

PurePower+ 3000 And PurePower+ 1500 Regenerators

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+ 1500 Regenerators**
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Today I'd like to discuss the best and the worst I've heard, and heard of, in high-end audio in the past year. Like in any other endeavor, there are good and bad guys, with the same difficulties of picking out the chaff from the wheat. We'll discuss two of the former and two of the latter today.

First on the list is one of the most overpriced pieces of gear reviewed in *Stereophile*, the Automatic Controls Mirage MMS-5A five source media server. This is an Ethernet connected media server with the appropriate inputs, outputs, hard and software, but only all of a 1 terabyte Western Digital Caviar green hard drive. Considering that one can pick up a one Terabyte caviar green hard drive for about \$100 and of the three I've had in the past, two died within a year, and there's nothing high-end in both their hard and software, the list price of \$4250 is ridiculous. For about 25% of that one **can build a media center computer** that will do more than this server with far better audio and video quality, and with far more storage, or do far better by following my suggestion at the end of the article. There, now you'll have to read all the way to the end! Where do these companies come up with their prices? I know high end equipment tends to be pricey, but this is a dressed up server with minimal storage. Come on!

For a better deal, just go to **MyOliveOne.com** and for \$499 you can purchase an Olive One high definition music player which does all of the same things for far less moolah. There, I just saved you almost \$4000, which can be used far more profitably on purchasing something discussed below. On the other hand I must mention one of the least greedy audio companies, and their good guy, Jason Liao, that produce great product; Oppo. Over the years I've reviewed just about every one of their disk players, which have produced sound and picture equivalent to products at least three times their price. I left my **BDP 105 unit** at my place in the Caribbean, emailed them, filled out their web order form, paid them through PayPal, and within a week received another BDP 105 for here. Such service and quality of product!

PurePower Regenerators

When I got into audio in the 1960's, most high-enders were making their own do-it-yourself projects such as amplifiers, speakers, etc. The computer has allowed audiophiles to get back into that earlier spirit of self-improvement kit building. I still remember the joy of listening to my first completed kit, a Lafayette tube integrated amplifier, which cost all of \$35, until the tubes started glowing green and a mushroom cloud formed over the chassis. Oh well, I think I do a better job of soldering now. So if you want to get into the audiophile computer revolution, save a bunch of cash, and have major gratification, either build it yourself or get a savvy computer friend to build a media center computer server for you.

Enough negativity! Now I'd like to discuss the best thing that's happened to my system in months, the PurePower line of AC regenerators. I've been running all of my equipment through three of their **PP 2000 units for several years now** and have been more than content with the sound of my system. They do an excellent job of cleaning up the AC grunge, giving the best sound

yet out of my system, even on nights when the electricity is atrocious. But one can still detect differences in sound on different nights so they can't be completely eliminating the garbage riding along with the 60 Hz.

Here's where #2 of the "worst" stories begins. **PurePower** is based in Ayr, Ontario, Canada, just outside of Toronto, has been having major problems over the past year and a half due to a less than reputable salesman they hired several years ago. The principals of company specialized in supplying AC-DC-AC regenerators for scientific and high tech installations where power quality was critical. Damian Janzen, President of PurePower, had worked with Andrew Marshall, editor of the Canadian high-end mag *Audio Ideas Guide*. He had guided Andrew into the new Desktop Publishing technology in the late 1980's early 1990s. Based on the power quality problems he saw in Andrews audio test lab and the poor "solutions" he saw advertised to audiophiles in Andrew's magazine he decided he could do better and he designed and purpose built the first PurePower unit to apply the expertise gained in solving industry and university power problems to the audio power problem.

The new product was found by Romy the Cat, a high ender do-it-yourselfer, to produce AC that works better on audio equipment than anything else out there. PurePower designed their units in house, and manufactured the first and 2nd generation products in Canada in their own plant but couldn't keep up with demand. Like many companies they decided that it would be faster and easier to increase production by outsourcing it to China. The units would be built there, shipped back to Canada where quality control would invariably find problems with the units, repair them, then ship them out to customers.

They had three problems with this; the quality of production, and the fact that the shipping costs and lack of quality control outweighed the assembly savings. Finally, and most damaging, behind their backs it seems someone robbed their web site, got the Chinese company to supply knock-offs of the units for him, and, because he had the company dealer contacts, was able to try to get dealers to transfer to him. To the credit of high-end audio dealers around the world, all but four PurePower dealers refused to deal in the counterfeit products.

