



For more Hi-Fi manuals and set-up information
please visit www.hifiengine.com

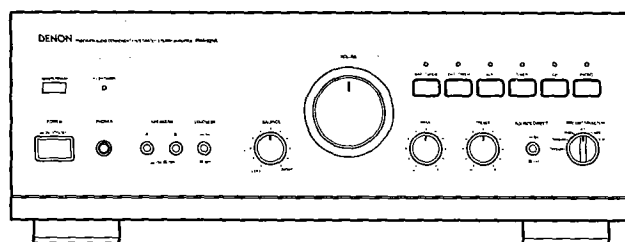
DENON

Hi-Fi Integrated Stereo Amplifier

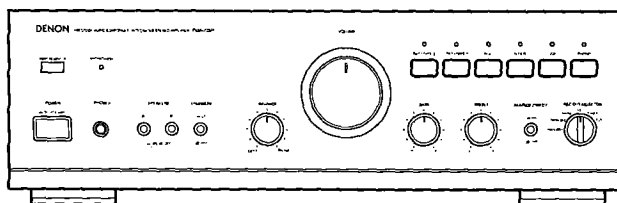
SERVICE MANUAL

MODEL PMA-925R/725R

INTEGRATED STEREO AMPLIFIER



PMA-925R




PMA-725R



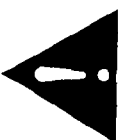
CONTENTS

OPERATING INSTRUCTIONS	2~7
REMOVAL OF EACH SECTION	8, 9
FUNCTION OF NEW CIRCUIT	10,11
METHOD OF ADJUSTMENTS	12
BLOCK AND LEVEL DIAGRAM	13
SEMICONDUCTORS	14, 15
PRINTED WIRING BOARD	16~19
NOTE FOR PARTS LIST	20
PARTS LIST OF P.W.B. ASS'Y	20~25
PMA-925R	20~23
PMA-725R	23~25
EXPLODED VIEW OF CHASSIS AND CABINET, PARTS LIST OF EXPLODED VIEW	26~29
PMA-925R	26,27
PMA-725R	28,29
WIRING DIAGRAM	30
SCHEMATIC DIAGRAM	31~34
PMA-925R	31,32
PMA-725R	33,34

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 SERVISING 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.

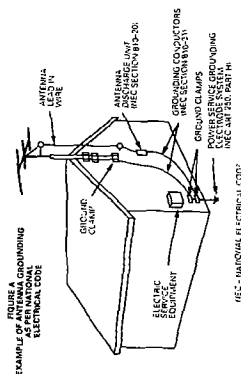
The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

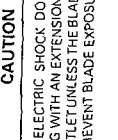
WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

● FOR U.S.A. MODEL ONLY

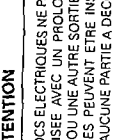
SAFETY INSTRUCTIONS

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.
17. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.





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 SERVISING 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 CHOCES 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.

● **DECLARATION OF CONFORMITY**
We declare under our sole responsibility that the product remains Amplifier PMA-925R/725R in conformity with the following standards:
EN55013, EN55020, EN60555-2 and EN60555-3

● **ÜBEREINSTIMMUNGSKLÄRUNG**
Wir erklären unter unserer Verantwortung, daß das Produkt Vor-Hauptverstärker PMA-925R/725R, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht:
EN55013, EN55020, EN60555-2 und EN60555-3

● **DECLARATION DE CONFORMITE**
Nous déclarons sur notre seule responsabilité que l'appareil Amplificateur PMA-925R/725R auquel se réfère cette déclaration est conforme aux standards suivants:
EN55013, EN55020, EN60555-2 et EN60555-3

● **DICHIAZIONE DI CONFORMITA**
Dichiaro con piena responsabilità che il prodotto amplificatore di precisione PMA-925R/725R, al quale questa dichiarazione si riferisce, è conforme alle seguenti norme:
EN55013, EN55020, EN60555-2 e EN60555-3

● **DECLARACIÓN DE CONFORMIDAD**
Declaramos bajo nuestra única responsabilidad que el producto preamplificador PMA-925R/725R, al que esta declaración hace referencia, es conforme con las siguientes estándares:
EN55013, EN55020, EN60555-2 y EN60555-3

● **EENVORMIGHEIDSVERKLARING**
Wij verklaren uitdrukkelijk op onze verantwoordelijkheid dat het product waarop deze verklaring betrekking heeft, de voorschriften PMA-925R/725R, in overeenstemming is met de volgende normen:
EN55013, EN55020, EN60555-2 en EN60555-3

● **ÖVERENSÄMMELSEINTYG**
Härmed intygar vi på eget ansvar att produkten, (förstärkare) slutbeg PMA-925R/725R, vilken detta intyg hänvisar till, uppfyller följande standarder:
EN55013, EN55020, EN60555-2 och EN60555-3

● **DECLARAÇÃO DE CONFORMIDADE**
Declaramos sob nossa exclusiva responsabilidade que o produto pre Amplificador Principal PMA-925R/725R ao qual esta declaração corresponde, está em conformidade com as seguintes normas:
EN55013, EN55020, EN60555-2 e EN60555-3

● **DECLARATION OF CONFORMITY**
We declare under our sole responsibility that the product remains Amplifier PMA-925R/725R in conformity with the following standards:
EN55013, EN55020, EN60555-2 and EN60555-3

● **ÜBEREINSTIMMUNGSKLÄRUNG**
Wir erklären unter unserer Verantwortung, daß das Produkt Vor-Hauptverstärker PMA-925R/725R, auf das sich diese Erklärung bezieht, den folgenden Standards entspricht:
EN55013, EN55020, EN60555-2 und EN60555-3

● **DECLARATION DE CONFORMITE**
Nous déclarons sur notre seule responsabilité que l'appareil Amplificateur PMA-925R/725R auquel se réfère cette déclaration est conforme aux standards suivants:
EN55013, EN55020, EN60555-2 et EN60555-3

● **DICHIAZIONE DI CONFORMITA**
Dichiaro con piena responsabilità che il prodotto amplificatore di precisione PMA-925R/725R, al quale questa dichiarazione si riferisce, è conforme alle seguenti norme:
EN55013, EN55020, EN60555-2 e EN60555-3



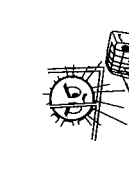
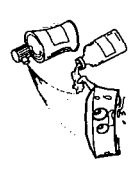

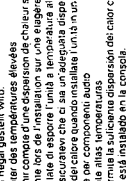
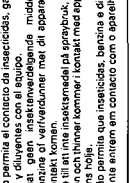
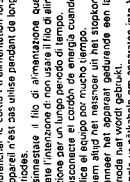

● **DECLARACIÓN DE CONFORMIDAD**
Declaramos bajo nuestra única responsabilidad que el producto preamplificador PMA-925R/725R, al que esta declaración hace referencia, es conforme con las siguientes estándares:
EN55013, EN55020, EN60555-2 y EN60555-3

● **EENVORMIGHEIDSVERKLARING**
Wij verklaren uitdrukkelijk op onze verantwoordelijkheid dat het product waarop deze verklaring betrekking heeft, de voorschriften PMA-925R/725R, in overeenstemming is met de volgende normen:
EN55013, EN55020, EN60555-2 en EN60555-3

● **ÖVERENSÄMMELSEINTYG**
Härmed intygar vi på eget ansvar att produkten, (förstärkare) slutbeg PMA-925R/725R, vilken detta intyg hänvisar till, uppfyller följande standarder:
EN55013, EN55020, EN60555-2 och EN60555-3

● **DECLARAÇÃO DE CONFORMIDADE**
Declaramos sob nossa exclusiva responsabilidade que o produto pre Amplificador Principal PMA-925R/725R ao qual esta declaração corresponde, está em conformidade com as seguintes normas:
EN55013, EN55020, EN60555-2 e EN60555-3

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

 <ul style="list-style-type: none"> Do not let foreign objects in the set. Nein fremden Gegenstände in das Gerät kommen lassen. Neg pas laisser des objets étrangers dans l'appareil. È importante che nessun oggetto è inserito all'interno dell'unità. Não deve colocar estranhos dentro do aparelho. Luist niet vreemde voorwerpen in het apparaat vallen. Se til alt fremmede föremål ikke ringer in i apparatet. Não deve objetos estranhos no aparelho. 	 <ul style="list-style-type: none"> Keep the set free from moisture, water, and dust. Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub frei. Protéger l'appareil contre l'humidité, l'eau et la poussière. tenere l'unità lontana dall'umidità, dall'acqua e dalla polvere. Maneja el equipo libre de humedad, agua y polvo. Laat geen vocht, gras, water of stof in het apparaat vallen. Uitst niet apparaten voor lucht, vatten och damm. Mantenha o aparelho livre de qualquer umidade, água ou poeira. 	 <ul style="list-style-type: none"> Avoid high temperatures. Allow for sufficient heat dissipation when installed on a rack. Vermieden Sie hohe Temperaturen. Verzorg de afvoer van warmte door voldoende ruimte te laten voor de afvoer van warmte. Evite das temperaturas elevadas. Permita a suficiente dispersão de calor quando o equipamento for instalado numa prateleira. Vermeid hoge temperaturen. Zorg voor een degelijke heatcooler 'naar het apparaat op een rack wordt geplaatst. Spiega se il rack non è adatto, perché non è adatto per il montaggio di un rack. Evite temperaturas altas. Se não for adequado, não monte o equipamento no rack.
 <ul style="list-style-type: none"> Do not let insecticides, benzene, and thinner come in contact with the set. Lassen Sie das Gerät nicht mit Insektiziden, Benzin oder Verdünnungsmitteln in Berührung kommen. Neg pas met insecticiden, benzine, en thinner in contact met het apparaat. Assicurarsi che l'unità non venga in contatto con insetticidi, benzina o thinner. Não permita o contato das inseticidas, gasolina e thinner com o equipamento. Laat geen insectenverdelgende middelen, benzine, of thinner in contact met het apparaat komen. Se til alt ikke insektsmedel på sprøytub, benzin og thinner kommer i kontakt med apparatet. Não permita que inseticidas, benzina e thinner venha em contato com o aparelho. 	 <ul style="list-style-type: none"> Unplug the power cord when not using the set for long periods of time. Niem das Gerät an der Steckdose zu, nicht, wenn du den set nicht nutzt. Sie das Netzkabel vom Netzstecker. Debrancher le cordon d'alimentation lorsque l'appareil n'est pas utilisé pendant de longues périodes. Disinnestare il filo di alimentazione quando avete l'intenzione di non usare il filo di alimentazione per un periodo di tempo. Desconecte o fio de energia quando não utilizar o equipamento por longo tempo. Niem altijd het netkabel uit het stopcontact. Neem altijd het netkabel uit het stopcontact wanneer u niet langer de set wilt gebruiken. Kopla het netkabel em apparaten inte tönner att användas i lång tid. Não tire o fio condutor da rede quando o aparelho não for usado por um longo período. 	 <ul style="list-style-type: none"> Handle the power cord carefully. Hold the plug when unplugging the cord. Halten Sie vorsichtig mit dem Netzkabel um. Holden Sie das Kabel am Stecker, wenn Sie den Netzkabel aus der Steckdose ziehen. Ne pas tirer le cordon d'alimentation avec précaution. Manejar la prise lors du débranchement du cordon. Agarre a ficha quando desligar o cabo da tomada. Manege el cordon de energia con cuidado. Agarre la parte de la clavija cuando desconecte el cable de energía. Handle the power cord carefully. Hold the plug when unplugging the cord. Halten Sie vorsichtig mit dem Netzkabel um. Holden Sie das Kabel am Stecker, wenn Sie den Netzkabel aus der Steckdose ziehen. Ne pas tirer le cordon d'alimentation avec précaution. Manejar la prise lors du débranchement du cordon. Agarre a ficha quando desligar o cabo da tomada. Manege el cordon de energia con cuidado. Agarre la parte de la clavija cuando desconecte el cable de energía.
 <ul style="list-style-type: none"> Never disassemble or modify the set in any way. Niem de set uit elkaar halen of het apparaat te wijzigen. Neg jamais démonter ou modifier l'appareil d'une manière ou d'une autre. Não desmonte nem modifique o aparelho de nenhuma maneira. Niem de set uit elkaar halen of het apparaat te wijzigen. Neg jamais desmontar nem modificar o aparelho de nenhuma maneira. Niem de set uit elkaar halen of het apparaat te wijzigen. Neg jamais desmontar nem modificar o aparelho de nenhuma maneira. 	 <ul style="list-style-type: none"> Do not obstruct the ventilation holes on the back of the set. Niem de ventilatiegaten op de achterkant van de set blokkeren. Neg jamais obstruir os furos de ventilação na parte traseira do aparelho. Não obstrua as aberturas de ventilação na parte traseira do aparelho. Niem de ventilatiegaten op de achterkant van de set blokkeren. Neg jamais obstruir os furos de ventilação na parte traseira do aparelho. Não obstrua as aberturas de ventilação na parte traseira do aparelho. 	 <ul style="list-style-type: none"> Do not obstruct the ventilation holes on the back of the set. Niem de ventilatiegaten op de achterkant van de set blokkeren. Neg jamais obstruir os furos de ventilação na parte traseira do aparelho. Não obstrua as aberturas de ventilação na parte traseira do aparelho. Niem de ventilatiegaten op de achterkant van de set blokkeren. Neg jamais obstruir os furos de ventilação na parte traseira do aparelho. Não obstrua as aberturas de ventilação na parte traseira do aparelho.

NOTE:

- Mantenha sempre activado el interruptor de alimentación (POWER) en la unidad principal.
- Encienda y apague el equipo desde la unidad de control remoto.
- 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 silenciamiento/modo de espera (MUTE/STANDBY) esté encendido, significa que la alimentación a la unidad ha sido desconectada. Mantenga el control remoto. Conecte la alimentación desde la unidad de control remoto.

OPMERKING:
1. Zorg er altijd voor dat de afstandsbediening (POWER) van het hoofdtoestel in de eenheids eenheid is ingeschakeld.
2. Schakel de stroom uit van de afstandsbediening.
3. Trek het netkabel uit wanneer u denkt het toestel gedurende een lange periode van niet te gebruiken.

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

OBSERVAR:
1. Lak alltid strömbyrøren (POWER) på hovedenheden være påslagen.
2. Slå til/fra strømmen med hjælp af fjernkontrollen.
3. Koppl loss netkabeln om apparaten ikke skal anvendes under lang tid.

WARNING:
Om MUTE/STANDBY-lampen lyser betyder det, at strømmen har sluttet af via fjernkontrollen. Strømmen måske slåes på via fjernkontrollen igen.

NOTA:
1. Mantenga el interruptor de Corrente (POWER) en la unidad principal siempre ligado.
2. Ligue e desligue a corrente a partir da unidade de controle remoto.
3. Desconecte o fio de força quando intender não utilizar a unidade por longo tempo.

CAUTION:
Se apenas se iluminar o LED de surdina/ espera (MUTE/STANDBY), isto significa que a força se desligou a partir do controle remoto. Ligue a força a partir do controle remoto.

註:
1. 主機上的POWER (電源) 顯示燈一直保持點亮。
2. 出遙控器按電源之開和關。
3. 出遙控器按電源之開和關。

注意:
若只有MUTE/STANDBY LED指示燈亮, 就表示電源已由遙控器關閉。應從遙控器開啟電源。

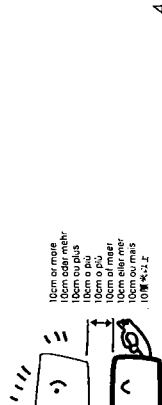
PRECAUCIONES PARA LA INSTALACION
Deje por lo menos 10 cm. de espacio entre esta unidad y cualquier otro componente situado sobre ella.

VOORZORGMAATREGELEN
Bij plaatsing dient u een ruimte van minstens 10 cm open te laten tussen de toestel en een ander erop geplaatst component.

FORSIKTIGHETSÅTGÆRDER VID INSTALLATIONEN
Se til at der ligger mindst 10 cm mellem rum mellem apparatet og en anden apparat som stilles ovenpå.

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

安裝注意
本機須與其上方擺置的其它音響設備相隔至少10厘米。



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

CAUTION:
If only the MUTE/STANDBY LED is lit, this means that the power is turned off from the remote control unit. Turn the power on from the remote control unit.

HINWEIS:
Wenn nur das Stumm-/Bereitschafts-LED (MUTE/STANDBY) leuchtet, so bedeutet dies, daß der Strom vom Fernbedienungsgarät aus abgeschaltet worden ist. Schalten Sie den Strom vom Fernbedienungsgarät aus ein.

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

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

ATTENTION:
Si seulement le 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. Tener siempre el interruptor de la corriente (POWER) en la unidad principal en la posición de activación.
2. Accendita e spegnita la corrente usando il telecomando.
3. Scollegare il filo di alimentazione quando avete intenzione di non usare l'appareil per un lungo periodo.

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

注意:
1. 主機上的POWER (電源) 顯示燈一直保持點亮。
2. 出遙控器按電源之開和關。
3. 出遙控器按電源之開和關。

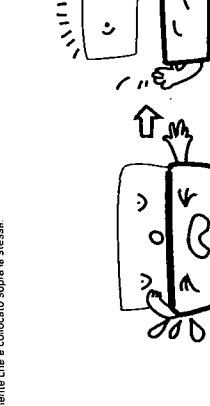
注意:
若只有MUTE/STANDBY LED指示燈亮, 就表示電源已由遙控器關閉。應從遙控器開啟電源。

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

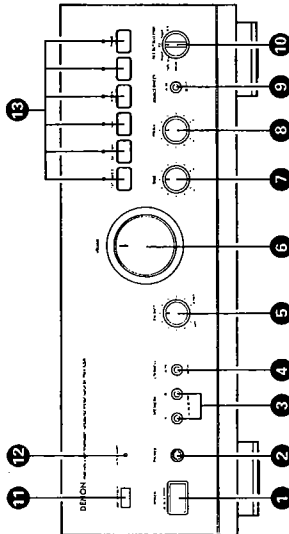
SICHERHEITSMASSNAHMEN BEIM EINBAU
Lassen einen Mindestabstand von 10 cm zwischen diesem Gerät und der anderen Komponente, die daraufgestellt wird.

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

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



FRONT PANEL
FRONTPLATTE
PANNEAU AVANT
正面



REAR PANEL
RÜCKWAND
PANNEAU ARRIERE
PANNELLO POSTERIORE
背面

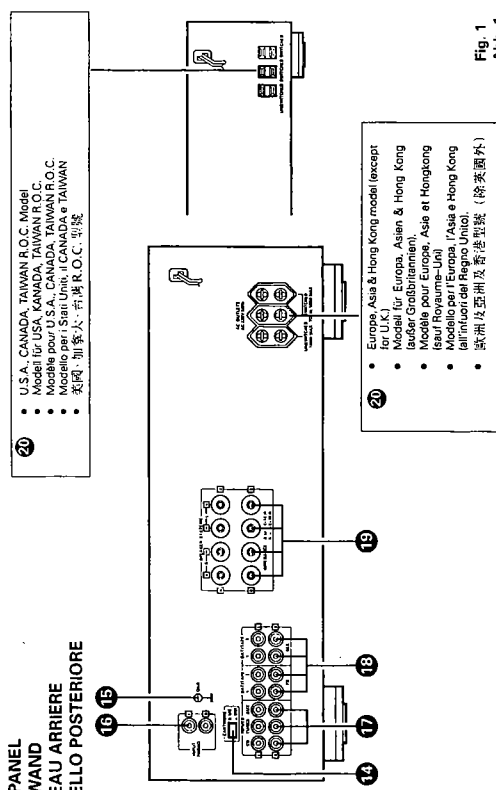


Fig. 1
Abb. 1
圖 1

① CARTRIDGE	② GND	③ PHONO	④ CD, TUNER, AUX	⑤ DAT/TAPE-1, DAT/TAPE-2, TAPE PB	⑥ SPEAKERS
Cartridge Cartridge Switch	GND	Phono Input Terminals Phono	Input Terminals (CD, TUNER, AUX)	Playback and Recording Terminals • Playback Terminals • Recording Terminals	Speaker Terminals
Tonearm Tonarm	GND	Excitation/Signal Phono	Excitation/Signal (CD, TUNER, AUX)	Tonearm-Start/Stop • Wiederabsp. • Aufspulen	Lautesprecher- klemmen
Selecteur de carte	GND	Bornes d'entrée phono	Bornes de lecture et d'enregistrement (CD, TUNER, AUX)	Bornes de lecture • Borne d'enregistrement	Bornes de haut- parleurs
Microphone d' enregistrement	GND	Terminals d'entrée Phono	Terminals d'entrée (CD, TUNER, AUX)	Terminals de reproduction • Terminals de reproduction • Terminals de registration	Terminali degli altoparlanti
喇叭/傳聲器	地線	唱盤輸入端子 (唱盤)	輸入端子 (CD, 調諧器, 輔助)	播放/錄音端子 • 播放/錄音	揚聲器端子

CONNECTIONS
ANSCHLÜSSE
CONNEXIONS
CONNESSIONI
連接方法

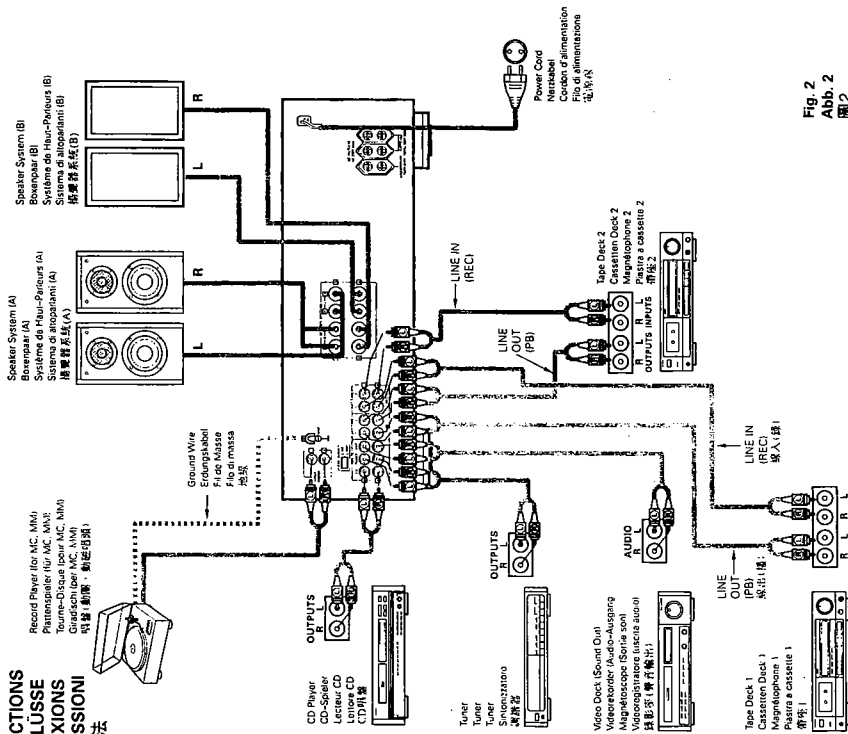


Fig. 2
Abb. 2
圖 2

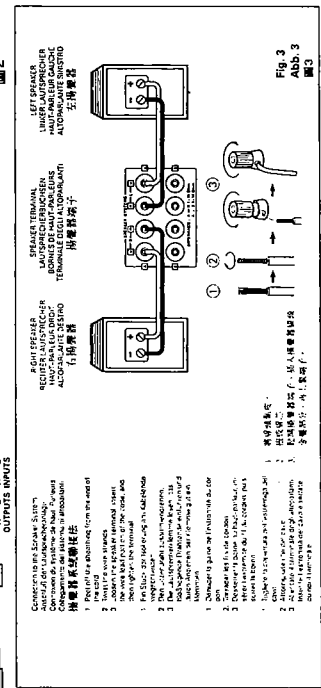


Fig. 3
Abb. 3
圖 3

DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS

- 1 POWER (Power Switch)**
When the power switch is turned ON (I), the MUTE/STAND-BY 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 SPEAKERS (Speaker Selection Switch)**
The PMA-925R/725R can be connected to two speaker systems: speaker system A and speaker system B.
When A is pressed, the speaker system connected to speaker output terminals A operates.
When B is pressed, the speaker system connected to speaker output terminals B operates.
When A and B are pressed together, both speaker systems operate simultaneously. When the A and B switches are both off (in the rest position), there is no output from the speaker terminals. This setting is used to listen to playback through the headphones.
- 4 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 (I) when listening to music at a low volume. The low notes and high notes will be corrected to produce a natural sound.
- 5 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.
- 6 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.
- 7 BASS (Bass Control)**
This knob is used to control the bass quality of the sound.
When the knob is set at the center position, the frequency characteristics are flattened in the range below 1000 Hz. The bass is emphasized as the knob is moved off center to the right (↗), and reduced as it is moved to the left (↖).
When volume control ③ is set to the right of the center position, the effect of the other controls is reduced.
- 8 TREBLE (Treble Control)**
This knob is used to control the treble quality of the sound.
When the knob is set at the center position, the frequency characteristics are flattened in the range above 1000 Hz. The treble is emphasized as the knob is moved off center to the right (↗), and reduced as it is moved to the left (↖).
When volume control ③ is set to the right of the center position, the effect of the other controls is reduced.

