



Owner's Reference

Owner's Reference PerfectWave Power Plant 10

Instructions for Use



PerfectWave Power Plant 10

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Rev D



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Important Safety Instructions



Read these instructions
Heed all warnings
Follow all instructions



WARNING. TO REDUCE THE RISK OF FIRE OR ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN NOR MOISTURE.

Clean only with a dry cloth.

Do not place flammable material on top of or beneath the component.

The PS Audio Power Plant 10 is a passively cooled component that requires adequate ventilation at all times during operation.

Rack mounting is available with the aftermarket purchase of custom shelving. Please see 2: Getting Started; Mounting.

Do not remove nor bypass the ground pin on the end of the AC cord. All PS products ship with a grounding-type plug. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.

Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus. Unplug this apparatus during lightning storms or when unused for long periods of time.

When making connections to this or any other component, make sure all components are powered off. Turn off the system's power before connecting the PS Audio component to any other component. Make sure all cable terminations are of the highest quality.

There are no user serviceable fuses inside this product.

THERE ARE NO USER-SERVICEABLE PARTS INSIDE THIS PS AUDIO PRODUCT. REFER ALL SERVICE NEEDS TO QUALIFIED SERVICE PERSONNEL.

Please contact your authorized dealer, your distributor, or PS Audio directly if you have any questions or concerns that are not addressed in this reference manual.

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Warnings

WARNING: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT EXPOSE THIS APPARATUS TO DRIPPING OR SPLASHING AND NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

WARNING: TO REDUCE THE RISK OF ELECTRICAL SHOCK, THIS APPLIANCE MUST BE CONNECTED TO A MAINS SOCKET OUTLET WITH A PROTECTIVE EARTH CONNECTION.

The European Union has harmonized the Mains Supply Voltage at 230V~50Hz. Previously, this nominal voltage was 220V~ for continental Europe and 240V~ for the United Kingdom. Since the output receptacles are Nationally Approved Mains Socket-Outlets, we have to restrict the Operator set Output Voltage Range to 220-240V~.

Unit is shipped with the Mains Output Socket-Receptacles applicable to the country of installation as specified by the customer. Please verify the marked Mains Supply ratings of the powered equipment before making any AC connections. If there is a mix of marked Voltages (e.g. 220V, 230V and 240V), please set the output voltage to 230V.

Symbols Found on the P10

Explanation of Symbols found on the PerfectWave Power Plant 10

 indicates compliance with European Union Legislation for relevant safety (Low Voltage Directive 2006/95/EC) and EMC (EMC Directive 2004/108/EC) requirements.

 is intended to tell the user that parts inside the product are a risk of electric shock to persons.

 is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

 signifies that the instrument complies with European Union Waste Electrical and Electronic Equipment Directive.

 indicates that the unit is in compliance with the European Union Reduction of Hazardous Substances Directive.

 indicates the connector location for Ethernet connection to the network.

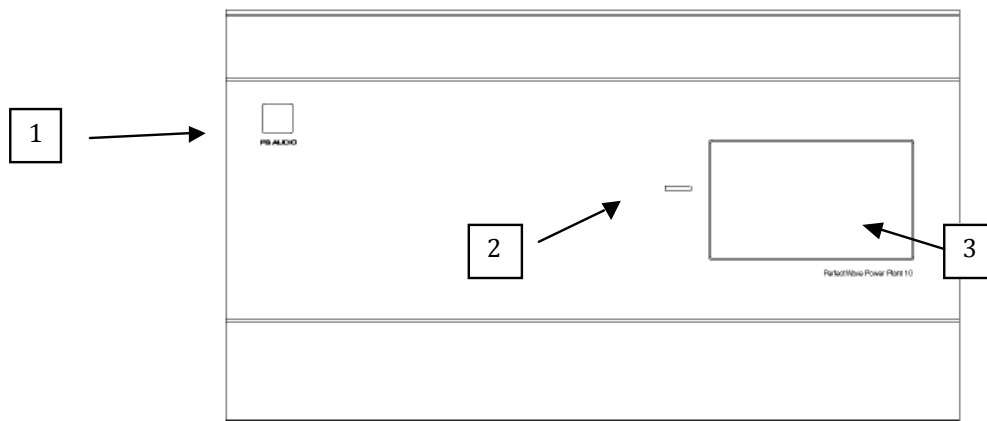
Specifications

Environment Specification	US / JP	Europe/Asia
Location	Indoor use only	
Duty Cycle	Suitable for continuous operation	
Moisture Sensitivity	Not sealed against moisture	
Operating Humidity	<80%rh	
Storage Temperature	-40C to +40 C	
Operating Temperature	10C to 35 C	
Electrical Supply Nominal Rating	120V 15A 60 Hz US 100V 15A 50/60 Hz JP	230V 10A 50/60 Hz

