

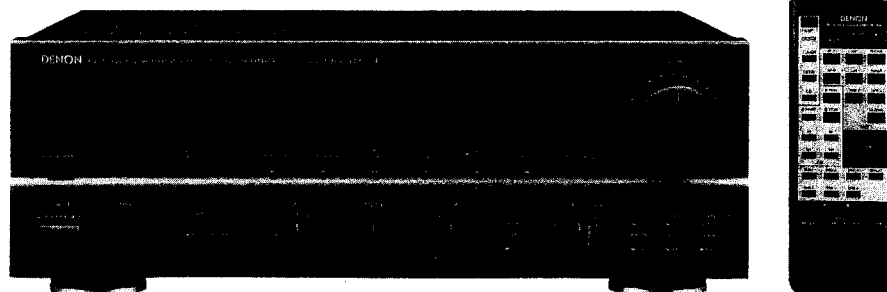
DENON

Hi-Fi Integrated Stereo Amplifier

SERVICE MANUAL

MODEL PMA-880R

INTEGRATED STEREO AMPLIFIER



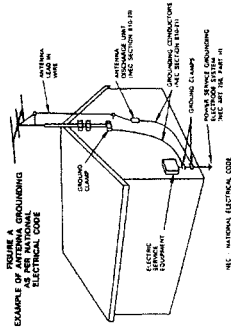
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NIPPON COLUMBIA CO., LTD.


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. Read Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
12. Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines - An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrodes. 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 SERVICE-ABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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

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

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

• FOR U.S.A. & CANADA MODEL ONLY

CAUTION

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

• POUR LE MODELE CANADIEN UNIQUEMENT

ATTENTION

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

• NUR FÜR EUROPÄISCHE MODELLE

Konformitätserklärung

Die DENOX Electronic GmbH
Helmholtzstr. 24
4030 Ratingen 1

Erklärt als Hersteller/Importeur, daß das in dieser Bedienungsanleitung beschriebene Gerät den Technischen Vorschriften für Ton- und Fernseh-Rundfunkempfänger nach der Amtsblattverfügung 6687/1989 (Amtsblatt des Bundesamters für Post und Telekommunikation vom 31. 9. 1989) entspricht.

• FOR UNITED KINGDOM MODEL ONLY

CONNECTING THE MAINS PLUG:

This unit operates from a 240V ac 50 Hz mains supply.

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

IMPORTANT

The wires in the mains lead are coloured in accordance with the following colouring:

Blue: Live
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal coloured black.

The wire which is coloured BROWN must be connected to the terminal which is marked with the letter L or coloured red.

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

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

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

Grid of safety instructions in multiple languages with illustrations. Includes: 'Do not let foreign objects in the set', 'Never disassemble or modify the set in any way', 'Keep the set free from moisture, water, and dust', 'Unplug the power cord when not using the set for long periods of time', 'Avoid high temperatures', 'Handle the power cord carefully', 'Never use the set outdoors', 'Do not touch the ventilation holes', 'Do not use the set in a car', 'Do not use the set in a car', 'Do not use the set in a car'.

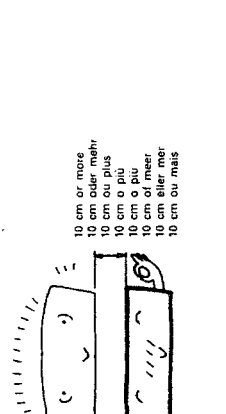
NOTA:
1. Mantenga siempre activado el interruptor de alimentación (POWER) en la unidad principal.
2. Evite y aplague el equipo desde la unidad de control remoto.
3. No use el equipo por un periodo prolongado de tiempo, desconecte el cable de alimentación.

PRECAUCION:
Este indicador LED de alimentación/modo de espera (MUTE/STANDBY) indica que la alimentación a la unidad ha sido desconectada desde la unidad de control remoto. Conecte la alimentación desde la unidad de control remoto.
OPMERKING:
1. Zorg er altijd voor dat de stroomschakelaar (POWER) van het hoofdtoestel in de ingeschakelde stand staat.
2. Schakel de stroom in en uit m.b.v. de afstandsbediening.
3. Trek het netkabel uit wanneer u denkt het toestel gedurende een lange periode 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.
OBSERVERA:
1. Låt alltid strömbrytaren (POWER) på huvudentheten vara påslagen.
2. Slå till/från strömmen med hjälp av fjärrkontrollen.
3. Roppa loss nätkabeln om apparaten inte skall användas under lång tid.
OM OBSERVARE:
Om endast MUTE/STANDBY-lampen lyser betyder det att strömmen har stängts av via fjärrkontrollen. Strömmen måste då slås på via fjärrkontrollen igen.

NOTA:
1. Mantenga o interruptor de Corrente (POWER) na unidade principal sempre na posição de ativação.
2. Ligue e desligue a corrente a partir da unidade de controle remoto.
3. Desconecte o fio de força quando intencionalmente não utilizar a unidade por longo tempo.
PRECAUCION:
Este indicador LED de averdado/espera (MUTE/STANDBY) isto significa que a força se desligou a partir do controle remoto. Ligue e força a partir do controle remoto.

PRECAUCIONES PARA LA INSTALACION
Date for lo menos 10cm de espacio entre esta unidad y cualquier otro componente situado sobre ella.
VOORZORGSAAMTEGEELEN
Bij plaatsing dient u een ruimte van minstens 10 cm open te laten tussen dit toestel en een ander, erop geplaatst, component.
FÖRSIKTIGHETSÅTGÄRDER VID INSTALLATIONEN
Se till att det finns minst 10 cm mellanrum mellan apparaten och en av andra apparater som ställs ovanpå.
CUIDADOS NA INSTALACAO
Deixe um espaço de pelo menos 10 cm entre esta unidade e qualquer outro componente colocado acima.



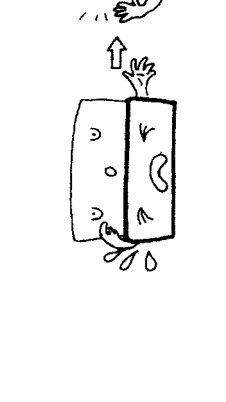
NOTE:
1. Always keep the POWER switch on the main unit turned on.
2. Turn the power on and off from the remote control unit.
3. Do not use the power cord when you do not plan to use the unit for a long period of time.

CAUTION:
If only the MUTE/STANDBY LED is lit, this means that the power is disconnected from the remote control unit. Turn the power on from the remote control unit.
HINWEIS:
Sie den Netzschalter (POWER) am Hauptgerät stets eingeschaltet lassen.
1. Schalten Sie den Strom mit dem Fernbedienungsgerät ein-und aus.
2. Trennen Sie das Netzkabel vom Netz ab, wenn Sie beabsichtigen, das Gerät über einen längeren Zeitraum hinweg nicht zu benutzen.
VORSICHT:
Wenn nur das Stummzeichen/Bereitschafts-LED (MUTE/STANDBY) leuchtet, so bedeutet dies, daß der Strom vom Fernbedienungsgerät aus ausgeschaltet worden ist. Schalten Sie den Strom vom Fernbedienungsgerät aus ein.

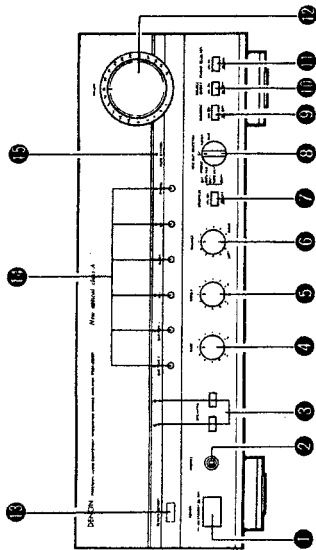
REMARQUE:
1. S'assurer que le commutateur d'alimentation (POWER) sur l'unité principale soit toujours dans la position active.
2. Mettre le courant sous et hors tension à l'aide de la télécommande.
3. Débrancher le cordon d'alimentation lorsque l'appareil ne sera pas utilisé pendant une longue période.
ATTENTION:
Si seul le témoin (LED) de veille/séjour (MUTE/STANDBY) est allumé, cela signifie que l'appareil est mis hors tension par la télécommande. Allumer l'appareil avec la télécommande.

NOTA:
1. Tenete sempre l'interruttore della corrente (POWER) dell'unità principale nella posizione di attivazione.
2. Accendete e spegnete la corrente usando il telecomando.
3. Scollegate il filo di alimentazione quando avete intenzione di non usare l'apparecchio per un lungo periodo.
AVISO:
Se sono illuminati solo i LED di attenuazione/attesa (MUTE/STANDBY), questo significa che l'appareil est mis hors tension par le telecomando. Raccendete la corrente usando il telecomando.

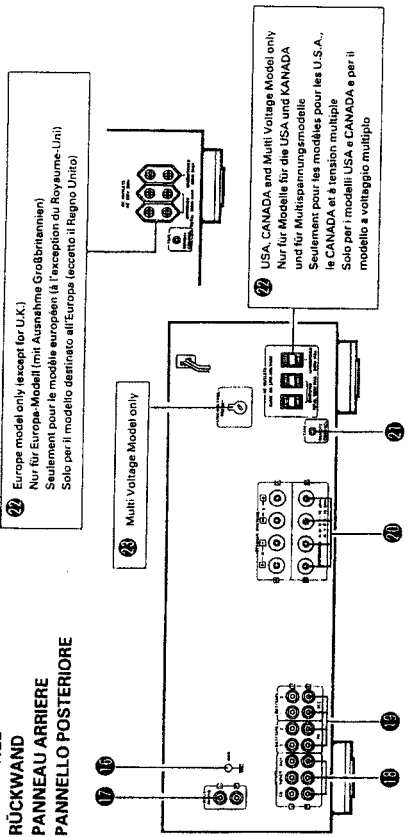
PRECAUTIONS FOR INSTALLATION
Leave at least 10cm of space between this unit and any other component placed above.
SICHERHEITSSAANNAHMEN BEIM EINBAU
Lassen einen Mindestabstand von 10 cm zwischen diesem Gerät und der anderen Komponente, die daraufgestellt wird.
PRECAUCIONES D'INSTALLATION
Laissez un espace d'au moins 10cm entre l'unité et tout autre appareil se trouvant au-dessus.
PRECAUZIONI PER L'INSTALLAZIONE
Lasciate uno spazio libero di almeno 10 cm fra quest'unità e qualsiasi altro componente che è collocato sopra la stessa.



