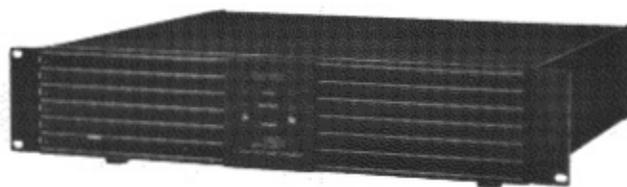


# Operating Instructions

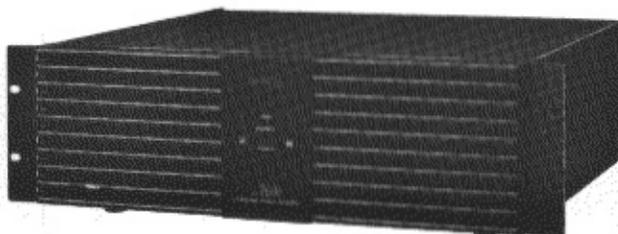
**RAMSA**

2-channel Power Amplifier

**WP-1200/WP-1400**



WP-1200



WP-1400

**Panasonic®**

Before attempting to connect or operate this product, please read these instructions completely.

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**WARNING:**  
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

## GENERAL

Panasonic's new RAMSA power amplifiers WP-1200, WP-1400 are high performance for the high density, powerful, high-quality sound musicians demand. And to maintain the optimum operating temperature, WP-1200 and WP-1400 features the newly developed servo cooling system which is constantly adjusted the fan speed regardless of output level.

Speaker safety is further assured by CROW-BAR circuitry which operates when DC voltage is generated at the output terminals due to amplifier malfunction.

## FEATURES

- The WP-1200, WP-1400 are 2-channel power amplifiers providing continuous outputs of 200W (RMS) + 200W (RMS) [WP-1200], 400W (RMS) + 400W (RMS) [WP-1400] (THD 0.3% or less with 4-ohm load, 40 Hz to 20 KHz). At 8-ohm load : 120W (RMS) + 120W (RMS) [WP-1200], 240W (RMS) + 240W (RMS) [WP-1400] continuous output (THD 0.3% or less with 8-ohm load, 20 Hz to 20 KHz) can be obtained.
- In bridge mono mode the power amplifier provides a 400W (RMS) [WP-1200], 800W (RMS) [WP-1400] output (THD 0.3% or less for 8-ohm load, 20 Hz to 20 KHz).
- The input circuit is electronically balanced employing an operational amplifier of excellent transient response and wide bandwidth. As a result, deterioration of response caused by the transformer and the effects of induction noise are minimized.
- Two types of input connectors are provided XLR type connectors (female) and 1/4" TRS phone jacks.
- The amplifier is protected by a VI-type energy limiter (voltage/current sensing protection circuit) that limits the current in the event of a short circuit and cuts off the output in the event of malfunction such as overheating or DC.
- The muting circuit prevents switching noise caused by turning the amplifier on or off.
- Input level adjustment controls are provided on each channel.
- 5 way binding posts are provided as output terminals. These posts are evenly-spaced, enabling the use of dual-banana plugs for either individual channel output, or bridge mode.
- A ventilation fan prevents the amplifier from overheating when properly installed.
- These amplifiers are power efficient due to the Class H power output circuit.
- Output terminal CROW-BAR DC detection circuit protects the speakers.
- Front-panel LED's indicate peak signal and protect mode.
- The automatic fan control circuit varies the fan speed as needed by sensing the temperature of the heat sink and the power transformer.

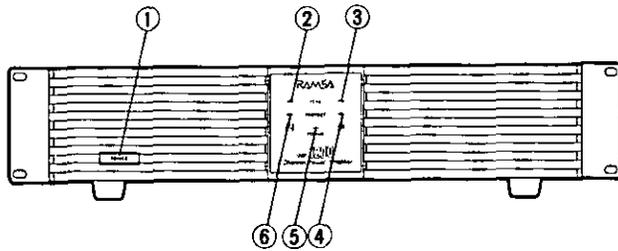
## PRECAUTIONS

- Do not stand the amplifier vertically on its back.
- Due to the muting circuit, no sound is produced for 4 to 6 seconds after turning on the power supply.
- Always use a power source of adequate capacity.
- Do not turn on the power of multiple power amplifiers at the same time. Never allow the ventilation holes on the Front and Rear of the amplifier to get obstructed in any way.
- To clean the amplifier, wipe it with a dry cloth. If the case is very dirty, disconnect the AC cord from the power source, then wipe it with a cloth dampened in water or mild soapy water, then wipe dry thoroughly. Never use solvents or chemical cloth, similarly, never spray insecticides as they may cause discoloration or peeling.
- If any trouble is found, disconnect the power cord and contact your dealer.

