

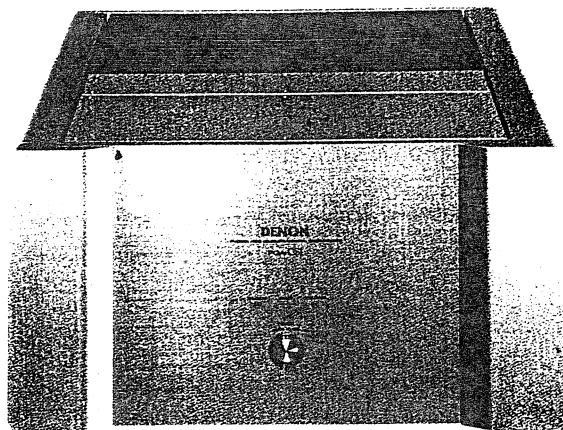
DENON

Hi-Fi Component

SERVICE MANUAL

MODEL POA-S1

MONAURAL POWER AMPLIFIER



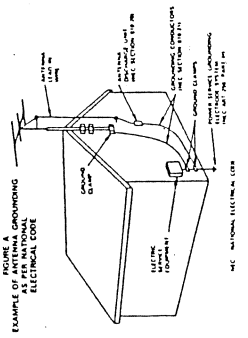
— TABLE OF CONTENTS —

OPERATING INSTRUCTIONS	2-6
SPECIFICATIONS	7
BLOCK DIAGRAM	8
DISASSEMBLY	9
ADJUSTMENT	10-12
SEMICONDUCTORS	13
PRINTED WIRING BOARD	
1U-2630D INPUT/BALANCE UNIT	14
1U-2631D CASCADE UNIT	15
1U-2632D POWER AMPLIFIER UNIT	16
1U-2633D POWER SUPPLY & CONTROL UNIT	17
NOTE FOR PARTS LIST	18
PRINTED WIRING BOARD PARTS LIST	
1U-2630D INPUT/BALANCE UNIT	18
1U-2631D CASCADE UNIT	19
1U-2632D POWER AMPLIFIER UNIT	19, 20
1U-2633D POWER SUPPLY & CONTROL UNIT	20, 21
PARTS LIST OF EXPLODED VIEW	22
PARTS LIST OF PACKING & ACCESSORIES	22
EXPLODED VIEW	23
WIRING DIAGRAM	24
SCHEMATIC DIAGRAM	25-27
SERVICE FLOW CHART	29

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. Heed Warnings - All warnings on the appliance and in the operating instructions should be adhered to.
4. Follow Instructions - All operating and use instructions should be followed.
5. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
6. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
- 6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
7. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
8. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
9. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
10. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
11. Grounding or Polarization - Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.
12. Power-Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them. Paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
14. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
15. Power Lines - An outdoor antenna should be located away from power lines.
16. Outdoor Antenna Grounding - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.
17. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
18. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
19. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - A. The power-supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
20. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.



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.
- NUR FÜR EUROPÄISCHE MODELLE

Konformitätserklärung

Die DENON Electronic GmbH
Haltestraße 32
40880 Ratingen

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

ATTENTION

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

- 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 be replaced with the 5 amp fuse of the type of plug used, a 5 amp fuse must be fitted either in the plug or adaptor or at the distribution board.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:
Blue: Neutral
Brown: Live
- As the colours of the wires in the mains lead of 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 which is marked with the letter N or 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.

FEATURES

(1) Newly-Developed Power Amplifier

Through the use of a UHC single push-pull circuit with UHC-MOS-FET's (Ultra High Current MOS-FET's), the POA-S1 is able to drive low-impedance speakers and attain outstanding linearity even at very low levels. The low and high levels both exhibit superior characteristics as a result of this new advance in high technology.

By enhancing the high performance of each amplification stage, DENON has been able to create a simple design with two steps in the voltage amplification stage and one step in the electrical current amplification stage. The resulting sound is completely musical and natural, with nothing added or subtracted to it in the amplification process.

(2) Rock-Solid Power Circuit

The power supply section of an amp with high output power needs to be highly reliable in order to ensure stable operation of the amp. A silicon diode is usually used for the rectifying element of a power supply circuit, but the POA-S1 employs a UHC-MOS-FET instead of the silicon diode to dramatically reduce power loss in the power supply section. The UHC-MOS-FET is able to supply power that is stable enough to drive even low-impedance speakers.

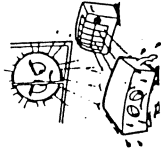

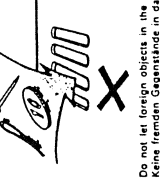

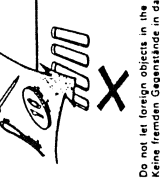


Two large toroidal transformers are used for the POA-S1's power amp stage, and an EI transformer is used for the voltage amplification stage and the POA-S1's other circuits. The use of separate transformers works to reduce power losses and to minimize mutual interference between the stages of amplification.

(3) Chassis Construction with Direct Mechanical Ground

The large, high-mass toroidal transformers, which normally are a source of vibration, and the large power heat sinks are located above the POA-S1's feet and are attached directly to them in what is (tentatively) called the Direct Mechanical Ground construction. As a virtual mechanical ground for the chassis, this improved design now eliminates any interference caused by vibrations and its adverse effects on the various circuits.

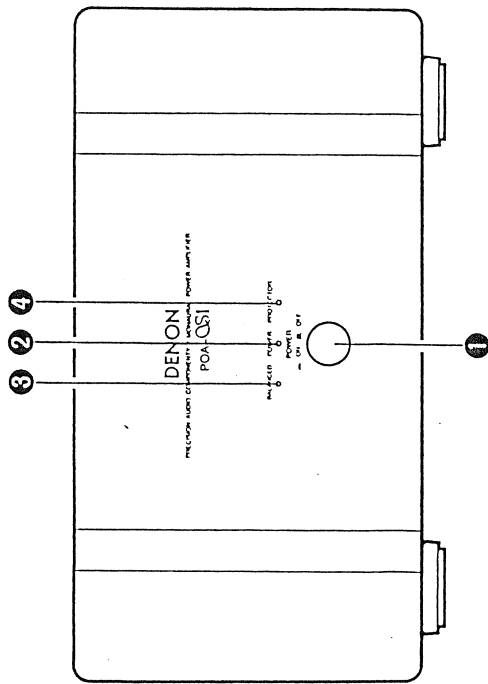
The circuits have been installed onto a base of large mass, further ensuring the elimination of mutual interference caused by vibrations.

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"> • Avoid high temperatures. • Installed on a rack, heat dispersion when possible. • Beachten Sie hohe Temperaturen • Gerüst auf ein Regal stellen • Eviter des températures élevées • Eviter de l'installation sur une étagère • Evitare di esporre l'unità a temperature alte • Assicurarsi che ci sia un'adeguata dispersione del calore dell'unità in un mobile per componenti audio. • Evite altas temperaturas • Permite la suficiente dispersion del calor • Vermeid hohe Temperaturen • Zorg voor een degelijke hitte/voer indien het apparaat op een rek wordt geplaatst. • Evite altas temperaturas • Vermeiden Sie hohe Temperaturen • Evite temperaturas altas • Conceda suficiente dispersão de calor • Concedo equipamiento for instalado numa prateleira. 		<ul style="list-style-type: none"> • Keep the set free from moisture, water, and dust. • Halten Sie das Gerät von Feuchtigkeit, Wasser und Staub fern. • Eviter l'humidité, l'eau et la poussière • Teneți l'unități liberă de umezeală, apă și de praful. • Mantere o aparcho livre de humidade, água ou poeira. 		<ul style="list-style-type: none"> • Do not let incandescent, halogen, and incandescent lamps come in contact with the set. • Lassen Sie das Gerät nicht mit Incandescent-, Halogen- oder Verdünnungsröhren in Berührung kommen. • Ne pas mettre en contact des incandescentes, halogènes et à économie d'énergie. • Nu lasă lampă incandescentă, halogenă sau economie de energie în contact cu aparatul. • Laat geen vlammevlammen, gloeilampen of halogeenlampen in contact met het apparaat. • Sa jätti älä mit incandescent, halogeen ja säästökäyttölamppuihin kosketusta. • Do not let incandescent, halogen, and incandescent lamps come in contact with the set. • Lassen Sie das Gerät nicht mit Incandescent-, Halogen- oder Verdünnungsröhren in Berührung kommen. • Ne pas mettre en contact des incandescentes, halogènes et à économie d'énergie. • Nu lasă lampă incandescentă, halogenă sau economie de energie în contact cu aparatul. • Laat geen vlammevlammen, gloeilampen of halogeenlampen in contact met het apparaat. • Sa jätti älä mit incandescent, halogeen ja säästökäyttölamppuihin kosketusta.
	<ul style="list-style-type: none"> • Unplug the power cord when not using the set for long periods of time. • Wenn das Gerät eine längere Zeit nicht verwendet werden soll, trennen Sie das Netzstecker. • Débrancher le cordon d'alimentation lors de longues périodes. • Dacă este necesar să îl dezconectați când nu îl folosiți pe termen lung. • Desconecte el cordon de energía cuando no lo use por largos periodos de tiempo. • Neem altijd het apparaat gedurende een lange periode niet wordt gebruikt. • Desligue o fio condutor de força quando o aparelho não tiver que ser usado por um longo período. 		<ul style="list-style-type: none"> • Never disassemble or modify the set in any way. • Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern. • Ne jamais démonter ou modifier l'appareil. • Nu încercați să demontați sau să modificați unități în niciun mod. • Nunc demantele o modifique el equipo de ninguna manera. • Never disassemble or modify the set in any way. • Versuchen Sie niemals das Gerät auseinander zu nehmen oder auf jegliche Art zu verändern. • Ne jamais démonter ou modifier l'appareil. • Nu încercați să demontați sau să modificați unități în niciun mod. • Nunc demantele o modifique el equipo de ninguna manera. 		
	<ul style="list-style-type: none"> • Do not obstruct the ventilation holes. • Die Belüftungslöcher dürfen nicht verblockt werden. • Non coprire i fori di ventilazione. • Nu obstrucți găurile de ventilație. • De ventilatsioonilõuked ei tohi blokeerida. • Tapo älä tukkia ventilaatioaukkoja. • No obstruya os orificios de ventilación. 		<ul style="list-style-type: none"> • Do not obstruct the ventilation holes. • Die Belüftungslöcher dürfen nicht verblockt werden. • Non coprire i fori di ventilazione. • Nu obstrucți găurile de ventilație. • De ventilatsioonilõuked ei tohi blokeerida. • Tapo älä tukkia ventilaatioaukkoja. • No obstruya os orificios de ventilación. 		

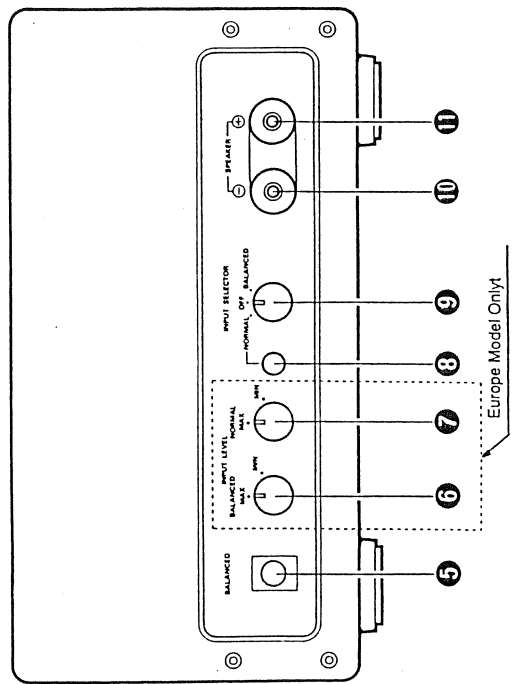
FRONT PANEL
FRONTPLATTE
PANNEAU AVANT

PANNELLO FRONTALE
TABLERO FRONTAL
VOORPANEEL



REAR PANEL
RÜCKWAND
PANNEAU ARRIERE

IL PANNELLO POSTERIORE
PANEL TRASERO
ACHTERPANEEL



NAMES AND FUNCTIONS OF PARTS (Refer to page 5)

