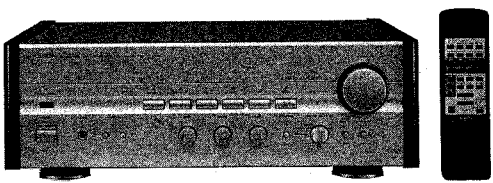
DENON

Hi-Fi Integrated Stereo Amplifier

SERVICE MANUAL

MODEL PMA-1315R
MODEL PMA-1315RG

INTEGRATED STEREO AMPLIFIER



The photograph shows the PMA-1315RG with side wood boards. (Multi-Voltage Model only)

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 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
Höhenstraße 32
40880 Ratingen

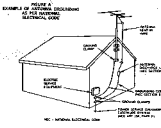
erklärt als Herstellerimporteur, daß das in dieser Bedienungsanleitung beschriebene Gerät den Technischen Vorschriften für Ton- und Rundfunk-Funkentstörempfänger nach der Amtsblattverfügung 859/1989 (Amtsblatt des Bundesministers für Post und Telekommunikation vom 31. 8. 1989) entspricht.

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.
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, 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.
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.

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 contorl 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.

> **AVVISO:**
> 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.

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 periodo 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 strommen med hjälp av fjärrkontrollen.
3. Koppla loss nätkabeln om apparaten inte skall användas under lång tid.

> **OBSERVERA:**
> 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.

> **PRECAUÇÃO:**
> 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.

PRECAUTIONS FOR INSTALLATION
Leave at least 10cm 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 10cm entre l'unité et tout autre appareil se trouvant au-dessus.

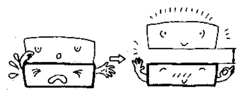
PRECAUZIONI PER L'INSTALLAZIONE
Lasciate uno spazio libero di almeno 10 cm fra quest'unità e qualsiasi altro componente che è collocato sopra la stessa.

PRECAUCIONES PARA LA INSTALACION
Deja 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.

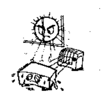
FÖRSIKTIGHETSÅTGÄRDER VID INSTALLATIONEN
Se till att det finns minst 10 cm mellanrum mellan apparaten och en ev. annan apparat som ställs ovanpå.

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

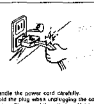


10 cm or more
10 cm oder mehr
10 cm ou plus
10 cm o più
10 cm o más
10 cm of meer
10 cm eller mer
10 cm ou mais

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

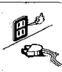


- Avoid high temperatures
  Allow for sufficient heat dispersion when installed on a rack.
- Vermeiden Sie hohe Temperaturen
  Beachten Sie, daß eine ausreichend Luftzirkulation gewährleistet wird, wenn das Gerät auf ein Regal gestellt wird.
- Éviter des températures élevées
  Tenir compte d'une dispersion 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.

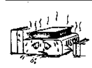


- Handle the power cord carefully.
  Hold the plug when unplugging the cord.
- Gehen Sie vorsichtig mit dem Netzkabel um.
  Halten Sie das Kabel am Stecker, wenn Sie den Stecker herausziehen.
- Manipuler le cordon d'alimentation avec précaution.
  Tenir la prise lors du débranchement du cordon.
- Maneggiate 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.
- Hanteer 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.

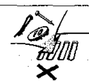


- Unplug the power cord when not using the set for long periods of time.
- Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzkabel vom Netzstecker.
- Débrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes.
- Disinnestate il 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.

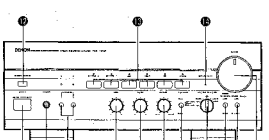


- Do not let foreign objects in the set.
- Keine fremden Gegenstände in das Gerät kommen lassen.
- Ne pas laisser des objets étrangers dans l'appareil.
- E' importante che nessun oggetto è inserito all'interno dell'unità.
- No deje objetos extraños dentro del equipo.
- Laat geen vreemde voorwerpen in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

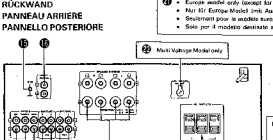
- Do not let insecticides, benzene, and thinner come in contact with the set.
- Lassen Sie das Gerat nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen.
- Ne pas mettre en contact des insecticides, du benzène et un diluant avec l'appareil.
- Assicuratevi che l'unità non venga 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 sprayburk, bensen och thinner kommer i kontakt med apparatens hölje.
- Não permita que insecticidas, 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, né 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.

FRONT PANEL
FRONTPLATTE
PANNEAU AVANT
PANNELLO ANTERIORE



REAR PANEL
RÜCKWAND
PANNEAU ARRIERE
PANNELLO POSTERIORE



⑦
- Europe model only (except for U.K.)
- Nur für Europe-Modell (mit Ausnahme Großbritannien)
- Seulement pour le modèle européen (à l'exception du Royaume-Uni)
- Solo per il modello destinato all'Europa (eccetto il Regno Unito)

⑫ Multi Voltage Model only

⑬
- U.S.A, CANADA and Multi Voltage Model only
- Nur für Modelle für die U.S.A. und KANADA und für Multispannungsmodelle
- Seulement pour les modèles pour les U.S.A., le CANADA et à tension multiple
- Solo per i modelli U.S.A. o CANADA e per il modello a voltaggio multiplo

⑫ **LINE VOLTAGE (Voltage select switch) . . . For Multi-voltage model only.**
- The desired voltage may be set with the VOLTAGE SELECTOR KNOB on the back panel using a screw driver.
- Do not twist the VOLTAGE SELECTOR KNOB with excessive force, it may be damaged.
- If the voltage select switch does not turn smoothly, see qualified serviceman.

Fig. 1
Abb. 1

⑥ GND	⑦ PHONO	⑧ CD, TUNER, AUX	⑨ DAT/TAPE-1, DAT/TAPE-2 • TAPE PB • TAPE REC	⑩ SPEAKERS
GND	Phono Input Terminals (Phono)	Input Terminals (CD, TUNER, AUX)	Playback and Recording Terminals • Playback Terminals • Recording Terminals	Speaker Terminals
GND	Schallplattenspieler-Eingangsbuchsen (Phono)	Eingangsbuchsen (CD, TUNER, AUX)	Tonband-Ein/Ausgänge • Wiedergabe • Aufnahme	Lautsprecher-Klemmen
GND	Borne d'entrée (phono)	Bornes (CD, TUNER, AUX)	Bornes de lecture et d'enregistrement • Bornes de lecture • Bornes d'enregistrement	Bornes de haut-parleurs
GND	Terminali di ingresso Phono	Terminali di ingresso (CD, TUNER, AUX)	Terminali di riproduzione registrazione • Terminali di riproduzione • Terminali di registrazione	Terminali degli altoparlanti

CONNECTIONS
ANSCHLÜSSE
CONNEXIONS
CONNESSIONI

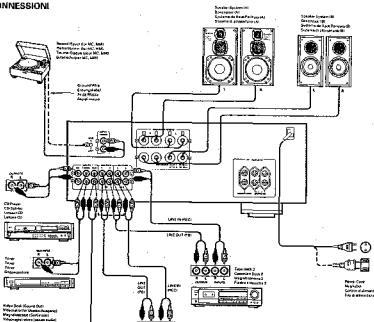


Fig. 2
Abb. 2

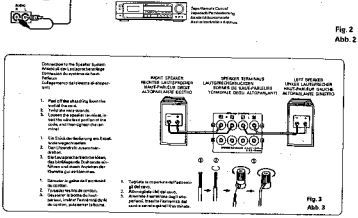


Fig. 3
Abb. 3

DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS

❶ POWER (Power Switch)
When the power switch is turned ON (⏻ 1, the MUTE/STANDBY LED ❿ 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.

❸ SPEAKERS (Speaker System Switch)
The PMA-1315R 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 output terminals B operates. When B is pressed again, its LED goes out and the speaker system B can not operate.

❹ 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 1600 Hz. The bass is emphasized as the knob is moved off center to the right (↷), and reduced as it is moved to the left (↶). When volume control ❽ is set to the right of the center position, the effect of the other controls is reduced.

❺ 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 1600 Hz. The treble is emphasized as the knob is moved off center to the right (↷), and reduced as it is moved to the left (↶). When volume control ❽ is set to the right of the center position, the effect of the other controls is reduced.

❻ 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.

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

❽ 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 ▶ 2: Used to recording from the tape deck connected to the DAT/TAPE-1 jacks.
- DAT/TAPE-2 ▶ 1: Used to recording from the tape deck connected to the DAT/TAPE-2 jacks.

❾ PHONO SELECTOR (Cartridge Selection Switch)
This switch is set according to the type of player cartridge to be used.
- MC (▬ 7: Used when an MC (moving-coil) cartridge with an output of less than 0.5 mV is used.
- MM (▬ 1: Used when an MM (moving-magnet) cartridge with an output of 2 mV or more is used.

❿ SOURCE DIRECT (Source Direct Switch)
Set this switch to ON will cause the input signal to by-pass the LOUDNESS ❼, BASS ❹, TREBLE ❺, BALANCE ❻ circuits (regardless of the settings of these controls) and the input directly to the VOLUME ❽ control to prevent loss of sound quality.

⓫ 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.

⓬ 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.

⓭ 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 ❾ 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.
- 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.

⓮ MUTE/STANDBY 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.

⓯ AC OUTLETS: Rear Panel Side
- **For U.S.A. and Canada 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 (except the U.K.) and Multi-Voltage 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

PREPARATION

1. CHECKING CONNECTIONS
- Make sure that all the connections are proper by referring to the back panel (Fig. 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 SOURCE DIRECT and LOUDNESS to "OFF (▬)".

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 to "PHONO".
2. Operate the turntable and play the record.
3. Turn the volume and tone controls to yield an appropriate volume and sound quality.

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

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

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

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

RECORDING WITH TAPE DECK
1. Set the REC OUT SELECTOR to the program source you wish to record.
2. Start the playback of the program source.
3. Start recording with the component connected to "DAT/TAPE-1" or "DAT/TAPE-2".
- In the PMA-1315R, 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 for monitoring. When a recording is being made using DAT/TAPE-1, selecting DAT/TAPE-1 with the INPUT SELECTOR will engage the RECORD/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 waiting 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 ⓭ are set to the last mode set before the power was turned off.

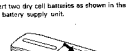
REMOTE CONTROL OPERATION

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.

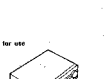


3. Replace the battery cover.

Notes on Battery Usage

- RC-176 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 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 exasperation.

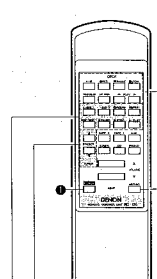
Besides being able to operate the PMA-1315R amplifier with this Remote Control Unit, you can also operate a DENON cassette deck and CD player from this handy full-system Remote Control Unit.

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-1315R to create a remarkably ergonomic and versatile DENON system with all the quality sound reproduction that the devoted audiophile expects.

Remote Control Unit RC-176 supplied with the PMA-1315R



❶ 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.

❷ 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-1315R, and function in the same way as the corresponding buttons on the set.

DECK

▶ 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 ⇔ DECK	A/B DECK SELECT button

CD

▶ PLAY	PLAY button
■ STOP	STOP button
⏮	Reverse Track Search button
⏭	Forward Track Search button
RANDOM REPEAT DISC SKIP	Refer to the operating instructions of your DENON CD player
⏸	PAUSE button

TUNER

PRESET ⇕ buttons

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

- The RC-176 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 MUTE/STANDBY LED ❶ 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.