Instrument Specification	US/JP	Europe / Asia
Dimensions	17" W x 14" D x 8.5" H (43cm W x 36cm D x 21.5cm H)	
Weight	73 LBS (33kg)	
Nominal Input Voltage	100 - 120 VAC	230 VAC
Maximum Continuous Load	1200VA	1500VA (EX/IN/GR/UK/AU)
Maximum Peak Load	1500VA	2000VA
Voltage Regulation	±0.5V	1V
Output Distortion (Resistive Load)	<0.5%	
Output Distortion (Reactive Load)	<0.5%	
Output Impedance	<0.015 ohm	
Noise Reduction	100kHz - 2MHz >80dB	
Efficiency @1200 VA	>85%	
Idle Power Consumption	30w	
Input Frequency	45 - 65Hz	
Under Voltage Limit	Continuous -10% of setting 15 sec duration - 15% of setting	
Over Voltage Limit	Continuous 5% of setting 15 sec duration - 10% of setting	
Coax Insertion Loss	<1dB	N/A
DC Trigger Configuration	Tip Positive	
DC Trigger Voltage	5 – 15Vdc	
Surge Protection		
Energy Dissipation	2440J	3670J
Peak Current Surge	144,000A	84,000A
Max Surge Voltage	6000V	
Clamp Level	330V	800V

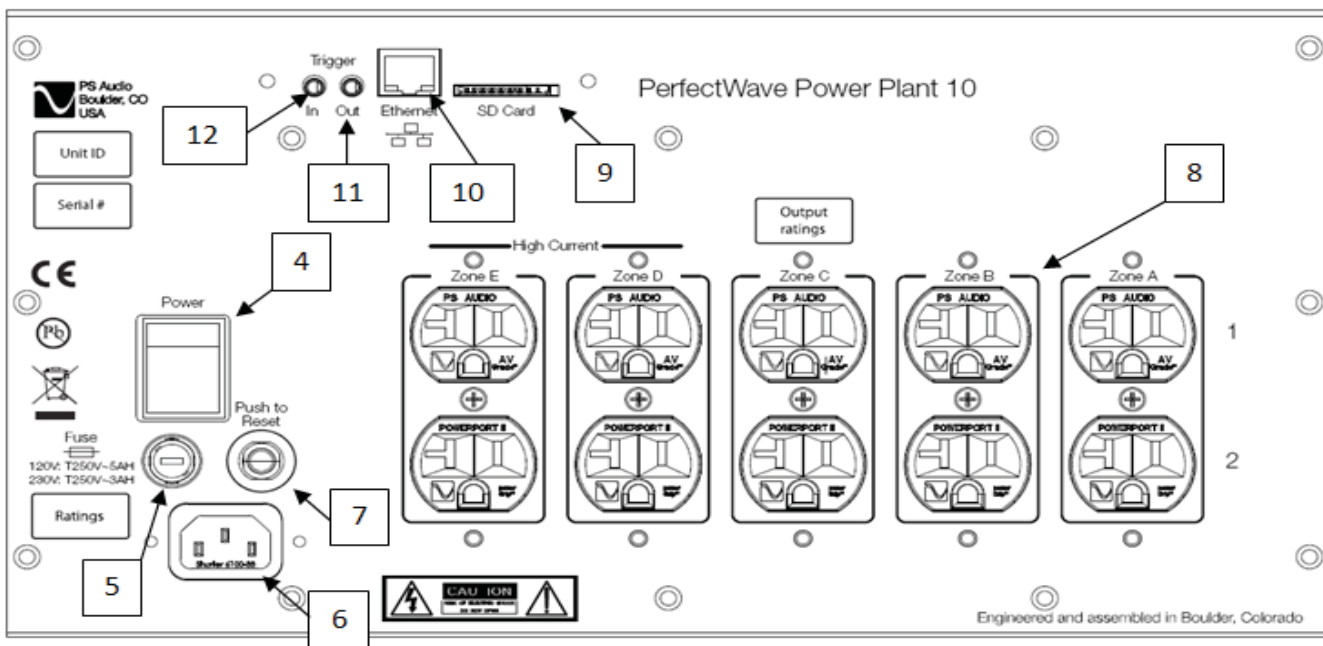
Note 1: Input voltage fluctuations are not to exceed ± 10% of the rated supply voltage range.

