





SONAR 2016

"Manchester" Update

Happy new year! Or maybe if Santa was good to you, happy new gear. We're excited about what's planned for 2016, and want to thank you for your support in 2015 that made it possible for us to continue down the

path of continuous improvements. We greatly appreciate your suggestions—keep those comments coming, because we all want the same goal of SONAR being the best DAW ever.

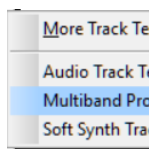
Last year we were pleasantly surprised by the extremely positive reaction to Patch Points and Aux Tracks, but that's the beauty of the rolling updates—we can adapt to *your* needs, so in this release we're emphasizing enhancements to the Patch Point workflow. However, we also have an important Melodyne update, more fixes and enhancements, a fun "Anatomy of a SONAR Project," the insider story on a new expansion pack, and plenty more. But that's enough from us—now go enjoy the eZine. – *Bill Jackson and the Cakewalk Team*



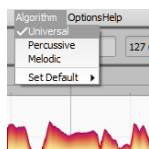
Patch Point / Aux Track Smart Solo: Patch Points and Aux Tracks have allowed for some profound changes with SONAR's workflow. Now the logic for Solo operations has been enhanced to accommodate, and accurately reflect, changes that occur "downstream" or "upstream" of Aux Tracks.



Track Solo Optimizations: The track solo logic is now streamlined and optimized. Previously, some computations were being done multiple times to evaluate the solo and exclusive solo state for tracks. The code for doing this has been changed, so soloing tracks and loading projects with solos will be a lot faster.



Patch Point and Aux Track Support for Track Templates: Yes, we *do* take requests (well...not "Freebird," but anything else is fair game). This oft-requested enhancement from the community upgrades Track Template functionality to recall Patch Points and Aux Tracks.



Melodyne 4 Update: Great news—if you received Melodyne Essential with SONAR, you're eligible for a free update to Melodyne 4 Essential. Among other enhancements, its new Universal algorithm provides high-quality transposition, pitch-shifting, and time-stretching, even with complex program material. Grab it!



Workflow Enhancements and Fixes: Manchester includes several bug fixes that relate to MIDI, including no more “port scrambling” when devices are added or removed, rendering automation when bouncing MIDI clips with arpeggiation, PRV selection issues, and more.



The Inside Story on the New Gibson Bass Collection Expansion Pack: The latest Rapture Pro/Session expansion pack didn’t just fall out of the sky, but required a pilgrimage to “the world’s greatest lending library for guitarists.” Get the lowdown on what’s involved in translating physical basses to the world of synthesis.



Review | TASCAM US-20x20 audio interface: USB 3.0 promises lower latency and more throughput—and finally, we have a USB 3.0 interface that’s under \$500. Does faster USB really make a difference? How does it compare to Thunderbolt, which has yet to gain traction on Windows? Let’s investigate.



Anatomy of a SONAR Project—A Non-Traditional Approach to a Commercial Recording: What do Finland, ukuleles, a Brooklyn “birdhouse,” Yamaha’s New York showroom, a Les Paul, gear ripped from an 80s console, hand-to-hand combat, and Cakewalk’s Jimmy Landry all have in common? Find out here.



BlogBeat: A roundup of a few of the Cakewalk Blog’s “greatest hits.” If nothing else, check out the [SONAR X3 vs. Platinum Importing Audio](#) video—it’s a riot, down to the race car sound effects. But that’s not all: learn about multi-track drum editing, Universal Routing Technology, optimizing reverb, and more.

How to Download the Manchester Update

Open the **Cakewalk Command Center**. If you don't have the latest installer, SONAR will ask if you want to download and install it. Cakewalk highly recommends that you do this. (Also remember that you can always download the latest version from the Cakewalk Command Center [home page](#).)

To download the **Manchester** update itself, download from the core SONAR Artist, Professional, or Platinum category. It's not necessary to download anything else.

Patch Point / Aux Track Smart Solo

Artist, Professional, Platinum

The Manchester release provides significant enhancements to the logic for soloing Aux Tracks, as well as tracks that have Patch Points as inputs. Solo functionality is now “Patch Point Aware,” so when you solo an Aux Track or a bus that outputs to a Patch Point, SONAR will automatically manage the solo state for all upstream and downstream tracks/buses. The Solo logic for bus solo has also been enhanced, so that buses are aware of downstream Patch Points to which the buses may route.

The upshot of this intelligent management is that it eliminates the need to solo or mute other tracks manually when using Patch Points, greatly improving the Patch Point workflow.

Furthermore, the Clips pane now confirms Aux Tracks track status visually, so “what you see is what you hear.” All upstream or downstream tracks that mute as the result of soloing an Aux Track will be dimmed in the Clips View to indicate that these tracks will be silent. This makes it very easy to see the results of muting an Aux Track within a project.

The simplest way to illustrate how this works is with a few use cases, but the new Solo logic handles many other general routing scenarios.

TYPICAL SOLO BEHAVIOR SCENARIOS IN THE CLIPS PANE



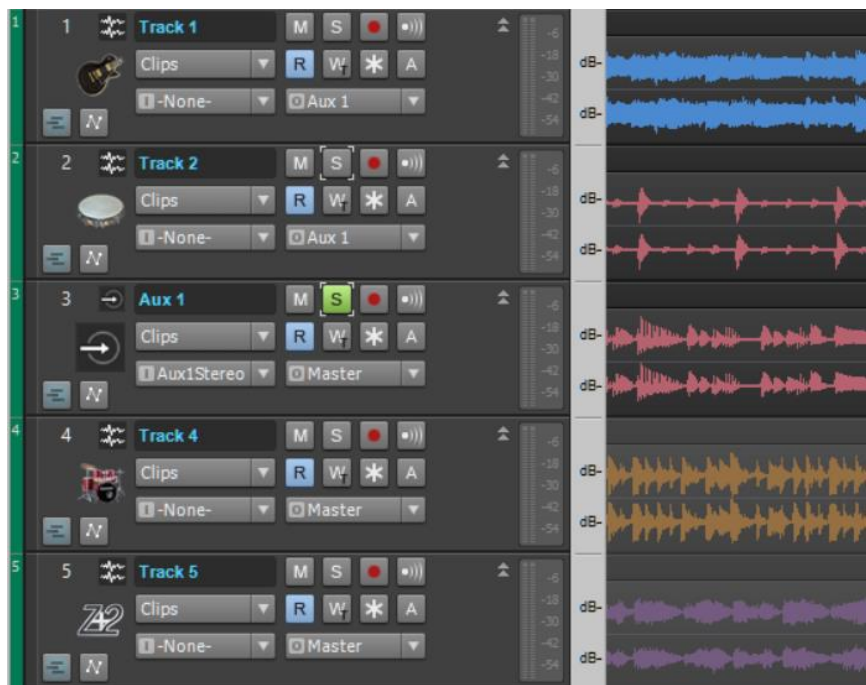
Soloing a track that *routes* to one or more Patch Points via an output or send (directly or indirectly) will make all downstream patch points in the circuit audible. In this example:

