

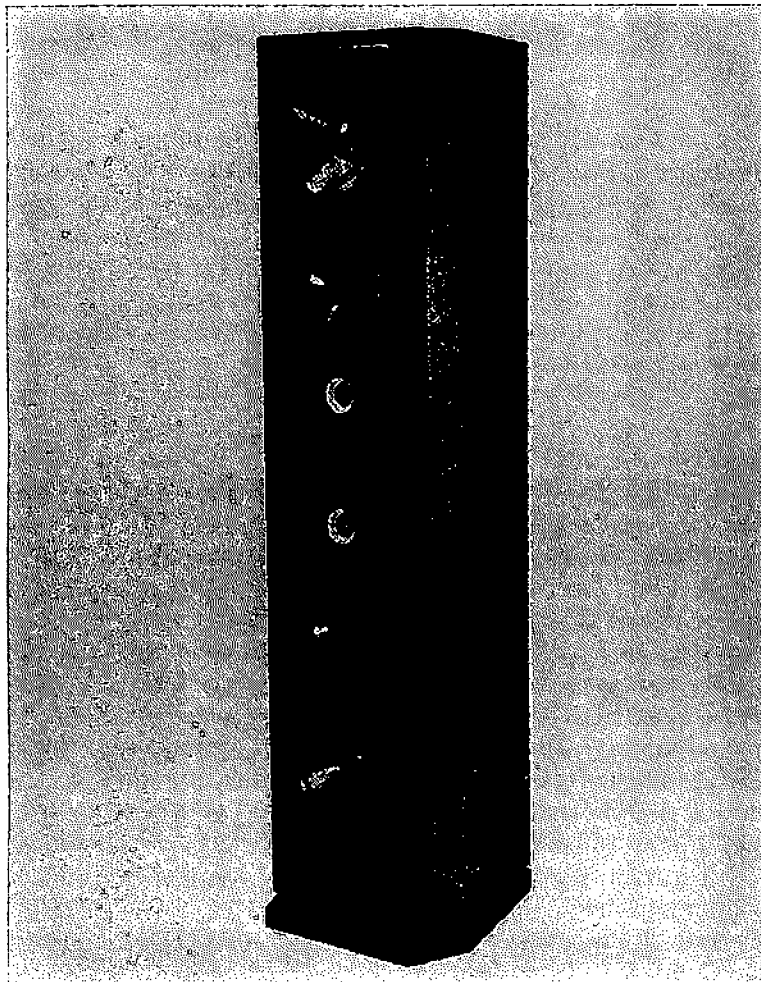
Reprinted from:

# The audiophile voice™

"...by audiophiles for audiophiles."

## *PBN Montana XP Loudspeakers*

Arnis Balgalvis



**P**ETER NOERBAEK sure is one busy man. Not only does he manufacture loudspeaker cabinets for Soliloquy Loudspeakers and Quintessence Acoustics, but he is a designer in his own right, actively creating and producing speakers for one of his own companies, Montana Audio. Peter started that outfit five years ago and today Montana's product line-up consists of seven models spanning a price range of \$2,800 to \$55,000.

Judging by my experience with the \$15,000 Montana XP model, I can tell you very confidently that Peter is really on target when it comes to turning out very high performance loudspeakers.

As if that was not enough to keep him on the go, Peter recently decided to enter the electronics side of the market. Joining forces with Erno Borbely, they have launched a new company under the Sierra Audio name. Obviously Peter and

Erno are going all out. Unveiled in Las Vegas at the 1999 Winter Consumer Electronics Show were several behemoth power amplifier models, with a pair of their 1250-watt, 190-lb mono-blocks, aptly named the Everest, leading the way. The price, \$19,500 the pair. That effort will be followed up with additional lower wattage versions of power amps, as well as a balanced, all-discrete battery powered preamplifier.

### The Montana XP

The Montana Audio XP has a very commanding presence. Standing 65 inches tall, with a width of 16 inches and a depth of 17 inches, the XP is unmistakably an imposing loudspeaker. Try to push it and the initial respect is bound to grow even more. This is some heavy speaker! It is only fair to inform you that you have been trying to move a 240-pound loudspeaker. While the 240 pounds per side is the bad news, the good news is that a very functional, and attractive I might add, caster and spike platform is part and parcel of the XP. This facility is so convenient it's a puzzle why other manufacturers have not offered something similar.

With the spikes retracted, the speaker rests on a set of casters making it possible to reposition it easily. Once in the desired location the spikes are "activated" by screwing them into a position where they support the speaker. Peter has cleverly made life significantly easier for everyone who is going to purchase a loudspeaker weighing 240 pounds per side.