Front Panel View



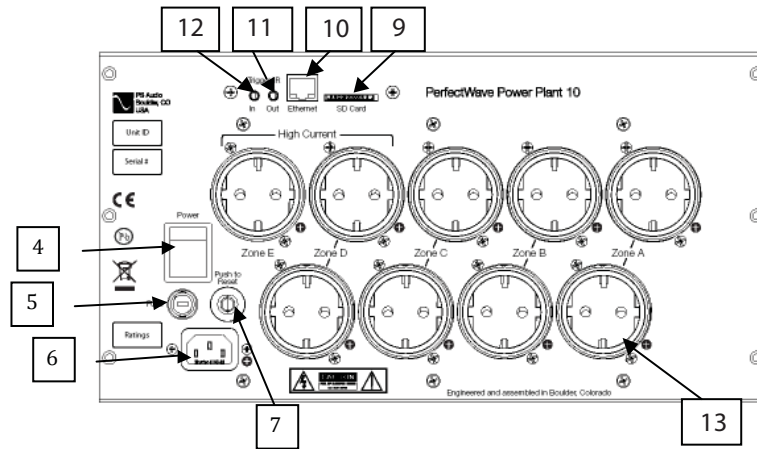
PerfectWave PowerPlant P10 Front Panel

Rear Panel View



PerfectWave PowerPlant 10 Back Panel w/ duplex outlets

Schuko Rear Panel View



PerfectWave PowerPlant 10 Back Panel w/ duplex outlets

- 1) Front panel lighted logo button - When pressed so it is illuminated, the outlets operate as shown on the front panel display. When pressed so it is not illuminated, the regenerator circuitry is still powered and operating. However, display and outlets are turned off unless configured to be always on.
- 2) IR remote receiver lens - This is where the signals from the P10 remote control are received.
- 3) Touch screen display - See operation details elsewhere in this manual
- 4) Back panel power switch - Pressing the 'O' mark on the power switch removes line power to the P10. Pressing the 'I' mark applies line power to the P10.
- 5) Fuse - If replacement is required, for 100V or 120V P10 units, use a T250V~ 5A type H fuse. For 230V units use a T250V~ 3A type H fuse.
- 6) IEC power inlet connector - Use a 3 conductor 1.5mm² cord rated for 250V, 75°C minimum.
- 7) Circuit breaker - Press to reset
- 8) Duplex style output connector
- 9) SD (memory) card socket - Used for firmware upgrades
- 10) Ethernet connection - Uses RJ45 connector. For connection to a Local Area Network (LAN), or to the Internet. Used for enhanced control and/or monitoring performance of P10.
- 11) Trigger out port - Uses a 3.5mm tip sleeve connector. The tip is positive. Trigger out provides a 12VDC signal that follows the condition of the front panel Logo button.
- 12) Trigger in port - Uses a 3.5mm tip sleeve connector. The tip is positive. A 5VDC to 15VDC signal turns a unit that is currently in the off state (Logo button not illuminated) to the on state. Removing the trigger in signal is equivalent to turning the Logo button off. This state of the trigger in port is overridden by the front panel display/Logo button, or the remote control.
- 13) Non duplex output connector - The style shown is a Schuko outlet. Other styles are available



Getting Started

Owner's Reference PerfectWave Power Plant 10

Welcome

Thank you for purchasing the PS Audio PerfectWave Power Plant 10 AC Regenerator.

The Power Plant 10 is a state-of-the-art AC regenerator that regulates and regenerates the AC line voltage, producing clean, low distortion AC power. The Power Plant 10, also known as the P10, will provide regulated AC power regardless of the condition of your home's power. Clean, regulated AC is essential to optimize the performance of your connected equipment.

The System

Dynamics Never Restricted

The Power Plant 10 will not restrict the dynamics or the soundstage in your high-end system and will, in fact, provide superior levels of performance in micro and macro dynamics. In addition, the P10 will maintain the harmonic integrity of your audio equipment while increasing color saturation and lowering video noise in video equipment.

Built to the Highest Standards

PS PerfectWave power products are built to the highest standards, both internally and externally, in Boulder, Colorado. Every effort has been made to provide the highest quality performance and reliability possible. Every PerfectWave Power Plant is hand built, tested and then burned in to make sure what you receive is ready to go and will provide years of trouble free service.

Wattage vs. VA (Volt-Amps)

All Power Plant 10's labeled US can output a continuous load of up to 1200 Volt-Amps of pure, regulated AC, with peak momentary output capabilities of up to 1500 Volt-Amps. All Power Plant 10's labeled EX, GR, or UK can output a continuous load of up to 1500 Volt-Amps of pure, regulated AC, with peak momentary output capabilities of up to 1750 Volt-Amps. There is a practical difference between Volt-Amps and wattage, which can get somewhat confusing and may need clarification, especially if you have a large load and are intending to drive high-current-draw devices.

The power factor of an AC electric power system is defined as the ratio of the real power flowing to the load to the apparent power in the circuit. Real power is the capacity of the circuit for performing work in a particular time. Real power is measured in watts. Apparent power is the product of the current and voltage of the circuit; due to energy stored in the load, or due to a non-linear load that distorts the wave shape of the current drawn from the source, the apparent power will be greater than the real power. Apparent power is measured in Volt-Amps.

In an electric power system, a load with a low power factor draws more current than a load with a high power factor for the same amount of useful power transferred. The higher currents increase the energy lost in the distribution system, and affect the ratings of the equipment.

Apparent power is what the Power Plant Regenerators is asked to deliver. Real power is what actually does the work. There is a difference between the two numbers because of losses and AC effects.



Getting Started

Owner's Reference PerfectWave Power Plant 10

Installation Considerations

Location

Once your new Power Plant 10 is unpacked, you'll need to find a convenient place to set it.

Mounting

The Power Plant 10 should be placed with consideration of providing air circulation to the unit. If wishing to install the P10 into your component rack, the purchase of an aftermarket, custom-designed shelf will be necessary.

If your equipment is located a long distance from the Power Plant 10, it is preferable to use a long, heavy gauge shielded power cable between the AC receptacle in the wall and the Power Plant. This is better than long individual power cables between the connected components and the Power Plant 10.

Vibration

The Power Plant 10 can benefit from aftermarket isolation devices such as cones, spikes and Sorbothane pads. Once you have chosen the location for the Power Plant 10 you can use the supplied AC power cord to connect to the wall receptacle, or you can use an aftermarket power cord and/or receptacle.

Conditioners

We discourage the use of any other power conditioning equipment before or after the P10 without considerable evaluation. A critical determination will have to be made as to whether there are any sonic or visual shortcomings. The P10 has a significant input & output passive filter design, and adding extra power cables to its input or additional filtering to its output may, in fact, be undesirable.

