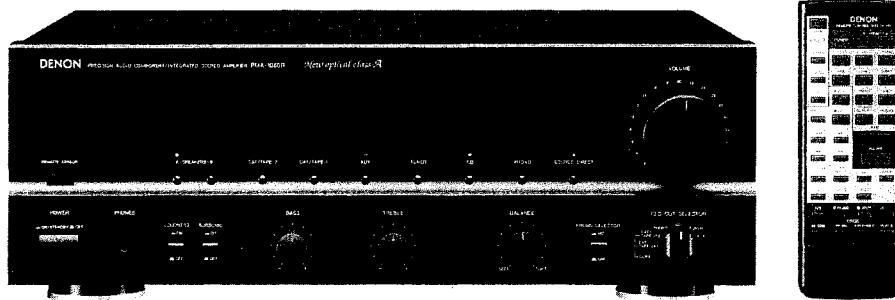


# DENON

Hi-Fi Integrated Stereo Amplifier

## SERVICE MANUAL MODEL PMA-1080R INTEGRATED STEREO AMPLIFIER



### CONTENTS

OPERATING INSTRUCTIONS .....	2-7
BLOCK AND LEVEL DIAGRAM .....	9
METHOD OF ADJUSTMENTS .....	9
REMOVAL OF EACH SECTION .....	10
SEMICONDUCTORS .....	11
PRINTED WIRING BOARD .....	12, 13
PRINTED WIRING BOARD PARTS LIST .....	14-17
WIRING DIAGRAM .....	18
EXPLODED VIEW OF CHASSIS AND CABINET .....	19
PARTS LIST OF EXPLODED VIEW .....	20
SCHEMATIC DIAGRAM .....	21,22

**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.**

## 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.
 

FIGURE 4  
EXAMPLE OF GROUNDING OR POLARIZATION MEANS OF AN APPLIANCE AS PER NATIONAL ELECTRICAL CODE
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.
13. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
14. Power Lines - An outdoor antenna should be located away from power lines.
15. 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, ANS/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.
16. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
17. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
18. 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.
19. 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.

• **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 LE 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.

• **NUR FÜR EUROPÄISCHE MODELLE**

**Konformitätserklärung**

Die DENON Electronic GmbH  
Heikstraße 32  
4030 Ratingen 1

Erklärt als Hersteller/Importeur, daß das in dieser Bedienungsanleitung beschriebene Gerät den Technischen Vorschriften für Ton- und Fernseh-Rundfunkempfänger nach der Amtsblattverfügung 866/1989 (Amtsblatt des Bundesministers für Post und Telekommunikation vom 31. 6. 1989) entspricht.

• **FOR UNITED KINGDOM MODEL ONLY**

**CONNECTING THE MAINS PLUG:**  
This unit operates from a 240V ac 50 Hz mains supply.

Fill a proper mains plug to the mains lead of this equipment. If a 13 amp (BS1363) plug is used, a 5 amp fuse must be fitted. The 13 amp fuse supplied in a new plug must NOT be used. If any other type of plug is used, a 5 amp fuse must be fitted either in the plug or adaptor or at the distribution board.

**IMPORTANT**  
The wires in the mains lead are coloured in accordance with the following code:  
Blue: Neutral  
Brown: Live

As the colours of the wires in the mains lead of the apparatus may not correspond with the colours used on your plug, proceed as follows:  
The wire which is coloured BLUE must be connected to the terminal which is marked with the letter N or coloured blue.  
The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured red.

**DO NOT MAKE ANY CONNECTION TO THE LARGER PIN MARKED WITH THE LETTER OR BY THE SYMBOL OR COLOURED GREEN OR GREEN-AND-YELLOW.**

Disconnect the mains plug from the supply socket when not in use.

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

VORSICHT: Wenn nur das VOLUME (Lautstärkeregel)-LED 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 active. 2. Mettre l'appareil sous tension et l'éteindre à l'aide de la télécommande. 3. Débrancher le cordon d'alimentation lorsque l'appareil ne sera pas utilisé pendant une longue période.

ATTENTION: 1. L'at allid strombrytaren (POWER) på huvudenheten vara påslagen. 2. Slå till/igen strömmen med hjälp av fjärrkontrollen. 3. Koppla loss nätströmen om apparaten inte skall användas under lång tid.

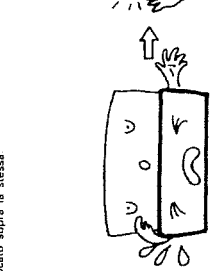
NOTA: 1. Mantenga siempre activado el interruptor de alimentación (POWER) en la unidad principal. 2. Encienda y apague el equipo desde la unidad de control remoto. 3. Cuando la unidad vaya a estar fuera de uso por un período prolongado de tiempo, desconecte el cable de alimentación.

PRECAUTIONS FOR INSTALLATION: 1. Leave a minimum of 10 cm between this unit and any other component placed above. 2. Do not place the unit directly above a heat source. 3. Do not place the unit in a location where it will be exposed to direct sunlight or other heat sources.

SICHERHEITSMASSNAHMEN BEIM EINBAU: Lassen einen Mindestabstand von 10 cm zwischen diesem Gerät und der anderen Komponente, die daraufgestellt wird. 2. Stellen Sie das Gerät nicht direkt über einer Wärmequelle auf. 3. Stellen Sie das Gerät nicht an einer Stelle auf, an der es direkt der Sonne oder anderen Wärmequellen ausgesetzt ist.

PRECAUTIONS D'INSTALLATION: Prévoir un espace d'au moins 10cm entre l'unité et tout autre appareil se trouvant au-dessus. 2. Ne pas placer l'appareil directement au-dessus d'une source de chaleur. 3. Ne pas placer l'appareil dans un endroit où il serait exposé à la lumière directe du soleil ou à d'autres sources de chaleur.

PRECAUÇÕES NA INSTALAÇÃO: Deixe um espaço livre de almeno 10 cm fra questa unità e qualsiasi altro componente che è collocato sopra la stessa. 2. Non collocare l'apparelo direttamente sopra una fonte di calore. 3. Non collocare l'apparelo in un luogo dove potrebbe essere esposto alla luce diretta del sole o ad altre fonti di calore.



NOTE: 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.

PRECAUTION: Cuando sólo el indicador LED de VOLUME (Control de volumen) está 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 hooftoestel in de ingeschakelde stand staat. 2. Schakel de stroom in en uit m.b.v. de afstandsbediening. 3. Het apparaat niet te gebruiken.

WAARSCHUWING: Indien enkel de demping's VOLUME (Volumeregelaar) LED brandt, betekent dit dat de spanning met de afstandsbediening is uitge-schakeld. Schakel de spanning in met de afstandsbediening.

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

NOTA: 1. Mantenga siempre activado el interruptor de Corrente (POWER) na unidade principal sempre ligada. 2. Ligue e desligue a corrente a partir da unidade de controlo remoto. 3. Desconecte o fio de força quando estiver fora de utilização por um longo tempo.

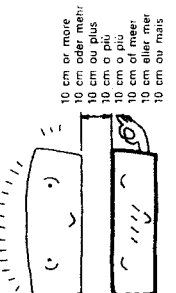
PRECAUÇÃO: Se apenas se iluminar o LED de VOLUME (Controle de volume), isto significa que a força se desliga a partir do controle remoto. Ligue a força a partir do controle remoto.

PRECAUTIONS PARA LA INSTALACION: Deje por lo menos 10 cm. de espacio entre esta unidad y cualquier otro componente situado sobre ella. 1. No coloque el aparato directamente sobre una fuente de calor. 2. No coloque el aparato en un lugar donde pueda estar expuesto a la luz directa del sol o a otras fuentes de calor.

VOORZORGSMAATREGELEN: Bij plaatsing dient u een ruimte van minstens 10 cm open te laten tussen dit toestel en een ander erop geplaatst component. 2. Plaats het apparaat niet direct boven een warmtebron. 3. Plaats het apparaat niet op een plaats waar het direct blootgesteld kan worden aan de directe zonlicht of andere warmtebronnen.

FÖRSIKTIGHETSÅTGÄRDER VID INSTALLATIONEN: Se till att det finns minst 10 cm mellanrum mellan apparaten och en ev annan apparat som ställs ovanpå. 2. Placera inte apparaten direkt över en värme-källa. 3. Placera inte apparaten på en plats där den kan utsättas för direkt solljus eller andra värme-källor.

CUIDADOS NA INSTALAÇÃO: Deixe um espaço livre de pelo menos 10 cm entre esta unidade e qualquer outro componente colocado acima. 2. Não coloque o aparelho diretamente sobre uma fonte de calor. 3. Não coloque o aparelho em um lugar onde possa estar exposto à luz direta do sol ou a outras fontes de calor.



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

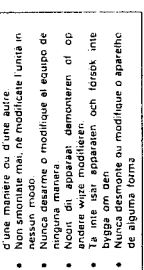
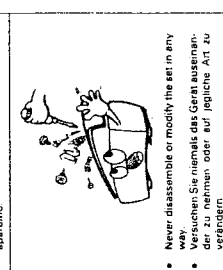
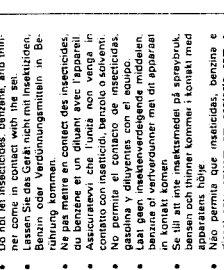
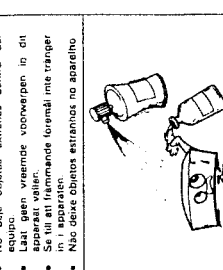
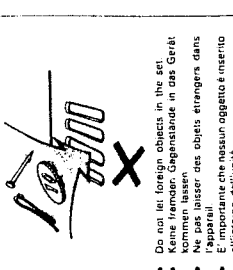
• Avoid high temperatures. Do not place the unit in a location where it will be exposed to direct sunlight or other heat sources. • Do not use the unit in a location where it will be exposed to high humidity or moisture. • Do not use the unit in a location where it will be exposed to dust or dirt. • Do not use the unit in a location where it will be exposed to rain or water. • Do not use the unit in a location where it will be exposed to fire or flames. • Do not use the unit in a location where it will be exposed to strong magnetic fields. • Do not use the unit in a location where it will be exposed to strong electromagnetic interference. • Do not use the unit in a location where it will be exposed to strong radio frequency interference. • Do not use the unit in a location where it will be exposed to strong static electricity. • Do not use the unit in a location where it will be exposed to strong vibrations. • Do not use the unit in a location where it will be exposed to strong shocks. • Do not use the unit in a location where it will be exposed to strong impacts. • Do not use the unit in a location where it will be exposed to strong pressure. • Do not use the unit in a location where it will be exposed to strong suction. • Do not use the unit in a location where it will be exposed to strong forces. • Do not use the unit in a location where it will be exposed to strong torques. • Do not use the unit in a location where it will be exposed to strong moments. • Do not use the unit in a location where it will be exposed to strong stresses. • Do not use the unit in a location where it will be exposed to strong strains. • Do not use the unit in a location where it will be exposed to strong deformations. • Do not use the unit in a location where it will be exposed to strong displacements. • Do not use the unit in a location where it will be exposed to strong rotations. • Do not use the unit in a location where it will be exposed to strong translations. • Do not use the unit in a location where it will be exposed to strong movements. • Do not use the unit in a location where it will be exposed to strong vibrations. • Do not use the unit in a location where it will be exposed to strong shocks. • Do not use the unit in a location where it will be exposed to strong impacts. • Do not use the unit in a location where it will be exposed to strong pressure. • Do not use the unit in a location where it will be exposed to strong suction. • Do not use the unit in a location where it will be exposed to strong forces. • Do not use the unit in a location where it will be exposed to strong torques. • Do not use the unit in a location where it will be exposed to strong moments. • Do not use the unit in a location where it will be exposed to strong stresses. • Do not use the unit in a location where it will be exposed to strong strains. • Do not use the unit in a location where it will be exposed to strong deformations. • Do not use the unit in a location where it will be exposed to strong displacements. • Do not use the unit in a location where it will be exposed to strong rotations. • Do not use the unit in a location where it will be exposed to strong translations. • Do not use the unit in a location where it will be exposed to strong movements.

• Keep the set free from moisture, water, and dust. • Do not use the unit in a location where it will be exposed to high humidity or moisture. • Do not use the unit in a location where it will be exposed to dust or dirt. • Do not use the unit in a location where it will be exposed to rain or water. • Do not use the unit in a location where it will be exposed to fire or flames. • Do not use the unit in a location where it will be exposed to strong magnetic fields. • Do not use the unit in a location where it will be exposed to strong electromagnetic interference. • Do not use the unit in a location where it will be exposed to strong radio frequency interference. • Do not use the unit in a location where it will be exposed to strong static electricity. • Do not use the unit in a location where it will be exposed to strong vibrations. • Do not use the unit in a location where it will be exposed to strong shocks. • Do not use the unit in a location where it will be exposed to strong impacts. • Do not use the unit in a location where it will be exposed to strong pressure. • Do not use the unit in a location where it will be exposed to strong suction. • Do not use the unit in a location where it will be exposed to strong forces. • Do not use the unit in a location where it will be exposed to strong torques. • Do not use the unit in a location where it will be exposed to strong moments. • Do not use the unit in a location where it will be exposed to strong stresses. • Do not use the unit in a location where it will be exposed to strong strains. • Do not use the unit in a location where it will be exposed to strong deformations. • Do not use the unit in a location where it will be exposed to strong displacements. • Do not use the unit in a location where it will be exposed to strong rotations. • Do not use the unit in a location where it will be exposed to strong translations. • Do not use the unit in a location where it will be exposed to strong movements.

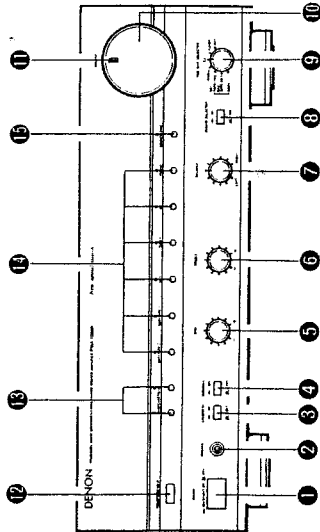
• Never disassemble or modify the set in any way. • Do not use the unit in a location where it will be exposed to high humidity or moisture. • Do not use the unit in a location where it will be exposed to dust or dirt. • Do not use the unit in a location where it will be exposed to rain or water. • Do not use the unit in a location where it will be exposed to fire or flames. • Do not use the unit in a location where it will be exposed to strong magnetic fields. • Do not use the unit in a location where it will be exposed to strong electromagnetic interference. • Do not use the unit in a location where it will be exposed to strong radio frequency interference. • Do not use the unit in a location where it will be exposed to strong static electricity. • Do not use the unit in a location where it will be exposed to strong vibrations. • Do not use the unit in a location where it will be exposed to strong shocks. • Do not use the unit in a location where it will be exposed to strong impacts. • Do not use the unit in a location where it will be exposed to strong pressure. • Do not use the unit in a location where it will be exposed to strong suction. • Do not use the unit in a location where it will be exposed to strong forces. • Do not use the unit in a location where it will be exposed to strong torques. • Do not use the unit in a location where it will be exposed to strong moments. • Do not use the unit in a location where it will be exposed to strong stresses. • Do not use the unit in a location where it will be exposed to strong strains. • Do not use the unit in a location where it will be exposed to strong deformations. • Do not use the unit in a location where it will be exposed to strong displacements. • Do not use the unit in a location where it will be exposed to strong rotations. • Do not use the unit in a location where it will be exposed to strong translations. • Do not use the unit in a location where it will be exposed to strong movements.