- 9 SOURCE DIRECT (Source Direct Switch)**
The controls (BALANCE, LOUDNESS, and TONE) can be used when this switch is in the OFF (I) position.
When set to the ON (I) position, the above controls are bypassed and the signals are input directly to the volume control circuit, providing high quality sound.
- 10 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: Used to recording from the tape deck connected to the DAT/TAPE-1 jacks.
• DAT/TAPE-2: Used to recording from the tape deck connected to the DAT/TAPE-2 jacks.
- 11 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.
- 12 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.
- 13 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: Used to select the output from a turntable that is connected to the PHONO terminal.
Use the PHONO switch (Rear Panel Side) to switch the sensitivity to correspond to the cartridge type being used.
Used to listen a compact disc player or other component that is connected to the CD terminal.
• CD: 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, B-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.

14 PHONO (Cartridge Selection Switch): Rear Panel Side

This switch is set according to the type of player cartridge to be used.
• MC (I): Used when an MC (moving-coil) cartridge with an output of less than 0.5 mV is used.
• MM (I): Used when an MM (moving-magnet) cartridge with an output of 2 mV or more is used.

20 AC OUTLETS: Rear Panel Side

- For U.S.A., Canada, and Taiwan R.O.C. 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.), Asia and Hong Kong 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. 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 (I)".
- 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-925R/725R, the REC OUT signal and the speaker headphones 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 sources 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 tape deck is used for recording 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 to the speaker circuit's operation cuts off the output to the speaker. In such a case, be sure to turn the power to the set off and check connections to the speakers. Then turn the power on again. After muting for several seconds, the set will operate normally.

NOTE

- This amplifier has a full memory back-up system. When the power is turned on, INPUT SELECTOR ③ is 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, the time the 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 flame.
 - If the batteries have leaked, remove any traces of battery fluid from the battery compartment wiping thoroughly with a dry cloth. Then insert new batteries.

(2) Directions for use

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

Note on operation

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

Besides being able to operate the PMA-925R/725R 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-925R/725R to create a remarkably ergonomic and versatile DENON system with all the quality sound reproduction that the devoted audiophile expects.

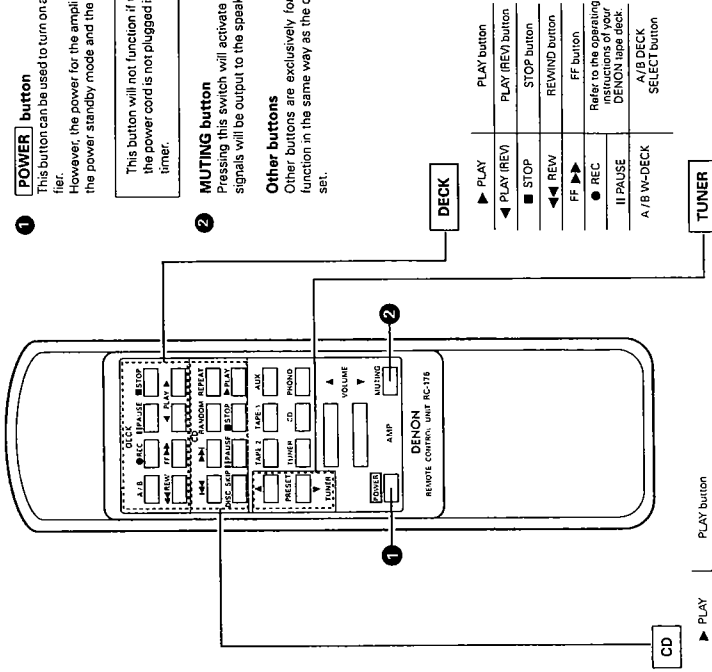
Remote Control Unit RC-176 supplied with the PMA-925R/725R

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

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

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

Other buttons
Other buttons are exclusively for the PMA-925R/725R, and function in the same way as the corresponding buttons on the set.



PRESET buttons

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

- 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, 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.
- Only the MUTE/STANDBY 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.

Technical Data (typical value)	Technische Daten (typische Werte)	Caractéristiques techniques (valeur caractéristique)	PMA-925R/725R
POWER AMPLIFIER SECTION Rated Output Power: 100W per channel 20 Hz to 20 kHz THD 0.02% @ 0.05% (A2) (8Ω min Load) 1 kHz, T.H.D. 0.7% *Continuous BOW/BSW per channel min. into 8 Ω/Ohm from 20 Hz to 20 kHz with no more than 0.02% @ 0.05% total harmonic distortion.	LEISTUNGSGENÜSSE VERSTÄRKER Nenn-Ausgangsleistung: 100W je Kanal 20 Hz bis 20 kHz THD 0.02% @ 0.05% (A2) (8Ω min Last) 1 kHz, T.H.D. 0.7% *Fortwährender BOW/BSW pro Kanal min. zu 8 Ω/Ohm von 20 Hz bis 20 kHz mit einem Gesamtharmonikgehalt nicht mehr als 0.02% @ 0.05%.	PARTIE AMPLIFICATEUR Puissance nominale: 100W par canal 20 Hz à 20 kHz, D.H.T. 0.02% @ 0.05% (charge A2) (8Ω min) 1 kHz, D.H.T. 0.7% *BOW/BSW en continu par canal sur min. 8 Ω/Ohm de 20 Hz à 20 kHz avec une distorsion harmonique totale de 0.02% @ 0.05% ou moins.	80W + BOW/BSW = 60W 130W + 130W/100W + 100W BOW/BSW
PRE AMPLIFIER SECTION Rated Output: 150 mV (into 100 Ω load) Input Sensitivity: 1 mV (into 100 Ω load) Input Impedance: 100 kΩ PHONO: CD, TUNER, AUX TAPE-1, TAPE-2 RIAA Deviation: Within ±0.3 dB Maximum Input: 150 mV (into 100 Ω load)	VORVERSTÄRKER Nenn-Ausgangsleistung: 150 mV (in 100 Ω Last) Eingangsempfindlichkeit: 1 mV (in 100 Ω Last) Eingangsimpedanz: 100 kΩ PHONO: CD, TUNER, AUX TAPE-1, TAPE-2 RIAA-Abweichung von der Norm: innerhalb ±0.3 dB Maximaler Eingang: 150 mV (in 100 Ω Last)	PRE-AMPLI Puissance nominale: 150 mV (dans 100 Ω) Sensibilité d'entrée: 1 mV (dans 100 Ω) Impédance d'entrée: 100 kΩ PHONO: CD, TUNER, AUX TAPE-1, TAPE-2 Variation RIAA: Int. à ±0.3 dB Entrée max.: 150 mV (dans 100 Ω)	0.007% 150 mV MM 2.5 mV/100 Ω/ohm MC 200/100 Ω/ohm 150 mV/47 Ω/ohm
OVERALL CHARACTERISTICS SIN Ratio (IHF A Network): (input terminals short-circuited) SOURCE-DIRECT ON Tone Control Adjustable Bass: Treble: Loudness: OTHERS Power Supply AC Output: Switched x 2: Unswitched x 1: Power Consumption Dimensions x (W) x (H) x (D)	GESAMTEIGENSCHAFTEN Signal/Rauschverhältnis (IHF-A-Netzwerk): (Eingangs- und Ausgangsterminals kurzgeschlossen) QUELLE-DIREKT EIN Klingregulierungsbereich: TIEFEN (BASS) HOHEN (TREBLE) Lautstärke: SONSTIGES Netzspannung und- Frequenz Wechselstrom-Ausgänge Geschaltet x 2: Ungeschaltet x 1: Leistungsaufnahme Abmessungen (B) x (H) x (T)	CARACTÉRISTIQUES GÉNÉRALES Rapport signal/bruit (réseau IIF A) (Bornes d'entrée court-circuitées) SOURCE DIRECT ON Gamme de réglage de tonalité: GRAVES AIGÜES Compensation physiologique: AUTRES Alimentation Prises secteur (AC) Commutées x 2: Non commutées x 1: Consommation Dimensions (L) x (H) x (D)	20 Hz ~ 20 kHz PHONO MM 160 mV/1 kHz MC 120mV/1 kHz PHONO: MM 90 dB MC 70 dB (input) MC 70 dB (output) CD, TUNER, AUX TAPE-1, TAPE-2: 107 dB 100 Hz ±8 dB 10 kHz ±7 dB 10 kHz ±6 dB AC220V/50 Hz (For U.S.A., Canada and Hong Kong models) AC120V/60 Hz (For U.S.A., Canada and Taiwan R.O.C. models) 100W (Total) (For Europe except the U.K.), Asia and Hong Kong models) 120W (Total) (For U.S.A., Canada, and Taiwan R.O.C. models) 100W (For Europe except the U.K.), Asia and Hong Kong models) 240W (For U.S.A., Canada, and Taiwan R.O.C. models) 230W/100 (IEC) 42A3, 6A (U.S.A. and Canada models) 43A001 x 102H x 340Dmm PMA-925R 43A001 x 102H x 340Dmm PMA-725R (17-332" x 5-19/32" x 13-5/8") 11 kg (24 lbs 4oz) / 9.6 kg (21 lbs 3oz) 55W/100 x 194H x 180Dmm 2-1164" x 7-1/164" x 45(64") 100 g (about 3.5 oz) (including batteries)
Net Weight REMOTE CONTROL UNIT RC-176 Infrared control system: Infrared pulse system Power supply: 3V DC (two size R6P (AA)*1) Dimensions: Weight:	FERNBEDIENUNGSGERÄT RC-176 Fernbedienungs-System: Infrarot-Impuls Stromversorgung: 3V DC (zwei Größe R6P (AA)*1) Äußere Abmessungen: Gewicht:	UNITÉ DE TÉLÉCOMMANDE RC-176 Système de télécommande: Système à impulsion infrarouge Alimentation: 3V DC (deux piles alcalines de format R6P (AA)*1) Dimensions extérieures: Poids:	11 kg (24 lbs 4oz) / 9.6 kg (21 lbs 3oz)

Note: *1 For Europe, Asia and Hong Kong. *2 For U.S.A., Canada, and Taiwan R.O.C.
 *1 Für Europa, Asien und Hong Kong. *2 Für U.S.A., Kanada, und Taiwan R.O.C.
 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.

ESPAÑOL
 Por favor verifique asegurándose de que los siguientes artículos son empacados en la caja pero separados de la unidad principal.
 (1) Manual de instrucciones 1
 (2) Unidad de control remoto (RC-176) 1
 (3) Piles R6P (AA) 2

NEDERLANDS
 Controleer of de volgende accessoires bij het hoofd toestel 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

中文
 下列物品應主機一起包裝於紙箱內，請查對：
 (1) 使用說明書 1
 (2) 遙控器 (RC-176) 1
 (3) 電池 (R6P(AA)) 2

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

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

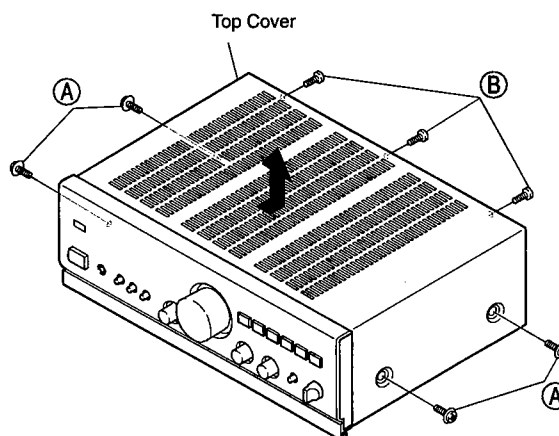
ITALIANO
 Controllare che le parti seguenti si trovino imballate con l'apparecchio nella scatola di spedizione.
 (1) Libretto delle istruzioni 1
 (2) Telecomando (RC-176) 1
 (3) Batterie R6P (AA) 2

MEMO:

REMOVAL OF EACH SECTION

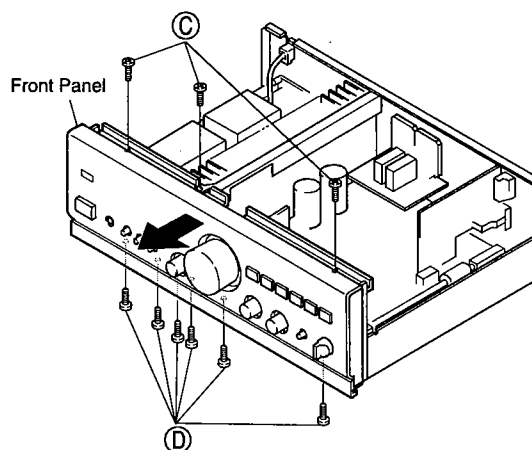
● Top Cover

- 1) Remove 4 screws (A) and 3 screws (B).
- 2) Pull up Top Cover in arrow direction.



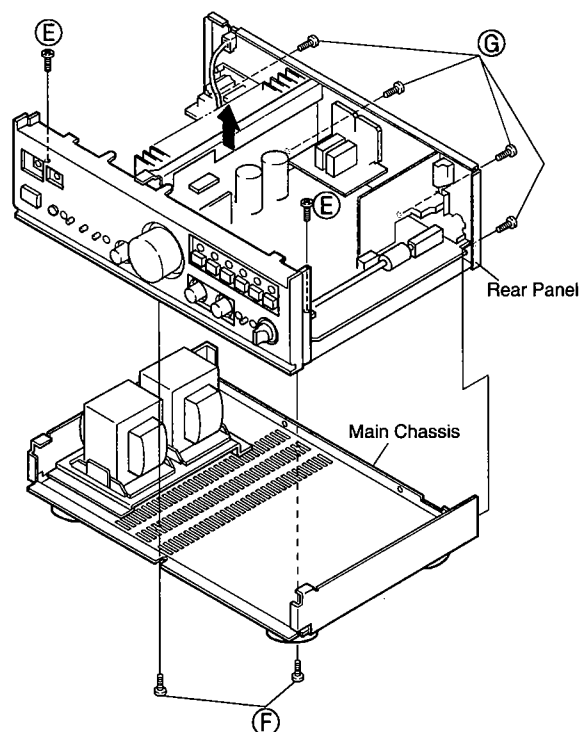
● Front Panel

- 1) Remove 3 screws (C).
- 2) Remove 6 screws (D).
- 3) Detach Front Panel in arrow direction.



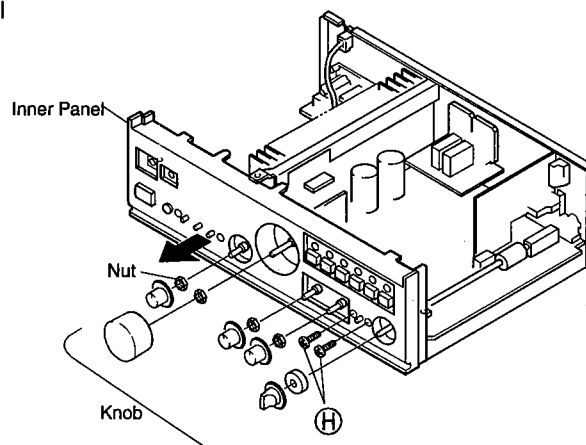
● Main Chassis

- 1) Remove 2 screws (E).
- 2) Remove 2 screws (F) securing Power Radiator with Main Chassis.
- 3) Remove 4 screws (G) securing Rear Panel with Main Chassis.



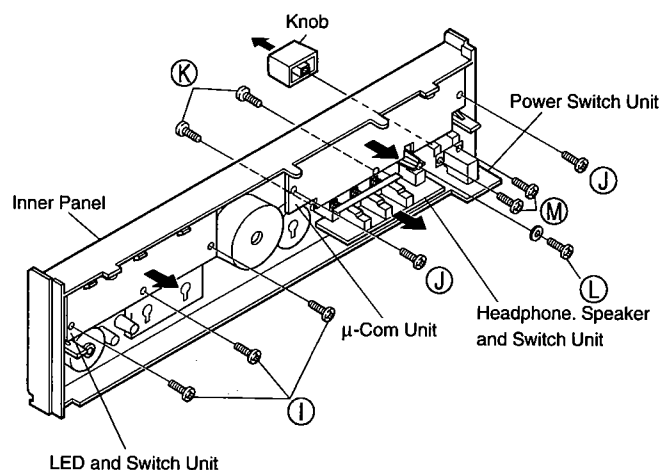
● Inner Panel

- 1) Remove 5 Knobs and 4 nuts.
- 2) Remove 2 screws (H) and detach Inner Panel in arrow direction.



● Each Unit of Inner Panel

- 1) Remove 3 screws (I), and detach LED and Switch Unit.
- 2) Remove 2 screws (J), and detach μ -Com Unit.
- 3) Remove 2 screws (K) securing Headphone, SP Switch Unit with Inner Panel.
- 4) Remove 1 screw (L) and 1 washer, and detach Headphone, SP. switch Unit.
- 5) Remove 2 screws (M) and a Knob, then detach Power Switch Unit.



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.

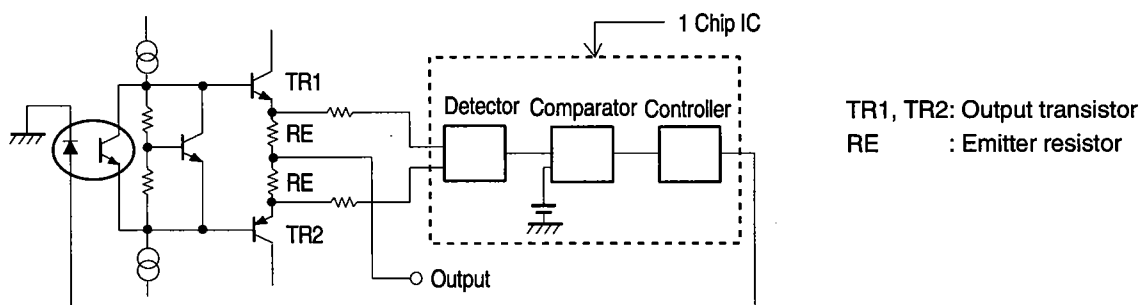


Fig. 1

3. POWER SUPPLY FOR ACTUATING CONTROL CIRCUIT

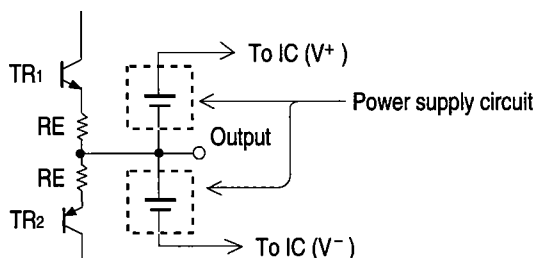


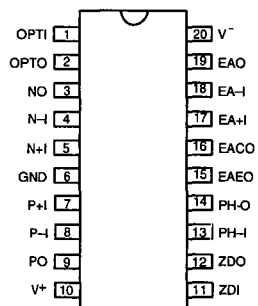
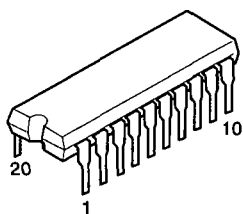
Fig. 2

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.

