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DENON

Hi-Fi Monaural Power Amplifier

SERVICE MANUAL

MODEL POA-6600

SOLID STATE MONAURAL POWER AMPLIFIER



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NIPPON COLUMBIA CO., LTD.

SPECIFICATIONS

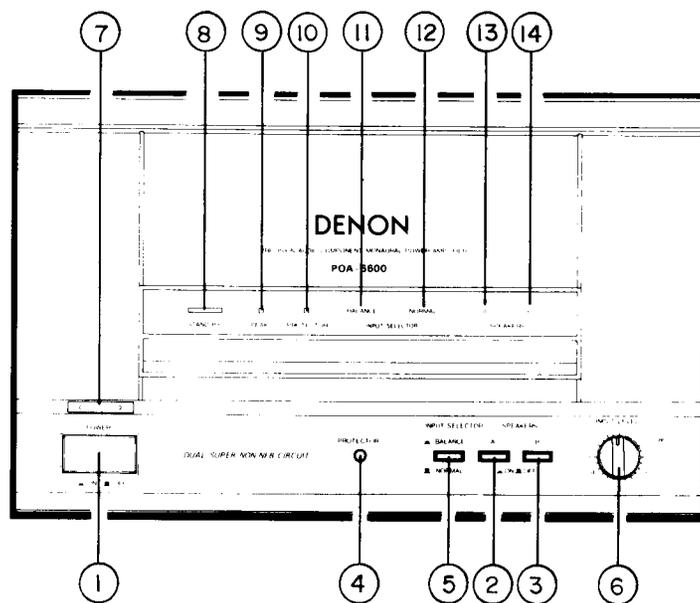
Rated output power:	250 W min., RMS into 8 ohms from 20 Hz to 20 kHz with no more than 0.02% total harmonic distortion 450 W (4 ohm, DIN 1 kHz)	S/N ratio:	123 dB (IHF, A-weighting)
Dynamic power:	650 W (at 4 ohm) 1100 W (at 1 ohm)	Slew rate:	± 500 V/ μ sec
Total harmonic distortion:	Less than 0.002% (-3 dB at rated output, 8 ohm)	Output terminals:	Speakers A or B 4 ohm ~ 16 ohm A + B 8 ohm ~ 16 ohm
Intermodulation distortion:	Less than 0.002% (60 Hz/7 kHz: 4/1 at rated output, 8 ohms)	Power supply:	AC 220 V/50 Hz (for European countries) AC 240 V/50 Hz (for U.K. and Australia) AC 120 V/60 Hz (for U.S.A. and Canada) AC 110/120/220/240 V/50, 60 Hz [for Asia (Multiple)]
Power band width:	5 Hz - 80 kHz (8 ohms, THD 0.02%)	Power consumption:	7 A (for U.S.A. and Canada) 350 W (for IEC) 275 W (for Multiple)
Frequency response:	1 Hz - 300 kHz + 0, -3 dB (at 1 W)	Dimensions:	310 (W) x 207 (H) x 456 (D) mm (Including control knobs and feet)
Input sensitivity:	1 V (Normal in) 1 V (Balance in)	Weight:	15.6 kg
Input impedance:	25 k ohms (Normal in) 10 k ohms (Balance in)		
Output impedance:	0.1 ohm (1 kHz)		

* Design and specifications are subject to change without prior notice.

NOTE: The following codes correspond to the appropriate models.
E2 for Europe, EU for U.S.A., EA for Australia, EK for U.K.
E1 for Asia and EC for Canada.
This Service Manual is prepared based on EU Black Version.

