

GEAR GEEKING W/ ANDY...

In the previous issue, I wrote in this column about moving from Apple Logic 7 to Cubase 4 and Sonar 6. I also promised that in a future issue, I'd be writing up a review of Sonar from an audio recording/editing/mixing perspective to complement Joseph Brigg's review of Sonar from a composer's perspective. I was planning on having my review ready for print here, but Cakewalk surprised me with a **Sonar 7** release! This new version has a bunch of new features, many of which augment Sonar's MIDI capability: an integrated step sequencer; a customizable "smart" MIDI tool; a number of new instruments; and a vastly improved piano roll with multilane editing and a virtual magnifier glass. It has many new audio features as well: 64-bit, linear-phase, multiband compressor and EQ plug-ins; automatic delay compensation on hardware inserts; sidechain capability for VST plug-ins that support it; integrated CD ripping and burning; drag & drop copying of EQ settings; and spotting regions to original timestamps. The folks at Steinberg have been busy too with new releases: **Cubase 4.1** and **Nuendo 4**. I'll report back on these new versions in a future issue—promise! Additionally, right after I announced that I'd given up on Logic 7, Apple released **Logic Pro 8**. I just received a review of it from contributing writer Geoff Farina. I'll be adding my thoughts, and you'll see the double review soon.

••• A couple months ago, Chris Fichera (VP of Blue Sky) and Blue Wilding (Audio Agent) dropped by my new NYC video production facility to help configure the **Blue Sky SAT 12** speakers we bought for our large screening room. These suckers create an incredible sound field, and the midrange detail is nothing short of awesome—especially for vocals—despite the room's unfinished walls. Chris explained that a well-designed three-way speaker will easily trump a two-way in this regard, because a dedicated midrange driver won't suffer from smearing in the woofer/tweeter crossover region. We also talked about why it's advantageous to use a subwoofer, divorcing the low-frequency driver from the rest of the system. The lows are what suffer most from room modes (standing waves resulting in severe peaks, dips, and resonances). Optimized placement of a separate subwoofer allows you to minimize adverse room coupling without affecting the soundstage from the main speakers. For more on Blue Sky and Chris Fichera's ideologies, see F. Reid Shippen's entertaining but informative review of the **Big Blue 2.1** monitoring system in this issue. ••• And while we're talking about room modes, let me mention that I've been testing a **Bag End E-Trap** in my personal studio. This is a tunable, electronic bass trap that looks like a subwoofer but works by actively subtracting low-end resonance out of the room—a very cool device. Full review of this coming soon too. ••• Here are two problem solvers I've been using for years. The plastic **CableClamp** (www.cableclamp.com) is great for keeping cable coiled. It's shaped so that you hold it between your trigger finger and thumb, and it opens when you "cock" it with your thumb—a one-handed operation that keeps the cable hooked on the opened clamp. Many sizes and colors are available, and it's especially useful for cable runs that are too heavy for Velcro ties. The bombproof **Shure A15AS** is an in-line, XLR barrel, resistor pad with a recessed switch for three levels of attenuation—15, 20, and 25 dB—and input and output impedance of 1k Ohm and 150 Ohm, respectively. It's perfect for when the mic's output is too hot for the preamp. —AH

Josephson *C700A variable-pattern mic*

The Josephson Engineering *C700A* doesn't look like any mic you've seen before, and that's a good thing because, psychologically, you'll be expecting something new, and I promise, you won't be disappointed. It's big like a vintage mic—physically and sonically. The extra size accommodates its unique two-capsule design: a 26 mm large-diaphragm figure-of-eight (gradient); and a 16 mm omni (pressure). Each capsule has its own outputs so that, if both are recorded, you can decide after-the-fact how intimate or spacious the sound may be. And yes, it does cardioid!

This mic appeals to my geek sensibilities, to be sure, because there are not that many microphone manufacturers who make their own capsules. (In both versions of the *C700*, the capsules are internally shock-mounted so all you have to do is mount it on a suitable stand.) While the large-diaphragm capsule is based on AKG's CK 12, it's Josephson's knowledge of micro-acoustics—both within the capsule and its surrounding environment—that helps to preserve and enhance what we like best in a microphone. So, for example, even though it doesn't have a tube or an output transformer, it still kicks ass. The *C700A* has that bold, forward character of a classic mic with a supporting cast of seemingly minor, but technically astute innovations that contribute more than just their sum.

I like the "Ahhhhh test" for A/B mic comparisons. As simple as it sounds, the mic is placed about 12" from the vocalist, and once recorded, the continuous breath of the "Ah" can then be looped as you switch from one mic to the other. From here you can judge the low-frequency warmth as well as the presence and "air". I put the *C700A* up against the Neumann SM 69 (the stereo version of a U 67). While these two mics have little in common except for their polar pattern—the capsule designs and electronics are completely different—they compared quite favorably. One is a vintage classic and the other is thoroughly modern, yet they share the same spectral neighborhood—intimate, focused, detailed and sweet.

