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Mike Rivers (mrivers@d-and-d.com)

A pleasant weekend, long hours, tired feet, and another NAMM show has been here and gone. After a few days to catch my breath and organize my literature, here's the report. Like many past shows, this one was more evolutionary than revolutionary, but there were some interesting new ideas and I hope you might find something useful here.

The usual disclaimers:

To the users – If it's not here, it wasn't at the show, I missed it entirely, or it just didn't interest me. This report isn't a regurgitation of press releases; it's my impressions of what caught my interest. Hope you find something here that also interests you.

To the exhibitors – Same as above. If I missed you, sorry, better luck (or placement) next time. If I've misrepresented your product, feel free to e-mail me with a correction, or better yet, post to the rec.audio.pro newsgroup where you'll find most of the interested readers. Please don't expect a retraction unless it's really a gross error (my judgment) and don't ask me to modify this report. It's too much trouble, and I'm doing it for free.

Now on with the show.

Microphones

The most common studio condenser mics simply plug directly into a preamp with a phantom power source, but the miniature condenser mics such as those used for close-in instrument placement or lavaliers typically have a lump containing power supply and amplifier components at the end of a thin cable attached to the mic. You need to find a place for this power unit, which is sometimes inconvenient. Audix has introduced a pair of mics suitable for these applications which have the electronics built in to the body, and connect with a mini XLR connector. A cable with a standard sized XLR is supplied so you won't have to go hunting. The M1245 and M1290 are just over 3/8" in diameter, the 1290 being about 3-1/2 inches long and the M1245 about half that length. The 1290 is available as a cardioid, hypercardioid, or omni, while the 1245 is cardioid or hypercardioid. They're similar in performance, with greater low end extension on the 1290. There's also the M1245-PLUS which increases the sensitivity by about 10 dB. The M1245 is well suited for hanging choir mics in a church, particular the Plus version, or when used close to the sound hole of an acoustic guitar.

The M1290 is more appropriate for conventional placement when a physically small or unobtrusive mic is desired. <http://www.audixusa.com>

Powering concerns seem to be “in” this year. Tube condenser mics typically have an outboard power supply which not only adds complexity to the setup, but also increases manufacturing cost with the added chassis and multi-conductor cable between the power supply and the mic. Audio-Technica’s new AT3060, the latest in their low priced 30 series is a large capsule condenser mic with the high voltage power supply built right into the case. It connects to a standard 48 volt phantom power source and an internal DC-DC converter provides the plate voltage for the tube. It’s a real tube design, with the tube being the impedance converter for the condenser element, not simply a tube output circuit grafted on to an FET amplifier. The capsule design is similar to the externally powered tube It’s promised in the Spring, with a shock mount and MSRP of \$600. <http://www.audio-technica.com>

Blue Microphones never does anything ordinary. At the AES show in October, they had some pictures of a new dynamic mic (all of their other products have been condensers) with a ball-shaped plastic case. If that’s not enough, it has a built-in active buffer amplifier and takes 48 volt phantom power. Something we’ve learned through the trek through the hundreds and hundreds of mic preamps released over the past half dozen years is that the impedance that the capsule sees when connected to a preamp input can greatly affect the sound of the mic itself. The buffer in The Ball assures that the capsule sees the optimum load impedance regardless of the preamp used. I call it The Wiffle Ball. You’ll probably call it cute. And since they don’t have the sound quite to the point where they want it yet (Skipper tells of the capsule sounding great in the prototype, but the case still needs some work to keep the good sound) all of us will have to wait to hear it.

In other Blue news, there’s a promotion going on now that will get you a Blue Baby Bottle mic and a Focusrite Voice Master Pro preamp/channel processor for \$1000 total. Good through February 28 at your friendly pro audio dealer. <http://www.bluemic.com>

While not exactly a microphone, and not exactly the NAMM show (I saw this at the CES the previous week, but thought it worth mentioning), Ray Kimber of Kimber Cable was showing his IsoMike system, a new configuration for a baffled omni stereo mic setup. This baffle is huge, roughly heart-shaped, and about six feet across the widest part. The advantage of the size and shape is that it improves low frequency isolation. This obviously isn’t something you’d toss in your backpack when going to a Phish concert, but rather a rig that you’d install in a hall where recordings are regularly made. I heard some recordings (DSD no less) that sounded like very good stereo, so it obviously works. <http://www.kimber.com/isomike.htm>

Consoles and Stuff

While not brand new for the show, this was the first outing for Mackie's Version 5 software for their d8b console. The most obvious feature (other than the price tag, which is \$300 – previous updates over the past 4+ years have been free) of the new software is a redesigned graphical interface with several new views of what's happening, including a nice display of the channel meters on screen. There's new and less restrictive effects routing allowing chaining of effects on a channel path, improved EQ algorithms, and graphic displays of gate and compressor transfer functions. Also new is full control of 5.1 surround monitoring, with a master volume control as well as individual level controls for the outputs. Of great importance to (some) DAW users is the new control layer which offers the Mackie HUI control protocol. DAWs which will work with a HUI can now be operated directly from the d8b control surface without any fiddling with MIDI mapping. And wouldn't you know it – there's a service release for Version 5 coming out very shortly after the show.