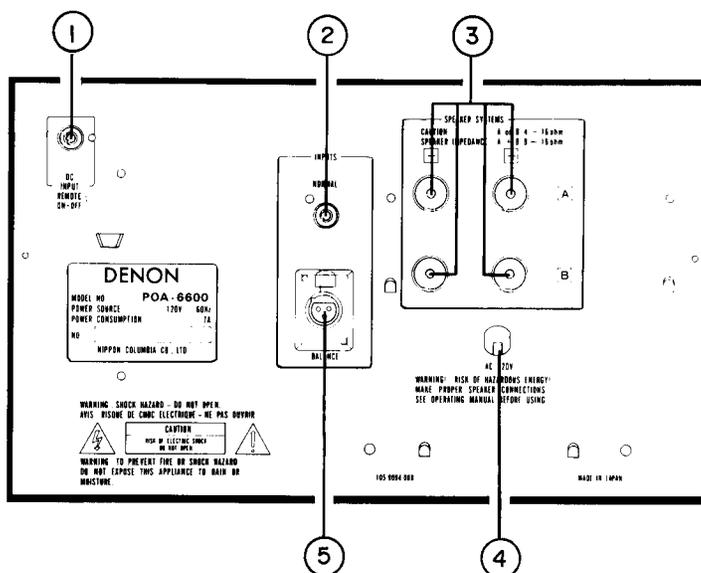
NAME OF EACH PART

• FRONT PANEL



- | | | |
|------------------------------------------|--------------|---------------|
| ① POWER (Power Switch) | ⑧ STAND BY | } (Indicator) |
| ② SPEAKERS-A (Speaker Select Switch-A) | ⑨ PEAK | |
| ③ SPEAKERS-B (Speaker Select Switch-B) | ⑩ PROTECTOR | |
| ④ PROTECTOR (Non-locking Switch) | ⑪ BALANCE | |
| ⑤ INPUT SELECTOR (Input Selector Switch) | ⑫ NORMAL | |
| ⑥ INPUT LEVEL (Input Level Control) | ⑬ SPEAKERS-A | |
| ⑦ POWER INDICATOR | ⑭ SPEAKERS-B | |

• BACK PANEL



- ① DC INPUT TERMINAL
- ② NORMAL (Normal Input Jack)
- ③ SPEAKER SYSTEMS (Speaker Terminals)
- ④ AC CORD (Power Cord)
- ⑤ BALANCE