Track 1 > Aux 1

Track 2 > Aux 1

Aux 1 > Master

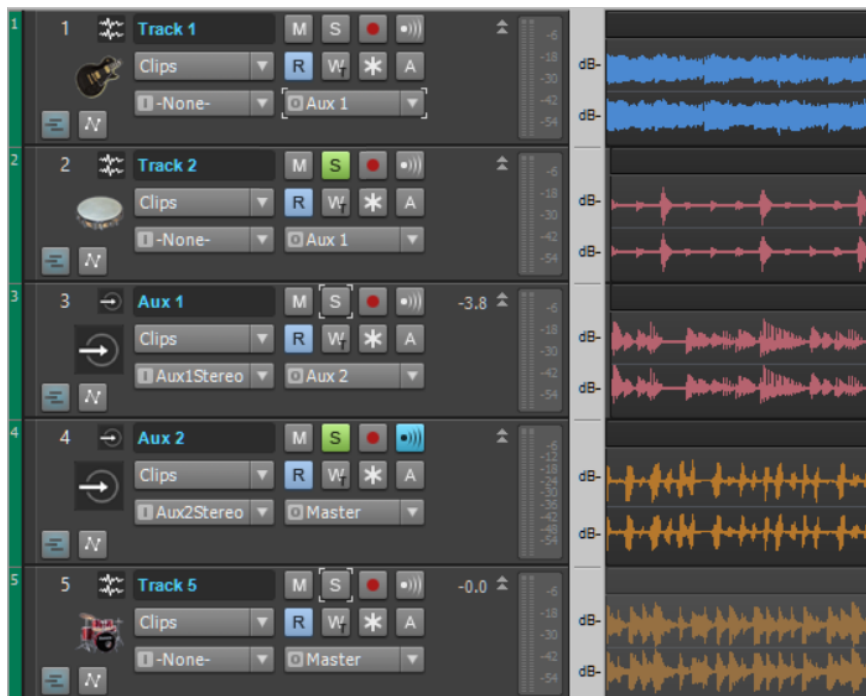
Soloing Track 1 makes Aux 1 audible. Note how tracks 2, 4, and 5 are dimmed to reflect that they're muted.



Soloing a track that has its *input* set to a patch point automatically makes all upstream tracks or buses audible. In this example:

Track 1 > Aux 1
Track 2 > Aux 1
Aux 1 > Master

Soloing Aux 1 makes Tracks 1 and 2 audible (you can still solo and mute tracks 1 and track 2 independently). Note that tracks 4 and 5 are dimmed.



Here's an example of what happens when you solo tracks chained to multiple patch points and aux tracks. In this example:

Track 1 > Aux 1 > Aux 2 > Master
Track 2 > Aux 1 > Aux 2 > Master

To hear only Track 2, solo Aux 2 and also Track 2; to hear only Track 1, solo Aux 2 and also Track 1.

TYPICAL SOLO BEHAVIOR SCENARIOS THAT INVOLVE CLIPS AND BUSES

Soloing a bus to which an Aux track outputs makes all upstream tracks or buses audible automatically. For example:

Track 1 > Aux 1
Track 2 > Aux 1
Aux 1 > Master

Soloing the Master bus will make Track 1, Track 2 and Aux 1 audible (note that you can still solo and mute tracks 1 and track 2 independently in this scenario).

Soloing a bus that *routes to* one or more patch points via an output or send (directly or indirectly) will make all downstream patch points in the circuit audible. For example:

Track 1 > Bus A
Track 2 > Bus B
Bus A > Aux 1
Bus B > Aux 1
Aux 1 > Master

Soloing Bus A will make Aux 1 as well as Track 1 audible.

TYPICAL SOLO BEHAVIOR SCENARIOS THAT INVOLVE MIDI AND INSTRUMENTS

Aux Track solo logic also includes MIDI tracks when activating solo.

Example 1: Simple Instrument tracks that output to patch points or aux tracks are now automatically included in the circuit when you solo the patch point track.

Simple Instrument Track 1: Rapture Pro Output > Aux 1
MIDI Track 2: Kick > Rapture Pro
Aux 1 > Master

Soloing Aux 1 will automatically include both Simple Instrument Track 1 and MIDI Track 2 in the mix.

Example 2: Multi-out synth tracks that output to Patch Points automatically include all referenced MIDI tracks in the “circuit” when they are soloed.

Synth Track 1: Kontakt 5.1 Kt. aux 1/Kt. aux 1: Stereo > Aux 1

Synth Track 2: Kontakt 5.1 Kt. aux 2/Kt. aux 2: Stereo > Aux 2

MIDI Track 3: Kick > 1-Kontakt 5.1

MIDI Track 4: Snare > 1-Kontakt 5.1

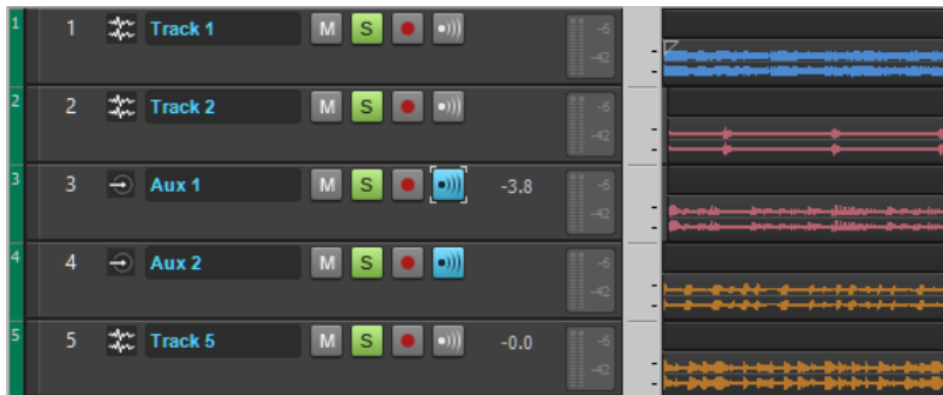
Aux 1 > Master

Aux 2 > Master

Soloing Aux 2 will automatically include both MIDI Track 3 and MIDI Track 4, along with Synth Track 2. As a result, there is no need to solo the MIDI tracks manually when soloing the Aux Track. Of course you can also mute and solo the MIDI tracks manually, or use the pre-existing synth smart solo mechanism in addition to aux solo.

