

MultiWave II+ Installation Instructions P500

Table of Contents

- 1....What's in the Box
- 2....Warning
- 2....Safety Instructions
- 2....Overview
- 3....Installing the Upgrade
- 6....Testing the Power Plant
- 6....MultiWave II+ Operation
- 7....MultiWave II+ Waveforms
- 8....Warranty and Service Issues
- 8....Contact Information

What's in the Box

- One microchip
- One chip puller
- One plastic dentist mirror
- One anti-static wrist strap
- One instruction booklet



Warning

To prevent fire or shock hazard, do not expose the MultiWave II+ kit to rain or moisture. To avoid electrical shock, the Power Plant must be unplugged and fully discharged before opening.

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

General Instruction:

Read the operating instructions provided with your MultiWave II+ kit.

Retain the operating instructions for later use and reference

Completely discharge the Power Plant before opening the chassis by unplugging the unit for at least 12 hours.

Unplug the Power Plant from the wall outlet before changing the fuse or performing any upgrade or service.

Do not operate the Power Plant 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. Unauthorized substitutions may result in fire, electric shock, or other hazards.

Do not operate with faulty or frayed power cables.

MultiWave II+™ operation:

Any turntable or equipment with AC synchronous motors, such as some cooling fans should not be used with MultiWave II+ unless it is in the sine wave mode. This equipment must be used with sin mode.

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

Overview

Read the entire instruction manual before starting the installation.

The benefits the Plus upgrade kit will provide for your MultiWave II equipped power plant are:

- Fine tuning for turntables
- Clean Sweep

The MultiWave II+ upgrade is a fairly simple process. If you have any questions at any time, please contact your dealer, distributor or PS Audio by e-mail, fax or telephone at the numbers listed at the end of the instructions.

All P500 Power Plants were shipped from the factory with MultiWave II installed.

Here's the quick procedure.

1. Remove the input power cable from the rear of the power plant, wait a few hours.
2. Remove the top cover using a Phillips screwdriver.
3. Remove the power connector that connects the front panel board with the big power transformer.
4. Remove the bolt holding the power transformer in place, pull the power transformer aside and gain access to the front panel board.
5. Replace the microchip on the front panel board.
6. Re-install the power transformer.
7. Reconnect the power cable to the front panel.
8. Replace the top cover.
9. You are done.

Installing the Upgrade

Before beginning the Plus upgrade, you will need to do the following:

The Night Before

Unplug the Power Plant the night before (or at least several hours before) you plan to do the upgrade. Really unplug it! Take out the input power cable and take out all the power cables connecting to your a/v equipment. By letting the Power Plant sit overnight, most of the energy stored in the power supply will drain away.

The Day of the Upgrade

Assemble the following tools in your work area:

- A clean table to place the Power Plant while you are working.
- A #2 Phillips head screwdriver.
- A 1/2 inch nut driver or open end wrench and a 1/2 inch deep-socket wrench
- A desk lamp, gooseneck lamp or other light placed next to the Power Plant so you can see what you are doing.
- The MultiWave II+ Upgrade Kit.

Before opening the Power Plant

- Ensure it is **fully unplugged and discharged for at least several hours or more.**

Disassembly

Keep the P500 upright so you have easy access to the top. Use #2 Phillips screwdriver to remove the screws affixing the top cover of the P500. Remove the top cover and set it aside.

Locate and disconnect the power cable

Note the big, round toroidal power transformer. Locate the power connector from the transformer to the front panel board as shown in the picture. Squeeze the connec-

tor's side tabs and gently pull the connector out. Do NOT remove the 2nd connector that attaches the transformer to the rear power inlet board. Remove ONLY the front panel power connector.



Remove the power transformer

Using the 1/2" open end wrench or nut driver on the bottom of the P500, hold the transformer's hold down bolt head, while you remove the inside nut holding the transformer in place using the 1/2" socket wrench.

Move the transformer away from the front panel so you gain access to the front panel board. Be careful not to stress the wires connecting the transformer with the rear power inlet board.

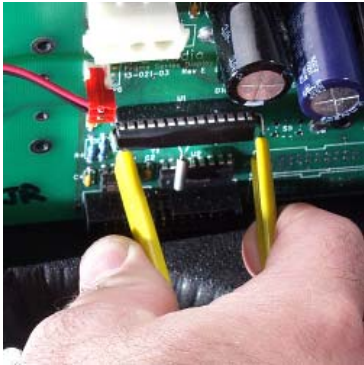
Removing the old front panel microchip

Locate the chip puller enclosed with the MultiWave II+ package. The chip puller will be used to carefully remove the old microchip. Notice the chip puller has two small prongs. Put the two prongs of the chip puller between the chip and the socket on the left and right side. There is a small gap between the chip and the socket for you to insert the prongs of the chip puller. It may take a little wiggling of the chip puller to get its

prongs under the chip.

Squeeze the chip puller together and pull





the microchip straight out of its socket. It may take a tug. Pull straight back. When the **old** microchip pops out of its socket, lay it out of the way.

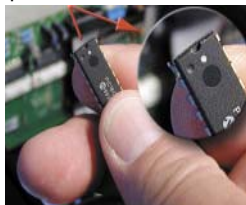
Great work. You are almost done. Take a break.

Take this time to attach the anti-static wrist strap to your wrist by wrapping the clear sticky end around your wrist like a bracelet. Remove the adhesive strip from the copper tail and attach it to an exposed aluminium surface inside the Power Plant chassis.