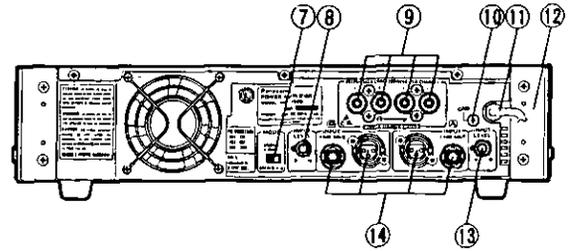
# MAJOR OPERATING CONTROLS AND THEIR FUNCTIONS

## ■ WP-1200

### • Front Panel :

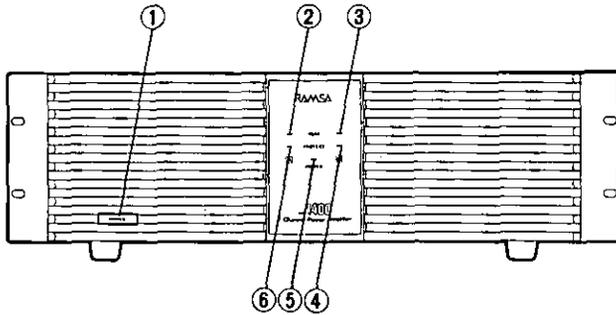


### • Rear Panel :

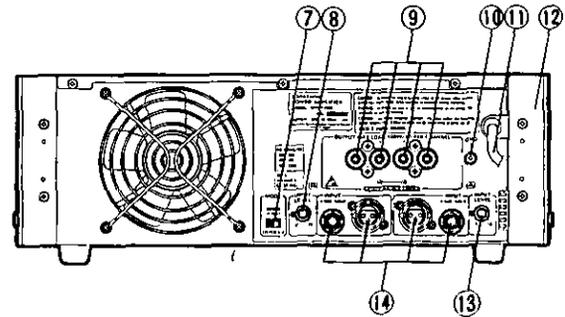


## ■ WP-1400

### • Front Panel :



### • Rear Panel :



### 1. Power ON/OFF switch [POWER]

- The power amplifier reaches the operating conditions 4 to 6 seconds after turning on the power ON/OFF switch due to a muting circuit which prevents switching noise at power-up.

#### CAUTION :

When using the WP-1200/1400 in a system with other equipment such as a mixer, equalizer, and other signal processor, always turn the amplifier on last as switching noise from the other equipment can damage the speakers. Similarly, at system power-down always turn the amplifier off first.

### 2. Peak level Indicator [PEAK (red) A]

When this LED lights, the output signal of the A channel has reached its clipping level; possibly resulting in distortion. Should this occur, either adjust the output level of the mixer or adjust the power amplifier Input Level control so that the PEAK LED turns off.

### 3. Peak level indicator, [PEAK (red) B]

When this LED lights, the output signal of the B channel has reached its clipping level; possibly resulting in distortion. Should this occur, either adjust the output level of the mixer or adjust the power amplifier Input Level control so that the PEAK LED turns off.

**4. Protect Indicator [PROTECT (orange) B]**

The LED indicates that the muting circuit for the B channel is activated and therefore sound cannot be produced at the output. This occurs for 4 to 6 seconds when the amplifier is turned on, and also during overheating or any malfunction that may cause damage to the speakers.

**5. Power ON Indicator [POWER] (red)**

Indicates that the amplifier is turned on.

**6. Protect Indicator [PROTECT (orange) A]**

The LED indicates that the muting circuit for the A channel is activated and therefore sound cannot be produced at the output. This occurs for 4 to 6 seconds when the amplifier is turned on, and also during overheating or any malfunction that may cause damage to the speakers.