Technical Data (typical value)	Technische Daten (typische werte)	Caractéristiques techniques (valeur caractéristique)	
• **POWER AMPLIFIER SECTION**	• **LEISTUNGSENDS VERSTÄRKER**	• **PARTIE AMPLIFICATEUR DEPUISSANCE**	
Rated Output Power: *1 Both channel driven (8 ohm Load) 20 Hz to 20 kHz, T.H.D. 0.02%	**Nenn-Ausgangsleistung:** *1 Beide Kanäle betroebem (an 8 Ohm) 20 Hz bis 20 kHz, T.H.D. 0,02%	**Puissance nominale:** *1 Entrainement deux canaux (charge 8 ohms) 20 Hz à 20 kHz, D.H.T. 0,02%	115W + 115W
(4 ohm Load) DIN, 1 kHz, T.H.D. 0.7%	(an 4 Ohm) DIN, 1 kHz, T.H.D. 0,7%	(charge 4 ohms) DIN, 1 kHz, D.H.T. 0,7%	200W + 200W
*2 Continuous 115W per channel min into 8 ohms from 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion.	*2 Fortlaufend 115W pro Kanal min. zu 8 Ohm von 20 Hz bis 20 kHz mit einem Gesamtklirrfaktor von nicht mehr als 0.02%.	*2 115W en continu par canal sur min. 8 ohms de 20 Hz à 20 kHz avec une distorsion harmonique totale de 0,02% ou moins.	115W
Total Harmonic Distortion: (−3 dB at rated output, 8 ohms) (1 kHz)	**Gesamtklirrfaktor:** (−3 dB bei Nennausgang, 8 Ohm) (1 kHz)	**Distorsion harmonique totale:** (−3 dB à la sortie nominale, 8 ohms) (1 kHz)	0.004%
• **PRE AMPLIFIER SECTION** **Rated Output:** (Recout Terminal)	• **VORVERSTÄRKER** **Nenn-Ausgangsleistung:** (Aufnahme-Ausgangsbuchse)	• **PRE-AMPLI** **Puissance nominale:** (Borne de sortie d'enregistrement)	150 mV
Input Sensitivity/ Input Impedance: The value in parentheses ( ) refers to the input impedance when SOURCE DIRECT is ON.	**Eingangsempfindlichkeit/ Eingangsimpedanz:** Der in Klammern ( ) angegebene Wert bezieht sich auf die Eingangsimpedanz, wenn der Quellen-Direktschalter (SOURCE DIRECT) eingeschaltet (ON) ist.	**Sensibilité d'entrée/ Impédance d'entrée:** La valeur entre parenthèses ( ) se rapporte à l'impédance d'entrée lorsque la touche de source directe (SOURCE DIRECT) est sur la position sous tension (ON).	
PHONO:	PHONO:	PHONO:	MM 2.5 mV/47 kohm MC 200 µV/100 ohm
CD, TUNER AUX TAPE-1, TAPE-2:	CD, TUNER, AUX TAPE-1, TAPE-2:	CD, TUNER, AUX TAPE-1, TAPE-2:	150 mV/47 kohm (150 mV/10 kohm)
RIAA Deviation: PHONO: Within ±0.3 dB	**Abweichung von der RIAA-Kennlinie:** PHONO: Innerhalb ±0.3 dB	**Variation RIAA:** PHONO: Inf. à ±0,3 dB	20 Hz ~ 20 kHz
Maximum Input:	**Maximaler Eingang:**	**Entrée max.:**	PHONO MM 160 mV/1 kHz MC 12mV/1 kHz
• **OVERALL CHARACTERISTICS**	• **GESAMTEIGENSCHAFTEN**	• **CARACTERISTIQUES GENERALES**	
SN Ratio (IHF A Network): (input terminals short-circuited) SOURCE-DIRECT: ON	**Signal/Rauschabstand** (IHF-A-Weiche): (Eingänge kurzgeschlossen) SOURCE DIRECT: ON	**Rapport signal/bruit** (réseau IHF A): (Bornes d'entrée court-circuitées) SOURCE DIRECT: ON	PHONO: MM: 94 dB (at 5 mV input) MC: 76 dB (at 0.5 mV input) CD, TUNER, AUX TAPE-1, TAPE-2: 110 dB
Tone Control Adjustable Range: BASS	**Klangregelbereich:** TIEFEN (BASS)	**Gamme de réglage de tonalité:** GRAVES	100 Hz ±8 dB
TREBLE	HÖHEN (TREBLE)	AIGUS	10 kHz ±8 dB
Loudness:	**Gehörrichtige Lautstärke:**	**Compensation physiologique:**	100 Hz +7 dB 10 kHz +6 dB
• **OTHERS** **Power Supply**	• **SONSTIGES** **Netzspannung und- frequenz**	• **AUTRES** **Alimentation**	AC230V/50 Hz (For Europe) AC120V/60 Hz (For U.S.A. and Canada) AC110/220/230V, 50/60 Hz (For Multiple)
AC Outlets Switched×2:	**Wechselstrom-Ausgänge** Geschältet×2:	**Prises secteur (AC)** Commutées×2:	100W (Total) (For Europe and Multi-Voltage models, except the U.K. model) 120W (Total) (For U.S.A., and Canada models)
Unswitched×1:	Ungeschaltet×1:	Non commutées×1:	100W (For Europe and Multi-Voltage models, except the U.K. model) 240W (For U.S.A., and Canada models)
Power Consumption	**Leistungsaufnahme**	**Consommation**	320W (IEC) 5.8A (U.S.A., and Canada models)
Dimensions (W)×(H)×(D)	**Abmessungen (B)×(H)×(T)**	**Dimensions (L)×(H)×(D)**	434(W)×160(H)×424(D)mm (17-3/32"×6-19/64×16-45/64")
Net Weight	**Nettogewicht**	**Poids**	14.5 kg (31 lbs 15 oz)
REMOTE CONTROL UNIT (RC-176) **Remote control system:** Infrared pulse system **Power supply:** 3V DC, Two size R6P ("AA") dry cell batteries	**FERNBEDIENUNGSGERÄT (RC-176)** **Fernbedienungs-System:** Infrarot-Impulse **Stromversorgung:** 3V Gleichstrom, zwei Trockenzelle-Batterien vom format R6 (AA)	**UNITE DE TELECOMMANDE (RC-176)** **Système de télécommande:** Système à impulsion infrarouge **Alimentation:** 3V CC, deux piles sèches de format R6P ("AA")	
External dimensions:	**Äußere Abmessungen:**	**Dimensions extérieures:**	55(W)×194(H)×18(D)mm (2-11/64"×7-41/64"×45/64")
Weight:	**Gewicht:**	**Poids:**	100 g (about 3.5 oz) (including batteries)

Note: *1 For Europe and Multi-Voltage
*2 For U.S.A. and Canada

Hinweis: *1 Für Europa und Mehrspannung
*2 Für die USA und Kanada

Note: *1 Pour les modèles pour l'Europe et multi-tension
*2 Pour les U.S.A. et le Canada

- 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.
- Spécifications 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-176) 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-176) 1
(3) Batterien vom Typ R6P (AA) 2

FRANCAIS

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-176) 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-176) 1
(3) Batterie R6P (AA) 2

ESPAÑOL

Por favor verifique asegurandose de que los siguientes articulos son empacados en la caja pero separados de la unidad principal.

(1) Manual de instrucciones 1
(2) Unidad de control remoto (RC-176) 1
(3) Pilas R6P (AA) 2

NEDERLANDS

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

(1) Gebruiksaanwijzing 1
(2) Afstandsbediening (RC-176) 1
(3) Batterijen R6P (AA) 2

SVENSKA

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

(1) Bruksanvisning 1
(2) Fjärrkontroll (RC-176) 1
(3) Batterier R6P (AA) 2

PORTUGUÊS

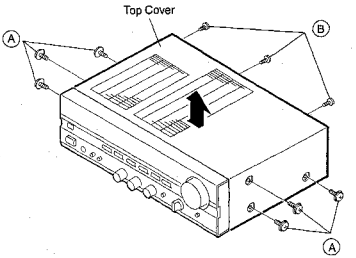
Certifique-se de que as seguintes peças estão incluídas na embalagem fora da unidade principal:

(1) Instruções de operação 1
(2) Unidade de controle remoto (RC-176) 1
(3) Baterias R6P (AA) 2

REMOVAL OF EACH SECTION

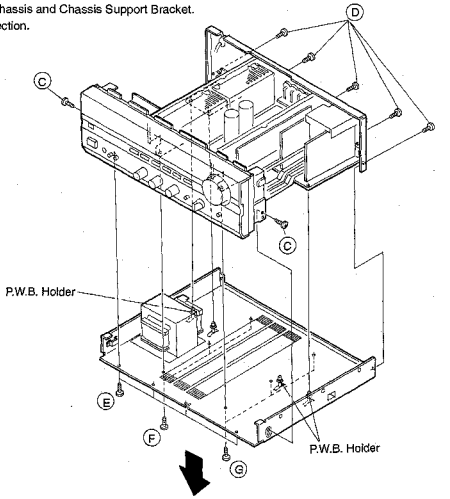
1. Top Cover

(1) Remove 6 screws Ⓐ , and 3 screws Ⓑ .
(2) Pull up Top Cover in arrow direction.



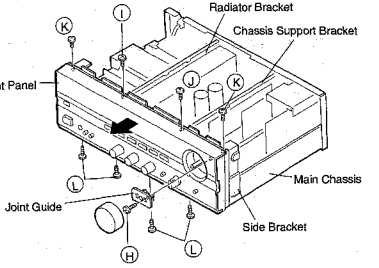
2. Main Chassis

(1) Remove 4 P.W.B. Holder from P.W. Board.
(2) Remove 2 screws Ⓒ fixing Main Chassis and Side Bracket.
(3) Remove 5 screws Ⓓ fixing Main Chassis and Rear Panel.
(4) Remove 4 screws Ⓔ fixing Main Chassis and Front Panel.
(5) Remove 3 screws Ⓕ fixing Main Chassis and Radiator Bracket.
(6) Remove 3 screws Ⓖ fixing Main Chassis and Chassis Support Bracket.
(7) Pull down Main Chassis in arrow direction.



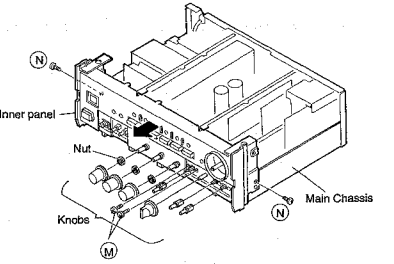
3. Front Panel

(1) Detach Control Knob, remove 1 screws (H) and detach Joint Guide.
(2) Remove 1 screw (I) fixing Front Panel and Radiator Bracket.
(3) Remove 1 screw (J) fixing Front Panel and Chassis Support Bracket.
(4) Remove 2 screws (K) fixing Front Panel and Side Bracket.
(5) Remove 4 screws (L) fixing Front Panel and Main Chassis.
(6) Detach Front Panel in arrow direction.



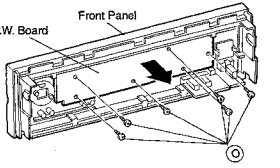
4. Inner Panel

(1) Detach 7 Knobs, remove 2 screws (M) and 3 nuts.
(2) Remove 2 screws (N) fixing Side Bracket and Main Chassis.
(3) Detach Inner Panel in arrow direction.



5. P.W. Board attached to Inner Panel

(1) Remove 6 screws (O) fixing P.W. Board.
(2) Take out P.W. Board in arrow direction.



FUNCTION OF NEW CIRCUIT

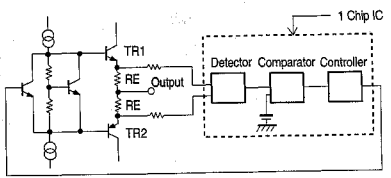
1. CHARACTERISTIC OF THIS CIRCUIT

The junction temperature of power amplifier output transistor always varies by an ambient temperature and music signal. Occurrence of junction temperature varying causes in change of bias current, unstable function, thus pure music signal playback is unable to do.

To maintain fixed bias current and to make pure music signal playback possible is the purpose of this circuit. This circuit holds stable bias current condition within a few seconds after turning on the power.

2. BLOCK DIAGRAM OF BIAS CONTROL CIRCUIT FUNCTION

As explained in Fig. 1, detects a voltage across the emitter resistors (RE) of TR1, TR2. Converts the detected voltage and comparing with the reference voltage to make the bias current value in stable state. Actually, these functions are performed by 1 chip IC.



TR1, TR2: Output transistor
RE : Emitter resistor

Fig. 1

3. POWER SUPPLY FOR ACTUATING CONTROL CIRCUIT

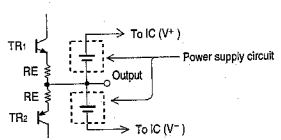


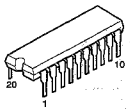
Fig. 2

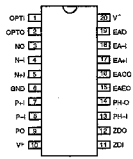
The circuit (IC) controlling bias current actuates by floating.

Accordingly, the power supply is also needed to be floated.

In this circuit, as indicated in Fig. 2, output is common to provide +, – power system and supplies to IC.

