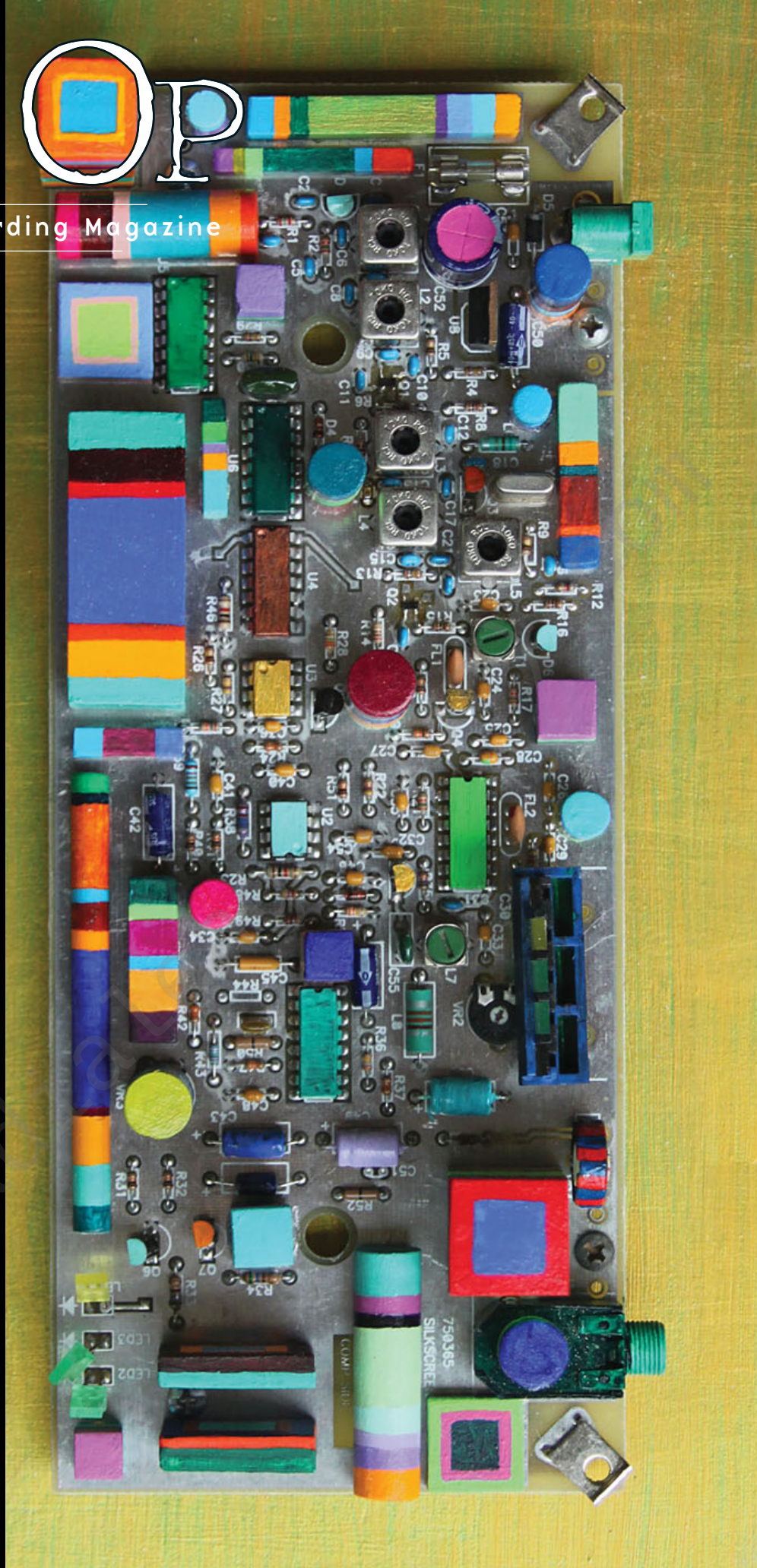
Tape Op

The Creative Music Recording Magazine



Herb Alpert
& the Tijuana Brass, A&M Studios

Chris Hillman
The Byrds, Burrito Brothers, Tom Petty

Jason Carmer
Third Eye Blind, The Donnas, Mexico City

Richard Chycki
Rush, Dream Theater, Aerosmith

Michael Kiwanuka
recording w/ Danger Mouse & Paul Butler

Sarah Jarosz
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Andy Shauf
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Anne Gauthier
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Jacquire King
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Making Tom Waits' *Mule Variations*
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Gear Reviews

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Steinberg

Backbone

drum re-synthesizer plug-in

Steinberg revealed what they label as a drum re-synthesizer in *Backbone*. In a market saturated with sample packs, this plug-in can help tailor samples into unique drum sounds, create risers, impacts, and other sound design effects. It is essentially a sampler, but more than a traditional sampler, it's focused on the layering and manipulation of one-shot drum samples. The workflow is to layer samples, decompose into tonal and noise sections, manipulate individual layers using built-in tools (or resynthesize the spectral version of your sample), then drag and drop the new one-shot into your DAW. It's fast and intuitive, and can yield some marvelous results.