• Do not use insecticides, benzene, and flammable liquids near the set. • Do not use the unit in a location where it will be exposed to high humidity or moisture. • Do not use the unit in a location where it will be exposed to dust or dirt. • Do not use the unit in a location where it will be exposed to rain or water. • Do not use the unit in a location where it will be exposed to fire or flames. • Do not use the unit in a location where it will be exposed to strong magnetic fields. • Do not use the unit in a location where it will be exposed to strong electromagnetic interference. • Do not use the unit in a location where it will be exposed to strong radio frequency interference. • Do not use the unit in a location where it will be exposed to strong static electricity. • Do not use the unit in a location where it will be exposed to strong vibrations. • Do not use the unit in a location where it will be exposed to strong shocks. • Do not use the unit in a location where it will be exposed to strong impacts. • Do not use the unit in a location where it will be exposed to strong pressure. • Do not use the unit in a location where it will be exposed to strong suction. • Do not use the unit in a location where it will be exposed to strong forces. • Do not use the unit in a location where it will be exposed to strong torques. • Do not use the unit in a location where it will be exposed to strong moments. • Do not use the unit in a location where it will be exposed to strong stresses. • Do not use the unit in a location where it will be exposed to strong strains. • Do not use the unit in a location where it will be exposed to strong deformations. • Do not use the unit in a location where it will be exposed to strong displacements. • Do not use the unit in a location where it will be exposed to strong rotations. • Do not use the unit in a location where it will be exposed to strong translations. • Do not use the unit in a location where it will be exposed to strong movements.

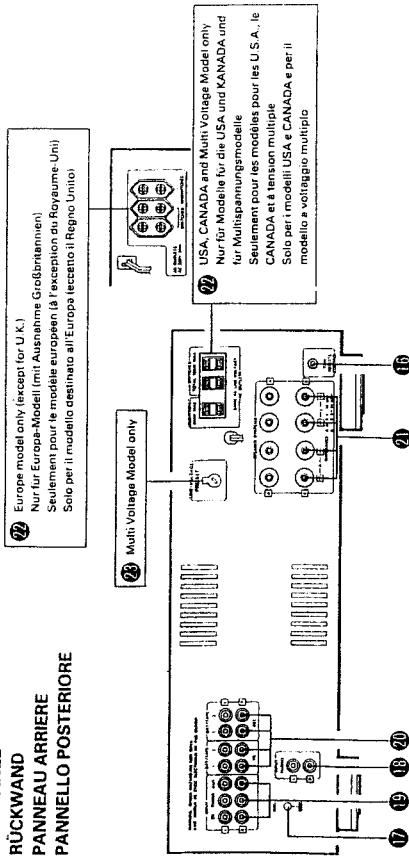
• Use the power cord when not using the set for long periods of time. • Do not use the unit in a location where it will be exposed to high humidity or moisture. • Do not use the unit in a location where it will be exposed to dust or dirt. • Do not use the unit in a location where it will be exposed to rain or water. • Do not use the unit in a location where it will be exposed to fire or flames. • Do not use the unit in a location where it will be exposed to strong magnetic fields. • Do not use the unit in a location where it will be exposed to strong electromagnetic interference. • Do not use the unit in a location where it will be exposed to strong radio frequency interference. • Do not use the unit in a location where it will be exposed to strong static electricity. • Do not use the unit in a location where it will be exposed to strong vibrations. • Do not use the unit in a location where it will be exposed to strong shocks. • Do not use the unit in a location where it will be exposed to strong impacts. • Do not use the unit in a location where it will be exposed to strong pressure. • Do not use the unit in a location where it will be exposed to strong suction. • Do not use the unit in a location where it will be exposed to strong forces. • Do not use the unit in a location where it will be exposed to strong torques. • Do not use the unit in a location where it will be exposed to strong moments. • Do not use the unit in a location where it will be exposed to strong stresses. • Do not use the unit in a location where it will be exposed to strong strains. • Do not use the unit in a location where it will be exposed to strong deformations. • Do not use the unit in a location where it will be exposed to strong displacements. • Do not use the unit in a location where it will be exposed to strong rotations. • Do not use the unit in a location where it will be exposed to strong translations. • Do not use the unit in a location where it will be exposed to strong movements.



FRONT PANEL  
FRONTPLATTE  
PANNEAU AVANT  
PANNELLO ANTERIORE



REAR PANEL  
RÜCKWAND  
PANNEAU ARRIERE  
PANNELLO POSTERIORE



23 LINE VOLTAGE (Voltage select switch) . . . For Multi-voltage models only. The desired voltage may be set with the VOL-TAGE SELECTOR KNOB on the back panel using a screw driver. Do not use excessive force. It may be damaged if the voltage select switch does not turn smoothly. See qualified serviceman.

16 TAPE/REMOTE CONTROL	15 PHONO	14 GND	13 CD, TUNER, AUX	12 DAT/TAPE 1, TAPE PB, TAPE REC	11 SPEAKERS
Tape deck Remote control jack	Phono Input Terminals (Phono)	GND	Input Terminals (CD, TUNER, AUX)	Physical and playback terminals	Speaker Terminals
Tafeldeck Fernbedienungssteckdose	Schallplatteneingangsanschlüsse (Phono)	GND	Eingangsbuchsen (CD, TUNER, AUX)	Tonband Ein/Ausgangsbuchsen	Lautsprecherklemmen
Prise de télécommande de magnéto cassette	Bornes d'entrée (phono)	GND	Bornes de lecture (CD, TUNER, AUX)	Bornes de lecture et d'enregistrement	Bornes de haut-parleurs
STECKDOSE FÜR FERNEBEDIENUNG DES TAPE DECK	Terminali di ingresso (Phono)	0V0	Terminali di ingresso (CD, TUNER, AUX)	Terminali di riproduzione e registrazione	Terminali degli altoparlanti

Fig. 1  
Abb. 1

CONNECTIONS  
ANSCHLÜSSE  
CONNEXIONS  
CONNESSIONI

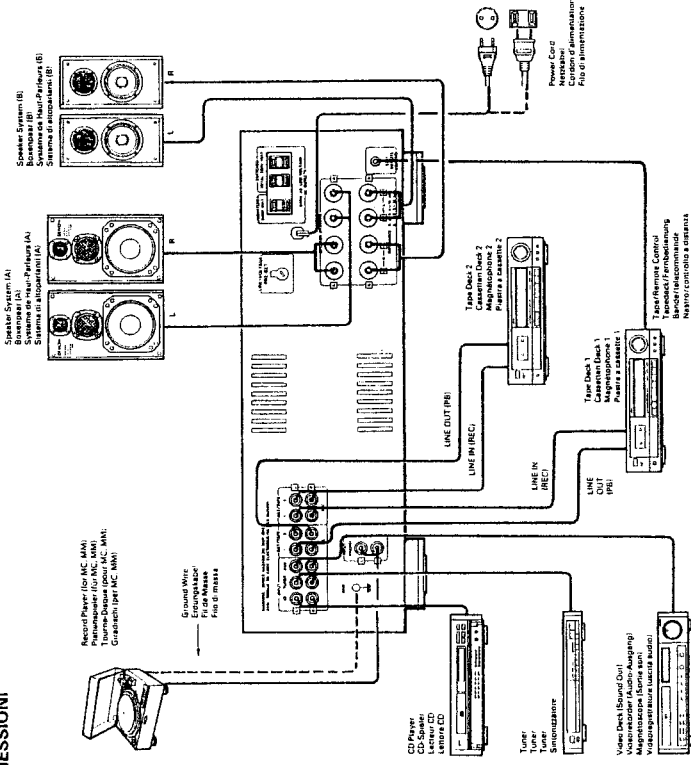


Fig. 2  
Abb. 2

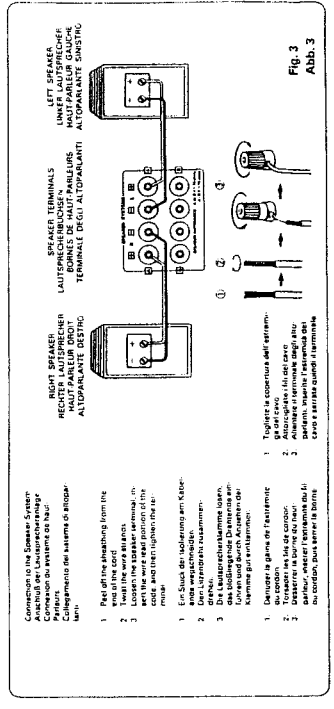


Fig. 3  
Abb. 3

## DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS

- 1 POWER (Power Switch)**  
When the power switch is turned ON (  $\rightarrow$  ), the volume LED 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.
- 2 PHONES (Headphone Jack)**  
This jack is used to plug in the headphones.

- 3 LOUDNESS (Loudness Switch)**  
When the volume is low, it is difficult for the human ear to clearly distinguish notes in the low and high frequency ranges. The loudness switch allows a simple "one-touch" correction of this difficulty. Press the loudness switch ON (  $\rightarrow$  ) when listening to music at a low volume. The low notes and high notes will be corrected to produce a natural sound.

- 4 SUBSONIC (Subsonic Filter Switch)**  
Use to prevent subsonic speaker vibration due to vibration of the player motor or a warped record, etc., when playing a connected player.

- 5 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 (  $\curvearrowright$  ), and reduced as it is moved to the left (  $\curvearrowleft$  ). When volume control **10** is set to the right of the center position, the effect of the other controls is reduced.

- 6 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 (  $\curvearrowright$  ), and reduced as it is moved to the left (  $\curvearrowleft$  ). When volume control **10** is set to the right of the center position, the effect of the other controls is reduced.

- 7 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 (  $\curvearrowright$  ). If the volume on the left side is too low, turn the knob to the left (  $\curvearrowleft$  ). This will achieve an even balance on the left and right sides.

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

- 9 REC OUT SELECTOR (Rec Out Select Switch)**  
Use this switch to select the recording component.  
  - PHONO: Used to recording from the turntable.
  - CD: Used to recording from the CD player.
  - TUNER: Used to recording from the tuner.
  - AUX: Used to recording component that connected to the AUX terminal.
  - DAT/TAPE-1  $\rightarrow$  2: Used to recording from the tape deck connected to the DAT/TAPE-1 jacks.
  - DAT/TAPE-2  $\rightarrow$  1: Used to recording from the tape deck connected to the DAT/TAPE-2 jacks.

- 10 VOLUME (Volume Control)**  
This knob controls the overall volume level.  
Turn the knob to the right (  $\curvearrowright$  ) to raise the volume and to the left (  $\curvearrowleft$  ) to lower it.

- 11 Volume LED**  
This LED flashes while the muting circuit is activated when the power is turned on and when muting is turned on from the remote control unit, and remains lit (without flashing) while the power is on.

- 12 REMOTE SENSOR (Remote Control Sensor)**  
This sensor receives the infrared light transmitted from the wireless remote control unit.  
For remote control, point the wireless remote control unit towards the sensor.

- 13 SPEAKERS (Speaker Selection Switch)**  
The PMA-1080R can be connected to two speaker systems: speaker system A and speaker system B.  
When A is pressed, its LED lights and the speaker system connected to speaker output terminals A operates. When A is pressed again, its LED goes out and the speaker system A can not operate.  
When B is pressed, its LED lights and the speaker system connected to speaker input terminals B operates. When B is pressed again, its LED goes out and the speaker system B can not operate.

- 14 INPUT SELECTOR (Input Select Switch)**  
Use these to select the program source.  
When the button for the desired program source is selected, its LED lights. One program source only can be selected at a time, as follows:  
  - PHONO: Use this position when using the record player connected to the PHONO jacks. Use the PHONO SELECTOR **8** 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, 8-track tape player or tape deck that is connected to the AUX terminal.
- DAT/TAPE-1: Use this Position when using the tape deck, etc., connected to the DAT/TAPE-1 jacks.
- DAT/TAPE-2: Use this Position when using the tape deck, etc., connected to the DAT/TAPE-2 jacks.

- 15 SOURCE DIRECT (Source Direct Switch)**  
Set this switch to ON will cause the input signal to bypass the LOUDNESS **3**, SUBSONIC **4**, BASS **5**, TREBLE **6**, BALANCE **7** circuits (regardless of the settings of these controls) and be input directly to the VOLUME **10** control to prevent loss of sound quality. The SOURCE DIRECT indicator will light up at this time.

- 16 TAPE/REMOTE CONTROL (Tape Deck Remote Control Jack; Rear Panel Side)**  
Remote control of a connected DENON cassette deck is enabled by connecting the tape deck remote control lead to this jack. The jack is a mini-jack designed to accept a 3.5 mm plug.  
NOTE: Do not connect headphones or a microphone to this jack. Use this jack only to connect a DENON cassette deck with a remote control jack (wired).

- 17 AC OUTLETS: Rear Panel Side**  
  - For U.S.A., Canada and Multi-voltage models. AC outlets are used for connecting amplifier component units, such as tuner, turntable, tape deck, etc.
  - SWITCHED (Total capacity: 120 W): These outlets are turned ON/OFF when main power switch and POWER button on the Remote Control Unit is turned on/off.
  - UNSWITCHED (Capacity: 240 W): This outlet is always ON whether power switch is on or OFF.
  - For Europe model, except the U.K. and Australia models. 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 and POWER button on the Remote Control Unit is turned on/off.
  - UNSWITCHED (Capacity: 100 W): This outlet is always ON whether power switch is on or OFF.

## OPERATION

- 1. CHECKING CONNECTIONS**  
  - Make sure that all the connections are proper by referring to the back panel. (Fig. 1, 2, 3)
  - 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 counterclockwise, to "0".
  - Set the rotary knob to "flat".
  - Set LOUDNESS, SUBSONIC to "OFF (  $\rightarrow$  )".

After checking the above items, turn on the power.

Turn the SOURCE DIRECT button off (the source direct indicator turns off) after turning on the power.

## PLAYING A RECORD

- Set the INPUT SELECTOR switch to "PHONO".
- Operate the turntable and play the record.
- Turn the volume and tone controls to yield an appropriate volume and sound quality.

- PLAYBACK OF CD PLAYER**  
  - Set the INPUT SELECTOR switch to "CD".
  - Operate the CD player.
  - Turn the volume and tone controls to yield an appropriate volume and sound quality.

- RECEPTION OF RADIO PROGRAMS**  
  - Set the INPUT SELECTOR switch to "TUNER".
  - Operate the tuner to receive a radio program.
  - Turn the volume and tone controls to yield an appropriate volume and sound quality.