Network Connectivity

Connecting your Power Plant 10 to the network is an option that provides extended functionality benefits. It is recommended that the Power Plant 10 be connected to the router via hard-wire connection, however it will certainly function if connected to the network via wireless Ethernet bridge. We recommend using a high quality shielded CAT5 or CAT6 cable. In addition, in order to make sure your Power Plant is fully compliant with international regulations, please install the included ferrite noise suppressor onto the Ethernet cable close to the unit. (Included photo)



If a network connection is not available for the Power Plant 10 it will in no way affect the P10's performance in your system in terms of the quality of regenerated, regulated AC. Connecting your P10 to the network allows functionality benefits only, not performance based benefits.

The online interface is user friendly and can be accessed by registering one's P10 at the following link: www.powerplay.psaudio.com. The end-user will find a multitude of usability features including

- P10 consumption records and performance tracking.
- Individualized zone control.
- Naming of individual zones.



Operation Guide

Owner's Reference PerfectWave Power Plant 10

Power-down First

We recommend that you power the entire system down before attempting to connect equipment to the Power Plant 10. Integrate the P10 into your system, plug in the desired gear (which has been powered-down) and activate the P10 with the back-panel power switch. After the AC Regenerator inside your Power Plant 10 has synchronized with your incoming power, your system will power up automatically. Now just add music!

Plug the P10 into an AC receptacle with at least 15 amps of service (in the US) or 10 amps of service (in 230 volt regions), preferably using a dedicated AC line. A dedicated line means there is nothing else plugged into the wiring feeding the AC receptacle and that wiring returns directly to the AC breaker box.

Use the heaviest- gauge, shielded power cable possible

Use the heaviest gauge shielded AC power cable you can to connect a Power Plant 10 to its AC source. The heavier the gauge used, the less the chance for restricted dynamics in both audio and video systems. Once the Power Plant 10 has been connected to an AC source it is time to connect your equipment (with the P10 powered down).

Zones

Power zones should be used to isolate different genres of equipment from each other. For instance, you can group digital equipment together on a single zone and multiple analog sources on another zone. You should not mix digital, video or analog equipment on the same zone if possible. Digital equipment would be a DVD player, CD player, DAC, computer, TIVO, or satellite receiver. Video equipment would be a VCR, TV or computer monitor. Analog examples would be a power amp, preamp, projector, turntable, or any type of tube equipment. It is a good idea to keep in mind that all equipment generates radiated noise when it is operating. This radiated noise is harmful to both audio and video system performance and is typically carried down the AC power line.

Zones D and E on the Power Plant 10 are marked "HC" for High Current. These zones are identical to Zones A, B, and C in terms of the quality of regenerated, regulated AC output, however also enjoy the benefits of an in-rush limiter. When capacitors or tubes are powered down for extended periods, they drain of their capacitance. Upon powering these devices up, they can demand a lot of current to both turn the unit on and to reintroduce this capacitance. The result in one's home can, with very high-wattage-draw devices, go so far as to trip the circuit breaker in the residence. An in-rush limiter, such as the one found on Zones D and E of your Power Plant 10, slows the pace of initial AC output. A more gradual rise in output voltage allows the connected device to power up fully while not over-taxing either the P10 nor the mains power.

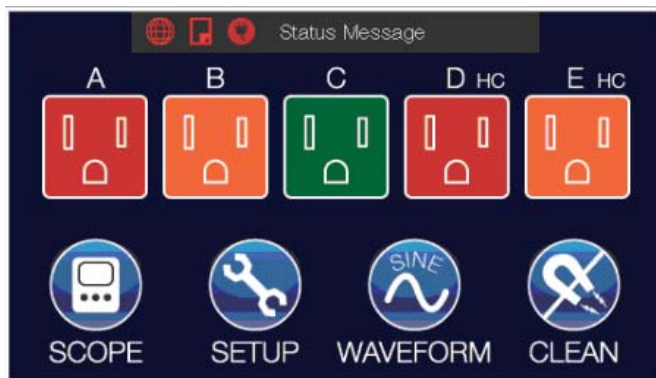
How to Turn It On

Once everything is connected you can flip the back panel power switch to power up the unit by pressing the "I" symbol on the back panel power switch. The P10 will initialize for several seconds before entering the home page. All zones exhibiting green receptacle icons will be outputting regenerated AC to connected components.

Home Screen

Once initialization is complete, the Power Plant 10 will output regenerated AC to all zones exhibiting green receptacle icons and will remain at the HOME SCREEN. The illuminated front-panel display is touch-activated. By touching any of the output receptacle icons, one can toggle that zone on & off. Upon turning off, the output receptacle icon will turn red. Below these output receptacle icons one will find selector icons for Scope, Setup, Waveform, and Clean.

One will also notice the "connection" and "memory" status indicators. For Connection one will see either a red or green colored "globe" symbol based on whether the unit is connected to the network via Ethernet cable. A valid connection to the router must be established, the router must be activated, and the DHCP server must be enabled to assign an IP address to your Power Plant 10 in order to achieve a "green" connection status. Memory will display either a red or green "card" symbol based on whether the SD Card is inserted into the reader (on the back-panel).

