DENON

Hi-Fi Integrated Stereo Amplifier

SERVICE MANUAL

MODEL PMA-S10

INTEGRATED STEREO AMPLIFIER

CONTENTS

NIPPON COLUMBIA CO., LTD.

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 PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

- **POUR LES MODELE CANADIEN UNIQUEMENT**

ATTENTION
POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

安全注意事項

CAUTION

RISK OF ELECTRIC SHOCK

DO NOT OPEN

注意：為減少觸電危險，切勿拆下機殼（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：為減少着火或觸電危險，切勿讓本機受雨淋濕或受潮。

- **NUR FÜR EUROPÄISCHE MODELLE**

Konformitätserklärung

Die DENON Electronic GmbH
Halskestraße 32
40880 Ratingen

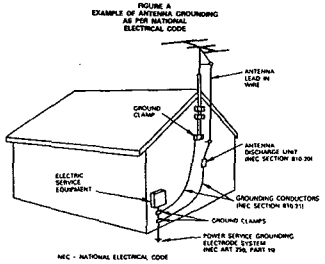
Erklärt als Hersteller/Importeur, daß das in dieser Bedienungsanleitung beschriebene Gerät den Technischen Vorschriften für Ton- und Fernseh-Rundfunkempfänger nach der Amtsblattverfügung 868/1989 (Amtsblatt des Bundesministers für Post und Telekommunikation vom 31. 8. 1989) entspricht.

SAFETY INSTRUCTIONS

1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.
2. Retain Instructions – The safety and operating instructions should be retained for future reference.
3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions – All operating and use instructions should be followed.
5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. 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.

7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. 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.
9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. 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.
11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.



12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines – An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:
    A. The power-supply cord or the plug has been damaged; or
    B. Objects have fallen, or liquid has been spilled into the appliance; or
    C. The appliance has been exposed to rain; or
    D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
    E. The appliance has been dropped, or the enclosure damaged.
20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

NOTE:
1. Always keep the POWER switch on the main unit turned on.
2. Turn the power on and off from the remote control unit.
3. Unplug the power cord when you do not plan to use the unit for a long period of time.

CAUTION:
If only the MUTE/STANDBY LED is lit, 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 Netzkabel vom Netz ab, wenn Sie beabsichtigen, das Gerät über einen längeren Zeitraum hinweg nicht zu benutzen.

VORSICHT:
Wenn nur das Stummschalt-/Bereitschafts-LED (MUTE/STANDBY) leuchtet, so bedeutet dies, daß der Strom vom Fernbedienungsgerät aus ausgeschaltet worden ist. Schalten Sie den Strom vom Fernbedienungsgerät aus ein.

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

ATTENTION:
Si seul le témoin (LED) de sourdine/veille (MUTE/STANDBY) est allumé, cela signifie que l'appareil est mis hors circuit par la télécommande. Allumer l'appareil avec la télécommande.

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.

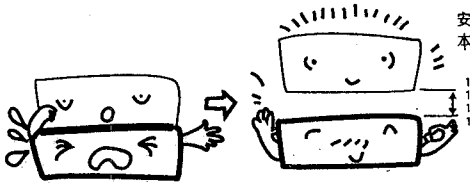
AVVERTIMENTO:
Se sono illuminati solo i LED di attenuazione/attesa (MUTE/STANDBY), questo significa che la corrente e' stata spenta con il telecomando. Riaccendete la corrente usando il telecomando.

PRECAUTIONS FOR INSTALLATION
Leave at least 10 cm of space between this unit and any other component placed above.

SICHERHEITSMASSNAHMEN BEIM EINBAU
Lassen einen Mindestabstand von 10 cm zwischen diesem Gerät und der anderen Komponente, die daraufgestellt wird.

PRECAUTIONS D'INSTALLATION
Prévoir un espace d'au moins 10 cm entre l'unité et tout autre appareil se trouvant au-dessus.

PRECAUZIONI PER L'INSTALLAZIONE
Lasciate uno spazio libero di almeno 10 cm fra quest'unità e qualsiasi altro componente che è collocato sopra la stessa.



NOTA:
1. Mantenga siempre activado el interruptor de alimentación (POWER) en la unidad principal.
2. Encienda y apague el equipo desde la unidad de control remoto.
3. Cuando la unidad vaya a estar fuera de uso por un período prolongado de tiempo, desconecte el cable de alimentación.

PRECAUCION:
Cuando sólo el indicador LED de silenciamiento/modo de espera (MUTE/STANDBY) esté encendido, 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 hoofdtoestel in de ingeschakelde stand staat.
2. Schakel de stroom in en uit m.b.v. de afstandsbediening.
3. Trek het netsnoer uit wanneer u denkt het toestel gedurende een lange periode niet te gebruiken.

WAARSCHUWING:
Indien enkel de dempings-(MUTE)/STANDBY LED brandt, betekent dit dat de spanning met de afstandsbediening is uitgeschakeld. Schakel de spanning in met de afstandsbediening.

OBSERVERA:
1. Låt alltid strömbrytaren (POWER) på huvudenheten vara påslagen.
2. Slå till/från strömmen med hjälp av fjärrkontrollen.
3. Koppla loss nätkabeln om apparaten inte skall användas under lång tid.

VARNING:
Om endast MUTE/STANDBY-lampan lyser betyder det att strömmen har stängts av via fjärrkontrollen. Strömmen måste då slås på via fjärrkontrollen igen.

NOTA:
1. Mantenha o interruptor da Corrente (POWER) na unidade principal sempre ligado.
2. Ligue 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 apenas se iluminar o LED de surdina/espera (MUTE/STANDBY), isto significa que a força se desligou a partir do controle remoto. Ligue a força a partir do controle remoto.

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

注意:
若只有電源指示燈亮，就表示電源已從遙控器關閉。必須從遙控器才能再打開源。

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

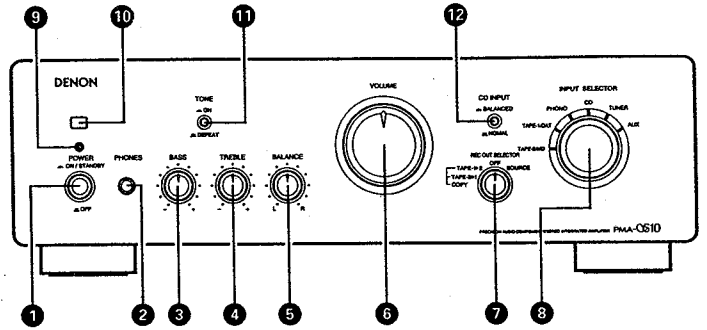
VOORZORGSMAATREGELEN
Bij plaatsing dient u een ruimte van minstens 10 cm open te laten tussen dit toestel en een ander erop geplaatst komponent.

FÖRSIKTIGHETSÅTGÄRDER VID INSTALLATIONEN
Se till att det finns minst 10 cm mellanrum mellan apparaten och en ev. annan apparat som ställs ovanpå.

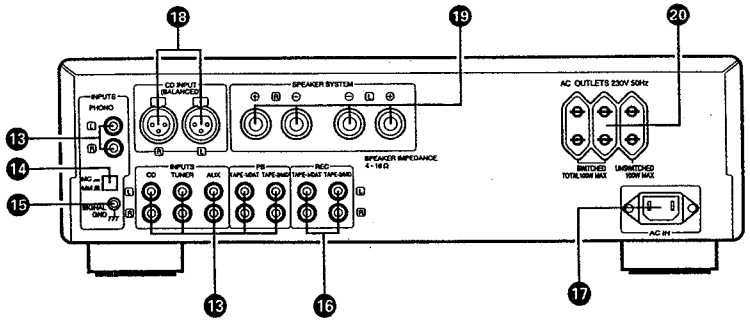
CUIDADOS NA INSTALAÇÃO
Deixe um espaço de pelo menos 10 cm entre esta unidade e qualquer outro componente colocado acima.

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。

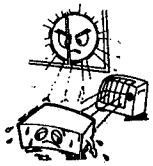
FRONT PANEL **PANEL FRONTAL**
FRONTPLATTE **VOORPANEEL**
PANNEAU AVANT **FRAMSIDA**
PANNELLO ANTERIORE **PAINEL FRONTAL**
正面



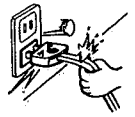
REAR PANEL **PANEL TRASERO**
RÜCKWAND **ACHTERPANEEL**
PANNEAU ARRIERE **BAKSIDA**
PANNELLO POSTERIORE **PAINEL TRAZEIRO**
背板



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

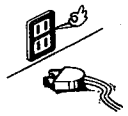


- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
  Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Eviter des températures élevées
  Tenir compte d'une dispersion de chaleur suffisante lors de l'installation sur une étagère.
- Evitate di esporre l'unità a temperature alte.
  Assicuratevi che ci sia un'adeguata dispersione del calore quando installate l'unità in un mobile per componenti audio.
- Evite altas temperaturas
  Permite la suficiente dispersión del calor cuando está instalado en la consola.
- Vermijd hoge temperaturen.
  Zorg voor een degelijk hitteafvoer indien het apparaat op een rek wordt geplaatst.
- Undvik höga temperaturer.
  Se till att det finns möjlighet till god värmeavledning vid montering i ett rack.
- Evite temperaturas altas
  Conceda suficiente dispersão de calor quando o equipamento for instalado numa prateleira.



- Handle the power cord carefully.
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Manneggiate il filo di alimentazione con cura.
  Agite per la spina quando scollegate il cavo dalla presa.
- Maneje el cordón de energía con cuidado.
  Sostenga el enchufe cuando desconecte el cordón de energía.
- Hanteér het netsnoer voorzichtig.
  Houd het snoer bij de stekker vast wanneer deze moet worden aan- of losgekoppeld.
- Hantera nätkabeln varsamt.
  Håll i kabeln när den kopplas från eluttaget.
- Manuseie com cuidado o fio condutor de energia.
  Segure a tomada ao desconectar o fio.

- Keep the set free from moisture, water, and dust.
- Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern.
- Protéger l'appareil contre l'humidité, l'eau et la poussière.
- Tenete l'unità lontana dall'umidità, dall'acqua e dalla polvere.
- Mantenga el equipo libre de humedad, agua y polvo.
- Laat geen vochtigheid, water of stof in het apparaat binnendringen.
- Utsätt inte apparaten för fukt, vatten och damm.
- Mantenha o aparelho livre de qualquer umidade, água ou poeira.



- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Disinnestate il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un lungo periodo di tempo.
- Desconecte el cordón de energía cuando no utilice el equipo por mucho tiempo.
- Neem altijd het netsnoer uit het stopkontakt wanneer het apparaat gedurende een lange periode niet wordt gebruikt.
- Koppla ur nätkabeln om apparaten inte kommer att användas i lång tid.
- Desligue o fio condutor de força quando o aparelho não tiver que ser usado por um longo período.

*(For sets with ventilation holes)

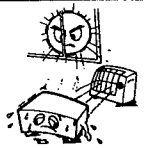
- Do not obstruct the ventilation holes.
- Die Belüftungsöffnungen dürfen nicht verdeckt werden.
- Ne pas obstruer les trous d'aération.
- Non coprite i fori di ventilazione.
- No obstruya los orificios de ventilación.
- De ventilatieopeningen mogen niet worden beblokkeerd.
- Täpp inte till ventilationsöppningarna.
- Não obstrua os orifícios de ventilação.

- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerät kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in dit apparaat vallen.
- Se till att främmande föremål inte tränger in i apparaten.
- Não deixe objetos estranhos no aparelho.

- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevvi che l'unità non venga in contatto con insetticidi, benzolo o solventi.
- No permita el contacto de insecticidas, gasolina y diluyentes con el equipo.
- Laat geen insektenverdelgende middelen, benzine of verfverdunner met dit apparaat in kontakt komen.
- Se till att inte insektsmedel på spraybruk, bensen och thinner kommer i kontakt med apparatens hölje.
- Não permita que inseticidas, benzina e dissolvente entrem em contacto com o aparelho.

- Never disassemble or modify the set in any way.
- Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern.
- Ne jamais démonter ou modifier l'appareil d'une manière ou d'une autre.
- Non smontate mai, nè modificate l'unità in nessun modo.
- Nunca desarme o modifique el equipo de ninguna manera.
- Nooit dit apparaat demonteren of op andere wijze modifiëren.
- Ta inte isär apparaten och försök inte bygga om den.
- Nunca desmonte ou modifique o aparelho de alguma forma.

使用注意事項

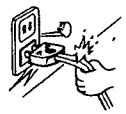


防止高溫

- 勿將本機放置於受烈日曝曬或靠近發熱器材的位置。

機架/機箱安裝注意

- 避免將本機裝於密閉的機架內。
- 裝於機架或機箱時，要配備足夠大的通風孔，以加強散熱。



留意電源線

- 從插座拔出插頭時切勿拉電源線．應該抓住插頭將其拔出。

注意濕汽，水和露

- 勿將本機放置於濕度很高或多塵的位置。花瓶或其它有水的物件均不宜擺在本機上方。

當你外出時

- 長時間不用本機時．例如外出旅行時．須將插頭拔離電源插座。

備有通風孔的機殼

勿堵塞機殼的通風孔

- 堵塞通風孔會損壞本機。
- 各通風孔對本機內部散熱很常重要。必須特別留意．若通風孔有物件阻擋．就會使機內溫度升得很高。

勿讓雜物掉入機內

- 特別要留意勿讓針、髮夾、硬幣等進入本機。

保護機殼

- 避免在本機附近噴灑殺蟲劑、也勿用汽油或拿水或其它溶劑抹機箱．因這類溶液易引起品質或顏色改變。抹塵要用軟布．在用化學處理過的布擦抹時請小心遵守說明書規定。

勿打開機殼

- 打開機殼頂蓋或底板、及伸手入機殼內都是危險的。切勿打開機殼。如果本機表現有不妥當時．宜立刻拔下電源插頭．再與購入本機的商店或鄰近經銷商聯絡。

Please check to make sure the following items are included with the main unit in the carton:
(1) Operating Instructions 1
(2) Remote Control Unit (RC-185) 1
(3) Batteries R6P (AA) 2
(4) AC Power Cord 1

Bitte überprüfen Sie, ob die folgenden Teile vollständig in der Verpackung enthalten sind:
(1) Bedienungsanleitung 1
(2) Fernbedienung (RC-185) 1
(3) Batterien vom Typ R6P (AA) 2
(4) AC-Netzkabel 1

Veuillez contrôler que les articles suivants sont bien joints à l'appareil principal dans le carton:
(1) Mode d'emploi 1
(2) Unité de télécommande (RC-185) 1
(3) Piles R6P (AA) 2
(4) Cordon électrique AC 1

Controllare che le parti seguenti si trovino imballate con l'apparecchio nella scatola di spedizione.
(1) Libretto delle istruzioni 1
(2) Telecomando (RC-185) 1
(3) Batterie R6P (AA) 2
(4) Filo di alimentazione CA 1

Por favor verifique asegurandose de que los siguientes artículos son empacados en la caja pero separados de la unidad principal.
(1) Manual de instrucciones 1
(2) Unidad de control remoto (RC-185) 1
(3) Pilas R6P (AA) 2
(4) Cable de corriente CA 1

Kontroleer of de volgende accessoires bij het hoofdtoestel in de doos zijn verpakt:
(1) Gebruiksaanwijzing 1
(2) Afstandsbediening (RC-185) 1
(3) Batterijen R6P (AA) 2
(4) Netsnoer 1

Kontrollera att följande, förutom huvudapparaten, finns med i kartongen.
(1) Bruksanvisning 1
(2) Fjärrkontroll (RC-185) 1
(3) Batterier R6P (AA) 2
(4) Nätsladd 1

Certifique-se de que as seguintes peças estão incluídas na embalagem fora da unidade principal:
(1) Instruções de operação 1
(2) Unidade de controle remoto (RC-185) 1
(3) Baterias R6P (AA) 2
(4) Cabo de CA 1

下列物品隨主機包裝於同一紙箱內，請查對:
(1) 操作說明書 1
(2) 遙控器RC-185 1
(3) 電池R6(AA) 2
(4) 交流電源線 1

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

❶ POWER
(Power Switch)
When the power switch is turned ON (▬), the Power indicator ⓫ lights.
When the power switch is turned ON, power is supplied to the unit. It takes a few seconds after the power is turned on for the unit to warm up. This is due to the built-in muting circuit that eliminates noise during the on/off operation.

❷ PHONES
(Headphone Jack)
This jack is used to plug in the headphones.
(The SPEAKER output is turned off when the headphones are plugged in.)

❸ 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 below 1000 Hz. The bass is emphasized as the knob is moved off center to the right (↷), and reduced as it is moved to the left (↶).

❹ 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 (↶).

❺ 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 it. 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.

❻ 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.

❼ REC OUT SELECTOR
(Recording output selector)
Use this to select the output source for recording onto a tape deck, etc.
- **SOURCE:**
  Set to this position when recording. The recording output is the source selected with the CD INPUT switch ⓬ and the INPUT SELECTOR ❽.
- **OFF:**
  In this position, the recording output is turned off. For higher quality playback sound, we recommend keeping the selector at this position when not recording.
- **TAPE-1 ▶ 2:**
  Use this position when making copies of tapes using two tape decks. The input signal from the deck connected to the TAPE-1 input jacks is fed to the TAPE-2 REC-OUT jacks, regardless of the position of the CD INPUT switch ⓬ and the INPUT SELECTOR ❽.
- **TAPE-2 ▶ 1:**
  Use this position when making copies of tapes using two tape decks. The input signal from the deck connected to the TAPE-2 input jacks is fed to the TAPE-1 REC-OUT jacks, regardless of the position of the CD INPUT switch ⓬ and the INPUT SELECTOR ❽.

❽ 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 jacks.
  Use the PHONO SELECTOR ⓮ 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 terminal.
- **TUNER:**
  Used to play a component such as an FM/AM tuner or a TV tuner that is connected to the TUNER terminal.
- **AUX:**
  Used to play a component such as a Hi Fi video player, TV tuner or tape deck that is connected to the AUX terminal.
- **TAPE-1:**
  Use this Position when using the tape deck, etc., connected to the TAPE-1 jacks.
- **TAPE-2:**
  Use this Position when using the tape deck, etc., connected to the TAPE-2 jacks.

This switch is of the rotary type. When turned clockwise (↷), the program source switches in the order TAPE-2, TAPE-1, PHONO, CD, TUNER, AUX and TAPE-2 again. When turned counterclockwise (↶), the program source switches in the order AUX, TUNER, CD, PHONO, TAPE-1, TAPE-2, and AUX again.

❾ POWER indicator
The LED indicates the set's operating status.
- **In the muting mode:**
  Flashes orange
- **In the normal operating mode:**
  Lit orange
- **In the standby mode:**
  Red
- **When the power is off:**
  off

❿ 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.

⓫ TONE
(Tone switch)
The tone control function is operated by using the TONE switch.
When the switch is set to DEFEAT (▟), the transmission characteristic curve is flattened, and the positions of the BASS and TREBLE knobs have no effect.
When the switch is pressed ON (▬), tone control is enabled.
(The level of BASS and TREBLE can be varied.)

⓬ CD INPUT
(CD input switch)
Use this switch to select the INPUT SELECTOR ❽ CD input jacks.
- **NORMAL (▟):**
  The CD input jacks are selected.
- **BALANCED (▬):**
  The CD input (BALANCED) jacks are selected.

⓭ INPUTS Terminals
These are input terminals for CD players, turntables, AM/FM tuners, tape decks or other playback components.