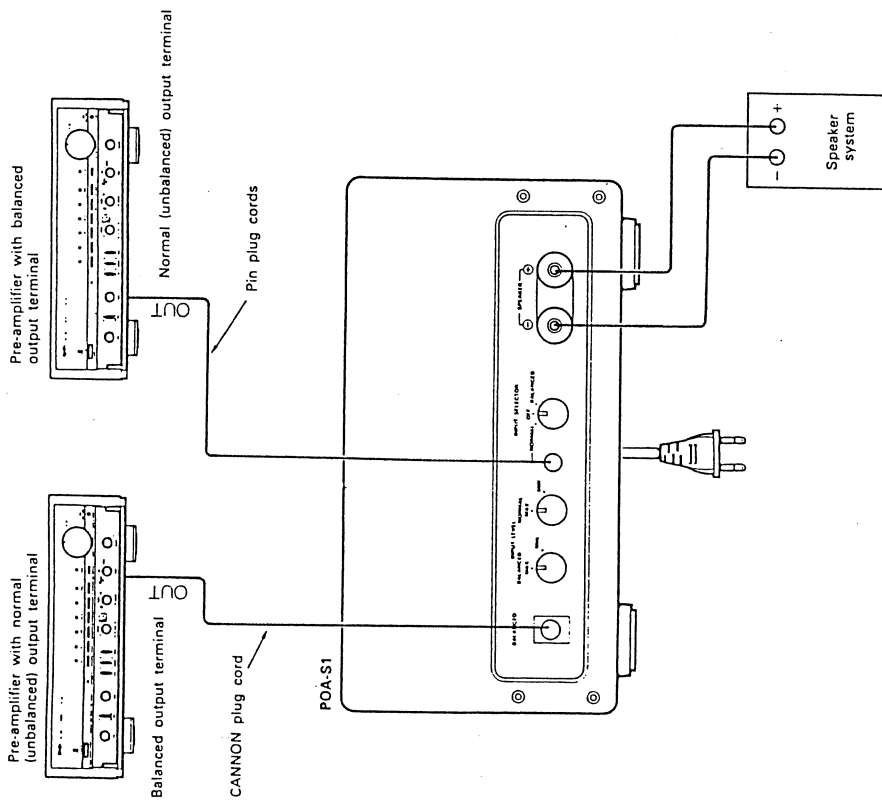
- 1 POWER switch
 - When the POWER switch 1 is pressed and indicator 2 lights and the power turns on. The PROTECTOR indicator 3 flashes for several seconds after the power is turned on. Once the protector circuit has checked the stability of the amplifier's operation, the PROTECTOR indicator 3 turns off and the amplifier becomes operable. Press the POWER switch 1 again to turn the power off (1).
- 2 BALANCED IN indicator
 - This lights when the INPUT SELECTOR switch 5 on the rear panel (refer to page 5) is set to BALANCED, indicating that a balanced input (Cannon connector) is selected.
- 3 PROTECTOR indicator
 - The POA-S1 is equipped with various protector circuits. The PROTECTOR indicator flashes when these protector circuits are activated, during which the speaker output is blocked (muting).
 - (1) The muting circuit is activated and the PROTECTOR indicator flashes for several seconds after the POWER switch is pressed and for 1 or 2 seconds when the INPUT SELECTOR switch 5 on the rear panel (refer to page 5) is operated. Once the indicator stops flashing, the muting circuit is deactivated.
 - (2) In addition, the muting circuit is also activated when the following conditions are detected:
 - When the speaker output's offset voltage is not within the specified range.
 - When the temperature of the POA-S1 is abnormally high.
 - When an abnormally high current is detected due to the speaker output being short-circuited or grounded. In this case, turn the power off immediately and check as shown on the diagram on page 14.
- 4 BALANCED INPUT terminal
 - This is a balanced input terminal (Cannon connector). Connect it to the pre-amplifier's balanced pre-out terminal. When using this terminal, set the INPUT SELECTOR switch 5 to the "BALANCED" side.
- 5 BALANCE INPUT (Europe Model Only)
 - Controls the balanced input level.
- 6 NORMAL INPUT (Europe Model Only)
 - Controls the normal input level.
- 7 NORMAL INPUT terminal
 - This is a normal input terminal (RCA connector). Connect it to the pre-amplifier's normal pre-out terminal. When using this terminal, set the INPUT SELECTOR switch 5 to the "NORMAL" side.
- 8 INPUT SELECTOR switch
 - This switch is used to select between the BALANCED input (Cannon connector - 4) and NORMAL input (RCA connector - 7). When set to OFF, no signals are input.
- 9 SPEAKER ⊖ (- speaker output terminal)
 - Connect this to the speaker system's ⊖ terminal.

NOTE:

- The POA-S1 has a BTL structure, so the same high voltage as is output to the "+" side speaker terminal 10 is output to the "-" side speaker terminal 9. Do not connect anything but speaker systems to this terminal. Doing so is extremely dangerous.

- 10 SPEAKER ⊕ (+ speaker output terminal)
 - Connect this to the speaker system's ⊕ terminal.

CONNECTIONS



Connection precautions

- Do not plug the power cord into the AC outlet until all connections have been completed.
- Insert the plugs securely. Incomplete connections will lead to noise generation.
- Note that bundling pin plug cords together with power cords, or setting pin plug cords close to power transformers will lead to hum or noise.

Cautions on Installation [Europe]

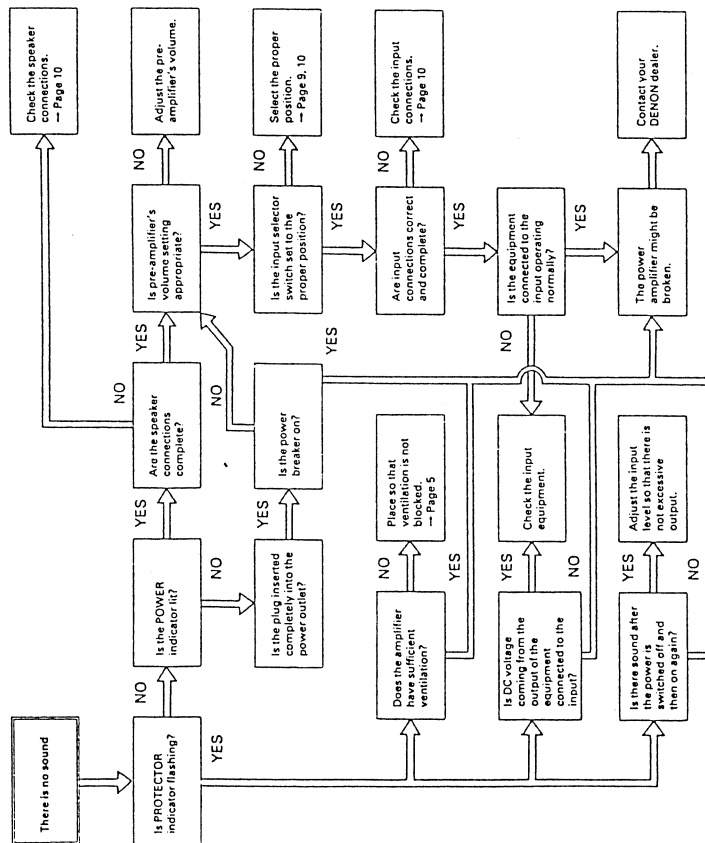
- Because of the POA-S1's heavy weight, it is extremely dangerous to install it on racks. Install it directly on a sufficiently sturdy floor.
- To allow heat to disperse, do not place objects on top of the unit.
- Install in such a way that no humming, noise or other mutual interference occurs between the POA-S1 and connected components.
- When a 1 ohm speaker is connected to the POA-S1, an AC current with a maximum of approximately 20A is generated. In order to take full advantage of the POA-S1's performance, connect it to a power outlet with the highest current capacity possible.
- Avoid using switching devices for selecting between various amplifier and speaker combinations.
- Make sure that no input cords, speaker cables or power cords are caught under the POA-S1's feet.
- The POA-S1 should be moved by at least four persons, who should hold it under the four corners for stability.

Cautions on Installation [Asia (multiple), U.S.A.]

- Because of the POA-S1's heavy weight, it is extremely dangerous to install it on racks. Install it directly on a sufficiently sturdy floor.
- To allow heat to disperse, do not place objects on top of the unit.
- Install in such a way that no humming, noise or other mutual interference occurs between the POA-S1 and connected components.
- When a 1Ω speaker is connected to the POA-S1, an AC current with a maximum of approximately 40A (100 V/120 V) 20A (200 V/240 V) is generated. In order to take full advantage of the POA-S1's performance, connect it to a power outlet with the highest current capacity possible.
- Avoid using switching devices for selecting between various amplifier and speaker combinations.
- Make sure that no input cords, speaker cables or power cords are caught under the POA-S1's feet.
- The POA-S1 should be moved by at least four persons, who should hold it under the four corners for stability.

TROUBLESHOOTING

1. Have all connections been made **PROPERLY** ?
 2. Have you followed all operational instructions correctly ?
 3. Check speaker and the preamplifier systems for proper operation.
- When your unit does not seem to be operating correctly, first check the items in the following table. If the symptom does not correspond to any of the problems as shown below, turn off the power sources immediately and contact your DENON dealer.



SPECIFICATIONS

■ POWER AMPLIFIER SECTION

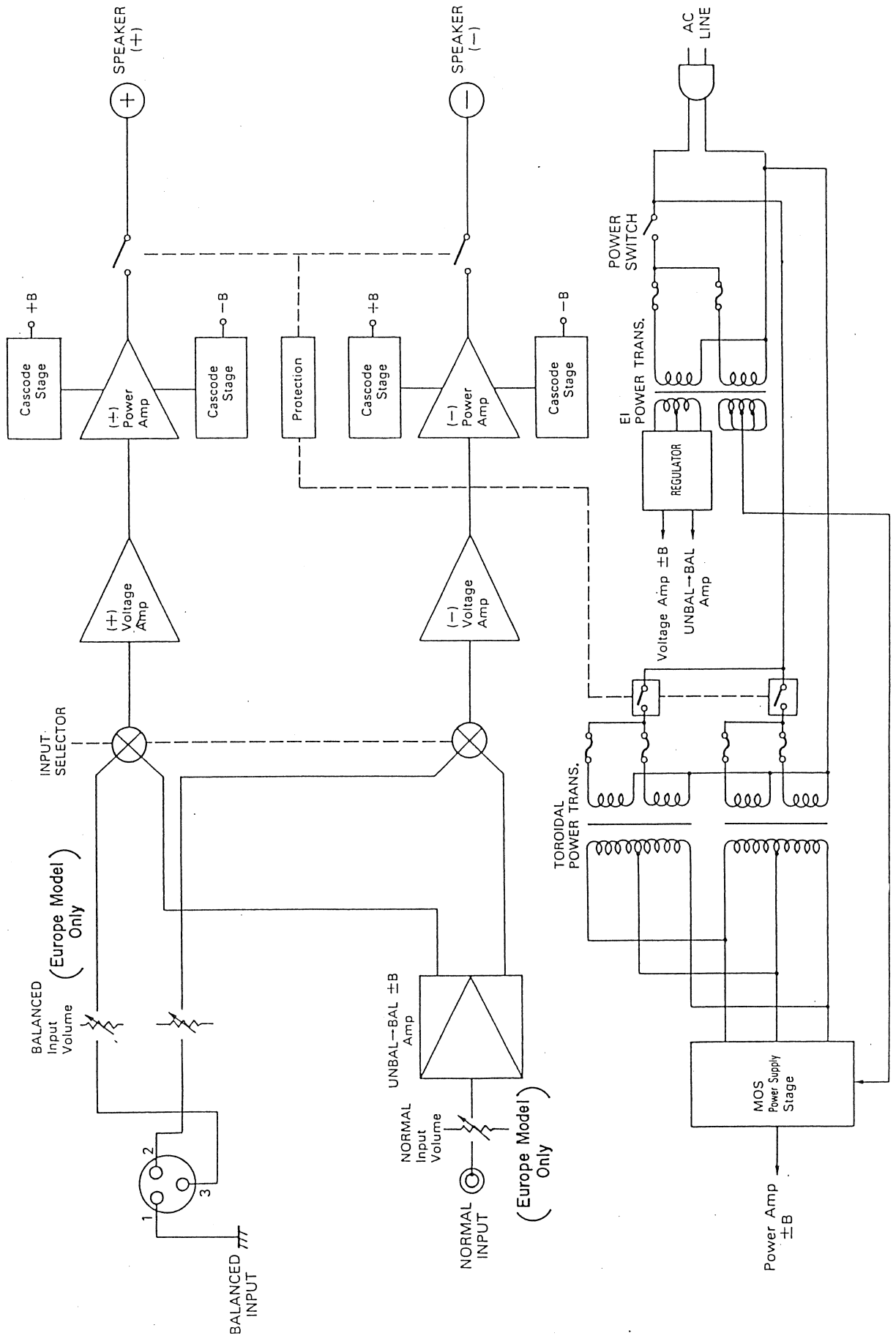
- **Rated output power:** Continuous 250 W min, into 8 ohms from 20 Hz to 20 kHz with no more than 0.05% total harmonic distortion
 - 500 W (4 ohm load, DIN)
 - 1000 W (2 ohm load, DIN)
 - 1400 W (1 ohm load, DIN)
- **Total harmonic distortion:** 0.008% (20 Hz ~ 20 kHz, 8 ohm load, rated output -3 dB)
- **Intermodulation distortion:** 0.003% or less (7 kHz/60 Hz = 1/4, 8 ohm load, at an amplitude output equivalent to the rated output)
- **Power bandwidth:** 5 Hz ~ 50 kHz (T.H.D.: 0.05%, 8 ohm load, rated output -3 dB)
- **Frequency response:** 1 Hz ~ 300 kHz (8 ohm load, at 1 W output)
- **Input sensitivity:**
 - NORMAL 1 V
 - BALANCED 1 V
- **Input impedance:**
 - NORMAL 47 kohms
 - BALANCED 47 kohms
- **Output impedance:** 0.05 ohms (1 kHz)
- **S/N ratio ("A" curve weighting):**
 - NORMAL 110 dB
 - BALANCED 120 dB
- **Speaker output terminals:** 1 ~ 16ohms

■ GENERAL

- **Power supply:**
 - AC 230 V, 50 Hz
 - AC 100/120/200/240 V, 50/60 Hz [Asia (multiple)]
 - AC 120 V, 60 Hz (U.S.A.)
- **Power consumption:**
 - 1200 W
 - 12 A (U.S.A.)
- **Dimensions:** 483 mm (19-1/64") W × 237.5 mm (10-3/4") H × 683.5 mm (26-29/32") D (including controls and height of feet)
- **Weight:** 79.0 kg (174 lbs 3 oz)

* Specifications and design are subject to change without notice for the purpose of improvement.

