



# Sweetwater® SweetNotes

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## 21st Century Guitar

There's nothing more analog than an electric guitar. It's literally wood, strings, and a magnet or two. However, Gibson — one of the most-respected American guitar manufacturers — is out to change all that with the new digital HD.6X-PRO Guitar System. This high-definition multi-channel digital audio system could be the most revolutionary leap forward in guitar technology of the past 50 years!

We know guitarists can be hardcore traditionalists — we admit we feel that way too! If it doesn't run on tubes, we get suspicious. But rest assured the HD.6X-PRO is a real Les Paul through and through. It's got classic Gibson humbuckers for true Les Paul tone, as well as a hand-oiled mahogany neck, low-profile frets, and a slightly wider fingerboard for great playability. Crank your amp, plug it in, and it's a screaming Les Paul all day long. But the HD.6X-PRO also packs some serious technology that can take your playing to places you've never imagined.

Over the past several years, Gibson has been perfecting new ways to move electrical signals. The result is MaGIC (Media-accelerated Global Information Carrier) — Ethernet with patented Gibson technology that can carry up to 32 bidirectional channels of audio over a single cable. The MaGIC digital system is the brain of the HD.6X-PRO, and it captures your playing with no noise, hum, or degradation. Plug the Ethernet cable into the HD.6X-PRO and what comes out is pure tone.



**Gibson**

— continued on page 15

## CAKEWALK SONAR 6

cakewalk

Cakewalk has been there from the very beginning — anyone remember Twelve Tone Systems and their groundbreaking software? Since 1987 the company has been pushing the limits of sequencers. Now with 64-bit processing and **SONAR 6**, Cakewalk opens a whole new frontier.

### Thinking Inside One Box

By focusing on the Windows platform, Cakewalk has been able to optimize their software to take full advantage of the CPU — including the latest dual-core processors. Imagine a project with 150 tracks, 17 real-time virtual instruments, 42 real-time effects plug-ins, and full-screen digital video playback, all running simultaneously — in just one dual-core PC. That's what SONAR 6 is all about.

SONAR 6 is also about sound quality. Any processing applied to digital audio means an increase in word length. In some systems, word lengths exceeding CPU limits can be truncated or dithered, resulting in a potential loss of audio quality and fine details. SONAR's 64-bit double precision provides greater word length coupled with a clean signal path — so your signals will be represented with as much resolution as possible, equating to excellent audio quality. Audio time stretching is also said to experience a marked sonic improvement in SONAR 6. Going beyond 64-bit audio, SONAR also supports 64-bit computer data paths, taking full advantage of modern computer capabilities and operating systems.



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# from the editor



**Mitch Gallagher**  
Editorial Director

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## Cross-pollinization

I spent this past weekend up in Interlochen, Michigan attending the Interlochen art school's first summer Guitar Institute program. Spending a few days taking classes and seminars and attending nightly concerts was wonderful. On Saturday, I had the opportunity to perform in a classical guitar master class with William Kanengiser, a superb classical guitarist and 1/4th of the renowned L.A. Guitar Quartet. Being critiqued and educated by a virtuoso like Kanengiser was truly a treat, and gave me plenty of material to work on in my practice room!

"But I thought you were a music technology/recording guy..." It's true, my books and many of my magazine articles are about technology, computers, and recording, but I have also written for "musician"-oriented magazines such as *Guitar Player*, *Acoustic Guitar*, and *Performing Songwriter*. (And don't forget that Sweetwater carries an incredible range of guitars, basses, keyboards, and electronic drums — we definitely support musicians!) But I spent much of my musical life as a guitar player, and have been making a real effort for the past year to get back to my roots as a player.

The cool thing is I believe this has resulted in improvement in my recording skills. First of all, my ear is more finely attuned to what music sounds like acoustically in a room — not just as a listener, but as a performer. It's a different perspective that I find changes my approach. Second, I can relate more closely to the challenges performers are facing when I record them — the nerves, the focus required, how important mood and environment are, and more. Third, having a musician's grasp of what an instrument sounds like, what its capabilities are, and how it functions is a big bonus. I find it helps me with mic placement, positioning the musician in the room when tracking, and placing the track when mixing.

If you're an engineer or producer who doesn't play an instrument, I highly recommend giving it a try. You don't have to become a virtuoso or spend much time playing — though I'll warn you that you may become hooked! The idea is to experience what a musician does and gain a new perspective. I think you'll find it valuable.

## Lexicon Alpha, Lambda, and Omega

For some, the words "alpha," "lambda," and "omega" conjure images of frat brothers screaming "food fight!" But in the case of Lexicon — whose legacy in the audio fraternity looms large — Alpha, Lambda, and Omega identify the members of a family of high-quality digital audio interfaces that will elevate any computer-based studio to new heights of flexibility and sonic purity.

**lexicon**

### Alpha

Alpha Studio, the entry-level Lexicon desktop recording studio, is a bus-powered 2 x 2 USB interface. The Alpha features one XLR microphone input, two TRS line inputs, and two TRS and RCA line outs. Alpha's front panel also features an ultra high-impedance instrument input. In action, the bus-powered Alpha Studio can stream two channels of 44.1 or 48kHz audio at either 16- or 24-bit resolution and record two tracks at once from two input sources.

### Lambda

Let's move on to the Lambda Studio. Based on the Omega Studio (below), the Lambda is a USB interface that features MIDI I/O, two XLR mic preamps with TRS inserts, an ultra high-Z 1/4" instrument input, and switchable 48-volt phantom power. Lambda can stream four channels of 44.1 or 48kHz audio at 16- or 24-bit resolution. You can record two tracks at once as well as MIDI.

### Omega

The Omega Studio stands apart from your average I/O box. Omega is designed and built around the same concept as a large-format recording console (only smaller). An 8-input, 2-output USB interface, its two preamps are the acclaimed ultra low-noise Silver Series by dbx. The Omega provides 48-volt phantom power, TRS inserts, S/PDIF I/O, high-impedance instrument input, MIDI I/O, and complete metering and monitoring functions. You can record up to four simultaneous channels via ultra-transparent 24-bit A/D converters, and interface with unbalanced or balanced equipment.

### A Pantheon of Sound

To give your recordings that legendary "Lexicon Sound," all three models include the Lexicon Pantheon VST Reverb plug-in. Fulfilling the promise of professional desktop recording, the Alpha, Lambda, and Omega Studios all ship with 48-track Cubase LE, but you can use any recording software you prefer. Best of all, zero-latency monitoring for delay-free overdubs is supported with all three interfaces. Call your Sales Engineer now for more info!



- >> Lexicon Omega • Sweetwater price \$299.97 • [www.sweetwater.com/Omega](http://www.sweetwater.com/Omega)
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## EXCLUSIVE SWEETWATER FIRST LOOK: Mbox2 Goes Pro!

By Mitch Gallagher

Digidesign's Mbox and Mbox2 have proven tremendously popular — not only with “entry-level” and “home” users (whatever those terms mean) but also with high-end professionals, who use the portable interfaces for editing tracks on location and on airplanes, for tracking smaller sessions, for mixing on the run, and for working on projects from home or project studios, then taking those projects into full-on Pro Tools TDM-based studios for the finishing touches.

A big part of the appeal has always been the inclusion of Digidesign's powerful Pro Tools LE software with the interfaces. Not only does Pro Tools LE give you as much tracking, editing, processing, and mixing power as you need to do even large projects, but you can easily open up the Pro Tools LE session in a high-end Pro Tools TDM system with all its settings and plug-ins intact.

Now, with the FireWire-based **Mbox2 Pro**, Pro Tools LE just got even cooler! Just as the **Mbox2** built on the original Mbox, the Mbox2 Pro increases on the capabilities of the Mbox2. (The Mbox2 remains available.) The result is an even more powerful Pro Tools LE interface that works with Mac (including the new Intel-based models) and Windows XP computers. It ships with Pro Tools LE, and includes a variety of useful plug-ins. Also included is the Ignition Pack, which bundles Ableton Live Lite, Propellerhead Reason Adapted, FXpansion BFD Lite, Celemony Melodyne Uno Essential, IK Multimedia Samplitude 2 SE, Amplitude LE, and Tracks EQ, an instructional DVD, a REX file CD, and much more. It's also available as the Mbox2 Pro Factory, which adds five more great plug-ins. For additional power, purchase the Music Production Toolkit, which takes PT LE up to 48 mono or stereo tracks, adds the multitrack Beat Detective, even more high-end plug-ins, and much more.