⓮ PHONO SELECTOR
(Cartridge Selection Switch)
This switch is set according to the type of player cartridge to be used.
- **MC (▬):**
  Used when an MC (moving-coil) cartridge with an output of less than 0.5 mV is used.
- **MM (▟):**
  Used when an MM (moving-magnet) cartridge with an output of 2 mV or more is used.

⓯ SIGNAL GND (ground) terminal
Connect the turntable's ground wire here.

⓰ TAPE REC (recording output) Terminals
These are recording output terminals for connection to tape decks.

⓱ AC IN
Connect the included AC power cord here.

⓲ CD INPUT (BALANCED) terminals
These are XLR input terminals for connecting a CD player or other playback component equipped with balanced outputs.
The polarities of the pins are as follows:
Pin 1: Ground (GND) Pin 2: Cold (−) Pin 3: Hot (+)

⓳ SPEAKER SYSTEM terminals
Connect the speaker systems here.

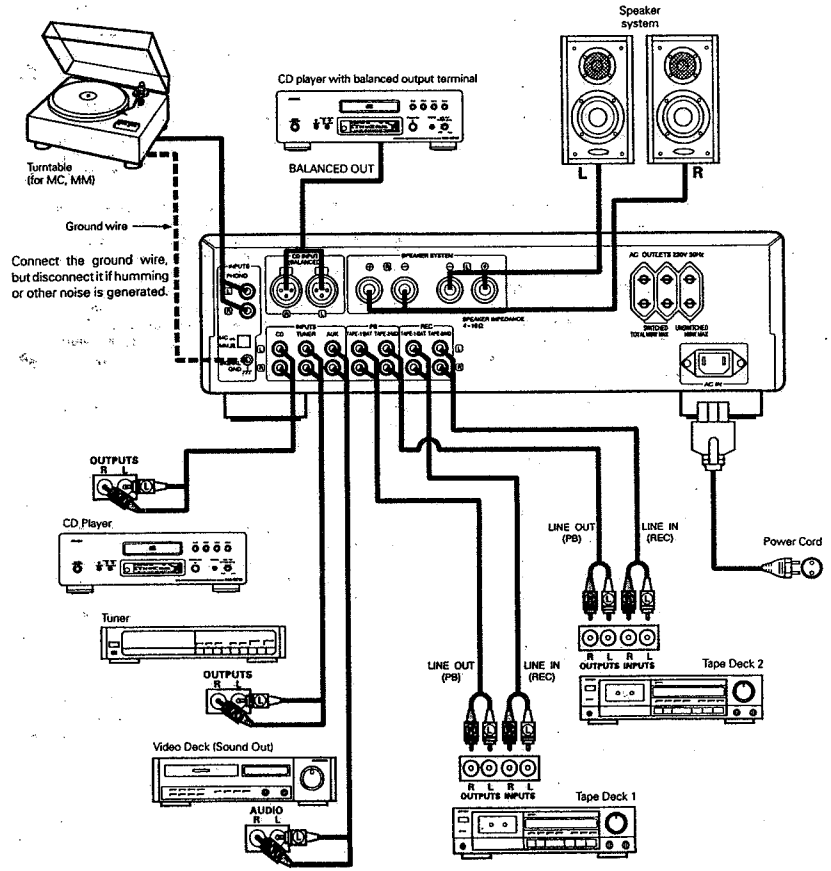
⓴ AC OUTLETS
AC outlets are used for connecting amplifier component units, such as tuner, turntable, tape deck, etc.
- SWITCHED (Total capacity: 100 W):
  These outlets are turned ON/OFF when main power switch is turned on/off.
- UNSWITCHED (Capacity: 100 W):
  This outlet is always ON whether power switch is on or off.

Connecting the Speakers
- Speaker impedance
  - o Use speakers with an impedance of 4 to 16 Ω/ohms.
  - o 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 wire entirely, then turn the terminal clockwise to tighten it.

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 SWITCHED AC outlets to plug in audio components. Do not use them for hair dryers or other appliances.
- Note that placing the pin plug cords next to power cords or near power transformers may result in humming or other noise.
- The PHONO input jacks have an extremely high sensitivity, so avoid turning up the volume when no pin plug cords are connected. Doing so may result in induction humming (booming) from the speakers. When pin plug cords are not connected, insert the included short-circuit pin plug.

CONNECTIONS



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 directivity of stereo separation (right cord to right channel terminal, and left cord to left channel terminal).
- Check the directivity of pin cord connection.

2. SETTING OF EACH KNOB

- Turn the volume control knob ⑥ counterclockwise, to minimum position.
- Set the rotary knob ③, ④, ⑤ to center position.
- Set TONE switch ⑪ to "ON (▲)".

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

PLAYING A RECORD

1. Set the INPUT SELECTOR switch ⑧ to "PHONO".
2. Operate the turntable and play the record.
3. Turn the volume ⑥ and tone controls ③, ④, ⑤ to yield an appropriate volume and sound quality.

PLAYBACK OF CD PLAYER (NORMAL)

1. Set the CD INPUT switch ⑫ to NORMAL (▲).
2. Set the INPUT SELECTOR switch ⑧ to "CD".
3. Operate the CD player.
4. Turn the volume ⑥ and tone controls ③, ④, ⑤ to yield an appropriate volume and sound quality.

PLAYBACK OF CD PLAYER (BALANCED)

1. Set the CD INPUT switch ⑫ to BALANCED (▲).
2. Set the INPUT SELECTOR switch ⑧ to "CD".
3. Operate the CD player.
4. Turn the volume ⑥ and tone controls ③, ④, ⑤ to yield an appropriate volume and sound quality.

RECEPTION OF RADIO PROGRAMS

1. Set the INPUT SELECTOR switch ⑧ to "TUNER".
2. Operate the tuner to receive a radio program.
3. Turn the volume ⑥ and tone controls ③, ④, ⑤ to yield an appropriate volume and sound quality.

CONNECTIONS OF AUDIO EQUIPMENT TO AUX TERMINALS

1. Set the INPUT SELECTOR switch ⑧ to "AUX" Position.
2. Operate the Audio equipment Systems.
3. Turn the volume ⑥ and tone controls ③, ④, ⑤ to yield an appropriate volume and sound quality.

PLAYBACK WITH TAPE DECK

1. Set the INPUT SELECTOR switch ⑧ to "TAPE-1" or "TAPE-2".
2. Operate the Tape Deck.
3. Turn the volume ⑥ and tone controls ③, ④, ⑤ to yield an appropriate volume and sound quality.

COPYING TAPES

(Refer to the tape decks' instructions.)

1. Select the tape deck using the REC OUT SELECTOR ⑨.
   - To record from the deck connected to the TAPE-1 jacks, set to the TAPE-1 ▶ 2 position.
   - To record from the deck connected to the TAPE-2 jacks, set to the TAPE-2 ▶ 1 position.
2. Set the tape deck onto which you want to record to the recording mode.
3. Set the tape deck from which you want copy to the play mode.

RECORDING ONTO A TAPE DECK

(other than for copying tapes)

1. Select the source to be recorded using the INPUT SELECTOR ⑧ and the CD INPUT switch ⑫.
2. Set the REC OUT SELECTOR ⑨ to the SOURCE position.
3. Set the tape deck onto which you want to record to the recording mode.
   (Refer to the tape deck's instructions.)
4. Play the source to be recorded.

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 jacks 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

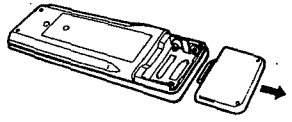
- This amplifier has a full memory back-up system. When the power is turned on, INPUT SELECTOR ⑧ are set to the last mode set before the power was turned off.

REMOTE CONTROL OPERATION

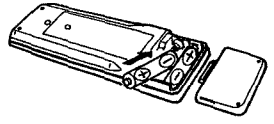
The accessory Remote Control Unit is used to control the amplifier from a convenient distance.

(1) Inserting the Dry Cell Batteries

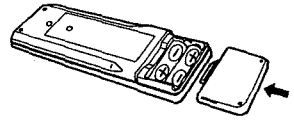
1. Remove the battery cover on the Remote Control Unit.



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



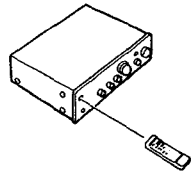
3. Replace the battery cover.



Notes on Battery Usage

- RC–185 uses the size R6P (AA) dry cell batteries.
- The batteries will need to be replaced approximately once a year. This will depend upon how often the Remote Control Unit is used.
- If, in less than a year from the time new batteries were inserted, the Remote Control Unit fails to operate the Amplifier from a near–by position, it is time to replace the batteries.
- Insert the batteries properly, following the polarity diagram inside the battery compartment.
- Batteries are prone to damage and leakage. Therefore:
  - Do not mix new batteries with used ones.
  - Do not mix different types of batteries.
  - Do not jumper opposite poles of the batteries, expose them to heat, break them open, nor expose them to open fire.
- If the batteries have leaked, remove any traces of battery fluid from the battery compartment wiping thoroughly with a dry cloth. Then insert new batteries.

(2) Directions for use



- Operate the Remote Control Unit while pointing it towards the Remote Control Sensor on the Amplifier as shown in the diagram on the *left*.
- The Remote Control Unit can be used at distances up to about 8 meters in a straight line from the amplifier. This distance will decrease if there are obstructions blocking the infra–red light transmission or if the Remote Control Unit is not directed straight at the amplifier.

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.

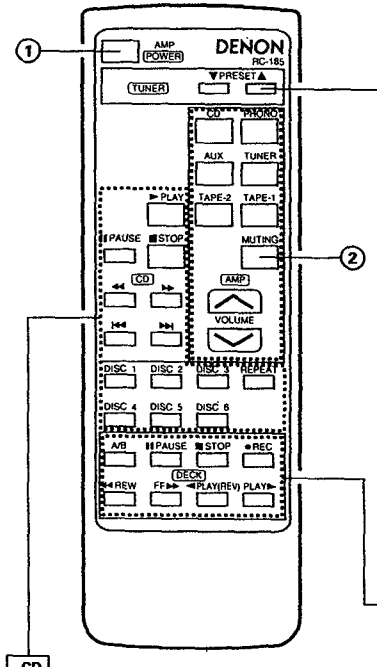
Besides being able to operate the PMA–S10 integrated–amplifier with this Remote Control Unit, you can also operate a DENON cassette deck and CD player from this handy full–system Remote Control Unit.

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–S10 to create a remarkably ergonomic and versatile DENON system with all the quality sound reproduction that the devoted audiophile expects.

Remote Control Unit RC–185 supplied with the PMA–S10



① **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 indicator ❾ is lit.

② **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–S10, and function in the same way as the corresponding buttons on the set.

PRESET ▼▲buttons

Press this button to move up or down among the preset station numbers.

PLAY ▶	PLAY button
◀ PLAY (REV)	PLAY (REV) button
■ STOP	STOP button
◀◀ REW	REWIND button
FF ▶▶	FF button
● REC	Refer to the operating instructions of your DENON tape deck.
⏸ PAUSE	
A/B	A/B DECK SELECT button

▶ PLAY	PLAY button
■ STOP	STOP button
⏮	Reverse Track Search button
⏭	Forward Track Search button
◀◀	Manual Search Reverse button
▶▶	Manual Search Forward button
⏸ PAUSE	PAUSE button

REPEAT	Refer to the operating instructions of your DENON CD player
DISC 1	Select disc 1
DISC 2	Select disc 2
DISC 3	Select disc 3
DISC 4	Select disc 4
DISC 5	Select disc 5
DISC 6	Select disc 6

- The RC–185 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 indicator ❾ lights red 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.

Technical Data (typical value)	
• POWER AMPLIFIER SECTION	
Rated Output Power:	
*1 Both channel driven (8 Ω/ohm Load) 20 Hz to 20 kHz, T.H.D. 0.02%	50 W + 50 W
(4 Ω/ohm Load) DIN, 1 kHz, T.H.D. 0.7%	100 W + 100 W
*2 Continuous 50W per channel min into 8 Ω/ohms from 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion	50 W
Total Harmonic Distortion: (–3 dB at rated output, 8 Ω/ohms) (1 kHz)	0.01%
• PRE AMPLIFIER SECTION	
Rated Output: (Recout Terminal)	150 mV
Input Sensitivity / Input Impedance:	
PHONO:	MM 2.5 mV/47 kΩ/kohm MC 200 μV/100 Ω/ohm
CD, TUNER, AUX TAPE–1, TAPE–2:	150 mV/25 kΩ/kohm
RIAA Deviation: PHONO: Within ±0.5 dB	20 Hz ~ 20 kHz
Maximum Input:	PHONO MM 130 mV/1 kHz MC 10 mV/1 kHz
• OVERALL CHARACTERISTICS	
SN Ratio (IHF A Network):	PHONO: MM: 91 dB (at 5 mV input) MC: 76 dB (at 0.5 mV input)
(input terminals short-circuited)	CD, TUNER, AUX TAPE–1, TAPE–2: 102 dB
Tone Control Adjustable Range:	
BASS	100 Hz ± 8 dB
TREBLE	10 kHz ± 8 dB
• OTHERS	
Power Supply	AC 230 V/50 Hz (For Europe model and Asia models)
AC Outlets	
Switched × 2:	100 W (Total) (For Europe model and Asia models)
Unswitched × 1:	100 W (For Europe model and Asia models)
Power Consumption	190 W (IEC)
Dimensions (W) × (H) × (D)	434(W) × 137(H) × 365(D)mm (17–3/32" × 5–25/64" × 14–3/8")
Net Weight	15.2 kg (33 lbs 9 oz)
REMOTE CONTROL UNIT (RC–185)	
Remote control system: Infrared pulse system	
Power supply: 3V DC, Two size R6P ("AA") dry cell batteries	
External dimensions:	60(W) × 177(H) × 18(D)mm (2–23/64" × 6–31/32" × 45/64")
Weight:	120 g (about 4.2 oz) (including batteries)

Note: *1 For Europe
*2 For Asia

- Specifications and contents are subject to change without notice for purposes of improvement.

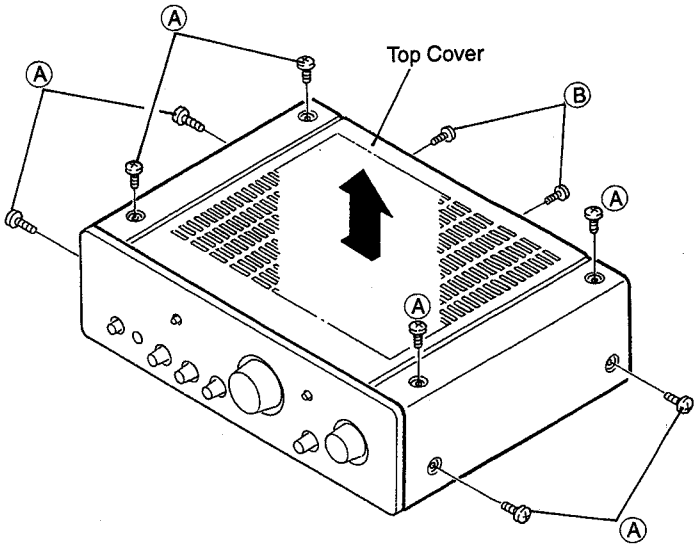
MEMO:

REMOVAL OF EACH SECTION

(For reassembling, do reverse manner as removal.)

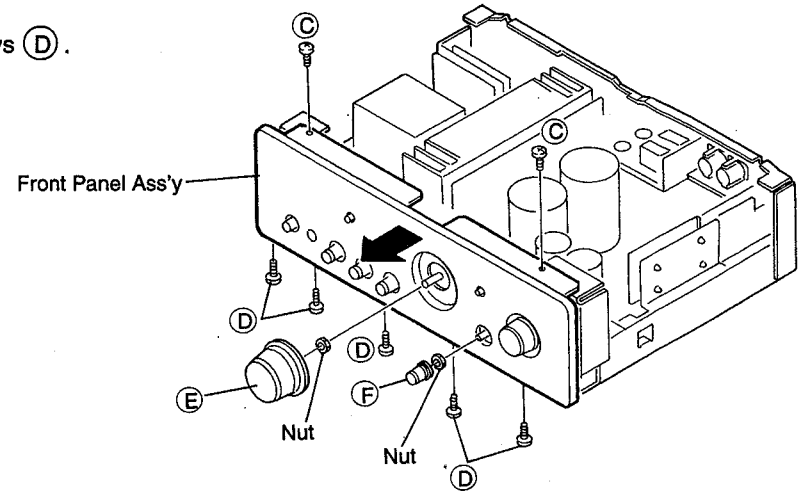
1. Top Cover

(1) Remove 8 screws Ⓐ and 2 screws Ⓑ.
(2) Pull up Top Cover in arrow direction.



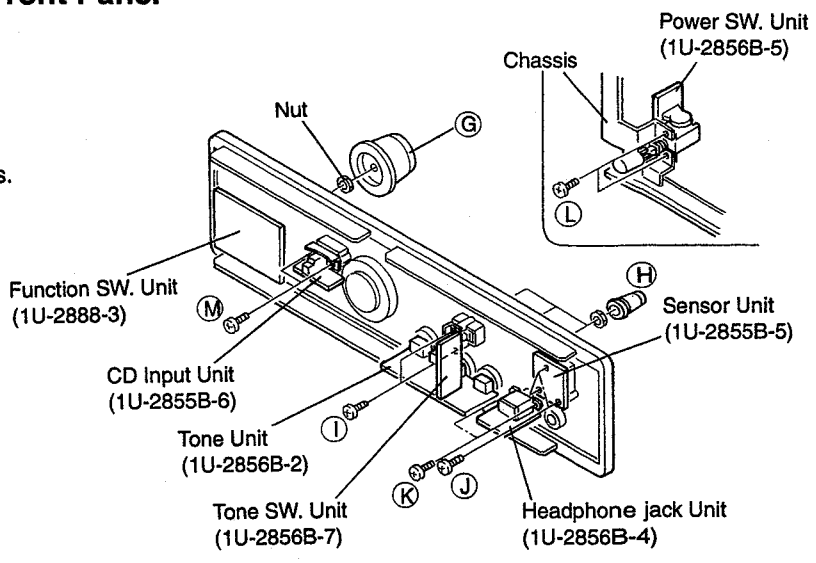
2. Front Panel Ass'y

(1) Remove 2 screws Ⓒ and 5 screws Ⓓ.
(2) Detach control knob Ⓔ and Nut.
(3) Detach control knob Ⓕ and Nut.



