



SWEETNOTES

MUSIC TECHNOLOGY DIRECT

LATE SUMMER 1998 ISSUE

ROLAND VS-1680

16-TRACK, 24-BIT HARD DISK POWERHOUSE!

When **Roland** unveiled their original 16-bit, 8-track **VS-880 Digital Studio Workstation**, the industry really took notice — particularly when you realize that tens of thousands of units were sold and shipped within months of its release. It has since gone on to be the best selling stand alone hard disk recorder in history. So how can a company top such a phenomenal product? Simple: Add more tracks and make it sound better.

Representing a true breakthrough in professional digital recording technology, the new **Roland VS-1680 24-Bit Digital Studio Workstation** is an amazing 16-track random-access digital audio recording, mixing, editing and effects processing system with superb 24-bit audio resolution in a compact table-top workstation.



Wait! 16 tracks? 24-bit recording? Yes — that's right! And maybe more shocking is the list price of just \$3195!

Building on the same technology that has made Roland's VS-880 so incredibly popular, the VS-1680 brings users a powerful, integrated hard-disk based digital recording studio with 16-track playback; 8-track simultaneous recording; a 26-channel fully automated — *Continued on Page 7*

INSIDE THIS ISSUE:

Event's Layla is here!

Yes, it's the name of the classic 1970s hit by Eric Clapton — one of the most instantly recognizable songs of all time. But it's also the name of **Event Electronics'** most eagerly-anticipated product ever, a computer-based hard disk recording system for the PC. Check out the full details inside on the 1998 version of Layla. — **SEE PAGE 2**

T.C. Electronic Products

You probably know them best for their incredible M2000 reverb and the amazing Finalizer. Now **T.C. Electronic** is shipping no less than three brand new products, the **DBMax Digital Maximizer**, the **Gold Channel Mic Preamp** and the **UnitY Signal Processing Engine** for the best-selling Yamaha O2R Mixer. — **SEE PAGE 3**



New Alesis 20-Bit M20

While 16-bit audio is still the world standard (and will be for quite some time), audio perfectionists know that 20-bit recordings have a staggering 16 times more resolution than 16-bit. And for demanding professional use, no tape-based digital multi-track can top the feature set of the new 20-bit **Alesis ADAT Type II M20**. Details inside! — **SEE PAGE 3**

Sweetwater K2500SWx

The **Kurzweil K2000** and **K2500** have literally rewritten the history of modern music with their VAST synthesis system. Now, Sweetwater Sound has created a package that allows you to tap into the full potential of the K2500 the minute you open the box. Introducing the new **K2500SWx**. — **SEE PAGE 7**

Plus: Industry standard processing from Lexicon, Marshall Amplifiers, Fostex FD4 ... and much more inside!



A Century of Excellence

My first guitar was a Gibson. Well, actually my very first guitar, the one I learned to play on in 1966, was a masonite Sears model. But as soon as I figured out how to play the chord changes to "Louie, Louie," my parents bought me a bright, shiny Gibson SG Special. Man, I was the envy of all my guitar playing friends — guys who were destroying their fingers trying to play strange-looking instruments like those from Kent, Teisco and Goya.

As far back as I can recall, **Gibson Guitars** were the benchmark of quality against which all the other brands were measured — and for good reason. It's no wonder that vintage guitars like 1950s and 60s Les Paul Standards have skyrocketed in price to the point where only millionaires can comfortably consider owning one today. The — *Continued on Page 4*

YAMAHA EX-SERIES: UNLIMITED POTENTIAL

Remember how revolutionary the DX7 was when it was first introduced? If you didn't have one, you were left behind in the dust. For the first time, digital synthesis was within reach of the average musician and the distinctive DX sound was heard all over the radio and in concerts around the world.

But a lot has changed since 1984. The latest offering from **Yamaha**, the **EX-Series** is comprised of the 76-key, 128-note polyphonic **EX5** (\$2695 list) and rackmount **EX5R** (\$2195 list) and the 61-key, 64-note polyphonic **EX7** (\$2195 list). Each features a unique **Extended Synthesis** system which incorporates a number of the most advanced tone generator technologies currently available — plus a full-featured sampling system! What's so special about these new instruments? A lot — just read on . . .

Imagine for a minute that you can have one instrument that combines the "best of the best" synthesis techniques — from fat analog to highly detailed physical modeling. Now add in ROM-based samples. Then give this "supersynth" the ability to sample anything into RAM via mic or line input and



The 76-key Yamaha EX5 Synthesizer offers the company's Extended Synthesis which even includes physical modeling and sampling!

you'd have a killer machine, right? Particularly when you add a powerful sequencer and some superb effects processing. You want one already, don't you?

Imagine no more! Such a synth exists and it's here now. What's more, it's incredibly affordable: It's the EX-Series from Yamaha! Every feature you ever dreamed of is here. Every sound you ever thought you could one day create is at your fingertips *right now*. By combining the very best state-of-the-art tone generation technologies, Yamaha has given musicians a great-sounding instrument that covers the entire sonic vocabulary necessary for modern music production. Let's take a closer look at each . . .

AWM (Advanced Wave Memory) is Yamaha's original system for effectively using sampled waveforms as tone generators. The strength of AWM lies in its ability to shape and control the sound of the samples with a comprehensive system of envelope generators, filters, key scaling, modulation, and more. AWM voices can have one-four AWM elements, and each can use a preset wave or sampled waveform. The ability to combine AWM elements means you can, for example, combine separate samples for the attack and sustain portions of an instrument's sound, with independent control over each.

Virtual Acoustic Synthesis (VL — which stands, incidentally, for Virtual Lead) is the same tone generator technology used in the ground-breaking (and expensive) VL1 and the popular VL70m tone generator. This system applies sophisticated computer-based "physical modeling" technology to musical sound synthesis, accurately simulating the very complex vibrations, resonances, reflections and other acoustic phenomena that occur in a real wind or string instrument. VL voices can have one VL element and from one to three AWM elements. The VL element can be used alone to emphasize the full realism and expressive power of the VL tone generator, or with added AWM elements for thicker textures.

Yamaha **AN Synthesis** (or **Analog Physical Modeling**) offers all the benefits of traditional analog synthesis with the stability, reproducibility, and precise control of digital technology. It is capable of accurately reproducing the sound of classic analog synthesizers without patch cables, setting charts, or the frustrating instability that was the bane of the analog age. A standard (Poly) AN voice can have one AN element and from one to three AWM elements. Classic analog synth type sounds can be created with the single AN element alone. AWM elements can be added as necessary to "modernize" the sound. EX synths additionally allow "AN layer" voices which can have one or two AN elements and one or two AWM elements. The combination of two AN elements in this voice type can result in really thick, powerful, punchy analog type voices. AWM elements can be used to add realistic samples/textures.



Event Electronics' Layla: Their much-anticipated and very cool digital hard disk recording system

EVENT SHIPS LAYLA AND NEW DSP•FX

When it comes to hard disk-based recording, the people at **Event Electronics** (famed for their mics and powered monitors) know you'll settle for nothing less than total sonic excellence. They also know that you're not willing to trade away performance, or features, or convenience, or flexibility, or expandability just for the sake of price. Here's good news: now you don't have to.

Event Electronic's **Layla** is a breakthrough multichannel digital audio interface for your PC (and soon for the Mac), loaded with the professional features and audio performance your music demands and deserves. Right out of the box it comes with everything you need to record, arrange, edit, and master to CD all your music and audio projects. And you can have it all at the irresistibly low price of just \$999 (and that's retail).

Layla's hardware is elegantly simple: a PCI bus-master host card connected via a digital control cable to a single-space rackmount audio interface. The interface sports eight balanced 20-bit analog inputs, ten balanced 20-bit analog outputs, and 24-bit S/PDIF stereo digital I/O — all simultaneously accessible. There's also massive onboard DSP, word clock/superclock I/O (for sync and expansion), a 24-bit internal audio path, and MIDI In/Out/Thru. Top it all off with broad-based compatibility with a wide variety of popular digital audio software applications. Get the picture? Layla is a complete multitrack digital recording, editing, and mastering system designed to help you make great-sounding music. Designed to grow as your needs grow. Designed to change the way you think about hard disk recording. Designed to knock your socks off.