**FRONT PANEL
FRONTPLATTE
PANNEAU AVANT
PANNELLO ANTERIORE**



**REAR PANEL
RÜCKWAND
PANNEAU ARRIERE
PANNELLO POSTERIORE**



**CONNECTIONS
ANSCHLÜSSE
CONNEXIONS
CONNESSIONI**

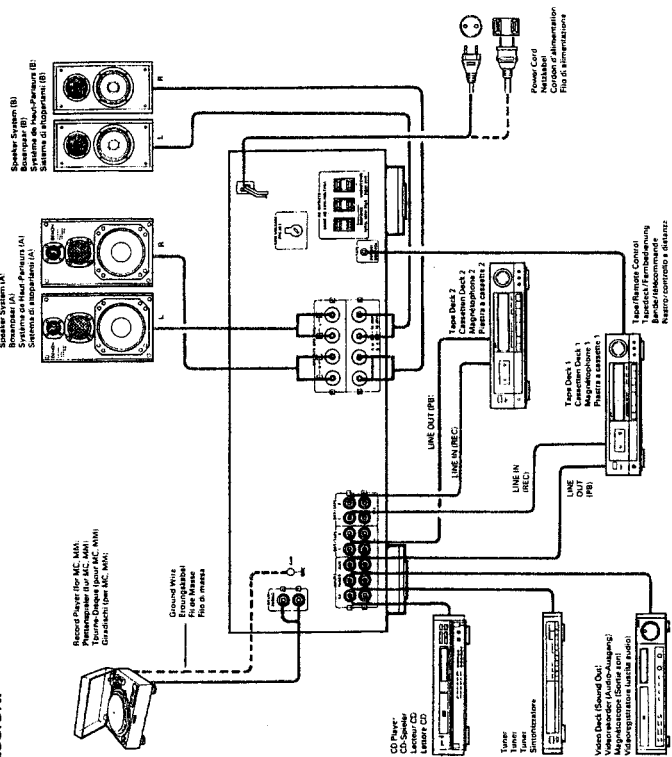


Fig. 2
Abb. 2

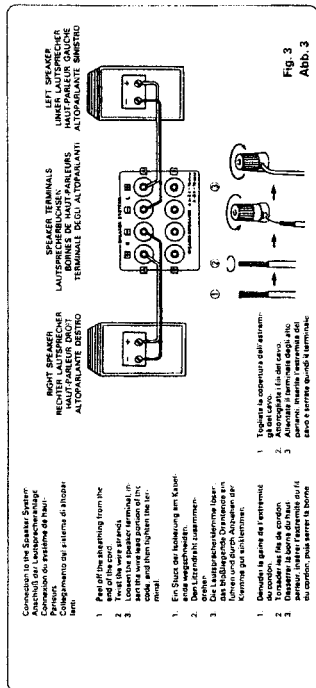


Fig. 3
Abb. 3

Fig. 1
Abb. 1

10 GND	Phono Input Terminals (Phono)	11 PHONO	Phono Input Terminals (Phono)	12 CD, TUNER, AUX	Input Terminals (CD, TUNER, AUX)	13 CD, TUNER, AUX	Engangsterminals (CD, TUNER, AUX)	14 CD, TUNER, AUX	Termini di ingresso (CD, TUNER, AUX)	15 CD, TUNER, AUX	Termini di ingresso (CD, TUNER, AUX)	16 DAY/TAPE-1, DAY/TAPE-2	Playback and Recording Terminals (Recording Terminals)	17 TAPE PB - TAPE REC	Recording Terminals	18 SPEAKERS	Speaker Terminals	19 TAPE/REMOTE CONTROL	Tape deck Remote control jack
GND	Schallleitanschlüsse (Phono)	GND	Schallleitanschlüsse (Phono)	GND	Engangsterminals (CD, TUNER, AUX)	GND	Engangsterminals (CD, TUNER, AUX)	GND	Termini di ingresso (CD, TUNER, AUX)	GND	Termini di riproduzione (CD, TUNER, AUX)	Bornes de haut parleur	Bornes de haut parleur	Bornes de haut parleur	Bornes de haut parleur	Terminals of reproduction	Terminals degli altoparlanti	Prise de commande à distance de la cassette	Prise de commande à distance de la cassette

DESIGNATIONS AND FUNCTIONS OF PANEL CONTROLS

- 1 **POWER (Power Switch)**
When the PMA switch is turned ON (↗), the MUTE/STANDBY 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-880R can be connected to two speaker systems: speaker system A and speaker system B.
When A is pressed, its LED lights and the speaker system connected to speaker output terminals A operates. When A is pressed again, its LED goes out and the speaker system A can not operate.
When B is pressed, its LED lights and the speaker system connected to speaker output terminals B operates. When B is pressed again, its LED goes out and the speaker system B can not operate.
- 4 **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 is set to the right of the center position, the effect of the other controls is reduced.
- 5 **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 is set to the right of the center position, the effect of the other controls is reduced.
- 6 **BALANCE (Balance Control)**
This knob is used to adjust the balance between the left and right channels. When it is set to the center position, the amplitude of the amplifier is equal on both sides. If there is a difference in the left and right channel output voltages for a cartridge, move the knob to the left and the right to adjust 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.
- 7 **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 touchswitch ON (↗) when listening to music at a low volume. The low notes and high notes will be corrected to produce a natural sound.
- 8 **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.
- 9 **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.
- 10 **TAPE/REMOTE CONTROL (Tape Deck Remote Control Jack): Rear Panel Side**
Remote control of a connected DENON cassette deck is enabled by connecting the tape deck remote control lead to this jack. The jack is a mini-jack designed to accept a 3.5 mm plug.
NOTE: Do not connect headphones or a microphone to this jack. Use this jack only to connect a DENON cassette deck with a remote control jack (wired).
- 11 **AC OUTLETS: Rear Panel Side**
For U.S.A., Canada and Multi-voltage models. AC outlets are used for connecting amplifier component units, such as tuner, turntable, tape deck, etc.
 - SWITCHED (Total capacity: 120 W): These outlets are turned ON/OFF when main power switch and POWER button on the Remote Control Unit is turned on/off.
 - UNSWITCHED (Capacity: 240 W): This outlet is always ON whether power switch is on or OFF.
 - For Europe model, except the U.K. and Australia models. AC outlets are used for connecting amplifier component units, such as tuner, turntable, tape deck, etc.
 - SWITCHED (Total capacity: 100 W): These outlets are turned ON/OFF when main power switch and POWER button on the Remote Control Unit is turned on/off.
 - UNSWITCHED (Capacity: 100 W): This outlet is always ON whether power switch is on or OFF.
- 12 **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.
- 13 **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.
- 14 **INPUT SELECTOR (Input Select Switch)**
Use these to select the program source.
When the button for the desired program source is selected, its LED lights. One program source only can be selected at a time, as follows:
 - PHONO: Use this position when using the record player connected to the PHONO jacks. Use the PHONO SELECTOR to switch the sensitivity to correspond to the cartridge type being used.
 - CD: Used to listen a compact disc player or other component that is connected to the CD terminal.
 - TUNER: Used to play a component such as an FM/AM tuner, a TV tuner that is connected to the TUNER terminal.
 - AUX: Used to play a component such as a Hi Fi video player, TV tuner, 8-track tape player or tape deck that is connected to the AUX terminal.
- 15 **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.
- 16 **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.
- 17 **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.
- 18 **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.
- 19 **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.
- 20 **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-880R, the REC OUT signal and the speaker or headphone signal are output via separate circuits so that knobs and switches related to the tone and volume have no effect whatsoever on the sound that is recorded. Also, since the recording function is selected by the REC OUT SELECTOR, the free program source can be played through the speakers (or headphones) even during recording.
- 21 **MONITORING THE RECORDING**
A recording in progress can be monitored if a tape deck with three individual heads for recording and playback is used. A tape deck in which a common head is used for both recording and playback cannot be used to monitor recording. When a recording is being made using DAT/TAPE-1, selecting DAT/TAPE-1 with the INPUT SELECTOR will engage the RECORDING MONITOR and permit a check of the recording condition.

CAUTION

Protective Circuit

This set is equipped with a high speed protective circuit. This circuit protects the internal circuitry from damage due to large currents flowing when the speaker jacks are not completely connected or when an output is generated by a short circuit. This protective circuit's operation cuts off the output to the speakers. In such a case, be sure to turn the power to the set off and check the connections to the speakers. Then turn the power on again. After 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, SPEAKERS and INPUT SELECTOR are set to the last mode set before the power was turned off.

OPERATION

PREPARATION

1. CHECKING CONNECTIONS

- Make sure that all the connections are proper by referring to the back panel. (Fig. 1, 2, 3)
- Check the polarity (positive and negative) of connections, and the direction of stereo separation (right cord to right channel terminal, and left cord to left channel terminal).
- Check the direction of pin cord connection.

2. SETTING OF EACH KNOB

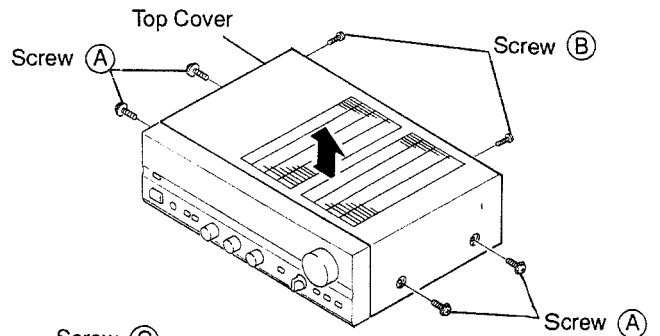
- Turn the volume control knob counterclockwise to "0".
- Set the rotary knob to "Flat".
- Set LOUDNESS, SUBSONIC and SOURCE DIRECT to "OFF" (■).

After checking the above items, turn on the power.

REMOVAL OF EACH SECTION

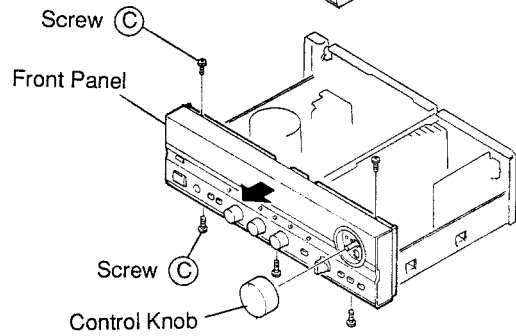
● **Top Cover**

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



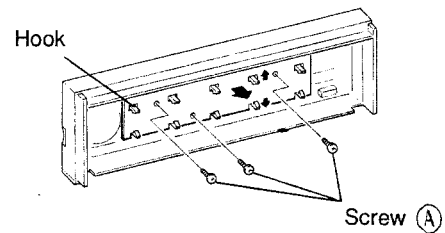
● **Front Panel**

- 1) Remove Control Knob and 5 screws (C).
- 2) Detach Front Panel in arrow direction.



● **Microcomputer Printed Wiring Board.**

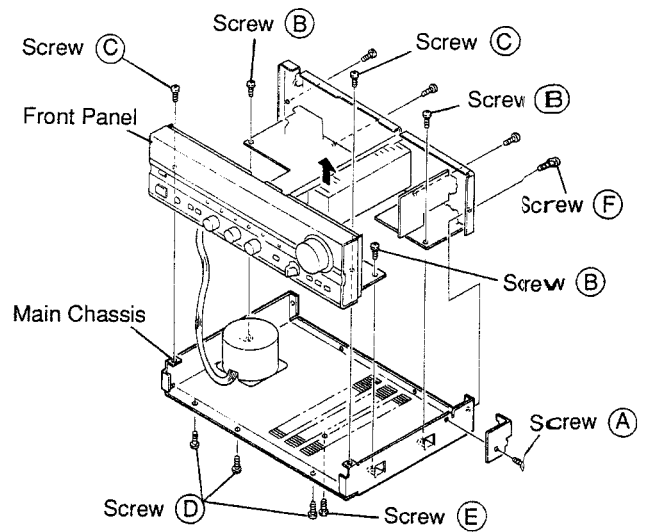
- 1) Remove 3 screws (A).
- 2) Detach P.W.B., expanding 10 hooks outwards.



