

noticed an improvement to back up this claim. I haven't had any of the infrequent crashes with earlier versions (knock on wood), so kudos to code optimization and another reason to put off buying a new computer.

The list of new features is long, so I'll just hit the highlights here. Two I noticed right off. I do a lot of work with soft synths and a new Instrument track folder replaces the previous three-level folder that included the synth folder and sub-audio and MIDI tracks. This took up valuable screen space unless minimized, and it simply felt clunky. With SONAR 8 you can switch between the old folder and the new streamlined look, this initially confused me, since the necessary folder dialogs don't come up unless you click on the subfolders, not the main one. Loop Explorer 2 is another feature I quickly learned to lean on. This lets you preview audio clips and MIDI loops to your synth of choice and then drag and drop them onto the timeline. You can choose the synth you want to use with the loops from a list with just a mouse click, so you can quickly switch to the right synth from within the app itself, and you can try out the loops with the song running. Another handy feature is the Arr Assistant Cursor for placing audio clips in line with others. It basically provides a vertical line on top of your cursor that runs through the tracks. It is not as psychedelic as Sony Vegas's clip alignment, which highlights the start point of every clip with the clip color as you align, but in practice, it works about as well. The Free Edit Tool lets you select a clip or edit it, depending where on the timeline's track you click. At the top or bottom of a clip you grab the entire thing. Click in the center, however, and you can edit the clip itself. If you have a lot of tracks on screen and the tracks are squished, it is hard to find the differentiating areas, but the tool is a real lifesaver when working on several expanded tracks at one time or several clips on a single track.

Other improvements include Anytime Recording—enabling recording from playback without stopping, which wasn't possible in earlier versions. Live Bounce lets you assign live inputs to a bounce rather than just internal tracks, making it simpler to integrate hardware processing and instrumentation. Busing gets the Insert Send Assistant, which lets you to either assign a track or bus to an existing bus, or create a new bus, give it a name, assign effects (pre or post fader), and then choose an output. Nothing you can't do elsewhere, but it puts bus creation on a single page. It would be nice to have a complete bus-routing page like this, or better yet, a virtual patchbay you could call up. Maybe for SONAR 9? Clip Selection Groups allow you to select clips and lock them together so they can be moved on the timeline as one. This is great for drums, backing vocals, or any other track that needs to be treated as a single unit. You can do the group assignment before recording and each group gets its own number. Another improved grouping function is Bus QuickGroup. Previously, you could QuickGroup many track functions like faders. SONAR 8 adds the same function to buses. For example, take the drum bus again. QuickGroup the bus fader and you can lower all the grouped tracks with it. You can make it a permanent group and then move on to a new "quickie," only one QuickGroup is available at a time so you don't end up editing the wrong one in the heat of a mix. Rounding out the feature updates is the Track Console View sync, which when activated, hides the same tracks in both views. Once again, you can switch between the new and old modes to match your way of working. There are still some problems, of course. The automatic external offset still doesn't seem to work for all users. Happily, there have been two patch-sets fixed out within the first month, which have helped with this and other problems. It's clear Lakewalk is listening to end users and providing solutions.

Finally, since I'm writing this during Christmastime, let's open up SONAR 8's bag of goodies. Both Studio and Producer editions come with basic but good effects. Producer has a couple of extras like Vintage Channel, a Kjaerhus-powered channel strip, and convolution reverb from Voxengo. There aren't a lot of impulse responses included, but a few hours on the internet will round up plenty of 'em. (I suggest noisevault.com, and for serious sound design, buy CDs from Virtuasonic and Spirit Canyon Audio.) Producer also includes a good mastering suite with multi-band EQ and compression, and both editions include a simple but effective limiter. There is also the new Channel Tools. This is a stereo balance unit with spread, Mid/Side, sample delay, etc. SONAR's stereo balance control has always been a little off to my ears, so Channel Tools is a great addition for placing stereo sounds within the stereo field after recording. New Producer extensions include a new version of Native Instruments Guitar Rig, which lets cover almost any instrument you want to "ampify" on the fly (though I was saddened to see LI didn't include the Orange amps) along with transient Shaper and Tube Leveler. Transient Shaper works much like its software and hardware brethren, not only giving control over attack and decay, but distortion, too. The Tube Leveler, however, has always been my favorite in SONAR's arsenal of compressors. It has a great real emulation and smoothing levels the sound while adding a touch of warmth and roundness. A handy feature is the low-pass filter, so you can keep the bass clean while automatically compensating for the output level (if you wish). The saturation controls let you tailor the sound where you want knobs and buttons. The analog emulation does a great job, adds a missing touch to the effects suite. Most of the other effects seem bright and well-digital in comparison (but I find this the case for most other software).