4. IC DESCRIPTION (μPC5023CS-064)

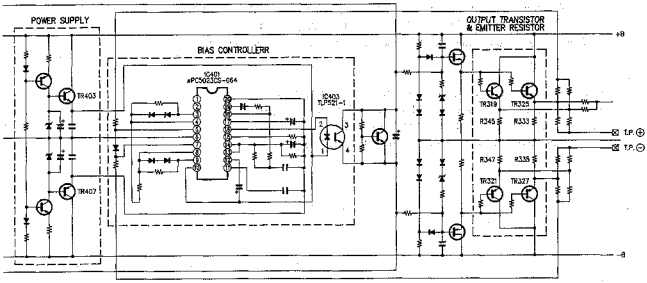




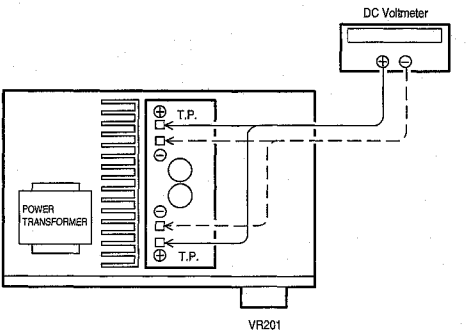
Pin. No.	Name	Contents
1	OPTI	NCP
2	OPTO	
3	NO	Comparator output
4	N–I	Comparator input (–)
5	N+I	Comparator input (+)
6	GND	Floating common
7	P+I	Comparator input (+)
8	P–I	Comparator input (–)
9	PO	Comparator output
10	V+	+ Power supply

Pin. No.	Name	Contents
11	ZDI	Control signal stabilizer input
12	ZDO	Control signal stabilizer output
13	PH-I	Peak hold input
14	PHO	Peak hold output
15	EAEO	Controller gain setting
16	EACO	Control signal output
17	EA+I	Reference voltage
18	EA–I	Comparator gain setting
19	EAO	Comparator output
20	V–	– Power supply

5. CIRCUIT IN THE CONCRETE



METHOD OF ADJUSTMENTS

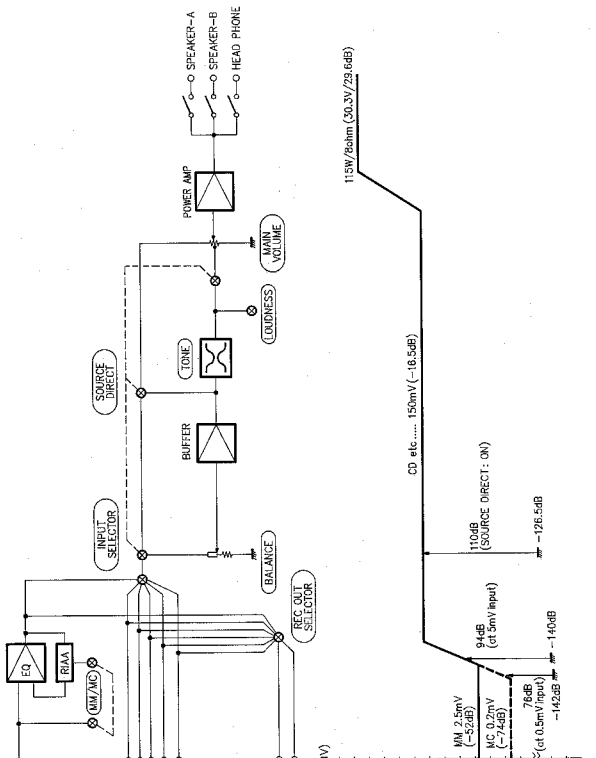


IDLING CURRENT

- 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 (VR201)
     (VR202, 203 and 204 are center position.)
     SPEAKER Terminals→ open: do not connect the speakers, dummy load etc.

- Confirm
  1. Remove Top cover. And then connect DC Voltmeter to Test points of Main Unit.
  2. Connect Power cord to AC Outlet, and turn POWER Switch "on" (—).
  3. 10 seconds after check to see DC Voltmeter reading is 17 ± 2mV.
  4. 2 minutes after re-check DC Voltmeter for 17 ± 2mV reading.

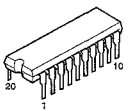
BLOCK AND LEVEL DIAGRAM

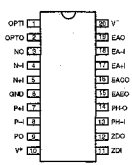


SEMICONDUCTORS

● IC's

μPC5023CS-064 (IC401,402)

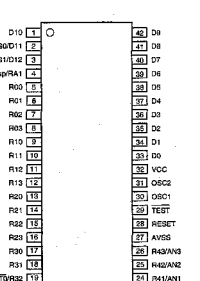




Pin. No.	Name	Contents
1	OPTI	NCP
2	OPTO	
3	NO	Comparator output
4	N-I	Comparator input (–)
5	N+I	Comparator input (+)
6	GND	Floating common
7	P+I	Comparator input (+)
8	P–I	Comparator input (–)
9	PO	Comparator output
10	V+	+ Power supply

Pin. No.	Name	Contents
11	ZDI	Control signal stabiliser input
12	ZDO	Control signal stabiliser output
13	PH–I	Peak hold input
14	PHO	Peak hold output
15	EAEO	Controller gain setting
16	EACO	Control signal output
17	EA+I	Reference voltage
18	EA–1	Comparator gain setting
19	EAO	Comparator output
20	V–	– Power supply

HD404304A13P (IC801)

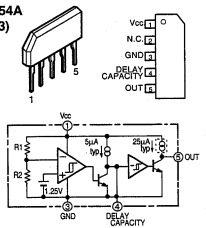


HD404304P Terminal Function

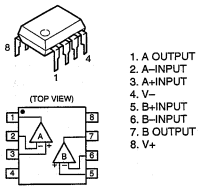
Pin No.	Name	I/O	Contents	Active
1	D10	O	VOLUME LED Indication	H
2	TG0/D11	O	NOP	
3	TG1/D12	O	Power Control (REMOTE Power ON/OFF)	L
4	Vdisp/RA1	I	NOP	
5	R00	O	NOP	
6	R01	O	Muting Control (Power On-OFF, Function Shifting, Muting)	L
7	R02	O	SP-A Control	H
8	R03	O	SP-A Control	H
9	R10	O	Key scan strobe	H
10	R11	O		H
11	R12	O		H
12	R13	O	NOP	
13	R20	I	Key scan receive	
14	R21	I		
15	R22	I		
16	R23	I		
17	R30	O	Volume Control "UP" → "H"	H
18	R31	O	Volume Control "DOWN" → "H"	H
19	INT0/R32	I	Power Breakdown detect input	
20	INT1/R33	I	Remote control signal decoding input	
21	GND		GND	
22	AVcc		Avcc (Vcc)	
23	R40/AN0		NOP	
24	R41/AN1	I	NOP	
25	R42/AN2	I	NOP	
26	R43/AN3	I	Discrimination port by user's given	
27	Avss		Avss (GND)	
28	RESET		MS1934A External	
29	TEST		Vcc	
30	OSC1		Cstal Pll Oscillator 4MHz External	
31	OSC2		Cstal Pll Oscillator 4MHz External	
32	Vcc		Vcc	
33	D0	O	SOURCE DIRECT Control	H
34	D1	O	NOP	
35	D2	O	TAPE-2 Control	H
36	D3	O	TAPE-1 Control	H
37	D4	O	NOP	
38	D5	O	AUX Control	H
39	D6	O	TUNER Control	H
40	D7	O	NOP	
41	D8	O	CD Control	H
42	D9	O	PHONO Control	H

Mutually exact

M51954A (IC803)

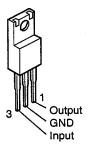


NJM4558DDC (IC201, 901)

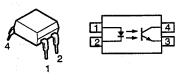


1. A OUTPUT
2. A–INPUT
3. A+INPUT
4. V–
5. B+INPUT
6. B–INPUT
7. B OUTPUT
8. V+

NJM7806FA(S) (IC702)

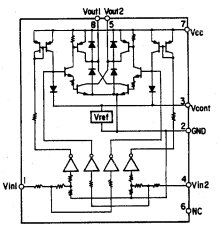


TRP521-1(BL)
INFRARED LED + PHOTO TRANSISTOR
(IC403, 404)



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

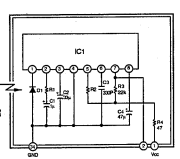
LB1639 (IC802)



SBX1610-52 (Remote Control Receiver) (IC804)

1. Vcc
2. Output
3. GND
4. Case Fin
5. Case Fin

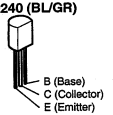
STANDARD TRANSMITTER



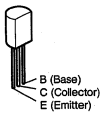
IC1	: CX20106A Chip
D1	: PIN Photo Diode Chip
C1,C2,C4	: Aluminum Electrolytic Capacitor
C3	: SL Characteristic ±5%
R1	: Gain Adjuster
R2	: fo Adjuster ±1% USE
R3,4	: ±5%

● TRANSISTORS

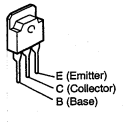
2SA970 (BL), (BL/GR)
2SA988 (E/F)
2SC1841 (E/F)
2SC1815 (BL)
2SC2240 (BL/GR)



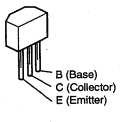
2SA1145 (O)/(Y)
2SC2705 (O)/(Y)



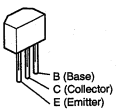
2SA1491 LB4 (O)/(P)/(Y)/(Z)
2SC3855 LB4 (O)/(P)/(Y)/(Z)



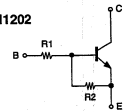
2SA1048 (GR)
2SC2458 (BL)



RN1202NPN
RN2204 PNP

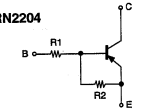


RN1202



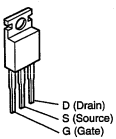
	R1	R2
RN1202	10kohm	10kohm

RN2204

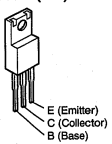


	R1	R2
RN2204	47kohm	47kohm

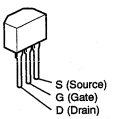
2SJ78
2SK215



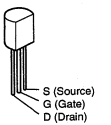
2SD1913 (R/S)
2SB1274 (R/S)



2SK184C (GR)/(RL)

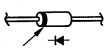


2SK369 (BL)/(GR)-C



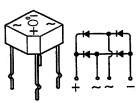
● DIODES (including LED)

1S2076A
1SS270A

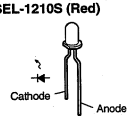


HZS4B-2 HZS7C-1
HZS5C-1 HZS27-1
HZS18-1

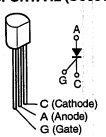
S4VB20 (D701, 702)



SEL-1810A (Orange)
SEL-1210S (Red)



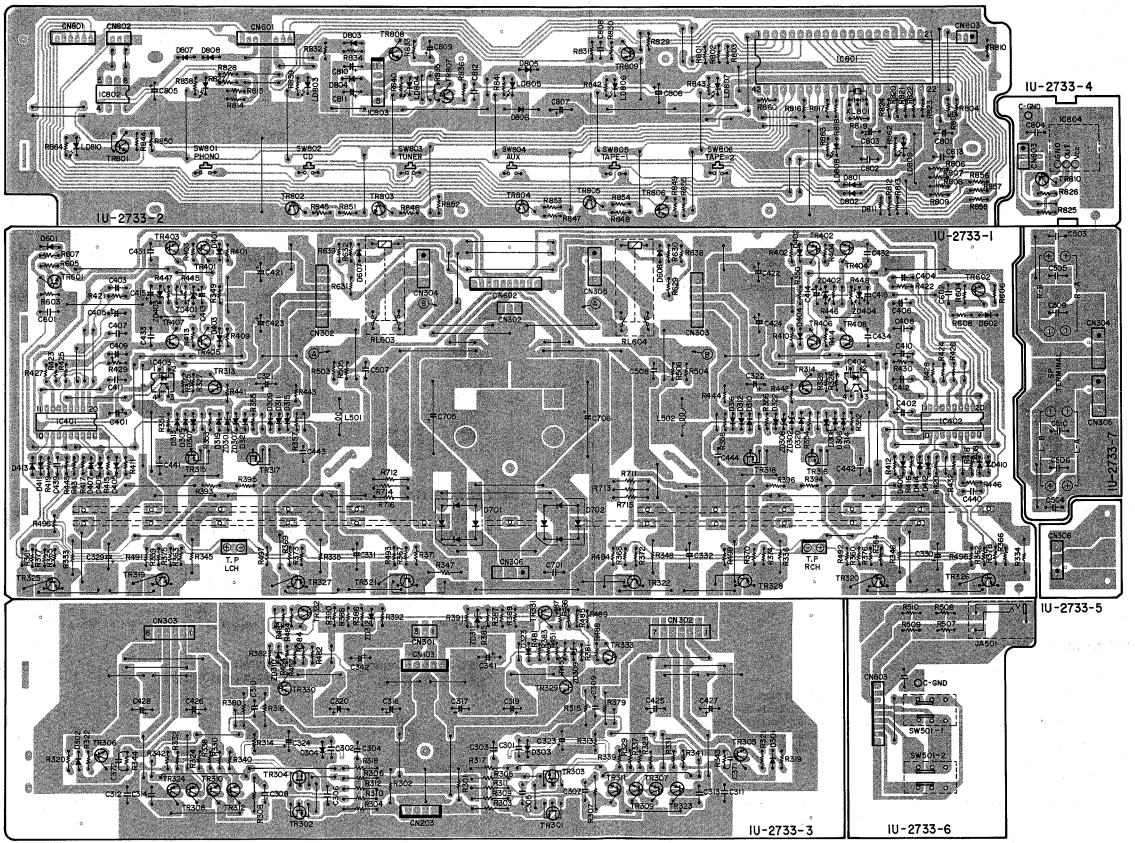
Thyristor
SFOR1A42 (SC601)