- CONNECTIONS OF AUDIO EQUIPMENT TO AUX TERMINALS**  
  - Set the INPUT SELECTOR switch to "AUX" Position.
  - Operate the Audio equipment Systems.
  - Turn the volume and tone controls to yield an appropriate volume and sound quality.

- PLAYBACK WITH TAPE DECK**  
  - Set the INPUT SELECTOR switch to "DAT/TAPE-1" or "DAT/TAPE-2".
  - Operate the Tape Deck.
  - Turn the volume and tone controls to yield an appropriate volume and sound quality.

- RECORDING WITH TAPE DECK**  
  - Set the REC OUT SELECTOR to the program source you wish to record.
  - Start recording with the program source.
  - Start recording with the component connected to "DAT/TAPE-1" or "DAT/TAPE-2".

- In the PMA-1080R, the REC OUT signal and the speaker or headphone signal are output via separate circuits so that knobs and switches related to the tone and volume have no effect whatsoever on the sound that is recorded. Also, since the recording function is selected by the REC OUT SELECTOR, the free program source can be played through the speakers (or headphones) even during recording.

- MONITORING THE RECORDING**  
A recording in progress can be monitored if a tape deck with three individual heads for recording and playback is used. A tape deck in which a common head is used for both recording and playback cannot be used to monitor recording. When a recording is being made using DAT/TAPE-1, selecting DAT/TAPE-1 with the INPUT SELECTOR will engage the RECORDING MONITOR and permit a check of the recording condition.

## 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 turning for several seconds, the set will operate normally.

## NOTE

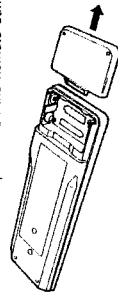
- This amplifier has a full memory back-up system. When the power is turned on, SPEAKERS **13**, INPUT SELECTOR **8** and SOURCE DIRECT **15** are set to the last mode set before the power was turned off.

REMOTE CONTROL OPERATION

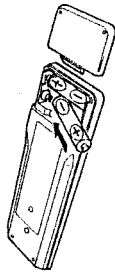
The accessory Remote Control Unit is used to control the amplifier from a convenient distance.

(1) Inserting the Dry Cell Batteries

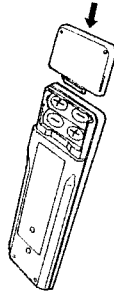
1. Remove the battery cover on the Remote Control Unit.



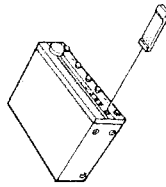
2. Insert two dry cell batteries as shown in the diagram on the battery supply unit.



3. Replace the battery cover.



(2) Directions for use



- Notes on Battery Usage**
- RC-151 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.

- 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-1080R 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-1080R to create a remarkably ergonomic and versatile DENON system with all the quality sound reproduction that the devoted audiophile expects.

Remote Control Unit RC-151 supplied with the PMA-1080R

1 [POWER] buttons

These buttons can be used to turn on and off the power of the various components, including the amplifier, tuner, cassette tape deck, CD player, etc. However, the power for these components can only be turned on and off if they are 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.

For some components, these buttons will not turn the power on and off. Read the manuals for the components before using the buttons.

2 SP-A and SP-B buttons

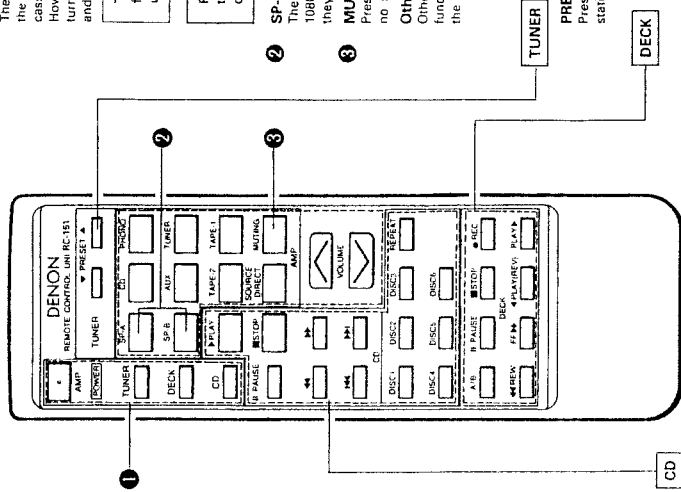
These control the speaker selector switches on the PMA-1080R. The switches turn on, off, then back on each time they are pressed.

3 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-1080R, and function in the same way as the corresponding buttons on the set.



TUNER

PRESET buttons

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

DECK

▶ PLAY button	▶ PLAY button
■ STOP button	▶ PLAY (REV) button
◀◀ REVERSE TRACK SEARCH button	■ STOP button
▶▶ FORWARD TRACK SEARCH button	◀◀ REW button
◀◀ REVERSE button	▶▶ FF button
▶▶ FORWARD button	● REC button
⏸ PAUSE button	Refer to the operating instructions of your DENON tape deck
▶▶ FORWARD button	A/B W-DECK
⏸ PAUSE button	A/B DECK
	SELECT button

- The RC-151 Remote Control Unit can control all CD players (excluding the DCD-1800R) and cassette decks manufactured by DENON.
- Buttons are conveniently separated into groups, each group controlling one specific component. The groups are AMP, FUNCTION, CD, DECK and TUNER etc.

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.
- On the VOLUME LED lights 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.

ENGLISH DEUTSCH FRANÇAIS

Technical Data (typical value)	Technische Daten (typische Werte)	Caractéristiques techniques (valeur caractéristique)
<p><b>POWER AMPLIFIER SECTION</b>                      Rated Output Power: 105W (8 ohm Load)                      Continuous 105W (8 ohm Load)                      D.I.N. 1 kHz, T.H.D. 0.7%                      *Continuous 105W (8 ohm Load) from 20 Hz to 20 kHz with no more than 0.005% total harmonic distortion.                      Total Harmonic Distortion: 0.005% (rated output, 8 ohms)  <b>PRE AMPLIFIER SECTION</b>                      Rated Output: 150 mV (line out terminal)                      Input Sensitivity/Impedance: 100 mV (8 ohm) (100 kHz)                      Relates to the input impedance when SOURCE DIRECT is ON.                      PHONO:                      MM 2.5 mV/47 kohm                      MC 200 µV/100 kohm                      TAPE 1, TAPE 2:                      RIAA Deviation:                      PHONO:                      Within ±0.3 dB                      Maximum input:</p>	<p><b>LEISTUNGSSEKTEUR</b>                      Nenn-Ausgangsleistung: 105 W (8 Ohm Last)                      Dauerleistung: 105 W (8 Ohm Last)                      D.I.N. 1 kHz, T.H.D. 0,7%                      *Fortwährend 105 W (8 Ohm Last) von 20 Hz bis 20 kHz mit einem Gesamtharmonikfaktor von nicht mehr als 0,005%                      Gesamtharmonikfaktor: 0,005% (Nennleistung, 8 Ohm)  <b>VORVERSTÄRKER</b>                      Nenn-Ausgangsleistung: 150 mV (Linienausgangsterminal)                      Eingangsempfindlichkeit/Impedanz: 100 mV (8 Ohm) (100 kHz)                      Wert bezieht sich auf die Eingangsimpedanz, wenn die Quellen-Direktwahl (SOURCE DIRECT) eingeschaltet (ON) ist.                      PHONO:                      MM 2,5 mV/47 kOhm                      MC 200 µV/100 kOhm                      TAPE 1, TAPE 2:                      RIAA-Kurve:                      PHONO:                      Innerhalb ±0,3 dB                      Maximaler Eingang:</p>	<p><b>PARTIE AMPLIFICATEUR</b>                      Puissance nominale: 105 W (charge 8 ohms)                      Puissance continue: 105 W (charge 8 ohms)                      D.I.N. 1 kHz, T.H.D. 0,7%                      *105W en continu par charge 8 Ohms de 20 Hz à 20 kHz avec une distorsion harmonique totale de 0,005% ou moins.                      Distorsion harmonique totale: 0,005% (à la sortie nominale, 8 ohms)  <b>PRE-AMPLI</b>                      Puissance nominale: 150 mV (Borne de sortie d'entré-gâtré-)                      Sensibilité d'entrée/Impédance d'entrée: 100 mV (8 Ohms) (100 kHz)                      La valeur se rapporte à l'impédance d'entrée lorsque la touche de source directe (SOURCE DIRECT) est sur "ON" sous tension (ON).                      PHONO:                      MM 2,5 mV/47 kOhm                      MC 200 µV/100 kOhm                      TAPE 1, TAPE 2:                      Variation RIAA:                      PHONO:                      Int. ± 0,3 dB                      Entrée max.:</p>
<p><b>OVERALL CHARACTERISTICS</b>                      SN Ratio (100 Hz Network):                      Input terminals short:                      SOURCE-DIRECT: ON                      Tone Control Adjustable                      Bass                      Treble                      Loudness:                      Subsonic Filter:                      OTHERS                      Power Supply</p>	<p><b>GESAMTEIGENSCHAFTEN</b>                      Signal/Rauschverhältnis (100 Hz Netzschleife):                      (Eingänge kurzgeschlossen)                      SOURCE-DIRECT: ON                      Klangregelbereich:                      TIEFEN (BASS)                      HÖHEN (TREBLE)                      Gehörliche Lautstärke:                      Untererschall-Schaltung:                      ANDERES                      Netzspannung und-frequenz</p>	<p><b>CHARACTERISTIQUES GENERALES</b>                      Rapport signal/bruit (réseau 100 Hz):                      (Bornes d'entrée court-circuitées)                      SOURCE DIRECT: ON                      Gamme de réglage de tonalité:                      GRAVES                      AIGÜS                      Compensation physiologique:                      Filtre subsonique:                      AUTRES                      Alimentation</p>
<p>AC Output Switched*2:                      Unswitched*1:                      Power Consumption                      Dimensions (W) x (H) x (D)                      Net Weight  <b>REMOTE CONTROL UNIT</b>                      Remote control system:                      Infrared pulse system                      Power supply:                      dry cell batteries (1 AA)                      External dimensions:                      Weight:</p>	<p>Wahlstrom-Ausgänge Geschaltet*2:                      Ungeschaltet*1:                      Leistungsaufnahme                      Abmessungen (B) x (H) x (T)                      Nettogewicht  <b>FERNBEDIENUNGSGERÄT</b>                      Fernbedienungs-System:                      Infrarot-Impulse                      Stromversorgung:                      Trockenzellen                      Batterien vom Format RG (AA)                      Äußere Abmessungen:                      Gewicht:</p>	<p><b>UNITS DE TELECOMMANDE</b>                      Système de télécommande:                      Système à impulsion infrarouge                      Alimentation:                      piles sèches (format RG "AA")                      Dimensions extérieures:                      Poids:</p>

Note: \*1 For Europe Multi-Voltage \*2 For U.S.A., Canada and Multi-Voltage  
 Hinweis: \*1 Für Europa Mehrfach-Spannung \*2 Für U.S.A., Kanada und Mehrfach-Spannung  
 Specifications and contents are subject to change without notice for purposes of improvement.  
 Änderungen des Inhalts und der technischen Daten zum Zwecke der Verbesserung vorbehalten.  
 Specifications et contenu sont sujets à modification sans préavis.

ENGLISH

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-151) ..... 1
- (3) Batteries R6P (AA) ..... 2

DEUTSCH

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

- (1) Bedienungsanleitung ..... 1
- (2) Fernbedienung (RC-151) ..... 1
- (3) Batterien vom Typ R6P (AA) ..... 2

FRANÇAIS

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-151) ..... 1
- (3) Piles R6P (AA) ..... 2

ITALIANO

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

- (1) Libretto delle istruzioni ..... 1
- (2) Telecomando (RC-151) ..... 1
- (3) Batterie R6P (AA) ..... 2

ESPAÑOL

Por favor, verifique asegurándose de que los siguientes artículos son empacados en la caja para asegurarse de la unidad principal.

- (1) Manual de instrucciones ..... 1
- (2) Unidad de control remoto (RC-151) ..... 1
- (3) Pilas R6P (AA) ..... 2

NEDERLANDS

Controleer of de volgende accessoires bij het hoofdtoestel in de doos zijn verpakt:

- (1) Gebruiksaanwijzing ..... 1
- (2) Afstandsbediening (RC-151) ..... 1
- (3) Batterijen R6P (AA) ..... 2

SVENSKA

Kontrollera att följande föremål huvudsapparatens, finns med i kartongen.

- (1) Bruksanvisning ..... 1
- (2) Fjärrkontroll (RC-151) ..... 1
- (3) Batterier R6P (AA) ..... 2

PORTUGUÊS

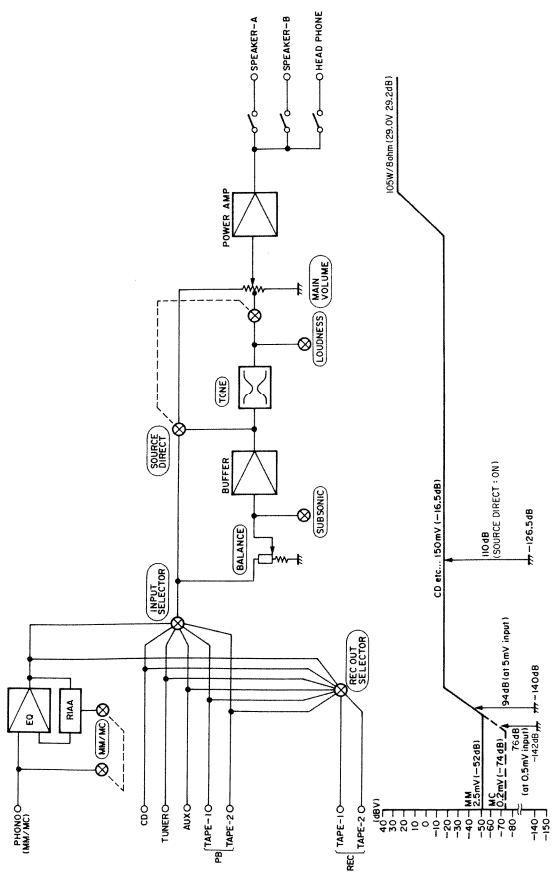
Confirme-se de que as seguintes peças estão incluídas na embalagem fora da unidade principal:

- (1) Instruções de operação ..... 1
- (2) Unidade de controle remoto (RC-151) ..... 1
- (3) Baterias R6P (AA) ..... 2

