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Sweetwater MUSIC INDUSTRY NEWS AND PRODUCT INFORMATION

SWEETNOTES

MUSIC TECHNOLOGY DIRECT

EARLY SPRING 2000 ISSUE



ALESIS MASTERLINK ML-9600 High Resolution Master Disk Recorder

Most of you still remember when Alesis first introduced us to digital multitracking. In fact, odds are good that you own an ADAT yourself (I do). Admittedly, that's a hard act to follow, but in my opinion, Alesis has done it. Introducing the **MasterLink ML-9600**, a new mixdown and mastering system that combines sophisticated hard disk recording and editing, powerful digital signal processing and CD creation in a single versatile unit.

MasterLink ML-9600 allows studios, musicians and mastering facilities to store, deliver and play stereo 24-bit, 96kHz audio on standard recordable compact discs. Yes, that's right: 24 / 96 compact discs in your own studio — how cool is that? What's more, the unit can also produce and play back conventional 16-bit, 44.1kHz Red Book format CDs. MasterLink features a 3.2GB internal hard drive with editing, DSP and mastering functions, a 4X CD-R drive, and 24-bit A/D and D/A converters. The biggest surprise might be the price: Just \$1699 list!

The introduction of MasterLink also marks the debut of CD24, another breakthrough technology from Alesis. CD24, a proprietary format developed by Alesis engineers, exceeds the previously limited resolution of Red Book audio on standard compact discs. Utilizing the ISO 9660 disc format and AIFF audio files on standard

CD blanks, MasterLink 9600 creates ultra high resolution CDs that can be played back on MasterLink 9600, in addition to being accessible to digital audio workstations at studios and mastering facilities worldwide.

Standard CD-R media is a portable, robust, inexpensive and widespread technology supported by dozens of manufacturers. Now that Alesis has developed the technology to write 24-bit / 96kHz on inexpensive CD-R, CD24 will blow the doors wide open. Tomorrow's release formats — DVD and Super CD — are calling for greater than 16-bit delivery. While other companies are spinning their wheels, trying to decide on the best way to deliver the higher audio standards available with 24 / 96, MasterLink 9600 answers the need today for a 96kHz, 24-bit audio stereo delivery format. With higher resolution, editing and signal processing, the company expects that MasterLink will be rapidly embraced as a superior alternative to R-DAT machines.

What? Ditch your DAT? Heresy, you say? Well, consider this: MasterLink's dedicated 3.2GB hard drive holds the equivalent of almost five hours of continuous CD-quality stereo audio. Even at the maximum sample rate and word length, ML9600 stores up to 95 — *Continued on Page 2*

JOHNSON JT50 MIRAGE A new standard for affordable modeling amps

Not long ago, guitarists had to make a choice: The cool look and great sound of a vintage tube amp (along with a huge price tag) or the versatility and nearly unlimited tone potential offered by the latest amp modeling technology. Good news! Today, guitarists can spend less and still get all the tone they will ever want or need. — See Page 6 for more!



WINTER NAMM *Special Issue*



More knobs, more buttons, more flashing lights. The latest gear for making music was at the Winter NAMM Show in Los Angeles. Couldn't be there to see it all for yourself? Our team of reporters brings you all of the hottest news on the coolest products! — **SEE PAGE 3**

GIBSON'S BLUESHAWK GUITAR

People love the blues! And guitarists love playing it! And now Gibson, one of the most trusted names in all of guitar-dom, introduces a new ax designed to take the blues — or any other music you care to play — to a new level thanks to a host of innovative features. — **SEE PAGE 2**

PLUS: Great new Digital Workstations, Godin Guitars, Korg OASYS PCI Synth, Event Monitors, Yamaha CS6x and more!

Aside from some great leaps in technology, I'll always remember the '90s as the decade that reawakened the Blues as a popular form of music. And based on the rapidly expanding Blues sections in the CD stores, it looks like the trend isn't going to slow down any time soon.

One of the mysteries of the Blues is that, by basing its style on only a handful of well known forms, it actually allows a great deal of freedom in other areas of expression, including tone and playing styles. And over the years, these tones and styles have been explored on a number of electric guitars including Stratocasters, Telecasters, Les Pauls, ES-335s, solid-bodies, wide-bodies, hollow and semi-hollow bodies, and even a rectangular box or two. And the widely varying types of Blues have been influenced by Jazz, Rock, Country, Soul and R&B.

Love the Blues? Want to play the Blues? Now you can own a finely-crafted instrument with the flexibility and authority needed to speak authentically in any style of Blues (or Rock, Country or Jazz for that matter). **Gibson's BluesHawk** (\$1253 list) brings a new look and an arsenal of hot new sounds to the Blues with a classy F-hole body and a pair of unique "Blues 90" single-coil pickups. A plushly padded custom-fitted gig bag is also included.

The BluesHawk features a maple-capped poplar body, a mahogany neck (25 1/2-inch scale), rosewood fingerboard and luxurious gold hardware. It's lightweight and well balanced, with a comfortably contoured back. Diamond-shaped inlays plus the single-ply binding add a distinctive touch, and the narrow neck profile sports a slight V-shape for better playability. The bridge features a low-profile string-through-body-system that contributes to the deep resonance and admirable sustain of the instrument. The BluesHawk is available in three finishes: Chicago Blue (shown here), Ebony and Heritage Cherry.

The electronics are distinctively Gibson. And the combination of two "Blues 90" pickups with their three-way position pickup switch and the six-position Varitone selector

Gibson Blues Hawk



knob give you all the sounds you're looking for, regardless of who you're playing with that night. Of special note: Though these are single coil pickups in the style of Gibson's venerable P-90s, they include a dummy coil to keep the hum and buzz usually associated with single coils under control, much like a humbucker.

For me, the Varitone selector is one of the most exciting features of this guitar. I spent hours trying each of the 18 possible combinations (3-way pickup switch x 6-position Varitone selector) through several different amplifiers with varying amounts of overdrive, and every setting I tried produced yet another source of timbres to explore — and that's not even including the possibilities offered by using the Tone control, which also has a push-pull switch to bypass the Varitone.

I found that I could conjure up the crystalline bell-like tones of a Strat neck pickup (thanks to the extended frequency response that's characteristic of single coil pickups), as well as the mid-range snarl of a Les Paul bridge pickup (this is, after all, a Gibson), plus the muted, full-bodied warmth of a hollow-bodied jazz humbucker, and every type of out-of-phase spank and twang needed for the Country buff. In case you hadn't already noticed, I'm truly smitten by this Varitone selector. (If it were possible, I'd add one to all of my guitars.)

And speaking of adding, you can also equip your BluesHawk with an optional Maestro vibrato bar (which is actually the same as the classic Bigsby vibratos from the '50s and '60s). Make no mistake, this is not your neighbor kid's dive-bombing whammy bar; this is a far more subtle and refined tremolo that's reminiscent of the Stray Cats, Chris Isaacs and those '60s spy movie soundtracks. The extra gold hardware looks pretty sharp too.

So if you've always wanted to own a Gibson, or just feel like adding another one to your collection, call your Sweetwater Sales Engineer and find out just how easy (and affordable) it can be to put some authentic Blues into your music. — **Daniel Fisher**

MASTERLINK

— *Continued from Page 1* minutes of audio. Prior to recording, any combination of the four industry-standard sample rates (44.1, 48, 88.2, 96kHz) and three word lengths (16-, 20- or 24-bit) can be selected on the front panel. Because recordings are saved to the hard disk, different versions of mixes can be stored in memory and recalled instantly for comparison. Additionally, MasterLink can create multiple identical copies of program material, something that normally requires two DAT recorders.

How about ease of operation? Activated by a single 'Create CD' button, the fast internal 4x CD-R creates a full (74 minute) Red Book Standard CD in about 20 minutes. MasterLink's firmware is conveniently updated through the internal CD-R drive. This makes it possible for the user (that's you) to easily upload new software features as soon as they become available. No swapping chip sets. MasterLink's CD drive also automatically recognizes CD24 and Red Book Standard discs and plays them back at the appropriate sample rate and word lengths.

How about editing? You know that if you want to make changes to a DAT recording, you have to first dump the audio into a computer for the slicing and dicing. MasterLink's editing features allow the user to reorder tracks, adjust gain, build playlists, trim heads and tails of programs, set start times, preserve the best takes and delete tracks before committing the material to CD. Join and Split commands allow material from multiple mixes to be resequenced, creating entirely new versions. MasterLink also includes an internal sample rate converter so that high resolution files on the hard disk can be used to create Red Book CDs (which, let's face it, will be with us for many years to come). Editing is accomplished using front panel controls, which allow you to audition and edit start/end points.

We mentioned DSP earlier. MasterLink's onboard digital signal processing functions include many essential "Finishing Tools" such as equalization, compression, normalization and peak limiting, all of which can be applied to program material prior to

creating a CD. The 2U-rackmountable unit includes analog inputs and outputs on +4 dB balanced XLRs and -10dB unbalanced RCAs, as well as digital inputs and outputs in both AES and coaxial digital formats. MasterLink 9600 is a fully functional CD player with 24-bit A/D and D/A converters for optimal sonic performance. Front panel controls include: Standard CD player transport with scan and skip, track controls (new track, delete track, track information), cursor controls, CD resolution, input source (analog, digital, optical), word length, sample rate and Create CD. The unit ships with a wireless remote control and there's even a front panel headphone jack.

MasterLink's integration of HD, CD-R and DSP, make it a powerful standalone solution for any application requiring the recording and playback of stereo audio. Project and commercial studios will find MasterLink an ideal way to capture and preserve high resolution mixes to produce reference discs, deliver audio to mastering rooms, archive, and back up files from digital audio workstations (i.e. Pro Tools).

We are expecting to have these units in stock by the time you read this, but be aware that there will be more demand than supply for a few months, so I would suggest that you get your order in today for a Masterlink. Of course, if you can't see how cool this box is, your friendly Sweetwater Sales Engineer will be happy to give you all the information you need to draw your own conclusion: The ML-9600 rocks! And yes, you'll also get a special low Sweetwater price when you call that will make purchasing a Masterlink a really smart move for your studio. Hey, I plan to get one (I've already put in my order), so what are you waiting for? Call today! — **M.Rief**



What's more excitable than a gear-head set loose on a new piece of equipment? Try a few thousand gear-heads set loose at the coolest music technology show on Earth. Winter NAMM is unquestionably Mecca for gear-heads, technobabblers, audio-troggs, knob-jockeys, hi-fi hooligans and all manner of creatures left slack-jawed and mesmerized at the sight of blinking lights and shiny objects. And there was plenty at Winter NAMM to stir any gear-head's ardor. Your NAMM Report staff was there, snapping pictures, pressing buttons and asking questions, all in the effort to bring you the best of the best — and a few "sleepers" we thought you'd be interested in.

Please keep in mind that this is not intended as a complete listing of all new or relevant products debuted at this NAMM show (we wouldn't have room for the rest of this issue if we told you about everything, so for a complete report, see our Web site at "www.sweetwater.com/NAMM"), nor is all of the information here guaranteed to be 100% correct. In many cases, manufacturers are still solidifying things like price (which is shown here as the expected list or retail price), availability, and features. We gathered all we could from the things that caught our eye. We hope you enjoy this first sneak preview.

AKAI showed off a very cool new line of compact powered mixers. The **AMX Series** all weigh less than 17 pounds and are housed in a composite flight case with a cover and a handle.



TASCAM DA98HR

When the gig is over, you just cover them up and carry them away like a suitcase. The 10-channel **AMX10** (\$699) and the 6-channel **AMX6** (\$599) are very efficient and feature digital effects, a high-quality mixing section with individual EQ, dual amps and more. Akai was also showing some new ultralight stereo power amplifiers, the **APX500** and the **APX1000**. Both are high-efficiency PWM power amps and they sound promising.