In the "more good news" category, please note that the cabinet leaves a hexagonal footprint

rather than the more common rectangle. Better yet, it's not a symmetrical hexagon. Since one of the very desirable goals in cabinet design is to keep any

---

## While the Montana XP is a BIG and HEAVY speaker system, it looks good and functions well.

---

internal parallel surfaces to a minimum, you can easily see that the walls of the chosen configuration can never be accused of abetting internal standing waves.

The manual reveals that the speaker's weight builds up from the one inch thick MDF walls, the two inch thick front baffle, and seven internal horizontal bracing shelves. That's, of course, in addition to the huge magnet structures of the drivers. I was very impressed with the clever geometry of the interior compartments used to isolate the two mid-range drivers from the very intense internal pressures generated by the woofers.

Colorations are the enemy of the transducer state. Peter's take on the subject is to make the cabinet as inert as possible using existing, readily available materials. That is, of course, in addition to careful implementation of internal bracing and careful selection of the geometric configuration. While he does use the more rugged version of medium density fiberboard (MDF), he feels no need to resort to exotic cabinet materials.

The end result is not only a very functional, but also a very substantial cabinet. Anyone's feeble attempts at rapping their knuckles on these ever-so-solid walls produces one of the

dullest and most inert responses ever encountered. Internal wiring is by Monster Cable, custom-made capacitors and inductors, supplied by A. W. Kroessler Co., a local San Diego outfit, comprise the crossover. Two sets of substantial WBT terminals are provided for cabling to the amplifier in a bi-wired fashion, if desired.

Now remove the front grille. You have just come face to face with the basic reason for its prodigious performance proficiency—the drivers. Lined up vertically on a surface of 65 by 12 inches, an array of symmetrically positioned drivers is revealed. They grow size-wise as you go away from the centrally located tweeter. The focus, in the middle of two four-inch mid-range drivers, is a one-inch dome tweeter. All three of these components can be seen protruding through a felt covered surface, approximately 17 inches high by eight inches wide. Next in line, is a pair of seven-inch mid-woofers, one above and one below the tweeter/mid-range array. The driver line-up is completed with a pair of 10-inch subwoofers, one positioned at the top of the front panel, the other at the bottom. Not at all uncommon perhaps as far as driver distribution is concerned, but very impressive none the less.

Each driver is a custom design and is sourced from such very renowned driver manufacturers as Vifa and Scanspeak. The tweeter, called the Scanspeak/Montana Revelator, is a hand-made, one-inch, fabric dome and uses the latest magnet system. To eliminate electrical phase shifts, Peter says he uses SK copper caps at the magnetic focal point. It also incorporates

unique internal chambers to minimize air noise and compression.

The four-inch Scanspeak midrange drivers are claimed to have vanishingly low distortion. Its Kevlar cone aids in capably reproducing transients. Such aspects as an extremely focused magnetic field, patented symmetrical drive, vented pole pieces, and a very robust die-cast aluminum basket all aid the exceptional performance potential.

Vifa makes the seven-inch mid-bass driver and the 10-inch woofer for the Montana XP. Both are made with a new long-stroke, ultra low-reflection magnesium baskets, and very stiff paper cones. The mid-bass driver uses a concave dust cap for reduce midrange glare and a linear, low-loss suspension for aiding dynamic performance. Peter claims this driver to be responsible for the tight punchy sound of the XP.

The technically minded might be interested to know that the three cross-over points for four-way XP system are at 80, 500, and 4,000 Hz. Each cross-over slope has been designed to result in an acoustic 24 dB per octave roll-off rate. The implementation of high-efficiency drivers and opting for a ported cabinet design results in a relatively high 93-dB SPL sensitivity.

Having visited the PBN factory in San Diego I can report very reliably that nothing but the greatest care is evident in every phase of manufacturing. The internal chambers were marvels of geometric ingenuity and actually seeing the two-inch thick front baffle anchoring all the drivers was very reassuring.

Precision jigs are the PBN norm for creating consistency

and achieving accurate fit, only the best materials are utilized in manufacturing, and every loudspeaker is treated with an admirable attention to detail. Having worked for a small loudspeaker manufacturer some moons ago, I know from experi-

---

## **The Montana is capable of prodigiously loud performance on peaks.**

---

ence what it takes to produce an exceptional product repeatably. I came away from the Montana Audio factory convinced that every PBN product receives every bit of scrutiny that only a proud designer like Peter can muster.

### **The Sound**

Let me tell you at the outset—this is a dangerous speaker: “Power to the people” gets a new meaning with this loudspeaker. It can rock, it can sock, and it can delight. Even though I did have the product for an extended stay, it’s likely I only tapped a moderate portion of its full potential since the XP regularly surprised me during its stay with some new aspect of its many attributes.

