SONAR 2016.03 Update

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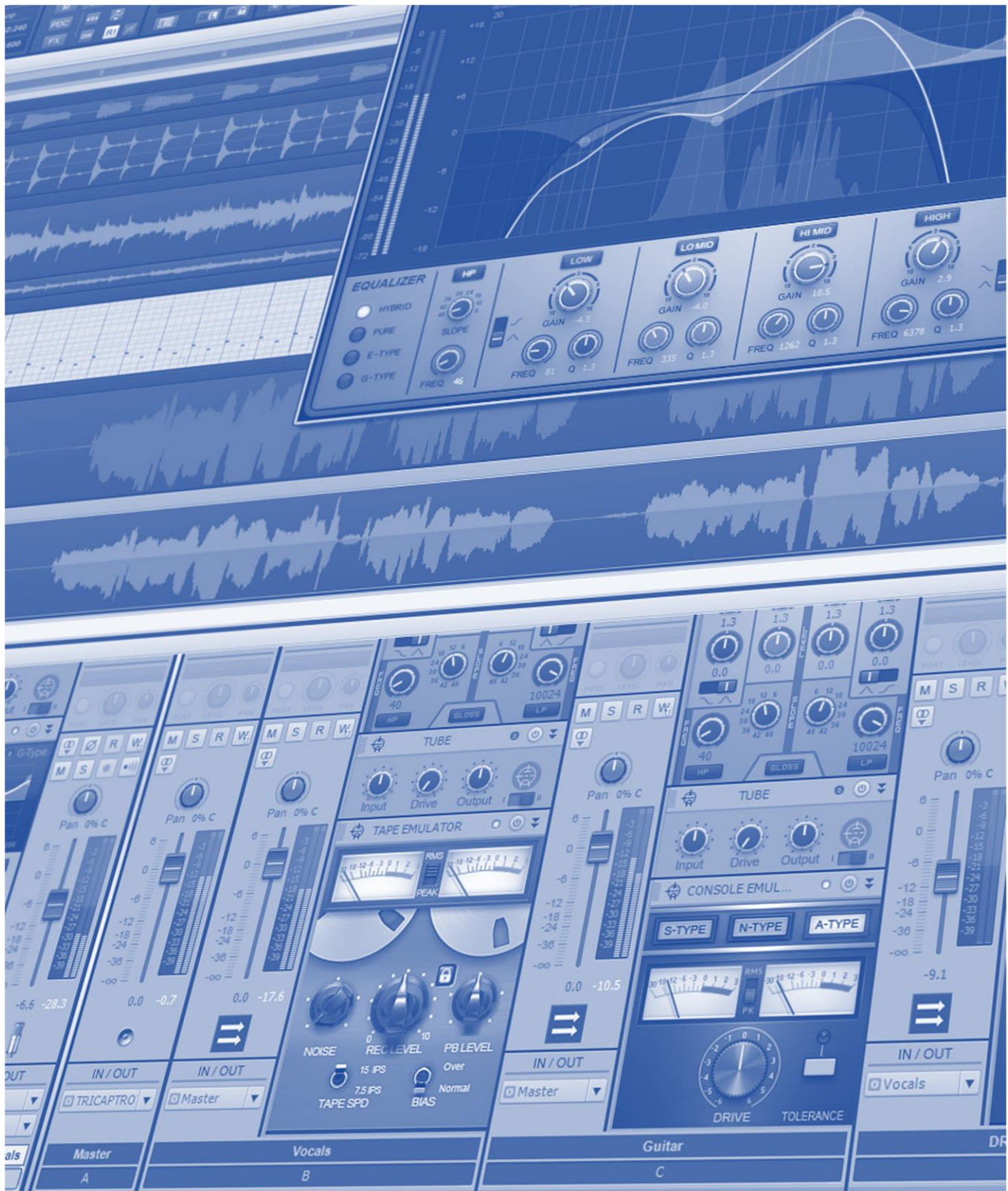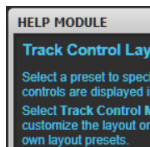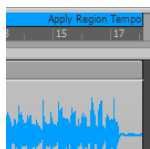SONAR

This month's update adds two very important features. The Help Module takes a different approach to help because it's not geared solely to beginners, but also to SONAR veterans. Next up, we've implemented Melodyne's advanced tempo detection features to create tempo maps that automatically follow the tempo of clips, including live performances not cut to a click.

What's more, Platinum members receive one of the coolest little virtual instruments we've seen in a long time: AAS Ultra Analog Session 2. Also, the ever-popular Lounge Lizard electric piano has been updated with several convenience features.

Still want more? Okay…three multiband processing track templates take advantage of SONAR's Universal Routing Technology with Patch Points and Aux Tracks, there's a review of Neat's studio mics written by *MusicTech* magazine author Matthew Mann, an "Anatomy of a SONAR Project" about modeling a vintage wah pedal using SONAR (with a free FX Chain download), five new Rapture Pro tips, some pretty significant fixes, and of course, Blog Beat. We had a lot of fun with this update, and hope you do too. *– Bill Jackson and the Cakewalk Team*

Help Module: This new view isn't just about learning the program, but becoming more proficient at using SONAR thanks to the inclusion of shortcuts, tips, and a Learn More button that can take you to additional resources. The Help view appears as a pane in the Skylight interface, so it's easy to show and hide as needed.

Melodyne Tempo Detection: Thanks to Melodyne's advanced tempo detection and SONAR's ARA drag-and-drop integration, your projects can now follow a live recording's tempo. Simply drag a standard audio clip (or Melodyne region effect) to SONAR's timeline, and the magic happens.

AAS Ultra Analog Session 2: It's fast, fun, funky, and adds a welcome "vintage analog" dimension to your projects. With 244 ready-to-go presets, a user interface so simple you can almost program it while unconscious, and an integrated sequencer, Ultra Analog Session 2 is ready to add cool synth mojo to your projects.

AAS Lounge Lizard Session 4 Update: AAS couldn't improve on the sound of everyone's favorite electric piano modeling virtual instrument, so they did the next best thing and resized the interface, tweaked some convenience features, added support for Scala files, and included some fixes and enhancements.

Multiband Processing Track templates: Patch Points and Aux Tracks, part of SONAR's Universal Routing Technology, have many applications. One of them is simplifying the process of doing multiband processing, and these three Track Templates simplify the process even further.

Workflow Enhancements and Fixes: MIDI plug-ins now work properly when using a font size other than the Windows default, the mysterious "bouncing produces silent clips" issue has been banished, Track Templates now work properly with Patch Point and Aux Track assignments, and more.
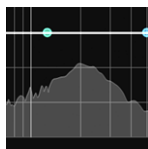
Anatomy of a SONAR Project | Modeling a Vintage Wah: Can you really get the same sound within SONAR as a classic wah pedal that fetches as much as $1,000+ among collectors? As it turns out, you can—but in order to make it happen, you need to analyze the wah's performance within SONAR.