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SWEETWATER PRODUCT PROFILE

ALESIS M20

SETTING A NEW STANDARD

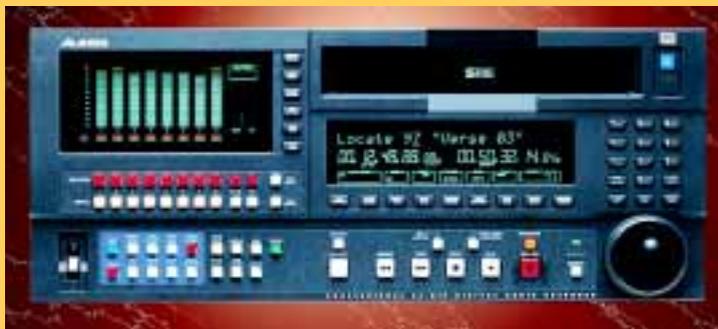
For most of us, 16-bit digital audio is the best thing since, well . . . analog. After all, that's true CD quality! Still, there are certain studios (and individuals) who need something better. So, just for them, those thoughtful people at Alesis built a brand new digital multitrack — and it's their best ever! What's more, it's shipping right now and we have them in stock in our giant warehouse!

The new **M20 Professional 20-Bit Digital Multitrack Recorder** (\$6999 list) was specifically created for commercial audio recording facilities, as well as high-end video and film post-production studios. Its sophisticated full-servo direct-drive transport and 20-bit audio capability means you get finely detailed sound that unquestionably surpasses even the best analog mastering recorders. The M20 was engineered for demanding, around-the-clock applications which require the highest standard of audio quality as well as low maintenance, quick response and built-in SMPTE/EBU time code synchronization. It uses the very same S-VHS tape and sample-accurate multi-unit synchronization that made the Alesis ADAT the most popular digital multitrack ever made.

Though completely compatible with original ADAT formatted tapes, the M20 features the new ADAT Type II format (also found in the **XT20** and **LX20** — see last issue) which records eight tracks of true, linear 20-bit digital audio onto tape without external converters or multiplexers. 20-bit recording offers much greater sonic detail than 16-bit recording since each additional bit actually *doubles* the number of values that can be recorded. A 20-bit recorder can then record an amazing *16 times more audio data!* While 16-bit formats (like the original ADAT or CD players) divide the audio spectrum into 65,536 values in a single sample, the 20-bit M20 captures 1,048,576 values. So if you thought 16-bit sounded good, you're not going to believe how great 20-bit sounds!

To offer this incredible fidelity, the M20 employs built-in, high-resolution oversampling A/D and D/A converters. The M20's ADAT Type II format meets or exceeds the specifications of almost everything else in a professional studio (and goes considerably beyond the specifications of the Compact Disc). Unlike some hard disk recorders, the M20 uses a linear recording format, meaning that no data compression of any kind is applied to the signal going to or from tape.

Plus, a 60-minute tape recorded in the ADAT Type II format holds over 3 gigabytes of audio data, with no upload or download time required — just pop in a new tape and you're ready to start recording.



Want one in your rack? The M20 offers 16 times the audio resolution of a 16-bit multitrack.

The ADAT Optical ports and ADAT Sync jacks on the back of the M20 use the exact same format as all previous ADAT models use, even when in Type II mode, so M20s may be combined in a system with all exist-

ing ADAT-format recorders. The M20 will send out 20 bits per track on its ADAT Optical output, and is capable of dithering its 20 bits to 16 bits on the ADAT Optical port for higher fidelity when received by Type I machines. M20s, ADATs, and ADAT-XTs can all be linked together into a single system using the same 9-pin DSUB ADAT Sync input and output cables ADATs have always used.

Part of the advantage for professional studios to employ an M20 recorder is its compatibility with the original Alesis ADAT, the ADAT-XT and other ADAT Type I-format 16-bit recorders. Since the M20 will automatically detect whether an S-VHS tape has been formatted in the ADAT Type II 20-bit format or the original ADAT Type I 16-bit format, commercial studios can provide their high-end services to clients who have already created their basic tracks in an ADAT-based project studios. These existing tracks can then be sweetened using the 20-bit system by overdubbing or rerecording parts to take full advantage of the greater fidelity of the M20. When it's time to start a new project, you simply tell the M20 whether you want the tape to be formatted in 16-bit or 20-bit mode. Sorry, Type II tapes are not "backwards" compatible with Type I systems, so you can't play an M20 tape in an ADAT XT.

Of course, the M20 was designed for use in full-

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NEW GEAR FROM T.C. ELECTRONIC



T.C. Electronic has just unveiled the latest version of their acclaimed **DBMax** processor, the **Digital Broadcast Maximizer Mark II** (\$3995 list — see photo above). Think of it as a big, bad Finalizer for top pro applications, featuring 24-bit A/D and D/A converters among its many enhancements. What's more, T.C. has announced an unprecedented free hardware and software upgrade for all existing DBMax customers.

Significant improvements in the DBMAX Mark II include a hardware analog signal bypass function (allowing the signal to pass through even if the unit is off), a new EQ with a multiband clipper function, five bands of expansion, compression and limiting and a new adaptive automatic gain controller, all combined with the ability to simultaneously insert multiple signal processing functions both pre and post.

The DBMax serves three distinct, yet interrelated applications. Inserted as the final link in broadcasting, it is the optimal transmission processor, securing a louder, more consistent signal, and expanding the actual coverage area. It is FM, AM, TV, and DAB compatible and will be shipped to conform to all major standards worldwide. In outside broadcasting, the DBMax can also solve on-air problem frequencies with selective dynamic equalization. Finally, the unit is the ultimate mastering tool for video post or broadcast productions. It will make the final product punchier and unquestionably louder, and will make it possible to monitor exactly how the audience will experience the transmitted signal. It features optimized broadcast-specific presets such as commercials, talk shows, news and all music types.

This versatile single rackspace dynamics processor includes EQ, Stereo Adjust, an Automatic Gain Controller,

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5335 BASS RD. • FT. WAYNE, IN 46808

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good news for those of us who are never going to have a 1959 Les Paul flame top, is that the company is building guitars that, in every way, truly measure up to those coveted old instruments.

In April of this year I was at Sweetwater shooting pictures of some of the great guitars they have in stock, and I was amazed at just how wonderful some of these new Gibsons felt in my hands. From a **Les Paul Classic Premium Plus** (with a gorgeous flame maple top) to a vintage sunburst **ES335 Reissue**, these were guitars that any serious player would love to own and play. Over the last 30 years, I've personally owned many Gibsons (a few of which I still have, many more that I was foolish enough to sell or trade), so I can tell you from my own observations and experience that the craftsmanship at Gibson is apparent at every level, from the deep, glossy finishes down to the tiny details like fingerboard inlays.

Obviously, when anyone mentions the name Gibson, it's hard not to picture a **Les Paul**. If the company had never built any other guitar, that one model alone would have been enough to assure them of a lofty place in guitar history. That amazing combination of the Les Paul's mahogany back and neck, maple top and humbucking pickups produced the ultra fat, warm and buttery distortion that we automatically associate with the 1960s rock and blues revolution.

Of course, even back then Les Pauls were highly prized and out of reach of most young guitar players. But these days, almost every serious player can afford a Les Paul. Prices start at just \$1439 (that's retail) for the **Les Paul Studio** and go upwards, all the way to the impressive **Les Paul Classic Premium Plus**

with its stunningly figured maple top at \$5099 list. In between there are several models to pick from, so there's a Les Paul to fit literally every pocketbook. There's even a brand new **Double Cutaway (DC)** version that's worth a look, particularly at the low list price of \$1279.