BLOCK DIAGRAM

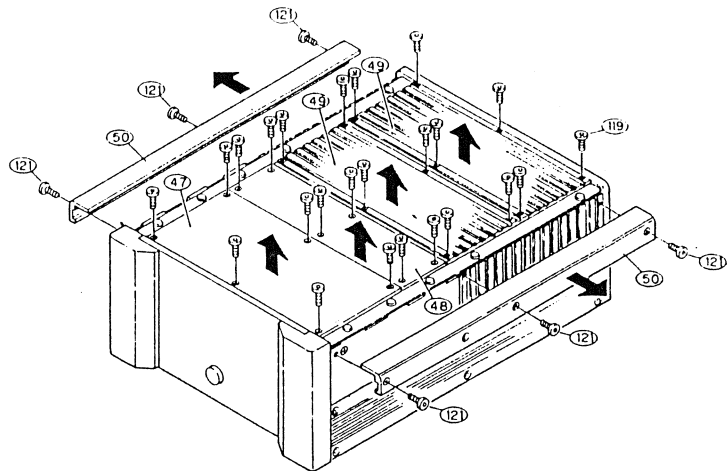


DISASSEMBLY

(To reassemble reverse disassembly)

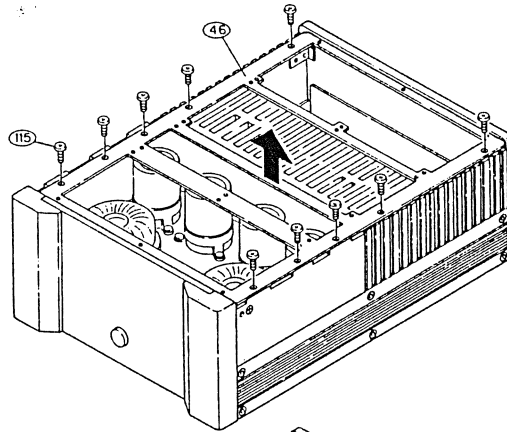
1 Side Escutcheon, Plate (47) (48) (49)

1. Remove 6 screws 4 × 20 HSHB-AU (121) on the both sides and detach 2 Side Escutcheons (50).
2. Remove 24 screws 4 × 10 HSHB-AU (119) on the top and detach each Plates (47), (48) and (49).



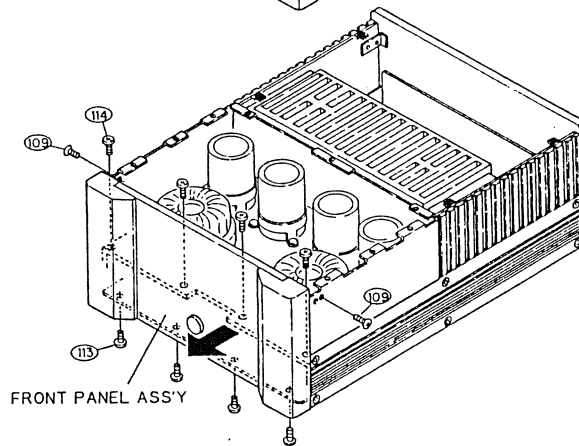
2 Top Plate

1. Remove 10 screws 4 × 10 CBTS(S)-B (115) and detach Top Plate (46).



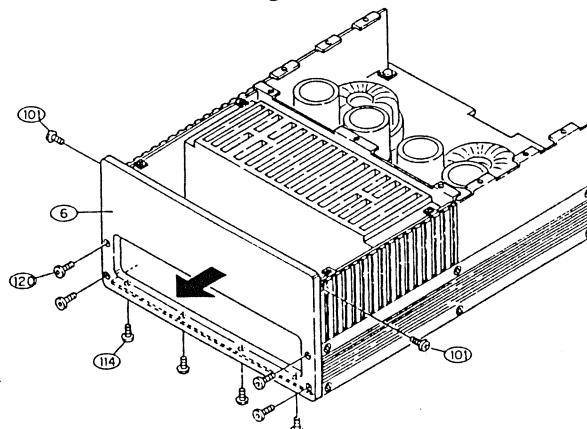
3 Front Panel Ass'y

1. Remove 2 screws 3 × 8 CFTS(S)-B (109), 4 screws 4 × 10 CBS-B (114), 4 screws 4 × 8 CBTS(S)-B (113) and detach the Front Panel Ass'y.



4 Back Panel

1. Remove 2 screws 3 × 8 CBTS(S)-CU (101), 4 screws 4 × 10 CBS-B (114), 4 screws 4 × 15 HSHB-AU (120) and detach Back Panel (6).



ADJUSTMENT

● Idle Current

1. Required Measuring Equipment
Digital Voltmeter

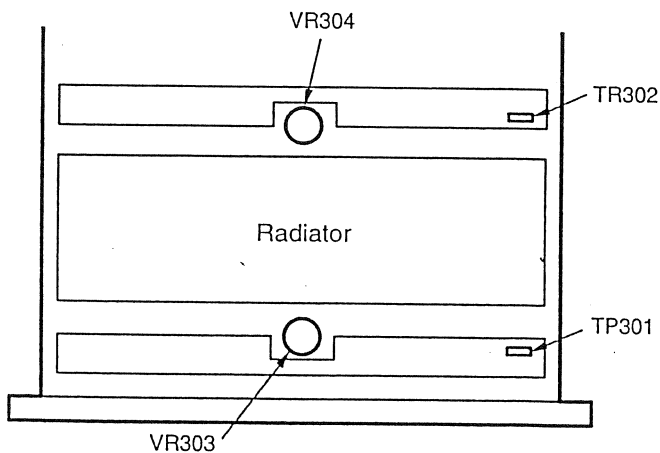
2. Preparation

- 1) Place POA-S1 in the normal using condition away from an excessively ventilated location, such as near by air conditioner or close to air circulation fan.
- 2) Set the controls as follows:
 - POWER SWITCH → OFF
 - INPUT SWITCH → OFF
 - SPEAKER TERMINALS on the rear panel → Unloaded (Without connect speakers, dummy resistors, etc.)

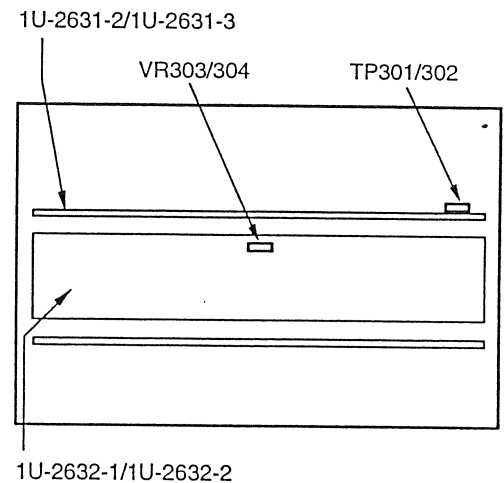
3. Adjustment

- 1) Remove the radiator cover on the top, insert a screwdriver into a square hole in the center of 1U-2632-1/1U-2632-2 (Power amplifier PWB) and rotate VR303/VR304 counterclockwise to set to tail-end state.
- 2) Connect a digital voltmeter between Pin ① and Pin ③ of Test Point (TP301/TP302).
- 3) Plug in the power cord to an appropriate AC power source (fit to POA-S1 supply voltage intended to adjust) and turn ON the POWER switch.
- 4) Aging approx. 1 minute after turned ON the power then rotate VR303/VR304 clockwise to adjust the voltage $10\text{mV} \pm 0.5\text{mV}$ DC initially.
- 5) After 10 minutes from the initial adjustment of voltage, rotate VR303/VR304 to set the voltage to $10\text{mV} \pm 1\text{mV}$ DC.

Note) Voltages at test points show absolute values.



TOP VIEW



RADIATOR FRONT VIEW

● Voltage Selection

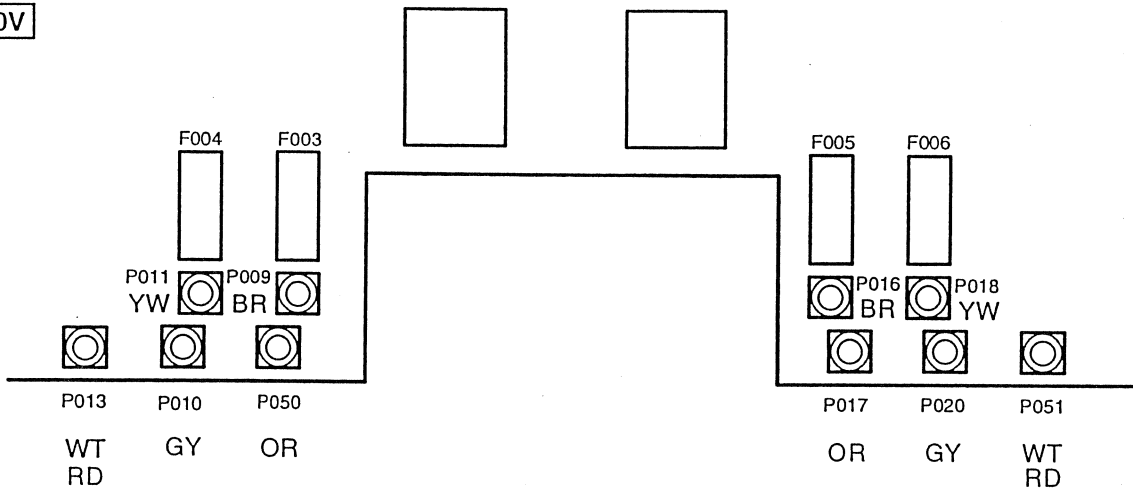
Except the Europe Version, all POA-S1 adapt 4 types of voltage sources, AC 100V/120V/200V/240V. For changing the voltage value, use voltage selector (SW002) to set, also, require connection change of transformer lead as shown in the following figures. The part unit (1U-2633-1) to change the connection is located on the bottom surface of chassis.

Remind that, in case to set to 200V or 240V, F004, F006 are not to be used.

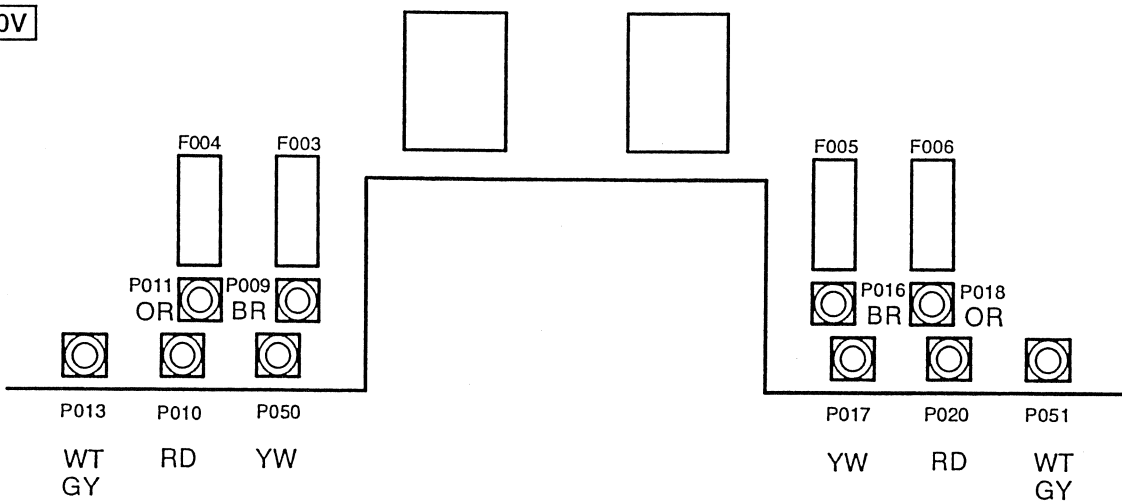
A fuse to be used for F003, F004, F005 and F006 is rated 6.3A (250V)(2061061057).

A fuse rated 6.3A (2061046001) must be used for U.S.A. Version, please be noted.

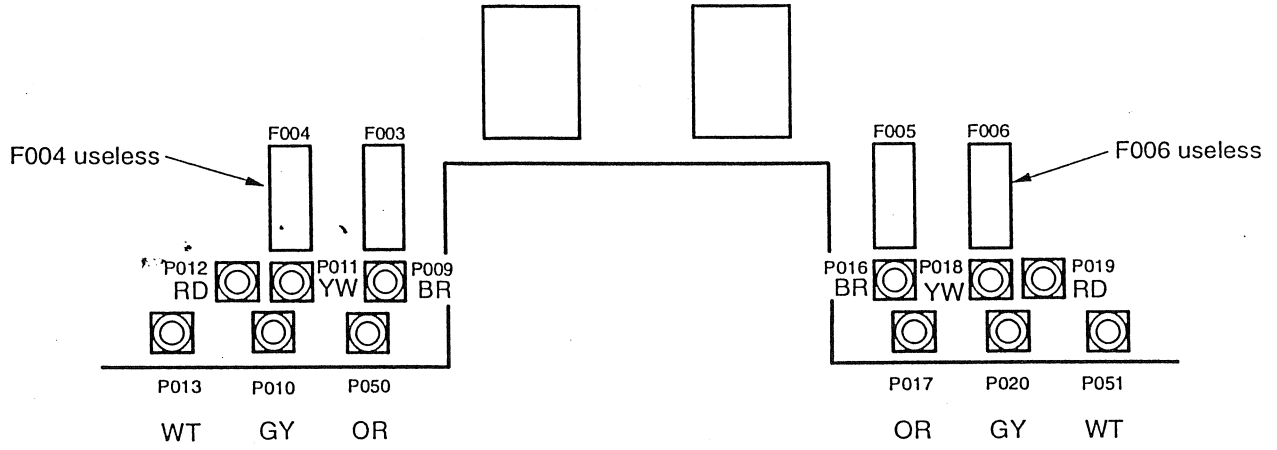
AC100V



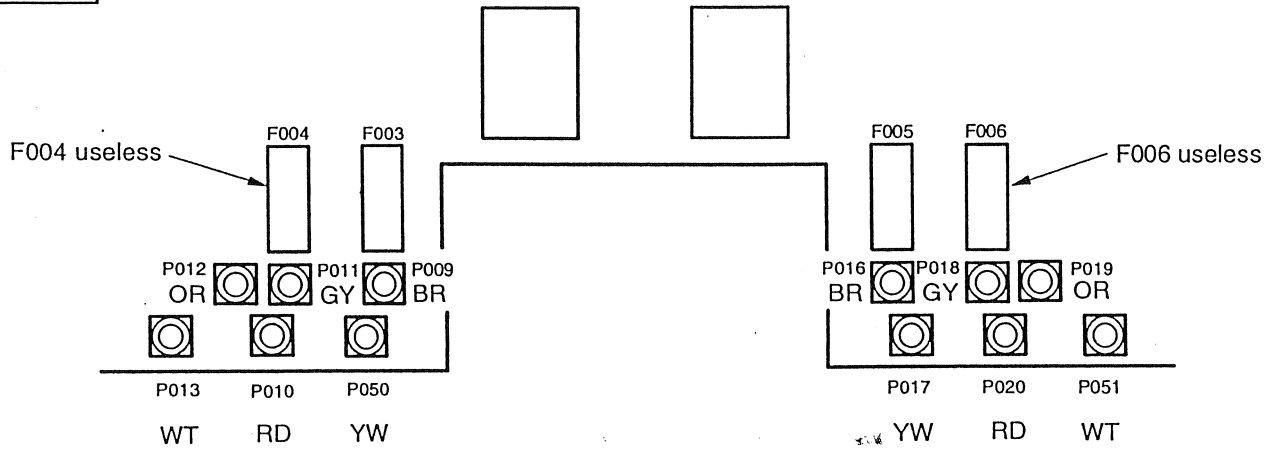
AC120V



AC200V



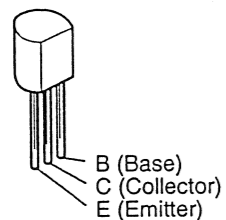
AC240V



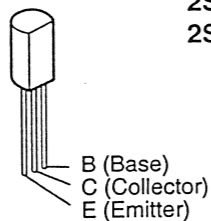
SEMICONDUCTORS

● TRANSISTORS

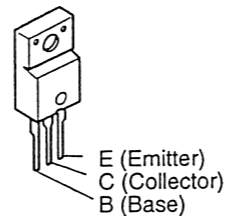
2SA1015 (GR)
2SC1815 (BL)
2SC2240
2SC2878