Review | Neat Microphones King Bee and Worker Bee Condenser Mics: Mics are an essential part of any studio, and now the founders of Blue Microphones have come up with the next generation of mics. Reviewer Matthew Mann puts these eye-catching mics to the test in his studio, and finds out what the buzz is all about.
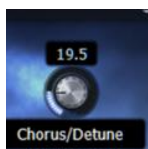
5 More Rapture Pro Tips: Building on the tips provided in the last eZine, this article describes how to create a touch-sensitive filter effect, discover comb filtering, create a pseudo-chorus, trim release times from the Instrument page, and do parameter fine-tuning.

BlogBeat: This month's Blog Beat focuses on *you*—the SONAR users who helped shape this product into the powerhouse it is today. The theme: unique case studies written by (or about) SONAR power users with varying goals, experiences, and applications.
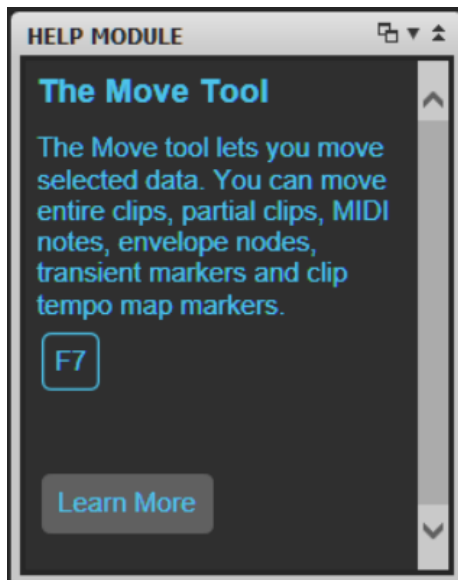
Help Module
Artist, Professional, Platinum

SONAR is a program with a rich feature set, so it's not always easy to remember all the features, tips, tricks, and shortcuts that speed up workflow and make using SONAR a pleasure. However, help is on the way—literally.

Choosing *Views > Help Module* (shortcut "Y") opens a new pane in the Skylight interface's Browser that you can undock, collapse, and reposition. Also note that because it has hooks into the Windows interface, you can change the Help Module typeface size by hovering the cursor over the Help Module pane, then holding the Ctrl key while using the mouse scroll wheel to change the size.

For help on a particular interface element, hover over the element with the Help Module pane open for about a second; text appears in the Help module that describes the feature. If a shortcut is available, you'll see the key combination and if you see a Learn More button, click on it to link to the online help and other resources.

Not all SONAR elements have become integrated with the Help Module yet, but it will continue to be beefed up in the future so it becomes an ever-more useful resource to SONAR users at all levels of expertise.

Melodyne Tempo Detection

Professional, Platinum

Thanks to Melodyne's Tempo Detection feature, which SONAR accesses through its tight ARA integration, it's easy to generate a tempo map from a clip with a varying tempo. Whether you're working with a live recording or a recording done without a click, creating a tempo map is now a simple drag-and-drop operation. Although this feature reaches its full potential with Melodyne Editor and Studio, it's still extremely effective with Melodyne Essential 2 and 4.

As with MIDI extraction, you don't need to convert the Clip to a Melodyne Region FX (although you can also use Region FX clips). Simply drag a clip with a varying tempo up to the time ruler. Note that you don't need to hold the Shift key to constrain vertical movement, because as soon as you drag a clip to the time ruler, it snaps back to its original horizontal.
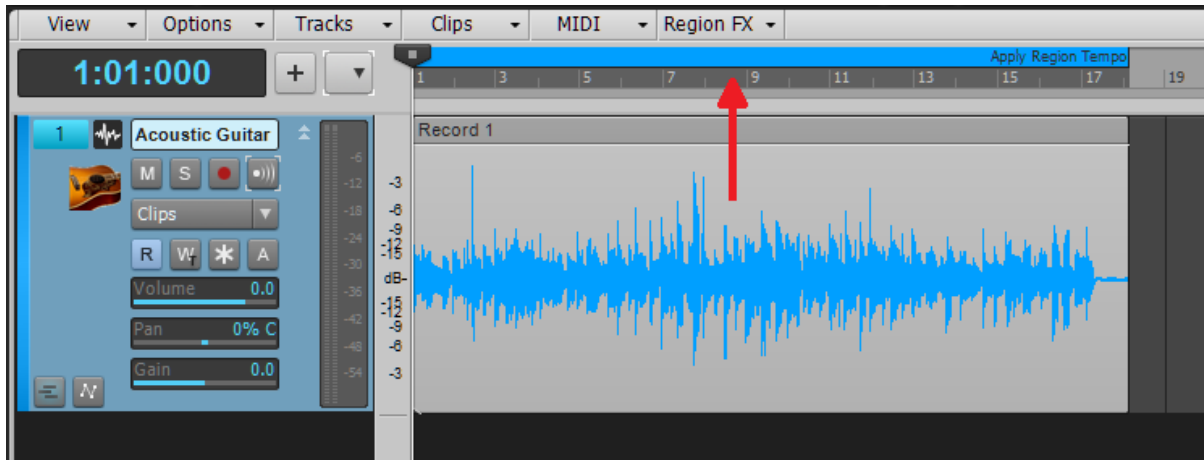
If you've already converted the Clip into a Melodyne Region FX, you have another option. Click on the Tempo Options button.
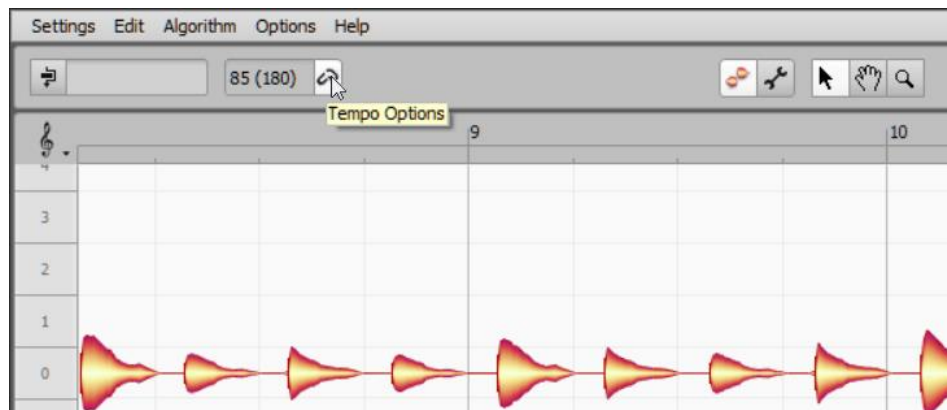
This opens a dialog box with three choices.
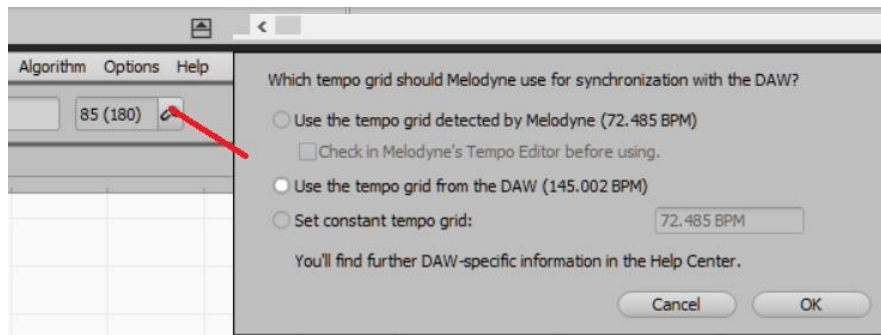
To modify the tempo map (note: tempo maps are available only in Melodyne 4 versions higher than Essential) based on the tempo Melodyne detects in the Clip, choose "Use the tempo grid detected by Melodyne." Also note that with Melodyne Studio, if you edit a tempo inside the tempo editor, you need to *close* the tempo editor (by clicking on Melodyne Studio's Tempo Edit button) *before* you attempt to drag and drop the clip to extract the tempo. Otherwise the edits will not be included in the data that's extracted.