● **Main Chassis**

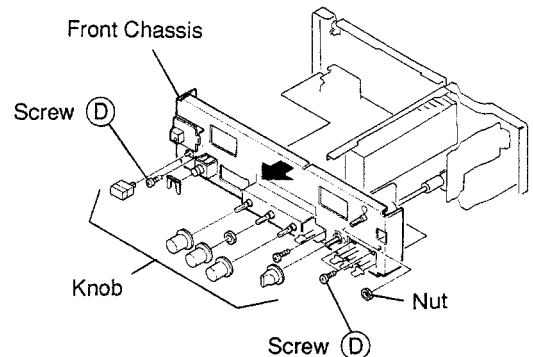
- 1) Remove 1 screw (A) securing Bracket with MAIN CHASSIS.
- 2) Remove 3 screws (B) securing P.W.B. with MAIN CHASSIS.
- 3) Remove 2 screws (C) securing FRONT CHASSIS with MAIN CHASSIS.
- 4) Remove 3 screws (D) securing FRONT PANEL with MAIN CHASSIS.
- 5) Remove 1 screw (E) securing Main CHASSIS with POWER RADIATOR.
- 6) Remove 4 screws (F) securing REAR PANEL with MAIN CHASSIS.

NOTE Then, by pulling up, FRONT PANEL, POWER RADIATOR, P.W.B., REAR PANEL will be detached as a whole. However, wire on POWER TRANS still remains connected ; therefore make repairing on detached CHASSIS side-up.

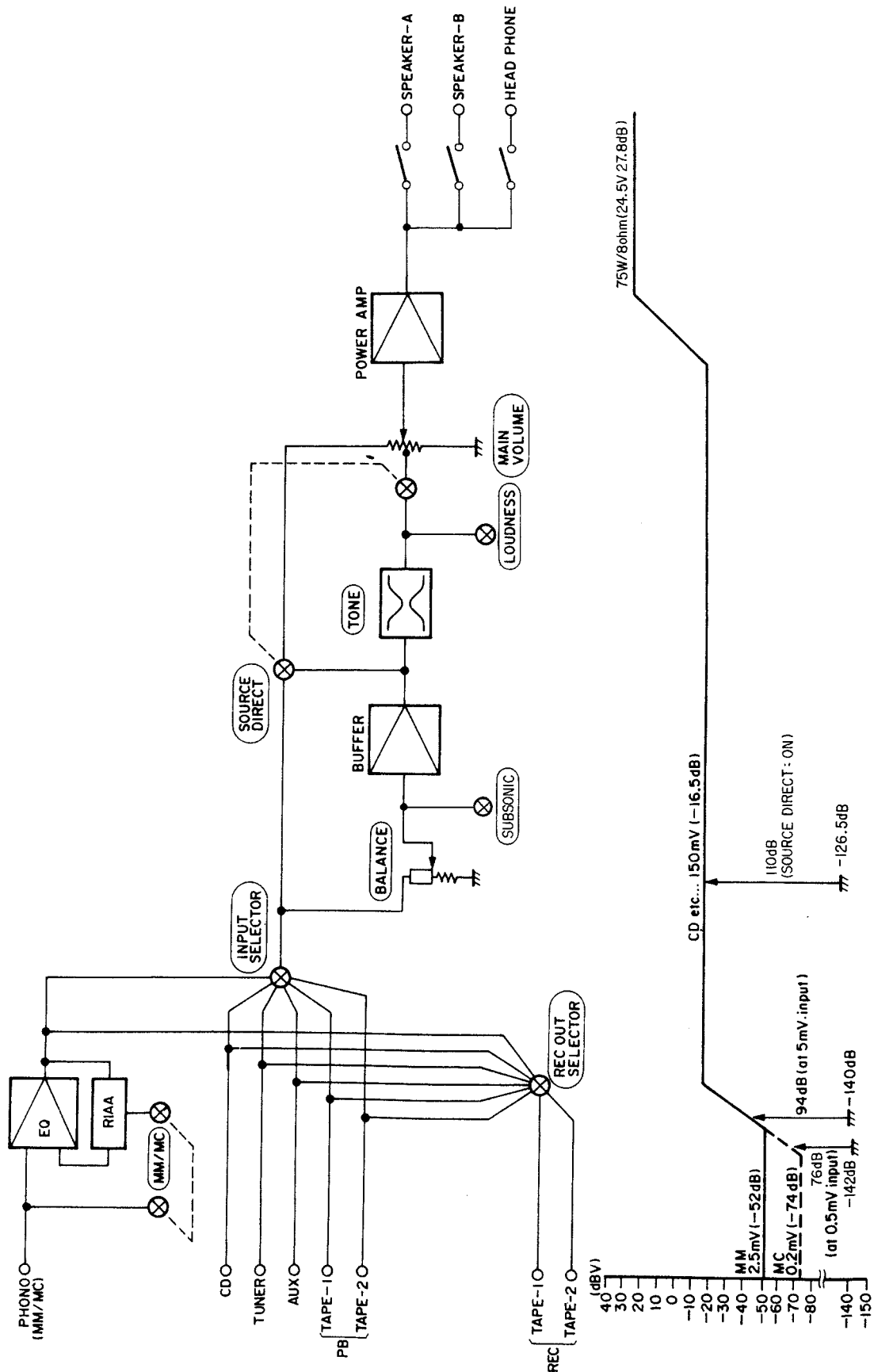


● **Front Chassis**

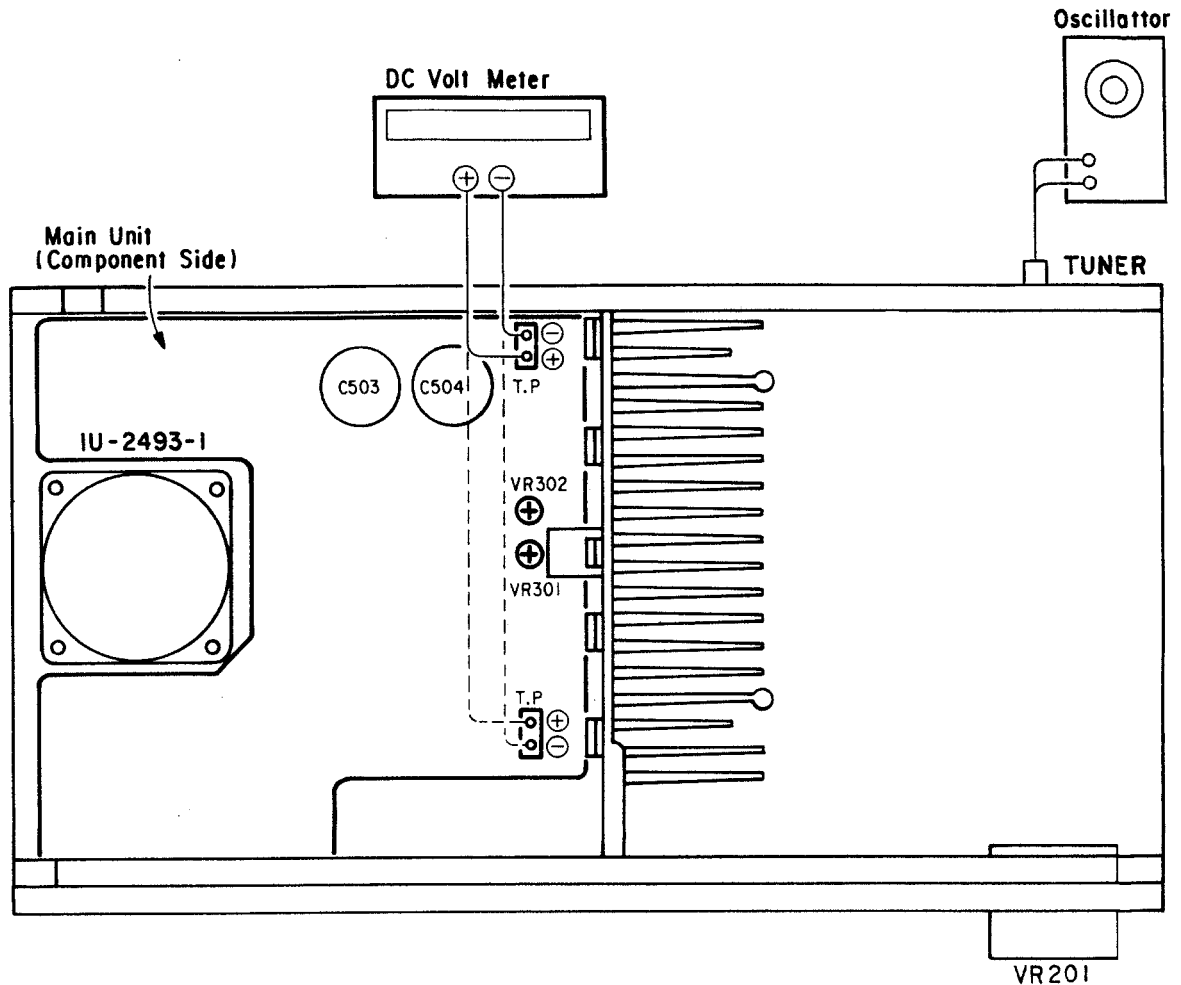
- 1) Remove 8 Knobs.
- 2) Remove 2 nuts and 4 screws (D).
- 3) Detach Inner Panel in arrow direction, undoing hooks at two places.



BLOCK AND LEVEL DIAGRAM




METHOD OF ADJUSTMENTS




IDLING CURRENT

● Setup


1. Lay the unit at an ordinary position away from a direct current from a cooler or fan. Do the adjustment at a temperature between 15°C (59°F) and 30°C (86°F).
2. Set controls as follows.

POWER SWITCH → OFF ()

VOLUME CONTROL → fully counterclockwise. () min. [Main volume (VR201) and Semifixed resistor (VR301...Lch, VR302...Rch)]

SPEAKER Terminals → open: do not connect the speakers, dummy load etc.

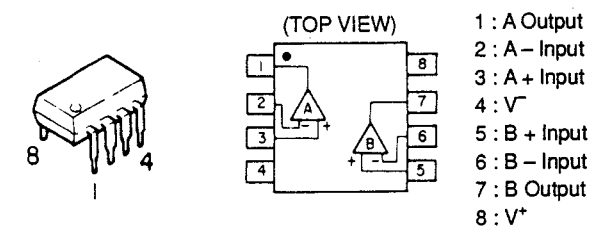
● Adjustment

1. Remove Top cover. And then connect DC Voltmeter to Test points of 1U-2493-1 (Main Unit).
2. Connect Power cord to AC wall outlet, and turn Power Switch "on" (). Within 10 seconds turn VR301 (Lch) and VR302 (Rch) clockwise so that the DC voltmeter reads 1.0 ± 0.2 mV DC.
3. Then after 2 minutes warmup adjust VR301 and VR302 so that the DC Voltmeter reads 3.0 ± 0.2 mV DC.
4. And after 10 minutes warmup adjust VR301 and VR302 so that the DC Voltmeter reads 3.0 ± 0.2 mV DC.
5. Apply a 1kHz, 10mVrms signal to both channels input and set the main volume (VR201) at maximum position.
6. Confirm that the indication of DC Voltmeter becomes 25 ± 10 mV DC.