### What's New?

Through a great deal of pitiful whining and pleading, I was able to get my hands on a pre-release Mbox2 Pro for a few days, and to take it to my studio for a quick run-through. Check out the accompanying photos and their captions for a rundown on all the inputs and outputs and controls that the Mbox2 Pro has to offer. The big things include the ability to use up to six simultaneous inputs (analog+digital ins) and eight simultaneous outputs (analog+digital outs). There are new RCA “phono” inputs with a ground lug, perfect for DJs and remixers. Dual headphone outputs increase flexibility, in fact, you can create two completely separate independent headphone mixes if you want to — a great feature! Front-panel DI inputs as well as dedicated rear-panel line outputs add convenience.

There's no question that the Mbox2 Pro takes the Mbox concept to an entirely new level. With six simultaneous inputs, there's increased flexibility for tracking on location or in the studio, and the eight outputs plus dedicated monitor outs allow you to use external hardware or to create additional cue mixes for performers. I like that the form-factor has remained compact; the Mbox2 Pro fit nicely into my laptop bag alongside my new MacBook — what a cool portable recording rig! I've been doing a lot of location work lately recording classical guitar, and I can see where this would be a great interface to take with my laptop to the site for capturing performances, then bringing the tracks back to my full Pro Tools HD Accel rig for final post-production. (Though, really, with the power that Pro Tools LE offers, there's little reason not to finish up the production simply using the laptop, Pro Tools LE, and the Mbox2 Pro.)

With the Mbox2 Pro, Digidesign has taken the concept of a portable, compact Pro Tools LE rig to even greater heights. You'll find that it's a powerful box that offers a great deal of flexibility and capability. The Mbox2 Pro should be shipping by the time you read this. Give your Sales Engineer a call for all the details. You're going to like this one.

>>> Digidesign MBox2ProFact • Sweetwater price \$799.97 • [www.sweetwater.com/MBox2ProFact](http://www.sweetwater.com/MBox2ProFact)  
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*The clean and streamlined front panel of the Mbox2 Pro offers plenty of up-front hands-on control. Starting from the left, there are indicators for power, external clock sync, and MIDI activity. Two 1/4-inch headphone jacks follow, each with its own dedicated volume knob — you can create two independent headphone mixes using the 3/4 button — after which comes the monitor output volume knob. Next up is the stereo Aux Input control, with accompanying peak LED and switch/indicator for phono operation. On the right are two inputs, each with a level control, peak LED indicator, and switches for selecting either the front-panel 1/4-inch DI jacks or the rear-panel mic-/line-level connections.*



*Flipping the Mbox 2 Pro around to check out the back panel, we find a plethora of input/output options. Starting from the left we have two 1/4-inch/XLR combo mic/line inputs, then the stereo Aux Input, which offers a choice of 1/4-inch line inputs or RCA inputs for phono operation, and features a grounding lug for use with turntables. Stereo 1/4-inch monitor outputs appear next, along with four 1/4-inch line outputs. S/PDIF digital I/O on coaxial connections follows, along with line outs 5/6 (which share one jack), a footswitch jack, MIDI in and out (with time-stamping), and two FireWire ports for connecting the unit to your computer and daisy-chaining additional FireWire gear. Of special note are the word clock input and output on BNC connectors, for synchronizing the Mbox2 Pro to the rest of your digital gear. The back panel is rounded out with a connector for the external power supply.*



# Apple Mac Pro

Apple shocked the world when they parted ways with PowerPC processors and began shipping computers with Intel CPUs. Now the **Mac Pro** completes the transition to Intel-based processors by providing a completely professional desktop-based computer solution with performance running up to twice as fast as a PowerPC G5 Quad, and offering a plethora of expansion options and connectivity — all of which makes it ideal as the centerpiece for today's high-tech DAW-/virtual instrument-based recording studio.

## Serious Horsepower

Each of the Mac Pro's Intel Xeon dual-core processors offer incredible speed — up to 3GHz. Because it's more efficient, the Mac Pro doesn't get as warm and therefore doesn't work its fans as hard to keep cool, so there's less noise pollution in the studio. There's tremendous muscle under the Mac Pro's hood — this is one powerful beast, capable of handling almost any task you might want to throw at it.

## Storage Galore!

The Mac Pro ships standard with an internal 250GB hard drive and can hold up to four internal 500GB hard drives for 2TB of instantly accessible storage. Data can actually be transferred internally faster than with a FireWire or USB drive due to the robustness of the SATA hard drive system. You can upgrade the Mac Pro's RAM up to 16GB — more than enough for most audio or video production applications.

## Making a Connection

The Mac Pro connects to a wide range of peripherals — including hard drives, audio/MIDI interfaces, digital cameras, and more, using two FireWire 800, two FireWire 400, five USB 2.0 and two USB 1.1 ports, plus it has three PCIe slots. For quick and easy audio hookup, there are Toslink audio inputs and outputs, which double as analog ins and outs. If you need to connect it to your computer, the Mac Pro can handle it.

There's lots more to discuss with regard to the Mac Pro. Call your Sales Engineer now to get complete information about everything the amazing Apple Mac Pro can do for you and your music!

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>> Apple MacPro30 • Sweetwater price \$3499.00 • [www.sweetwater.com/macpro30](http://www.sweetwater.com/macpro30)

# Hot Fusion

By Daniel Fisher

*[Ed. Note — Long-time Sweetwater customers will remember soundware designer/synthesis expert Daniel Fisher from his previous tour of duty here. We're happy to welcome him back to Sweetwater!]*

Hi, everyone. It's great to be back at Sweetwater again. (For the past five years, I was an associate professor of music synthesis at Berklee College in Boston.)

One of my favorite things about being part of the Sweetwater team is getting to dig deeply into almost every synthesizer and plug-in that comes out.

My first project has involved the **Fusion 6HD** and **8HD**, Alesis' flagship workstations, with 61 synth-weighted and 88 fully weighted keys respectively. When Alesis says "workstation" they really mean it. Fusion has it all: 120MB of sample waveform playback, up to 272 simultaneous voices, high-quality sampling and editing (64MB RAM upgradeable to 192MB), a 64-layer drum module, an analog modeling synth with three oscillators, eight envelopes, and eight LFOs, a full-blown FM synthesizer with six oscillators, wind and reed physical modeling synthesis, and a powerful tempo-driven arpeggiator with phrases and drum machine playback. One more thing: It can record eight simultaneous digital audio tracks to play along with 32-track onboard sequences! Sounds, samples, songs, and digital audio tracks are stored on the built-in 80GB hard drive, or on CompactFlash cards. You can even connect the Fusion to your computer for storage and to download new samples and programs.

So what was my project? I've been busy creating an amazing collection of exclusive sounds for the Fusion keyboards drawn from Sweetwater's huge library of award-winning guitars, basses, drums, strings, and other sounds — we call it the **FusionValue Pack**, and we're including it completely free of charge with every Fusion 6HD and Fusion 8HD. With this brand-new collection of sounds loaded into your Fusion, you'll have everything you need to create complete audio productions right at your fingertips. I think you'll agree that these are some of the most vibrant, realistic sounds you can find on any keyboard — and did I mention we're including the entire set of sounds for free?

## Geek Alert!

I'd like to talk to the synthesists out there who love to tweak and are never satisfied with just the presets. The Fusion's "Coldfire" processor is a joy to program. You can add and delete modulation connections at will. Each mod can have its own unique curve, smoothing, sample and hold, and if that's still not enough, you can even make your own custom table with up to 16 points.

But even if you don't program you'll have hundreds of onboard and downloadable sounds to choose from, plus the exciting FusionValue Pack. Call your Sales Engineer to learn more!

