/EEC, 89/378/EEC, 89/379/EEC, 89/380/EEC, 89/381/EEC, 89/382/EEC, 89/383/EEC, 89/384/EEC, 89/385/EEC, 89/386/EEC, 89/387/EEC, 89/388/EEC, 89/389/EEC, 89/390/EEC, 89/391/EEC, 89/392/EEC, 89/393/EEC, 89/394/EEC, 89/395/EEC, 89/396/EEC, 89/397/EEC, 89/398/EEC, 89/399/EEC, 89/400/EEC, 89/401/EEC, 89/402/EEC, 89/403/EEC, 89/404/EEC, 89/405/EEC, 89/406/EEC, 89/407/EEC, 89/408/EEC, 89/409/EEC, 89/410/EEC, 89/411/EEC, 89/412/EEC, 89/413/EEC, 89/414/EEC, 89/415/EEC, 89/416/EEC, 89/417/EEC, 89/418/EEC, 89/419/EEC, 89/420/EEC, 89/421/EEC, 89/422/EEC, 89/423/EEC, 89/424/EEC, 89/425/EEC, 89/426/EEC, 89/427/EEC, 89/428/EEC, 89/429/EEC, 89/430/EEC, 89/431/EEC, 89/432/EEC, 89/433/EEC, 89/434/EEC, 89/435/EEC, 89/436/EEC, 89/437/EEC, 89/438/EEC, 89/439/EEC, 89/440/EEC, 89/441/EEC, 89/442/EEC, 89/443/EEC, 89/444/EEC, 89/445/EEC, 89/446/EEC, 89/447/EEC, 89/448/EEC, 89/449/EEC, 89/450/EEC, 89/451/EEC, 89/452/EEC, 89/453/EEC, 89/454/EEC, 89/455/EEC, 89/456/EEC, 89/457/EEC, 89/458/EEC, 89/459/EEC, 89/460/EEC, 89/461/EEC, 89/462/EEC, 89/463/EEC, 89/464/EEC, 89/465/EEC, 89/466/EEC, 89/467/EEC, 89/468/EEC, 89/469/EEC, 89/470/EEC, 89/471/EEC, 89/472/EEC, 89/473/EEC, 89/474/EEC, 89/475/EEC, 89/476/EEC, 89/477/EEC, 89/478/EEC, 89/479/EEC, 89/480/EEC, 89/481/EEC, 89/482/EEC, 89/483/EEC, 89/484/EEC, 89/485/EEC, 89/486/EEC, 89/487/EEC, 89/488/EEC, 89/489/EEC, 89/490/EEC, 89/491/EEC, 89/492/EEC, 89/493/EEC, 89/494/EEC, 89/495/EEC, 89/496/EEC, 89/497/EEC, 89/498/EEC, 89/499/EEC, 89/500/EEC, 89/501/EEC, 89/502/EEC, 89/503/EEC, 89/504/EEC, 89/505/EEC, 89/506/EEC, 89/507/EEC, 89/508/EEC, 89/509/EEC, 89/510/EEC, 89/511/EEC, 89/512/EEC, 89/513/EEC, 89/514/EEC, 89/515/EEC, 89/516/EEC, 89/517/EEC, 89/518/EEC, 89/519/EEC, 89/520/EEC, 89/521/EEC, 89/522/EEC, 89/523/EEC, 89/524/EEC, 89/525/EEC, 89/526/EEC, 89/527/EEC, 89/528/EEC, 89/529/EEC, 89/530/EEC, 89/531/EEC, 89/532/EEC, 89/533/EEC, 89/534/EEC, 89/535/EEC, 89/536/EEC, 89/537/EEC, 89/538/EEC, 89/539/EEC, 89/540/EEC, 89/541/EEC, 89/542/EEC, 89/543/EEC, 89/544/EEC, 89/545/EEC, 89/546/EEC, 89/547/EEC, 89/548/EEC, 89/549/EEC, 89/550/EEC, 89/551/EEC, 89/552/EEC, 89/553/EEC, 89/554/EEC, 89/555/EEC, 89/556/EEC, 89/557/EEC, 89/558/EEC, 89/559/EEC, 89/560/EEC, 89/561/EEC, 89/562/EEC, 89/563/EEC, 89/564/EEC, 89/565/EEC, 89/566/EEC, 89/567/EEC, 89/568/EEC, 89/569/EEC, 89/570/EEC, 89/571/EEC, 89/572/EEC, 89/573/EEC, 89/574/EEC, 89/575/EEC, 89/576/EEC, 89/577/EEC, 89/578/EEC, 89/579/EEC, 89/580/EEC, 89/581/EEC, 89/582/EEC, 89/583/EEC, 89/584/EEC, 89/585/EEC, 89/586/EEC, 89/587/EEC, 89/588/EEC, 89/589/EEC, 89/590/EEC, 89/591/EEC, 89/592/EEC, 89/593/EEC, 89/594/EEC, 89/595/EEC, 89/596/EEC, 89/597/EEC, 89/598/EEC, 89/599/EEC, 89/600/EEC, 89/601/EEC, 89/602/EEC, 89/603/EEC, 89/604/EEC, 89/605/EEC, 89/606/EEC, 89/607/EEC, 89/608/EEC, 89/609/EEC, 89/610/EEC, 89/611/EEC, 89/612/EEC, 89/613/EEC, 89/614/EEC, 89/615/EEC, 89/616/EEC, 89/617/EEC, 89/618/EEC, 89/619/EEC, 89/620/EEC, 89/621/EEC, 89/622/EEC, 89/623/EEC, 89/624/EEC, 89/625/EEC, 89/626/EEC, 89/627/EEC, 89/628/EEC, 89/629/EEC, 89/630/EEC, 89/631/EEC, 89/632/EEC, 89/633/EEC, 89/634/EEC, 89/635/EEC, 89/636/EEC, 89/637/EEC, 89/638/EEC, 89/639/EEC, 89/640/EEC, 89/641/EEC, 89/642/EEC, 89/643/EEC, 89/644/EEC, 89/645/EEC, 89/646/EEC, 89/647/EEC, 89/648/EEC, 89/649/EEC, 89/650/EEC, 89/651/EEC, 89/652/EEC, 89/653/EEC, 89/654/EEC, 89/655/EEC, 89/656/EEC, 89/657/EEC, 89/658/EEC, 89/659/EEC, 89/660/EEC, 89/661/EEC, 89/662/EEC, 89/663/EEC, 89/664/EEC, 89/665/EEC, 89/666/EEC, 89/667/EEC, 89/668/EEC, 89/669/EEC, 89/670/EEC, 89/671/EEC, 89/672/EEC, 89/673/EEC, 89/674/EEC, 89/675/EEC, 89/676/EEC, 89/677/EEC, 89/678/EEC, 89/679/EEC, 89/680/EEC, 89/681/EEC, 89/682/EEC, 89/683/EEC, 89/684/EEC, 89/685/EEC, 89/686/EEC, 89/687/EEC, 89/688/EEC, 89/689/EEC, 89/690/EEC, 89/691/EEC, 89/692/EEC, 89/693/EEC, 89/694/EEC, 89/695/EEC, 89/696/EEC, 89/697/EEC, 89/698/EEC, 89/699/EEC, 89/700/EEC, 89/701/EEC, 89/702/EEC, 89/703/EEC, 89/704/EEC, 89/705/EEC, 89/706/EEC, 89/707/EEC, 89/708/EEC, 89/709/EEC, 89/710/EEC, 89/711/EEC, 89/712/EEC, 89/713/EEC, 89/714/EEC, 89/715/EEC, 89/716/EEC, 89/717/EEC, 89/718/EEC, 89/719/EEC, 89/720/EEC, 89/721/EEC, 89/722/EEC, 89/723/EEC, 89/724/EEC, 89/725/EEC, 89/726/EEC, 89/727/EEC, 89/728/EEC, 89/729/EEC, 89/730/EEC, 89/731/EEC, 89/732/EEC, 89/733/EEC, 89/734/EEC, 89/735/EEC, 89/736/EEC, 89/737/EEC, 89/738/EEC, 89/739/EEC, 89/740/EEC, 89/741/EEC, 89/742/EEC, 89/743/EEC, 89/744/EEC, 89/745/EEC, 89/746/EEC, 89/747/EEC, 89/748/EEC, 89/749/EEC, 89/750/EEC, 89/751/EEC, 89/752/EEC, 89/753/EEC, 89/754/EEC, 89/755/EEC, 89/756/EEC, 89/757/EEC, 89/758/EEC, 89/759/EEC, 89/760/EEC, 89/761/EEC, 89/762/EEC, 89/763/EEC, 89/764/EEC, 89/765/EEC, 89/766/EEC, 89/767/EEC, 89/768/EEC, 89/769/EEC, 89/770/EEC, 89/771/EEC, 89/772/EEC, 89/773/EEC, 89/774/EEC, 89/775/EEC, 89/776/EEC, 89/777/EEC, 89/778/EEC, 89/779/EEC, 89/780/EEC, 89/781/EEC, 89/782/EEC, 89/783/EEC, 89/784/EEC, 89/785/EEC, 89/786/EEC, 89/787/EEC, 89/788/EEC, 89/789/EEC, 89/790/EEC, 89/791/EEC, 89/792/EEC, 89/793/EEC, 89/794/EEC, 89/795/EEC, 89/796/EEC, 89/797/EEC, 89/798/EEC, 89/799/EEC, 89/800/EEC, 89/801/EEC, 89/802/EEC, 89/803/EEC, 89/804/EEC, 89/805/EEC, 89/806/EEC, 89/807/EEC, 89/808/EEC, 89/809/EEC, 89/810/EEC, 89/811/EEC, 89/812/EEC, 89/813/EEC, 89/814/EEC, 89/815/EEC, 89/816/EEC, 89/817/EEC, 89/818/EEC, 89/819/EEC, 89/820/EEC, 89/821/EEC, 89/822/EEC, 89/823/EEC, 89/824/EEC, 89/825/EEC, 89/826/EEC, 89/827/EEC, 89/828/EEC, 89/829/EEC, 89/830/EEC, 89/831/EEC, 89/832/EEC, 89/833/EEC, 89/834/EEC, 89/835/EEC, 89/836/EEC, 89/837/EEC, 89/838/EEC, 89/839/EEC, 89/840/EEC, 89/841/EEC, 89/842/EEC, 89/843/EEC, 89/844/EEC, 89/845/EEC, 89/846/EEC, 89/847/EEC, 89/848/EEC, 89/849/EEC, 89/850/EEC, 89/851/EEC, 89/852/EEC, 89/853/EEC, 89/854/EEC, 89/855/EEC, 89/856/EEC, 89/857/EEC, 89/858/EEC, 89/859/EEC, 89/860/EEC, 89/861/EEC, 89/862/EEC, 89/863/EEC, 89/864/EEC, 89/865/EEC, 89/866/EEC, 89/867/EEC, 89/868/EEC, 89/869/EEC, 89/870/EEC, 89/871/EEC, 89/872/EEC, 89/873/EEC, 89/874/EEC, 89/875/EEC, 89/876/EEC, 89/877/EEC, 89/878/EEC, 89/879/EEC, 89/880/EEC, 89/881/EEC, 89/882/EEC, 89/883/EEC, 89/884/EEC, 89/885/EEC, 89/886/EEC, 89/887/EEC, 89/888/EEC, 89/889/EEC, 89/890/EEC, 89/891/EEC, 89/892/EEC, 89/893/EEC, 89/894/EEC, 89/895/EEC, 89/896/EEC, 89/897/EEC, 89/898/EEC, 89/899/EEC, 89/900/EEC, 89/901/EEC, 89/902/EEC, 89/903/EEC, 89/904/EEC, 89/905/EEC, 89/906/EEC, 89/907/EEC, 89/908/EEC, 89/909/EEC, 89/910/EEC, 89/911/EEC, 89/912/EEC, 89/913/EEC, 89/914/EEC, 89/915/EEC, 89/916/EEC, 89/917/EEC, 89/918/EEC, 89/919/EEC, 89/920/EEC, 89/921/EEC, 89/922/EEC, 89/923/EEC, 89/924/EEC, 89/925/EEC, 89/926/EEC, 89/927/EEC, 89/928/EEC, 89/929/EEC, 89/930/EEC, 89/931/EEC, 89/932/EEC, 89/933/EEC, 89/934/EEC, 89/935/EEC, 89/936/EEC, 89/937/EEC, 89/938/EEC, 89/939/EEC, 89/940/EEC, 89/941/EEC, 89/942/EEC, 89/943/EEC, 89/944/EEC, 89/945/EEC, 89/946/EEC, 89/947/EEC, 89/948/EEC, 89/949/EEC, 89/950/EEC, 89/951/EEC, 89/952/EEC, 89/953/EEC, 89/954/EEC, 89/955/EEC, 89/956/EEC, 89/957/EEC, 89/958/EEC, 89/959/EEC, 89/960/EEC, 89/961/EEC, 89/962/EEC, 89/963/EEC, 89/964/EEC, 89/965/EEC, 89/966/EEC, 89/967/EEC, 89/968/EEC, 89/969/EEC, 89/970/EEC, 89/971/EEC, 89/972/EEC, 89/973/EEC, 89/974/EEC, 89/975/EEC, 89/976/EEC, 89/977/EEC, 89/978/EEC, 89/979/EEC, 89/980/EEC, 89/981/EEC, 89/982/EEC, 89/983/EEC, 89/984/EEC, 89/985/EEC, 89/986/EEC, 89/987/EEC, 89/988/EEC, 89/989/EEC, 89/990/EEC, 89/991/EEC, 89/992/EEC, 89/993/EEC, 89/994/EEC, 89/995/EEC, 89/996/EEC, 89/997/EEC, 89/998/EEC, 89/999/EEC, 89/1000/EEC.

PANEL FRONTAL
VOORPANEEL
FRONTPLATTE
PANNEAU AVANT
PANNELLO ANTERIORE
正面



PANEL TRASERO
ACHTERPANEEL
BAKSIDA
PANTEL TRAZEIRO
背板



NOTA:
 1. Always keep the POWER switch on the main unit turned on.
 2. Unplug the power cord when you do not plan to use the unit for a long period of time.

CAUTION:
 If the POWER LED is lit and orange, this means that the power is turned off from the remote control unit. Turn the power on from the remote control unit.

HINWEIS:
 1. Lassen Sie den Netzschalter (POWER) am Hauptgerät stets eingeschaltet.
 2. Schalten Sie den Strom mit dem Fernbedienungsgerät ein- und aus.
 3. Trennen Sie das Netzsteckernetz vom Netz ab, wenn Sie beabsichtigen, das Gerät über einen längeren Zeitraum hinweg nicht zu benutzen.

VORSICHT:
 Wenn das POWER LED orange leuchtet, so bedeutet dies, daß der Strom vom Fernbedienungsgerät aus ausgeschaltet wurde. Schalten Sie den Strom vom Fernbedienungsgerät aus ein.

REMARKS:
 1. S'assure que le commutateur d'alimentation (POWER) sur l'unité principale soit toujours dans la position activée.
 2. Allumer et éteindre l'appareil avec la télécommande.
 3. Débrancher le cordon d'alimentation lorsque l'appareil ne sera pas utilisé pendant une longue période.

ATTENTION:
 If the POWER LED is lit and orange, this signifies that the power is being cut off from the remote control unit. Turn the power on from the remote control unit.

NOTA:
 1. Tenete sempre l'interruttore della corrente (POWER) dell'unità principale nella posizione di attivazione.
 2. Accendete e spegnete la corrente usando il telecomando.
 3. Scollegate il filo di alimentazione quando avete intenzione di non usare l'apparecchio per un lungo periodo.

AVVERTIMENTO:
 Se il POWER LED emette luce arancione, ciò significa che la corrente è stata spegnuta con il telecomando. Riaccendete la corrente usando il telecomando.

PRECAUCION:
 Si el LED POWER está encendido de color naranja, significará que la alimentación a la unidad ha sido desconectada desde la unidad de control remoto. Conecte la alimentación desde la unidad de control remoto.

OPMERKING:
 1. Zorg er altijd voor dat de stroomschakelaar (POWER) van het hoofd toestel in de stand "aan" staat.
 2. Schakel de stroom in en uit m.b.v. de afstandsbediening.
 3. Trek het netstekker uit wanneer u denkt het toestel gedurende een lange periode niet te gebruiken.

WAARSCHUWING:
 Als de POWER LED brandt in oranje is, betekent dit dat de spanning met de afstandsbediening is uitgeschakeld. Schakel de spanning in met de afstandsbediening.

OBSERVERA:
 1. Låt alltid strömbrytaren (POWER) på huvudentheten vara påslagen.
 2. Slå till/ifrån strömen med fjärrstyret.
 3. Koppla bort nätströmen från apparaten förr du skall använda den under lång tid.

NOTA:
 1. Tenete sempre l'interruttore della corrente (POWER) su unità principale in posizione di "on".
 2. Ligate e desligue a corrente a partir da unidade de controlo remoto.
 3. Desconecte o fio de força quando intentar não utilizar a unidade por longo tempo.

CAUTELA:
 Se o POWER LED emitir aceso a laranja, isto significa que a força de alimentação a unidade foi desligada pelo controlo remoto.

註:
 1. 主機上的POWER (電源) 燈須一直保持接通。
 2. 由遙控器操縱電源之開和閉。
 3. 本機打算長時間不用時應將電源線拔下。

注意:
 若電源發光二種管(LED)成波顏色, 意味著來自遙控器的電源已關掉。請接通來自遙控器的電源。

PRECAUCIONES PARA LA INSTALACION
 Deje por lo menos 10 cm. de espacio entre esta unidad y cualquier otro componente situado sobre ella.