With Melodyne Essential or higher, you can conform the Clip tempo to the existing Tempo Map. Choose "Use the tempo grid from the DAW." If you want a constant Clip tempo and conform the Tempo Map to that tempo, choose "Set constant tempo grid," and then specify a tempo.

Next, drag the Clip to the timeline as shown above. In either case, after dragging the clip to the timeline, you'll see that the tempo map has been modified to reflect the Clip's varying tempo.
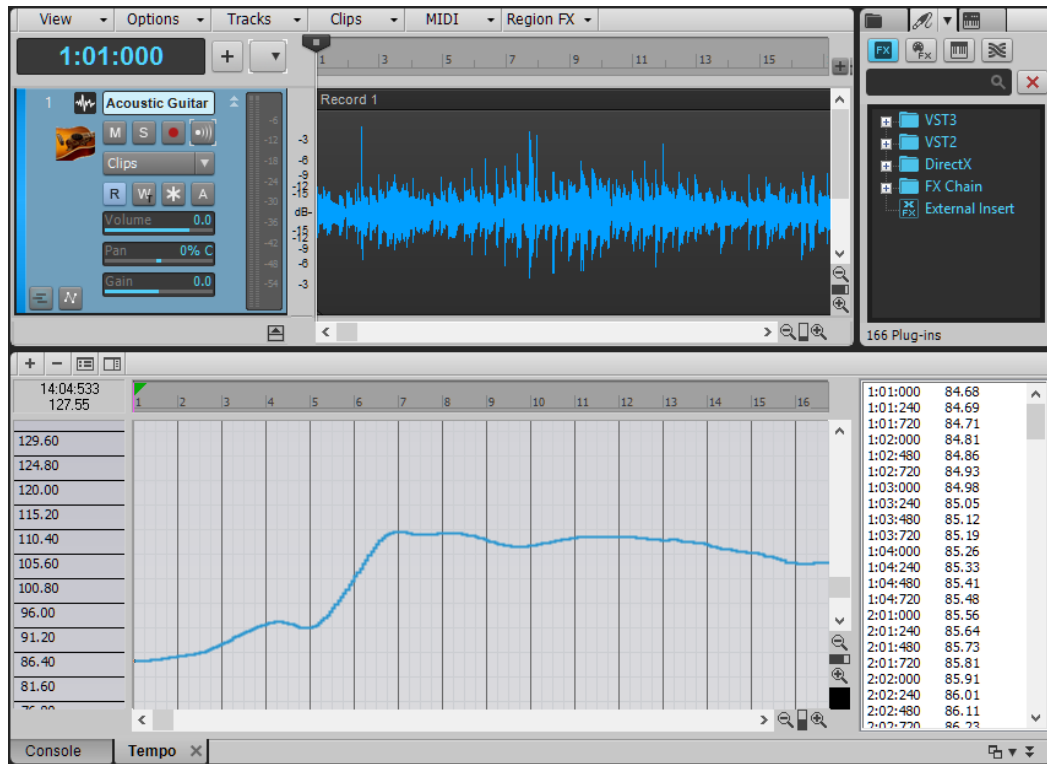
Although Melodyne's Tempo Detection process is extremely reliable, sometimes it "guesses" a tempo that's a multiple of the actual tempo. At present, Essential can't fix this because it doesn't offer any tempo detection editing; however as noted above, Melodyne Editor and Studio can modify tempo. For additional information, please consult the Melodyne and SONAR help files.

AAS Ultra Analog Session 2 Virtual Instrument
Platinum

If you think synthesizers should be fast, fun, and funky, this one's for you. With 144 production-ready presets and another 100 signature presets from Richard Devine and Sean Divine, you can just choose a sound and go—but it's so easy to program you'll probably find yourself tweaking away. For example, the screen shot shows a cool, "mini"-style bass sound that took all of two minutes to create, without even reading the manual.

Standout features include a built-in arpeggiator, seven different effects, hard-sync sounds, five unison modes, and five global modes. UAS 2 is very much like a late 70s analog synth from one of that era's prominent Japanese manufacturers, and it places a premium on real-time control—which is why the MIDI Learn functionality is great. Not only does it do MIDI Learn and MIDI Forget, but you can control any number of parameters with a single control, and specify minimum and maximum values. Choosing a higher

minimum than maximum value can reverse a parameter's response, so a single controller can increase one parameter value while decreasing another one.

Ready to have some fun? Click on the logo to check out the manual, then start playing.

Lounge Lizard Session 4 Update
Platinum

When the original Lounge Lizard electric piano virtual instrument first hit the market, it showed that sampling wasn't the only way to get convincing sounds—and 14 years later, Lounge Lizard has more than stood the test of time. For many musicians, Lounge Lizard is the "first call" virtual instrument for responsive, authentic electric piano sounds.

This latest update offers several convenient additions.

- Resized Interface
- Additional microtonal tunings via Scala scale files
- Additional parameter values entry via computer keyboard
- Bank and program navigation via computer keyboard arrows
- Overall fixes and enhancements

One of the most intriguing updates is the ability to load Scala tunings, which are different from standard equal-tempered or "stretch" tunings for piano. For information and to download Scala-related files, visit the Scala home page.

By default, Lounge Lizard EP loads with standard stretched temperament, but equal temperament is also available. To load different Scala file tunings, click on the Tune button; this opens the Tuning pop-up window to display a list of available tuning temperament files.

You can add more files to the list by copying them to the folder: %AppData%\Applied Acoustics Systems\Scala Tunings\

Next time you need an electric piano, try Lounge Lizard first—you may never use a sampled version again, especially after these new updates.

Multiband Processing Track Templates

Professional, Platinum

by Craig Anderton

Multiband processing splits audio into different frequency bands, which you can then process separately. I first used multiband processing in the Quadrafuzz multiband distortion unit, which was published as a DIY project in *Guitar Player* magazine in 1983, released as a kit by [PAiA Electronics](#), virtualized by Steinberg as a VST plug-in, and released as the [QF2 hardware unit](#) by Iron Ether—so this is definitely not a "new" concept.

What *is* new is that SONAR makes it super-simple to do these and other multiband processing techniques, thanks to Aux Tracks and SONAR's Universal Routing Technology. Prior to Aux Tracks, you'd need an audio track and a bunch of buses. But now you can do everything required for multiband processing in the Tracks pane, and button it all up in a Track Folder for a compact, practical setup.