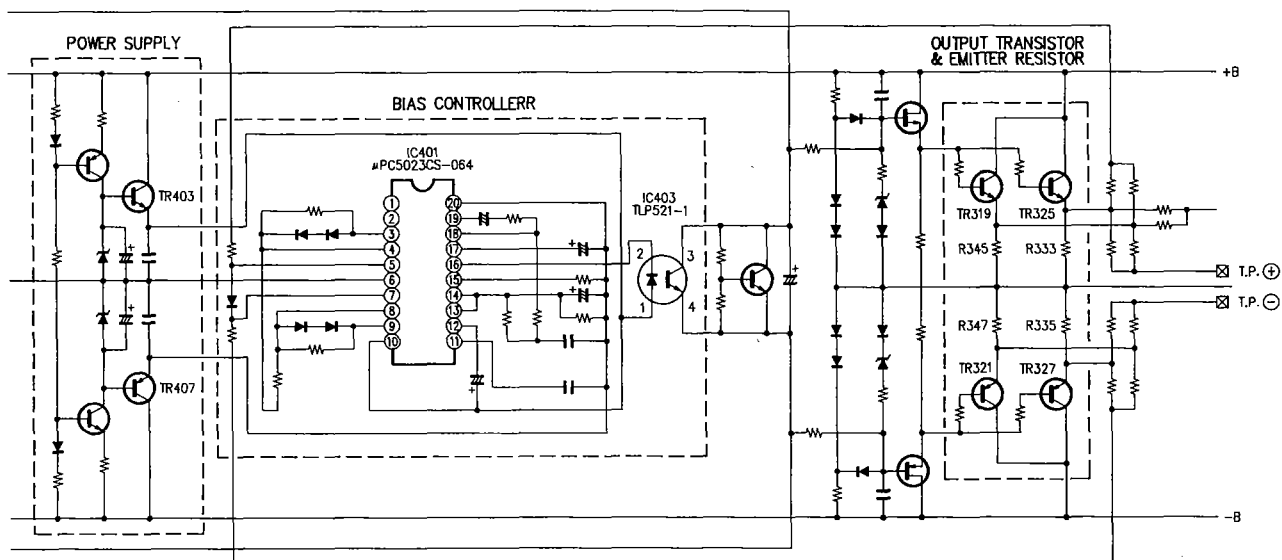
4. IC DESCRIPTION (μ PC5023CS-064)



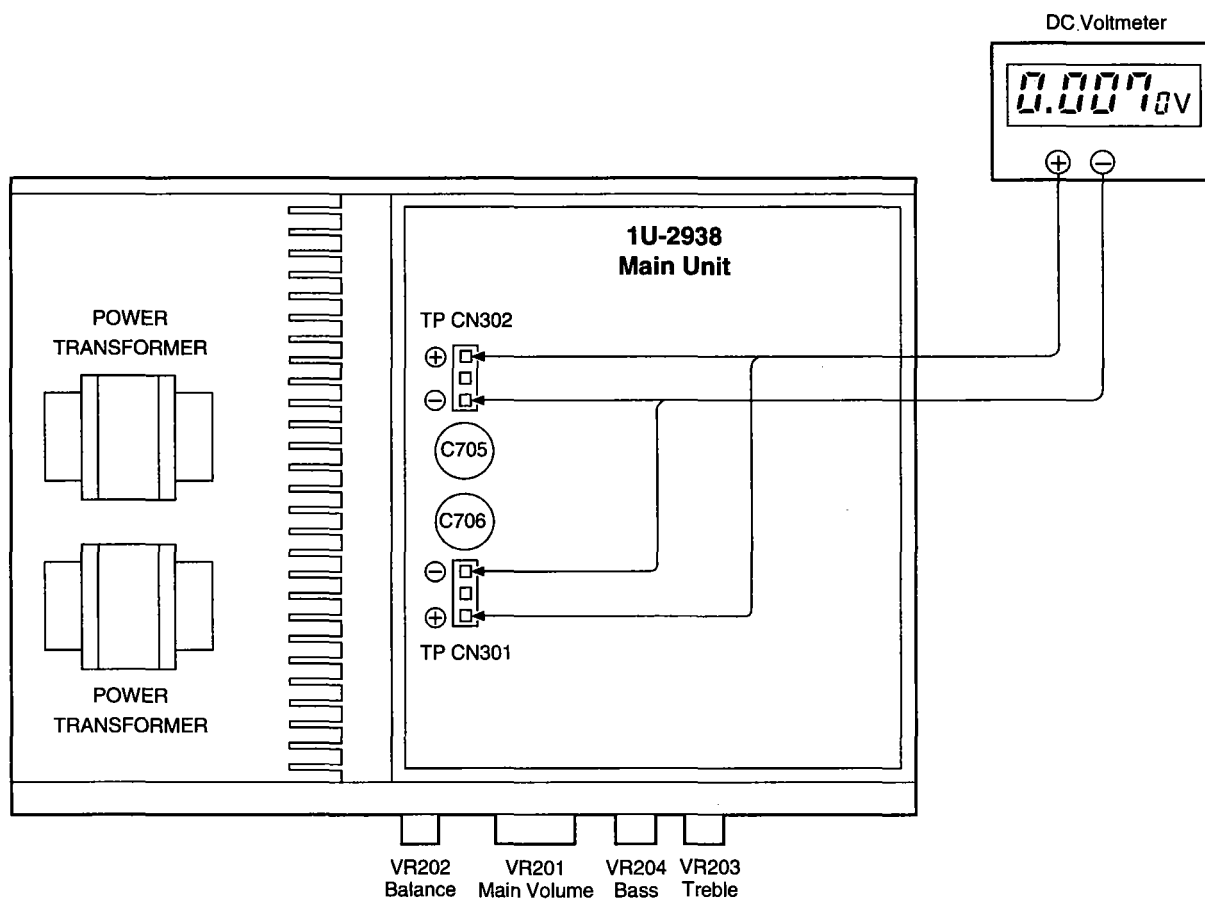
Pin. No.	Name	Contents
1	OPTI	NCP
2	OPTO	
3	NO	Comparator output
4	N-I	Comparator input (-)
5	N+I	Comparator input (+)
6	GND	Floating common
7	P+I	Comparator input (+)
8	P-I	Comparator input (-)
9	PO	Comparator output
10	V+	+ Power supply

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

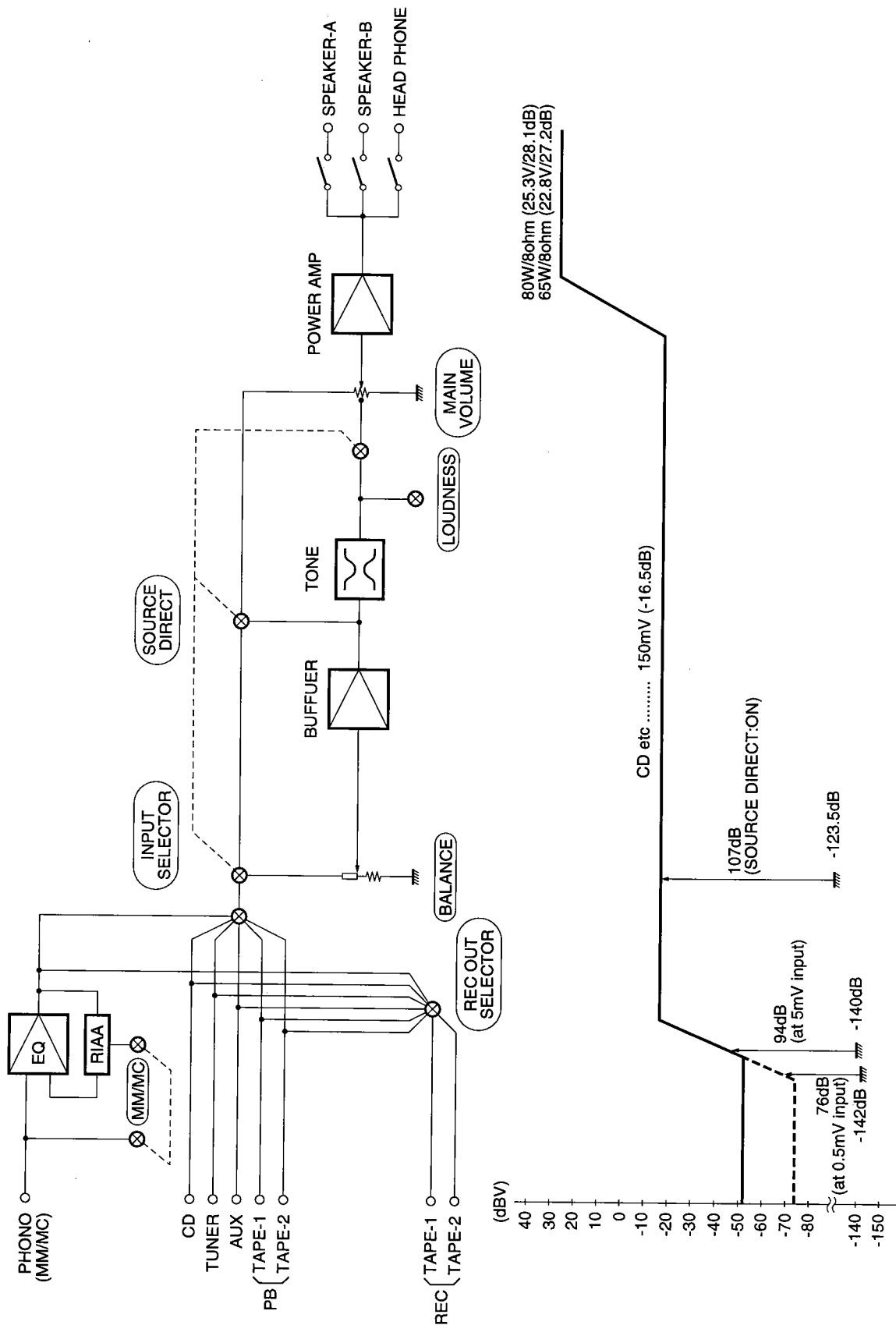
● Setup

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 $7 \pm 2\text{mV}$.
4. 2 minutes after re-check DC Voltmeter for $7 \pm 2\text{mV}$ reading.

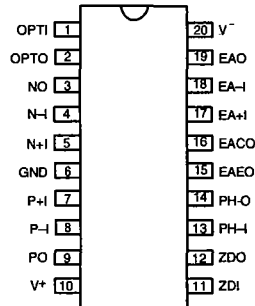
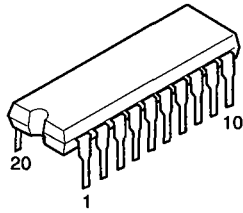
BLOCK AND LEVEL DIAGRAM



SEMICONDUCTORS

● IC's

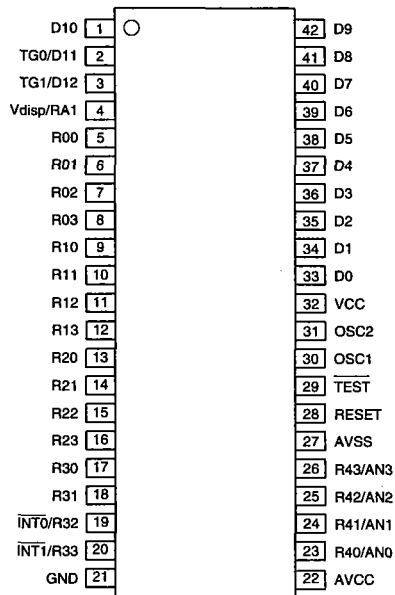
μPC5023CS-064 (IC401,402)



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

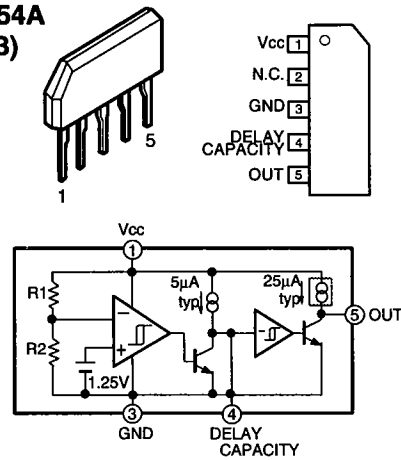
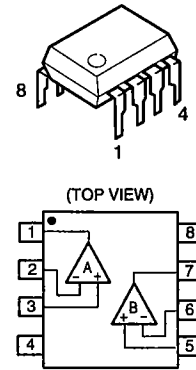
Pin. No.	Name	Contents
11	ZDI	Control signal stabiliser input
12	ZDO	Control signal stabiliser output
13	PH-I	Peak hold input
14	PHO	Peak hold output
15	EAO	Controller gain setting
16	EACO	Control signal output
17	EA-I	Reference voltage
18	EA-1	Comparator gain setting
19	EAO	Comparator output
20	V-	-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

HD404304A13P (IC801)

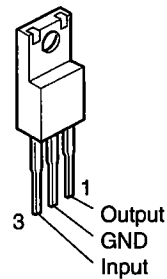
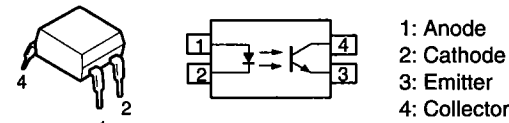
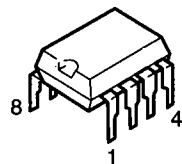
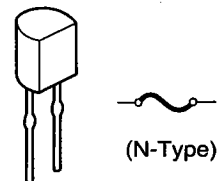
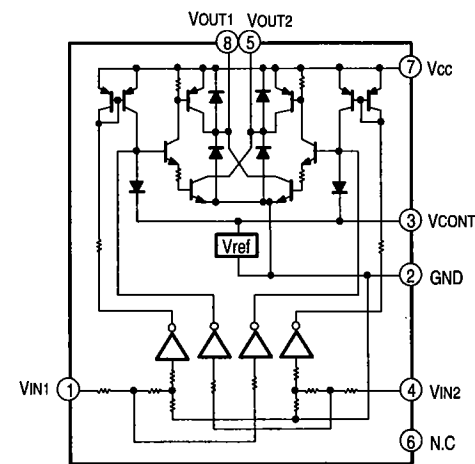
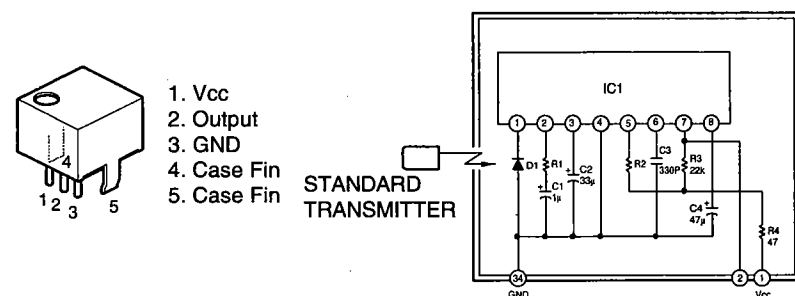


HD404304A13P Terminal Function

Pin No.	Name	I/O	Contents	Active
1	D10	O	MUTE/STANDBY 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-B 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 genre	
27	AVss		AVss (GND)	
28	RESET		M51954A; External	
29	TEST		Vcc	
30	OSC1		Celler Fill Oscillator 4MHz; External	
31	OSC2		Celler Fill Oscillator 4MHz; External	
32	Vcc		Vcc	
33	D0	O	NOP	
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

M51954A (IC803)**BA4558 (IC201, 901)
NJM2068DDC (IC202)**

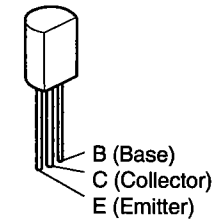
1. A OUTPUT
2. A-INPUT
3. A+INPUT
4. V-
5. B+INPUT
6. B-INPUT
7. B OUTPUT
8. V+

NJM7806FA(S) (IC702)**TLP521-1(BL)
INFRARED LED + PHOTO TRANSISTOR
(IC403, 404)****LB1639 (IC802)****IC PROTECTOR
ICP-15 (IC701)****SBX1610-52 (Remote Control Receiver) (IC105)**

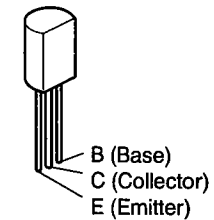
- IC1 : CX20106A Chip
 D1 : PIN Photo Diode Chip
 C1,C2,C4 : Aluminum Electrolytic Capacitor
 C3 : SL Characteristic $\pm 5\%$
 R1 : Gain Adjuster
 R2 : fo Adjuster $\pm 1\%$ USE
 R3,4 : $\pm 5\%$

TRANSISTORS

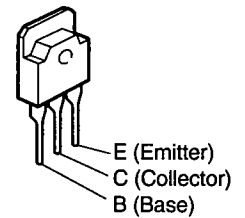
2SA970 (BL), (BL/GR)
 2SA988 (E/F)
 2SC1841 (E/F)
 2SC1815 (BL)
 2SC2240 (BL/GR)



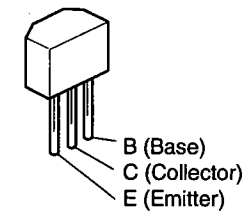
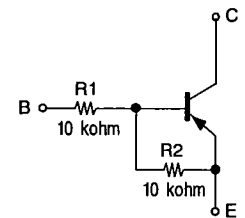
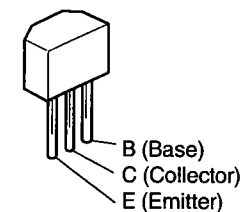
2SA1145 (O)/(Y)
 2SC2705 (O)/(Y)



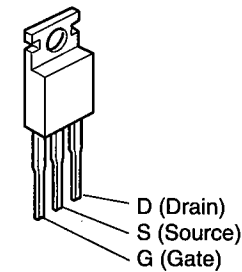
2SA1491 (O/P/Y)/(Z) PMA-925R
 2SC3855 (O/P/Y)/(Z) PMA-925R
 2SB1560 (O/P/Y) PMA-725R
 2SD2390 (O/P/Y) PMA-725R



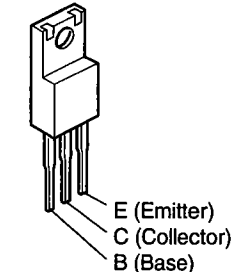
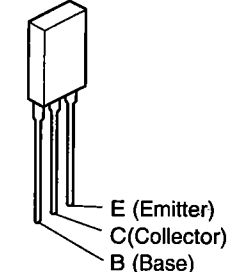
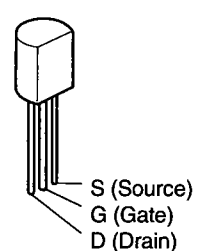
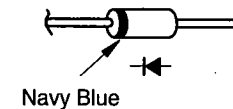
2SA1038S (S/E)
 2SA933S (S)
 2SC2389S (S/E)
 2SSC1740S (S)

**DTA114ES**

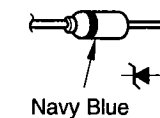
2SJ78
 2SK215



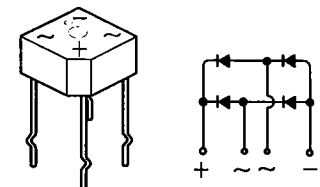
2SD2395 (E/F)
 2SB1566 (E/F)

**2SB1328 (P)****2SK369 (BL)/(GR)-C****DIODES (including LED)****1SS252**

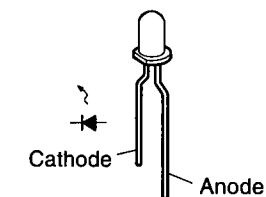
MTZJ 3.9A MTZJ 36A
 MTZJ 7.5A MTZJ 16A
 MTZJ 18A



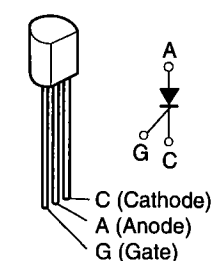
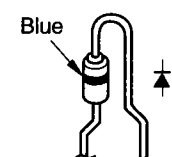
S4VB20F (D702) PMA-725R
 4D4B42 (D702) PMA-925R



SLR56-VR (Red)
 SLR56-DU (Orange)

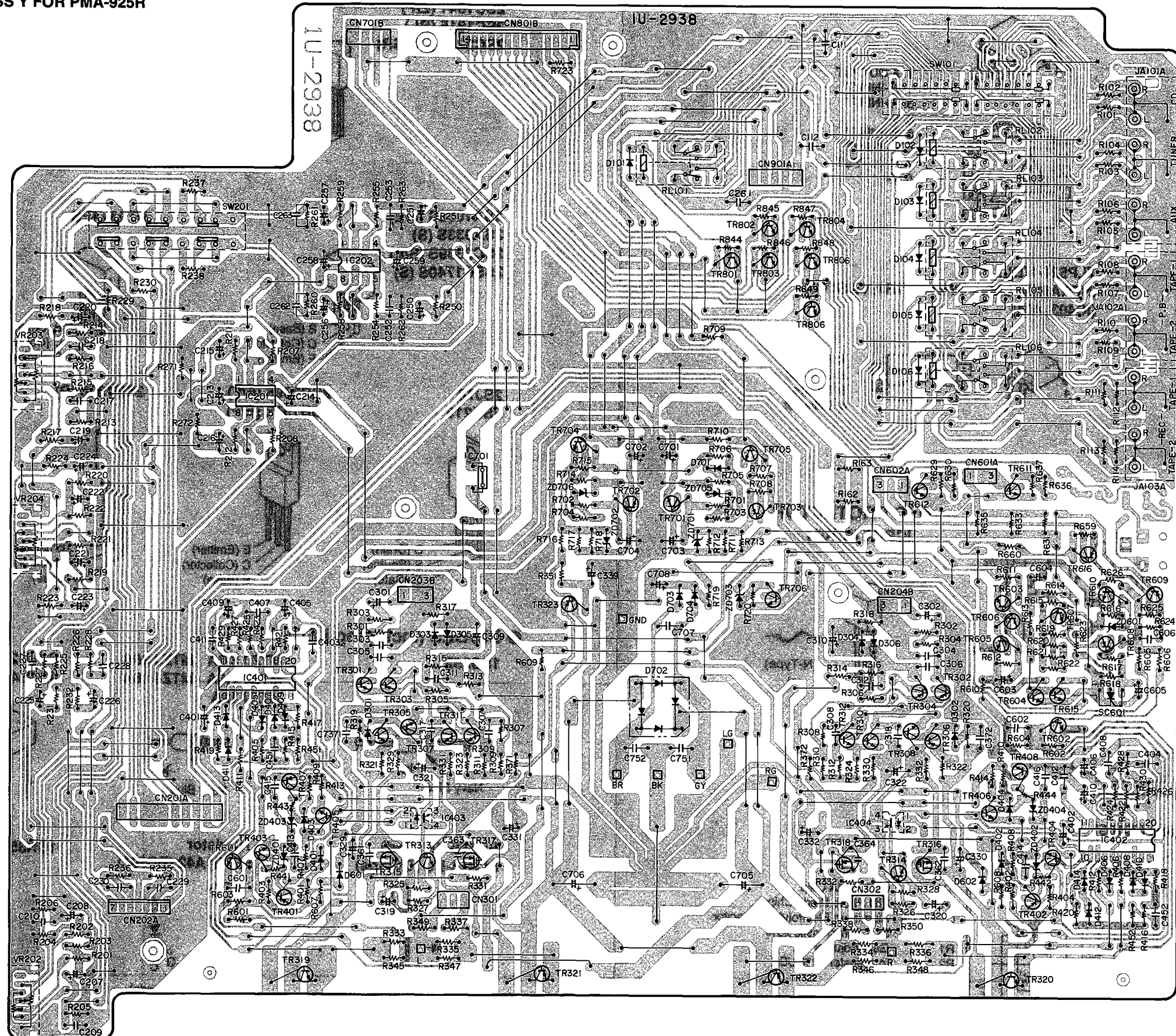


Thyristor
 SF0R1A42 (SC601)