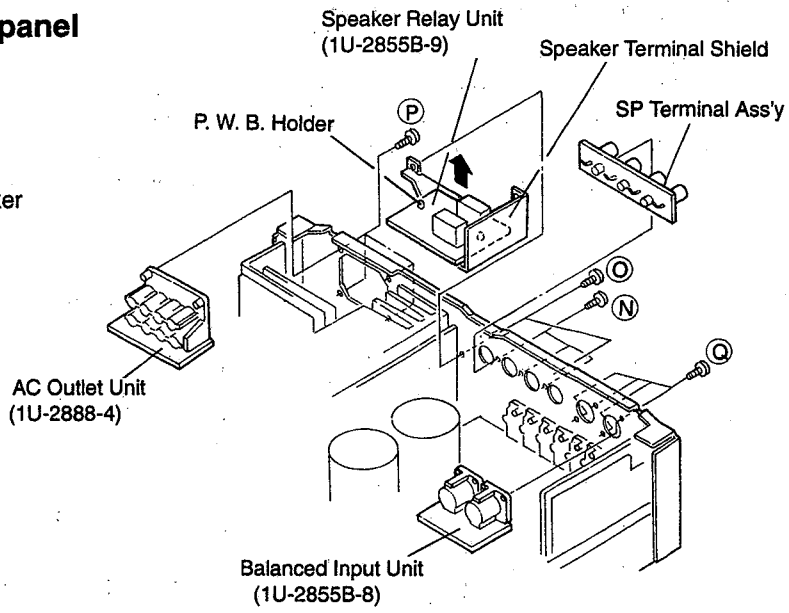
3. Each P. W. Board attached to Front Panel

- **Function switch Unit (1U-2888-3)**
  Detach control knob Ⓖ and Nut.
- **Tone Unit and Tone switch Unit (1U-2856B-2 and 1U-2856B-7)**
  (1) Detach 3 control knobs Ⓗ and 3 Nuts.
  (2) Remove 2 screws Ⓘ.
- **Headphone jack Unit (1U-2856B-4)**
  Remove 2 screws Ⓙ.
- **Sensor Unit (1U-2855B-5)**
  Remove 3 screws Ⓚ.
- **Power switch Unit (1U-2856B-5)**
  Remove 2 screws Ⓛ from chassis.
- **CD Input Unit (1U-2855B-6)**
  Remove 2 screws Ⓜ.



4. Each P. W. Board attached to Rear panel

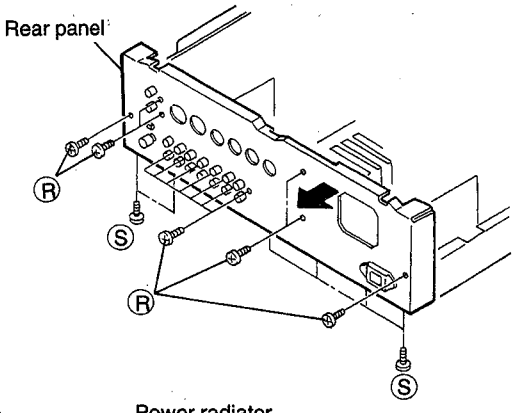
- **Speaker Relay Unit (1U-2855B-9)**
  (1) Remove 3 screws (N) and detach Speaker terminal Ass'y.
  (2) Remove 2 screws (O).
  (3) Undo P. W. B. Holder from 2 places on Speaker terminal shield.
- **AC outlet Unit (1U-2888-4)**
  Remove 4 screws (P).
- **Balanced Input Unit (1U-2855B-8)**
  Remove 4 screws (Q).

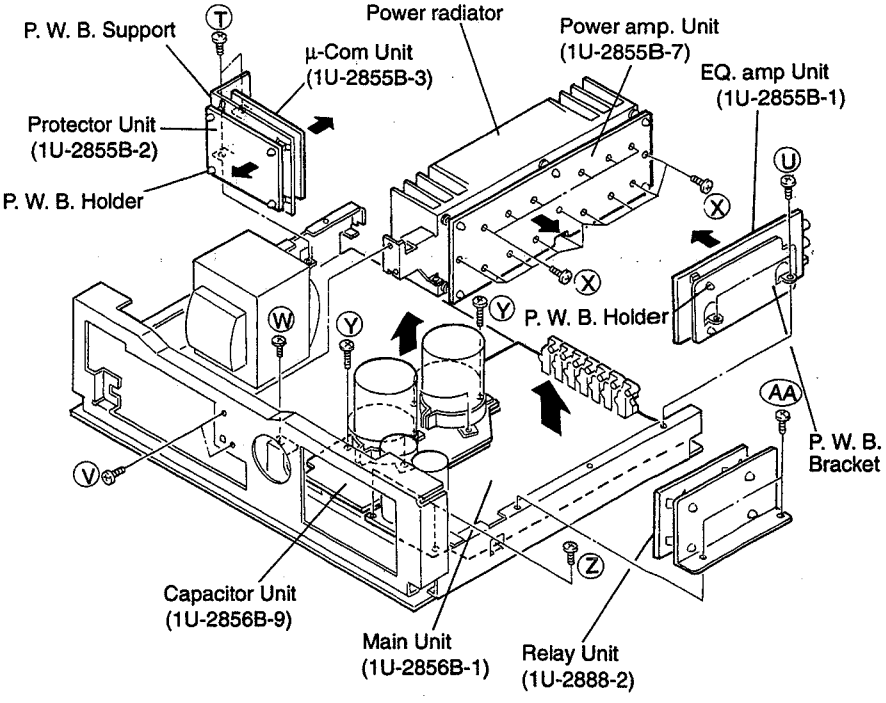


5. Each P. W. Board attached to Chassis

Remove 13 screws (R) and 6 screws (S), then detach Rear Panel.

- **μ-Com Unit and Protector Unit (1U-2855B-3 and 1U-2855B-2)**
  (1) Remove 2 screws (T).
  (2) Undo P. W. B. Holder from 2 Places on P. W. B. support.
- **EQ. Amp. Unit (1U-2855B-1)**
  (1) Remove 2 screws (U).
  (2) Undo P. W. B. Holder from 2 Places on P. W. B. bracket.
- **Power Amp. Unit (1U-2855B-7)**
  (1) Remove 2 screws (V) and screws (W).
  (2) Remove 15 screws (X) fixing Power Radiator.
- **Capacitor Unit (1U-2856B-9)**
  Remove 6 screws (Y).
- **Main Unit (1U-2856B-1)**
  Remove 2 screws (Z).
- **Relay Unit (for Remote power off) (1U-2888-2)**
  Remove 2 screws (AA).





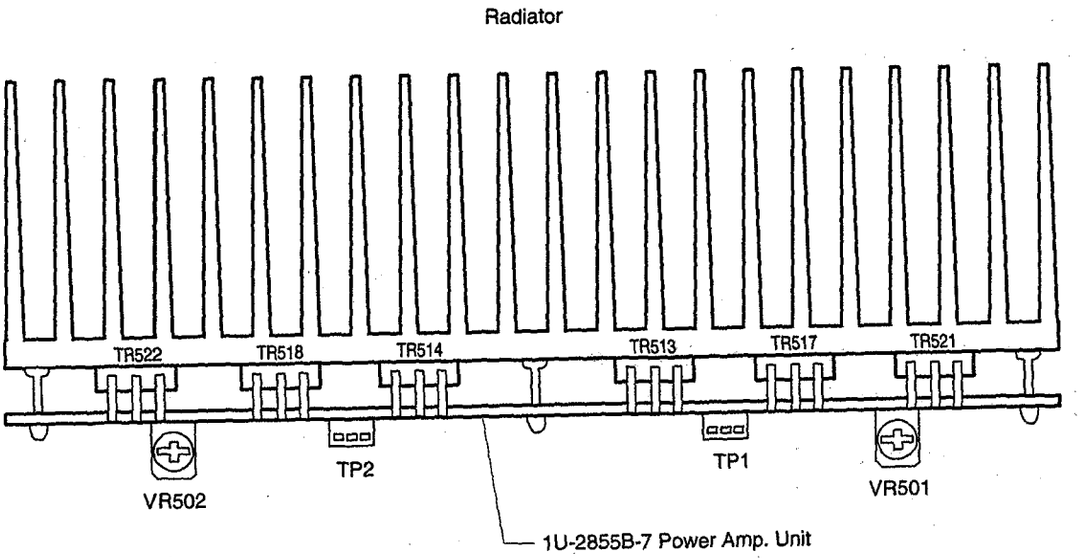
METHOD OF ADJUSTMENTS

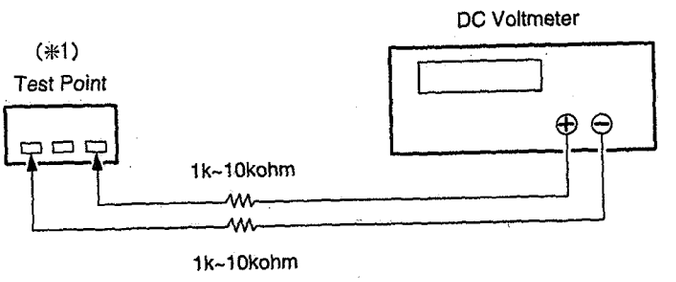
Power Amplification Circuit

Idling Current Adjustment

Turn Semi-Fixed Resistors (VR501, VR502) and Volume fully counterclockwise (↺), then turn the power switch ON.

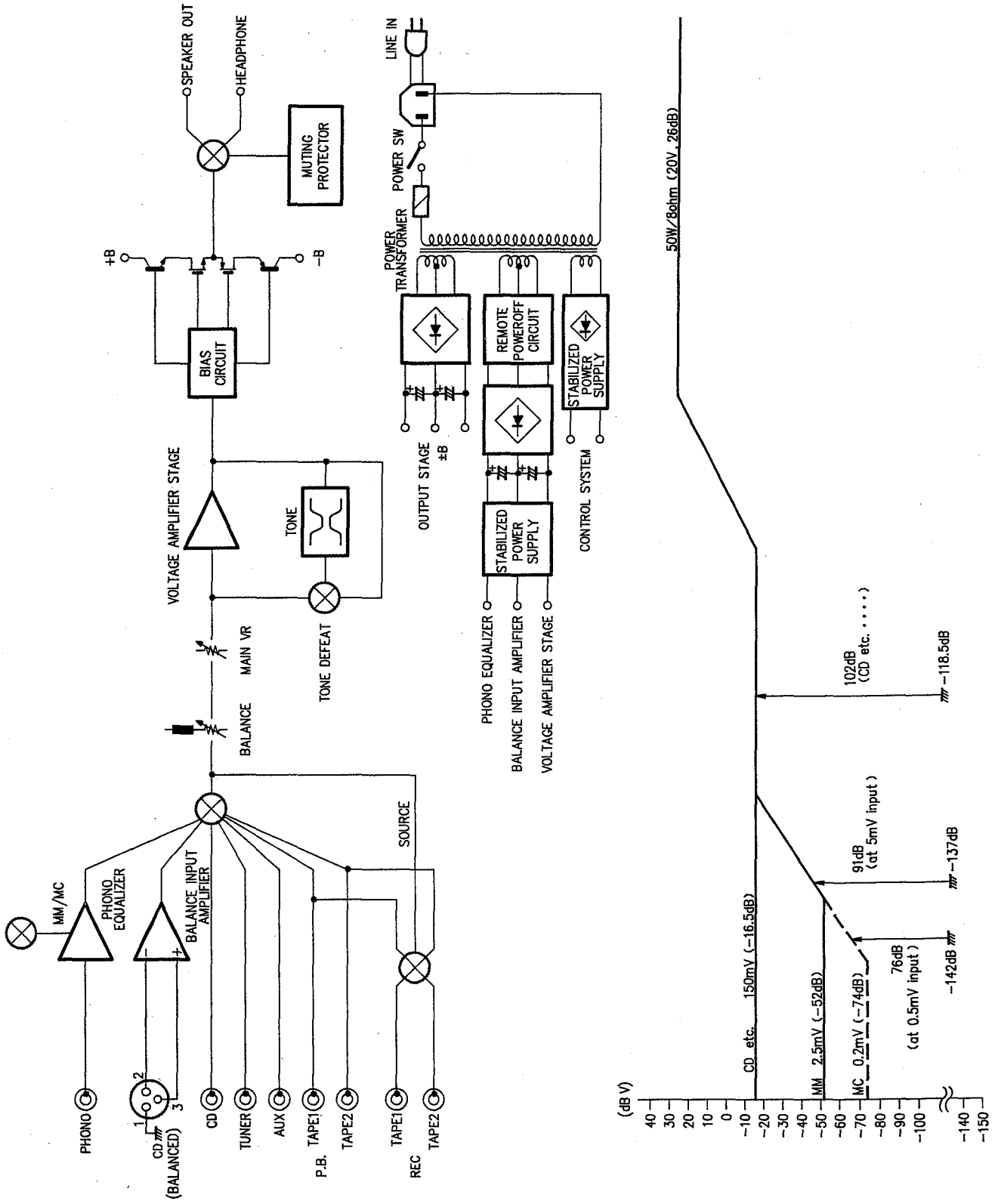
(✳1) Connect DC voltmeter to test point TP1, turn VR501 clockwise (↻) to obtain 10 ± 1mV output reading on DC voltmeter.
After 10 minutes, set DC voltmeter for 20 ± 2mV with same way.
Continue as indicated above to adjust Lch inverting Amp, Rch Non-inverting and inverting Amp. with VR502 at TP2.





Note: Connect resistors (1 k~10 kohm) joined DC voltmeter prob header to test point for preventing oscillation.

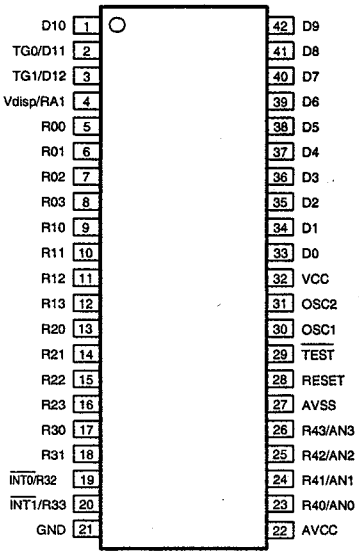
BLOCK AND LEVEL DIAGRAM



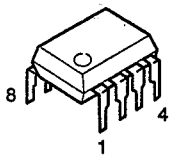
SEMICONDUCTORS

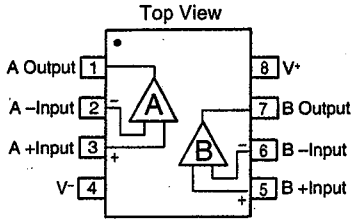
● IC's

HD404304A13P (IC101)

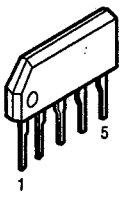


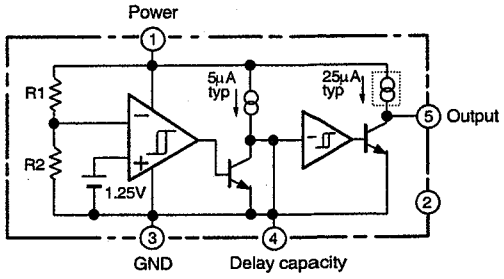
NJM4558DX (IC401, 701)
NJM082DT/BD (IC501, 502)





M51954AL (IC602)

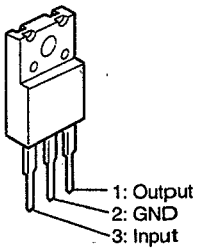




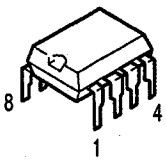
HD404304A13P Terminal Function

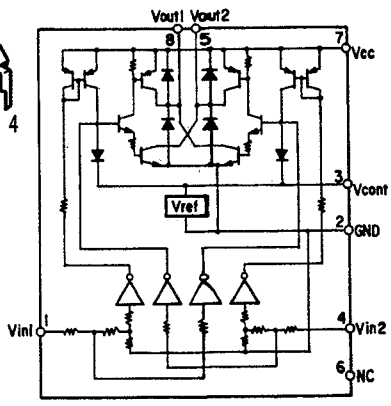
Pin No.	Symbol	I/O	Active	Function	
1	D10	O	H	MUTE/STANDBY LED Indication	
2	TG0/D11	O		Not used	
3	TG1/D12	O	L	Power control (remote power ON/OFF)	
4	Vdisp/RA1	I		Not used	
5	R00	O		Not used	
6	R01	O	L	Muting control (power ON/OFF, function shift, muting)	
7	R02	O		Not used	
8	R03	O		Not used	
9	R10	O	H	Key output	
10	R11	O	H		
11	R12	O		Not used	
12	R13	O		Not used	
13	R20	I		Key Input	
14	R21	I			
15	R22	I			
16	R23	I		Not used	
17	R30	O	H		
18	R31	O	H		
19	$\overline{INT0}$/R32	I		Detection input for power stop	
20	$\overline{INT1}$/R33	I		Decode input for remote control signal	
21	GND			GND	
22	AVCC			AVcc (Vcc)	
23	R40/AN0			Not used	
24	R41/AN1	I		Not used	
25	R42/AN2	I		Not used	
26	R43/AN3	I		Judgement port for prior use model	
27	AVSS			AVss (GND)	
28	RESET			Connect to external M51954AL	
29	$\overline{TEST}$			Vcc	
30	OSC1			Connect to external crystal oscillator (4MHz)	
31	OSC2				
32	VCC			Vcc	
33	D0	O		Not used	
34	D1	O		Not used	
35	D2	O	H	TAPE-2 control	Mutual Reset
36	D3	O	H	TAPE-1 control	
37	D4	O		Not used	
38	D5	O	H	AUX control	Mutual Reset
39	D6	O	H	TUNER control	
40	D7	O		Not used	
41	D8	O	H	CD control	
42	D9	O	H	PHONE control	

NJM7806FA(S) (IC601)



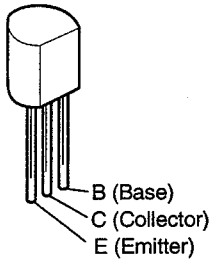
LB1639 (IC103)



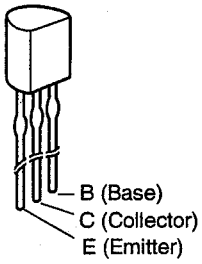


● TRANSISTORS

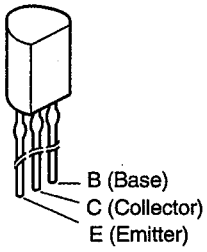
2SA988 (E/F)
2SA1015 (GR)
2SC1841 (E/F)



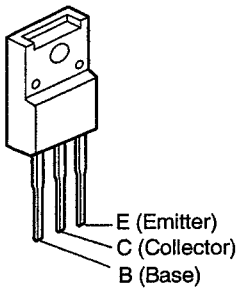
2SA1145 (O)/(Y)
2SC1815 (GR)
2SC2705 (O)/(Y)
2SD1111



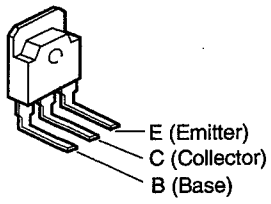
2SC4208A



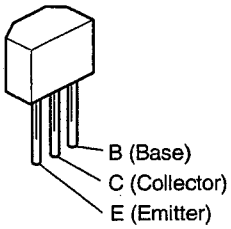
2SA1837-Y
2SC4793-Y



2SA1491LB4 (O/P/Y) (Z)
2SC3855LB4 (O/P/Y) (Z)

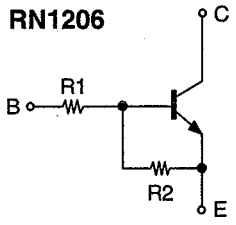


RN1202
RN1205
RN1206
RN2201
RN2204



NPN Type

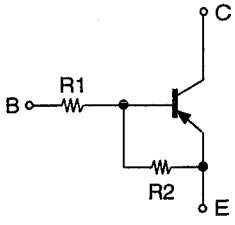
RN1202
RN1205
RN1206



	R1	R2
RN1202	10kohm	10kohm
RN1205	2.2kohm	47kohm
RN1206	4.7kohm	47kohm

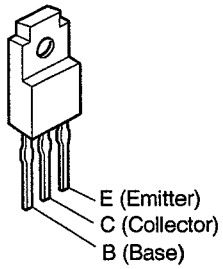
PNP Type

RN2201
RN2204

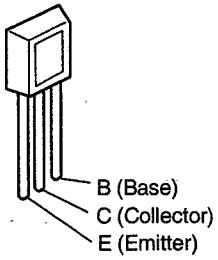


	R1	R2
RN2201	4.7kohm	4.7kohm
RN2204	47kohm	47kohm

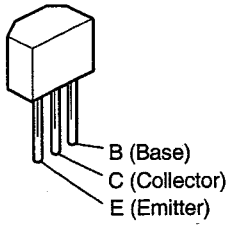
2SB1185 (E/F)
2SB1186A (D)
2SD1762 (E/F)
2SD1763A (D)