For the low-end bass man, Akai offered two intriguing stomp boxes: The **UB1** lets you "thicken" your sound via effects like adding an octave, or distortion, or enabling you to play harmony lines by yourself. It's great for filling out a band's sound on stage. The **SB1** lets you play those fat, funky synthesizer bass lines on your bass. You can edit the sounds to get exactly the tone you want, and there are nine programmable memories that let you switch sounds while you play. And of course, where there's bass effects pedals, there's usually twice as many guitar pedals. First up is the **W1 Variwah** (\$199), a box that gives you multiple wah: Pedal wah (there's a traditional wah pedal), Touch wah and a Swell wah feature all in one. The **D1 Shred-O-Matic** (\$299) also goes by a less lively name, the Tube/Solid-State Hybrid Distortion box. Whatever you call it, the 4 distortion modes are exceptional, giving guitarists a wide choice of distortion sounds. The **E1 Headrush** (\$279) is a tap delay/tape echo simulator/looping recorder effects pedal. Features include 16-bit digital



delay with a delay time from 0.5ms to 23.8 seconds, and the Tape Echo mode, which simulates an analog 4-head tape echo machine. Finally, there's the **P1 Intelliphase** (\$149), a cool sounding analog phaser with Soft Touch and Hard Touch mode.

Finally, they also had a very hip variable tempo phrase sampler called the **U400** (\$249), which gives you 35.7 seconds of recording time. Operation was very simple. You can playback the phrases at 2/3 and 1/2 speed without affecting the pitch, and easily isolate and loop a selected region. One of the coolest features for any instrumentalist who wants to learn their favorite solo is the Note Grabber, which takes you through a recording a single note at a time.

ALESIS. Their **A6 Andromeda Analog Waveform synth** (\$3499) was being put through its paces during a great mini-show. The A6 is no digital emulation of an analog synth; this is the real thing. A real-deal analog synthesizer bristling with knobs. Features include 16-voice, 16-channel multitimbral with full MIDI control. It's capable of some very sweet, fat and soulful sounds.

APOGEE. They were showing off two high-quality converter cards, the **AP8AD** (\$1495) and the **AP8DA** (\$1195). These are designed to add quality digital conversion to any Yamaha digital system equipped either with full-size YGDAI card slots. They would make a perfect complement to Yamaha's AW4416 workstation (see Yamaha section later).

AUDIO-TECHNICA. We love packs and bundles, and know a lot of budget-minded working musicians feel the same way. Audio-Technica has four great new, inexpensive microphone kits we think you'll like. The **KP Series** consists of an assortment of mics for specific tasks, held in a durable, travel-friendly case. The **KP-Drums** kit (\$499.95) include four custom-engineered cardioid dynamic mics: Two Snare/Tom mics and two Kick/Tom mics. The **KP-Vocals** kit (\$209.95) comes with three dynamic vocal mics with stand clamps and cable ties. The **KP-Studio** kit (\$299.95) provides two cardioid condenser mics and a pair of ATH-M3X stereo headphones. Finally, the **KP-Worship** (\$419.95) handles the diverse needs of sound reinforcement in churches and other places of worship, with two hanging "choir" mics, one goose-neck "podium" mic and a handheld cardioid dynamic "vocal" mic. The company also released their **1400 Wireless Series**, featuring true diversity reception with independent RF sections.

BOSS brought out some incredible new gear, all seemingly aimed toward the performing/touring musician and songwriter. The **BR-8** (\$845) is an 8-track digital recording workstation for

guitarists and other musicians looking for a simple, cost-effective alternative to a tape-based personal studio. If a serious fledgling songwriter wanted to make a really wise investment in gear, the **BR-8** is it — easy to operate, it includes many of the features that have made Roland's VS workstations such a hit. You get virtual tracks, COSM effects processing, excellent editing functions, etc. You also get Rhythm Guide, Phase Trainer, and a built-in chromatic tuner. Next up was the **JS-5 JamStation** (\$595), which might actually be even cooler than the **BR-8** — depending on who you talked to. With the **JS-5**, guitar and bass players can jam along to high quality accompaniments in many different styles. You can even record up to 32 minutes of your work, just in case you hit that great groove that could turn into something. It's very useful for practicing, jamming, songwriting or learning to play in a new style of music. Hearing the demo

gave all of us a case of the "gimmes."

CROWN. The latest addition to their **CE Series** amps, the **CE 4000** is being targeted to nightclubs and DJ systems, regional touring PAs, A/V rental houses and fixed installations. It's one of the most efficient amplifiers that Crown has ever come out with: A switching amplifier design means the CE 4000's BCA topology delivers massive amounts of power while generating just one-tenth the heat of a conventional amp. It delivers a solid 1800 watts per channel (both channels driven) into 2 Ohms, 1200 watts into 4 Ohms and 600 watts into 8 Ohms. For such a powerful amp, it was very lightweight, checking in at about 34 lbs. Crown also gave us an award for Outstanding Sales in 1999.

DENON. Among their selection of excellent and reliable CD players, Denon had a couple of new products that will surely raise the beats-per-minute of any serious creative DJ. The first was the latest version of their **DN-2600** dual CD player, the **DN-2600F**. Along with features like authentic scratching, the DN-2600F brings some exciting new functions to the tables (pun fully intended). Each drive has "Hot Start": The DJ can instantly and seamlessly change a track or cue point with the touch of a button. "Stutter" mode plays momentary audio as the buttons are pressed down, and then "recues" to the original point upon



Sony DMXR100 Mixer

release.

Also, the "Effector" features offer fully customizable frequency filter, reverb and flanger effects. Check this out!

E-MU. Coolness was running rampant at the E-MU booth. First up was their brand new sound module, the **B-3**. Just like the name says, the B-3 sound module delivers jaw-droppingly realistic B-3 tonewheel organ sounds. This includes all the effects, like loads of authentic drawbar settings, distortion, and percussion features that sound just like the real deal. The realtime controls give you tremendous rotary speaker control. It's expandable, too. Also strutting its stuff was the **Xtreme Lead-1** (\$895), an innovative single rackspace sound module / synthesizer. De-

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— Continued from Page 3 signed as an all-in-one instrument for techno/electronic/dance artists, the XL-1 offers a very powerful and diverse set of features. There are just too many highlights to go into detail (like 32 MB Sound ROM with 512 ROM/512 User Presets; 16 simultaneously synced arpeggiators, etc.), but one of its most impressive features was the SuperBEATS mode, which allows you to trigger latch and unlatch synced loops and grooves from separate keys on your keyboard. If grooves and BPMs are your musical currency of choice, you'll want to check this module out. But the shakin' doesn't stop there. E-MU has more. Or Mo', to be precise. The **Mo' Phatt Urban Dance Synth** picks up where the legendary Planet Phatt left off. Just like the name says, Mo' Phatt gives you more. More sounds, more grooves, more creative options and a more powerful processor. Like the XL-1, Mo' Phatt features the SuperBEATS mode. Best of all, you can add your own unique touch to the grooves via a cutting-edge synthesis architecture and effects processor.

FOCUSRITE. They're reissuing their classic **ISA 110 Mic Preamp and EQ** (\$2000). The ISA 110 was Focusrite's "build-

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much more. Continuing Fostex's tradition of top-of-the-line compact recording workstations is the **VF-16** 16-Track Digital Multitracker (\$1500). It features 16 tracks plus 8 additional "ghost" tracks, and fantastic digital mixing capabilities. There are two independent digital multi-effects using acclaimed Fostex A.S.P. technology. They also had the **VM88** (\$799) 8-channel Digital Mixer with DSP Effects. This was a nifty, compact submixer for live performance, loaded with great features and simple to operate. If you're a performing musician you need to check this one out.

KORG. The new **Triton OS version 2.0** adds a little boost to the sampling section of this amazing keyboard. New features include Time Slice, which lets you take a sampled loop or phrase, cut it into segments, and then create a new multisample and program. This is placed into the sequencer along with the required track data to play the part. There is also a time stretch function, which matches the tempo/length of sampled phrases. The crossfade looping function lets you loop complex sounds without clicks or pops at loop point. Korg was also showing their new "old skool" synth, the **MS2000 Analog Waveform Synth** (\$1100). This is the first new entry in Korg's classic MS Series in 20 years. The MS2000 faithfully recreates the analog sounds of the past using the latest DSP technology, and adds a very cool vocoder. We got a brief demo of this synth and the sounds were excellent. Tweakers will especially love this synth: There are no less than 35 dedicated knobs on the MS2000, all so you can create and manipulate sounds in real time. The weird thing was that your NAMM Report staff had just come from an exhibit of vintage synths, and it was interesting to see how people seem to like the look and "hands-on" aspects of the older synths with knobs, even if the dependability, performance and sound quality of today's synths bears no resemblance to the instruments of even 15 years ago.

Finally, the **ES-1 Rhythm Production Sampler** (\$600)



Korg MS2000 Analog Synth

is the newest member of the best-selling Electribe family (this one happens to be green). The ES-1 is a variation on the ER-1 (that's the red one), but the ES-1 lets you process the samples in an astonishing variety of ways. You can tweak and alter your samples via the pitch, filter and effects knobs, and use the step sequencer to create complex rhythm patterns.

LINE 6. It's black. It's vaguely kidney-shaped. And it's for bassists! Line 6 opens the way for bass players to have a little

effects fun with the **Bass Pod**, the bass version of their popular Pod modeler/effects device. Bass Pod offers 16 bass amp modelers, 16 bass cabinet models, 16 digital effects combinations, and much more. They were also showing their **Rackmount Pod Pro**, essentially a rackmount version of the Pod with extra nifty features, including 24-bit AES/EBU and S/PDIF digital out, and stereo effects loop.

MARSHALL. An acoustic guitar amp from Marshall? They exist, and our raised eyebrows were lowered when we got a look and listen. The **AS80R Acoustic Guitar Amplifier** (\$1199) is an 80-watt chorus combo that sounds amazing. If you've ever heard one of Marshall's acoustic amps you know what we mean. All that power and clarity is applied to a more delicate sound and the results are stunning.

MARTIN. The **Special Edition** guitars are always a NAMM highlight, but this year they outdid themselves with the **Eric Clapton signature guitar** (\$15,000). A curvy acoustic of Brazilian Rosewood, the **00042ECB** has already caused quite a stir among collectors and connoisseurs. There will only be 200

of these beauties built. Still think a young man ain't got nuthin' in the world these days? Think again. For the Young Man Blues, there's the **Johnny Lang signature guitar**, a jumbo 14-fret full access Venetian cut-away equipped with a Fishman Prefix Onboard Blender system. The face of the guitar has an aged, amber hue for that "dues-paid-in-full" look and feel. Martin was also showing off two **Jim Croce** limited edition guitars. Each guitar has a mint condition 1973 dime inlaid at the third fret fingerboard position, in honor of Croce's "Operator". Martin is limiting the number of Jim Croce special edition guitars to 73 in reference to the year Croce died.

There were other special editions we liked, but one that definitely caught our eye was the **Custom D-45** Dreadnought, an incredibly ornate instrument featuring pearl inlay Chinese icons



Martin Eric Clapton Signature

and symbols. The neck boasts an ornate double dragon motif, while the keys have beautifully intricate symbols of the Chinese calendar. There won't be many of these, but you can pick one up for a paltry \$700,000.

MOTU. There was a really exciting development at Mark of the Unicorn's booth. We got to go behind closed doors to see their brand spankin' new **1296** audio workstation for Mac and Windows. It's the latest addition to their 2408 family, and boasts (what else?) 24-bit/96 kHz. It's ideal for surround sound mixing and is available as a core system and as an expansion I/O. You can connect up to three 1296s for 36 channels. We'll have more on the 1296 very soon.

PARKER. They've added two new models to their line of innovative instruments: The **Parker Hardtail** (\$2,650) and the **Parker Jazz** (\$3,375) both boast Parker's characteristic light weight and easy playability, but add a stronger low-end to the overall tone. The Hardtail is a stealth gray color with a basswood body and neck. It also features a Drop-D tuner. The Jazz is a deep, classy red color with all gold hardware. The pickup is specially voiced to deliver a warm jazz tone.

