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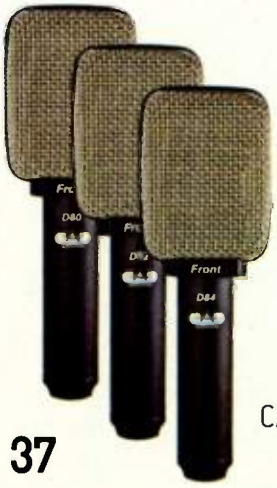

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ProAudio Review

The Review Resource for Sound Professionals

SEPTEMBER/OCTOBER 2014

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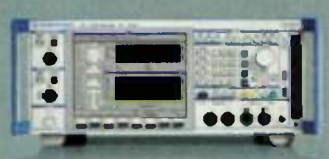

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technically speaking

Be Great

by Frank Wells

Over the weekend, I went to a wedding at an outdoor venue. I've been to this venue before, and the typical approach is to just put up a pair of speakers on sticks on each side of the freestanding pergola where the bride and groom meet for the ceremony. The soundman for this wedding turned out to be a friend and, after hellos, he noted, "There wasn't a good place to put the speakers, so I hung them in the trees." Sure enough, in the large trees on each side of the pergola, a pair of powered loudspeakers hung unobtrusively, the speaker cabinets secured to large central tree branches using steel cabling fitted with proper hardware. The vocalist/pianist (electronic keyboard in this case) commented to the soundman that it was the best outdoor wedding sound she had ever experienced (and she's done a lot of weddings).

This is an example of a professional taking an extra step beyond what is required. He delivered superlative sound, but he would have done that with stand mounted speakers near as well (the extra height was a plus for full audience coverage). But he also considered the aesthetics, and did what it took to make the complete experience as excellent as possible for his customer.

On a different occasion, while participating in the judging of a student recording competition, top-shelf, household name engineers giving their critiques diverged into a conversation of how their own mixes are judged, not on a sliding scale, but instead on a strict success or failure criteria. Good enough is never good enough, they opined, with one judge commenting, "Until it's great, it sucks."

Talent, whether native or carefully honed, can certainly differentiate the performance of audio professionals in a given situation. Knowledge and expertise can do the same. Professionalism is the final component. Given two equally talented and skilled professionals with the same available resources to complete a job, the one that shows the extra effort, that goes beyond what is expected, that looks outside the narrowest parameters of the task at hand, maybe even climbing a tree if that's what it takes—that'll be the one considered Great.

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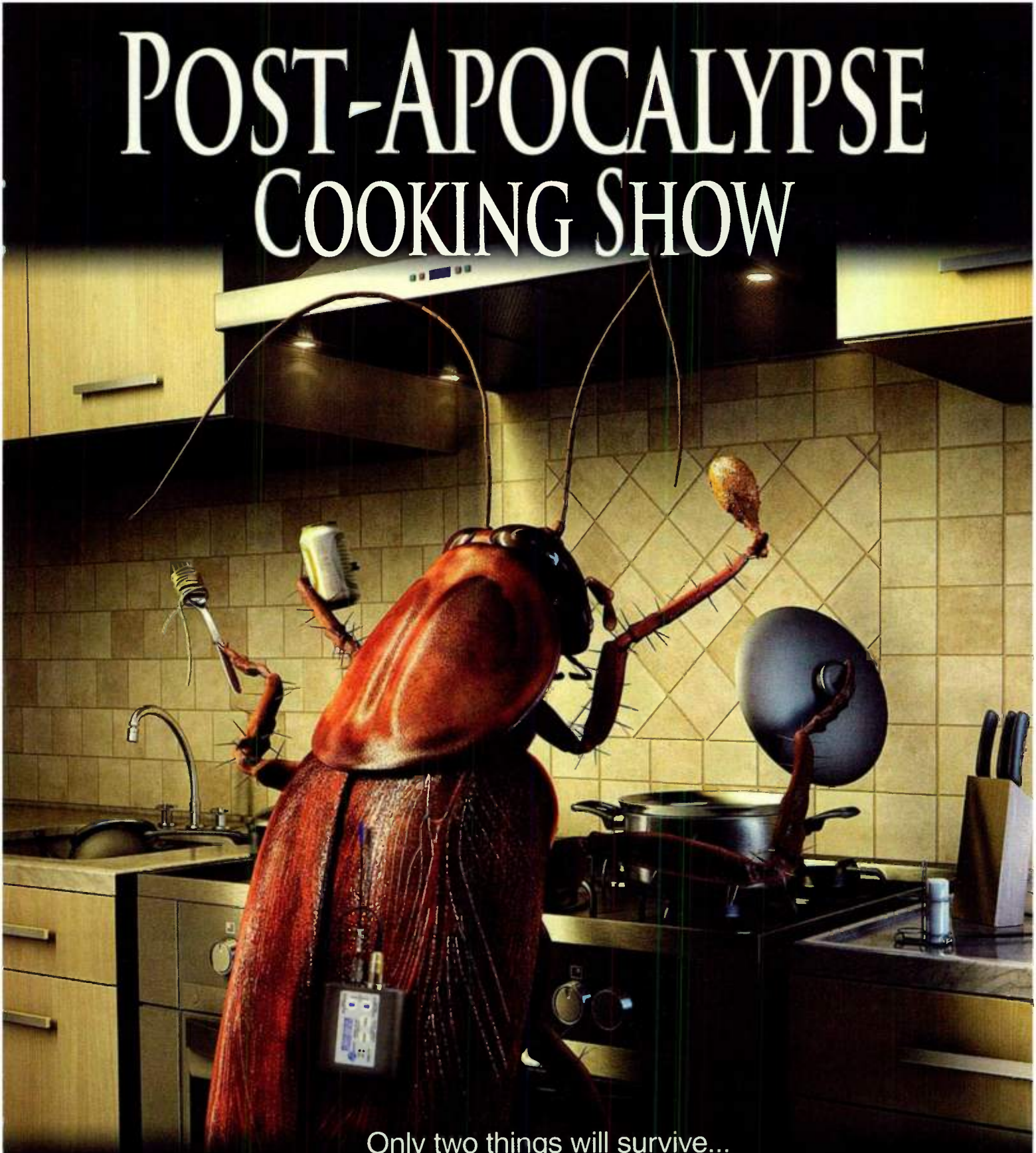

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For a limited time (until October 17, 2014 at midnight EST) UltraReverb is available for only $79. After the promotion, UltraReverb native will retail for $199. After this promotion ends, UltraReverb native plug-in will retail for $199.

Eventide: http://bit.ly/UltraReverb

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Audio-Technica: audio-technica.com

Apogee Ensemble 30x34 Thunderbolt Audio Interface

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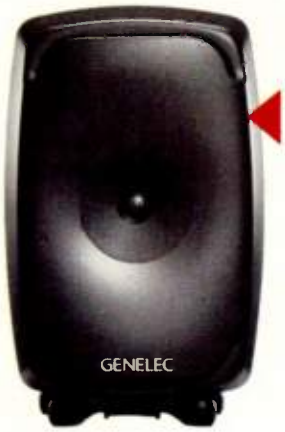

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Genelec: genelec.com

Universal Audio UAD-2 Satellite Thunderbolt DSP Accelerators

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UAD-2 Satellite Thunderbolt DSP Accelerators are available in Core, Custom, and Ultimate software packages. The Core package includes the Analog Classics Plus plug-in bundle, while Custom adds a choice of any three individual UAD plug-ins at registration. The Satellite Thunderbolt OCTO Ultimate has more than 79 UA-developed plug-ins—up to and including UAD software v7.8.

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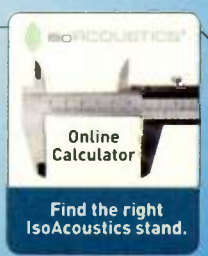

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Crane Song: cranesong.com

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IsoAcoustics: isoacoustics.com

Android Void:
The Most Popular Mobile OS Has No Pro Audio Applications

by Strother Bullins
Editor of *PAR*
sbullins@nbmedia.com

While pro audio is respectably monogamous to iOS—its first-love mobile platform—the world overwhelmingly runs with Android. Worldwide, Android accounts for 97.4 percent of smartphones[1] and at least 60 percent of tablets, and rising.[2]

Android OS—with thousands of available app options—currently offers no reasonable tools for its users who may want to, for example, use their tablets to capture multi-microphone/multi-track performance sessions, record overdubs, effect/edit tracks, mix, and distribute audio productions without horribly bad audio I/O latency. Yet there's an iOS app for that—dozens actually, and those perform spectacularly.

Meanwhile Audour and Harrison MixBus are each fine DAWs available on Linux OS, the open architecture OS (with the cute penguin mascot) that shared its processing kernel with Android (branded with the little green robot with antennas).

The Latency Hurdle

Overcoming a best-case scenario 20 ms full round-trip I/O latency in tablets seems easy enough—that is, if the best case scenario would be as low and consistent. Yet the fact is, audio latency inherent in Android devices varies terribly, based on each manufacturer's own added code and the accompanying, inherent variances; expect latencies of 250 to 300 ms, regularly and randomly. This is simply unacceptable for audio production tools and an issue that Google, Android's current developer, will have to make a greater priority to solve with an updated API* as well as some form of enforced standards. After all, some tablets process audio at 48 kHz, other "smart" devices at 32 kHz, while games often use 24 kHz and streaming audio is widely variable (QuickTime, for example, uses rates ranging from 8 kHz to 48 kHz). Thus Android audio requires latency-causing resampling code.[3] Or, tablet manufacturers must work around current Android code using other means. Or, possible still, third-party pro audio industry Android advocates could provide some interesting work-arounds.

Google now manages the world's most popular mobile OS in history. To be fair, Pro Audio's specific needs in new Android code is obviously down a long list of other priorities, yet that's not to say Google isn't concerned about audio I/O latency. Who opens the Android gate into such pro audio development? Is Android's market dominance even that attractive to pro audio product developers, or—possibly more poignant—is pro quality audio production an attractive market to tablet manufacturers?

I recently spoke with two experts also interested in this topic: Paul Davis, developer/programmer of Audour, the JACK Audio Connection Kit**, and second-earliest programmer for Jeff Bezos' Amazon.com; and Ben Loftis, designer/engineer and developer of MixBus for Harrison Consoles.

Paul Davis

My conversation with Davis on the subject started with this disclaimer. "Let me first qualify anything I am about to say: I'm not an expert with Android audio. In fact, at this point, I wouldn't even say that I'm an expert on audio inside of the Linux kernel."

Yet, within the last few years, Davis continued to develop his Audour project with investment and collaboration with Harrison Consoles and later, development and promotional support from Solid State Logic, the latter an arrangement publicly announced late 2006 at the San Francisco AES Convention. Davis is a DAW expert with quite an interesting and scenic viewpoint.

"There's a historical background to this, and that problem goes back to the guys that worked on the APIs and libraries that application developers use," begins Davis. "They didn't really care about low latency audio. I'm not even sure that they knew about it, understood it or even thought that it was a problem to pay specific attention to. The specific difference is, in a world that's derived from UNIX-types of operating systems and that didn't mutate in the way Apple did it, there are essentially two models for interacting with audio hardware. One is a push model; one is a pull model."