CONNECTIONS

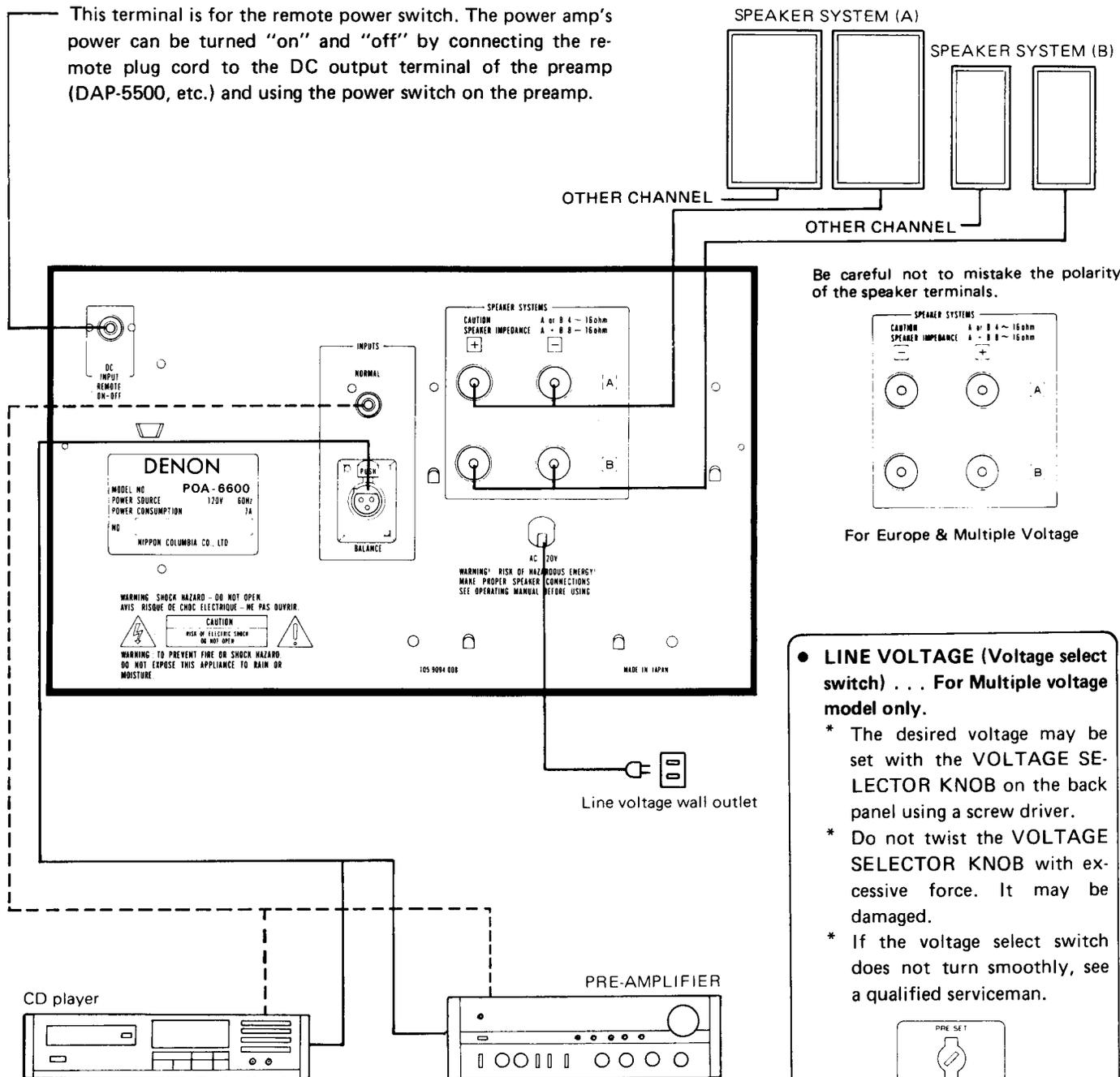
Notes on Connection

- Do not plug the power supply cord into the wall socket, until all the connections are complete.
- Plug the pins in securely. An incomplete connection will cause noise generation.
- Binding the pin plug to the power supply cord, or setting the pin cord close to the power supply transformer will cause humming or noise, and should be avoided.

Connection to the speaker system

Connect the speaker system for the left channel (the left side as viewed facing the front) to the L speaker terminal on the back panel, and the speaker system for the right channel into the R terminal. There are two sets of **SPEAKERS** terminals. If only one speaker system is to be used, connect it to the **SYSTEM (A)** terminals.

This terminal is for the remote power switch. The power amp's power can be turned "on" and "off" by connecting the remote plug cord to the DC output terminal of the preamp (DAP-5500, etc.) and using the power switch on the preamp.



• LINE VOLTAGE (Voltage select switch) . . . For Multiple voltage model only.

- * The desired voltage may be set with the **VOLTAGE SELECTOR KNOB** on the back panel using a screw driver.
- * Do not twist the **VOLTAGE SELECTOR KNOB** with excessive force. It may be damaged.
- * If the voltage select switch does not turn smoothly, see a qualified serviceman.

● **Connection to the speaker system**

- When connecting the speaker terminals to the speaker systems, make certain to connect the polarities correctly (+ to + and - to -). If the polarities are incorrect when the two are connected, the center area of the sound will be lacking, the positions of the musical instruments will not be clear, and the stereo directional sensitivity will be impaired.
- During connection, be careful that the center wires in the speaker cords do not protrude from the terminals to contact any other terminal, and that the central wires in the separate speaker cords do not contact each other.