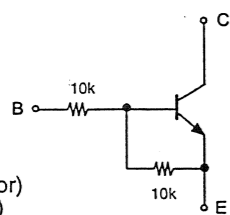
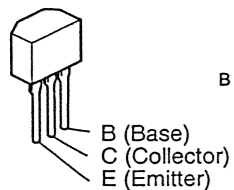
2SA1145 (O)/(Y)
2SC2705 (O)/(Y)



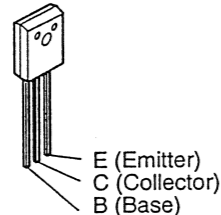
2SB1586
2SD2437
2SD1763A (D)



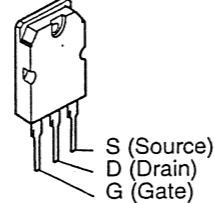
RN1202 (10k-10k)



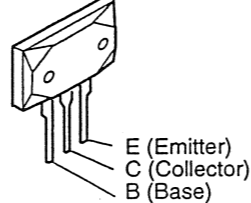
2SA1232
2SC3012



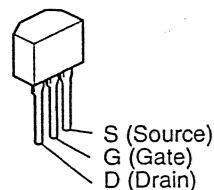
2SJ217
2SK1297



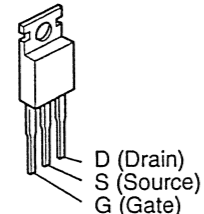
2SA1494LB
2SC3858LB



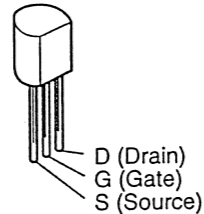
2SK184C (GR)/(BL)
2SK369 (BL)/(GR)-C



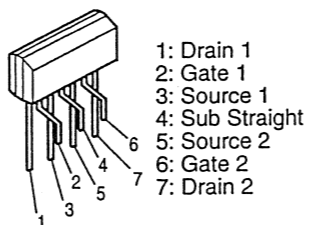
2SJ78
2SK215



2SK373 (Y)
2SJ40

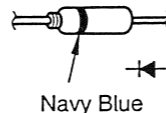


2SK389 (GR)/(BL)/(V)

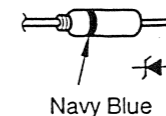


● DIODES (including LED)

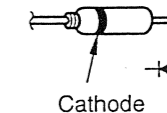
1S2076A



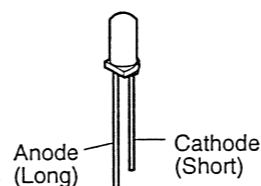
HZ2B-1 HZ5B-1 HZ15L-1
HZ4B-1 HZ7A-1 HZ16L-1
HZ5A-2 HZ12LA-1 HZ24L-1



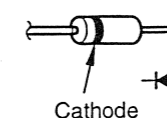
D1NK20
1SS106
TLR112



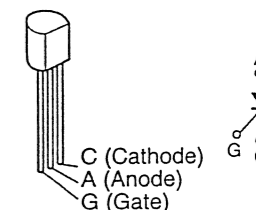
SEL-4214S (RD)
SEL-4214E (GN)
SEL-4914A (OG)



S2K20F



SFOR1A42
(Thyristor)



PRINTED WIRING BOARD (Pattern Side)

1 2 3 4 5 6 7 8

1U-2630D INPUT & BARANCE UNIT

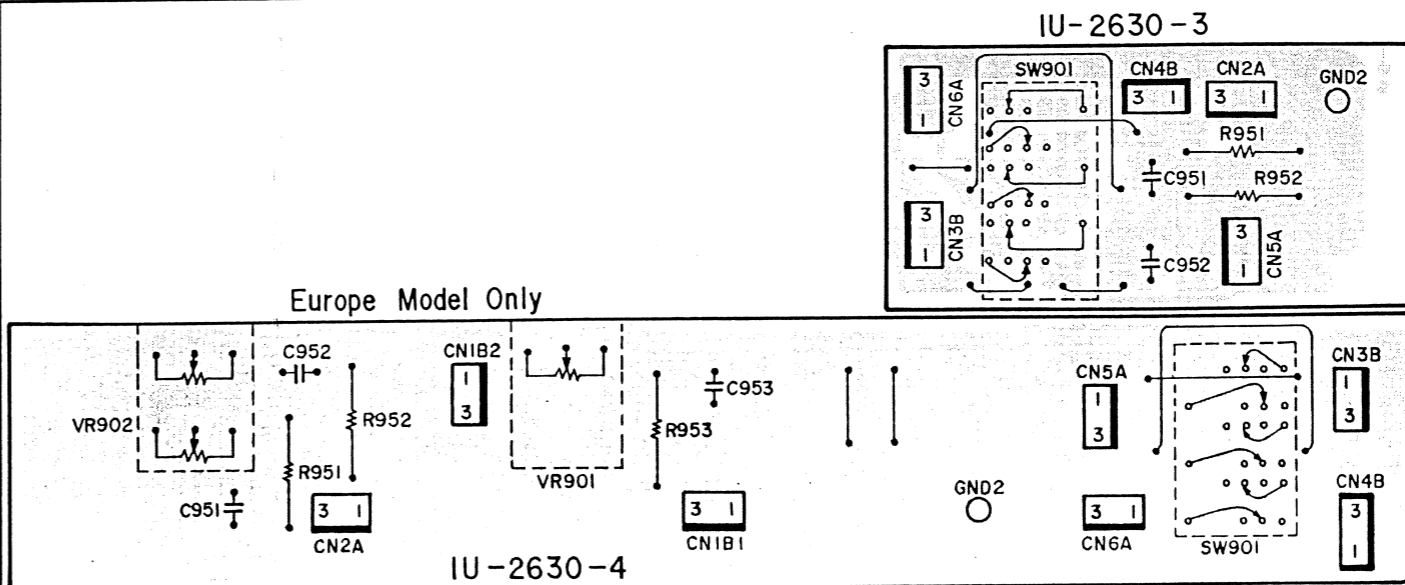
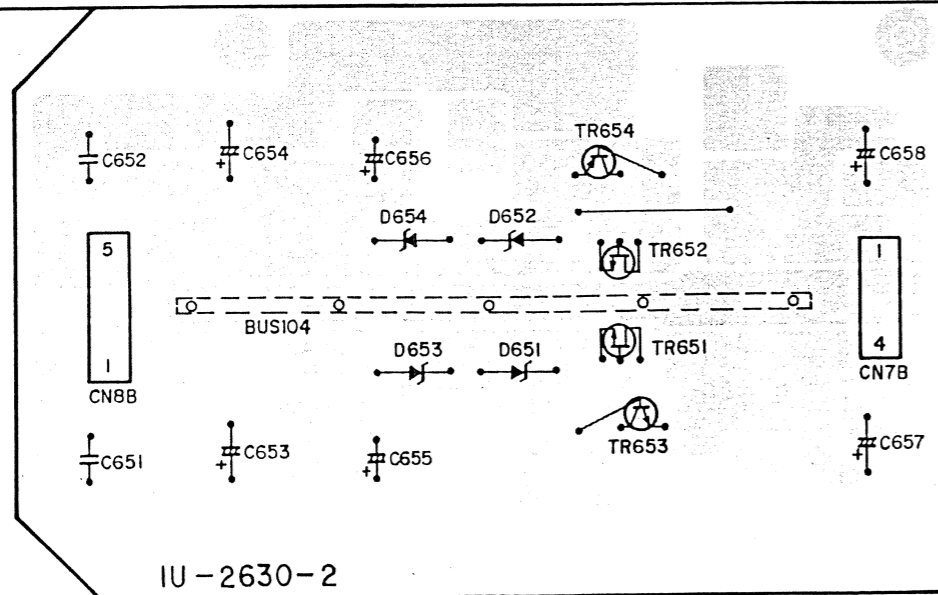
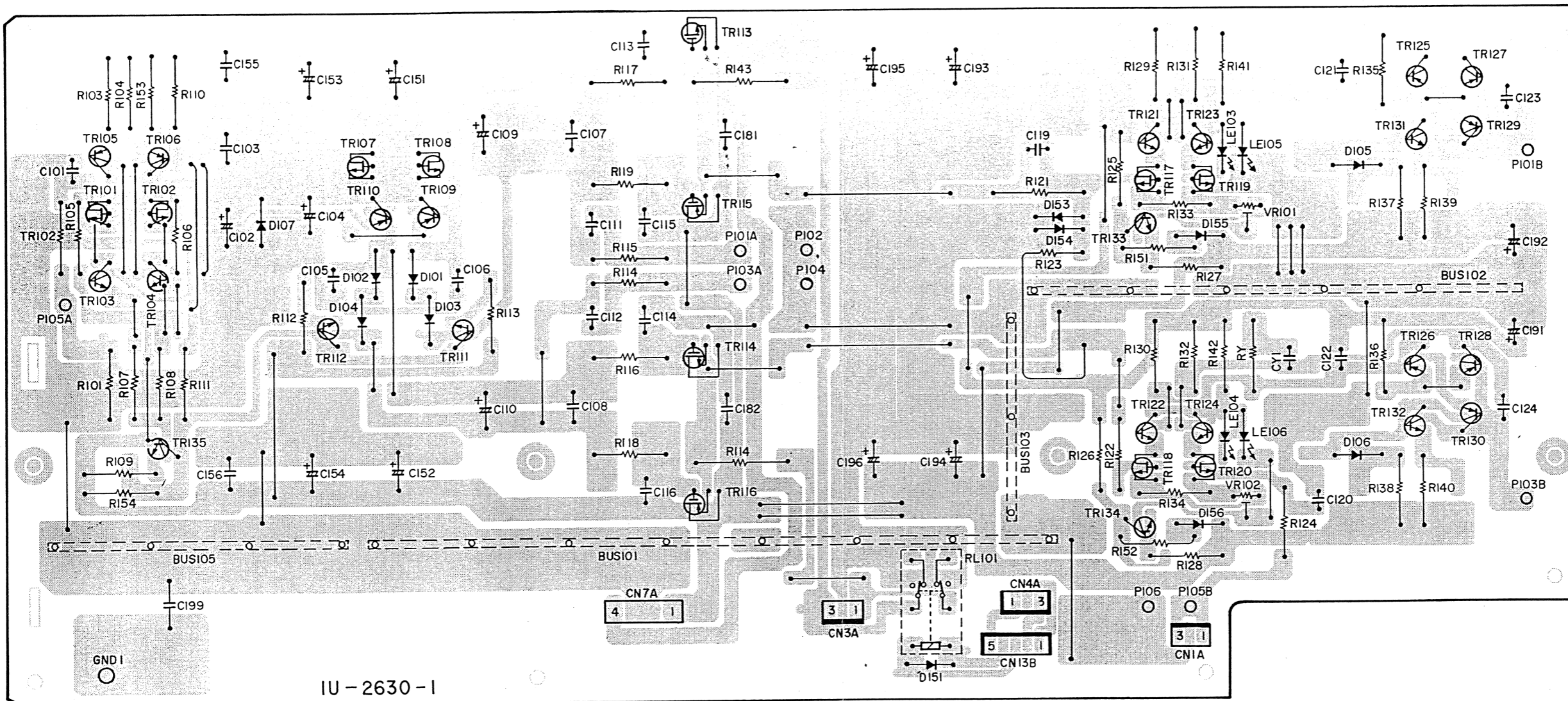
A

