

Grand Prix Audio Monaco Modular Component Isolation System

It's no longer news that uncontrolled spurious vibration is one of the greatest threats to high-quality sound and video reproduction. Source components are, by themselves, a nightmare to isolate from the omnipresent vibrations in the environment. The intrusion of uncontrolled spurious into the playback of LPs, CDs, SACDs, and DVDs has a deleterious and occasionally disastrous effect on the ability of the stylus or laser to precisely do its almost-molecular-scale job. Electronics are nearly as susceptible to such vibration-induced headaches as microphonics.

The easiest way to maximize the performance of an audio or video system is to isolate its components from the shaking world around them, and the last decade has seen an explosion in products designed to calm the world's gear. Devices ranging from air bladders to suspended racks to feet made of everything from exotic metals to exotic woods, as well as couplers, decouplers, floaters, shimmers, and rollers, have been used to minimize the effects of vibration. Almost all of them help to one degree or another, especially when used in carefully selected combinations.

Into this cacophony of competing claims and products stepped Alvin Lloyd and his company, Grand Prix Audio. Lloyd's background includes 20 years of involvement in professional motor sports, including a stint as vice president of operations for Swift Engineering, the only American manufacturer of CART racing-car chassis. After founding GPA, Lloyd drafted more motor-sports engineering talent in the form of Henry Wolf and Tom Huschilt. Wolf worked as an engineer-



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ing consultant for a CART series team and was responsible for shaker dyno research, which involves determining the natural resonant frequencies and stiffnesses of all aspects of a car and its tires. Prior to joining Swift, Huschilt, a suspension engineer, worked at Newman Haas Racing, overseeing suspension design and research for such dri-

vers as Nigel Mansell and Mario and Michael Andretti. There, Huschilt was responsible for co-designing the first American-built car to win the Indianapolis 500 in more than 20 years. It would appear that these gents understand the physics of vibration.

The path to the GPA shelves began with nothing more than Lloyd's curiosity about what, if any, of his racing experience could be applied to his other great interest: audio. Having mastered management of the massive stresses that act on the suspension system of a CART car traveling at up to 220mph, with multiple G-forces acting on its chassis and suspension in all three dimensions, designing audio stands should be a piece of cake.

So Lloyd and company brought their wealth of experience in testing, research, and exotic materials to bear in designing the Grand Prix Audio series of stands, the apex of which are the Monaco modular stands. After considerable preliminary design work, Lloyd determined that a combination of rigid, lightweight carbon-fiber frames supporting acrylic (or the optional F1 Kevlar/carbon-fiber composite) shelves would be just the ticket. But because Lloyd believes that no single approach can successfully provide the degree of isolation necessary for optimal vibration control, GPA developed an eight-stage approach.

The Monaco is available as a three-, four-, or five-shelf system, or as individual modules. From the ground up, a GPA system consists of: 1) a 304 stainless-steel spike; 2) a large-diameter 304 stainless-steel support column, to which an aerospace-derived damping com-

Description: Modular metal/carbon-fiber/Kevlar equipment rack system.

Dimensions: 21" W by 23.3" D or 20.75" W by 17.75" D; Standard heights: 37.5", 39.5", 41.5" or Custom.

Prices: 3-shelf system, \$2495; 4-shelf system, \$3495; 5-shelf system, \$4495; base module, \$1500; short or tall module, \$999; amplifier stand, \$999; F1 carbon-fiber/Kevlar composite shelf, \$850. Approximate number of dealers: 24.

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pound is applied; 3) O-ring dampers in the caps of each support column; 4) “true vector” stainless-steel ball couplers that couple multiple modules together; 5) the viscoelastic damping material that secures 6) the carbon-fiber supports, which provide the foundation for 7) specially sized dampers between supports and shelves;¹ and 8) acrylic shelves (F1 shelves can be substituted at additional cost). The hollow stainless-steel columns can also be filled with lead shot to further improve performance. The approach is based on high-tech engineering and finesse rather than brute mass-loading.