**7. Mode selector [MODE]**

[STEREO A.B, BRIDGE A ONLY]

Selects between STEREO mode (A in/A out, B in/B out) or BRIDGE mode (A in/A & B combined out). When using Bridge Mode the input signal must be applied to the A Channel only.

**8. Input level control [INPUT LEVEL B]**

- When this control is at "10", the B channel will reach its rated power output when the input signal is at a level of + 4 dB.
- The calibrated markings on the front panel indicate the amount of attenuation applied to the input signal. The allows proper volume setting of the speakers when the input signal source is at its rated level.

**9. Output terminals**

[OUTPUT MAX LOAD 400W/4Ω PER CHANNEL]

■ WP-1200

- 8 ohms ..... 120W + 120W (RMS)
- 4 ohms ..... 200W + 200W (RMS)
- Bridge (8 ohms) ..... 400W (RMS)
- When using in bridge mode, the + side of the A CH output terminals becomes the hot side, and the + side of the B CH output terminal becomes the cold.

■ WP-1400

- 8 ohms ..... 240W + 240W (RMS)
- 4 ohms ..... 400W + 400W (RMS)
- Bridge (8 ohms) ..... 800W (RMS)
- When using in bridge mode, the + side of the A CH output terminals becomes the hot side, and the + side of the B CH output terminal becomes the cold.

**CAUTIONS :**

- Do not connect the output channels in parallel.
- When using bridge connection, always use minimum 8 ohm speakers. Never connect the speakers between + and - of A CH, or + and - of B CH.

**10. Ground terminal [GND]**

An external amplifier ground terminal.

**11. AC Power cord**

120V AC 60 Hz - approx. 6.5 feet.

**12. Rear panel protection angle**

These angles protect the input and output terminals against damage. However, do not stand the power amplifier on them during performance.

**13. Input level control [INPUT LEVEL A]**

- When this control is at "10", the A channel will reach its rated power output when the input signal is at a level of + 4 dB. Use this control when running the amplifier in BRIDGE mode.
- The calibrated markings on the front panel indicate the amount of attenuation applied to the input signal. The allows proper volume setting of the speakers when the input signal source is at its rated level.

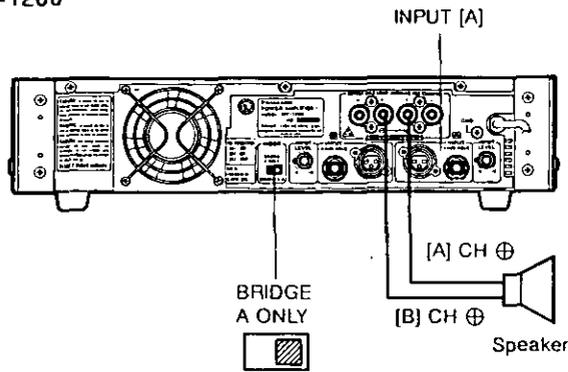
**14. Input connectors [INPUT A, B +4 dB, 40 kΩ]**

- Two types of input connectors are provided : XLR-type connectors (female) and 1/4" tip-ring-sleeve phone jack.
- These input connectors are connected in parallel internally. Do not connect more than one input signal to these connectors at the same time.
- When using amplifier in bridge mono mode, connect the input signal to A channel only. Any signal connected to B channel will not be passed.