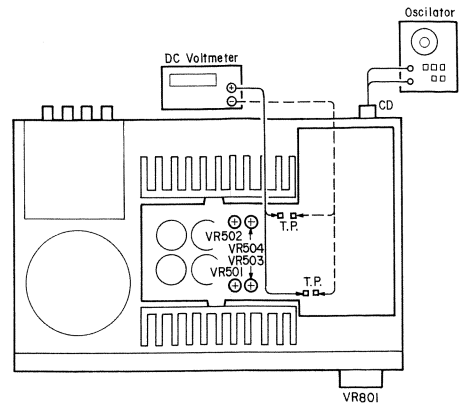
MEMO : \_\_\_\_\_



BLOCK AND LEVEL DIAGRAM



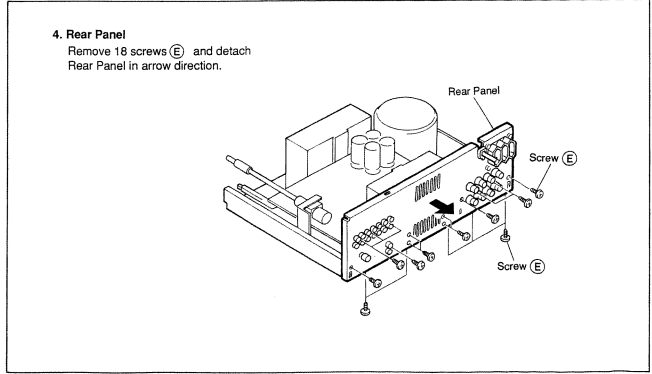
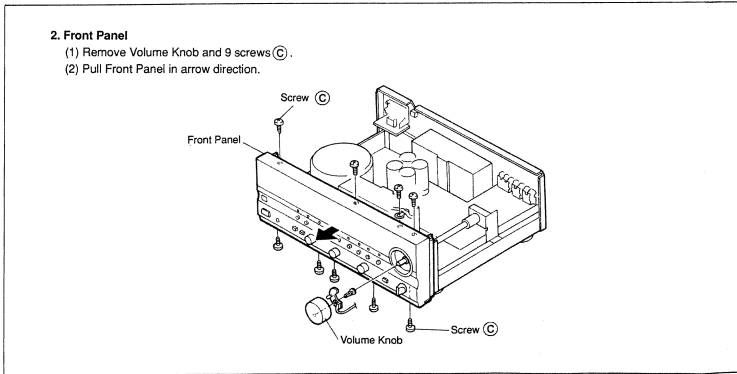
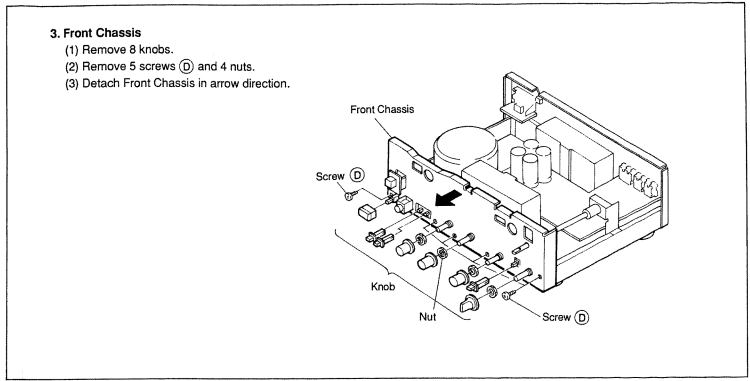
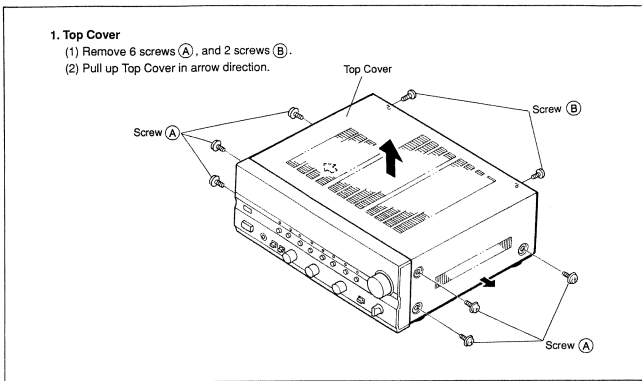
METHOD OF ADJUSTMENTS



IDLING CURRENT

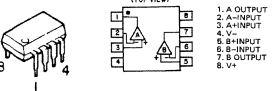
- Setup
  1. Lay the unit at an ordinary position away from a direct current from a cooler or fan. Do the adjustment at a temperature between 15°C (59°F) and 30°C (86°F).
  2. Set controls as follows.
    - POWER SWITCH → OFF (■)
    - VOLUME CONTROL → fully counterclockwise. (⤴) min. [Main volume (VR801) and semifixed resistors] (VR501,502,503 and 504)
    - SPEAKER Terminals → open: do not connect the speakers, dummy load etc.
- Adjustment
  1. Remove Top cover. And then connect DC Voltmeter to Test points of Main Unit 1U-2460A-1.
  2. Connect Power cord to AC outlet, and turn POWER Switch "ON" (■). Within 10 seconds turn VR501 (Lch) and VR502 (Rch) clockwise so that the DC voltmeter reads 8 ± 0.5 mV.
  3. Then after 2 minutes warmup adjust VR501 and VR502 so that the DC Voltmeter reads 8 ± 0.5mV.
  4. And after 10 minutes warmup adjust VR501 and VR502 so that the DC Voltmeter reads 8 ± 0.5 mV.
  5. Apply a 1 kHz, 10 mVrms signal to both channels input and set the main volume at maximum position.
  6. Confirm that the indication of DC voltmeter becomes slightly greater value (approx. 10 mV or less), then adjust the VR503 (L ch), VR504 (R ch) clockwise to obtain 30 mV ± 3 mV on the meter.
  7. After 2 minutes, readjust the VR503, VR504 for 30 mV ± 3mV.
  8. And after 10 minutes warmup, adjust VR503, VR504 for 30mV ± 3mV.

REMOVAL OF EACH SECTION



SEMICONDUCTORS

- IC's
- NJM4558DD (IC701)
- NJM2066DDC (IC201)
- M5218AP (IC401)
- NJM2082DD (IC402)

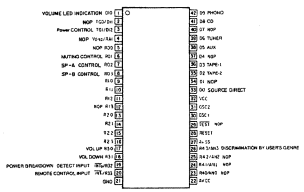


TRP521-1(BL)  
INFRARED LED + PHOTO TRANSISTOR



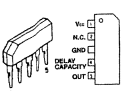
- 1: Cathode
- 2: Anode
- 3: Emitter
- 4: Collector

HD404304A13P (IC101)

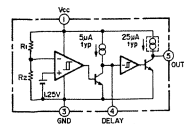
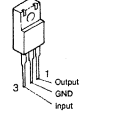


Pin No.	Name	ID	Contents	Active
1	D10	O	VOLUME LED INDICATOR	H
2	TRP521	O	NOP	
3	TOLU12	O	Power Control (REMOTE Power ON/OFF)	L
4	VOLUME	I	NOP	
5	TRP	O	NOP	
6	R01	O	Muting Control (Power ON OFF, Function Setting, Muting)	L
7	R02	O	SP-A Control	H
8	R03	O	SP-A Control	H
9	R10	O		H
10	R11	O	Key lock inhibit	H
11	R12	O		H
12	R13	O	NOP	
13	R20	I		H
14	R21	I	Key scan receive	H
15	R22	I		H
16	R23	I		H
17	R24	O	Volume Control "UP" = "H"	H
18	R25	O	Volume Control "DOWN" = "L"	H
19	TRP521	I	Power On/Off control signal	H
20	INTERRUPT	I	Flammable control signal receiving input	
21	GND			
22	AVCS		AVCS (AVCS)	
23	FRAGAND	NOP		
24	FRAGAND	NOP		
25	FRAGAND	NOP		
26	FRAGAND	NOP		
27	AVCS		Discontinuation port by user's gate	
28	AVCS		AVCS (AVCS)	
29	RESET		MR-200A External	
30	TEST		Yes	
31	CEC1		Center Fire Controller 4MHz External	
32	CEC2		Center Fire Controller 4MHz External	
33	CEC3		Center Fire Controller 4MHz External	
34	CEC4		Center Fire Controller 4MHz External	
35	CEC5		Center Fire Controller 4MHz External	
36	CEC6		Center Fire Controller 4MHz External	
37	CEC7		Center Fire Controller 4MHz External	
38	CEC8		Center Fire Controller 4MHz External	
39	CEC9		Center Fire Controller 4MHz External	
40	CEC10		Center Fire Controller 4MHz External	
41	CEC11		Center Fire Controller 4MHz External	
42	CEC12		Center Fire Controller 4MHz External	

M51954A (IC602)

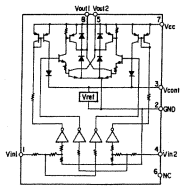


NJM7806FA(S) (IC601)



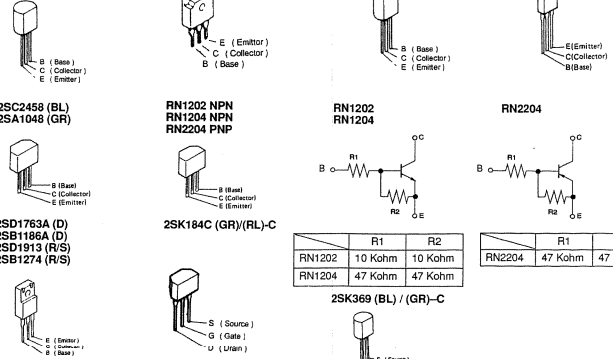
• IC PROTECTOR  
ICP-N15 (IC603)

LB1639 (IC103)

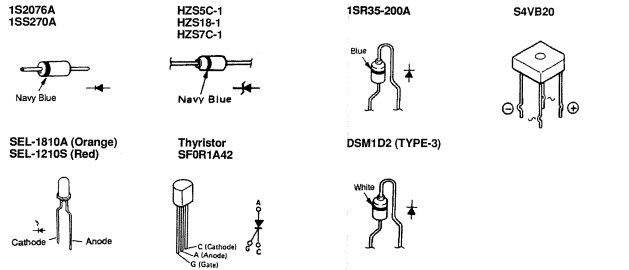


• TRANSISTORS

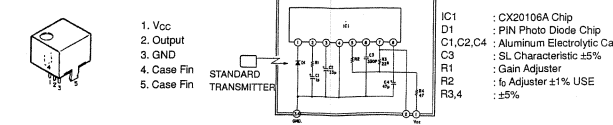
- 2SA988 (E/F)
- 2SC1841 (E/F)
- 2SC1815 (BL)
- 2SC2240 (BL/GR)
- 2SA1491LB4 (O)(P)(Y)/Z
- 2SC3855LB4 (O)(P)(Y)/Z
- 2SA1145(O)(Y)
- 2SC2705(O)(Y)
- 2SB1328 (P)
- 2SD2004 (P)



• DIODES (including LED)



SBX1610-52 (Remote Control Receiver) (IC102)

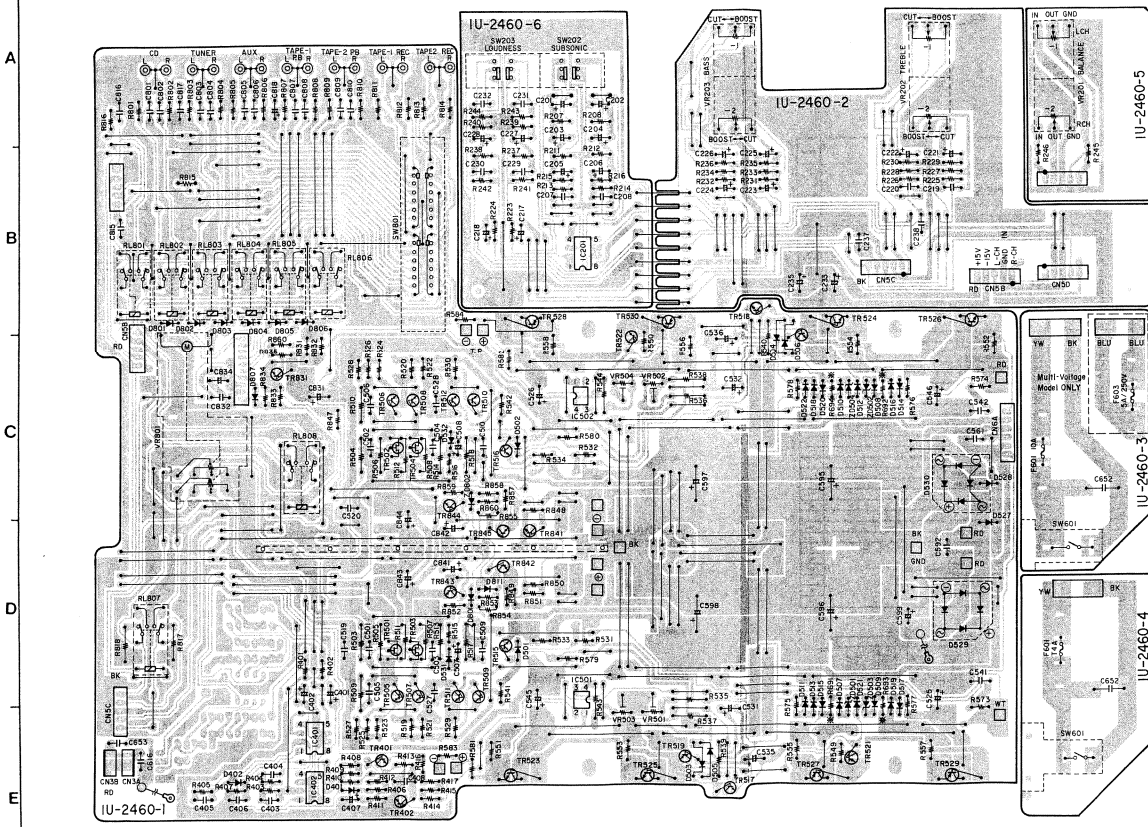


- IC1 : CX20106A Chip
- D1 : PIN Photo Diode Chip
- C1, C2, C4 : Aluminum Electrolytic Capacitor
- C3 : 5% Characteristic 25%
- R1 : Gain Adjuster
- R2 : f<sub>0</sub> Adjuster ±1% USE
- R3,4 : ±5%

PRINTED WIRING BOARD (Pattern Side)

1 2 3 4 5 6 7 8

1U-2460A MAIN UNIT ASS'Y



Version	U.S.A. Canada & Multi-Voltage Models	Europe, U.K. & Australia Models
1U-2460-3	Use	—
1U-2460-4	—	Use

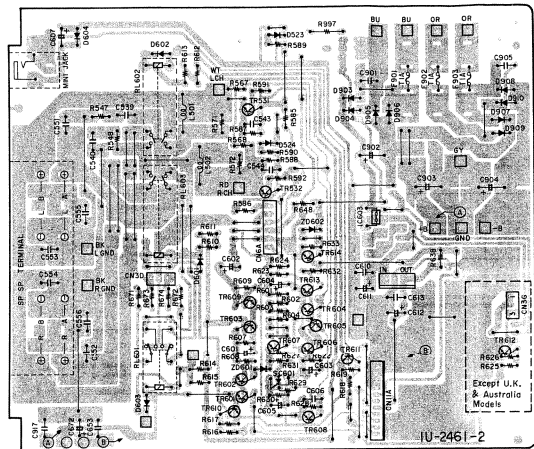
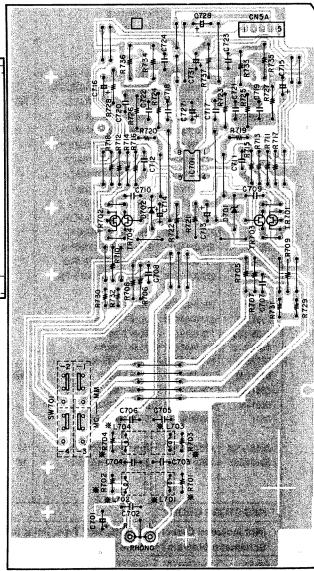
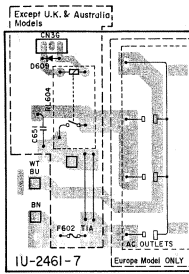
Table 1