"In the push model, the application is responsible for deciding, 'hey, I have a big chunk of samples and I want to send it out to the device right now and it's going to get played.' It's a nice, simple design that works really well for all the traditional UNIX audio applications where you just want to make a beat, play one audio file, etc. Just grab the samples, queue up a bunch or all of it, push it toward the device, and some layer in the software will just take care of the rest. This is not so good for low latency in general because of loads of buffering between the application and the hardware."

"The pull model actually wasn't pioneered by Apple but they were the first company to impose it on application developers when they switched to Core Audio with OS X. You had to deal with the new model. The device is going to wake up when it has audio to record or needs more audio for playback, and the application handling that has to deal with it right now. With this model, it's easy to get very low latency. Of course, you can lay other things on top; it's easy to write high latency stuff on top of the pull model. All the low-latency systems—ASIO, Core Audio, and systems like JACK, which sit on top of those—use a pull model."

"In developing Android, they either didn't know this, or didn't care. So, all of the audio APIs in Android became push-based. The idea is, 'I'm an application. I have some audio playback. I just need a pathway through to the device.' In Android, historically, the model was Java—high-level languages, applications that need boatloads of buffering. Up until 2-3 years ago, that's the reason why Android sucked. They just weren't in that headspace at all, and there was nothing available for developers. Recently, this has begun to change.

"Google has a relatively small team focused on trying to redesign the core audio layers inside Android, and they have made some significant progress so far. They have also added the OpenSL API which does provide a pull model option for application developers, although it comes with a lot of additional stuff the pro audio apps don't want or need."

"Apple said to their developers, 'We don't care how much this is going to disrupt your other application designs. With Core Audio, this is how audio applications have to be written, end of story.' My impression is that Android management, whatever that means, really doesn't want to turn around and announce this kind of change."

"My sense is that there's an unwillingness to commit to, 'we have to have a low latency path.' There is also the problem that Android itself is not a product in the way iOS is. Getting this stuff to work the way we need it for pro audio requires the whole Android ecosystem to agree on some basic goals and rules, and that seems quite unlike how Android has worked so far."

> "Getting this stuff to work the way we need it for pro audio requires the whole Android ecosystem to agree on some basic goals and rules, and that seems quite unlike how Android has worked so far."
>
> —*Paul Davis*

Ben Loftis

Loftis' MixBus DAW is modeled on code developed by Paul Davis via Audour. As such, Loftis further developed in MixBus an aesthetic reflecting what you'd hope to see from an engineer at such a classic, large-format console manufacturer as Harrison.

Loftis dove into the Linux pool 12 years ago. "We first started with Linux when

> "The fact of the matter is, the underlying protocol is unidirectional only; it's not a record/playback system. You have separate record and playback systems with separate clocks."
>
> *–Ben Loftis*

we changed our automation system from Apple to a system called BeOS, which marketed itself as the multimedia operating system," recalls Loftis. "TASCAM, RADAR (iZ Technology), Harrison, Level Control Systems, Roland and several others bought into the idea that BeOS was going to be the next big multimedia platform—the replacement for Mac. That didn't happen. BeOS changed focus to consumer things and we were stuck with an automation system that we had written that had to be ported away to something different. We looked around at Windows and Mac and decided that we couldn't afford to have another company shift their focus and make us re-write our software every few years, so we got into Linux development."

Upon Android's burgeoning success just a couple of years ago, Linux audio folks like Loftis were stoked. "The thought was, 'If we can put JACK on Android, then all this cool software we've written—metering and recording, MIDI, virtual instruments and synthesizers—could get immediately ported over. They found that Android's infrastructure was incapable, raised a fuss, started a mailing list and hammered on Google to address the issue. They have tried to address some of these things, so that users can use Android for 'semi-pro audio,' but there's a lot of existing hardware and things that make it hard to backtrack. The fact of the matter is, the underlying protocol is unidirectional only; it's not a record/playback system. You have separate record and playback systems with separate clocks. So, when Google announced that this was what you're going to get, everyone (in pro audio) just said, 'forget it, then.'"

Loftis poses that the pro audio industry may ultimately regret "hitching wagons" to consumer OS systems. "Don't get me wrong, there are great iOS products," disclaims Loftis, "but the problem is that we, as the audio industry, are dependent on consumer electronics to make the bigger version, the smaller version, the faster version or the cheaper version to meet our needs. We are not the tail that wags the dog; they don't make larger iPads because the audio industry wants it. They may do that anyway. But they're not going to do it *because* the audio industry wants it."

But wouldn't "audio-optimized" Android tablets open up music production to a much larger audience, further nurturing and growing next generation audio content creators? Possibly, agrees Loftis, but "there's a bit of a chicken-or-egg situation there, too. Samsung has promoted a high-performance audio tablet, porting JACK over to Android, and apparently it works. But they're still held back by a couple of things: Samsung didn't rewrite anything in Android; they're still using what Android provides them. No one can write software for a really good audio back-end until there is one. If you make a very good audio back-end and there are no apps out there, it's not a sellable product. I'm just looking at this from the developers' standpoint. It's hard for me to make a really cool app because even with Samsung's changes, the performance of Android isn't as good as iOS. I would be motivated if it was as good, but I would still have to consider that only those with the latest Samsung tablet could run it."

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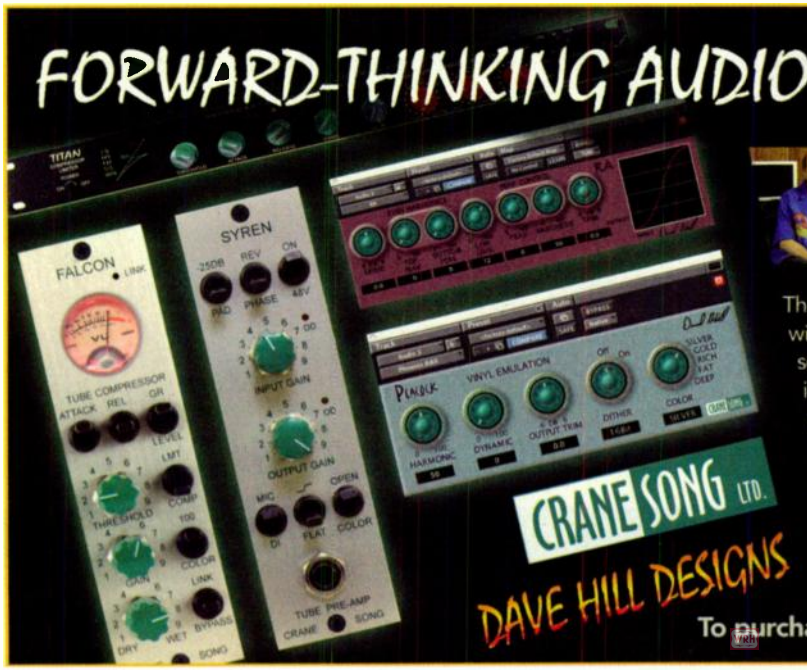

Dave Hill, the man behind Crane Song and Dave Hill Designs, is known for creating forward-thinking audio gear with a distinctive character. Crane Song's mic pres, signal processors, converters and plug-ins have the color and flavor you need to deliver stellar-sounding audio everytime.

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Rather than apps, perhaps the future of Android in pro audio is Android-enhanced hardware. "A USB front-end is already costing more than a tablet or computer," poses Loftis. "The next step is, you buy your USB I/O device with Android on it, which costs nothing to license. Suddenly you can do everything any other tablet can do: drag and drop, wi-fi, use a keyboard, etc. You wouldn't buy a tablet like an iPad; you actually buy a tablet with four XLR ins, four XLR outs, etc. That could happen—an I/O device featuring Android. It's definitely an interesting prospect for hardware manufacturers."

"If it wasn't just about the iPad, [pro audio companies] would stick an Android tablet in there, one that they could have manufactured specifically for their needs," he continues. "If Amazon can sell a cheap tablet for, say, $50, they're being made for $20. A company could have them made and put their software in; users could pull it out of the slot, it would be company branded and the company would have a lot more control over it—that is, if it isn't just about the iPad. And as controllers, Android tablets are already superior because they're cheaper, customizable with better battery life, Wi-Fi range, or any number of features."

"As controllers, Android tablets are already superior because they're cheaper, customizable with better battery life, Wi-Fi range or any number of features."
—Ben Loftis

Meanwhile, it's amazingly quiet in pro audio circles on the topic of Android. Why? "It's not a solution to a problem we have," offers Loftis. "It's just that people want to use their iPads. I've heard the sentiment, 'Put an iPad in it and it'll sell.' If you can afford a $700 iPad, you can afford a $200 guitar input dongle. And eventually, you'll go around looking at mixers. 'What kind?' 'The kind that works with my iPad, of course!' Really, that's a lot of what's going on."

Filling The Void

It's arguable that Android, the most accessible OS in consumer electronics history, could allow for more pro audio products to, for example, assist budding producers who already have an Android tablet, or for those who could more easily afford an Android machine. And despite how much we all love iOS, a little competition is never a bad thing. But for now, the competition is still in the locker room.

Footnotes:

1 "Android, iOS Gobble Up Even More Global Smartphone Share," PC World (http://www.pcworld.com/article/2465045/android-ios-gobble-up-even-more-global-smartphone-share.html)

2 "Gartner Analysts: 2.5B PCs, Tablets And Mobiles Will Be Shipped in 2014, 1.1B Of Them On Android," TechCrunch http://techcrunch.com/2014/01/07/gartner-2-5b-pcs-tablets-and-mobiles-will-be-shipped-in-2014-1-1b-of-them-on-android/)

3 "Sample rates and resampling: Why can't we all just agree?" Google I/O 2014 (https://www.google.com/events/io/io14videos/17fb53da-42e0-e311-b297-00155d5066d7)

* Application programming interface, specifically audio I/O software http://en.wikipedia.org/wiki/Application_programming_interface

** The JACK Audio Connection Kit is Linux audio/MIDI software, a soundcard server for Linux, iOS/OSX and Windows: http://en.wikipedia.org/wiki/JACK_Audio_Connection_Kit. Meanwhile, the iOS exclusive AudioBus, is in V.2.

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by Lynn Fuston
PAR Technical Editor
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Retro Instruments OP6 Portable Amplifier

When I asked Phil Moore why he decided to build a recreation of the classic 1940s-vintage RCA OP6 preamp, his answer was brief and straight to the point. "Because I heard one." There you have it. "I have a friend who collects old gear and he loaned me one. It adds such a nice polish to the sound."

For those who may not recognize Phil Moore's name, his company, Retro Instruments, has been manufacturing his reinterpretations of the likes of the Pultec EQP-1A, UA 176 and Sta-Level limiters and his own creations, the Powerstrip and Doublewide. This is his latest project, the Retro OP6, based on RCA's "portable amplifier" which came in a small breadbox-size case with huge VU meter and Bakelite "volume" knob.

PHOTO: LYNN FUSTON

Retro's OP6 sits left of its inspiration, the 1940s-era RCA OP6 preamp.