**1SR35-200A**

PRINTED WIRING BOARD (Pattern Side)

1U-2938C MAIN UNIT ASS'Y FOR PMA-925R



1

2

3

4

5

6

7

8

1U-2939A μ -COM. UNIT ASS'Y

1U-2939A μ -Com. Unit Ass'y	
-1	μ -Com. Unit
-2	LED Unit
-3	Phono Unit
-4	Supply Unit

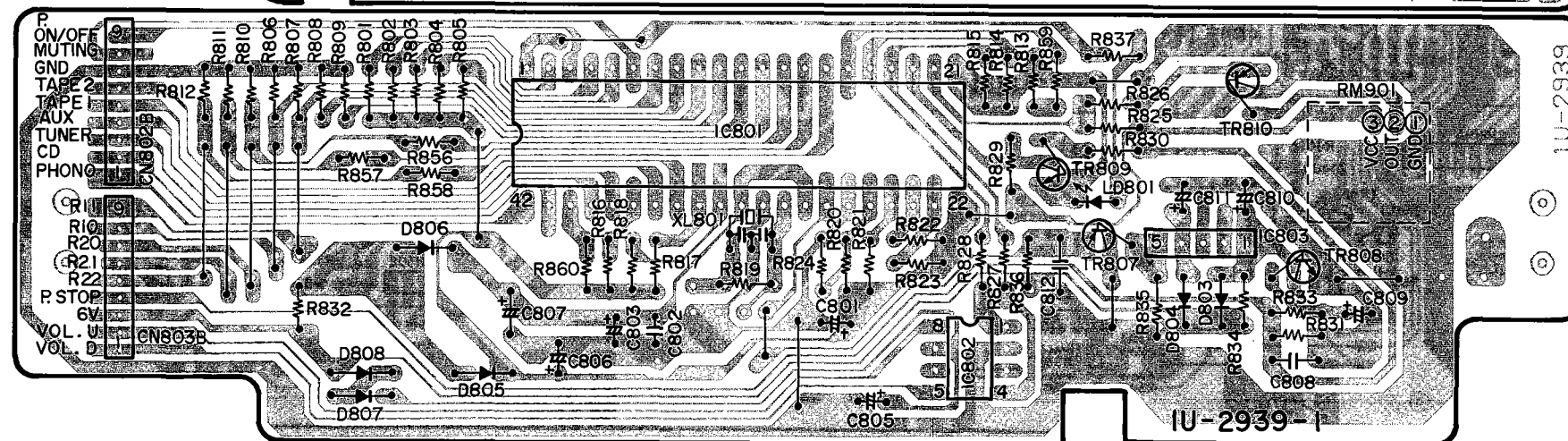
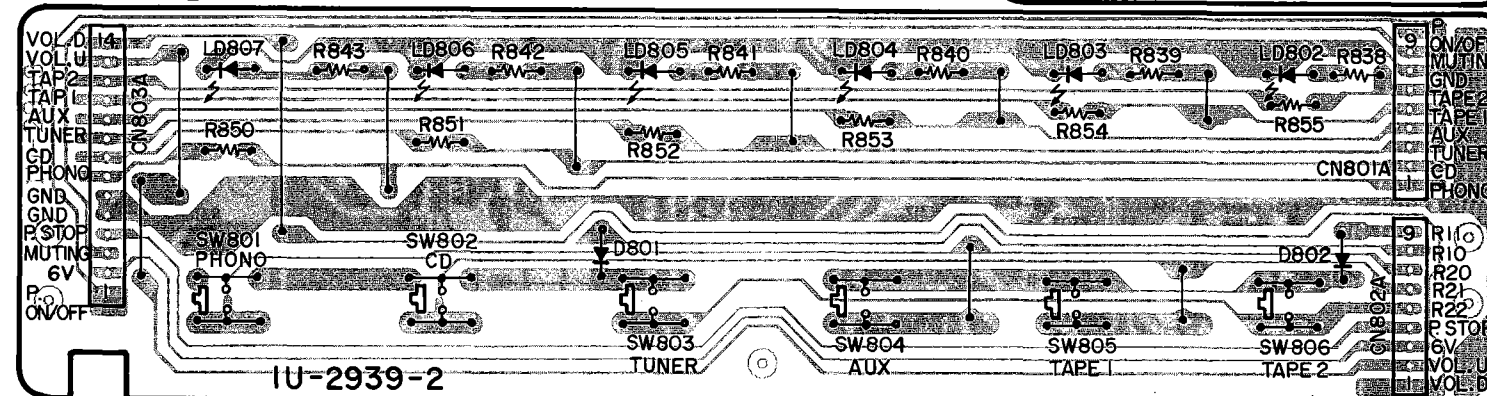
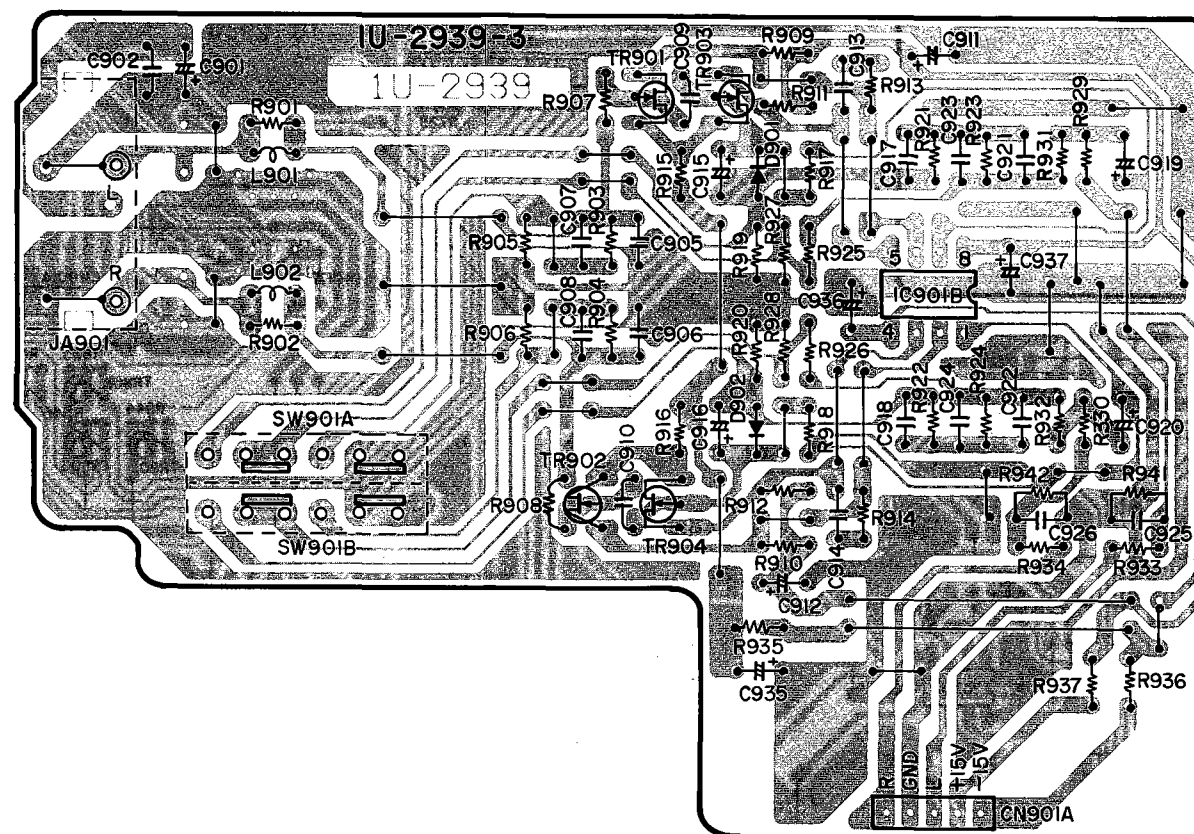
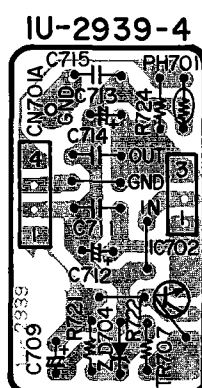
A

B

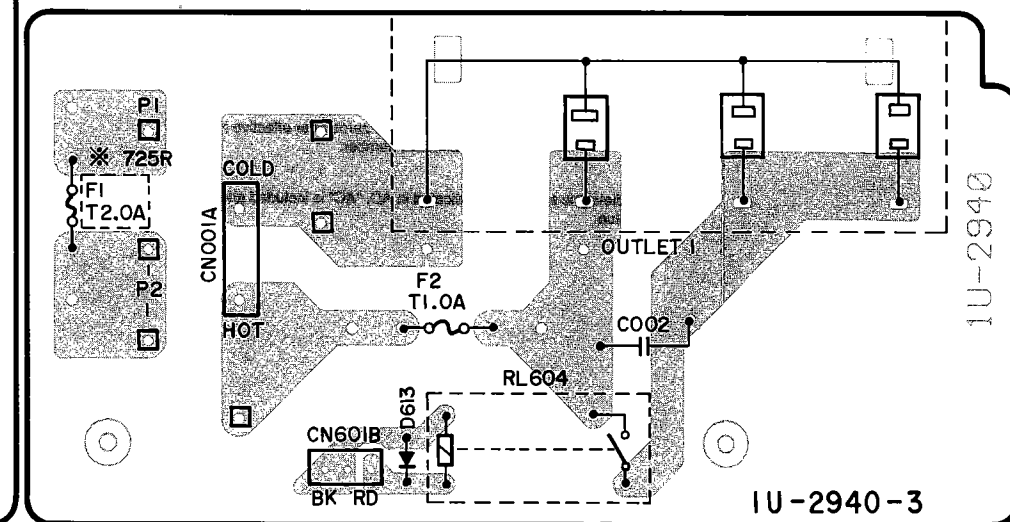
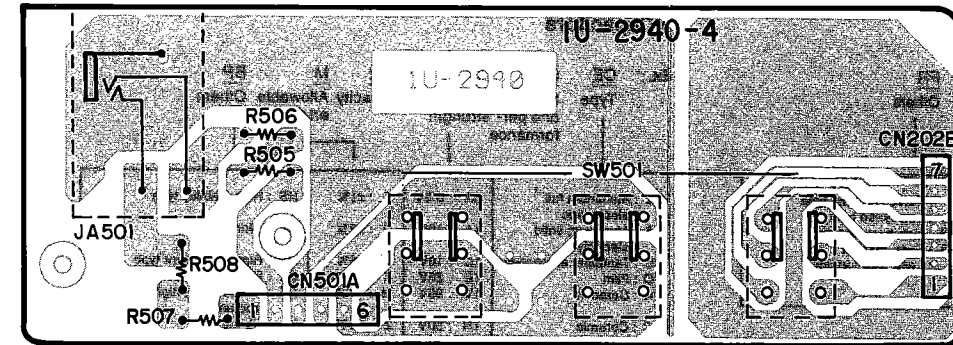
C

D

E



1U-2940 Volume Unit Ass'y	
-1	Volume Unit
-2	Speaker Unit
-3	AC Outlet Unit
-4	Speaker Sel. Unit



NOTE FOR PARTS LIST

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

WARNING:

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

● Resistors

Ex: RN 14K 2E 182 G FR
Type Shape Power Resist- Allowable Others
performance ance error

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

* Resistance

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

• Units: ohm

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

• Units: ohm

● Capacitors

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

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

* Capacity (electrolyte only)

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

• Units: μF .

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

• Units: μF .

* Capacity (except electrolyte)

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

• Units: pF.



























2 2 1 \Rightarrow 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 dielectric strength value.

PARTS LIST OF P.W.B. UNIT ASS'Y

1U-2938C MAIN UNIT ASS'Y (PMA-925R)

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP				RESISTORS GROUP			
IC201	263 0322 004	IC BA4558	Linear ope. amp	 D702	276 0424 005	Diode 4D4B42(LC1)	Bridge
IC202	263 0609 002	IC NJM2068DDC		D703,704	276 0553 905	Diode 1SR35-200A	
IC401,402	263 0930 001	IC $\mu\text{PC}5023\text{CS-064}$	Bias IC	ZD401~404	276 0643 954	Zener diode MTZJ3.9A	3.9 V
IC403,404	262 0874 009	IC TLP521-1(BL)		ZD601	276 0644 911	Zener diode MTZJ7.5A	7.5 V
IC701	268 0073 905	IC ICP-N15	IC protector	ZD701,702	276 0645 978	Zener diode MTZJ36A	36 V
TR301~304	271 0094 919	Transistor 2SA970(BL)		ZD703	276 0644 911	Zener diode MTZJ7.5A	7.5 V
TR305,306	271 0131 924	Transistor 2SA988(E/F)		ZD705,706	276 0645 907	Zener diode MTZJ18A	18 V
TR307~312	273 0235 923	Transistor 2SC1841(E/F)		SC601	279 0016 904	Thyristor SF0R1A42	
TR313,314	273 0303 910	Transistor 2SC1740S(S)					
TR315,316	275 0069 001	Transistor 2SK215	N type FET				
TR317,318	275 0068 002	Transistor 2SJ78	P type FET				
TR323	271 0131 924	Transistor 2SA988(E/F)		VR202	211 0798 103	Variable resistor 100kohm	Balance
TR401,402	271 0280 901	Transistor 2SA1038S(S/E)		VR203	211 0834 012	Variable resistor 10kohm	Treble
TR403,404	273 0281 906	Transistor 2SC2705(O)/(Y)		VR204	211 0834 009	Variable resistor 30kohm	Bass
TR405,406	273 0432 904	Transistor 2SC2389S(S/E)		 R116	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNBS(S)
TR407,408	271 0168 900	Transistor 2SA1145(O)/(Y)		 R182	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNBS(S)
TR601,602	273 0235 923	Transistor 2SC1841(E/F)		 R309~312	241 2380 963	Carbon film 2.2kohm 1/4W	RD14B2E222JNBS
TR603~605	273 0303 910	Transistor 2SC1740S(S)		 R317,318	241 2377 963	Carbon film 120ohm 1/4W	RD14B2E121JNBS
TR606	271 0192 905	Transistor 2SA933S(S)		 R319~322	241 2377 976	Carbon film 130ohm 1/4W	RD14B2E131JNBS
TR607	273 0235 923	Transistor 2SC1841(E/F)		 R323,324	241 2315 967	Fusible resistor 68ohm 1/4W	RD14B2E680GFPS
TR608	271 0094 935	Transistor 2SA970(BL/GR)		 R325,326	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
TR609	272 0107 906	Transistor 2SB1328(P)		 R327,328	241 2379 929	Carbon film 560ohm 1/4W	RD14B2E561JNBS
TR610~612	273 0235 923	Transistor 2SC1841(E/F)		 R331,332	241 2378 920	Carbon film 220ohm 1/4W	RD14B2E221JNBS
TR615	273 0303 910	Transistor 2SC1740S(S)		 R333~336	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
TR616	272 0107 906	Transistor 2SB1328(P)		 R345~348	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
TR701	274 0168 006	Transistor 2SD2395(E/F)		 R351	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
TR702	272 0129 007	Transistor 2SB1566(E/F)		 R401,402	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
TR703	271 0280 901	Transistor 2SA1038S(S/E)		 R403,404	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
TR704,705	273 0432 904	Transistor 2SC2389S(S/E)		 R409,410	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
TR706	273 0303 910	Transistor 2SC1740S(S)		 R413,414	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
TR801~806	273 0235 923	Transistor 2SC1841(E/F)		 R441~444	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
D101~106	276 0616 907	Diode 1SS252		 R601~604	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
D301~306	276 0616 907	Diode 1SS252		 R631	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNBS(S)
D351,352	276 0616 907	Diode 1SS252		 R633	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNBS(S)
D401~414	276 0616 907	Diode 1SS252		 R635	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNBS(S)
D601,602	276 0616 907	Diode 1SS252		 R711,712	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)
D701	276 0553 905	Diode 1SR35-200A		 R713	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
				 R716	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS
				 R717,718	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP							
C111,112	253 4444 907	Ceramic cap. 220pF/50V	CC45SL1H221J	C701,702	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C207,208	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M	C703,704	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C209,210	253 4537 982	Ceramic cap. 56pF/50V	CC45SL1H560J	C705,706	254 6206 007	Electrolytic 12000μF/63V	CE68W1J123MC(DL)
C213,214	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	C707	256 1042 903	Metalized 0.1μF/250V	CF93A2E104K
C215,216	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M	C708	254 4263 916	Electrolytic 0.22μF/100V	CE04W2AR22M
C217,218	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)	OTHERS PARTS GROUP			
C219,220	254 4260 919	Electrolytic 0.22μF/50V	CE04W1HR22M		—	(P.W.board)	
C221,222	254 4260 906	Electrolytic 0.1μF/50V	CE04W1H0R1M				
C223,224	254 4260 935	Electrolytic 0.47μF/50V	CE04W1HR47M	SW101	212 0336 005	Rotary switch	Rec out sel.
C225,226	254 4260 922	Electrolytic 0.33μF/50V	CE04W1HR33M	SW202	212 1161 004	1P push switch	Surce direct
C227,228	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J	RL101~106	214 0178 007	Relay(MR62-12USRY)	
C229,230	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)				
C250,251	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M				
C252,253	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)		204 8266 008	4P pin jack(S-GND)	for TAPE
C256,257	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M		204 8278 009	6P pin jack(S-GND)	for INPUTS
C258,259	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M				
C261	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z				
C262,263	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)				
C301,302	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M				
C303,304	255 4235 918	Film cap. 100pF/100V	CQ93P2A101J(NH)				
C305,306	255 6177 980	Film cap. 220pF/50V	CQ09S1H221J(STM)				
C307,308	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)				
C309,310	254 4252 082	Electrolytic 2200μF/10V	CE04W1A222M				
C311,312	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)				
C317,318	253 4470 900	Ceramic cap. 10pF/500V	CC45SL2H100D				
C319~322	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M				
C329~332	254 4262 904	Electrolytic 4.7μF/63V	CE04W1J4R7M				
C339	254 4262 755	Electrolytic 100μF/63V	CE04W1J101MC				
C361,362	253 4490 906	Ceramic cap. 68pF/500V	CC45SL2H680J				
C363,364	253 4470 900	Ceramic cap. 10pF/500V	CC45SL2H100D				
C371,372	255 6178 947	Film cap. 680pF/50V	CQ09S1H681J(STM)				
C401,402	254 4261 918	Electrolytic 47μF/50V	CE04W1H470M				
C403,404	254 3056 959	Electrolytic 10μF/50V	CE04D1H100MBP (Bipole)				
C405,406	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M				
C407,408	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)				
C409,410	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M				
C411,412	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)				
C413~416	256 1034 979	Metalized 0.1μF/50V	CF93A1H104J				
C451,452	253 1179 987	Ceramic cap. 470pF/50V	CK45B1H471K				
C601,602	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)				
C603	254 4250 945	Electrolytic 330μF/6.3V	CE04W0J331M				
C604	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M				
C605	254 4252 901	Electrolytic 22μF/10V	CE04W1A220M				
C606	255 1265 978	Film cap. 0.022μF/50V	CQ93M1H223J(B)				

1U-2939A μ -COM UNIT ASS'Y (PMA-925R)