As one example of multiband processing, with multiband distortion there's less intermodulation distortion because each band is distorted separately. So, the resulting sound is more "focused" than conventional distortion. However, you can also do tricks like chorusing different bands individually, using different delay times on higher and lower bands, processing program material in novel ways, and much more.

GETTING STARTED

The 2016.03 releases includes three Track Templates to get you started, but here are the basics on creating your own.

1. Select the audio track that will play back the material you want to process. For its output, create an Aux Track.
2. Clone the Aux Track as many times as you have bands, minus one for the Aux Track you already created. For example for five-band multiband processing, you'd create four more Aux Tracks.
3. Use the Sonitus Multiband compressor as a crossover instead of a dynamics processor. To do this, set the Ratio to 1.0 so there's no compression, turn off Limiting (to prevent the 1.5 ms lookahead), and then solo different bands within the Multiband compressor for different tracks.
4. Follow the Multiband in each track with your processor(s) of choice. You'll find more information on setting up the Sonitus Multiband for multiband processing in [this article](#) from *Sound on Sound* magazine.

ABOUT THE TRACK TEMPLATES

The first screen shot shows the 5-Band multiband track template, housed in a Track Folder.


Referring to the Sonitus Multiband effect, because it's inserted in the Track Template's Low Band, its lowest band (Band 1) is in Solo mode and the other bands are bypassed. Solo the Multiband's Band 2 for the Low Mid Band, Band 3 for the Mid Band, Band 4 for the High Mid Band, and Band 5 for the High Band. Now you can insert a processor in the FX Rack after each Multiband so that each track processes its own band. Assign the track outputs to your master bus, a different bus, or another Aux Track, and get creative.

(By the way, there's reason for the track colors...they follow the color spectrum so it's easy to see which bands are higher or lower.)

The next screen shot shows the Program Material Track Template. This divides the signal into low, mids, and highs, which can be useful if you want to do something like apply different compressors to each band. Because the band divisions are fairly broad, this works well for program material.
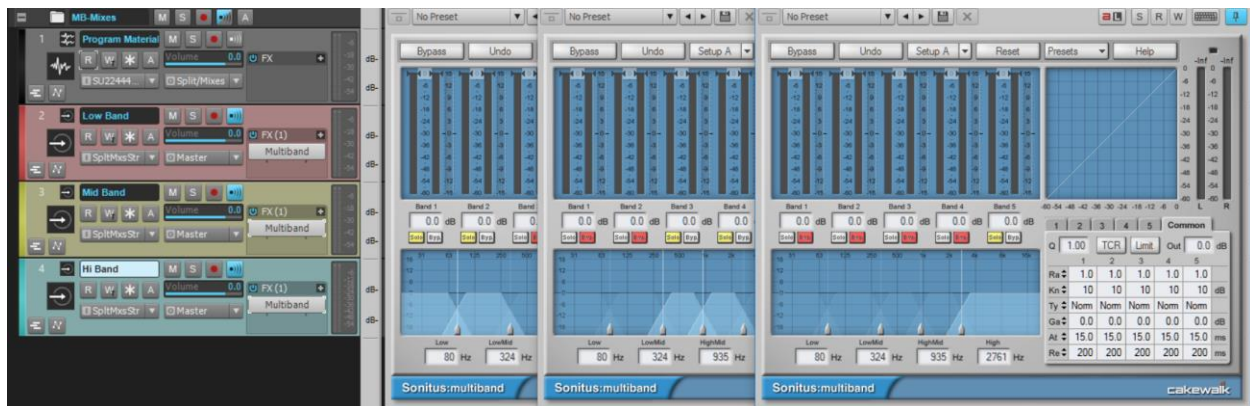
Although the Sonitus Multiband has five bands, you can move the frequency ranges around and solo more than one band at a time. In this example, soloing the two lowest bands covers the Low Band range, the next two bands cover the Mid Band range, and the highest band is soloed to take care of the High Band.

The final screen shot shows the Guitar Distortion Track Template, which takes some creative license compared to the previous multiband distortion techniques (for those who listened to the preview of my new CD "Neo-," this is the same template used for the final "big" guitar chords in "Maladie Du Coeur" at the end of side one). Note that I've turned off solo in the Multiband compressor so you can see all five bands in this one view.
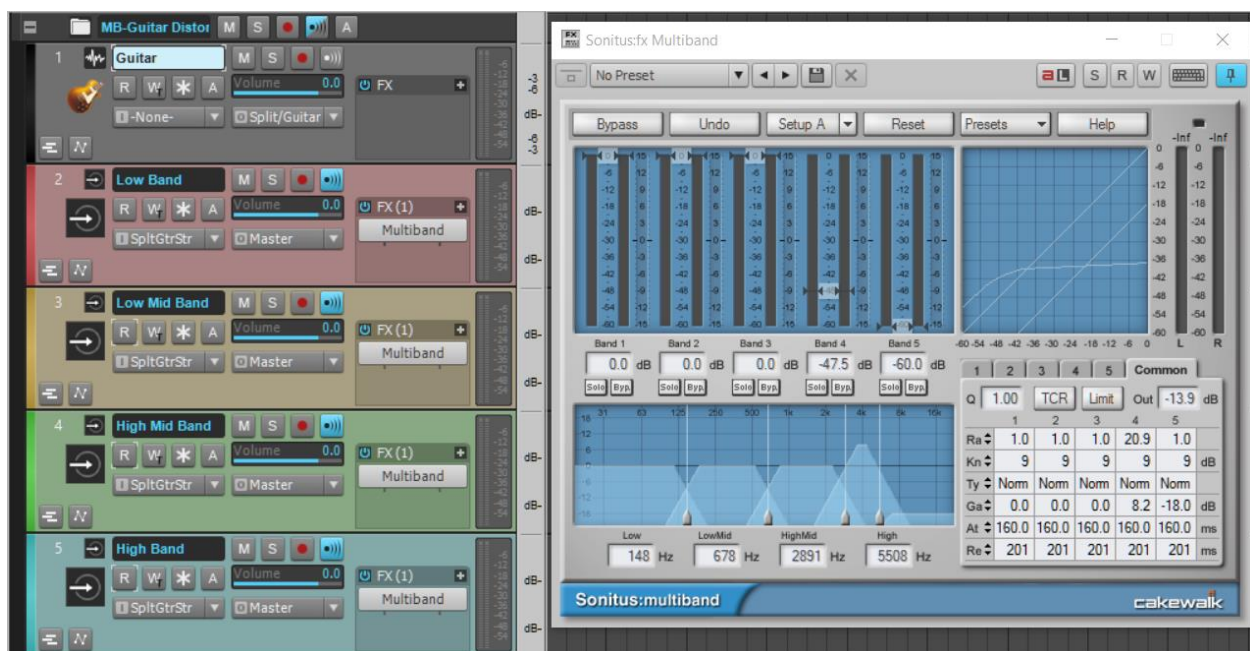
Because each band is intended to feed into distortion, you can optimize the response; for example, the highest band is turned down as far as possible—you don't want to add massive distortion to high frequencies. As a result, the sound is a little less bright but the fourth band

has 5.7 dB more gain than the lower bands, and a substantial amount of compression (after all, this is a multiband compressor!) to make the midrange more responsive and touch-sensitive. It also covers a fairly narrow range, so this effect happens only in the upper midrange.