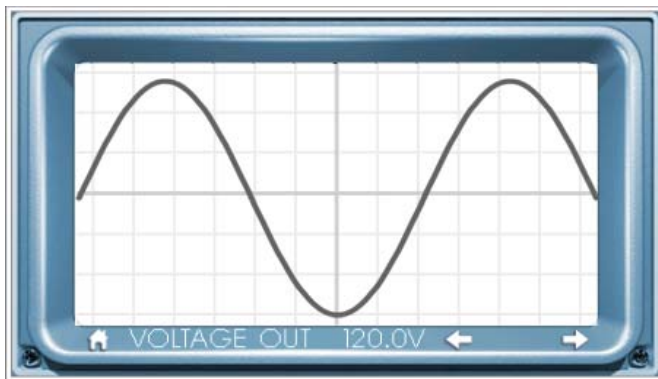


In some instances, one will notice a third status indicator which is a circle with the image of an AC plug inset. During typical operation, this status indicator will not be present. However if the Power Plant 10 is outputting 90% of its full potential, the status indicator will appear in orange color. If the Power

Plant 10 is outputting 100% of its potential, the status indicator will be red in color. Both of these status indicators are warnings that the P10 is being pushed too hard, and that a smaller load will be necessary. If the P10 goes over 100% of its capable output, it will shut down.

SCOPE

Reading input & output "vitals" and status information

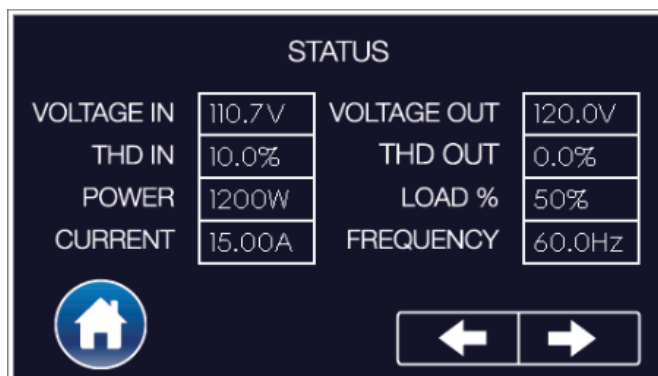


Upon selecting SCOPE the user will first see an oscilloscopic representation of the incoming AC waveform. This is a visual interpretation of the AC's frequency and distortion, thereby denoting the quality of the power in the home. This is what your components would be receiving if not for the Power Plant 10. Often times the incoming waveform will exhibit a truncated, or chopped-off peak.

By touching the Right arrow, we move to the second screen which displays, instead, the output AC waveform. The user will notice a smoother, perfectly formed, symmetrical sine wave. These are the corrections that the Power Plant 10 is making to the AC signal. A clipped, distorted or asymmetrical sine wave implies harmonic distortion which lessens the quality of musical playback and weakens the performance of your system. By completely eliminating the original AC signal and applying a reference sine wave (using a sine wave generator) the Power Plant 10 literally rebuilds the AC to a nearly perfect signal.

By pressing the Right arrow a second time, the Power Plant 10 will display the incoming vs. outgoing sine wave differential. This is essentially a closer look at the difference the Power Plant 10 is making in your AC power. Everything you see on this screen is what the P10 is getting rid of.

By pressing the Right arrow a final time you will find the STATUS screen. Here measurements are available for voltage input, voltage output, THD input, THD output, power output (in wattage), load percentage (of the maximum continuous output), current (in amps), and frequency (in Hz). THD stands for Total Harmonic Distortion, and is a numerical representation of the two sine waves seen on the first two screens. Reduction in THD from input to output will vary, but typically the Power Plant 10 will reduce THD by anywhere between a factor of two and a factor of ten.

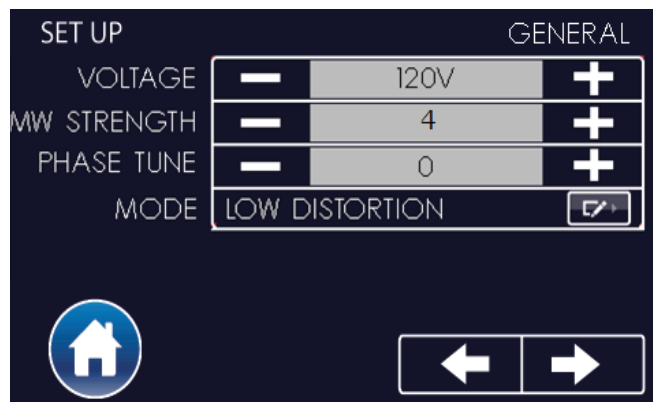


At any time while in the SCOPE menu, the Home button can be pressed to return to the HOME SCREEN.

SETUP

Voltage Regulation, Mode Setting, and Setting Individual Zone Parameters

Screen #1: GENERAL SETUP — By selecting the HOME SCREEN icon labeled Setup you can enter screen #1 of the setup menu. Here you will be able to influence two different general settings for your Power Plant 10.



Voltage Regulation: The Power Plant 10 provides user adjustment of the output voltage. By applying touch to either the “+” or “-” selector, one can adjust the output voltage by one-volt increments.