Track Solo Optimizations

Artist, Professional, Platinum



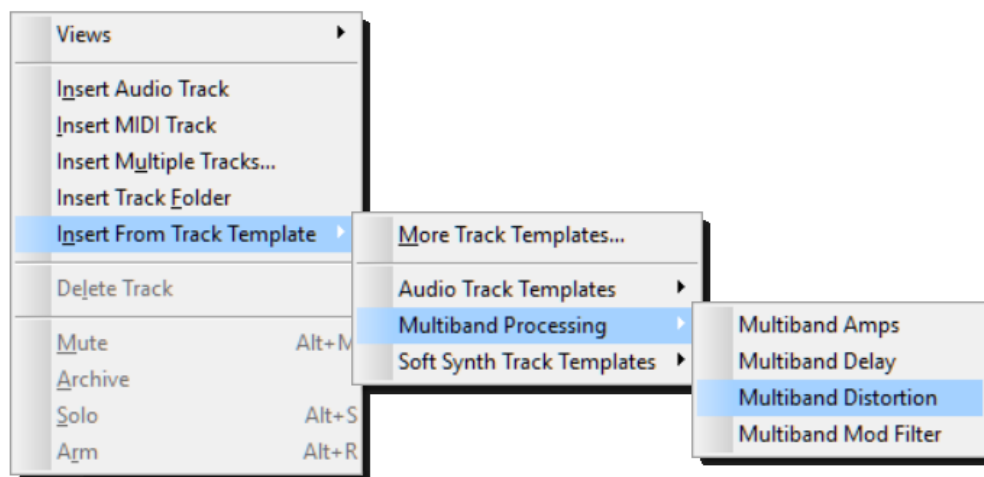
While working “under the hood” to enhance the Solo function for use with Patch Points and Aux Tracks, the Bakers also streamlined and optimized the track solo logic (however, despite speculations in the SONAR forum it’s *not* true they changed the oil filter; SONAR does not require an oil filter).

Previously, some computations were being done multiple times to evaluate the solo and exclusive solo state for tracks. Because these computations were being done every time a track’s solo state changed, this would slow down soloing multiple tracks when quick grouping, as well as slow down project loading. With these changes, soloing tracks and loading projects with solos will be faster.

Patch Point and Aux Track Support for Track Templates

Artist, Professional, Platinum

The latest upgrade to Track Templates allows them to be aware of Aux Tracks and Patch Points, and to manage routing of Patch Points contained within track templates. So you can now create Track Templates that reference Patch Points and Aux Tracks, and then import these into your projects, which makes it easy to save your favorite routing setups. As soon as you import a Track Template that references Patch Points, SONAR will create all referenced Patch Points as well as retain routing for any associated buses or tracks that route to Patch Points in the template.



AUTOMATIC PATCH POINT PORT VIRTUAL PORT REMAPPING

The import mechanism automatically remaps incoming Patch Point ports to similarly named Patch Points that may already exist in the project. Patch Points are “merged” into the project by matching Patch Point name, similarly to how buses are merged when you import a Track Template. In other words, if you import a Track Template with Patch Points that share the same name as existing Patch Points in the project, the existing ones will be re-used as much as possible (unless SONAR detects feedback).

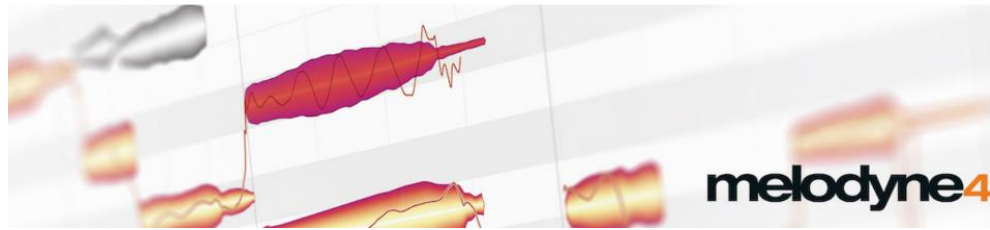
For example, if you have an existing Aux Track named "Aux 1" and import a Track Template that references the same Aux 1, SONAR will automatically assign the imported tracks to the Aux Track "Aux 1" input/output virtual ports.

Note that because SONAR’s import logic automatically checks for and eliminates feedback circuits, inputs will be assigned to None if feedback results from assigning an input to a Patch Point. (This is similar to the way buses are merged when importing a Project Template.)

Melodyne 4 Update

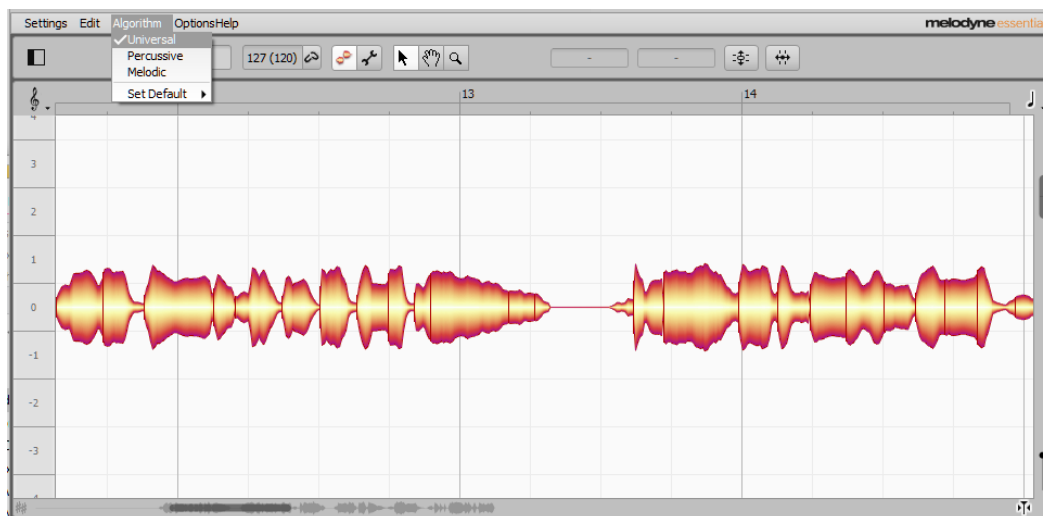
Professional, Platinum

Thanks to our friends at Celemony, SONAR users who have the bundled version of



Melodyne Essential can now upgrade to Melodyne 4 Essential for free. It's simple: The next time you open Melodyne, you should see an opportunity to upgrade. If not, simply run the Update Check from Melodyne's preferences. Either way, once you reach Celemony's servers, the download process is automatic. Unzip the folder, open it, and then double-click on Setup.exe. Follow the authorization procedure, and you're ready to rock. Well, or at least correct pitches, and do all kinds of other useful things.

Although the interface looks cleaner this is much more than just a UI change. With the older version, you could edit monophonic signals like vocals and bass with the Melodic algorithm as well as non-tonal, percussive material with the Percussive algorithm. The new *Universal* algorithm in Melodyne 4 allows transposition, conforming to tempo, and quantizing chords and other complex material with very high audio quality. It's even well-suited to pitch-shifting and time-stretching entire mixes, and CPU consumption remains very reasonable. (However, if you want to change individual notes *within* a chord, you do need a more advanced version like Melodyne Studio or Melodyne Editor).