B

C

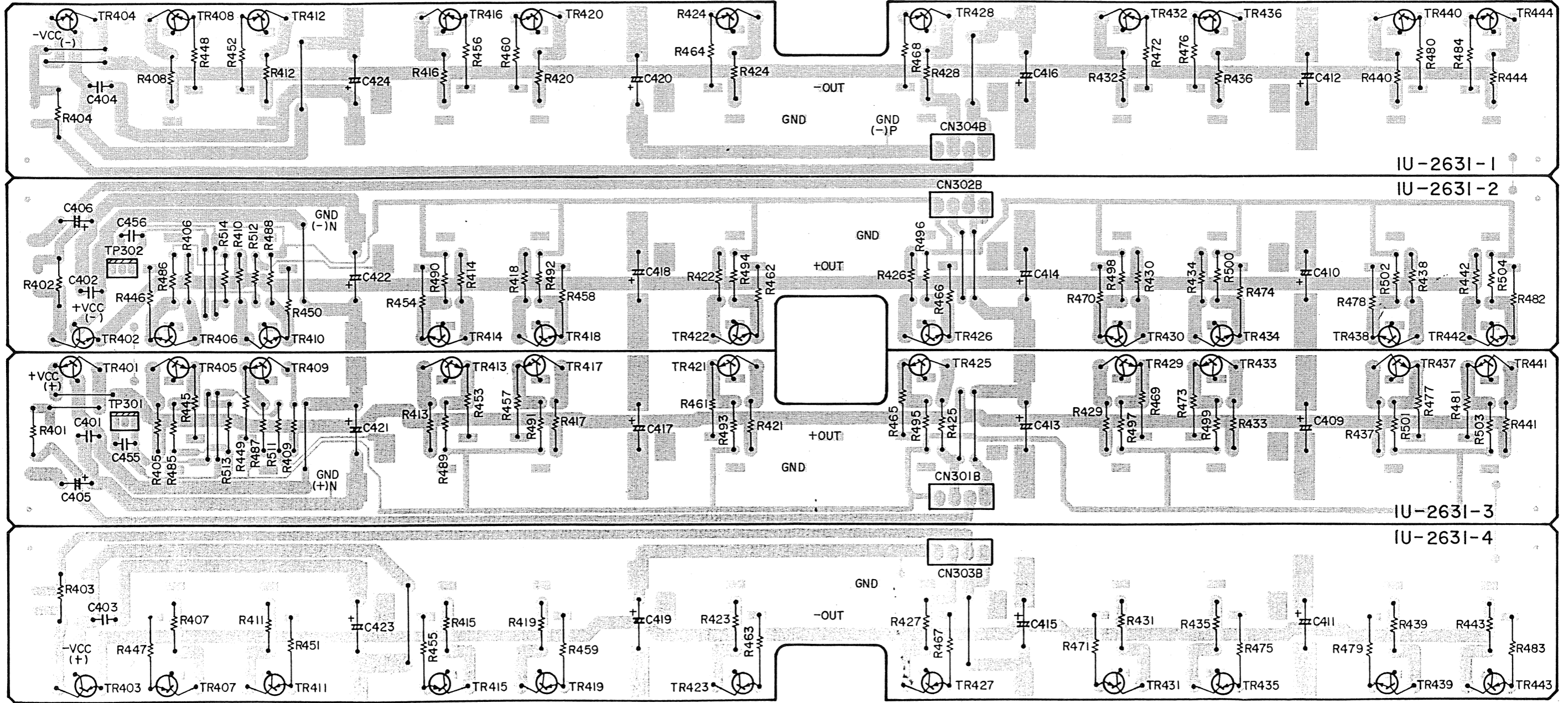
D

E



1 2 3 4 5 6 7 8

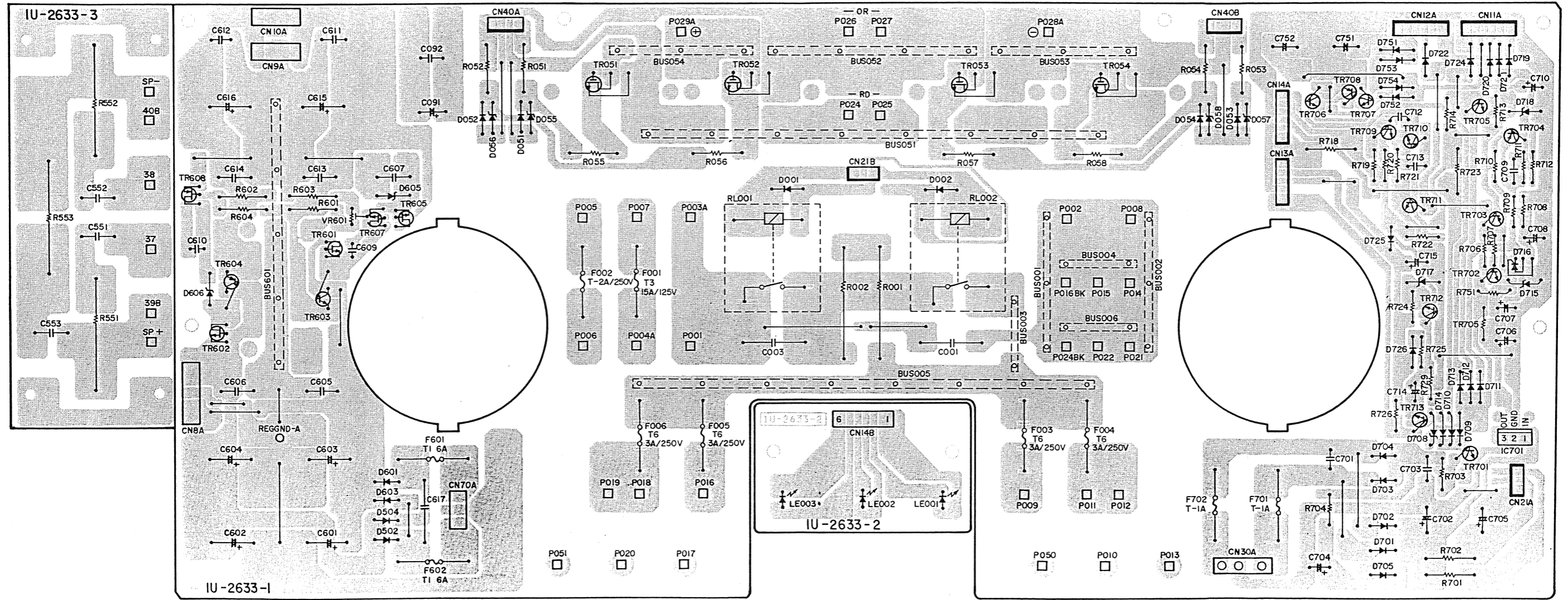
1U-2631D CASCADE UNIT



1 2 3 4 5 6 7 8

1U-2633D POWER SUPPLY & CONTROL UNIT

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

$\frac{1}{\text{---}} \frac{8}{\text{---}} \frac{2}{\text{---}} \Rightarrow 1800 \text{ ohm} = 1.8 \text{ kohm}$
 Indicates number of zeros after effective number.
 2-digit effective number.

• Units: ohm

$\frac{1}{\text{---}} \frac{R}{\text{---}} \frac{2}{\text{---}} \Rightarrow 1.2 \text{ ohm}$
 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 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
CK : 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 (electrolyte only)

$\frac{2}{\text{---}} \frac{2}{\text{---}} \frac{2}{\text{---}} \Rightarrow 2200\mu\text{F}$
 Indicates number of zeros after effective number.
 2-digit effective number.

• Units: μF.

$\frac{2}{\text{---}} \frac{R}{\text{---}} \frac{2}{\text{---}} \Rightarrow 2.2\mu\text{F}$
 1-digit effective number.
 2-digit effective number, decimal point indicated by R.

• Units: μF.

• Capacity (except electrolyte)

$\frac{2}{\text{---}} \frac{2}{\text{---}} \frac{2}{\text{---}} \Rightarrow 2200\text{pF} = 0.0022\mu\text{F}$
 (More than 2) — Indicates number of zeros after effective number.
 2-digit effective number.

• Units: μF.

$\frac{2}{\text{---}} \frac{2}{\text{---}} \frac{1}{\text{---}} \Rightarrow 220\text{pF}$
 (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.

PRINTED WIRING BOARD PARTS LIST
1U-2630D INPUT & BALANCE UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
TR101,102	275 0042 905	Transistor 2SK373(BL)/(GR)	
TR103,104	273 0198 918	Transistor 2SC1815(BL)	
TR105,106	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR107,108	275 0042 905	Transistor 2SK373(BL)/(GR)	
TR109,110	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR111,112	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR113,114	275 0069 001	Transistor 2SK215	
TR115,116	275 0068 002	Transistor 2SJ78	
TR117	275 0055 015	Transistor 2SK184C(GR)/(BL)	
TR118	275 0038 045	Transistor 2SK369(BL)/(GR)-C	
TR119	275 0055 015	Transistor 2SK184C(GR)/(BL)	
TR120	275 0038 045	Transistor 2SK369(BL)/(GR)-C	
TR121-124	273 0198 918	Transistor 2SC1815(BL)	
TR125-130	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR131,132	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR133,134	273 0187 932	Transistor 2SC2240(BL)/(GR)	
TR135	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR651,652	275 0042 905	Transistor 2SK373(BL)/(GR)	
TR653	274 0167 007	Transistor 2SD2437	
TR654	272 0128 008	Transistor 2SB1586	
D101-106	276 0049 914	Diode 1S2076A TE	
D107	276 0256 930	Zener Diode HZ16L-1TD	
D151-154	276 0049 914	Diode 1S2076A TE	
D651-654	276 0498 905	Zener Diode HZ24L-1TD	
D999	276 0049 914	Diode 1S2076A TE	
LE103-106	393 9454 902	LED TLR112	
RESISTORS GROUP			
VR101,102	211 6075 011	Adjust 100ohm (CERMET)	V06PB101
R001	241 2438 022	Carbon 2.2kohm 1/2W	RD05A2H222J RMG
R101	241 2447 084	Carbon 47kohm 1/2W	RD05A2H473J RMG
R102	241 2458 060	Carbon 1kohm 1/2W	RD05A2H102J RFA
R103,104	241 2457 003	Carbon 220ohm 1/2W	RD05A2H221J RFA
R105,106	241 2448 067	Carbon 100kohm 1/2W	RD05A2H104J RMG
R107,108	241 2445 031	Carbon 3kohm 1/2W	RD05A2H302J RMG
R109	241 2457 003	Carbon 220ohm 1/2W	RD05A2H221J RFA
R110,111	241 2447 068	Carbon 39kohm 1/2W	RD05A2H393J RMG
R112,113	241 2457 074	Carbon 430ohm 1/2W	RD05A2H431J RFA
R114,115	241 2438 077	Carbon 6.8kohm 1/2W	RD05A2H682J RMG
R116-119	241 2456 020	Carbon 100ohm 1/2W	RD05A2H101J RFA
R121	244 2059 028	Metal oxide film 1kohm 2W Non-burning type	RS14B3D102JNBF
R122	241 2456 020	Carbon 100ohm 1/2W	RD05A2H101J RFA
R123	244 2059 028	Metal oxide film 1kohm 2W Non-burning type	RS14B3D102JNBF
R124	241 2434 068	Carbon 1kohm 1/2W	RD05A2H102J RMG
R125	241 2448 067	Carbon 100kohm 1/2W	RD05A2H104J RMG
R126	241 2448 009	Carbon 56kohm 1/2W	RD05A2H563J RMG
R127	241 2457 087	Carbon 470ohm 1/2W	RD05A2H471J RFA
R128	241 2457 029	Carbon 270ohm 1/2W	RD05A2H271J RFA
R129-132	241 2458 060	Carbon 1kohm 1/2W	RD05A2H102J RFA
R133,134	241 2453 081	Carbon 10ohm 1/2W	RD05A2H100J RFA
R135	241 2455 021	Carbon 39ohm 1/2W	RD05A2H390J RFA
R136	241 2456 059	Carbon 130ohm 1/2W	RD05A2H131J RFA
R137	241 2456 004	Carbon 82ohm 1/2W	RD05A2H820J RFA
R138	241 2457 029	Carbon 270ohm 1/2W	RD05A2H271J RFA
R139	241 2456 004	Carbon 82ohm 1/2W	RD05A2H820J RFA
R140	241 2457 029	Carbon 270ohm 1/2W	RD05A2H271J RFA
R141,142	241 2447 084	Carbon 47kohm 1/2W	RD05A2H473J RMG

Ref. No.	Part No.	Part Name	Remarks
R142,144	244 2059 015	Metal oxide film 100ohm 2W Non-burning type	RS14B3D101JNBF
R151	241 2458 060	Carbon 1kohm 1/2W	RD05A2H102J RFA
R152	241 2444 003	Carbon 680ohm 1/2W	RD05A2H681J RFA
R153,154	241 2444 087	Carbon 1.5kohm 1/2W	RD05A2H152J RMG
CAPACITORS GROUP			
C101	255 6167 039	Film 47pF/125V	CQ09S2B470K B
C102	254 4356 755	Electrolytic 220μF/50V	CE04W1H221MC ARS
C103	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C104	254 4347 906	Electrolytic 10μF/50V	CE04W1H100MC ARSA
C105,106	255 6167 039	Film 47pF/125V	CQ09S2B470K B
C107,108	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C109,110	254 4356 742	Electrolytic 470μF/50V	CE04W1H471 ARS
C111,112	255 6181 002	Film 10pF/400V	CQ09S2G100KF B
C113-116	255 6181 015	Film 22pF/400V	CQ09S2G220KF B
C119	255 6167 039	Film 47pF/125V	CQ09S2B470K B
C120	255 6175 063	Film 220pF/125V	CQ09S2B221KF B
C122	255 6167 042	Film 470pF/125V	CQ09S2B471K B
C123	255 6181 002	Film 10pF/400V	CQ09S2G100KF B
C124	255 6181 015	Film 22pF/400V	CQ09S2G220KF B
C153,154	254 4356 742	Electrolytic 470μF/50V	CE04W1H471 ARS
C155,156	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C181,182	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C191,192	254 4373 735	Electrolytic 4.7μF/50V	CE04W1H4R7MC ARSA
C199	256 1054 001	Metallized 1μF/50V	CF93B1H105K GSG
C651,652	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C653,654	254 4373 000	Electrolytic 100μF/100V	CE04W2A101M ARS
C655,656	254 4373 735	Electrolytic 4.7μF/50V	CE04W1H4R7MC ARSA
C657,658	254 4461 705	Electrolytic 1000μF/50V	CE04W1H102MC ARS
CX001	255 6167 042	Film 470pF/125V	CQ09S2B471K B
CY001	255 6167 042	Film 470pF/125V	CQ09S2B471K B
OTHER PARTS			
RL101	214 0127 003	Relay (RY-12W)	
SW901	212 0350 007	Rotary Switch	
CN1A	205 0190 036	3P NH Connector Base	
CN2A	205 0190 036	3P NH Connector Base	
CN3A,3B	205 0190 036	3P NH Connector Base	
CN4A,4B	205 0277 030	3P EH Connector Base (RD)	
CN5A	205 0190 036	3P NH Connector Base	
CN6A	205 0190 036	3P NH Connector Base	
CN7A,7B	205 0653 049	4P VH Connector Base	
CN8B	205 0653 052	5P VH Connector Base	
CN13B	205 0233 058	5P EH Connector Base	