● **Speaker impedance**

- When the A and B terminal sets are to be used separately, the speakers that are to be connected should have a nominal impedance of 4 to 16 ohm.
- When the two sets (A + B) are to be used at the same time, use of speakers whose impedance is outside the range from 8 to 16 ohm will result in malfunction. Be careful not to let this happen.
- Speakers with a lower impedance may cause the protective circuitry to operate.

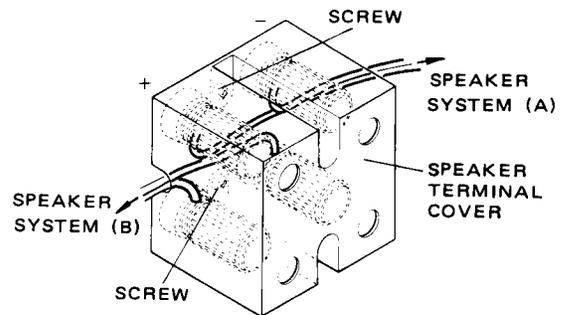
Models for the U.S.A. and Canada only. (Case of UL standardized articles)

WARNING!

This amplifier produces a large power output at the speaker terminals, which means that a dangerous amount of energy is generated and that there is the danger of electric shock. Please perform the speaker cord connections correctly as follows.

(Making connections that differ from the specified method may give rise to a shock hazard.)

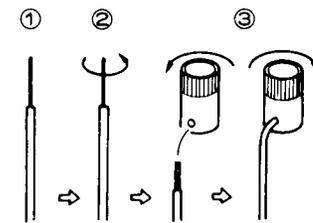
- 1) For the speaker connection cord, use a cord made with non-combustible insulation material with a VW-1 rating or a cord of the SPT-1 type or one with higher flexibility.
- 2) Use a screwdriver to take the screws holding the speaker terminal cover out.
- 3) Connect the speaker cord specified in 1) to the speaker terminals.
- 4) Tie the speaker cord, then pass it through the cutout hole in the speaker terminal cover.
- 5) Install the speaker terminal cover removed in 2).



Models for destinations other than the U.S.A. and Canada.

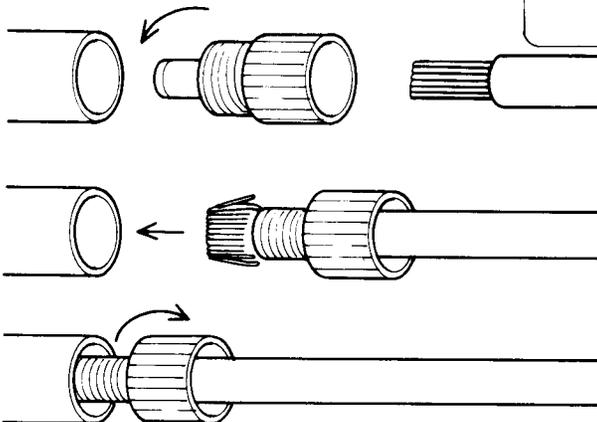
● **For regular cords**

1. Remove the insulation from the end of each cord.
2. Twist the center wire.
3. Turn the speaker terminal to loosen it, insert the center wire of the cord, and then tighten the terminal to hold the wire in place.



● **For extra-large cords**

1. Remove the insulation from the end of the cord. Loosen and remove the end of the speaker terminal.
2. Insert the center wire, and bend back the wire.
3. Insert the cord in the terminal, and turn the terminal to the right to tighten it.