What's more, the variably configurable, single-window interface makes it easier to adapt Melodyne to your own preferences and working requirements, with new browsers and

inspectors offering a better overview and direct access to all important parameters. There are also many more keyboard shortcuts for improved efficiency. Furthermore, under-the-hood improvements optimize Melodyne for the latest operating systems in either 32- or 64-bit environments.

There's a [new video](#) on using Melodyne 4 with SONAR; check it out for more information on what this combination can do.

Finally, although this doesn't apply to Melodyne Essential, note that SONAR supports Melodyne Studio's new Multitrack mode thanks to SONAR including specific VST3 interfaces that support this behavior. Multiple instances of Melodyne in a single project can now be "aware" of each other, so in SONAR Platinum, you can see all the track names and switch among the ARA multitrack data views in Melodyne's window—very useful for reference purposes when editing your current track.

Fixes and Workflow Enhancements

Artist, Professional, Platinum

Fixed issues where:

- The EQ plot would occasionally not update properly when moving within the project using markers or hot keys
- The collapsed Event Inspector would not display event data
- Multiple MIDI input ports would re-order at project open; they no longer scramble when devices are added or removed
- Dragging multiple MIDI clips with envelopes was not working properly
- Bounced clips reset the Time Base to “Musical” when the original clips were set to Absolute
- Single-note selection was not working properly in the Piano Roll View
- Left-click with the Select Tool in the PRV did not select a note
- Bouncing MIDI clip with arpeggiation didn’t render automation
- Arpeggiator automation was not rendered when bouncing MIDI clips
- Selections in project were resetting when a track was added
- Audio engine stability had issues with certain FX Chains and 64-bit Double Precision operation
- Saving a project with FX Chain or Style Dial off, then moving a knob, caused the mouse pointer to disappear
- Automation controls were not working properly when used with a control surface or via MIDI learn
- The name entered when starting a blank project wasn’t used
- Retrograde didn’t affect multiple clips correctly on the same track
- Crashes could occur when recording multiple MIDI takes on take lanes
- Undoing after import of multichannel audio files could cause crashes

The Inside Story on the New Gibson Bass Collection Expansion Pack

By Craig Anderton

Cakewalk has introduced a new expansion pack for Rapture Pro and Rapture Session: the **Gibson Bass Collection**. It includes the Gibson Les Paul Standard Bass, Gibson Midtown Bass, and Gibson EB 5-String Bass 2.0, an updated and enhanced version of the Gibson EB 5-String Bass pack originally created for Dimension Pro. I've been asked to write a bit about how they came about...so here's the scoop.



First of all, why three basses? Simple: I'm about 300 feet away from the *World's Greatest Lending Library for Guitarists*—the Gibson USA factory! Several people at Gibson told me they thought the Les Paul Standard was the best Gibson bass ever, so I borrowed one. Its deep, powerful tone was very different from the EB 5-String bass I normally play. Its tone was made for not just rock, but blues and country.

Intrigued, I checked out the Midtown bass. It looks like a thinline semi-acoustic guitar *à la* ES-335, but its hollow qualities come from hollowing out a solid piece of wood—not laminating the top, back, and sides

around a center block. It provided another radically different tonality that, while deep, also had a bright kind of “snap” that sounds great for pop, and reminds me somewhat of a “rick.”

WHY SAMPLE A BASS IF YOU CAN PLAY ONE?

Good question. Because I've played bass for years, people are sometimes surprised I often use keyboard bass in my own productions. That's because to me, they're different instruments: Basses are wonderful, but they don't hook into synthesis modules like a keyboard bass can. This means that keyboard basses involve an element of sound design that makes it easy to tailor them for specific projects.

But, I was never a fan of either multisampled basses because they sometimes felt too much like I was “assembling” parts, or standard synth bass sounds that lacked the organic quality of a physical bass. Besides with multisampled basses, after all these years of practicing to avoid

finger squeaks and fret buzzes, it seemed weird to put them back in on purpose! So, my solution was to sample real basses, and then use synthesis to allow the bass sounds to respond to dynamics.

A DIFFERENT KIND OF “MATRIX VIEW”

The sounds were sampled with a fairly heavy pick attack for consistency but once those are captured (not a trivial process), then the Modulation Matrix is key. Inside Rapture Pro/Session, velocity not only controls level, but raises filters somewhat from a base value to emulate the brightness that happens when you hit a string harder, and also affects sample start. At low velocities, sample playback begins after the hardest part of the pick attack; hitting the key harder brings in more of the pick sound.



Each program also has a keyswitched articulation to flip between two sets of .SFZ files (these are the files of code that map samples to the keyboard, as well as control sample parameters). The “pick” articulation works as described above; the “thumb” articulation emulates a finger attack by stopping sample playback just short of the pick attack at high velocities, and adding a slight attack time. By hitting the lowest C below the existing notes, you can alternate between the two. Programs in the packs that contain this functionality are called “Pick” programs.

A second set of “Thumb” programs offer a different articulation. The main articulation is the thumb/finger one, while the second adds a quick, percussive detail. It has a certain synth-like quality that works well with alternative musical genres.

The Midtown and Les Paul Standard basses have six total programs, two (Pick and Thumb) for each pickup combination—Bridge, Neck, and Neck + Bridge. The EB 5-String Bass 2.0 has eight pickup combinations and eight unique sounds, thanks to the Tune Coil Tap concept perfected by Gibson pickup guru Jim DeCola. As a result it has 16 program (and of course, needs a lot more samples). All of them also have sampled up and up/down slides, which adds a whole other element.

THE “SPECIAL SAUCE”

These basses have some unusual twists. With the Midtown and Les Paul Standard, I wanted the notes to go down to the 5-string range. So, I transposed the low E digitally to create “new” samples (not just transpose with the instrument mapping) until I had enough to cover the needed note range. Also, all the files in use the .FLAC format to reduce the memory footprint and load times. Most instruments are around 200-300 MB, and typically load in 2 seconds or less from a hard drive.

But the Big Deal involves Rapture’s Instrument controls, and programming these probably took 80% of the pack development time. Each of the basses has the same control complement, so if you’ve learned one, you’ve learned them all. Here are the 12 controls.



- **Bass Tone** – boost/cut shelving equalizer
- **Treble Tone** – boost/cut shelving equalizer
- **8-String** – adds a second, octave-higher layer to provide an 8-string bass effect. This layer has an 18 ms delay compared to the primary layer, which gives the distinctive sound of a pick hitting the octave string after the fundamental string.
- **Suboctave** – this uses a wavetable (Sine Cube) to generate a synthesized sound an octave below the main layer.
- **TouchFilter** – this keys a resonant filter to velocity, so you get “touch wah” effects as you play. It’s quite electronic-sounding.
- **Growl** – uses Rapture’s internal DSP to add a little grit.
- **Chorus Rate** and **Chorus Depth** – with minimal Rate, increasing depth adds stereo width. Of course, you can also use this to provide chorusing effects.