PRESONUS. The **Quad Com** (\$899.95) was their new, single rack, four-channel professional compressor/limiter. They also had the **Quad Gate** (\$899.95), a single rack, four-channel

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Attendees are treated to a demo of the Boss BR-8

ing block" product and is still used in countless recording studios worldwide. This is a standalone one-channel unit in a 19" format with integral power supply, but other wise it conforms to the original ISA 110. They were also showing the ISA 430 Producer Pack, a front-end processor that makes a great front-end for Pro Tools. The ISA 430 includes a transformer-coupled mic preamp stage, plus line and instrument inputs with phantom power and phase reverse with direct input. There's also a Compressor and Expander/Gate featuring proprietary Class AVCA and side-chain circuit as used in the vintage ISA 130; a De-esser; a 3-band Limiter; and special Single or Split modes.

The **MixMaster** is Focusrite's latest addition to their award-winning Platinum Range of dynamics processors. Designed principally as the final processing stage when mixing, the MixMaster will also prove a valuable tool for anyone mastering his or her own recordings. Features include Stereo line input; Stereo expander; Stereo multiband (spectral) compressor; Stereo 3-band parametric equalizer; Stereo Image Controller; and Stereo limiter (frequency adaptive limiter for minimum distortion and maximum A/D protection).

FOSTEX. They were showing several great new releases sure to be of interest to recording professionals. The first was the **NF-1A** (\$1598/pair), a nifty nearfield monitor that boasts an almost completely neutral sound. These were powered versions of the NF-1 introduced at AES '99. The NF-1A features a "patent-pending" hyperbolic parabolic transducer design that provides a tight off-axis response. Also introduced were the **D 824** (\$1795) and the **D 1624** (\$2795), two powerful, high-end hard disk recorders. They offer an RS422 interface and a total of five recording formats, including non-compressed 24-bit, 96 kHz audio. The new interface increases the recorder's versatility dramatically by allowing remote placement and offering compatibility with video editors and other professional tools. Both feature unlimited Undos, Copy/Paste be-



In this issue, I had planned on taking a look back at everything that happened in 1999, then maybe giving you a sneak peek at a few things we have planned for the year 2000 and beyond. But there was a problem.

Not long before press time, I got a chance to see Jeff Radke's column, "Inside the Sweetwater Difference." Well, it seems as though Jeff had the same idea, and since he did such a nice job of it, I'll simply tell you that you can read Jeff's column on Page 10.

So what to talk about? Simple: It's the one thing that has been occupying a lot of the staff's time lately, and that's our Online Store. From the e-mail, calls and letters we've gotten, it looks like everyone loves this new service. It means a lot to us to know we've done something to make things easier for you — and maybe even a bit more fun. We have an entire crew that comes in fresh each morning to process all the orders we receive overnight, get them packaged up and sent out to you as fast as possible.

As of this writing, there are about 3,000 items available from our Online Store and that number is growing each and every day as we add new products from our inventory to the Secure Server, making 24-hour shopping a reality. It's important to note here that although we want to make purchasing quick and simple, we still believe you need to discuss your purchases ahead of time with our friendly, knowledgeable Sales Engineer to make sure that the gear you want is actually the gear you need! Believe me, these folks can save you a lot of time and needless frustration — and it's why they're here.

Since I'm on the subject, I should mention here is that when you log on to the Sweetwater Store, you'll see a couple of small logos in the gray box over on the left. Here's what they mean and why they are important.

VeriSign, Inc. is the leading provider of Internet trust services — including authentication, validation and payment — needed by Web sites and other e-commerce service providers to conduct secure electronic commerce and communications over IP networks. As of this writing, VeriSign has issued over 180,000 Web site digital certificates and over 3.9 million digital certificates for individuals. The company's Web site digital certificate services are used by all of the Fortune 500 companies with a Web presence.

While many of the wild rumors you hear about people being able to intercept all of your credit card information when you perform transactions over the

Internet are sort of like the bizarre Y2K rumors you heard a while back (like the total breakdown of our monetary system), the truth is that there does exist the possibility that someone may actually relish such a challenge. Of course, it's even easier for that sales person at the department store where you just bought a blender to write down your number and use it, but most of us don't

worry about that, do we? Still, just because it's a slim chance doesn't mean we can ignore it. Which is why we signed on with the planet's largest provider of secure Internet transactions. This way, we both have the peace-of-mind that comes with knowing that any purchases you make from Sweetwater online are completely protected, and nobody's business except yours and ours.

To the right of our VeriSign logo is the **BBBOnline Reliability Program Seal** (the "BBB" stands for Better Business Bureau). BBBOnline's mission is to help web users find reliable, trustworthy businesses online, and to help reliable businesses identify themselves as such, all via voluntary self-regulatory programs that help avoid government regulation of the Internet.

The seal allows Web shoppers to check BBB information on a company and be assured the company is reliable. To date, the BBBOnline Reliability Seal has been awarded to over 4,500 Web Sites, helping to safeguard consumers like you from Web sites that might be, shall we say, more naughty than nice.

All businesses with Web sites displaying the BBBOnline Reliability seal have qualified for membership in the Better Business Bureau, agreed to comply with the BBB's arbitration process and had their Web site reviewed to ensure accuracy of advertising claims. In addition, before granting a seal, a BBBOnline representative visits the workplace of each company to verify the business's location and its ability to deliver what it promises. These people are serious about protecting consumers, which is why we are happy to participate in this very important program.

As the Internet grows — and it will, beyond anything we could have imagined even a few years ago — it's good to know that you can trust a company that protects your transactions with services such as VeriSign, and complies with the business practices as outlined by the Better Business Bureau. If you are considering making a purchase from a company that hasn't taken the time to get signed up or made the effort to show its compliance with the high standards set by BBBOnline, well, maybe you might want to think twice about it.

Some companies may think all this is too complicated, and certainly too expensive, so why bother? Our philosophy is that every single thing that we can do to make our customers feel good — and secure — about their purchases is well worth the effort and expense.

That's all the space I have. See you next issue.



Q: How do I use the new MOTU MIDI Interfaces with Logic Audio and a USB-equipped Mac?

A: Download OMS 2.3.8 and FreeMIDI 1.43 from their respective Web sites, then follow these instructions:

- 1) Trash any old OMS or FreeMIDI items, which includes preferences, control panels and applications.
- 2) Install OMS 2.3.8 and then restart your computer, but do not launch OMS at this time — this is very important.
- 3) Now install FreeMIDI 1.43, restart, but do not launch FreeMIDI.
- 4) Now you can turn on your MIDI interface with all your MIDI equipment powered up and connected correctly (this is also quite important), then launch and set up OMS. During the set up, you do not have to check the modem or printer port since you don't have any.

If you followed these instructions correctly, your MIDI interface should show up after you run the set up procedure. Next: 5) Trash your Logic Preferences. 6) Now go into the Extensions Manager and turn off any FreeMIDI extensions (there should be three in all). 7) Now launch Logic and tell it to use OMS. You may need to reset the I/O and sample rate preferences, since they were lost when you trashed the preference file. 8) You should be ready to make some music.

Note that the Preference Folder, Control Panel Folder and Extensions Folder are located in the System Folder on your internal hard drive.

Q: How do I configure my JL Cooper DataSync and Digi 001 (running ProTools 5.0 LE)?

A: Follow along with us on this one:

- 1) Connect the MIDI Out of the DataSync to a MIDI In on your MIDI interface or to the Digi 001's MIDI In and vice versa.
- 2) Connect the light pipe cables between the Digi 001 card and the ADAT.
- 3) Make sure you have both the 9-pin ADAT sync cables going to and from the DataSync.
- 4) Configure OMS, making sure you have a DataSync on the appropriate OMS port and that you have the Sends / Receives MTC and MMC boxes checked. You can uncheck all the other settings for this device if you want.
- 5) Depress the "MTC ON" button on the Datasync.
- 6) In the Pro Tools Peripherals dialog, set the device to "Generic MTC Reader" and set the port to DataSync.

With us so far? Good. 7) In the Session Setup window, make sure your frame and sample rate matches the DataSync's. If you have an ADAT that allows you to always use the optical port as its sync source, go ahead and leave it set to use that port for its clock. In this case, set the Pro Tools sync mode to internal sync. If your ADAT does not allow this, then you will need to follow normal digital sync procedures (the device receiving the digital data should receive sync from the other, which should be using internal sync). 8) To enable MIDI Machine Control of the DataSync (optional), enable it in Setup Peripherals — Machine Control to DataSync. Leave the ID number at 127. 9) Transport window machine=MMC.

Finally, go online and hit play. If you followed the procedure above, your ADAT should roll to position and begin playing. Pro Tools should play along. Note that this can be applied to an 001 to sync with a BRC as well.



By Daniel Fisher

When we were much younger, "The Future" promised us many things — some of which are still long overdue (like flying cars, friendly robots, and zero-gravity romance), while others have come true in ways that have far exceeded even our most optimistic visions.

One area that has truly lived up to the promises of The Future is music technology. Few of us in the '60s could have predicted the power that a 5-pin MIDI connector would offer or the effortless flexibility found in hard disk recording and editing.

Equally unimaginable were guitar amps that could emulate many of history's favorite amplifiers, feature a full pedalboard's worth of studio quiet, sparkling effects, require no miking to sound fantastic in a recording studio, have little or no maintenance issues, could be easily carried with one hand, and would be affordable for both pros and beginning guitar heroes.

Sweetwater is proud to carry the **Johnson Mirage JT50** (list \$649.95), a 50-watt modeling guitar amp combo with a custom 12-inch Johnson Premium loudspeaker. The Johnson Mirage JT50 is extremely versatile, easy to use, and delivers several of the most sought-after amp tones in the world with twelve different high-quality amp models, a host of various modulation and pitch shifting effects, delay, reverb, and an easy-to-use interface at your command. The JT50's digital V-Tube technology modeling sets a new standard for what a modeling amp should be.

The Mirage comes with 21 pre-programmed User Presets. These Presets were designed to provide a wide array of sounds perfect for a variety of musical applications. The straightforward controls makes Preset selection and fine tuning the effects a breeze. Programming menus have been replaced with clearly labeled knobs (hooray!) making Preset creation easy.

Each of the 24-bit digital effects have specific knobs, which are used to vary the values of their associated parameters. The amp section has a Gain, Bass, Mid, Treble, and Preset Level knob, as well as a 12-position knob to select your Amp Type. And the EQ controls on the Mirage amplifier uses the same authentic EQ points as the famous amps that are being emulated. For example, if you choose the "Black Face" as your Amp Model, the tone controls on the Mirage will respond exactly as if you were using a real vintage Fender Black Face amplifier, circa 1964.

The Mod / Pitch Effects section has a Speed / Level and Depth / Gate knob along with a 7-position knob to choose from the 6 types of Effects or Effects bypass. The Speed / Level knob adjusts the rate that your selected Modulation effect sweeps back and forth. When the Pitch Shift effect is selected, this knob will adjust the interval of the shifted pitch. This knob also functions as a Level control for the Modulation Effects when used in conjunction with the Tap-It / Shift button. The Depth / Gate knob adjusts the depth or

intensity of the modulation effect. When the Pitch Shift effect is selected, the Depth knob will adjust the amount of

detune added to the shifted pitch. This knob also functions as a Gate Threshold control when used in conjunction with the Tap-It / Shift button.

The Delay section has a Level / Time, and Feedback

knob and includes a Tap-It / Shift button to synchronize the delay time with the tempo of the music. This knob adjusts the volume of the Delay effect. This knob also adjusts the Delay time when used in conjunction with the Tap-It / Shift button. The Feedback knob adjusts the number of Delay repeats.