Mode: Here the toggle exists between two different general settings. Low distortion and high regulation. If the Power Plant 10 is being used in an area with relatively consistent, relatively accurate input AC, then it is recommended that the Low Distortion

selection be made. This will focus the Power Plant 10's efforts on decreasing output THD as much as possible. If the P10 is being used in an area with erratic input voltage, or input voltage that is consistently higher or lower than the level 120V or 240V (depending on region), it is suggested that the High Regulation selection is made. This will focus the Power Plant 10's efforts more closely on regulating the output voltage to a nominal output, and on this setting you may notice the output THD climb slightly higher.

As general guidelines, tube equipment and electrostatic speakers will benefit from the High Regulation setting, whereas solid state amplifiers and video equipment will benefit from the Low Distortion setting. In the incoming AC is within 5V of the base-line output, either mode will offer great performance. Outside of five volts, the user can maintain voltage regulation at the slight expense of THD control with High Regulation, or can maintain THD control at the slight expense of voltage regulation using Low Distortion.

Variable MultiWave: Since the introduction of the PerfectWave series of Power Plants users have had only two options for their regenerated outputs: pure sine wave or MultiWave. Now, with the addition of Variable Multwave, we've extended those two options to seven: pure sine wave or one of six MultiWave choices. Users are empowered to vary the strength of the MultiWave output according to the needs of the equipment and the resulting performance benefits.

MultiWave option settings are chosen from the front panel on the setup screen menu. The choice is labeled **MW Strength** and users can choose strength levels 1 through 6. Each progressive step increases the charging time of the Power Plant's output waveform. Longer charging times, taking place at the peak of the Power Plant's output sine wave, lowers the connected equipment's power supply ripple, much the same way as increasing the power supply capacitance of connected equipment. Just imagine adding 50% more power supply capacitance to your connected equipment.



Operation Guide

Owner's Reference PerfectWave Power Plant 10

The original MultiWave function on P5 and P10 Power Plants is the same as Variable MultiWave strength level four. Strength levels one through three are lower strength waves while strength levels five and six are the highest strength levels of MultiWave ever offered.

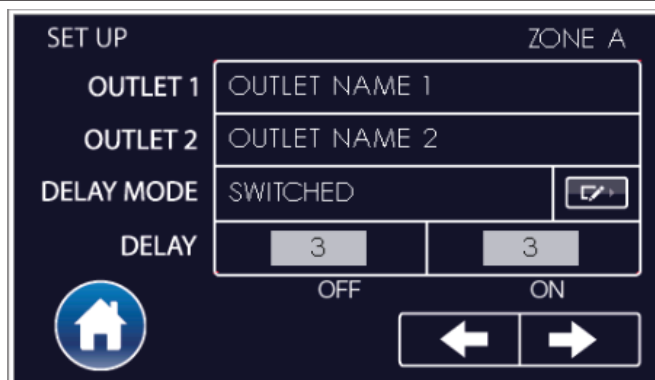
Try different MultiWave strength levels to suit your system's needs for best sound.

Considerations: Variable MultiWave strength levels five and six require more energy to be delivered from the regenerator in the Power Plant than the present single MultiWave selection does. If your Power Plant is already close to maximum power output or is working hard to make up for low input voltage, you may notice an increase in output distortion of the Power Plant when using Variable MultiWave setting five and six. It is recommended, in these cases, to stay with Variable MultiWave strength four or below to help maintain low output distortion to your equipment.

Phase Tune: Phase tune adjusts the time relationship (phase) between the incoming voltage waveform and the regenerated waveform. There are a few places that have unusual distortion which includes a very substantial time lag (phase shift) relative to the fundamental. In these situations the default setting of the Power Plant didn't perform as well as it could. 99% of the time, the default setting (0) is appropriate and no adjustment is necessary. If your Power Plant is consistently delivering less than 0.5% distortion (THD) in Sine mode, you should not need to make any adjustments. Below are the conditions under which you might want to adjust this setting:

- 1) Your power from the utility has extremely high distortion, over about 8%.
- 2) Your power from the utility is typically more than 10V (15V for 230V models) away from your desired output setting.
- 3) Your Power Plant is not able to reduce the incoming distortion by a factor of 10.

In other words, if your THD In reading is 8.0%, and your THD Out is 0.5%, your Power Plant is performing well. If your THD Out reading is 1.0% you may benefit from adjusting the Phase Tune. Please keep in mind that the Power Plant is correcting both THD and voltage errors. If your incoming voltage is within a few volts of the output setting, your Power Plant will be able to devote most of its capability to correcting the distortion. If the voltage is 10 volts or more away from the setting, the Power Plant is not going to be able to correct the THD as well. So if your utility voltage is more than 10V off, and you are seeing your THD reduced by only a factor of 5, this is probably normal. The procedure for setting the Phase Tune is simple. Experiment with different Phase Tune settings and see what setting gives you the lowest output THD reading. The optimum setting depends on how much distortion is on your power and what it looks like. Unfortunately there is no way to predict what it will be.



Setting Individual Zone Parameters: Each of the five Zones (labeled A, B, C, D, and E) can be independently controlled for sequenced power-cycling combinations.

Screen #2, #3, #4, #5 and #6: **INDIVIDUAL ZONE PARAMETERS** — By touching the Next screen from the GENERAL SETUP menu, one will enter the controlling interface for Zone A, which is the name of the first two of ten total output receptacles (five total for

all products marked UK, GR, and AU) on the back of the Power Plant 10. Zone A, along with each other zone, allows four different parameters to be set.