So what hath Peter wrought? For starters, one hell of a great speaker, that’s what! On broad stroke basis, the XP can do dynamics, can fly high—well above hearing—it can shake the rafters raucously, and at the same time have an immediacy and clarity in the midrange that are absolutely delightful. What else? Oh, yes, staging. Owing to its outstanding ability to focus images and produce accurate dispersion, this speaker creates a

stage that is as spatially accomplished as anything that I’ve encountered.

This last attribute is a pleasant surprise. During a recent listening session Ross Wagner, a fellow TAV writer, made the observation that the XP seemed to go against the grain of the idea that for great imaging to take place, the tweeter and mid-range mounting surface had to be as narrow as possible. At least that’s something that he and I have surmised from the prevailing

information and experience. Well, the baffle of the XP is significantly wider than the diameter of the mid-range and tweeter array. Peter claims that the felt inlay surrounding the tweeter and mid-range drivers does the trick. The bottom line is that the XP images right up there with the best of them, so much so that I consider this ability to be one of its strong points.

As can be expected from its many drivers and rock-solid build quality, the XP is capable of some really prodigiously loud peak performance. The 93 dB for one watt sensitivity, coupled with its nominal four-ohm impedance, permitted the Krell FPB 350M monoblocks I used to easily take many excursions into the high decibel realm. But no matter how much energy I recruited into exciting the air molecules of my listening room, the XPs remained unfazed and continued to behave in a very controlled manner. Despite some very loud levels, the sound was exceptionally clean over a very large portion of the audio spectrum.

O.K. Well and good. But what about the low levels? The XP was a joy there as well. More so, because this is the area of

delicacy and finesse. This is also where most of our listening is likely to take place, and detailing and dynamics at low levels are components essential for a credible playback experience.

Peter has done, from what I can hear, a remarkable job of integrating his cross-over points with his cross-over slopes. In addition, the blending of his electronic components with the driver characteristics creates a very evenly distributed spectral response. To me, the three cross-over points were not discernable resulting in a very seamless impression.

All in all, the Montana Audio XP is very much a "Gentle Giant." When called upon to perform feats of prodigious prowess, it can do everything with utmost confidence. But remarkably, the finer points of sonic replication are handled with a delicacy and refinement that are very much of a surprise considering that a relatively large loudspeaker system is doing the performing.

As good as this speaker is, it is not what was once written about another speaker in another publication. That particular reviewer wrote, after listing all the positives, "Deficiencies—none". Well, that's not true of the XP or of any other loudspeaker.

Let's face it, as long as we are speaking loudspeakers as we know them today, deficiencies are a given. Since the transducer without short-comings does not exist, it's just a matter of discussing the degree of any shortfall. Based on my experience, I feel the XP errs less than most any other multi-driver loudspeaker in its price category.

As far as transgressions are concerned, the XP will lapse on

being somewhat assertive as opposed to retiring, even though it certainly will not be forgiving when forward source material is played. Rather, it will let you know—loud and clear—when you're playing a forward recording. But the XP will not turn its

---

### **If you feed the XP a great recording, it will turn it into something heavenly.**

---

forwardness into aggressiveness.

I felt all along that this was a very difficult speaker to review. Its outstanding resolution would reveal artifacts that I had a hard time ascribing to the speaker, the source, or the system. This certainly had a positive side; individual CDs would display recording processing problems, reveal new spatial information, or musically pertinent details. Or I was also able to make cabling choices that significantly increased the performance of the speakers. Believe me, after this review, my system is in much better shape.

But truth has its consequences. For one thing truth is

uncompromising. Basically we don't get just the good parts or the parts we wished for. With truth, we get everything. Like openness, transparency, transients, speed and the like. But we better be playing good source material. The XP does not play the game with the owner having the home-field advantage. Feed it something raw and you'll get raw, and bright will get you bright. Same goes for grunge.

But should you feed the XP something heavenly—you will get heaven in the form of a wide and spacious soundstage, with effervescent detail, pounding dynamics, presence and immediacy. These are a few of the many aspects comprising this divine presentation.

My experience with the XP taught me to respect this speaker. It is, my friends, a very accurate transducer. How do I know this? I must thank the good people at Wadia for their 270 transport and the 27i processor (with its internal digital volume control) and Dan D'Agostino for Krells FPB 350M monoblocks. (No, these are not loaners—I own these components) The Wadia CD system retrieves an

## **N O T E S**

**PBN Montana SP Loudspeakers, \$15,000.00.** Montana speakers by PBN Audio, 1015 La Mesa Ave., Spring Valley, CA 91977; phone 619/465-6450, fax 619/465-6479, phone inquiries 407/888-8900, website [www.pbnaudio.com](http://www.pbnaudio.com).

