



## **Warranty and Service**

### **Inside the U.S. and Canada**

PS Audio's warranty is 3 years parts and labor, from the date of original purchase. This means that we warranty the product itself regardless of ownership, new or used.

### **Outside the U.S. and Canada**

PS Audio has authorized distribution in many countries of the world. In each country, the authorized importing retailer or distributor has accepted the responsibility for warranty of products sold by that retailer or distributor. Warranty service should normally be obtained from the importing retailer or distributor from whom you purchased the product. In the unlikely event of service required beyond the capability of the importer, PS Audio will fulfill the conditions of the warranty. Such product must be returned at the

owner's expense to the PS Audio factory. Contact your PS Audio distributor or the PS Audio customer service department for more information.

### **Service issues**

Should your unit ever require service or if you have any technical questions about the Power Plant, you must either contact your dealer (PS Audio if purchased direct) or your PS Audio distributor. No equipment will be received at our service facilities without an attached RA number.



If purchased through an authorized PS Audio dealer or distributor, the RA number must be obtained by the dealer or distributor. If the product was purchased from PS Audio direct, this can easily be obtained by contacting PS Audio at:  
E-mail - [service@psaudio.com](mailto:service@psaudio.com)  
Phone - 720.406.8946  
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# Operating Instructions for the Power Plant P300

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## *What's In the Box*

- One PS Audio Power Plant P300
- One 2m power cable
- One operating manual
- One 5amp slow blow spare fuse

### **IMPORTANT:**

Be sure to save all packing materials included with the Power Plant P500 as this will be required if you ever need to ship the unit for service or modification.



## Warning

To prevent fire or shock hazard, do not expose the unit to rain or moisture. To avoid electrical shock, do not open the enclosure. Refer servicing to qualified personnel only.

To prevent electric shock, use a 3 prong, grounded type power cable.

Any change or modifications not expressly approved in the manual could void your warranty.

## Safety Instructions

Any turntable or equipment with AC synchronous motors, such as some cooling fans should not be used with MultiWave II. This equipment must be used with 60Hz SineWave mode.

We recommend the use of the SineWave [sin] or TubeWave [tub] with any type of tube based audio products.

Read the operating instructions provided with the P300.

Retain the operating instructions for later use and reference

Unplug the P300 from the wall outlet before changing the fuse or performing any cleaning or service.

Do not operate the P300 near water. Avoid placement near a water reservoir or excessive moisture.

When replacement parts are required, be sure they are specified by the manufacturer to have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Do not operate with faulty or frayed power cables.

Do not operate the P300 with the LED load indicator when illuminated RED or YELLOW for extended amounts of time.

## Overview

The Power Plant P300 is a power regenerator capable of delivering the highest level of AC performance to all audio and video components.

The PS Audio Power Plant P300 is designed to operate as a stand-alone power management device, or as part of a larger power management system. The P300 is capable of producing, clean and safe power for a small 2 channel audio system or small home theater system.

The P300 is capable of delivering up to 300 watts of peak power, depending on the load.

- Up to 300 watts power delivery - depending on load requirements.
- Next generation MultiWave II technology featuring TubeWave.
- Independent power zones keep power for analog, digital and high current equipment electrically isolated.
- Regenerated AC delivered through 4 Power Port outlets.
- Front panel display for systems monitoring and user interface.
- Front panel displays waveform setting, output voltage and wattage.
- Reduction of AC line noise by more than 70dB.
- High voltage surge suppression devices for surge and spike protection.
- Lower AC impedance for better transients

***My turntable or fan based equipment is not operating normally***

Any turntable or equipment with AC synchronous fans should not be used with MultiWave II. These products must be used with 60Hz SINE mode.

***The P300 shut down, the display is blank and the fuses are not blown***

If airflow is inadequate or room temperature is very warm and the P300 is run near 100% capacity for very long periods of time this type of shut-down may occur. If this occurs the load should be lessened on the P300 or else improve the airflow around the P300.

***How do I reset the settings to factory default?***

To revert to the default factory settings. Simply switch the P300 off at the back panel. The default settings are: Sin mode, 60hz, 117v (export - 220v, Japan - 100v).