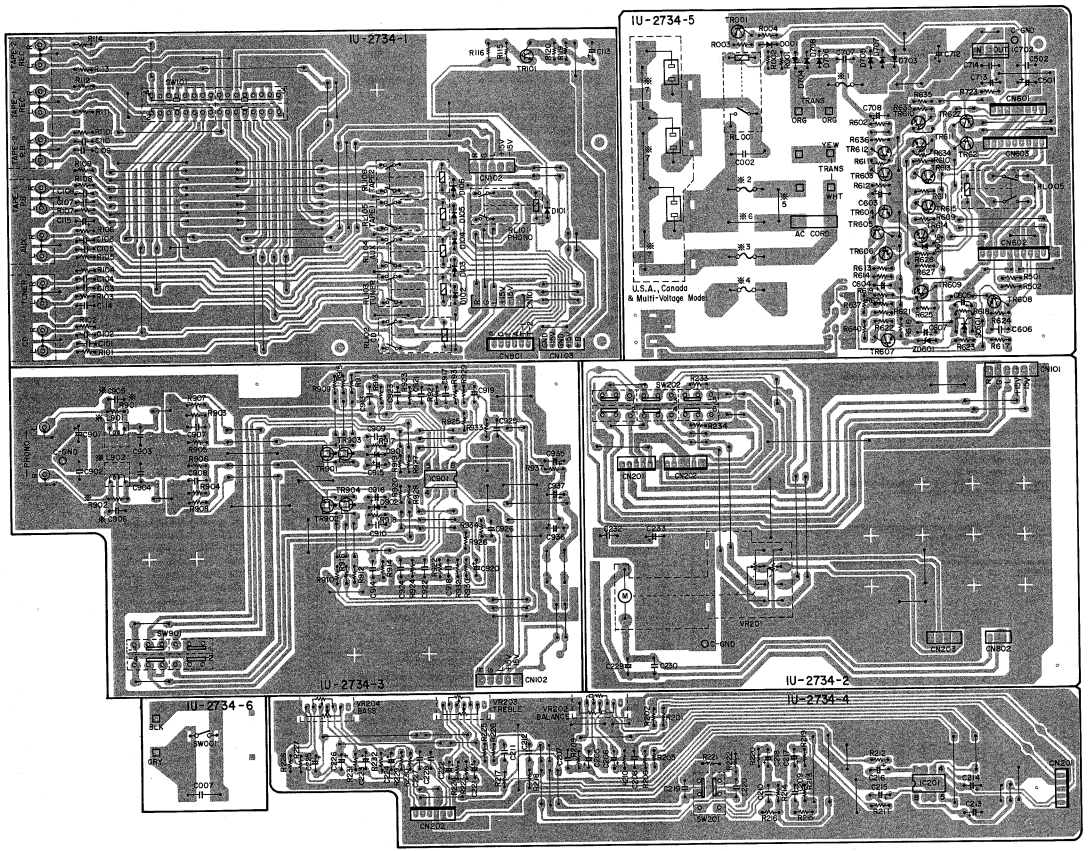
1SR35-200A

PRINTED WIRING BOARD (Pattern Side)

1U-2733A P.AMP UNIT ASS'Y



1U-2734A INPUT UNIT ASS'Y



1U-2734: Europe, U.K. & Australia Model
1U-2777: U.S.A., Canada & Multi Voltage Model

	Europe Model	Other Model
L901, 902	150µH	—
C905, 906	47p	—
R901, 902	820ohm	Jumper

※1 – ※7

	Europe Model	U.K. & Australia Model	U.S.A. & Canada Model	Multi-Voltage Model
※1	F701 T1A	F701 T1A	F701 1A/125V	F701 T1A
※2	F001 T4A	F001 T4A	F002 8A/125V	F001 T10A
※3	F002 T1A	—	Jumper	Jumper
※4	—	—	F001 10A/125V	F003 T4A
※5	—	—	Jumper	—
※6	Jumper	Jumper	—	Jumper
※7	—	—	Jumper	Jumper

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 ⇒ 1600 ohm = 1.8 kohm
2-digit effective number.
Indicates number of zeros after effective number.

• Units: ohm

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

• 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 CO : 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
Indicates number of zeros after effective number.
2-digit effective number.

• Units: μF.

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

• 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-2733A/B P. AMP UNIT ASS'Y (For Europe Black / Gold)

Ref. No.	Parts No.	Parts Name	Remarks
SEMICONDUCTORS GROUP			
IC401,402	263 0930 001	IC μPC5023CS-064	Bias Controller
IC403,404	262 0874 009	IC TLP521-1(BL)	Photo Coupler
IC801	262 1579 303	IC HD404004A13P	μ-com
IC802	263 0476 002	IC LB1639	Motor Driver
IC803	263 0535 008	IC M51954AL	Reset
IC804	499 0150 008	IC SBX1610-52	Remocon Sensor
TR301–304	275 0055 015	FET 2SK184C(GR)(BL)	
TR305,306	273 0281 906	Transistor 2SC2705(O)(Y)	
TR307,308	271 0168 900	Transistor 2SA1145(O)(Y)	
TR309–312	273 0187 932	Transistor 2SC2240(BL/GR)	
TR313,314	273 0198 918	Transistor 2SC1815(BL)	
TR315,316	275 0069 001	FET 2SK215	
TR317,318	275 0068 002	FET 2SJ76	
TR323,324	271 0168 900	Transistor 2SA1145(O)(Y)	
TR329	274 0136 012	Transistor 2SD1913(R/S)	
TR330	272 0093 010	Transistor 2SB1274(R/S)	
TR331	271 0094 919	Transistor 2SA970(BL)	
TR332,333	273 0187 932	Transistor 2SC2240(BL/GR)	
TR401,402	271 0094 919	Transistor 2SA970(BL)	
TR403,404	273 0281 906	Transistor 2SC2705(O)(Y)	
TR405,406	273 0187 932	Transistor 2SC2240(BL/GR)	
TR407,408	271 0168 900	Transistor 2SA1145(O)(Y)	
TR801,802	273 0235 923	Transistor 2SC1841(E/F)	
TR801–806	273 0235 923	Transistor 2SC1841(E/F)	
TR807	271 0191 906	Transistor 2SA1048(GR)	
TR808,809	273 0317 906	Transistor 2SC2458(BL)	
TR810	269 0030 909	Transistor RN2204	Built in Resistor
D301–316	276 0432 903	Diode 1SS270A	
D319–322	276 0432 903	Diode 1SS270A	
D323	276 0553 905	Diode 1SR35-200A	
D401–414	276 0432 903	Diode 1SS270A	
D601,602	276 0432 903	Diode 1SS270A	
D607,608	276 0432 903	Diode 1SS270A	
⚠ D701,702	276 0335 001	Diode S4VB20	Bridge
D801–805	276 0432 903	Diode 1SS270A	
D806	276 0049 914	Diode 1SS2076A	
D807,808	276 0432 903	Diode 1SS270A	
ZD301,302	276 0460 904	Zener Diode HZS5C-1	5 V
ZD307,308	276 0460 904	Zener Diode HZS5C-1	5 V
ZD309,310	276 0478 909	Zener Diode HZS18-1	18 V
ZD311,312	276 0485 905	Zener Diode HZS36-1	36 V
ZD401–404	276 0643 954	Zener Diode MTZJ3.9A	3.9 V
LD802–807	393 9454 906	LED SEL1210S	Function
LD808–810	393 9453 916	LED SEL1810A	Speaker
RESISTORS GROUP (Not included Carbon Film ±5%, 1/4 W Type. Refer to the Schematic Diagram for those parts.)			
R301,302	245 2116 906	Metal Film 100kohm 1/4 W	RN14K2E104G
R303,304	245 2060 900	Metal Film 470ohm 1/4 W	RN14K2E471G
R305,306	245 2090 909	Metal Film 8.2kohm 1/4 W	RN14K2E822G
R307,308	245 2052 905	Metal Film 220ohm 1/4 W	RN14K2E221G
R309–312	245 2084 902	Metal Film 4.7kohm 1/4 W	RN14K2E472G
R315,316	245 2099 900	Metal Film 20kohm 1/4 W	RN14K2E203G
R317,318	245 2046 908	Metal Film 120ohm 1/4 W	RN14K2E121G
⚠ R319–322	241 2327 930	Fusible 160ohm 1/4 W(FR)	RD14B2E161GFRS
⚠ R323,324	241 2315 983	Fusible 330ohm 1/4 W(FR)	RD14B2E331GFRS
⚠ R325,326	241 2379 959	Carbon Film 750ohm 1/4 W(NB)	RD14B2E751JNBS
⚠ R327,328	241 2379 934	Carbon Film 160ohm 1/4 W(NB)	RD14B2E161JNBS

Ref. No.	Parts No.	Parts Name	Remarks
⚠ R329,330	241 2315 983	Fusible 330ohm 1/4 W(FR)	RD14B2E331GFRS
⚠ R331,332	241 2377 921	Carbon Film 82ohm 1/4 W(NB)	RD14B2E820JNBS
R333–336	243 2061 013	Wire Wound 0.22ohm 5 W	RW99-4FR22K
R337–340	241 2378 922	Carbon Film 330ohm 1/4 W(NB)	RD14B2E331JNBS
R341,342	241 2380 918	Carbon Film 1.3kohm 1/4 W(NB)	RD14B2E132JNBS
R343,344	244 2055 967	Metal Oxide 12 kohm 1 W	RS14B3A123JNBS(S)
R345–348	243 2061 013	Wire Wound 0.22ohm 5 W	RW99-4FR22K
R353–358	241 2387 943	Carbon Film 4.7ohm 1/4 W(NB)	RD14B2E4R7JNBS
R359–362	241 2376 964	Carbon Film 47ohm 1/4 W(NB)	RD14B2E470JNBS
R367–370	241 2376 964	Carbon Film 47ohm 1/4 W(NB)	RD14B2E470JNBS
R375–378	241 2380 959	Carbon Film 2 kohm 1/4 W(NB)	RD14B2E202JNBS
R379,380	245 2036 905	Metal Film 47ohm 1/4 W	RN14K2E470G
⚠ R385–392	244 2043 940	Metal Oxide 0.22ohm 1 W	RS14B3A220JNBS(S)
R391,392	241 2387 949	Carbon Film 4.7ohm 1/4 W(NB)	RD14B2E4R7JNBS
R393–396	244 2052 909	Metal Oxide 47ohm 1 W	RS14B3A470JNBS(S)
R401,402	241 2379 916	Carbon Film 510ohm 1/4 W(NB)	RD14B2E511JNBS
R403,404	241 2379 946	Carbon Film 270ohm 1/4 W(NB)	RD14B2E271JNBS
R405,410	241 2379 918	Carbon Film 510ohm 1/4 W(NB)	RD14B2E511JNBS
R411,412	241 2379 987	Carbon Film 1 kohm 1/4 W(NB)	RD14B2E102JNBS
R413,414	241 2378 946	Carbon Film 270ohm 1/4 W(NB)	RD14B2E271JNBS
R415,416	241 2379 967	Carbon Film 1 kohm 1/4 W(NB)	RD14B2E102JNBS
R423,424	241 2380 950	Carbon Film 2 kohm 1/4 W(NB)	RD14B2E202JNBS
R425,426	241 2380 905	Carbon Film 1.2kohm 1/4 W(NB)	RD14B2E122JNBS
R427,428	241 2379 987	Carbon Film 1 kohm 1/4 W(NB)	RD14B2E102JNBS
R441–444	241 2377 947	Carbon Film 100ohm 1/4 W(NB)	RD14B2E101JNBS
R445–448	241 2379 987	Carbon Film 1 kohm 1/4 W(NB)	RD14B2E102JNBS
R491–498	244 2051 987	Metal Oxide 47ohm 1 W	RS14B3A47JNBS(S)
R503,504	244 2043 937	Metal Oxide 10ohm 1 W	RS14B3A100JNBS(S)
R505,506	241 2367 924	Carbon Film 2.7ohm 1/4 W(NB)	RD14B2E2R7JNBS
R507–510	244 2051 958	Metal Oxide 220ohm 1 W	RS14B3A221JNBS(S)
R603,604	241 2380 950	Carbon Film 2 kohm 1/4 W(NB)	RD14B2E202JNBS
R623–632	244 2052 957	Metal Oxide 5.6 kohm 1 W	RS14B3A562JNBS(S)
R638,639	244 2052 957	Metal Oxide 5.6 kohm 1 W	RS14B3A562JNBS(S)
R711–716	245 2113 909	Metal Film 75kohm 1/4W	RN14K2E473G
⚠ R803	241 2387 949	Carbon Film 4.7ohm 1/4 W(NB)	RD14B2E4R7JNBS
CAPACITORS GROUP			
C301,302	255 4199 973	Mylar Film 0.01μF/50 V	CQ92M1H103J(MRZ)
C303,304	255 6177 948	Polystyrol Film 100pF/50 V	CQ09S1H101J(SMT)
C305,306	253 4538 949	Ceramic Cap. 100pF/50 V	CC45SL1H101J
C307,308	255 1251 937	Mylar Film 0.0033μF/50 V	CQ92M1H332J(MRZ)
C309,310	253 4481 902	Ceramic Cap. 30pF/500 V	CC45SL2H300J
C311,312	253 1179 945	Ceramic Cap. 220pF/50 V	CK45B1H221K
C313,314	253 4476 904	Ceramic Cap. 18pF/500 V	CC45SL2H180J
C317–320	254 4261 921	Electrolytic 100 μF/50 V	CE04W1H101MC
C321,322	254 4356 713	Electrolytic 100 μF/50 V	CE04W1H101MC(ARS)
C323,324	254 4356 739	Electrolytic 47 μF/50 V	CE04W1H470MC(ARS)
C329–332	254 4373 000	Electrolytic 100 μF/100 V	CE04W2A101MC(ARS)
C341,342	254 4263 967	Electrolytic 10μF/100 V	CE04W2A100M(SME)
C371,372	253 4470 900	Ceramic Cap. 10pF/500 V	CC45SL2H100D
C401,402	254 4261 918	Electrolytic 47 μF/50 V	CE04W1H470M
C403,404	254 3056 959	Electrolytic 10μF/50 V (Bipolar)	CE04W1H100MBP
C405,406	254 4260 993	Electrolytic 22 μF/50 V	CE04W1H220M
C407,408	255 4199 986	Mylar Film 0.001μF/50 V	CQ92M1H102J(MRZ)
C409,410	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C411,412	255 4199 973	Mylar Film 0.01μF/50 V	CQ92M1H103J(MRZ)
C413–416	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C421–428	254 4263 987	Electrolytic 10μF/100 V	CE04W2A100M
C431–434	256 1034 979	Metalized 0.1μF/50 V	CF93A1H104J
C439,440	253 1179 961	Ceramic Cap. 330pF/50 V	CK45B1H331K
C441–444	253 1128 909	Ceramic Cap. 220pF/500 V	CK45B2H221K
C503–506	255 1251 940	Mylar Film 0.0047μF/50 V	CQ92M1H472J(MRZ)
C507,508	255 4199 960	Mylar Film 0.022μF/50 V	CQ92M1H223J(MRZ)