Version	U.S.A. & Canada Models	Europe, U.K., Australia & Multi-Voltage Models
R691 - 694	10 ohm NB	Jumper

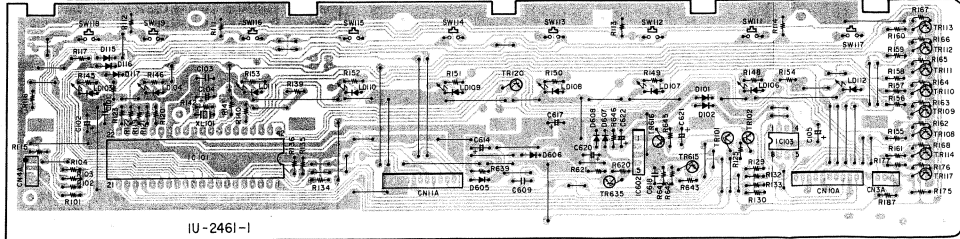
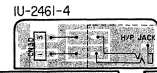
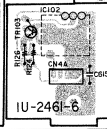
Table 2

1 2 3 4 5 6 7 8

1U-2461A  $\mu$ -COM UNIT ASS'Y



Version	R701 - R704	L701 - 704	F602
Europe Model	470	150 $\mu$ H	T1.0A
Except Europe Model	Jumper	—	Jumper




A  
B  
C  
D  
E

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 "1" (1) 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

RN	14K	ZE	182	G	FR
Type	Shape and performance	Power	Resistance error	Allowable error	Others
RD	Carbon	2B : 1/8W 2E : 1/4W 2H : 1/2W 3A : 3/4W 3D : 1W 3H : 3/2W	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	NS : Low noise type NB : Non-burning type FR : Pulse-resistor F : Lead wire forming	P : Pulse-resistor type NS : Low noise type NB : Non-burning type FR : Pulse-resistor F : Lead wire forming

Resistance  
1 8 2 ⇒ 1800 ohm = 1.8 kohm  
Indicates number of zeros after effective number  
2-digit effective number, decimal point indicated by R.  
Units: ohm

Capacitors

CE	04W	1H	2R2	M	BP
Type	Shape	Dielectric and per- strength	Capacity	Allowable error	Others
CE	Aluminum foil electrolytic	0J : 6.3V 1A : 10V 1C : 16V 1E : 25V 1V : 35V	F : ±1% G : ±2% J : ±5% K : ±10% M : ±20%	HS : High stability type BP : Non-polar type HR : Ripple-resistor type DS : For charge and discharge HP : For assuring High frequency	U : 1/8 Watt C : USA part W : U.L.CSA type F : Lead wire forming

Capacity  
2 R 2 ⇒ 2.2µF  
1-digit effective number, decimal point indicated by R.  
2-digit effective number, decimal point indicated by R.  
Units: µF (for P, pf) (µpF)  
\* When the dielectric strength is indicated in AC, "AC" is included after the dielectricUnits: µF (for P, pf) (µpF)

PARTS LIST OF P.W. UNIT  
1U-2460A MAIN UNIT (For Europe Black / Gold)

Ref. No.	Part No.	Part Name	Remarks	
<b>SEMICONDUCTORS GROUP</b>				
IC01	263 0609 002	IC NM2068DOC	FET	
IC02	263 0711 000	IC M5218AP		
IC02	263 0743 007	IC NM2082DD		
IC501.502	262 0874 009	IC TLP211-1(BL)		
TR401	273 0317 906	Transistor 2SC2458(BL)		
TR402	273 0187 932	Transistor 2SC2204(BL/GR)		
TR501-504	275 0055 015	FET 2SK184C(GR)(BL)		
TR505-508	273 0235 923	Transistor 2SC1841(E/F)		
TR509-512	271 0168 900	Transistor 2SA1145(O)(Y)		
TR515.516	273 0281 906	Transistor 2SC1815(BL)		
TR517.518	273 0198 918	Transistor 2SC1815(BL)		
TR519.520	274 0158 003	Transistor 2SD1763A(D)		
TR521.522	272 0115 008	Transistor 2SB1186A(D)		
TR831	274 0151 903	Transistor 2SC2004(P)	Bridge	
TR841	273 0235 923	Transistor 2SC1841(E/F)		
TR842	271 0131 924	Transistor 2SA888(E/F)		
TR843	274 0136 012	Transistor 2SD1913(R/S)		
TR844	272 0093 010	Transistor 2SB1274(R/S)		
TR845	273 0235 923	Transistor 2SC1841(E/F)		
D401.402	276 0432 903	Diode 1SS270A		5V 18V
D501.502	276 0432 903	Diode 1SS270A		
D903-506	276 0049 011	Diode 1S2076A		
n607-529	276 0432 903	Diode 1SS270A		
D627.528	276 0553 905	Diode 1SR55-200A		
D629.530	276 0305 001	Diode SAV520		
D531.532	276 0432 903	Diode 1SS270A		
D801-807	276 0432 903	Diode 1SS270A		
D811	276 0553 905	Diode 1SR35-200A		
ZD501-504	276 0460 904	Zener Diode HZSSC-1		
ZD801.802	276 0478 909	Zener Diode HZS18-1		
<b>RESISTORS GROUP</b>				
(Not included Carbon Film ±5%, 1/4W Type. Refer to the Schematic Diagram for those Parts.)				
R503.504	245 2063 907	Metal Film 620ohm,1/4W	RN14K2E21G	
R505-508	245 2084 902	Metal Film 4.7Kohm,1/4W	RN14K2E47G	
RS11.512	245 2090 909	Metal Film 8.2Kohm,1/4W	RN14K2E82G	
RS13.514	245 2046 908	Metal Film 120ohm,1/4W	RN14K2E121G	
RS17.518	245 2099 900	Metal Film 20Kohm,1/4W	RN14K2E20G	
AP519-522	241 2315 983	Fusible 380ohm,1/4W	RD14BE231GFRS	
AP523-529	241 2376 922	Carbon Film 330ohm,1/4W(N.B)	RD14BE233JNBS	
AP527.528	241 2330 918	Carbon Film 1.3Kohm,1/4W(N.B)	RD14BE132JNBS	
AR529.530	241 2377 921	Carbon Film 82ohm,1/4W(N.B)	RD14BE820JNBS	
AR531-534	241 2371 930	Fusible 160ohm,1/4W	RD14BE161GFRS	
RS35.536	245 2074 909	Metal Film 1.8Kohm,1/4W	RN14K2E182G	
RS37.538	245 2088 908	Metal Film 6.8Kohm,1/4W	RN14K2E682G	
RS39.540	245 2116 906	Metal Film 100Kohm,1/4W	RN14K2E104G	
AP541.542	244 2055 967	Metal Oxide 12Kohm,1W	RS14B3A12JNBS(S)	
AR543.544	243 2103 906	Metal Film 30Kohm,1/4W	RN14K2E30G	
AR545.550	241 2377 983	Carbon Film 120ohm,1/4W(N.B)	RD14BE121JNBS	
AR551-558	243 2061 013	Wire Wound 0.22ohm,5W	RW99-3FR22K	
AR573.574	244 2050 904	Metal Oxide 22ohm,1W	RS14B3A22JNBS(S)	
AR577.578	245 2081 905	Metal Film 3.6Kohm,1/4W	RN14K2E362G	
AR581	244 2051 916	Metal Oxide 7.5Kohm,1W	RS14B3A75JNBS(S)	
AR582	244 2050 991	Metal Oxide 6.8Kohm,1W	RS14B3A68JNBS(S)	
AR583	244 2051 990	Metal Oxide 4.7Kohm,1W	RS14B3A47JNBS(S)	
AR584	244 2052 957	Metal Oxide 5.6Kohm,1W	RS14B3A56JNBS(S)	
AR585	241 2432 905	Carbon Film 470ohm,1/4W(N.B)	RD14BE471JNBP	
AR586	241 2397 940	Carbon Film 4.7ohm,1/4W(N.B)	RD14BE471JNBP	
VR201	211 0742 007	Variable Resistor 100Kohm	Balance	
VR202	211 0744 005	Variable Resistor 10Kohm	Treble	
VR203	211 0743 006	Variable Resistor 30Kohm	Bass	
VR501.502	211 6077 941	Semi Fixed Resistor 5Kohm	V06PB502	
VR503.504	211 6077 933	Semi Fixed Resistor 47Kohm	V06PB473	
VR801	211 0745 004	Variable Resistor 30Kohm	Main	
<b>CAPACITORS GROUP</b>				
C201-204	254 4196 009	Electrolytic 0.1µF/50V(SRA)	CE04WH10R1M	
C205.206	254 4196 041	Electrolytic 1µF/50V(SRA)	CE04WH10I0M	
C207.208	253 4538 004	Ceramic 68pF50V	CC45SL1H680J	
C212.218	264 4199 003	Film-mylar-1N(F1N)(V)(SRA)	CE04WH10I00M	
C219.220	256 1034 018	Metalized 0.033µF50V	CF93A1H333J	
C221.222	254 4196 012	Electrolytic 0.22µF/50V(SRA)	CE04WH10R22M	
C223.224	254 4196 009	Electrolytic 0.1µF/50V(SRA)	CE04WH10R1M	
C225.226	254 4196 038	Electrolytic 0.47µF/50V(SRA)	CE04WH10R47M	
C227.228	254 4196 025	Electrolytic 0.33µF/50V(SRA)	CE04WH10R33M	
C229.230	256 1034 050	Metalized 0.068µF50V	CF93A1H683J	
C231.232	256 1034 018	Metalized 0.033µF50V	CF93A1H333J	
C233	254 4196 041	Electrolytic 1µF/50V(SRA)	CE04WH10I0M	
C235	254 4196 041	Electrolytic 1µF/50V(SRA)	CE04WH10I0M	
C237.238	253 4537 021	Ceramic 33pF50V	CC45SL1H330J	
C401.402	254 4260 045	Electrolytic 1µF/50V	CE04WH10I00M	
C403	253 3603 008	Ceramic 10pF50V	CC45SL1H100D	
C404	254 4260 067	Electrolytic 10µF/50V	CE04WH10I00M	
C405	253 3603 008	Ceramic 10pF50V	CC45SL1H100D	
C406	253 1181 001	Ceramic 0.01µF50V	CK45FH1H03Z	
C407	254 4260 090	Electrolytic 22µF/50V	CE04WH1220M	
C408	253 1181 001	Ceramic 0.01µF50V	CK45FH1H03Z	
C501-504	255 6177 948	Plastic Film 100pF50V(SMT)	CO09S1H101J	
C505.506	255 6179 948	Plastic Film 0.022µF50V(SMT)	CO09S1H222J	
C507.508	254 4431 007	Electrolytic 47µF/50V(ARA)	CE04WH10R70M	
C509.510	255 6163 046	Plastic Film 20pF250V	CO09S2E200J	
C519.520	255 6177 960	Plastic Film 22pF50V(SMT)	CO09S1H221J	
C525.526	254 4434 907	Electrolytic 47µF/100V(ARA)	CE04W2A47M	
C527.528	255 6163 033	Plastic Film 18pF250V	CO09S2E180J	
C531.532	254 4260 045	Electrolytic 1µF/50V	CE04WH10I0M	
C535.536	254 4432 705	Plastic Film 20µF/50V(ARZ)	CE04WH1211MC	
C541.542	255 4199 973	Plastic Film 0.01µF/100V(ARZ)	CO09M1H103J	
C545.546	254 4434 907	Electrolytic 47µF/100V(ARZ)	CE04W2A47M	
C561	256 1042 000	Metalized 0.1µF/250V	CF93A2E104K	
C592	256 1042 000	Metalized 0.1µF/250V	CF93A2E104K	

**1U-2460D for Multi-Voltage Model PARTS LIST**  
 (Same as 1U-2460A for Europe Black except the following)

Ref. No.	Part No.	Part Name	Remarks
C595,596	254 4426 009	Electrolytic 8200µF/ V	CE04W-822MC(DL)
C597,598	254 4427 008	Electrolytic 8200µF/ V	CE04W-822MC (DL)ALP
C599	254 4347 748	Electrolytic 1µF/50V(ARSA)	CE04W1H010MC
C616	253 1181 014	Ceramic 0.022µF/50V(ARSA)	CK45F1H223Z
▲C652	253 8003 713	Ceramic 4700pF/400V(AC)	CK45E2GAC472MC
C653	253 1181 014	Ceramic 0.022µF/50V	CK45F1H223Z
C801-810	253 4537 089	Ceramic 56µF/50V	CC45SL1H560J
C815,816	255 4199 986	Plastic Film 0.001µF/50V(MRZ)	CQ92M1H102J
C817	253 1181 014	Ceramic 0.022µF/50V	CK45F1H223Z
C818	254 4260 045	Electrolytic 1µF/50V	CE04W1H010M
C831	254 4263 987	Electrolytic 10µF/100V	CE04W2A100M
C832	253 1181 014	Ceramic 0.022µF/50V	CK45F1H223Z
C834	254 3053 004	Electrolytic 10µF/16V Bipole	CE04D1C100MBP
C841,842	254 4256 059	Electrolytic 220µF/25V	CE04W1E221M
C843,844	254 4356 755	Electrolytic 220µF/50V(ARS)	CE04W1H221MC

Ref. No.	Part No.	Part Name	Remarks	Q'ty
▲R691-694	241 2375 907	Carbon Film 10ohm,1/4W(N.B)	RD14B2E100JNBS	4
▲SW601	212 9534 002	Power Switch(TV-8)		1
	202 0022 008	Fuse Holder		4
▲F601	206 1061 073	Fuse (T10A/250V)		1
▲F603	206 1061 044	Fuse (T5A/250V)		1
	205 0149 003	2P Wrapping Terminal		2

**1U-2460E for U.S.A & Canada Models PARTS LIST**  
 (Same as 1U-2460A for Europe Black except the following)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
▲R691-694	241 2375 907	Carbon Film 10ohm,1/4W(N.B)	RD14B2E100JNBS	4
▲SW601	212 9534 002	Power Switch(TV-8)		1
▲F601	206 1046 043	Fuse (10A)		1