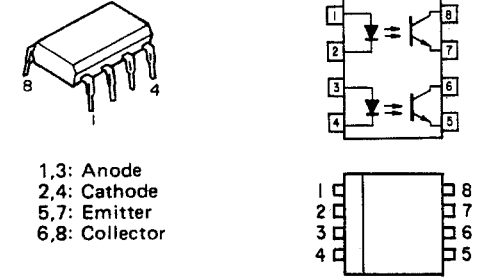
SEMICONDUCTORS

● IC's

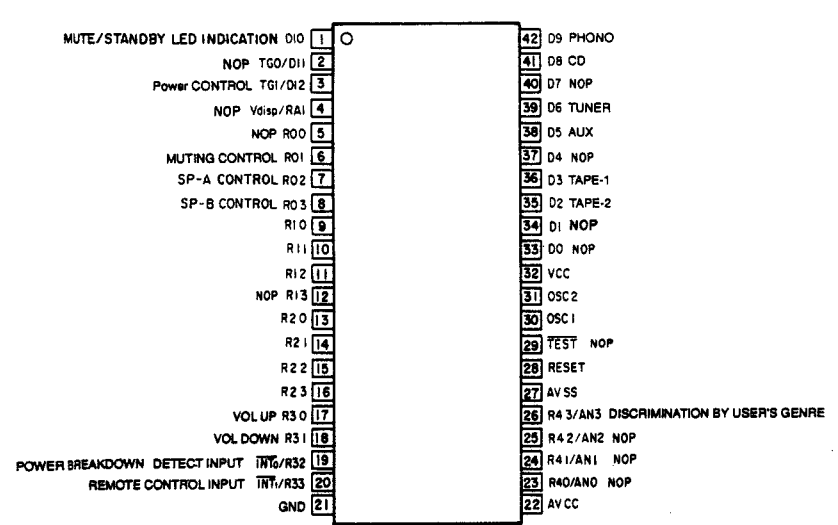
NJM4558DD (IC201, 601)
M5218AP (IC001)



TLP521-2 (BL)(IC002)



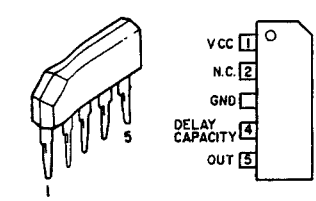
HD404304A013P (IC801)



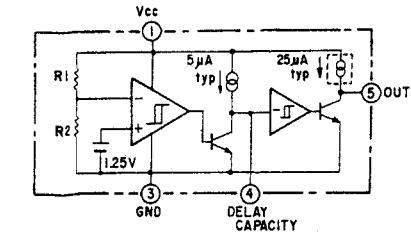
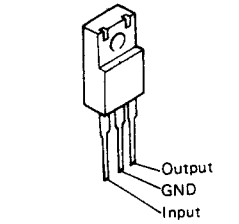
HD404304A013P Terminal Function

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	Vdsp/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		H
10	R11	O	Key scan strobe	H
11	R12	O		H
12	R13	O	NOP	
13	R20	I		
14	R21	I	Key scan receive	
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		Carrier Fill Oscillator 4MHz; External	
31	OSC2		Carrier 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

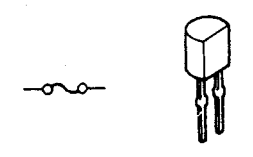
M51954AL (IC803)



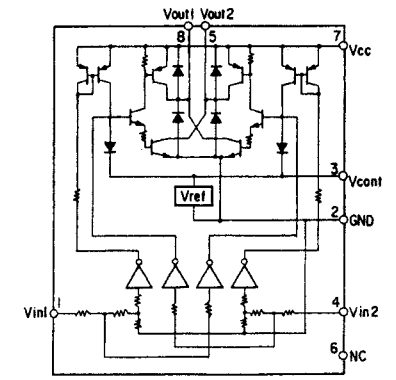
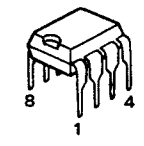
NJM7806FA (S)(IC502)



● IC PROTECTOR
ICP-N15 (IC501)

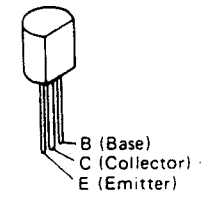


LB1639 (IC802)

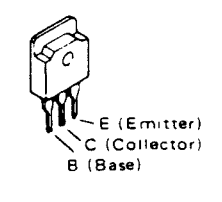


● TRANSISTORS

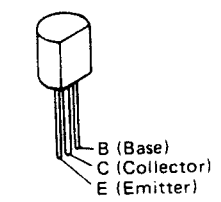
2SA988 (E/F)
2SC1841 (E/F)
2SA970 (BL)



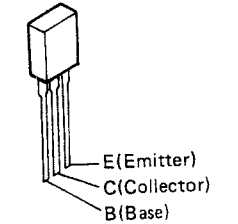
2SA1491 (O)/(P)/(Y)/Z
2SC3855 (O)/(P)/(Y)/Z



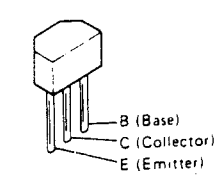
2SC4208A



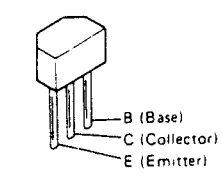
2SB1328 (P)
2SD2004 (P)



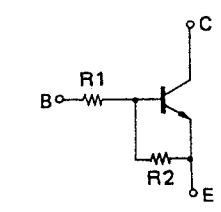
2SC2458 (BL)
2SA1048 (GR)



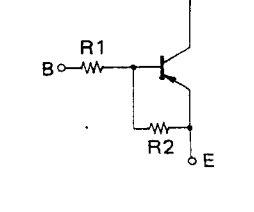
RN1202 (NPN)
RN2202 (PNP)



RN1202



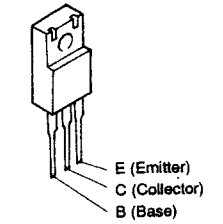
RN2202



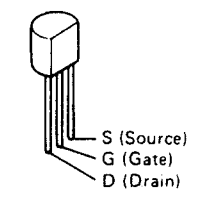
	R1	R2
RN1202	10 Kohm	10 Kohm

	R1	R2
RN2202	10 Kohm	10 Kohm

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

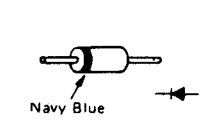


2SK369 (BL)/(GR)-C (FET)

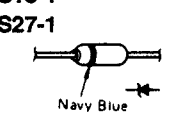


● DIODES (including LED)

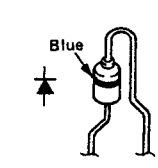
1SS2076A
1SS270A



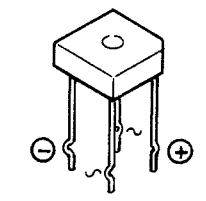
HZS7C-1
HZS16-1
HZS18-1
HZS27-1



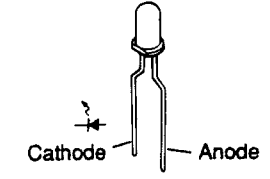
1SR35-200A



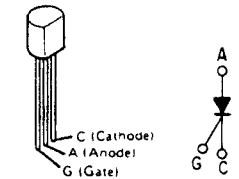
4D4B42 (LC1)



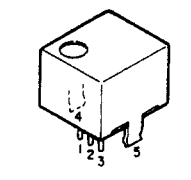
SEL-1810A (Orange)
SEL-1210S (Red)



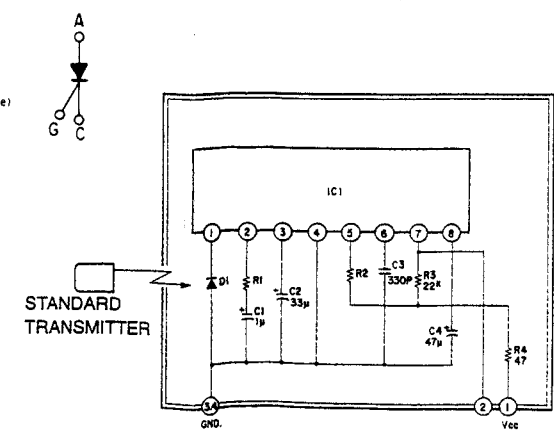
Thyristor
SFOR1A42



SBX1610-52 (Remote Control Receiver)



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



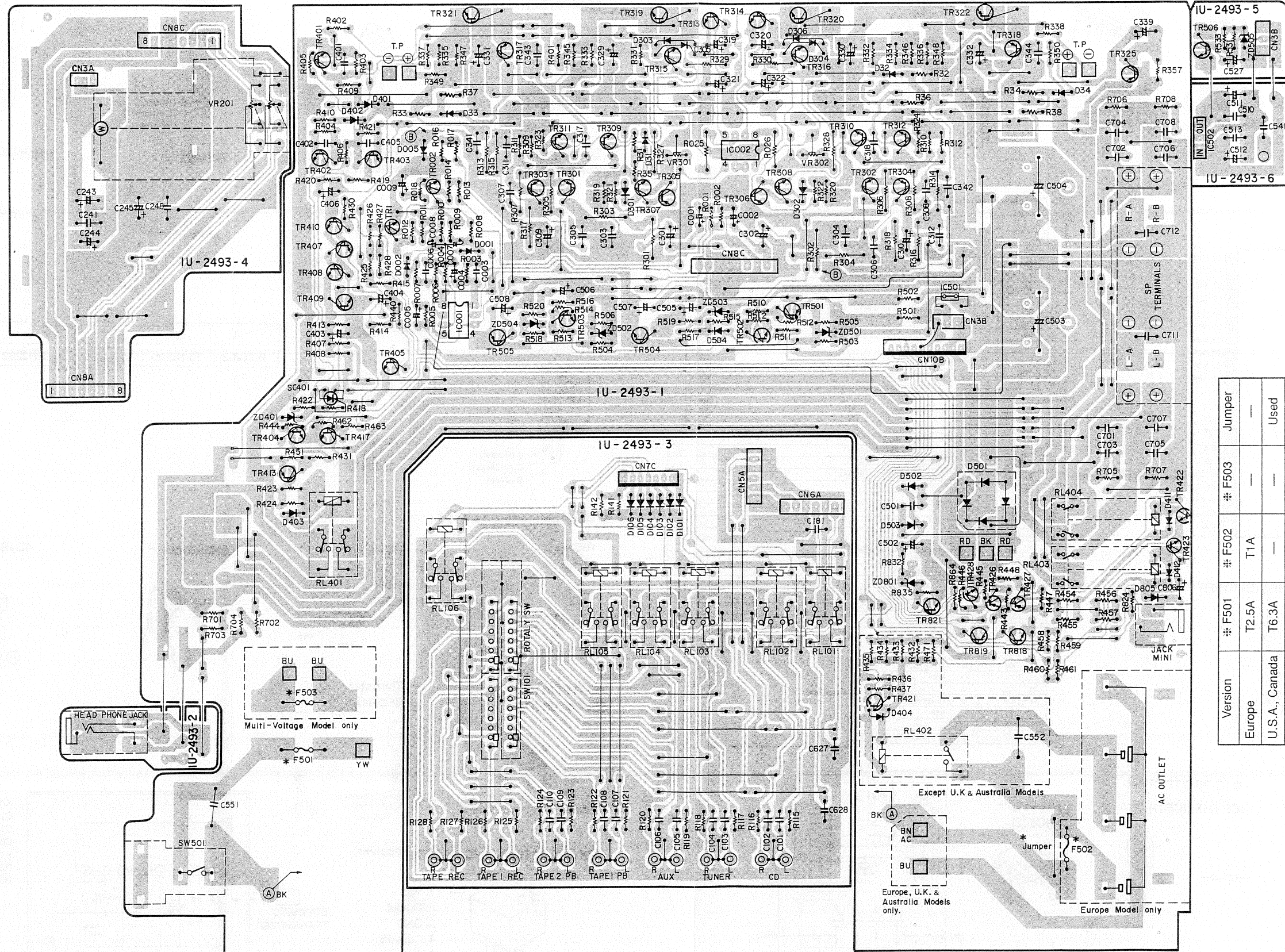
- IC1 : CX20106A Chip
- D1 : PIN Photo Diode Chip
- C1, C2, C4 : Aluminum Electrolytic Capacitor
- C3 : SL Characteristic: 5%
- R1 : Gain Adjuster
- R2 : f₀ Adjuster ± 1% LSE
- R3, R4 : ± 5%