Ref. No.	Parts No.	Parts Name	Remarks
C505,510	253 1181 904	Ceramic Cap. 0.01μF /50 V	CK45F1H103Z
C521	253 1181 917	Ceramic Cap. 0.022μF /50 V	CK45F1H223Z
C601,602	255 4199 973	Mylar Film 0.01μF/50 V	CQ92M1H103J(MRZ)
C701	256 1042 903	Metalized 0.1μF/250 V	CF93A2E104K
C801	254 4213 937	Electrolytic 100 μF/6.3 V	CE04W0J101M(SRA)
C802	253 1181 917	Ceramic Cap. 0.022μF /50 V	CK45F1H223Z
C803	254 4213 937	Electrolytic 100 μF/6.3 V	CE04W0J101M(SRA)
C804	253 1181 917	Ceramic Cap. 0.022μF /50 V	CK45F1H223Z
C805,806	254 4213 937	Electrolytic 100 μF/6.3 V	CE04W0J101M(SRA)
C807	259 0007 008	Backup Cap. 8200μF/5.5 V	SB CAP=822=
C808	253 1181 917	Ceramic Cap. 0.022μF /50 V	CK45F1H223Z
C809	254 4196 973	Electrolytic 4.7μF/50 V	CE04W1H4R7M(SRA)
C810	254 4196 944	Electrolytic 1 μF/50 V	CE04W1H010M(SRA)
C811	254 4196 928	Electrolytic 0.33 μF/50 V	CE04W1HR33M(SRA)
C812	256 1034 992	Metalized 0.12μF/50 V	CF93A1H124J
C813	253 1181 917	Ceramic Cap. 0.022μF /50 V	CK45F1H223Z

OTHER GROUP				Q'ty
	—	(P.W.Board)		(1)
L501,502	235 0068 004	Inductor 1 μH		2
SW501	212 1128 005	2 P Push Switch	SP Switch	1
SW801-806	212 5604 910	Tact Switch		6
RL603,604	241 9003 005	Relay		2
	205 0753 004	8 P Terminal(S-GND)		1
JA501	204 8354 004	Headphone Jack	Black model	1
JA501	204 8355 003	Headphone Jack	Gold model	1
XL901	339 0191 903	Ceramic Resonator	CST4.00MGW	1
	417 0043 100	Radiator	for TR315-318	4
	473 7500 015	Tapping Screw (S)3x8		4
	412 2160 031	Common Plate		1
	412 2160 044	Common Plate		2
	412 2160 060	Common Plate		1
	203 0525 057	1 P Contact Ass'y	L=110 Black	1
	203 0526 015	1 P Contact Ass'y	L=130 Black	1
	203 0601 008	1 P SIN Cord Ass'y	L=130 Red	1
	203 0601 011	1 P SIN Cord Ass'y	L=130 White	1
CN103	203 8414 008	5 P EH-SCN Conn. Cord		1
CN203	203 8484 009	4 P EH-SCN Conn. Cord		1
CN301	205 0239 032	3 P EH Conn. Base		1
CN301	205 0234 031	3 P EH SID Conn. Base		1
CN302	205 0233 074	7 P EH Conn. Base		1
CN302	205 0234 073	7 P EH SID Conn. Base		1
CN303	205 0233 061	6 P EH Conn. Base		1
CN303	205 0234 060	6 P Conn. Base		1
CN304	203 5023 021	3 P SDN-SDN Conn. Cord		1
CN305	203 5023 018	3 P SDN-SDN Conn. Cord		1
CN306	203 5023 005	3 P SDN-SDN Conn. Cord		1
CN601	205 0935 088	8 P KR Conn. Base (L)		1
CN602	205 0375 000	10 P KR Conn. Base (KR-PH)		1
CN603	205 0343 099	9 P KR Conn. Base (KR-PH)		1
CN302	205 0355 033	3 P KR Conn. Base (L)		1
CN801	205 0355 062	6 P KR Conn. Base (L)		1
CN803	203 4769 017	3 P DA-DA Conn. Cord		1
T.P.	205 0190 036	3 P NH Conn. Base		2

1U-2733C for Multi-Voltage Model PARTS LIST
(Same as 1U-2733A/B for Europe Black except the following)

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
JA501	204 8341 004	Head Phone Jack	Change	1
	205 0777 006	8P Terminal (S-GND)	Change	1

1U-2733D for U.S.A & Canada Models PARTS LIST
(Same as 1U-2733A/B for Europe Black except the following)

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	205 0777 006	8P Terminal (S-GND)	Change	1

1U-2734A/B INPUT UNIT ASS'Y

Ref. No.	Parts No.	Parts Name	Remarks
SEMICONDUCTORS GROUP			
IC201	263 0030 004	IC NJM4558DD	
IC702	263 0793 002	IC NJM7806FA(S)	Regulator +6 V
IC901	265 0030 004	IC NJM4558DD	
TR001	273 0317 906	Transistor 2SC2458(BL)	
TR101	274 0151 903	Transistor 2SD2004(P)	
TR603~605	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)	
TR611	269 0025 901	Transistor RN1202	Built in Resistor
TR612	273 0317 906	Transistor 2SC2458(BL)	
TR613~615	273 0235 923	Transistor 2SC1841(E/F)	
TR621	269 0025 901	Transistor RN1202	Built in Resistor
TR622	269 0026 900	Transistor RN2202	Built in Resistor
TR901~904	275 0038 045	FET 2SK369(BL)/(GR)-C	
D001	276 0432 903	Diode 1SS270A	
D101~106	276 0432 903	Diode 1SS270A	
D606	276 0432 903	Diode 1SS270A	
D703~708	276 0553 905	Diode 1SR35-200A	
D901,902	276 0432 903	Diode 1SS270A	
ZD601	276 0466 908	Zener Diode HZS7C-1	7 V
SC601	279 0016 904	Thyristor SF0R1A42	
RESISTORS GROUP (Not included Carbon Film ±5%, 1/4 W Type. Refer to the Schematic Diagram for those parts.)			
⚠ R001	244 2051 961	Metal Oxide 100ohm 1 W(NB)	RS14B3A101JNBST(S)
⚠ R002	244 2043 924	Metal Oxide 56ohm 1 W(NB)	RS14B3A560JNBST(S)
⚠ R115,116	244 2051 903	Metal Oxide 8.2kohm 1 W(NB)	RS14B3A822JNBST(S)
⚠ R119	241 2327 940	Carbon Film 4.7ohm 1/4 W(NB)	RD14B2E4R7JNBS
⚠ R120	241 2432 905	Carbon Film 470ohm 1/4 W(NB)	RD14B2E471JNBP
⚠ R625	241 2432 905	Carbon Film 470ohm 1/4 W(NB)	RD14B2E471JNBP
⚠ R627,628	244 2051 903	Metal Oxide 8.2kohm 1 W(NB)	RS14B3A822JNBST(S)
VR201	211 0761 004	Variable Resister 30 kohm	Main Volume
VR202	211 0798 103	Variable Resister 100 kohm	Balance
VR203	211 0834 012	Variable Resister 10 kohm	Treble
VR204	211 0834 009	Variable Resister 30 kohm	Bass
CAPACITORS GROUP			
⚠ C002,003	253 8003 713	Ceramic Cap. 4700pF /400 V	CK45E2GAC472MC
C101~110	253 4537 982	Ceramic Cap. 56pF /50 V	CC45SL1H560J
C113	254 4263 987	Electrolytic 10 μF/100 V	CE04W2A100M
C114	253 1181 917	Ceramic Cap. 0.022μF/50 V	CK45F1H223Z
C115	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C205,206	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C207,208	253 4538 907	Ceramic Cap. 68pF /50 V	CC45SL1H680J
C209,210	256 1034 953	Metalized 0.068μF/50 V	CF93A1H683J
C211,212	256 1034 911	Metalized 0.033μF/50 V	CF93A1H333J
C213,214	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C215,216	254 4254 909	Electrolytic 10 μF/16 V	CE04W1C100M
C217,218	254 4260 922	Electrolytic 0.33 μF/50 V	CE04W1HR33M
C219,220	256 1034 911	Metalized 0.033μF/50 V	CF93A1H333J
C221,222	254 4260 919	Electrolytic 0.22 μF/50 V	CE04W1HR22M
C223,224	254 4260 906	Electrolytic 0.1 μF/50 V	CE04W1H0R1M
C225,226	254 4260 935	Electrolytic 0.47 μF/50 V	CE04W1HR47M
C227,228	253 4537 924	Ceramic Cap. 33pF /50 V	CC45SL1H330J
C229	254 3056 917	Electrolytic 1 μF/50 V (Bipolar)	CE04D1H010MBP
C230	253 1181 904	Ceramic Cap. 0.01μF/50 V	CK45F1H103Z
C232	255 4199 960	Mylar Film 0.022 μF/50 V	CQ92M1H223J(MRZ)
C233	254 4356 797	Electrolytic 10 μF/50 V	CE04W1H100MC(ARS)
C501	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C502	253 1181 917	Ceramic Cap. 0.022μF/50 V	CK45F1H223Z
C603	254 4250 945	Electrolytic 330 μF/6.3 V	CE04W0J331M
C604,605	254 4254 912	Electrolytic 22 μF/16 V	CE04W1C220M
C606	253 1181 917	Ceramic Cap. 0.022μF/50 V	CK45F1H223Z
C607	254 4263 987	Electrolytic 10 μF/100 V	CE04W2A100M
C707	253 1181 917	Ceramic Cap. 0.022μF/50 V	CK45F1H223Z
C708	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C712	254 4259 700	Electrolytic 2200 μF/35 V	CE04W1V222MC
C713	254 4254 909	Electrolytic 10 μF/16 V	CE04W1C100M
C714	253 1181 904	Ceramic Cap. 0.01μF/50 V	CK45F1H103Z
C901	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M
C902	253 1181 917	Ceramic Cap. 0.022μF/50 V	CK45F1H223Z
C903,904	253 1179 929	Ceramic Cap. 150pF /50 V	CK45B1H151K
C905,906	253 4537 966	Ceramic Cap. 47pF /50 V	CC45SL1H470J
C907,908	253 1179 929	Ceramic Cap. 150pF /50 V	CK45B1H151K
C909,910	253 1179 903	Ceramic Cap. 100pF /50 V	CK45B1H101K
C913,914	255 1251 937	Mylar Film 0.0033μF/50 V	CQ92M1H332J(MRZ)
C915,916	254 4254 941	Electrolytic 100μF/16 V	CE04W1C101M(ASF)
C917,918	256 1034 953	Metalized 0.068μF/50 V	CF93A1H683J
C919,920	254 4260 980	Electrolytic 10 μF/50 V	CE04W1H100MC
C921,922	255 4223 959	Mylar Film 0.018 μF/50 V	CQ92M1H183J(MRZ)
C923,924	255 1251 953	Mylar Film 0.0012 μF/50 V	CQ92M1H122J(MRZ)
C925,926	255 4199 986	Mylar Film 0.001μF/50 V	CQ92M1H102J(MRZ)
C935	254 4254 941	Electrolytic 100μF/16 V	CE04W1C101M
C936,937	254 4260 948	Electrolytic 1 μF/50 V	CE04W1H010M

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
OTHER GROUP				
	—	(P.W.Board)		
L901,902	235 9003 002	FTZ Choke Coil		2
⚠ RL001	214 0142 004	Relay(TY-S)		1
RL005	214 0127 003	Relay(RY-12W)		1
RL101~106	214 0127 003	Relay(RY-12W)		6
⚠ F801	206 1015 037	Fuse 4.0 A		1
⚠ F802	206 1015 023	Fuse 1 A T		1
⚠ F701	206 1015 023	Fuse 1 AT		1
⚠ AC001	273 3950 002	3 P AC Outlet		1
	202 0040 909	Fuse Clip		6
⚠ SW001	212 1101 008	Power Switch (TY-S)		1
SW101	212 0336 005	Rotary Switch		1
SW201	212 1097 000	1 P Push Switch	Loudness	1
SW202	212 1130 006	1 P Push Switch	S.Direct	1
SW901	212 1041 001	1 P Push Switch	MM-MC	1
	204 8413 000	2 P Pin Jack(C-GND)	Phono	1
	204 8266 008	4 P Pin Jack(S-GND)		2
	204 8278 009	6 P Pin Jack(S-GND)		1
	415 0299 000	Condenser Cover		2