Also brand new for the d8b is the Pro Audio Lab plug-in, a combination spectrum analyzer, phase meter, and tone generator. Typically this would be installed on the main L-R bus to keep track of what's going on in the mix. Typical of Mackie plug-ins, the graphics are excellent. This one isn't available yet, but was installed on the console at the show, so I got a peek.

Interestingly, Mackie wasn't showing any of their analog mixers. Their emphasis this show was on interoperability of DAWs with their various hardware control surfaces. About a dozen different workstations demonstrated the operation of their control surfaces with a number of different software packages including their own Soundscape 32. On the evil business side of things, shortly after the opening of the show, Mackie announced the intention of a major investment by Sun Capital Partners in which the partnership would purchase about 65% of Mackie stock and give the company about \$6.3 million in working capital. Lawyers are still hammering out the details, and Greg Mackie is enjoying his new role as consultant and chief worm-drowner.

<http://www.mackie.com>

Yamaha has a new digital console, the 01V96. It's really more like a scaled down 02R96 than a goosed up 01V, but I guess someone in the Marketing department decided on the model name and that's it. As the model implies, it's 96 kHz capable, and like the other 96 kHz Yamaha consoles, you don't lose half the channels when running at greater sample rates than 48 kHz. You do lose half of the internal effects, however (two rather than four). Like any other digital console, you have to count your gozintas and gozoutas carefully though, before you buy it to integrate into a system. It has 16 analog inputs (12 with mic preamps) and an ADAT Lightpipe for eight digital inputs, but the built-in

Lightpipe is only 48 kHz. There's one I/O expansion slot that accepts the Yamaha Mini-YGDAI format cards, and that's where you can get 96 kHz I/O. There are 16-channel AES/EBU, TDIF, and ADAT cards available, but they operate at 96 kHz in the double-wide mode, so the maximum number of 96 kHz I/O connections is eight. <http://www.yamahaproaudio.com>

For the past several years, I've been mourning the demise of the analog 8-bus console in the marketplace. We have the Soundcraft Ghost and Mackie 8-but, but they're getting a bit long in the tooth. Coming soon to a pro audio dealer near you is an old familiar name with a new brand behind it. Wharfedale, famous for their speakers for 50 years or so is offering a new Topaz (yes, the same Topaz) series of consoles. Presently there's a 20 input 4-bus "Mackie style" console in production, and a both larger live sound version as well as a true 8-bus in-line recording version are around the corner. The prototype of the recording console on display looked well thought out, and at a low enough cost, it will provide a long missing introduction to both the analog sound and the intuitive operation of a fully configured console for those who haven't fully committed to digital interfacing and processing. <http://www.wharfedalepro.com>

While not a full console, the product line from Dangerous Music has been filling out. Their initial product, the Dangerous 2-bus is an eight-pair stereo analog summing amplifier with limited control – just a 6 dB attenuator for each pair and an overall -3 to +6 dB output level adjustment. The principle here is that you use your DAW for recording, playback, processing, panning, and level balancing, then sum up to 16 outputs to stereo through the analog mixer, bypassing the software summing bus (which many think is the weak point of a DAW). A new version, the Dangerous 2-Bus LT is a scaled down version at a lower cost. While employing the same analog summing circuitry as the full out version, switching to 25-pin D-sub connectors for the inputs, losing the 6 dB switches for the channel pairs, and slimming down the case to a single rack space gets the price down to \$1500.

One of the biggest problems with using a computer-based DAW is how to monitor everything – a mix when tracking, muting and dimming when you need to talk, mono summing when you want to check mono compatibility, listen to alternate sources, and monitor on alternate speakers. The Dangerous Monitor provides all this, as well as a high quality 24-bit D/A converter to allow you to monitor digital sources, and more importantly, monitor all of your digital sources through the same converter for fair comparisons. All that, plus the all important volume control. There's an output for both analog and digital meters, and as you might expect, a meter panel with real analog VU meters and digital peak meters is available as an accessory (or to stand alone if you don't need the monitoring functions).