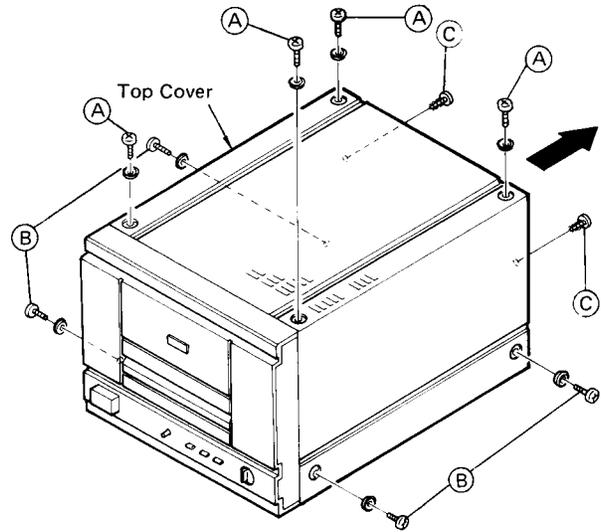
Note:

The knob on this speaker terminal can be removed from the Amplifier. Be careful not to lose these knobs, or mix up the left and right sides or polarities. Follow the indication provided on the back panel for proper handling.

REMOVAL OF EACH SECTION

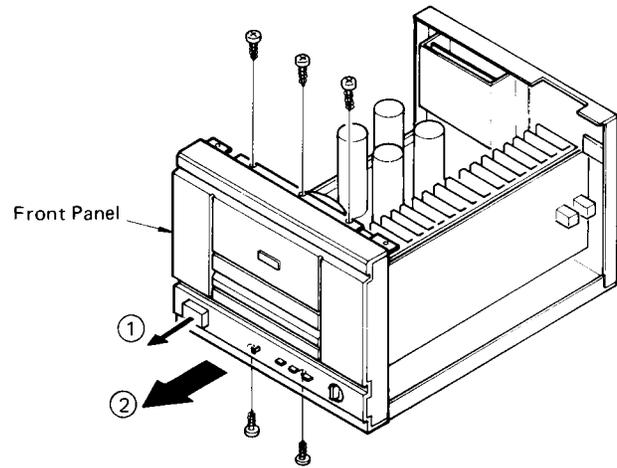
1. Top Cover

Remove 4 screws with washers (A) from the both side, 4 screws with washers (B) from left and right side and 2 screws (C) from the backside and detach the top cover in the direction arrow shows.



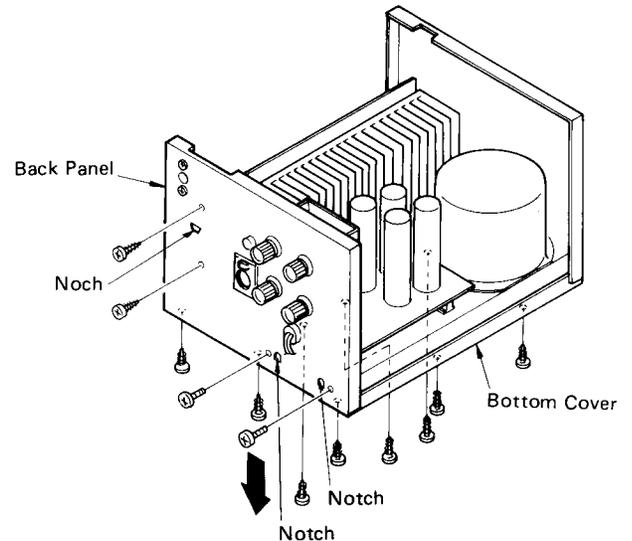
2. Front Panel

- 1) Pull out the Power Knob picking up by hand. (As the power switch is easily broken).
- 2) Unfasten 2 screws from the bottom, 3 screws from the top, and dismantle the Front Panel in the direction arrow shows.



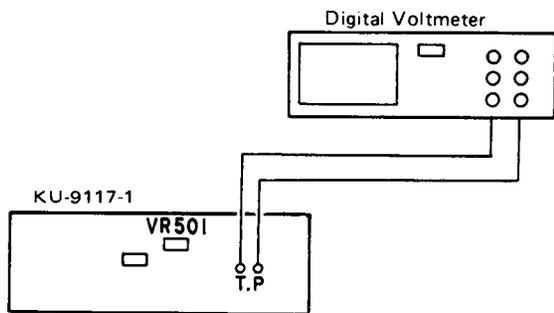
3. Back Panel

Remove 8 screws from the bottom, and take out the Bottom Cover. Then remove 4 screws from the back panel, and detach the Back Panel out of the 3 notches in the direction as arrow shows.