- **X/Y Pad 1** – the X-Axis controls vibrato depth, the Y-Axis controls frequency. Given that bassists rarely use vibrato, this can add a very “synthy” vibe.
- **X/Y Pad 2** – this is effective only if the 8-String layer or Suboctave is turned up, because the X-Axis adds distortion to the 8-String layer, while the Y-Axis adds distortion to the Suboctave layer.

Unlike Rapture Session, Rapture Pro includes a Mixer section. Its two sends are assigned; Send 1 introduces temp-synched delay, while Send 2 feeds an LFO filter.

COVERING ALL THE...BASES

I’ve often mentioned that I initially design the effects and instruments Cakewalk releases for my own use, and these basses are no exception. Even the people at Cakewalk were surprised by the sonic differences among them—the aggressive, big sound of the Les Paul Standard Bass; the warm, rich, sound of the Midtown Bass, along with its distinctive “snap” that adds brightness; and the clarity of the EB 5-String, thanks to the swamp ash body and the versatility that results from the clever passive pickup wiring. I’m happy to share them with you, and hope you find them useful in your own music.

Review: TASCAM US-20x20 Audio Interface

By Craig Anderton

I've refrained from reviewing Gibson Brands products because Cakewalk is part of the Gibson family of brands, and some people might see any review as suspect. However I also have obligations as a journalist, and I would be remiss if I didn't make you aware of this USB 3.0/2.0 interface, and why I've switched over to it.



USB 3.0: THUNDERBOLT FOR WINDOWS?

Not quite, but...

Latencies with Thunderbolt interfaces like the [Clarett8 PreX](#) are pretty astounding—with 64 sample buffers on a MacBook Pro, I tested the round-trip latency at around 4 ms. To put this in perspective, that's about the same latency as the delay between sound leaving my studio monitors and hitting my ears. So with headphones, the latency is actually *less* than using speakers. Chew on that for a bit...

But Thunderbolt (which is pretty pricey) hasn't gotten traction yet on Windows, so it's of little relevance to SONAR users. However USB 3.0 interfaces are starting to appear, and I was very intrigued by the US-20x20, which sells for under \$500 and offers USB 3.0 compatibility.

USB 3.0 is *definitely* faster. I had no problem running at 64 samples with complex projects, resulting in a round-trip latency (input + computer + output) of around 9 ms at 44.1 kHz. This breaks the 10 ms barrier that, at least to me, makes the difference between a real-time "feel"

with virtual instruments/amp sims and a detectable delay. With USB 2.0 and equally complex projects, I usually had to do at least 128 samples and sometimes 256. As to comparing USB 3.0's 9 ms with Thunderbolt's 4 ms, try this experiment: Play guitar through an amp from 4 feet away (4 ms), then try 9 feet away (9 ms). I doubt you'll hear any significant difference.

The one caution is that USB 3.0 can be more temperamental than USB 2.0, and requires USB 3.0 cables (one is supplied with the US-20x20, as well as a cable for USB 2.0). For best results, you're also limited to a cable length of about 9-10 feet. The US-20x20 is the first USB 3.0 interface to use class-compliant drivers, so it should work with any modern computer; the US-20x20 worked perfectly with my circa-2012 HP laptop. However older computers may work, or may need a motherboard firmware or driver update, or rarely, they might not even work at all. That was the case with my desktop computer, which was born around the time of Vista-64 and had problems with some (but not all—go figure) USB 3.0 devices.

Fortunately, there's a simple solution—the [Insignia NS-PCCUP53](#) USB 3.0 PCIe card, available from Best Buy, works perfectly with the US-20x20 and costs only \$30. It doesn't need a driver with Windows 8 or above, and includes a driver disc for Windows XP/Vista/7.

As expected the US-20x20 works with USB 2.0, although of course you lose the speed advantage of USB 3.0. It's also compatible with iOS, but requires OS X 10.11.2 to be compatible with USB 3.0 on the Mac.

OTHER FEATURES

I won't dwell on the other features, because you can find out about them on TASCAM's US-20x20 [landing page](#). However, some highlights are definitely worth noting.

- **Lots of I/O.** Although solo artists might not feel the need for eight mic/line inputs (there's also S/PDIF, ADAT, Word Clock, and MIDI digital I/O), it means I don't have to re-patch anything—with my setup two mics, guitar, bass, and stereo keyboard are always plugged in and ready to go. However, note that phantom power isn't switchable for individual channels, only for two groups of four.



- **Onboard DSP.** For those who like to record with effects, the US-20x20 has an Analog Devices Blackfin processor that provides EQ, compression, and reverb. (Like almost all

interfaces, the compression is post-A/D conversion so you can't use it to prevent input clipping at the converters.) The reverb is in an aux bus, so you can record vocals dry while the singer hears reverb in the headphones. They tend to like that...



- **Three different functions.** The mic preamps in the US-20x20 are excellent—Class A design with discrete components, not ICs. As a result, in addition to audio interface mode the US-20x20 also has a mic preamp mode where it serves as a stand-alone set of eight mic pres; and because there's an ADAT output, you can feed them into an interface with an ADAT input (including the US-20x20, of course) to gain eight more mic preamps. The third mode, Mixer mode, lets you use the US-20x20 as a computer-controlled digital mixer.

There are many more features, but those are the high points. If you've been jealous of Mac Thunderbolt setups, need to update your existing interface, want more inputs, use amp sims or virtual instruments, or require more functionality, the US-20x20 offers a lot for the price. And given that TASCAM is also a Gibson brand, as you might expect it's been tested extensively with SONAR.

Anatomy of a Project: A Nontraditional Approach to a Commercial Recording

By Jimmy Landry



Last summer, Peppina—a young female artist from Finland—plunged herself into the NYC music scene for two months. With the help of renowned NYC entertainment attorney Steven Beer who discovered her, she managed to head back to Finland with a major-label sounding EP. The project was recorded in different ways, in different locations all over the city—and with budgets being slashed, these days it’s pretty much hand-to-hand combat when making a low budget recording where anything goes. But the upshot is yes, you *can* record a commercial-sounding record on a budget—so here are some of the techniques we employed to accomplish that goal.

This all started when Beer called about an artist he’d heard sing at a film festival, and invited me for a meeting at his office. Interestingly, there were two other producer/writers there as well—a bit unorthodox, but pretty much anything goes these days, so nothing really surprises me anymore. We discussed the artist’s interests, influences, and other variables, and then listened to some of my reel as well as music from the other producers. It turned out the lawyer’s master plan was to bring the three of us together to co-write, record, and mix a five-song EP before she went back to Finland in 45 days.