Fusion 6HD



**ALESIS**

>> Alesis Fusion8HD • Sweetwater price \$1499.97 • [www.sweetwater.com/fusion8hd](http://www.sweetwater.com/fusion8hd)  
>> Alesis Fusion6HD • Sweetwater price \$999.97 • [www.sweetwater.com/fusion6hd](http://www.sweetwater.com/fusion6hd)



# Sweetwater Welcomes RCF

In our ongoing mission to find the most effective music-making equipment for our customers, we've added speaker manufacturer RCF to our distinguished list of vendors. We make it our business to find gear for our customers that we would want to use ourselves, and RCF definitely fits the bill. Case in point: Chuck, our founder and president, regularly plays out on weekends. This gives him the opportunity to test gear in real world settings. We're happy to report he decided to give the RCF **ART 322-A** powered PA speakers a whirl, and now that's all he uses!

## The 411 on RCF

RCF has over 50 years experience designing innovative speaker systems — some of the most popular “molded plastic” PA speakers from other manufacturers came from the brains at RCF. (We won't mention any names, but you'd recognize the grey-black plastic cabinets anywhere.)

## Sims

RCF uses computer simulation software to study the interaction of system components. These simulations identify magnetic flux patterns, voice coil dynamics, suspension linearity, horn dispersion, amplifier thermal behavior, and more. As a result, RCF has developed a number of proprietary transducer technologies.

## Just a TAED More Power

RCF's True Active Extended Dynamic (TAED) amplifier technology features a new “Double Wave” Limiting System that along with providing improved transducer protection, guarantees the full use of the true dynamic range of the power amplifier. By increasing the effective dynamic range of a loudspeaker system, you get improved sonic accuracy, vocal clarity, depth, and resolution.

## Inside/Out

Another RCF innovation is their unique inside/outside voice coil, which



doubles the dissipation surface and adhesion area of the “former” (the part of the voice coil the windings are wrapped on). This allows greater power handling by virtue of more coil wrappings, and improved thermal immunity. The top of the former is bonded directly to the titanium diaphragm resulting in a direct drive configuration. Direct drive provides optimal energy transfer between the voice coil and dome assembly, smooth extended frequency response beyond 10kHz, reduced break-up modes, and lower distortion. RCF precision compression drivers and woofers are equipped with high-performance, lightweight neodymium magnets, which weigh less and improve high-frequency clarity.

## 322-A and 310-A

All that tech talk means one thing: Great sound, and lots of it! The ART310-A features a 10-inch woofer driven by 350 watts, while the ART322-A has a 12-inch woofer and 400 watts; both feature 50 watts pushing a neodymium/titanium dome tweeter. We're talking up to 128dB SPL with great dispersion. Each has EQ, phase alignment, limiting and protection, XLR mic- or line-level input, and polemount and fly capability. Compare these speakers to the competing models — you'll be as excited as we are!

## RCF: The Rules of Sound

In the final analysis, it's RCF's vast technical and practical experience that give RCF loudspeaker systems their amazingly clear, and thrilling sound. We can say from direct experience that you can turn the company motto (RCF: The Rules of Sound) inside out and it still applies: The Sound of RCF Rules.

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# Practicing with Guitar Rig

By Mitch Gallagher

Recently a coworker here at Sweetwater asked me to fill in for the guitar player in his church's worship band. I agreed, and was given chord charts and a CD containing the tunes we'd be playing. I listened to the CD, and realized this was going to be more than a “strum along with the charts” gig — the guitar played many of the signature parts for the songs.

No problem, I'd just sit down and learn the parts. Except that I'm lazy. I really didn't want to drag my amp out, plug everything in, move a chair over in front of the stereo, etc. — or put it all back when I was done. Then, a flash of inspiration — Native Instruments Guitar Rig 2!

Guitar Rig (GR) contains a component called “Tape Deck” that can record and play AIFF, MP3, and WAV files. All I'd have to do is plug my guitar into my computer, boot up GR, and start practicing. Here's how it works:

1. Prepare your audio files. I used iTunes to rip the CD into MP3 files.
2. Plug your guitar into your computer (I use the guitar input on my audio interface) and launch GR. Get your guitar sound happening.
3. If it's not already in the GR rack, add the Tape Deck module. You can set Tape Deck to play “At Input” (through GR's amp/effects) or “At Output” (straight to GR's output). Set it for “At Output.”
4. Drag an audio file onto Tape Deck. Push play.

>> Native Instruments GuitarRig2 • Sweetwater price \$499.97 [www.sweetwater.com/GuitarRig2](http://www.sweetwater.com/GuitarRig2)



## A FEW TIPS

- Tape Deck can transpose the audio file by half-steps and tune it to your guitar without changing the tempo, or change the tempo without changing the pitch.
- Tape Deck can loop part of the song if you want to isolate a lick or solo.
- If you come up with a great lick, just hit Record. Tape Deck will record your playing to hard disk.
- Load a drum loop for practicing rather than a metronome. GR even comes with samples and loops to get you started.

# Problem Solvers

At Summer NAMM 2006, Audio-Technica unveiled new additions to their Artist Series mics. This retooling of the Artist Series line involved conferring with audio professionals from both the performing and engineering camps concerning the problems they commonly encounter. The end result is innovative mics that offer fresh new approaches to issues engineers face on a daily basis.

One such mic is the **ATM250DE**, tailored for low-frequency instruments, especially kick drum. The “DE” stands for dual-element, which means the mic contains both dynamic and condenser capsules. The dynamic capsule sports a hypercardioid pattern to capture the attack of the beater and a neodymium element for quick transient response. The cardioid condenser capsule picks up the tonality of the shell with amazing detail.

The great thing about the ATM250DE is that it solves a common problem in the studio — phase cancellation due to multiple mics. It’s no secret that placing a dynamic mic up close and a condenser back a bit is a great way to capture huge sounds, but it can be difficult to get them placed without phase issues. By having two capsules perfectly phase-aligned, you get the benefits of a double-miked kick with none of the problems associated with numerous mics pointing at a single source. But don’t pigeonhole the ATM250DE as a one-trick pony. It also handles guitar cabinets or any other source where you want to capture a big sound with ease.

Another nifty addition to the Artist Series is the **ATM450**, a “pencil” condenser with a unique feature: side-address design — sound enters from the side, rather than the end of the mic. This opens up a world of placement options. From sneaking it in on a snare drum to unobtrusively miking a guitar cabinet, the small size and side-address style of the ATM450 keep it out of the way while capturing sounds with the quality that we’ve come to expect from A-T. The ATM450 can handle an impressive 152dB for even screaming loud sources.

Both of these mics offer unique approaches to solving studio issues. By tackling these problems with innovative approaches, A-T again shows that it is a major player in the microphone world, and intends to stay that way.



audio-technica

>> Audio-Technica ATM250DE • Sweetwater price \$299.97 • [www.sweetwater.com/ATM250DE](http://www.sweetwater.com/ATM250DE)  
>> Audio-Technica ATM450 • Sweetwater price \$219.97 • [www.sweetwater.com/ATM450](http://www.sweetwater.com/ATM450)

## Modern Vintage

Roland isn’t new to the synthesizer game. Since the early 1980s their synthesizers have graced countless recordings. Even if you can’t spot one on sight, you’ve undoubtedly heard them. Extending the lineage begun by the legendary JUNOs of years past, the **JUNO-G** is a synth for the 21st century.

The JUNO-G is one of the most powerful synthesizers at its price point, thanks to the fact that it uses the same processor found in Roland’s flagship Fantom-X as its sonic engine. Many of the onboard sounds were crafted specifically for the JUNO-G, and you can further expand your creative palette with optional SRX expansion cards. The JUNO-G even allows you to combine SRX patches with the onboard waveforms to create entirely new patches. With the vast selection of SRX boards available, the number of possible user-created sounds is mind-boggling.

Another feature that’s decidedly modern is the inclusion of the audio/MIDI recorder/sequencer. A pair of audio inputs on the back panel let you record up to four audio tracks from external sources such as guitar, bass, or vocals to complement the 16 MIDI tracks. The front panel of the JUNO-G provides five faders in the recording section for mixing the audio tracks. Once you’ve gotten your mix put together, output it to your computer via the USB port, and put on the finishing touches with the included Cakewalk SONAR LE software.

As if there wasn’t enough cool stuff packed into the JUNO-G, the user interface is easy to navigate. The keyboard is loaded with modulation options for summoning any kind of sound you desire. There are six sound modifier knobs and a pitch bend/modulation lever, as well as a D Beam controller, which uses an infrared beam of light to send various controller changes depending on the function selected. There’s almost no limit to what you can do sonically with the JUNO-G.