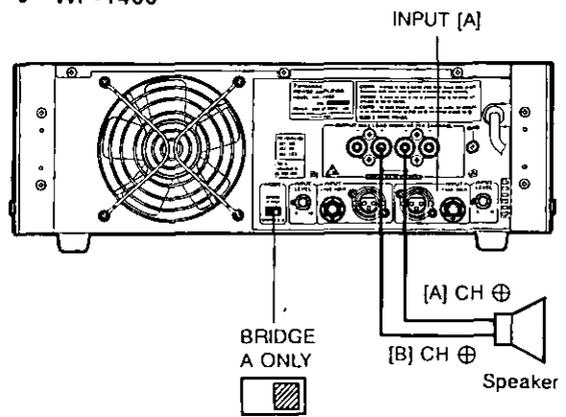
# CONNECTIONS

## For 1 Input : [BRIDGE]

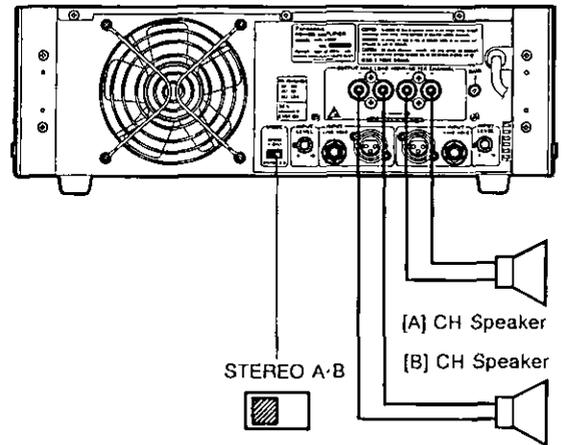
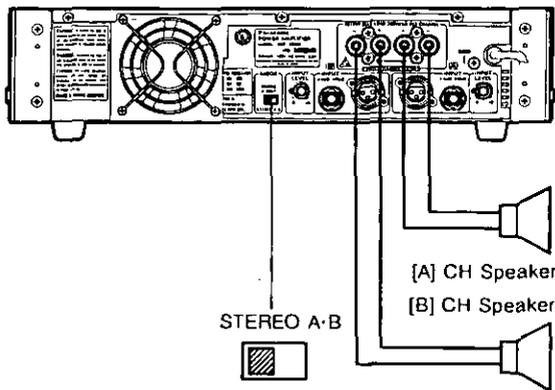
- WP-1200



- WP-1400



## For 2 Inputs : [STEREO]

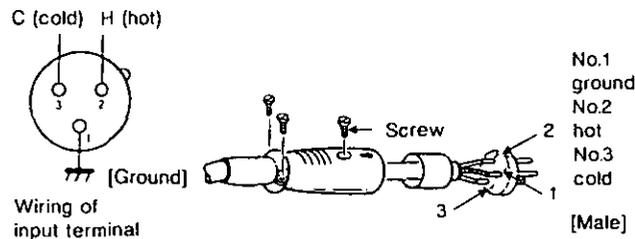


### CAUTIONS :

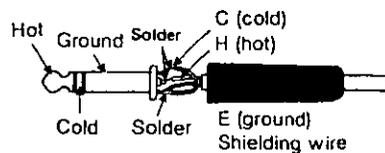
- Connect the speakers after selecting either bridge or stereo.
- When using bridge connection, never connect the speakers between + and - of A CH or B CH.