**Specifications**

**Output:**

Power	-	300 Watts
Voltage	-	95-240 Vts
Frequency	-	50-120 Hz
<small>(depending on model)</small>		
Current	-	2 Amps
Peak	-	3 Amps
Distortion (THD)	-	0.1%

**Input:**

AC input range	-	90-250Volts
<small>(depending on model)</small>		
Frequency input	-	50/60 Hz
Input capacity	-	750 VA
Power consumption	-	15 Watts
<small>(with no load)</small>		

**General:**

Width	-	9 in
Height	-	5.5 in
Depth	-	19 in
Weight	-	30 lbs
Cooling system	-	forced convection

### **[P-4] MultiWave4**

MultiWave4 is full combination of P-1 and P-2. It generates a pseudorandom collection of frequencies, however instead of generating sine waves it generates the same waveform as P-1.

Again, try these settings on your system to see which one has the highest perceived benefit in terms of performance.

### **Servo System**

The Power Plant provides a virtual Servo System to continually correct for any DC offset. This will reduce hum from problematic or sensitive transformers as the Power Plant produces pure AC waveforms indefinitely without the need for calibration.

## **Troubleshooting Guide**

The Power Plant P300 sets a new mark for performance and protection. It has been designed to bring forth the absolute best from the connected equipment. In addition to the audio and video improvements, the P300 will also provide long-term product reliability and the piece of mind that connected equipment is safe from electrical disturbances.

In the event of abnormal operation with the P300, please refer to the following suggestions:

#### **Unit will not turn on**

1. Check the obvious. Is it plugged in and is the AC wall outlet live? This can easily be tested by using a functional lamp. Plug the lamp into the wall outlet and see if the light works. If not, the P300 may be plugged into a switched outlet, or perhaps the circuit breaker feeding the outlet has tripped and needs resetting.

2. After plugging the unit into the wall, the P300 will only become activated after flipping the rear switch and pressing the front panel power button. Be sure that the unit is both plugged into the wall and turned on by the both power buttons.

3. Check the Main Fuse. The chances of the Power Plant's main fuse being blown are very remote. However, if the Main Fuse is blown, the P300 will be completely inoperable. To check the fuse locate the section of the back panel labeled "Main Fuse." It is located between the IEC and the main power switch.

Unplug the unit from the wall, remove the fuse and check its conductivity. If necessary, replace the fuse and try powering up the P300. If the main fuse is blown and a replacement fuse does not solve the problem, please contact your dealer for additional service.

#### **The P300 seems to be working, but the display is blank**

The P300 may be in the display blanking mode. Press the Mode button on the front panel and the display should turn back on.

## Quick Start Guide

1. Place the P300 in a rack or on a shelf in the audio/video system. If placed on carpet it is necessary to use isolation or accessory feet to elevate it above the carpet 1 inch, as it is essential for proper ventilation. Failure to do so could compromise the power regeneration capabilities of the P300.
2. Connect the power cable(s) of the audio/video equipment to the P300. There are two electrically isolated duplex receptacles on the P300, which are oriented horizontally.
3. Plug the P300 into a power source. Use the supplied AC power cable, or an aftermarket power cable. We would strongly urge the use of an xStream Power Cable.
4. Turn on the P300 by switching the rear panel rocker switch and then, pressing the power button located on the far left side of the front panel.
5. If desired, select a MultiWave II setting using the front panel controls. See the MultiWave II section of the manual for more information on MultiWave II

### Default settings

The P300 comes from the factory with standard default settings that should work well for most situations. The type of power delivery can be configured to achieve the optimal performance for any system.



## Rear Panel Layout

### 1. Coaxial pass-through

The P300 comes equipped with a coaxial pass-through for providing protection to a cable TV coaxial lead. It can also reduce ground loop problems associated with the cable TV coaxial lead.

### 2. Main Power Switch

The main power switch is a hard power switch and will not keep the P300 in standby mode. No current is drawn from the wall and the unit will not pass power. There is also a soft power switch on the front of the unit.

### 3. AC Power Inlet

15 Amp IEC standard male socket.

### 4. Main Fuse

The main fuse is a 5 Amp slow blow. The fuse can be removed by inserting a flat device into the fuse holder, removing the outer cover then removing the fuse.

### 5. Isolated Ground Post

The P300 allows for an isolated ground line to be used instead of the ground from the wall outlet. See the Isolated Ground Post section for more information.

### 6. Power Ports™

Two PS Audio Power Ports™ provide the best possible connection to power equipment.

### Underside ventilation slots (not show)

The ventilation slots provide exhaust for the thermally controlled cooling fan. Leave at least 1 inch of clearance underneath the unit at all times.