PRINTED WIRING BOARD (Pattern Side)

1 2 3 4 5 6 7 8

1U-2493G MAIN UNIT ASS'Y

A
B
C
D
E

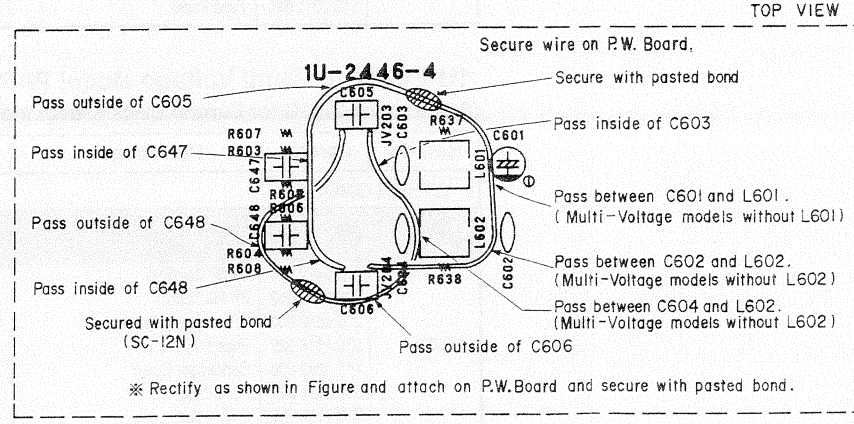
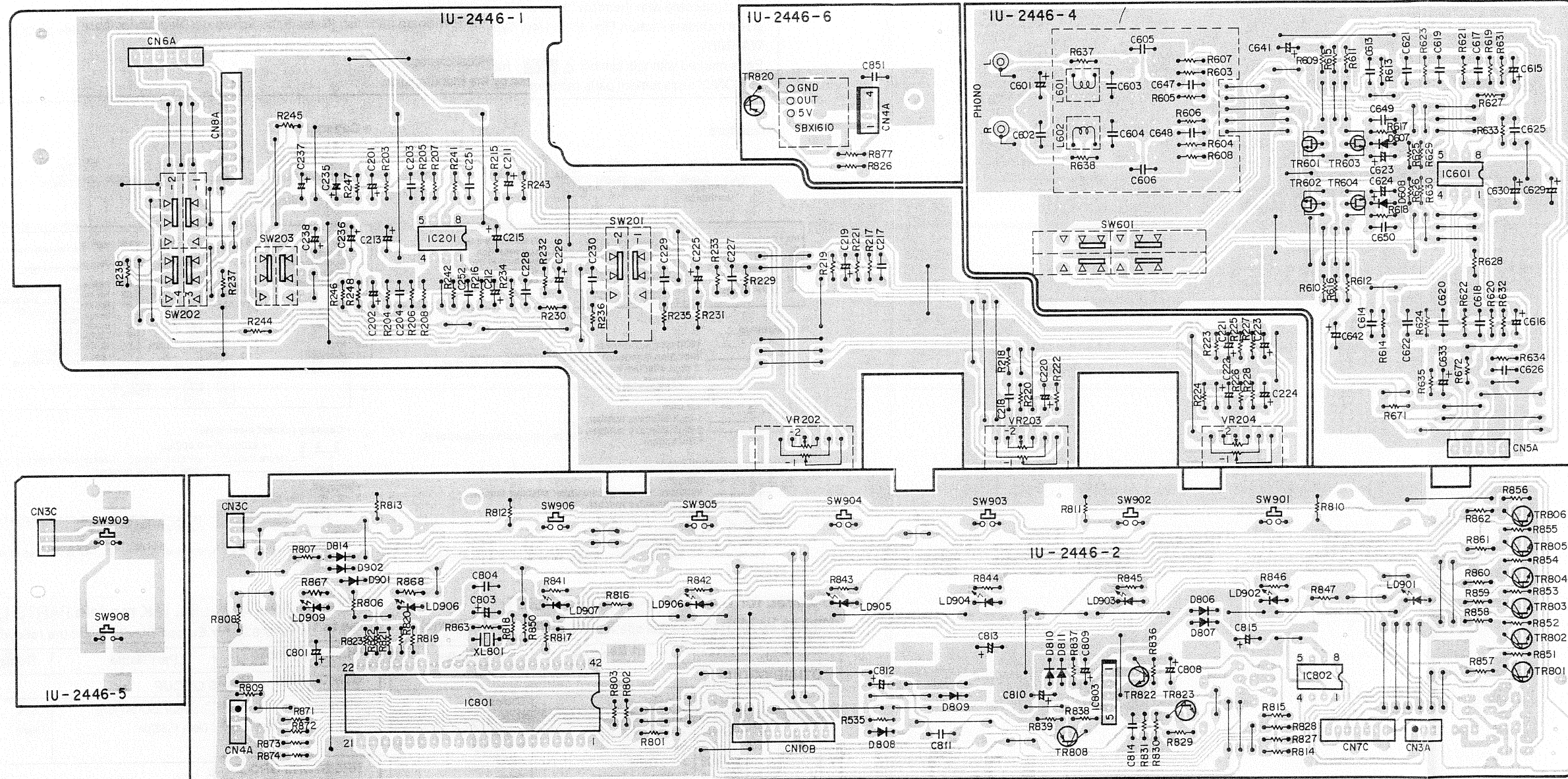


Version	# F501	# F502	# F503	Jumper
Europe	T2.5A	T1A	—	—
U.S.A., Canada	T6.3A	—	—	Used
Multi-Voltage	T6.3A	—	T3.15A	Used
U.K. & Australia	T2.5A	—	—	Used

Version	Unit No.	F501	F502	F503	AC Outlet	H/P Jack	SP Terminal
Black for Europe	1U-2493G	T2.5A	T1A	—	203 3950 002	204 8354 004	205 0484 001
Gold for Europe	1U-2493H	T2.5A	T1A	—	203 3950 002	204 8355 003	205 0484 001
U.S.A., Canada	1U-2493L	T6.3A	—	—	—	204 8354 004	205 0472 013
Multi-Voltage	1U-2493K	T6.3A	—	T3.15A	—	204 8354 004	205 0472 013
U.K. & Australia	1U-2493J	T2.5A	—	—	—	204 8354 004	205 0472 013

1U-2446G CONTROL UNIT ASS'Y

Note : Wire rectification is necessary.
Rectify according to below.
(Component Side)



Version	Unit No.	R637, R638
Europe Black	1U-2446G	820ohm
Europe Gold	1U-2446G	820ohm
U.S.A., Canada	1U-2446J	Jumper
Multi-Voltage	1U-2446J	Jumper
Australia, UK	1U-2446J	Jumper

Version	R637, R638
Europe	820ohm
U.S.A., Canada	Jumper
Multi-Voltage	Jumper
Australia, UK	Jumper

A
B
C
D
E

NOTE FOR PARTS LIST

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

WARNING:

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

● **Resistors**

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

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

● **Resistance**

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

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

● **Capacity (electrolyte only)**

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

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

● **Capacitors**

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

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

● **Capacity (except electrolyte)**

2 2 2 ⇒ 2200µµF = 0.0022µF
 (More than 2) — indicates number of zeros after effective number.
 2-digit effective number.
 • Units: µF.

2 2 1 ⇒ 220PF
 (0 or 1) — indicates number of zeros after effective number.
 2-digit effective number.
 • Units: PF.
 • When the dielectric strength is indicated in AC, "AC" is included after the dielectric strength value.

1U-2493L for U.S.A., Canada PARTS LIST

(Same as 1U-2493G for Europe Black except the following Parts)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER GROUP				
	202 0040 909	Fuse Clip	Change	2
	206 1046 001	Fuse (3A/250V)	Change	1
(F502)	205 0472 013	8P SP Terminal	Change	1
	206 1015 029	Fuse (1AT)	Delete	-
	203 3950 002	3P AC Outlet	Delete	-
	205 0692 000	2P Wrapping Terminal	Delete	-
	513 2011 069	Fuse Label	Add	1

1U-2493K for Multi Voltage Model PARTS LIST

(Same as 1U-2493G for Europe Black except the following Parts)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER GROUP				
	206 1081 057	Fuse (6.3A/250V)	Change	1
	206 1061 028	Fuse (3.15A/250V)	Add	1
	205 0472 013	8P SP Terminal	Change	1
	203 3950 002	3P AC Outlet	Delete	-
	205 0692 000	2P Wrapping Terminal	Delete	-
(F502)	206 1015 029	Fuse (1AT)	Delete	-
	415 0299 000	Condenser Cover	Add	1
	513 2011 098	Fuse Label	Add	1
	513 2011 085	Fuse Label	Add	1

1U-2493J for Australia, U.K models PARTS LIST

(Same as 1U-2493G for Europe Black except the following Parts)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
SEMICONDUCTORS GROUP				
(TR421)	273 0235 923	Transistor 2SC1841 (E/F)	Delete	-
(D404)	276 0432 000	Diode 1SS270A	Delete	-
RESISTORS GROUP				
(R432-435)	244 2051 990	Metal Oxide 4.7kohm, 1W	Delete	-
(R471)	244 2051 990	Metal Oxide 4.7kohm, 1W	Delete	-
CAPACITORS GROUP				
(C552)	253 8003 713	Ceramic 4700pF/400V (AC)	Delete	-
OTHER GROUP				
	202 0040 909	Fuse Clip	Change	2
(F502)	205 0472 013	8P SP Terminal	Change	1
	206 1015 029	Fuse (1AT)	Delete	-
	203 3950 002	3P AC Outlet	Delete	-
(RL402)	214 0142 004	Relay (TV-5)	Delete	-