VOORZORGSAAMTEGELEN
 Bij plaatsing dient u een ruime afstand van minstens 10 cm open te laten tussen dit toestel en een ander enig gelijkaardig component.

FÖRSÄKTIGHETSÅTGÄRDER VID INSTALLATIONEN
 För installation bör ett tillräckligt mellanrum mellan apparaten och en eventuell annan liknande apparat, 10 cm eller mer, vara öppet.

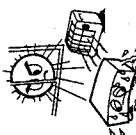


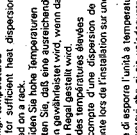
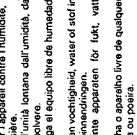
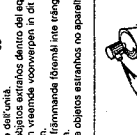
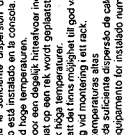
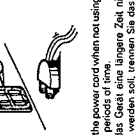
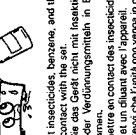

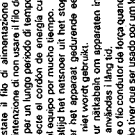
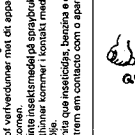
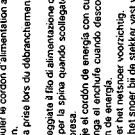
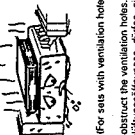
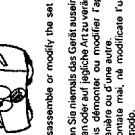
CUIDADOS NA INSTALACAO
 Deve um espaço de pelo menos 10 cm entre esta unidade e qualquer outro componente colocado acima.

安裝注意
 本機須與其下方擺置的其它音響設備相隔至少10厘米。

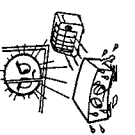


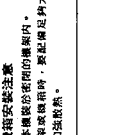

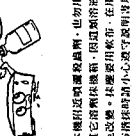
10 cm or more
 10 厘米或更多
 10 cm or more
 10 厘米或更多
 10 cm or plus
 10 厘米或以上



NOTE ON USE / HINWEISE ZUM GEBRAUCH / OBSERVATIONS RELATIVES A L'UTILISATION / NOTE SULL'USO / NOTAS SOBRE EL USO / ALVOREINS TE GEBRUIKEN / OBSERVERA OBSERVAÇÕES QUANTO AO USO

 <ul style="list-style-type: none"> Avoid high temperatures installed on a rack. Permettez une haute température d'installation sur un socle. Kosten Sie hohe Temperaturen bei der Installation auf ein Regal. Evite temperaturas altas de equipamento ao instalar numa prateleira. 	 <ul style="list-style-type: none"> Keep the set free from moisture, water, and dust. Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern. Évitez l'appareil comme l'humidité, l'eau et la poussière. Tienete l'unità lontana dall'umidità, dall'acqua e dalla polvere. Mantenga el equipo libre de humedad, agua y polvo. Let geen vochtigheid, water of stof in het apparaat binnenvallen. Mantenha o aparelho livre de qualquer umidade, água ou poeira. 	 <ul style="list-style-type: none"> Do not let foreign objects in the set. Verboten het inbrengen van vreemde voorwerpen in het toestel. Évitez d'insérer des objets étrangers dans l'appareil. Non lasciare oggetti estranei dentro dell'apparato. No debe introducir objetos extraños en el aparato. Se tillet ikke fremmede formler ind i apparatet. Não deixe objetos estranhos no aparelho.
 <ul style="list-style-type: none"> Allow for sufficient heat dissipation when installed on a rack. Permettez une libre dissipation thermique lors de l'installation sur un socle. Kosten Sie genügend Wärmeabfuhr bei der Installation auf dem Regal. Conceda suficiente dispersão de calor quando o equipamento for instalado numa prateleira. 	 <ul style="list-style-type: none"> Keep the set free from moisture, water, and dust. Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern. Évitez l'appareil comme l'humidité, l'eau et la poussière. Tienete l'unità lontana dall'umidità, dall'acqua e dalla polvere. Mantenga el equipo libre de humedad, agua y polvo. Let geen vochtigheid, water of stof in het apparaat binnenvallen. Mantenha o aparelho livre de qualquer umidade, água ou poeira. 	 <ul style="list-style-type: none"> Do not let foreign objects in the set. Verboten het inbrengen van vreemde voorwerpen in het toestel. Évitez d'insérer des objets étrangers dans l'appareil. Non lasciare oggetti estranei dentro dell'apparato. No debe introducir objetos extraños en el aparato. Se tillet ikke fremmede formler ind i apparatet. Não deixe objetos estranhos no aparelho.
 <ul style="list-style-type: none"> Unplug the power cord when not using the set for long periods of time. Wählen das Gerät eine längere Zeit nicht verbunden mit dem Stromnetz. Ne pas brancher l'appareil sur le réseau électrique quand on ne l'utilise pas pendant de longues périodes. Disinnestare il filo di alimentazione quando si non usate il filo di alimentazione per un lungo periodo di tempo. Desconecte el cable de alimentación cuando no lo utilice el equipo por mucho tiempo. Neem altijd het netstroom-uit het stopcontact wanneer het apparaat gedurende een lange periode niet gebruikt wordt. Desligue o aparelho quando não estiver sendo utilizado por um longo período. 	 <ul style="list-style-type: none"> Unplug the power cord when not using the set for long periods of time. Wählen das Gerät eine längere Zeit nicht verbunden mit dem Stromnetz. Ne pas brancher l'appareil sur le réseau électrique quand on ne l'utilise pas pendant de longues périodes. Disinnestare il filo di alimentazione quando si non usate il filo di alimentazione per un lungo periodo di tempo. Desconecte el cable de alimentación cuando no lo utilice el equipo por mucho tiempo. Neem altijd het netstroom-uit het stopcontact wanneer het apparaat gedurende een lange periode niet gebruikt wordt. Desligue o aparelho quando não estiver sendo utilizado por um longo período. 	 <ul style="list-style-type: none"> Do not let foreign objects in the set. Verboten het inbrengen van vreemde voorwerpen in het toestel. Évitez d'insérer des objets étrangers dans l'appareil. Non lasciare oggetti estranei dentro dell'apparato. No debe introducir objetos extraños en el aparato. Se tillet ikke fremmede formler ind i apparatet. Não deixe objetos estranhos no aparelho.
 <ul style="list-style-type: none"> Handle the power cord carefully. Geben Sie vorsichtig mit dem Netzkabel um. Manipuler le cordon d'alimentation avec précaution. Maneggiare il cavo di alimentazione con cura. Maneje el cable de energía con cuidado. Handle het netstroom-voorzicht. Handle het snoer bij de stekker vast wanneer deze moet worden aange- of losgemaakt. Handle the cable of power when it is plugged. Maneje o tomada ao desconectar o fio. 	 <ul style="list-style-type: none"> Unplug the power cord when not using the set for long periods of time. Wählen das Gerät eine längere Zeit nicht verbunden mit dem Stromnetz. Ne pas brancher l'appareil sur le réseau électrique quand on ne l'utilise pas pendant de longues périodes. Disinnestare il filo di alimentazione quando si non usate il filo di alimentazione per un lungo periodo di tempo. Desconecte el cable de alimentación cuando no lo utilice el equipo por mucho tiempo. Neem altijd het netstroom-uit het stopcontact wanneer het apparaat gedurende een lange periode niet gebruikt wordt. Desligue o aparelho quando não estiver sendo utilizado por um longo período. 	 <ul style="list-style-type: none"> Do not let foreign objects in the set. Verboten het inbrengen van vreemde voorwerpen in het toestel. Évitez d'insérer des objets étrangers dans l'appareil. Non lasciare oggetti estranei dentro dell'apparato. No debe introducir objetos extraños en el aparato. Se tillet ikke fremmede formler ind i apparatet. Não deixe objetos estranhos no aparelho.
 <ul style="list-style-type: none"> Never disassemble or modify the set in any way. Verboten het inbrengen van vreemde voorwerpen in het toestel. Évitez de démonter ou modifier l'appareil de quelque manière que ce soit. Non smontare mai, né modificare l'unità in nessun modo. Nunca desarme o modifique el equipo de ninguna manera. Do niet de apparatuur demonteren of op andere wijze modificeren. Nunca desmonte ou modifique o aparelho de alguma forma. 	 <ul style="list-style-type: none"> Unplug the power cord when not using the set for long periods of time. Wählen das Gerät eine längere Zeit nicht verbunden mit dem Stromnetz. Ne pas brancher l'appareil sur le réseau électrique quand on ne l'utilise pas pendant de longues périodes. Disinnestare il filo di alimentazione quando si non usate il filo di alimentazione per un lungo periodo di tempo. Desconecte el cable de alimentación cuando no lo utilice el equipo por mucho tiempo. Neem altijd het netstroom-uit het stopcontact wanneer het apparaat gedurende een lange periode niet gebruikt wordt. Desligue o aparelho quando não estiver sendo utilizado por um longo período. 	 <ul style="list-style-type: none"> Do not let foreign objects in the set. Verboten het inbrengen van vreemde voorwerpen in het toestel. Évitez d'insérer des objets étrangers dans l'appareil. Non lasciare oggetti estranei dentro dell'apparato. No debe introducir objetos extraños en el aparato. Se tillet ikke fremmede formler ind i apparatet. Não deixe objetos estranhos no aparelho.

使用注意事項

 <p>防止高溫</p> <ul style="list-style-type: none"> 勿將本機放置於受烈日曝曬或靠近熱源器材的位置。 避免將本機安裝於溫度很高多塵埃的位置。 勿將本機放置於溫度很高多塵埃的位置。在風扇或其他有水的物件均不宜擺在電腦上方。 	 <p>當你外出時</p> <ul style="list-style-type: none"> 長時間不用本機時，請將外掛線拆下，並將風扇調整至關閉。 請勿將本機放置於受烈日曝曬或靠近熱源器材的位置。 避免將本機安裝於溫度很高多塵埃的位置。 勿將本機放置於溫度很高多塵埃的位置。在風扇或其他有水的物件均不宜擺在電腦上方。 	 <p>保護機殼</p> <ul style="list-style-type: none"> 避免在本機附近噴灑液體，更勿用汽瓶噴水或把其他液體灑在機殼上。因液體灑在機殼上可能會造成損壞。機殼若用帆布，在化學藥品或油類灑在機殼上時，應小心處理。
 <p>留家電源線</p> <ul style="list-style-type: none"> 當插線板出現鬆動時，切勿拉扯電源線，應直接拉出插線板。 切勿將風扇孔的線蓋 切勿將風扇孔的線蓋 切勿將風扇孔的線蓋 	 <p>切勿將機殼</p> <ul style="list-style-type: none"> 切勿將機殼拆下或拆成板，及勿將手伸入機殼內部。危險的。切勿打開機殼。如欲更換零件，應先將機殼拆下。切勿將機殼拆下或拆成板，及勿將手伸入機殼內部。危險的。切勿打開機殼。如欲更換零件，應先將機殼拆下。 	 <p>切勿將機殼</p> <ul style="list-style-type: none"> 切勿將機殼拆下或拆成板，及勿將手伸入機殼內部。危險的。切勿打開機殼。如欲更換零件，應先將機殼拆下。切勿將機殼拆下或拆成板，及勿將手伸入機殼內部。危險的。切勿打開機殼。如欲更換零件，應先將機殼拆下。

Please check to make sure the following items are included with the main unit in the carton:

- (1) Operating Instructions (RC-837)
- (2) Battery RSP (AA)
- (3) AC Power Cord
- (4) Service Station List

Bitte überprüfen Sie, ob die folgenden Teile vollständig in der Verpackung enthalten sind:

- (1) Betriebsanleitung (RC-837)
- (2) Fernbedienung (RC-837)
- (3) Batterie RSP (AA)
- (4) AC-Netztafel
- (5) Service-Station-Liste

Veuillez contrôler que les articles suivants sont bien joints à l'appareil principal dans le carton:

- (1) Manuel d'instructions (RC-837)
- (2) Piles RSP (AA)
- (3) Cordon électrique AC
- (4) Liste des stations

Controllare che le parti seguenti si trovino imballate con l'apparecchio nella scatola:

- (1) Libretto delle istruzioni (RC-837)
- (2) Telecomando (RC-837)
- (3) Batterie RSP (AA)
- (4) Fido di alimentazione CA
- (5) Lista di assistenza tecnica

Kontroleer de volgende accessoires bij het hoofdtoestel in de doos zijn verpakt:

- (1) Gebruiksaanwijzing (RC-837)
- (2) Batterijen RSP (AA)
- (3) Netsnoer
- (4) Lijst met service-adressen

Kontrollera att följande, förutom huvudapparatens, finns med i kartongen.

- (1) Bruksanvisning (RC-837)
- (2) Batterier RSP (AA)
- (3) AC-Netztavel
- (4) Lista över serviceställen

Certifique-se de que as seguintes peças estão incluídas na embalagem fora da unidade principal:

- (1) Instruções de operação (RC-837)
- (2) Pilhas RSP (AA)
- (3) Cabo de CA
- (4) Lista de Estações de Serviço

下列物品應裝在機殼同一紙箱內，請查對：

- (1) 操作說明書 (RC-837)
- (2) 遙控器 (RC-837)
- (3) 電池 RSP (AA)
- (4) 交流電源線
- (5) 維修站地址一覽表

1 DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS (Refer to Page 5)

- 1 POWER (Power Switch)**
When the power switch is turned ON (●), the POWER LED (●) lights. When the power switch is turned OFF (○), power is supplied to the unit. It is used to turn the power on and off of the unit to warm up. This is also the built-in muting circuit that eliminates noise during the on/off operation.
- 2 PHONES (Headphone Terminals)**
This terminal is used to plug in the headphones. (The SPEAKER output is turned off when the headphones are plugged in.) To prevent hearing loss, do not raise the volume level excessively when using headphones.
- 3 BASS (Bass Control)**
This knob is used to control the bass quality of the sound. When the knob is set at the center position, the frequency characteristics are flattened in the range above 1000 Hz. The treble is emphasized as the knob is moved off center to the right (↗), and reduced as it is moved to the left (↖).
- 4 TREBLE (Treble Control)**
This knob is used to control the treble quality of the sound. When the knob is set at the center position, the frequency characteristics are flattened in the range above 1000 Hz. The treble is emphasized as the knob is moved off center to the right (↗), and reduced as it is moved to the left (↖).

NOTE:
When the Volume control (●) is turned right (↗) from the center position, the adjustment range of the BASS (●) and TREBLE (●) controls is narrowed. If the Volume control (●) is turned left (↖) from the center position, the adjustment range of the BASS (●) and TREBLE (●) controls is widened. If the Volume control (●) is turned left (↖) from the center position, the BASS (●) and TREBLE (●) controls cannot be adjusted.

- 5 LOUDNESS (Loudness Switch)**
When the volume is low, it is difficult for the human ear to clearly distinguish notes in the low and high frequency ranges. The loudness switch allows a simple "one-touch" correction of this difficulty. Press the loudness switch ON (●) when listening to music at a low volume. The low notes and high notes will be corrected to produce a natural sound.
- 6 BALANCE (Balance Control)**
This knob is used to adjust the balance between the left and right channels. When it is set to the center position, the amplitude of the amplifier is equal on both sides. If there is a difference in the left and right channel output voltages for a cartridge, move the knob to the left and the right to adjust. If the volume on the right side is too low, turn the knob to the right (↗). If the volume on the left side is too low, turn the knob to the left (↖). This will achieve an even balance on the left and right sides.
- 7 VOLUME (Volume Control)**
This knob controls the overall volume level. Turn the knob to the right (↗) to raise the volume and to the left (↖) to lower it.
- 8 REC OUT SELECTOR (Recording Output Select Switch)**
Use this switch to select the recording component.
● PHONO:
Used to recording from the turntable.
● CD:
Used to recording from the CD player.
● TUNER:
Used to recording from the tuner.
● DTD/AUX:
Used to recording component that connected to the AUX terminal.
● TAPE-1 ▶ 2:
Used to recording from the tape deck connected to the TAPE-1 jacks.
● TAPE-2 ▶ 1:
Used to recording from the tape deck connected to the TAPE-2 jacks.

- 9 INPUT SELECTOR (Input Select Switch)**
This switch is used to select the input signal for the program source.
● PHONO:
Use this position when using the record player connected to the PHONO terminals.
Use the CARTRIDGE selection switch (●) to switch the sensitivity to correspond to the cartridge type being used.
● CD:
Used to listen a compact disc player or other component that is connected to the CD terminals.
● TUNER:
Used to play a component such as FM/AM tuner or a TV tuner that is connected to the TUNER terminals.
● DVD/AUX:
Used to play a component such as a HiFi video player, TV tuner or tape deck that is connected to the DVD/AUX terminals.
● TAPE-1/DAT:
Use this position when using the tape deck, etc., connected to the TAPE-1/DAT terminals.
● TAPE-2/MD:
Use this position when using the tape deck, etc., connected to the TAPE-2/MD terminals.
- 10 SOURCE DIRECT (Source Direct Switch)**
The controls (BASS ●, TREBLE ●, LOUDNESS ● and BALANCE ●) can be used when this switch is in the OFF (●) position. When set to the ON (●) position, the above controls are by-passed and the signals are input directly to the volume control circuit, providing high quality sound.
- 11 POWER LED**
The LED indicates the set's operating mode.

Main unit power switch	Main unit mode	LED color
ON (●)	Operating	Lit red
	Mute	Flashing red
	Standby (power off from remote control)	Lit orange
OFF (○)		Off

The mute mode is set for several seconds when the main unit's power switch is turned ON (●) in the standby mode. The LED flashes red and stops flashing, remaining lit, once the set is operable.
- 12 REMOTE SENSOR (Remote Control Sensor)**
This sensor receives the infra-red light transmitted from the wireless remote control unit. For remote control, point the wireless remote control unit towards the sensor.