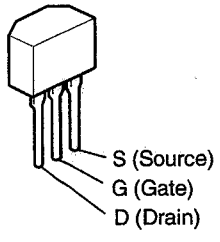
2SB1328 (P)
2SD2004 (P)



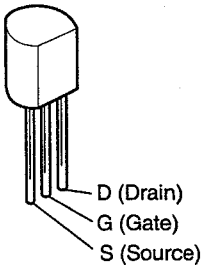
2SA1048 (GR)
2SC2458 (BL)
2SC1740S (S)



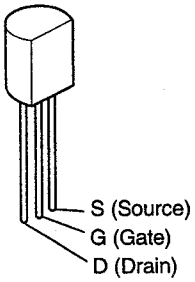
2SK184C (GR)/(BL)



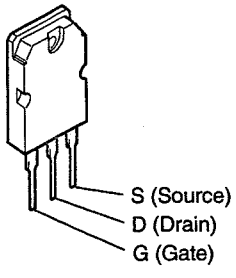
2SK373 (Y)



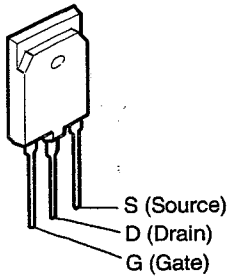
2SK369 (BL)/(GR)-C



2SK1303

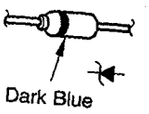


2SJ216

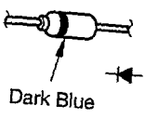


● DIODES (included LED)

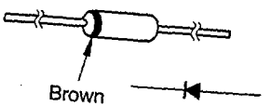
HZS5C-1
HZS6C-1
HZS7C-1
HZS16-1
HZS18-1
HZS20-1
MTZJ2.0A



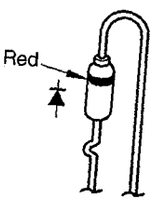
1SS270A



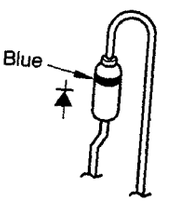
RU-4Z (J8)



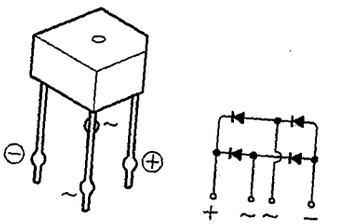
S2K20F



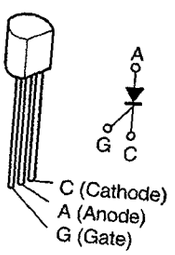
1SR35-200A



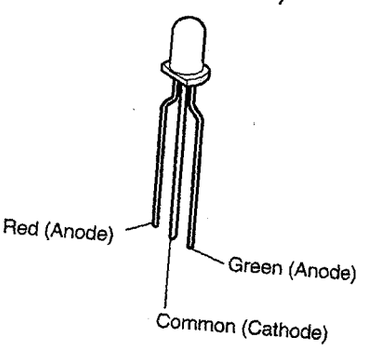
4D4B42 (D805)



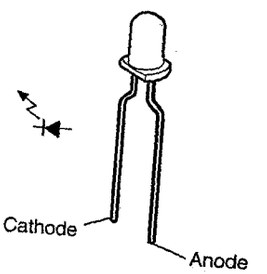
SFOR3G42 (SC601)



SML1216W(LED)
(LD001)

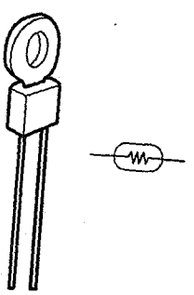


SEL-1210S (RED)
(LED)



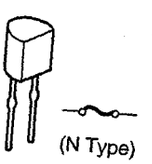
● POSISTOR

PTH9M04BC222TS2F333 (P501)



● IC PROTECTOR

ICP-N15 (IC603)



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 (Type) 14K (Shape and performance) 2E (Power) 182 (Resistance) G (Allowable error) FR (Others)

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

* **Resistance**

1 8 2 ⇒ 1800 ohm = 1.8 kohm
- 2-digit effective number.
- Indicates number of zeros after effective number.

• Units: ohm

1 R 2 ⇒ 1.2 ohm
- 2-digit effective number, decimal point indicated by R.
- 1-digit effective number.

• Units: ohm

● Capacitors

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

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

* **Capacity (electrolyte only)**

2 2 2 ⇒ 2200μF
- 2-digit effective number.
- Indicates number of zeros after effective number.

• Units: μF.

2 R 2 ⇒ 2.2μF
- 2-digit effective number, decimal point indicated by R.
- 1-digit effective number.

• Units: μF.

* **Capacity (except electrolyte)**

2 2 2 ⇒ 2200pF = 0.0022μF
- (More than 2) — Indicates number of zeros after effective number.
- 2-digit effective number.

• Units: μF.

2 2 1 ⇒ 220pF
- (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 dieelectric strength value.

PRINTED WIRING BOARD PARTS LIST

1U-2855B EQ. AMP. UNIT ASS'Y

Ref.No.	Parts No.	Parts Name	Remarks
SEMICONDUCTORS GROUP			
IC101	262 1579 303	IC HD404304A13P	μ-com
IC103	263 0476 002	IC LB1639	
IC401	263 0081 015	IC NJM4558DX	
IC501,502	263 0244 014	IC NJM082DT/BD	
IC601	263 0793 002	IC NJM7806FA(S)	Regulator +6 V
IC602	263 0535 008	IC M51954AL	
IC603	268 0073 905	IC ICP-N15	IC protector
IC701	263 0081 015	IC NJM4558DX	
TR103	269 0030 909	Transistor RN2204	Built in resistor
TR104	269 0067 901	Transistor RN1205	Built in resistor
TR105	269 0024 902	Transistor RN2201	Built in resistor
TR106	269 0025 901	Transistor RN1202	Built in resistor
TR108~113	273 0235 923	Transistor 2SC1841(E/F)	
TR114	269 0164 901	Transistor RN1206	Built in resistor
TR501,502	271 0272 003	Transistor 2SA1837(Y)	
TR503,504	273 0423 007	Transistor 2SC4793(Y)	
TR505,506	271 0102 924	Transistor 2SA1015(GR)	
TR507,508	273 0198 921	Transistor 2SC1815(GR)	
TR509,510	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR511,512	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR525,526	273 0198 921	Transistor 2SC1815(GR)	
TR527,528	273 0380 001	Transistor 2SC4208A	
TR601	269 0025 901	Transistor RN1202	Built in resistor
TR602	273 0235 923	Transistor 2SC1841(E/F)	
TR603	272 0107 906	Transistor 2SB1328(P)	
TR604,605	273 0317 906	Transistor 2SC2458(BL)	
TR606	271 0191 906	Transistor 2SA1048(GR)	
TR607	273 0235 923	Transistor 2SC1841(E/F)	
TR608	271 0131 924	Transistor 2SA988(E/F)	
TR609	274 0151 903	Transistor 2SD2004(P)	
TR610	273 0235 923	Transistor 2SC1841(E/F)	
TR613~616	273 0303 910	Transistor 2SC1740S(S)	
TR617,618	274 0111 901	Transistor 2SD1111	
TR619	273 0303 910	Transistor 2SC1740S(S)	
TR701~704	275 0038 045	FET 2SK369(BL)/(GR)-C	N type FET
D101~104	276 0432 903	Diode 1SS270A	
D509~512	276 0432 903	Diode 1SS270A	
D521~524	276 0553 905	Diode 1SR35-200A	
D531,532	276 0432 903	Diode 1SS270A	
D601~604	276 0553 905	Diode 1SR35-200A	
D605~611	276 0432 903	Diode 1SS270A	
D612,613	276 0553 905	Diode 1SR35-200A	
D701,702	276 0432 903	Diode 1SS270A	
ZD501~504	276 0624 902	Zener diode MTZJ2.0A	2 V
ZD505~508	276 0460 904	Zener diode HZS5C-1	5 V
ZD525,526	276 0463 901	Zener diode HZS6C-1	6 V
ZD601	276 0466 908	Zener diode HZS7C-1	7 V
ZD602	276 0477 900	Zener diode HZS16-1	16 V
ZD603	276 0463 901	Zener diode HZS6C-1	6 V
P501	279 0034 054	Posistor PTH9M04BC222TS2F333	
SC601	279 0038 908	Thyrister SF0R3G42	
LD001	393 9491 004	LED SML1216W	
RESISTORS GROUP			
R401,402	241 2423 930	Carbon film 2.4kohm 1/4W	RD14B2E242J(PSNB)
R403,404	241 2424 900	Carbon film 4.7kohm 1/4W	RD14B2E472J(PSNB)
R405,406	241 2423 943	Carbon film 2.7kohm 1/4W	RD14B2E272J(PSNB)
R407,408	241 2423 998	Carbon film 4.3kohm 1/4W	RD14B2E432J(PSNB)
R409,410	241 2427 923	Carbon film 100kohm 1/4W	RD14B2E104J(PSNB)
R501~504	241 2425 925	Carbon film 15kohm 1/4W	RD14B2E153J(PSNB)
⚠R505~508	241 2313 901	Fusible 100ohm 1/4W	RD14B2E101GFRS
R509,510	241 2420 975	Carbon film 200ohm 1/4W	RD14B2E201J(PSNB)
R511,512	241 2413 076	Carbon film 10kohm 1/2W	RD05A2H102J(RMA)
R513,514	241 2420 904	Carbon film 100ohm 1/4W	RD14B2E101J(PSNB)
R515~522	241 2423 927	Carbon film 2.2kohm 1/4W	RD14B2E222J(PSNB)
⚠R523,524	241 2380 921	Carbon film 1.5kohm 1/4W(NB)	RD14B2E152JNBS
⚠R525~528	241 2378 920	Carbon film 220ohm 1/4W(NB)	RD14B2E221JNBS
⚠R529~536	241 2375 907	Carbon film 10ohm 1/4W(NB)	RD14B2E100JNBS
R537,538	241 2423 985	Carbon film 3.9kohm 1/4W	RD14B2E392J(PSNB)
R539,540	241 2422 944	Carbon film 1kohm 1/4W	RD14B2E102J(PSNB)
⚠R541~548	243 2061 013	Cement resist. 0.22ohm 3W	RW99-3FR22K
⚠R549~552	241 2375 907	Carbon film 10ohm 1/4W(NB)	RD14B2E100JNBS
R553,554	241 2423 985	Carbon film 3.9kohm 1/4W	RD14B2E392J(PSNB)
R555,556	241 2425 983	Carbon film 27kohm 1/4W	RD14B2E273J(PSNB)
R557,558	241 2426 937	Carbon film 43kohm 1/4W	RD14B2E433J(PSNB)
R561,562	241 2426 908	Carbon film 33kohm 1/4W	RD14B2E333J(PSNB)
R563,564	241 2424 984	Carbon film 10kohm 1/4W	RD14B2E103J(PSNB)
R565,566	241 2422 944	Carbon film 1kohm 1/4W	RD14B2E102J(PSNB)
R567,568	241 2424 984	Carbon film 10kohm 1/4W	RD14B2E103J(PSNB)
⚠R569,570	244 2059 031	Metal oxide film 10ohm 2W	RS14B3D100JNBF(RSFN)
⚠R571,572	241 2387 940	Carbon film 4.7ohm 1/4W(NB)	RD14B2E4R7JNBS
⚠R609	241 2379 903	Carbon film 470ohm 1/4W(NB)	RD14B2E471JNBS

Ref.No.	Parts No.	Parts Name	Remarks
⚠R610	244 2043 908	Metal oxide film 680ohm 1W	RS14B3A681JNBS(S)
⚠R614	244 2043 908	Metal oxide film 680ohm 1W	RS14B3A681JNBS(S)
⚠R639,640	241 2387 940	Carbon film 4.7ohm 1/4W(NB)	RD14B2E4R7JNBS
R701~704	241 2421 961	Carbon film 470ohm 1/4W	RD14B2E471J(PSNB)
R705,706	241 2420 904	Carbon film 100ohm 1/4W	RD14B2E101J(PSNB)
R707,708	241 2426 940	Carbon film 47kohm 1/4W	RD14B2E473J(PSNB)
R709,710	241 2417 962	Carbon film 10ohm 1/4W	RD14B2E100J(PSNB)
R711~714	241 2423 956	Carbon film 3kohm 1/4W	RD14B2E302J(PSNB)
R715,716	241 2420 975	Carbon film 200ohm 1/4W	RD14B2E201J(PSNB)
R717,718	241 2423 914	Carbon film 2kohm 1/4W	RD14B2E202J(PSNB)
R721,722	241 2419 986	Carbon film 82ohm 1/4W	RD14B2E820J(PSNB)
R723,724	241 2426 940	Carbon film 47kohm 1/4W	RD14B2E473J(PSNB)
R725,726	241 2423 985	Carbon film 3.9kohm 1/4W	RD14B2E392J(PSNB)
R727,728	241 2418 945	Carbon film 22ohm 1/4W	RD14B2E220J(PSNB)
R729,730	241 2429 918	Carbon film 620kohm 1/4W	RD14B2E624J(PSNB)
R731,732	241 2417 920	Carbon film 6.8ohm 1/4W	RD14B2E6R8J(PSNB)
R733,734	241 2420 988	Carbon film 220ohm 1/4W	RD14B2E221J(PSNB)
R735,736	241 2421 961	Carbon film 470ohm 1/4W	RD14B2E471J(PSNB)
R737,738	241 2422 928	Carbon film 820ohm 1/4W	RD14B2E821J(PSNB)
R992~994	241 2424 984	Carbon film 10kohm 1/4W	RD14B2E103J(PSNB)
VR501,502	211 6095 949	Semi fixed resister 2.2kohm	V06QB222

CAPACITORS GROUP

C002	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C004	253 1180 921	Ceramic cap. 1000 pF /50 V	CK45B1H102K
C053	253 1181 904	Ceramic cap. 0.01μF/50 V	CK45F1H103Z
C101	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C102	254 4252 930	Electrolytic 100 μF/10 V	CE04W1A101M
C103	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C104,105	254 4252 930	Electrolytic 100 μF/10 V	CE04W1A101M
C107	253 1179 987	Ceramic cap. 470 pF /50 V	CK45B1H471K
C121~123	253 1180 921	Ceramic cap. 1000 pF /50 V	CK45B1H102K
C401~404	255 4235 918	Polypro. cap. 100 pF/100 V	CQ93P2A101J(NH)
C405,406	254 4313 918	Electrolytic 10 μF/50 V	CE04W1H100M(ASF)
C407,408	255 4235 918	Polypro. cap. 100 pF/100 V	CQ93P2A101J(NH)
C409~412	254 4313 921	Electrolytic 22 μF/50 V	CE04W1H220M(ASF)
C413,414	255 4256 075	Electrolytic 470μF/25 V	CE04W1E471M
C501,502	255 6175 050	Polystyrol cap. 39 pF/125 V	CQ09S2B390KF(B)
C503,504	255 4232 924	Polypro. cap. 39 pF/100 V	CQ93P2A390J(NH)
C505,506	255 4235 921	Polypro. cap. 270 pF/100 V	CQ93P2A271J(NH)
C509,510	255 4235 921	Polypro. cap. 270 pF/100 V	CQ93P2A271J(NH)
C511,512	255 6167 000	Polystyrol cap. 0.01μF/125 V	CQ09S2B103JF(B)
C513,514	254 4256 755	Electrolytic 220 μF/50 V	CE04W1H221(ARS)
C515,516	255 4237 903	Polypro. cap. 0.0027μF/100 V	CQ93P2A272J(NH)

Ref.No.	Parts No.	Parts Name	Remarks
C517,518	254 4356 797	Electrolytic 10 μF/50 V	CE04W1H100MC(ARS)
C521~524	254 4356 713	Electrolytic 100 μF/50 V	CE04W1H101MC(ARS)
C525~528	255 6167 000	Polystyrol cap. 0.01μF/125 V	CQ09S2B103JF(B)
C531,532	254 4256 755	Electrolytic 220 μF/50 V	CE04W1H221(ARS)
C533~536	254 4356 713	Electrolytic 100 μF/50 V	CE04W1H101MC(ARS)
C537,538	254 4256 755	Electrolytic 220 μF/50 V	CE04W1H221(ARS)
C601	254 4254 909	Electrolytic 10 μF/16 V	CE04W1C100M
C602	254 4264 025	Electrolytic 100μF/100 V	CE04W2A101M
C603	254 4250 945	Electrolytic 330 μF/6.3 V	CE04W0J331M
C604	254 4252 901	Electrolytic 22 μF/10 V	CE04W1A220M
C605	254 4252 927	Electrolytic 47 μF/10 V	CE04W1A470M
C606,607	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C608	254 4252 930	Electrolytic 100 μF/10 V	CE04W1A101M
C610	255 4235 743	Polypro. cap. 0.022μF/100 V	CQ93P2A223J(NH)
C611	254 4260 980	Electrolytic 10 μF/50 V	CE04W1H100M
C612	254 4254 909	Electrolytic 10 μF/16 V	CE04W1C100M
C613	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C614	254 4250 945	Electrolytic 330 μF/6.3 V	CE04W0J331M
C615,616	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C617	254 4487 718	Electrolytic 1000 μF/16 V	CE04W1C102MC(ARD)
C618	253 1181 917	Ceramic cap. 0.022μF/50 V	CK45F1H223Z
C619	256 1034 982	Metalized cap. 0.12μF/50 V	CF93A1H124J
C620	254 4260 922	Electrolytic 0.33μF/50 V	CE04W1HR33M
C621	254 4260 935	Electrolytic 0.47μF/50 V	CE04W1HR47M
C622	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C631	254 4260 980	Electrolytic 10 μF/50 V	CE04W1H100M
C632	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C633	254 4260 977	Electrolytic 4.7 μF/50 V	CE04W1H4R7M
C671	254 4256 790	Electrolytic 2200 μF/25 V	CE04W1E222MC
C672	255 6167 000	Polystyrol cap. 0.01μF/125 V	CQ09S2B103JF(B)
C673	253 9039 906	BC Ceramic cap. 0.1μF/25 V	CK45=1E104Z
C702	256 1045 007	Metalized cap. 1 μF/63 V	CF93B1J105K(SA)
C703,704	255 4237 916	Polypro. cap. 47 pF/100 V	CQ93P2A470J(NH)
C705,706	255 6177 964	Polystyrol cap. 150 pF/50 V	CQ09S1H151J(SMT)
C707,708	255 6176 004	Polystyrol cap.0.001μF/125 V	CQ09S2B102JF(B)
C709,710	255 4235 918	Polypro. cap. 100 pF/100 V	CQ93P2A101J(NH)
C711,712	255 4232 995	Polypro. cap. 0.0033μF/100 V	CQ93P2A332J(NH)
C713,714	254 4356 713	Electrolytic 100 μF/50 V	CE04W1H101MC(ARS)
C715,716	254 4356 797	Electrolytic 10 μF/50 V	CE04W1H100MC(ARS)
C717,718	255 4199 931	Mylar film cap. 0.068μF/50 V	CQ92M1H683J(MRZ)
C719,720	255 6178 976	Polystyrol cap.0.0012μF/50 V	CQ09S1H122J(SMT)
C721,722	255 4199 957	Mylar film cap. 0.018μF/50 V	CQ92M1H183J(MRZ)
C723,724	255 4232 937	Polypro. cap. 0.001μF/100 V	CQ93P2A102J(NH)
C727,728	254 4247 049	Electrolytic 1 μF/50 V	CE04W1H010M(ARSA)
C731,732	254 4356 713	Electrolytic 100 μF/50 V	CE04W1H101MC(ARS)
C911,912	255 4235 057	Polypro. cap. 0.1μF/100 V	CQ93P2A104J(NH)
C915,916	255 6167 000	Polystyrol cap. 0.01μF/125 V	CQ09S2B103JF(B)