1U-2446G CONTROL UNIT

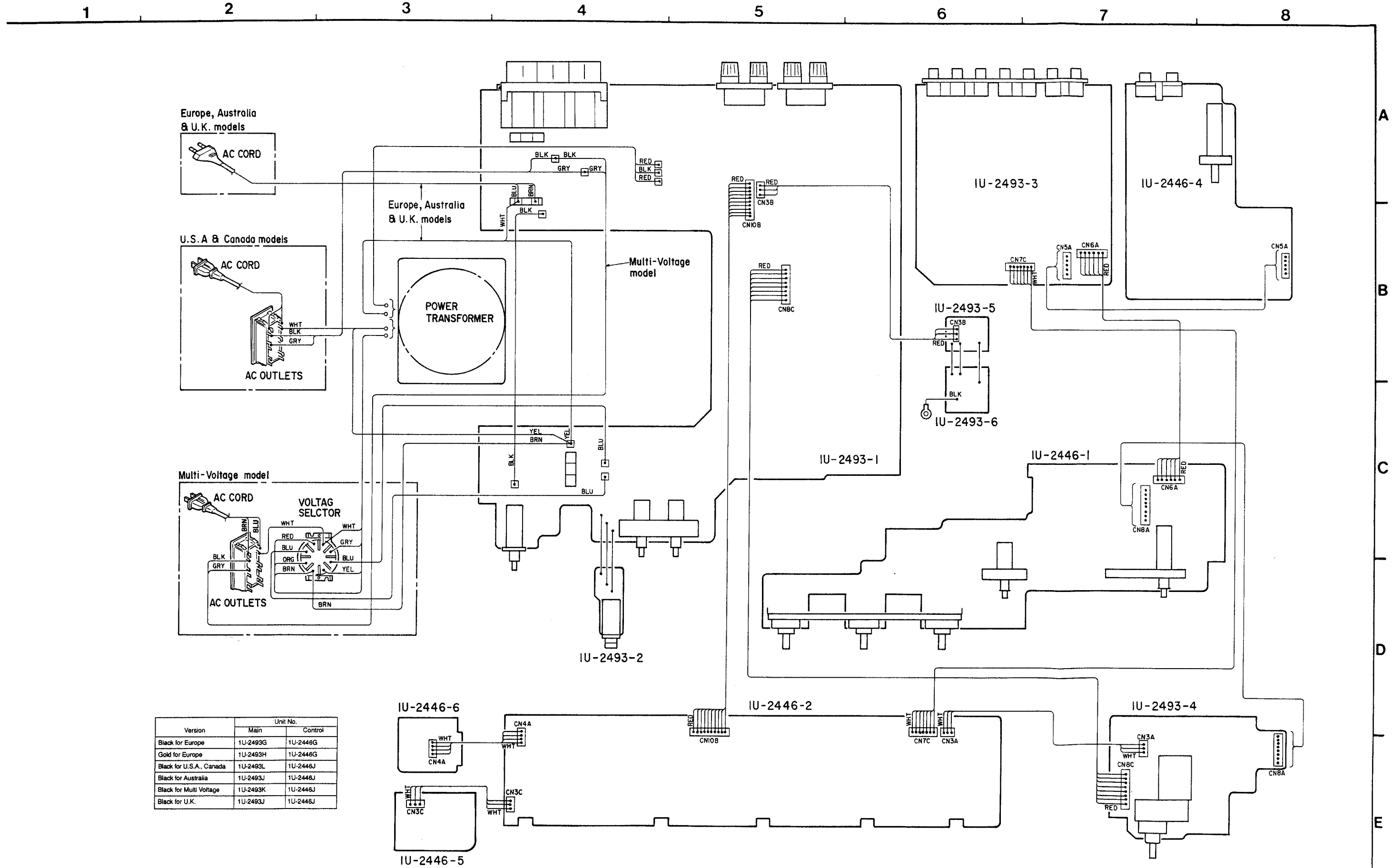
Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
SEMICONDUCTORS GROUP									
IC201	265 0030 004	IC NJM4558DD		2	C617,618	256 1034 050	Metalized 0.068μF/50V	CF93A1H683J	
IC601	265 0030 004	IC NJM4558DD			C619,620	255 6178 976	Plastic Film 0.0012μF/50V	CQ09S1H122J(SMT)	2
IC801	262 1579 303	IC HD404304A13P	μ-Com	1	C621,622	255 4223 959	Plastic Film 0.018μF/50V	CQ92M1H183J(MRZ)	2
IC802	263 0476 002	IC LB1639		1	C623,624	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M	3
IC803	263 0535 008	IC M51954AL		1	C625,626	253 1179 068	Ceramic 330pF/50V	CK45B1H331K	2
TR601-604	257 0038 045	FET 2SK369(BL)/(GR)-C	FET	4	C629,630	254 4256 033	Electrolytic 47μF/25V	CE04W1E470M	2
TR801-806	273 0235 923	Transistor 2SC1841(E/F)		6	C633	254 4252 037	Electrolytic 100μF/10V	CE04W1A101M	
TR808	271 0191 906	Transistor 2SA1048(GR)		1	C641,642	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	
TR820	269 0026 900	Transistor RN2202(10K-10K)	built in Resistor	1	C647,648	253 1179 026	Ceramic 150pF/50V	CK45B1H151K	
TR822,823	273 0317 906	Transistor 2SC2458(BL)		2	C649,650	253 1179 000	Ceramic 100pF/50V	CK45B1H101K	
D607,608	276 0432 903	Diode 1SS270A		11	C801	254 4250 026	Electrolytic 100μF/6.3V	CE04W0J101M	3
D806,807	276 0432 903	Diode 1SS270A			C803	254 4250 026	Electrolytic 100μF/6.3V	CE04W0J101M	
D808,809	276 0432 903	Diode 1SS270A			C804	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z	
D810,811	276 0432 903	Diode 1SS270A			C808	254 4260 074	Electrolytic 4.7μF/50V	CE04W1H4R7M	
D814	276 0432 903	Diode 1SS270A			C809	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	
D901,902	276 0432 903	Diode 1SS270A			C810	254 4260 029	Electrolytic 0.33μF/50V	CE04W1HR33M	
LD901	393 9453 903	LED SEL1810A	Orange	3	C811	256 1034 089	Metalized 0.12μF/50V	CF93A1H124J	1
LD902-907	393 9434 906	LED SEL1210S	Red	6	C812	254 4250 042	Electrolytic 330μF/6.3V	CE04W0J331M	1
LD908,909	393 9453 903	LED SEL1810A	Orange		C813	259 0007 003	Back Up Cap.8200μF/5.5V	SBCAP--822=C	1
					C814	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z	
					C815	254 4250 026	Electrolytic 100μF/6.3V	CE04W0J101M	
					C851	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z	
RESISTORS GROUP					OTHER GROUP				
Not included Carbon Film ±5%, 1/4W Type. (Refer to the Schematic Diagram for those Parts.)					SW201 212 1097 000 (P,W Board) 1P Push Switch Loudness (1)				
VR535	241 2387 940	Carbon Film 4.7ohm, 1/4W (N.B)	RD14B2E4R7JNBS	1	SW202,203	212 1098 009	2P Push Switch	Sub. S.Direct	1
VR671,672	241 2377 905	Carbon Film 68ohm, 1/4W (N.B)	RD14B2E680JNBS	2	SW601	212 1041 001	1P Push Switch	MM-MC	1
VR202-204	211 0762 003	Variable Resistor	3 Gang	1	SW901-906	212 5604 910	Tact Switch		8
					SW908,909	212 5604 910	Tact Switch		
CAPACITORS GROUP					L601,602* 235 9003 002 FTZ Choke Coil 2				
C201,202	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M	8	XL801	399 9018 003	Ceramic Vibrator		1
C203,204	253 4537 089	Ceramic 56pF/50V	CC45SL1H560J	2		499 0150 008	Remocon Receiver		1
C211,212	254 4254 006	Electrolytic 10μF/16V	CE04W1C100M	4		204 8413 000	2P Pin Jack (C-GND)	Phono	1
C213	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M		CN4A	203 6306 077	4P KR-DA Conn. Cord	I=150	1
C215	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M		CN3A	203 4808 014	3P KR-DA Conn. Cord	I=170	1
C217,218	256 1034 018	Metalized 0.033μF/50V	CF93A1H333J	4	CN8A	205 0666 081	8P Conn. Base (9130)		1
C219,220	254 4260 016	Electrolytic 0.22μF/50V	CE04W1HR22M	2	CN5A	205 0667 051	5P Conn. Base-L (9130)		1
C221,222	254 4260 003	Electrolytic 0.1μF/50V	CE04W1H0R1M	2	CN10B	205 0480 005	10P KR Conn. Base (L)		1
C223,224	254 4260 032	Electrolytic 0.47μF/50V	CE04W1HR47M	6	CN7C	205 0355 075	7P KR Conn. Base (L)		1
C225,226	254 4260 029	Electrolytic 0.33μF/50V	CE04W1HR33M	3	CN6A	205 0233 061	6P EH Conn. Base		1
C227,228	256 1034 050	Metalized 0.068μF/50V	CF93A1H683J	4	CN4A	205 0343 045	4P Conn. Base (KR-PH)		1
C229,230	256 1034 018	Metalized 0.033μF/50V	CF93A1H333J		CN3C	203 4579 000	3P DA-DA Conn. Cord		1
C235-238	254 4260 003	Electrolytic 0.1μF/50V	CE04W1H0R1M			001 0144 024	Vinyl Wire	Bk I=100	1
C251,252	253 1179 000	Ceramic 100pF/50V	CK45B1H101K	4		001 0144 037	Vinyl Wire	Bk I=80	1
C601	254 4260 045	Electrolytic 1μF/50V	CE04W1H010M						
C602	253 1181 014	Ceramic 0.022μF/50V	CK45F1H223Z	4					
C603,604	253 4537 063	Ceramic 47pF/50V	CC45SL1H470J	2					
C605,606	253 1179 026	Ceramic 150pF/50V	CK45B1H151K	4					
C613,614	255 1251 937	Plastic Film 0.0033μF/50V	CQ92M1H332J(MRZ)	2					
C615,616	254 4254 006	Electrolytic 10μF/16V	CE04W1C100M						

1U-2446J for U.S.A., CANADA, Multi-Voltage, Australia and U.K. PARTS LIST

(Same as 1U-2446G for Europe Black except the following Parts)

Ref. No.	Part No.	Part Name	Remarks	Q'ty
OTHER GROUP				
(L601,602)	235 9003 002	FTZ Choke Coil	Delete	-