Lloyd backs up his approach by providing comparative test results of GPA stands, conventional metal stands, and air-bladder shelves, measured on a shaker table. GPA claims that while air-suspension devices provide an 80% reduction in vibration over conventional shot-filled metal shelving, the Monaco reduces vibration even further.

Lloyd and I chatted extensively about what gear I was going to be setting on his shelves and the philosophy behind the Monacos. A few weeks later, several large boxes showed up. While unpacking the stands, I was somewhat dubious about GPA's theories. I've used the heavy-duty, high-mass approach for my electronics

and digital gear for a long while, including stone slabs, dampers, and various combinations of isolation footers. How, I thought, could these very stylish, lightweight stands do the job of a couple of hundred pounds of sheer mass? Despite its light weight, a four-shelf Monaco can carry up to 150 lbs per shelf, for a maximum total loading of 500 lbs. (Fortunately, my basement listening room allows me to spike everything to the concrete-slab foundation.)

I set up the unloaded amplifier stands and plunked down first the Lamm ML1 power amplifier, and later the Manley Labs Neo-Classic 250. (Lloyd recommended that I first listen to the stands unloaded, and then load the lead shot. I auditioned them in that sequence.) Per Lloyd's instructions, I used no footers between amps and stands. I hadn't expected that there would be much of a change, and, in a sense, there wasn't. Neither amp changed in its basic character, but the subtle improvements were unmistakable. More than anything else, the Monaco brought a sense of focus and a difficult-to-explain sense of calm to the sound of both of these excellent amplifiers.

Intrigued, I set up the main shelf and transferred my digital gear to the Monaco from my aged but trusty Target TT5 stand (with granite slab and a small forest of footers). While assembling the main Monaco rack, I was taken slightly aback —when nudged, it swayed a bit. My doubts were quickly eliminated. As with the amplifiers, there was a notable reduc-

tion in the already low amounts of smear and blur. A fine curtain of mist was lifted from in front of the soundstage of my digital sources, allowing music to emerge with a greater sense of clarity. Again, the sound of the components didn't change their sonic stripes, but there was an increased sense of ease and centeredness that was clearly audible.

The effect of setting electronic components on the unloaded Monacos was clear and worthwhile. Loading them gave me a substantially larger increment of improvement. Backgrounds became quieter, low-level detail retrieval improved markedly, and dynamic contrasts took on greater subtlety and sharper contrasts. Adding the F1 shelves under the Ayre D-1x and Classé Omega digital players brought a further level of stability, image definition, and overall refinement to their presentations, even greater than the effect of loading the stands.

After enjoying the GPA effect on digital gear for a good long while, I moved the Clearaudio Champion Level 2 turntable (review to come) onto the Monaco, and again was pleasantly surprised. For years, I'd consistently obtained the best turntable isolation from heavy, bulky stands. Perched atop the Monaco, the Champion's depth of field and downstage resolution improved to a truly surprising degree, and the Zen-like calm I'd already come to expect from the GPA stands was immediately apparent. It was as if another \$1000 or so worth of performance had been grafted into the already good-sounding Champion.

Perhaps the most telling aspect of the Monacos was that they were the first stands I've used that were *not* further improved by the use of separate isolation footers under components. Neither amps nor CD players sounded better when isolation footers of any type were inserted between a component and an acrylic or F1 shelf. In fact, using footers only muddled things to varying degrees, and seemed to cancel out the beneficial effects of the unadorned stands. This is perhaps the best evidence of the fundamental soundness of the GPA approach to vibration control.

Conclusions

The Monacos are expensive, but their splendid appearance and their cross-the-board improvements in resolution, imaging, and dynamics make them a “must audition” for anyone looking to maximize the performance of a high-resolution system. Easy to set up, lovely to look at, extremely effective, and highly recommended. ☒

¹ Weight-specific dampers are installed between frames and shelves to provide further refinement. When a customer purchases a Monaco stand, the dealer needs to know the weights of the components that will be placed on the stands in order to supply shelves of the correct thickness and the proper dampers from the six available load-bearing ranges.