2 CONNECTIONS

- Connecting the speakers**
 - Speaker impedance
 - When using speaker systems A and B separately, speakers with an impedance of 4 to 16 Ω/ohms can be connected.
 - When bi-wiring with bi-wireable speaker system, speakers with an impedance of 4 to 16 Ω/ohms can be connected.
 - Note that when using two sets of speaker systems together (A+B), using speakers with an impedance other than between 8 to 16 Ω/ohms may result in damage.
 - Note that the unit is not equipped with a switch for selecting the speaker systems. The A and B speaker output terminals are connected in parallel.
 - The protective circuit may be activated if speakers with other impedances are connected.
 - Be sure to connect the cords between the speaker terminals and speaker systems with the same polarities (⊕ to ⊕, ⊖ to ⊖). If not, the central sound will be weak and the position of the different instruments will not be clear, diminishing the stereo effect.
 - When connecting the speakers, be sure that the core wires of the speaker cords do not stick out from the terminals and touch other terminals, each other or the rear panel.
 - Connecting the speaker cords
 - ① Peel off the sheathing from the end of the cord.
 - ② Twist the core wires.
 - ③ Turn the speaker terminal counterclockwise to loosen it.
 - ④ Insert the core wires entirely, then turn the terminal clockwise to tighten it.

CAUTION

- Protective Circuit**
This set is equipped with a high speed protective circuit. This circuit protects the internal circuitry from damage due to large currents flowing when the speaker terminals are not completely connected or when an output is generated by a short circuit. This protective circuit's operation cuts off the output to the speakers. In such a case, be sure to turn the power to the set off and check the connections to the speakers. Then turn the power on again. After muting for several seconds, the set will operate normally.
- NOTE:**
NEVER touch the speaker terminals when the power is on. Doing so could result in electric shocks.

13 INPUTS terminals

These are input terminals for CD players, turntables, AM/FM tuners or other playback components.

NOTE:
The PHONO input terminals are equipped with a short pin-plug. Remove this plug to connect a record player. Store the removed short pin-plug in a safe place so as not to lose it. Do not plug a short pin plug into the REC (recording output) terminals. Doing so will result in a loss of sound and may damage connected equipment.

- 14 TAPE PLAY and REC terminals**
 - Playback Terminals
 - Recording Terminals
- 15 PRE-OUT terminals**
 - Use these to connect an extra power amplifier.
 - Connect the extra power amplifier's input terminals to the PHONO-1500R's pre-out terminals.
- 16 SPEAKER SYSTEMS terminals**
Connect the speaker systems here.
- 17 CARTRIDGE (Cartridge Selection Switch)**
This switch is set according to the type of player cartridge to be used. Set this switch to MM (●), MC (●) or MC (●) according to the type of cartridge used on your turntable.
- 18 SIGNAL GND (ground) terminal**
Connect the turntable's ground wire here.

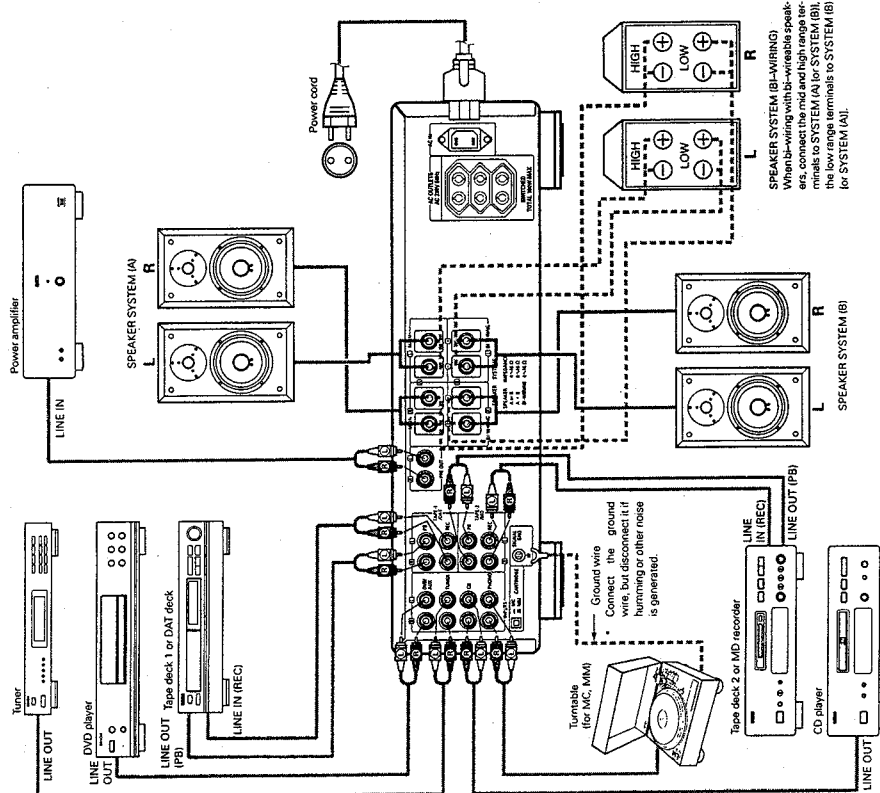
NOTE:
This terminal is used to reduce noise when a turntable, etc., is connected. It does not provide complete grounding.

AC OUTLETS
AC outlets are used for connecting amplifier component units, such as turntables, tape decks, etc. 120 VAC.
● SENSITIVE: These outlets are turned ON/OFF when main power switch is turned on/off.

AC IN connector
Connect the included AC power cord here. Do not use any other cord than the provided AC power cord.

Cautions on Connections

- Do not plug in the power cord until all connections are completed.
- Be sure to connect the left and right channels properly.
- Insert the plugs securely. Incomplete connections can result in noise.
- Use the SYNCHROD AC OUTLETS to plug in audio components. Do not use them for hair dryers or other appliances.
- Note that plugging the pin plug cords next to power cords or near power transformers may result in humming or other noise.
- The PHONO input terminals have an extremely high sensitivity, so avoid moving the slider in reaction humming/buzzing from the speakers. When pin plug cords are not connected, insert the included short-circuit pin plug.



3 OPERATION (Refer to Page 5)

PREPARATION

1. CHECKING CONNECTIONS

- Make sure that all the connections are proper by referring to the rear panel.
 - Check the polarity (positive and negative) of connections, and the direction of stress separation (right cord to right channel terminal, and left cord to left channel terminal).
 - Check the direction of pin cord connector.
- 2. SETTING OF EACH KNOB**
- Turn the volume control knob ① left (←), to minimum position.
 - Set the rotary knob ②, ③ and balance control ④ to center position.
 - Set LOUDNESS switch ⑤ to "OFF (L)".
 - Set SOURCE DIRECT switch ⑥ to "OFF (L)".

After checking the above items, turn on the power, the amplifier is set in the ready mode in a few seconds.

PLAYING A RECORD

- Set the CARTRIDGE selection switch ① "MC (←)" or "MM (→)".
- Set the INPUT SELECTOR ② to "PHONO".
- Operate the tuner to receive a radio program.
- Turn the volume ⑦ and tone controls ③, ④ and balance control ⑤ to yield an appropriate volume and sound quality.

PLAYBACK OF CD PLAYER

- Set the INPUT SELECTOR ② to "CD".
- Operate the CD player.
- Turn the volume ⑦ and tone controls ③, ④ and balance control ⑤ to yield an appropriate volume and sound quality.

RECEPTION OF RADIO PROGRAMS

- Set the INPUT SELECTOR ② to "TUNER".
- Operate the tuner to receive a radio program.
- Turn the volume ⑦ and tone controls ③, ④ and balance control ⑤ to yield an appropriate volume and sound quality.

CONNECTIONS OF AUDIO EQUIPMENT TO AUX TERMINALS

- Set the INPUT SELECTOR ② to "DVD/AUX" position.
- Operate the Audio equipment Systems.
- Turn the volume ⑦ and tone controls ③, ④ and balance control ⑤ to yield an appropriate volume and sound quality.

PLAYBACK WITH TAPE DECK

- Set the INPUT SELECTOR ② to "TAPE-1/DAT" or "TAPE-2/MD".
- Operate the Tape Deck.
- Turn the volume ⑦ and tone controls ③, ④ and balance control ⑤ to yield an appropriate volume and sound quality.

RECORDING WITH TAPE DECK

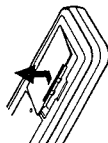
- Set the REC OUT SELECTOR ③ to the program source you wish to record.
 - Start the playback of the program source.
 - Start recording with the component connected to "TAPE-1/DAT" or "TAPE-2/MD".
- In the PMA-1500R, the REC OUT signal and the speaker (head-phones) signal are output via separate circuits, so that knobs and switches related to the tone and volume have no effect whatsoever on the sound that is recorded. Also, since the recording function is selected by the REC OUT SELECTOR ③, the free program source can be played through the speakers for headphones even during recording.
 - MONITORING THE RECORDING**
A recording in progress can be monitored, if a tape deck with three individual heads for recording and playback is used. A tape deck in which a common head is used for both recording and playback cannot be used to monitor recording. When a recording is being made using TAPE-1/DAT, selecting TAPE-1/DAT with the INPUT SELECTOR will engage the RECORDING MONITOR and permit a check of the recording condition.

4 REMOTE CONTROL OPERATION

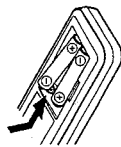
The accessory Remote Control Unit is used to control the amplifier from a convenient distance.

(1) Inserting the Dry Cell Batteries

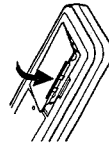
1. Remove the battery cover on the Remote Control Unit.



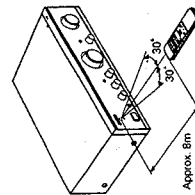
2. Insert two dry cell batteries as shown in the diagram on the battery supply unit.



3. Replace the battery cover.



(2) Directions for use



Note on operation

- Do not press the operating buttons on the Amplifier and the Remote Control Unit at the same time. This will cause misoperation.
- Operation of the Remote Control Unit will become less effective or erratic if the infrared Remote Control Sensor on the Amplifier is exposed to strong light or if there are obstructions between the Remote Control Unit and the sensor.
- In case you operate a VCR, TV or other components by remote control, do not operate buttons on two different remote control units at the same time. This will cause misoperation.

Besides being able to operate the PMA-1500R integrated-amplifier with this Remote Control Unit, you can also operate a DENON cassette deck and CD player from this handy full-system Remote Control Unit.

Remote control section

Full-system Remote Control Unit

The full-system Remote Control Unit operates all major functions of the Amplifier, such as function switching, volume control. But that's not all! The same control pad can also control the major functions of a DENON CD player and cassette deck and tuner when combined with the PMA-1500R to create a remarkably ergonomic and versatile DENON system with all the quality sound reproduction that the devoted audiophile expects.

Remote Control Unit RC-837 supplied with the PMA-1500R

- POWER button**
This button can be used to turn on and off the power of the amplifier. However, the power for the amplifier turned on and off if it is in the power standby mode and the power cord is plugged in.

This button will not function if there is a power failure, if the power cord is not plugged in, or when using an audio timer.

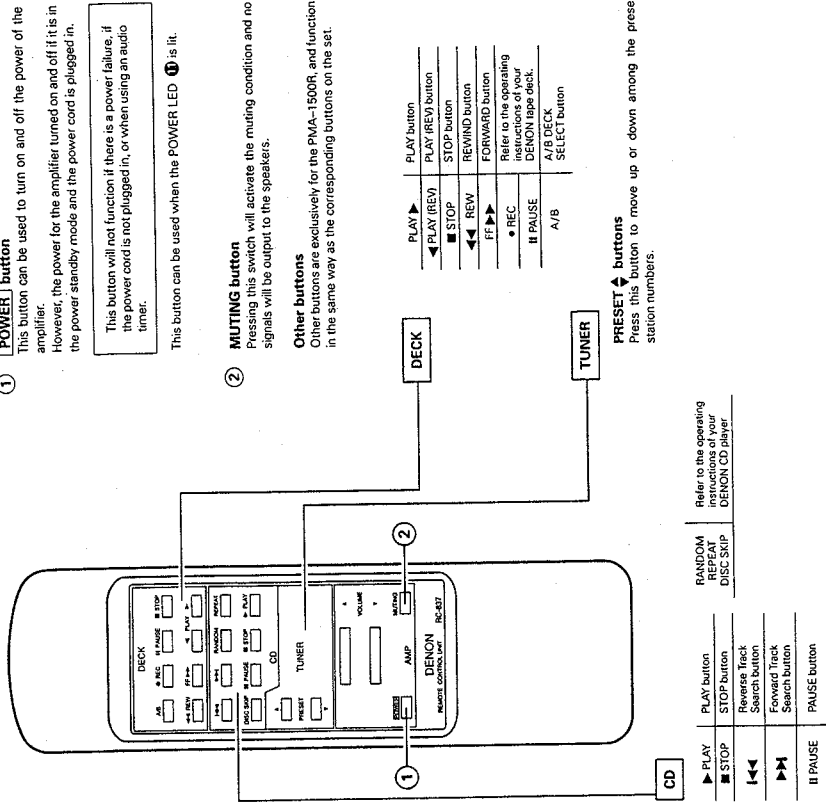
This button can be used when the POWER LED is lit.

- MUTING button**

Pressing this switch will activate the muting condition and no signals will be output to the speakers.

Other buttons

Other buttons are exclusively for the PMA-1500R, and function in the same way as the corresponding buttons on the set.



- The RC-837 Remote Control Unit can control CD players and cassette decks manufactured by DENON.
 - Note that operation may not be possible for some models.
 - Buttons are conveniently separated into groups, each group controlling one specific component. The groups are AMP, CD, DECK and TUNER.
- For details on operating other components, refer to the operating instructions for the CD player and/or cassette deck.

CAUTION:

- If the power is turned off with the Remote Control Unit, the set is switched to the power stand-by state. If you are absent for a long period of time, unplug the power cord.
- Only the POWER LED lights orange when in the power stand-by mode.
- You may experience erratic operation of the Remote Control Unit if it is operated in fluorescent light and direct sunlight, in particular, if this light strikes the Remote Control Sensor on the Amplifier. However, this is not a malfunction, and if this should happen, simply protect the sensor against such light.

5 TROUBLESHOOTING

Check the following before assuming there is a problem with the set.

1. Are all connections proper?
 2. Is the set being operated as described in the operating instructions?
 3. Are the speakers and input components being operated properly?
- If the set does not seem to be operating properly, check the points listed below. If these points do not apply, the set may be damaged. Turn off the power, immediately and contact your store of purchase.

Symptom	Cause	Measures	Page
POWER LED does not light and no sound is produced when POWER switch is turned on.	<ul style="list-style-type: none"> Power cord is not connected. 	<ul style="list-style-type: none"> Check that the cord is plugged in. 	10
POWER LED lights but no sound is produced.	<ul style="list-style-type: none"> Speaker cords not properly connected. INPUT SELECTOR not set to proper position. VOLUME control turned down. 	<ul style="list-style-type: none"> Connect securely. Set to the proper position. Set to an appropriate level. 	9, 10 8, 11
Sound is not produced from one side only.	<ul style="list-style-type: none"> Speaker cords not properly connected. Input cords not properly connected. Left/right balance improperly adjusted. 	<ul style="list-style-type: none"> Connect securely. Connect securely. Adjust the BALANCE control. 	9, 10 10 8, 11
Volume level is different when listening to tuner and records.	<ul style="list-style-type: none"> Tuner and record outputs different. 	<ul style="list-style-type: none"> Adjust the tuner output to the turntable's output (if the tuner is equipped with an output control). 	—
Positions of instruments inverted for stereo sources.	<ul style="list-style-type: none"> Left and right speakers or input cords inverted. 	<ul style="list-style-type: none"> Check the left/right connections. 	9, 10
Booming sound produced when playing records.	<ul style="list-style-type: none"> Turntable's ground wire not connected. Input cords not properly connected to PHONO terminals. Influence from a TV or VCR near the turntable. 	<ul style="list-style-type: none"> Connect securely. Connect securely. Change the position of installation. 	10 10
Howling produced when volume is turned up while playing records.	<ul style="list-style-type: none"> Turntable and speaker systems are too close. Floor is soft and vibrates easily. 	<ul style="list-style-type: none"> Move speaker systems as far away as possible. Use cushions to absorb the vibrations transmitted from the floor to the speakers. If the turntable does not include insulators, use audio insulators, available in stores. 	—
Sound is distorted.	<ul style="list-style-type: none"> Stylus pressure is too light. Dirt on tip of stylus. Defective cartridge. 	<ul style="list-style-type: none"> Apply proper pressure. Check the tip of the stylus. Replace the cartridge. 	—
This unit does not operate properly when remote control unit is used.	<ul style="list-style-type: none"> Batteries dead. Remote control unit too far from this unit. Obstacle between this unit and remote control unit. Different button is being pressed. ⊕ and ⊖ ends of battery inserted in reverse. 	<ul style="list-style-type: none"> Replace with new batteries. Move closer. Remove obstacle. Press the proper button. Insert batteries properly. 	12 12 12 13 12

6 SPECIFICATIONS

POWER AMPLIFIER SECTION

Rated Output Power:

- Both channel driven (8 Ω/ohms Load) 70 W + 70 W
 - 20 Hz to 20 kHz, T.H.D. 0.07% 140 W + 140 W
 - (4 Ω/ohms Load) 0.01%
 - DIN, 1 kHz, T.H.D. 0.7%
- Total Harmonic Distortion:
(-3 dB at rated output,
8 Ω/ohms) (1 kHz)

PRE AMPLIFIER SECTION

Rated Output:

150 mV (Recout Terminal)

Input Sensitivity/

Input Impedance:

The value in parentheses () refers to the input impedance when SOURCE DIRECT is ON.