Ref.No.	Parts No.	Parts Name	Remarks	Q'ty
OTHER GROUP				
	—	(P.W.board)		(1)
L501,502	235 0053 019	Inductor 1 μH		2
L701~704	235 9003 002	FTZ choke coil		4
SW103	212 2615 012	1 p push switch	CD input	1
SW701	212 4728 004	1 p push switch	MM/MC	1
RL501,502	214 0129 001	Relay(DH2TU)		2
RM001	499 0150 008	Remocon sensor SBX1610-52		1
U701	204 8500 007	1 p pin jack(white)	Phono input	1
U702	204 8499 008	1 p pin jack(red)	Phono input	1
XL101	399 0191 903	Ceramic resonator	CST4.00MGW-TF01	1
⚠F601	206 1053 007	Fuse 1.0 A		1
	202 0040 909	Fue clip		2
CN3E	205 0233 032	3 p EH conn. base		1
CN3F,3P	205 0277 030	3 p EH conn. base (red)		2
CN3L	205 0296 037	3 p EH conn. base (yellow)		1
CN3G	205 0278 039	3 p EH conn. base (black)		1
CB3K	205 0271 036	3 p PH conn. base		1
CN3C,CB3C	205 0321 038	3 p conn. base (red)		2
CN3B	205 0323 036	3 p conn. base (black)		1
CN3A	205 0322 037	3 p conn. base (blue)		1
CN4A,B	205 0271 049	4 p PH conn. base		2
CB4A,B	205 0271 049	4 p PH conn. base		2
CN7B	205 0233 074	7 p EH conn. base		1
CN8A	205 0271 081	8 p PH conn. base		1
CN9A	205 0271 094	9 p PH conn. base		1
CN10A	205 0271 007	10 p PH conn. base		1
CB10A	205 0271 007	10 p PH conn. base		1
CN3D,CN2A	205 0581 001	2 p VH conn. base		2
CN3S	205 0133 035	3 p NH connector base		1
	203 0629 006	1 p cotact Ass'y		1
P3	203 0637 001	1 p cotact Ass'y		1
P1	203 0637 014	1 p cotact Ass'y		1
+B,-B	203 2376 001	2 c SIC cord Ass'y		1
+B,-B,GND	203 5120 005	3 c SIC cord Ass'y		1

Ref.No.	Parts No.	Parts Name	Remarks	Q'ty
CN6B	204 0497 008	6 p SAN-KR cord		1
CB6B	205 0279 067	6 p PH SID Conn. base		1
CN401,402	205 0450 006	3 p CANNON connector		2
	143 0568 001	Filter	for RM001	1
	415 0309 013	PVC tube (L=10)	for TR527,528	4
	415 0309 026	PVC tube (L=20)	for P501	2
JV008	001 0101 067	VinylWire		1
JV009	001 0101 054	VinylWire		1

1U-2856B MAIN UNIT ASS'Y

Ref.No.	Parts No.	Parts Name	Remarks
SEMICONDUCTORS GROUP			
TR201~204	275 0055 015	FET 2SK184C(GR)/(BL)	N type FET
TR205~212	273 0235 923	Transistor 2SC1841(E/F)	
TR213~216	271 0131 924	Transistor 2SA988(E/F)	
TR217,218	273 0235 923	Transistor 2SC1841(E/F)	
TR219,220	274 0158 003	Transistor 2SD1763A(D)	
TR221,222	272 0115 008	Transistor 2SB1186A(D)	
TR231	274 0120 002	Transistor 2SD1762(E/F)	
TR232	272 0083 004	Transistor 2SB1185(E/F)	
TR237,238	275 0042 905	FET 2SK373(Y)	N type FET
TR705	274 0120 002	Transistor 2SD1762(E/F)	
TR706	272 0083 004	Transistor 2SB1185(E/F)	
D201~212	276 0432 903	Diode 1SS270A	
D231~237	276 0432 903	Diode 1SS270A	
D801~804	276 0574 706	Diode RU4Z(J8)	
⚠D805	276 0424 005	Diode 4D4B42(LC1)	Bridge
D806~809	276 0348 000	Diode S2K20F	
ZD215,216	276 0460 904	Zener diode HZS5C-1	5 V
ZD217,218	276 0479 908	Zener diode HZS20-1	20 V
ZD221,222	276 0479 908	Zener diode HZS20-1	20 V
ZD703,704	276 0478 909	Zener diode HZS18-1	18 V
RESISTORS GROUP			
R201,202	241 2427 923	Carbon Film 100kohm 1/4W	RD14B2E104J(PSNB)
R203,204	241 2422 944	Carbon Film 1kohm 1/4W	RD14B2E102J(PSNB)
R205,206	241 2426 940	Carbon Film 47kohm 1/4W	RD14B2E473J(PSNB)
R207~210	241 2424 900	Carbon Film 4.7kohm 1/4W	RD14B2E472J(PSNB)
R211,212	241 2420 975	Carbon Film 200ohm 1/4W	RD14B2E201J(PSNB)
R213,214	241 2425 912	Carbon Film 13kohm 1/4W	RD14B2E133J(PSNB)
R215,216	241 2422 928	Carbon Film 820ohm 1/4W	RD14B2E821J(PSNB)
⚠R217~220	241 2315 883	Fusible 330ohm 1/4W(FR)	RD14B2E331GFRS
⚠R221~224	241 2376 922	Carbon Film 33ohm 1/4W(NB)	RD14B2E330JNBS
⚠R225,226	244 2052 957	Metal oxide film 5.6kohm 1W	RS14B3A222JNBS(S)
⚠R227,228	241 2377 921	Carbon Film 82ohm 1/4W(NB)	RD14B2E820JNBS
⚠R229,230	244 2053 967	Metal oxide film 12kohm 1W	RS14B3A123JNBS(S)
⚠R231~234	241 2371 930	Fusible 160ohm 1/4W(FR)	RD14B2E161GFRS
⚠R235~238	244 2050 964	Metal oxide film 22ohm 1W	RS14B3A220JNBS(S)
R239,240	241 2415 919	Carbon Film 47ohm 1/4W	RD14B2E470J(PSNB)
R241,242	241 2429 963	Carbon Film 1 Mohm 1/4W	RD14B2E105J(PSNB)
R243,244	241 2425 938	Carbon Film 16kohm 1/4W	RD14B2E163J(PSNB)
R247,248	241 2421 958	Carbon Film 430ohm 1/4W	RD14B2E431J(PSNB)
⚠R251,252	241 2387 908	Carbon Film 1ohm 1/4W(NB)	RD14B2E010JNBS
R257,258	241 2427 923	Carbon Film 100kohm 1/4W	RD14B2E104J(PSNB)
R259,260	241 2426 979	Carbon Film 62kohm 1/4W	RD14B2E623J(PSNB)
R271,272	241 2431 003	Carbon Film 1kohm 1/2W	RD14B2H102J(RMA)

Ref.No.	Parts No.	Parts Name	Remarks
R281~290	241 2428 948	Carbon Film 330kohm 1/4W	RD14B2E334J(PSNB)
⚠R291	244 2050 959	Metal oxide film 270ohm 1W	RS14B3A271JNBS(S)
R301,302	241 2425 925	Carbon Film 15kohm 1/4W	RD14B2E153J(PSNB)
R305,306	241 2423 914	Carbon Film 2kohm 1/4W	RD14B2E202J(PSNB)
R307,308	241 2427 952	Carbon Film 130kohm 1/4W	RD14B2E134J(PSNB)
R309,310	241 2425 925	Carbon Film 15kohm 1/4W	RD14B2E153J(PSNB)
R311,312	241 2423 901	Carbon Film 1.8kohm 1/4W	RD14B2E182J(PSNB)
R315,316	241 2421 916	Carbon Film 300ohm 1/4W	RD14B2E301J(PSNB)
R317,318	241 2419 957	Carbon Film 62ohm 1/4W	RD14B2E620J(PSNB)
⚠R671~674	244 2051 958	Metal oxide film 220ohm 1W	RS14B3A221JNBS(S)
R743,744	241 2422 944	Carbon Film 1kohm 1/4W	RD14B2E102J(PSNB)
R747,748	241 2425 909	Carbon Film 12kohm 1/4W	RD14B2E123J(PSNB)
⚠R801,802	244 2051 945	Metal oxide film 1ohm 1W	RS14B3A010JNBS(S)
R997~999	241 2429 963	Carbon Film 1 Mohm 1/4W	RD14B2E105J(PSNB)
VR301	211 9113 048	Variable resistor 250kohm	Bass
VR302	211 9113 051	Variable resistor 50kohm	Treble
VR303	211 0798 103	Variable resistor 100kohm	Balance
CAPACITORS GROUP			
⚠C101	253 8003 713	Ceramic cap. 4700 pF/400 V(AC)	CK45E2GAC472MC
C201,202	255 4235 918	Polypro. cap. 100 pF/100 V	CQ93P2A101J(NH)
C203,204	255 4232 911	Polypro. cap. 180 pF/100 V	CQ93P2A181J(NH)
C205,206	255 4235 989	Polypro. cap. 470 pF/100 V	CQ93P2A471J(NH)
C207~210	254 4356 713	Electrolytic 100 µF/50 V	CE04W1H101MC(ARS)
C211,212	255 4232 924	Polypro. cap. 39 pF/100 V	CQ93P2A390J(NH)
C213,214	254 4488 717	Electrolytic 470 µF/25 V	CE04W1E471MC(ARS)
C217,218	255 4235 918	Polypro. cap. 100 pF/100 V	CQ93P2A101J(NH)
C219,220	255 6181 002	Polystyrol cap. 10 pF/400 V	CQ09S2G100KF(B)
C225	254 4356 755	Electrolytic 220 µF/50 V	CE04W1H221MC(ARS)
C227,228	254 4488 717	Electrolytic 470 µF/25 V	CE04W1E471MC(ARS)
C229,230	255 6167 000	Polystyrol cap. 0.01µF/125 V	CQ09S2B103K(B)
C231,232	254 4356 001	Electrolytic 10 µF/50 V	CE04W1H100(ARS)
C234	254 4356 742	Electrolytic 470 µF/50 V	CE04W1h471(ARS)
C236	254 4356 742	Electrolytic 470 µF/50 V	CE04W1H471(ARS)
C241,242	255 6176 004	Polystyrol cap.0.001µF/125 V	CQ09S2B102JF(B)
C271	255 4235 934	Polypro. cap. 0.01µF/100 V	CQ93P2A103J(NH)
C281~290	255 4237 929	Polypro. cap. 56 pF/100 V	CQ93P2A560J(NH)
C301,302	253 4536 983	Ceramic cap. 22 pF/50 V	CC454SL1H220J
C305,306	253 4537 924	Ceramic cap. 33 pF/50 V	CC454SL1H330J
C307,308	255 4222 976	Mylar Film cap.0.0039µF/50 V	CQ92M1H392J(MRZ)
C309,310	255 1251 979	Mylar Film cap. 0.015µF/50 V	CQ92M1H153J(MRZ)
C311,312	256 1034 982	Metalized cap. 0.12µF/50 V	CF93A1H124J

Ref.No.	Parts No.	Parts Name	Remarks
C313,314	255 4200 969	Polypro. cap. 180 pF/50 V	CQ93P1H181J
C315,316	255 1264 911	Mylar Film cap.0.0012µF/50 V	CQ92M1H122J(B)
C317,318	255 4223 991	Mylar Film cap. 0.039µF/50 V	CQ92M1H393J(MRZ)
C741,742	254 4256 739	Electrolytic 47 µF/50 V	CE04W1H470MC(ARS)
C743,744	254 4356 001	Electrolytic 10 µF/50 V	CE04W1H100(ARS)
C803,804	255 6167 000	Polystyrol cap. 0.01µF/125 V	CQ09S2B103K(B)
C807,808	255 6167 000	Polystyrol cap. 0.01µF/125 V	CQ09S2B103K(B)
C809,810	255 4235 057	Polypro. cap. 0.1µF/125 V	CQ93P2A104J(NH)
C811,812	255 4235 934	Polypro. cap. 0.01µF/100 V	CQ93P2A103J(NH)
C813	255 6167 000	Polystyrol cap. 0.01µF/125 V	CQ09S2B103K(B)
C815~818	255 4232 937	Polypro. cap. 0.001µF/125 V	CQ93P2A102J(NH)
OTHER GROUP			Q'ty
	—	(P.W.board)	(1)
⚠SW101	212 9534 002	Power switch (TV-8)	Power 1
SW201	212 2619 005	Slide switch (4-4)	Recout selector 1
SW301	212 2615 012	1 p push switch	Tone defeat 1
RL201~207	214 0172 003	Relay (RY12W-OH)	7
	204 8480 004	Heacphone jack (sw)	1
	204 8501 006	2 p pin jack	Inputs 7
	415 0299 000	Capacitor cover	for C101 1
	417 0253 026	Radiator	2
	470 0012 022	Pan screw 3x12With sw,w	2
CB3D	205 0581 001	2 p VH connector base	1
CB3F,P	205 0277 030	3 p EH connector base(Red)	2
CN3I	205 0277 030	3 p EH connector base(Red)	1
CB3H,CN3H	205 0276 031	3 p EH connector base(Blue)	2
CB3G,CN3J	205 0278 039	3 p EH connector base(Black)	2
CB3K	205 0271 036	3 p PH connector base	1
CB3L	205 0296 037	3 p EH connector base(Yellow)	1
CB3Q	205 0833 018	3 p VH connector base(Black)	1
CB3E	205 0233 032	3 p EH connector base	1
CB6A	205 0696 064	JL connector (BT-E)	1
CB6C,CN6C	205 0233 061	6 p EH connector base	2
CN6A	205 0748 064	JL connector (R)	1
CN7B	205 0233 074	7 p EH connector base	1
CN8A	205 0271 081	8 p PH connector base	1
	203 0604 018	1 p contact Ass'y	1
	203 0627 008	1 p contact Ass'y	1
	203 0630 008	1 p contact Ass'y	1

1U-2888 VOLUME UNIT ASS'Y

Ref.No.	Parts No.	Parts Name	Remarks
SEMICONDUCTORS GROUP			
TR001,002	273 0235 923	Transistor 2SC1841(E/F)	
D001,002	276 0432 903	Diode 1SS270A	
LD002~007	393 9514 907	LED SEL1210S	Red
RESISTORS GROUP (Not included carbon film ±5%,1/4W type. Refer to the Schematic diagram for those parts.)			
⚠R023~026	244 2055 996	Metal oxide 1.2kohm 1W	RS1483A122JNBS(S)
VR201	211 0859 000	Variable resister 50kohm	Main V2720V30FA503
CAPACITORS GROUP			
C251	253 1181 917	Ceramic cap. 0.022µF/50 V	CK45F1H223Z
C252	254 3055 918	Electrolytic 10µF/35 V	CE04D1V100MBP(bipole)
C253	253 1181 917	Ceramic cap. 0.022µF/50 V	CK45F1H223Z
C254	254 4313 963	Electrolytic 1 µF/50 V	CE04W1H010M(ASF)
OTHER GROUP			Q'ty
	—	(P.W.board)	(1)
SW102	212 0332 009	Rotary switch	Input selector 1
⚠RL001,002	214 0142 004	Relay(TV-5)	2
⚠F001	206 1015 032	Fuse 2.5 A	1
⚠F002	206 1015 061	Fuse 2.0 A	1
	202 0040 909	Fuse clip	for F001,002 4
⚠	209 3950 002	3 p AC outlet	1
CB9A	205 0271 094	9 p PH conn. base	1
CN3Q	205 0653 036	3 p VH conn. base	2
CB3B	205 0323 036	3 p conn. base (Black)	1
CB3I	205 0277 030	3 p EH conn. base (Red)	1
CB3J	205 0278 039	3 p EH conn. base (Black)	1
CB3A	205 0322 037	3 p conn. base (Blue)	1
CB3S	205 0133 035	3 p NH conn. base	1
CB3M	205 0833 018	3 p VH conn. base (Black)	1
	203 0474 060	1 p contact Ass'y	1
	203 0629 019	1 p contact Ass'y	1
	412 3473 002	Earth Plate	for SW102 1

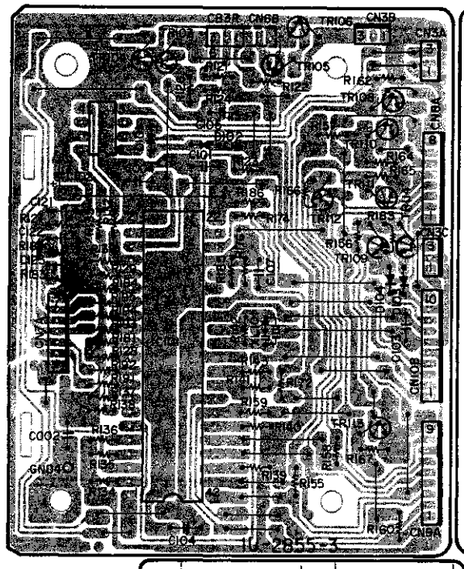
PRINTED WIRING BOARD (Pattern Side)