Naming output receptacle #1, Zones can also be named by accessing the online interface once a network connection has been established and the Power Plant 10 is accessed over the network via the unit's IP Address. For more networking information, please the section under Getting Started: NETWORK CONNECTIVITY.

Naming output receptacle #2, Zone A: Here precisely the same methods will be used as found in #1, and precisely the same usage suggestions will apply.

Delay Mode: The Power Plant 10 allows for six different power sequencing options. The default setting for all four zones is SWITCHED. All of these selections are only activated by the front-panel power button. It is important to make the distinction between the Power Plant 10's back-panel power switch, which mechanically cuts incoming AC to the unit and is known as the "hard" power switch, and the front-panel power button which illuminates blue when activated, and functions to carry out the settings that are described below.

1. **SWITCHED:** As the front-panel power button is engaged, any zone set to SWITCHED will power up with no delay, and power down with a three-second delay.
2. **DELAYED:** As the front-panel power button is engaged, any zone set to DELAYED will power up with a three-second delay, and power down with a zero-second delay.
3. **PROGRAMMED:** As the front-panel power button is engaged, any zone set to PROGRAMMED will power up with a delay in the number of seconds desired, as well as power down with a delay in the number of seconds desired.
4. **REBOOT:** As the front-panel power button is powered down, any zone set to REBOOT will power down accordingly, and will after a three-second delay power back on.
5. **AUTO-REBOOT:** If your Power Plant 10 is connected to the network, and if the network's router is being powered by the Power Plant 10, you may want to set that zone to AUTO-REBOOT. At this setting, the Power Plant 10 will use the router and the network to PING the PS Audio Server, essentially saying "hello, I'm an active network device and the router is working." If the PING does not reach our server after several tries, the Power Plant 10 will assume that the router has frozen up, and will automatically reboot that zone, thereby resetting the router and restoring connectivity. One may wish to power the network's modem on this zone as well, for the same reason.

6. ALWAYS ON: In this setting, the P10 will output power from this zone regardless of whether the front-panel power button is engaged. As long as the Power Plant 10 is plugged in and the back-panel power switch is flipped, any zone set to ALWAYS ON will output regulated, regenerated AC power.

Note that pressing the Next button will take you from control parameters for Zone A to the parameters for Zone B, C, and D respectively. All Zone setting can be made with the same instructions and suggestions as described above for Zone A.

WAVEFORM

SineWave & MultiWave

By selecting the icon labeled WAVEFORM the Power Plant 10 will toggle between MultiWave or SineWave. In the MultiWave position, the peak charging time of the sine wave is extended to help connected equipment lower power supply ripple and will therefore improve the performance. MultiWave can have the same improvement gained from adding a larger power transformer or more power supply capacitance to connected equipment.

CLEANWAVE



Degaussing Connected Transformers

By selecting the icon labeled CLEAN the Power Plant 10 will activate the CleanWave function and the display of the P10 will begin to countdown the time left as the P10 is applying the CleanWave signal. CleanWave places a series of higher frequencies that ride on the main sine wave to help "degauss" connected magnetics. To ensure that CleanWave is effective,

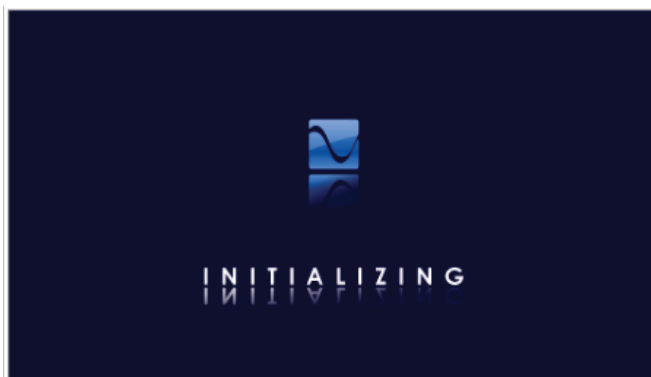
make sure all connected equipment is on and functioning. CleanWave can be used between CD's, movies and vinyl. It is not recommended to activate CleanWave while you are listening as it may not sound correct until the CleanWave cycle has finished. The option exists for a 10 second or a 60 CleanWave cycle by touching the Add Time button.

Information Screen

Viewing Fundamental System Setup Parameters

Different from the General Setup features which can be accessed by selecting the Setup button from the HOME SCREEN, this section identifies and instructs on primary usage settings as described below.

To enter the SYSTEM SETUP SCREEN one must first power down the PerfectWave P10 using the back-panel power switch. One must then reapply AC power to the PerfectWave P10 by flipping the back-panel power switch to the "On" position. The unit will initialize for 15 to 20 seconds. After 5 seconds of initialization (see picture), the P10's touch-screen will activate. After its activation, but before the P10 fully initializes and enters the HOME SCREEN, the unit's front-panel touch-screen can be touched anywhere on its face. This will bring the user to the SYSTEM SETUP SCREEN where the following parameters are displayed:



1. Unit ID
2. Bootloader
3. Firmware
4. Power Meter
5. Oscillator
6. Web
7. Dimmer

Under Dimmer, five different selections can be made here to either statically set the display's brightness, or to employ the P10's ambient light meter which automatically dims the display to match the room's illuminative levels.