PHONO:

- MM: 2.5 mV / 47 kΩ/ohms
 - MC: 200 μV / 100 Ω/ohms
 - 150 mV / 47 kΩ/ohms
 - (150 mV / 13 kΩ/ohms)
- 20 Hz ~ 20 kHz ±0.5 dB(MM)
30 Hz ~ 20 kHz ±0.5 dB(MC)

CD, TUNER, DVD/AUX,

TAPE-1/DAT, TAPE-2/MD

PHONO:

OVERALL CHARACTERISTICS

SN Ratio (IHF A Network):

- PHONO: 91 dB (at 5 mV input)
 - MM: 76 dB (at 0.5 mV input)
 - MC: 76 dB (at 0.5 mV input)
- (input terminals short-circuited)

SOURCE-DIRECT: ON

DVD/AUX,

TAPE-1/DAT, TAPE-2/MD:

110 dB

Tone Control Adjustable Range:

- BASS: 100 Hz ±8 dB
- TREBLE: 10 kHz ±8 dB
- LOUDNESS: 50 Hz +10 dB
- 10 kHz +6 dB

OTHERS

Power Supply:

- AC 230 V, 50 Hz (Europe & Asia & Hong Kong Models)
- AC 120 V, 60 Hz (U.S.A., Canada & Taiwan R.O.C. Models)

AC Outputs:

Switched x 3:

- 120 W (U.S.A., Canada & Taiwan R.O.C. Models)
- 100 W (Europe & Asia & Hong Kong Models)
- 305 W (IEC) (Europe & Asia & Hong Kong Models)
- 4.4 A (U.S.A., Canada & Taiwan R.O.C. Models)

Power Consumption:

- 120 W (U.S.A., Canada & Taiwan R.O.C. Models)
- 100 W (Europe & Asia & Hong Kong Models)
- 305 W (IEC) (Europe & Asia & Hong Kong Models)
- 4.4 A (U.S.A., Canada & Taiwan R.O.C. Models)

Dimensions:

- 434 (W) x 134 (H) x 407 (D) mm (17-3/32" x 5-9/32" x 16-1/32")

Net Weight:

- 14.0 kg (30 lbs 14 oz)

REMOTE CONTROL UNIT (RC-837)

Remote control system:

- Infrared pulse system
- 3V DC, two size R6P ("AA") dry cell batteries

External dimensions:

- 55 (W) x 194 (H) x 18 (D) mm (2-23/64" x 7-47/64" x 4/32")

Weight:

- 100 g (Approx. 3.5 oz) (including batteries)

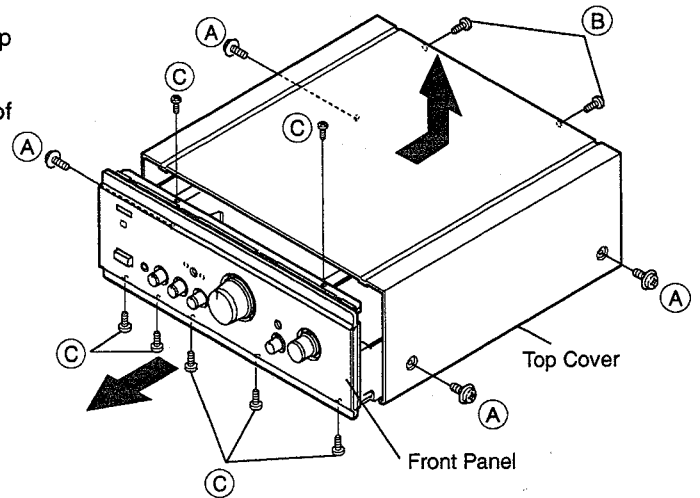
- Maximum dimensions include controls, jacks, and covers.
- (W) = width, (H) = height, (D) = depth
- For improvement purposes, specifications and functions are subject to change without advanced notice.

DISASSEMBLY

(Follow in the reverse order when reassembling)

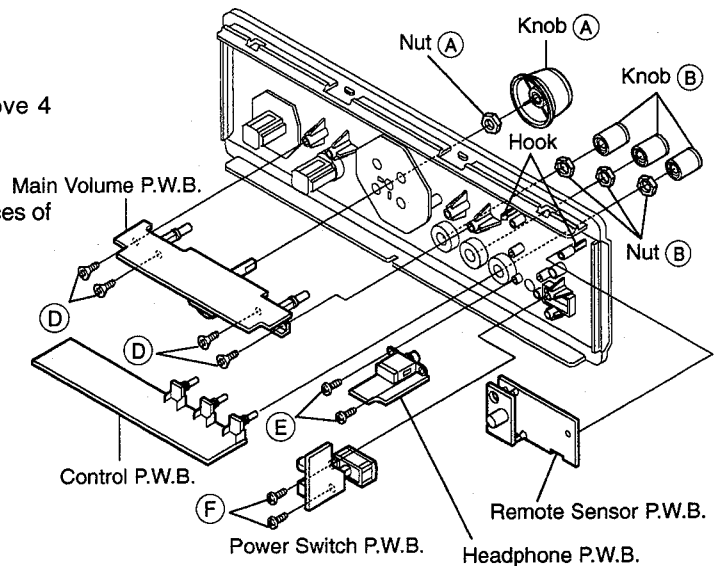
1. Top Cover and Front Panel

- (1) Remove 4 screws (A), 2 screws (B) and detach the Top Cover in the arrow direction.
- (2) Remove 7 screws (C) at the top and bottom edges of the Front Panel, then detach it in the arrow direction.



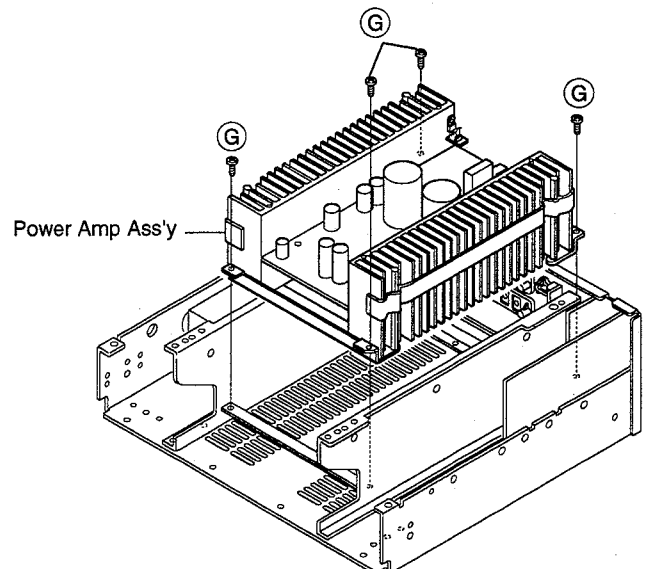
2. Each Front Panel P.W.Board

- Main Volume P.W.B.
 - (1) Pull out Knob (A), unfasten Nut (A) and remove 4 screws (D).
- Control P.W.B.
 - (1) Pull out 3 pieces of Knob (B) and unfasten 3 pieces of Nut (B).
- Headphone P.W.B.
 - (1) Remove 2 screws (E).
- Power Switch P.W.B.
 - (1) Remove 2 screws (F).
- Remote Sensor P.W.B.
 - (1) Release 2 Hooks.



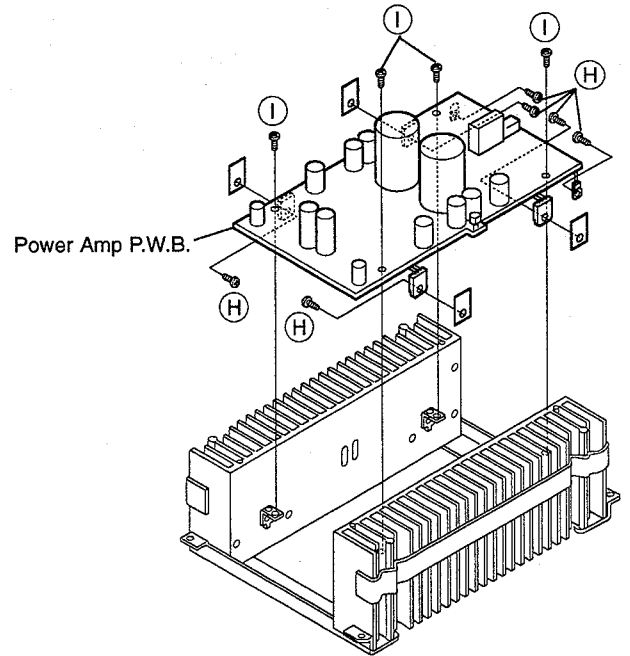
3. Power Amp Ass'y

- (1) Remove 4 screws (G) and detach the Power Amp Ass'y.



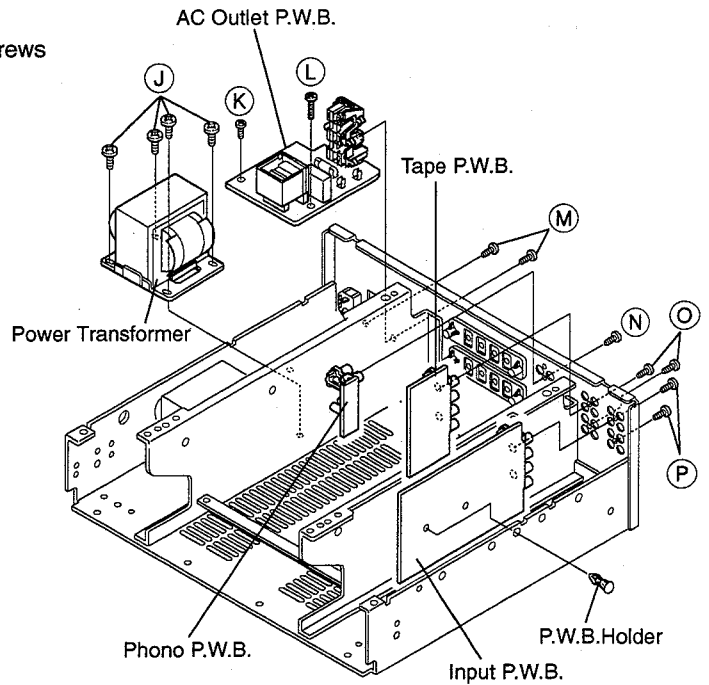
4. Power Amp P.W.B.

- (1) Remove 6 screws (H) from the bottom side of the Power Amp P.W.B.
- (2) Remove 4 screws (I) from the top side of the Power Amp P.W.B..

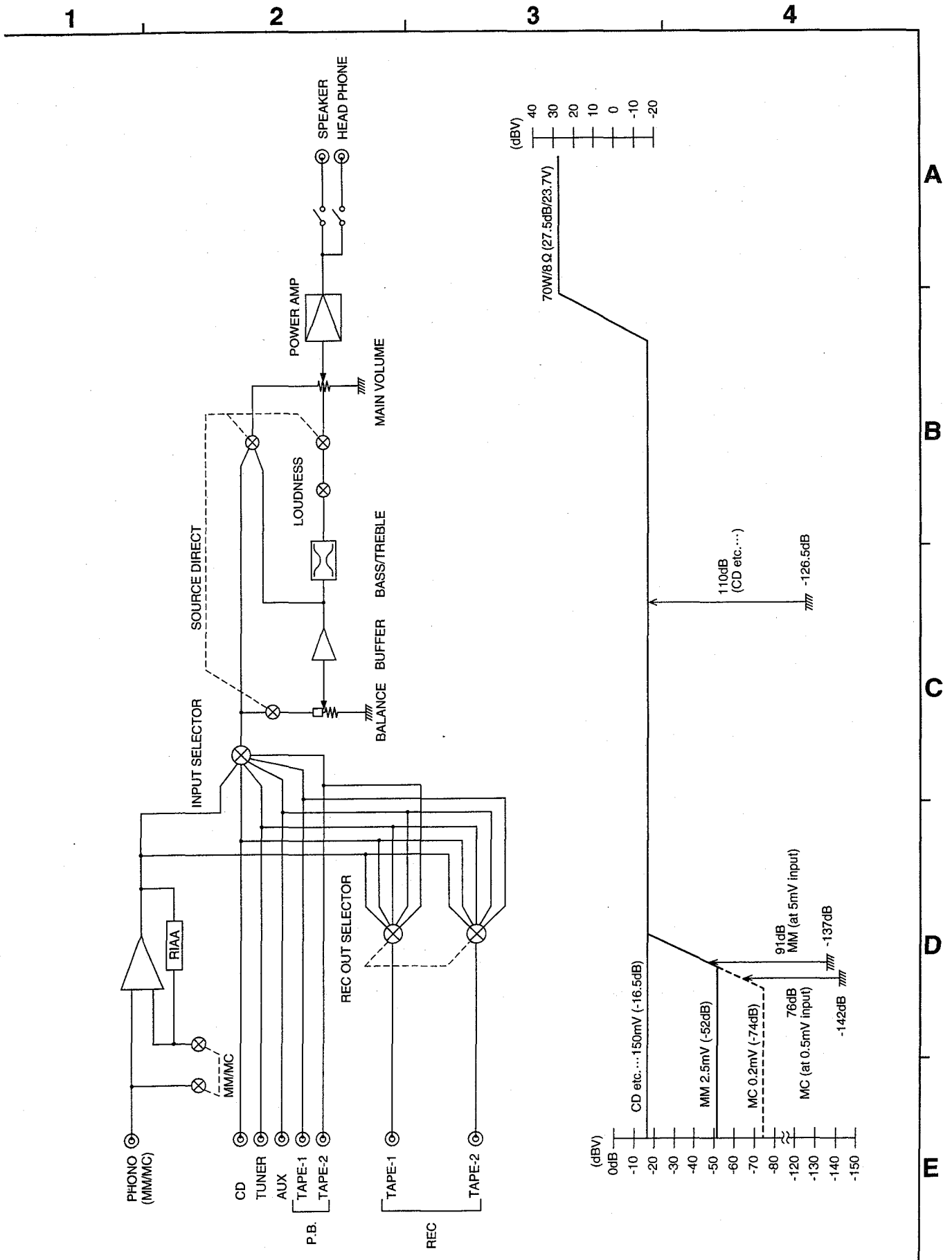


5. Each Rear Panel P.W.B.

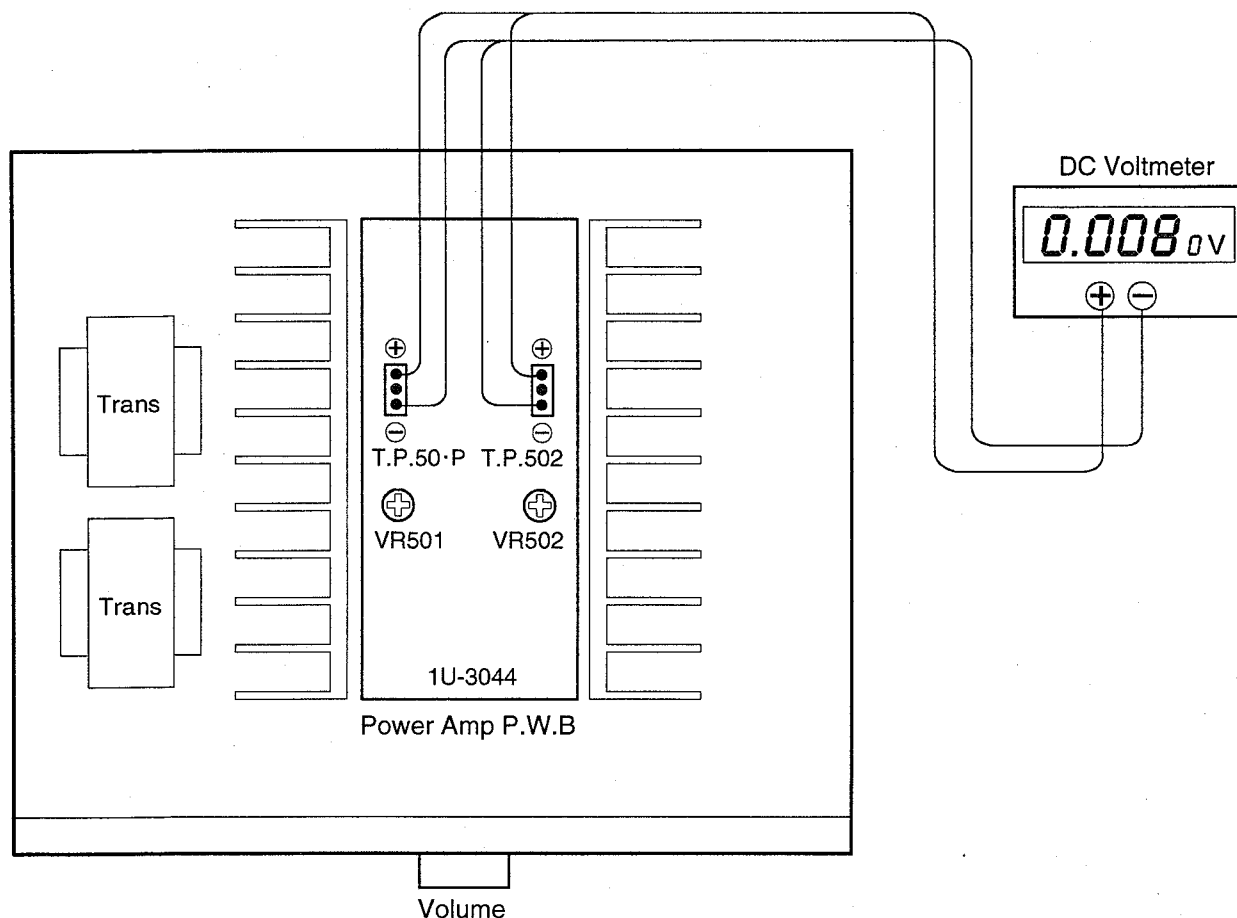
- AC Outlet P.W.B.
 - (1) Remove Power Transformer after removing 4 screws (J).
 - (2) Remove 2 screws (K, L).
 - (3) Remove 2 screws (M).
- Phono P.W.B.
 - (1) Remove 1 screw (N).
- Tape P.W.B.
 - (1) Remove 2 screws (O).
- Input P.W.B.
 - (1) Remove 2 screws (P).
 - (2) Pull out P.W.B. Holder.