Naturally the JUNO-G has MIDI I/O, plus the USB port can transmit MIDI information. The included editor/librarian software handles importing and exporting WAV and AIFF files as well as patch data, also through the USB port.

To look at the JUNO-G you might suspect it’s a high-dollar vintage keyboard — it looks remarkably like its brothers from the past. But with its cutting edge sounds, onboard audio recording and editing, and slew of sound and modulation features, this is a truly modern synth at a reasonable price. Call your Sweetwater Sales Engineer to get the full story on this modern-day classic keyboard!



Roland

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# GUITAR 101: Pickups, Part Two

By Jim Miller

Back in the 1960s, when guitarists wanted to use an acoustic guitar on stage, the only option for amplifying one was using a mic or adding a magnetic pickup. The Gibson **J160E** model, which was owned by both George Harrison and John Lennon, is an early example. It could be played acoustically, but it also came with a single-coil pickup installed between the soundhole and the fingerboard. Plugged in, it did sound more like an acoustic, though amplifiers back then couldn't handle such a wide frequency response.

In the late 1960s, Ovation built a special 6-element, piezoelectric pickup into the guitar's bridge. This type of pickup uses crystals that generate an electrical signal when mechanically flexed. So when an Ovation guitar was strummed, the piezo elements would transform the vibrations into electricity. A small onboard preamp boosted the signal, which was generally plugged into the PA system. Thus was born the "electro-acoustic" guitar.

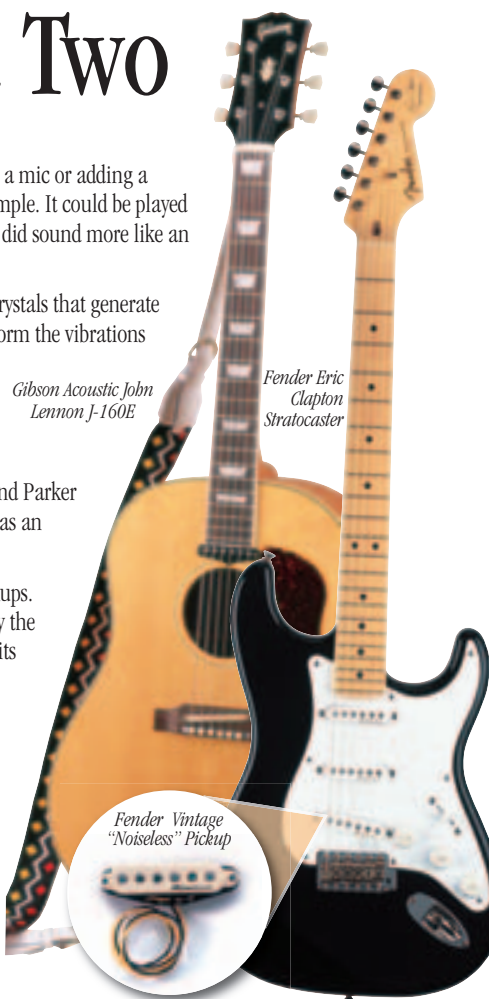
Piezos were installed into thousands of acoustic guitars so they could be played live on stage and sound like an acoustic. Eventually, manufacturers realized that piezos could also be added to electric guitars to produce extended frequency response that, when combined with an appropriate preamp, sounded very much like an acoustic. Brian Moore and Parker electric guitars, for example, are often designed around both magnetic and piezo pickups. PRS also made piezos available as an option in their hollowbody guitars.

Beginning in the late 1970s, in an attempt to cover all tonal bases, many electric guitars began mixing and matching pickups. For example, Fender began building the **Telecaster Custom**, which had a humbucking pickup in the neck position. By the early 1990s, Stratocasters were available with a humbucking pickup in the bridge position. But Fender had more tricks up its sleeve than just "mix and match" pickups.

In 1988, the new **Eric Clapton Signature Strat** looked like your basic Strat, but the pickups were the new Lace Sensors, first seen the previous year on the Strat Plus. These pickups were hotter, but more importantly, they were quieter. Clapton had asked Fender to design a special circuit that would deliver a more compressed sound with additional midrange, effectively giving him a chunkier, humbucker-type sound. The production model combined an active 25dB midrange boost with Fender's standard TBX tone control. It was so successful, the same circuit was added to the Buddy Guy Strat. More recently, the Clapton signature model was upgraded with Fender's Vintage Noiseless single-coils.

Manufacturers equipped their humbuckers with coil taps, effectively turning them into single-coils with the flick of a switch, while other designs placed separate coils of a pair of humbuckers in series or parallel to deliver credible approximations of the Strat's glossy, "in-between" positions, which combined bridge and middle or neck and middle pickups.

More recently, Roland and Line 6 have developed technologies that allow a properly equipped guitar to duplicate almost any conceivable guitar tone imaginable via digital modeling. For now, this is where we'll leave this discussion, since we're moving rather far afield from pickups. We'll see you back here next issue when we'll be discussing tailpieces.



Gibson Acoustic John Lennon J-160E

Fender Eric Clapton Stratocaster

Fender Vintage "Noiseless" Pickup

## DrumCore 2

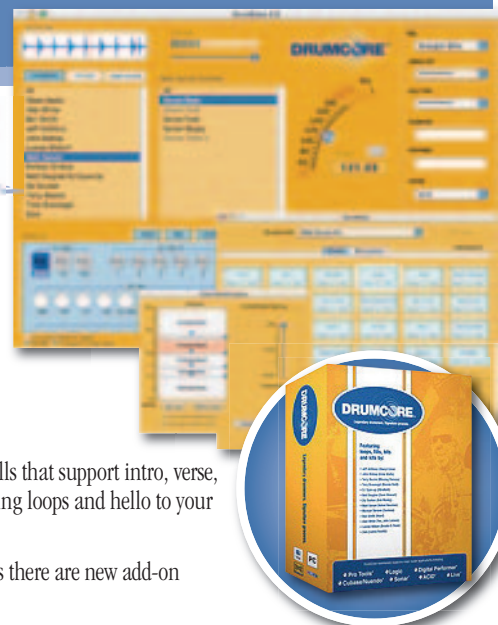
Submersible Music created a powerful tool with DrumCore, a drum loop librarian and production tool. Version 2 makes it faster and easier to create drum tracks, while giving you access to even more world-class drummers, ready to play your songs any time you choose.

### Core Features

**DrumCore 2** includes all the performances from previous versions plus even more great content and styles/performers, including country drummer Lonnie Wilson (twice named "Country Drummer of the Year"). Alan White (Yes) brings his progressive style and exotic meters. For rockers, there's new double-kick content from Terry Bozzio (Missing Persons, Jeff Beck, Frank Zappa). Plus there's more jazz brush content from Jon Bishop and pop grooves from Ben Smith. Both audio and MIDI grooves are included, recorded at 10 BPM increments.

Drumcore 2 is enhanced with separate audio outputs with pitch and pan control for all drum sounds. Each output can be routed to your ReWire host for mixing and processing. DrumCore 2 syncs to any ReWire host's tempo with astounding accuracy. Content is organized into "GrooveSets," with a basic groove, variations, and fills that support intro, verse, chorus, etc., plus DrumCore's "Gabrielizer" technology intelligently generates variations — say goodbye to boring loops and hello to your new virtual drummer!

There are more features and musical options in DrumCore 2 than we can mention in the space we have — plus there are new add-on Drummer Packs with content from Terry Bozzio and Alan White. Your Sweetwater Sales Engineer is standing by to give you the complete low-down.



>> Submersible Music DrumCore • Sweetwater price \$199.97 • [www.sweetwater.com/DrumCore](http://www.sweetwater.com/DrumCore)



As you read this, great things are happening at Sweetwater. On October 14th and 15th, we're moving our entire warehouse, lock, stock, and mixing board, from our old, familiar facility on Bass Road in Fort Wayne to our exciting new campus on Highway 30. Imagine loading out tons of gear and instruments (you think it's bad loading out after a gig?) and the caravan of moving vans it will take to make such a move. Who knows what we'll discover in the corners of the old warehouse? After all those years, and the huge mountains of gear that have passed through our doors, I'm betting there will be some pretty interesting finds lurking back there!