<http://www.dangerousmusic.com>

Processors

What's an audio show without signal processors? Some well respected engineers consider the t.c. electronic System 6000 to be the ultimate reverb. New this show is the Reverb 4000, a stereo version of the 6-channel System 6000, with all the algorithms of the 6000, a fairly intuitive t.c. style user interface, and stereo analog and digital I/O for \$3000. Also new from t.c. are two harmony and pitch-shift processors, the TC-Helicon VoiceWorks and Quintet. The VoiceWorks is primarily a studio unit producing multi-voice musically based harmonies, pitch correction, a mic input, and a collection of TC effects. The Quintet is more of a stage version with simpler controls and MIDI control.

<http://www.tcelectronic.com>

Presonus introduced the single channel TubePRE tube mic and instrument preamp (yeah, I'm getting jaded and lumping these in with processors now). Input gain of up to 40 dB and an additional 20 dB of tube overdrive (see why I call it a processor) lets you get a range of clean or colored sounds. It fits in a 1/3 rack space and mounts on a standard shelf. Wall wart input, phantom power, low price. While not quite ready for prime time, Presonus was also showing a collection of small single function boxes – preamp, EQ, and compressor, that are designed to stack vertically in a rack that holds six units.

In other Presonus news, they've partnered with Anthony Demaria Labs to develop a new line of tube-based audio products. ADL has been a leader in tube preamps and compressors for many years, and this partnership intends to bring out a line of Demaria-designed and Presonus-built cost-effective products. The first one will be a stereo tube preamp with transformer coupled inputs and outputs for around \$2500.

<http://www.presonus.com>

At the AES show, Manifold Labs introduced Plugzilla, a stand-alone plug-in player that brings the power and variety of software plug-ins to the studio that isn't based around a computer DAW. The concept, for those of you who missed it, is a box with two pairs of input and output connectors (both analog and digital) with the computer horsepower to run industry standard VST plug-ins. Unlike some products that provide the platform and then try to entice software developers to port their plug-ins, Plugzilla takes the opposite approach and provides a hardware platform to run the vast array of available plug-ins, providing input and output connections as well as a front panel user interface to adjust parameters. While negotiations are still going on with a good number of the major developers (issues such as copy protection must be resolved), Plugzilla is now ready to ship as soon as the chassis parts arrive from the sheet metal shop, and will come with a suite of a couple of hundred freeware plug-ins which have been tested with the unit.

<http://www.manifoldlabs.com>

Finally, Little Labs introduced the IBP Junior analog phase alignment tool. This is a scaled down version of a previously introduced unit that included a high quality direct box. The IBP provides a continuously adjustable phase shift to bring two sources into alignment when switching polarity isn't close enough. While the original version was intended primarily to be used as an instrument input and get the direct pickup signal lined up with a mic, the Junior is line level in and out, appropriate for when you have tracks recorded and want to adjust their relative phase.

<http://www.littlelabs.com>

Digital Stuff

Apogee announced the Mini-DAC, a companion to their Mini-Me mic preamp and A/D converter. The Mini-DAC provides D/A conversion, output level control, and a high quality headphone amplifier to monitor a digital output up with sample rates up to 192 kHz. A clever interfacing feature is a bi-directional USB connection to a computer to allow playback from a DAW as well as a "Digital THRU" mode which takes an optical, coax, or AES/EBU digital input and sends it out the USB port. This allows you to connect your favorite A/D converter to a computer via USB. Pretty clever.

Apogee converters have developed a reputation for having really great, low jitter word clocks, and many people use an Apogee converter as the master word clock source in their systems. Apogee has now put that word clock technology in a stand-alone box, the Big Ben. As expected, it provides all sample rates p to 192 kHz including the 0.1% and 4% pull-up and pull-down rates and provides six BNC outputs as well as AES/EBU, SPDIF coax and optical at either standard or Superclock (256x) rates. In addition, the digital inputs and outputs are all live all the time and function at format converters. Another neat feature is a indicator for each BNC output that tells whether the output is properly terminated, unterminated, or double-terminated.

<http://www.apogeedigital.com>

MADI has been the professional choice for digital I/O between multitrack recorders and consoles since it's capable of handling up to 64 channels of 24-bit audio at 48 kHz and 32 channels at 96 kHz on a single cable up to 100 meters in length. Because of its relatively high cost, MADI has eluded the project studio products, but now RME offers the Hammerfall DSP MADI, a cost effective PCI card with MADI I/O. While the number of devices that you can interface to your computer using this card is fairly small today, hopefully the lower cost technology (a cheap MADI chip, I'll bet) will be adopted by others and we'll start seeing \$2000 consoles and hard disk recorders with MADI I/O.