BLOCK AND LEVEL DIAGRAM



ADJUSTMENT



IDLING CURRENT

● Setup

- Place the unit at an ordinary position avoiding direct air flow from an air-conditioner or fan. Do the adjustment at a temperature between 15 °C (59 °F) and 30 °C (86 °F).
- Set control as follows.

POWER switch	→	OFF (■)
VOLUME control	→	fully counterclockwise (↺ min.)
SPEAKER terminals	→	open: do not connect the speakers, dummy load etc.

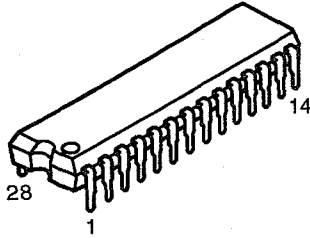
● Adjustment

- Remove top cover. And then connect DC voltmeter to the test points TP501 and TP502 of POWER AMP P.W.B. (1U-3044).
- Connect power cord to AC230V (218 ~ 242V) (Europe & Asia Models) or AC120V (114~126V) (U.S.A,Canada & TAIWAN R.O.C Models) wall outlet, and turn POWER switch "ON" (■).
- Right after power on, adjust VR501 and VR502 so that the DC voltmeter reads $10 \pm 2\text{mV}$.
- Then after 2 minutes warmup adjust VR501 and VR502 so that the DC voltmeter reads $10 \pm 1\text{mV}$.
- And after 10 minutes warmup adjust VR501 and VR502 so that the DC voltmeter reads $10 \pm 0.5\text{mV}$.

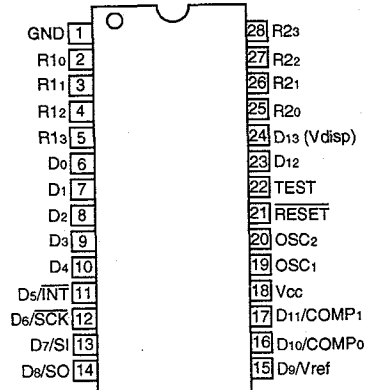
SEMICONDUCTORS

● IC's

HD404222 (IC903)



Large current terminals	High dielectric terminals
R1, R2, D12, D13	—



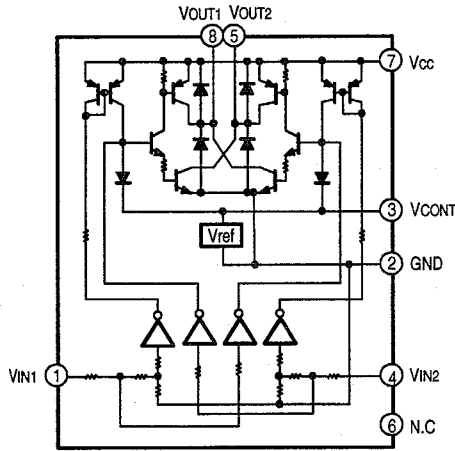
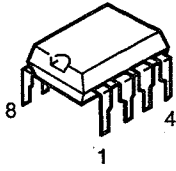
HD404222 (IC901) Terminal Function

Pin No.	Port Name	Symbol	Typ	Opt	I/O	Res	Ini	Act	Det	Function
1	GND	GND	—	—	—	—	—	—	—	Ground
2	R10	PHONO	B	IU	O	HZ	H	L	—	Function display LED drive output
3	R11	CD	B	IU	O	HZ	H	L	—	Function display LED drive output
4	R12	TUNER	B	IU	O	HZ	H	L	—	Function display LED drive output
5	R13	AUX	B	IU	O	HZ	H	L	—	Function display LED drive output
6	D0	VOLUME UP	B	IU	O	HZ	L	H	—	Volume drive output
7	D1	VOLUME DOWN	B	IU	O	HZ	L	H	—	Volume drive output
8	D2	NC	B	IU	I	HZ	L	—	—	Connects to GND
9	D3	B-DOWN	B	IU	I	HZ	H	L	Lv	Break down detection input
10	D4	PROTECTION	B	IU	I	HZ	H	L	Lv	Protection detection input
11	INT	REMOCON	B	IU	I	HZ	H	L	Ed	Remote control signal input
12	D6	CK	B	IU	O	HZ	L	H	—	Analog function switch control output (clock)
13	D7	ST	B	IU	O	HZ	L	H	—	Analog function switch control output (chip select)
14	D6	DATA	B	IU	O	HZ	L	H	—	Analog function switch control output (data)
15	Vref	VREF	—	—	—	—	—	—	—	Comparator reference voltage input
16	D10	KEY IN	B	IU	I	HZ	—	—	Alg	Button input (analog)
17	D11	NC	B	IU	I	HZ	L	—	—	Connects to GND
18	Vcc	Vcc	—	—	—	—	—	—	—	Power supply
19	OSC1	OSC1	—	—	I	—	—	—	—	Xtal input
20	OSC2	OSC2	—	—	O	—	—	—	—	Xtal output
21	RESET	RESET	—	EU	I	L	H	H	—	Reset input
22	TEST	—	—	—	I	—	—	—	—	
23	D12	POWER ON/OFF	B	IU	O	HZ	H	L	—	Power ON/OFF switching output ("L"= Power on)
24	D13	MUTING	B	IU	O	HZ	H	H	—	Mute output ("H"= Mute on)
25	R20	NC	B	IU	O	HZ	L	—	—	Connects to GND
26	R21	MUTE/STANDBY	B	IU	O	HZ	H	L	—	Mute/Standby display LED drive output
27	R22	TAPE2	B	IU	O	HZ	H	L	—	Function display LED drive output
28	R23	TAPE1	B	IU	O	HZ	H	L	—	Function display LED drive output

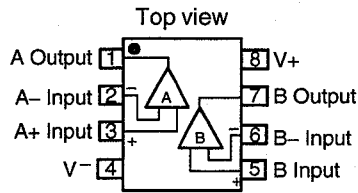
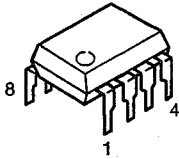
Abbreviations:

- Typ (Type) : B=NMOS open drain.
- Opt (Option) : IU=internal pull up, EU=external pull up.
- Port state : Res=reset, Ini=standby, Act=active.
- Det : Lv=level, Ed=edge, Alg=analog.
- I/O : Input or output of port "I"= Input port, "O"= Output port.
- Res : State at reset
- Opt : "H"= Outputs high level at reset, "L"= Outputs low level at reset, "HZ"= Becomes high impedance mode at reset.
- Det : Pull up or pull down selection information "U"= Pull up, "D"= Pull down.
- Ini : Indicates judging state of input port "Lv"= Level detection, "Ed"= Edge detection.
- Act : Initial state of in/out port "H"= High level, "L"= Low level.
- Act : Indicates port state in operation.

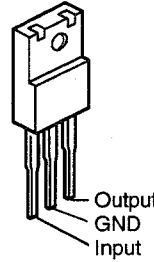
LB1639 (IC904)



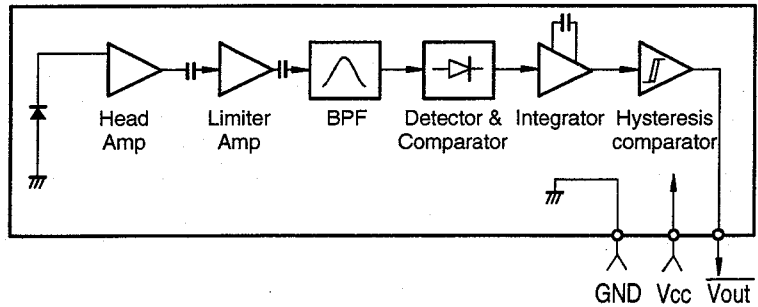
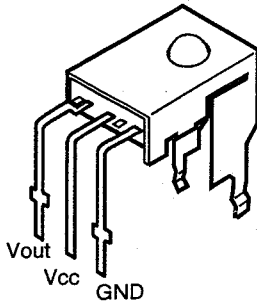
**NJM2068DDC (IC301)
BA15218 (IC401)**



NJM7805FA (IC902)

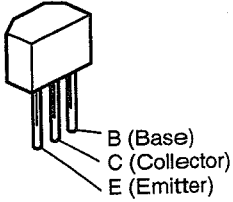


GP1U271X (Remote Control Sensor) (IC901)

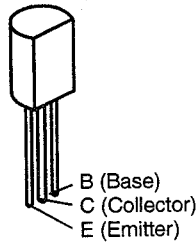


● TRANSISTORS

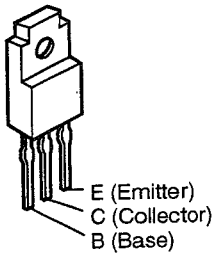
2SA1048 (GR)
2SC2458 (BL)



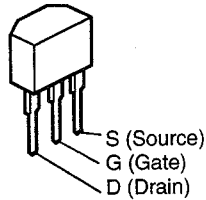
2SA988 (E/F)
2SC1815 (Y)
2SC1841 (E/F)



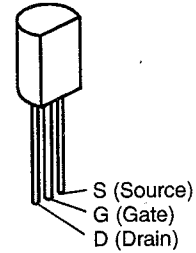
2SB1186A (D)
2SD1763A (D)



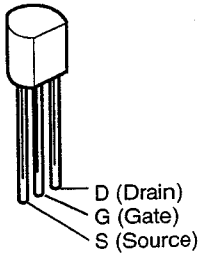
2SK184C (GR)/(BL)



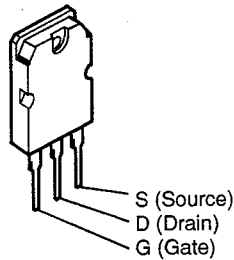
2SK369 (BL)/(GR)-C



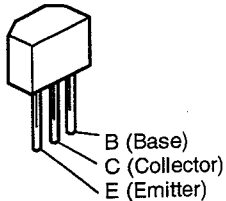
2SK373 (Y)



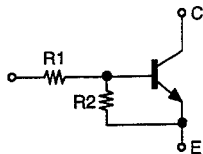
2SK851



DTC114ES
RN1241

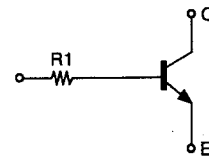


DTC114ES



	R1	R2
DTC114ES	10 kohm	10 kohm

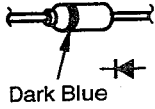
RN1241



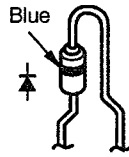
	R1
RN1241	5.6 kohm

● DIODE & LED

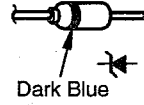
1SS252



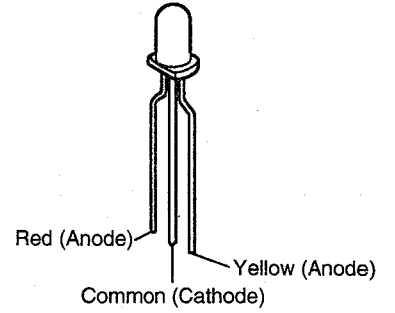
1SR35-200A



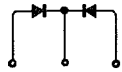
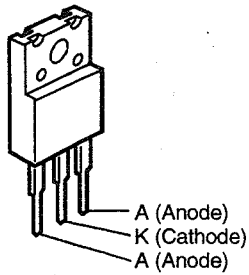
HZS5A-1
HZS12A-1
HZS6B-1
HZS24-1
MTZJ7.5C
MTZJ18A



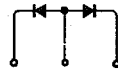
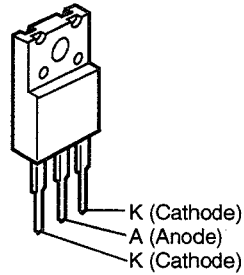
SML16751 (LED)



FMG-22S

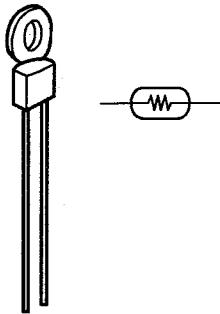


FMG-22R

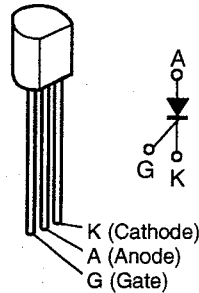


● POSISTOR

PTH9M04BC222TS2F333 (P501)



SFOR3G42 (Thyristor)
(SC601)

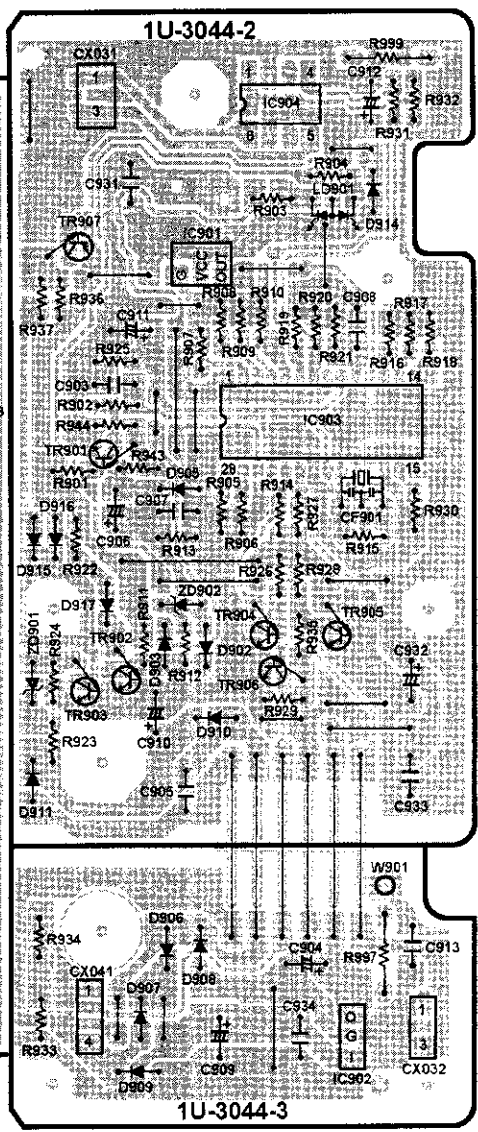
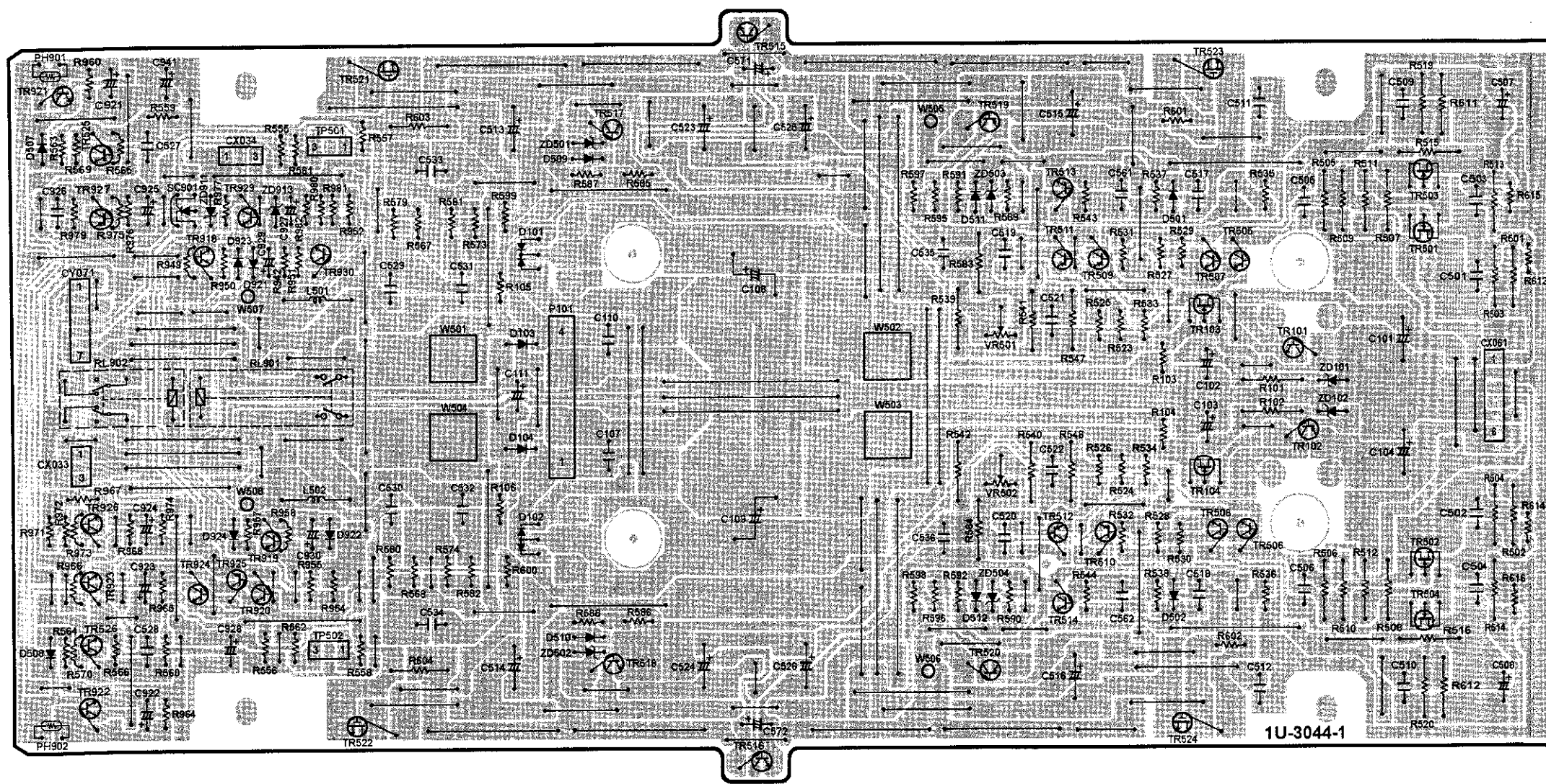