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
	205 0692 000	2 P Wrapping Terminal		1
CN101	205 0666 065	6 P Conn. Base(9130)		1
CN101	205 0667 064	6 P Conn. Base-L(9130)		1
CN102	205 0666 052	5 P Conn. Base(9130)		1
CN102	205 0667 051	5 P Conn. Base-L(9130)		1
CN103	205 0233 058	5 P EH Conn. Base		1
CN201	205 0343 058	5 P Conn. Base (KR-PH)		2
CN201	203 8415 005	5 P PH-PH Conn. Cord		1
CN202	204 0455 008	6 P PH-PH Conn. Cord		1
CN202,801	205 0343 061	6 P Conn. Base (KR-PH)		3
CN203	205 0234 044	4 P EH SID Base		1
CN301	203 5024 004	3 P EH-EH Conn. Cord		1
CN303	204 0454 009	6 P EH-EH Conn. Cord		1
	204 2693 004	7 P EH-EH Conn. Cord		1
CN601	205 0343 087	8 P Conn. Base (KR-PH)		1
CN601	204 2548 007	8 P KR-KR Ribbon	L=550	1
CN602	205 0375 000	10 P Conn. Base (KR-PH)		1
CN602	204 2554 046	10 P KR-KR Ribbon	L=750	1
CN603	205 0343 090	9 P Conn. Base (KR-PH)		1
CN603	204 2550 053	9 P KR-KR Ribbon	L=400	1
CN802	205 0355 033	3 P KR Conn. Base (L)		1
	203 0418 042	1 P SIN Cord Ass'y	L=70 Black	1
CN802	203 4872 037	3 P KR-KR Ribbon	L=350	1

1U-2777C for Multi-Voltage Model PARTS LIST

(Same as 1U-2734A/B for Europe Black except the following)

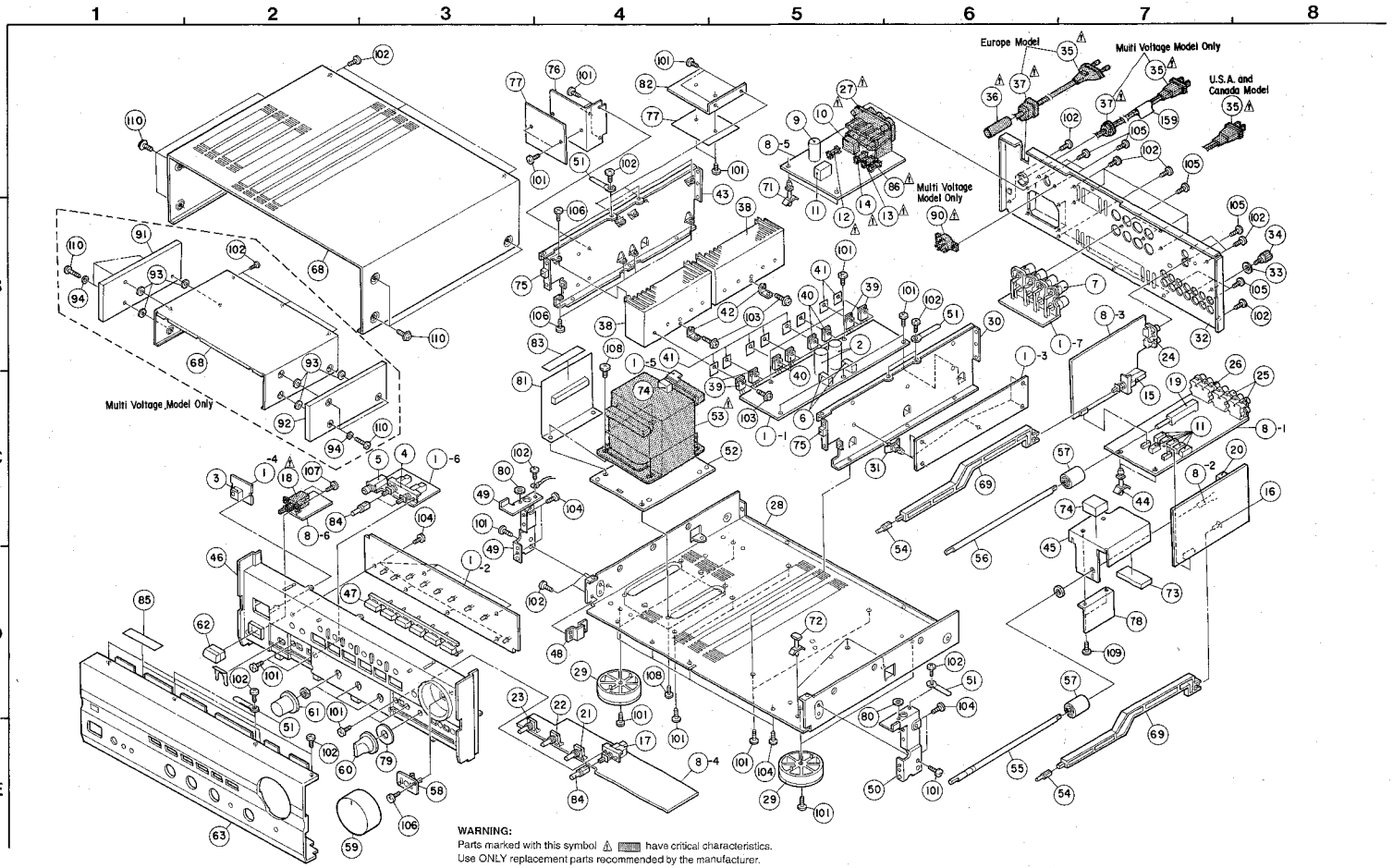
Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
CAPACITORS GROUP				
C905,906	253 4537 966	Ceramic Cap. 47pF/50V	Delete	–
OTHER GROUP				
L901,902	235 9003 002	FTZ Choke Coil	Delete	–
⚠ F001	206 1061 073	Fuse 10A (250V)	Change	1
⚠ F002	206 1015 029	Fuse 1AT	Delete	–
⚠ F003	206 1015 087	Fuse 10A	Add	1
	513 2695 095	Fuse Label	Add	1
⚠ AC001	203 3946 003	AC Outlet	Change	1

1U-2777D for U.S.A. & Canada Models PARTS LIST

(Same as 1U-2734A/B for Europe Black except the following)

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
CAPACITORS GROUP				
C905,906	253 4537 966	Ceramic Cap. 47pF/50V	Delete	–
OTHER GROUP				
L901,902	235 9003 002	FTZ Choke Coil	Delete	–
⚠ F001	206 1046 043	Fuse 10A	Change	1
⚠ F002	206 1046 914	Fuse 8A	Change	1
⚠ F701	206 1039 034	Fuse 1A	Change	1
	415 0299 000	Condenser Cover	Delete	–
	513 2195 079	Fuse Label	Add	1
	513 1674 083	Fuse Label	Add	1
	513 2195 082	Fuse Label	Add	1
⚠ AC001	203 3946 003	AC Outlet	Change	1

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

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
◉ 1	Note	P. Amp. Unit Ass'y		1s
1-1	—	P. Amp. Unit Ass'y		(1)
1-2	—	μ-com Unit		(1)
1-3	—	Pre Amp. Unit		(1)
1-4	—	Sensor Unit		(1)
1-5	—	Wire Unit		(1)
1-6	—	SP Switch Unit		(1)
1-7	—	Speaker Unit		(1)
2	254 6186 004	Chemicon 15000μF/71V	C705,706	2
3	499 0150 008	Remocon Sensor SBX1610-52	IC804	
4	212 1128 005	2 P Push Switch	SW501 SP SW	1
5	Note	Headphone Jack		1
6	214 9003 005	Relay	RL603,604	2
7	Note	8 P Terminal(S-GND)		1
◉ 8	Note	Input Unit Ass'y		1s
8-1	—	Input Unit		(1)
8-2	—	Vol. Unit		(1)
8-3	—	EQ. Unit		(1)
8-4	—	Tone Unit		(1)
8-5	—	Protector Unit		(1)
8-6	—	Power Switch Unit		(1)
9	254 4259 700	Chemicon 2200μF/35 V	C712	1
⚠ 10	214 0142 004	Relay (TV-5)	RL001	1
11	214 0127 003	Relay (RY-12W)	RL005,101~106	7
⚠ 12	Note	Fuse 1 A T	F701	1
⚠ 13	Note	Fuse nA		1
⚠ 14	Note	Fuse nA		1
15	212 1041 001	1 P Push Switch	SW901 MM/MC	1
16	212 1130 006	1 P Push Switch	SW202 S.Direct	1
17	212 1097 000	1 P Push Switch	SW201 Loudness	1
⚠ 18	212 1101 006	Power Switch(TV-5)	SW001	1
19	212 0336 005	Rotary Switch	SW101 Rec out	1
20	211 0761 004	Variable Resistor 30k ohm	VR201 Main Vol.	1
21	211 0798 103	Variable Resistor100k ohm	VR202 Balance	1
22	211 0834 012	Variable Resistor 10k ohm	VR203 Treble	1
23	211 0834 009	Variable Resistor 30k ohm	VR204 Bass	1
24	204 8413 002	2 P Pin Jack(C-GND)	Phono	1
25	204 8266 008	4 P Pin Jack(S-GND)	Tape	2
26	204 8278 009	6 P Pin Jack(S-GND)		1
⚠ 27	Note	3 P AC Outlet	AC001	1
◉ 28	411 1294 206	:Main Chassis		1
29	104 0194 108	Foot Ass'y		4
◉ 30	412 9400 008	Chassis Sup. Bracket		1
◉ 31	415 9016 019	P.C.B. Holder		5
◉ 32	Note	Rear Panel		1
33	477 0018 001	Washer(P-87)		1
34	205 0071 016	Terminal Ass'y		1
⚠ 35	Note	AC Cord with Plug		1
⚠ 36	415 0305 017	P.V.C. Tube	L=150	1
⚠ 37	Note	Cord Bush		1
38	417 0502 007	Power Radiator		2
39	273 0413 004	Transistor 2SC3855LB4 (O/P/Y)(Z)	TR319,320,325,326	4
40	271 0263 009	Transistor 2SA1491LB4 (O/P/Y)(Z)	TR321,322,327,328	4
41	412 0234 007	Insulating Sheet		8
◉ 42	412 3225 108	P.W.B. Bracket(A)		2
43	412 3833 202	Radiator Bracket		1
44	415 9016 048	P.C.B. Holder	L=21.5	2
45	412 9401 104	Volume Bracket		1
◉ 46	Note	Inner Panel		1
47	Note	Function Button		1
◉ 48	Note	Side Bracket		1
◉ 49	412 9402 006	Side Bracket(L)		1
◉ 50	412 9403 005	Side Bracket(R)		1
51	445 0048 003	Cord Holder(L=76)		7
◉ 52	412 3836 102	Trans Plate		1
⚠ 53	Note	Power Trans		1
54	Note	Knob (Round)		2
55	112 9113 026	VR Knob Joint(A)		1
56	112 9113 013	VR Knob Joint(A)		1
57	112 0643 003	VR Knob Joint(B)		2
58	119 0071 207	Joint Guide		1
59	Note	VR Knob Ass'y		1
60	Note	Knob (Fuji)		1
61	Note	Knob(S) (Round)		3
62	Note	Power Button Ass'y		1
◉ 63	Note	Front Panel Ass'y		1
★ 64	445 8004 007	Wire Clamper		17
65	—	—		
66	—	—		
67	—	—		
◉ 68	Note	Top Cover		1
69	113 1366 007	Push Knob Joint (B)		2
★ 70	Note	Masking Sheet		1
71	415 9016 006	P.C.B Holder	L=15	2
72	449 0050 006	Card Spacer	L=19.1	3
73	461 9052 021	Rubber Sheet	Put on VR Bracket	1
74	461 9054 016	Rubber Sheet		2
75	461 9052 034	Rubber Sheet	Put on Rad..Chass.	2
76	414 9145 107	P/T Shield-1		1
77	414 9151 007	P/T Shield-3		2
78	414 9159 009	Shield Plate		1
79	124 0032 002	Felt Sheet	T=2	1
80	477 0224 057	SP Washer	T=0.8	2
81	414 9160 001	P/T Shield Plate (A)		1
82	414 9161 000	P/T Shield Plate (B)		1
83	122 9030 012	Himeron Sheet	110x10xT0.5	1
84	Note	Knob (Round)		3
85	122 9030 009	Himeron Sheet	120x10xT1	2
⚠ 89	Note	Fuse nA		1

SCREWS

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
101	473 7002 018	Tapping Screw(S)3x8		30
102	Note	Tapping Screw(S)3x8 BLK		27
103	473 8007 009	Cup Screw 3x12		10
104	473 7508 017	Tapping Screw(P)3x10 BLK		14
105	Note	Fixing Screw		10
106	473 7500 015	Tapping Screw(P)3x8		9
107	473 7508 004	Tapping Screw(P)3x8 BLK		2
108	473 7004 003	Tapping Screw(S)4x8		8
109	473 7002 034	Tapping Screw(S)3x6 BLK		2
110	Note	3 P Swelling Screw		6