OTHER GROUP				Q'ty
	—	(P.W.Board)		(1)
SW202,203	212 1104 003	2P Push Switch	SUB,LOUD	1
▲SW601	212 1031 008	Power Switch(TV-5)		1
RL801-808	214 0127 003	Relay(RY-12W)		8
	204 8266 008	4P Pin Jack(S-GND)		2
	204 8300 003	6P Pin Jack		1
	212 4331 006	Slide Switch(4-6)REMOTE		1
	202 0022 008	Fuse Holder		2
▲F601	206 1015 087	Fuse(T4.0A)		1
	412 2160 044	Common Plate		1
CN5A	205 0233 058	5P EH Conn.Base		1
CN5B	205 0277 056	5P EH Conn.Base(RD)		2
CN5C	205 0278 055	5P EH Conn.Base(BK)		2
CN6A	205 0233 061	6P EH Conn.Base		1
CN3A	205 0343 032	3P Conn.Base(KR-PH)		1
CN3B	205 0321 038	3P Conn.Base(RED)		1
CN10A	205 0375 000	10P Conn.Base(KR-PH)		1
CN5D	203 8282 018	5P SCN-SCN Conn.Cord		1
	205 0149 003	2P Wrapping Terminal		1
	415 0309 042	PVC Tube(L=05)		8
	203 0418 071	1P SIN Cord Ass'y		1
	203 0497 021	1P Contact Ass'y		1

1U-2461A/B μ-COM UNIT (For Europe Black / Gold)

Ref. No.	Part No.	Part Name	Remarks
<b>SEMICONDUCTORS GROUP</b>			
IC101	262 1579 303	IC HD404304A13P	μ-COM
IC102	299 0150 008	IC SBX1610-52	Remocon Receiver
IC103	263 0476 002	IC LB1639	
IC601	263 0793 002	IC NJM7806FA(S)	Regulator
IC602	263 0535 008	IC M51954A	
IC603	268 0073 905	IC ICP-N15	IC Protector
IC701	263 0030 004	IC NJM4558DD	
TR101	269 0030 909	Transistor RN2204(47K-47K)	Built-in Resistor
TR102	269 0029 907	Transistor RN1204(47K-47K)	Built-in Resistor
TR103	269 0030 909	Transistor RN2204(47K-47K)	Built-in Resistor
TR108-113	273 0235 923	Transistor 2SC1841(E/F)	
TR114	273 0317 906	Transistor 2SC2458(BL)	
TR117	273 0235 923	Transistor 2SC1841(E/F)	
TR120	269 0029 907	Transistor RN1204(47K-47K)	Built-in Resistor
TR531,532	273 0235 923	Transistor 2SC1841(E/F)	
TR601	269 0025 901	Transistor RN1202(10K-10K)	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)	
TR610,611	273 0235 923	Transistor 2SC1841(E/F)	
TR612-616	273 0317 906	Transistor 2SC2458(BL)	
TR635	271 0191 906	Transistor 2SA1048(GR)	
TR701-704	275 0038 045	FET 2SK369(BL)(GR)-C	FET
D101,102	276 0432 903	Diode 1SS270A	
D115-117	276 0432 903	Diode 1SS270A	
D523,524	276 0432 903	Diode 1SS270A	
D601-609	276 0432 903	Diode 1SS270A	
D701,702	276 0049 011	Diode 1S2076A	
D903-906	276 0553 905	Diode 1SR35-200A	
D907-910	276 0548 910	Diode DSM1D2	
ZD601,602	276 0466 908	Zener Diode HZS7C-1	7V
LD101	393 9434 906	LED SEL1210S	Red
LD103,104	393 9453 903	LED SEL1810A	Amber
LD106-111	393 9434 906	LED SEL1210S	Red
LD112	393 9453 903	LED SEL1810A	Amber
SC601	279 0016 906	Thyristor SF0R1A42	
<b>RESISTORS GROUP</b>			
<b>(Not included Carbon Film 5%, 1/4W Type. Refer to the Schematic Diagram for those Parts.)</b>			
△R547,548	244 2043 937	Metal Oxide 10ohm,1W	RS14B3A100JNBS(S)
△R571,572	241 2387 940	Carbon Film 4.7ohm,1/4W(N.B)	RD14B2E4R7JNBS
△R585-588	241 2380 950	Carbon Film 2Kohm,1/4W(N.B)	RD14B2E202JNBS

Ref. No.	Part No.	Part Name	Remarks
△R609	241 2432 905	Carbon Film 470ohm,1/4W(N.B)	RD14B2E471JNBS
△R610	244 2052 986	Metal Oxide 750ohm,1W	RS14B3A751JNBS(S)
△R611	244 2051 929	Metal Oxide 820ohm,1W	RS14B3A821JNBS(S)
△R612	244 2052 986	Metal Oxide 750ohm,1W	RS14B3A751JNBS(S)
△R613	244 2051 929	Metal Oxide 820ohm,1W	RS14B3A821JNBS(S)
△R614	244 2050 991	Metal Oxide 6.8Kohm,1W	RS14B3A682JNBS(S)
△R615	244 2051 916	Metal Oxide 7.5Kohm,1W	RS14B3A752JNBS(S)
△R640	241 2387 940	Carbon Film 4.7ohm,1/4W(N.B)	RD14B2E4R7JNBS
△R671-674	244 2051 958	Metal Oxide 220ohm,1W	RS14B3A221JNBS(S)
R705,706	245 2044 900	Metal Film 100ohm,1/4W	RN14K2E101G
R707,708	245 2108 901	Metal Film 47Kohm,1/4W	RN14K2E473G
R709,710	245 2020 908	Metal Film 10ohm,1/4W	RN14K2E100G
R711-714	245 2079 904	Metal Film 3Kohm,1/4W	RN14K2E302G
R715,716	245 2051 906	Metal Film 200ohm,1/4W	RN14K2E201G
R717,718	245 2075 908	Metal Film 2Kohm,1/4W	RN14K2E202G
R721,722	245 2042 902	Metal Film 82ohm,1/4W	RN14K2E820G
R723,724	245 2108 901	Metal Film 47Kohm,1/4W	RN14K2E473G
R725,726	245 2082 904	Metal Film 3.9Kohm,1/4W	RN14K2E392G
R727,728	245 2028 900	Metal Film 220ohm,1/4W	RN14K2E220G
R733,734	245 2052 905	Metal Film 220ohm,1/4W	RN14K2E221G
R735,736	245 2060 900	Metal Film 470ohm,1/4W	RN14K2E471G
R737	245 2066 904	Metal Film 820ohm,1/4W	RN14K2E821G
<b>CAPACITORS GROUP</b>			
C101	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C102	254 4213 034	Electrolytic 100μF/6.3V(SRA)	CE04WJ 101M
C103	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C104,105	254 4213 034	Electrolytic 100μF/6.3V(SRA)	CE04WJ 101M
C539,540	255 4199 960	Plastic Film 0.022μF/50V(MRZ)	CQ92M1H223J
C543,544	253 1181 001	Ceramic 0.01μF/50V	CK45F1H103Z
C551-554	255 1251 940	Plastic Film 0.0047μF/50V(MRZ)	CQ92M1H472J
C555,556	253 1181 001	Ceramic 0.01μF/50V	CK45F1H103Z
C601	254 4254 006	Electrolytic 10μF/16V	CE04W1C 100M
C602	254 4264 025	Electrolytic 100μF/100V	CE04W2A 101M
C603	254 4250 042	Electrolytic 330μF/6.3V	CE04W0J331M
C604,605	254 4252 008	Electrolytic 22μF/10V	CE04W1A220M
C606	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C607	254 4254 006	Electrolytic 10μF/16V	CE04W1C 100M
C609	256 1034 089	Metalized 0.12μF/50V	CF93A1H1 24J
C610	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C611	254 4260 087	Electrolytic 10μF/50V	CE04W1H 100M
C612	254 4254 006	Electrolytic 10μF/16V	CE04W1C 100M
C613	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C614	254 4250 042	Electrolytic 330μF/6.3V	CE04W0J331M
C615	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C617	259 0007 003	Back Up Cap.8200μF	SB CAP-822-
C618	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z
C620	254 4260 029	Electrolytic 0.33μF/50V	CE04W1H333M
C621	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H477M
C622	254 4260 045	Electrolytic 1μF/50V	CE04W1H1010M



**1U-2461C for Australia Model PARTS LIST**  
(Same as 1U-2461A for Europe Black except the following)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
AC651	253 8003 713	Ceramic 4700pF400V(AC)	CK45FH223Z	
C653	253 1181 014	Ceramic 0.022uF50V	CK45FH223Z	
C672	254 4260 045	Electrolytic 1uF50V	CE04WH010M	
C701	254 4260 045	Electrolytic 1uF50V	CE04WH010M	
C702	253 1181 014	Ceramic 0.022uF50V	CK45FH223Z	
C703,704	253 4537 083	Ceramic 470pF50V	CC45SLH470J	
C705,706	255 6177 964	Plastic Film 150pF50V(SMT)	CO09S1H151J	
C707,708	255 4199 986	Plastic Film 0.001uF50V(MRZ)	CO29M1H102J	
C709,710	255 6177 948	Plastic Film 100pF50V(SMT)	CO09S1H101J	
C711,712	255 6179 920	Plastic Film 0.003uF50V(SMT)	CO09S1H332J	
C713,714	254 4252 037	Electrolytic 100uF10V	CE04WA101M	
C715,716	254 4254 006	Electrolytic 10uF16V	CE04WC100M	
C717,718	255 4199 931	Plastic Film 0.068uF50V(MRZ)	CO29M1H683J	
C719,720	255 6178 976	Plastic Film 0.001uF50V(SMT)	CO09S1H123J	
C721,722	255 4199 957	Plastic Film 0.010uF50V(MRZ)	CO29M1H183J	
C723,724	255 4199 986	Plastic Film 0.001uF50V(MRZ)	CO29M1H102J	
C727,728	254 4260 045	Electrolytic 1uF50V	CE04WH010M	
C731	254 4252 037	Electrolytic 100uF10V	CE04WA101M	
C901	253 1181 014	Ceramic 0.022uF50V	CK45FH223Z	
C902	254 4256 790	Electrolytic 2200uF25V	CE04WE22MC	
C903,904	254 4433 704	Electrolytic 1000uF35V(ARE)	CE04W1V102MC	
C905	256 1042 903	Metallized 0.1uF250V	CF93A2E104K	
C917	253 1181 014	Ceramic 0.022uF50V	CK45FH223Z	
<b>OTHER GROUP</b>				<b>Q'ty</b>
SW111-119	212 5604 910	(FW Board)		(1)
RL601	214 0127 003	1act Switch	for HPP	9
RL601	214 0127 003	Relay(RY-12W)	for HPP	1
RL604	214 0142 004	Relay(TVS)	for AC Out	1
RL604	203 3950 002	3P AC Outlet		1
XL101	399 9018 003	Ceramic Vibrator CST4.00MGW		1
L701-704	235 9003 002	FTZ Choke Coil		4
	235 0274 004	2P Connector Base		1
	202 0022 008	Fuse Holder		8
AF602	206 1015 029	Fuse 1A(T)		1
AF602	206 1015 029	Fuse 1A(T)		3
SW701	212 1041 001	1P Push Switch	MM/MC	1
	204 8354 004	Head Phone Jack	Black Version	1
	204 8355 003	Head Phone Jack	Gold Version	1
	204 8260 004	Mini Jack		1
	205 0753 004	8P Terminal(S-GND)		1
L501,502	235 0068 004	Inductor 1uH		2
RL602,603	214 9033 005	Relay	for SP A/B	2
CN3A	205 0343 032	3P Conn.Base(KR-PH)		1
CN4A	205 0343 045	4P Conn.Base(KR-PH)		1
CN10A	205 0375 000	10P Conn.Base(KR-PH)		1
CN3G	205 0233 032	3P EH Conn.Base		1
CN11A+2	205 0321 012	11P Conn.Base(RED)		2
CN3B	203 4837 001	3P PH-SAN Conn.Cord		1
CN4A	203 6393 006	4P KR-DS Conn.Cord		1
CN5A	203 6310 029	5P EH-SCN Conn.Cord		1
CN3D	203 4838 003	3P SCN-SCN Conn.Cord		1
CN3G	203 4882 001	3P EH-SCN Conn.Cord		1
CN6A	204 0309 028	6P EH-SCN Conn.Cord		1
	203 0525 045	1P SIN Cord Assy	Black L=140	1
	203 0525 058	1P SIN Cord Assy	Black L=200	1

Ref. No.	Part No.	Part Name	Remarks	Q'ty
TR612	273 0317 906	Transistor 2SC2458 (BL)	Delete	0
D609	276 0432 903	Diode 1SS270A	Delete	0
AC651	253 8003 713	Ceramic 4700pF400V(AC)	Delete	0
AC651	203 3950 002	3P AC Outlet	Delete	0
L701-704	235 9003 002	FTZ Choke Coil	Delete	0
	202 0022 008	Fuse Holder	Delete	6
RL604	214 0142 004	Relay (TVS)	Delete	0
AF602	206 1015 029	Fuse 1A(T)	Delete	0
	205 0777 006	8P Terminal (S-GND)	Delete	1
CN3G	205 0233 032	3P EH Conn. Base	Delete	0
CN3G	205 4882 001	3P EH-SCN Conn. Cord	Delete	0