So is it a replica of the original or a reinterpretation? "It's a re-engineering of the original." He kept all of the circuit design, the VU meter (optional on the original), a big plastic knob and the hammer tone gray all-steel case. To these he added things that the original didn't offer, things that weren't needed (or even invented) in the 1940s: XLR in and out, IEC power connector, phantom power, an input pad, selectable mic impedance and multitap transformer. Phil used the original tubes ("There's still a big stash of these tubes around, 6J7 and 1620") and added a fewer other tricks along the way. "I doubled the tubes on the input and output stages. They run paralleled." Why is that? "It lowers the noise floor by 6 dB and it actually sounds better. It's like a Fairchild thing. And it allows you to have a spare tube, in case you lose one. Just pull

Second Opinion: Russ Long

The Retro OP-6 performed beautifully on acoustic guitar. The rich, pristine top end coupled with a smooth, lush body was gorgeous. Capturing drums with a single mic was also pretty amazing. The impact of each individual element of the drum kit combined with the tone of Addiction Sound Studio's tracking space was enough to capture the ear of any discerning listener.

one of the tubes and it will work just like the vintage original. And you can listen to it either way and decide which you like best. But it's better with the dual tubes" he adds coyly.

Other nice touches include stepped main "Volume" knob, switchable polarity reverse, cool colored jewel light indicators, along with a Hi-Z instrument input and a continuously-variable Output level control. There's a meter switch to indicate output levels (+4, +20, OFF) or to check the status of the tubes. Nice. Input impedance settings are 37, 150 and 600 ohms. I noted those seemed very low. "That's for selecting appropriate termination for certain mics, not the actual input impedance. The output of the transformer is terminated and reflected back to the mic." The Retro OP6 even mimics the original's dual-log pot and it offers a spec'd 82 dB of gain. "Part of the sound of the original is the metal tubes and part of it is the transformers. I used a custom input transformer and the steel output transformer is also custom made for us."

Curious potential purchasers so far have asked if there will be rack-mount version of this unit. Phil, who is still gearing up for the first "non-prototype" production unit, is not inclined to agree to that. Also I joked with Phil that a 500-series version could probably fill an entire 10-slot 500 rack, three spaces for the meter, two for the knob, etc. That got a laugh.

So how does it sound?

I assembled a small but elite group of engineers to audition the Retro OP6 against two very worthy preamps. First was an original RCA OP6 that came from the vintage RCA gear collection of Blackbird Audio Rentals (http://www.blackbirdaudiorentals.com/). Thanks, Rolff. This was a unit that has been refurbished with caps replaced, XLR connectors added, etc. The other contestant was a Neve 1073 preamp in the racks at Addiction Sound Studio. (http://addiction-sound.com/)

We listened to acoustic guitar through the Retro OP6 and the 1073, using a U87. I preferred the OP6 as it seemed livelier to me, with more definition and clarity, less thick. Gains were precisely matched and mic and instrument position were identical. I have included 24-bit/48 kHz .wav samples so you can hear what I heard. (http://www.3daudioinc.com/par/retro_op6) Next we compared the Retro to the original RCA OP6 on drums with an R84 placed in front of the kit, then with a Peluso 67 placed over the kit, and then with the Peluso 67 on acoustic guitar.

Overall, the RCA felt softer on transients to my ear, like I could hear softness in the power supply (listen to the first crash cymbal of the Peluso 67 drum sample for comparison). The RCA also sounded woolier on the low end and possibly a bit hyped on the extreme top (compare the Retro/RCA guitar samples). That huskiness is part of the RCA's appeal. According to Phil, the sound will get "mushier" when removing one of the doubled tubes but I didn't get to hear that. On the drum samples, I heard a difference in the ambience (amount of room) picked up the two, which surprised me, almost as if the mic was moved. The way the snare sat in the overall drum picture also changed between the two. The Retro felt overall more desirable to me but mostly in terms of fidelity. If someone wants a vintage sound, that seems a bit dated, then the RCA would get the nod. The RCA definitely has a distinctive sound to it, but for overall usage, I'd pick the Retro recreation.

From a purely practical standpoint, I found that working with the Retro was preferable. The Retro's ability to pad the input allows use with a wider range of mic (when using the RCA, a tube LDC's output was delivering too hot an output [+21 dBu] even with the RCA's input turned all the way down), having phantom power available at

RCA's Portable Amplifer OP-6

Designed at a time when a six-channel broadcast "console" required two men to lift, the nearly 21 lb lunchbox-sized (9.5-inch x 12.5-inch x 7.25-inch) "Remote Pickup Amplifier" was designed for field work and was designed for use with any kind of microphone, including the then-current crop of low output RCA "velocity" mics (ribbon mics, like the 44-BX and 77D) and offered 88 dB of gain. Frequency response was 40 Hz to 10,000 Hz, +/- 1 dB and it offered a built-in power supply. Accompanying kit included the OP-7 microphone mixer, which offered four mic inputs and a mic-level output that would then plug into the OP-6, and also a similar-sized Battery Box for use where there was no electricity. The complete kit for the recorder-on-the-go offered a leather shoulder strap so one could sling the preamp over one shoulder and the 44 lb battery box over the other. Just add a mic and boom and something to record to and you're ready to go. What was unique about its circuit design? I'll just quote from the 1950 RCA manual: "The OP-6 is a three-stage resistance coupled amplifier using RCA 1620 low noise, non-microphonic tubes. The amplifier circuit is unique in that it utilizes two feedback loops. One loop is around the first stage and is varied with the main gain control thus maintaining a maximum feedback consistent with required gain. This arrangement prevents overloading the first tube by high output microphones. The gain control is located between the first and second stage and is a high quality step-by-step device equipped with a large knob. The second feedback loop is fixed and is connected around the second and third stages."

From a purely practical standpoint,
I found that working with the Retro was preferable [to the RCA original].

the flip of a switch allows using any mic (the original RCA never offered phantom), plus the stepped input control and the ability to trim the output, all of these are not only nice but features we take for granted these days.

The Retro OP6 is really an amazing recreation of a classic piece, an update both sonically and practically, and I think it sounds great. Nice job. The final score? For retro vibe (pun intended) and cool factor, there are very few things comparable, you'll spend time scouring Ebay trying to score an original, which may be in questionable condition. The sound? Unique and worth the price. And that price? It's high, at $3500, but the cost of finding and refurb'ing a very elusive original may be comparable. The upside to such a unique piece is that it will definitely be a focal piece, both visually and sonically, in the studio. The downside? Only one. It won't fit in your rack.

Latch Lake Music iOxboom Phone/Tablet Mount

One of the most innovative products I saw at Summer NAMM 2014 was the iOxmount and iOxboom combination from Latch Lake in partnership with iOmounts. Touted as a universal tablet and smartphone stand, "a flexible and secure way to magnetically attach your phone or tablet to a microphone stand," I was intrigued by its ingeniously simple mounting mechanism, comprised of a stainless steel ball (iOball), strong neodymium magnet (iOcore) and steel stickers (iOadapts x2) that attach to your device via double-sided sticker (supplied). Since the iOadapt is NOT coming off (at least not easily) once it is in place, attaching it to a rigid case is strongly recommended. The

PHOTO: LYNN FULTON

iOxboom includes all the above and an 18" Xtra Boom, which clamps onto most any microphone or lighting stand or pipe with a diameter of 5/8-inch to 1 3/16-inch. The combination of the steel ball and adjoining magnet means that this ball-and-socket device can rotate and swivel through an arc nearly 360° in any plane, minus the actual restrictions of the 9/16th-inch diameter of the mic stand.

So what uses did I find for the iOxboom? Lots. I frequently use my tablet for internet/social media/music access, where I like to have it close at hand but I don't want it lying on the surface, like when I'm at a desk or a recording console. With the iOxboom, I positioned the iPad so that it just hovers above the desk surface but doesn't restrict access to what's below (faders, charts, etc.) I used it as an iPad camera stand while doing time-lapse photos in my garden. I even used it as I read a recipe in the kitchen to suspend the iPad over the counter, keeping it close but away from potential spills. For displaying musician's charts or as remote control for a DAW or to hold the tablet close at hand when one returns to a tablet-enabled console, it works anywhere one needs a tablet close but without holding it or setting it down. The biggest advantage, other than complete rotational flexibility, is the ease with which it can be attached/detached. Just grab and go. Or slap and stay. The other advantage if a tablet will be visible in a photo or video shoot? It's completely invisible from the front, clean-looking in video parlance, with no clamps protruding around the side of the tablet.

The two questions I hear most about it are 1) Is it really stable and 2) Will a magnet that strong hurt an electronic phone/tablet? Well I have an iPad 4, currently the largest they make, and I have been unable to accidentally dislodge it from its perch even as moving the mic stand around. Caution is always advised however. As far as this incredibly strong [Do not swallow!/Keep away from kids!] magnet goes, "Any smartphone, tablet, e-reader or other approved device with a solid-state drive or flash memory will not be damaged by the magnet," according to the supplied documentation. However older iPods or devices with conventional hard drives may be damaged or destroyed, so don't plan on mounting your hard drive cases or computer with one of these. Again, caution is advised.

Prices

iOxboom Smart Device mount with boom: $115

iOxmount: $60

Xtra boom: $75

The biggest advantage, other than complete rotational flexibility, is the ease with which the iOxboom can be attached/detached. Just grab and go. Or slap and stay.

I have found all manner of uses for the iOxboom/iOmount combo and use it in a variety of applications every single day. It's a great tool to have around in these increasingly tablet/phone-centric days.

Contact: Latch Lake Music | latchlakemusic.com/accessories/ioxboom/

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by Russ Long
PAR Senior Contributor
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Universal Audio Apollo Twin DUO, Ingram Engineering MPA575 and RTZ PEQ-1549

In this issue I will be digging into Universal Audio's latest computer interface, the Apollo Twin DUO. I will also be looking at a pair of 500 Series products by Ingram Engineering and RTZ Professional Audio. Ingram Engineering's MPA575 combines a mic pre, compressor and equalizer into a single 500 Series module and the RTZ PEQ1549 is a full-fledged, four-band parametric equalizer that includes high-pass and low-pass filters.

Universal Audio Apollo Twin DUO

After falling in love with the Universal Audio Apollo QUAD while reviewing it a few years back, I couldn't wait to get my hands on the Apollo Twin, released earlier this year. The small footprint Twin provides 24-bit/192 kHz sound and, according to UA, has the highest dynamic range and lowest noise of any desktop interface currently available. Its mic preamps, input stage and converters are identical to those in the other Apollo models. The Twin has two variations, the Twin SOLO and the Twin DUO. The only difference is that the DUO utilizes two SHARC DSP processors and the SOLO utilizes one, meaning the DUO, which I review here, has the ability to run twice as many plug-ins as the SOLO.

The Apollo Twin is a 10 x 6 Thunderbolt desktop interface that incorporates two analog inputs, eight digital inputs and six analog outputs. Analog input is through two digitally controlled mic/line inputs. Channel 1 can alternatively be set to use the front panel's Hi-Z instrument input, which sounds great! Analog output is through two balanced line outputs, two digitally controlled analog monitor outs, and one dedicated stereo headphone output. The optical digital input allows either eight additional channels of ADAT or two channels of S/PDIF input. Weighing 2.35 lb, the Twin measures 6.2 inches deep by 6.3 inches wide by 2.6 inches high.

The majority of the small computer interfaces I've encountered are poorly made, feeling somewhat cheap and even disposable. This is not the case with the Twin, which feels robust and solid like something that you will likely still be using a decade from now. The power supply's cable includes a twist-lock mechanism that secures the cable into the Twin so it doesn't accidentally get removed. This is the first time I've seen this and it's a brilliant idea that should be incorporated by all manufacturers utilizing wall-wart power supplies, especially hard drive manufacturers.

