

Variable MultiWave Update

Variable MultiWave is the first official update to the PerfectWave Power Plants P5 and P10 and is released on December 20th, 2013. The release heralded in a new MultiWave feature that allows users to select the MultiWave strength according to their personal tastes and the connected equipment's needs. The upgrade is free to all P5 and P10 Power Plant owners.

MultiWave

MultiWave extends the peak charging time of the sine wave so connected equipment has more energy storage and less power supply ripple. Turning MultiWave on is like adding a larger capacitor bank to your connected equipment's power supply. The audible results are dramatic and produce a bigger soundstage that sounds far more natural than with a simple sine wave.

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 MultiWave, 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.

Using Variable MultiWave

After updating the firmware on your P5 or P10 Power Plant it will now be possible to select one of six strength levels of MultiWave through the unit's touch screen panel in the setup screen. 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.

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 through 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.

Simplest way to upgrade

The firmware upgrade is free for all P5 and P10 Power Plant owners if you are comfortable downloading the files, unzipping them, copying them to a formatted empty SD card and installing them. Detailed instructions on this process are offered below.

For those not so handy with computers and firmware, simply [purchase a preformatted SD card](#) from us for \$29.95 and we will ship it to you prepaid In the United States. If you are outside the US, please contact your dealer or distributor. Once you receive your package, simply turn the rear panel power switch on the Power Plant off, insert the SD card, turn the power back on and in less than one minute, you are finished.

Detailed Instructions for doing it yourself

Upgrading is rather simple if you're handy with computers and memory cards. The overview is to take a fresh SD card, or reformat an existing card, copy the downloaded and **unzipped** files onto the card, place it in the Power Plant while the power is off.

Turn the rear panel power switch on and the front panel light will blink as the firmware loads. Time to load is less than 5 minutes. You can then remove the card or leave it in.

Once loaded the firmware will not reload again if you reboot.

If you follow these instructions and have a problem with the operation, go to our [Community Forums page](#) for online help, or contact our [customer service department](#) and we will assist you. Typically things should go smoothly.

The Details

Installing new firmware on the PerfectWave Power Plant is a relatively simple procedure. The entire update is stored on an SD memory card (similar to what you might find in a digital camera for memory).



The necessary files are loaded onto the SD card, placed in the rear of the PerfectWave Power Plant when the AC power is off, then the files are automatically loaded as soon as the AC power is connected.

Download the files

Download the files onto your computer. It's easiest in many cases to place them on the desktop of either your Mac or Windows computer. This just simply helps locate them. If you received the files in a zip folder ***you must first unzip the files***. Do NOT try and add the zip file itself to the SD card. The PerfectWave cannot read a zip file.

You will need a standard SD memory card to load the files onto. ***You can only use a standard SD card that does not exceed 2gB in size***. Ultra, Ultra II SDHC SD cards cannot be read in the PerfectWave. Make sure the SD card is a standard version.

Place the SD card in an SD card reader connected to either your MAC or Windows computer. SD card readers are low cost and easy to acquire. They typically plug into your computer's USB connection and self install. Most computer setups already have access to this type of card reader. Some cards have a lock on them that prevents data being removed or added – make sure this is unlocked.

Once the computer recognizes the SD card in the reader, double click to see the contents. Make sure the SD card is empty and formatted. Most are. If there is content on the SD card, it's best to erase the content and clear the card. ***Format must be FAT 16 (although FAT 32 will work)***. It is always advised to reformat the SD card to be sure.

With a cleared and properly formatted SD card, simply drag the PS Audio update files you downloaded (***and unzipped***) from our servers onto the card. Make sure you see all the files on the SD card. Make sure there is not a zip file on the SD card.

Load the firmware

Turn power off on the PerfectWave Power Plant. To do this, reach around the back of the unit and switch off the power. Check to see if there is an SD card installed already. If there is an SD card installed, push on the card to get it out. The card will pop out for you.

Install the new card with the firmware on it. Make sure it clicks into place.

Turn the rear panel power switch on. If everything is going properly, the front panel logo light will begin to blink, indicating the firmware is being loaded. It will keep blinking until the entire code has been loaded. Once fully loaded, the PerfectWave will restart and be ready for operation. This should take no more than 5 minutes.

Remove the card and you're done

You can now remove the SD card.

You can check the front panel setup screen to verify you have the latest update completed successfully if you wish. If the logo light on the front panel did not start blinking then the firmware was not installed. Call us for help or email our service department.

As always, we are here to help you in any way we can.