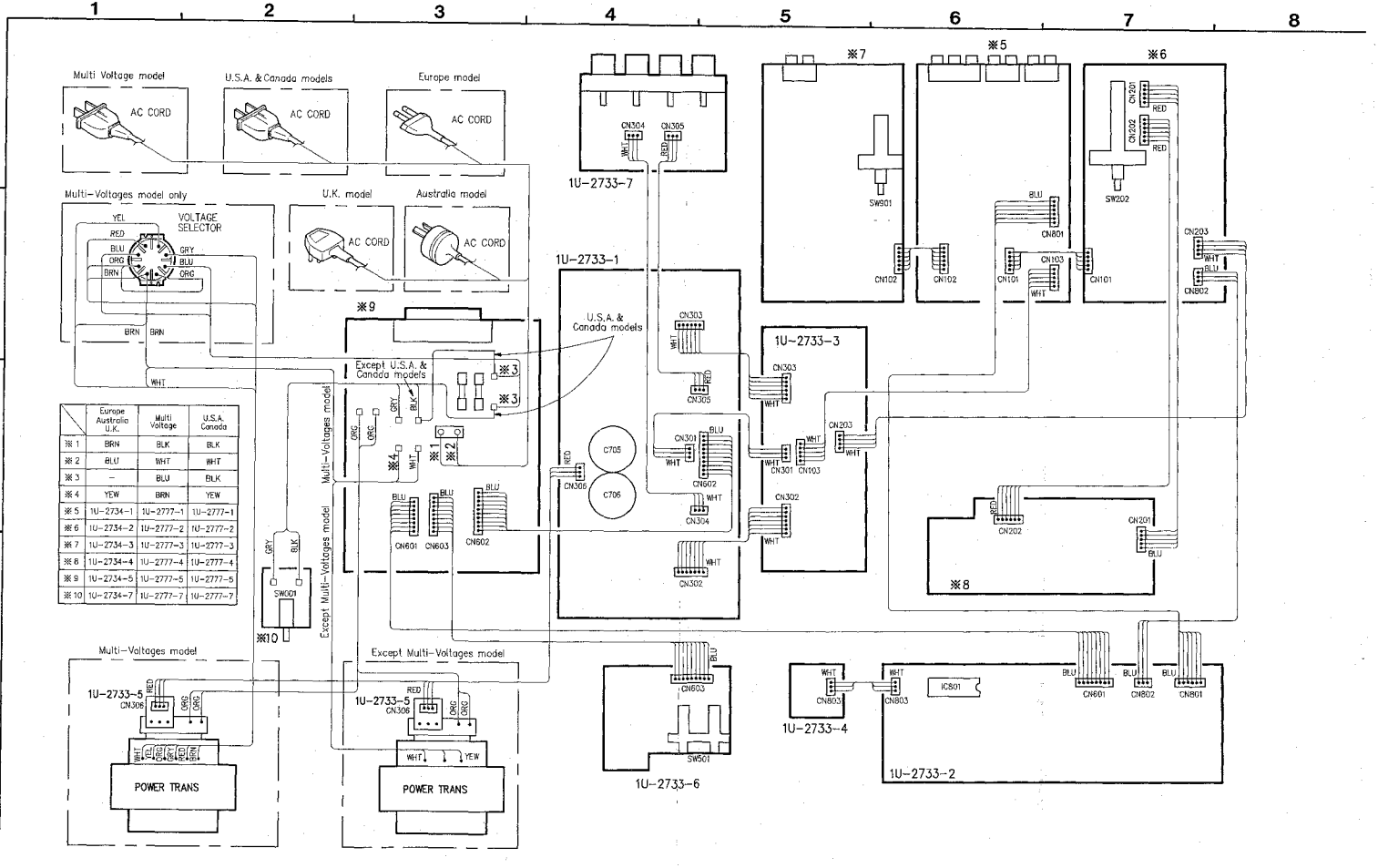
PACKING & ACCESSORIES (Not included EXPLODED VIEW.)

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
151	Note	Envelope Sub Ass'y		1s
151-1	505 8006 019	Envelope		(1)
151-2	Note	Inst. Manual		(1)
151-3	499 0277 004	Remote Control	RC-176	(1)
151-4	—	Batteries		(2)
152	504 9102 029	Styrene Paper		1
153	Note	Poly Cover		1
154	504 0092 080	Styrene Paper	for AC Cord	1
◉ 155	Note	Cushion Ass'y		1
◉ 156	Note	Carton Case		1
157	Note	Color Label(Gold)		2
158	Note	Side Pad		2
159	Note	Preset Label		1

ADDENDUM PARTS LIST

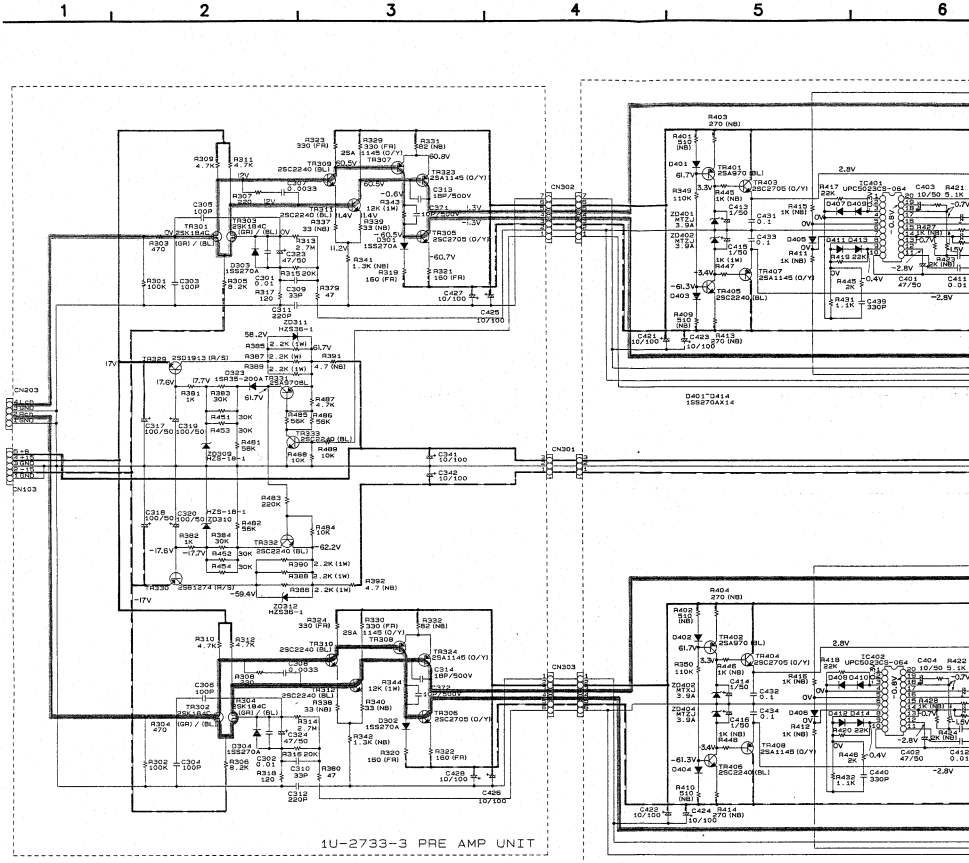
Ref. No.	Parts Name & Description	Part No.				
		Europe Black	Europe Gold	U.S.A. Black	Canada Black	M.-Voltage Gold
◉ 1	P.Amp. Unit Ass'y (1s)	1U- 2733 A	1U- 2733 B	1U- 2733 D	1U- 2733 D	1U- 2733 C
5	Headphone Jack (1)	204 8354 004	204 8355 003	204 8354 004	204 8354 004	204 8341 004
7	8 P Terminal (S-GND) (1)	205 0753 004	205 0753 004	205 0777 006	205 0777 006	205 0777 006
◉ 8	Input Unit Ass'y (1s)	1U- 2734 A	1U- 2734 A	1U- 2777 D	1U- 2777 D	1U- 2777 C
⚠ 12	Fuse n A (F701) (1)	206 1015 029 1 A T	206 1015 029 1 A T	206 1039 034 1 A T	206 1039 034 1 A T	206 1015 029 1 A T
⚠ 13	Fuse n A (1)	206 1015 029 1 A T (F002)	206 1015 029 1 A T (F002)			
⚠ 14	Fuse n A (1)	206 1015 087 4.0 A T (F001)	206 1015 087 4.0 A T (F001)	206 1046 014 8 A T (F002)	206 1046 014 8 A T (F002)	206 1061 073 10 A T (F001)
⚠ 27	3 P AC Outlet (1)	203 3950 002	203 3950 002	203 3946 003	203 3946 003	203 3945 003
32	Rear Panel (1)	105 9243 008	105 9243 008	105 9243 011	105 9243 011	105 9243 024
⚠ 35	AC Cord with Plug (1)	206 2063 009	206 2063 009	206 2060 002	206 2060 002	206 2082 005
⚠ 37	Cord Bush (1)	445 0056 008	445 0056 008	445 0056 008	445 0056 008	445 0071 009
46	Inner Panel (1)	146 1505 143	146 1505 156	146 1505 172	146 1505 172	146 1505 185
47	Function Button (1)	113 1686 101	113 1686 114	113 1686 127	113 1686 127	113 1686 130
48	Side Bracket (1)	412 2955 107	412 2955 107	—	—	—
⚠ 53	Power Trans (1)	233 6119 003	233 6119 003	233 6131 007	233 6131 007	233 6132 006
54	Knob(Round) (2)	113 1356 004	113 1356 017	113 1356 004	113 1356 004	113 1356 062
59	VR Knob Ass'y (1)	112 0744 009	112 0744 012	112 0744 009	112 0744 009	112 0744 025
60	Knob(Fuji) (1)	112 0641 005	112 0641 018	112 0641 005	112 0641 005	112 0641 047
61	Knob(S) (Round) (3)	112 0646 000	112 0646 013	112 0646 000	112 0646 000	112 0646 042
62	Power Button (1)	113 9213 000	113 9213 026	113 9213 000	113 9213 000	113 9213 039
63	Front Panel Ass'y (1)	144 9197 201	144 9197 214	144 9197 201	144 9197 201	144 9197 227
68	Top Cover (1)	102 9046 002	102 9046 015	102 9046 002	102 9046 002	102 9046 028
70	Masking Sheet (1)	513 1144 005	513 1144 005	—	—	—
84	Knob (Round) (3)	113 1694 009	113 1694 012	113 1694 009	113 1694 009	113 1694 025
⚠ 86	Fuse nA (1)	—	—	206 1046 043 10AT (F001)	206 1046 043 10AT (F001)	206 1015 087 4AT (F003)
⚠ 90	Voltage Sel. Switch (1)	—	—	—	—	212 0363 007
91	Wood Board (L) (1)	—	—	—	—	101 2543 004
92	Wood Board (R) (1)	—	—	—	—	101 2544 003
93	Felt Sheet (6)	—	—	—	—	124 0032 015
94	5 Washer (6)	—	—	—	—	475 1006 016
SCREWS						
102	Tapping Screw (S)3x8 Black	473 7015 018 (27)	473 7015 018 (27)	473 7015 018 (25)	473 7015 018 (25)	473 7015 018 (27)
105	Fixing Screw	477 0064 107 (10)	477 0064 107 (10)	477 0064 107 (8)	477 0064 107 (8)	477 0064 107 (8)
109	3 P Swelling Screw (6)	477 0263 005	477 0263 018	477 0263 005	477 0263 005	477 7007 039
PACKING & ACCESORIES (Not included EXPLODED VIEW.)						
151	Envelope Sub. Ass'y (1s)	GEN 7623	GEN 7623	GEN 7263 -01	GEN 7263 -01	GEN 7263 -02
151-2	Inst. Manual (1)	511 9375 003	511 9375 003	511 9375 003	511 9375 003	511 2679 007
153	Poly Cover	505 9102 019 (1)	505 9102 019 (1)	505 9102 019 (1)	505 9102 019 (1)	505 9102 019 (2)
155	Cushion Ass'y (1)	503 9261 006	503 9261 006	503 9261 006	503 9261 006	503 1147 102
157	Carton Case (1)	501 9256 002	501 9256 002	501 9256 002	501 9256 002	501 9256 028
158	Color Label(Gold) (2)	—	513 9111 001	—	—	513 9111 001
158	Side Pad (2)	—	—	—	—	504 0159 013
159	Preset Label (1)	—	—	—	—	515 8030 008