The Twin includes a power supply with international adaptors and a card that includes a link and software download instructions. There is no physical manual and no Thunderbolt cable. The Apollo Twin requires an Apple Mac computer running Mac OS X 10.8 Mountain Lion or 10.9 Mavericks with 2 GB of available disk space and an available Thunderbolt port.

Installing the UA software package was straightforward and easy. In addition to the UAD plug-in library, the software includes the necessary drivers as well as the metering and control panel application that allows the easy management of authorizations and the ability to monitor system usage.

More so than any other manufacturer, UA has done a great job of making the integration between the hardware and software seamless. Initiating the UAD Meter & Control Panel installs the entire library of UA plug-ins so purchasing additional plug-ins is only a software authorization that can be done in seconds and fully functional 14-day demos are included.

The Apollo Twin includes the "Realtime Analog Classics" UAD plug-in bundle, which is made up of UA 610-B Tube Preamp and EQ, Softube Amp Room Essentials, 1176SE/LN (Legacy), Pultec Pro Equalizers (Legacy), Teletronix LA-2A (Legacy), CS-1 Precision Channel, and RealVerb Pro. The bundle is a great compliment to the Twin but with the long list of amazing plug-ins that UA offers, don't expect to go too long without purchasing more.

Perhaps the most exciting thing about the Apollo Twin is its incorporation of Unison technology, which allows the Twin's mic preamps to both behave and sound like a dream list of solid state and tube preamps. This is not some fancy EQ trick but rather the mic pre actually matches the impedance, circuit behaviors and even the gain stage "sweet spots" of the modeled mic pres. The genius designers at Universal Audio had the necessary hardware to facilitate this modeling built into the original UA Apollo but nobody (at least nobody I know) knew it existed until the Apollo Twin was released this past January. In addition to the 610-B, the API Vision Channel Strip and Neve 1073 Preamp and EQ are the other preamp emulation plug-ins currently available; there will likely be more options by the time you read this. The 610-B does a fantastic job of recreating the legendary warmth and character that made the 610-B famous and it's a perfect contrast to the solid-state sound of the Twin's pre when used without activating the emulation. After several sessions experimenting with using the different preamp models on a wide variety of sound sources I found that I enjoy the 610 on vocals and acoustic guitar, the 1073 on electric guitars and bass and the API on drums and perc. Truthfully though, it's just fantastic having multiple options at the click of a mouse. I did some experimentation switching between pre emulations when doubling an electric or acoustic guitar and I found that I loved the sonic tone resulting from the blend of the two passes recorded through different preamp emulations.

The Apollo Twin navigation is intuitive and easy. The large knob controls the gain of both mic/line inputs as well as the monitor/headphone volume. The headphone amp

Russ' mobile recording rig consisting of a MacBook Pro running Pro Tools, UA's Apollo Twin, Blue Mo-Fi headphones and a USB keyboard/controller.

sounds wonderful, as do the line outputs. I actually feel like the Twin is worth the price just for the DAC and headphone amp. The row of function buttons provides pad, polarity, low-cut, phantom power and stereo-linking functionality. Unfortunately there is only one set of monitor outputs and there is no speaker dim option.

The included Console application is the Apollo Twin's software control interface; it is essentially a software version of the input path with added routing options. Its design makes it easy to insert multiple plug-ins in a recording patch with almost no latency (1.1 ms @ 96 kHz sample rate) and the routing architecture follows the logic of an analog console so adapting to its workflow is extremely instinctual. Console setups can be saved as presets or even saved within a session using the Console Recall plug-in (VST/AU/RTAS/AAX 64) making it easy to recall a recording path from the previous week, month or even decade. During my review period, I used the Apollo Twin with Pro Tools, Logic and Nuendo and it performed flawlessly in every instance.

The Apollo Twin is a winner in my book: it sounds great, the Unison mic pres are remarkable, and it performs flawlessly along with the UA Console software and DAW of choice. It is surprisingly affordable. There are a few features that I miss though. Word clock input and output would simplify some configurations and I wish it included a second Thunderbolt port making it possible to daisy chain a Thunderbolt hard drive or a monitor to the device. That said, I still think this is one of UA's strongest products yet. Anyone in need of a quality desktop interface should give the UA Twin serious consideration.

Price: Apollo Twin SOLO: $879; Apollo Twin DUO: $1,129

Contact: Universal Audio | uaudio.com

Ingram Engineering MPA575 Microphone Processor

The MPA575, Ingram Engineering's foray into the 500 Series format, is the world's only microphone processor that packs a mic pre, compressor and equalizer into a single 500 Series module. At first glance, the feature set of the module's EQ and compressor appear to be quite limited, but in reality it packs a pretty powerful punch without any sonic compromise.

The MPA575's mic pre circuit provides from 10 dB to 70 dB of gain and is identical to Ingram's acclaimed MPA685 rack-mount mic pre. The module has an input impedance selectable between 600 Ohm and 2.4 kOhm and while the exact results will vary from mic to mic, I found that the lower impedance typically yields a darker tone and the higher setting is somewhat brighter. The equalizer consists of just two controls: a continuously variable high-pass filter that has a cutoff frequency ranging from 30 Hz to 400 Hz and a unique combined low/high frequency variable EQ that Ingram Engineering describes as a "frequency response see-saw." The EQ's pivot point is set at 1.2 kHz and when turned clockwise, frequencies above 1.2 kHz are boosted and frequencies below are cut and when turned counterclockwise, frequencies below 1.2 kHz are boosted and frequencies above are cut. While this is an extremely simple concept, simultaneous use of the HP filter and EQ control provide fairly extreme tone-shaping flexibility. The high-pass filter and EQ can be independently bypassed when not in use.

The program dependent compressor is also operationally quite simple. The Threshold knob simultaneously controls the compressor threshold, the compression ratio and the make-up gain. The circuit has a soft-knee characteristic with a compression ratio that varies from 1.2:1 to greater than 20:1. The attack and release times are program dependent and are configured automatically. The circuit does an amazing job of adapting to a wide variety of sonic sources and, in my experience, was always usable. The makeup gain is automatically increased for lower compressor thresholds

Russ at Work

Steven Curtis Chapman at Historic RCA Studio A

The looming demolition of Grand Victor Sound Nashville (Ben Folds' studio which is the historic RCA Studio A) has been a hot topic in Nashville as of late (http://tinyurl.com/np8wxu4). My last session there was recording strings for Steven Curtis Chapman's most recent album. It's a beautiful sounding room.

https://itunes.apple.com/us/album/together/id686297284?i=686297603

so that a somewhat-constant average program level is achieved.

A second variable see-saw EQ (identical to the EQ in the signal path) is dedicated to the compressor path and used as a side chain filter providing for some creative compression control. The side chain path is also routed to the 500 Series API "Option" or Radial Engineering "Omniport" output allowing an external filter to be used for more intense side chain control. The side chain and compressor path can be bypassed when not being used.

I loved using the MPA575. It's an incredibly adaptable piece of equipment that works well in practically any recording situation. As someone who almost always tracks with at least some EQ and compression, I never dreamed that I'd be able to confidently record master tracks with a single 500 Series module without feeling I'm compromising the recording quality but the MPA575 has made this a possibility.

During the review period I had the opportunity to use the module with a wide variety of mics on a varied selection of sound sources and the MPA575 never disappointed. Kick drum (AKG D112), snare drum (Heil PR-22) and hi-hat (Royer SF-1A) recorded wonderfully. On occasion, I found that I needed additional EQ (the RTZ PEQ1549 worked perfectly) to attain my desired result on kick drum.

Currently On My Desk

1. Gruv Gear Club Bag
2. Blue Mo-Fi Headphones
3. Alta Moda Audio AM-25 Equalizer
4. Alta Moda AM-30 Mic Pre

The module did a fantastic job recording bass guitar (Heil PR-40) and electric guitar (Royer 122 on a Vox AC30 and a Fender Twin) also sounded great. The MPA575's EQ added just the right amount of shimmer to the Royer ribbon while retaining a warm smooth sound. The module is already feature packed but I wish there was a DI input so direct signals could be recorded without the use of an external direct box.

I feel the real strength of the pre is on vocals and acoustic instruments. I recorded male vocals with an MXL Revelation Solo and female vocals with a Sony C-800G and had great results in each instance. On some occasions when I needed more extreme compression, I found that using a Tube Tech CL1B in addition to the onboard compressor worked quite well. I recorded several acoustic guitars and a mandolin through an AEA N22 Nuvo and had great results. In most instances I found that I prefer the lower impedance setting (600 Ohm) on drums and guitars as it is somewhat more "Neve-esque" and I prefer the higher setting (2.4 kOhm) on acoustic instruments and vocals. This wasn't always the case, but I do love having the ability to switch between the two settings and the module automatically adjusts the gain when the impedance is switched; there isn't a volume change when switching impedance. The EQ and compressor functions also incorporate this gain matching circuit so when they are switched in and out, the gain stages are automatically adjusted; the module's gain is constant within a fraction of a decibel.

The MPA575 will be a welcome addition to any studio wanting to expand its audio arsenal yet it is also a perfect "first outboard pre" since it is quite affordable and it includes EQ and compression.

Price: MPA575: $1,200; MPA575-T (with transformer): $1,350

Contact: Ingram Engineering | ingramengineering.net

RTZ PEQ-1549 Parametric Equalizer

The RTZ PEQ-1549 is a four-band, state-variable parametric equalizer that includes high-pass and low-pass filter sections. Inspired by the illustrious Calrec PQ1549 equalizer, the PEQ-1549 offers Calrec's classic British tone in the 500 Series format. With ten knobs, ten buttons and a few LEDs, the module can seem a bit intimidating at first but after using it for a short time, it feels very natural. The HF-High Frequency band ranges from 1.5 kHz to 16 kHz in Normal mode or from 3.4 kHz to 35 kHz if the HF Air Mode is activated. The HM-High Mid Frequency band ranges from 350 Hz to 7.5 kHz in Normal Mode or from 680 Hz to 16 kHz in 2X Band Mode. The LM-Low Mid Frequency band ranges from 210 Hz to 2.3 kHz and the LF-Low Frequency band ranges from 30 Hz to 320 Hz. The high-pass and low-pass filter section can be switched in and out as needed. Both filters have a 12 dB/octave slope. The HP-High Pass filter is sweepable from 25 Hz to 1.2 kHz and the LP-Low Pass filter is sweepable from 2.5 kHz to 35 kHz. Each of the four bands has a High-Q enable switch that changes the bandwidth from broad to narrow when activated. Signal Present and Overload Indicator LEDs make it easy to tell if there is signal present or if the circuit is being overloaded. The Signal Present LED illuminates when a signal greater than -20 dBu is present at the EQ's output. The Overload LED illuminates when the output level reaches +20 dBu indicating that the unit is near clipping at maximum output level of +24 dBu.

(continued on page 40)

by Rich Tozzoli
PAR Software Editor
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Hey, Pro Tools Pros: What's New?

PT power users itemize their latest favorites in plugs and hardware

PAR Software Editor Rich Tozzoli recently spoke with five engineering peers on their recent purchases and choices in both software- and hardware-based audio tools. He shares his new favorites, too.

Peter Moshay (Hall & Oates, LIve From Daryl's House, Ian Hunter, Barbra Streisand)

Q: What new audio tools have you bought this year?

A: The UAD Twin and all of the UA plug-ins. There's just nothing an engineer/mixer can't find addictive from first use, and the UA Twin portable package means that I can bring high-quality UA conversion on the road with me. I'm using the latest Thunderbolt with the latest MacBook Pro to get a system nearly as powerful as my studio system now. That was a fantasy not too long ago.