1U-2631D CASCADE UNIT

1U-2632D POWER AMP UNIT

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
TR325,326	275 0078 005	Transistor 2SK1297	GEN7527
TR327,328	275 0079 004	Transistor 2SJ217	GEN7527
TR401,402	273 0424 006	Transistor 2SC3012R/Q/P	GEN7527
TR403,404	271 0273 002	Transistor 2SA1232R/Q/P	GEN7527
TR405,406	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR407,408	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR409,410	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR411,412	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR413,414	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR415,416	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR417,418	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR419,420	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR421,422	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR423,424	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR425,426	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR427,428	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR429,430	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR431,432	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR433,434	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR435,436	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR437,438	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR439,440	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
TR441,442	273 0425 005	Transistor 2SC3858LB(G)(Z)	GEN7527
TR443,444	271 0130 006	Transistor 2SA1494LB(G)(Z)	GEN7527
RESISTORS GROUP			
R401-404	241 2455 047	Carbon 47ohm 1/2W	RD05A2H470J RFA
R405-444	241 2453 081	Carbon 10ohm 1/2W	RD05A2H100J RFA
R445-484	243 2043 028	Winding 0.15ohm 3W	RW99-3FR15K
R485-504	241 2458 002	Carbon 560ohm 1/2W	RD05A2H561J RFA
R511-514	241 2438 080	Carbon 10kohm 1/2W	RD05A2H103J RMG
CAPACITORS GROUP			
C401-404	255 6167 000	Film 0.01µF/125V	CQ09S2B103K B
C409-416	254 4356 768	Electrolytic 2200µF/50V	CE04W1H222MC ARS
C417-424	254 4347 764	Electrolytic 47µF/50V	CE04W1H470MC ARSA
C455,456	256 1034 979	Metallized 0.1µF/50V	CF93A1H104JT
OTHER PARTS			
CN301	205 0838 000	4P VH Connector Base (RD)	
CN302	205 0838 013	4P VH Connector Base (BU)	
CN303,304	205 0653 049	4P VH Connector Base	

Ref. No.	Part No.	Part Name	Remarks
SEMICONDUCTORS GROUP			
TR301,302	275 0045 012	Transistor 2SK389(GR)/(BL)/(V)	
TR303-306	273 0198 918	Transistor 2SC1815(BL)	
TR309,310	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR311-316	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR317,318	273 0281 906	Transistor 2SC2705(O)/(Y)	
TR319,320	274 0158 003	Transistor 2SD1763A(D)	
TR321,322	275 0069 001	Transistor 2SK215	
TR323,324	275 0068 002	Transistor 2SJ78	
TR329,330	271 0168 900	Transistor 2SA1145(O)/(Y)	
TR331,332	273 0281 906	Transistor 2SC2705(O)/(Y)	
D257,258	276 0049 914	Diode 1S2076A TE	
D301-304	276 0049 914	Diode 1S2076A TE	
D305-308	276 0566 002	Diode D1NK20	
D325-330	276 0049 914	Diode 1S2076A TE	
D351-354	276 0173 945	Zener Diode HZ6B-1TE	
D355,356	276 0236 947	Zener Diode HZ5A-2TE	
D359,360	276 0236 976	Zener Diode HZ5B-1TE	
LE301-312	393 9454 902	LED TLR112	
LE321,322	393 9454 902	LED TLR112	
RESISTORS GROUP			
VR303,304	211 6058 009	Adjust 470ohm	V10QB741
R301,302	241 2447 084	Carbon 47kohm 1/2W	RD05A2H473J RMG
R303,304	241 2458 060	Carbon 1kohm 1/2W	RD05A2H102J RFA
R305,306	241 2448 054	Carbon 91kohm 1/2W	RD05A2H913J RMG
R307-310	241 2458 060	Carbon 1kohm 1/2W	RD05A2H102J RFA
R311,312	241 2442 063	Carbon 130ohm 1/2W	RD05A2H131J RMG
R313,314	241 2450 097	Carbon 1Mohm 1/2W	RD05A2H105J RMG
R315,316	241 2438 039	Carbon 2.7kohm 1/2W	RD05A2H272J RMG
R317,318	241 2442 063	Carbon 130ohm 1/2W	RD05A2H131J RMG
R319,320	241 2457 087	Carbon 470ohm 1/2W	RD05A2H471J RFA
R321,322	241 2438 022	Carbon 2.2kohm 1/2W	RD05A2H222J RMG
R323-326	241 2458 002	Carbon 560ohm 1/2W	RD05A2H561J RFA
R327,328	241 2456 088	Carbon 100ohm 1/2W	RD05A2H101J RFA
R329-332	241 2458 044	Carbon 820ohm 1/2W	RD05A2H821J RFA
R333-336	241 2457 087	Carbon 470ohm 1/2W	RD05A2H471J RFA
R337,338	244 2058 029	Metal oxide film 1.5kohm 1W (Non-burning type)	RS14B3A152JNBS
R339,340	244 2058 003	Metal oxide film 1kohm 1W (Non-burning type)	RS14B3A102JNBS
R341-344	241 2458 002	Carbon 560ohm 1/2W	RD05A2H561J RFA
R345-348	241 2456 020	Carbon 180ohm 1/2W	RD05A2H181J RFA
R349-356	244 2059 002	Metal oxide film 22ohm 2W (Non-burning type)	RS14B3D220JNBF
R357,358	241 2447 042	Carbon 33kohm 1/2W	RD05A2H333J RMG
R359,360	244 2059 002	Metal oxide film 22ohm 2W (Non-burning type)	RS14B3D220JNBF
R371,372	241 2438 022	Carbon 2.2kohm 1/2W	RD05A2H222J RMG
R373,374	241 2448 067	Carbon 100kohm 1/2W	RD05A2H104J RMG
R373,374	241 2458 060	Carbon 1kohm 1/2W	RD05A2H102J RFA
CAPACITORS GROUP			
C301,302	254 4347 706	Electrolytic 10µF/50V	CE04W1H100MC ARSA
C303,304	255 6167 000	Film 0.01µF/125V	CQ09S2B103K B
C305-308	254 4356 742	Electrolytic 470µF/50V	CE04W1H471 ARS
C313-316	255 6167 000	Film 0.01µF/125V	CQ09S2B103K B

1U-2633D P.S & CONTROL UNIT

Ref. No.	Part No.	Part Name	Remarks
C317,318	255 6175 063	Film 220pF/125V	CQ09S2B221KF B
C319,320	255 6175 076	Film 0.0015μF/125V	CQ09S2B152KF B
C321,322	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C323-326	254 4347 722	Electrolytic 22μF/50V	CE04W1H220MC ARSA
C327,328	255 6181 002	Film 10pF/400V	CQ09S2G100KF B
C329-332	255 6175 034	Film 100pF/125V	CQ09S2B101KF B
C335,336	254 4356 742	Electrolytic 470μF/50V	CE04W1H471 ARS
C339,340	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C341,342	255 6167 013	Film 0.0068μF/125V	CQ09S2B682K B
C343,344	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C345,346	254 3060 738	Electrolytic 100μF/50V(Bipolar)	CE04W1H101MBPCAWF
C347-350	255 6167 000	Film 0.01μF/125V	CQ09S2B103K B
C353,354	255 6175 047	Film 270pF/125V	CQ09S2B271KF B
C355-358	255 6167 000	Film 0.01μF/125V ?	CQ09S2B103K B
C355-358	254 4356 001	Electrolytic 10μF/50V ?	CE04W1H100 ARS

OTHER PARTS

Ref. No.	Part No.	Part Name	Remarks
RL301,302	214 0041 008	Relay	
P301,302	279 0034 067	Posistor (PTH9M04BB222TS2F333)	
CN3	205 0185 038	3P Wire Holder	3P WIRE HOLDER
CN3A,3B,3D	205 0185 038	3P Wire Holder	
CN5B	205 0190 036	3P NH Connector Base	
CN6B	205 0190 036	3P NH Connector Base	
CN9B	205 0838 000	4P VH Connector Base (RD)	
CN10B	205 0653 049	4P VH Connector Base	
CN11B	205 0277 069	6P EH Connector Base (RD)	
CN12B	205 0233 061	6P EH Connector Base	
CN17A	205 0277 030	3P EH Connector Base (RD)	
CN18A	205 0233 032	3P EH Connector Base	
CN301A	205 0838 000	4P VH Connector Base (RD)	
CN302A	205 0838 013	4P VH Connector Base (BU)	
CN303A	205 0653 049	4P VH Connector Base	
CN304A	205 0653 049	4P VH Connector Base	

Ref. No.	Part No.	Part Name	Remarks	
SEMICONDUCTORS GROUP				
TR601,602	275 0042 002	Transistor 2SK373 (Y)		
TR605	275 0042 002	Transistor 2SK373 (Y)		
TR607	275 0042 002	Transistor 2SK373 (Y)		
TR608	275 0058 009	Transistor 2SJ40 (C)/(D)		
TR701	273 0253 015	Transistor 2SC2878(A)/(B)		
TR702	273 0198 015	Transistor 2SC1815(BL)		
TR703,704	271 0102 021	Transistor 2SA1015(GR)		
TR705-707	273 0198 015	Transistor 2SC1815(BL)		
TR708	271 0102 021	Transistor 2SA1015(GR)		
TR709,710	273 0198 015	Transistor 2SC1815(BL)		
TR711	269 0025 901	Transistor RN1202(10K-10K)T		
TR712,713	273 0198 015	Transistor 2SC1815(BL)		
D001,002	276 0049 011	Diode 1S2076A		Built in Resistor
D051-054	276 0370 007	Diode 1SS106		
D055-058	276 0536 003	Zener Diode HZ2B-1		
D502	276 0348 000	Diode S2K20F		
D504	276 0348 000	Diode S2K20F		
D551,552	276 0049 011	Diode 1S2076A		
D601	276 0348 000	Diode S2K20F		
D603	276 0348 000	Diode S2K20F		
D605	276 0051 054	Zener Diode HZ7A-1		
D606	276 0498 002	Zener Diode HZ24L-1		
D701-705	276 0348 000	Diode S2K20F		
D708	276 0392 001	Zener Diode HZ15L-1		
D709-714	276 0049 011	Diode 1S2076A		
D715	276 0392 001	Zener Diode HZ15L-1		
D716	279 0016 001	Thyristor SFOR1A42		
D717	276 0347 001	Zener Diode HZ12LA-1		
D718	276 0158 030	Zener Diode HZ4B-1		
D719-722	276 0049 011	Diode 1S2076A		
D724	276 0049 011	Diode 1S2076A		
D725	276 0348 000	Diode S2K20F		
D726	276 0049 011	Diode 1S2076A		
D751-754	276 0049 011	Diode 1S2076A		
LE001	393 9523 914	LED SEL-4414E		
LE002	393 9523 927	LED SEL-4814A		
LE003	393 9523 901	LED SEL-4214S		

RESISTORS GROUP (not included Carbon Film ±5% 1/4W type)

Ref. No.	Part No.	Part Name	Remarks
VR601	211 6075 037	Adjust 10kohm (CERMET)	V06QPB103
R001,002	243 2079 021	Winding 33ohm 10W	RW78A4A330K=(UL)
R051-054	241 2438 080	Carbon 10kohm 1/2W	RD05A2H103J RMG
R055-058	241 2456 020	Carbon 100ohm 1/2W	RD05A2H101J RFA
R551,552	244 2059 002	Metal oxide film 22ohm 2W (Non-burning type)	RS14B3D220JNBF
R553	244 2059 044	Metal oxide film 33ohm 2W (Non-burning type)	RS14B3D330JNBF
R554,555	244 2059 002	Metal oxide film 22ohm 2W (Non-burning type)	RS14B3D220JNBF
R556,557	244 2059 044	Metal oxide film 33ohm 2W (Non-burning type)	RS14B3D330JNBF
R601	241 2447 055	Carbon 36kohm 1/2W	RD05A2H363J RMG
R602	241 2447 084	Carbon 47kohm 1/2W	RD05A2H473J RMG
R603	241 2438 035	Carbon 2.7kohm 1/2W	RD05A2H272J RMG
R604	241 2447 084	Carbon 47kohm 1/2W	RD05A2H473J RMG
R701,702	244 0031 022	Metal oxide film 150ohm 1W (Non-burning type)	RS14B3A151JNBF
R715,716	241 2434 068	Carbon 1kohm 1/2W	RD05A2H102J RMG
R717	241 2450 097	Carbon 1Mohm 1/2W	RD05A2H105J RMG