Peppina already had some momentum in Finland from a loop she wrote and uploaded to a site called HITRECORD (owned by actor and director Joseph Gordon-Levitt). Her upload was so popular that Gordon-Levitt flew her to California to perform the piece at the Orpheum in LA during one of the show’s TV episodes. This all sounded good to me, so I signed on to a production team that would share in the production duties and heavy lifting. As to budgets...well, there was enough there for us to take it on as a challenge.



THE SONGS

After getting to know her work—a huge variety, from loops to complete songs to just her with a ukulele, but with lots of potential—the writing began and we whittled down eight prospects to five songs. Most were written with me on acoustic guitar, Jeffrey Franzel on piano, and Peppina and Michael Spivack on multiple instruments. [PHOTO] All of the songs except one called for a traditional acoustic drum set, so Jeffrey called in favor #1 to drummer/percussionist Shawn Pelton, Saturday Night Live’s drummer.

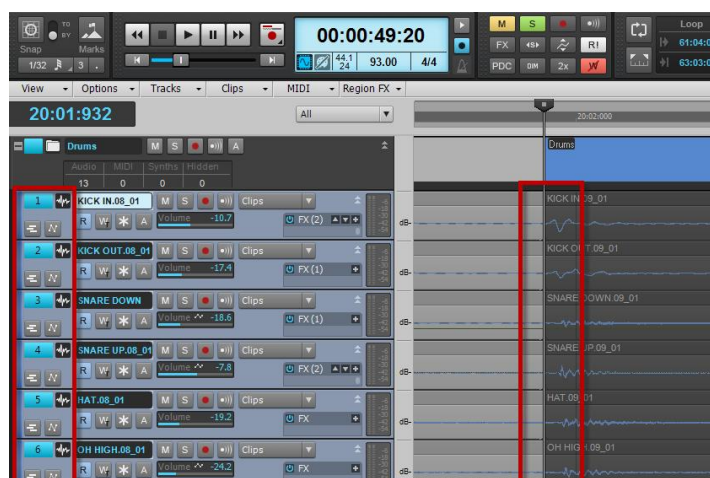




DRUMS WITH SNL DRUMMER SHAWN PELTON

Shawn familiarized himself with the songs for about a week from demo tracks, and then we recorded the drums in some underground studio in Bushwick, Brooklyn that didn't even have a name—it was one of those “under the radar” hybrid studios with great mics and preamps where you get in-and-out for under \$500 a day. We mic'd the kit in a fairly ordinary fashion, including 414s for overheads measured symmetrically to the snare. An SM7 aimed right at the front of the kit about 3' away gives the option to add some “slam-lift” in choruses when mixing. In a very nontraditional fashion, Shawn played to the demo tracks we created but with the demo drums omitted. The great thing about working with someone like Shawn is that you get your money's worth; we left in about five hours with stellar performances.

Next was importing the tracks into SONAR, then setting up the sessions. I recorded the drums in Pro Tools in the Brooklyn studio, but have to admit that going back to that software really made me realize how far SONAR has come. For example in SONAR I simply created a track template after I set up the first song with drums, so for the next four songs all my routing architecture, including busing and initial EQ'ing, was ready to go. By doing a mix even at this stage, all other drum tracks recorded with the same mic'ing scheme sounded great with just a few minor tweaks. The Quadcurve EQ (right) is phenomenal for situations like this because it's not only efficient, but baked into the channels so there's no delay compensation to get in the way of further tracking.



For the drum editing, Shawn Pelton's performances were really energetic and special so I felt very little need to use AudioSnap. The “feel” outweighed any minor pushes or pulls that were happening, and his humanization added to the energy of the songs—imagine that! 😊 After some very minor adjustments, we were ready to tackle tracking the piano. (Tip: When editing multi-tracked drums for timing, to avoid

phasing headings in spots with heavy processing, move *all* the tracks at the same time and not just the kick and snare.)

TRACKING PIANO IN A NON-TRACKING ATMOSPHERE

We didn't do the customary procedure of tracking bass after drums, but went for the piano because if you analyze many of the great songs of the 70s (and 80s for the most part), you'll notice something that was truly magical. Many bass players back then intuitively created counterpart bass lines that strayed away from the root notes just enough to create mesmerizing musical emotions. I knew we truly had a great pianist and bass player here with Jeffrey and Michael, so I thought by tracking the piano first Michael would be able to come up with some of that bass-mojo that would lend itself well to the authenticity of these songs.



To stay on budget, we called in more favors and went to Yamaha's NYC showroom with my SONAR laptop rig, a small headphone distribution amp, five mics, five preamps and an unbelievable array of Yamaha grand pianos at our disposal. For mics I brought a pair of ADAs (Hamburg and Vienna) for the top overheads, an AT4033a, a Neat Worker Bee prototype (it helps to have Gibson connections), and finally a trusty ole SM58 for some added depth wherever it might land.

It took two hours before Michael and I found the best mic positioning; it was important to test out many combinations of the mic, mic pre, and positioning options since we were recording outside of a studio environment and had no known sound reference for comparison. I brought a small, trustworthy pair of KRK ROKIT 4" monitors to listen back outside of headphones.



We ended up with the ADK mics about two feet above the grand, the Worker Bee and AT4033a close to the hammers, and the SM58 directly under the piano. Jeffrey started knocking out the tracks one by one, and thanks to SONAR's Speed Comping mode, I could comp piano tracks in between songs while Jeffrey took breaks. For me, this is a real-world



reason why SONAR really shines as a DAW, because comping the best takes together so quickly meant being able to review those parts on the spot during tracking. This allowed returning to some parts at the end of the day to “beat the comp” and have a better performance for a better master—these little things add up quickly when making a commercial record.

THE LOW END

Since I'm on SONAR and bassist Michael Spivack uses Pro Tools, I bounced out stereo wav reference files of the drums and keyboards that he snapped into his system starting at “0.” This way everything would line up when I received the bass parts. Michael did all the bass tracks in his Brooklyn apartment with nothing more than solid bass performances, a good instrument, and a good D.I. After two days, I had five superb bass performances which I simply imported into SONAR...who says DAWs can't get along?