Associated Equipment

Analog source: Clearaudio Champion 2 turntable, Clearaudio Unify tonearm, Benz L2 cartridge.

Digital sources: Classé Omega SACD/CD player, Ayre K-1x CD/DVD player.

Preamplification: Manley Labs Steelhead, Jeff Rowland Design Group Cadence phono stages; Jeff Rowland Design Group Synergy III line stage; Ayre K-1x, Atma-Sphere MP-3 preamplifiers.

Power amplifiers: Lamm ML1, M2.1, Manley Labs 250 Neo-Classic.

Loudspeakers: Eggleston Works Andra II, Calix Phoenix Grand Signature, Apogee Duetta Signature, Silverline Sonata.

Cables: Phono: Clearaudio Sixstream. Interconnect: Nordost Valhalla; Acoustic Zen Silver Ref-

erence 2, Matrix Reference 2; Wireworld Gold Eclipse 3+; Cardas Golden Reference. Speaker: Nordost Valhalla, SPM; Acoustic Zen Satori Shotgun biwire, Hologram biwire; Wireworld Gold Eclipse 3+ biwire. AC: Nordost El Dorado; Acoustic Zen Gargantua, Gargantua 2; Wireworld Silver Electra 3; Custom Power Cord Company Top Gun, Top Gun HCFi, Top Gun Super Power Block conditioner (front-end electronics, digital components).

Accessories: Ganymede isolation footers, Nordost Ti Pulsar points, PolyCrystal footers, WallyTools analog setup equipment, Argent Room Lenses, Caig Pro Gold contact cleaner, Ayre IBE system break-in CD.

—Paul Bolin



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Editor:

There was a time — remember? — when all amps were believed to sound the same. Years passed. Then folks buried that myth for good. Later, cables began to make a difference. More time passed. Just now, equipment reports are beginning to come out of the closet. They are drowsily emerging from their Dark Age hibernation. We sincerely appreciate Paul Bolin's willingness, with enthusiasm and understanding, to don the role of torchbearer. His report in the December issue of *Stereophile* educates our music-loving friends around the world about the very real benefits of scientific engineering when it is applied to resonance control.

Unlike in audio, this is a well-documented, half-century-old, highly advanced science in mechanical engineering. Literally millions upon millions of applied R&D dollars have been invested. Paul's comprehensive and elegantly stated review leaves little to add.

When designing competitive — and winning — racecars for champions like

Michael Andretti, performance advantages must be repeatable time after time. Translation? The assurance of predictability, the elimination of chance. Not only winning is at stake — lives are. In audio, thankfully, it is not lives but hard-earned money. Audiophiles should demand demonstrable returns of real significance for their dollars. The various cone, puck, high-mass, and bearing-based approaches operate on a less efficient and far more erratic scale.

By contrast, we can unequivocally state that the performances of all Grand Prix Audio isolation systems are predictable and repeatable — as were the racing cars we designed and manufactured. What Paul heard is exactly what any of your readers would hear with their components, their systems, in their rooms. It's easy to be this confident when your designs are based on actual testing, zero-tolerance execution, and textbook science.

However, take us to the test. Our home trial program makes this uncomplicated and rewarding. You will find that we are the best not because we say

so, but because proven experience from a highly competitive, very-well-funded industry has been systematically applied. Once you understand the rules of engagement and obey them categorically, performance accelerates from possible yet arbitrary to guaranteed and predictable, each and every time.

One small correction to the review: Tom Huschilt was involved in the design of the Swift 007 CART Indy car we produced at Swift. This car won its first race (Miami Homestead GP 1997), which was the first time an American-designed and -produced car had won an Indy Car (CART, USAC, etc.) race in over 20 years. Further, later in our season, with Newman Haas we were the first American-designed and -manufactured racecar to finish one and two (Road America GP 1997) in over 22 years! We did not win the Indy 500 (as printed), because we could not enter due to the founding of the IRL.

Thank you again for the time and effort applied to review our design.

Alvin Lloyd
Grand Prix Audio