But while Les Pauls are still the most recognizable Gibsons around, my personal taste has always run towards the semi-hollow body **ES335**. At a list price of \$3299, the current version of this classic is actually a beautifully crafted reissue of the treasured 1960 dot-neck version (the one with the shorter pick guard). Eric Clapton played one on the Blind Faith album, then more recently on his "From The Cradle" album. Studio legends like Larry Carlton and Lee Rittenour regularly relied on the 335 for its ability to go from clean warm tones through to smoking distortion. It's available in either vintage cherry or (my favorite) a deep vintage sunburst.

B.B. King has always favored the sweet sound of a 335-style guitar (actually the upscale ES355 which had Gibson's Vari-Tone rotary switch, but is now out of

Gibson
USA

production), though he was upgraded by Gibson some years ago to his own Signature model, the **B.B. King Lucille** (\$2756 list) with an ebony or cherry finish, ebony neck with real mother-of-pearl block markers and gold hardware.

Other gorgeous Gibsons include the single cutaway, semi-hollow body **Howard Roberts Fusion II** (which sports gold hardware and dual humbucking pickups, \$2199 list), and the full hollow body **ES175** (\$3839 list) whose colorful history began in 1949 and includes such diverse players as Joe Pass, Steve Howe (of Yes fame) and even Ted Nugent.

If you prefer a solid body with a super fast neck, I'd suggest taking a good look at the classic **SG Standard** (\$1599 list). This is the uptown version of my first guitar and it comes with a great-looking mahogany body in cherry or ebony, with dual humbuckers and a slim neck that you have to play to believe. Also in stock right now is the **All American SG**, a superb player with a modest retail price of just \$839. An interesting historical sidenote is the fact that the SG body shape actually replaced the original Les Paul design in 1961 — in fact, it was even called the Les Paul for a short time until getting the SG designation in about 1963. It has been said that Mr. Paul was not overly fond of the SG's double cutaway body. The "real" LP was back in production in 1968.

It's worth noting here that while I've been concentrating on Gibson electrics, the company's heritage was actually built on the superb quality of their acoustic guitars (plus mandolins and banjos). Space prevents me from giving you a complete rundown of all the models in stock, but I know that lovers of really awesome acoustics will drool at the photo below of the Gibson **CL50** acoustic (\$3999 list) with its stunning abalone inlays and flawless finish.

There's also the **J200** (\$3300 list), one of the most popular acoustics of all time. It features a "jumbo-style" body with select solid Sitka spruce top, maple back, sides and neck, an ebony fingerboard and that marvelous, trademark "moustache" bridge.

If your budget just happens to be a little tighter, you might want to go with a **J45** (\$1799 list), a dead-on recreation of the original 1940s "dreadnought" design with period-accurate vintage headstock and Kluson-style tuners.

If the sky's the limit and I haven't made you grab for the phone (and your wallet) yet, you can always commission one of the hand built instruments that are produced lovingly, one at a time in Gibson's acclaimed Custom Shop. Rock stars please take note of this and call us!

I'm almost out of space, but I can't forget to mention an important detail: Gibson guitars are among the best selling instruments on the planet, which means they can arrive in the Sweetwater warehouse one day and be shipped to lucky guitar players around the world the very next day. So you need to keep in mind that not all the Gibson guitars we've talked about will be in stock at all times.

So for current availability, additional information and your special pricing on the Gibson you've always dreamed of, call your friendly, knowledgeable Sweetwater Sales Engineer immediately. — **Jim Miller**



The ES335 Reissue faithfully captures the body design and slim-taper neck of the 1960 original.



Quality in every detail: check out the abalone inlays, soundhole rosette and binding on this CL50 acoustic.

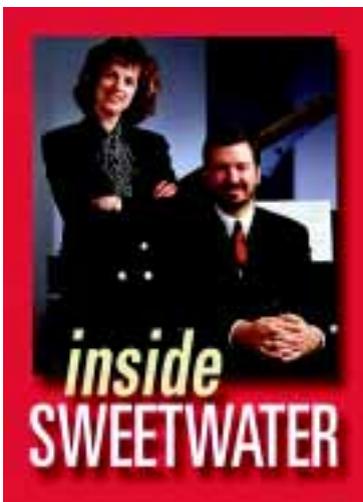
FACTORY AUTHORIZED! WE FIX YOUR GEAR RIGHT AND ON TIME WITH NO EXCUSES!

**By Chuck and Brenda Surack
Owners, Sweetwater Sound**

We'd like to start this issue's column with a mention of our all-new **1998 Yamaha Equipment Directory**. Over the last few issues, you've no doubt noticed that we have not only become an authorized Yamaha dealer, but that we've done so in a rather big way.

Part of the reason is because that's how we always do business: In a big way, but always with an eye towards serving the needs of today's musicians, engineers and studio owners. You know all those cards, letters and e-mail you sent us over the past few years? Well, we read each and every one. So we knew that thousands of you wanted us to carry the exceptional products currently being offered by Yamaha. Let's face it, the company has *always* been an industry leader (you might remember a little keyboard called the DX7, which pretty much revolutionized synthesis in the 1980s), but the equipment being produced right now is truly the finest, most advanced (and most dependable) Yamaha has ever made.

Right about the time that we began shipping copies of our 1998 Equipment Directory, the ink was just drying on



pany. Though we don't often mention it here, we wanted to tell you just how proud we are of the entire Sweetwater Sound team, from sales to shipping to our technical support and service departments and our in-house creative staff.

These are the people you deal with every day, the ones that make sure you are ordering exactly the right product for your needs. They make sure you get your orders on time and provide you with the excellent technical support you need to get you up

and running (and keep you that way). Our Web masters and electronic publishing team keeps you informed of all the latest developments in the industry, usually way ahead of the major magazines which often take months to announce new products (because of their lengthy lead times for printing).

Log onto our Web server ("www.sweetwater.com") day or night and you have immediate access to thousands of pages of information, including our entire 1998 Equipment Directory in convenient PDF format. Check your mailbox and you'll find *Sweet Notes*, a copy of our latest Products Directory and other late-breaking product announcements.

Call us and you talk to a real, live operator — you'll never have to negotiate one of those ridiculously convoluted (and hugely annoying) electronic menus when you call Sweetwater. They'll direct your call as quickly as possible. Maybe you need some sound advice from our Sales Engineers, all of whom have an incredible amount of real world knowledge and hands-on experience with the latest gear. They'll help you make the most of every purchase.

When you have a question or feel overwhelmed by a problem, don't panic, our technical support staff and highly skilled service department (all of whom are trained right down to component level repairs) will get you back on track in virtually no time. There's no such thing as a question too tough or a problem too big for them to handle.

Want your order fast? You bet! Our shipping department is committed to getting your order sent out — if at all humanly possible — the very same day it's placed (but please don't wait until 5 PM to call . . . they're good, but they're not magicians). Every single order *is* processed the very same day it's received. If there were Olympics for shipping, these people would consistently bring home the gold.

Longtime customers have experienced the Sweetwater policy of absolute customer satisfaction. That's why they come back time after time when they need hardware or software. They know there's a group of caring professionals at the other end of the phone that come to work every single day, ready to put in that extra effort, providing friendly, personalized service that's light years ahead of every other music retailer. If you've never placed an order with us, we know you'll be pleasantly surprised at the way you're treated here.

We think our company has a great business policy, but we know it's our valued employees — over 130 of the best people in the entire industry — that make us, year after year, the nation's number one music technology retailer!



Q: Here's another question for you tech guru: What happens to the "extra" bits when I transfer data via the optical lightpipe from a 20-bit ADAT XT20 to an ADAT XT, which is a 16-bit machine? Do I still get 20-bit audio?

A: Sorry, but the answer is no. The ADAT XT will simply truncate the extra four bits, so you end up with 16-bit audio (which, we might add, is CD quality and still sounds amazingly good).

Q: I have just received my VSCDRS2 CD-burning package for the Roland VS-880 Digital Workstation, but the 880 doesn't seem to be seeing the software upgrade from the Zip disk during bootup. Is it possible that I am doing something wrong?