LAYING DOWN GUITARS—“MY ONLY HEART”

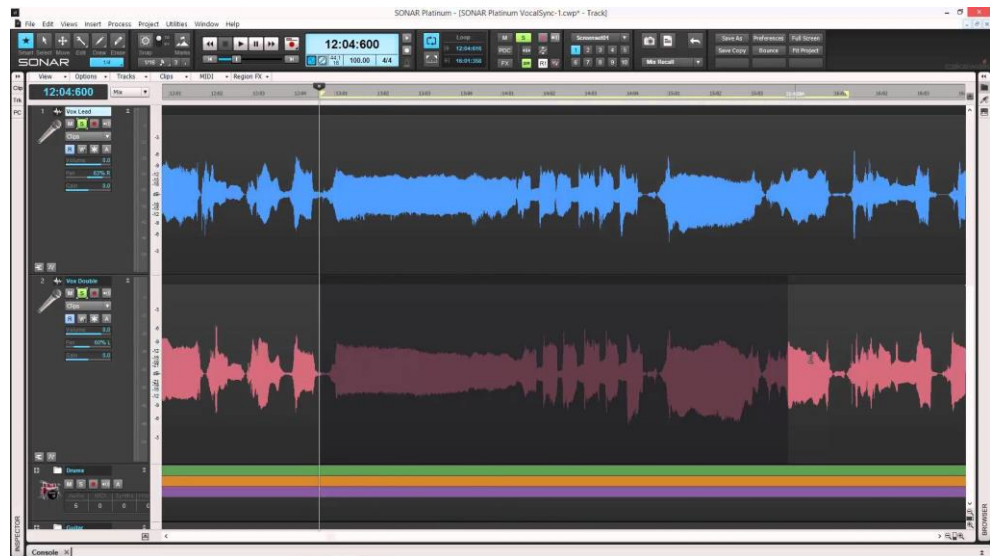
This rest of this article focuses on one song—“My Only Heart.” Here is where the magic started coming together. Already with the bass and piano laid into the drum tracks, we had a very full [“Keane-ish”](#) sounding vibe. I had brought this song in as a close-to-completed song idea, but wanted a different guitar flavor than what I could play. Thankfully Michael's guitar picking chops were up to speed, so we tracked those in my project studio with ADK mics going into stereo Yamaha PM1000 mic preamps. (These preamps were pulled out of boards and racked in the early 80s, and were considered very close to Neve 1073s— I highly recommend them as cost-effective workhorses.) We ended up passing the same guitar back and forth throughout the track until we came up with the parts we wanted. I had never really approached a track like this in terms of recording, so it was fun to experiment and feed off another player.

VOCALS: A BIRDHOUSE IN BROOKLYN



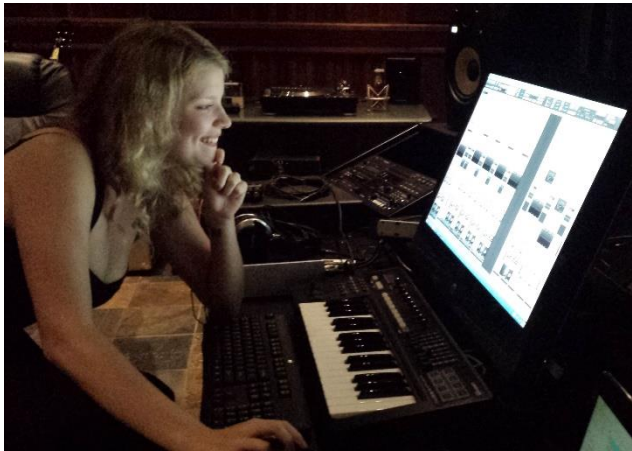
After tracking the guitar parts, a little compression and EQ helped them sit well in the song. This is another aspect of working in SONAR that I truly love—that it's easy and fast to get things sounding wonderful with the ProChannel, and not have latency concerns. Again following a nontraditional approach, Peppina felt most comfortable tracking the vocals in Brooklyn at Michael's apartment close to where she was staying for her NYC trip. Although a noisy Brooklyn apartment isn't the best place to track vocals, we had a secret weapon: "The Bird House." Michael had built a NYC-proof vocal contraption that looked more like a birdhouse belonging in NJ rather than at a vocal session in NYC.

I started tracking with the song's *last* chorus first, because some songs call for an energetic performance at the end of the track. This way you don't have to be as concerned if the singer tires while tracking multiple takes for the best comp. I can talk all day long about how great SONAR is for its plug-ins, sound engine and such—and I sometimes do!—but the program's innate workflow is its true value, because it saves time in the trenches. For example, with this song I could track four full performances of each song section, and by the time Peppina would come back from a break I'd have everything comped and doubled using SONAR'S comping tool and VocalSync.



Also concerning workflow, the ProChannel's ability to provide quick, on-the-fly, non-destructive EQ and compression when tracking backing vocals is important. You can set them into the song while tracking in real-time, which allows making better decisions on the parts moving forward. The more you can hear how the song will fit together in terms of the mix while tracking, the better. Rolling off the low end on playback with the ProChannel opened up the spectrum, allowing Michael and Jeff to come up with some background vocal parts that were different than what I'd had in mind. Finally all

the parts came together well, and the song's vocals were comped before I left Michael's apartment. Next up: my favorite part—the overdub embellishments.



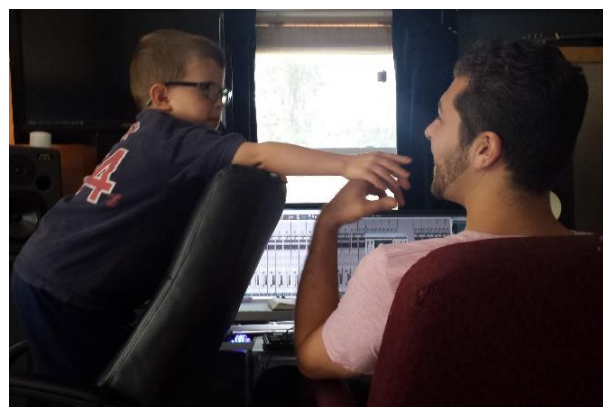
CREATING COLOR

We now had huge drums, big full piano, warm bass parts, massive string sections tracked by one player live in Michael's apartment, angelic vocals with interesting backing counterparts, and acoustic guitar parts that rounded out the track. Since I was mixing a little as I went along, I was able to know “when to say when.” The remaining to-dos were something interesting in the verses, and maybe some light electric guitar work in the

choruses. To address the first element, Peppina's ukulele skills were ideal—plucked single notes with added slapback delay worked. They gave the verses a lift without getting in the way.



The added electric guitar parts gave the choruses a bit of weight without interfering with the other guitars. The secret weapon here was Michael's Les Paul going through my old Line6 AX2, which served as a DI/Amp Simulator. I usually track a fairly clean signal with this hacked-up rig, and then add TH2 elements and other effects to the signal after the fact. When it comes to guitars in the digital age, I'm a big proponent of using different guitars, sources, and plug-ins brands on a single track so that it doesn't all start to sound the same. often combine my AX2, Overloud's TH2, SONAR's CA-X amps, and Native Instruments Guitar Rig 5.



THE MIX

We ended up mixing the whole EP in my project studio (Michael, my 6 year old Mack and I). Fortunately, mixing a bit as I went along allowed decent enough tracking decisions—this was one of those tracks that just fell together. Although the track count was pretty light (52 tracks and 27 busses), I still used Track Folders and Track Colors to the fullest extent to help keep things

organized and differentiated visually. Here are a few of the key interesting elements in the mix.