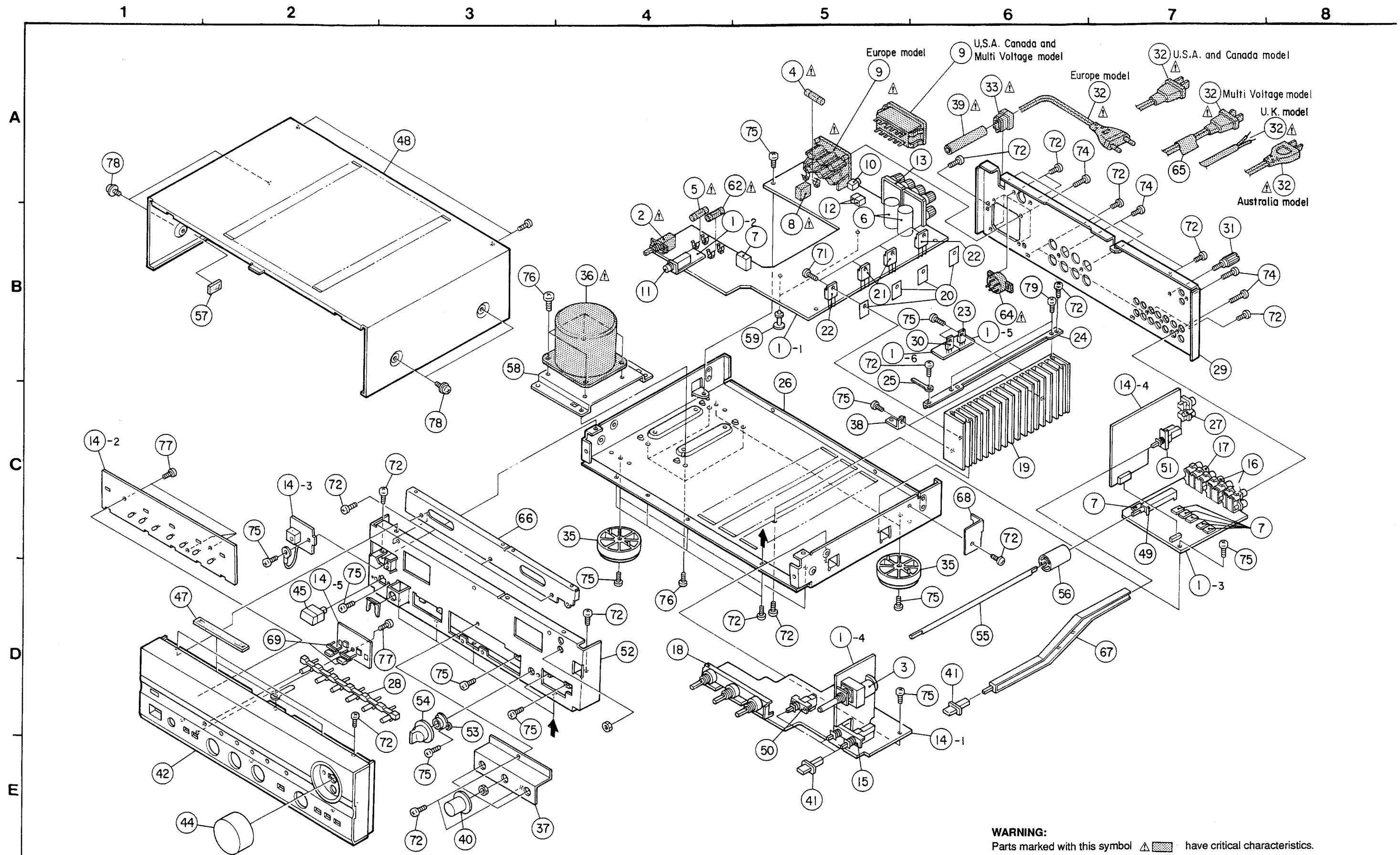
WIRING DIAGRAM



Version	Unit No.	
	Main	Control
Black for Europe	1U-2493G	1U-2446G
Gold for Europe	1U-2493H	1U-2446G
Black for U.S.A., Canada	1U-2493L	1U-2446J
Black for Australia	1U-2493J	1U-2446J
Black for Multi Voltage	1U-2493K	1U-2446J
Black for U.K.	1U-2493J	1U-2446J

A
B
C
D
E

EXPLODED VIEW OF CHASSIS AND CABINET



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

PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Q'ty	Ref. No.	Part No.	Part Name	Remarks	Q'ty
* 1	Note	Main Unit Ass'y		1 ^s	* 48	Note	Top Cover		1
1-1	—	Main Unit		(1)	49	212 0336 005	Rotary Switch	Rec Out	1
1-2	—	H/P Unit		(1)	50	212 1097 000	1P Push Switch	Loudness	1
1-3	—	Input Unit		(1)	51	212 1041 001	1P Push Switch	MM-MC	1
1-4	—	M.Vol. Unit		(1)	* 52	411 1179 305	Front Chassis Ass'y		1
1-5	—	+16V Unit		(1)	53	119 0070 004	LOD Guide		1
1-6	—	+6V Unit		(1)	* 54	Note	Fuji Knob	Rec Out	1
▲ * 2	212 1103 004	Power Switch (TV-5)		1	55	112 0642 208	VR Knob Joint(A)		1
3	211 0761 004	Variable Resistor	Main	1	56	112 0643 003	VR Knob Joint(B)		1
▲ * 4	Note	Fuse 1A T	F502	1	57	461 0501 089	Rubber Sheet	20×20×T8	1
▲ * 5	Note	Fuse	F501	1	58	412 9160 209	Trans Bracket		1
6	254 6161 016	Chemicon 12000μF/63V	C503,504	2	59	412 2814 057	Card Spacer		2
7	214 0127 003	Relay (RY-12W)		7	▲ * 62	Note	Fuse	F503	1
▲ * 8	Note	Relay (TV-5)	RL402	1	▲ * 64	Note	Voltage Sel. Switch		1
▲ * 9	Note	AC Outlet(3P)		1	66	412 3561 008	Support Bracket		1
10	204 8260 004	Mini Jack		1	67	113 1563 101	Push Knob Joint		1
* 11	Note	Head Phone Jack		1	68	412 3600 008	Stopper Bracket		1
12	214 9003 005	Relay	RL403,404	2	* 69	Note	Push Knob (TACT)		2
* 13	Note	8P SP Terminal		1	★ 82	204 2555 003	8P EH-EH Conn. Cord	CN8C	1
* 14	Note	Control Unit		1 ^s	★ 83	204 2345 006	10P KR-KR Conn. Cord	CN10B	1
14-1	—	Control Unit		(1)	★ 84	204 2426 035	7P KR-KR Conn. Cord	CN7C	1
14-2	—	μ-Com Unit		(1)					
14-4	—	EQ.Unit		(1)	SCREWS				
14-5	—	SP. Tact Unit		(1)	71	473 8007 009	Cup Screw 3×12		4
14-6	—	Sensor Unit		(1)	* 72	Note	Tapping Screw (S) 3×8	Black	24
15	212 1098 009	2P Push Switch	S.Direct, SUBSONIC	1	73	—	—		
16	204 8266 008	4P Pin Jack (S-GND)		2	* 74	Note	Fixing Screw		10
17	204 8278 009	6P Pin Jack (S-GND)		1	75	473 7002 018	Tapping Screw (S) 3×8		20
18	211 0762 003	Variable Resistor	3 Gang	1	76	473 7004 003	Tapping Screw (S) 4×8		8
19	417 0460 314	Power Radiator		1	77	473 7501 001	Tapping Screw (P) 3×10		4
20	415 0234 007	Insulating Sheet		4	* 78	Note	3P Swelling Screw		4
21	273 0389 002	Transistor 2SC3855(O/P/Y)(Z)	TR319,320	2	79	473 7500 044	Tapping Screw (S) 3×8	Black	2
22	271 0240 006	Transistor 2SA1491(O/P/Y)(Z)	TR321,322	2	PACKING & ACCESSORIES (Not included Exploded View)				
23	274 0136 012	Transistor 2SD1913(R/S)	TR506	1	101	505 8006 019	Envelope		1
* 24	412 3526 108	Radiator Bracket		1	102	511 2370 005	Inst. Manual		1
25	445 0048 003	Cord Holder (L=76)		1	103	499 0247 005	Remote Control(RC-156)		1
* 26	411 1180 200	Main Chassis		1	104	—	Battery	R6P/AA	2
27	204 8413 000	2P Pin Jack (C-GND)		1	105	504 9102 003	Styrene Paper		1
* 28	Note	Function Knob		1	106	505 9102 006	Poly Cover		1
* 29	Note	Rear Panel		1	107	504 0092 060	Styrene Paper	for AC Cord	1
30	263 0793 002	NJM7806FA(S)	IC502	1	108	503 1044 108	Cushion		2
31	205 0071 016	Terminal Ass'y		1	109	501 1635 003	Carton Case		1
▲ * 32	Note	AC Cord		1	110	—	—		
▲ * 33	445 0056 008	Cord Bush		1	111	513 1389 006	Control Card Base		1
* ★ 34	Note	Masking Sheet		1	112	513 1349 004	Thermal Carbon Film		1
35	104 0194 001	Foot Ass'y		4					
▲ * 36	Note	Power Trans		1					
* 37	412 3530 000	Volume Bracket		1					
* 38	412 3225 108	P.W.B.Bracket(A)		2					
▲ * 39	Note	P.V.C. Tube	for AC Cord	1					
* 40	Note	Maru Knob(s)	Bass, Treble, Balance	3					
* 41	Note	Push Knob (KAKU)		4					
* 42	Note	Front Panel Ass'y		1					
★ 43	445 8004 007	Wire Clamper		8					
* 44	Note	VR Knob Ass'y		1					
* 45	Note	Power Knob Ass'y		1					
46	—	—							
47	461 0501 005	Rubber Sheet	100×8×T1 Put on F/P Upper	1					

ADDENDUM LIST

Ref. No.	Parts Name & Descriptions		Parts No.						
			Europe Black	Europe Gold	U.S.A.	Canada	Multi-Voltage	Australia	U.K.
● 1	Main Unit Ass'y	(1s)	1U-2493G	1U-2493H	1U-2493L	1U-2493L	1U-2493K	1U-2493J	1U-2493J
▲ 4	Fuse (F-502)	(1)	206 1015 029 (1AT)	206 1015 029 (1AT)	—	—	—	—	—
▲ 5	Fuse (F-501)	(1)	206 1015 032 T2.5A	206 1015 032 T2.5A	206 1046 001 T6.3A	206 1046 001 T6.3A	206 1061 057 T6.3A/250V	206 1015 032 T2.5A	206 1015 032 T2.5A
▲ 8	Relay (TV-5)	(1)	214 0142 004	214 0142 004	214 0142 004	214 0142 004	214 0142 004	—	—
▲ 9	AC Outlet (3P)	(1)	203 3950 002	203 3950 002	203 3926 007 (Polarized)	203 3926 007 (Polarized)	203 3926 007 (Polarized)	—	—
11	Headphone Jack	(1)	204 8354 004	204 8355 003	204 8354 004	204 8354 004	204 8354 004	204 8354 004	204 8354 004
13	8P SP Terminal	(1)	205 0484 001	205 0484 001	205 0472 013	205 0472 013	205 0472 013	205 0472 013	205 0472 013
14	Control Unit	(1s)	1U-2446G	1U-2446G	1U-2446J	1U-2446J	1U-2446J	1U-2446J	1U-2446J
28	Function Knob	(1)	113 1538 000	113 1538 013	113 1538 068	113 1538 000	113 1538 000	113 1538 000	113 1538 000
29	Rear Panel	(1)	105 1058 149	105 1058 149	105 1058 136	105 1058 136	105 1058 123	105 1058 110	105 1058 110
▲ 32	AC Cord	(1)	206 2063 009	206 2063 009	206 2060 002 (Polarized)	206 2060 002 (Polarized)	206 2054 005	206 2025 005	206 2024 103
★ 34	Masking Sheet	(1)	513 1144 005	513 1144 005	—	513 9224 008	—	—	—
▲ 36	Power Trans	(1)	233 5989 001	233 5989 001	233 5998 005	233 5998 005	233 5997 006	233 5996 007	233 5996 007
39	P.V.C. Tube	(1)	415 0305 017	415 0305 017	—	—	415 0305 017	415 0305 017	415 0305 017
40	Maru Knob	(3)	112 0646 000	112 0646 013	112 0646 000	112 0646 000	112 0646 000	112 0646 000	112 0646 000
	Bass, Treb., Balance								
41	Push Knob (KAKU)	(4)	113 1493 103	113 1493 116	113 1493 103	113 1493 103	113 1493 103	113 1493 103	113 1493 103
42	Front Panel Ass'y	(1)	144 2247 107	144 2247 116	144 2247 129	144 2247 107	144 2247 107	144 2247 107	144 2247 107
44	VR Knob Ass'y	(1)	112 0569 145	112 0569 158	112 0569 145	112 0569 145	112 0569 145	112 0569 145	112 0569 145
45	Power Knob Ass'y	(1)	113 1054 128	113 1054 131	113 1054 128	113 1054 128	113 1054 128	113 1054 128	113 1054 128
48	Top Cover	(1)	102 0521 005	102 0521 018	102 0521 005	102 0521 005	102 0521 005	102 0521 005	102 0521 005
54	Fuji Knob (Rec out)	(1)	112 0641 005	112 0641 018	112 0641 005	112 0641 005	112 0641 005	112 0641 005	112 0641 005
★ 60	Fuse Label	(1)	—	—	513 2011 069	513 2011 069	513 2011 098	—	—
★ 61	Fuse Caution Label	(1)	—	—	513 1796 084	513 1796 084	—	—	—
▲ 62	Fuse (F-503)	(1)	—	—	—	—	206 1061 028 T3.15A/250V	—	—
★ 63	Fuse Label	(1)	—	—	—	—	513 2011 085	—	—
▲ 64	Voltage Sel. Switch	(1)	—	—	—	—	212 9555 007	—	—
65	Preset Label	(1)	—	—	—	—	515 8030 008	—	—
69	Push Knob (Tact)	(2)	113 1492 201	113 1492 214	113 1492 201	113 1492 201	113 1492 201	113 1492 201	113 1492 201
★ 81	IC Caution Label	(1)	—	—	513 2046 005	513 2046 005	—	—	—
SCREWS									
72	Tapping Screw (s)3x8 Black	(26)	473 7015 018 (26)	473 7015 018 (20)	473 7015 018 (20)	473 7015 018 (20)	473 7015 018 (22)	473 7015 018 (20)	473 7015 018 (20)
74	Fixing Screw	(10)	477 0064 107 (10)	477 0064 107 (10)	477 0064 107 (6)	477 0064 107 (10)	477 0064 107 (10)	477 0064 107 (8)	477 0064 107 (8)
78	3P Swelling Screw	(4)	477 0263 005	477 0263 018	477 0263 005	477 0263 005	477 0263 005	477 0263 005	477 0263 005
PACKING & ACCESSORIES									
115	Color Label (Gold)	(2)	—	513 9111 001	—	—	—	—	—
116	DAI Warranty	(1)	—	—	515 0623 002	—	—	—	—
117	DCI Warranty Form	(1)	—	—	—	515 0627 008	—	—	—
118	CSA Label DCI	(1)	—	—	—	LL-64064	—	—	—
121									
122									