<http://www.rme-audio.com>

While the majority of DAWers are DIYers, some people enjoy the comfort of letting someone else configure their PC hardware for them. Shoutmedia is a new kid on this block, and they're offering a really cute DAW-optimized PC based on the Shuttle PC motherboard. This is a really cute little box named the Pulse which is less than 8 inches square and a foot deep. It contains a 1.8 GHz Mobile Pentium 4 CPU, up to 1 GB RAM, a passive (= quiet) heat pipe CPU cooler, 10,000 RPM fluid bearing Seagate Barracuda hard drive, CD-RW (DVD optional) drive, 4 USB and 3 Firewire ports and Ethernet. They've taken great pains to quiet the system, using a real metal case and vibration damping material to line it. As a limited time introductory special, they're selling the computer with a 60 GB drive and 256 MB RAM together with a Digidesign M-Box for \$1349. For those who prefer the traditional rack mount format, their Cadence system with equally quiet and carefully chosen components is also available. <http://www.shoutmedia.com>

Speakers and Stuff

Alesis has always come up with some remarkably cost effective products that truly don't sound bad for the money (and a few that do, but this isn't about those) and the new ProActive 5.1 speaker system is one. This system consists six loudspeakers – one subwoofer that provides power for the whole system, a front pair, a rear pair, and a center speaker (all slightly different designs), a master controller, and an IR remote control. It has six discrete analog inputs, six discrete digital inputs on an ADAT Lightpipe connector, and a surround decoder for use with two inputs. The controller provides a master volume control as well as control of subwoofer and center channel level, a few gimmicky sound processors, and input source selection. The remote lets you put that (rather compact) box out of the way and do most everything you need to do without trailing wires. All this and THX approval for only \$400. <http://www.alesis.com>

KV2 Audio is a brand new company formed by several ex-Mackie folks involved in the Mackie Active speaker product line. Not surprisingly, they're building a powered sound reinforcement speaker system consisting of a power amplifier module, a choice of three different sized subwoofers and one or two mid-high three-way cabinets. There's some trickery in the power amplifier module to increase efficiency and improve power reserve for transients, as well as time alignment and switch-selectable optimization for the selected speaker components. Being former Mackoids, their brochures have the typical wackiness, technically informative but slightly irreverent. A true international company, much of the engineering talent is located in the Czech Republic, and if that sounds a bit like the folks who designed the Mackie Fusion speaker line, it is. As an old friend and former associate, I wish them success. <http://www.kv2audio.com>

I mentioned the Intelligent Audio Systems subwoofer system in a brief report on the CES (Consumer Electronics Show) but it's worth mentioning again here. This is a subwoofer system that contains two speakers at opposite ends of a fairly long box, firing in opposite directions, and independently driven by two power amplifiers which are DSP-controlled. Since the two speakers are independently powered and controlled, they don't necessarily have to do the same thing at the same time. The DSP can control the amplitude and phase of each speaker's output to shape the radiation pattern, and can have different radiation patterns at different frequencies if necessary to control room modes. A built-in test system optimizes the speaker response to the room. Not inexpensive (about \$11,000 for the pair) but perhaps cheaper than rebuilding the room.

<http://www.intelligentaudiosystems.com>

Cool Gadgets

Back when I was trying to learn guitar, I'd tape a record at 7-1/2 ips, then slow the tape down to 3-3/4 ips. Not very inspiring, but it worked. Today there are plenty of software programs that will allow you to change pitch and tempo independently to slow down a part for learning, but the new TASCAM CD-GT1 puts it all together – a CD player with tempo reduction up to 50%, pitch control up to 50%, looping, instant cueing, a built-in guitar input with a tuner, effect processor, and mixer to the headphone output. Batteries included, so you can take it to practice at the beach.

<http://www.tascam.com>

Personal multitrack recorders seem to be getting more powerful and more compact, but each generation seems to have some cooler features than the previous one. (well, sometimes they lose some features too) The Fostex MR-8 is a very basic 8-track digital recorder that records 16-bit 44.1 kHz PCM (WAV) files directly to a flash memory card. It will take up to 128 MB cards (it ships with a 64 MB one for 24 track-minutes) which, with the proper adapter or slot, you can transfer to your computer for further processing or burning CDs. It records a maximum of 2 tracks at a time, there are two mic inputs with companion line inputs, one of which is switchable to a guitar input, and one of the mic inputs can be switched to an internal microphone, which might actually be usable since there isn't a motor grinding away. Reverb is just a button away, as are three choices for mic simulation and three guitar effects. A single button bounces the eight tracks (there are four mono and two stereo pairs) to the 7-8 track pair, and you can apply one of three Mastering presets in the process, aptly named Powerful, Natural, and Bright.