Ref. No.	Part No.	Part Name	Remarks
R718	244 0045 021	Metal oxide film 2.2kohm 1W (Non-burning type)	RS14B3A222JNBF
R723	244 0045 021	Metal oxide film 2.2kohm 1W (Non-burning type)	RS14B3A222JNBF
R751	244 2058 003	Carbon 100ohm 1/4W (Non-burning type)	RD14B2E101JNBST
CAPACITORS GROUP			
C001	256 8023 006	Metalized 0.01 μ /250VAC	CF93A2EAC103M
C003	256 8023 006	Metalized 0.01 μ /250VAC	CF93A2EAC103M
C551-553	256 1055 712	Metalized 0.22 μ /100V	CF93B2A224KC GUG
C601,602	254 4373 013	Electrolytic 1000 μ /100V	CE04W2A102M ARS
C603,604	254 4290 073	Electrolytic 1000 μ /80V	CE04W1K102M AWF
C605,606	255 6167 000	Film 0.01 μ /125V	CQ09S2B103K B
C607	254 4347 735	Electrolytic 4.7 μ /50V	CE04W1H4R7MC ARSA
C609,610	255 6175 034	Film 100pF/125V	CQ09S2B101KF B
C611,612	255 6167 000	Film 0.01 μ /125V	CQ09S2B103K B
C615,616	254 4356 768	Electrolytic 2200 μ /50V	CE04W1H222MC ARS
C617	256 8023 006	Metalized 0.01 μ /250VAC	CF93A2EAC103M
C701	255 6167 000	Film 0.01 μ /125V	CQ09S2B103K B
C702	254 4432 721	Electrolytic 470 μ /50V	CE04W1H471MC ARS
C703	256 1035 091	Metalized 1 μ /50V	CF93A1H105J
C704	254 4432 718	Electrolytic 100 μ /50V	CE04W1H101MC ARS
C705	254 4432 721	Electrolytic 470 μ /50V	CE04W1H471MC ARS
C706	254 4432 718	Electrolytic 100 μ /50V	CE04W1H101MC ARS
C707,708	254 4432 734	Electrolytic 22 μ /50V	CE04W1H220MC ARS
C709	255 1265 033	Film 0.01 μ /50V	CQ93M1H103J B
C710	254 4432 734	Electrolytic 22 μ /50V	CE04W1H220MC ARS
C712,713	254 4447 004	Electrolytic 2.2 μ /50V(Bipolar)	CE04W1H2R2MBP
C714,715	254 4432 718	Electrolytic 100 μ /50V	CE04W1H101MC ARS
C751,752	254 3060 741	Electrolytic 220 μ /50V(Bipolar)	CE04W1H221MBPC AWF
OTHER PARTS			
RL001,002	214 0169 003	Relay (TV-15)	
CN10A	205 0653 049	4P VH Connector Base	
CN11A	205 0277 069	6P EH Connector Base (RD)	
CN12A	205 0233 061	6P EH Connector Base	
CN13A	205 0233 058	5P EH Connector Base	
CN14A	205 0276 060	6P EH Connector Base (BU)	
CN14B	205 0280 069	6P EH Connector Base (BU)	
CN17B	205 0277 030	3P EH Connector Base (RD)	
CN18B	205 0233 032	3P EH Connector Base	
CN21A,21B	205 0233 032	3P EH Connector Base	
CN30A	205 0241 037	3P Connector Pin ASS'Y	
CN40A,40B	205 0190 049	4P NH Connector Base	
CN70A	205 0653 036	3P VH Connector Base	
CN8A	205 0653 052	5P VH Connector Base	
CN9A	205 0838 000	4P VH Connector Base (RD)	

PARTS LIST OF EXPLODED VIEW

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks
1	411 9166 124	BASE CHASSIS(KK)		103	471 3830 000	SCREW 3 x 6 CBS-CU	
2	412 9364 005	B.C.BRACKET(R)		104	471 3302 020	SCREW 3 x 5 CBS	
3	412 9365 004	B.C.BRACKET(L)		105	471 3303 029	SCREW 3 x 6 CBS	
4	233 9657 009	POWER TRASFORMER	Multi-Voltage, U.S.A.	106			
	233 9658 008	POWER TRASFORMER	Europe	107	473 7005 044	SCREW 3 x 20 CBTS(S)-Z	
5	233 6064 006	POWER TRASFORMER	Multi-Voltage, U.S.A.	108	473 7012 008	SCREW 3 x 10 CFTS(S)-N	
	233 6089 007	POWER TRASFORMER	Europe	109	473 7003 017	SCREW 3 x 8 CFTS(S)-B	
6	105 9232 200	REAR PANEL		110	473 8007 025	CUP SCREW 3 x 8	
7	412 9348 102	F.P.BRACKET(B)		111	473 8007 038	CUP SCREW 3 x 14	
8	412 9370 002	BRACKET(B)		112	471 3404 025	SCREW 4 x 8 CBS	
9	105 9233 115	REAR PLATE	Multi-Voltage, U.S.A.	113	473 7007 000	SCREW 4 x 8 CBTS(S)-B	
	105 9233 128	REAR PLATE	Europe	114	471 3405 024	SCREW 4 x 10 CBS(B)	
10	412 3774 002	P.W.B.BRACKET(B)		115	473 7007 013	SCREW 4 x 10 CBTS(S)-B	
11	443 0900 116	P.W.B.SUPPORT		116	471 3409 020	SCREW 4 x 16 CBS-B	
12	412 2814 002	CARD SPACER(L=8)		117	471 3410 022	SCREW 4 x 20 CBS(MFZNB)	
13	412 3781 008	P.W.B.BRACKET(C)		118	471 3414 028	SCREW 4 x 35 CBS(B)	
14	144 9175 003	FRONT PANEL ASS'Y		119	474 4317 000	SCREW 4 x 10 HSHB-AU	
15	144 9178 000	FRONT PANEL (SIDE)		120	474 4317 013	SCREW 4 x 15 HSHB-AU	
16	412 9347 006	F.P.BRACKET(A)		121	474 4317 026	SCREW 4 x 20 HSHB-AU	
17	412 9362 007	BRACKET(A)		122	471 3508 028	SCREW 5 x 14 CBS-B	
18	113 9273 008	PUSH BUTTON ASS'Y		123	475 2003 034	SPRING WASHER 3 SW	
19	463 9071 008	SPRING		124	475 2005 003	SPRING WASHER 5 SW ZN	
20	476 1003 009	3 E RING		125	475 6016 001	NUT 10 N	
21	412 9369 000	POWER SWITCH BRACKET B		126	475 2008 000	SPRING WASHER 10 SW	
22	144 1161 031	LED RING		127	475 1009 000	WASHER 10 W	
23	143 9107 007	LENS (INPUT)		128	475 3201 000	3 TWB	
24	412 9361 008	LED BRACKET	XLR-3-32-A176	129			
25	417 9075 302	POWER RADIATOR	XLR-3-31-A176	130			
26	417 9074 109	CU PLATE		200	212 4686 007	POWER SWITCH (TV-5)	
27	412 3773 003	CU PLATE (TR)		201	1U-2633 D-2	LED UNIT	
28	412 3772 004	P.W.B.BRACKET		202	212 9569 006	VOLTAGE SELECTOR	Multi-Voltage, U.S.A.
29	412 3786 003	CU PLATE (A)		203	275 0077 006	TRANSISTOR (2SK1382)	TR051-054
30	104 9034 007	FOOT BASE A		204	417 9073 003	RADIATOR	
31	104 0267 006	FOOT ASS'Y		205	272 0128 008	TRANSISTOR (2SB1586)	TR604
32	104 9035 006	FOOT BASE B		206	417 9073 003	RADIATOR	
33	412 9360 300	EARTH PLATE(COND)		207	274 0167 007	TRANSISTOR (2SD2437)	TR603
34	412 9363 200	EARTH PLATE(COND-B)		208	417 9073 003	RADIATOR	
35	206 2115 009	AC CORD WITH PLUG	Multi-Voltage, Europe	209	214 0169 003	RELAY (TV-15)	
	206 2114 000	AC CORD WITH PLUG	U.S.A.	210	254 6175 002	CONDENSER(CE37W1J303M)	C051,052
36	412 9355 205	CORD BRACKET		211	254 6176 001	CONDENSER(CE37W1H202M)	C053,054
37	144 9180 205	SIDE COVER		212	204 8441 001	1P PIN JACK	J001
38	445 0048 003	CORD HOLDER(L76)		213	205 0839 009	2P SPEAKER TERMINAL(WT)	
39	105 9234 208	BOTTOM COVER		214	1U-2630 D-3	SWITCH UNIT	
40	102 9040 105	TRANS COVER		215	205 0837 001	3P CANNON CONNECTOR	J002
41	144 9183 008	RADIATOR PLATE(SIDE)		216	1U-2633 D-3	SPEAKER RELAY UNIT	
42	144 9183 011	RADIATOR PLATE(SIDE)		217	1U-2630 D-2	REGULATOR UNIT	
43	411 9117 107	RADIATOR COVER		218	1U-2630 D-1	BALANCE AMP UNIT	
44	411 9118 106	RADIATOR COVER (L)		219	415 9044 007	INSULATING SHEET	
45	461 0639 061	RUBBER SHEET		220	273 0425 005	TRANSISTOR (2SC3858LB)	TR405,406,409,410,413, 414,417,418,421,422, 425,426,429,430,433, 434,437,438,441,442
46	102 9041 104	TOP PLATE					
47	144 9179 009	TRANS PLATE (TOP)		221	271 0130 006	TRANSISTOR (2SA1494LB)	TR407,408,411,412,415, 416,419,420,423,424, 427,428,431,432,435, 436,439,440,443,444
48	144 9181 000	CONDENSER PLATE					
49	144 9182 009	RADIATOR PLATE(TOP)		222	275 0078 005	TRANSISTOR (2SK1295)	TR325,326
50	144 9174 004	SIDE ESCUTCHEON		223	275 0079 004	TRANSISTOR (2SJ217)	TR327,328
51	461 0639 074	RUBBER SHEET		224	273 0424 006	TRANSISTOR (2SC3012)	TR401,402
52	112 9099 001	BUTTON ASS'Y		225	271 0273 002	TRANSISTOR (2SA1232)	TR403,404
101	473 7017 016	SCREW 3 x 8 CBTS(S)-C					
102	471 3830 013	SCREW 3 x 8 CBS-CU					

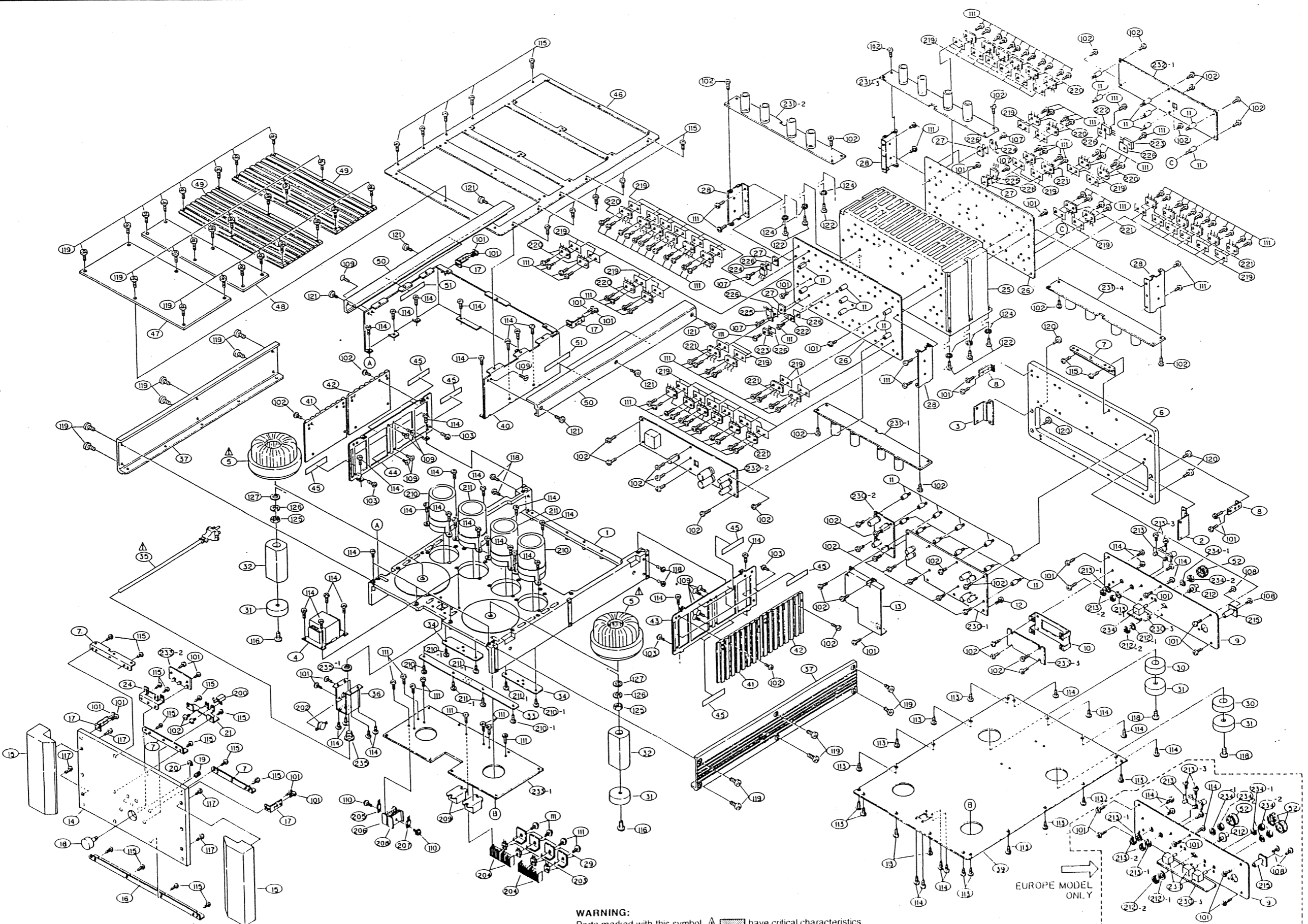
PARTS LIST OF PACKING & ACCESSORIES

Ref. No.	Part No.	Part Name	Remarks	Ref. No.	Part No.	Part Name	Remarks	Q'ty
226	415 0234 007	INSULATING SHEET			504 0055 052	Cabinet Sheet		1
227	1U-2632 D-1	POWER(+) UNIT			503 9245 006	Cushion (Top)		1
228	1U-2632 D-2	POWER(-) UNIT			503 9244 007	Cushion (Bottom)		1
229	1U-2631 D-1	N(+) UNIT			509 9117 006	Wooden Box		1
230	1U-2631 D-2	P(+) UNIT						
231	1U-2631 D-3	N(-) UNIT			505 0038 030	Poly Cover		1
232	1U-2631 D-4	P(-) UNIT			511 9350 002	Instruction Manual		1
233	1U-2633 D-1	PS & CONTROL UNIT						
234					515 0623 109	DAI Warranty Home	U.S.A. Only	1
235								