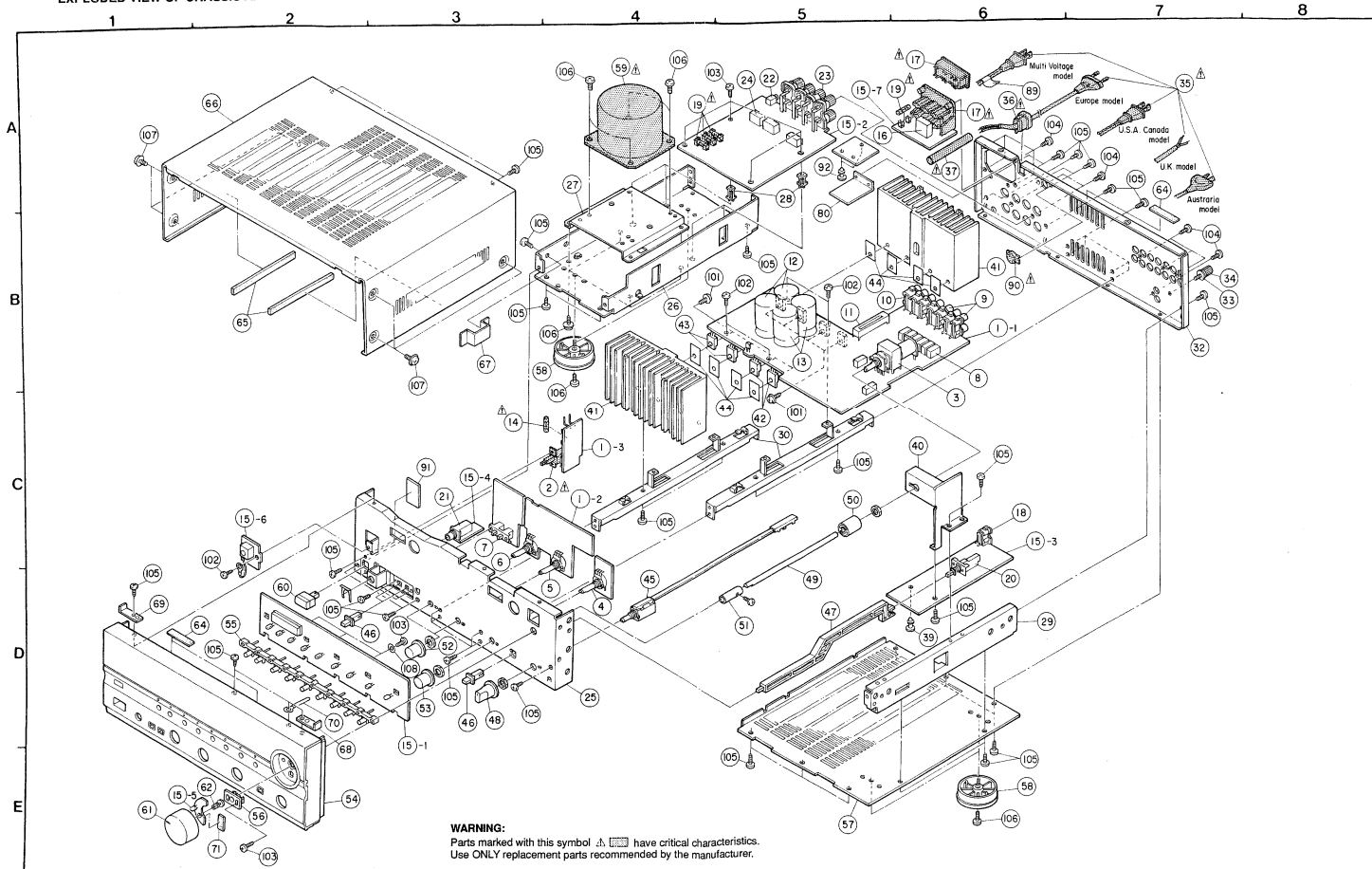
**1U-2461D for Multi-Voltage Model PARTS LIST**  
(Same as 1U-2461A for Europe Black except the following)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
AC651	203 3950 002	3P AC Outlet	Delete	0
L701-704	235 9003 002	FTZ Choke Coil	Delete	0
	202 0022 008	Fuse Holder	Delete	6
AF901-903	206 1039 007	Fuse 1.0A	Delete	3
	205 0777 006	8P Terminal (S-GND)	Delete	1
AF602	206 1015 029	Fuse 1A (T)	Delete	0

**1U-2461E for U.S.A. & Canada Models PARTS LIST**  
(Same as 1U-2461A for Europe Black except the following)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
AC651	203 3950 002	3P AC Outlet	Delete	0
L701-704	235 9003 002	FTZ Choke Coil	Delete	0
	202 0022 008	Fuse Holder	Delete	6
AF901-903	206 1039 007	Fuse 1.0A	Delete	3
	205 0777 006	8P Terminal (S-GND)	Delete	1
AF602	206 1015 029	Fuse 1A (T)	Delete	0

EXPLODED VIEW OF CHASSIS AND CABINET



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

PARTS LIST OF EXPLODED VIEW

Table with columns: Ref. No., Part No., Part Name, Remarks, Q'ty. Lists various components like Main Unit Assy, Variable Resistor, Relay, and AC Outlet.

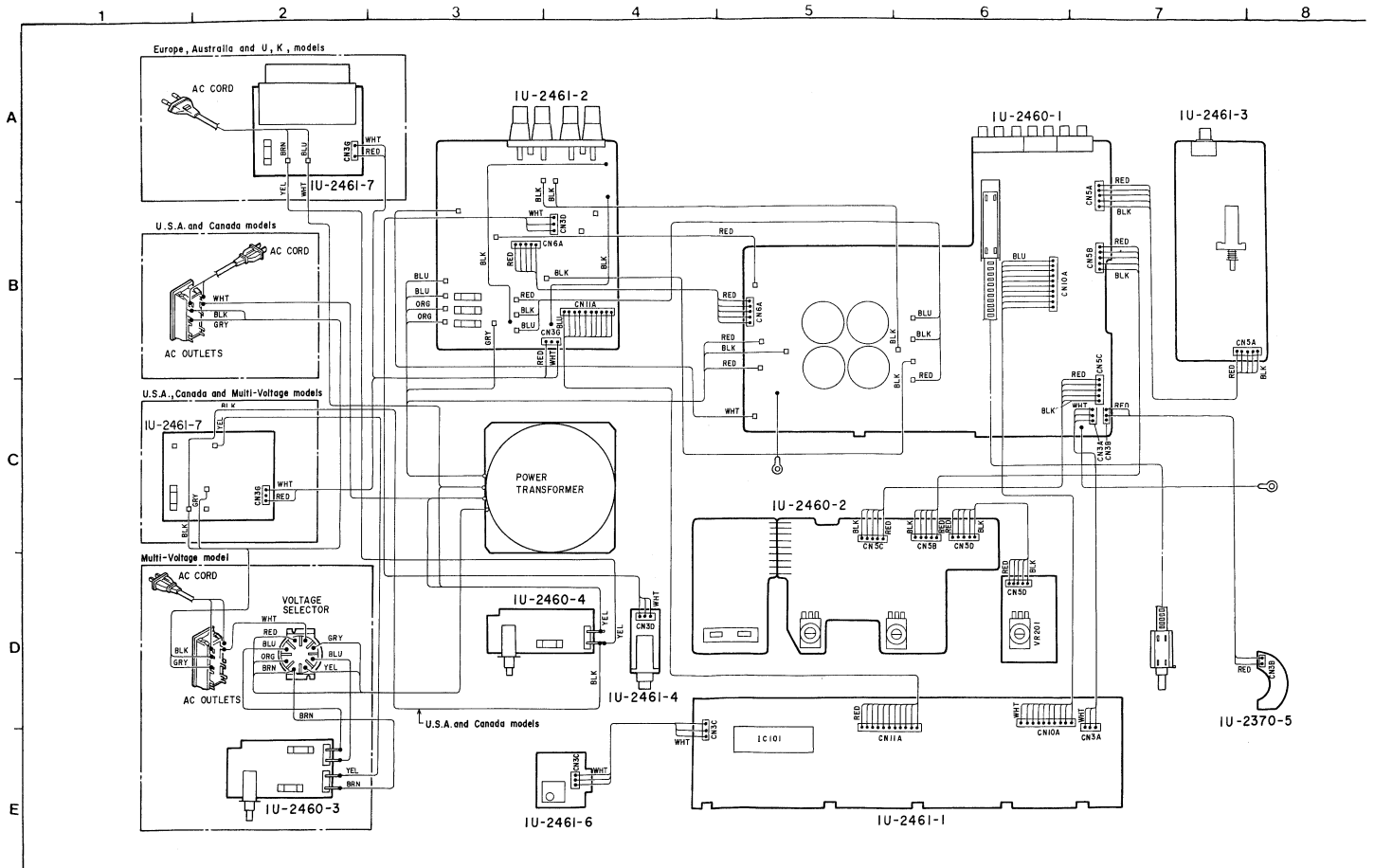
Table with columns: Ref. No., Part No., Part Name, Remarks, Q'ty. Lists various components like VR Knob, Power Trans, and various screws and washers.

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...

ADDENDUM LIST

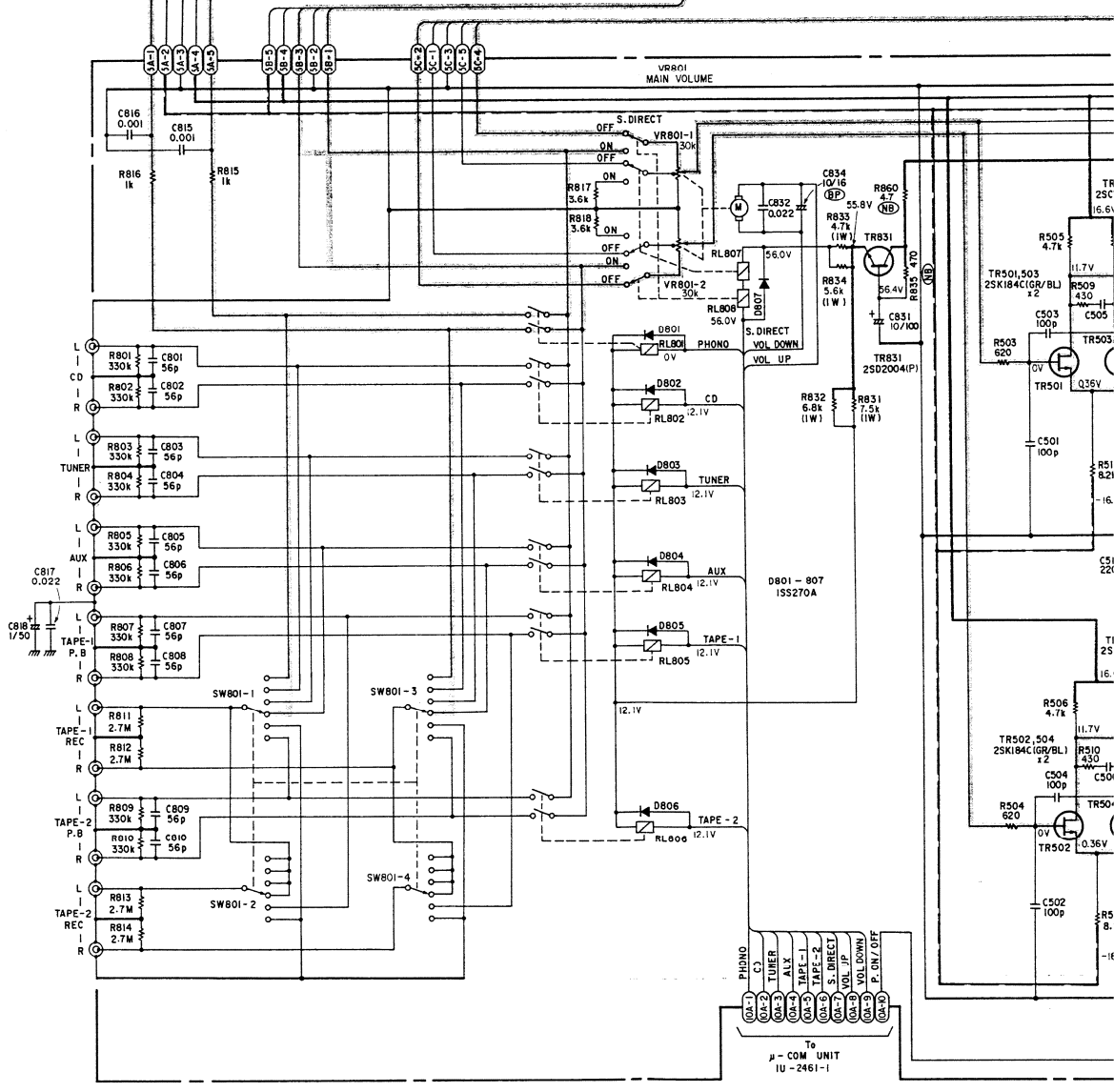
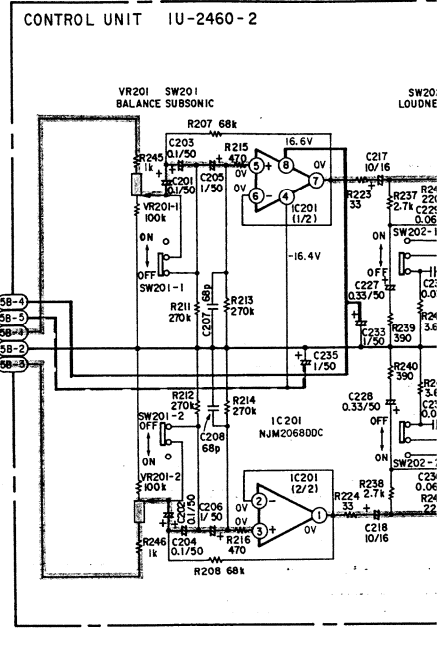
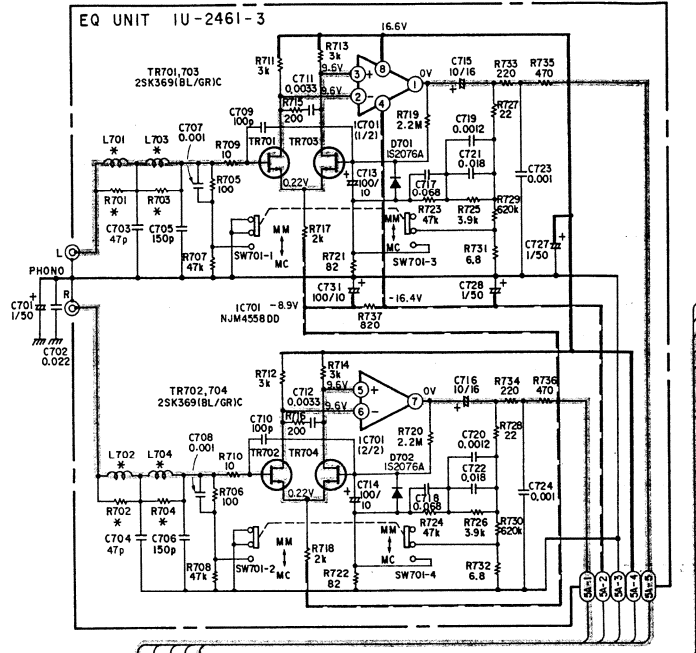
Table with columns: Ref. No., Part Name & Descriptions, Europe Black, Europe Gold, U.S.A. Black, Canada Black, Multi-Voltage Black, Australia Black. Lists alternative part numbers for various components.