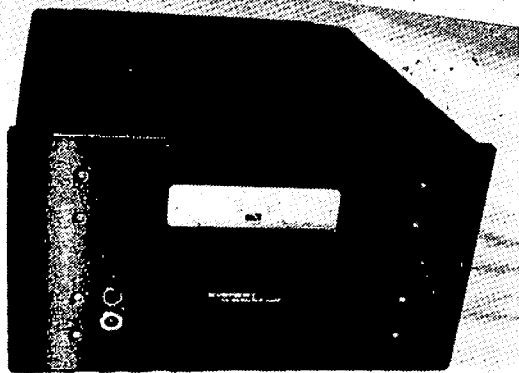
### **Associated Equipment**

**Wadia 270 CD Transport; Wadia 27i CD Processor with ClockLink; Krell FPB 350M monoblock power amplifiers; Cardas Neutral Reference, TARA Labs RSC Air 1, Monster Cable Sigma Retro interconnects and speaker cables; Hales Transcendence 8 and Avalon Eclipse Classic loudspeakers; Echo Buster and ASC Tube Traps.**

incredible amount of very compelling music from the CDs and the Krells pass it on to the speakers, in this case the Montanas.

I don't mind telling you that the combination of the Wadia 270 transport and the Wadia 27i, ClockLinked, is an absolutely astonishing CD playback combination. But even at this exalted level, to get the most out of it, the transport benefited from care in placement and choosing the right support hardware. The Montana XPs were very instrumental in helping me to sort out these problems with their extremely high resolution capabilities.

**The 650-watt Denali can be used as a monoblock or stereo amp.**



Now every CD sounded quite different and in many cases by more than just a slightly discernable difference. Bye, bye homogenization. The system dropped most every sense of character—ones such as warm, or harmonic, or rich, or some other prevailing coloration. The resulting sound came across with little compromise, yet with abundant discrimination.

And the XPs thrived on this. If a CD was compelling, the XPs conveyed just that. If a CD was spacious, that's what you got. Same for focus, dynamics, and numerous other desirable traits of musical reproduction.

This speaker simply did not

compromise on flawed music. It took no prisoners. Basically it's "garbage in, garbage out". And believe me, since the speaker is rather accurate, the garbage many a time did not sound very pleasant. The XP will not give you the good morsels to enjoy and somehow ignore or gloss over the rough spots. No such luck, not with the XP.

As you know, I like to audition products, speakers in particular, at sites other than my listening room. Once again, good fortune prevailed in the form of a trip to San Diego, where I could not only visit Peter's factory, but get a listen to his home system as well. It just so happened that the XPs were there, and it also just so happened that they were driven by Peter's new Denali power amp, 650-watt monoblocks, fresh off the Sierra Audio production line.

This experience confirmed most of my impressions formed at home, but it revealed the XP to be even a better performer in the bass than I had experienced previously. At Peter's home, the speakers were more extended into the bass region, but the icing on the cake was the XP's very impressive "slam" and "punch" capabilities. For one thing, this speaker can rock, for another it gives a foundation to classical music that is ever so captivating.

My respect for the speaker increased quite a bit after this trip to Peter's house.

### Conclusion

I am sure the Montana Audio XP is a very valid indication of the high level of performance that this company is capable to attain. I say that after an extended period of living with the speaker. If by now you do not know that I was taken by this

product and that I feel that the XP is an outstanding high performance loudspeaker then something is very wrong. It knocks at the door of the very most pricey loudspeakers, the region where competition has evolved to be exceedingly fierce. No, I am not going to declare this the speaker of speakers. Neither I nor anyone else is in a position to make such a statement for the simple reason that it is an impossible task. Besides loudspeakers not only have to fit into the acoustic environment, but they must meet individual listening tastes and requirements.

While you hold those thoughts, I would like to tell you that based on a lot of listening to local audiophile systems as well as numerous components in my listening room, and many years of trekking to CES and other hi-fi shows, I can tell you this is *one* remarkable speaker. I suggest very strongly you look for it and audition it. As I said earlier: This is one hell of a great speaker.

Reprinted by permission of  
The Audiophile Voice © 1999  
Guts & Elbow Grease  
Publishing Ltd., 215 Glenridge  
Ave., Lower Level, Montclair,  
N.J. 07042.

**Subscriptions** are \$30.00 for  
one year or \$55.00 for two  
years within the U.S.,  
Canadian subscriptions are  
\$39.00 for one year and  
\$65.00 for two years.

Overseas subscriptions are  
\$66.00 for one year. Please  
make payment by check or  
money order in U.S. funds. We  
do not use credit cards so as  
to help keep our overhead low.

Send payment to:

The Audiophile Voice, P.O.  
Box 43537, Upper Montclair,  
N.J. 07043



**LOUDSPEAKERS**

*Division of PBN Audio*

**1015 La Mesa Avenue  
Spring Valley, CA 91977**

**Tel: (619) 465-6450**

**Fax: (619) 465-6479**

**[www.pbnaudio.com](http://www.pbnaudio.com)**