SONAR includes a wealth of soft synths for your digital pleasure. Both editions come with many of the older Lakewalk synths to handle most needs, but they also include Lakewalk's premiere synth, Dimension, and Reptone. In Studio, these are essentially playback, not programmable versions, but they come with hundreds of voices. Producer adds the full version of Dimension, as well as the older semi-modular ZTRAX and TruePiano Amber modules, a warm-sounding modular piano. Finally, there is the all-new BeatScope. BeatScope triggers samples as well as ACID and FLX loops from its stereo pads. It is a joy to play and comes with a lot of content. I quickly came up with something by loading the same sample into different pads, making with the panning, effects, and filters and stacking and layering them with additional sample sounds in a series of groups. Of course, it just isn't what you can do with the ACID/FLX modules but can't save the results, so BeatScope has an unfinished feel to it. If Lakewalk makes it possible to save effects and sounds, they will have some powerful looping beast on their hands.

SONAR isn't perfect, of course. The Staff functions for SONAR haven't been updated in many years, and you can't edit directly. (You have to export to a text file.) And I thought I had found one of those anomalous bugs that always pop up at the worst times. When I tried overdubbing a soft synth line in a project started in SONAR 7, I encountered a huge delay. It was so bad I couldn't play the notes live since they sounded so late behind the beat. It turned out to be a hybrid of the transient Shaper placed on another track, transient Shaper has a 200 ms delay and other plug-ins with similar look-alike requirements also do this. The solution is to manually disable them while overdubbing. That one might have been operator error, but Lakewalk still hasn't had it. I can't hide that problem. The area to grab the handles is not to be about one pixel wide, and I'm forever catching the end of a clip, or

of the fade and accidentally moving the clip around though SONAR is a mature, well-used and loved software package. It is an outstanding addition and almost worth the price of the upgrade to use the new features. The interface is clean and precise. I will use SONAR for the foreseeable future instead of Vegas, which used to have the same edge with all the digital effects. Version 8 might not be groundbreaking, but it makes SONAR ahead of the DAW game in my opinion. **DAW 8.0** (Cakewalk, \$229)

ADAM Audio Sub12 subwoofer

As I've mentioned in the past, a properly positioned subwoofer can reproduce the low frequencies that the main speakers simply can't due to room geometry and placement constraints. Even if a full-range speaker has good low-end extension as measured in an anechoic chamber, once placed in a real-world room with low-frequency anomalies that all but the most meticulously-designed and treated rooms exhibit, that speaker may lose the battle against the room's low-frequency modal cancellations and resonances. Nearfield monitors, for example, are typically positioned in a triangular arrangement with the listener for best imaging and detail. But such placement might not be ideal for bass reproduction, as reflections from room boundaries will cause standing waves at low frequencies, and some frequencies will be nulled at the listener and/or at the speaker. If you add a subwoofer to the system, you can position the low-frequency driver—separate from the main speakers—to minimize the detrimental effect of room modes on the lows, while leaving the full-range drivers where they sound best. There are a number of tools available online that can help you choose the best location for a subwoofer based on your room dimensions. These tools are educational, but the easiest method of determining optimal subwoofer position is to "swap" your ears and the subwoofer driver. In other words, place your subwoofer where your head would normally be (and height off the floor is just as crucial as left/right and front/back position), and move your ears around the room (again, height is crucial) while listening to tone sweeps that cover the subwoofer's frequency range. Where you hear sweeps with the least "bumps" or dropouts is where your subwoofer will behave best.

Up until last year, I had a Bag End Infrabass-12 PRO (*Tape Op* #50) in the control room of my personal studio. It's now with my colleagues at WMBR Radio, who set up a room with the powered version of Bag End's matching M-6 monitors (also #50). The Infrabass-12 is an amazing subwoofer, capable of reproducing lows down to 8 Hz, with more power than I needed in my small (18 ft long) room; I was sorry to see it go. I now have an ADAM Audio *Sub12* in its place. Although the ADAM is taller and deeper, it's 4" thinner than the Bag End, so it gave me a placement option that I didn't quite have with the Bag End in the crowded area surrounding my 8 ft wide desk.