I trimmed the output levels of all the bands because I was using a high-gain amp sim, and wanted to bring down the "drive" a bit. Normally you'd keep the output fairly high, maybe even higher than normal, because the distortion input is "seeing" less level than it would if it was receiving all the frequencies.

DO THE EFFECTS GO BEFORE OR AFTER THE SONITUS MULTIBAND?

As with the usual questions about effects placement...it depends. Distortion usually goes after the "multiband-compressor-disguised-as-a-crossover" because the whole point is to restrict the range of frequencies going into each stage of distortion. You'll generally want effects like chorusing to follow the multiband, but as usual there are no rules, so experiment and see what works. For example, distortion before multiband sounds very different because you're filtering out a fully distorted signal instead of distorting a filtered signal.

If you haven't tried multiband processing, you're in for a treat. Hopefully these templates will inspire you to take the concept further.

Workflow and Enhancements

Fixed issues where:

- Frame advancement from arrow keys would stick after changing project tempo
- Recording with Auto Punch's "Mute Previous Takes" option interfered with comping
- Mouse wheel didn't work properly on Track Inspector Key+ field
- Process Audio was not splitting out Clip at selection
- Process Audio caused drawing issues when zooming
- Fit Content in Track View was using only the upper half of MIDI track height
- System font size could cause MIDI FX controls to work improperly
- Insert measures command could cause time signature changes to move unexpectedly
- Track Templates didn't preserve Aux Track/Patch Point assignments when loaded as the first operation in a blank project
- Render bit depth changes were not applied when bouncing to Track
- Bounce to clip with global Solo enabled was not rendering audio, causing silent clips
- Apply Region Tempo menu item was not working from the Clip menu
- Uninstalling the current SONAR demo could cause X3 to crash on export

Anatomy of a SONAR Project: Modeling a Vintage Wah
Platinum

By Craig Anderton

Although SONAR is primarily about recording musical projects, people have used it for everything from mastering to test equipment. I've also used it to create sample and loop libraries, but this project shows yet another SONAR application.
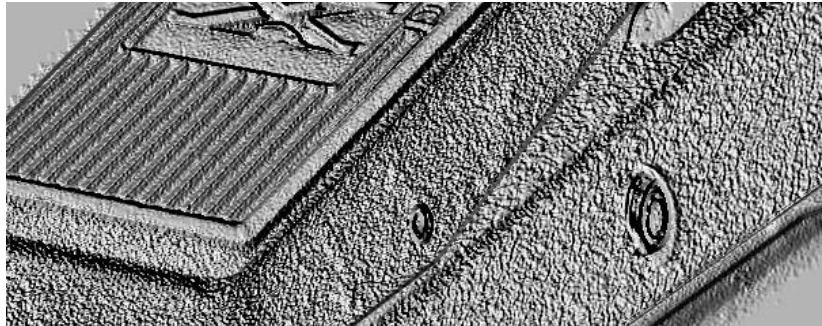
In 1967, I bought an original Clyde McCoy wah-wah pedal—yes, the one made by Thomas Organ under the Vox name, with Clyde McCoy's face (not just his signature) on the bottom plate. These can fetch up to $1,000 among collectors, and rather than risk damaging or losing it, I wanted to model the pedal's sound as a plug-in within SONAR. However, bear in mind that a parametric EQ with a boost won't do the job for a few reasons. First, the skirt isn't broad enough, although there are ways around that (see my Cakewalk blog post that "de-constructs" the Vintage Wah FX Chain in the Anderton Collection of FX Chains). Second, the wah has an inductor that gave a distinctive midrange resonance, so you need to not just get the frequency range right, but the correct Q settings to sound like "the real thing."

I've been reviewing the Line 6 Helix in a Harmony Central Pro Review, and wanted to figure out a way to compare the 12 different wah pedal models included in Helix. The answer was taking my own advice from the Friday's Tip of the Week for week #59 about "Understanding the QuadCurve—Why Noise Is Your Friend." By using pink noise and observing the spectrum in the QuadCurve EQ's flyout, it was clear what frequency ranges the different wahs covered, and the changes in amplitude and Q that happened over that range (there's even a video that shows the wahs being analyzed in SONAR). That planted a seed…

SONITUS COMES THROUGH—AGAIN

I inserted the Sonitus Surround plug-in into a track because it includes a pink noise source, then fed its output to a TASCAM US-20x20 interface output, patched that into the vintage wah, then patched the wah output back into a second SONAR track so I could see the results of changing the wah pedal in the QuadCurve EQ's spectrum analyzer. So far, so good; the next question was deciding which plug-in would allow duplicating the same response.

Visions of multiple parametric EQs with ganged parameters flashed across my mind, but then I remembered the Sonitus Wahwah plug-in. Hmmm...

Feeding noise through the Wahwah default preset resulted in characteristics similar to the vintage wah, but didn't nail "that" sound. Fortunately the plug-in has several adjustable parameters, so it was time to see if tweaking them could do what was needed.