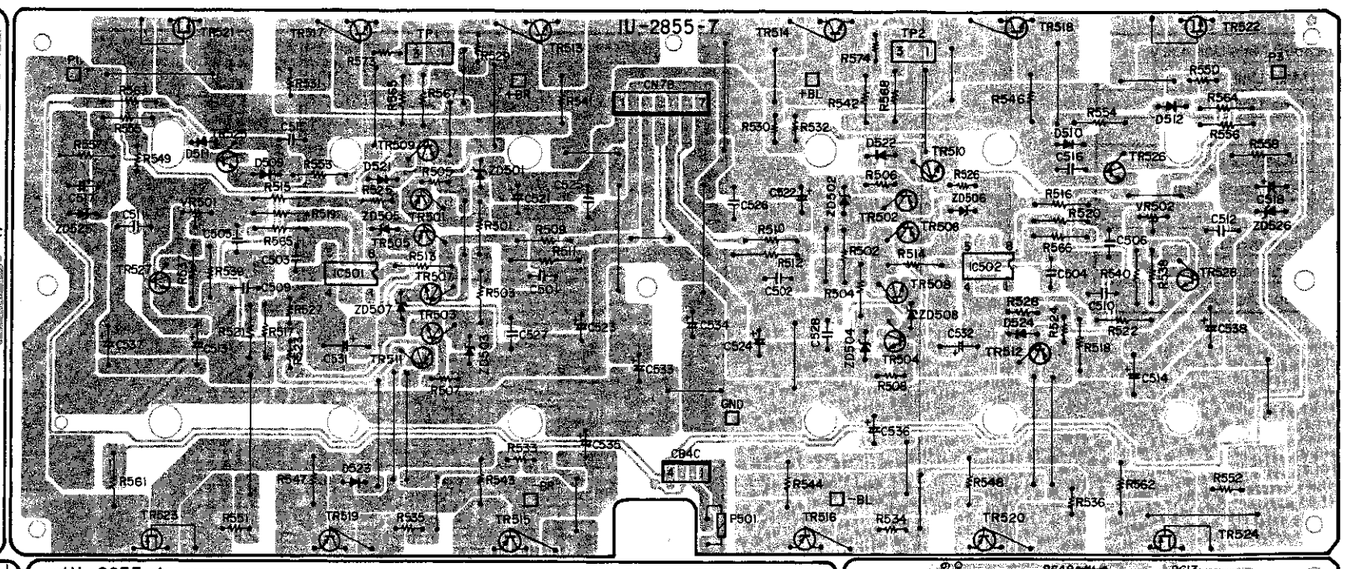
1 2 3 4 5 6 7 8

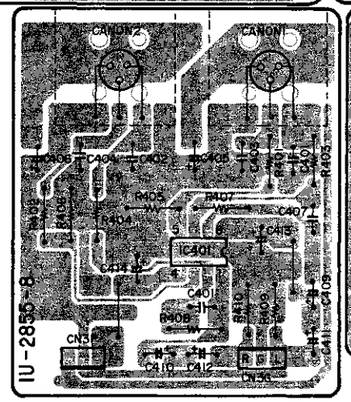
A B C D E

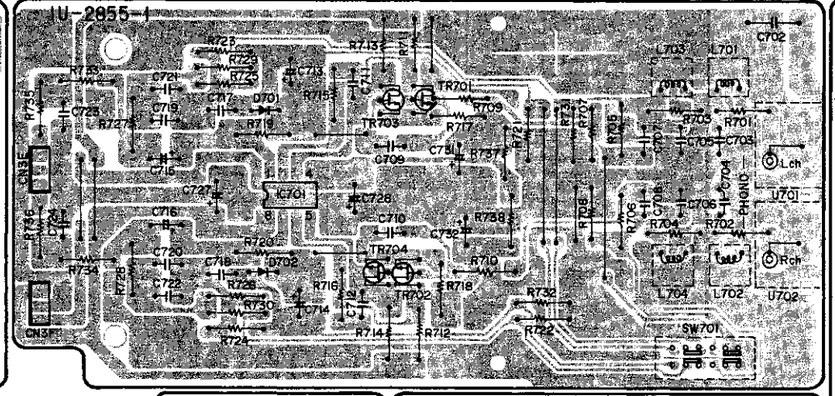
1U-2855B EQ, AMP. UNIT ASS'Y

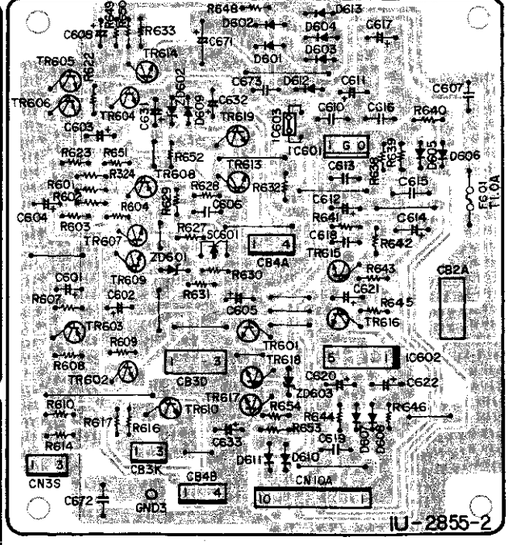
1U-2855B EQ, amp. Unit Ass'y	
-1	EQ, amp. Unit
-2	Protector Unit
-3	Microprocesser Unit
-4	–
-5	Sensor Unit
-6	CD Input Unit
-7	Power amp. Unit
-8	Balanced Input Unit
-9	Speaker relay Unit

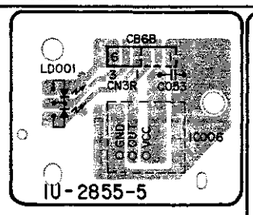


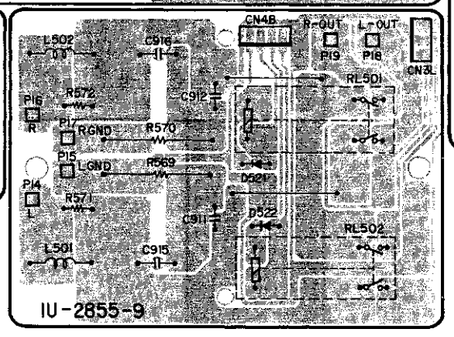


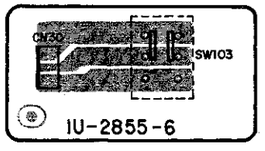






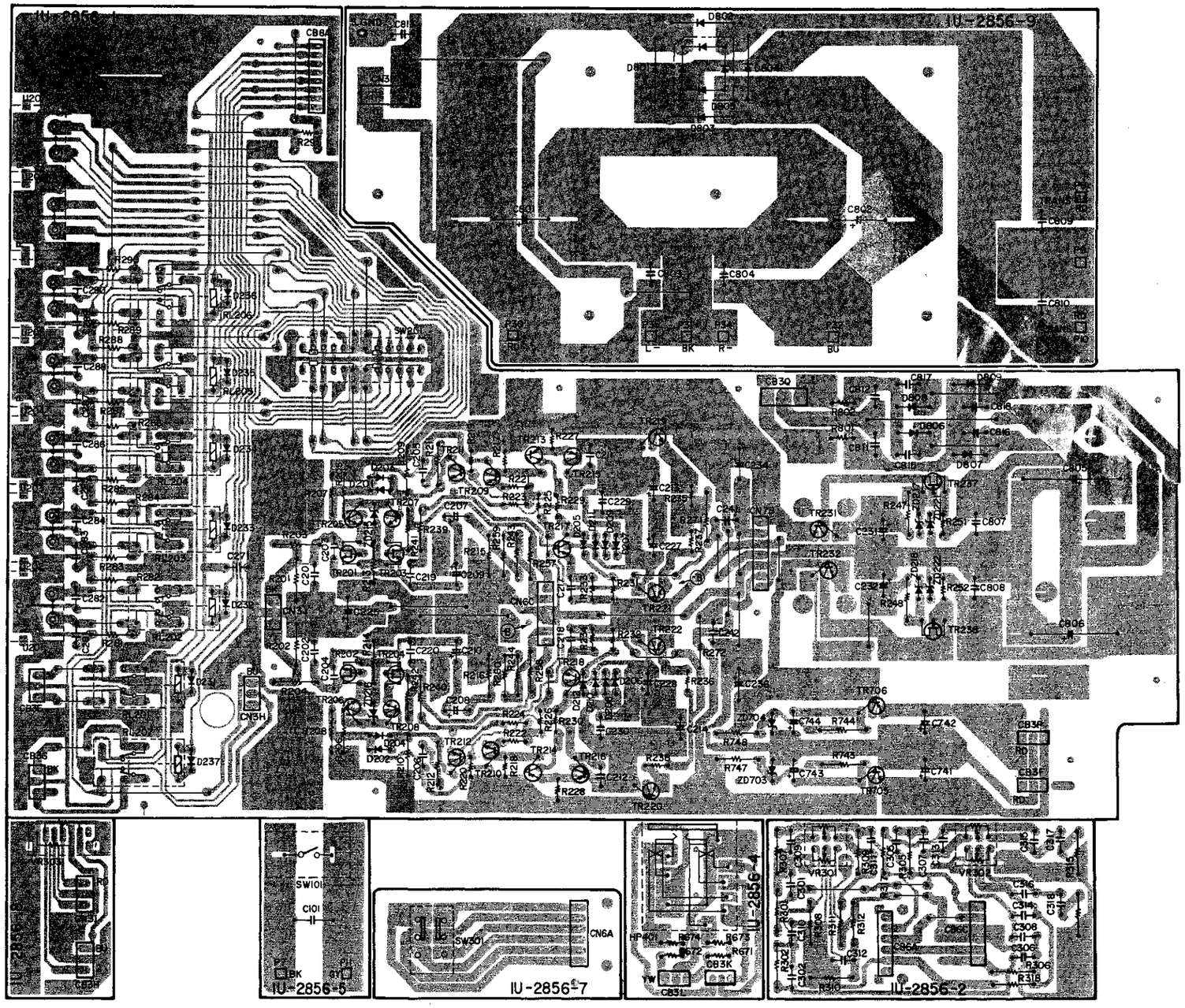






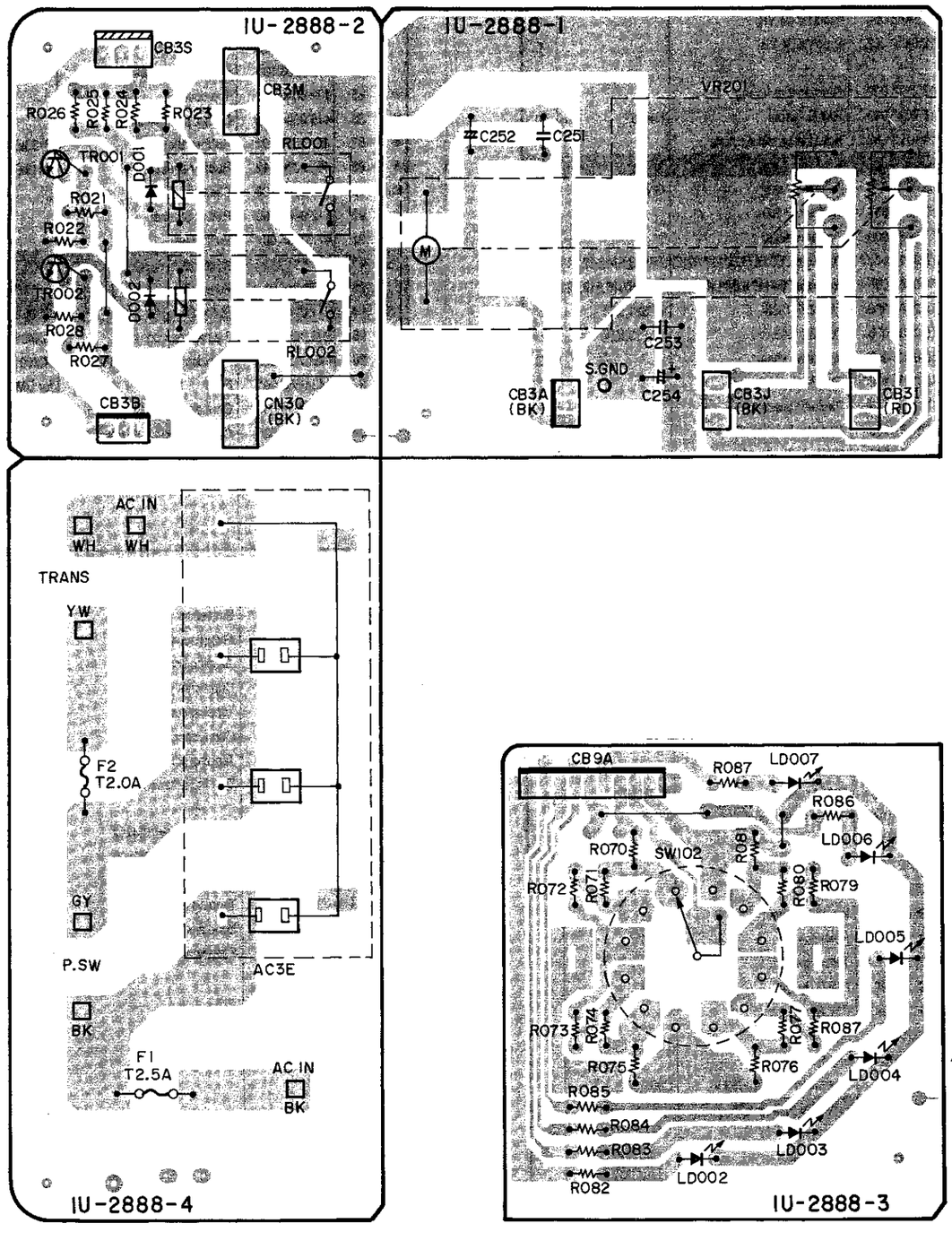
1U-2856B MAIN UNIT ASS'Y

1U-2856B Main Unit Ass'y	
-1	Main Unit
-2	Tone Unit
-3	–
-4	Headphone jack Unit
-5	Power switch Unit
-6	–
-7	Tone switch Unit
-8	Balance volume Unit
-9	Capacitor Unit



1U-2888 VOLUME UNIT ASS'Y

1U-2888 Volume Unit Ass'y	
-1	Main VR Unit
-2	Relay Unit
-3	Function switch Unit
-4	AC outlet Unit



PARTS LIST OF EXPLODED VIEW

Ref.No.	Parts No.	Parts Name	Remarks	Q'ty
◉ 1	1U- 2855B	EQ. amp. P.W.B. unit Ass'y		1s
1-1	—	EQ. amp. unit		(1)
1-2	—	Protector unit		(1)
1-3	—	Microprocesser unit		(1)
1-4	—	—		
1-5	—	Sensor unit		(1)
1-6	—	CD input unit		(1)
1-7	—	Power amp. unit		(1)
1-8	—	Balanced input unit		(1)
1-9	—	Speaker relay unit		(1)
◉ 2	1U- 2856B	Main P.W.B. unit Ass'y		1s
2-1	—	Main unit		(1)
2-2	—	Tone unit		(1)
2-3	—	—		
2-4	—	Headphone jack unit		(1)
2-5	—	Power switch unit		(1)
2-6	—	—		
2-7	—	Tone switch unit		(1)
2-8	—	Balance volume unit		
2-9	—	Capacitor unit		(1)
◉ 3	1U- 2888	Volume P.W.B. Unit Ass'y		1s
3-1	—	Main VR unit		(1)
3-2	—	Relay unit		(1)
3-3	—	Function switch unit		(1)
3-4	—	AC outlet unit		(1)
4	212 4728 004	1 p push switch	SW701 MM/MC	1
★ 5	254 4256 790	Chemicon 2200µF/25 V (SME)	C671	1
★ 6	254 4487 718	Chemicon 1000µF/16 V (ARD)	C617	1
⚠ 7	206 1053 007	Fuse 1.0 A	F601	1
8	204 8499 008	1 p pin jack(Red)	U702 Phono input	1
9	204 8500 007	1 p pin jack(White)	U701 Phono input	1
10	214 0129 001	Relay (DH2TU)	RL501,502	2
11	211 9113 048	Variable resistor 250kohm	VR301 Bass	1
12	211 9113 051	Variable resistor 50kohm	VR302 Treble	1
13	211 0859 000	Variable resistor 50kohm	Main VR	1
14	211 0798 103	Variable resistor 100kohm	VR303 Balance	1
⚠ 15	212 9534 002	Power switch (Push) TV-8	SW101 Power	1
16	212 2615 012	1 p push switch	SW103 CD input	2
			SW301 Tone defeat	
17	212 2619 005	Slide switch (4-4) Remote	SW201 Recout sel.	1
18	212 0332 009	Rotary switch	SW102 Input select.	1
19	204 8480 004	Headphone jack(SW)	PHONES	1
★ 20	214 0172 003	Relay (RY12W-OH)	RL201~207	7
⚠ 21	203 3250 002	3 p AC outlet		1
22	204 8501 006	2 p pin jack	Input	7
◉ 23	411 9132 315	Front chassis		1
◉ 24	412 9452 108	Support bracket		1
◉ 25	412 9440 013	SW bracket		1
◉ 26	411 9136 117	Side chassis		1
◉ 27	411 9137 116	Side chassis Ass'y		1
◉ 28	105 9266 111	Rear panel		1
◉ 29	415 9091 005	Rear panel plate		1
30	205 0789 001	4 p terminal		1
◉ 31	412 9463 003	Stopper (M-VR)		1
◉ 32	412 9480 002	Bracket (M-VR)		1
33	—	—		
◉ 34	412 2814 002	Card spacer (L=8)		2
◉ 35	415 9016 019	P.W.B. holder	H=8.8	10
36	414 9179 102	Speaker terminal s.plate		1
⚠ 37	203 3970 006	AC inlet	AC in	1
38	205 0071 016	Terminal Ass'y	GND	1
◉ 39	477 0018 001	Washer (P-87)		1
◉ 40	417 9089 000	Power radiator		1
41	273 0413 004	Transistor2SC3855LB4(O/P/Y)(Z)	TR513,514,517,518	4
42	271 0263 009	Transistor2SA1491LB4(O/P/Y)(Z)	TR515,516,519,520	4
43	275 0081 005	FET 2SK1303	TR521,522	2
44	275 0080 006	FET 2SJ216	TR523,524	2
◉ 45	415 0234 007	Insulating sheet		12
◉ 46	443 0900 132	P.W.B. support		3
◉ 47	412 9450 100	Radiator bracket (R)		1
◉ 48	412 9451 109	Radiator bracket (F)		1
49	412 2814 057	Card spacer (L=12)		7
◉ 50	412 9453 107	P.W.B. bracket (M)		1
◉ 51	412 2814 028	Card spacer (L=10)		9
52	254 4490 006	Chemicon 4700µF/63 V	C805,806	2
◉ 53	412 9455 105	P.W.B. bracket (EQ)		1
54	415 9016 051	P.W.B. holder	H=12	6
◉ 55	144 9233 000	Front panel Ass'y		1
◉ 56	475 6138 002	M 9 VR nut		4
57	113 9304 100	Push button Ass'y		2
58	212 0207 024	Rotary remote (A)switch		1
◉ 59	143 9174 001	Lens (P)		1
◉ 60	414 9184 003	Damp. plate (VR)		1
61	—	—		
◉ 62	105 9265 206	Bottom cover		1
◉ 63	461 9068 002	Rubber sheet	130x8xT4	1
◉ 64	412 9456 104	Power trans base		1
◉ 65	414 9181 006	Foot base		2
◉ 66	129 0212 005	Foot damper		4
◉ 67	104 0267 006	Foot Ass'y		4
◉ 68	415 9089 004	Insulating sheet		2
◉ 69	477 0210 003	Push rivet	3x4.5	4
◉ 70	415 9080 016	Teflon spacer		8
71	412 2762 002	P.W.B. holder	H=12	6
72	412 9457 006	P.W.B. support		1
73	415 9016 019	P.C.B. holder		8
◉ 74	401 9005 005	Snap hinge (H)		1
75	254 4489 004	Chemicon 12000µF/63 V	C801,802	2
⚠ 76	233 6179 001	Power trans former		1
◉ 77	415 9092 004	Teflon plate (PT)		1
78	415 9080 016	Teflon Spacer		4
◉ 79	414 9095 008	Copper damper		4
◉ 80	461 0334 081	Rubber sheet	30x30xT2	1
81	112 9123 100	Knob Ass'y (M)		1
82	112 9125 108	Knob Ass'y (F)		1
83	112 9127 106	Knob Ass'y (B)		4
84	113 9303 101	Power button Ass'y		1
◉ 85	102 9048 123	Top cover		1
◉★ 86	415 9094 002	Damp. plate (Top)		4
◉ 87	461 9001 001	Rubber sheet	8x30xT5	2
◉ 88	461 0390 012	Rubber sheet	9x12xT2	4
◉★ 89	209 0012 006	Short pin		2
◉ 90	412 9482 000	P.W.B. bracket		1
91	477 0096 007	Push rivet		1
⚠ 92	206 1015 032	Fuse 2.5 A	F001	1
⚠ 93	206 1015 061	Fuse 2 A	F002	1
⚠★ 94	214 0142 004	Relay (TV-5)	RL001,002	2
95	205 0450 006	3 p cannon connector	CN401,402	2
96	499 0150 008	Remocon sensor SBX1610-52	RM001	1
97	143 0568 001	Filter	for RM001	2
★ 98	125 0075 004	Chukoh tape L=280,W=25	for Power radiator	1/34
★ 99	125 0075 020	Chukoh tape L=400,W=13	for Top cover	1/5
100				
101				
102				

SCREWS

151	473 8034 001	Tapping screw 3x8 -CU	Copper	47
152	471 3303 016	Bind screw 3x6		2
153	477 0064 107	Fixing screw		16
154	473 7002 021	Tapping screw(S)3x8	Black	9
155	473 8007 038	Cup screw 3x14		12
156	473 7002 034	Tapping screw(S)3x6	Black	7
157	473 8007 025	Cup screw 3x8		2
158	473 7500 044	Tapping screw(P)3x8	Black	11
159	473 7015 018	Tapping screw(S)3x8	Black	8
160	—	—		
161	473 7007 071	Tapping screw(S)4x12		6
162	473 7508 059	Tapping screw(P)3x20	Black	6
163	473 7007 013	Tapping screw(S)4x10	Black	4
164	473 7007 026	Tapping screw(S)4x16	Black	4
165	471 9043 008	Special screw		8
166	473 7003 017	F.tapping screw(S)3x8	Black	2

PACKING & ACCESORIES PARTS LIST
(Not included EXPLODED VIEW.)