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks	
SEMICONDUCTORS GROUP				C809	254 4196 973	Electrolytic 4.7μF/50V	CE04W1H4R7M(SRA)	
IC105	499 0150 008	IC SBX1610-52	Remote sensor	C810	254 4196 944	Electrolytic 1μF/50V	CE04W1H010M(SRA)	
IC702	263 0793 002	IC NJM7806FA(S)	Regulator +6 V	C811	254 4196 928	Electrolytic 0.33μF/50V	CE04W1HR33M(SRA)	
IC801	262 1579 303	IC HD404304A13P	μ-com	C812	256 1034 982	Metallized 0.12μF/50V	CF93A1H124J	
IC802	263 0476 002	IC LB1639	Motor driver	C901	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
IC803	263 0535 008	IC M51954AL	Reset IC	C902	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z	
IC901	263 0322 004	IC BA4558		C905,906	253 1179 929	Ceramic cap. 150pF/50V	CK45B1H151K	
TR707	274 0168 006	Transistor 2SD2395(E/F)		C907,908	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K	
TR807	271 0192 905	Transistor 2SA933S(S)		C909,910	253 1179 903	Ceramic cap. 100pF/50V	CK45B1H101K	
TR808,809	273 0303 910	Transistor 2SC1740S(S)		C911,912	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M	
TR810	269 0046 906	Transistor DTA114ES	Built in resistor	C913,914	255 1251 937	Film cap. 3300pF/50V	CQ92M1H332J(MRZ)	
TR901~904	275 0038 045	Transistor 2SK369(BL)/(GR)-C	N type FET ΔVGS	C915,916	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M	
D801~805	276 0616 907	Diode 1SS252		C917,918	256 1034 953	Metallized 0.068μF/50V	CF93A1H683J	
D806	276 0553 905	Diode 1SR35-200A		C919,920	254 4254 909	Electrolytic 10μF/16V	CE04W1C100M	
D807,808	276 0616 907	Diode 1SS252		C921,922	255 4223 959	Film cap. 0.018μF/50V	CQ92M1H183J(MRZ)	
D901,902	276 0616 907	Diode 1SS252		C923,924	255 1264 911	Film cap. 1200pF/50V	CQ93M1H122J(B)	
ZD704	276 0644 995	Zener diode MTZJ16A	16 V	C925,926	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K	
LD801	393 9559 904	LED SLR-56DUTB7	Orange	C935	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M	
LD802~807	393 9515 906	LED SLR-56VR70	Red	C936,937	254 4256 936	Electrolytic 47μF/25V	CE04W1E470M	
PH701	279 0034 041	Posistor PTH9M04BD222TS2F333		OTHERS PARTS GROUP				Q'ty
RESISTORS GROUP				L901,902	235 9003 002	Inductor (150μH)	FTZ choke coil	(1)
ΔR832	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS	XL801	399 9018 003	Resonator	CST4.00 MGW	2
ΔR936,937	241 2377 905	Carbon film 68ohm 1/4W	RD14B2E680JNBS	SW801~806	212 4789 001	Tact switch		1
CAPACITORS GROUP				SW901	212 1099 008	1P push swtch	MM/MC	6
C709	254 4263 916	Electrolytic 0.22μF/100V	CE04W2AR22M		204 8413 000	2P pin jack(C-GND)	PHONO	1
C711	253 1181 904	Ceramic cap. 0.01μF/50V	CK45F1H103Z		415 0309 013	P.V.C.tube L=10	for PH701	1
C712,713	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M					2
C714,715	253 1181 904	Ceramic cap. 0.01μF/50V	CK45F1H103Z					
C801	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)					
C802	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z					
C803	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)					
C805	254 4213 937	Electrolytic 100μF/6.3V	CE04W0J101M(SRA)					
C806	254 6190 906	Electrolytic 330μF/6.3V	CE04W0J331M(SRA)					
C807	259 0007 003	Back up cap. 8200μF/5.5V	SB CAP=822=					
C808	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z					

1U-2938 MAIN UNIT ASS'Y (PMA-725R)

1U-2938A : Europe model

1U-2938B : U.K. model

1U-2940C VOLUME UNIT ASS'Y (PMA-925R)

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP				SEMICONDUCTORS GROUP			
TR617,618	273 0235 923	Transistor 2SC1841(E/F)		IC201	263 0322 004	IC BA4558	Linear ope. amp
D001	276 0616 907	Diode 1SS252		IC202	263 0609 002	IC NJM2068DDC	
D441~444	276 0616 907	Diode 1SS252		IC401,402	263 0930 001	IC μ PC5023CS-064	Bias IC
D610~612	276 0616 907	Diode 1SS252		IC403,404	262 0874 009	IC TLP521-1(BL)	
RESISTORS GROUP(Not included carbon film $\pm 5\%$, 1/4W)				IC701	268 0073 905	IC ICP-N15	IC protector
VR201	211 0869 003	Variable resistor 30kohm	Main volume	TR301~304	271 0094 919	Transistor 2SA970(BL)	
Δ R341,342	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AP22JNBS(S)	TR305,306	271 0131 924	Transistor 2SA988(E/F)	
Δ R501,502	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)	TR307~312	273 0235 923	Transistor 2SC1841(E/F)	
Δ R505~508	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)	TR313,314	273 0303 910	Transistor 2SC1740S(S)	
Δ R652	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB	TR323	271 0131 924	Transistor 2SA988(E/F)	
Δ R653	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNB(S)	TR401,402	271 0280 901	Transistor 2SA1038S(S/E)	
Δ R654	244 2069 005	Metal oxide 2.4kohm 5W	RS14B3H242JNB(S)	TR403,404	273 0281 906	Transistor 2SC2705(O)/(Y)	
Δ R655	244 2069 018	Metal oxide 3kohm 5W	RS14B3H302JNB(S)	TR405,406	273 0432 904	Transistor 2SC2389S(S/E)	
Δ R656	244 2069 005	Metal oxide 2.4kohm 5W	RS14B3H242JNB(S)	TR407,408	271 0168 900	Transistor 2SA1145(O)/(Y)	
Δ R660	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB	TR601,602	273 0235 923	Transistor 2SC1841(E/F)	
CAPACITORS GROUP				TR603~605	273 0303 910	Transistor 2SC1740S(S)	
Δ C002	253 8003 713	Ceramic cap. 4700pF/400V AC	CK45E2GAC472MC	TR606	271 0192 905	Transistor 2SA933S(S)	
C203,204	254 4254 909	Electrolytic 10 μ F/16V	CE04W1C100M	TR607	273 0235 923	Transistor 2SC1841(E/F)	
C205	255 1265 936	Film cap. 0.01 μ F/50V	CQ93M1H103J(B)	TR608	271 0094 935	Transistor 2SA970(BL/GR)	
C501,502	256 1034 979	Metalized 0.1 μ F/50V	CF93A1H104J	TR609	272 0107 906	Transistor 2SB1328(P)	
OTHERS PARTS GROUP				TR610	273 0235 923	Transistor 2SC1841(E/F)	
	—	(P.W.board)		TR611	273 0235 923	Transistor 2SC1841(E/F)	Europe model only
L301,302	235 0104 007	Inductor(1mH)		R612	273 0235 923	Transistor 2SC1841(E/F)	
	202 0022 008	Fuse holder	for F001,002	TR615	273 0303 910	Transistor 2SC1740S(S)	
Δ F001	206 1015 032	Fuse(2.5A)		TR616	272 0107 906	Transistor 2SB1328(P)	
Δ F002	206 1015 029	Fuse(1A T)		TR701	274 0168 006	Transistor 2SD2395(E/F)	
	513 0654 017	Fuse label (T. 25A)	for F001	TR702	272 0129 007	Transistor 2SB1566(E/F)	
Δ	415 0299 000	Capacitor cover	for C002	TR703	271 0280 901	Transistor 2SA1038S(S/E)	
Δ RL001	214 0142 004	Relay(TV-5)		TR704,705	273 0432 904	Transistor 2SC2389S(S/E)	
RL601,602	214 0129 001	Relay(DH2TU)	for SP-A,B	TR706	273 0303 910	Transistor 2SC1740S(S)	
RL603	214 0178 007	Relay(MR62-12USRY)	for Headphone	TR801~806	273 0235 923	Transistor 2SC1841(E/F)	
SW501	212 1162 003	3P push switch	for Speaker	D101~106	276 0616 907	Diode 1SS252	
	205 0484 001	8P speaker terminal	for Speaker	D301~306	276 0616 907	Diode 1SS252	
	204 8503 004	Head phone jack	JA501	D351,352	276 0616 907	Diode 1SS252	
Δ	203 3950 002	3P AC outlet	AOL-1	D401~414	276 0616 907	Diode 1SS252	
Δ	205 0692 000	2P wrapping terminal		D601,602	276 0616 907	Diode 1SS252	
				D701	276 0553 905	Diode 1SR35-200A	

Ref. No.	Part No.	Part Name	Remarks
△D702	276 0338 007	Diode S4VB20F	Bridge
D703,704	276 0553 905	Diode 1SR35-200A	
ZD401~404	276 0643 954	Zener diode MTZJ3.9A	3.9 V
ZD601	276 0644 911	Zener diode MTZJ7.5A	7.5 V
ZD701,702	276 0645 978	Zener diode MTZJ36A	36 V
ZD703	276 0644 911	Zener diode MTZJ7.5A	7.5 V
ZD705,706	276 0645 907	Zener diode MTZJ18A	18 V
SC601	279 0016 904	Thyristor SF0R1A42	

RESISTORS GROUP

VR202	211 0798 103	Variable resistor 100kohm	Balance
VR203	211 0834 012	Variable resistor 10kohm	Treble
VR204	211 0834 009	Variable resistor 30kohm	Bass
△R115,116	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
△R162,163	244 2051 974	Metal oxide 1kohm 1W	RS14B3A102JNBS(S)
△R309~312	241 2380 963	Carbon film 2.2kohm 1/4W	RD14B2E222JNBS
△R317,318	241 2377 963	Carbon film 120ohm 1/4W	RD14B2E121JNBS
△R319~322	241 2377 976	Carbon film 130ohm 1/4W	RD14B2E131JNBS
△R323,324	241 2315 967	Fusible resistor 68ohm 1/4W	RD14B2E680GFRS
△R325,326	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
△R327,328	241 2379 929	Carbon film 560ohm 1/4W	RD14B2E561JNBS
△R333~336	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3A222JNBS(S)
△R345~348	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3A222JNBS(S)
△R351	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
△R401,402	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
△R403,404	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
△R409,410	241 2379 916	Carbon film 510ohm 1/4W	RD14B2E511JNBS
△R413,414	241 2378 946	Carbon film 270ohm 1/4W	RD14B2E271JNBS
△R441~444	241 2379 987	Carbon film 1kohm 1/4W	RD14B2E102JNBS
△R601~604	241 2380 950	Carbon film 2kohm 1/4W	RD14B2E202JNBS
△R631~633	244 2051 990	Metal oxide 4.7kohm 1W	RS14B3A472JNBS(S)
△R634,635	244 2052 957	Metal oxide 5.6kohm 1W	RS14B3A562JNBS(S)
△R681	244 2052 957	Metal oxide 5.6kohm 1W	RS14B3A562JNBS(S)
△R711,712	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)
△R713	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E47JNBS
△R716	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E47JNBS
△R717,718	244 2043 908	Metal oxide 680ohm 1W	RS14B3A681JNBS(S)

Ref. No.	Part No.	Part Name	Remarks
CAPACITORS GROUP			
C111,112	253 4444 907	Ceramic cap. 220pF/50V	CC45SL1H221J
C207,208	254 4260 980	Electrolytic 10μF/50V	CE04W1H100M
C209,210	253 4537 982	Ceramic cap. 56pF/50V	CC45SL1H560J
C213,214	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C215,216	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C217,218	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)
C219,220	254 4260 919	Electrolytic 0.22μF/50V	CE04W1HR22M
C221,222	254 4260 906	Electrolytic 0.1μF/50V	CE04W1H0R1M
C223,224	254 4260 935	Electrolytic 0.47μF/50V	CE04W1HR47M
C225,226	254 4260 922	Electrolytic 0.33μF/50V	CE04W1HR33M
C227,228	256 1034 953	Metalized 0.068μF/50V	CF93A1H683J
C229,230	255 1265 994	Film cap. 0.033μF/50V	CQ93M1H333J(B)
C250,251	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C252,253	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)
C256,257	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C258,259	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C261	253 1181 917	Ceramic cap. 0.022μF/50V	CK45F1H223Z
C262,263	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C301,302	254 4254 941	Electrolytic 100μF/16V	CE04W1C101M
C303,304	255 4235 918	Film cap. 100pF/100V	CQ93P2A101J(NH)
C305,306	255 6177 980	Film cap. 220pF/50V	CQ09S1H221J(STM)
C307,308	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)
C309,310	254 4252 082	Electrolytic 2200μF/10V	CE04W1A222M
C311,312	255 4237 929	Film cap. 56pF/100V	CQ93P2A560J(NH)
C317,318	253 4470 900	Ceramic cap. 10pF/500V	CC45SL2H100D
C319~322	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M
C329~332	254 4262 904	Electrolytic 4.7μF/63V	CE04W1J4R7M
C339	254 4262 755	Electrolytic 100μF/63V	CE04W1J101MC
C371,372	255 6178 947	Film cap. 680pF/50V	CQ09S1H681J(STM)
C401,402	254 4261 918	Electrolytic 47μF/50V	CE04W1H470M
C403,404	254 3056 959	Electrolytic 10μF/50V	CE04D1H100MBP (Bipole)
C405,406	254 4260 993	Electrolytic 22μF/50V	CE04W1H220M
C407,408	255 1264 908	Film cap. 1000pF/50V	CQ93M1H102J(B)
C409,410	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C411,412	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C413~416	256 1034 979	Metalized 0.1μF/50V	CF93A1H104J
C451,452	253 1179 987	Ceramic cap. 470pF/50V	CK45B1H471K
C601,602	255 1265 936	Film cap. 0.01μF/50V	CQ93M1H103J(B)
C603	254 4250 945	Electrolytic 330μF/6.3V	CE04W0J331M
C604	254 4252 930	Electrolytic 100μF/10V	CE04W1A101M
C605	254 4252 901	Electrolytic 22μF/10V	CE04W1A220M
C606	255 1265 978	Film cap. 0.022μF/50V	CQ93M1H223J(B)
C701,702	254 4260 948	Electrolytic 1μF/50V	CE04W1H010M
C703,704	254 4261 921	Electrolytic 100μF/50V	CE04W1H101M

1U-2940 VOLUME UNIT ASS'Y

1U-2940A : Europe model

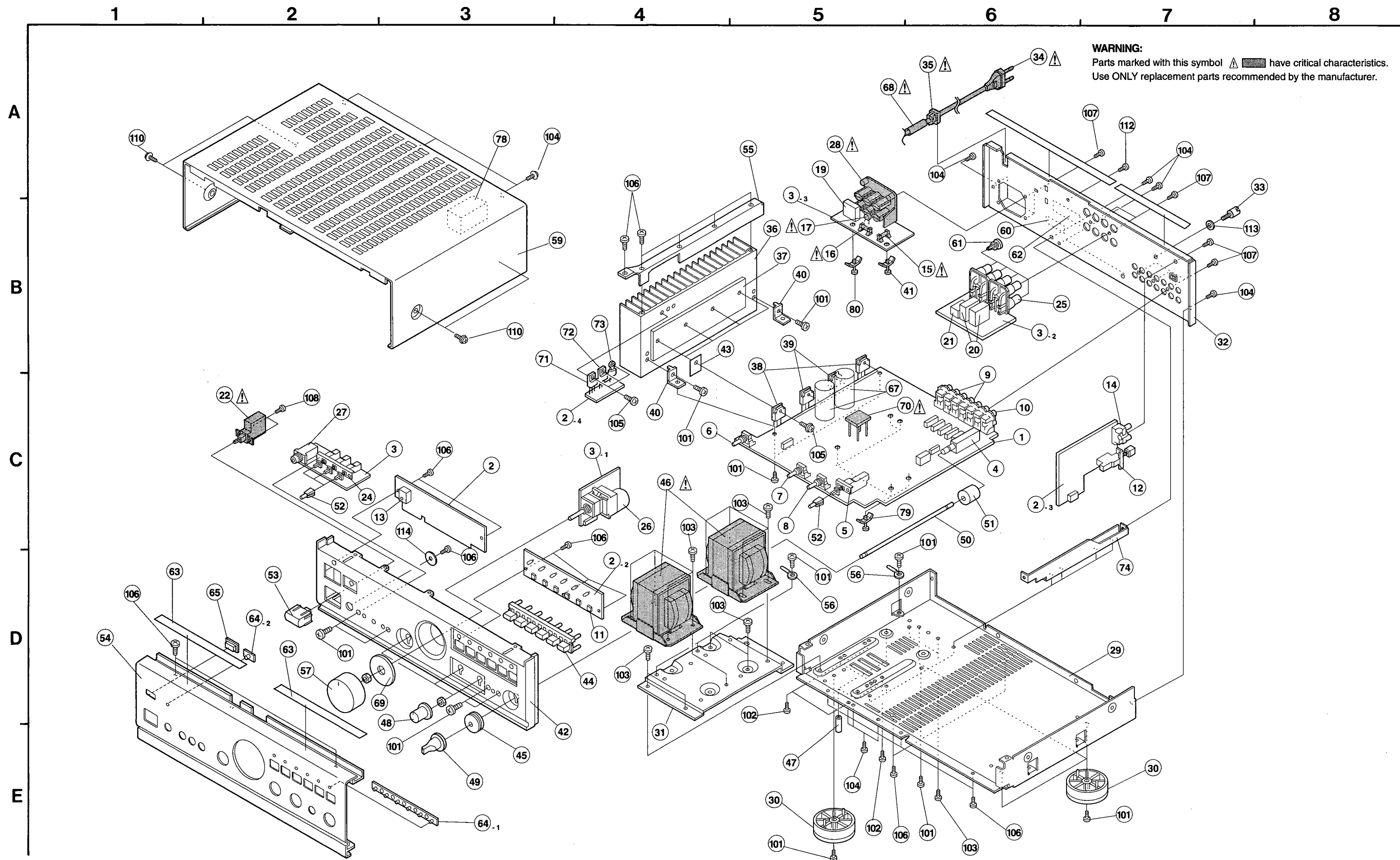
1U-2940B : U.K. model

1U-2939A μ -COM UNIT ASS'Y (PMA-725R)

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
C705,706	254 6205 008	Electrolytic 10000 μ F/51V	CE68W==103MC(DL)	SEMICONDUCTORS GROUP			
C707	256 1042 903	Metalized 0.1 μ F/250V	CF93A2E104K	IC105	499 0150 008	IC SBX1610-52	Remote sensor
C708	254 4263 916	Electrolytic 0.22 μ F/100V	CE04W2AR22M	IC702	263 0793 002	IC NJM7806FA(S)	Regulator +6V
OTHERS PARTS GROUP				IC801	262 1579 303	IC HD404304A13P	μ -com
	—	(P.W.board)		IC802	263 0476 002	IC LB1639	Motor driver
SW101	212 0336 005	Rotary switch	Rec out sel.	IC803	263 0535 008	IC M51954AL	Reset IC
SW202	212 1161 004	1P push switch	Surce direct	IC901	263 0322 004	IC BA4558	
RL101~106	214 0178 007	Relay(MR62-12USRY)		TR707	274 0168 006	Transistor 2SD2395(E/F)	
	204 8266 008	4P pin jack(S-GND)	for TAPE	TR807	271 0192 905	Transistor 2SA933S(S)	
	204 8278 009	6P pin jack(S-GND)	for INPUTS	TR808,809	273 0303 910	Transistor 2SC1740S(S)	
				TR810	269 0046 906	Transistor DTA114ES	Built in resistor
				TR901~904	275 0038 045	Transistor 2SK369(BL)(GR)-C	N type FET Δ VGS
				D801~805	276 0616 907	Diode 1SS252	
				D806	276 0553 905	Diode 1SR35-200A	
				D807,808	276 0616 907	Diode 1SS252	
				D901,902	276 0616 907	Diode 1SS252	
				ZD704	276 0644 995	Zener diode MTZJ16A	16 V
				LD801	393 9559 904	LED SLR-56DUTB7	Orange
				LD802~807	393 9515 906	LED SLR-56VR70	Red
				PH701	279 0034 041	Posistor PTH9M04BD222TS2F333	
RESISTORS GROUP				CAPACITORS GROUP			
Δ R832	241 2387 940	Carbon film 4.7ohm 1/4W	RD14B2E4R7JNBS	C709	254 4263 916	Electrolytic 0.22 μ F/100V	CE04W2AR22M
Δ R936,937	241 2377 905	Carbon film 68ohm 1/4W	RD14B2E680JNBS	C711	253 1181 904	Ceramic cap. 0.01 μ F/50V	CK45F1H103Z
				C712,713	254 4260 980	Electrolytic 10 μ F/50V	CE04W1H100M
				C714,715	253 1181 904	Ceramic cap. 0.01 μ F/50V	CK45F1H103Z
				C801	254 4213 937	Electrolytic 100 μ F/6.3V	CE04W0J101M(SRA)
				C802	253 1181 917	Ceramic cap. 0.022 μ F/50V	CK45F1H223Z
				C803	254 4213 937	Electrolytic 100 μ F/6.3V	CE04W0J101M(SRA)
				C805	254 4213 937	Electrolytic 100 μ F/6.3V	CE04W0J101M(SRA)
				C806	254 6190 906	Electrolytic 330 μ F/6.3V	CE04W0J331M(SRA)
				C807	259 0007 003	Back up cap. 8200 μ F/5.5V	SB CAP==822=
				C808	253 1181 917	Ceramic cap. 0.022 μ F/50V	CK45F1H223Z