Then on November 3rd and 4th, after we finish the monumental task of moving our inventory to the new warehouse, all the furniture and equipment — and personnel — for our Sales, Purchasing, Business, Marketing, IT, and Service departments will begin the journey to their homes in the new building. An overwhelming amount of planning and work has been required to facilitate moving the entire operation. You

know what it takes to move into a new house or apartment, picture doing that with more than 250 people and tons of furniture and equipment!

A big priority has been making the move safe and seamless for our employees. Imagine our Sales Engineers unplugging their phones and computers, boxing up photos and memorabilia, calculators, files, and pens and pencils, and loading it all into their vehicles and driving out of the Bass Road parking lot for the last time. We may need a police escort for the parade! Then, with everything ready and waiting at the new campus, all they'll have to do is unpack, plug in, log on, and they'll be ready to continue providing you with the customer service and professional expertise you've come to expect from Sweetwater. If all goes as planned, there won't be much of a glitch in our operation at all — you shouldn't even notice a hiccup. Even our phone number will remain the same!

The only thing left to move after that will be Sweetwater Productions, our recording studios. The studio staff will have the Bass Road facility all to themselves until early next summer, when construction will be complete on our three new Russ Berger-designed studios, training auditorium and media center, and most of the customer and employee amenities, including the dining room, mall, and other spaces.

This move has been a long time coming — we're bursting at the seams in our old building, and can't wait to start providing even better service for you from our optimized and highly efficient new facility.

Finally, please consider this your invitation to visit us! Come see us now — we're even easier to find, just take the Highway 30 west-bound exit off of I-69 to the Kroemer Road intersection — or for our grand opening next summer. We'll let you know the exact dates very soon. In the meantime, please visit [www.sweetwater.com/feature/expansion](http://www.sweetwater.com/feature/expansion) to keep up with our progress. Thank you for your support!

# Princeton Recording

*Fender*

An electronics instructor at Bell Labs once said, “the essence of engineering is laziness,” which explains why we constantly search for easier ways to do things. Perhaps it was laziness (or lower back pain) that led recording engineers to try to find a way to get a huge recorded guitar sound without having to set up heavy stacks of guitar amps — or perhaps they stumbled on the Fender Princeton combo amp by accident. The original Princeton, released in the 1960s, was a 20-watt combo with a 10" speaker. What was massive was its all-tube sound. Perhaps one of the most recorded amps of all time, the Fender Princeton earned the reputation in the 1970s as the definitive recording amp for a huge guitar sound without a lot of volume — a reputation that it's maintained for decades.

Well aware that there are many guitarists out there looking for an original Princeton Reverb amp, Fender has thoughtfully created a modern reissue that faithfully reproduces all the tone and response of the original: the new **Princeton Recording Amp**. Why “Recording” instead of “Reverb” in the title? Because Fender has added several modern studio-friendly features. The classic '65 Princeton Reverb's 20-watt all-tube preamp, power amp, and reverb circuitry are all there, along with a 10" Jensen speaker. However Fender has added a trans-impedance power attenuator that lets you crank up the amp for full output tube overdrive and set the speaker volume as low as you want (even silent for headphone or direct recording use). Other features include two classic onboard “stomp box” effects (overdrive and compression), a tube-driven spring reverb by Accutronics, and a headphone output. For direct recording, the Princeton Recording sports a speaker-emulated XLR line output with level control and ground lift. There's also a speaker output jack for use with external enclosures. Plus, there's a must-have modern feature: an effects loop. A 4-button footswitch completes the package.

But one thing dominates the feature list, and that's the powerful tube-driven tone of the Princeton Recording Amp. You'd be hard-pressed to find a more versatile, more capable amp for recording, rehearsal, or gigs — the Princeton Recording truly can cover it all. Though it has its roots in the vintage past, that equates to many great-sounding sessions and gigs in your future!



➤➤ Fender Princeton • Sweetwater price \$999.99 • [www.sweetwater.com/princeton](http://www.sweetwater.com/princeton)



# QUESTION & ANSWERS

## Q&A

### Q: My plug-ins are suddenly taking a long time to load on my PC, and I'm getting some errors on sessions that I've never had before. What's wrong?

**A:** There are a number of possible causes for this behavior:

- The addition of new hardware or software to your system.
- A problem with the file system on your hard drive.
- A corrupt session file.

- A physical problem with a hard drive.
- A problem with RAM.

These types of problems can usually be solved in one of several ways:

- Be sure you're not overloading the system. Sometimes processor-hungry plug-ins can cause spikes in processor performance that can cause erratic behavior. Removing a few plug-ins or processing the file in non-real time (especially reverb and maximizing plug-ins) can sometimes help.
- Defragment your hard drives.
- Remove or uninstall any new hardware and software, and run msconfig on your system (detailed instructions are contained in our Web Knowledge-base PC Optimization Guide #30058, under the "Startup Service/Applications" section).
- Run a hard drive diagnostic tool. Creation Station users can use Seatools (available at [www.seagate.com/support/seatools/](http://www.seagate.com/support/seatools/)) for diagnostics. Owners of other PCs should check with the manufacturer of the hard drive(s) in their PC.
- Run a RAM diagnostic tool. All PC users can use memtest86+ to test their system RAM. This test is available at [www.memtest.org](http://www.memtest.org).

- Try to import your session data into a new session. If the original session was corrupted, you can usually retrieve the data from it by moving it into a newly created session. Check your DAW's manual for steps on doing this.

If your system passes all diagnostic tests, and importing session data doesn't help, give Sweetwater's Tech Support department a call!

### Q: I've accidentally recorded in Pro Tools with my external clock set incorrectly and now my audio plays at the wrong speed. How can I fix this?

**A:** Here is the procedure for fixing this problem in Pro Tools. (Most DAWs will have similar processes.)

- Create a new Pro Tools Session.
- Choose *File>Import Session Data* and choose the session with the audio files that don't play correctly.
- In the Import Session Data window check "Apply SRC" (sample rate conversion) and change the Source Sample Rate to the incorrect sample rate.
- Set the Destinations for the Source Tracks to "new track" and click OK.

— CAKEWALK SONAR 6 continued from page 1

### The Vintage Advantage

SONAR 6 offers even more major improvements. For example, there's the new VC-64 Vintage Channel. It features two equalizers, two compressors, a gate, and a de-esser. The internal effects are interconnected with ten selectable routings, including dual-band setups, and special setups like mid-side processing and compression based on sidechain filtering. With the double equalizer and compressor architecture, the VC-64 offers sonic flexibility that isn't possible with other plug-ins.

The VC-64 is the creation of Kjaerhus Audio, a Danish software company that's been garnering rave reviews. Their proprietary analog modeling technology creates a separate algorithm for each analog component and then connects them all together. The staggering level of realism this technique provides combined with 64-bit processing offers a sound that truly must be heard to be appreciated.

### Snap

Audio Snap is a group of features that lets you manipulate audio clips. You can grab a beat and move it manually, align audio clips to the project's tempo, quantize beats within a clip, quantize entire audio clips without splitting them into individual segments, extract tempo from an audio clip and apply it to the project tempo, extract and apply grooves to audio, have audio clips follow tempo changes, automatically split audio clips into individual beats, and much more. Concentrate on feel and performance, and let Audio Snap handle rhythmic issues and last-minute changes.

### Getting Into the ACT

Active Controller Technology (ACT) allows you to control plug-ins and soft synths — you're not limited to a specific hardware controller; you can use any keyboard or control surface. Once a control surface is mapped for a plug-in, it works the same way on each instance.

### Your Turn to Act

SONAR has been navigating the depths of PC processors for 20 years and now stands poised and ready to give your music the full potential of the most powerful computer processors to date. Isn't it time you started making music with SONAR? For more information on SONAR 6, go to [sweetwater.com](http://sweetwater.com) or call your Sweetwater Sales Engineer.



## Creation Stations Cakewalk-certified

We're proud to announce that the complete Sweetwater Creation Station line of Windows-based music production computers has been officially certified for use with the Cakewalk family of audio/MIDI products, including SONAR, the SONAR Home Studio line, Kinetic, Dimension Pro, Rapture, Z3TA+, and Guitar Tracks Pro 3.