## Isolated Ground Post

Using an isolated ground wire can eliminate ground potential difference problems and provide a more reliable ground connection. Before attaching the isolated ground wire to the grounding post on the P300 the internal ground wire must be disconnected.

Place the P300 on its back so the underside is exposed. Remove the bottom cover of the P300 and set it to the side. Be cautious of the wires which are connected to the bottom cover. Locate the green cable which runs from the rear outlets to the main circuit board. Disconnect the white jumper on the green cable.

Replace the bottom cover and screws. Now attach the isolated ground wire to the post. All products powered by the power plant will use this ground instead of the ground supplied in the wall outlet.

## Front Panel Controls

There are four buttons on the front panel of the Power Plant P300.

1. Power
2. Mode
3. Frequency Down
4. Frequency Up

### Power On/Off

The power button will activate the front panel display and provide power to the outlets.

### Mode

The Mode button cycles through the available display modes.

### Frequency

The Frequency Up and Frequency Down buttons cycle through the available options within each display mode.

## Power Plant Operation

There are five available display modes on the front panel of the Power Plant. The Mode button will cycle through the following five modes:

1. Waveform setting
2. Frequency generated (sin mode only)
3. Voltage produced
4. Wattage produced
5. Display blanking mode

### Waveform setting

This mode will display the name of the waveform presently being generated. For more information about each of the MultiWave settings, see the Multiwave II Waveforms section of the manual.

### Frequency generated

The frequency setting will only be displayed if the Waveform menu is set to Sin.

This mode will display the frequency the Power Plant is generating. The frequency can be adjusted in 1 hertz increments from 50Hz to 120Hz by using the Up and Down buttons. The default setting is 60Hz.

### Voltage produced

This mode will display the output voltage of the Power Plant. **Note:** the voltage figure will be flashing. The output voltage can be adjusted in 1 volt increments by using the Frequency Up and Down buttons. The range varies depending on the Power Plant model:

- 100 volt model ranges from 95 - 105 v. Default setting is 100 volts.
- 120 volt model ranges from 100 - 120 v. Default setting is 117 volts.
- 240 volt model ranges from 220 - 240 v. Default setting is 220 volts. (adjustments in 2 volt increments)

As long as the voltage to the Power Plant does not deviate more than 10% below normal it will continue to output the voltage displayed on the front panel.

### Wattage produced

This mode will display, in real-time, the **approximate** wattage the Power Plant is generating. Complex loads may not register

accurately on the Power Plant's meter. For true power consumption figures consult the owners manual of the connected product.

Under normal operation a green LED will illuminate. A yellow LED will indicate a heavy load and is not recommended for continuous operation. A red LED indicates an overload or fault mode.

### **Display Blanking**

This mode allows discrete front panel operation by blanking the display. The PS logo will continue to illuminate in blue to indicate that the unit is operational.

### **Notice of MultiWave II operation:**

Any turntable or equipment with AC synchronous motors, such as some cooling fans should not be used with MultiWave patterns. This type of equipment must be used with 60Hz sin mode.

We recommend the use of the SineWave [sin], or TubeWave™ [tub] with any type of tube based audio products.



## **MultiWave II Waveforms**

### **[sin] SineWave**

In the sine wave mode the Power Plant will generate a perfect sine wave (50-120Hz).

### **[tub] TubeWave**

TubeWave is specifically designed to optimize the performance of tube based audio products.

TubeWave uses the same pseudorandom generation of frequencies as MultiWave2 waveform, however it utilizes more "tube-friendly" frequencies.

### **[P-1] MultiWave1**

MultiWave1 is a single 60Hz sine wave with a minute amount of 3<sup>rd</sup> Harmonic sine waves mixed together to form a single partial square MultiWave. This is an improved version of PS2 from the original MultiWave™ series.

The partial square wave setting improves the power supply's ability to charge the capacitors in equipment by extending the length of time available to "top off" the capacitors' voltage. Use this setting to enhance the performance of both source and power equipment.

### **[P-2] MultiWave2**

MultiWave2 is a 60Hz sine wave that incorporates a pseudorandom collection of frequencies which are dithered from 55-65Hz.

Using this slightly random frequency deviation is similar to adding dither on a digital audio source. Power supply dithering can lower the perceived noise floor and help remove apparent glare on the audio signal.

### **[P-3] MultiWave3**

MultiWave3 is a combination of P-1 with a slight degree of 3<sup>rd</sup> harmonic addition (P-1).

Try this setting and see how the audio sounds and the video looks. All systems can respond differently to each MultiWave pattern.