### ■ Connection of Plugs and Connectors :

1. Input connector (3-pin XLR-type female connector)

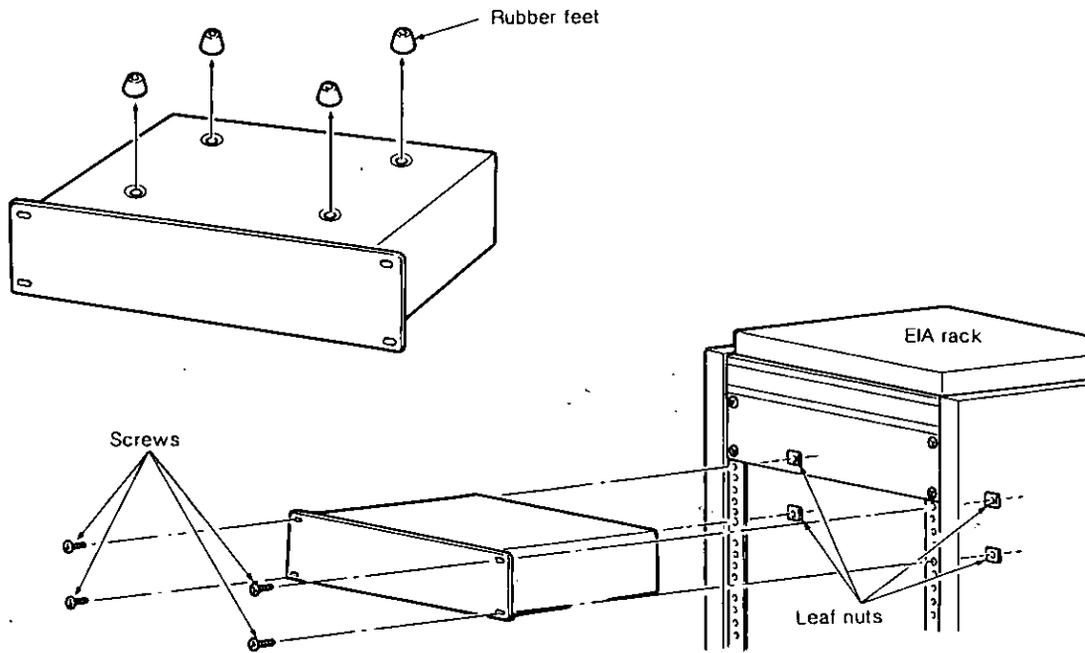


2. Tip-ring-sleeve phone plug



# RACK MOUNTING

1. Remove the screws which are inside the rubber feet, then detach the feet from the bottom of the amplifier.
2. Mount the power amplifier to the rack as shown with four optional rack mounting screws (not supplied, M5 × 12).



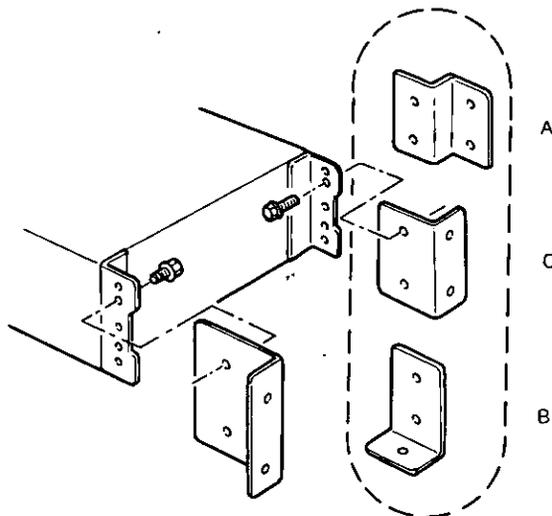
## Note :

When transporting the machine while mounted in a rack, the rear of the amplifier must be secured to the rack. Use an angle with a thickness of at least 2 mm.