According to Cakewalk's Ryan Pietras, "The Creation Station is among the top digital audio workstations available. The first time I used one I was very impressed by its solid build, and it was apparent that every component Sweetwater uses to make a Creation Station is top quality. SONAR plus a Creation Station combine together to become an unbeatable DAW for producing large projects."

Sweetwater's entire line of Creation Station computers can be found at [www.sweetwater.com/creationstation](http://www.sweetwater.com/creationstation).

➤➤ Cakewalk SONARPro • Sweetwater price \$499.97 • [www.sweetwater.com/sonarpro](http://www.sweetwater.com/sonarpro)

# Sweetwater's *NEW and IMPROVED* Guitar Gallery

In 2004, Sweetwater unveiled the amazing online Guitar Gallery — the response was great, and, of course, our competitors attempted to follow in our footsteps. Now, we've introduced a new and improved Guitar Gallery — version 2.0 if you will! There's no question, our Web design team have outdone themselves. From the moment you enter the Gallery, you'll see that everything is cleanly laid out, with hot buttons that take you directly to the pages you want to see.

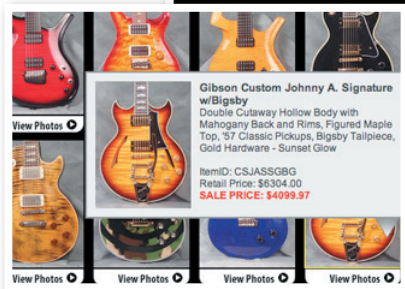
There's no better way to shop for a guitar! Most of our inventory of guitars is online — hundreds of them, all featuring beautiful custom photos taken right here in-house by our staff. Browse the guitars, read up on the features, find the exact guitar you want — you can even order that exact guitar by serial number so you know just what you're getting. It's a guitar player's dream! Visit [www.sweetwater.com/guitargallery](http://www.sweetwater.com/guitargallery) to check it out for yourself.

1

Say you're looking for an electric guitar; a simple click on the "Browse Electric" button takes you there.



2 The Sweetwater Guitar Gallery is all about photos — highly drool-worthy photos! Most of us drop in for a look once or twice a week to see what's new, and if you love guitars even half as much as we do, we're betting you'll do the same!



3 See a guitar you might be interested in? Just mouse over the image and you'll get a description of the guitar with the key features listed, along with the Sweetwater Item ID, the Retail Price, and Sweetwater's special Sale Price.



4 Once you've found the item you're looking for — we'll use a PRS Singlecut in Violin Amber Burst as an example — just click it and you'll be taken to its page where you'll see all the images that are available. Want to see a close-up of the headstock? Choose the thumbnail and the new image appears in the main window.



5 You can easily navigate to other resources within the Guitar Gallery. For example, we'll click on "Why Buy from Sweetwater?" There's a ton of great information on these pages, such as a description of our exclusive 55-point guitar evaluation and more.



# studio notebook: Learn It, Live It

By Mitch Gallagher

Two weeks ago, I had a session in my studio where I was tracking drums for a Christian singer/songwriter I'm producing. In the case of this artist, we had started the songs by recording rough guide tracks of his vocals and acoustic guitar. Then the bass player came in to lay down his tracks, and in this session we were adding the drums. (Not the way I usually prefer to do things — normally I would track the rhythm section playing together, or at least the drums first — but in this case, schedules and availability of the studio musicians limited our options.)

In preparing for the drum sessions, it became apparent that I had a lot of work ahead of me. I was faced with opening the Pro Tools session for each song, adding in all the empty drum tracks, labeling them, setting up routing, setting up the cue mix, etc. Lots of repetitive work.

Instead, I took advantage of a feature in Pro Tools that allows you to import some or all of the data from one session into another. So I did all the work to get the empty drum tracks ready for recording in the first song, then imported the empty drum tracks — with all the setup and routing intact — from that song into the rest of the songs. By the time the drummer arrived, all I had to do was load the song we wanted to work on and hit record. Sweet!



Here's the point: If you haven't taken the time to really learn what your DAW can do, then you're probably not taking advantage of all the power and features it has for making your life in the studio more productive and easier. Yes, I know it's a pain to sit there reading manuals and exploring menus. But in the long run, I view it as an investment — the time I spend doing that pays off later in time and stress saved.

This doesn't just apply to software DAWs. It's the same for any piece of software. Each application has so many features and capabilities that few of us even scratch the surface of what it can do.

You can even apply this to hardware. With hardware such as effects processors and digital mixers, there often are "hidden" features lurking in the menus. Page through the manual; you may be surprised what you find your gear can do.

This even applies to seemingly "simple" analog hardware. Have you ever tried all those polar pattern and filter switches on your mics? What about the various filter, impedance, and other settings on your preamps? Each of these can be used to shape your sound — if you know what they do.

Take the time to get to really know your gear. It will pay off richly in the long run.

## Live and Kicking

Ableton Live stunned the world with its unique approach to "elastic" audio and MIDI and amazing ability to process audio in real time. The latest version, Live 6, may be the biggest upgrade in its history, opening the doors to even greater creative power.

### SAMPLER!

**Ableton's optional Sampler is a new instrument that brings multi-sample playback and sound creation to Live 6.**

**Sampler supports all the popular sample formats, and includes the tools to dive deep into sound design. Sampler should be available at the same time as Live 6, by the time you read this.**

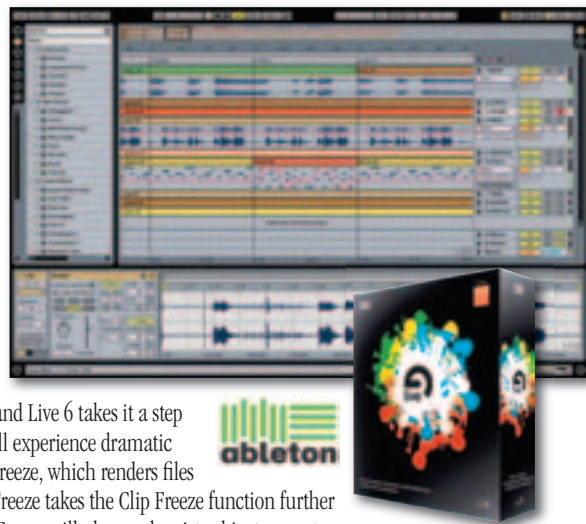
Arguably the biggest new feature in **Live 6** is the ability to import QuickTime files into sessions with drag-and-drop ease. The audio portion of the clip can be processed just like any other audio file. Support for video has been one of the most requested features, and this opens Live up for film scorers and commercial composers.

Live was one of the first to jump into the Mac Intel platform, and Live 6 takes it a step further. Now users with multiple and multi-core processors will experience dramatic increases in performance. In Live 5, Ableton introduced Clip Freeze, which renders files for all clips in the track, preserving CPU power. Live 6's Deep Freeze takes the Clip Freeze function further by allowing editing and automation of "frozen" tracks. Deep Freeze will also render virtual instrument tracks into audio tracks.

Live 6 adds a new Essential Instrument Collection that covers everything from pianos to plucked instruments to choirs. The multi-GB library of sounds is from the SONIVOX (formerly Sonic Implants) premium collections and integrates into Live 6 using the included Sampler instrument. Live 6 also introduces Rack effects. There are very few limitations when working within a Rack — you can have any number of VST/AU plug-ins, parallel device chains, and even other Racks inside a single Rack. Your favorite custom settings can be saved with drag-and-drop ease.

Live 6 also brings improved processing tools to the table. EQ Eight doubles the number of available EQ bands. Dynamic Tube mimics vintage tube distortion and lets you create your own tube-flavored distortion. Saturator has been upgraded to include a user-defined waveshaper. No matter how hard you push the Saturator, the second saturator stage prevents the signal from peaking higher than 0dB.

Ableton Live has succeeded in winning favor in the studios and stage rigs of musicians worldwide, and now it's taking a big step forward with Live 6. Between the addition of video support and the new effects and instruments, there's plenty to be stoked about. Call now for complete information!