PurePower

This cost PurePower major headaches, hundreds of thousands of dollars in lost sales and lawyer and court costs, and forced them into changing their method of construction, probably a good thing. They have now built a dedicated factory in Canada, where they do all construction, quality control and from which at significantly less cost, ship their units. In addition, during the year plus down-time, they listened to their audiophile customers who had purchased their original equipment and redesigned their units for increased audio enjoyment.

PurePower+ 3000 And PurePower+ 1500 Regenerators

So about two weeks ago, Richard Janzen and his lovely wife Doneida came over with three of their units, a PurePower+ 3000 and two PurePower+ 1500 Regenerators. Luckily the two wives immediately liked each other and went off to do what wives do, leaving Richard and I to do what audiophiles do. Thus we went to the media room, set up his units and discussed the company's travails.

The units convert wall AC into DC, which is both stored in the batteries and converted back into a pure 60 Hz sine wave. This is not the typical square wave of most regenerators, hopefully leaving behind any grunge coming in with the AC. The batteries supply extra current when amplifiers require it, thus stabilizing the AC and allowing for better transients, and allow the units to play during power outages, and brown-outs.

One of the problems with the old units was their weight. Some were over 100 pounds, which becomes a burden and back cruncher as audiophiles get older. The new + units are constructed in such a way that each chassis weighs less than 50 pounds. Thus the 2000 and 3000's have two chassis with the batteries in one unit and the electronics in another. The 1500's need only one chassis as they use only three batteries for 36 DC volts, while the 2000 use four for 48 DC volts and the 3000's use 6 for DC 72 volts. Each unit then ups the voltage to the required value,



which can be set anywhere from 100 to 130 volts, and 40 to 70 Hz. Since it would be a problem to mix up the different power supplies, the umbilicals between them don't allow one to interchange battery packs for another voltage. One can also gang multiple power supplies to prolong usage if the power goes off, or if you want to run completely cut off from the mains, but Richard states he doesn't feel that it improves on the quality of the output power.



Another problem they've had was the fraudulent termination by the Chinese of their contract. The previously Chinese sourced units were known for some reliability problems due to overloading them beyond their power ratings, tending to go on the fritz rather than shutting down. This caused frustration for both the buyer and seller as the units had to be shipped back to Canada for repair. I think this is no longer a problem as they now have a dealer and repair network in both the US and Europe. But what became a problem was the lack of replacement parts. It didn't make sense to have the old parts built by a new supplier when we were already getting new superior parts made for the new design. PurePower addressed the issue by guaranteeing new units as replacements but due to startup difficulties in their production, and the number of new orders outpacing their ability until now for production, there has been a long wait, which has provided some justified grumbling on audiophile sites. Richard guarantees that has been solved and the replacements will go out in the next month, and the waiting time for new units will be minimal.

The units were placed above my three PP2000's so that switching the ac cables could go fairly smoothly. Although 2000 is a larger number than 1500+, in fact the new units have more output wattage than the old ones. Thus the 1500+ is actually equivalent to the old 2000 at 1500 Volt-Amps, and the 2000+ produces 2000 V-A and the 3000+ produces 3000, with up to a 100% headroom for up to 10 seconds.

Each has a 20 Ampere IEC input plug, and ten 15 Ampere Hubbell outputs. The 2000 and 3000 also have two Hubbell L5-20 locking plugs for high wattage amplifiers. There are circuit breakers on the back of both the power supplies and main units, and an LCD screen and three small buttons on the front to control on and off functions and change the readout on the LCD. They come with a thick 20 amp IEC input cord, can be ordered with the special L5-20 power cords, and an umbilical cord for connecting the power supply and an easy to read instruction booklet. The company even makes their own transport boxes.

For the first week the units were here, for some reason the wall AC was the quietest it's been in years, which made it somewhat difficult to see what the units could do with really bad electricity. But even with exceptionally quiet AC input, the old units still improved the sound, and the new units surpassed even them. For the first couple of hours, one 3000+ was used for the right channel, subs and rear speakers, and one 1500+ was used for the left channel and the source components. The 3000+ was then sent down to Romy for evaluation and the second 1500+ was placed in the system. Finally this weekend the AC turned nasty and I was able to see what the units can do.

Removing the 3000+ did produce an unforeseen problem which did prove the resiliency of these units to overload. My system idles at about 2000 VA, but on peaks with 9 subwoofers and 12 channels of rear and side amplification as each speaker is tri-amped, it requires more than 6000 VA. Using two of the 1500's, which produce a total of 2700 watts and up to 5400 peak watts for 10 seconds there was not the least feeling that either the units were in trouble or that they were clipping, but on looking closely to the LCD, the 1500's were giving warnings that I was taxing them. If they were going to implode, they should have done it then and there. Not wanting to destroy them, I disconnected the rear channels.