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
C809	254 4196 973	Electrolytic 4.7 μ F/50V	CE04W1H4R7M(SRA)	SEMICONDUCTORS GROUP			
C810	254 4196 944	Electrolytic 1 μ F/50V	CE04W1H010M(SRA)	TR617,618	273 0235 923	Transistor 2SC1841(E/F)	
C811	254 4196 928	Electrolytic 0.33 μ F/50V	CE04W1HR33M(SRA)	D001	276 0616 907	Diode 1SS252	Europe model only
C812	256 1034 982	Metalized 0.12 μ F/50V	CF93A1H124J	D441~444	276 0616 907	Diode 1SS252	
C901	254 4260 948	Electrolytic 1 μ F/50V	CE04W1H010M	D610~612	276 0616 907	Diode 1SS252	
C902	253 1181 917	Ceramic cap. 0.022 μ F/50V	CK45F1H223Z	RESISTORS GROUP(Not included carbon film \pm5%,1/4W)			
C905,906	253 1179 929	Ceramic cap. 150pF/50V	CK45B1H151K	VR201	211 0869 003	Variable resistor 30kohm	Main volume
C907,908	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K	Δ R341,342	244 2043 982	Metal oxide 0.22ohm 1W	RS14B3AR22JNBS(S)
C909,910	253 1179 903	Ceramic cap. 100pF/50V	CK45B1H101K	Δ R501,502	244 2043 937	Metal oxide 10ohm 1W	RS14B3A100JNBS(S)
C911,912	254 4260 948	Electrolytic 1 μ F/50V	CE04W1H010M	Δ R505~508	244 2050 933	Metal oxide 180ohm 1W	RS14B3A181JNBS(S)
C913,914	255 1251 937	Film cap. 3300pF/50V	CQ92M1H332J(MRZ)	Δ R652	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB
C915,916	254 4252 930	Electrolytic 100 μ F/10V	CE04W1A101M	Δ R653	244 2043 940	Metal oxide 2.2kohm 1W	RS14B3A222JNBS(S)
C917,918	256 1034 953	Metalized 0.068 μ F/50V	CF93A1H683J	Δ R654	244 2052 915	Metal oxide 1.8kohm 1W	RS14B3A182JNBS(S)
C919,920	254 4254 909	Electrolytic 10 μ F/16V	CE04W1C100M	Δ R655	244 2043 940	Metal oxide 2.2kohm 1W	RS14B3A222JNBS(S)
C921,922	255 4223 959	Film cap. 0.018 μ F/50V	CQ92M1H183J(MRZ)	Δ R656	244 2052 915	Metal oxide 1.8kohm 1W	RS14B3A182JNBS(S)
C923,924	255 1264 911	Film cap. 1200pF/50V	CQ93M1H122J(B)	Δ R660	244 0157 003	Metal oxide 2.2kohm 3W	RS14B3F222JNB
C925,926	253 1179 961	Ceramic cap. 330pF/50V	CK45B1H331K	CAPACITORS GROUP			
C935	254 4252 930	Electrolytic 100 μ F/10V	CE04W1A101M	Δ C002	253 8003 713	Ceramic cap. 4700pF/400V AC	CK45E2GAC472MC
C936,937	254 4256 936	Electrolytic 47 μ F/25V	CE04W1E470M	C203,204	254 4254 909	Electrolytic 10 μ F/16V	CE04W1C100M
OTHERS PARTS GROUP				C205	255 1265 936	Film cap. 0.01 μ F/50V	CQ93M1H103J(B)
	—	(P.W.board)		C501,502	256 1034 979	Metalized 0.1 μ F/50V	CF93A1H104J
L901,902	235 9003 002	Inductor (150 μ H)	FTZ choke coil	OTHERS PARTS GROUP			
XL801	399 9018 003	Resonator	CST4.00 MGW		—	(P.W.board)	
SW801~806	212 4789 001	Tact switch		L301,302	235 0104 007	Inductor(1mH)	
SW901	212 1099 008	1P push switch	MM/MC		202 0022 008	Fuse holder	Europe model
	204 8413 000	2P pin jack(C-GND)	PHONO		202 0022 008	Fuse holder	U.K. model
	415 0309 013	P.V.C.tube L=10	for PH701	Δ F001	206 1015 061	Fuse(2A)	
				Δ F002	206 1015 029	Fuse(1A T)	Europe model only
				Δ	415 0299 000	Capacitor cover	for C002
				Δ RL001	214 0142 004	Relay(TV-5)	Europe model only
				RL601,602	214 0129 001	Relay(DH2TU)	for SP-A,B
				RL603	214 0178 007	Relay(MR62-12USRY)	for Headphone
				SW501	212 1162 003	3P push switch	for Speaker ON-OFF
					205 0484 001	8P speaker terminal	for Speaker
					204 8503 004	Head phone jack	JA501
				Δ	203 3950 002	3P AC outlet	AOL-1
				Δ	205 0692 000	2P wrapping terminal	Europe model only

EXPLODED VIEW OF CHASSIS AND CABINET : PMA-925R



PARTS LIST OF EXPLODED VIEW PMA-925R

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	1U-2938 C	Main unit Ass'y		1s	47	462 0094 007	Screw tube		2
2	1U-2939 A	M-com unit Ass'y		1s	48	112 0646 000	:*Knob(S)	Black model	3
2-1	—	M-com unit		(1)	48	112 0646 013	:*Knob(S)	Gold model	3
2-2	—	LED unit		(1)	49	112 0641 102	:*Fuji knob	Black model	1
2-3	—	Phono unit		(1)	49	112 0641 115	:*Fuji knob	Gold model	1
2-4	—	Supply unit		(1)	50	112 0784 001	Volume knob joint		1
3	1U-2940 C	Volume unit Ass'y		1s	51	112 0785 000	Volume knob joint (B)		1
3-1	—	Volume unit		(1)	52	113 1745 107	:*Push button(Round)	Black model	4
3-2	—	Speaker unit		(1)	52	113 1745 110	:*Push button(Round)	Gold model	4
3-3	—	AC outlet unit		(1)	53	113 1738 101	:*Power button	Black model	1
3-4	—	Speaker sel. unit		(1)	53	113 1738 114	:*Power button	Gold model	1
4	212 0336 005	Rotary switch	SW101 Rec out sel.	1	54	144 2509 207	Front panel	Black model	1
5	212 1161 004	1P push switch	SW202 S.Direct	1	54	144 2509 210	Front panel	Gold model	1
6	211 0798 103	Variable resistor 100kohm	VR202 Balance	1	55	412 4136 005	Radiator bracket		1
7	211 0834 009	Variable resistor 30kohm	VR204 Bass	1	56	445 0048 003	Cord holder L=76		3
8	211 0834 012	Variable resistor 10kohm	VR203 Treble	1	57	112 0789 006	Volume knob Ass'y	Black model	1
9	204 8266 008	4P pin jack(S-GND)	for TAPE	2	57	112 0789 019	Volume knob Ass'y	Gold model	1
10	204 8278 009	6P pin jack(S-GND)	for INPUTS	1	58	445 8004 007	Wire clammer		18
11	212 4789 001	Tact switch	SW801~806	6	59	102 0521 128	::Top cover	Black model	1
12	212 1099 008	1P push switch	SW901 MM/MC	1	59	102 0521 131	::Top cover	Gold model	1
13	499 0150 008	Remote sensor SBX1610-52	IC105	1	60	513 2444 005	Label (China)	Put on rear panel	1
14	204 8413 000	2P pin jack(C-GND)	for PHONO	1	61	477 0096 007	Push rivet		8
15	206 1015 032	Fuse (2.5A)	F001	1	62	513 2433 003	Serial No. sheet		1
16	206 1015 029	Fuse (1A T)	F002	1	63	122 0219 007	Sheet	F/Panel, R/Panel	4
17	415 0299 000	Capacitor cover	for C002	1	64	143 0945 006	:*Lens		1
18	—	—	—	—	64-1	—	:*Lens		(1)
19	214 0142 004	Relay(TV-5)	RL001	1	64-2	—	:*Lens		(1)
20	214 0129 001	Relay(DH2TU)	RL601,602	2	65	143 9181 007	:*Remocon window		1
21	214 0178 007	Relay(MR62-12USRY)	RL101~106,603	7	66	254 4252 082	Electrolytic cap. 2200μF/10V	C309,310	2
22	212 1030 009	Power switch(TV-5)	SW001	1	67	254 6206 007	Electrolytic cap. 12000μF/63V	C705,706	2
23	—	—	—	—	68	415 0305 017	P.V.C. tube	for AC cord	1
24	212 1162 003	3P push switch	SW501 Speaker ON-OFF	1	69	412 4135 006	Volume plate	Black model	1
25	205 0484 001	8P speaker terminal	for speaker	1	69	412 4135 019	Volume plate	Gold model	1
26	211 0869 003	Variable resistor 30kohm	VR201 Main volume	1	70	276 0424 005	Diode 404B42	D-702 Bridge	1
27	204 8503 004	:Head phone jack	JA501	1	71	272 0129 007	Transistor 2SB1566(E/F)	TR702	1
28	203 3950 002	3P AC outlet	AOL-1	1	72	263 0793 002	IC NJM7806FA(S)	IC702 Regulator +6V	1
29	411 1267 712	*Main chassis		1	73	279 0034 041	PTH94M04BD222TS2F333	PH701	1
30	104 0282 007	:*Foot Ass'y		4	74	412 4156 001	Trans frame		1
31	441 1786 016	Trans bracket		1	75	—	—		
32	105 1203 004	Rear panel		1	76	—	—		
33	205 0071 016	Terminal Ass'y		1	77	146 1651 000	Side spacer		2
34	206 2063 009	AC cord with plug		1	78	461 0940 006	:Rubber form		1
35	445 0056 008	Cord bush		1	79	449 0138 025	Card spacer (L=31)		5
36	417 0503 132	Power radiator		1	80	449 0138 012	Card spacer (L=25)		1
37	417 0507 015	:*CU plate		1	81	—	—		
38	273 0389 002	Transistor 2SC3855(O/P/Y)(Z)	TR319,320	2					
39	271 0240 006	Transistor 2SA1491(O/P/Y)(Z)	TR321,322	2					
40	412 4000 005	:*P.W.B.bracket (A)		2					
41	449 0138 009	:Card spacer (L=12)		1					
42	146 1637 008	Inner panel	Black model	1					
42	146 1637 011	Inner panel	Gold model	1					
43	—	Mica sheet		4					
44	113 1739 003	:*Function button	Black model	1					
44	113 1739 016	:*Function button	Gold model	1					
45	—	—		—					
46	233 6207 009	Power transformer		2					

PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
SCREWS & WASHERS					151	GEN 3580	Envelope Sub. Ass'y		1s
101	473 7002 018	Screw 3x8	CBTS(S)-Z	17	151-1	505 8006 019	Envelope		(1)
102	473 7004 016	Screw 4x6	CBTS(S)-Z	8	151-2	511 2899 007	Operating instructions		(1)
103	473 7004 029	Screw 4x10	CBTS(S)-Z	14	151-3	399 0277 004	Remote control unit	RC-176	(1)
104	473 7015 018	Screw 3x8	CBTS(S)-B	11	151-4	—	Batteries	R6P/AA/SUM-3	(2)
105	473 8007 009	Cup screw 3x12		7	151-5	515 0671 326	DENON service network		(1)
106	473 7508 017	Screw 3x10	CBTS(P)-B	18	152	505 8092 010	Laminate envelope		1
107	477 0064 107	Fixing screw 3x10		10	153	503 1222 001	Cushion		2
108	473 7508 004	Screw 3x6	CBTS(P)-B	2	154	502 0892 002	:Support pad		2
109	473 7500 044	Screw 3x8	CBTS(P)-B	2	155	502 1227 006	:Sub cushion		1
110	477 0263 005	3P swelling screw	Black model	4	156	501 1927 009	Carton case		1
110	477 0263 018	3P swelling screw	Gold model	4	157	513 2446 003	China label(E)		1
111	—	—		—	158	513 2447 002	China label(F)		1
112	473 7002 034	Screw 3x6	CBTS(S)-B	1	159	513 9111 001	Color label (Gold)	Gold model only	2
113	477 0018 001	Washer	P-87	1					
114	475 1175 002	:Washer		1					
115	—	—		—					

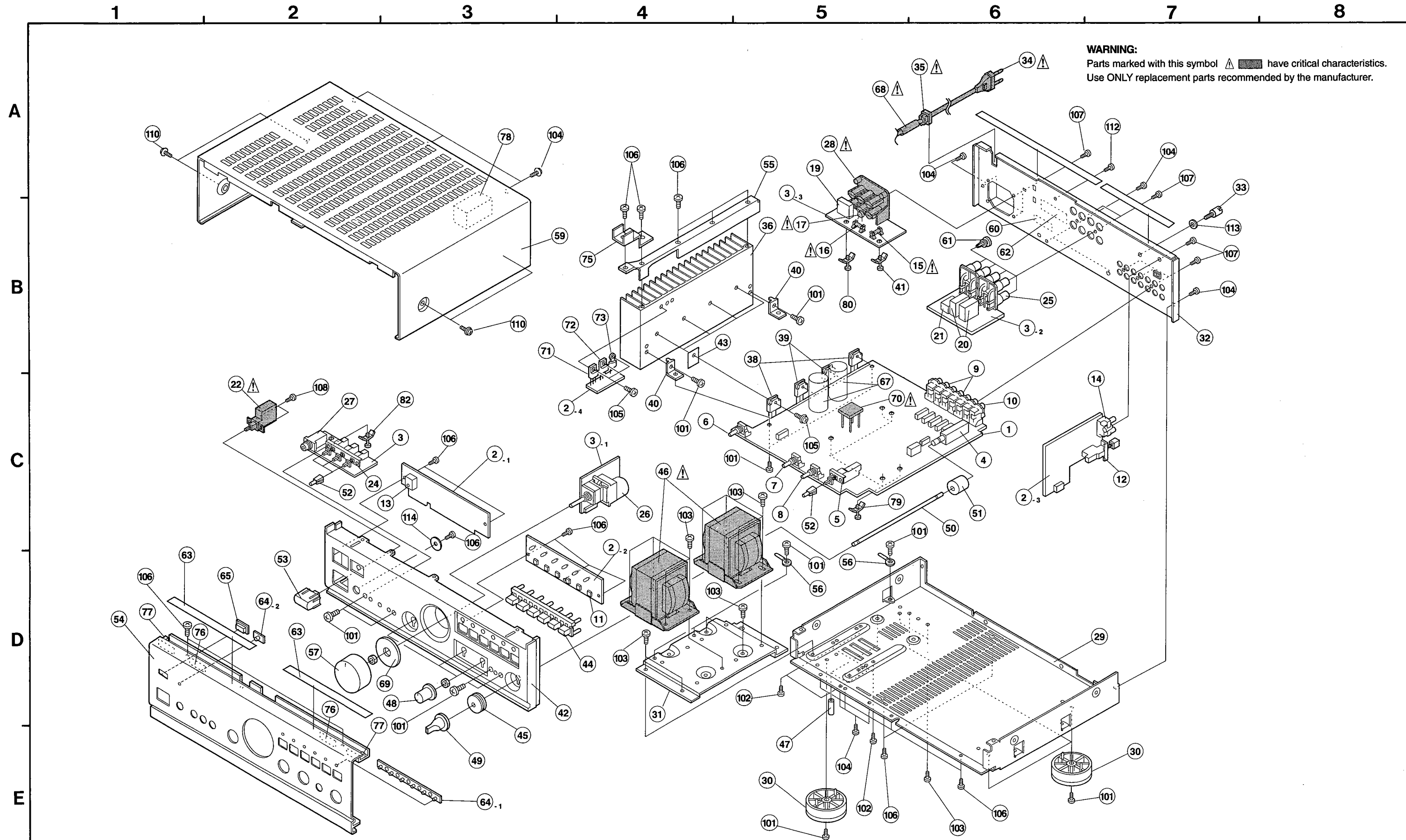
NOTE FOR PARTS LIST

- 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.

WARNING:

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

EXPLODED VIEW OF CHASSIS AND CABINET : PMA-725R



PARTS LIST OF EXPLODED VIEW PMA-725R

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
1	1U-2938 A	Main unit Ass'y	Europe model	1s	40	412 4000 005	*P.W.B.bracket (A)		2
1	1U-2938 B	Main unit Ass'y	U.K. model	1s	41	—	—		
2	1U-2939 A	M-com unit Ass'y		1s	42	146 1632 003	Inner panel	Black model	1
2-1	—	M-com unit		(1)	42	146 1632 016	Inner panel	Gold model	1
2-2	—	LED unit		(1)	43	—	Mica sheet		4
2-3	—	Phono unit		(1)	44	113 1739 003	*Function button	Black model	1
2-4	—	Supply unit		(1)	44	113 1739 016	*Function button	Gold model	1
3	1U-2940 A	Volume unit Ass'y	Europe model	1s	45	124 0032 057	Felt sheet		1
3	1U-2940 B	Volume unit Ass'y	U.K. model	1s	46	233 6203 003	Power transformer		2
3-1	—	Volume unit		(1)	47	462 0094 007	Screw tube		2
3-2	—	Speaker unit		(1)	48	112 0646 000	*Knob(S)	Black model	3
3-3	—	AC outlet unit	Europe model only	(1)	48	112 0646 013	*Knob(S)	Gold model	3
3-4	—	Speaker sel. unit		(1)	49	112 0641 102	*Fuji knob	Black model	1
3-5	—	Power switch unit	U.K. model only	(1)	49	112 0641 115	*Fuji knob	Gold model	1
3-6	—	AC unit	U.K. model only	(1)	50	112 0784 001	Volume knob joint		1
4	212 0336 005	Rotary switch	SW101 Rec out sel.	1	51	112 0785 000	Volume knob joint (B)		1
5	212 1161 004	1P push switch	SW202 S.Direct	1	52	113 1745 107	*Push button(Round)	Black model	4
6	211 0798 103	Variable resistor 100kohm	VR202 Balance	1	52	113 1745 110	*Push button(Round)	Gold model	4
7	211 0834 009	Variable resistor 30kohm	VR204 Bass	1	53	113 1738 101	*Power button	Black model	1
8	211 0834 012	Variable resistor 10kohm	VR203 Treble	1	53	113 1738 114	*Power button	Gold model	1
9	204 8266 008	4P pin jack(S-GND)	for TAPE	2	54	144 2507 306	Front panel	Black model	1
10	204 8278 009	6P pin jack(S-GND)	for INPUTS	1	54	144 2507 319	Front panel	Gold model	1
11	212 4789 001	Tact switch	SW801-806	6	55	412 4128 000	Radiator bracket		1
12	212 1099 008	1P push switch	SW901 MM/MC	1	56	445 0048 003	Cord holder L=76		3
13	499 0150 008	Remote sensor SBX1610-52	IC105	1	57	112 0744 009	Volume knob Ass'y	Black model	1
14	204 8413 000	2P pin jack(C-GND)	for PHONO	1	57	112 0744 012	Volume knob Ass'y	Gold model	1
15	206 1015 061	Fuse (2 A)	F001	1	58	445 8004 007	Wire clasper		18
16	206 1015 029	Fuse (1 A T)	F002	1	59	102 0543 119	::Top cover	Black model	1
17	415 0299 000	Capacitor cover	Europe model only for C002	1	59	102 0543 122	::Top cover	Gold model	1
18	—	—			60	513 2444 005	Label (China)	Put on rear panel	1
19	214 0142 004	Relay(TV-5)	RL001	1	61	477 0096 007	Push rivet		8
20	214 0129 001	Relay(DH2TU)	Europe model only	1	62	513 2433 003	Serial No. sheet		1
21	214 0178 007	Relay(MR62-12USRY)	RL601,602	2	63	122 0219 007	Sheet	F/Panel, R/Panel	4
22	212 1030 009	Power switch(TV-5)	SW001	1	64	143 0945 006	*Lens		1
23	—	—			64-1	—	*Lens		(1)
24	212 1162 003	3P push switch	SW501 Speaker ON-OFF	1	64-2	—	*Lens		(1)
25	205 0484 001	8P speaker terminal	for speaker	1	65	143 9181 007	*Remocon window		1
26	211 0869 003	Variable resistor 30kohm	VR201 Main volume	1	66	254 4252 082	Electrolytic cap. 2200μF/10V	C309,310	2
27	204 8503 004	Head phone jack	JA501	1	67	254 6205 008	Electrolytic cap. 10000μF/51V	C705,706	2
28	203 3950 002	3P AC outlet	AOL-1	1	68	415 0305 017	P.V.C. tube	for AC cord	1
29	411 1267 712	*Main chassis	Europe model only	1	69	412 4135 006	Volume plate	Black model	1
30	104 0282 007	*Foot Ass'y		4	69	412 4135 019	Volume plate	Gold model	1
31	441 1786 003	Trans bracket		1	70	276 0338 007	Diode S4VB20F	D702 Bridge	1
32	105 1198 009	Rear panel	Europe model	1	71	272 0129 007	Transistor 2SB1566 (E/F)	TR702	1
32	105 1198 012	Rear panel	U.K. model	1	72	263 0793 002	IC NJM7806FA (S)	IC702 Regulator+6V	1
33	205 0071 016	Terminal Ass'y		1	73	279 0034 041	PTH9M04BD222TS2F333	PH701	1
34	206 2063 009	AC cord with plug	Europe model	1	74	—	—		
34	206 2131 009	AC cord with plug	U.K. model	1	75	412 4159 008	:Support bracket		1
35	445 0056 008	Cord bush		1	76	461 0942 004	Spacer (T=1)		2
36	417 0503 129	Power radiator		1	77	146 1648 000	Side spacer		2
37	—	—			78	461 0941 005	:Rubber form		1
38	274 0173 004	Transistor 2SD2390(O/P/Y)	TR319,320	2	79	449 0138 012	:Card spacer (L=25)		5
39	272 0137 002	Transistor 2SB1560(O/P/Y)	TR321,322	2	80	449 0138 012	:Card spacer (L=25)		1
					81	449 0138 012	:Card spacer (L=25)		1
					82	449 0138 025	Card spacer (L=31)		1
					83	513 2001 008	Insulate mark sheet	U.K. model only	1
					84	202 0013 101	Fuse holder	U.K. model only	1

PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
85	415 0785 006	Insulating plate	U.K. model only	1	151	GEN 3580	Envelope Sub. Ass'y		1s
86	513 1390 008	Fuse label	U.K. model only	1	151-1	505 8006 019	Envelope		(1)
87	203 0150 009	Wire connector	U.K. model only	2	151-2	511 2899 007	Operating instructions		(1)
88	415 0360 052	P.V.C. Tubing (19)	U.K. model only	1	151-3	399 0277 004	Remote control unit	RC-176	(1)
SCREWS & WASHERS					151-4	—	Batteries	R6P/AA/SUM-3	(2)
101	473 7002 018	Screw 3x8	CBTS(S)-Z	15	151-5	515 0671 326	DENON service network		(1)
102	473 7004 016	Screw 4x6	CBTS(S)-Z	8	152	505 8092 010	Laminate envelope		1
103	473 7004 029	Screw 4x10	CBTS(S)-Z	14	153	503 1218 002	Cushion		2
104	473 7015 018	Screw 3x8	CBTS(S)-B	10	154	502 0893 001	:L supporter		2
105	473 8007 009	Cup screw 3x12		7	155	502 0894 000	:Pad (T=10)		1
106	473 7508 017	Screw 3x10	CBTS(P)-B	18	156	501 1922 004	Carton case		1
107	477 0064 107	Fixing screw 3x10	Europe model	10	157	513 2446 003	China label(E)		1
107	477 0064 107	Fixing screw 3x10	U.K. model	6	158	513 2447 002	China label(F)		1
108	473 7508 004	Screw 3x6	CBTS(P)-B	2	159	513 9111 001	Color label (Gold)	Gold model only	2
109	—	—			160	504 0176 009	AC protect sheet	U.K. model only	1
110	477 0263 005	3P swelling screw	Black model	4	161	503 1228 008	Support pad	U.K. model only	1
110	477 0263 018	3P swelling screw	Gold model	4					
111	—	—							
112	473 7002 034	Screw 3x6	CBTS(S)-B	1					
113	477 0018 001	Washer	P-87	1					
114	475 1175 002	:Washer		1					
115	471 3304 031	Screw 3x8	CBS U.K. model only	1					
116	475 6006 008	Nut M3	U.K. model only	1					