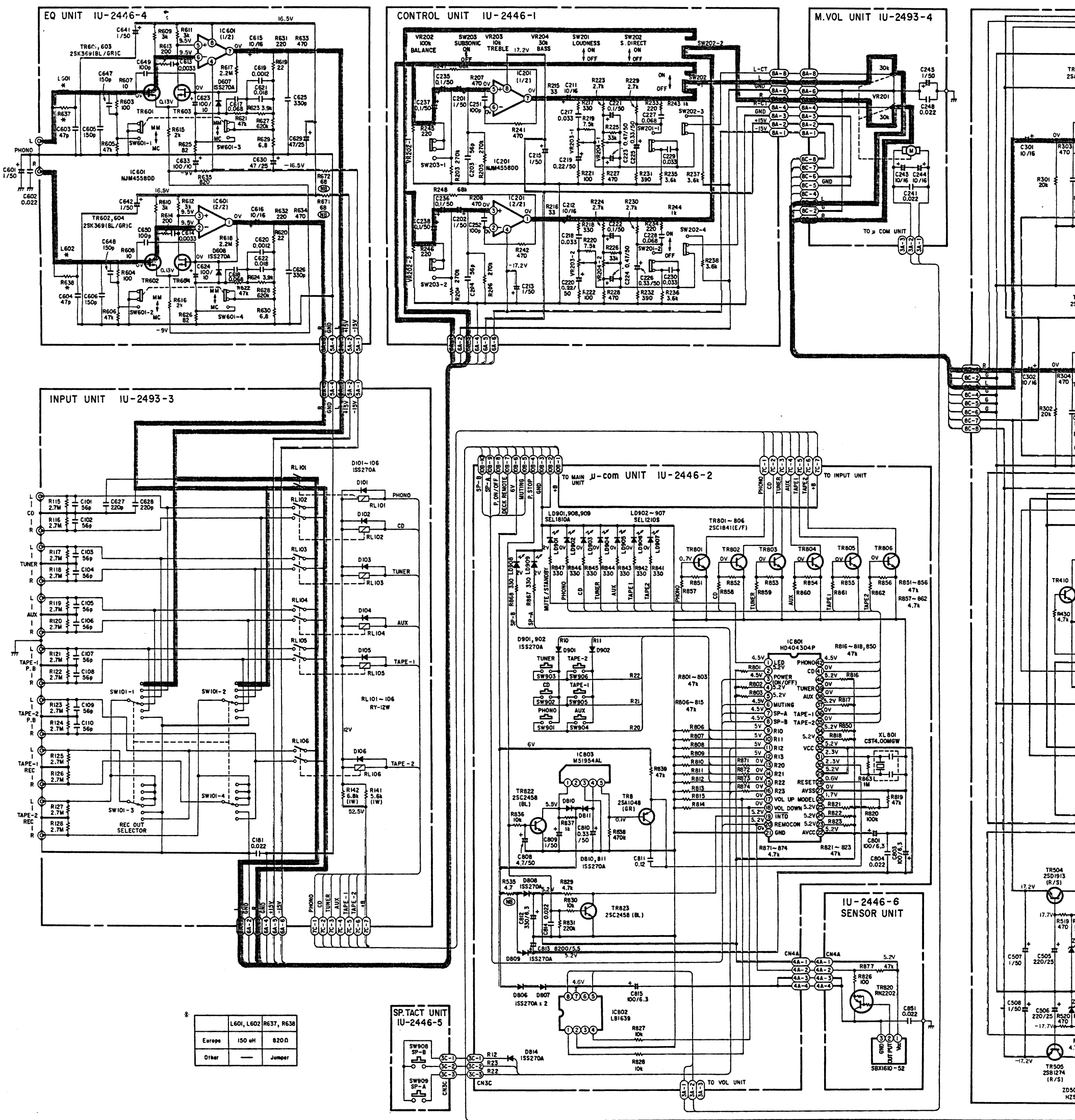
NOTE FOR PARTS LIST

- Part indicated with the mark " ● " are not always in stock and possibly to take a long period of time for supplying, or in some case supplying of part may be refused.
- When ordering of part, clearly indicate "1" and "1" (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.

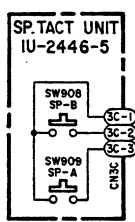
WARNING:
 Parts marked with this symbol ▲ have critical characteristics.
 Use ONLY replacement parts recommended by the manufacturer.

SCHEMATIC DIAGRAM

1 2 3 4 5 6



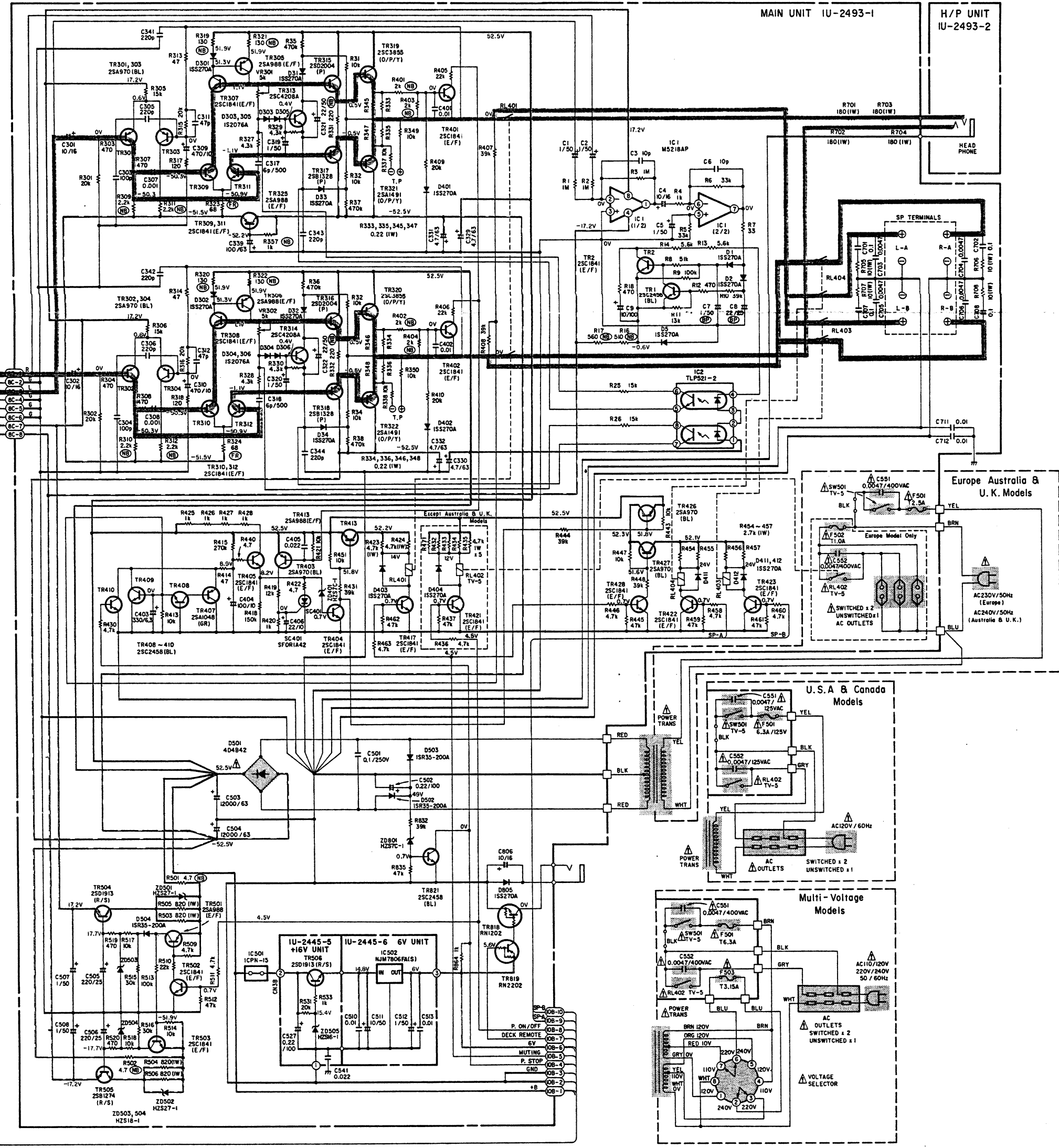
	L601, L602, R637, R638
Europe	150 uH 820 Ω
Other	— Jumper



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 the leakage current exceeds 0.5 milliamps, or if the resistance from chassis to either side of the power cord is defective.

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



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

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.

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

A
B
C
D
E
F
G
H

DENON

NIPPON COLUMBIA CO., LTD.

14-14, AKASAKA 4-CHOME, MINATO-KU, TOKYO 107-11, JAPAN

Telephone: 03 (3584) 8111

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