A: A few VS-880s don't want to recognize the software on bootup. To force the VS-880 to see it, hold down the Channel Edit 1, 2, 3 and 4 buttons with your left hand, and the Play Transport button with your right hand, and then power up (yes, it helps to have a few extra fingers). If the 880 still won't see it, there's the very real possibility that the Zip disk is defective or the data is corrupt. If you bought the unit from us, just call your Sweetwater Sales Engineer or the Tech Support department and we'll arrange to rush a new one to you right away.

Q: I have several keyboards (including a K2000) that have internal floppy drives. Is there anything I should do to protect the drives before I transport the machines to and from gigs?

A: You should always park the floppy drive before you transport any keyboard with a built-in drive. You can park most drives by going to the Load screen and executing the LOAD command without a disk in the drive. Once you get a message indicating there is no disk in the drive, power off your Kurzweil (or other cool keyboard) and you're ready to hit the road!

Q: I've converted some .WAV audio files to AIF files in Sound Forge and then burned them onto a data CD, but for some reason they won't open on my Mac. What the heck am I doing wrong? Help — I really need those files!

A: Don't panic — your data is actually there. Here's the deal: Sound Forge doesn't "render" the files all the way, which means you will have to install Sonic Foundry's "AIF Typer" utility onto the Macintosh for it to open the files. The good news is that this utility is available on Sonic Foundry's Web site. Go to the Support page, then to Products, then to Utilities, choose the correct download and you should be ready to go.

Got a question? Need help? The Tech Support Department is always ready to take care of you. E-mail us at "tech_support@sweetwater.com" or send us a letter via U.S. Mail or (of course) pick up the phone and call us.



our contracts with Yamaha. So we decided that we would just go to press with a special "All Yamaha" Edition of the Directory. The copywriters and artists that man our in-house electronic publishing division immediately mobilized, putting an enormous amount of energy into producing this full color, 20-page guide to Yamaha's cutting edge technology.

You may already have a copy, or one may be in the mail to you right now. If you haven't received yours and absolutely must know if it's on the way, feel free to call your Sweetwater Sales Engineer. They'll make sure you get a copy of this great-looking, highly informative publication.

All of which brings us to our next item. No business can truly thrive in today's highly competitive marketplace without a tremendous amount of effort from everyone in the com-

NO DELAYS! ORDERS PROCESSED SAME DAY! In most cases, orders ship the same day we receive them!

INNOVATIONS '98 from **lexicon**

If you've been in any major studio anywhere in the country — or even the world, for that matter — you've probably seen **Lexicon** gear. Year after year, the products released by the company quickly become industry standards, and Lexicon's reputation just keeps on growing.

Believe it or not, the company wasn't founded to make studio owners, musicians and engineers happy. Lexicon, Inc. was actually founded in 1969 by MIT Professor Dr. Francis Lee, who had developed a digital delay unit for heartbeat monitoring! (Bet you can't wait to hit everyone at the next engineer's cocktail party with that bit of trivia.) Luckily for us, the company's big breakthrough product was their development of the **224**, the world's first commercially viable digital reverb system, which was shown at the AES Convention in 1978 and shipped the following year. The 224 remained an industry standard until the introduction of its successor, the **Model 480L**, which is still the top of the Lexicon reverb line.



The PCM 81 Digital Effects Processor (top) and PCM91 Reverb

Still, you can't expect such a progressive company to rest solely upon its past accomplishments. So now, in 1998, Lexicon has actually upgraded two of its most popular digital effects processors and introduced a software version of its most impressive reverbs. The **PCM 81** Digital Effects Processor (\$2995 list) has everything that made the PCM 80 the top choice among studio effects processors — and more: More effects, more algorithms, longer delays, and full AES/EBU ins and outs. Each effect has an uncompromised stereo reverb with several voices of additional effects available. A full complement of Pitch Shifters provides doubling, quadruple-tracking, chorus, and pitch correction within a range of up to three octaves (up or down in one cent increments), as well as unique special effects. 300 presets give you instant access to pitch, reverb, ambient, sophisticated modulators,

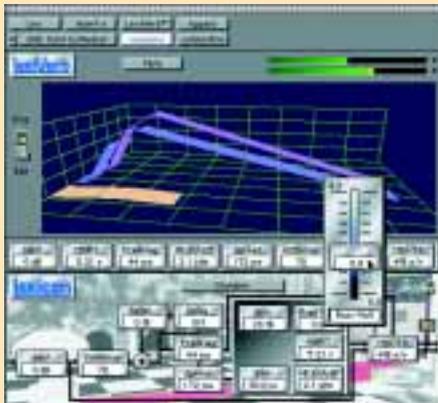
20-second stereo delays and dynamic spatialization effects for stereo or surround sound.

The PCM 81 actually features two digital signal processors: Lexicon's proprietary Lexichip, which runs the silky-smooth reverbs, and a second DSP engine to handle all the other effects. With 24-bit processing, true stereo signal path, balanced analog ins and outs, full AES/EBU and S/PDIF digital I/O and extensive modulation capabilities, the PCM 81 offers an enormous range of studio quality effects and the capacity to store up to nearly 800 presets.

The **PCM 91 Digital Reverberator** (\$2995 list) offers Lexicon's highest

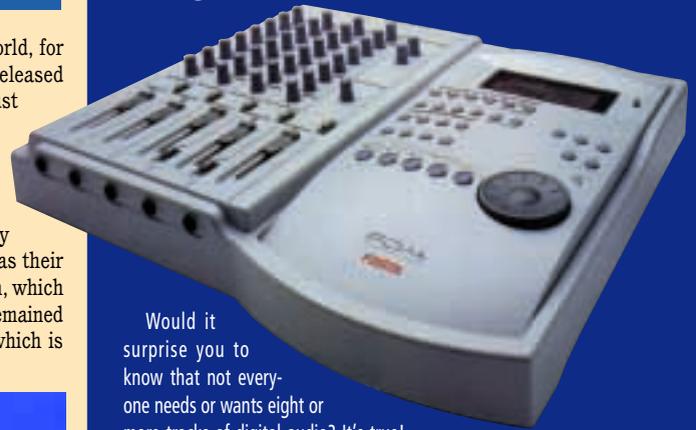
quality reverbs in a compact, affordable package with a powerful interface which allows both easy access and a wealth of programming capabilities for the sound designer. All of

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LexiVerb for Pro Tools sports a great-looking user interface

FOSTEX FD-4 Digital Multitracker



Would it surprise you to know that not everyone needs or wants eight or more tracks of digital audio? It's true!

Often less is really more: Faster, more intuitive, easier to use. The new four-track **Fostex FD4 Digital Multitracker** is just what the doctor ordered for those of you who want flexibility and infinite choices along with your 16-bit, CD-quality audio, all at a list price of just \$599.

See, the FD4 doesn't ship with any internal media. Does that sound weird? No, it's actually a pretty cool concept. Think about how fast the world of digital information storage has changed lately. Makes your head spin, doesn't it? Why commit to something that will be ancient history next year? Why pay big bucks for something that will cost you a fraction of the price in a month or two? Something to think about, isn't it?

That's exactly what the product designers at Fostex did: They gave it a lot of thought and decided to build a multitrack recorder with four input channels, two Aux sends, dual stereo Aux returns, two balanced XLR mic inputs with trim controls and a 3-band EQ on every channel. All for less than you would have paid for a multitrack cassette deck a few years ago . . . but without a hard disk! Those radicals.

What this means is that you can connect the FD4 to absolutely any SCSI or IDE hard drive of your choice thanks to its built-in SCSI-II interface. Or any removable media (Iomega Zip, SyQuest EZFlyer, etc.). Or anything the industry releases later this year or next. Now record on dual Virtual Tracks for extra takes, rehearsals, mastering and additional choices at mixdown. Edit your material entirely within the digital domain: Cut, copy, move or erase with full undo/redo convenience. Hey, random access editing is the choice of pros around the world — why live without it?

Ahh, this is starting to make sense, isn't it? But we're not done yet. The FD4 even allows you to input digital audio from any two-track source (like a CD, a DAT recorder, your computer, just to name a few). You even get a two track digital output — standard (a costly add-on with some other digital recorders). What's more, you can take the FD4 out of its box and start recording almost immediately. There's no ridiculous learning curve. And wouldn't you rather be making music rather than spending weeks studying a manual written by some genius that doesn't understand how a musician's mind works (and often doesn't know how to communicate in English, either).