As you can see, I am a little obsessed with the big capsule, but since the *C700A* has two, we can mix in the omni to zoom out and enjoy the ambience. How many times have you wished to have more control of a sound within its environment, after-the-fact? The *C700A* allows you to manipulate the depth of the sound source—forward and back, left and right—and let's face it, if you've got a nice ambient space to record in, no reverb (plug-in or hardware) can touch it. There is also a "stereo" version—the *C700S*—that allows even more spatial possibilities. More on that in a moment.

I also enlisted the scrutinizing ears of Tom Garneau, an engineer who's worked with Prince, George Clinton, Big Head Todd and the Monsters, The Breeders, The Time, MC Hammer, Bodeans, Sting, Mavis and Pop Staples, Mike Doughty, Mason Jennings, Terri Nunn, Colin Hay, etc. Tom's capture of the *C700A* mic was pretty straight ahead. At Master Mix Studios here in Minneapolis, Tom plugged in the API 512C mic preamps. Not always his first vocal choice, but they were the preamps on hand in sufficient quantity for equal comparison of the lot, which included the *C700A*'s two outputs plus an AKG C 24 (a stereo C 12) and a Telefunken Ela M251. The mics were placed as physically close together as was practical. Levels were VU eyeballed into Pro Tools HD 192 converters. No additional EQ or compression was used.

The vocal artist used for Tom's test was very sensitive to distances and tone when working a mic. The perfect distance for each mic being different, a happy medium was found. For this artist, Tom said that the *C700A* sounded great—every bit as detailed and pleasant as the Ela M251 and C 24, with the post-recording manipulation of the *C700A* polar patterns an awesome plus.

In addition to the usual pattern variations, Tom said, "I could imagine recording a pair of background vocalists on either side of the mic and using polarity and a touch of level on the omni capsule to adjust blend." (When configured as cardioid, flipping polarity of one of the capsules makes it possible to choose which side of the figure-8 capsule is "the front".) "Similarly, the *C700A* can be positioned in the studio and by manipulating directivity, I can change the room tone from intimate to distant."

Tom also noticed that "only one of the student engineers in the room thought the *C700A* was too complicated to use." As a feature request, Tom said he'd like to see a pattern-mixing switch on the mic for the times when he wanted to commit to a pattern without using two preamps and outboard summing. "I'm especially looking forward to trying the stereo version on piano," said Tom, "and not just stereo, as the *C700S* can be matrixed to extract five-channel surround."

Josephson's inside-out approach—knowing what a capsule needs to be happy—gives his designs an edge over the competition. Take one look at the wide-open honeycomb grillwork and you'll have to agree, this is no copycat operation. Sound passes through the grill unobstructed, and the best analogy I can make is the improvement that goggles make (over no goggles) when seeing underwater. Sound samples will be posted at my website, just click on the *microphones* link from the home page. (\$5200 MSRP; www.josephson.com)

—Eddie Giletti, www.tangible-technology.com

Blue Sky *Big Blue 2.1 monitoring system*

When the request went out for a review on the Blue Sky *Big Blue* speaker system, I figured what the hell. I've been toying around with the idea of stepping up to a larger pair of speakers for some time now, and this system is a great package—tri-amped three-ways and optional subwoofers.

It's not an optional subwoofer, it's just an extension of the speaker system. The idea of Blue Sky is to build a full-range monitoring system in separate boxes. Using bass management to send the bass signal to a larger speaker in its own cabinet just makes sense. Trying to force a two-way monitor to produce "full range" is a bad idea because the tweeter and woofer are stretched to capacity, sacrificing midrange frequencies and never delivering real low end because the box is too small. It's just physics. Doesn't matter what size system, it's the same concept. With bass-management, even a small system can provide true full range at a reasonable price, even in a small room. You know a lot of stuff happens below 50 Hz... and consumers are listening in their cars and homes to stuff below 50 Hz...

WTF? Am I hearing voices?

I'm the Voice of Reason, the metaphysical superego of Chris Fichera, food and golf connoisseur, occasional Grammy-winning engineer, one of the founders of Blue Sky, fits audio in between tee times.

Yeah, well, it says “subs” on your website. Anyway, a bunch of big boxes arrived at the studio. I set up the pair of Big Blue SAT 12 three-ways in the control room sans the two SUB 15 subs—might as well see if they rock before we unbox all that stuff, right? Nice big cabs, with a 12” woofer, 4” midrange, and a dual-concentric diaphragm tweeter that looks like a nipple. Cool rubberized front face, with a bunch of slots. Kinda kinky setup when you think about it.

It's a Multi-Aperture Acoustic Diffraction Absorber, which helps to smooth out the frequency response without having to use a waveguide.

Um, sure. Hello, MAADA. What's great is that the front face can be rotated for horizontal or vertical orientation of the speakers (sweet!) There are three separate amplifiers in the cabs for the low (200 Watt), mid (200 Watt) and high (100 Watt)—so plenty of power there. Tweaks include four different flavors of baffle compensation for use as full-space (in the room) or half-space (against a wall); gain and input pad; individual trim for HF/MF/LF; and a pair of XLR inputs (one with a built-in 80 Hz high-pass, one without). Power on-state is indicated by a blue LED on the front—always a plus. (One of the rear dipswitches allows you to disable the front LED; there's a non-switchable rear power LED also.) Crank em up... um, well... hey dude, these speakers, um, they don't get that loud, man. Limiters are kicking in big time. S... U... C...