While I couldn't do quick A-B comparisons, there were only five minute gaps between listening to the old and new units. Also, the new units have the ability to bypass the AC-DC-AC conversion running the line AC directly to the components, making it easy to hear the difference the units made. The first quality noted compared to the original units and the line was a significant improvement in both the sharpness and impact of transients with both bass and snare drums. Having been a French Hornist sitting directly in front of the percussion section, I know what sort of effect live drums can have on both chest thrill and compression, and these units allowed the system to produce that live effect.

Next noted was a widening and deepening of the soundstage with increased feeling of space but also a quieting of the electronic noise that interferes with the clarity of the soundfield. On recordings I've heard many times before, instrumental lines normally buried in the grunge came out. On surround recordings, the space between the speakers filled in more giving a more complete feeling of hall ambiance.

All in all, there was a significant enough improvement over the older units to require me to once more dig into my retirement fund for immediate payment for them. But I still didn't have enough juice with the two 1500+ units, which idled at 75% power but went way over 200% with bass peaks, to run the rear channels. I couldn't justify (at least yet) in purchasing two of the larger units or a third 1500+ so I connected the rear channels and subs to one of my old PP 2000's. This allowed the two 1500+ units to run at 50% power rating steadily as all of the attached equipment including amps were Class A. Interestingly, doing this and turning off the rear channels did not significantly decrease the sound values mentioned above. I'm supposed to receive a couple of the larger units in the near future which I'll report on in a future article. I'm hoping that I'll hear little if any change with them as I don't want to be eating spam and living in a shelter when I hit 90 due to lack of funds from purchasing more units.

Was there a negative produced by the units to the sound? On many multi-mike recordings, there was an increase in the ability to differentiate the soundfields picked up by the various microphones. Thus instruments moved more around the stage as the musicians moved, and one could hear more clearly the demarcations between the different microphone soundfields. That's not a fault of the PurePowers, but due to their removing the electrical grunge, or "veils" as other audiophile writers would say.

Second, I must report that on the 3000+ sent to Romy, a relay malfunctioned and the unit had to be shipped back to the factory for repair at their expense, as they have a two year warranty. On the other hand, a friend Maurice Schmir, dealer for the TAD speakers has had a 3000+ running for several months with no problems.

Now for the kicker for the videophiles. I have an old Electrohome 9500 LC 9" CRT projector which still produces a great smooth picture and a black level that still can't be accomplished by plasma or LCD, but at 1080P, lettering on computer stuff is somewhat fuzzy as the lines produced are not as crisp as the dots on a solid state projector. Connected to the PurePower units the lettering has become significantly more readable. It's almost as if the sharpening control has been turned up without the negatives that entails. In addition the brightness (dark) end of the scale has become more uniform with better gamma control. Thus the units are definitely removing some grunge coming from the wall that the old units didn't that affects video.

Now for the cost!

PurePower 1500+ - \$2495

PurePower 2000+ - \$3495 with one power supply and AC cord

PurePower 3000+ - \$4495 with one power supply and AC cord

Extra Battery Pack - \$995 each with batteries

So one can pick up a PP 3000+, or a PP 2000+ with a balls to the wall media center computer or the Olive unit for about the same price as one of the Autonomic Controls Mirage MMS-5A servers. Such a steal!!

Next month I'll be writing (or not) from Europe as the wife and I will be taking a retirement-wedding anniversary trip to ride a river boat on the Danube from Vienna to Amsterdam and a week in Ireland, spending a few days in several of the European music capitals. Hopefully there'll be some orchestras playing as most take the summer off and I won't be able to get to Salzburg for the "Festspiel" or Bayreuth for the Wagner Festival. Hopefully they'll have recovered from the horrible flooding that's occurring over there right now.

Manufacturer Comments

We didn't make computer UPS but supplied "double conversion regenerators" for scientific and industrial situations needing very high power quality. Damian worked with Andrew Marshall, editor of the Canadian high end mag *Audio Ideas Guide*. He had guided Andrew into the new Desktop Publishing technology in the late 80's early 90s. Based on the power quality problems we saw in Andrews Audio test lab and the poor "solutions" we saw advertised to audiophiles in his magazine we decided we could do better and we designed and purpose built the first PurePower unit to apply the expertise gained in solving industry and university power problems to the audio power problem.

We manufactured our first and second generation products in Canada in our own plant but couldn't keep up with demand. We outsourced in 2009 to speed production not so much to cut costs.

I have to agree with you on the quality and feel of good HD CRT technology. I still run a 34" 1080 widescreen CRT set for watching anything I really want to enjoy. The only downside to it is when the wife wants to re-arrange the furniture.

Richard Janzen
PurePower