PRINTED WIRING BOARD

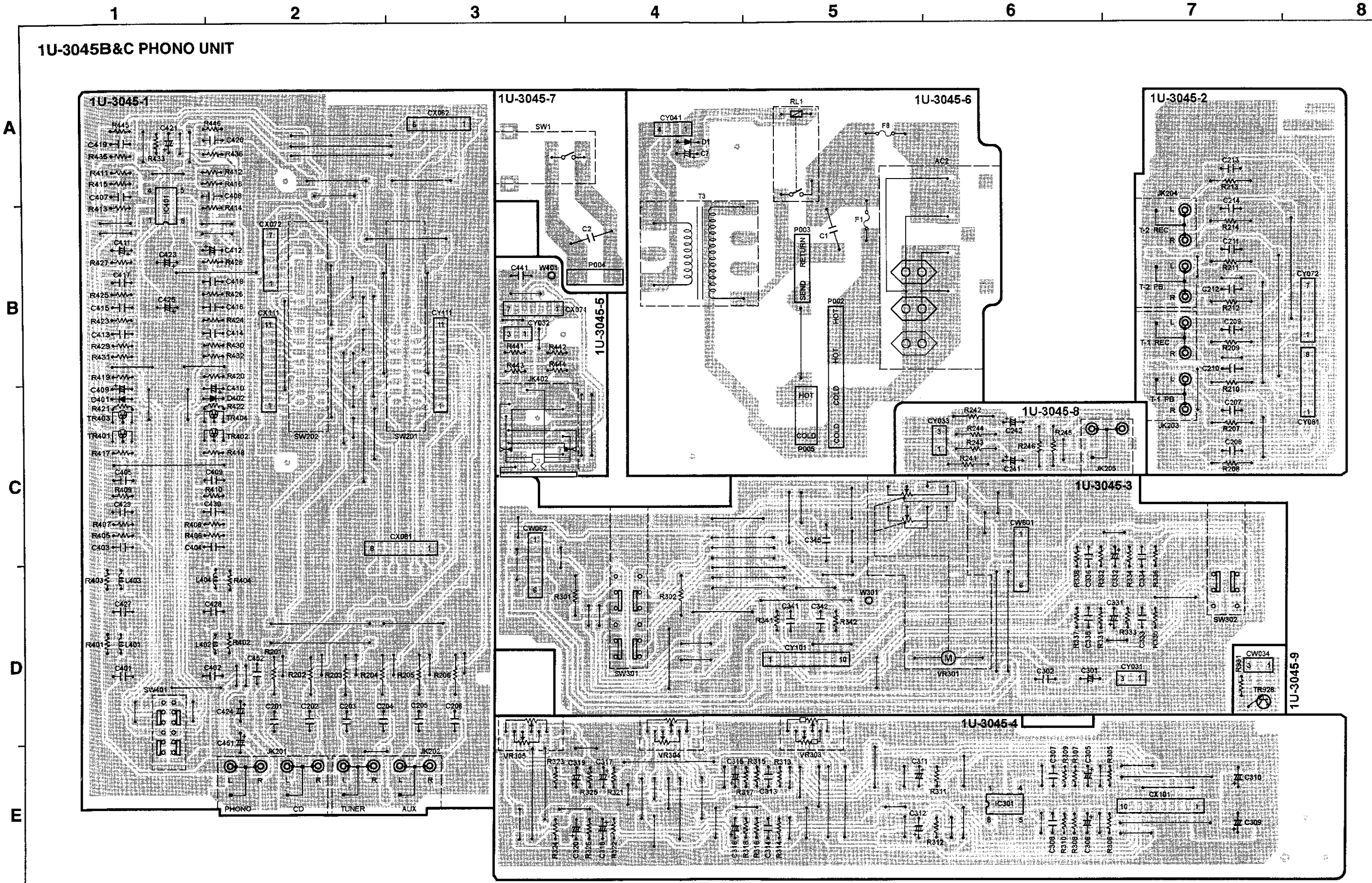
1 2 3 4 5 6 7 8

1U-3044B MAIN UNIT

A
B
C
D
E




1U-3045B&C PHONO UNIT



NOTE FOR PARTS LIST

- Part indicated with the mark "⊙" are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "I" (i) to avoid mis-supplying.
- Ordering part without stating its part number can not be supplied.
- Part indicated with the mark "★" is not illustrated in the exploded view.
- Not including Carbon Film ±5%, 1/4W Type in the P.W.Board parts list. (Refer to the Schematic Diagram for those parts.)

WARNING:

Parts marked with this symbol  have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

● Resistors

Ex.: **RN** **14K** **2E** **182** **G** **FR**
 Type Shape and performance Power Resistance Allowable error Others

RD : Carbon	2B : 1/8W	F : ±1%	P : Pulse-resistant type
RC : Composition	2E : 1/4W	G : ±2%	NL : Low noise type
RS : Metal oxide film	2H : 1/2W	J : ±5%	NB : Non-burning type
RW : Winding	3A : 1W	K : ±10%	FR : Fuse-resistor
RN : Metal film	3D : 2W	M : ±20%	F : Lead wire forming
RK : Metal mixture	3F : 3W		
	3H : 5W		

* Resistance

$1 \overset{8}{\text{R}} 2 \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$
 Indicates number of zeros after effective number.
 2-digit effective number.

• Units: ohm

$1 \overset{R}{\text{R}} 2 \Rightarrow 1.2 \text{ ohm}$
 1-digit effective number.
 2-digit effective number, decimal point indicated by R.

• Units: ohm

● Capacitors

Ex.: **CE** **04W** **1H** **2R2** **M** **BP**
 Type Shape and performance Dielectric strength Capacity Allowable error Others

CE : Aluminum foil electrolytic	0J : 6.3V	F : ±1%	HS : High stability type
CA : Aluminum solid electrolytic	1A : 10V	G : ±2%	BP : Non-polar type
CS : Tantalum electrolytic	1C : 16V	J : ±5%	HR : Ripple-resistant type
CQ : Film	1E : 25V	K : ±10%	DL : For charge and discharge
CK : Ceramic	1V : 35V	M : ±20%	HF : For assuring high frequency
CC : Ceramic	1H : 50V	Z : +80%	U : UL part
CP : Oil	2A : 100V	-20%	C : CSA part
CM : Mica	2B : 125V	P : +100%	W : UL-CSA type
CF : Metallized	2C : 160V	-0%	F : Lead wire forming
CH : Metallized	2D : 200V	C : ±0.25pF	
	2E : 250V	D : ±0.5pF	
	2H : 500V	= : Others	
	2J : 630V		

* Capacity (electrolyte only)

$2 \overset{2}{\text{R}} 2 \Rightarrow 2200 \mu\text{F}$
 Indicates number of zeros after effective number.
 2-digit effective number.

• Units: μF.

$2 \overset{R}{\text{R}} 2 \Rightarrow 2.2 \mu\text{F}$
 1-digit effective number.
 2-digit effective number, decimal point indicated by R.

• Units: μF.

* Capacity (except electrolyte)

$2 \overset{2}{\text{R}} 2 \Rightarrow 2200 \text{ pF} = 0.0022 \mu\text{F}$
 (More than 2) — Indicates number of zeros after effective number.
 2-digit effective number.

• Units: μF.

$2 \overset{2}{\text{R}} 1 \Rightarrow 220 \text{ pF}$
 (0 or 1) — Indicates number of zeros after effective number.
 2-digit effective number.

• Units: pF.

• When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

PARTS LIST OF P.W.BOARD

1U-3044B MAIN UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP				RESISTORS GROUP			
IC901	499 0290 007	Remocon sensor GP1U271X		ZD902	276 0634 905	Zener diode MTZJ3.3A	3.3V
IC902	263 0809 006	IC NJM7805FA(S)		ZD911	276 0635 904	Zener diode MTZJ7.5C	
IC903	262 2168 001	IC HD404222		ZD913	276 0481 909	Zener diode HZS18-1TD	
IC904	263 0476 002	IC LB1639		LD901	393 9563 903	LED SML16751WN	
TR101	274 0158 003	Transistor 2SD1763A(D)		SC901	279 0038 908	Thyristor SF0R3G42	
TR102	272 0115 008	Transistor 2SB1186A(D)		RESISTORS GROUP			
TR103,104	275 0042 905	FET 2SK373(Y)		R101,102	241 2422 944	Carbon film 1 kohm 1/4W	RD14B2E102J(PSNB)
TR501~504	275 0055 015	FET 2SK184C (GR)/(BL)		R103,104	241 2387 908	Carbon film 1 ohm 1/4W(NB)	RD14B2E010JNBS
TR505~508	273 0235 923	Transistor 2SC1841(E/F)		R501,502	241 2429 963	Carbon film 1 Mohm 1/4W	RD14B2E105J(PSNB)
TR509~512	271 0202 002	Transistor 2SA1360 (O/Y)		R503,504	245 2044 900	Metal film 100 ohm 1/4W	RN14K2E101G
TR513,514	273 0333 003	Transistor 2SC3423(O/Y)		R505~508	241 2424 900	Carbon film 4.7 kohm 1/4W	RD14B2E472J(PSNB)
TR515,516	273 0198 002	Transistor 2SC1815(Y)		R509,510	241 2421 929	Carbon film 330 ohm 1/4W	RD14B2E331J(PSNB)
TR517,518	274 0158 003	Transistor 2SD1763A(D)		R511,512	241 2424 968	Carbon film 8.2 kohm 1/4W	RD14B2E822J(PSNB)
TR519,520	272 0115 008	Transistor 2SB1186A(D)		R513,514	245 2048 906	Metal film 150 ohm 1/4W	RN14K2E151G
TR525,526	273 0235 923	Transistor 2SC1841(E/F)		R515,516	241 2429 963	Carbon film 1 Mohm 1/4W	RD14B2E105J(PSNB)
TR901	273 0303 910	Transistor 2SC1740S(S)		R519,520	241 2426 966	Carbon film 56 kohm 1/4W	RD14B2E563J(PSNB)
TR902	269 0020 906	Transistor DTC114ES(10K-10K)		R523~526	241 2315 983	Carbon film 330 ohm 1/4W	RD14B2E331GFRS
TR903	273 0317 906	Transistor 2SC2458(BL)		R527~530	241 2377 947	Carbon film 100 ohm 1/4W(NB)	RD14B2E101JNBS
TR904,905	269 0020 906	Transistor DTC114ES(10K-10K)		R531,532	241 2380 918	Carbon film 1.3 kohm 1/4W(NB)	RD14B2E132JNBS
TR906	273 0317 906	Transistor 2SC2458(BL)		R533,534	241 2377 921	Carbon film 82 ohm 1/4W(NB)	RD14B2E820JNBS
TR907	271 0191 906	Transistor 2SA1048(GR)		R535,536	244 2068 022	Metal oxide 12 kohm 1W	RS14B3A123JNBS (RSFSV)
TR918,919	273 0317 906	Transistor 2SC2458(BL)		R537,538	241 2371 930	Carbon film 160 ohm 1/4W	RD14B2E161GFRS
TR920	269 0107 900	Transistor RN1241(A/B)		R539,540	241 2424 926	Carbon film 5.6 kohm 1/4W	RD14B2E562J(PSNB)
TR921~924	273 0317 906	Transistor 2SC2458(BL)		R541,542	241 2422 944	Carbon film 1 kohm 1/4W	RD14B2E102J(PSNB)
TR925	271 0191 906	Transistor 2SA1048(GR)		R543,544	241 2371 930	Carbon film 160 ohm 1/4W	RD14B2E161GFRS
TR926	273 0317 906	Transistor 2SC2458(BL)		R547,548	241 2429 963	Carbon film 1 Mohm 1/4W	RD14B2E105J(PSNB)
TR927	271 0131 924	Transistor 2SA988(E/F)		R559,560	241 2425 967	Carbon film 22 kohm 1/4W	RD14B2E223J(PSNB)
TR929,930	273 0317 906	Transistor 2SC2458(BL)		R563,564	241 2428 906	Carbon film 220 kohm 1/4W	RD14B2E224J(PSNB)
D101	276 0681 000	Diode FMG-22S		R565,566	241 2426 908	Carbon film 33 kohm 1/4W	RD14B2E333J(PSNB)
D102	276 0682 009	Diode FMG-22R		R573,574	244 2058 045	Metal oxide 4.7 ohm 1W	RS14B3A4R7JNBS (RSFSV)
D103,104	276 0553 905	Diode 1SR35-200A		R579,580	244 2058 074	Metal oxide 22 ohm 1W	RS14B3A220JNBS (RSFSV)
D501,502	276 0616 907	Diode 1SS252		R581,582	244 2058 045	Metal oxide 4.7 ohm 1W	RS14B3A4R7JNBS (RSFSV)
D507~512	276 0616 907	Diode 1SS252		R583,584	241 2423 969	Carbon film 3.3 kohm 1/4W	RD14B2E332J (PSNB)
D902,903	276 0616 907	Diode 1SS252		R585,586	244 2050 933	Metal oxide 180 ohm 1W	RS14B3A181 JNBS(S)
D905	276 0616 907	Diode 1SS252		R587,588	244 2052 960	Metal oxide 220 ohm 1W	RS14B3A221 JNBS(S)
D906~911	276 0553 905	Diode 1SR35-200A		R589~592	244 2051 961	Metal oxide 100 ohm 1W	RS14B3A101JNBS(S)
D914~917	276 0616 907	Diode 1SS252		R595,596	244 2050 933	Metal oxide 180 ohm 1W	RS14B3A181JNBS(S)
D921~924	276 0616 907	Diode 1SS252		R597,598	244 2052 960	Metal oxide 220 ohm 1W	RS14B3A221JNBS(S)
ZD101,102	276 0645 907	Zener diode MTZJ18A	18V	R599	241 2376 964	Carbon film 47 ohm 1/4W(NB)	RD14B2E470JNBS
ZD501,502	276 0473 904	Zener diode HZS12A-1	12V				
ZD503,504	276 0458 903	Zener diode HZS5A-1	5V				
ZD901	276 0635 904	Zener diode MTZJ7.5C					

Ref. No.	Part No.	Part Name	Remarks
R600-602	241 2376 964	Carbon film 47 ohm 1/4W(NB)	RD14B2E470JNBS
R603,604	243 2061 000	Winding 0.1 ohm 3W	RW99=3FOR1K
R611,612	241 2426 966	Carbon film 56 kohm 1/4W	RD14B2E563J (PSNB)
R933,934	244 2064 974	Metal oxide 33 ohm 1W	RS14B3A330JNBS(S)
R954,955	244 2043 953	Metal oxide 470 ohm 1W	RS14B3A471JNBS(S)
R995-997	241 2429 963	Carbon film 1 Mohm 1/4W	RD14B2E105J(PSNB)
R999	241 2429 963	Carbon film 1 Mohm 1/4W	RD14B2E105J(PSNB)
VR501,502	211 6075 024	Semi fixed resistor 4.7 kohm	V06PB472 (CERMET)

CAPACITORS GROUP

C101	254 4356 755	Electrolytic 220µF/50V	CE04W1H221MC (ARS)
C102,103	254 4356 797	Electrolytic 10µF/50V	CE04W1H100MC (ARS)
C104	254 4356 755	Electrolytic 220µF/50V	CE04W1H221MC (ARS)
C107	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C108,109	254 6212 004	Electrolytic 8200µF/71V	CE68W==822MC(DL)
C110	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C111	254 4263 916	Electrolytic 0.22µF/100V	CE04W2AR22M
C501,502	255 4235 918	Polypropylene film 100 pF/100V	CQ93P2A101J(NH)
C503,504	255 4235 918	Polypropylene film 100 pF/100V	CQ93P2A101J(NH)
C505,506	255 4232 982	Polypropylene film 2200 pF/100V	CQ93P2A222J(NH)
C507,508	254 4356 739	Electrolytic 47µF/50V	CE04W1H470MC (ARS)
C509,510	255 4237 929	Polypropylene film 56 pF/100V	CQ93P2A560J(NH)
C511,512	255 4235 918	Polypropylene film 100 pF/100V	CQ93P2A101J(NH)
C513-516	254 4373 000	Electrolytic 100µF/100V	CE04W2A101M (ARS)
C517,518	255 4235 918	Polypropylene film 100 pF/100V	CQ93P2A101J(NH)
C519,520	255 4242 901	Polypropylene film 15 pF/100V	CQ93P2A150J(NH)
C521,522	255 4235 918	Polypropylene film 100 pF/100V	CQ93P2A101J(NH)
C525,526	254 4356 755	Electrolytic 220µF/50V	CE04W1H221MC (ARS)
C527,528	255 4232 937	Polypropylene film 1000 pF/100V	CQ93P2A102J(NH)
C529,530	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C531,532	255 4235 057	Polypropylene film 0.1µF/100V	CQ93P2A104J(NH)
C533,534	255 4232 937	Polypropylene film 1000 pF/100V	CQ93P2A102J(NH)
C535,536	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C561,562	255 4232 937	Polypropylene film 1000 pF/100V	CQ93P2A102J(NH)
C571,572	254 4461 718	Electrolytic 4.7µF/50V	CE04W1H4R7MC (ARS)
C903	256 1034 979	Metalized 0.12µF/50V	CF93A1H124J
C904	254 4356 797	Electrolytic 10µF/50V	CE04W1H100MC (ARS)
C905	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C906	254 4305 984	Electrolytic 2.2µF/50V	CE04W1H2R2M (SRE)