The Reverb section has a Level / Type knob which varies the Level of reverb in your mix. This knob is also used to select Reverb Types when used in conjunction with the Shift key. You can adjust any of these parameters to your liking, and your creations can be stored to any of the 21 User Preset Locations.

By adding the optional J3 Footswitch, you can select Presets 1-3 for each of the seven Banks. The more powerful J8 Footcontroller, in addition to providing extensive control of the JT50, also adds a Guitar Tuner, a Wah-Wah effect, and a Volume pedal to the functionality of your JT50. The J8 features 8 switches, an LED display, and an Expression Pedal. The switches will turn Effects on and off within a program, select Presets 1, 2, or 3, and change Banks.

But all of this technical information is pointless if the amp doesn't sound great. So how does it sound? Well it sounds, uhh...Great! Its 50 watts of power through a single 12-inch premium loudspeaker makes it a perfect amp for rehearsals and smaller clubs, and I have to say that it is a very cool looking amp. From the front you only see the vintage-looking grille cloth with the elegant gold trim and the Johnson logo: no flashing LEDs, calculator digits, or wiring diagrams that take away from the classic good looks.

Amp models include: Johnson Clean, Johnson Dirty, Johnson Gain, Rectified, Brit Modern, Brit Master, Brit Class A,

— Continued on Page 11

Johnson JT50 Mirage



UNBELIEVABLE SAVINGS ON A 20-BIT ADAT XT20



The jump from 16-bit to 20-bit recording provides audio quality that's actually sixteen times more detailed than the 16-bit sound of compact discs!

It's an amazing new standard in audio quality that remains compatible with the huge foundation of over 110,000 ADATs in use worldwide. Using ADAT Type II, the only modular digital multitrack format that writes 20 bits to tape, the XT20 raises the measure of sonic excellence that ADAT recorders have established since 1991. 20-bit recording results in a wider dynamic range, lower quantization distortion, higher headroom and lower noise. The XT20 uses the latest ultra-high fidelity 20-bit oversampling digital converters and includes the same Optical Digital Interface and Synchronization Interface as other ADATs, so it may easily be integrated into an existing system. The XT20 provides built-in digital editing features (Track Copy, Tape Offset and Track Delay) and a 10-point autolocator/numerical input system.

List Price: \$2599 Your Sweetwater Price: TOO LOW TO PRINT! Call Now!

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Digital Performer 2.7

Recently, the folks from **MOTU** came out to Sweetwater to show us the new **Digital Performer 2.7**. This version of the best-selling software will be shipping by the time you read this and will be available as a free update for all registered DP 2.6 users. If you've been thinking about purchasing Digital Performer, upgrading to it, or crossgrading to it from another sequencer, this version gives you some pretty serious reasons to make the jump.

First and foremost, Digital Performer 2.7 is all about MIDI timing. It has several new features that now give it the highest editing precision and recording / playback accuracy ever achieved in a sequencer. We're the first to admit that we get a little skeptical when a manufacturer makes claims like this. But after seeing 2.7 in action, we were duly impressed. MOTU has pretty much put the whole MIDI timing accuracy debate to bed. Period.

PPQ resolution. Since MIDI sequencers were first invented, one of the basic specifications always used to evaluate and compare them is their PPQ timing resolution. PPQ stands for Parts Per Quarter Note, and it refers to the smallest unit of mensural time by which you can view and edit data. (Mensural refers to bars and beats, as opposed to minutes / seconds or SMPTE time code frames.) Early hardware sequencers like the venerable Linn 9000 drum machine had a 48 PPQ resolution. You could move a note by as little as 1/48th of a quarter note. Until now, Digital Performer has always had a PPQ resolution of 480 PPQ. (MOTU calls them ticks.) At this resolution, a quarter note equals 480 ticks, an eighth note equals 240 ticks and so on. In recent years, other sequencing products have offered 960 PPQ or even 1920 PPQ. But in every case, the PPQ resolution is fixed.

How about 2 trillion PPQ? The number that Digital Performer uses to store the location of each MIDI event is a 64-bit number, which can express a range of numbers up to over 8,000,000,000,000,000,000. Whew! That's a lot of zeros. Our first reaction was: Why would anyone want to edit MIDI with such big numbers? Check this out: MOTU has done something truly innovative and useful with this high degree of precision. It's called adjustable PPQ.

Adjustable PPQ display. Digital Performer now allows you to view and edit MIDI data at any PPQ resolution you want. As you can see in Figure 1, Digital Performer lets you choose from a list of standard PPQ resolutions, like 96, 384, 480, 960 or 1920. These timing resolutions are not just some sort of display trick: you're able to actually edit MIDI data at these resolutions. If you are a seasoned Digital Performer user, you are probably accustomed to working with 480 ticks per quarter note. Therefore, it would probably be easiest for you to stick with 480. But now you can add greater resolution to your editing by simply adding extra decimal places. For example, you could add four decimal places (480.0000) to produce ten thousand times the resolution of previous versions of Digital Performer! This level of precision lets you nudge MIDI notes by way less than one audio sample — at either 44.1 or 48kHz. So MIDI data editing can now be more than sample-accurate.

What's maximum PPQ resolution? The maximum PPQ resolution you can choose is 10,000,0000 — this lets you move a note by 0.0001 of a tick. In doing so, you've just nudged it by one one-hundred millionth of a quarter note! If you try this at home and feel that you can hear the difference, please call your shrink ASAP. But all kidding aside, the point here is that MOTU is giving us all the editing resolution we could possibly ever need. One of the best things about Digital Performer's adjustable PPQ is that data continues to be recorded and played with the maximum timing accuracy possible, regardless of the PPQ resolution you've chosen. For example, even if you've decided to work at 96 PPQ, data will be recorded and played just as accurately at 96 PPQ as it would at 9600 PPQ.

MTS (MIDI Time Stamping). Okay, so adjustable PPQ gives us a high degree of precision when viewing and editing MIDI data. But what about accuracy? Version 2.7 supports MOTU's new hardware-based timing technology called MIDI Time Stamping. Digital Performer automatically uses MTS with MOTU's new line of USB MIDI interfaces: the **MIDI Timepiece AV-USB** (\$595 list), the **MIDI Express XT-USB** (\$395), the **Micro Express-USB** (\$295) and **FastLane-USB** (\$69). (Call your Sweetwater Sales Engineer for your special Sweetwater pricing.) In fact, MOTU tells us that MTS already exists in every one of their USB interfaces since the day they began

shipping. DP 2.7 automatically enables MTS as soon as it auto-detects a MOTU USB interface connected to the computer.

It's a USB thing. MOTU tells us that USB, with its increased bandwidth and other features, makes MTS possible. Together, MOTU's FastLane-USB and MTS deliver MIDI data with a timing accuracy of one millisecond or better. MOTU's rack-mountable interfaces (AV-, XT- and Micro-USB) feature an enhanced version of MTS that achieves a third of a millisecond timing accuracy. In other words, MIDI data will always be played or recorded within a third of a millisecond of when it is supposed to. Here's why: in these MOTU interfaces, MTS is accurate to within one MIDI byte, and the MIDI data rate is 31.25 kilobaud, or approximately three bytes per millisecond.

DP with MTS versus "the competition": MOTU tells us they did extensive testing to compare MTS with the only other similar system of this type. In their tests, MTS proved to be five times more accurate, as well as always accurate to within a 3rd of a millisecond. The competing product exhibited an inherent jitter of 1-2 milliseconds. Also, MOTU explained to us that MTS timing is applied to every note being recorded or played, whereas the other system only affects certain notes playing back under certain conditions involving quantized block chords. Clearly, if you want the absolute tightest MIDI timing you can get from your sequencer, 2.7 is the way to go.

MTS is easy to use with FreeMIDI or OMS.

Perhaps the best thing about MTS is that using it couldn't be easier: Just install 2.7 and then plug in your MOTU USB MIDI interface. That's it! FreeMIDI automatically detects the interface and enables MTS. Way to go, MOTU! If you are using OMS instead of FreeMIDI, MOTU says that you'll still enjoy the same high degree of timing accuracy as long as you are using Digital Performer with a MOTU USB MIDI interface as described earlier — 2.7 passes time stamping information through OMS to maintain MTS timing accuracy.

DP gets a Drum Editor.

MOTU clearly did their homework and has come up with a feature-laden, cool-looking editor to satisfy even the most demanding drum programmers out there. In addition to its sleek, stealth-bomber look and feel, this new window is full of tasty innovations, like independent, vertically resizable rows for each drum note and a very cool insertion tool they call the Rhythm Brush. The Pattern tool lets you quickly insert common stylistic rhythmic patterns like "triangle" and "bongo". Need a triangle pattern and insert the part with one swipe of the pattern tool.

Effects automation. Everything in 2.7's mixing environment can now be automated, including all effects parameters, muting and unmuting of tracks, bypassing and unbypassing effects, send levels, send mutes — you name it and it can be automated on the fly in real time. MOTU really went over the top here. For example, MOTU has three different types of automation: Ramp, stair-step and discrete events. MOTU explained that their automation ramps are sample-accurate, not quantized to internal buffers. Therefore, Digital Performer ramps will always be ultra-smooth and not susceptible to zipper effects or other undesirable artifacts. Another thing we noticed is that automation data recorded in real time appears onscreen during recording. Slick!

Beat-based effects. As if these automation features weren't enough, Digital Performer also provides beat / tempo-based automation: For any appropriate effect parameter, you can lock it to the tempo of the sequence at any note duration you choose. You'll even find little note duration pop-up menus right in the plug-ins themselves. For example, with the new Stereo Delay plug-in, you can lock the left channel delay taps to triplet eighth notes while the right-hand delay tap is locked to straight sixteenth notes. We're talking ping-pong effects from Mars, folks! And they only take seconds to create. MOTU's Sonic Modulator plug-in has just taken on a whole new dimension, allowing you to independently assign each of its four LFOs to any beat value you want, assign them to Sonic Mod's pitch, amplitude, delay and filter modulators, and then combine them for some of the most advanced pulsating and rhythmic effects you've ever heard.

Mackie HUI SUPPORT. Topping off the list of DP's advanced automation features is complete support for the Mackie HUI, a fully automated control surface that features touch-sensitive motorized faders (drool). MOTU showed us how you can call up plug-ins from the HUI, choose

— Continued on Page 14



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DIGITAL WORKSTATIONS

(...and other cool stuff you didn't even know about)

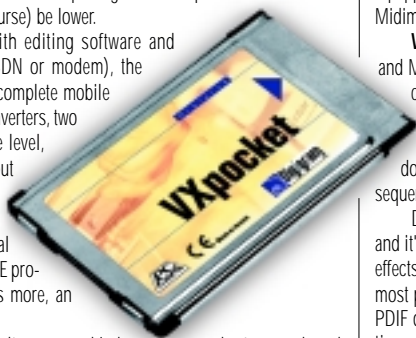
You don't have to read many issues of *Sweet Notes* to realize that we cover certain digital workstations a lot. That's because we sell so many of them — and because they're so darn good! However, we sell other workstations and support hardware that doesn't get much exposure, yet each one has something unique to offer. Here's just a sampling.

Aark24. Achieving superior sound requires simple, foolproof gear. That's why studio pros worldwide trust Aardvark digital audio products to always deliver natural dynamic sound. Built upon a decade of experience in engineering high-end digital audio gear, the Aark24's premium 24-bit onboard A/D converters and innovative design give your sound supreme clarity and precise accuracy. You'll notice the difference in any recording session where sonic excellence is an absolute must.



The Aark24 Includes: True 24-Bit A/D and D/A, eight 1/4" TRS Analog I/O, switchable +4 dBu / -10 dBv, ADAT Optical I/O and Sync, S/PDIF Digital I/O, MIDI In and Out, TOSLINK Optical I/O, Word Clock I/O, 10-channel full duplex simultaneous Rec/Play, monitor mixing software, easy and flexible signal routing, shielded PCI host card w/24-bit DSP, Win 95/98 & Steinberg ASIO drivers and much more. The most surprising part of the package? The list price of the Aark24 is just \$899. Your Sweetwater pricing will (of course) be lower.