- a. Auto-Fast
- b. Auto-Slow
- c. Low (33% intensity)
- d. Medium (66% intensity)
- e. High (100% intensity)



Warranty

Owner's Reference PerfectWave Power Plant 10

Limited Three Year Warranty

Registering

Should I Register My Product?

- Registering your product validates the warranty start date.
- If you do not register your product within 30 days of service, a copy of your purchase receipt from an authorized PS Audio dealer may be used as a proof of purchase to establish the warranty start date.
- If no proof of purchase from an authorized PS Audio dealer or registration is provided, the production date of the product will be used to determine the warranty start date.
- Registration can be completed online, by phone, by mail, or by email.
- You may wish to sign up for PS Audio's monthly newsletters, specials, product updates, and/or Paul's Daily Posts.

Coverage

What Does this Warranty Cover?

This warranty covers defects in material and workmanship for products purchased from PS Audio or its authorized dealers and agents.

What Will PS Audio Do to Correct the Problem?

In the event your product fails your sole remedy under this limited warranty shall be to return the product to PS Audio or an authorized PS Audio repair center. The product will be repaired without charge for parts or labor, replaced, or the purchase price refunded through the original point of purchase, at the option of PS Audio.

What is the Period of Coverage?

This limited warranty is in effect for 3 years from the date the unit was first purchased from PS Audio or its dealers and agents.

Shipping

Who Pays for Shipping?

You are responsible to pay for the safe and proper shipment of the warrantied product to PS Audio or its authorized repair center.

The PS Audio authorized repair center will pay the cost of returning the repaired or replacement product to you under this warranty.



Warranty

Owner's Reference PerfectWave Power Plant 10

Not Covered

What Does this Warranty Not Cover?

This warranty does not cover damage due to:

- Accidents, carelessness, improper transportation, misuse, neglect, or abuse
- Failure to follow the operating instructions that are provided by PS Audio in the owner's manuals (available for download at psaudio.com)
- Use in any manner inconsistent with PS Audio's operating instructions (available for download at psaudio.com)
- Lack of routine maintenance
- Connection to an improper voltage supply
- Alterations or modifications to the unit
- Improper or unauthorized repair, including repairs not authorized by PS Audio or a PS Audio authorized repair center
- Fire, lightning, flood, "acts of God," or other contingencies beyond the control of PS Audio
- Products purchased through an unauthorized source (if you have questions as to whether or not a dealer is authorized, please contact customer support at psaudio.com)
- Products with a factory-applied serial number that has in any way been altered, defaced, or removed

Limitations

Limitations on PS Audio's Obligations Under this Warranty

- In no event will PS Audio's liability to you exceed the original purchase price of the unit.
- This warranty does not cover the cost of custom installation, customer instruction, setup adjustments, or signal reception problems.
- This warranty does not cover consequential and incidental damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.
- In the event your warranted product cannot be repaired, PS Audio will replace or refund the unit. We reserve the right to replace any out-of-stock, discontinued, or limited edition products with a comparable product. Discontinued products may not be available for warranty replacement.

Warranty Transfer

How Can the Warranty be Transferred?

This warranty is for the benefit of the original purchaser of the product. The warranty may be transferred to a subsequent purchaser during the 3 year warranty period. To do this, you must contact PS Audio directly to set up transfer of registration.



If you require
service in North
America

How Do I Get Warranty Service?

To locate an authorized PS Audio repair center, for service assistance, or for help with the operation of a product or just for information, please contact PS Audio customer support.

Warranty Service Within the US

Obtain an RMA
number

- You must first obtain a Return Merchandise Authorization Number (RMA#) to receive warranty service and prior to returning any item. Contact PS Audio or an authorized PS Audio repair center to receive an RMA#.
- You must put the RMA# on all returns. If it is not clearly marked, PS Audio will return the package back to you, freight collect.
- You should include a description of the problem, along with the RMA# inside the packaging.
- Original packaging should be used for the safe transit of your PS Audio unit to the repair center. If you do not have the original packing, PS Audio can sell and ship to you replacement packaging.
- You are responsible for the cost of shipping the product to a PS Audio authorized repair center. You should insure the product for its full retail cost in the event it gets lost or damaged in transit. PS Audio is not responsible for damage incurred in products sent to us.
- Shipping your product in non-PS Audio packaging may void this warranty. PS Audio reserves the right to charge you for new factory packaging to return your product after a repair.

Use original
packing

State law

How State Law Applies

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

If you are outside
the US

Warranty Service Outside of the US

PS Audio has authorized distribution in many countries of the world. In each country, the authorized importing distributor has accepted the responsibility for warranty of products sold by that distributor. Warranty service should be obtained where the product was purchased.



Service

Owner's Reference PerfectWave Power Plant 10

Changes to Our Products

PS Audio reserves the right to modify the design of any product without obligation to purchasers of previously manufactured products and to change the prices or specifications of any products without notice or obligation to any person.

Your Serial
Number

Your Purchase
Information

Date of Purchase



Owner's Reference PerfectWave Power Plant 10

This image shows a single page of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.



Owner's Reference PerfectWave Power Plant 10

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