Sublime Sounds

Blue Sky 2.1 Powered Monitor System

by Frank Wells

The concept of adding a subwoofer to a satellite system is obviously not a new one. The post market embraced the concept because of the absolute necessity of hearing low-frequency sound effects during production, but the concept of bass management has eluded many on the pure music production side of the fence. This has always seemed curious to me, largely due to my cutting my studio teeth in a facility dedicated to reproducing everything going to tape. I understand the allure of bringing familiar reference monitors to a project, but that seemed counterproductive when the majority of listening sacrificed the bottom octave (or two).

Now that music projects are being produced for surround sound, and for 5.1 delivery formats, the presence of the sub for those projects is fostering a greater understanding of the concept of bass management in general—and a corresponding increase in the use of subwoofers to extend the low end where space or portability don't allow the use of full-range monitors. A number of manufacturers are acknowledging this with their systems, as with Blue Sky International offering its debut 2.1 powered monitor system only as a package with the pair of satellites and the sub.

Blue Sky 2.1 powered monitor system

The Blue Sky 2.1 satellites, dubbed the "sat 6.5," are housed in an 8-inch-wide, 10-inch-deep, 12-inch-high cabinet (with a little extra depth on the rear for the power amps' cooling fins). The construction uses 1-inch MDF for the front and rear baffles, and 3/4-inch MDF for the rest of the cabinet, including an internal divider/brace that fits between the power amp and the speaker components. The finish is flat black, with a rubberized paint on the front panel giving a unique look and pliant texture.

The sat 6.5 tweeter is a 1-inch, bullet-tipped component said to offer an extremely high peak power handling capacity. The 6-inch woofer has a distinctive look—at first appearing to be an aluminum bowl. The "inverted hemisphere" cone is actually "mica-filled, injection-molded polypropylene" and the silver color is part of the chemical mix. The rear chassis houses an IEC power jack, fuse holder, balanced XLR line-level input, and an input-level attenuator (a 320-degree potentiometer that ranges from the max out reference level to Off).

Inside the sat 6.5, an active crossover feeds two 100W power amplifiers. The input circuitry uses a FET op-amp stage (built around TLO74s) feeding the bi-polar, transistor-based output stage—the topology specifically developed for this amplifier series, eschewing the off-the-shelf IC power amp solutions. The components both present the amplifiers a 4-ohm load. The satellite has an 80 Hz, 12 dB per octave acoustical roll-off.

The "sub 12" subwoofer has a corresponding 12 dB high-pass filter on its input, yielding a 24 dB per octave acoustic roll-off on the satellites. The sub input is fully active, and the filtered low-frequency information is summed and fed to a 200W amplifier of the same topology used in the sat 6.5s. The 12-inch driver in the sub 12 is a mica-filled polypropylene cone laminated to an additional heavy paper cone for added stability. The sub 12 has a removable grille, while the sat 6.5 has none. The sub 12 is housed in a substantial cabinet measuring 16 inches wide by 20 deep and 17.5 high. The construction is similar to that of the sat 6.5s. The sub 12 connections include a stereo pair of XLRs for input and another set of XLR males to feed the sat 6.5s. A low-frequency-only, direct-in and -out allow additional sub 12s to be daisy-chained as necessary. Rounding out the sub 12 rear panel are the AC power in, fuse, and on/off switch, a level attenuator, phase-invert switch (helpful when placing the sub—I ended up using it inverted for most of my listening) and a mute switch.

If you are taking a "virgin" Blue Sky 2.1 system out of the box, break them in a bit before doing critical listening. That done, the system provides a very satisfying performance overall. Imaging is detailed, with a strong center image and a convincing sound stage—decent phantom placement of instruments panned off center. The frequency response doesn't present any obvious bumps or anomalies.

Punch and transient response are all pleasing, and the sub 12 affords ample impact when tasked. I am told the amps are not clamped or limited in any way past the AC fuse—something that I think must contribute to the significant attack the 2.1 system can provide—too often powered speakers are "protected" into an unsatisfactory performance range.

Perhaps the most impressive characteristic of the 2.1 system is the *lack* of any character obviously imparted by the crossovers, both within the sat 6.5 and between the sat 6.5 and the sub 12. The transitions are smooth, and the crossover points inconspicuous. If I have any complaint, it is with the lack of some minute, low-frequency detail on a few torture test tracks, detail, though, that I have rarely, if ever, heard reproduced outside of some well-designed, soffit-mounted, full-range monitor systems. Other test tracks—truly bad recordings that nonetheless don't sound that bad on many monitors—sounded, well, bad. And in that case, bad is good for a monitor system that will be used for critical listening.

The Blue Sky 2.1 system outperforms many systems costing much more, and remember, the sub 12 is not an expensive add-on, but is included in the purchase price. The system is well worth an audition, and will likely be seen soon as standard equipment in a studio near you.

Product information

Blue Sky 2.1: $1,395
Blue Sky International
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inthefield

The Drawing Board

Blue Sky International is a new company, specifically created to manufacture professional-quality monitor systems. The company is a joint venture of the Group One professional audio marketing firm and Audio Design Labs. The chief technical officer of Audio Design Labs, Rich Walborn, led the design team.

In answer to the inevitable question, "Why does the world need yet another nearfield monitor?" Walborn says, "There are a lot of pretty good monitors out there, but our concept was, 'Well, suppose we make them really good and really affordable?'"

That goal would require Asian manufacturing, but not just to acquire the cheapest components and assemble them at the lowest cost to hit an arbitrary price point, according to Walborn. "We decided from day one to manufacture these in China," he elaborates. "We knew companies that made great boxes, we knew other companies that build high-quality electronics, and it allowed us to spend more money on the driver components."

The concept for the unique, concave, dome-shaped woofers came from Audio Design Labs' Bruce Weisberg, with the shape having function beyond the distinctive appearance. "Typically conventional 5- and 6.5-inch drivers are pretty ratty in the 1-2 khz region," Walborn explains. "Since we wanted to use a crossover frequency of 1.5 kHz, we needed a woofer that was smooth in that critical 1-2 kHz band."

After trying a number of different types of construction, the design team settled on a custom driver (Taiwanese-made) that combines a hemispherical shape, a mica-filled, injection-molded polypropylene cone, shorting ring, and a voice coil bonded directly to the rear of the cone. The tweeter is a "dual-concentric-ring radiator" imported from Denmark, with an integral bullet waveguide. "The Asian tweeters didn't quite measure up," says Walborn, adding that they liked this design even better than standard domes from the same high-end supplier. "You listen to CDs a hundred times," he adds, "and then you listen to them through this tweeter, and you go, 'Well, geez, I never heard that before.'"

The Blue Sky 2.1 system was designed with the .1, the subwoofer, from the outset. Walborn was formerly vice president of engineering for M&K, and designed around 20 subwoofers and satellite systems for them. "I know the problems you run into," he says, "trying to use full-range monitors in small rooms—it just doesn't work that well. We figured the correct way to do this was to build the system with a sub."

The Blue Sky team has already installed two 5.1 systems, and Walborn is working on a microprocessor-based, bass-management controller. "We've got a little smaller system planned," he adds. "We've got bigger stuff also in the works." Asked if, given the design criteria, there was anything he would like to change in the 2.1 system, anything that he wished he'd done differently along the way, Walborn answers with a simple, "No. It's exactly what we were trying to achieve, and, in many cases, better. As an overall package, it's more than the sum of its parts, it seems."