Digigram VXpocket. When used with editing software and equipped with a communications board (ISDN or modem), the VXpocket actually transforms a laptop into a complete mobile audio workstation. The VXpocket has 24-bit converters, two balanced analog inputs at microphone or line level, and two balanced analog outputs. S/PDIF input and output allow for direct digital transfers. It is designed to work with the wide choice of applications using Digigram's exclusive Virtual PCX audio resource modules, Microsoft's WAVE protocol, or the Mac OS Sound Manager. What's more, an ASIO driver is also available.



The VXpocket is full duplex, offering simultaneous and independent record and playback capabilities. Sampling rates supported are 8, 11.025, 16, 22.05, 24, 32, 44.1, and 48 kHz. PCM encoding/decoding rates are 8, 16, or 24 bits. When supported by the user application, analog inputs and outputs may be configured as one stereo or two mono channels. List price for the Digigram VXpocket is just \$729.

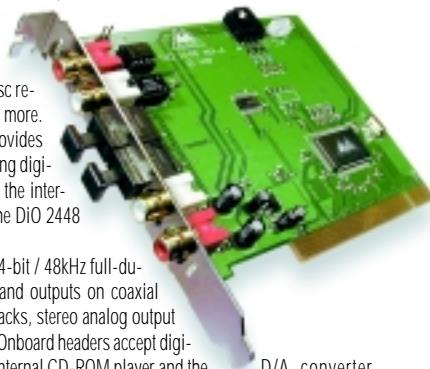
Sea Sound Solo EX. Hard disk recording interface, mic preamps, headphone amp, MIDI interface, mixer — all in one! Hard to believe, but it's true! The Solo Digital Audio Recording



System provides a variety of common functions required by today's digital-audio musician: pre-amplification for microphones and low-level instruments (such as guitar, bass, etc.), line-level input controls, input mixing, monitoring, complete compatibility with popular recording and editing software and 24-bit / 96kHz conversion of audio signals to / from the digital domain.

Solo also features two high quality, custom mic preamps (with a full 65db of gain control), S/PDIF In and Out, two high-Z instrument preamps, sample rates of 8kHz right out to 96kHz at 24-bit resolution, channel inserts, ASIO, Sound Manager and WAVE drivers, a built-in mixer, MIDI In, Out and Thru, signal activity / clip indicators for recording or playback with both peak-average and peak-hold display modes, footswitch transport control interface and two headphone amps. The best news is that Solo is fully Mac or PC compatible via the supplied PCI card. List price for Sea Sound Solo EX is just \$849.95.

Midiman DiO 2448. The DiO 2448 PCI Digital I/O Card from Midiman combines coaxial and optical digital I/O with stereo analog outputs at a remarkably low price. It's perfect for interfacing to S/PDIF-capable equipment such as DAT machines, MiniDisc recorders, dedicated audio converters, and more. In addition, the built-in D/A converter provides analog audio output for monitoring incoming digital audio. Plug your CD-ROM or CD-R to the internal analog or digital connector, and use the DiO 2448 as your Windows Sound System card.

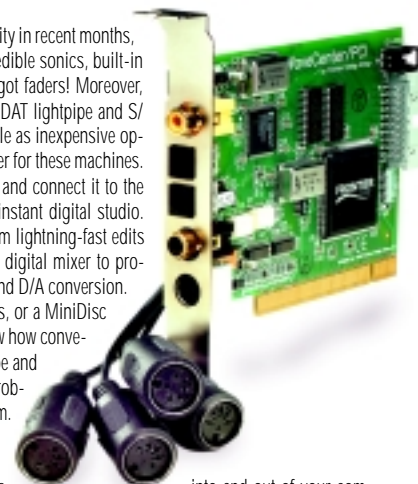


Features include a two-in, two-out 24-bit / 48kHz full-duplex PCI audio interface, S/PDIF inputs and outputs on coaxial (gold-plated RCA) and optical (TOSlink) jacks, stereo analog output on gold-plated RCA jacks (-10dbv levels). Onboard headers accept digital or analog audio from your computer's internal CD-ROM player and the D/A converter may be used to monitor digital input or output. Digital input may be bypassed directly to digital output (in "audio thru" mode). DiO2448 supports 44.1kHz and 48kHz sample rates and works with either Windows 95 or 98 drivers. Minimum system requirements are a Pentium 200 MHz-equipped PC with 32MB of RAM. UDMA EIDE or SCSI hard disk recommended. List price of the Midiman DiO2448 is just \$149.95.

WaveCenter / PCI. Need an affordable new ADAT digital lightpipe card for your Windows and Macintosh computer? Look at the WaveCenter/PCI from Frontier Design. It combines eight channels of lightpipe I/O, two channels of S/PDIF, and a 2x2 MIDI interface on one compact PCI card. WaveCenter/PCI combines the sonic benefits of all-digital 24-bit I/O with the convenience and flexibility of industry-standard interfaces. And now with drivers for Windows 95/98 and MacOS, WaveCenter/PCI can be used with all of your favorite editing and sequencing software.

Digital mixers have grown in popularity in recent months, and it's easy to see why. They've got incredible sonics, built-in effects, they're automatable, and they've got faders! Moreover, most popular digital mixers either have ADAT lightpipe and S/PDIF digital I/O built in, or they're available as inexpensive options. WaveCenter/PCI is the perfect partner for these machines. Simply plug the card into your computer and connect it to the digital I/O on your mixer, and voila! — instant digital studio. Now you can track directly to disk, perform lightning-fast edits with your favorite software, and use your digital mixer to provide automated mixing, effects, and A/D and D/A conversion.

If you're using ADATs, DAT machines, or a MiniDisc recorder to lay down your tracks, you know how convenient they are to use: You just load a tape and press the red button. There's just one problem: You can't edit the tape! No problem. Just connect the WaveCenter/PCI to your tape deck's digital I/O, and you can easily transfer bit-for-bit copies of your tracks



into and out of your computer. You can transfer up to 10 channels simultaneously, with 24-bit resolution on each channel! Now you can do all the stuff you could never do with just tape alone: Edit, rearrange, mix down, add effects, burn a CD, create an MP3 file -- it's entirely up to you! When you're done editing on the computer, just transfer your finished song back to a fresh tape, stick a label on it and start tracking the next one! WaveCenter/PCI carries a list price of \$389.

If some (or all) of these products are surprising you, you should know that they're just the tip of the iceberg. There are so many new and innovative products being unveiled just about every day that it would be impossible for us to cover them all here in *Sweet Notes*. That's why you need to talk to your Sweetwater Sales Engineer. They have all the up-to-the-minute information on all the hottest new products — including a few you didn't even know about. So call today for the complete rundown, as well as your special Sweetwater pricing on these digital workstations and other cool gear you just might need.

Of all the bonuses and perks that come with being a Sweetwater employee, for me, the most exciting benefit is getting to preview, beta test, and sometimes even help with the development of future high-tech audio products. And this year, the most exciting product I've played with so far is the new **OASYS PCI** audio card from **Korg** (list \$2200) which integrates high-quality synthesis, effects processing, and computer audio input and output into a single, professional PCI card. It's the perfect complement to any MIDI sequencer or software-based digital audio workstation.

In this new Millennium, most musicians now have access to incredibly powerful home computers that are quite capable of performing at least some digital audio processing. But no matter how fast your computer can crunch numbers, the artist in you will soon be demanding more plug-ins than your CPU can handle. That's where the power and flexible design of the OASYS PCI comes to the rescue, adding significant amounts of DSP power to your computer, while providing synthesis and effects for your studio. (OASYS is currently compatible with Korg-approved MacOS computers, with Windows support to follow shortly.)

OASYS features a total of 12 inputs and outputs: Stereo analog, stereo S/PDIF, and eight-channel ADAT optical, and all inputs and outputs are 24-bit, which can all be used simultaneously with your multitrack audio software. But, as you may have learned the hard way, timing is everything in the world of computer-based music, so it's a godsend that the onboard DSP processing power provides zero-latency record monitoring — even with full effects!

The OASYS PCI card also provides Word clock and ADAT timecode I/O to ensure easy integration with your other professional digital audio equipment. In fact, OASYS supports all major audio and MIDI standards, for compatibility with virtually every audio and MIDI program. ASIO drivers for MacOS and Windows provide direct compatibility with Cakewalk Metro, Cubase VST, Digital Performer, Logic Audio, Vision DSP, Studio Vision Pro, and more. Standard Windows drivers provide compatibility with all popular Windows audio programs including Cakewalk, Samplitude, SAW, Acid, Sound Forge, and others. OMS,



FreeMIDI and standard Windows MIDI drivers seamlessly connect OASYS to all MIDI sequencers.

As a soundware designer I'm most fascinated by the numerous synthesis technologies available from this card. Korg has been a leader in DSP synthesis, as reflected in the Prophet, Wavedrum and Z1. Those of you who were synth fanatics in the mid-90s may remember

Keyboard Magazine's "What's the Next Big Thing?" cover story (Feb. '94) that had several pictures of a too-amazing-to-be-true mega-synth that featured a jaw-dropping back-lit touch screen. Unfortunately, the highly-ambitious technology proved to be far too expensive for us underpaid musicians. But now, science and technology have finally caught up with the whims of the engineering geniuses at Korg, making OASYS (Open Architecture Synthesis) an affordable reality. Hundreds of man-years of effort have gone into the development of the DSP synths and effects — and it shows.

There are hundreds of sounds based on 25 great-sounding algorithms, including models of famous analog synths like the Prophet Model featuring specifically tailored filter resonance, envelope shapes, and VCA output nonlinearity, along with poly



O A S Y S P C I
Open Architecture Synthesis, Effects, and Audio I/O

mod, sync, and simultaneous oscillator waveforms, just like the original. These oscillators are rich, bright, and smooth, with extremely low jitter and aliasing which prevents the unwanted artifacts heard in digital oscillators.

The OASYS filters are warm and fat, with resonance extending to frequencies far above typical digital "analog" filters. They're flexible, too, with many algorithms offering a choice of poles and modes. There's also a special, fully modulatable comb filter, for sounds like you've never heard before! Finally, the envelopes are punchy, smooth, and lightning-fast, and use audio-rate processing just like old-school analog envelopes.

Then there's the Minimoog Model featuring specific and separate modeling of the synth's high and low frequency filter resonances, as well as its distinctive envelope shapes and VCA sound. The Percussion Synth Model is optimized for analog-modeled percussion, with a hard-hitting, punchy sound. It's available both with and without an Electricbe-inspired percussion sequencer.

There's also a B-3 Tonewheel Organ Model with Rotary Speaker with perfect tonewheel phase coherency, resulting in pure, powerful sounding chords, just like the real thing. Then, there's subtle and sophisticated features such as complete drawbar control, fully programmable Key Click, true mono Percussion, plus au-



thentic Vibrato and Chorus, and the incredibly realistic Rotary Speaker Model from Korg's acclaimed Toneworks G4. Compare this model to sampled organs, with their fixed drawbar settings, out-of-phase chords, and percussion on every note, and you'll hear the difference immediately.

The physically modeled woodwinds respond to breath pressure (or other MIDI controllers) with incredible realism. The Sax Model features authentic growl and fingering noises, while being free of the formant shifts characteristic of sampled saxophones. You can hear the breath in the Flute Model, and then overblow it for a punchy "chiff." The Vocal Model physically models human vocals, allowing you to control the shape of the glottal pulse, noise components, transitions between vowels, and creating other-worldly melodies, pads, and effects.

But these algorithms just scratch the surface of possibilities. Throw in an FM Model (essentially a DX-7), Tine Piano Models, physically-modeled Trumpets, Trombones, Guitars, Pipe Organs, tempo-based LFOs and analog-style sequencers plus much more. These synthesis algorithms are plug-ins loaded from disk or downloaded, allowing for easy upgrades and expansion.