<http://www.fostex.com>

One of my favorite gadgets at the show is the Sight Reader, a battery powered clip-on light that's intended to go on a music stand, but I can see using it to

illuminate a mixer or recorder for those times when you're doing live sound or recording in a dark corner.

<http://www.mightybrightsightreader.com>

The folks from SE Electronics brought in a new line of microphone boom stands that are based on camera tripod hardware. They come in three weights (different tubing diameter) and all will get a mic about 15 feet up in the air. A removable wheel base is included, and it comes with a sandbag to add some stability. Being a camera tripod at heart, it folds up into a nice compact package.

<http://www.tbkmics.com>

Instruments

I don't follow musical instruments as much as I used to, but one interesting concept was presented by Open Labs. The eKo is an open platform that's based on a PC motherboard, has a 61-note keyboard, LCD screen, and scroll pad built in, plus four modular and removable panels with other human interfaces. As configured for the show, it had a 16-fader bank, a bank of 24 rotary controllers, a QWERTY keyboard and a multi-purpose control module with a joystick, a numeric pad, and a bunch of buttons. The concept is that you can load up whatever software you choose, and control it with the provided (or third-party – the interface is going to be open to developers) controllers. This is intended to be a performance instrument as well as a fixed workstation, so it includes a battery backed UPS to prevent a long disruption on stage if there's a temporary loss of power. At this point, it's a concept that the company hopes to sell.

<http://www.openlabs.com>

Need some unobtainable memory for an old synth or computer? Lifetime Memory Products may be able to help. They use modern premium quality memory and, when necessary, package it in older style modules.

<http://www.lifetimememory.com>

Taylor Guitars was showing a new line of pickups, the Expression System, which mate with a preamp designed by none other than our old friend Rupert Neve. Taylor is very much committed to getting good amplified sound for an acoustic guitar and they've been reasonably successful as far as they've taken it. I had great hopes for this, and I played with a guitar (sorry, I don't know which model) for about 15 minutes, twiddled the controls on the preamp (there were high and low EQ plus a sweepable parametric equalizer and two gain controls, one of which didn't appear to be functional. Listening on headphones, which I admit isn't a very good representation of live amplified acoustic guitar sound, I couldn't get rid of the buzziness that I so much dislike about acoustic guitars with pickups. But having faith in Taylor and Rupert, I'd like to give it another chance when listening conditions are better. Be on the lookout if you're an acoustic guitar player.

<http://www.taylorguitars.com/guitars/features/expression.html>

Things That Go Click and Whirrrrr In The Night

I miss the old days at AES shows where there was a whole section of the show floor devoted to tape duplicators, cassette loaders, printers, and packaging machines – things that went click and whir. Not much of that going on these days with CD burners and digital recorders, but there's hope. There were several CD duplicators on display with a robot arm that picks the disk from a stack, drops it in the drive, when recorded, removes it, drops it into a printer, and when printed, drops it on to a finished stack. While it's been advertised for quite some time now, this was my first look at the one that Diskmakers sells. Primera showed the Bravo, a "disk publisher" that records and prints up to 25 disks at a time. It connects to a PC to get the audio source data and print file. Stack it up and go to dinner.

<http://www.primeratechnology.com>

Where there's a CD recorder, there must be CDs, and Verbatim now offers the Digital Vinyl CD-R, a blank recordable CD that looks like a phonograph record, complete with a 45 RPM style label. For a look, check out

<http://www.digitalvinylcdr.com>

Perhaps the exhibitor I least expected to see at a NAMM show was Grizzly Tools, an importer of heavy (and not so heavy) woodworking tools from China. At their booth, they had everything you'd need to start with a tree and end up with a guitar – large bandsaws for sawing logs into boards, thickness planers and sanders, shapers, routers, and so on. Really great stuff, and of course important for instrument builders, without which we'd be in a pretty boring world.

<http://www.grizzly.com/>

Finally, one more thanks to EveAnna at Manley Labs, makers of fine amplifiers, preamps, and signal processing equipment. My hotel room had only Styrofoam coffee cups, and a Manley Tubes Rule real china (made in China) cup saved the mornings for me.

That's about all that's cool and that I remember. Next show's in the Summer in Nashville.

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