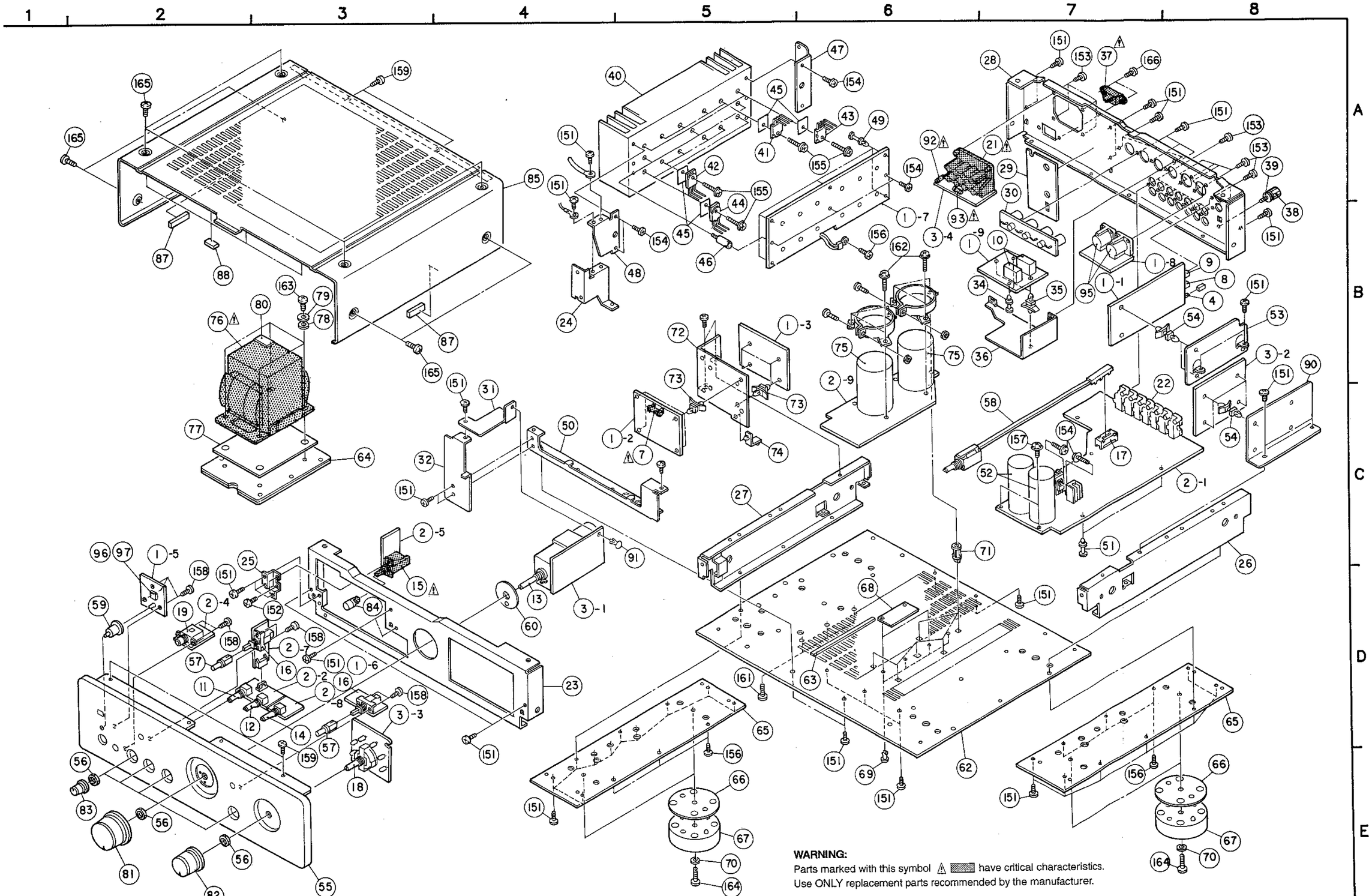
Ref.No.	Parts No.	Parts Name	Remarks	Q'ty
201	504 9102 003	Styen paper	800x650	1
202	505 9102 006	Poly cover	820x400	1
◉ 203	503 9275 102	Cushion		2
◉ 204	501 9265 035	Carton case		1
205	502 9133 005	Cushion (T)	50x150xt40	2
206	GEN 7744	Envelope sub. Ass'y		1s
206-1	505 8006 019	Envelope	255x380	(1)
206-2	511 9429 001	Inst. manual		(1)
206-3	515 0671 203	Service station list		(1)
206-4	499 0284 107	Remote control	RC-185	(1)
206-5	—	Batteries		(2)
⚠ 207	206 2147 006	AC cordWith connector		1
208	513 9111 001	Color label (Gold)		2
209				

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.)

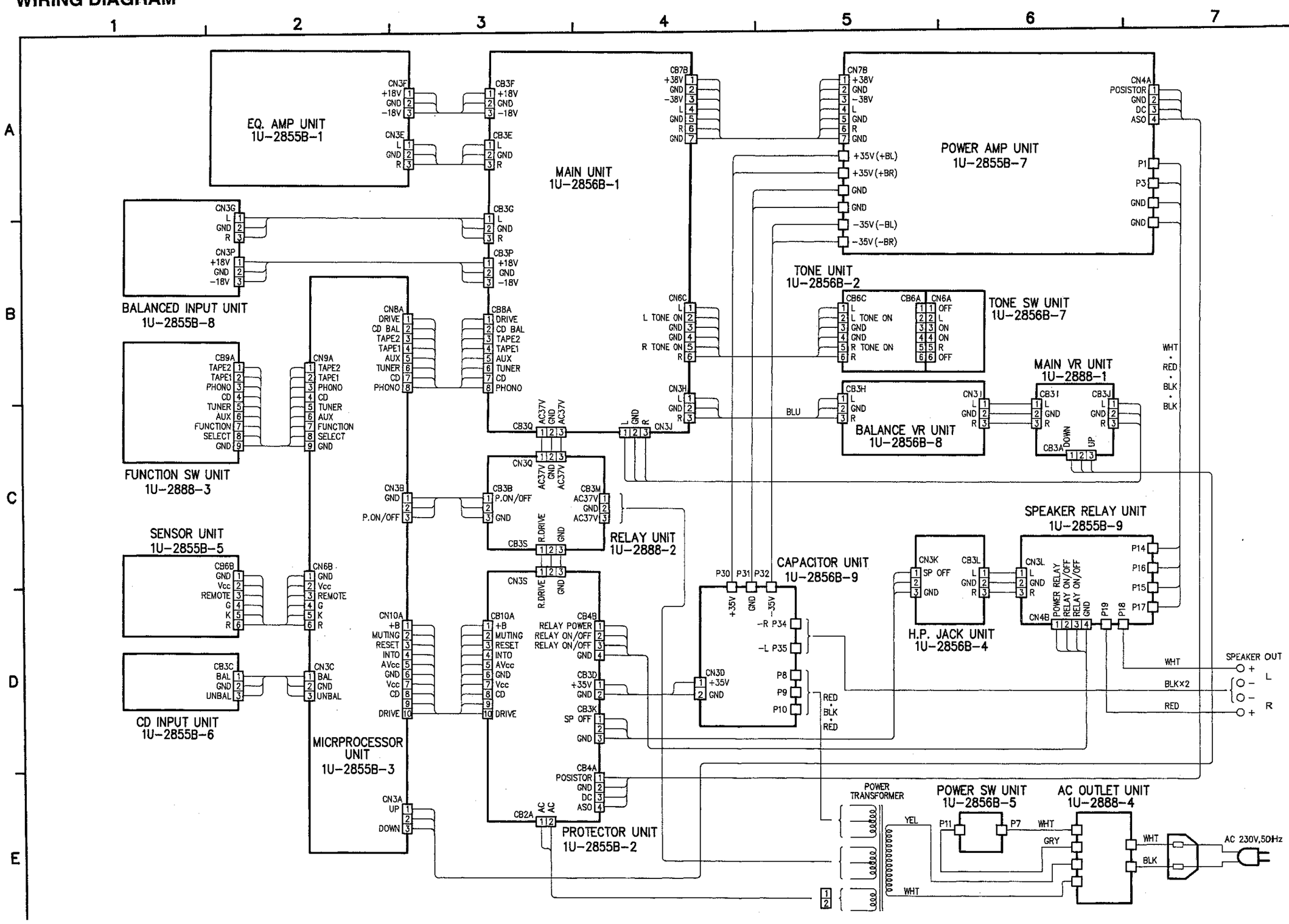
WARNING:
Parts marked with this symbol ⚠ ▒▒ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

EXPLODED VIEW OF CHASSIS AND CABINET



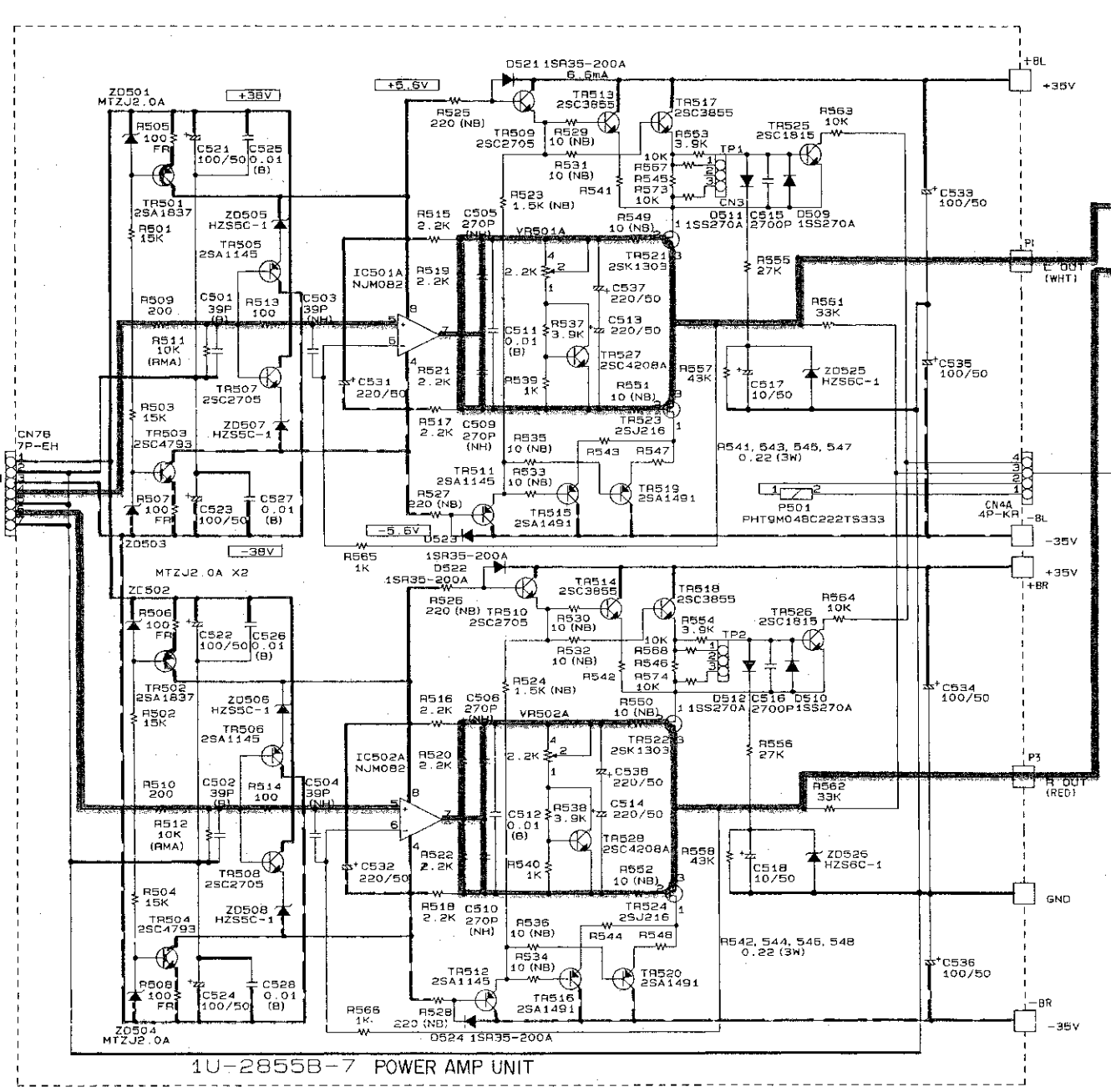
WARNING:
Parts marked with this symbol ⚠ ▨ have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

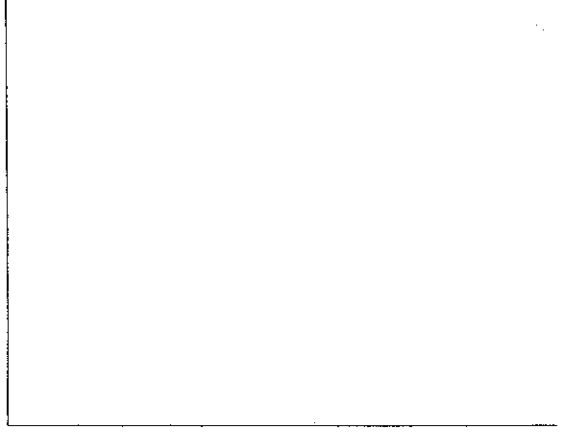
WIRING DIAGRAM

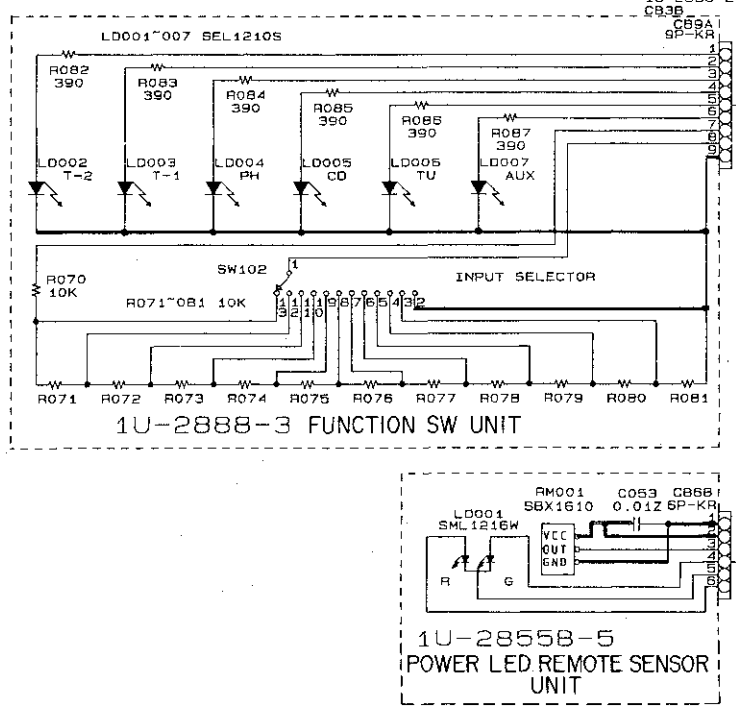


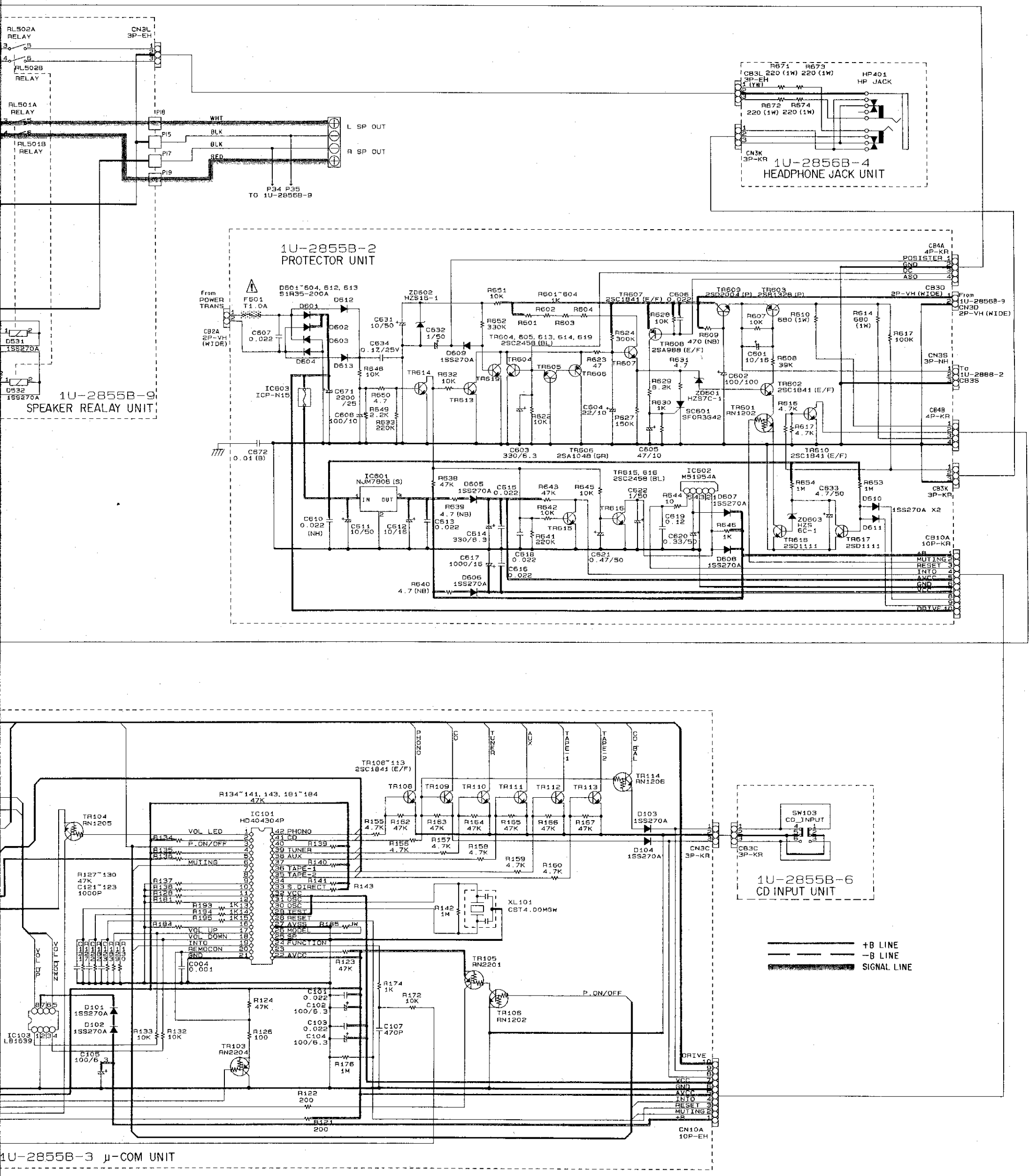
SCHEMATIC DIAGRAM (1/2)

1 2 3 4 5 6









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 milliamps, 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 until the problem is located and corrected.