This futuristic synthesis technology is then processed through an incredible multichannel effects sec-



tion that includes over 100 stunning effects algorithms. All of the effects from the award-winning Korg Trinity workstation are included — everything from standard reverbs, choruses, flangers, phasers and amp simulations to unique effects such as random filter, stepped

— *Continued on next page*

We have all the hottest products from all major manufacturers — IN STOCK!

SOUNDWARE SCENE

— Continued from previous page

phaser, doppler shift, and talking modulator.

Even more exciting, these effects can process the onboard synthesizers, plus tracks from your favorite digital audio programs, as well as live audio inputs — all simultaneously! Using the built-in submixer, chains of up to four effects each can be used on up to 12 separate channel inserts, four sends, and six stereo output busses. As with synthesis algorithms, all effects are plug-ins which are loaded from disk, allowing for easy expansion in the future.

Microtunings are also possible, allowing any incoming MIDI note to create any pitch, with a resolution of one cent (1/



100 of a semitone). You can create stretch tunings, duplicate historic European tunings, build scales with greater or fewer than 12 tones per octave, and more. Tuning can be specified separately for each of the 128 MIDI notes, and each Patch in a Program can have its own Scale. Scales are text files, so you can create and edit them using any standard text editing program, such as SimpleText. And you can add as many custom Scales as desired.

To make things even more mind-blowing, almost every parameter in this card can be controlled via MIDI, allowing easy modulation and automation of mixing, synthesis, and effects from any MIDI sequencer or realtime MIDI controller.

Are you still standing? If not, I understand. This card had the same effect on me when I first began to realize the limitless potential of the OASYS PCI — this little card that I can actually hold between two fingers. It really is an amazing era for personal and professional music creation. Give us a call and make your digital audio system ready to create music for the new Millennium!

Daniel Fisher is Director of Soundware Engineering

Moved? Moving?

You don't want to miss a single issue of Sweet Notes, do you? Of course not! Then don't count on the Post Office to forward your copies. Just phone, fax or e-mail us with your new address and we'll keep the issues coming. It's that simple!

I'm writing this article a week before heading out to the NAMM Show, and just two days after the annual Sweetwater Holiday party. The unique timing allows me to look back at the year that was, in addition to taking a brief glimpse at the fun yet to come in 2000.

Let's start with the Holiday party. Usually, we just make it a black-tie optional event, dress up and have a ball. It's always great to meet the "better halves" of our employees. We decided to break from the norm this year since we were sponsoring a Pops concert with the Fort Wayne Philharmonic and Neil Sedaka, so we gave it a '60s and '70s theme to sync up with Neil's popularity. We had some folks in amazing costumes, old Batman reruns on the screen and the songs of my youth on the stereo. I was privileged to MC the event and that's really what I wanted to cover here, because one of the topics I talked about was all that happened here at Sweetwater in 1999 and into the new year. So here's the 1999 recap, in no particular order:

- Sweetwater turned 21 years old in January, quite an accomplishment for any business these days and a long way from the little studio that started it all.
- Since we have a programmer in-house, we've upgraded our computer system countless times (and will continue to do so) in order to better serve our customers and run a more efficient business.
- We put a brand new, leading edge phone system and voice mail system into operation over the Labor Day weekend. As we've grown, this is one area that we realized was making it hard for us to serve our customers. Based on the results since we put the new system online, we have dramatically improved the way we respond to your calls. We didn't want to trap you in "voice jail" so we made our system as human friendly as possible (hit "0" at any time to get a real human).

- A new logo! You may have noticed that we've been gradually phasing out the old tape reel that served so well as our logo for the first 20 years of the company's life, but the fact is that times have changed and the logo was hardly appropriate for a technology-focussed company like Sweetwater.
- We were thankful to receive several honors this year, among them were *Musical Merchandise Review's* cover and feature story in the January 2000 issue and the REX (Retailer Excellence) Award from *Musica Inc.* magazine. We are the only "mail-order" company to have ever received this award.
- Our "Music-Careers.com" Web site was launched and voted by *Keyboard* as one of the Top 25 music related resources on the Web (no retail sites were considered).
- We also held our first VAST Workshop, which was taught by our resident Kurzweil genius, Daniel Fisher, along with other in-house personnel. Customers from all over the country came to Sweetwater to dig into the wonderful world of VAST programming (and thanks to all for your suggestions for the next session!).
- Craig Anderton presented a seminar on digital mixing which we broadcast via the first live webcast in our industry.

- We opened our Online Store so our customers can order whenever they wish from the convenience of their computer, any time, night or day. This does not diminish in any way the tremendous importance of our world class sales staff (whom I'd always recommend you consult before making any buying decision), but if you need to order something at midnight, well now you can.
- A new issue of Sweet Notes is sent to almost 200,000 subscribers every 8 weeks. One of the most successful magazines in our industry (which shall go unnamed here) has a subscriber list of just 80,000.
- Instead of sending VHS videotapes to our first-time customers, we now send a much more comprehensive (and interactive) CD-ROM.
- Our electronic newsletter, *inSync*, is about to celebrate its third birthday and is sent to tens of thousands of subscribers every week.

- We've printed over 200,000 issues of our 2000 Equipment Directory.
- We grew as a company from 129 employees in January of 1999 to 172 by the last day of the year (and we're closing in on 190 as I write this in late January). As a fun aside, the extended Sweetwater family grew a bunch this year as many Sweetwater employees had babies, including yours truly (my wife and I were blessed with a son in October).
- We added a brand new management position to the company — Client Amusement Specialist — in order that we might not only react to customer needs, but anticipate them in the coming months and years.
- Thanks to you, we had a wonderful year, a great fourth quarter and an amazing December. In December, we had the biggest sales day in company history, \$499,135. December was the biggest month in company history, finishing with over \$5,000,000 in sales. We understand that this is a very competitive world and sincerely appreciate you voting with your dollars for the retailer of your choice. You have our word that we will continue to work harder than ever to earn your business.

THE FUTURE. I'm assuming that most of you found the advent of the New Year as uneventful as I did. The Y2K bug scare certainly appears to have been a dog that was all bark and little bite. It hasn't had much of an effect on life here at Sweetwater (of course, it helps to have a database that is built on the Macintosh platform). What lies ahead? The hard disc recording revolution continues to roll with several new systems hitting in the first part of the year. Digital mixing continues to mature. My two cents worth is that this is going to be an amazing year for musicians and studios in terms of technological innovation. You're going to be able to get your hands on some incredible products that will boost your creativity more than ever. It's going to be a fun year.

Last year Sweetwater made a significant investment in additional personnel and training. We also expanded our infrastructure (Service, Purchasing, Shipping, Warehouse, etc.) to be able to accommodate our growing business. In a recent column, I noted that a "typical" Sweetwater customer expects consistently high quality service. We've worked hard to put the pieces in place that will keep our level of service not only high, but take it beyond anything any musician has ever experienced. I'd like to take this opportunity to wish you all a happy and prosperous year.

Thank you for choosing Sweetwater for your equipment needs. We sincerely appreciate your business!
Rock and Roll!

— Jeff Radke is Vice-President of Sales



SWEETWATER KNOWS THE *Godin* DIFFERENCE

Imagine, from a distance, the slow swell of full orchestral strings begins to fill the room. Just as the symphony of strings reach a crescendo, they fade away and a lonely flute is heard. Soon, the sweet sparkle of pure acoustic guitar joins the overture. Without warning, the unmistakable thunder of a shredding electrical lead guitar cuts into the mix. So, what's going on? Have the Moody Blues and Pink Floyd joined forces with the Eagles and Eric, for some sort of dream concert? Nope, it's just one man and his **Godin LGX-SA** guitar driving his Roland rig through some of their basic paces. Sound impossible? Not at all . . .

Today's Godin guitar is not your traditional "Paulmobile." Guitar technology of the new Millennium is here — now. Robert Godin may well be today's most innovative guitar building genius. He has devoted a lifetime of expertise blending traditional guitar construction with technological advances beyond Leo's wildest dreams. Case in point the LGX-SA: Featuring superb American craftsmanship combined with some of the world's finest tone woods from Canada. Taking it a step further, the electronics of the LGX are second to none. There are two humbucking pickups (optional Seymour Duncan or Godin Tetrads pickups) coupled with Lloyd Baggs micro sensor acoustic transducers. Finally, the RMC Poly Driver interfaces with Roland's proprietary 13-pin Synth Access systems.

What's all that mean? Are we still speaking English? With one guitar, today's player can access a world of great sounds with standard playing technique, from alto sax to xylophone and everything in between. Three separate outputs allow the independent direction of three different signals to three separate sources. Magnetic humbuckers provide all the electric guitar sounds. Seymour Duncan has personally designed the (optional) bridge pickup especially for the LGX. He started with the world renowned "Custom," then flavored to taste with some of his own special magic. The next Duncan is the classic "Jazz II" in the neck position for fat, smoky bass response. Both pickups are covered in high polished chrome, adding pleasure to the eyes as well as the ears.

For the player wanting a wider variety of sounds, check out Godin's own patented Tetrads. This format consists of four mini-railed humbuckers with a pull-pot filter, cutting 8db at 800 hertz, thus creating somewhat of a single coil flavor. A second quarter-inch output allows you to run pure acoustic tones to your favorite acoustic amp or PA. Now you can be your own duet. Separate tone and volume controls are provided for both sounds, acoustic and electric. (For your convenience, acoustic and electric sounds can both be directed from one output to one source.)

Now if that weren't enough, add to your mix the thirteen-pin synth output, giving you access to a full array of musical instrument combinations. With the Lloyd Baggs micro sensors, accurate instrument reproduction and spot-on tracking are a breeze.

The incredible electronics are paralleled by its stunning cosmetics with three per side tuning machines, a mahogany neck capped with a super smooth ebony fingerboard. The twenty-four and a quarter inch scale plays naturally, comfortably. The single cutaway body consists of mahogany, capped with a book matched carved flame or quilted maple top that would bring any lumberjack (or

guitar lover) to his or her knees — guaranteed.

The long and the short of the Godin LGX-SA combined with the Roland VG-8 Guitar Modeling System or the Roland GR-Series Synth modules (talk to your Sweetwater Sales Engineer for complete information), provide a complete arsenal of sound possibilities for today's guitar player. For the stage player, you can fill for some 300 plus instruments while providing acoustic and or electric guitar sounds simultaneously. For the recording enthusiasts you can lay down your own tracks from bass line to full orchestra, complete with horns and strings. The possibilities are endless with the Godin LGX teamed with Roland's GR or VG series of products.

As an aside, our own Jim Miller (of *Tech Notes* on Page 15) regularly uses an LGX-SA with his Roland VG-8EX for session work down in Florida. We've heard the material and can tell you from first hand experience that it sounds like Jim is playing everything from a '58 Strat and a '60 Les Paul to a Rickenbacker 12-string and even an acoustic, not to mention a few sounds that, well, don't even sound like a guitar. Space prevents us from going into a lot of detail, but you probably already know about the VG-8's guitar modeling, since we've discussed it at some length here in past issues of *Sweet Notes*. All the guitar magazines have covered it extensively, as well. But believe us when we say that the sound is just as amazing today as it was when Roland first unveiled the new technology a few years back. As longtime *Sweet Notes* readers know, Jim owns a lot of vintage guitars (we promised not to use the

term "guitar fanatic" in this article), and he's not about to risk taking any of his precious axes to a gig. But he doesn't have to, since his Godin and VG-8 provide every sound he's ever likely to need.