Next would be the Rupert Neve Master Bus Processor, the best all-in-one mix "fine tuning and gluing" box I've used since my SSL console. Not only are its width and tonal variations a strength, but the compressor compliments my SSL bus compressor like a marriage made in heaven.

The Miktek CV3 and C1 condenser mics are some of the best new mics that Miktek has made yet. When I first tried the C1 mic, I had no idea how much they were going to sell them for; my guess was at least $1,500. To my surprise, they are selling for $599.

Q: What software plug-ins do you use the most and why?

A: Without question, I rely most on UA plugs. Not only do they capture the sound of their hardware counterparts very well, they even capture the quirks of it.

Also, the Sound Radix Auto-Align plug-in is fabulous for much of the live recordings I mix. I'm able to time/phase align tracks much easier than ever before.

Q: Are you running Pro Tools 11 yet?

A: Yes. Now that I've been on PT 11, I'd never go back. V.11.2.2, just released, has been the best yet.

Richard Chycki (Rush, Dream Theater, Aerosmith)

Q: What new audio tools have you bought this year?

A: I've had a bit of a 500 Series resurgence with the Alan Smart CL1LA buss compressor. It's remarkably versatile and sounds great. I'm using it across the drum buss of the new Dream Theater live album. It's very snappy and aggressive—perfect for this type of music. I'm also using an Eventide DDL500, a pristine delay circuit that has a hard limiter in the front end, a la the PCM 42. The IGS Audio ONE LA 500 comp is a double-space, double-tube 500 Series comp that sounds remarkably LA2-like in

> "I rely most on UA plugs. Not only do they capture the sound of their hardware counterparts very well, they even capture the quirks of it."
>
> —*Peter Moshay*

Tozzoli's mobile rig, ready for his TV composition work, at Paul Antonell's Clubhouse Studios in Rhinebeck, NY.

its operation—very fat! I've also grabbed up some time-delay based effects like the Lexicon 300, Eventide Eclipse and an ancient Ibanez HD1000—a noisy, terrible 8-bit pitch shifter/delay glitch fest. It's so bad, it's good.

Q: What software plug-ins do you use the most and why?

A: I'm loving the Exponential Audio reverbs. I haven't tried the stereos but the surrounds are spectacular. I always have my staples: Sonnox's EQ, Dynamics and Limiter and the Brainworx line of M/S mastering compressors and EQs. I'm also a fan of the SSL plug-ins. McDSP's Active EQ or ML4000 completely rock for making toms pop out of a mix; I also use Colin McDowell's EQ's, especially the AC202 Analog Channel filters for shaping.

I was also recently asked to do beta testing for the just-released UA AMX RMX16 Digital Reverb Plug-in. It's really accurate without the drying-out edge connectors or crackly input pots.

Q: Are you running Pro Tools 11 yet?

A: No. Some of the plug-ins I use aren't 64-bit AAX ready. I haven't taken the Blue Cat Audio workaround yet [See bluecataudio.com/Main/AAX—Ed.]. Until then, it's V.10.3.9 here.

Bob Power (Erykah Badu, A Tribe Called Quest, Ozmati, India Arie)

Q: What new audio tools have you bought this year?

A: Although I'm trying to curb my metal, tube, and semi-conductor appetite, I did get one new hardware piece this year that gets a workout; an Aguilar Tone Hammer, which is a fantastic bass Preamp/DI with EQ parameters. I use it for just about everything that goes direct; it's a game-changer. As for other analog, I'm still relying on my faves: Pendulum, API and Empirical Labs compression tools; API, Neve, and Avalon mic pres; and EQs by GML, API, Neve, Tube-Tech, and Prism Sound.

Q: What software plug-ins do you use the most and why?

A: My go-to EQ continues to be McDSP, particularly the newer FilterBank E606 and P606. I find them easy to zero-in on the area I want with a minimum harshness and collateral damage. Also, I'm loving their 6030 Ultimate Compressor. There are mul-

tiple emulations in one plug as well as wonderful analog coloration and vibe in addition to effective gain control. Their D555 de-esser is great too.

Always wonderful are Sonnox's Dynamics, Inflator, Limiter and Reverb with the great EMT 140 emulation—my personal favorite reverb. Also, iZotope suites are pretty incredible, especially Ozone. The recent addition of Native Instruments' Komplete Ultimate has hugely expanded my musical and timbral arsenal.

Q: Are you running Pro Tools 11 yet?

A: I've bought a PT 11 setup, but I've yet to switch over, as I am mid-project on a few records. Maybe I'll switch around Christmas, if/when things slow down. I have driven PT 11 quite a bit in my teaching at NYU and it seems Avid's done a great job in keeping the workflow intact (which we've all worked so hard to master). PT 11 is very fluid and offers some very handy feature upgrades.

Brian Mackewich (Owner of BAM Media, NYC)

Q: What new audio tools have you bought this year?

A: Dolby's Media Meter has been crucial for broadcast audio delivery. Making sure the dialog norm levels are spot-on is nearly impossible. While it's not a new product, it's new for us.

For music, we've picked up DPA 4099D and 2011C mics, which sound amazing. Their low profile and clever mounts make them easy to use and set up. Last, and by no means least, are the Focal Twin 6be 2.1 monitors we put in one of our control rooms. They are super flat, which I love, and the clarity and definition is wonderful. Having a sub is pure heaven for low-end translation when set up correctly.

Q: What software plug-ins do you use the most and why?

A: For post editing, I've picked up the latest version of Synchro Arts' Revoice Pro (V.2.6) for ADR and vocal tightening. It offers more control and better workflow, literally saving hours of editing. For post mixing, we still like Waves Platinum bundle. With several engineers trading projects at different phases, it keeps things consistent within projects. Because turn times are generally very tight, there's not a lot of time to experiment with a wide variety of plug-ins. They are solid and very predictable. I wish they were HDX, but with CPUs being more powerful, native is fine for now.

Additionally, we regularly use any and all of our UA plug-ins. Especially the Shadow Hills Mastering Compressor. It has been a tremendous mixing and finishing tool. I love the SPL Transient Designer plug in; it tames the wild beast in snares and toms.

I have also been using PreSonus Capture 2 a lot with our remote rig. Connecting to the PreSonus Studio Live 16.4.2 mixer with one Firewire cable is so easy. You get 18 tracks with "one button record," which we then transfer to Pro Tools for all the heavy lifting. It has been a very comfortable workflow.

Q: Are you running Pro Tools 11 yet?

A: We use PT 11 a lot for music mixing. For post, we are still using PT 10. There are still some issues with plug-ins porting over and showing up in the same way. The off-line bounce is great, but some plug-ins cause a serious speed reduction. Perhaps that is a CPU-related issue, but I do see some slow down below real-time with certain effects.

Paul Antonell (Natalie Merchant, Sypro Gyra, Rusted Root and owner of Clubhouse Studios, Rhinebeck New York)

Q: What new audio tools have you bought this year?

A: The AEA Nuvo N22 ribbon mic is my new toy and it's a workhorse! It sounds great on just about everything. I picked up an Apollo Twin for mobile work and as a second small edit/mix system. I still rely on a lot of my outboard hardware; there's nothing like tubes and iron.

> "The AEA Nuvo N22 ribbon my is my new toy and it's a workhorse! It sounds great on just about everything."
>
> *—Paul Antonell*

Q: What software plug-ins do you use the most and why?

A: For plug-ins I have been using a lot of Universal Audio. I love the LA3A, the EMT140 and the API EQ. I also use the Oxford SurprEssor, EQ and Inflator on just about every session. I have been digging the Eventide Blackhole and Ultrachannel, which is their really cool channel strip. Of course, I also turn to the SoundToys EchoBoy. Lately, I have been enjoying The Izotope Alloy 2, Nectar 2, and RX3. And we can't forget Altiverb 7, which is a great update.

Q: Are you running Pro Tools 11 yet?

A: Oh yeah, absolutely. It's a no-brainer.

Rich Tozzoli (Al DiMeola, Ace Frehley, Omar Hakim)

Q: What new audio tools have I bought this year?

(continued on page 42)

The largest 500 Series selection anywhere.

VINTAGE KING AUDIO

ELYSIA XFILTER 500
True stereo Class A EQ in a surprisingly affordable package

SMART RESEARCH C1LA
Versatility reigns with this new forward-thinking compressor

WUNDER AUDIO COBALT PRE & ALLOTROPE EQ
The same beloved pre & EQ from Wunder's famous PEQ2 module

SHADOW HILLS MONO OPTOGRAPH
Taking cues from its big brother, the fabled Mastering Compressor

GREAT RIVER MP-500NV
Bring a little 70s console sound to your 500 Series rack

by Rob Tavaglione
PAR Contributor
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Ear Trumpet Labs Mabel, Fredenstein F200, MXL Genesis FET & Fostex PX-6

Ch-ch-ch-ch-changes: that's what's happening in my studio and likely yours, too. With a rebounding economy, a slew of maturing technologies and the work of audio pros taking hits from all sides, it's a very interesting time to be a sound wave slinger. Personally, I'm transitioning from a console to analog summing; from advertising to web promotion; and from album projects to streams of singles. "Time may change me," indeed.

Ear Trumpet Labs Mabel Condenser Microphone

Cosmetics do not affect the performance of any piece of audio kit. However, if the visual of a microphone inspires a vocalist then its appearance does matter as it may elevate the ensuing performance. Ear Trumpet Labs' Mabel is definitively one of those rare pieces of effectively artsy engineering that inspires performances and possibly shortens lengthy days.

Features

It is easy for me to imagine ETL founder Phil Graham hunched over a workbench in his Portland, Oregon boutique audio workshop, incorporating "found" parts—plumbing pieces, bike gears, assorted tubings and fittings, etc.—into a microphone chassis. I can clearly sense the care put into tuning the 26 mm (1-inch) diaphragm capsules—one per most ETL models, two per this flagship multi-pattern Mabel—and the workmanship involved in ETL mics' hand-assembly. The electronics are transformerless FET with fully balanced output. Shock and vibration damping are built in to minimize vibration-induced noise.

The $1000 phantom-powered Mabel offers a unique pivoting head; cardioid, figure-eight and omnidirectional polar patterns and comes only with a mic clip. She sits pretty in her own "classic

red metal toolbox" of a case. The Mabel package takes on a steampunk/retro-greaser look and feel that proved crucial in its ultimate appeal.

In Use

Mabel's appearance is indeed pivotal, as your client will surely be frothing to cut vocal takes before you ever get to swivel the capsule or hear its performance. I set up Mabel for side-address and placed a Stedman pop filter in front of it. It's immediately clear that Mabel offers fullness, depth and smoothness yet on the dark side of bright. Such depth often requires a HPF. Mabel shows that she indeed has top end, just very gentle and not at all edgy or brittle. As such, it seems understated against many of today's super-bright LDCs.

In use, the first vocalist on Mabel was a baritone. As I moved from tenors to altos and sopranos, the mic stayed consistent in voicing: always full down low, always classy and un-colored through the mids and the top never overstated. This versatile, consistent fullness was not unlike a Shure SM7, but with a brighter, "clearly condenser" top end performance. Like an SM7, Mabel did a fine job with screamers, too.