If you're ready to start creating some excellent music with the stunning clarity that only digital recording can offer, maybe the FD4 is right for you. Call your Sweetwater Sales Engineer right now and have them tell you all about the FD4. Then ask about your special low pricing. The more you know about this unit, the more you'll want one.

NEED IT TOMORROW? We can ship via FedEx for next day delivery! **(219) 432-8176**



by Daniel Fisher, Director of Soundware Engineering

If creating professional quality music is an important part of your life and career, you've probably given some serious thought to getting a Kurzweil keyboard, particularly since the K2000 and K2500 have literally defined the state-of-the-art in both synthesis and sampling technology for most of this entire decade.

Now, Sweetwater Sound, one of the largest Kurzweil dealer in the world, has created a package that allows you to tap into the full potential of the K2500 right from the first day you open the box. It's called the **K2500SWx**, and it's one very impressive music machine. Looks, functionality, sound — it's all there! With the K2500SWx, there's no need to worry about which options to get and when to get them. That's because all of the options — every single one available for the Kurzweil K2500 — have been installed and fully tested by our top-rated service department. And you won't have to worry about which Operating System you're getting, since Sweetwater will install the very latest version just before we subject the unit to 24 hours of burn-in testing. In fact, you won't even have to wonder when future Operating Systems become available: we'll notify you as they're released and (if the update is free) we'll even send you a copy so you will always have access to all the latest and greatest new features.

And now that you have the world's most powerful synthesizer/sampler, you'll be ready to dig into the most professional *15,000 Megabyte* CD-ROM Library ever assembled. These are not "throwaway" CD-ROMs. We're talking about Sweetwater's award-winning **Classical Instruments**, **American Standard Instruments**, and **Exotic Instruments and Synths**, plus the much-acclaimed Sweetwater **Grand Piano** CD-ROM, as well as the entire **RSI** Library. And don't forget our 20 out of 20 stars (*Keyboard Magazine*) **Ultimate Guitars** and the recently released **Total Stereo Session Drums**, along with the soulful **Pocket B-3** and the down-'n-dirty **Finger Juice** CD-ROMs. This is just a small sampling of the many CD-ROMs that ship with the SWx, a collection that will take your K2500SWx to the extreme. And just to show you how serious we are about this package, we've even included our entire **Power Translator Library** complete with Roland's Solo String, Brass Sections, Orchestral Winds, String Sections and Orchestral Percussion CD-ROMs, along with Sweetwater's custom designed Power Translator floppies.

You might ask, "What good would all this be without first-rate technical support?" Not a problem, since this exclusive Sweetwater package includes free lifetime technical support from the number one Kurzweil experts in the entire industry.

But the K2500SWx is more than just extremely smart, it's also extremely beautiful to look at. We've commissioned professional craftsmen to design a frame of real, solid oak for the keyboard as well as a top-quality extra-wide conductor's music stand. The K2500SWx rests atop a custom designed, solid black, wooden keyboard stand and sports a laser-engraved plaque with your studio's name which completes this musical work of art.

You might pick up on the fact that I'm pretty blown away myself at this instrument, and there's a darn good reason: It is simply the most inspiring musical keyboard you've ever seen. Want to know more? All you have to do is pick up the phone and call your friendly, knowledgeable Sales Engineer today for detailed information about this stunning package, available only from Sweetwater Sound — that's right, no other music retailer on the entire planet can sell you one of these. I ask you: It's your music — isn't it worth the best?

ROLAND VS-1680

— Continued from Page 1 digital mixer; 256 "Virtual" tracks for recording multiple ideas and arrangements, totally non-destructive digital audio editing (cut, copy, move, etc.), powerful automated digital mixing including effects and EQ, optional CD recording capability and optional multi-effects boards offering four independent stereo effects processors (including innovative effects like Voice Transformer, Mic Simulator and COSM-based guitar preamp with Speaker Simulator). Wow!

The VS-1680 further distinguishes itself with an extremely intuitive interface featuring a huge 320 x 240 LCD, and the new MT-Pro recording mode: a 16-track, 48kHz recording mode which boasts 256 Virtual tracks and sound quality that far surpasses standard 16-bit linear recording. Of course, the true test of any digital recording device is its sound quality. To this end, the VS-1680 offers a 24-bit recording mode, superb 20-bit D/A and A/D converters and massive audio editing power. Up to eight tracks of linear audio can be recorded simultaneously, and recording time on the internal 2.1GB hard drive is always dynamically allocated.

To maximize recording time, users can choose from one of six modes: Master, MT-Pro, MT 1, MT 2, LV 1 and LV 2. These offer between 404 and 1616 total track minutes of recording time at 44.1kHz using the internal hard drive. The enhanced 24-bit MT-Pro mode, for example, offers an impressive 808 total track minutes of 16-track audio recording and playback at 44.1kHz. And because MT-Pro mode captures the full dynamic range of 24-bit audio, its sound quality, dynamic range and headroom is notably better than industry-standard 16-bit linear digital recording.

Another plus: Like the VS-880, the VS-1680 allows users to burn audio CDs directly from its SCSI port using the optional VS-CDR-16 (\$695 list). This provides a convenient, inexpensive method for backup, mastering or simply for assessing a particular mix on any standard audio CD player. (VS-1680 and VS-CDR-16 drive are also available together as the VS-1680CDR) With the VS-1680's hard disk-based recording, editing, mixing and processing, users can perform cut-and-paste style audio editing down



Roland blew everyone away at Winter NAMM with their VS-1680 demo

to the waveform level. And 256 "Virtual" tracks let users record alternate guitar solos, vocal takes, string arrangements and other ideas without losing the original tracks. Then use all or part of any of your alternate takes to build the final track.

The VS-1680's huge backlit LCD simultaneously displays level meters, play lists, EQ and effects settings, waveform editing and more. Knob-style icons and graphic EQ curves allow for intuitive tweaking of levels and parameters, while a built-in "EZ Routing" function allows users to create, name and save comprehensive recording, track bouncing or mixdown configurations.

The VS-1680's 10-input/12-output, 26-channel automated digital mixer section lets users apply 26 channels of two-band parametric or 16 channels of three-band parametric EQ. Connections include: 10 audio ins with 2 balanced XLR-type ins (with phantom power), 6 balanced 1/4" ins, and 1 stereo digital input (optical/coaxial); 12 audio outputs, including 8 RCA-type outputs (Master L/R, Aux.A L/R, Aux.B L/R, Monitor L/R), and 2 stereo digital outputs plus a headphone output; a SCSI interface and MIDI In and Out/Thru ports.

With its unprecedented features and amazing ease of use, the VS-1680 offers a level of convenient, comprehensive recording power that stands alone in today's professional recording market. We could take up two pages with all its amazing features, but if you've read this far, you're ready to pick up the phone and call us here at Sweetwater for additional information, availability (yes, as with any killer new product, initial supplies may be very limited) and of course your Sweetwater special pricing.

ACCESS OUR 2,000+ PAGE WEB SITE DAY OR NIGHT AT "WWW.SWEETWATER.COM"

YAMAHA EX-SERIES SYNTHS

— *Continued from Page 2* **FDSP** (Formulated Digital Sound Processing) Synthesis adds a sophisticated note-dependent effects processor to the basic AWM synthesis. FDSP uses individual note and velocity data to control effect parameters, making it possible to simulate the characteristics of a number of real-world musical components, as well as produce totally new effects. FDSP voices have from one to four AWM elements with an FDSP stage between each and the main effect stage. The FDSP stage can be applied to any of the AWM elements. EX synths also allow the AN (one) and FDSP tone generators (up to three) to be combined in "AN + FDSP" voices.