The *Sub12* is not capable of reproducing inaudible infrasonic frequencies below 20 Hz, like the Bag End Infrabass-12 PRO can. Bag End's argument is that the Infrabass-12 PRO's extreme low-end extension aids the overall phase response. In practice, I couldn't hear a difference in low-end extension or phase response after switching to the ADAM *Sub12*. My room still sounds well-balanced, with a measured response (at mix position) that's still within 4 dB of flat from 25 Hz to 18 kHz. What I did notice though, is that I can no longer hear the subwoofer "working" in the room; with the Bag End

positioned left of the console, my ears could easily “locate” it due to audible energy above its fixed 95 Hz low-pass filter (12 dB per octave). ADAM’s documentation doesn’t specify the slope of the *Sub12* crossover’s low-pass filter, but in my room, I get the best results with the variable filter tuned to approximately 80 Hz. At that setting, there are not enough upper lows emanating from the *Sub12* for me to hear its position once my ADAM S3-A monitors are on. (If I listen only to the sub, I can still hear that it’s to my left.) Moreover, the *Sub12* sounds extremely tight, without the distraction of a lesser subwoofer’s harmonic distortion and resonances, which when heard, will immediately clue your ears to the location of the subwoofer.

Feature-wise, the *Sub12* doesn’t include bass management for surround sound, so you can’t use it to reproduce an LFE channel simultaneously with the L/R channels’ lows; you’ll need a source (or an external controller) that does include bass management to do that. But as a stereo subwoofer, the *Sub12* has all the features you would expect. L/R inputs and satellite outputs are on balanced XLR and unbalanced RCA jacks. Rear-panel switches allow you to swap subwoofer polarity and disable the high-pass filter for the satellite outputs. A third output (XLR-only) can be used to daisy-chain one or more additional subwoofers. And there are knobs for subwoofer level and crossover frequency so you can optimize the *Sub12*’s response for your room and monitoring configuration. On the front-panel are LEDs for power and overload. Even at room-rattling volumes, I’ve never heard the *Sub12* distort or go into any kind of limiting mode, and consequently, I’ve never seen the overload LED lit. Build quality is on par with the rest of ADAM’s well-engineered products, and aesthetics match the S-series best, although it looks the part of sibling to any of the black-finished ADAM speakers. There are only two features that I wish it had—handles to ease placement during setup and a remote bypass switch for A/B’ing—but otherwise, I’m very happy with the *Sub12*. I recommend it highly to anyone looking for a top-notch subwoofer. (\$1999 street; www.adam-audio.com) —AH

ShinyBox

Si 500-series mic preamp

Every time I record something, I am thankful that I have the right tools to simply get things rolling for the client. I don’t make them stand around for hours, nor do I need the drummer to play the kick drum for an eternity before I have a sound I am ready to commit to the record. I have the right tools for the job. This was not always true, and I did my share of asking the drummer to hit the snare for 10 minutes solid while I ran back and forth, changing the angle, changing my mind, changing the stance, changing the tuning—and thinking to myself all the while, “How the f--- do people just throw up any old mic and get record!!!!” I would read this in a magazine and be amazed at how simple everything sounded when some superstar engineer or producer would talk about making a record. “And then we just put up some old mic that the engineer wanted to try and got a level. That became the song that sold seven trillion copies in the first day. We just used the preamp in the console...or whatever. Ya know?”

Then I started to figure something out. That “old mic” that the “engineer wanted to try”? It was a U 47, M 49, U 67, or M 269. The “preamp in the console” turned out to be a 1086, A Range, API, Helix, Olympic, or Aempus discrete goodness just living in the console. When you are using the right tools, you can get some very striking results in a very short amount of time. When you are using tools that not only are well-made from a technical standpoint, but also have some cool, old-time

look and impart something positive on the source—even if the desirable quality is speed or transparency—something happens that is equal to any recorded subjective measure. Can a mic preamp actually flatter a mic? I think so. I don’t think it should just “do its job and get out of the way.” It’s funny because whenever someone tells me emphatically that “you can’t even hear it” about a piece of gear, I am like, “then why the hell would I bother to use it?” Can you “hear” a mic preamp? I think so.

ShinyBox is known primarily for their ribbon microphone offerings, and the first time I heard of some 500-series stuff from this cool company was in a deep corner of the NYC AES show a while back. That’s where I hung out with Jon, the head of ShinyBox. Jon turned out to be a great guy, a musician, and a fun person to be around. I figured I would see some ShinyBoxes in my future after meeting him. I was to support that sort of thing.

All of a sudden, the Si mic preamp shows up on the scene, and I have to have one. I get one in the mail and take it out of the cardboard, non-slimy box. The preamp looks like it was made to be used underwater. All the tolerances are tight, and the whole thing is sealed in. Plus, it is really well put-out. I usually don’t care too much about meters on mic preamps, as my destination is all I care about (level-wise, some machine or DAW), but the metering is actually really nice on the Si. Two-segment metering means it lets you know the mic is working—and more if you like, because your meter. The meter has a couple of different modes, and the peak hold is great, along with a clear button for the peak, but whatever with all that stuff...the preamp sounds great!