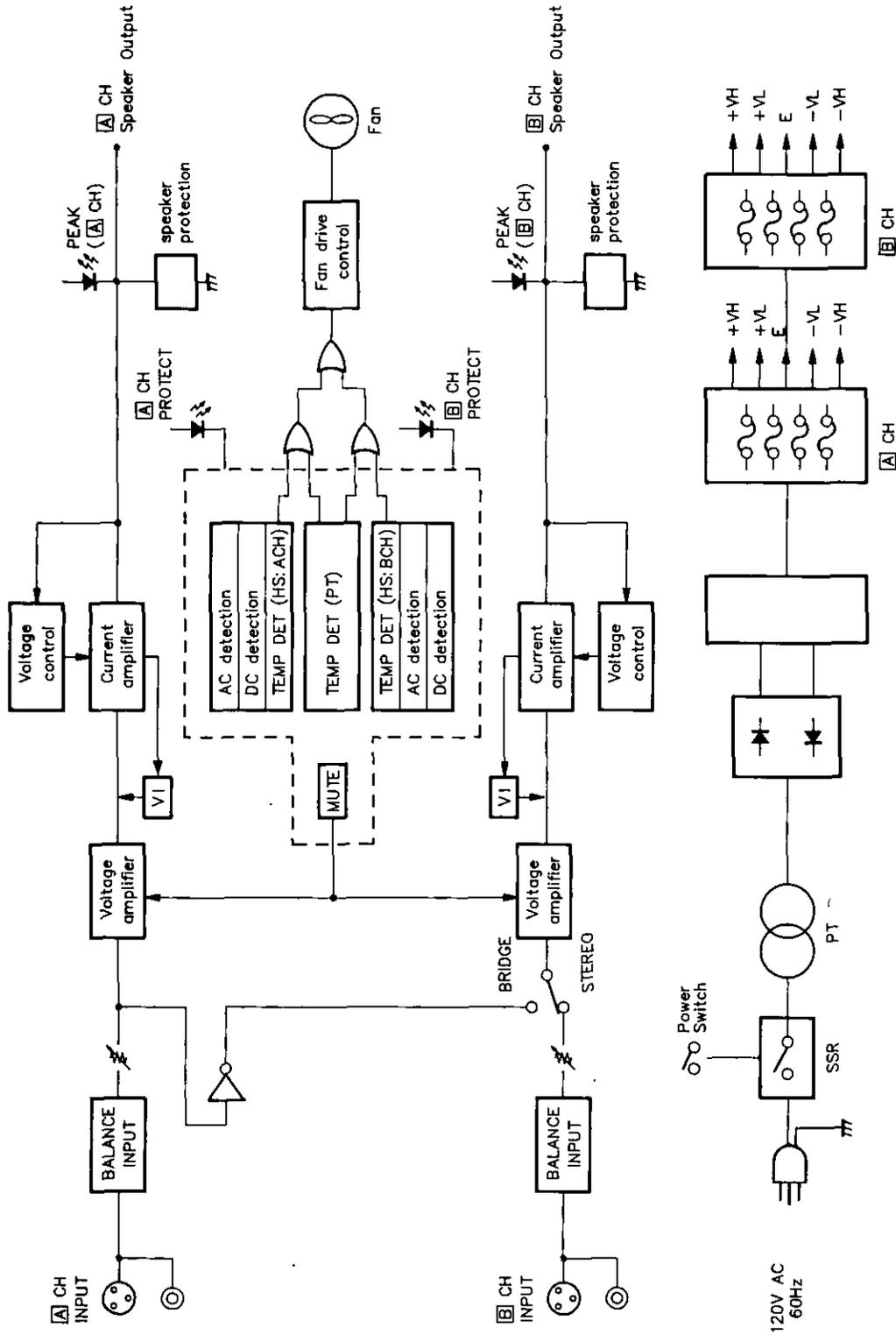
Rear-fixing angle :

Local procurement

- A Rear-fixing angle for mounting side of rack.
- B Rear-fixing angle for mounting on bottom of rack.
- C Rear-fixing angle for mounting on rear of rack.



# BLOCK DIAGRAM



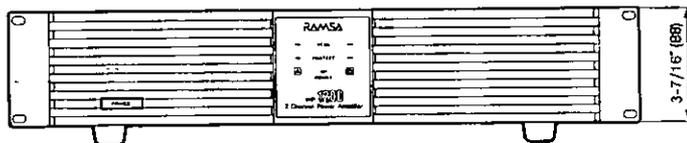
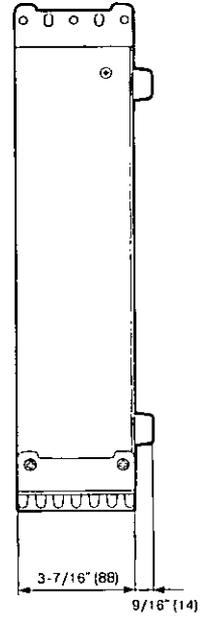
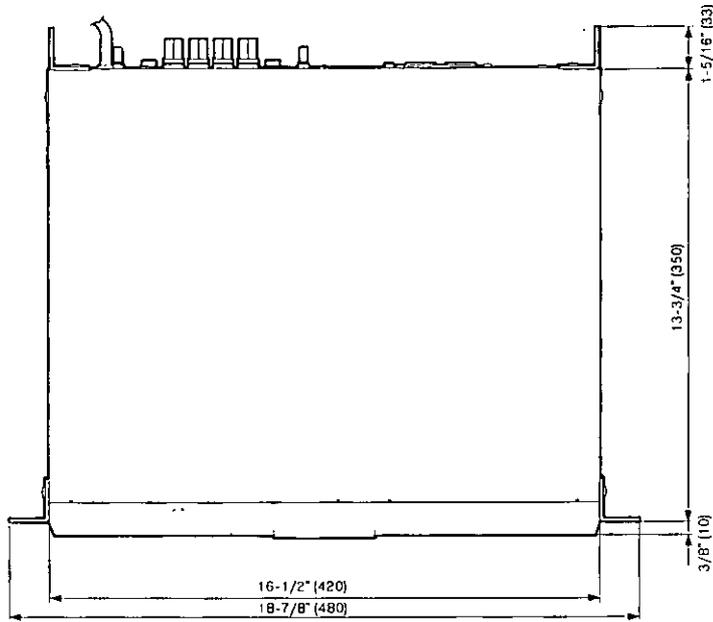
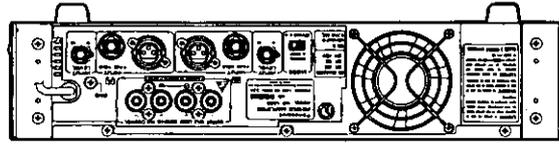
# SPECIFICATIONS