Parts marked with "▲" and/shading have special characteristics important to safety.
Be sure to use the specified parts for replacement.
Part indicated with the mark "●" are not always in stock and possibly to take a long period of time

EXPLODED VIEW

1 2 3 4 5 6 7 8



A

B

C

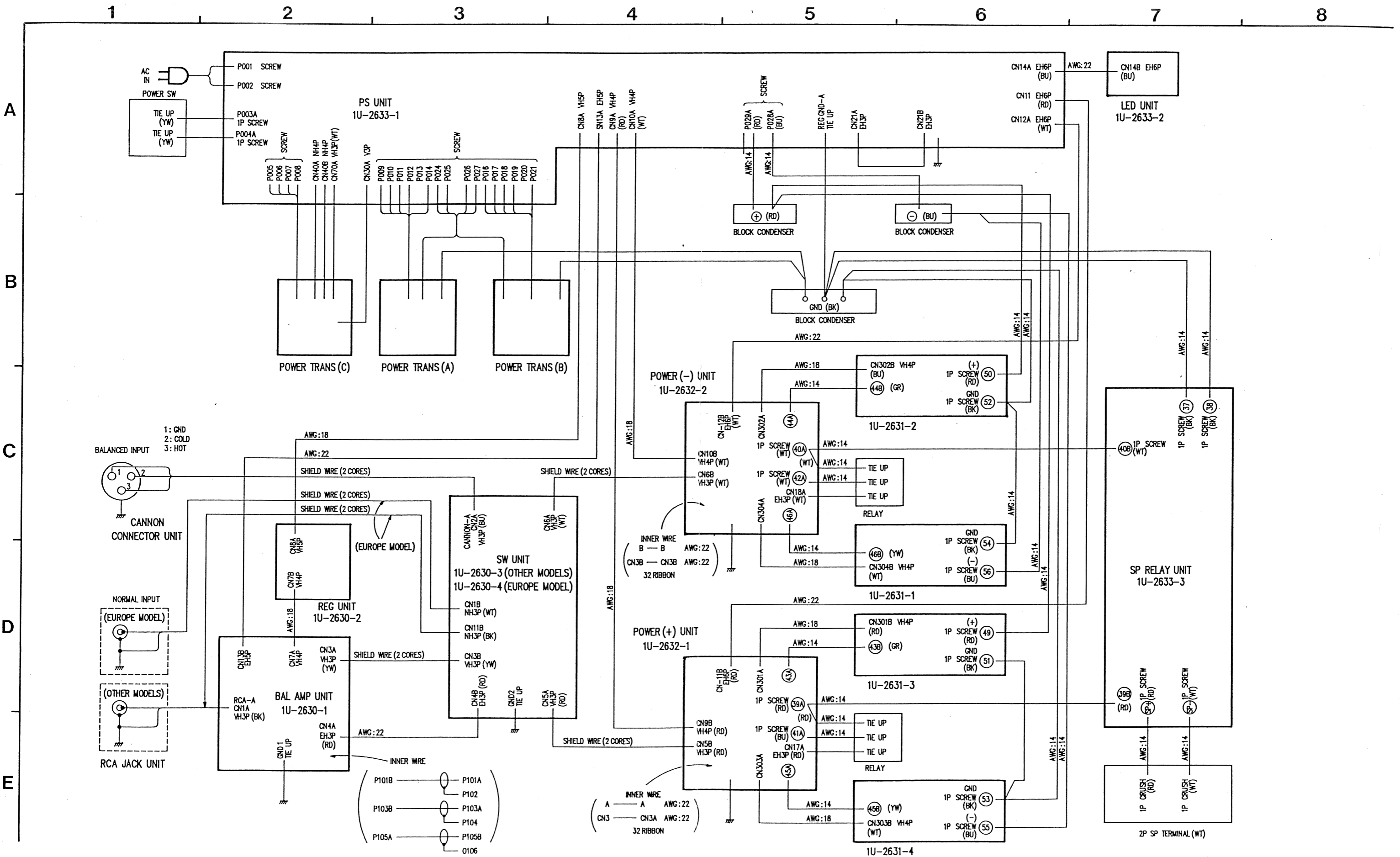
D

E

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

EUROPE MODEL ONLY

WIRING DIAGRAM



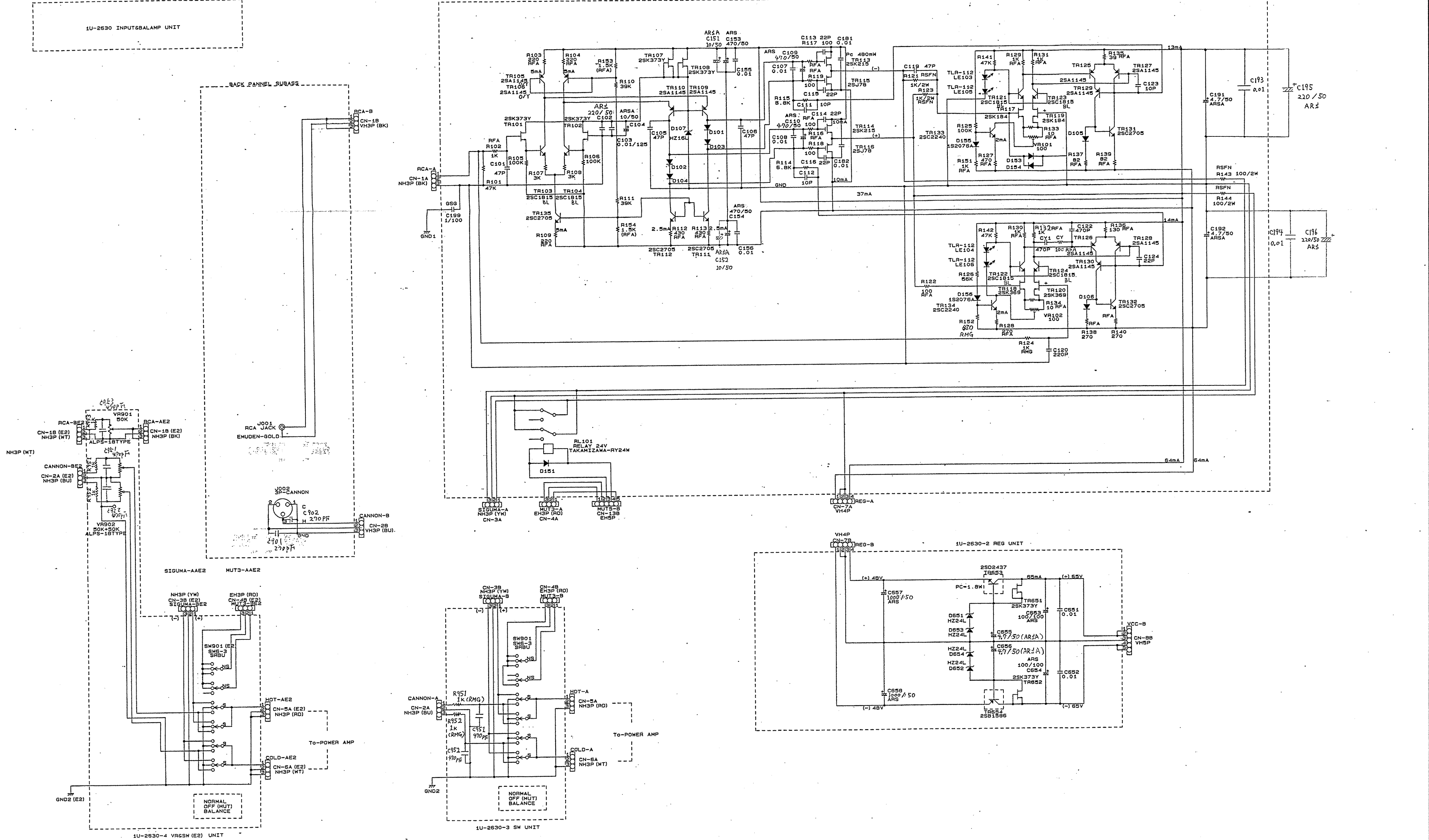
1U-2630 INPUT/BALAMP UNIT

1U-2630-1 BAL AMP UNIT

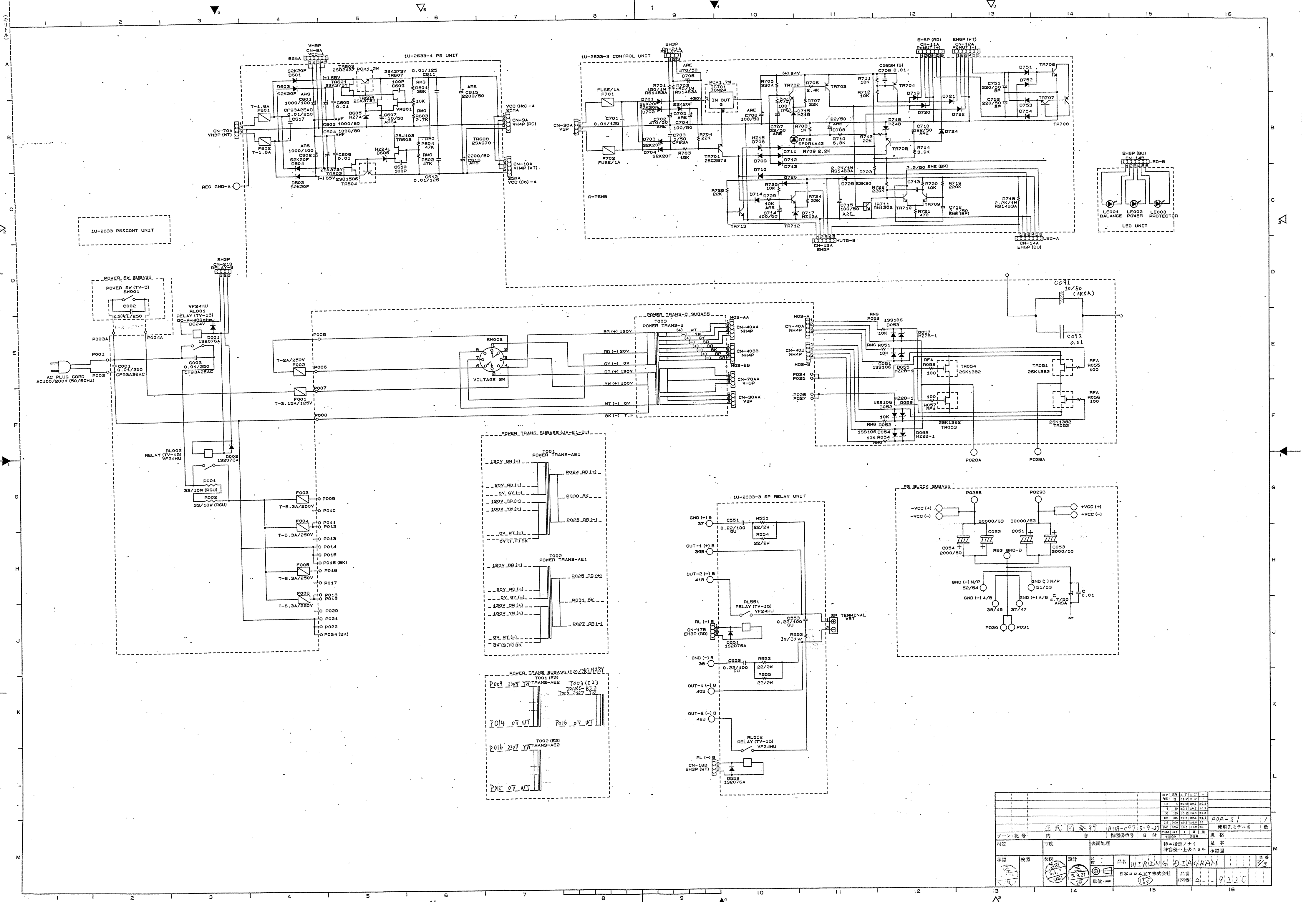
1U-2630-2 REG UNIT

1U-2630-4 VRG5W (E2) UNIT

1U-2630-3 SW UNIT



AV	AW	AX	AY	AZ	AA	AB	AC	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM
正式国器行 A118-02 5.9.22 内 容 指図書番号 日付 規格 材質 寸度 表面処理 特ニ指定ノイ 見本 許容差ノ上表ニ準ル 承認 承認 機種 製図 設計 品名 WZK-100 日本コロムビア株式会社 品番 規格 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 単位 9220																	



品名	WIRING DIAGRAM	数量	33
承認	検閲	設計	作成
材料	寸法	表面処理	特ニ指定ノイ
ゾーン記号	内容	指図書番号	日付
正式図発行	A18-C9755-9-2	使用先モデル名	POA-S1
特ニ指定ノイ	許容差ノ上表ニヨル	見本	承認
承認	検閲	設計	作成
品名	WIRING DIAGRAM	品番	A-922C
単位	mm	図番	