The EX's sophisticated sampling capability lets you sample sounds from any source, any of which can be used in AWM voice elements or mapped to play via individual keys of the keyboard using the Key Map mode. It's also possible to sample directly from the internal EX tone generator system, so you can capture any sound created by the EX synthesis engine and save it for later use. Wave Memory is one megabyte standard, expandable up to 65 megabytes by installing optional memory modules. Sampled waveforms can be saved to floppies or to an external storage device via an optional SCSI Interface. Standard wave files in WAV, AIFF or Akai format can also be loaded. Other outstanding features of the EX-Series include



The rackmount Yamaha EX5 Synth: Killer sounds at an astounding price!

512 totally new, top-quality preset voices, a four-track arpeggiator, splits and layers, and unparalleled real-time control (on the keyboard models). Controller knobs also function as data entry controls while editing for fast, efficient operation.

The EX synths also offer an impressive host of sequencing functions: The 16-Track Song Sequencer has a 30,000 note memory, so you have plenty of capacity for recording and playback. The 8-track "pattern" sequencer has most of the functions and features of the 16-track song sequencer, but is more suited to the production of shorter patterns such as drum tracks or dance grooves. Finally, the EX Effects System is capable of producing effects rivaling those of many separate component effect units.

Whew, that's already quite a list of features, and we didn't have room to list all of the others. Honestly, when you hear the EX Synths, you'll be blown away. So call your Sweetwater Sales Engineer right now for more information and special pricing on any of the EX Synths and options from Yamaha.

LEXICON EFFECTS FOR '98

— *Continued from Page 6* the features of the highly-acclaimed PCM 90 are included, plus AES/EBU ins and outs, Dual Reverb algorithms and many all-new presets with dynamic spatialization effects. 450 presets provide sounds for real-world applications— and a unique KeyWord search and sort function allows you to find the preset you want fast by application (i.e. vocals, drums, etc.). Built right in is a full compendium of Lexicon's "greatest hits" — the best reverb algorithms of the last decade including Random Hall, Random Ambience, Rich Plate, Concert Hall and Split Chamber. A front panel Adjust knob is automatically attached to one or more of the parameters you're likely to want to change in each preset without ever going into the Edit mode. Balanced analog XLR and 1/4" inputs and outputs are standard, as well as S/PDIF and AES/EBU I/O.



Those of you who want the legendary Lexicon reverb in software form for Pro Tools are going to love this next product. **LexiVerb** is a TDM-compatible software plug-in that combines that true, world-class Lexicon reverb with 24-bit DSP processing and a powerful user interface. LexiVerb supports Pro Tools 4.0 automation and LexiVerb parameter groupings (Macros), which offer complete control over the individual parameters that comprise the legendary "Lexicon Sound." Four stunning algorithms — Chamber, Plate, Inverse and Gate — are available via 100 presets. The plug-in can be used in either

mono or stereo configurations. Each algorithm is displayed as a wire diagram, complete with pop-up faders. As many as eight faders can be simultaneously assigned to a Soft Row to provide immediate access to the appropriate parameter adjustment.

Want to know more? Want to put one of these classic processors in your rack or right in your computer? Want to stop apologizing (finally) for the sound of your existing reverb? We thought so. We can make Lexicon ownership more affordable than ever before. So call your Sweetwater Sales engineer now for more information and special pricing on these great Lexicon products.

KRK'S ACTIVE V8 STUDIO MONITORS

In 1986, Keith Klawitter formed the company we now know as **KRK Systems**. Over a decade (and many success stories) later, KRK is recognized almost universally as a major force in the studio world. And the new **KRK V8** powered studio monitor (\$1249 list/pair) is the absolute culmination of a 12-year commitment to sophisticated engineering, combined with exhaustive listening tests.



The V8 is the first in a new series of ultra high performance, active near field monitors, and its unique design sets a lofty new standard of performance in its price range. Other manufacturers typically use only one amplifier with a standard passive crossover in speakers at this price point. The V8 uses separate power amps for the high and low frequencies, with a true electronic crossover. This means you get the benefits of an active — not just powered — monitor. What's more, the amp's power (130 watts for the lows, 70 watts for the highs) and frequency response (47Hz to 23kHz plus/minus 2dB) is specifically tailored to each speaker element and each driver is protected by its own specific circuitry.

Phase coherence is a term much used in the audio world. The V8's electronic crossover ensures that there is much less phase error and is also used to flatten the speaker's EQ, which improves the total system linearity and phase response. When using the V8, the speaker physically disappears, and the sound stage comes together right in front of the listener. This special imaging not only works in stereo, but also for critical surround sound applications. The V8's 8-inch Kevlar woofer is much stronger than paper and allows for faster transient response, and it doesn't have the audio band resonance problems of other traditional speakers. This special woofer, combined with KRK's active electronics, gives the V8 a low frequency linearity that's unmatched by other speakers of this size and price.

As you'd expect from such well-designed monitors, this 38 pound (each) speaker comes standard with full video shielding, making it perfect for broadcast and video post production facilities, as well as with DAWs like Pro Tools. So stick these babies right next to your monitor — no problem.

Need more information? Want to own a pair of V8s or outfit an entire surround system? Just call your Sweetwater Sales Engineer for full details and your special low pricing.

VINTAGE VOLTAGE

Marshall AMPLIFICATION



Now that Sweetwater is stocking a wide range of the best guitars in the world, it only makes sense to have some great guitar amps to go along with them. And in the amp world, few names command as much respect as **Marshall**.

It's easy to picture some of rock's biggest stars on stage, backed by a solid wall of Marshalls: The Who, Cream, Hendrix, Allman Brothers, to name a few. The good news is you don't have to be a rock legend any more to own one! Prices for Marshall amps begin at a modest \$199, but if you have the budget (and a huge venue you need to fill with sound), the sky's the limit.

Let's start with two reissues of their most popular valve amps. The **1959SLP** 100 Watt Super Lead Plexiglas head (\$1499 list) has been in production since the late 1960s. Many tone gurus regard as them as the finest examples of Marshall engineering. So the company went out and found two killer examples — amps that are packed with tone for days and a rich velvet-like overdrive to die for. These heads were turned over to the current R&D experts and they came back with a reissue that was so good, nobody could tell the difference.

Though the 50 watt **1987X** (\$1149 list) shares the same front and rear panel features of its big brother, the 1959SLP, it does have its own distinct personality. Sweet, warm singing tones are packed into every nook and cranny, and the 1987X also has fittings and hardware as true to the originals as humanly possible for an authentic Marshall "vintage" look and sound. If you need a vintage-style speaker cabinet, you can choose from the **1960AX** (angled front — \$1149 list) or **1960BX** (straight front — \$1149 list) 4x12 classic cabinets, both of which house faithful reissue Celestion "Greenback" classic 25-watt speakers and vintage-style vinyl covering with "old look" checked grille cloth. One look and your audience will know exactly where you're coming from.

For those of you who don't need to play at ear-shattering levels, may we suggest the 60-watt, dual-channel **JCM600-Series** Valve amps, which include the **JCM600** head (\$1049 list), the **JCM601** Combo (with one 12" Celestion Heritage speaker — \$1149 list) and the **JCM602** combo (with two 12" Celestions — \$1249 list). All three amps sport a specially wound heavy duty transformer that ensures each amp can scream, even at modest listening levels. Great for small clubs and in the studio. The JCM600 head can be played through any Marshall cabinet up to the full size Marshall 4x12.

When you need a cabinet that can take a real sonic beating and come back for more, Marshall offers the **1960A** angled cabinet (\$939 list) and **1960B** straight base cabinet (\$939 list), both equipped with 4x12 Celestions and a 300 watt power handling capacity. Designed in cooperation with Pete Townshend of The Who (he knows about LOUD!), you can bet these cabinets will deliver sound that can fill most any size venue.

Here's an amp that combines Marshall looks and sound with modern technology. You might think it just couldn't be done, but it has. Enter the **VS100R** **Valvestate Combo** (\$789 list) and V100H amp head (\$739 list). These are the first amps ever in their respective price ranges to offer three footswitchable channels and a tube-driven preamp to ensure a heaping dose of Marshall valve tones in all modes, giving you everything from clear to classic crunch (including that vital scooped midrange sound if you need it). But this amp runs through a Marshall-designed power amp that can deliver valve tones without

the need for expensive tubes. Impossible? Just crank one up and listen.