METHOD OF ADJUSTMENTS

1. Adjustment of Idle Current (KU9117-1)

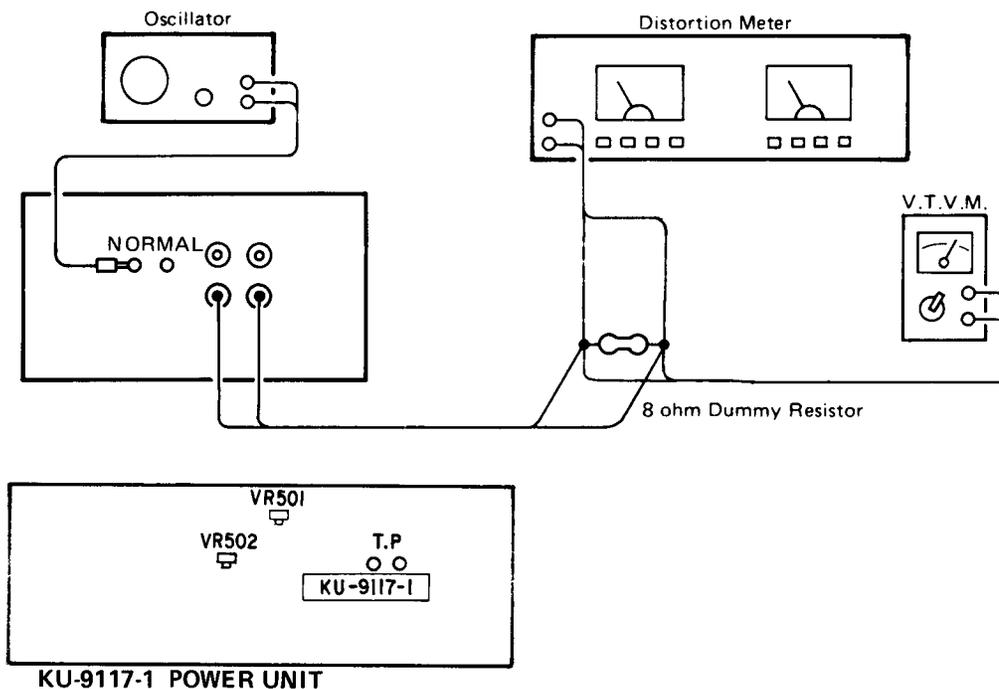


- (1) Connect a digital voltmeter to the test point.
- (2) Turn the unit power on.
- (3) Wait 2 ~ 3 minutes for warm-up, rotate VR501 and adjust voltage value on the meter to $8\text{ mV} \pm 1\text{ mV}$.

2. Adjustment of Neutral Point Voltage

- (1) Connect a digital voltmeter to the SPEAKER terminal.
- (2) Turn the unit power on.
- (3) Turn the LEVEL controls on the back panel fully clockwise (maximum).
- (4) Confirm the voltage on the meter indicates within $\pm 100\text{ mV}$ value.

3. Adjustment of Distortion Factor (KU-9117-1)



- (1) Set an oscillator output to "NORMAL" and feed it.

Each speaker output to connect — 8 ohm dummy resistor
 — Distortion meter
 — V.T.V.M.

- (2) Turn the unit power on, and set the LEVEL controls to maximum.
- (3) In the first place confirm that there's no dropping of supply voltage, then set the oscillator frequency to 20 kHz and adjust output of oscillator to obtain 31.6V for speaker output.
- (4) Adjust VR502 on the KU-9117-1 for minimum distortion. Distortion factor must be no more than 0.005% at this time.