➤➤ **Ableton Live • Sweetwater price \$399.97 • [www.sweetwater.com/live](http://www.sweetwater.com/live)**

# Analog Factory



There's nothing like the sound of a vintage analog synthesizer — that fat, round tone, the rich depth — there's just something organic about it. If you're a real synth-head, you could spend countless hours and thousands of dollars scouring the earth looking for vintage synthesizers in good working order. Then spend even more hours and dollars keeping all that delicate decades-old electronic hardware in operating condition — and in tune.

If all that sounds like more than you want to deal with, then here's some great news: Arturia has packed the most sought-after vintage analog synths of the past into a virtual instrument that works standalone or as a plug-in for just about any DAW, and is very easy to use: **Analog Factory**.

## Analog Heaven

Analog Factory has 2,000 presets featuring the heavyweights of the synthesizer world. Everything you'd want is easily accessible through the Smart Preset Manager, and with a mouse-click you have access to the range of Arturia's synths, including the minimog V, Moog Modular V, CS-80V, ARP 2600 V, Prophet V, and Prophet VS. These are some of the most realistic emulations of vintage synths available, largely due to Arturia's proprietary TAE (True Analog Emulation). With TAE, Analog Factory doesn't just approximate the sounds of vintage synths; it actually recreates the characteristics of analog synths in the digital realm.

## Get Tweaked

If you exhaust the possibilities of the 2,000 presets, Analog Factory is extremely programmable. Any of the presets can be modified using the onscreen controls or a MIDI controller to create brand-new sounds. Analog Factory gives you control over the building blocks of synthesis (filter with resonance, LFO, chorus and delay mixes, and ADSR envelope) plus four preset-specific parameters to take sounds in completely new directions. Whether you're a knob-twiddler or a preset surfer, Analog Factory has plenty to keep you occupied.

## Pick Your Platform

Analog Factory will run on either Mac or Windows and is supported by practically every major DAW. You can even bring the vintage tones onstage with you on a laptop. Analog Factory's intuitive user interface and wealth of sound possibilities will keep it in your virtual rack for years to come.



>> Arturia AnalogFact • Sweetwater price \$199.97  
[www.sweetwater.com/AnalogFact](http://www.sweetwater.com/AnalogFact)

## Customer Studio: Barry Carollo of ADC Studios



In this issue of *SweetNotes*, it's our pleasure to feature ADC Studios of Boonton, New Jersey, whose driving force is the creative spirit of its owner/operator, Barry Carollo. A man of many talents, his 25 years of diverse audio experience include major-market radio personality, producer, director, writer, composer, and creative director. Barry is also an outstanding voice-over and character voice artist, singer, and bass player. It was the luminaries of music he met during his time at cutting-edge New York radio stations K-Rock and WLIR that encouraged him to start his own studio in 1987.

While the mainstay of ADC Studios has been corporate and commercial work, Barry also makes his considerable producing, mixing, and mastering skills available to up-and-coming artists. It's often said that the best engineers are those that know music, and the best producers are those who help the artist bring their vision into focus, not overpower it. Barry's considerable experience on both sides of the glass enables him to do just that.

A loyal Sweetwater customer for more than ten years, Mr. Carollo had this to say about his long-term relationship with Sales Engineer, Kenny Bergle. "My current facility is the fifth I've built over the years, and one big reason my rooms work as well as they do is Sweetwater. I've been enjoying my relationship with

Sweetwater and especially Sales Engineer extraordinaire, Kenny Bergle. Kenny (and his assistant Matt Wood) do an outstanding job of fulfilling my needs in the quickest, easiest, and most cost-effective ways possible. If I need it, they get it for me. If I need it yesterday, they shred the fabric of time and space to get it to me. If I have a technical problem, their techno-wizards have proven to be invaluable for their depth of knowledge and endearing for their infinite patience. If I need it fixed, they fix it. If I'm having a problem with a company they expedite matters... Sweetwater is all about service — and so am I — so we understand each other very well."

The respect is obviously mutual. According to Kenny Bergle, "Barry is the consummate professional, so it's easy to work with him; he understands the value of the Sweetwater experience. I value the friendship we have formed. His success is directly related to his talent, enthusiasm for quality, and trustworthiness. I'm so honored to be able to help him and his clients."

We wish Barry Carollo and ADC Studios continued success, and will continue to do our part in helping him achieve it. For more information, check out [www.ADCStudios.com](http://www.ADCStudios.com).



**Want to see your studio in SweetNotes? Email photos to Mitch Gallagher now! ([mitch\\_gallagher@sweetwater.com](mailto:mitch_gallagher@sweetwater.com))**



In this issue, I'm going to take you behind the scenes with Eryk Foss, our Service Manager. His department is a huge part of the Sweetwater Difference and is integral to the over-the-top customer service we strive to provide.

**JR:** Tell us about your background and what brought you to Sweetwater.

**EF:** My parents are both music educators. Music has always been a big part of my life; I play guitar and keyboards. I grew up manufacturing aerial fireworks in our family business (an early start to my technical background). I have a BA in microbiology from the University of Idaho. I was a Sweetwater customer with a background in quality management before moving here. Music and technology are a good fit for me. I've been working at Sweetwater for almost six years now.



*Eryk Foss, Service Manager*

turnkey systems. Our Tech Support team makes sure any questions are answered promptly. Our Bench Repair Techs are there when you need them, providing outstanding in-house repair service.



Service also helps the Sweetwater team negotiate the curves of a fast-paced industry by testing compatibility of new gear and quickly relaying technical information from our many vendors back to Sales.

#### **Does Sweetwater perform warranty service?**

Absolutely! We're authorized to repair nearly every product we sell. We also service gear we don't sell here.

#### **What falls under your department's responsibilities?**

Sweetwater's Service Department is divided into three main areas: Install/Integration, Phone Support, and Bench Repair. Our job is to make sure your gear is up and running quickly (and stays that way).

#### **How do you view your department as part of the larger Sweetwater puzzle?**

The Service Department keeps customers connected to gear that works. It starts in Install where we configure and test



#### **How many guitars have been evaluated in your department?**

More than 10,000!

#### **How do you select people to work in Tech Support?**

We look for candidates with a strong background in music technology. Our techs have degrees from recording schools and universities across the country. I look for someone who's passionate about providing the best customer service experience possible.

#### **What's the strangest equipment failure you've seen?**

A laptop computer was sent in for repair because of a "light spot in the display." The customer had placed a candle on the laptop and the candle burned completely out, melting a hole in the top of the unit allowing light to shine through the display. Amazingly, every pixel still worked.

#### **Knowing what you know about service, do you cut your auto service center more or less slack?**

I cut them less slack. As a consumer, I'm always looking for an outstanding customer service experience. When you strive to provide that experience for others every day, you tend to notice the details.

#### **What's the most common misperception you run into with customers?**

A common misperception is that we only fix items in the Service Department. We do a lot more than that. With Install/Integration, Guitar Evaluation, and Tech Support we provide a wide range of support for all of our customers.



#### **What can a Sweetwater customer expect for turnaround times?**

We typically have gear on the bench same day or next day after arrival. Average turnaround is usually one week when you factor in parts orders. Overall, fast repair turnaround boils down to a commitment to outstanding customer service. Our Bench Repair Techs understand how important your gear is to you.

#### **Should a customer go direct to the manufacturer or contact us first if there's a problem?**

There's a distinct advantage for customers to contact us first. We're authorized for warranty repair, and we can often fix an item faster than a factory repair center. Our Tech Support also goes beyond any one manufacturer's products, and looks at the big picture. We have the customer's best interest at heart, and we'll make sure they experience outstanding customer service.

Rock and Roll!

Jeff (VP of Sales)



Twenty years ago, I started doing my own digital sampling on a Sequential Circuits Prophet 2000, which shipped with a mere 256K of sample RAM. There was no such thing as mass storage then, so everything had to be saved on 3.5-inch diskettes. I remember driving all over Sacramento trying to find those darn things. By 1987, I had moved up to an Akai S1000, which came standard with a whopping two megabytes of RAM.

The reason I was doing my own sampling was simple: The few disk libraries that existed at that point in time were pretty awful. Eventually word got out I was creating my own samples, and I ended up starting a small business called Stratus Sounds. Who knows, some of you may even have bought disks from me! I began building up a collection of sample disks for the new (at the time) Kurzweil K2000, but at that

point, I licensed everything to Sweetwater. I wanted to create libraries, not sell them, so it made complete sense for us to partner up.