|                              | WP-1200   | WP-1400   |
|------------------------------|---|---|
| Power supply :               | 120V AC, 60 Hz  |   |
| Power consumption :          | Approx. 770W at the rated output of 200W (RMS) + 200W (RMS)/4 $\Omega$  | Approx. 1500W at rated output of 400W (RMS) + 400W (RMS)/4 $\Omega$   |
| Rated power output :         | 120W + 120W (8 $\Omega$ continuous output)<br>200W + 200W (4 $\Omega$ continuous output)  | 240W + 240W (8 $\Omega$ continuous output)<br>400W + 400W (4 $\Omega$ continuous output)  |
| Mono-bridge output :         | 400W (8 $\Omega$ continuous output)   | 800W (8 $\Omega$ continuous output)   |
| Frequency response :         | 20 to 20,000 Hz +0, -0.5 dB (at 1W Output)  |   |
| Total harmonic distortion :  | 0.3% or less<br>(8 $\Omega$ , 120W + 120W, 20 Hz to 20 kHz)<br>0.3% or less<br>(4 $\Omega$ , 200W + 200W, 40 Hz to 20 kHz)<br>0.3% or less<br>((BRIDGE) 8 $\Omega$ , 400W, 20 Hz to 20 kHz) | 0.3% or less<br>(8 $\Omega$ , 240W + 240W, 20 Hz to 20 kHz)<br>0.3% or less<br>(4 $\Omega$ , 400W + 400W, 40 Hz to 20 kHz)<br>0.3% or less<br>((BRIDGE) 8 $\Omega$ , 800W, 20 Hz to 20 kHz) |
| Crosstalk :                  | 60 dB or more (20 kHz)  |   |
| Intermodulation distortion : | 0.3% or less<br>(4 $\Omega$ , 200W, 60 Hz : 7 kHz = 4 : 1   | 0.3% or less<br>(4 $\Omega$ , 400W, 60 Hz : 7 kHz = 4 : 1   |
| SN ratio :                   | 100 dB or more (DIN)  |   |
| Input level :                | +4 dB (continuously variable) balanced  |   |
| Voltage gain :               | 27.2 dB   | 30.3 dB   |
| Input impedance :            | 40 k $\Omega$ (balanced)  |   |
| Connectors :                 | Input :<br>3-pin XLR-type connectors (female), and 1/4" tip-ring-sleeve phone jack<br><br>Output :<br>Screw terminals, (5 way binding post)   |   |
| Dimensions :                 | 18-7/8" (W) $\times$ 4" (H) $\times$ 15-7/16" (D)<br>480 (W) $\times$ 102 (H) $\times$ 393 (D) mm<br>(Height includes rubber feet and depth includes rear panel protection angle)           | 18-7/8" (W) $\times$ 5-3/4" (H) $\times$ 15-7/16" (D)<br>480 (W) $\times$ 146 (H) $\times$ 393 (D) mm<br>(Height includes rubber feet and depth includes rear panel protection angle)       |
| Weight :                     | Approx. 26 lbs. (11.8 kg)   | Approx. 38.3 lbs. (17.4 kg)   |

# APPEARANCE

Unit : inch (mm)

## ■ WP-1200





# Panasonic®

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