Mabel on percussion was top shelf, with toothy tambos and such taking on a "cutting without irritating" persona. Acoustic guitar sound was similar: a very pleasant, smooth translation that made my comparably bright Taylor sound more like a rich and full Martin. Mabel also worked fairly well on electric guitars though requiring a significant bit of equalization.

Thus far, all of Mabel's work was in cardioid, though I tried other patterns with predictable results. In omni, Mabel became fuller and darker, with no proximity effect and good performance for handclaps, BGVs and roomy perc. In figure-eight, Mabel got brighter and edgier, with good off-axis rejection and nice response for BGVs and duets and I tried it as the "S" of my Mid-Side array. Being a little dark but nicely EQ-able, Mabel offers versatile ambience. With Mabel in omni, I tracked a singer-songwriter and managed to get a near-perfect balance of vocals and guitar on a couple of the songs. No multi-mic phase error here, simply realism. (Listen to the example webclip: soundcloud.com/pro-audio-review-magazine/ear-trumpet-labs-mabel-mic-on-voxgtr) In omni, Mabel was placed six feet away as a drum room mic and the tone was nicely balanced with ample thump and moderate sizzle—almost as cool as a ribbon.

I wouldn't recommend Mabel for on-stage use (except for maybe single mic folk or bluegrass applications) due to the polar pattern switch that protrudes from the swiveling head. Ear Trumpet Labs' Louise or Myrtle are tuned for stage and are likely better choices in those apps.

To My Ears

Mabel is a winner sonically, built like a beautifully quirky steampunk tank and a true joy to have in a mic locker, except for one potentially fatal flaw: its mic clip is way too small. It simply can't handle the mic's weight; it's so undersized that Mabel will pop right out with the slightest bump; I did it once and a client did, too. It took the fall with only a small dent, but the bottom line is this: find your own firmly-clamping mic clip. A mic this lovely, unique and inspiring deserves better than falling to the floor.

Fredenstein F200 Dual Channel Microphone Preamp/ Compressor

Have you heard about Fredenstein, a "new kid in town" making waves with a wildly diverse analog processing product line? With an American/German design team and Taiwanese manufacturing (and corporate offices), the company literally covers a lot of ground. For example, they offer a $4,000 F660 Limiting Amplifier with Fairchild 660/670 circuitry under DSP-regulated tube control, the Artistic, a $199 500 Series mic preamp and the F200 two-channel mic preamp and compressor, among other interesting products.

Features

I'm unsure about the F200's design specifics other than the preamp and the compressor are solid-state and the compressor is FET-based. I can tell you that Fredenstein, via their website, speaks unequivocally of their zero negative-feedback designs with "internally and externally balanced" circuitry (fully differential) designed with linearity in mind "to avoid the harshness of typical negative feedback designs with a warm and dynamic character."

Feature-wise, the F200 packs a lot of function into 1U with two channels of preamplification, each featuring 60 dB of gain, phantom power, -20 dB pad, line-level input capability, polarity flip, a switchable 60 Hz Low Cut (high pass) filter and a front panel quarter-inch DI input (balanced or unbalanced). Its compressor/limiter offers a continuously variable ratio (2:1-100:1), attack/release parameters and stereo linking. Regardless of actual parameter values, all knobs are uniformly labeled from 0 to 10

so you'll have to rely on your ears for settings. The unit offers XLR I/O, VU meters (output or attenuation), universal 90-240 VAC, 50-60 Hz operation (via IEC connector) and the ability to blend the outputs of the preamps and compressors (parallel compression) with separate pots.

In Use

At first I felt that operating the F200 was a little cramped; 1U is very little space for four fully featured audio components (pre x2, comp x2). I also thought the F200 was a little dark without the brighter sheen and "forwardness" that often accompanies affordable gear. I found setting levels a little cumbersome as balancing input gain, compressor output and direct output could be a little sensitive.

However, I stuck with it and soon discovered that the F200's layout really was ideal for having so many controls; the colored LEDs per switch proved quite helpful. I found that a particular methodology really made operation easier: start out with mic output fully open, compressor output at zero, mic gain set so that peaks are at -12 dBFS (save some headroom, you'll need it) and then slowly bring up compressor output (with a low ratio) to about equal loudness with the dry signal. Get accustomed to this NY-style parallel blend and then attenuate the dry signal, isolating your compressed signal. Tweak your time constants/ratio and, most importantly, tweak HPF for colorful compression, blending dry signal back in until about equal. This sounds tedious, but it's not; I found myself repeating this process with almost every input combo available over the next two months.

Whether paired with electric guitars (the F200's best friend), electric bass, stereo keyboard/synth DIs (the quarter-inch inputs sound great), drum overheads, vocals, BGVs, or effects, having a versatile compressor right there, with no patching required, was a huge time-saver. Sometimes I did my usual thing: I squashed the hell out of stuff because I could (and because I could make it sound great), with lots of density and thickness readily available by bringing that compression in up under the dry signal.

Don't get me wrong: the F200 is clean, yet not as transparent as my standard-bearer, Millennia Media's mic pre/comp combo. And the F200 isn't euphonic like some gear that's loaded with tubes and/or transformers. It is basically neutral with a slightly warm, and perhaps slightly veiled, sound. Coupled with its compressor, the F200 consistently takes on a slightly dark, non-forward, midrange-thick, squeezed character that I found rather desirable.

I mix a lot of rock and lately "in-the-box" productions quite a bit. In these applications, I found the F200 to provide a smoothing, pleasant treatment that benefited often loud, potentially harsh sources, especially those that would otherwise stay in the digital domain.

To My Ears

The F200 may not be the pristine choice of golden ears and audiophiles like siblings the F660 or F676, but this much utility, versatility, convenience and dark-and-chewy sonics deserves a closer look for producers of loud music and edgy sound source wranglers. Available for $800 street, the F200 is a truly great deal and a useful addition to most any recording rig. In fact, while recording on location, I found the F200 to have the right utility vs. weight/size ratio. That did it, so I bought one.

MXL Genesis FET Large Diaphragm Condenser Microphone

MXL sells a lot of good microphones at great prices. As of late, the company has unveiled a number of mics that offer super performance at incredible prices. (For example, see Russ Long's review of the CR89: prosoundnetwork.com/article/review-mxl-cr89-large-diaphragm-condenser-microphone/15967)

MXL's Genesis tube mic has been very successful—enough so that they have released another version of it, this time with solid state FET electronics for a different sonic take on its most popular LDC transducer.

Features

The cardioid-only Genesis FET is striking in its simplicity. Gold trimmings highlight its big red chassis that reveals no variables: no switches, pads or patterns. It comes a gold/metal clip-on windscreen and shock mount. It handles up to 111 dB SPL, has -13 dB self-noise, offers a frequency response from 20 Hz to 20 kHz and 150 Ohm impedance. The Genesis FET comes with a padded wood case and a certificate of authenticity.

Presenting PAR-Tube

Check out all my product review-based videos on PAR-Tube, Pro Audio Review's new video initiative featuring PAR Review Preview—"out of the box" first looks at reviewed gear—and Favorite Mic Preamps—my top four "must have" studio pres. Much more is to come.

See our Review Preview of API's "The Box" and enter for your chance to win an API 500 Series module and an "in The Box" analog stem remix as part of my full review: prosoundnetwork.com/ReviewPreview_APITheBoxContest.

In Use

My typical vocal sessions begin with three or four mics placed and ready: my current favorite, my dark-horse favorite and a couple under review for PAR. The Genesis FET received this treatment for two months at Catalyst and won the gig several times—no small feat with stiff competition. I found its lean bottom end to be well suited for a tight, concise vocal sound, one that was often ideal for BGVs. The Genesis FET has a pronounced top end that is a little too sibilant for my tastes, yet much smoother than many condensers in this price range. The overall balance wasn't so much suited to sopranos, but indeed was a better fit for baritones and tenors.

I don't do much rap/hip-hop, but when I do, I like my vocals crisp, defined and edgier than a sung vocal. The Genesis FET was a fine fit for such tracks with quick response, midrange definition and good cut up top. (For example, check out this webclip from The Dreamchild: soundcloud.com/pro-audio-review-magazine/the-dreamchild-mxl-genesis-fet)

I tried the Genesis FET on sources like hand perc, electric guitars, acoustic guitars and piano. The bottom line: it's clean and quick, forward but not pushy, with top-emphasis yet not bottomless. It's a good fit for full, darker instruments and not for crisp, bright ones; and a matter of taste on guitars and keys. I didn't dig Genesis FET on any drums or perc, but then again (with LDCs) I seldom do (other than overheads, where I would need two for testing).

To My Ears

The Genesis FET is a moderately versatile, defined condenser that excels on vocals. And for $400? It's a bargain-priced, worthy choice. With a nice little kit and a metal shockmount that really works, I will recommend it.

Fostex PX-6 Professional Studio Monitors

I remember when "personal monitor" meant an Auratone or Fostex 6301—the latter, an indestructible little broadcast audio workhorse. Today, there are mini-monitors everywhere and Fostex has added two such models in its PX line, serving needs at the intersection of broadcast and home studio applications.

Features

The PX-6 employs a bass-reflex design; 6.5-inch resin-impregnated aramid, fiber-stiffened woofer; a 1-inch resin-impregnated urethane, film-laminated polyester dome tweeter; 50 and 28 watts of power to woofer and tweeter, respectively; combo XLR/TRS and RCA inputs; a single rotary pot that switches to control both level and tone; DSP-controlled crossover at 2 kHz; 20 Hz to 20 kHz frequency response +/-2 dB); signal fade-up at power-on; and a low energy consumption mode.

In Use

Upon first inspection, the PX-6 struck me as a thoroughly modern monitor, with its combo input, ingenious four-function rotary encoder (Volume and Trim offer combined 440-step resolution, while Treble adjusts HF output and Bass adjusts LF rolloff, all of which can be saved) and cabinetry, design, and finish. Upon first listen, they seemed natural and subdued, rather than bright and forward (like many modern small monitors). Accurately setting the parameters took some time—thanks to back-panel controls—but I eventually settled on a +2 dB top end boost to achieve my own taste in balance. I stuck with this setting even after considerable use.

As I tried mixing and mastering with the PX-6s, it quickly became clear that they weren't going to give me the equitable combination of flat response, detail and translatability I required for precise music work. They did impress me as sufficiently full, even if perhaps lacking some note definition in the low end; nicely matched and even with stable imaging; amply loud and strikingly attractive (that red-eye tweeter looks cool, very HAL from 2001).

Wouldn't you know it: during this evaluation period, I got two big location-recording jobs and I hoped that the PX-6s would be ideal for some portable monitoring. The first gig provided the pressure of two world-class producers whom I idolize (no name dropping—confidentiality agreement) monitoring my on-location mixes;

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new live products

JoeCo BlackBox BBR1MP Recorder

JoeCo's new flagship BlackBox BBR1MP Recorder is a 24-channel stand-alone live audio recorder with all standard BlackBox functionality plus 24 high-quality JoeCo-developed microphone preamps, operating at up to 24-bit, 96 kHz, integrated into BlackBox's 1U housing. Features include individually switchable mic/line inputs, balanced outputs, video sync, timecode and word clock inputs. User installable Dante and MADI interface cards are also available as options, adding 24 channels of Dante or MADI I/O to the BBR1MP unit. Microphones can either be connected to the unit via tails from the rear D-Sub connectors or via an optional 2U breakout panel with XLR connectors. System components are available individually or as part of a bundle.