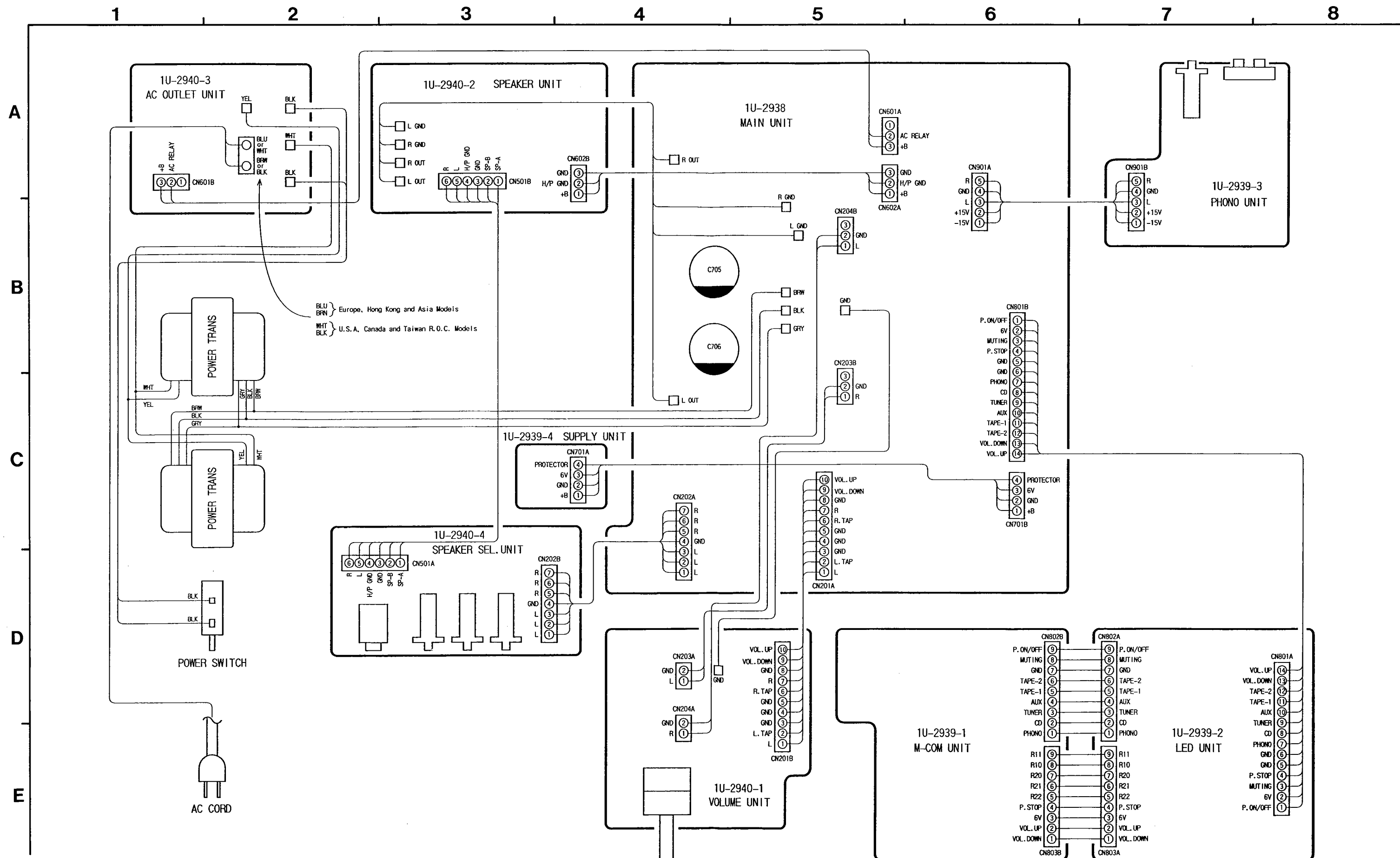
NOTE FOR PARTS LIST

- 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.

WARNING:

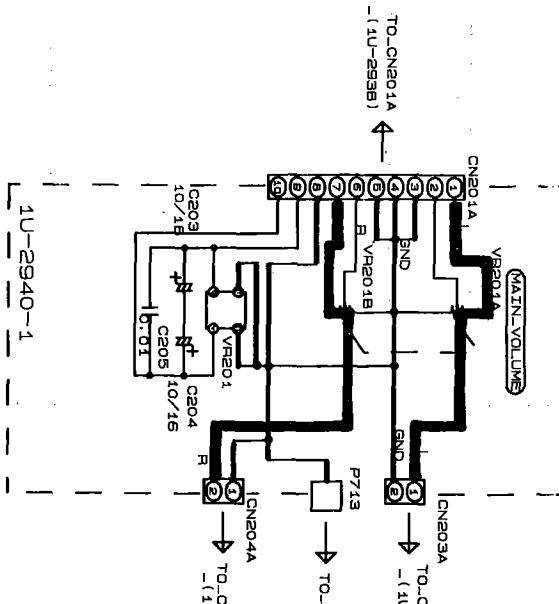
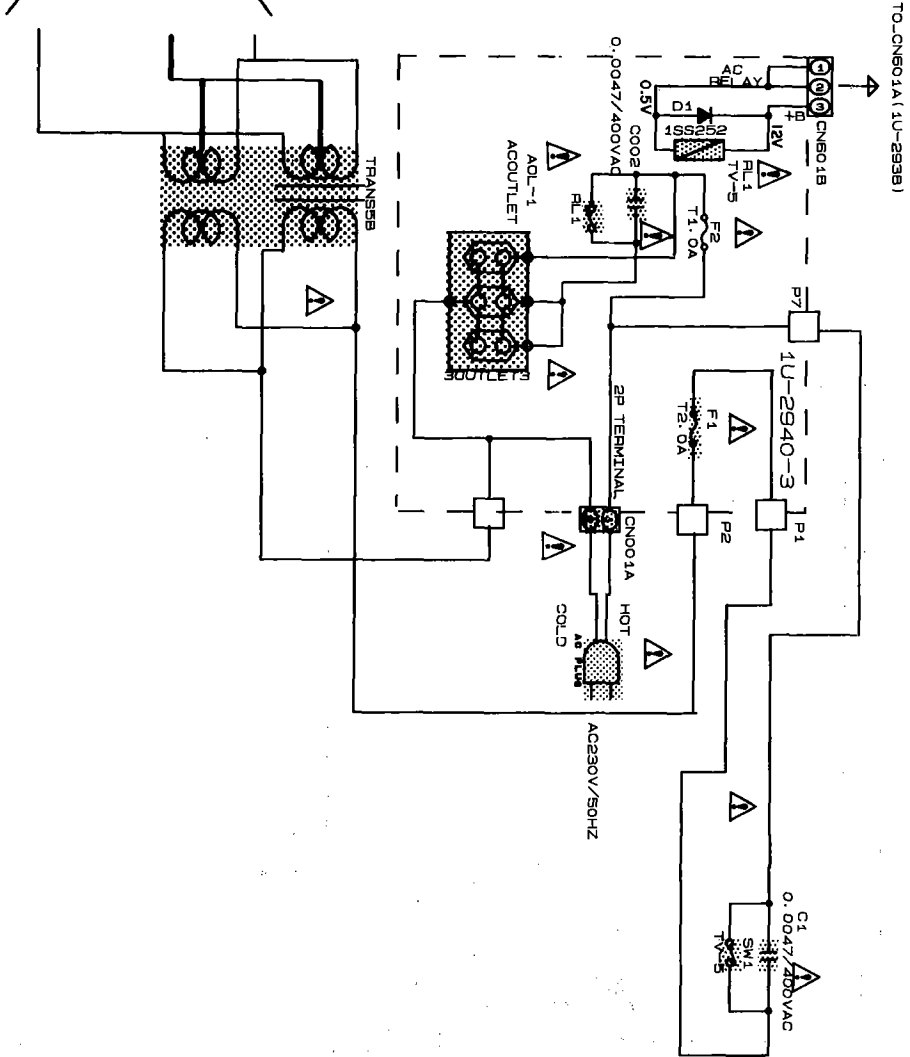
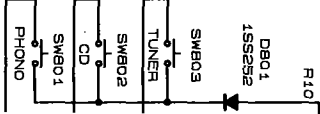
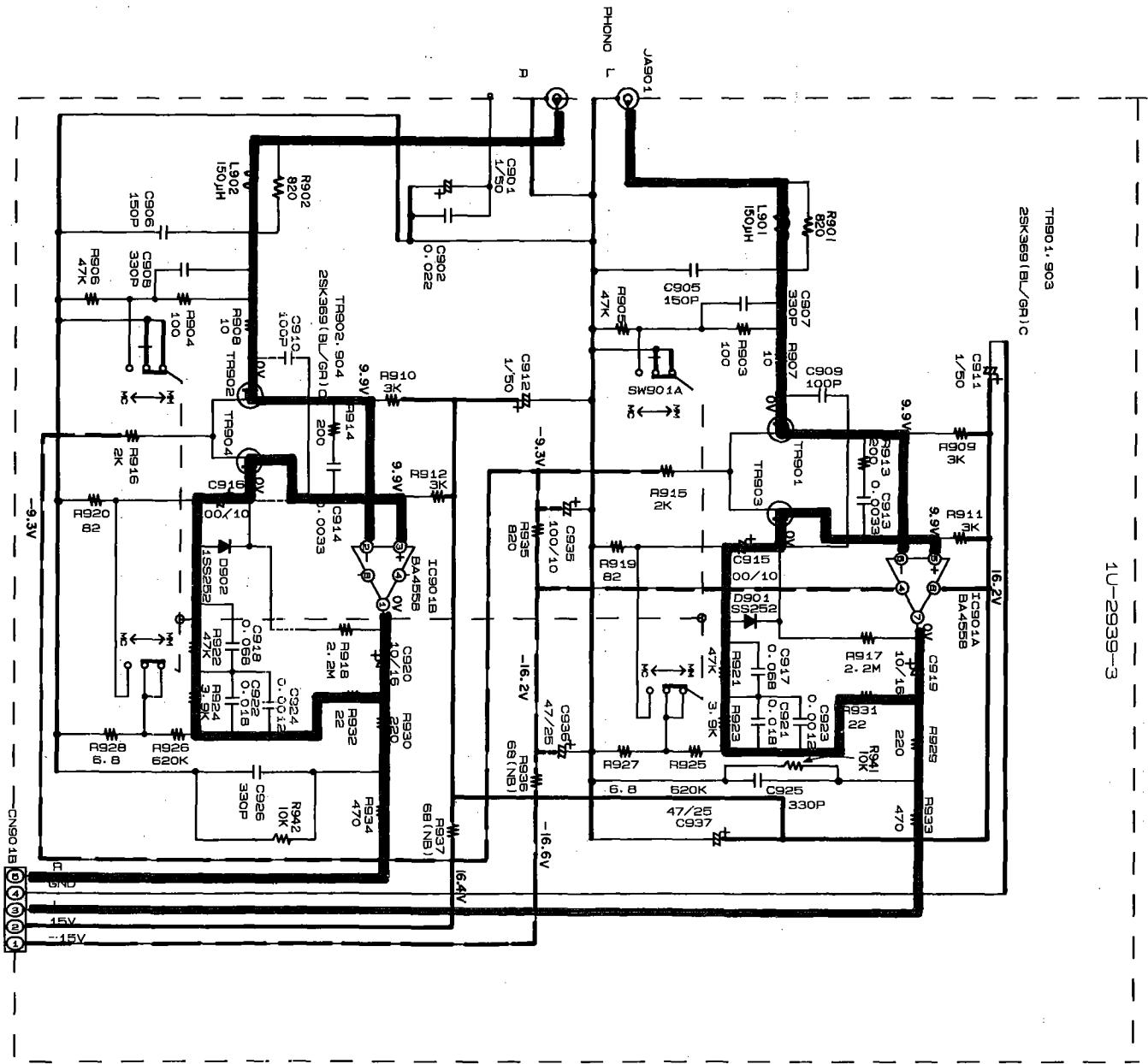
Parts marked with this symbol  have critical characteristics.
Use ONLY replacement parts recommended by the manufacturer.

WIRING DIAGRAM

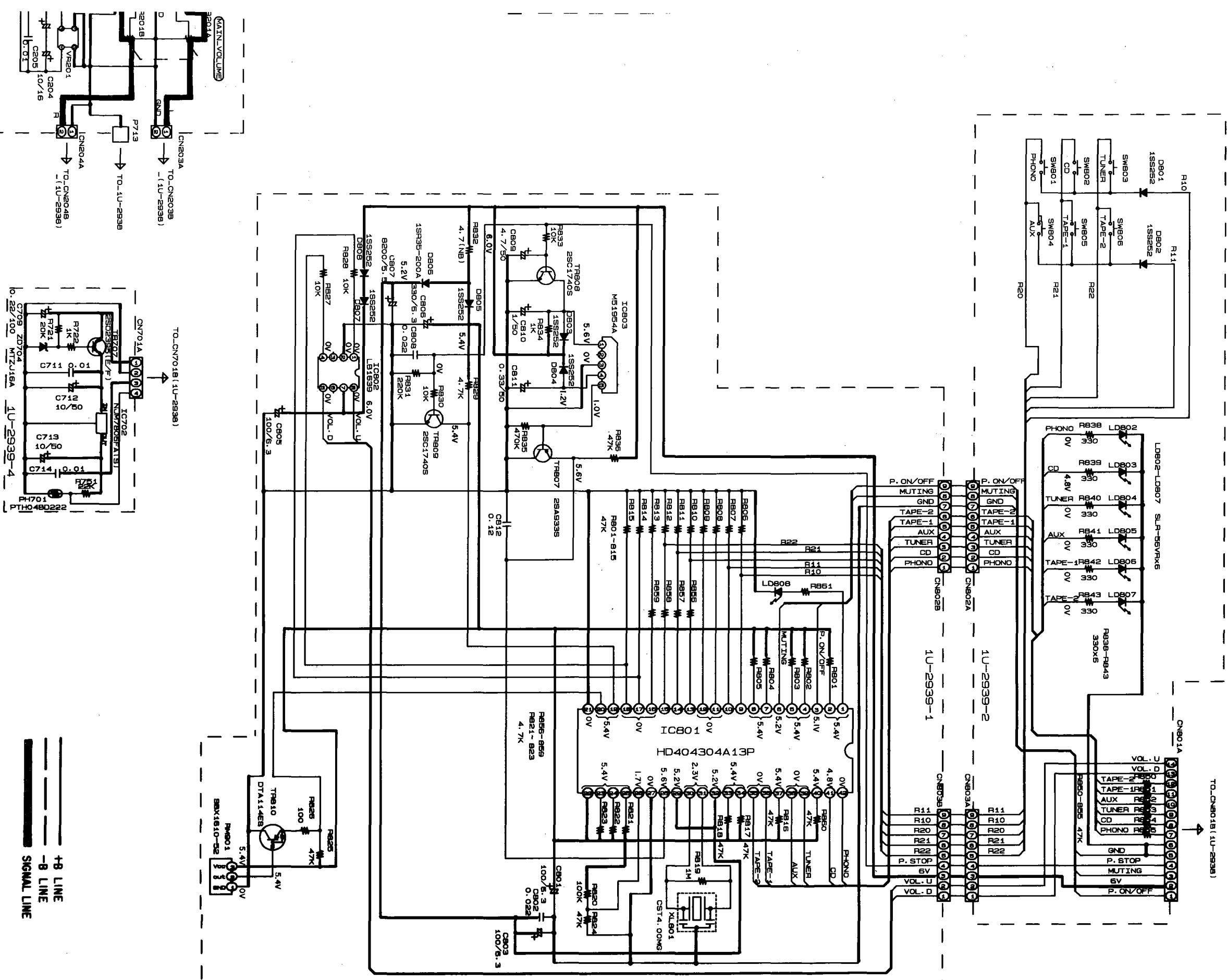


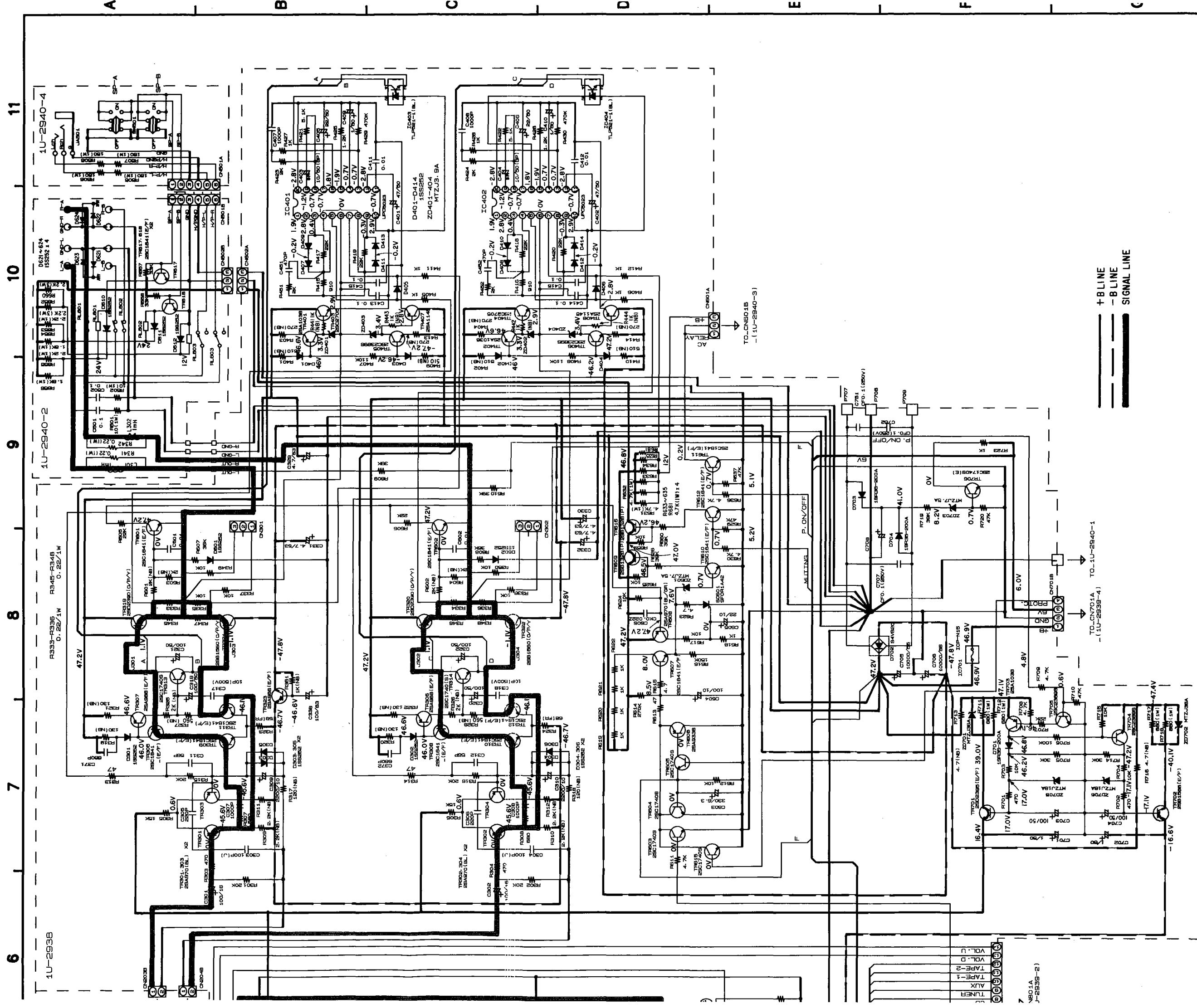
SCHEMATIC DIAGRAM (4/4) : PMA-725R

1 2 3 4 5 6



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.

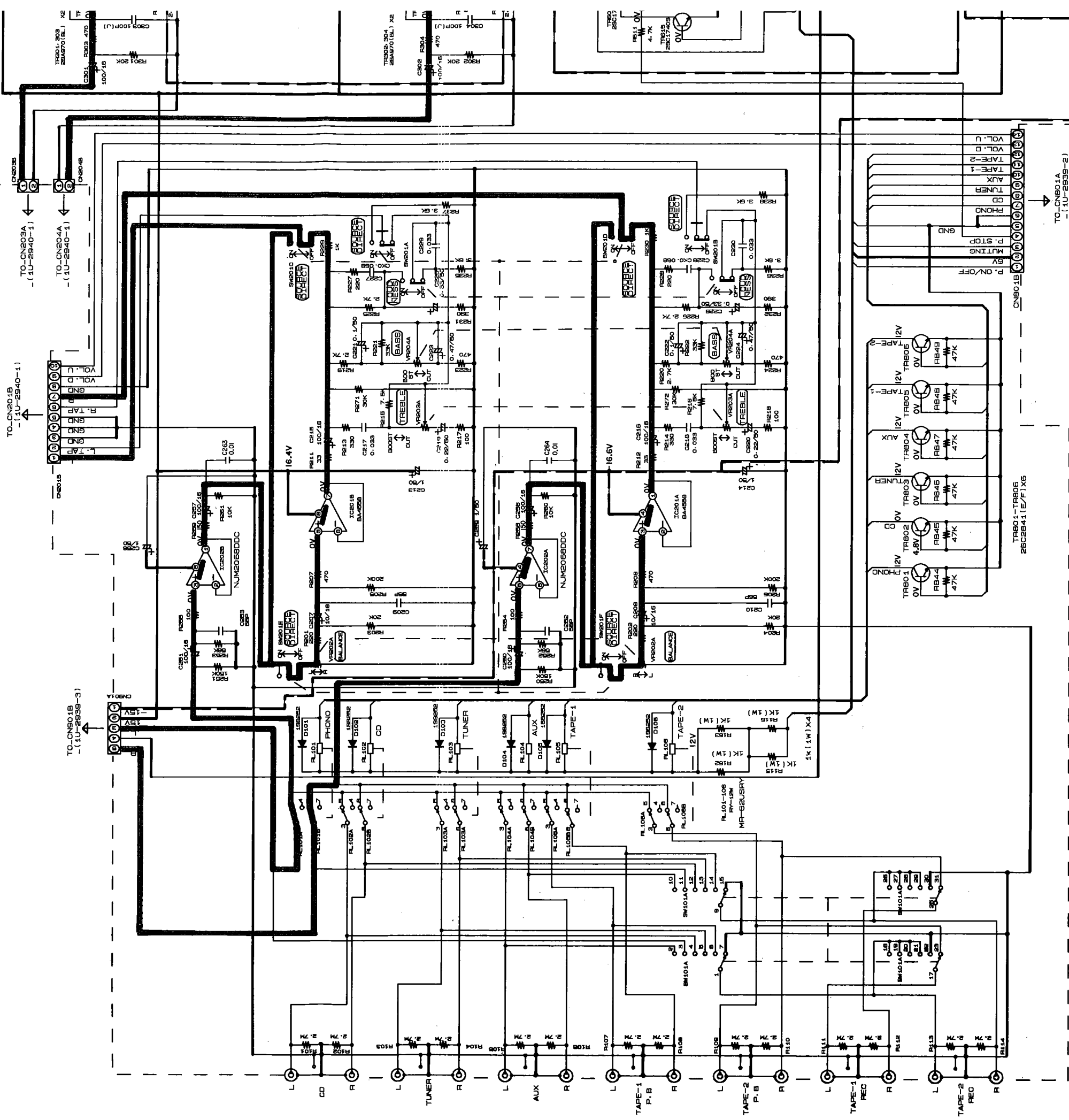
CAUTION: Before returning the unit to the customer, make sure you make either (1) a leakage current check or (2) a line to chassis resistance check. If the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is less than 240 kohms, the unit is defective.