You gotta set them up right. Didn't you hear what I said about forcing a small box to fill a big room? Here, let me show you how to do this. First, GET THE SUBS OUT OF THE BOXES.

Yeah well, I thought we'd just start with the...

Shut it. Let me do this right. Your room is huge, man, what are you thinking!?! You've got M&K subs on your NEARFIELDS dude.

Yeah, well, they do rock and I guess this room is pretty damn big...

Yeah, well, these do rock too, and they were designed by some of the same guys that did those M&Ks. Go get a coffee, and I'll have this room tweaked.

No way. Show me your kung fu.

Okay. I already have the Blue Sky test files on my iPod, but you can download them from the website too. They include 1 kHz, 40–80 Hz pink noise, 500 Hz–2.5 kHz pink noise, and full-bandwidth pink noise. The signal goes through the SUB 15s on the way to the SAT 12s. I normally bypass the console and set up the system as-is. I send 500 Hz–2.5 kHz to the left channel, adjusting the SAT 12 level to 85 dB SPL using my handheld meter. Repeat for the right channel. Then send 40–80 Hz to the left channel only, adjusting the SUB 15 level to read 85 dB SPL. Repeat with the right channel. Then I play the full-band pink noise left/right and measure 85 dB SPL. I also walk around the room, especially if it's large, to determine if the bass is coupling in one particular area and decide the placement and/or whether an additional sub is required. You can do this with an analyzer, but I use my ear—I can hear it.

Wow, huge difference. These are rocking! Dude, the low end's killer. They're loud and clear. What's the deal?

Good design, man. Good design within a budget, actually. There are great super-expensive speakers, but there's definitely a price point you have to reach. We designed these with a budget in mind, and got them as far as we could without breaking the bank.

You did well in this regard. Talk about impressing the clients when they need to crank it—these are perfect. Certainly a great choice for a studio that needs more volume than nearfields can put out but doesn't have the dough for an esoteric setup. And the subwoofer...

Low-frequency cabinet.

LF cab—sorry—is worth the price of admission alone. 1000 Watts of power and 125 lbs of mass make for a tight, punchy bottom. I had these up in my studio for several weeks. At normal listening levels, they took a little getting used to. I use ported speakers, so the *Big Blues* seemed a little lean in the low midrange and bright on top. But after mixing on the *Big Blues* for a while, my ProAcs sounded a little covered and boxy. Lean and bright, covered and boxy—there were pros and cons for each, and somewhere in the middle was a really nice spot. I found myself making really good mix decisions based on the comparison. The *Big Blue's* high end was revealing—lots of detail, very forward, and “American-sounding”—and a wide range of material sounded great on them. One of the most impressive aspects was the integration of the LF cabs and the speakers. I can usually tell when speakers are summing with subs, but with the *Big Blues*, it was all one cohesive unit. When I switched over to movies and games, the system integration really shined. Gaming on these is sick. They're absolutely gnarly—exciting and lifelike, and dynamic as hell. Movies were equally thrilling—I wish I had gotten the 5.1 setup! Extra props here again to the subwoofer; it's huge-sounding yet tight, and it hung with anything I could throw at it. I don't think you can get a better sub without spending four times the cash, and I don't know if you ever need to.

All in all, I would say that if your studio is looking for a mid to far-field solution that's expandable, dependable, loud, and clear, this *Big Blue* setup is a no-brainer for a test run. I would be hard-pressed to find another system in this price range that covers as many bases. It's down 3 dB at 20 Hz and 30 kHz—very impressive stats—but more importantly, it makes me work when I'm mixing, which is crucial. They're definitely worth a listen. (\$7500 MSRP for a single-sub 2.1 system; individually \$2500 for SAT 12, \$2500 for SUB 15; www.abluesky.com)

—F. Reid Shippen, www.myspace.com/freidshippen

Allen & Heath XONE V6 mixer

As the digital age showers the world with more and more buttons, knobs, switches, flashing lights, faders, cue point selectors, effects options, card slots, etc., it's nice when you find those rare machines that simply work well. To say the *Xone:V6* works well is an understatement for sure. This box has become the Holy Grail for DJs in search of pristine sound quality, smooth transitions, and several flexible channels to work with—for good reason. Clarity throughout the entire frequency range is noticeable when compared to other boxes. Highs seem much cleaner and more dynamic. Lows seem to cut through, making the *V6* seem punchier than other mixers. There's plenty of headroom and the noise levels are extremely low, and correspondingly, the available dynamic range is huge (116 dB). All this is due to the fully-discrete, Class A signal path with a 60 volt power rail (from a separate, external power supply). Additionally, tube preamps on every channel provide that extra bit of musical presence (even-order harmonics) that's crucial for digital sources, which tend to have a much flatter sound than vinyl recordings. Connectivity is also a breeze and options are plenty. The *Xone:V6* gives you six stereo channels in several configurable combinations of line and phono ins.

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