Audio is recorded direct to external USB2/3 drive in Broadcast WAV format with a "simultaneous stereo mixdown" features. Full support for iXML data is also provided.

JoeCo: joeco.co.uk

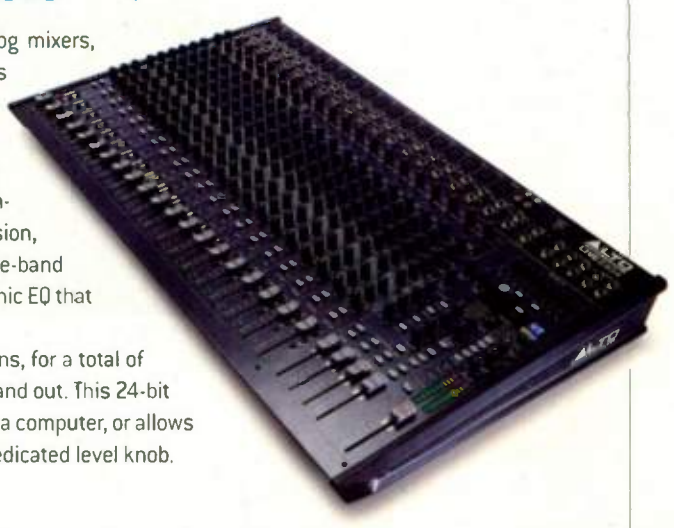
Yamaha MG Rec & Play iOS App

Yamaha's MG Rec & Play iPhone/iPad app enables on-the-go recording as well as playback of songs and sound effects; simply connect an iPhone/iPad to any MG Series XU model via an Apple Camera Connection Kit or Lightning to USB Adapter. The audio recorder function allows stereo bus recording in WAV format at 44.1, 48 or 96 kHz. Its audio player function features nine separate banks with eight tiles, assignable up to eight songs or sound effects from an iPhone/iPad music library. 72 songs and sound effects in total are available for playback by touching the assigned tile image of each corresponding audio file.

Compatible mixing consoles include the MG20XU, MG16XU, MG12XU and MG10XU, while compatible Apple iOS Devices include iPad Air, iPad, iPad Mini, iPhone 5s, iPhone 5c, iPhone 5, iPhone 4s.

Yamaha Pro Audio: yamahaproaudio.com

Alto Pro Live Series Analog Mixers



Alto Professional has announced the availability of its Live Series analog mixers, available in four configurations—the Live 802 and Live 1202, each two-buss mixers with eight and 12 channels, respectively; and Live 1604 and Live 2404, both 4-buss mixers with 16 and 24 channels, respectively.

Each XLR microphone channel is equipped with DNA preamps for clarity and dynamic range, and switchable phantom power for dynamic or condenser microphones. Select mic channels offer analog dynamic compression, each with an individual control knob. Each channel features its own three-band EQ—the 4-bus models add sweepable mids—and there is a nine-band graphic EQ that can be applied to the main or monitor mix.

Live Series mixers feature 10 Alesis DSP effects; each offers 10 variations, for a total of 100 ready-to use effects. Also, the Live Series mixers feature USB audio in and out. This 24-bit USB audio feature enables the stereo main or monitor mix to be recorded to a computer, or allows for the playback from a laptop or other USB audio source controlled by a dedicated level knob.

Alto Professional: altoproaudio.com

Mackie 2404VLZ4 and Gator Cases GMIX with JoeCo BlackBox, DPA d:screet Necklace and CAD Live Series

by Strother Bullins
Editor of *PAR*
sbullins@nbmedia.com

Club gigging. It's a lot to bring all PA, likely some back line and possibly some instruments and lights. Even in a group effort, main details of set-up, the show and tear down mainly reside with one person. Since regularly I am that person, I prefer simplicity and effectiveness. Add recording to the mix, the same is true.

The following are just that: simple, effective tools that make impressive live mixes (and multitrack recordings) easier.

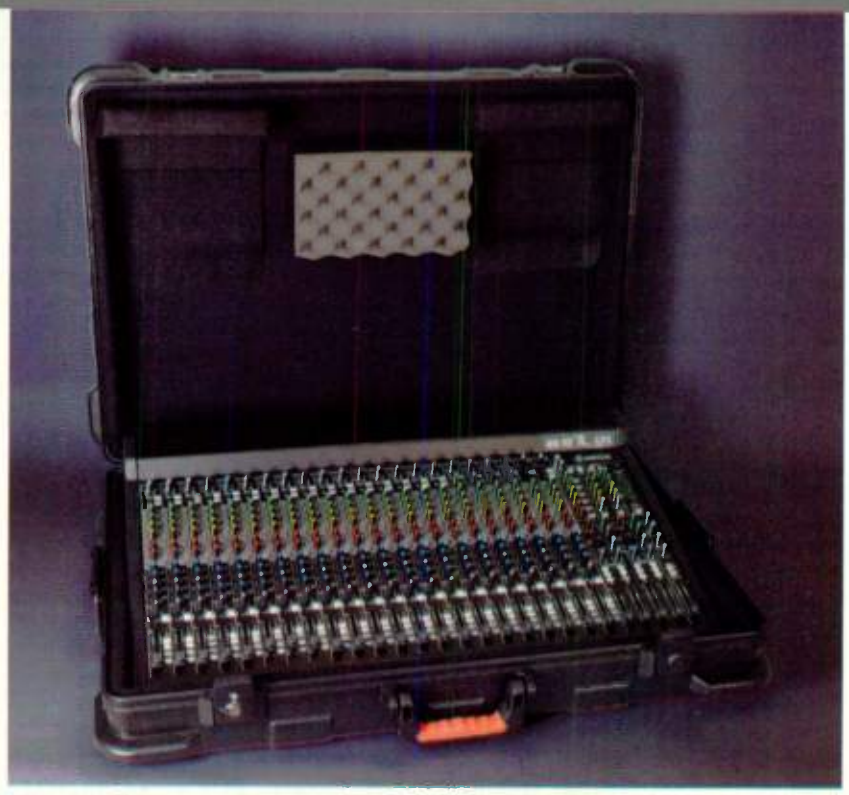
Mackie 2404VLZ4 24-Channel 4-Bus Analog Mixer with USB

I was up and running with the four-buss, 24-channel 2404VLZ4 in minutes—no manual required, really. When I did look at the manual, I was pleased to see some extra treats, such as the 4x2 USB interface, thus making the 2404VLZ4 a great-sounding four track recording/stereo playback rig, too—just add computer.

The VLZ4 Series—Mackie's latest incarnation of the successful VLZ mixer range—finally features the company's superb Onyx preamps. For the 2404VLZ4 (at $1,150 street), that means 20 Onyx preamps offering 60 dB of gain coupled with plenty-good three-band EQ with sweepable mids and six aux sends per channel. Two solid 32-bit RMFX+ effects processors are available per channel (via aux 5/6).

The aforementioned USB port allows 24-bit, 44.1 kHz audio via its 4x2 interface. This allows recording subgroups 1-4 or alternately Groups 1-2 or the Main mix to output channels 1-2 and Groups 3-4 or Aux 5-6 to output channels 3-4.

Analog I/O is comprehensive. I especially appreciate the channel inserts (more on that later) and the mono main mix output (XLR or TRS with rotary level control), perfect for detailing one-subwoofer mixes or adding extra, single speaker "dart and pool room" mixes. Further, the main outputs offer TRS inserts, too.



With a 4x2 USB interface, this Gator-cased 2404VLZ4 is a great-sounding four track recording/stereo playback rig, too—just add computer.

Once again, Mackie has included four "one knob" channel compressors (on 17-20) in this VLZ4, and then doubled the pleasure by adding four more identical comps on each subgroup—very useful, indeed.

Cosmetically, Mackie has given the VLZ Series an attractive makeover, overwhelmingly black with bright primary color accents utilized for various parameters—great for making adjustments in the semi-dark—and a notable change in its fader knobs, moving from the blocky white Mackie fader of the past to a thin black one. Upon first use, I still preferred the old white faders, but I quickly got over it.

In all, the 2404VLZ4 represents a notable leap forward for the VLZ Series if, for nothing else, getting the better Onyx preamps. However, improvements abound elsewhere, making the VLZ4 Series worth top consideration for those in need of a simple multipurpose analog mixer.

Gator Cases GMIX Mixer Case Series

I had previously experienced the over-built nature of Gator Cases via their GKPE Keyboard Cases line—very similar in both materials and construction to the GMIX Mixer Case Series. A pianist/band member of mine used one for years; she raved about it and I carried it, thus I was intrigued.

The GMIX Series features TSA-compliant latches, meaning that airport security can use TSA keys to quickly check contents while no one else can: a perfect solution for traveling audio pros. It offers a thick polypropylene exterior build, one-inch EPS foam interior protection throughout and an inner mixer secure fit system. The latter is essentially a thick center rectangle with Velcro on one side and "egg crate" foam on the other and two carpet-wrapped, plywood L-shaped spacers; the rectangle attaches to the case's inside top, pressing against the center of the console, while the L spacers attach to either side of the case's interior top, near the latches, pressing against the console's scribble strip. Together, the secure fit components effectively keep the console movement-free when in transport.

My only complaint is that the GMIX opens like a clam; you can't leave the mixer in the bottom half and simply pop the top without staring at the underside of the lid while in use. For a removable lid, the answer is Gator's GTOUR Series built of 9 mm plywood and featuring recessed steel twist latches as well as a justifiably larger price tag (approximately 25 percent more than a comparable GMIX).

At around $300 street, this GMIX case is worthwhile protection for any significant investment in a mixer (padded bags need not apply). Not only does it keep its contents in good working order, it will hopefully increase a console's resale value upon upgrade time.

BlackBox's front panel touch interface is so incredibly intuitive.

JoeCo BlackBox BBR1-US Recorder with unbalanced analog I/O

The third component of this month's live mixing/recording trifecta is the JoeCo BlackBox BBR1-US Recorder ($1,999 street), a lightweight 1U multitrack capable of recording up to 24 analog channels at 24-bit, 96 kHz. It's not a new product, but I've been tempted for years to try it. JoeCo recently unveiled a new model, the BBR1MP, boasting comprehensive digital and analog I/O, 24 mic preamps and the JoeCoRemote for iPad control feature; it joins an already-deep BlackBox lineup. Visit this link for detailed model specifics: joeco.co.uk/main/BBR_models.html.

Setup for the small 1U BlackBox was especially easy in this review scenario; I simply connected the Mackie 2404VLZ4's inserts via TRS to the BlackBox's DB25 analog inputs. BlackBox records the looped-through insert signals and even allows TRS inserts on its last eight channels, 17-24. Inserts for your inserts: quite clever.

I've multitracked a fair share of live shows via laptop DAW, but I can't say I enjoy it. To me, doing "QWERTY work" in a dark club amongst reveling and possibly impatient musicians and fans is a stressor. I'd much rather capture what I must while primarily focusing on the event, then dig into the tracks later. A BlackBox enables this very approach, as its no-moving-parts configuration and front panel touch interface is so incredibly intuitive. However, if you want to go QWERTY, BlackBox also offers a handy keyboard interface.