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

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.

CC

TO-CN801A
-(1U-2939-2)



SCHEMATIC DIAGRAM (1/4) : PMA-925R

1

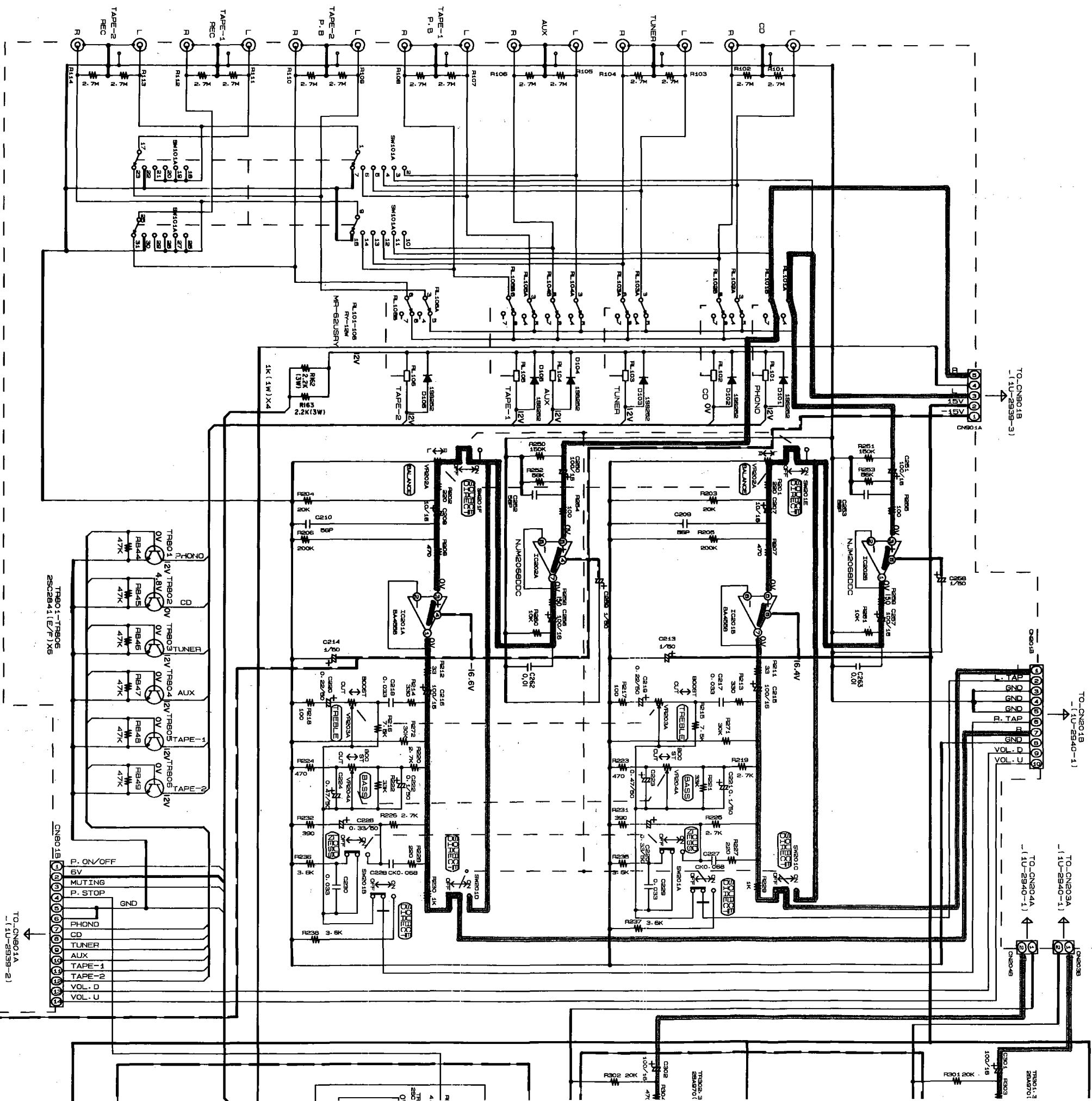
2

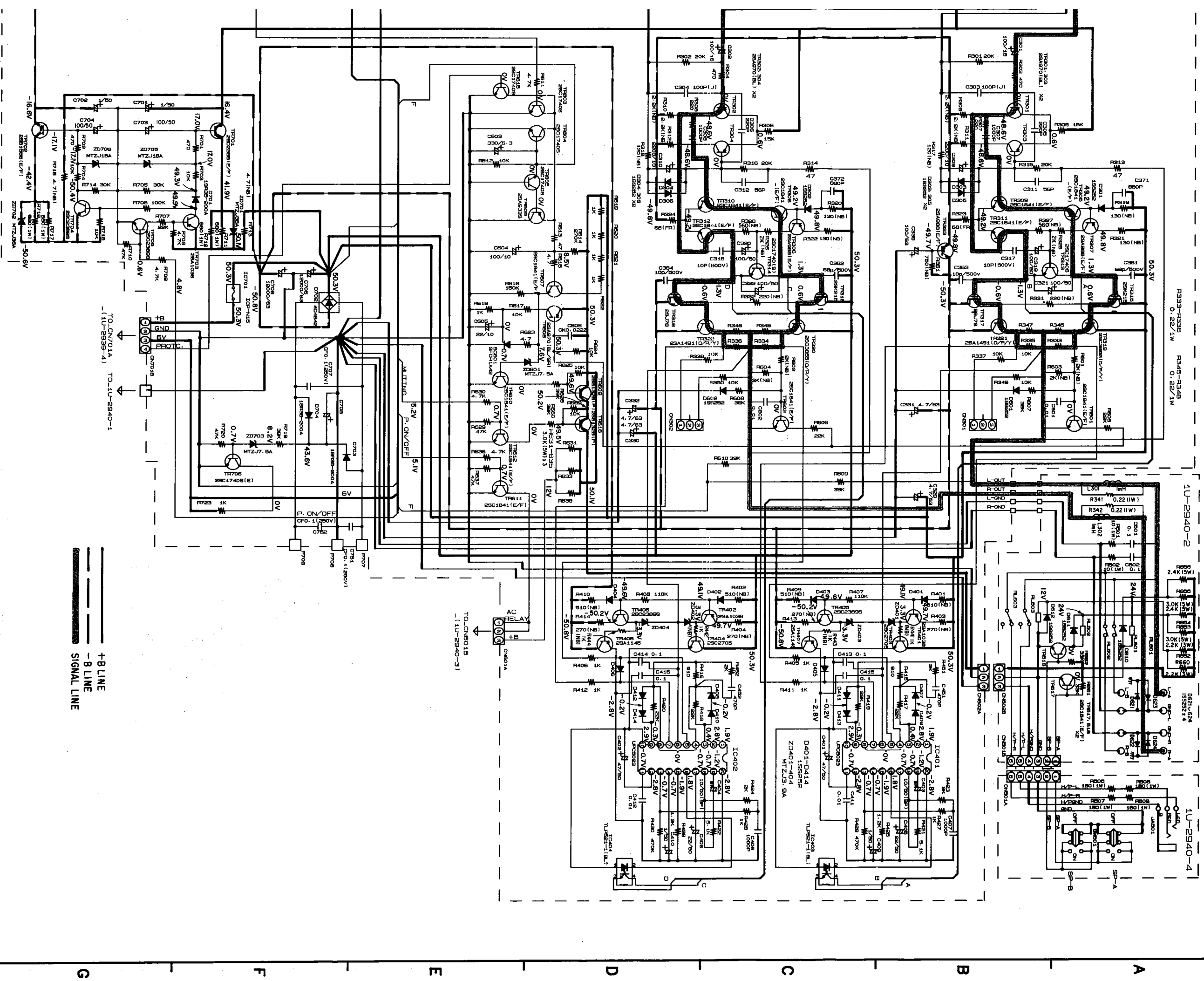
3

4


5

6



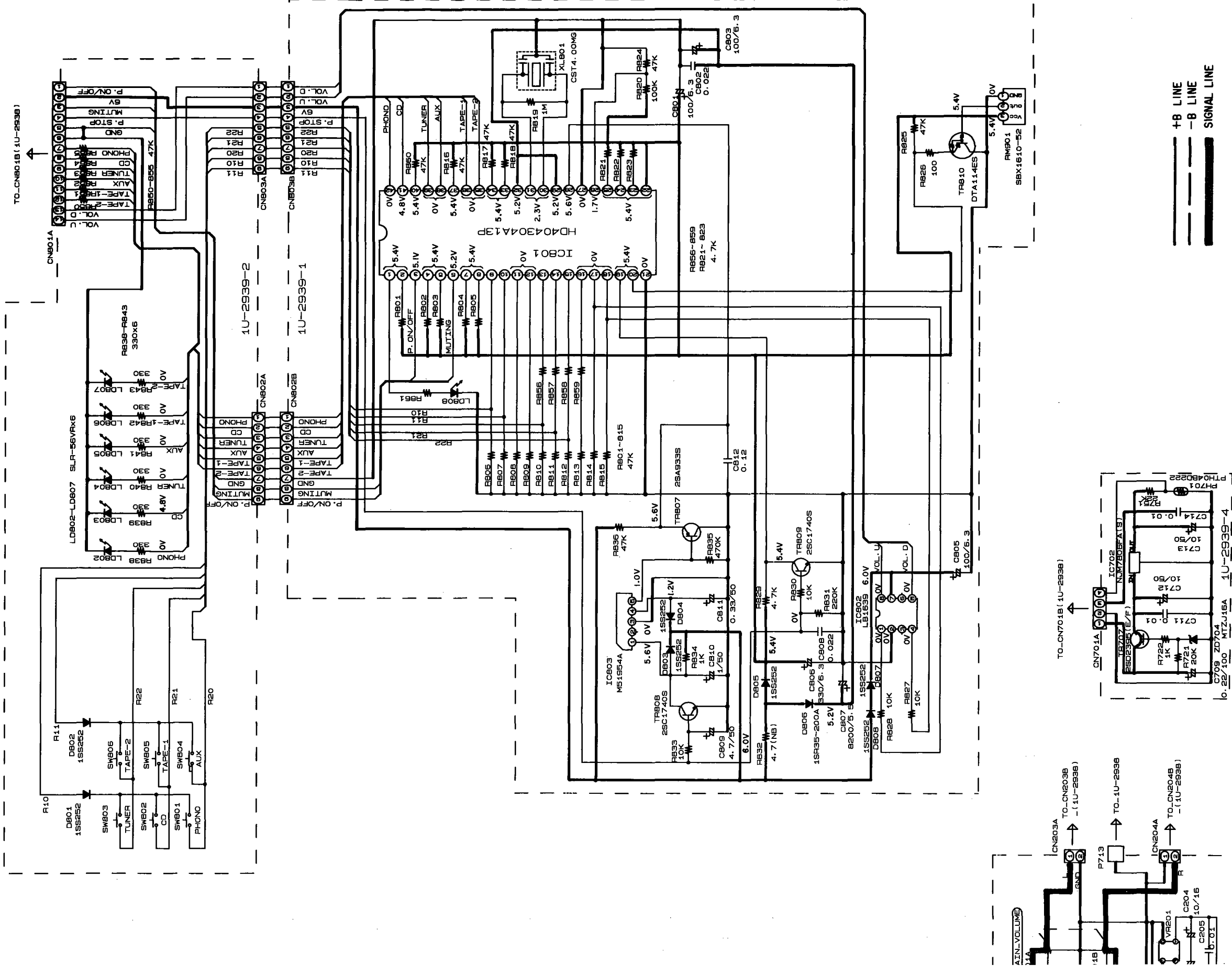


NOTES
ALL RESISTANCE VALUES IN OHM, K=1,000 OHM, M=1,000,000 OHM
ALL CAPACITANCE VALUES IN MICRO FARAD, P=PICTO-MICRO FARAD
EACH VOLTAGE AND CURRENT ARE MEASURED AT NO SIGNAL INPUT
CIRCUIT AND PARTS ARE SUBJECT TO CHANGE WITHOUT PRIOR
NOTICE.

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

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

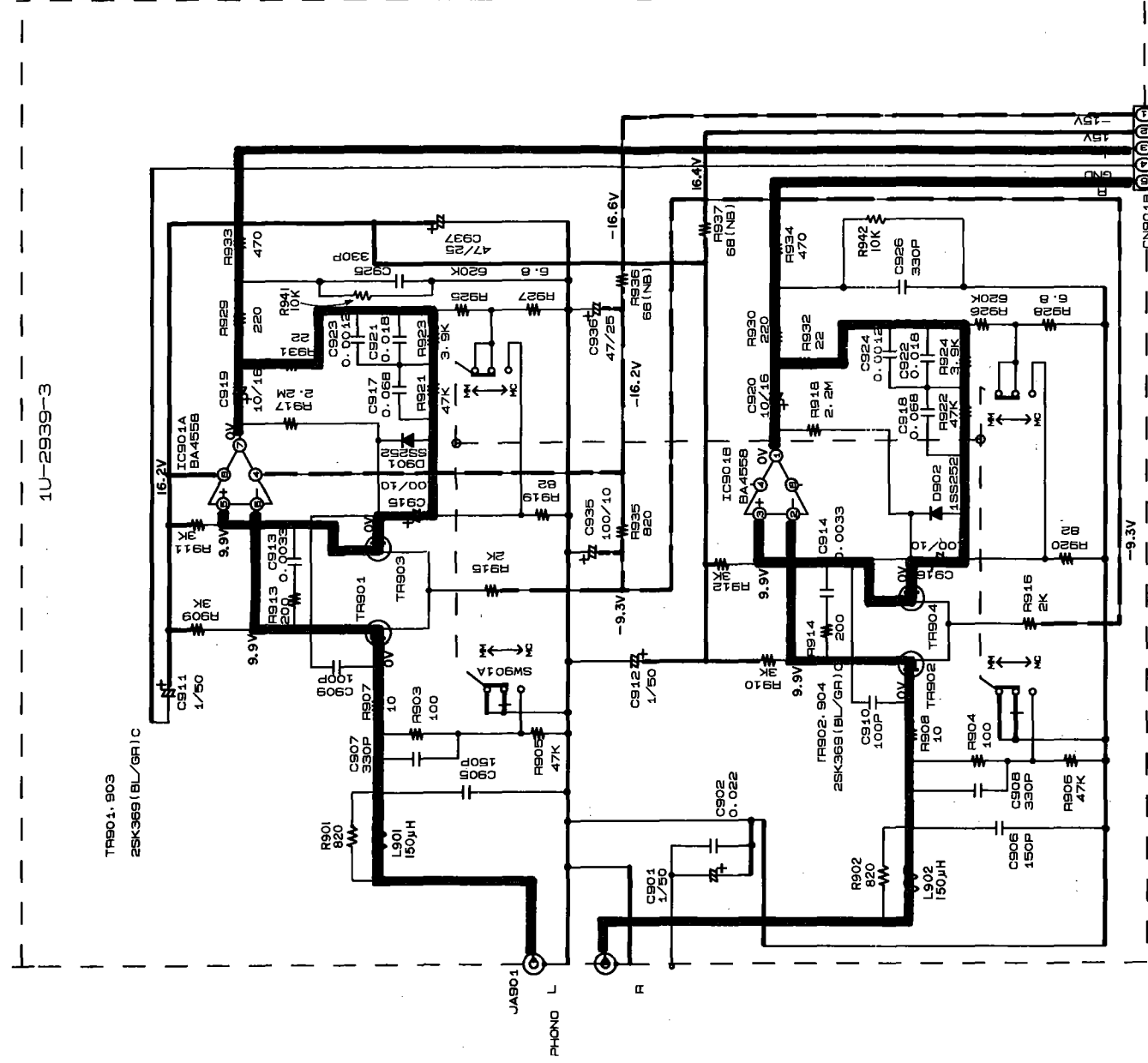
WARNING:
DO NOT return the unit to the customer until the problem is located and corrected.



— +B LINE
— -B LINE
— SIGNAL LINE

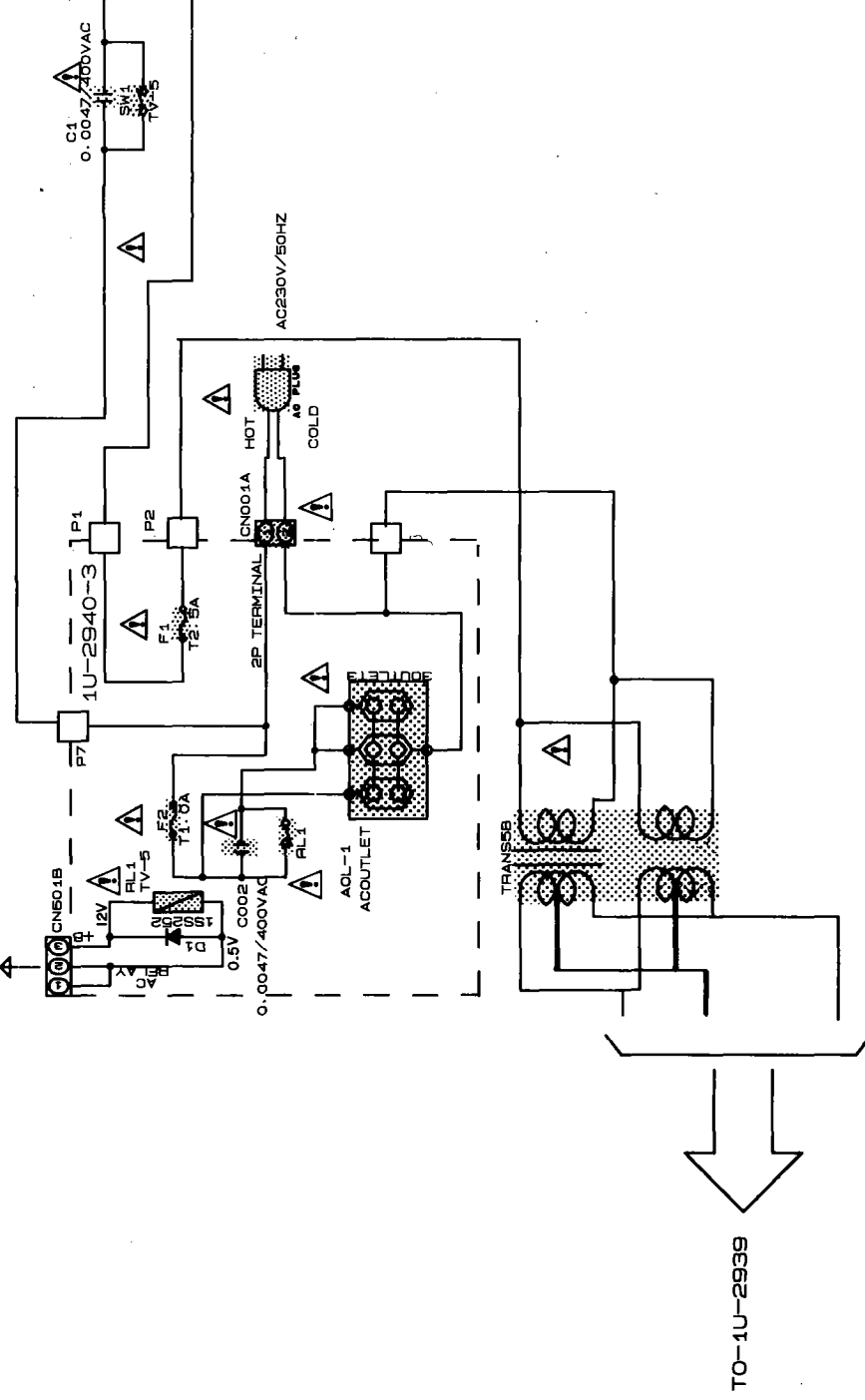
SCHEMATIC DIAGRAM (2/4) : PMA-925R

1 2 3 4 5 6

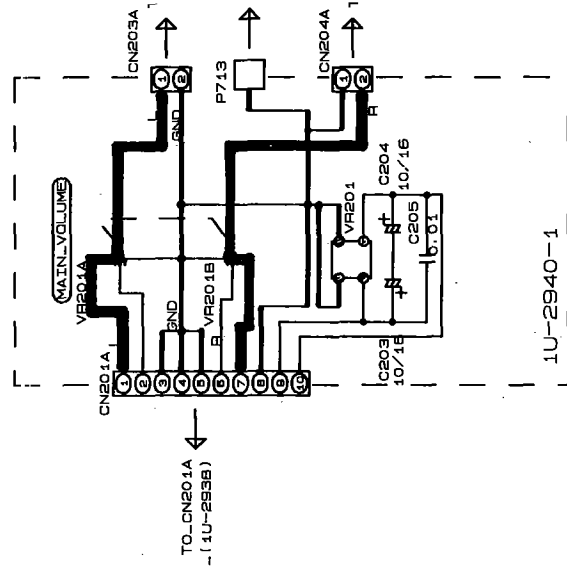


TO CN901A (1U-2938)

TO CN901A (1U-2938)




TO 1U-2939



1U-2940-1

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 milliamperes, 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.