For years, we limped along, dealing as best we could with serious limits in terms of both memory and polyphony. During the last five or six years, personal computers have grown in sophistication to where they can easily surpass hardware instruments in terms of memory and polyphony. A modern computer with enough RAM is capable of producing all the sounds of an entire symphony orchestra and still have enough processing power left to check your e-mail.

In the upper reaches of the soundware spectrum are the “gold standard” collections from such companies as Vienna Symphonic Library, Garritan, Sonivox (formerly Sonic Implants), and East West/Quantum Leap. These are light years beyond anything I used to produce and are so richly detailed and beautifully crafted that in many instances, entire film scores can be convincingly produced with them — no one in the audience the wiser. When a multi-million dollar Hollywood epic is in the works and a temporary music track needs to be put in place before committing to an astronomically priced scoring session, these are the libraries the pros turn to.

I recently had the opportunity to audition libraries that ranged from modest collections to the absolutely massive 550-gigabyte Vienna Instruments Symphonic Cube, which comprises no less than 800,000 individual samples! Suffice to say, it doesn't get much better than this.

There are times when I miss the “old days,” when I was doing all my own sampling. But these days I'm much more interested in composing again, as well as producing documentaries. Now that there are such brilliantly conceived and superbly detailed libraries available, my only concern is finding the time to transfer all that sample data onto my hard drives!

# Grand Finale

By giving composers the tools they needed to quickly and easily build complex scores, Finale streamlined the creation process, allowing users to concentrate on what's really important — writing music. With **Finale 2007**, scoring is faster than ever thanks to a new batch of performance-enhancing features designed to make sheet music even easier to create.

As the front-runner for film and TV scoring, it makes sense that Finale supports video integration. The new Finale automatically synchronizes digital video with your music in a resizable Movie Window. When working with an imported video file, you can compose, edit, and play back the score in perfect sync using the new “Fit to Time” feature. Finale 2007 also adds the ability to set frame rates, send SMPTE/MTC to outboard devices, and actually write time code into your score.

Saving time and effort is the name of the game with Finale, and this latest edition excels at doing just that. The new Intelligent Linking feature keeps your score and individual parts constantly linked — change anything in an individual part, and the score is instantly updated.

Finale 2007 runs on PC and runs natively on both Intel and PowerPC Macs, with increased performance on either processor. A Mighty Mouse-equipped Mac will let you cruise through your score with both horizontal and vertical scrolling. For a consistent look, Finale 2007 now embeds TrueType, OpenType, and Postscript fonts, and there are improved onscreen graphics for a smoother look.

Finale is popular not just because of its scoring tools, but because of its great playback engine. Since it utilizes Native Instrument's Kontakt Player 2, Finale can play any NI-supported sound library. Kontakt Player 2 is also a time saver, allowing you to load multiple instruments at once and stream large libraries from disk, and it has other tools to improve system performance and achieve stunningly realistic playback of your score.

Finale 2007 takes bold steps to bolster your creativity and minimize distractions from the technical aspects of writing music. Anyone from home hobbyists to band directors and professional composers will find Finale 2007 an invaluable piece of software that changes the way music notation and scores get created.

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— 21st Century Guitar continued from page 1

In addition to its two traditional humbuckers, the HD.6X-PRO packs six small patent-pending humbucking pickups between its tune-o-matic bridge and treble pickup. The signals from these high-tech pickups are converted from analog to digital inside the guitar. (We're talking high-definition conversion; at 2,304kbits-per-second, each of the six signals carries three times more information than a single channel on a CD!) The system then sends the six independent digital signals — one for each string — to the Ethernet output, which connects to a breakout box known as "BoB."

### What about BoB?

Once the digital signals reach BoB, you have sonic options galore. Naturally you can route the output as a single summed mono signal to an amplifier or recording console. But BoB opens a world of new possibilities: Send

the E, A, and D strings to one amp or mixer channel and the G, B, and high E to a second amp or channel for unique stereo effects or to separately process the low and high strings — play a distorted lead over clean chords! Add reverb to the G, B, and E strings, and delay and flange to the E, A, and D. Want to go even further? BoB can send the six individual strings to six different amps or mixer channels. These six individual signals can be sent through different effects boxes, or just about any combination of signal paths you can imagine — create the ultimate surround guitar soundscape! Let your imagination run wild; there are countless ways you can process and modulate your playing. BoB is the air traffic controller, routing the signals to all those different destinations — BoB does the work, so you can concentrate on playing.

Headphone volume

6-channel  
digital output

Microphone  
input

Headphone jack

Standard  
analog output

**How many guitars have an Ethernet jack and a mic input? Only one: The brand-new digital Gibson HD.6X-PRO.**

### The Whole Deal

Gibson includes a complete version of Cakewalk SONAR Producer with every HD.6X-PRO; add an audio interface and you'll be ready to make innovative music with your computer right out of the box!

### Breakthrough

With a few exceptions, the electric guitar has remained essentially unchanged since the innovations of the 1950s. But with the Gibson HD.6X-PRO, an entirely new sonic world is about to open up to guitarists thanks to this groundbreaking technology. Expect to be amazed!

**Sweetwater is the only authorized online dealer for the Gibson HD.6X-PRO. Give us a call for complete information.**



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## Meet **David** Mikautadze

**Name:** David Mikautadze

**Position at Sweetwater:**  
Sales Engineer

**Start date:** July 17, 2003

**Education:** Composition  
and film scoring degrees from  
Berklee College of Music,  
Boston, Massachusetts.

**Where are you from**  
**originally?** Born in Tbilisi, Georgia (former Soviet Union). Came to  
Sweetwater via Queens, New York.

**What was your occupation before coming to Sweetwater?** Independent audio  
technology consultant, composer.

**Why did you first apply for a job at Sweetwater?** The Sales Engineer job descrip-  
tion fit my background to a tee. My wife and I were also looking for a friendlier place to start  
a family.

**Foreign languages:** Georgian

**Technical strengths:** DAWs, virtual instruments and samplers, sequencing, and guitars.

**Favorite music-related website:** The Vienna Symphonic Library website ([www.vsl.co.at](http://www.vsl.co.at)) because the forums there have lots of great info regarding orchestration, specifically  
related to achieving realism using orchestral samples.

**Instruments you play:** Guitar and piano.

**Gear you own:** Fender '62 reissue Stratocaster, Washburn J6 hollowbody, Fender Champ,  
Roland JC-120, Yamaha G3 baby grand, CME UF8 MIDI controller, JV-2080 (fully expanded),  
two PCs, lots of sample libraries and virtual instruments, Tannoy Precision 8D monitors,  
Steinberg Nuendo

**Family info:** Super-hot wife Elizabeth, super-cute baby girl Juliette (born 5/27/06), and two  
mini lop bunnies, BooBoo and Tiger.

**Other stuff we should know about you:** I try to read and meditate as much as pos-  
sible. I love chess, and am heavily into physics and astronomy.

**Personal motto:** "Purify the heart and mind, then follow your instincts."

**Favorite magazine:** *JazzTimes*

**Real-life hero:** Gautama Buddha

**Guilty pleasure of choice:** I can't watch enough *Star Wars* movies.

**How would your boss describe you?** Hard working, honest, and determined.

**How would your best friend describe you?** Creative, artistic, and kind.

**What did you dream about doing for a living when you were growing up?**  
Traveling the world and performing music.

**Describe the most dramatic situation in which you provided the**  
**"Sweetwater Difference" for a customer:** Not sure what the most dramatic  
experience is, but I've stayed later, come in earlier, come in on weekends, emailed and called  
customers from home, provided diagrams for cabling complex systems...all to make sure my  
customers are happy and any problems are resolved ASAP.

**What in your life best prepared you for the work you do here at**  
**Sweetwater?** Being a musician and composer as well as living in New York and dealing  
with people from all walks of life.

**What do you enjoy most about being part of the Sweetwater Team?**  
It's a great feeling when customers tell me they shop with Sweetwater because of me.

**What is the most important thing you've learned at Sweetwater?** How to  
really listen to people and their needs, and how to truly be professional.