BlackBox records audio as Broadcast Wave files to USB2 disk drives, USB thumb drives (my preferred method), or SDHC card via USB2. Recording to thumb drive is a glorious thing since, for nearly a decade prior, I'd used the Alesis ADAT HD24XR 24-track hard-disk recorder for all non-DAW tracking needs: a big, heavy yet serviceable and "very '90s" machine, dependent on removable 80GB IDE drives. In comparison, tracking via BlackBox then sliding the drive into my jeans pocket feels like freedom.

DPA d:screet Necklace Microphone

DPA's latest product—the d:screet Necklace microphone—was reportedly conceived for use in the burgeoning reality TV market as a unobtrusive transducer, one that can still be worn sans shirt while "offering fast,

BlackBox records audio as Broadcast Wave files to USB2 disk drives, USB thumb drives, or SDHC card via USB2.

The unobtrusive nature of the d:screet Necklace may even improve performances, as artists may feel "unmiked."

repeatable and 'do-it-yourself' mounting." Upon first glance, I immediately thought of other possible applications in which it may be an ideal solution and was eager to put it to use.

From $650 street, the d:screet Necklace features DPA's awesome 4061 omnidirectional miniature capsule, handling up to 144 dB-SPL before clipping, embedded in a pliable rubber necklace-length cord (18.3- or 20.9-inches in length), available in black, white and brown. It attaches much like a necklace, with an "insert and turn" clasp, and is bolstered by magnetic components: one try and you've figured it out. It's ready for essentially any pro-grade wireless system with a bevy of purchasable adapters; an XLR adapter is even available for wired use.

In direct comparison to a lapel mic of comparable quality, it offers a notably warm, fuller sound, no doubt due to its position under the chin on an artist's chest. It is a bit rounded off on the top end, making it slightly less "crisp" than a rigidly mounted lapel mic; this is with a 20 Hz to 20 kHz, +/- 2dB frequency response plus a built-in 10 dB boost at 12 kHz. However, the d:screet Necklace's convenience factor ultimately wins, and any lack in high frequency is easily overcome with slight corrective EQ.

I had a blast using this mic with a variety of performers/speakers: two actor/singers, male and female, in community theater; a pastor who wanted to roam a bit from the pulpit; and a mic-shy singer-songwriter. In each case, I believe the unobtrusive nature of the d:screet Necklace improved performances, as they all quickly felt "unmiked," especially in the case of the singer/songwriter. As such, I believe it could be a great tool in crafting an "unplugged" vibe in intimate performance settings.

Also, while lapel mics feel quite "corporate," for lack of a better word, there was a certain cool factor applied in using the d:screet Necklace; the pastor commented how he appreciated not worrying about "brushing up against a lapel," which is a notable benefit of the d:screet Necklace. Both actors preferred the necklace over lapels, saying that they felt more comfortable in putting it on, and that it left less room for error in positioning, etc. I agree.

CAD Live Microphone Series

CAD designs and builds truly affordable workhorse microphones that shine especially in live applications. To date, the CAD e60 cardioid condenser is still one of my favorite affordable all-purpose live microphones that works well on virtually anything, especially loud sound sources.

I've wanted to use a "warm and forgiving" ribbon microphone live (especially on guitar cab and some wind instruments), but have never been comfortable bringing out pricier ribbons for some dirty club gig or confident in buying a generic "cheap" one either.

Thus enters the new CAD Live Microphone Series with its flagship ribbon, the D82, priced at an amazing $159 street. It's a robustly built side-address microphone capable of handling up to 140 dB (@100 Hz). It feels solid in the hand, just like CAD's other offerings on the higher end of its price list, and should inspire confidence in on-stage musicians, too. The other two CAD Live mics currently in the series—the large diaphragm condenser cardioid D84 and large diaphragm dynamic super cardioid D80 ($159 and $99 street, respectively)—are also fine performers, effectively bringing affordable and abuse-ready large diaphragm condenser performance to the club stage.

In use, the D82 provided a distinct voice for guitar tracks, a "silky" variation on my typical "57 to preamp" approach. As such, it ever so slightly highlighted its sound source. Over the next few months, I quickly found myself using at least one D82 per event and often two, especially in two guitar bands as well as horn-augmented shows. The D82 is super on saxophone; I may have sold a player on buying his first ribbon ever.

The D84 and D80 are also solid microphones and worthwhile of investment if you need a live-friendly LDC. For the money, you can't beat the $99 D80 super-cardioid; it replaced my kick drum mic for a show, no complaints. Yet for most live apps, I still prefer smaller, less obtrusive models for ease in positioning.

If you're still ribbon-less, I'd suggest picking up a D82 to get started. If you need more ribbons, these D82s can effectively augment your collection—and no one even has to know that your half-dozen ribbons cost less than $1,000.

Live-Ready Ribbon and LDCs: condenser cardioid D84, ribbon D82, dynamic supercardioid D80.

Long

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There is a Lundahl-balanced drive output transformer option that is driven by a THAT line driver; THAT Corp. also provides the input line receivers. I had the transformerless version for my review period. The EQ in/out switch is a relay-activated hardwire bypass. The entire unit is hard-wire bypassed when the switch is in the OUT position or if the power supply should fail.

Top Nashville musician/engineer Randy Kohrs (John Fogerty/Linda Ronstadt/Dolly Parton) turned me onto the PEQ1549 about six months ago. Randy gave me the low-down, "The thing I have found with the RTZ 1549 is that it can be gentle or forceful when you need it to be. Soft shelf lift for ribbon mics—easy breezy. Pushing some serious low or low mids to make a kick drum come alive, it has that too, in spades. The most useful thing about it, however, is being able to carve out the harsh top in a sibilant singer, hit the 2x on another band and give them back some air that was lost in the initial carving—all of that while still being able to high and low pass filter as needed. It's a great EQ worthy of the highest praises."

With an introduction like that, I couldn't wait to put the 1549 to work and it I found it to be as musical an EQ as I've ever encountered. Shaping a sound with the module is almost like playing an instrument. I occasionally find myself wishing I had a sweepable Q but in nearly every instance, the High-Q switch is more than enough to provide what I need and I love the extended top end control provided by selecting HF Air; it works wonders on acoustic instruments. In tracking and mixing situations, I found that from every element of the drum kit to guitars and vocals, I have yet to encounter a situation where they don't work well. In addition to using the EQ on individual instruments, I had great results using a pair of 1549s on the stereo buss. It's powerful enough to allow you to radically sculpt or mildly shape a sound into the desired result. The PEQ-1549 is well worth a listen for anyone in the market for a parametric EQ.

Price: PEQ-1549: $845; PEQ-1549X (with transformer): $1010

Contact: RTZ Professional Audio | rtzaudio.com

About Russ

A native of Boulder, Colorado, Russ Long moved to Nashville, Tennessee to attend Belmont University in 1986. Since graduating with a BBA degree in 1988, he has remained in Nashville engineering and producing a wide variety of music and film projects.

Russ's credits include the hit singles "Kiss Me" and "There She Goes" by Sixpence None The Richer alongside albums by Wilco, Newsboys, Over the Rhine, Relient K, Dolly Parton, Fernando Ortega and Jim Brickman. His film credits encompass the soundtracks to *The Sapphires, Girl Interrupted, Here On Earth, Jonah: A VeggieTales Movie, How To Lose A Guy In 10 Days, The Second Chance, Hannah Montana: The Movie,* and *She's All That.* Additionally, Russ has diversified to engineer 5.1 DVD mixes for artists such as Allison Moorer, David Crowder and Mercy Me as well as live sound recordings, having multi-tracked live performances for Switchfoot, Chris Tomlin and Guy Clark.

In 1994, Russ opened his Nashville studio–The Carport–which has played a key role in the majority of his projects. He has been a regular contributor to *Pro Audio Review* since 1997; as such, he has authored well over 100 equipment reviews and instructional audio production articles to the benefit of the pro audio industry.

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Tozzoli

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A: I also purchased a UAD Apollo Twin this year, which I run with my MacBook Pro. It allows me to have an incredibly powerful road rig on which I can compose, mix and edit. On smaller sessions, I use the built-in UAD preamps, which are quite nice. On larger sessions I hitch it to external preamps via ADAT Lightpipe for up to 10 channels (using the Grace m802 or Audient ASP880).

Also, I've purchased a few DPA 2011A mics featuring the 2011 cardioid capsule but with the longer MMP-A mic amplifier. They are extremely low noise and very pristine; I use them on acoustic guitars, percussion, overhead drum mics and even a few feet up from the hi-hat and snare drum for a super-punchy sound.

Speaking of acoustic guitar, I also picked up a new Martin D18 acoustic, the finest instrument they have made in many years, in my humble opinion. It has a sitka spruce top with mahogany back and sides, which translates to a light and airy but deep recording instrument. It's nice to see a company that has been making guitars since 1833 still doing it right.

Q: What software plug-ins do I use the most and why?

A: I still rely on all my usuals from SoundToys, Universal Audio, Sonnox, Waves and Audio Ease (Altiverb). But there are some great new plug-ins that have made their way into my workflow too.

The iZotope RX3 Advance DeReverb is amazing. I've successfully used it to remove ambient room noise from dialog on several occasions. Also, I've used it several times on drum room mics (and even loops) where ambience was just a little much.

I'm really digging the Nomad Factory BBE Sonic Maximizer, a gem on acoustic guitars. The UAD 610-A is a monster, too. It's a powerful modern emulation of the 610 tube preamp, perfect for dialing in warmth, harmonic presence and even clipping. I use it on kick drums to drive the beef and top by pushing 70 Hz and 10 kHz. Eventide's Blackhole reverb has made it into my daily arsenal as well. To me, it specializes in big deep ambience; I just push up the Size, Pre-delay, Low and High knobs to get a huge sound.

The Waves Scheps 73 is a great emulation of the classic Neve 1073 console EQ. I use the high 12 kHz knob to boost or cut some sizzle, and the low selections from 35 to 220 Hz. But my favorite band is 4.8 kHz on electric guitars; there's something magical about that frequency on Neve hardware EQs, and Waves has really nailed it in the software.

Q: Are you running Pro Tools 11 yet?

A: Yes, I primarily use Pro Tools 11, both on my HDX rig and my laptop. The faster-than-realtime bounce saves me a ton of time, especially when outputting many versions of TV cues. I will still occasionally use Pro Tools 10 on my laptop, but for the most part, Pro Tools 11 is the way to go.

> "I will still occasionally use Pro Tools 10 on my laptop, but for the most part, PT 11 is the way to go."
>
> *–Rich Tozzoli*

Tavaglione

(continued from page 35)

both of them were plenty satisfied with the PX-6's clarity, output level and intelligibility. On the second gig, the PX-6s filled my makeshift control room with joyful gospel sound and held up like troupers under long hours, nearly 100 percent humidity and the high heat of the South Carolina sandhills.

To My Ears

If your audio work is in a production truck/on-location and you need a small monitor footprint with ample SPL and front panel ports (for tighter placement options), require a non-fatiguing full sound with the detail necessary to mix dialogue and professional durability (as I've grown to expect from Fostex monitors) and can't quite afford the Neumann KH 120 (my top pick in small, location-friendly monitors at $1,500 per pair) then I recommend giving the Fostex PX-6 a try. At $899 a pair, street, they're quite worthy for location and broadcast applications—a growing portion of my own work—even as they are rivaled by numerous competitors in the saturated "small studio monitor" marketplace.

Currently On My Desk

1. API The Box project studio analog mixer
2. Manley Core channel strip
3. Pearl Priority large diaphragm condenser microphone

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