THE MODELING PROCESS

The first step was trying to reproduce the same spectrum at the "heel down" part of the wah, which is the filter's lowest frequency. Here's the response of the original vintage wah.
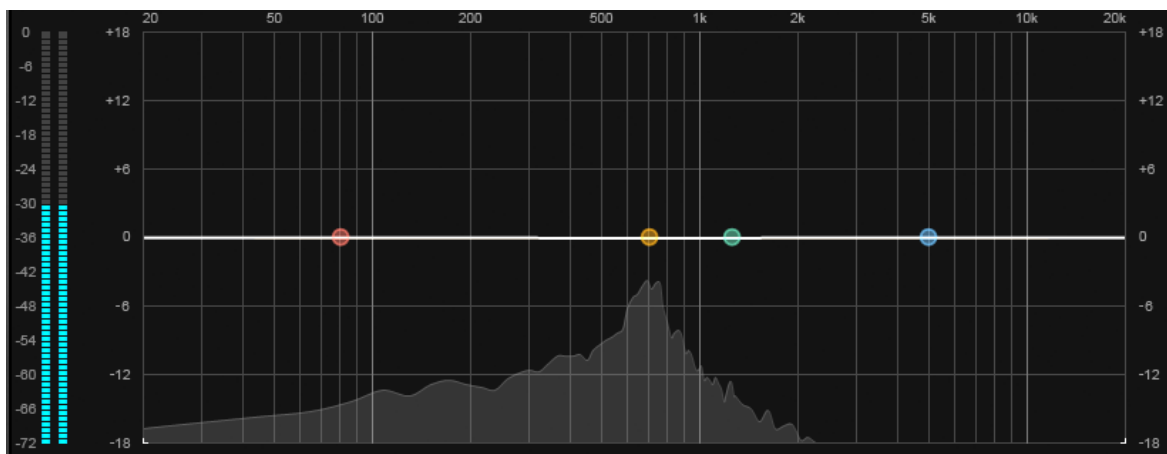
Here's the response after tweaking the "Low" parameters. Although the peak isn't exactly the same, the signal source is noise, so the spectrum is always varying. Observing the average response over a minute confirmed that the response was pretty much identical, especially the crucial "skirt" on either side of the peak.
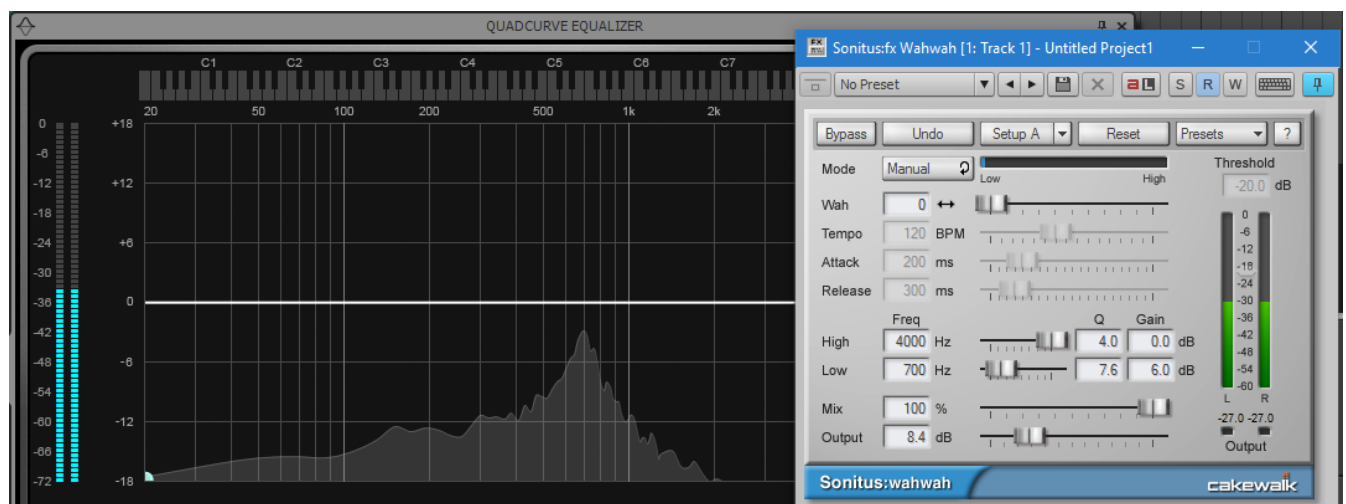
Next up—modeling the "toe down" response. Here's the original spectrum.
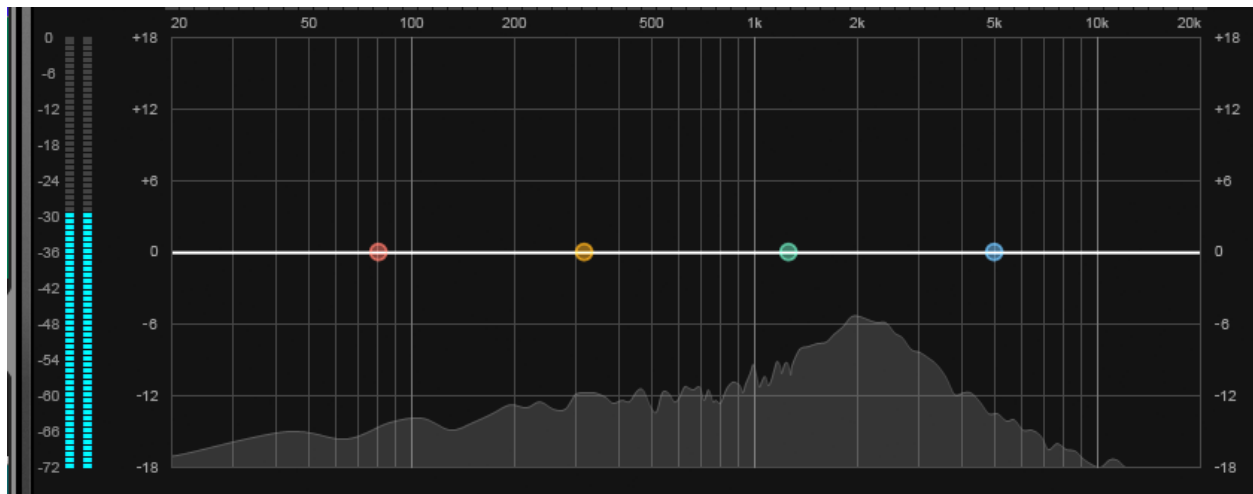
…and now, the modeled settings.

SO WHAT DOES IT SOUND LIKE?

I recorded the noise going through the real pedal and the modeled pedal on two different tracks. I then did an A/B comparison by grouping the track mute buttons, wit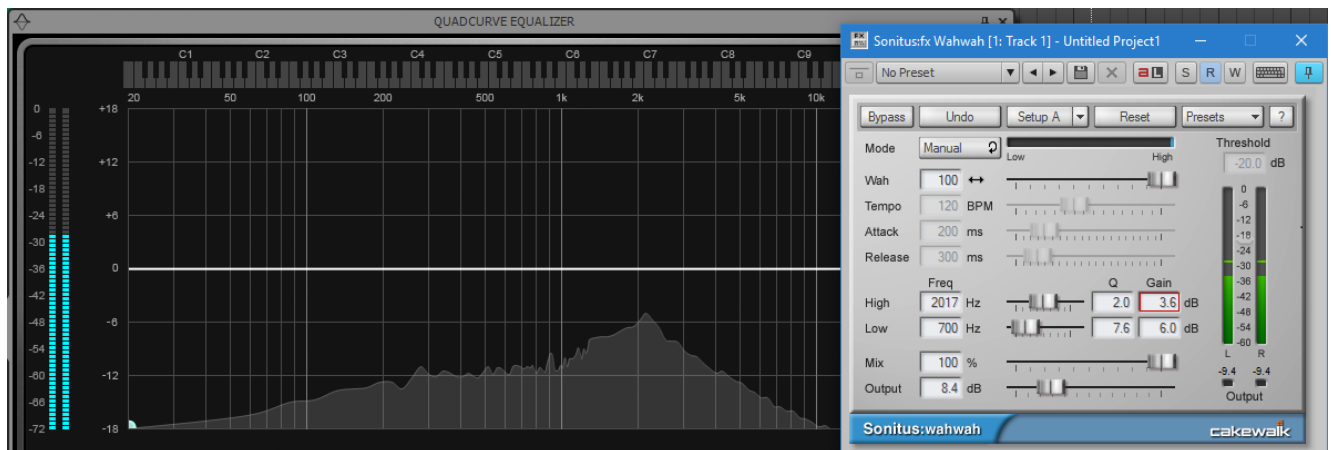h one button muted and the other not. Thus, clicking on either mute button does the A/B comparison. For A/B comparisons I close my eyes and click so many times I don't know which is which, and still with my eyes closed, click and try to hear a difference. I couldn't really hear a difference, so I figured the modeling was successful.