The **LGX-SA**, along with the **Multiac** hollow body, nylon-string with Synth Access, the **LGXT-SA** with tremolo and the **ACS** nylon-string solid body represent the coolest and most innovative line of guitars available today. What's more, they're surprisingly affordable. Imagine all this innovation for about half what you'd expect to pay for a guitar of this quality. So contact your Sweetwater Sales Engineer for complete details on our exclusive hassle-free, 30-day trial program and of course, your special, low Sweetwater pricing on any of the fine Godin guitars. — **M.R.**



Johnson JT50 Mirage

— *Continued from Page 6* Blues Combo, Black Face, Tweed, Boutique and Hot Rod Combo. Ask me which are my favorites and I'd be hard pressed to choose any over the others. Each one has something special going for it and they all sound quite different (you won't be switching back and forth saying "What the heck's different about this sound?"). In a live situation, you might end up using most or all of them.

But the real magic of the Johnson JT50 amp occurs when you plug in headphones. Now your burning guitar sound takes on a full-field stereo image that sounds like it's coming off a professionally-produced CD. And that's the whole point. If you use the speaker-compensated Direct Stereo Output to feed your studio's recording console or the house PA system you'll get the huge guitar sound you've always dreamed about, without having to carry and set up racks of effects and agonize over placing microphones.

But if you are one of those hyper-tweaky guitarists that already owns one or more pieces of stereo rack processors, you'll be thrilled to know that this little amp has built-in true stereo (!) effects Send and Return jacks. This Effects Loop is placed just after the smokin' Johnson Modeling Preamp, so your digital effects will stay perfectly clean no matter how hard you drive the preamp.

And the best part is that you can choose whether the internal speaker is On or Off, so you can listen to yourself from your amp and still feed the house PA for an arena-sized performance that will blow the crowd away. Then, at the end of the night, you can pick your JT50 up with one hand, grab your guitar with your other hand and leave the stadium. What a great era to be a guitarist!

If you're already raving and drooling about this gift from the future, give us a call and get ready to make the dream of easy-to-carry power and flexibility a reality right now. Your Sweetwater Sales Engineer can tell you more about the amp and will also give you a great, low Sweetwater price . . . you know, just to sweeten the deal.



Event's Project Studio Series: Mix with Confidence

By **Gary Phillips** and **Daniel Fisher**

Whether you're a seasoned veteran with a slew of projects under your belt, or you're taking your first stab at home recording, you know that one of the most important aspects of any studio is the monitoring system. Your monitors must deliver a sound that is musically pleasing — even inspiring — while at the same time they must provide an accurate frame of reference that can be completely trusted.

I have found **Event Electronics** to be the makers of that very type of monitoring system. Over the past three years, as a Soundware Engineer for Sweetwater, I've used Event monitors in some of our most critical listening situations. Many of our in-house soundware CD-ROMs, such as Total Stereo Session Drums and Electron Bomb, plus our Premium Rhythm Section CD-ROMs for E-MU S4 and ESI, Yamaha's EX5 and A3000 and others were created using Event 20/20bas monitors.

When creating soundware, it's extremely important that your speakers don't color the sound in any way; you want to be confident that what you hear is accurate. Currently, I'm working on a project that involves looping many pipe organ samples of different lengths. The Events allow me to hear the slightest clicks and pops in the sample loops, which I can then easily eliminate in order to create a perfect finished sample. Working for long hours in this kind of critical listening environment can be challenging, not to mention incredibly tedious, but the Events never seem to fatigue my ears. I was so pleased with the Events in my office that I eventually bought a set for my home studio as well.

Now, the same engineers who brought you their award-winning Event 20/20s, introduce their new bi-amplified, Direct Field, **PS Project Studio Series**. These monitors are an amazingly cost-effective way to get the same precise and accurate quality found in their best-selling 20/20s. Each speaker in the PS Project Studio Series is equipped with custom designed state-of-the-art drivers. These drivers can reproduce frequencies from 45Hz all the way up to 39kHz on the **PS5** with a 5 1/4-inch woofer (list \$599), from 45Hz up to 20kHz for the **PS6** with a 6 1/2-inch woofer (list \$699), and from 35Hz up to 20kHz for the **PS8** with an 8-inch woofer (list \$849).

The tweeters on all three models feature one-inch, magnetically-shielded, ferrofluid-cooled,



natural silk domes. This design provides accurate and detailed high frequency reproduction without the harshness and ear fatigue normally associated with metal dome tweeters. For low frequency accuracy, each woofer is designed to provide a smooth, consistent frequency response without the need of additional equalization. All of the PS Series woofers use magnetically shielded mineral-filled cones with a highly-damped linear rubber surround and a one-inch diameter high-temperature voice coil. The magnetically shielded design of the woofers and tweeters make them especially well suited for use in computer-based audio/video workstation environments.

The PS Series monitors have a separate power amp for each driver (70 watts per side for the low frequencies, and 30 watts per side for the high frequencies). By giving each driver its own amplifier, the amps are able to run more efficiently. That's because each amp is dedicated to its specific frequency range. The result is increased dynamic range, higher SPL, a faster transient response, better phase response and improved damping. The combination Power On/Clip LED will flash if the amplitude approaches clipping levels.

The PS6 and PS8 models are equipped with the same asymmetrical fourth-order crossovers found in Event's flagship 20/20bas, while the PS5 model comes with an asymmetrical second-order crossover.

Crossovers are an extremely important element in any speaker design. Event's crossovers ensure that mid and upper frequencies will be reproduced with clarity and precision.

XLR and 1/4-inch inputs are included on all three models. These inputs accept balanced XLR or unbalanced 1/4-inch plugs, which eliminates having to search for the right cable or adapter. All models are also equipped with an input sensitivity control for precise amplitude matching. The PS5 model has a front panel mounted input level knob, which is convenient when working with a computer-based home studio.

From personal experience I can say that with the Event PS Project Studio Series, you can be confident that your mixes will sound the same in the outside world as they do in your studio. Call your Sweetwater Sales Engineer today for the latest pricing and complete information on the incredible sounding PS Project Studio Series Monitors.

YAMAHA CS6X: THE NEXT GENERATION DANCE MACHINE

Take total control of your sound with **Yamaha's** new **CS6x Control Synthesizer**. Billed by the company as its next generation dance machine, the CS6x (\$1795 list) is a 64-note polyphonic, 61-key synthesizer that is loaded with hundreds of high quality voices designed especially for today's cutting edge music styles: Funky leads to "phat" basses and even standard voices are included to cover every possible need.

To truly explore your creative potential, the CS6x is jam packed with 14 sound control knobs, five assignable knobs, two programmable scene buttons, a ribbon controller, pitch and mod wheels — in short, everything you need to shape the sounds exactly the way you want. The CS6x also puts a new twist on the sampling concept with the use of what Yamaha calls "Phrase Clips." A Phrase Clip is a short recording; it can be a breakbeat or a loop of any kind or even a single shot percussion sound. Once a phrase is sampled, the CS6x allows you to create new sample variations by using the Loop Remix / Divide function. Up to 256 Phrase Clips can be stored into the 4MB of onboard memory. These samples can then be assembled into Clip Kits, which will allow you to trigger the phrases from the keyboard. Samples can be imported as WAV or AIFF files, or do-it-yourselfers can sample them right into the CS6x.

Another great feature of the CS6x is the A/D Input. This input will allow you to plug in an external source such as a microphone, CD player, or even another synthesizer into the CS6x and process the signal with the huge selection of onboard digital effects. Even many top-of-the-line synths don't include this feature.

Once you're ready to play a gig, there's no need to take along an external sequencer. The CS6x sports a built-in SMF playback sequencer. Just plug your home

computer into the CS6x's "TO HOST" connector and it's a breeze to drag and drop sequences from any sequencer right onto a Smart Media card. Leave that computer at home where it belongs and take a SmartMedia card and the CS6x to the gig.

To top off this exciting machine, it's fully expandable using Yamaha's Modular



Synthesis Plug-in system. Unlike conventional expansion boards, which only give you extra PCM samples, these expansion boards add a complete synthesizer engine to the CS6x! You get more sounds, more polyphony, and more effects. Two expansion slots are provided so you can decide what type of synthesis power you need.

Want to know more? You bet! We don't have space here for all the details, so call your Sweetwater Sales Engineer today for special Sweetwater pricing and complete information on this cutting-edge creative powerhouse from Yamaha. — Gary Phillips

WINTER NAMM 2000 *Special* Repo

— *Continued from Page 4* professional frequency gate with zero crossing circuitry. Then there was the DigiMax (\$1,499.95) eight-channel preamp featuring peak limiter, EQ enhancer, and Analog and Digital outputs. They had a new 4-band parametric EQ, the EQ80 (\$2,299.95), with eight channels, Narrow Q select and High/Low shelving. Finally, their Blue Tube (\$199.95) was a 1/2 rack space stereo tube mic pre. We'll be giving you more on all these fine units as soon as we get it.

ROLAND. We'll start with the addition to their VS Workstation Series, the **VS-1880**, which like its predecessors is a completely self-contained digital recording workstation with built-in digital mixing, optional effects processing, and CD-burning capabilities. You get 18 tracks of simultaneous playback, 8 tracks of simultaneous recording and 288 virtual tracks. Burning CDs is very efficient, thanks to a feature called Audio CD Image Format. Accessing CD writing menus and Mastering is a button push away. The new **MC-307 Groovebox** is for the DJ who wants the old school feel with the cutting-edge of groove technology. All new patterns, realtime controls, PLUS accurate turntable emu-



Roland's show-stopping VP-9000 VariPhrase Processor

lation which has to be seen (and heard) to be believed. DJs who want the visceral vinyl feel should check this out. The **VG-88 V-Guitar System** (\$1295) also ranks high on the impressive scale. It's a top-of-the-line guitar modeler, and the detail and variety of options are extraordinary. Features include nylon string guitar, brass sounds, and awesome guitar-oriented stuff like overdriven amp sounds and tube amp tones. We saw a great demo and were amazed. They were also showing the **GR-33 Guitar Synth** (\$695) which boasts a massive wave memory and over 350 stunning instrument sounds including analog synths, basses, nylon string guitars, orchestral sounds, choirs and more. It's a great tool for a creative guitarist.

They also were showing off their new XV Series of synths, all of which feature 128 voices and include the **XV-88** expandable keyboard, the **XV-3080** rack module and the flagship **XV-5080** rack module. They are all expandable and feature enormous internal wave memory — to 64MB and beyond with over 1,000 waves and sounds from many Roland classics, such as the JD-990 Super JD. Expanding on the technology and innovation that made the Roland V-Drum kit so popular, the **HPD-15 Hand Percussion Pad** (\$1295) is a perfect example of a seemingly simple idea executed brilliantly. Just like the name suggests, the HPD-15 is sort of the hand percussionist's answer to the V-Drum kit. Percussionists can tap, slap and pound away like angry chimps. Like the V-Drum kit, the pads are touch sensitive for expressive performance, and the sounds are incredibly realistic. There's even a "D-Beam" and dual ribbon controllers. Trust us, it rocks.

But Roland's crowning achievement (at least at this NAMM Show) is a unique device called the **VP-9000 VariPhrase Processor** (\$3295). The basic principle is that the VP-9000 makes music "elastic." It's an audio processor that allows you to manipulate pitch, time and formants in real time via knobs or MIDI control. But the sound quality of the original sample remains the same, whatever you do with it. Speed it up, slow it down, but the pitch stays the same. You can also instantly match phrase loops from different sources to the same key and tempo. But the VP-9000 goes far beyond pitch correction, or sampling. You can take a vocal line, drum beat, or other musical phrase, and change the "character" of a song, all in real time. Seamlessly. Still a little unclear? Well, we saw a number of different demonstrations of the VP-9000, and with each demo our appreciation grew. The applications are mind-boggling, encompassing everything from remix tasks, to postproduction for audio and video, to a complete creative tool. You're going to be hearing a lot about this new technology in the coming months, and Sweetwater will keep you up to date on all the latest developments.