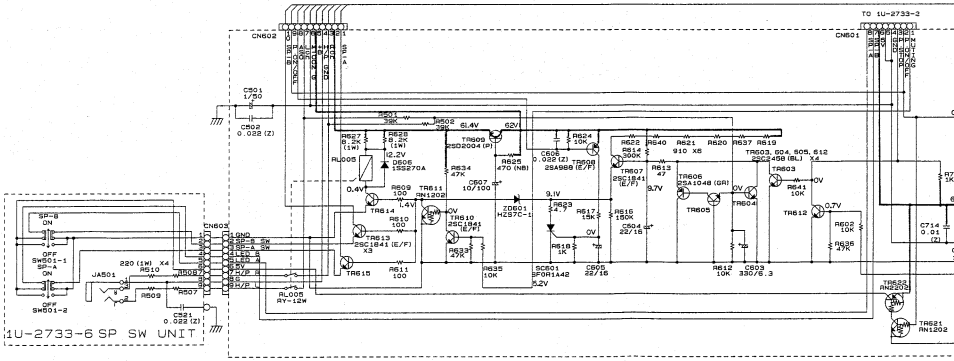
WIRING DIAGRAM

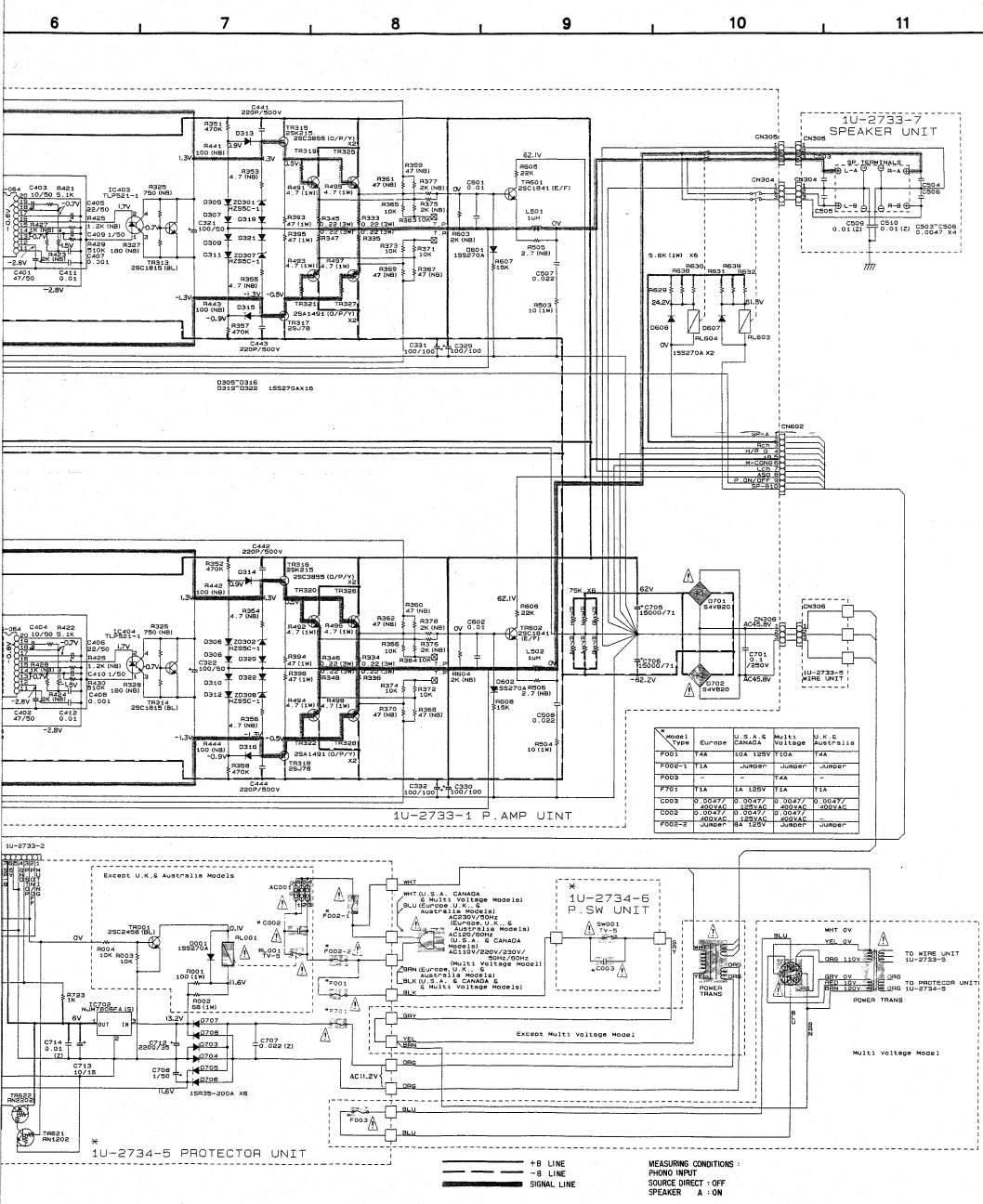


	Europe Australia U.K.	Multi Voltage	U.S.A. Canada
※1	BRN	BLK	BLK
※2	BLU	WHT	WHT
※3	–	BLU	BLK
※4	YEW	BRN	YEW
※5	1U-2734-1	1U-2777-1	1U-2777-1
※6	1U-2734-2	1U-2777-2	1U-2777-2
※7	1U-2734-3	1U-2777-3	1U-2777-3
※8	1U-2734-4	1U-2777-4	1U-2777-4
※9	1U-2734-5	1U-2777-5	1U-2777-5
※10	1U-2734-7	1U-2777-7	1U-2777-7

SCHEMATIC DIAGRAM







Model Type	Europe	U.S.A.& CANADA	Multi Voltage	U.K.& Australia
F001	T4A	10A 125V	T10A	T4A
F002-1	T1A	Jumper	Jumper	Jumper
F003	-	-	T4A	-
F701	T1A	1A 125V	T1A	T1A
C003	0.0047/ 400VAC	0.0047/ 400VAC	0.0047/ 400VAC	0.0047/ 400VAC
C002	0.0047/ 400VAC	0.0047/ 125VAC	0.0047/ 400VAC	-
F002-2	Jumper	8A 125V	Jumper	Jumper

MEASURING CONDITIONS :
PHONO INPUT
SOURCE DIRECT : OFF
SPEAKER A : ON

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.

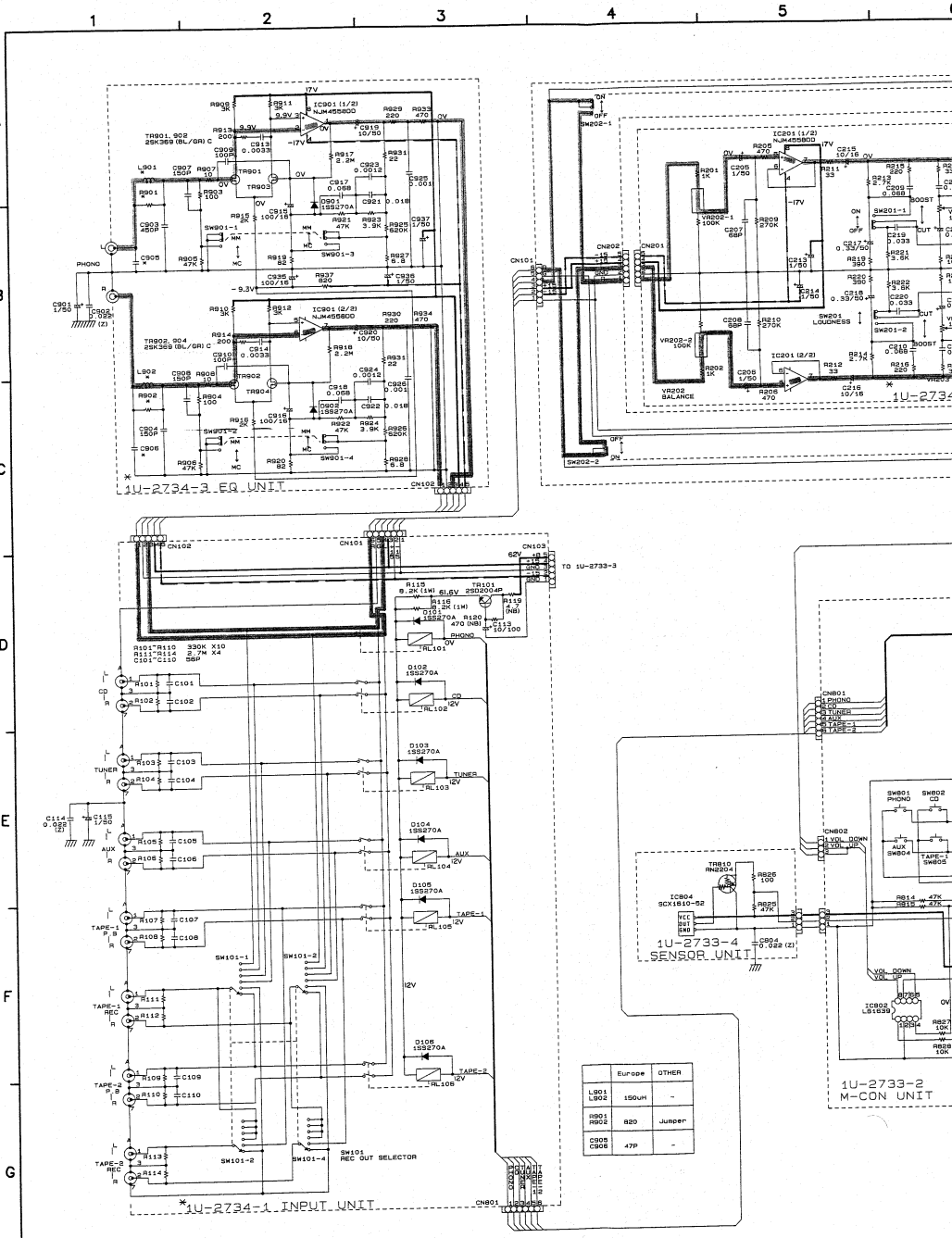
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.

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.



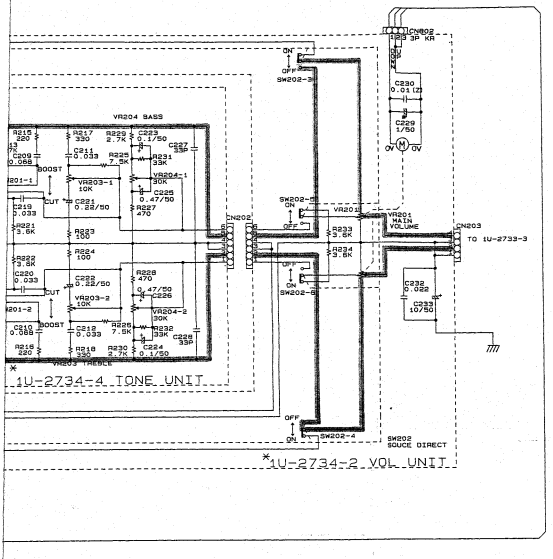
	Europe	OTHER
L901 L902	150uH	-
R901 R902	820	Jumper
C905 C906	47P	-

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.



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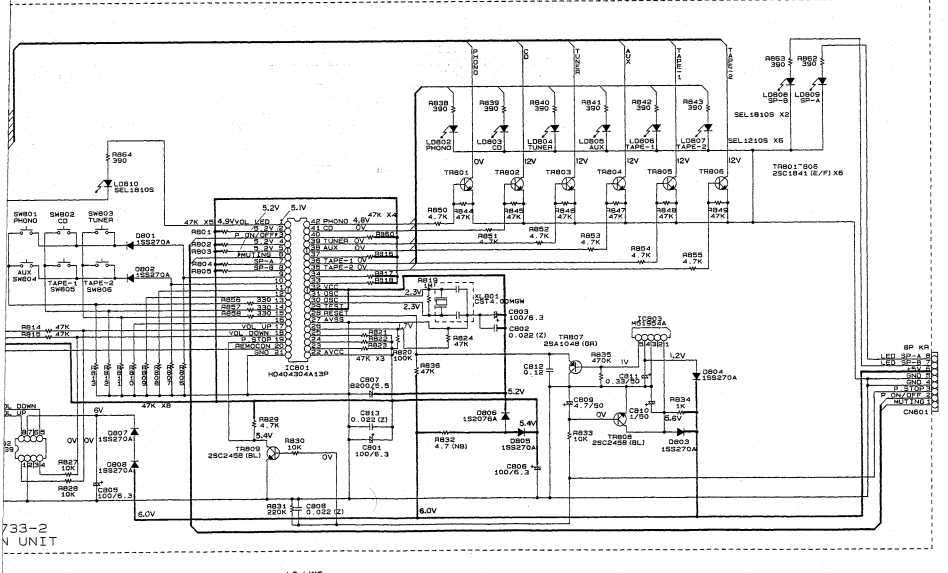
	Europe U.K. & Australia Models	Multi Voltage U.S.A. & Canada Models
INPUT UNIT	1U-2734-1	1U-2777-1
VOL UNIT	1U-2734-2	1U-2777-2
EQ UNIT	1U-2734-3	1U-2777-3
TONE UNIT	1U-2734-4	1U-2777-4
PROTECTOR UNIT	1U-2734-5	1U-2777-5
P SW UNIT	1U-2734-6	1U-2777-6



+B LINE
−B LINE
SIGNAL LINE

MEASURING CONDITIONS :
PHONO INPUT
SOURCE DIRECT : OFF
SPEAKER A : ON