However, in use I did note something interesting: The Sonitus plug-in's taper responded more smoothly to varying the frequency with a pedal than the "real" wah, where it was more difficult to dial in frequencies between the high and low ranges. (And if at this point you're wondering

how to control your pseudo-vintage wah with a pedal, check out Week 85 in the Friday's Tip of the Week series.)

Finally, you can download a free FX Chain with the wah settings pre-set. This FX Chain has been "locked" to take up minimal screen space, but the settings are the same as in the images above. The Wah Freq control is tied to the effect's Wah slider.

Review: Neat Microphones King Bee and Worker Bee Condenser Mics

By Matthew Mann

Neat Microphones is a new company formed by Skipper Wise and Martins Saulespurens (co-founders of Blue Microphones). Under the Gibson Brands umbrella, they're reaching in novel directions in both design and manufacture with this new line of microphones.

FIRST IMPRESSIONS

I received the King Bee and the Worker Bee, Neat's first two studio microphones, to review. They come shipped in a brown cardboard box, but it's what's inside the cardboard box that really intrigued me. The actual microphone box is made of recycled plastic and cardboard in a yellow and black color scheme, with an outer plastic frame shaped like a honeycomb that protects the printed cardboard carton. It struck me as pretty cool that they chose to use 100% recycled materials, and everyone in my household loved the bee color scheme and honeycomb design.

Each mic comes with a honeycomb-shaped manual, and when you snap on the included Honeycomb pop filter and mount the mics in their Beekeeper shock mount (also included with each mic), they actually look like bees. They also come with an interesting little bee toy that, while serving no musical purpose, is a great conversation piece and collectible. More importantly, each bee toy has a unique serial number which the company plans to use in the future for giveaways and such...so don't throw them in a drawer and forget about them.

THE KING BEE

This is a large-diaphragm (34 mm), side-address condenser microphone with a cardioid pickup pattern and custom audio output transformer. Neat claims a signal response from 16 Hz – 20 kHz with a maximum SPL of 140 dB. This mic is built like a tank—it's very solid, and could really do some serious damage if used for personal defense. I was initially concerned about the capsule itself because of the smallish neck that holds it on the body, but the build quality is sufficiently solid that doesn't appear to be a factor.

I like the Honeycomb pop filter that comes with the mic. It snaps on the capsule part of the microphone and negates the need for a standalone filter. Neat's design begs the question "Why didn't I think of that?"...the legacy from Blue carries on here. The Beekeeper shockmount is robust enough for daily use and the mic mounts into it easily: There are two thumbscrews on the underside that screw directly into threaded holes on the mic itself, and a recess in the shockmount base to guide you. A different design? Yes, but one that's effective. However while the two screws on the shockmount for these mics work well, you need to take care when threading them. I accidentally started threading one just a little off but fortunately, I realized it in time and didn't ruin the threading on the mic or the shockmount.

I tried the King Bee on lead vocals, backing vocals, spoken vocals, acoustic guitar, Melodica, hand claps, an electric guitar re-amped through an old Crate amp, and even a tambourine. It worked fine for everything. There seemed to be a little bit of a lift between 4 – 10 kHz. It wasn't too much, it just gave a bit more presence without sounding hyped. There's also a drop in response after 10 kHz, so you may need a little EQ to get that shimmer on vocals, but this was perfect for keeping certain brighter sounds from sounding brittle. It sounded smooth as silk on acoustic guitar, and really helped the electric guitar cut through a fairly dense funk mix.

Off-axis rejection was okay, but would certainly be helped by creative placement and barriers (like foam) on both sides of the mic. Overall, I was very happy with this microphone and would be glad to use it for most applications. I'm thinking I'm going to have to add one or two of these to my collection.

THE WORKER BEE

The Worker Bee is the smaller companion to the King Bee. It too is a side-address, cardioid condenser microphone, but is about half the height of the King Bee and features a medium-sized (25 mm) diaphragm. It also has a slightly different frequency response to the King Bee, which I thought was interesting. Where the King Bee has a little bump around 10 kHz, the

Worker Bee has a little bit of a dip. There's also a dip at around 2 kHz. The result of this difference is that the mics complement each other to a degree. For example, if you use the King Bee to record an acoustic guitar and the Worker Bee to record an electric, they don't blend quite as much as you would expect—the overall effect is a little more separation in the tones. It isn't a lot; in fact it's very subtle. However, I noticed it required less EQ to differentiate between the two mics, and they play nicely together.

The Worker Bee also has a higher tolerance for volume than the King Bee. It's rated at 145 dB and, as such, should work fine on louder sources like drums. Unfortunately I didn't have access to a full drum kit when reviewing this mic, but I borrowed a snare and tried the Worker Bee in several positions above and below the snare. It was okay, but not my first choice for a snare mic as it seems a bit dark for this particular application. If that's what you're going for, then it might be fine.

I was concerned that there's no pad on this mic, so I was afraid to put too much in front of it but did try a couple of experiments. I ran a previously recorded clean guitar out of my UA Apollo and through a new plug-in amp emulator. This was run out to my rather dull sounding Crate keyboard amp. I then recorded the sound of the re-amped guitar through the Worker Bee. This, by far, was my favorite sound. It sounded really good...and with a little adjustment to its position, the sound was (as the great James Ivey over on PTE likes to say) *A-MAYUH-ZIN!* My Crate amp never sounded so good.

This mic also sounds pretty decent through a variety of studio instruments I have on hand (as mentioned above). I wish that I'd had a chance to set it up over a real drum kit, but I did the next best thing. Pulling out that old Crate keyboard amp once more, I ran some pretty serious grooves through Slate's SSD4 Platinum and Air Instruments' Strike and through the Crate.

Dude!

I'm definitely going to use that technique again in the future. I was surprised at the quality (and realism) using this setup and the Worker Bee. I know...I know...drum purists are cursing my name right now, but I'm not a drummer, so sometimes I need to devise a workaround. Anyway,

the Worker Bee was punchy. And that slight darkness I perceived earlier actually made the cymbals less brittle and more pleasant. Remember: I only had one Worker Bee, so this was a mono, one-mic setup…but placed about 2 – 4 feet from the amp, it sounded great. Of course, I had to get the balance of the drums right in the DAW first, but the results were excellent.

THE BOTTOM LINE

I'd like to say that I was surprised at the quality of these mics, but I can't. With a heritage that brought us Dragonflies, Woodpeckers, Cactuses and Blueberries, I'd expect nothing less. And, while these are certainly aimed at a more budget-conscious market, they would do fine for almost any recording situation. I still think they sound a little darker than some of the mics in my collection, but this might be the difference between Chinese off-the-shelf mics (of which I have one or two), which sound a bit brittle and harsh compared to Neat's proprietary capsule design, which I found more accurate and smooth.

Overall, I was *very* happy with both mics and could certainly see adding a pair or Worker Bees for overhead work and a King Bee for lots of other instrumentation…and even vocals. And the best part of all, the price is so good. The King Bee sells for around $349 and the Worker Bee for around $199. At these prices for this level of quality, you really can't go wrong.