WIRING DIAGRAM



SCHEMATIC DIAGRAM

1 2 3 4 5 6



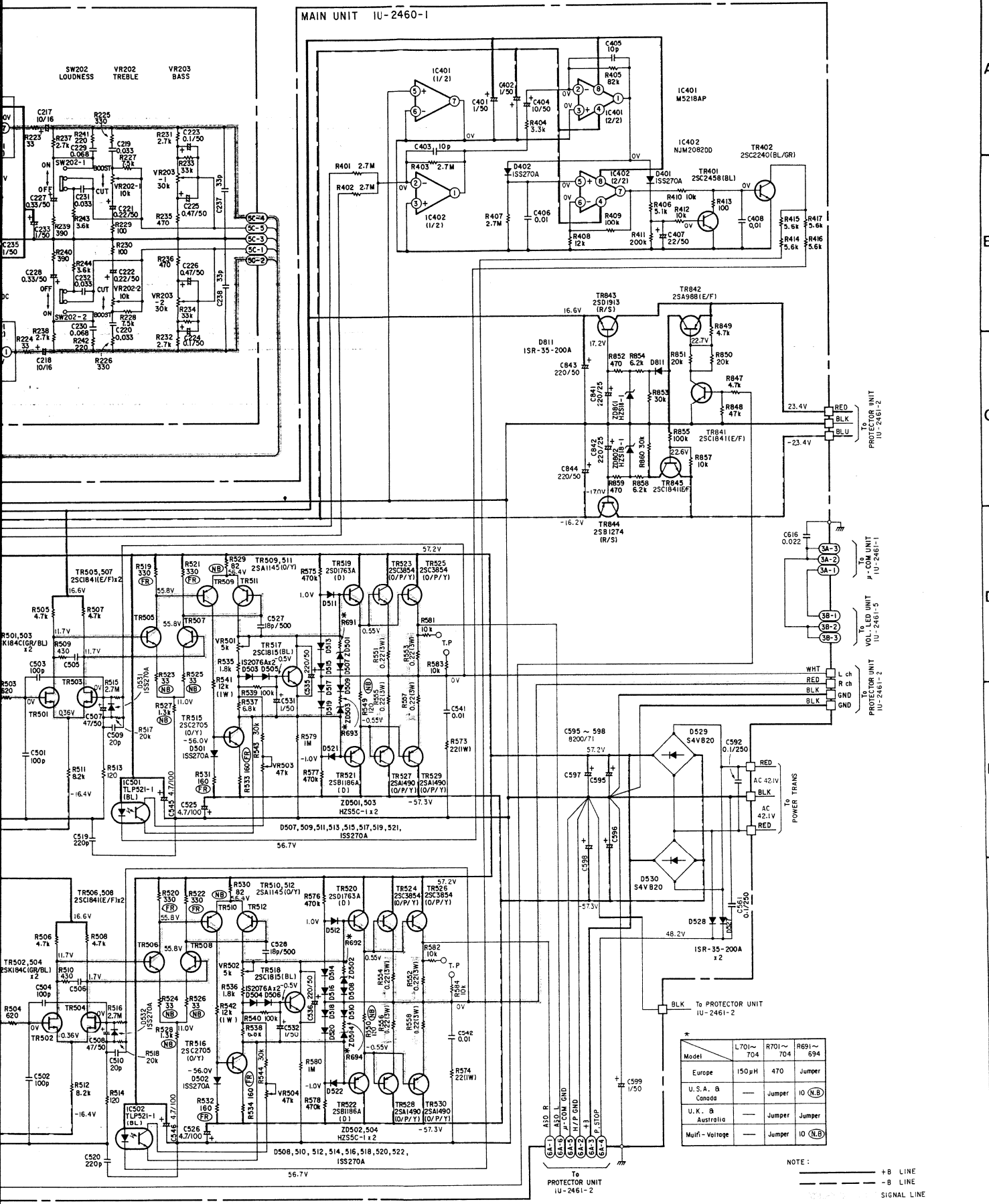
**WARNING:**  
Parts marked with this symbol  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**  
Before returning the unit to the customer, make sure you make sure the leakage current exceeds 0.5 milliamperes, or if the resistance is defective.

**WARNING:**  
DO NOT return the unit to the customer until the problem is located.

**NOTES:**  
Circuit and parts are subject to change without prior notice.

6 7 8 9 10 11



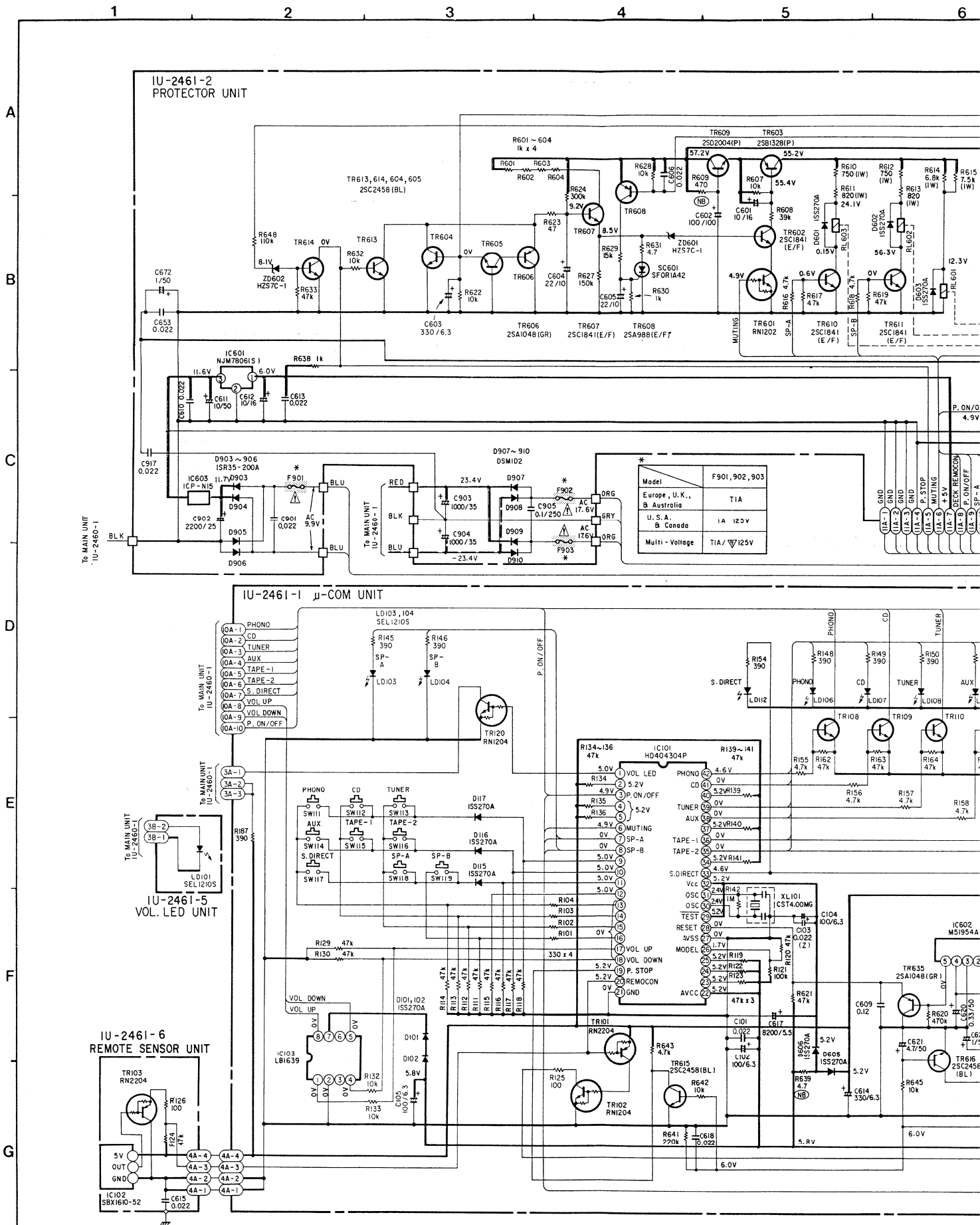
Model	L701~704	R701~704	R691~694
Europe	150µH	470	Jumper
U.S.A. & Canada	—	Jumper	10 (N.B.)
U.K. & Australia	—	Jumper	Jumper
Multif-Voltage	—	Jumper	10 (N.B.)

NOTE:  
 — +B LINE  
 - - - -B LINE  
 ——— SIGNAL LINE

...critical characteristics.  
 ...by the manufacturer.  
 ...make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If  
 ...s, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is  
 ...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**



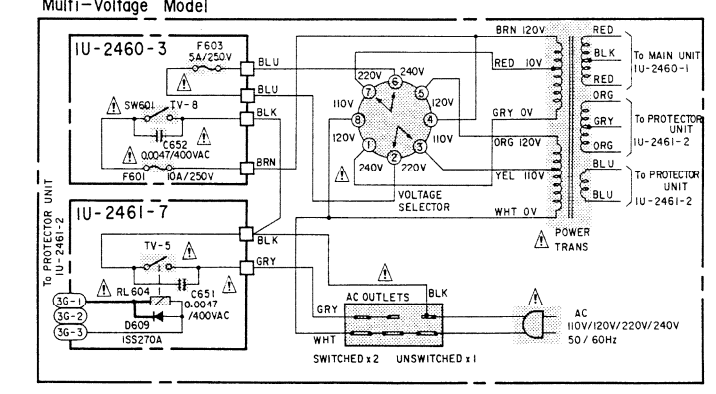
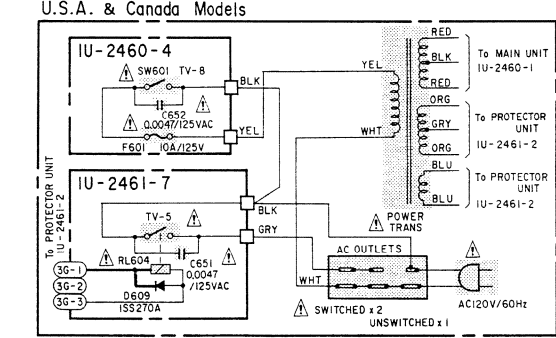
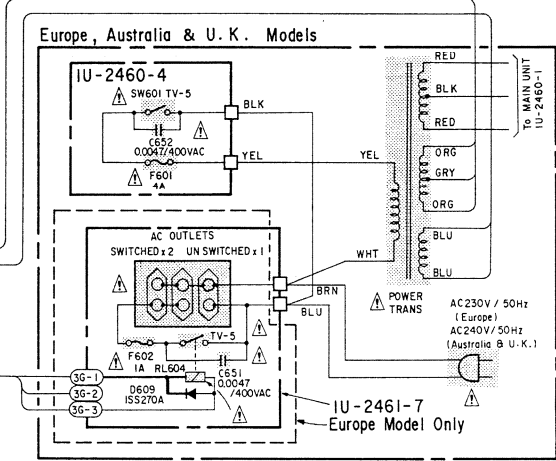
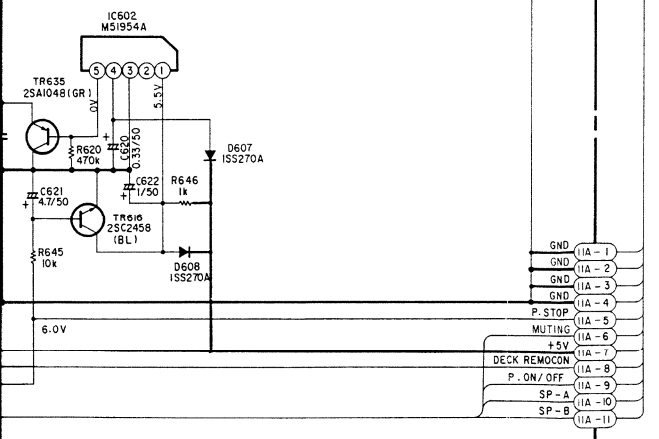
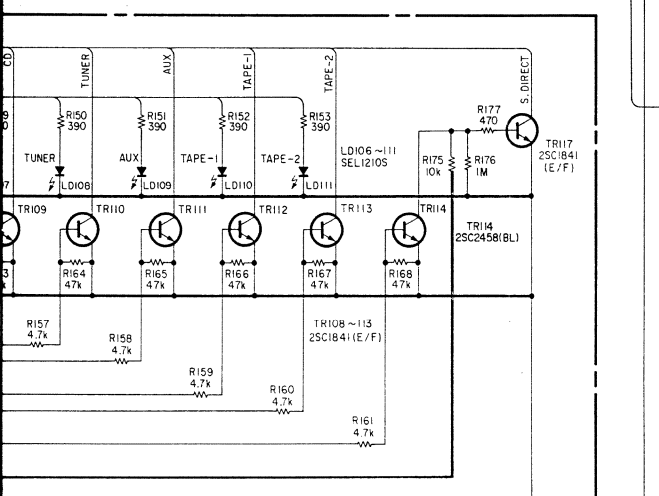
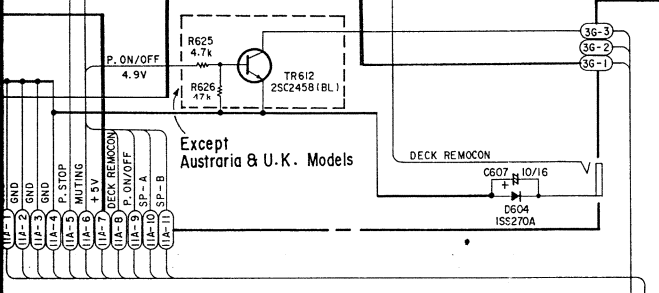
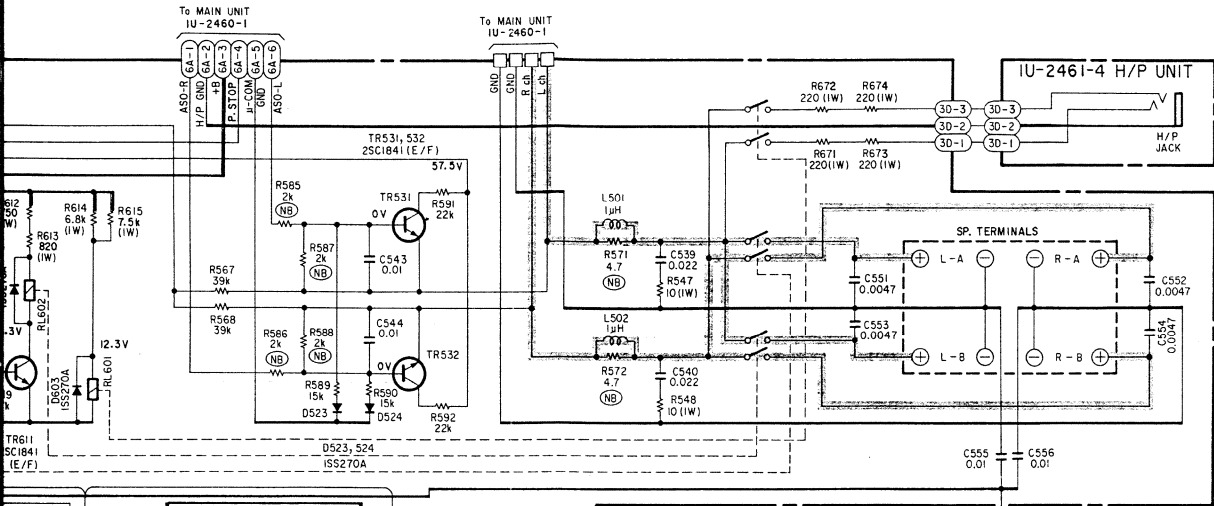
**WARNING:**  
Parts marked with this symbol  $\Delta$  have critical characteristics. Use ONLY replacement parts recommended by the manufacturer.

**CAUTION:**  
Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) the leakage current exceeds 0.5 millamps, or if the resistance from chassis to either side of the power defective.

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

**NOTES:**  
Circuit and parts are subject to change without prior notice.

**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.



NOTE:  
 - - - + B LINE  
 - - - - B LINE  
 - - - - SIGNAL LINE

Package current check or (2) a line to chassis resistance check. If either side of the power cord is less than 240 kohms, the unit is

ected.