Here at Sweetwater we have these great Marshall amps and many others in stock, and your Sweetwater Sales Engineer can tell you all about them with a simple phone call — as well as giving you your special low Sweetwater pricing on a Marshall amp of your own.

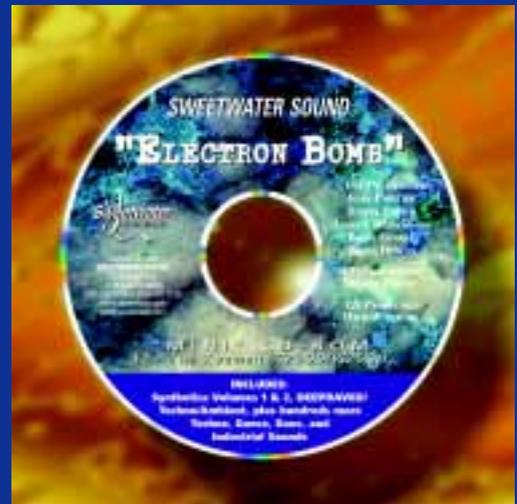


SOUNDWARE SCENE

By Daniel Fisher, Director of Soundware Engineering

Once again it's Summer NAMM time and, as always, we'll be bringing back lots of reports about the latest and greatest equipment and software (which you'll see next issue). As you'd expect, Sweetwater's Soundware Development Facility also has some new products to reveal at the show.

In the last issue of Sweet Notes, we announced the release of our **Young Chang "Mini" CD-ROM** for the K2000/K2500, which features our best 16 meg and 13 meg Stereo Virtual Grand Pianos. It even includes an 8 meg Mono Virtual Piano for your mono PA gigs, all for the outstanding (and very "Mini") price of only \$99. Get your copy today and start playing piano for real.



But as exciting as our Young Chang CD-ROM is, the real excitement will come from the Electron Bomb we're bringing to NAMM. No, we're not going to terrorize the NAMM Show, although that might make an interesting movie plot — sort of like "Spinal Tap" meets "Die Hard 3!" It's Sweetwater's latest "Mini" CD-ROM for the K2000/K2500 which was designed especially for the Techno/Dance/Rave/Industrial/Ambient crowd.

The **Electron Bomb "Mini" CD-ROM** (\$99) features VAST programming from many of the top Kurzweil programmers including Andrew Schlesinger, Gary Phillips, Brian Cowell, and Bruce Duncan (*Don't forget Daniel Fisher -ed.*). Inside you'll find the highly-rated 100 **Synthetica Volume 1** programs (regularly \$39) as well as the latest **Synthetica Volume 2** for Contemporary ROM (also \$39). You can "rave-on" with the 100 **DEEPAVED** Programs (\$39) and push the limit with our 100 **Techno/Ambient** programs (again \$39). As if that weren't enough to fill your tracks, we've also included many hundreds of Bonus Industrial/Techno Programs as well as Demo files of our entire Sweetwater Library. All this (and believe it or not, even more) for only \$99! Get your hands on the Electron Bomb today and welcome your Kurzweil into the 21st Century.

Well it's a short column this time since we're preparing for NAMM, but I'll be back next issue with lots of interesting news.

WE HAVE ALL THE HOTTEST PRODUCTS FROM ALL MAJOR MANUFACTURERS . . . IN STOCK!

NEW GEAR FROM T.C. ELECTRONIC

— Continued from Page 3

5-band Compressor, Limiter, Expander, and more, all applicable simultaneously. The DBMAX also includes T.C.'s unique Wizard Program Assist function enabling easy identification of the best preset by means of answering

soft limiter and T.C.'s own proprietary Digital Radiance Generator.

Also just released is the T.C. **Unity Signal Processing Engine** (\$1195 list) for the **Yamaha 02R** Digital Mixer. Fact: T.C.'s M5000 and M2000 are two of the world's best reverb and effects devices. Fact: The 02R is a powerful, great-sounding digital mixer. And now, with the introduction of Unity, you can achieve the convenience of seamless integration between those stunning T.C. reverbs, effects and an 02R. The mixer's automation will even control the Unity via a 24-bit resolution interface.

How does this work? Simple: All you have to do is plug the Unity card into one of the four 02R expansion slots available on the 02R and you're ready to go. Now you can run any two effects at the same time with all the parameters under

total recall by the mixer's automation system: Reverb, chorus, pitch shifting, delay, phaser and many more. The Unity can be ordered with or without an 8 channel AES/EBU digital I/O connector. Listen, if you own an 02R, then you've just got to have a Unity!

For more information on these superior T.C. Electronic products and your special low Sweetwater pricing, pick up the phone now and talk to your friendly, knowledgeable Sales Engineer.



Need a superb mic preamp and 24-bit A/D converter all in one? Introducing TC's new Gold Channel

four questions about the material to be processed. T.C. has worked in close cooperation with the chief engineers at broadcast facilities worldwide to develop this first in an array of dedicated broadcast products.

Also new is the **Gold Channel**, the digitally enhanced mic preamplifier (\$2495 list). Whoa! Did we say digitally enhanced? That's right, the Gold Channel not only provides you with two superior, high end mic preamps, but also the highest resolution 24-bit A/D converters (44.1–48kHz) and internal 96kHz digital signal processing simultaneously. You can even use this unit to process your audio signal after it's recorded via the digital or line inputs.

Included with this impressive unit is true +48 volt phantom power, M/S (Mid/Side) encoding and decoding, and a complete set of user presets, so you can save your current set up and come back to it two days or two years from now. There's even an intuitive dual channel user interface and high resolution metering for ease of operation. Gold Channel also offers a wealth of DSP tools (at 96kHz) like expander/gate, compressor, EQ, de-esser, dithering,



TC's Unity delivers stunning effects to 02R owners

ALESIS M20

— Continued from Page 3 blown professional time code applications. That means time code, MIDI, word clock, and video reference in and out jacks are all built into the back panel, so you don't need to purchase any optional cards or external boxes for a complete chase-lock system. For location recording and post-production applications, a new read/write SMPTE/EBU time code track allows discontinuous time code to be printed onto a special subcode area of the tape without using up a track, so different sections of tape can be uniquely identified without having to manually change offsets from the built-in sample accurate ABS time code of the ADAT format.

The M20 has a built-in SMPTE/EBU time code reader/generator that can operate at any time code frame rate (30 FPS and 29.97 FPS drop or non-drop, 25 FPS, and 24 FPS) and can synchronize at any of the industry-standard sample rates (48 or 44.1kHz, plus pull-up and pull-down rates). With this internal chase-lock synchronizer, you need only a set of XLR cables to synchronize the Alesis M20 directly to time code. You can also use the M20's MIDI IN jack to receive MIDI Machine Control (MMC) commands from a sequencer or other controller without external converter boxes.

Those of you who need all these features (and there are many others we just don't have space to mention) and the stunning fidelity of a 20-bit system will want to call their Sweetwater Sales Engineer immediately for special pricing or more detailed information.

EVENT'S DSP•FX VIRTUAL PACK

— Continued from Page 2 In another significant development, **Event Electronics** announced a newly-established strategic alliance with **DSP•FX** (formerly known as Power Technology), a premier developer of real-time DirectX audio processing plug-ins. The goal of this partnership is to bring world-class audio processing tools to the PC-DAW market with greater speed and regularity and at lower prices than ever before. The first product to be released under the new joint venture is the **DSP•FX Virtual Pack** (\$299 list), a suite of eight studio-quality audio tools, including reverb, multiband delay, multiband parametric EQ, multi-element chorus, analog tape flange, tremolo, pitch-shift, and autopan.

The Virtual Pack plug-ins are native-processing based, running entirely on the host CPU without the need of additional hardware. A combination of efficient algorithm design and proprietary Pentium-based technology results in plug-ins requiring far less CPU overhead than traditional plug-ins. The reverb algorithm, for example, uses approximately 16% of

the available host CPU versus the typical 66% (based on a 200MHz Pentium), so users can run many more DSP•FX plug-ins simultaneously.