The lead vocal track used heavy processing, but [still sounded authentic](#). The chain was SONAR's N-Type Console Emulation, Waves REQ 6, PSP RetroQ for added top-end, Waves RVox, Waves RDeEsser, and the QuadCurve EQ to back down some lower mids. I sent this track directly to a "Lead Vox" bus which was also the target for the "Lead Double" and "Lead Oct" tracks. The "Lead Oct" track appeared during the chorus for a lower octave effect using Waves Doubler2, compressed with the CA-2A ProChannel module, and rolled off below 1 kHz and above 3 kHz to get it out of the way of everything else. The "VocDble" track was processed sparingly by VocalSync in different parts of the song. This track was also sent to the "Lead Vox" bus which had a touch of compression on it to glue all the vocal tracks together.

I also used a parallel compression bus on the lead vocals to help define her voice. The fader on this bus landed around -16 dB, which didn't overprocess the track but gave it just enough juice to work well with the rest of the mix. Some of the other effects were the ReMatrix reverb, Waves SuperTap2 Delay, Sonitus Delay, and the UAD TreModEcho. The ReMatrix track output was sent to another bus for processing with EQ, synced mod delay, echo, and compression using the CA-2A, with many of the faders automated as needed.





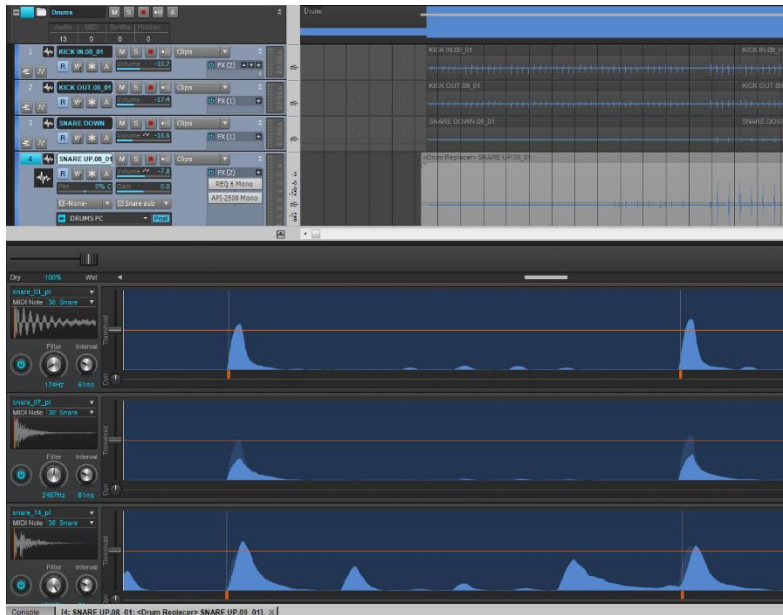
The [ukulele part](#) mentioned above was carved up with the QuadCurve EQ (Hybrid) and compressed with the CA-2A ProChannel module, then sent to a bus with Guitar Rig 5 for processing with the Delay Man and Tape Echo modules. The Tape Echo parameters were set to take down some high end,

widen the stereo delay, and add reverb; I also adjusted some of the other knobs such as Dropouts, Headroom, and Head Mix (I have no idea what they manipulated from a technical standpoint—I just knew they affected the sound to my liking).

The drums came together without much effort. 15 individually EQ'd and sometimes compressed drum tracks went to a main drum bus, with a send from each going to a separate parallel compression track. Both of those buses fed a Master drum bus processed mainly with David Bendeth's/Boz Digital Lab's +10db (bundle), which is



a beast on drums no matter what sound you want. As with most segments of the mix, I used many different “types” and “brands” of processing to give the mix a variation of sound—like using the ProChannel on individual drum tracks.



Another recent SONAR feature I can't live without is the Drum Replacer. Even though I had world-class drummer who tuned and played his drums meticulously, it was easy to vary the drum sounds using Drum Replacer. This feature is like having the ability to record multiple kits without actually switching out kits...brilliant!

For mastering, Steve Fallone at Sterling Sound Mastering in NYC did a fine job in polishing up the project. Overall, this experience

was a great one for many reasons. Working with Jeffrey Franzel and Michael Spivack re-opened my eyes to the possibilities of production-collaboration. The fact that we took on a production like this with a small budget gave the project a certain gritty flair, and it was fun overcoming the challenges inherent with a project of this nature. Getting to know and help guide Peppina—who literally landed in NYC as a young striving artist from another country—was a fantastic experience as well.

My Only Heart Soundcloud: <https://soundcloud.com/peppinamusic/my-only-heart>

More information:

Peppina:

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

Jeffrey Franzel:

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

Michael Spivack:

<http://michaelspivackmusic.com/>

Steven Beer:

<http://www.fwrw.com/attorneys/21-steven-c-beer.html>

Shawn Pelton:

https://en.wikipedia.org/wiki/Shawn_Pelton



(l-r) Michael, Peppina, Jeffrey, Jimmy

BlogBeat

The Cakewalk blog is loaded with useful and interesting information, so don't miss out! Here are some of the blog's "greatest hits."

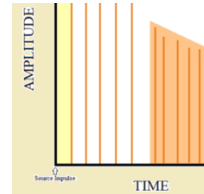
[SONAR Platinum VS. SONAR X3 Producer—Importing Audio](#): Gentlemen, *start your engines!* In our latest video, complete with drag race audio, a rock n' roll soundtrack, and a couple of millisecond-accurate stopwatches, **Joey Adams** places SONAR Platinum and SONAR X3 Producer side-by-side in a race of importing actual audio to see which is the real speed demon.



[Universal Routing Technology 202—Unlocking The Creative Potential of the Aux Track](#): If you're still looking for creative Patch Points and Aux Track applications, **Craig Anderton** has you covered. These six inspiring tips are sure to expand your understanding of how to use these outstanding features, and might even help you find a brand new workflow.



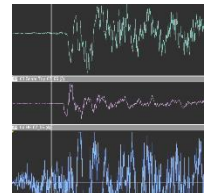
[Coloring Your Sound With Reverb, Part 1 – Convolution Reverb](#): With so many different reverb options available, it can sometimes be difficult to know where to begin. In the latest addition to the Cakewalk Blog, **Joey Adams** answers every question you've ever had about applying Convolution Reverb to add depth and color to your tracks.



[How Vivek Maddala's Work in SONAR Caught Mix Magazine's Eye \(+His Go-To Gear\)](#): In this one-on-one interview with in-demand producer Vivek Maddala, **Jimmy Landry** gets the lowdown on how SONAR is behind all his modern productions—from multiple film festival hits to brand new albums from Grammy-nominated artists.



[Multi-Track Drum Editing—Crossfading and Critical Listening](#): Drum editing can be an arduous task, especially when it involves multiple tracks. But **Dan Gonzalez** is here to help you make this process both easier and more efficient. In this series-concluding article, we walk through the closing steps of completing successful drum edits.



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