STEINBERG. Here's another company with so many new products that it's nearly impossible to know where to begin. The **Pro-Five VST Plug-in Synthesizer** (\$199) is based on the legendary Prophet Five synth used by many bands in the '80s. The quality of the plug-in is fully equal to the original hardware version. The second plug-in is the **Model-E VST Plug-in Analog Virtual Synthesizer** (\$199), with 16 multitimbral parts, up to 64 voices and 8 outputs per instrument. The sound is pure, fat analog. It's also the first software synth optimized for the Apple Mac G4 Velocity Engine. Finally, there's the **LM-4 VST Plug-in Drum Machine** (\$99), an amazing assortment of drum machine sounds. LMo4 comes with 20 high quality sound sets, each containing at least 18 drum sounds. You can also build your own kits. They also showed the current version of **Nuendo** (\$1299), an entire Media Production System with hardware and software components. More on the Nuendo system and Steinberg's other new releases as we get it.

SONY. Their **DMX-R100 Digital Audio Mixing Console** (\$20,000 — see photo on Page 3) is not only Sony's first entry into the compact professional digital mixer market, but it also represents a significant move forward for the entire category of gear. This really is a remarkable unit. It's a fully professional, 48-channel mixer with 25 motorized faders, a sophisticated control panel with touch-screen control, a fully-integrated package of automation, a digital routing matrix and machine control. The DMX-R100 can handle the full range of production applications: Recording, post-production, mastering, etc. and was specifically designed for surround sound projects. Among its full fea-

ture set is the touch screen control panel, which allows you to place your "sound source" by touch. For all its complexity, the DMX-R100 still manages to be a very intuitive machine.

TASCAM. Lots of cool new stuff at the Tascam booth. We were really excited about the **US-428 Digital Audio Workstation Controller** (\$599), a handy, compact 24-bit interface that lets you operate computer-based recording and mixing programs. The US-428 hooks up to your computer via a single USB connection — no card required. Your computer gets an excellent MIDI interface with mixing and transfer controls. It looks pretty, too, with aerodynamic lines and a cool, icy blue color. One of Tascam's strong points is their professional CD recorders/players. They consistently deliver great value and excellent performance. The **CD-D4000mkII** (\$1299) is a simple, basic yet fully professional CD duplicator. What it comes down to is that this machine reads, writes, and duplicates CDs fast. And the final results are excellent. Also up was the **CD-RW7000** CD-RW recorder (\$699), which records rewritable CDs. If you burn CDs on your computer, you need to check out the **CD-R Pro** (\$749) and the **CD-R Deluxe** (\$629), Tascam's latest recording software/hardware bundle. Each package contains a SCSI card, various software, and cables, and is designed to be an all-in-one solution for your CD burning needs. Each package includes both Mac and Windows software.

YAMAHA introduced their **CDR1000 Professional CD Recorder** (\$1799), a very impressive machine that seems destined to become the "must-have" recorder for any professional recording facility. Features include CD-R and CD-RW recording capabilities, sample rate converter and word clock input. Perhaps best of all, the CDR1000 includes an **Apogee Electronics UV22 Super CD Encoder**, which allows 16-bit encoding of sources originally recorded at higher bit rates, even 24-bit, without additional equipment. They were also showing off their very fine **AW4416 Audio Workstation**, a top-of-the-line recording workstation that combines elements of Yamaha's popular O2R, O1V and DSP Factory. Features on this fine machine include 16-track recording at 16- or 24-bit, 44 inputs during mixdown, editing, and an excellent eight-sample trigger pad that lets you sample up to 90 seconds of sound. There are two versions of the AW4416, one with a CD burner (\$3799) and one without (\$3399). There are tons of other great features, but the bottom line is that this is one of the most convenient, flexible, and most powerful recording workstations that we've seen in its class.

It wouldn't be Yamaha without keyboards, and the new addition to their distinctive PSR line, the **PSR-9000** (\$3495), seems like a perfect live performance keyboard for the solo musician. The speaker system is incredible, and it also boasts some of the best voices and voice effects Yamaha has ever offered. Another beautiful keyboard was the **S30 Musical Synth** (\$1295), a 61-note version of their award-winning S80. It's identical in every way, except it includes only one expansion slot and fewer jacks.

Guitarists were certainly not forgotten at the show! The **DG60** (\$599), the **DG80** (\$999) and the **DG130** (\$1499) all boast first-rate sound modeling and guitar effects, with extremely easy, smooth operation. The amps are amazingly noise free, and contain no noise gate, so the audio is crisp and clear. Even cooler, the amps switch sounds instantly. The transition from one tone or sound to another is virtually seamless.

And the entries from Yamaha continue! The **A5000** (\$2295) and **A4000** (\$1595) samplers looked very exciting. The A5000 features 126-note polyphony, 6 effects processors, and a 9-disk CD library. The A4000 is just like the A5000 "cut-in-half." Both units include graphic editing with realtime control, loop divide functions, and a cool feature called loop remix, which lets you shuffle the sample and manipulate it by throwing in reverses, changing pitch, and much more. You can burn CDs directly from the samplers to an external CD burner. Both samplers are compatible with all the major manufacturers. By the way, all the Yamaha gear was being played through their **MSP5** speakers — hardly a new product, we know, but the sound was excellent.

That's about all the space we have available in this "official" NAMM report. While we didn't see everything at the show (is that even possible?), we found ourselves very optimistic at the end. There wasn't too much that was wholly revolutionary, but we thought most of the products were more practical and better suited for the real world needs of today's musicians. This isn't to say we don't still have a ways to go, but it was one of the better shows in recent years. Next year, incidentally, the show returns to Anaheim, California. Meanwhile, much more information about all these products will be included in future issues of *Sweet Notes* and *InSync*, so stay tuned for further updates.



The Paul Reed Smith booth is always popular if you like gorgeous guitars: Here, their new single cutaway model.

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Despite all the widespread hype and hysteria, the year 2000 feels just like 1999 to me, which is fine, since I don't need any other reminders that I'm indeed getting old. Of course, old is relative: Carlos Santana is 52 and the man can still tear up the fretboard and rock with the best of them. What's more, I'm glad to see his Arista album, "Supernatural", getting the accolades and awards it so justly deserves.

While great guitar players come and go, musicians like Santana remain popular because they understand that it's not about how many notes you can play; it's about having a distinctive tone, knowing how to phrase a passage and most of all, how to put feeling into even a single note — and yes, it can be done! Likewise, many manufacturers come and go, but the really good ones will stick around because they continually build products that sound great and are versatile enough to appeal to a large audience. (I hope you liked that segue, because it took me forever to get it right.)

One example of a company that started with a single product (the AxSys 212) and now builds a number of useful and sonically compelling products is **Line 6**. Some of you may recall that I actually did the review of their AxSys amp in *Electronic Musician* a few years back. While I liked the amp well enough, what impressed me was the thinking that went into the design. And that thinking has led to other popular products like the best-selling **POD** and now the company's new **Stomp Box Modelers**.

I was fortunate enough to get an advance look at the first two pedals (there will eventually be three in the series): the **DL4 Delay Modeler** (shown below) and the **MM4 Modulation Modeler** (at right). Both carry a list price of \$349 and they are worth every single penny (even better, your Sweetwater price will be lower!). The construction is absolutely superb with heavy duty metal all around, so these units will stand up to all manner of punishment, plus the colors are pretty stylin' as well: A cool metallic green (DL4) and rich metallic blue (MM4).

The DL4 Delay Modeler offers (naturally) all sorts of delay effects, from the latest, super-clean 24-bit stereo delay (up to 2.5 seconds) to many vintage effects like those available on such stompboxes as the Electro-Harmonix Deluxe Memoryman, the classic Roland RE-101 Space Echo, and Maestro's EP-1 and EP-3 Tube Echo. You also get other cool delay effects like Rhythmic Delay, Ping Pong, Dynamic Delay and Sweep Echo. What's more, this box includes a 14-second Loop Sampler, so you can record about two bars of rhythm guitar (or whatever), loop it, then jam along. It doesn't take long to figure out all sorts of other interesting and unusual uses for this capability — and there's even a 1/2 speed and Reverse switch.

But the effect that sold me on this awesome box is the Reverse Delay. Remember all those weird reverse leads that Jimi Hendrix and The Beatles used on their albums back in the '60s (which were accomplished by actually flipping the analog tapes over and recording the leads, then flipping them back into the correct

position. Well, the Reverse Delay lets you create leads that come awfully darn close to duplicating those haunting sounds without doing anything more than tapping a footswitch. Imagine how that effect comes off in a live performance! Talk about stealing the show. This single effect



actually inspired me to finally sit down and write some music — yes, it's that terrific.

Aside from what the DL4 does, I must say that it also sounds fabulous. Comparing it to my existing rackmount delay (the one I thought sounded so wonderful) was a revelation. The DL4 sounds so much cleaner and the delays are so (for lack of a better word) articulated, that I'm ready to put my old delay out to pasture.

As for the blue MM4 Modulation Modeler, well here you're really getting into some awesome sonic potential. This baby does everything from an amazingly accurate Fender (as well as Vox) Tremolo

to various vintage Phasers (MXR, Ibanez and Mutron), Flangers (A/DA and MXR), Chorus (Boss CE-1, Roland Dimension D and more), Vibrato, Ring Modulator, Panner, and even Rotary Speaker effects like the Fender Vibratone and Leslie 145 (complete with horn depth and drive control). To top it all off, there's even a pretty darn accurate representation of the (now astronomically-priced) Uni-Vibe pedal made famous by Hendrix, Stevie Ray and others.

All of the effects are superb in their own right and most are dead-on reproductions of the original vintage pedals. The Uni-Vibe model is very useful, but I found I had to tweak and tweeze it to where it sounded best with my guitar,

though it's almost *too good* when compared to the real thing (which had a certain, slightly cheezy swooshiness to it). And while the the Leslie preset doesn't actually nail the sound of the real thing (which is as much mechanical as electronic), it sure beats hauling around a 200 pound piece of walnut furniture. Again, adjusting the effect to taste works wonders and you'll find a lot of uses for it. I sure did.

But hey, I'm getting picky here, because when all is said and done, there isn't a lush chorus effect, a flanger with more whoosh nor any tremolo boxes that can actually stand toe-to-toe with the original Fender and Vox tremolo effects. I must add that all the effects sound much better when run in stereo (which is great for studio use since those chorus, flange and pan effects really spread out left-to-right) and many of the models on both units really benefit if you use the (optional) Line 6 Expression Pedal. And did I mention that either unit will run for about 20-30 hours on a set of four quality Alkaline C-size batteries or powered by the optional AC adapter? My advice is to go with the adapter. Batteries are convenient (no outlet needed) but ultimately wasteful. Hey, we like to think about the environment around here.

Bottom line is that I absolutely love these boxes and I doubt that the Line 6 folks will be able to build them fast enough to keep up with the demand. Think about it: If you were to purchase all the original pedals and effects represented in these two Modelers, you'd spend almost as much as you would on a new car (with a really good stereo system). I wish I had more room to talk about how wonderful the Stomp Box Modelers are, but I'd really rather just go and play them. Naturally, you can get your own at a great Sweetwater price by calling your Sales Engineer right now. I guarantee you will be as impressed as I was. Now I can't wait to test drive their third pedal: The Distortion Modeler. I'm betting it's another hands-down winner!

Speaking of winners (excellent segue number two — I'm on a roll!), I have been meaning to mention Version 2.1 of **BIAS Peak** software for a while now, but you may have noticed my column got whittled down several times over the last few issues. I've depended on earlier versions of Peak for several years now (just about all my sample editing and processing is done using Peak), and it would be hard to find any software that was easier to use — in point of fact, I never actually read the manual. Version 2.1 (\$299 list or \$499 list for the TDM Version) takes a giant leap forward and offers up a host of new features and a redesigned user interface, though with all these new capabilities, I was now forced to sit down and read the manual (which I should mention is excellent and very readable). Aw, poor me.

— Continued on Page 14



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