The Virtual Pack algorithms themselves are bit-for-bit ports of the algorithms in DSP•FX's award-

winning hardware-based system, a system that has consistently garnered praise from both users and the international music press. A significant contributor to the overall sonic performance is the 32-bit floating-point arithmetic used in the algorithms which yields an extremely

wide dynamic range, making it nearly impossible to encounter overload distortion when adding even extreme amounts of equalization. The benefits are most clearly heard in the tails of the reverbs. In the 32-bit floating-point system, even the lowest level signal is represented by a full 32-bit number.

Want to know more about Virtual Pack? Smart move. An even smarter move is to pick up the phone and call your Sweetwater Sales Engineer for complete information and special low pricing!



SWEETWATER PROTECTS YOU WITH THE INDUSTRY'S FIRST AND BEST 100% BEST VALUE GUARANTEE!

By Jim Miller

If I were an action hero — you know, someone like Arnold or Mel or Bruce — I would have survived a helicopter crash and several gunshot wounds and still been tough enough to beat up the dastardly villain in a fair fight and sweep the leading lady off her feet . . . and all before lunchtime.

Not being an action hero, I'm sitting here wondering if it's okay to take some more Tylenol. See, I'm typing this with one hand because my left arm is in a cast up to the elbow. That tends to happen when you have a badly broken wrist. It hurts, but what hurts most is not being able to pick up a guitar or sit at my K2500 and play. Poor, poor me.

Still, despite the pain and inconvenience and frustration, I feel lucky because in three or four weeks the cast will be off and I can get back to what I love most, which is making music. Honestly, I can't believe all the great gear in my studio right now. A dozen years ago, in my wildest dreams, I would never have imagined that I would own all this fantastic equipment (well, the bank owns it, but they let me use it). I even have a CD recorder . . . incredible!

This injury has opened my eyes up again and given me a new appreciation for my studio, my family and my friends. I hope none of you breaks a limb or even catches a cold. But I also hope that, like me, you'll take a look at your own studio or stage rig and see how wonderful it is to have all this music-making potential available.

Okay, that's the end of my little motivational speech. Let's talk about cool new gear. First off, a couple of items from those nice folks at **Earthworks**. Already rightly famous for their critically-acclaimed TC30K and TC40K omnidirectional microphones, the company decided it was time to put their talents to work creating a cardioid condenser mic that was the equal of their omnis. The end result is the **Z30X** (\$750 list) which the company calls an enhanced cardioid. It features a near ruler flat frequency response from 30Hz (at about 15cm) right out to 30kHz.

I've had the good fortune to have one on hand for evaluation for over a month now, and I can tell you from experience that if you ever thought about owning one of the company's TC-Series mics, but just "couldn't go omni," you're going to want to get yourself a Z30X (or two). It has that unusual laser weaponry look of all the Earthworks mics, plus an almost unbelievably uncolored, detailed sound. It also has the outstanding imaging characteristics of the TC-Series with the added benefit of some enhanced bass when close-miking, which is typical of cardioids.

While I haven't used the mic in as many sessions as I would have liked (mostly due to that broken wrist), I did have the opportunity to use it to

sample a particularly nice Guild F50 flattop acoustic guitar. I did a side-by-side comparison with a TC40K, and I'd be hard pressed to say which sounded better; both were amazingly open and richly detailed. I also did some multi-mic samples of a nice Tama drum kit, placing two TC40Ks about four feet out, with the Z30X as my close mic. Since the mic can handle SPLs up to 145dB (without a pad), I didn't have to worry about any distortion. I particularly liked the transients on the toms and the snappiness of the Tama piccolo snare.

What's more, the Z30X does a great job on vocals, something I would never use the TC40Ks on. I won't mention the names of the mics I compared it to, but the Z30X consistently held its own. Granted, some performers and engineers like a vocal mic with somewhat more presence, even if that's not truly accurate (let's face it, we've all grown accustomed to slightly hyped-up vocals), but the mic is so clean, you can easily add a bit of EQ to compensate. As a bonus, the mic is virtually impervious to handling noise.

Now if you are a fanatic about your mics and love accurate sound,

you'll want a mic preamp that won't compromise your audio signal. Some mic preamps, including many that cost thousands of dollars, sound fantastic, but they are not, by definition, accurate. Like certain mics, these top mic pres tend to color the sound, though in a very musical manner. Sometimes that's exactly what you want (let's face it, how much of today's music could ever be considered "uncolored"). But in designing the LAB-Series mic preamps, Earthworks took their audio purist approach to the extreme and designed a unit that is as flat and truly uncolored as possible using current technology.

Just look for a second at the specs of the **LAB101** Mono and **LAB102** Stereo mic preamps. How many preamps (or any other audio gear) can boast a frequency response of 2Hz to 100kHz -0.1dB? Also contributing significantly to the accuracy is a lightning fast rise time of 0.25nsec (trust me, that's fast!). What's more, the LAB101 and 102 are incredibly quiet, even by today's standards, and actually become quieter at higher gain settings. Having auditioned a LAB102 (\$1500 list) recently, I can tell you that this claim is absolutely true.

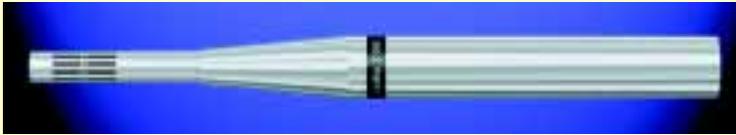
The gain of both models is arranged in 6 dB steps from 0 to 66dB. Each channel has a single XLR input to which 48 Volt phantom power can be applied via a front panel switch, plus phase reversal and (here's something different — and very useful) standby switches for each channel. Outputs are one XLR jack and one 1/4" TRS for each channel. And that's it — no EQ, no tubes, no big meters, no unneeded bells and whistles, and absolutely no unwanted coloration of the sound.

Sweetwater has the Z30X and the LAB101 and 102 preamps in stock right now, so be sure to call your Sales Engineer for additional details and special pricing if you're in the market for amazingly accurate, transparent sound. Doing live two-channel recording direct to DAT? This might just be the setup to have.

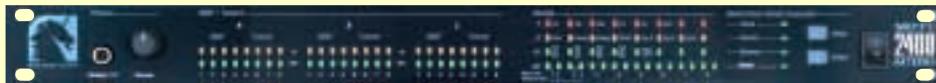
The other big news right now is that by the time you read this, the **Mark of the Unicorn 2408** Hard Disk Recording System will most likely be shipping. You read about it last issue, and at a list price of just \$995, you know this product is really hot! In fact, a few customers actually burned their fingers on last issue's cover . . . just kidding, but interest has been almost overwhelming and our list of back orders is growing daily. I mean, who isn't looking for a computer-based hard disk recording system that gives you 24 ins and outs with eight analog inputs (each

with 20-bit 64x oversampling converters) and facilities for linking up with just about any modular multitrack (ADAT, DA-88, etc) and more features than I could possibly list here? What's more, the 2408 runs with either a Mac or PC, so you're getting a unit that's enormously versatile and allows you to grow your system to up to 72 ins and outs and as many channels as your particular computer allows. Sound interesting? Call your Sales Engineer for all the heart-pounding details and your special pricing.

Just one final brief item. This issue marks my seventh anniversary writing this column for *Sweet Notes*. That's seven years of great memories and wonderful friends that I've been lucky enough to make at Sweetwater. So thank you, Chuck and Brenda and thanks to all of you great folks at Sweetwater who always make me feel so welcome when I come by for a visit and who make writing this column (and the other stories I sometimes write for *Sweet Notes*) such a pleasure. It's been a wonderful ride so far, and I look forward to the next seven years. Who can even begin to imagine what amazing equipment we'll be talking about by then?



Up top, the new Earthworks Z30X cardioid mic and below, the super-quiet LAB102 mic preamp



Mark of the Unicorn's 2408: A sophisticated hard disk recording system with a list price of just \$995 — and it's in stock!



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