I just wanna know one thing: When do we get to see the Queen Bee?

Matthew Mann graduated Berklee College of Music with a Master Certificate, Music Production. Matt has been in bands and run studios for over a decade, and had a three-year stint as a Sales Associate at GC Pro. Recently he's been concentrating on technical writing for MusicTech magazine and a variety of web sites, including Harmony Central. This article has been adapted from its original publication in Studio One Expert.

5 More Rapture Pro Tips

By Craig Anderton

Last issue presented five Rapture Pro programming tips, so let's keep the momentum going with some more goodies.

PRECISION CONTROL

Although most parameters have Direct Numeric Entry for precise parameter values, there are exceptions—for example, the Chorus, Phased Delay, and Symphonic Delay Time controls; the Reverb Predelay and Size parameters; and the Phaser Center control. Although you can set these parameters "close enough," you may want more precision. There are several ways to do this, and the following applies to all parameters and knobs—not just parameters that don't allow Direct Numeric Entry.

You can fine-tune parameters even if they don't have direct numeric entry

- Hold Shift while click+dragging a parameter value in the parameter window or knob
- Click in the parameter window, then use the mouse scroll wheel. Hold the Shift control while moving the mouse scroll wheel for even more precision.
- Knobs work similarly, but the resolution for mouse wheel scroll or mouse wheel + Shift makes larger jumps than in the parameter window (5% and 1% respectively).
- After clicking on a knob or parameter value window, the left/right arrow keys make adjustments in 0.1% increments, and the up/down arrow keys make adjustments in 1% increments.

VINTAGE SYNTH DRIFT

Admit it—sometimes you liked how with those old analog synths, the oscillators would be slightly out of tune with each other whenever you hit a key, and it was never quite the same

way twice. Rapture Pro may be a digital synth, but we can trick it into being a little more analog. Let's look at how to do this with a two-oscillator program, although the same principle applies to using more oscillators.

You can make Rapture Pro's oscillators sound like they're drifting without tying up any LFOs

In the Mod Matrix, assign a Random Bipolar source to the Pitch parameter for each oscillator. An amount of -5 and +5 keeps things from going too out of tune, but be my guest and increase this if you want something more out of tune (or are a fan of seasickness). Now every time you play a key, the offset between the two voices will be ever-so-slightly different.

CONTROLLED DETUNING/FLANGING/CHORUSING

In the same spirit as the above, but with more control, one of the Cool Synth Effects of All Time was detuning any oscillators slightly. With wavetables, you can do this easily in Rapture Pro by using the Multimode function and then altering the Detune parameter. However, if you're using longer samples, Multimode can't be activated so we need an alternate approach.

Flanging, chorusing, detuning—all under Instrument knob control.

The Mod Matrix settings are similar to the previous tip, but with two important differences. An Instrument knob replaces the Random Bipolar source, and the amount of pitch shift is greater (-25 and 25)—I chose those values just in case anyone wanted a honky-tonk piano sound ☺. As you turn up the instrument, one oscillator goes sharp while the other goes flat. If the two Elements are panned to center, turning up the instrument control goes through flanging, then chorusing, all the way up to some serious detuning. And there's a bonus feature: If you want to use the Element's insert effect for something other than chorus but still want a chorusing effect, turn up the Instrument knob a bit and make sure both Elements are panned to center.

TOUCH FILTERING

People liked the Touch Wah feature in the Gibson Bass Collection Expansion Pack, so here's how to add it to sounds in general. However, note that there's a lot of interaction among the various parameters depending on your touch and your keyboard's velocity response, so the numbers in the screen shot will likely need to be tweaked to your needs.

This collage shows the Mod Matrix, Filter Cutoff, and Instrument macro control settings

The basic idea is to turn the Filter Cutoff up a little under halfway so that no matter what, it won't close down far enough to cut off the sound completely. Velocity kicks up the cutoff as you play harder—so far, that's all pretty normal.

The Instrument macro control determines the touch filtering's effect. When turned down, the filter stays open, due to already being turned up partway and the effect of velocity on the cutoff. Turning up the Instrument knob turns down the filter cutoff, so velocity has more effect on determining the cutoff frequency but also increases the filter resonance so the filtering effect becomes more pronounced. Hopefully you'll find the "sweet spot" for the effect you want simply by trying different Instrument knob positions, but if not, you'll need to play with the other parameters as well.

DISCOVER COMB FILTERING

Comb filtering is one of the filter modes for the Rapture Pro Elements, and it can produce some cool real-time effects when tied to an instrument control. However, the frequency changes oppositely to the low pass filters, so you need to set things up a little differently so that the perceived frequency goes higher as you turn up an Instrument control.

Comb filtering is a great addition as an Instrument control

Use Direct Numeric Entry to set the Element's Filter Cutoff to 8000, and for the most dramatic effect, turn the Resonance up about ¾ of the way. (You don't want the cutoff higher because then the apparent frequency starts going down again above that setting.) In the Modulation Matrix, set the Macro Knob amount to -5000 so that turning up the Instrument control turns down the Filter Cutoff, and now the Comb Filtering will provide the right "sense" as you turn up the Instrument knob.

BlogBeat

This month's Blog Beat focuses on you—the SONAR users who helped shape this product into the powerhouse it is today. The theme: unique case studies written by (or about) SONAR power users with varying goals, experiences, and applications.

Artist Spotlight: Eric Hansen—How He Gets Big Pro Sounding Results At Home: Eric Hansen, no stranger to the Billboard charts, has been using SONAR for 15 years. In this interview by **Jimmy Landry**, Eric checks in from Florida to walk you through his typical signal chain, recording process, how SONAR Platinum has helped him deliver his new record, and more.

panup | Studio Session & LANDR Test: Cakewalk user **Panu "Panup" Pentikäinen** was very intrigued by LANDR's online mastering services, and decided to investigate just how well it actually works. Can it really produce a credible job of polishing a mix? He generously offered to share his findings with us, and now we're sharing them with you.

Mining Gold from PA Recordings with SONAR: Veteran SONAR user **Craig Parmerlee** uses SONAR mostly for processing recordings done in a live setting—which presents quite a few challenges compared to recording in a controlled studio environment. From working with the PA mix engineer to attacking mud and noise, this article is itself a gold mine of helpful tips.

How SONAR User Bentley Ousley Executes a Crazy Idea: Lately, Bentley Ousley has seen a lot of success with his latest audio-visual project involving fractals, music, and lots and lots (and lots) of complex coding. Cakewalk's **Jimmy Landry** found him right on our own Cakewalk forum, and conducted an impromptu interview to get the full story.
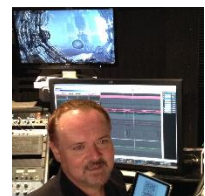
NBC "The Voice" Winner Javier Colon |How Sonar Played a Role in His New Record on Concord Music Group: As soon as the ink was dry on his contract, Colon started the songwriting process—and tells **Jimmy Landry** SONAR was a formidable "creative partner," from the drum loops in Addictive Drums that kick-start a tune to SONAR's speed in turning ideas into reality.

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