Installing the new front panel microchip

Carefully open the sealed end of the silver anti-static bag (you are wearing your wrist strap now, aren't you?). Carefully remove the **new** processor chip from the silver bag. The chip is pressed to a small piece of black foam. This special foam protects the chip from static. **Do not remove the chip from the antistatic foam at this time.**

Notice that the chip has a "half moon" on one side. There is also a white dot to help identify the direction. Looking from the rear of the unit, this dot must face to the **LEFT**.



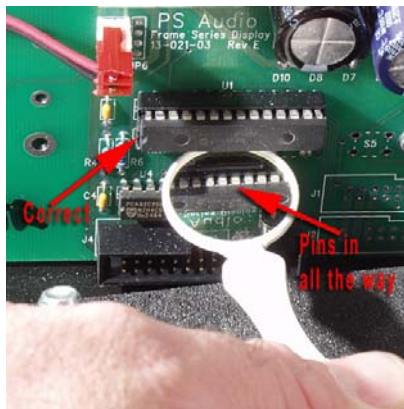
Now, carefully use your fingers to pull the chip **straight** out of the black protective foam. Yep, you can use the chip puller for this if you like. The key is pulling the chip straight out of the foam so that we do not bend any of the little legs.

After you pull the chip out of the foam, lay it so it rests on its legs on top of the black foam. It will look a lot like a bug - a healthy bug with straight legs. If any of the legs are not straight, use a finger nail to straighten it.

Do not rush the next step. Please read this next section again **before** you go on. Do you have a light shining inside the Power Plant? Is it well lit? Do you have your reading glasses on? Just checking.

You are going to next insert the chip into the socket. Do this by grasping the small sides of the chip with your thumb and forefinger. Now, carefully line up the legs of the chip with the holes in the socket. **BE VERY CAREFUL.** Only lightly press the chip into the socket at this time - just enough for the legs started. **Do not press hard on the chip at this time.**

Now make sure each leg of the microchip is inserted in the corresponding socket hole. That's what the little dentist's mirror is for. You should be able to see the pins on the top of the socket with your eye. The dentist mirror will help with the lower set of



pins. Most problems of MultiWave installation have been found to be people's failure to get the bottom row of legs in the socket properly. Make double sure. It's easy for the pins to be in the socket but not be seated electrically. Make sure the bottom pins look seated in an identical fashion to the top row of pins.

When you are sure that each leg of the microchip is straight and lined up correctly, top and bottom rows, press the microchip down into the socket. The chip will seat almost flush into the socket.

Now, use the mirror again to inspect the microchip and socket. The microchip **must** be flush in the socket and **no** pins should be bent or coming out of the socket.

Inspect your work

You are almost done!

Carefully inspect you work one more time before you button up. The items you want to check will be:

- The **new** microchip on the front panel display board is inserted correctly. Use that mirror if you need to!

Replace the transformer

Reverse the procedure you went through to remove the transformer. As long as it is sitting on its foam pad, insert the bolt through the hole, thread the nut back on and tighten. Make the sure the transformer is firmly mounted in place and that its orientation is such that the power connector will easily reconnect to the front panel board.

Reconnect the power cable from the transformer to the front panel board. Make sure that all the wires in the unit look ok.

Make sure the transformer is tight.

Replace the top cover

Make sure the holes in the top cover line up with the PEM threaded hardware in the chassis and then place the screws back in and tighten the cover in place.

Testing the Power Plant

To make sure everything is tip-top, perform the following tests:

- Plug the Power Plant into a power source. Do not plug anything into the back of the unit at this time.

- Next, press the front panel power button. 5

The Power Plant front panel should indicate [Sin] If it does, the Power Plant is fully operational and you are now a certified PS Audio MultiWave II+ upgrade installer. We are proud of you, but you may want to keep your day job.

- Don't forget to remove the anti-static wrist strap before leaving you work area.

YOU'RE DONE! Really. But keep that dentist mirror close by. Who knows what microchips or teeth might need inspecting.

NOW, hold on to your favorite listening chair and experience MultiWave II+. We are quite sure you will be as amazed as we were the first time we listened. **Use Clean Sweep and do a full system clean after everything's turned on and ready to go.**

Its benefits become addicting after a while so Clean Sweep the system before every serious listening session.

If you have any questions about the installation process, stop and contact us. We are here to help.

MultiWave II+ Operation

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 sine wave [sin], or TubeWave™ [tub] with any type of tube based audio products.

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
6. Clean Sweep

Waveform setting

This mode will display the name of the

waveform presently being generated. For more information about each of the MultiWave settings, see your original MultiWave II+ Waveforms section of the owner's 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.

New with MultiWave II+ is the ability to fine tune the frequency which is particularly useful with turntables.

Frequency Fine Tuning Turntables

- 1) After selecting the desired frequency, press the Mode Up Button. This will take you to the frequency fine tuning menu.
- 2) You can go up or down in 0.0625Hz steps up to a full +/- 1hz of range. The display will read -16 to 0 to 16. Each step is 0.0625Hz.
- 3) If you change the main frequency, the fine tuning value will be cleared.

Clean Sweep

Clean Sweep is a revolutionary new feature of the Power Plant that, in effect, cleans and demagnetizes the power supplies and power cables of all connected equipment.

We recommend running this feature before every serious listening session. There is a 60 second Clean Sweep mode, which is to be used for initial cleaning before listening. There is a Quick Sweep mode that will clean for 5 seconds and is designed for use as a touch up cleaning action when needed.

- 1) Press the Mode Up Or Mode Down Button until the word CLEAN appears on the display.
- 2) For a full system cleaning process (60 seconds), press the edit down button.
- 3) For a quick clean (5 seconds), press the edit up button.

- 4) The cleaning process is complete once the countdown stops and the word CLEAN is displayed on the display.

Warranty 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.

Warranty 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 MultiWave II++ kit, 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
Phone - 720.406.8946
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