The Si has with lots of great-sounding gain, and the stepped attenuator and the killer trim pot feel awesome. This thing is totally 100% winning. This mic preamp is worth having in my studio. Really, I have some really great dreams, including 3x vintage boxes in my new desk, and this preamp really has a home in my studio. It reminds me, in very broad terms, of an old API-esque thing happening with the 1086, but with an “ompt” to the low mids that I could really see lift on certain guitar sounds. This mic preamp just want to open up and scream, so for sure I liked it. I used room mic on drums—my telefunken U 47—now well in that position. The ShinyBox performed for this. Just the right balance for what I was after, forward, not bright, great mid definition, tons of like the feeling that you get using something with a adroom—you just can’t make it give up.

Variable input loading is really cool as well, even a preamp w/d an old tube mic. I tried the Hi-Z and got some interesting results in overall mix. I could see this being very useful outside the I matching mic impedance. This could be very interesting a more DAP-Kings (Sharon Jones, Amy ve) type of vibe out of your existing mics, with just nod to the past with an impedance-mismatching as a “pinched” low end, or a really shallow low—cool twist of tone at the push of a button. Try it the other way and get classic, discrete, high-end goodness. Totally awesome.

It that this preamp is \$500 blows my mind—totally worth every penny. It is made in the USA and it is something to make us prouder than Bush’s waking prowess. Buy a few of these preamps!!! at a 500-series “lunchbox” is needed to power and /O for this unit.

ShinyBox, www.shinybox.com
amazon, amazon.com

Hans Camenzind

Much Ado About Almost Nothing: Man’s Encounter with the Electron

Many *Tape Op* readers like to transport gear, solder, and build things. This book is for all of you (and, actually, anyone who is interested in a well-written, easy-to-understand explanation of electronics should consider this book). Author Hans Camenzind is a Swiss-born electrical engineer who designed the first integrated Class D amplifier, introduced the phase-locked loop concept to ICs, and according to Wikipedia, holds at least twenty US patents. But this book isn’t a technical treatise. *Much Ado About Almost Nothing* is a straightforward, dare I say fun, history of our invention of electricity and electronics. Presented chronologically, Camenzind profiles dozens of individuals who have shaped the electron. All of the household names are here: Franklin, Faraday, Morse, Bell, Tesla, Edison, etc. But there are many lesser-known, yet equally fascinating stories. For example, Wilhelm Schickel, a professor of Biblical language, had the first gear/mechanical calculator in 1622, but the plague plague cut his career and his inventor’s future short. John Baird built a TV set in his attic in 1923—years before RCA—but lacking the marketing power (and business acumen) of the larger company, he went bust. Looking back, with the knowledge we currently have, it’s both amazing and hysterical to view the experiments some of these men conducted. The number of times these gestalts occurred is equal to the number of times people were almost killed or maimed by their own curiosity.

Many of the fun things we studio types love are discussed—vacuum tubes, silicon, germanium, photo-luminescent panels, field-effect transistors, AM and FM radio (remember those?)—and the list goes on. Whether you want to avoid being a member of the morose masses who without understanding, post babble on the various Internet discussion boards, or just want to learn the origin of the term “Bafford!”, this book is a great investment of time and resources. (\$14.95 MSRP; bookrock.com) —GH

Amtec

PEQ-1A tube equalizer

I never really set out to “review” gear per se, it just ate around the studio until it finds its way into the workflow. I’m sure that wears out the guys who send me the stuff, but it’s really my only way to give them a fair shake. Otherwise, I do this...Bring in a piece of gear. Stop working. Plug it in to whatever rack I’m working on. Diddle with the knobs for 20 seconds. Is it hot or is it not? Review over...Which may be fair for certain one-trick ponies (I’ve never felt I needed to spend a few weeks with a gate, for example), but it’s a complete disservice to a product unit like the Amtec, which is why it sat around for a while in my studio.

Also, my studio has several different flavors of vintage tubes, and the comparison is inevitable, given the obvious similarities in the names. So for the duration of the review period, the PEQ-1A was sharing rackspace with a tube EQ-1A3 and a pair of solid-state-modified EQ-1A3s. Guess what—its not a tube. It’s not an old, temperamental time bomb of classic parts and dried-out caps with this out-fetish pushing the gear into orbit. It’s not pissed off when you feed it impedances that don’t exist in 1962. Its knobs don’t break and send you to therapy. It doesn’t occasionally decide to stop working at 3 AM and then cost untold hours and hundreds of dollars to fix—never mind connecting heads to insure a small box for \$200.

The Amtec PEQ-1A is a great, perhaps even better, broadband tube equalizer. (Ready for a string of subjective