Ref. No.	Part No.	Part Name	Remarks
C907	255 1265 936	Mylar film 0.01µF/50V	CQ93M1H103J(B)
C908	253 9039 906	Ceramic 0.1µF/25V	CK45=1E104Z(DD-3)
C909	254 4375 707	Electrolytic 1000µF/25V	CE04W1E102MC(ASF)
C910	254 4305 926	Electrolytic 0.22µF/50V	CE04W1HR22M (SRE)
C911	254 4305 942	Electrolytic 0.47µF/50V	CE04W1HR47M (SRE)
C912	254 4299 906	Electrolytic 10µF/16V	CE04W1C100M (SRE)
C913	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C921,922	254 4368 934	Electrolytic 100µF/25V	CE04W1E101M (ASF)
C923	254 4480 906	Electrolytic 330µF/6.3V	CE04W0J331M(ASF)
C924	254 4368 934	Electrolytic 100µF/25V	CE04W1E101M (ASF)
C925	254 4313 989	Electrolytic 33µF/50V	CE04W1H330M (ASF)
C926	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C927,928	254 4313 934	Electrolytic 47µF/50V	CE04W1H470M (ASF)
C929,930	254 4313 918	Electrolytic 10µF/50V	CE04W1H100M (ASF)
C933	255 4235 934	Polypropylene film 0.01µF/100V	CQ93P2A103J(NH)
C941	254 4313 934	Electrolytic 47µF/50V	CE04W1H470M (ASF)

OTHER PARTS GROUP

Ref. No.	Part No.	Part Name	Remarks	Q'ty
CF901	399 0191 903	Ceramic 4.00 MHz	CST4.00MGW-TF01	1
CX031	205 0355 033	3P KR connector base (L)		1
CX032,033	205 0343 032	3P connector base (KR-PH)		2
CX034	205 0233 032	3 P EH connector base		1
CX041	205 0343 045	4P connector base(KR-PH)		1
CX061	205 0233 061	6P EH connector base		1
CY071	205 0343 074	7P connector base(KR-PH)		1
P101	205 0087 042	4P wrapping terminal		1
RL901	214 0129 001	Relay (DH2TU)		1
RL902	214 0127 003	Relay (RY-12W)		1
TP501,502	205 0190 036	3P NH connector base		2
W501-504	205 0864 003	M3 screw terminal		4
W505,506	203 0615 094	1P SIN connector cord		2
W901	203 0501 027	1P SIN con. Ass'y		1
	415 0309 042	P.V.C. tuve (L=05)		4
	417 0476 007	Radiator		2
	417 0476 036	Radiator		2
	473 7002 021	Screw 3 8 CBTS(S)-B		4

1U-3045B&C PHONO UNIT ASS'Y

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
IC301	263 0609 002	IC NJM2068DDC	
IC401	263 0565 007	IC BA15218	
TR401~404	275 0038 045	FET 2SK369 (BL)/(GR)	
TR928	274 0158 003	Transistor 2SD1763A(D)	
D001	276 0616 907	Diode 1SS252	
D401,402	276 0616 907	Diode 1SS252	
RESISTORS GROUP			
R241,242	241 2425 909	Carbon film 12 kohm 1/4W	RD14B2E123J (PSNB)
R243,244	241 2421 961	Carbon film 470 ohm 1/4W	RD14B2E471J (PSNB)
R245,246	241 2427 923	Carbon film 100 kohm 1/4W	RD14B2E104J (PSNB)
R301,302	241 2423 972	Carbon film 3.6 kohm 1/4W	RD14B2E362J (PSNB)
R441~444	244 2050 933	Metal oxide 180 ohm 1W	RS14B3A181JNBS(S)
R990~994	241 2427 923	Carbon film 100 kohm 1/4W	RD14B2E104J(PSNB)
VR301	211 0902 009	Variable resistor 30 kohm	V1620V25FB303R
VR303	211 0798 103	Variable resistor 100 kohm	V14V20FW104K
VR304	211 0834 012	Variable resistor 10 kohm	V14V20FA103K
VR305	211 0834 009	Variable resistor 30 kohm	V14V20FA303K
CAPACITORS GROUP			
C001,002	253 8003 713	Ceramic 4700pF/400V(AC)	CK45E2GAC472MC
C007	254 4313 918	Electrolytic 10μF/50V	CE04W1H100M(ASF)
C201~214	255 4237 929	Polypropylene film 56pF/100V	CQ93P2A560J(NH) Europe & Asia Models
C241,242	254 4261 918	Electrolytic 47μF/50V	CE04W1H470M
C301	254 3053 907	Electrolytic 10μF/16V	CE04D1C100MBP
C302	255 1265 936	Mylar film 0.01μF/50V	CQ93M1H103J(B)
C305,306	254 4260 977	Electrolytic 4.7μF/50V	CE04W1H4R7M
C307,308	255 4235 918	Polypropylene film 100pF/100V	CQ93P2A101J(NH)
C309,310	254 4313 963	Electrolytic 1μF/50V	CE04W1H010M(ASF)
C311,312	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C313,314	255 1265 994	Mylar film 0.033μF/50V	CQ93M1H333J(B)
C315,316	254 4260 919	Electrolytic 0.22μF/50V	CE04W1HR22M



Ref. No.	Part No.	Part Name	Remarks	Q'ty
C317,318	254 4260 906	Electrolytic 0.1μF/50V	CE04W1H0R1M	
C319,320	254 4260 935	Electrolytic 0.47μF/50V	CE04W1HR47M	
C331,332	254 4260 922	Electrolytic 0.33μF/50V	CE04W1HR33M	
C333,334	255 1265 994	Mylar film 0.033μF/50V	CQ93M1H333J(B)	
C335,336	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J	
C341,342	255 1264 966	Mylar film 3300pF/50V	CQ93M1H332J(B)	
C345	256 1045 706	Metalized 1μF/63V	CF93B1J105K(SA)	
C401,402	255 4237 922	Polypropylene film 56pF/100V	CQ93P2A50J(NH)	
C403,404	255 4237 961	Polypropylene film 150pF/100V	CQ93P2A151J(NH)	
C405,406	255 4235 918	Polypropylene film 100pF/100V	CQ93P2A101J(NH)	
C407,408	255 1264 966	Mylar film 3300pF/50V	CQ93M1H332J(B)	
C409,410	254 4381 911	Electrolytic 100μF/10V	CE04W1A101M (ASF)	
C411,412	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M	
C413,414	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J	
C415,416	255 1264 911	Mylar film 1200pF/50V	CQ93M1H122J(B)	
C417,418	255 1265 965	Mylar film 0.018μF/50V	CQ93M1H183J(B)	
C419,420	255 1264 908	Mylar film 1000 πΦ/50V	CQ93M1H102J(B)	
C421	254 4381 911	Electrolytic 100μF/10V	CE04W1A101M (ASF)	
C423	254 4313 934	Electrolytic 47μF/50V	CE04W1H470M (ASF)	
C424	254 4461 718	Electrolytic 4.7μF/50V	CE04W1H4R7MC (ARS)	
C425	254 4313 934	Electrolytic 47μF/50V	CE04W1H470M (ASF)	
C429,430	255 1264 908	Mylar film 1000pF/50V	CQ93M1H102J(B)	
C441	255 4235 934	Polypropylene film 0.01μF/100V	CQ93P2A103J(NH)	
OTHER PARTS GROUP				
CW034	203 4720 011	3P EH-SCN connector cord		1
CW061	204 0532 002	6P EH-SCN cord		1
CW062	204 0532 015	6P EH-SCN cord		1
CX062	205 0233 061	6P EH connector base		1
CX071,072	205 0343 074	7P connector base(KR-PH)		2
CX081	205 0343 087	8P connector base(KR-PH)		1
CX101	205 0375 000	10P connector base (KR-PH)		1
CX111	205 0375 013	11P connector base (KR-PH)		1
CY031~033	205 0343 032	3P connector base (KR-PH)		3
CY041	205 0343 045	4P connector base(KR-PH)		1
CY072	205 0343 074	7P connector base(KR-PH)		1
CY081	205 0343 087	8P connector base(KR-PH)		1
CY101	205 0480 005	10P KR connector base(L)		1
CY111	205 0375 013	11P connector base (KR-PH)		1
F1	206 1046 014	Fuse 8A	U.S.A,Canada & Taiwan R.O.C Models	1

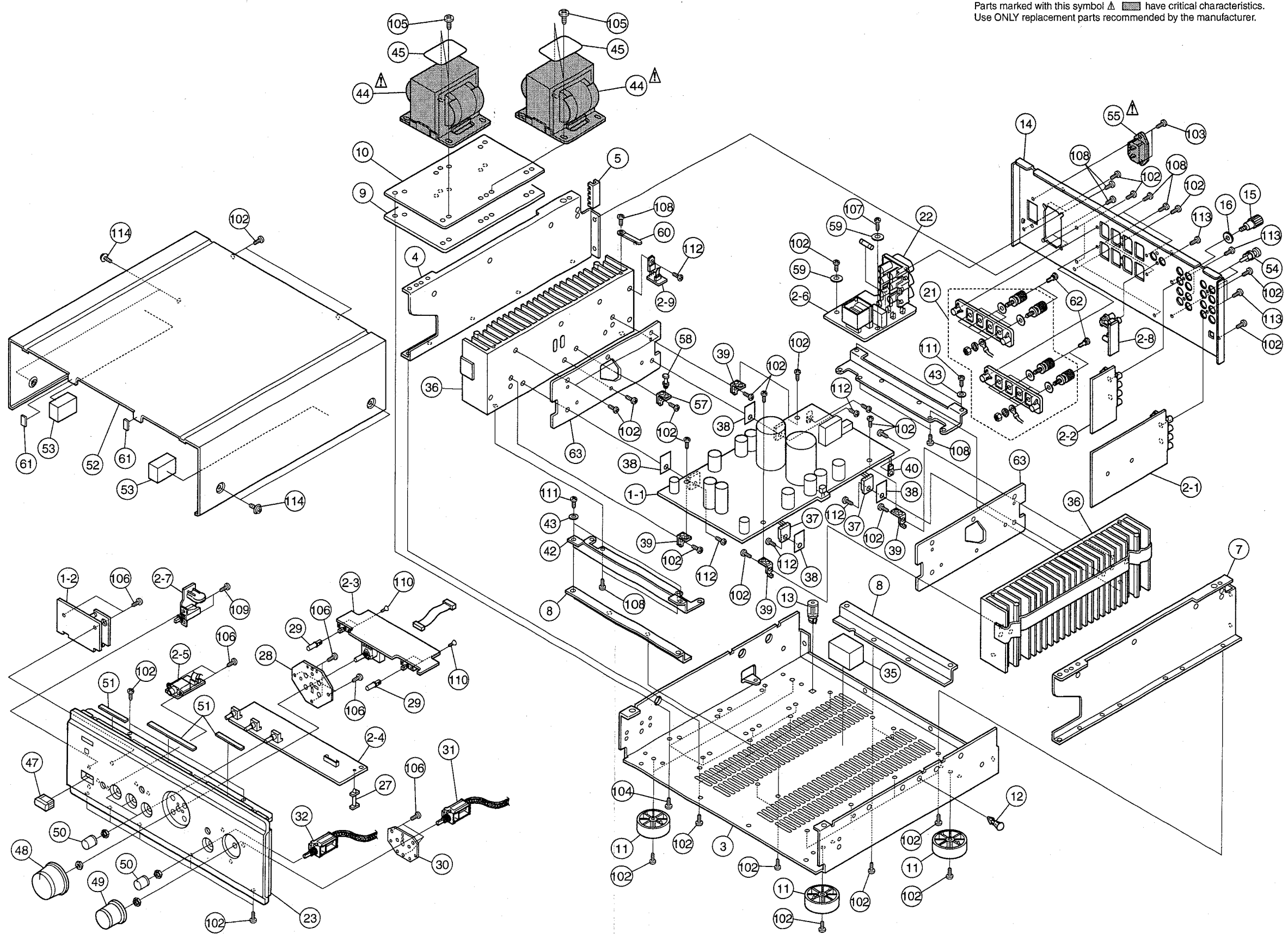
Ref. No.	Part No.	Part Name	Remarks	Q'ty
F1	206 1015 074	Fuse 3.15A	Europe & Asia Models	1
F8	206 1046 014	Fuse 8A	U.S.A,Canada & Taiwan R.O.C Models	1
F8	206 1015 032	Fuse 2.5A	Europe & Asia Models	1
JK201~204	204 8540 012	4P pin jack		4
JK205	204 8559 016	2P pin jack (S-GND)		1
JK402	204 8480 004	Head phone jack (SW)		1
L401~404	235 9003 002	FTZ choke coil	Europe & Asia Models	4
P002	205 0348 040	4P wrapping terminal		1
P003~005	205 0692 000	2P wrapping terminal		3
RL001	214 0142 004	Relay (TV-5)		1
SW001	212 1030 009	Power switch (TV-5)		1
SW201	212 1035 004	Slide SW (2-6) remote	INPUT SEL.	1
SW202	212 4331 006	Slide SW (4-6) remote	REC OUT SEL.	1
SW301	212 1169 006	1P push switch	S.DIRECT	1
SW302	212 1173 005	1P push switch	LOUDNESS	1
SW401	212 4728 004	1P push switch	MM/MC	1
T3	233 6230 005	Power trans. mini E3	U.S.A,Canada & Taiwan R.O.C Models	1
T3	233 6227 005	Power trans. mini E2	Europe & Asia Models	1
W301	203 0659 005	1P contact Ass'y		1
W401	203 0501 030	1P SIN con. Ass'y		1
	202 0040 909	Fuse clip	for F-001,008	4
		Knob	for SW401	1

EXPLODED VIEW

1 2 3 4 5 6 7 8

A
B
C
D
E

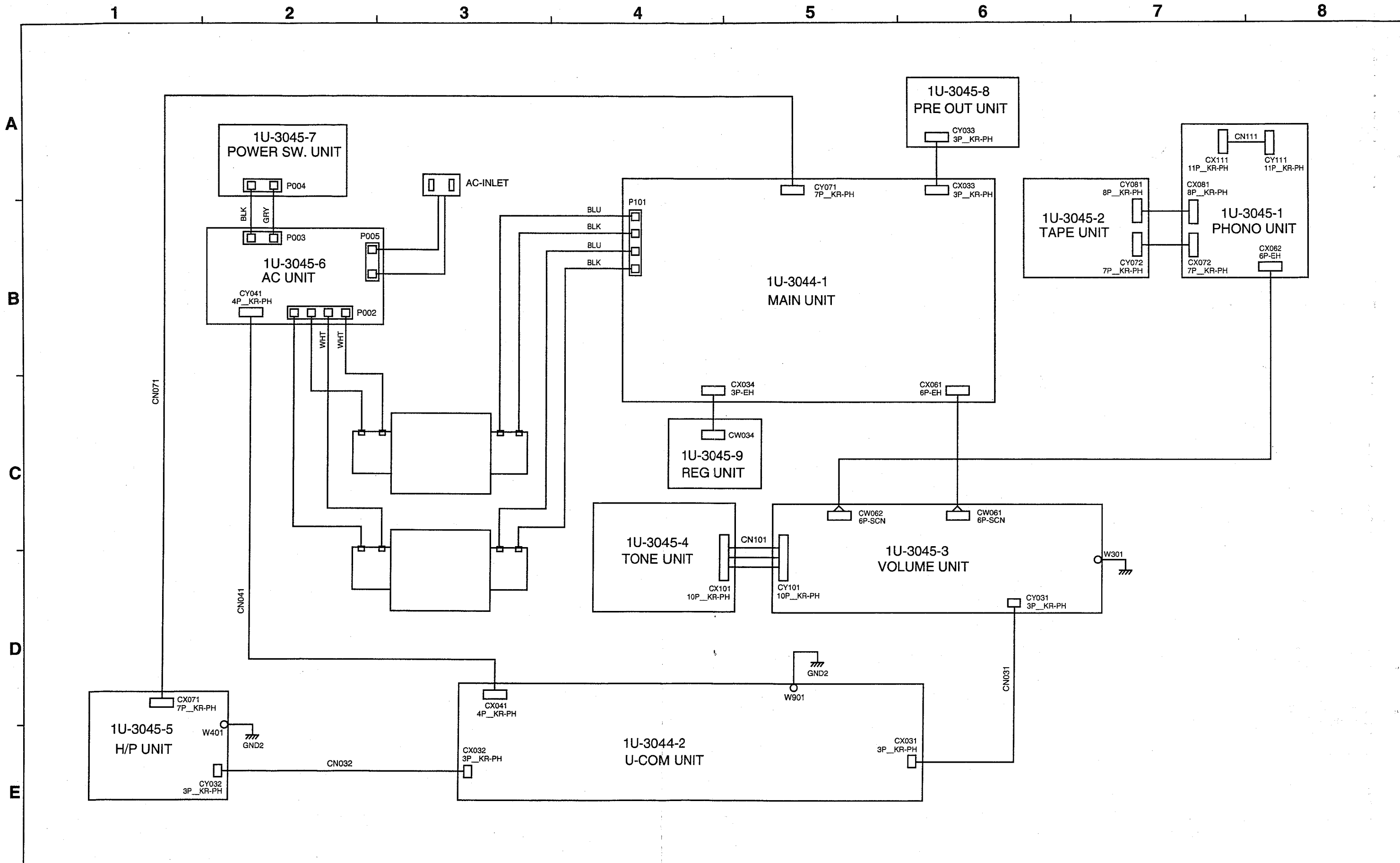
WARNING:
Parts marked with this symbol   have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.



PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	1U-3044B	Main P.W.B. unit ass'y		1	6	445 0048 016	Cord holder (L50)		1	49	112 9125 124	Knob ass'y (F)	Black model	1	208	504 9102 003	Stylen paper		1
1-1	1U-3044B-1	Main P.W.B. unit		1	7	412 4280 207	Center bracket (R)		1	50	112 0796 109	Knob MARU ass'y	Gold model	4	209	505 9102 019	Poly. cover		1
1-2	1U-3044B-2	U-COM P.W.B. unit		1	8	412 4267 204	Support bracket		2	50	112 0796 112	Knob MARU ass'y	Black model	4	210	503 1261 101	Cushion		1
2	1U-3045B	Phono P.W.B. unit ass'y	Europe & Asia Models	1	9	461 0974 001	Trans spacer		1	51	461 0501 005	Rubber sheet	F/PANEL	3	211	517 1335 049	E2 POS label		1
2-1	1U-3045B-1	Phono P.W.B. unit	Europe & Asia Models	1	10	412 4269 008	Trans plate		1	52	102 0584 204	Top cover	Gold model	1	212	513 1389 006	Control card base		1
2-2	1U-3045B-2	Tape P.W.B. unit	Europe & Asia Models	1	11	104 0194 205	Foot ass'y		4	52	102 0584 217	Top cover	Black model	1	213	501 1970 027	Carton case		1
2-3	1U-3045B-3	Volume P.W.B. unit	Europe & Asia Models	1	12	412 2741 036	P.W.B. holder (H=10)		4	53	461 9036 005	Spacer		2	214	513 1349 004	Thermal carbon film		1
2-4	1U-3045B-4	Tone P.W.B. unit	Europe & Asia Models	1	13	412 2762 002	P.W.B. holder		1	54	209 0012 006	Short pin		2	215	513 9111 001	Color label (gold)	Gold model	2
2-5	1U-3045B-5	H/P tape P.W.B. unit	Europe & Asia Models	1	14	105 1251 111	Back panel		1	Δ	55	203 3970 008	AC inlet	Europe & Asia Models	1				
2-6	1U-3045B-6	AC P.W.B. unit	Europe & Asia Models	1	15	205 0071 016	Terminal ass'y		1	Δ	55	203 3962 003	AC inlet	U.S.A,Canada & Taiwan R.O.C Models	1				
2-7	1U-3045B-7	Power SW. P.W.B. unit	Europe & Asia Models	1	16	477 0018 001	Washer (P-87)		1		56	143 0874 119	Remocon window		1				
2-8	1U-3045B-8	Pre out P.W.B. unit	Europe & Asia Models	1	17	203 4871 041	3P KR-KR ribbon 125	CN033	1		57	412 3225 218	P.W.B bracket (A)		2				
2-9	1U-3045B-9	REG. P.W.B. unit	Europe & Asia Models	1	18	204 6350 039	11P KR-KR ribbon 100	CN111	1		58	412 2814 044	Card spacer (L=6)		2				
2	1U-3045C	Phono P.W.B. unit ass'y	U.S.A,Canada & Taiwan R.O.C Models	1	19	204 2546 012	8P KE-KE ribbon 80	CN081	1		59	415 9080 003	Teflon spacer		2				
2-1	1U-3045C-1	Phono P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	20	204 2543 057	7P KR-KR ribbon 150	CN072	1		60	445 0048 003	Cord holder (L76)	L=76	4				
2-2	1U-3045C-2	Tape P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	21	205 1062 008	8P SP terminal		1		61	461 0577 084	Rubber sheet		2				
2-3	1U-3045C-3	Volume P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	22	203 3975 003	AC outlet (E2)	Europe & Asia Models	1		62	477 0096 007	Push rivet		8				
2-4	1U-3045C-4	Tone P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	22	203 3974 004	AC outlet	U.S.A,Canada & Taiwan R.O.C Models	1		63	417 0562 005	CU plate		2				
2-5	1U-3045C-5	H/P tape P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	23	144 2556 302	Front panel ass'y	Gold model	1	SCREWS									
2-6	1U-3045C-6	AC P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	23	144 2556 315	Front panel ass'y	Black model	1	101	470 0009 022	Screw 3 x 6 CPS (SW.W) ZNP		4					
2-7	1U-3045C-7	Power SW. P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	24	203 4871 096	3P KR-KR ribbon 250	CN031	1	102	473 7002 021	Screw 3 x 8 CBTS(S)-B		57					
2-8	1U-3045C-8	Pre out P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	25	203 4871 009	3P KR-KR ribbon 70	CN032	1	103	473 7003 017	Screw 3 x 8 CFTS (S)-B		2					
2-9	1U-3045C-9	REG. P.W.B. unit	U.S.A,Canada & Taiwan R.O.C Models	1	26	204 2552 019	10P KR-KR ribbon 80	CN101	1	104	473 7007 013	Screw 4 x 10 CBTS(S)-B		6					
3	411 1368 200	Main chassis		1	27	412 2814 073	Card spacer (L=18)	TONE UNIT	1	105	473 7026 007	Screw 4 x 6 CBTS(S)-B		8					
4	412 4268 203	Center bracket (L)		1	28	441 1780 203	Plate (M)		1	106	473 7500 015	Screw 3 x 8 CBTS(P)-Z		11					
5	415 0516 039	Flexible bush		1	29	113 1356 062	Push knob (MARU)	Gold model	2	107	473 7501 030	Screw 3 x 20 CBTS (P)-Z		1					
					29	113 1356 004	Push knob (MARU)	Black model	2	108	473 7508 017	Screw 3 x 10 CBTS(P)-B		19					
					30	441 1781 202	Plate (F)		1	109	473 7511 017	Screw 3 x 12 CFTS (P)-Z		2					
					31	212 4805 008	Rotary remote switch	INPUT SEL.	1	110	473 7520 011	Screw 2.6 x 10 CFTS(P)		4					
					32	212 4806 007	Rotary remote switch	REC OUT SEL.	1	111	473 8007 025	Cup screw 3 x 8		4					
					33	203 6386 026	4P KR-KR ribbon 325	CN041	1	112	473 8007 038	Cup screw 3 x 14		5					
					34	204 2544 098	7P KR-KR ribbon 500	CN071	1	113	477 0064 107	Fixing screw		5					
					35					114	477 0263 018	3P. swelling screw	Gold model	4					
					36	417 0549 316	Power radiator		2		477 0263 005	3P. swelling screw	Black model	4					
					37	275 0095 004	FET 2SK851	TR521-524	4	PACKING & ACCESORIES (Not included EXPLODED VIEW)									
					38	415 0234 007	Insulating sheet		4	201	513 1581 008	Serial No. sheet		1					
					39	412 3225 205	P.W.B bracket (A)		4	202	505 8006 019	Envelope		1					
					40	279 0034 041	Posistor	PH901,902	2	Δ	203	206 2147 006	AC cord with connector	Europe & Asia Models	1				
					41	415 0309 013	P.V.C. tube (L=10)	for PH901,902	4	Δ	203	206 2150 103	AC cord with connector	Taiwan R.O.C Models	1				
					42	412 4266 205	Radiator bracket		2		204	511 3224 008	Inst. manual		1				
					43	477 0224 031	SP washer	P UNIT GEN	4		205	515 0671 601	Service station list (EX)		1				
					Δ	44	233 6244 004	Power trans (E2)			206	394 0031 000	Battery UM-3		1				
					45	513 1404 004	Power trans label (A)		2		207	399 0465 008	Remote controller RC-837		1				
					46	445 8004 007	Wire clasper		10										
					47	113 9213 039	P. knob (P) ass'y	Gold model	1										
					47	113 9213 000	P. knob (P) ass'y	Black model	1										
					48	112 9123 126	Knob ass'y (M)	Gold model	1										
					48	112 9123 139	Knob ass'y (M)	Black model	1										
					49	112 9125 111	Knob ass'y (F)	Gold model	1										

WIRING DIAGRAM



SCHEMATIC DIAGRAM

1

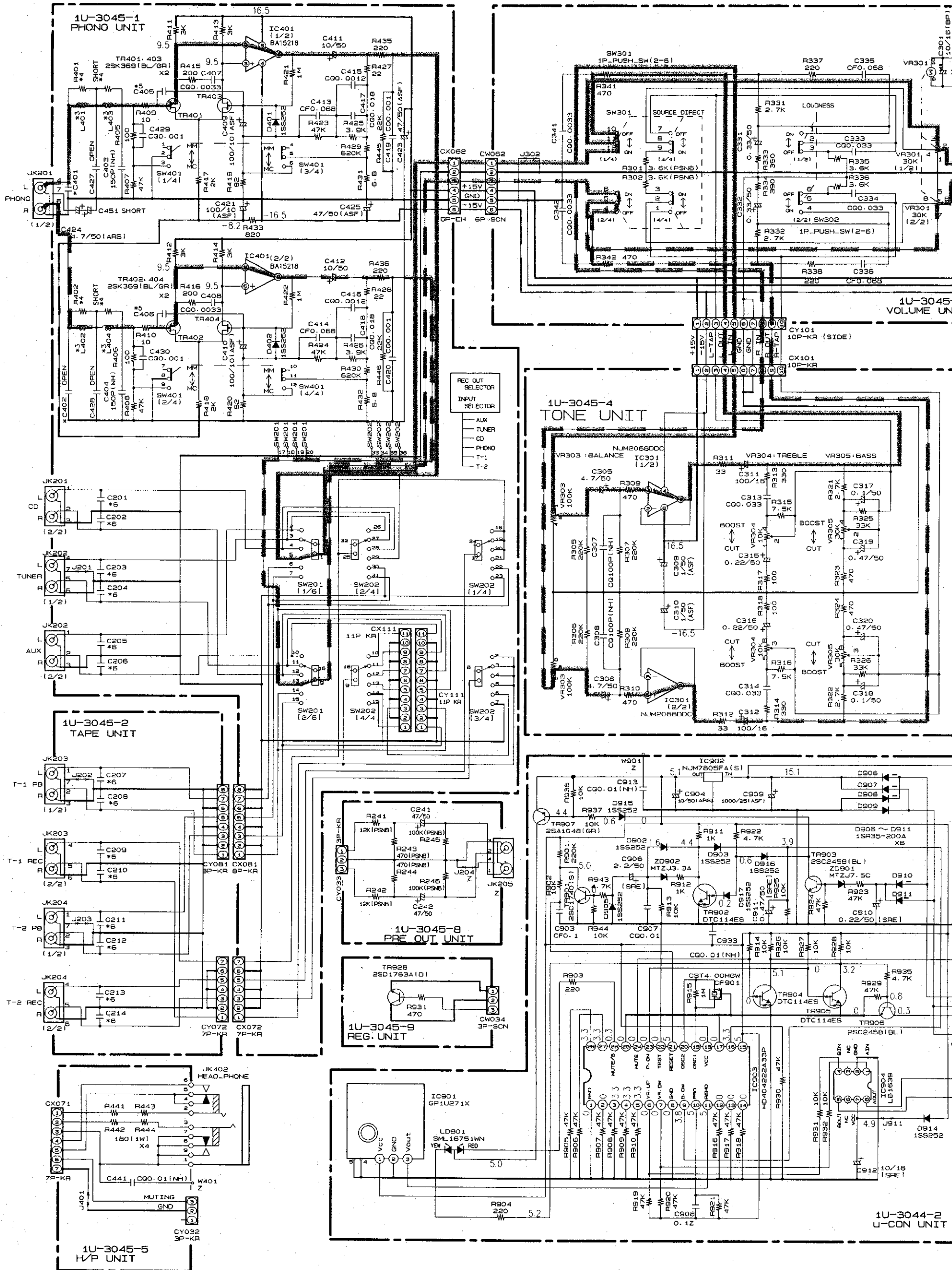
2

3

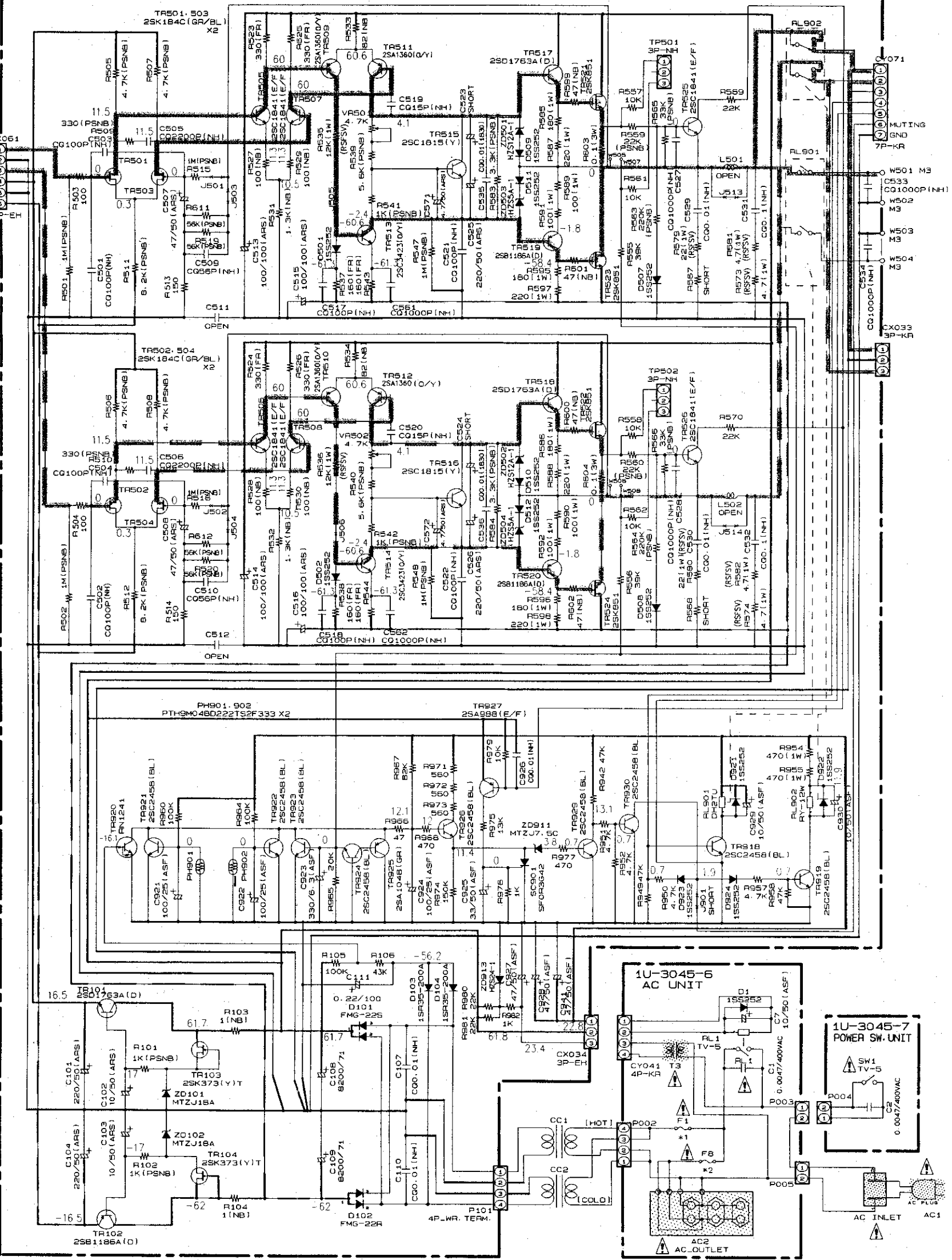
4

5

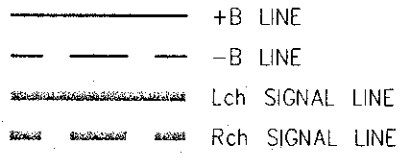
6



1U-3044-1 MAIN UNIT



	*1	*2	*3	*4	*5	*6	*7
	F1	F8	L401 -404	R401 -404	C405 406 C511, 512	C201 -214	C401 402
Europe, Asia Models	T3.15A	T2.5A	150μH	1kΩ	100pF	56pF	56pF
U.S.A., Canada & Taiwan, R.O.C Models	8A/125V	8A/125V	OPEN	SHORT	OPEN	OPEN	OPEN



NOTICE
 ALL RESISTANCE VALUES IN OHM. k=1,000 OHM M=1,000,000 OHM
 ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD
 EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
 CONDITION.
 CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
 NOTICE.

WARNING:
 Parts marked with this symbol have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

CAUTION:
 Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 millamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

WARNING:
 DO NOT return the unit to the customer unit the problem is located and corrected.

A

B

C

D

E

F

G

H