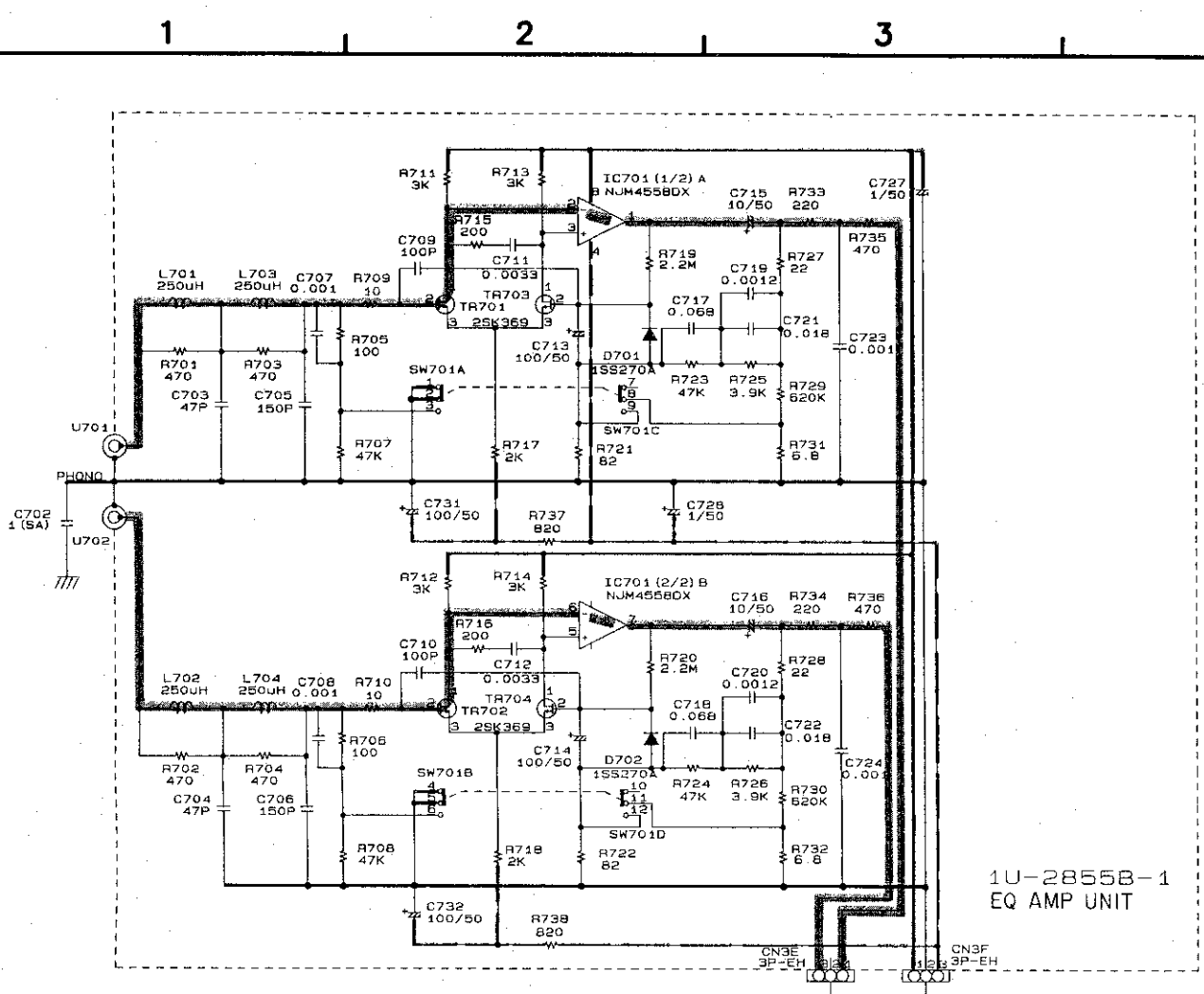
NOTES
ALL RESISTANCE VALUES IN OHM. k=1,000 OHM, M=1,000,000 OHM

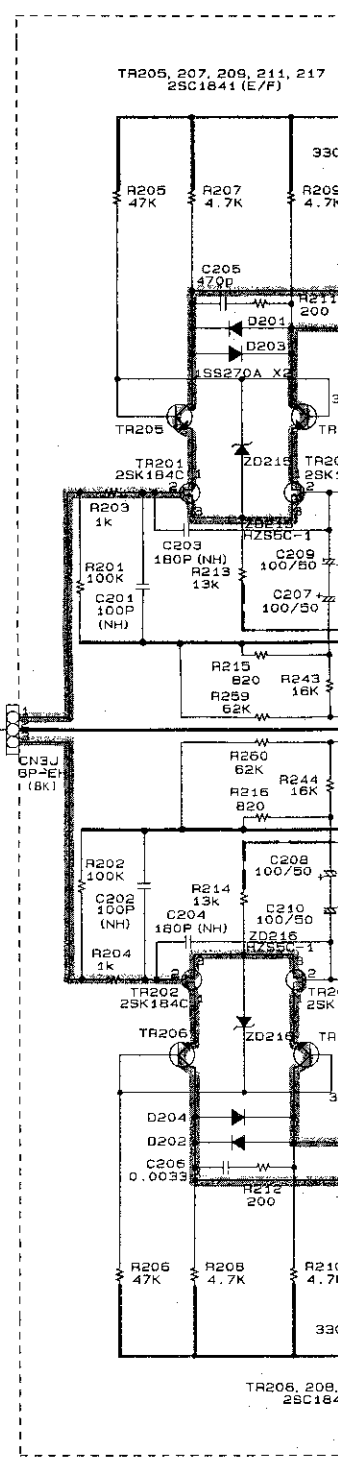
ALL CAPACITANCE VALUES IN MICRO FARAD. P=MICRO-MICRO FARAD

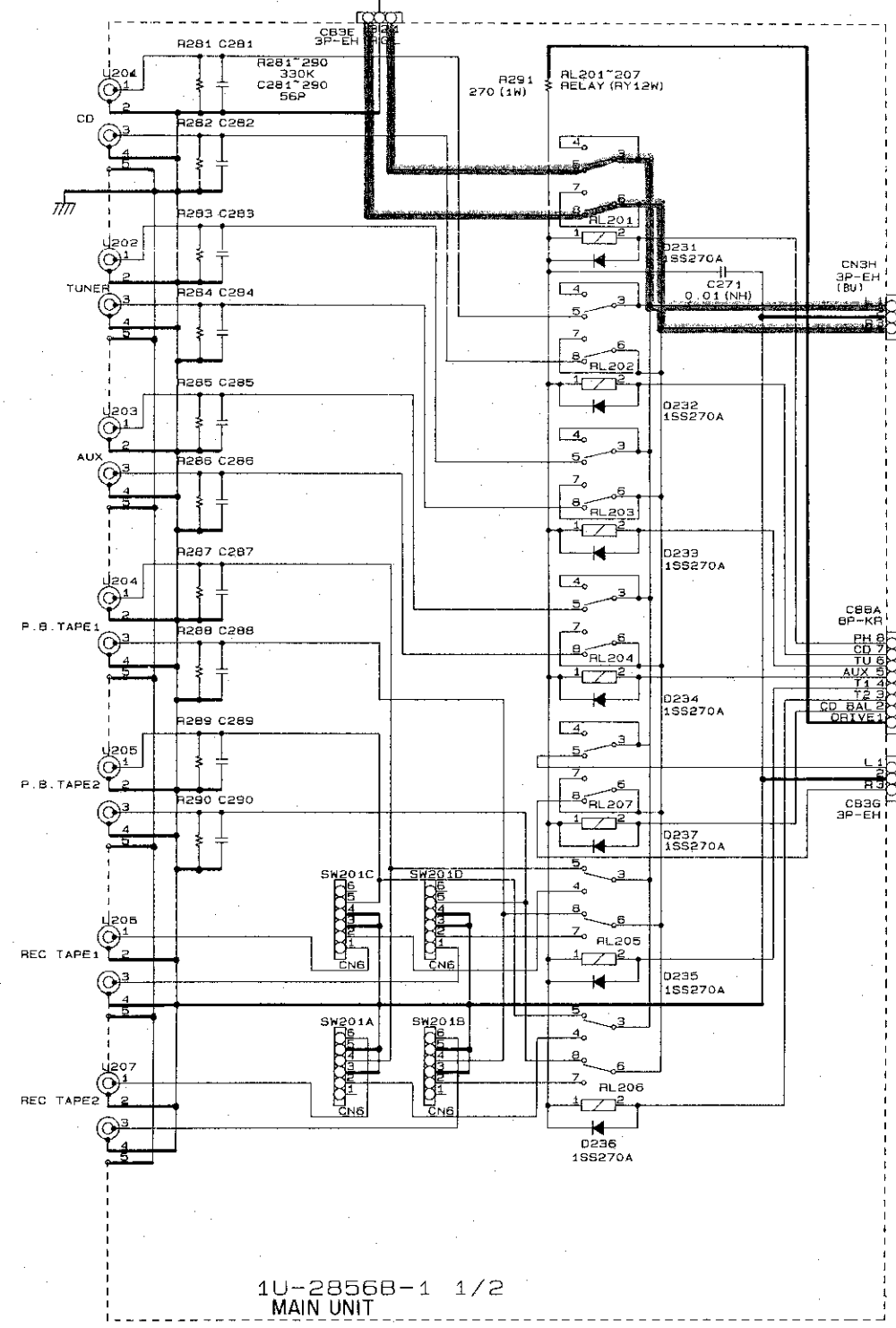
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT CONDITION.

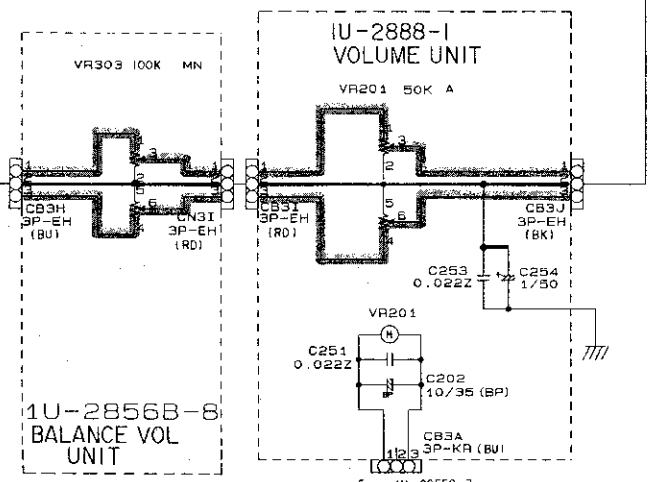
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

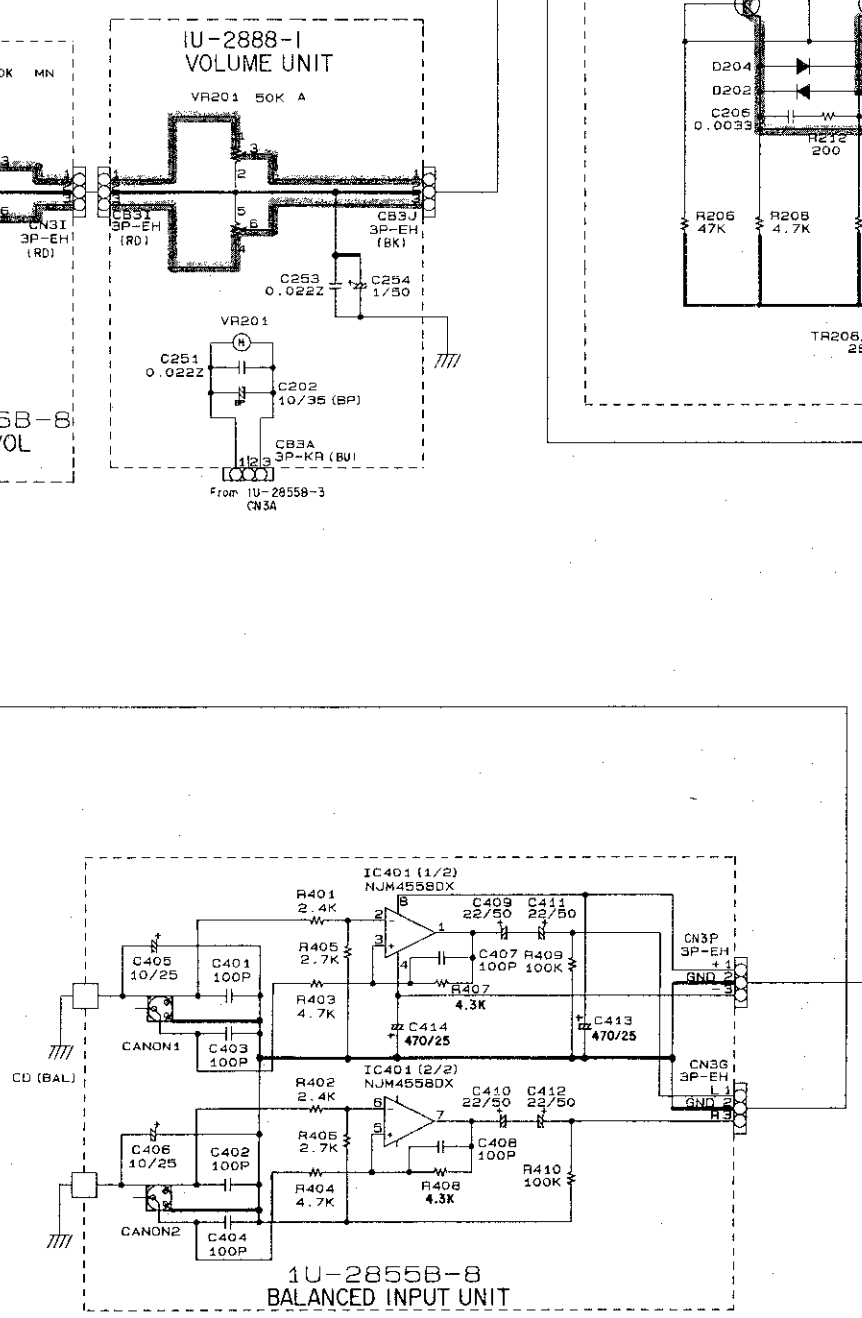
SCHEMATIC DIAGRAM (2/2)











NOTES

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.

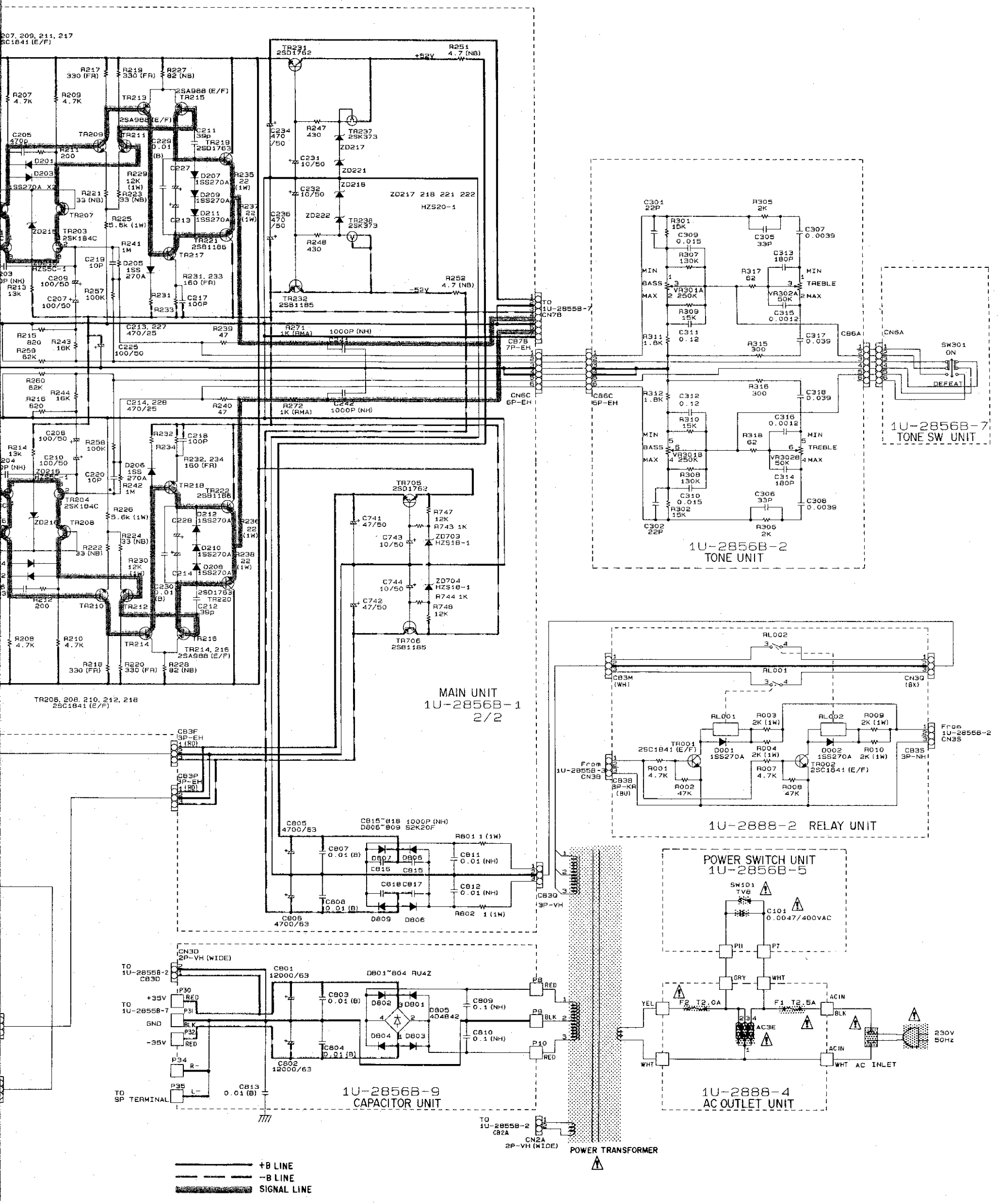
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

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 milliamps, 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 until the problem is located and corrected.

6 7 8 9 10 11


MAIN UNIT
1U-2856B-1
2/2
1U-2856B-2
TONE UNIT
1U-2856B-7
TONE SW UNIT
1U-2888-2 RELAY UNIT
POWER SWITCH UNIT
1U-2856B-5
1U-2856B-9
CAPACITOR UNIT
1U-2888-4
AC OUTLET UNIT
POWER TRANSFORMER
+B LINE
-B LINE
SIGNAL LINE