The plug-in has three sections: The sample layers, the individual modules for each layer, and the effects section. It almost takes the shape of a subtractive synthesizer. The sample portion can stack up to eight layers, and each layer can be muted or soloed. Once a sample has been added, the Decompose algorithm can be used to separate the tone from the noise section of the sample. A prime example of this is a snare drum. Set the tone portion to change pitch chromatically, while controlling the noise section to maintain pitch. The snare sample retains its snap and punch while remaining natural sounding, *even* with drastic changes to pitch. Now that the sound has been split, you can process each layer independently using the individual modules: Sample, Resynth, Pitch, Filter, and Amp. Clicking each individual module reveals a detailed screen with more options. Resynth acts as an oscillator based on the spectral version of your sample. It contains information about the spectrum, time, and pitch. Lots of different timbres can be found by editing Purity, Formant, and Inharmonicity; all deal with changes to the partials of the sound. The Pitch section changes the pitch without changing the time or timbre of the sound and includes a synched envelope. Filter has a great multimode filter, and the Amp section has all the control one would normally find in both sections, including another synced envelope. Two buses can be routed parallel or in series, and have a set of useful effects such as Reverb, Delay, Distortion, EQ, Compression, Chorus, Flanger, and more. Once you are happy with your sound you can drag and drop the sample directly into your DAW for clip-based arrangement, or into a sampler, or bring it right back into *Backbone* for further manipulation and layering.

One unexpected use was to augment live drum sounds instead of replacing them. I received a few mixes with weak, close drum mics. Instead of using a drum replacer plug-in, I imported the original sounds into *Backbone*, split them into tonal and noise layers, and then got to work manipulating the tones. By using that process alone, I was able to build up the weak drum tones by adding in additional layers and tuning them to the song – it totally took the drums to the next level.

Freezing a sound at different positions in the sample allowed me to sustain the sound where there would be none. Utilizing single cycle waveforms on loop in *Backbone* makes it behave as a synthesizer with Pitch, Filter, and Amp envelopes built into each layer. This software also makes the creation of sample packs ridiculously easy: Design your sound completely in *Backbone* and then quickly export it for use. I found the Match Pitch function useful for being able to play sounds in key, especially when layering samples. Quickly being able to match samples to the same pitch of the song is a blessing, as layering samples is not effective if tones are not in unison. *Backbone* is also playable via MIDI from your DAW, and there are some tricks to animating the sound using the envelopes and various built-in tools.

Backbone is an excellent sound design tool for quickly building complex, layered hits. The ability to cherry-pick the best elements of a sound and tailor them to your needs in one place is a huge time saver. It's so much more than just a drum designer, and is capable of creating a melodic natural sound, even if the process is technically the furthest thing from natural. The Decompose and Resynthesize parameters of *Backbone* are unique, and brought new life to my existing catalog of samples. If your productions are heavily sample-based, this is an indispensable tool in creating unique sounds with an efficient workflow. *($149.99 direct; new.steinberg.net) -Kevin Friedrichsen <greyroom510.com>*

Sense

Electric consumption monitor

Every electrical device has a power consumption signature. If your service is a split-phase 120/240 V residential panel up to 200 A (and many studios are), a *Sense* is compatible. About the size of a paperback book, *Sense* includes two sensors that clamp around the main lines (no splicing required) for monitoring. *Sense* needs to monitor the voltage across both legs of your electrical system. Installing on a 240 V breaker for the unit ensures that this is done correctly. Don't worry about draw; *Sense* operates on less than one-tenth of an amp. Next, connect with *Sense* via phone or tablet Bluetooth, add your Wi-Fi network credentials, and wait for the data to come in. *Sense* continually monitors current draw, sampling millions of times per second. Its machine learning detection algorithms work to distinguish one appliance from another. Over time, *Sense* learns what is what. You can also give custom names, like "Tube Compressor" or "Console Power Supply" that are not common appliance categories.

Why do this? I have three reasons that I did. Safety: Seeing changes in the energy usage of some items can warn you before they fail. A typical story is the electric water heater that doubles or triples its draw up to 12 months before it fails. You can avoid a potential fire and save electricity by replacing the dying appliance early. Cost: Your mind will melt when you learn how many things are always using power. You know those wall-warts used in some audio gear? Those draw even if your device is not on. Data: *Sense* will be a neutral observer to watch, which tells you whether buying a smart thermostat saves you money on your utility bill (spoiler alert: they can if used correctly), as well as other conservation steps you try.

Sense claims that most users save enough electricity to pay for the device within the first year. I was skeptical of that claim, but nine months in, I'm starting to be convinced. Should it prevent a fire, or warn of an appliance failing, the value skyrockets. I stalked them and waited for a $50 sale coupon. If you're interested, that is a prudent route. They also make a version to monitor solar panels if you have those on-premises. I strongly suggest visiting their website to confirm if *Sense* will work with your facility. If you're in doubt, please hire a licensed professional for assistance. If you want to save money, and or reduce wasteful electrical use, *Sense* is a smart approach.

($299 direct; sense.com) -Garrett Haines <treelady.com>

Radial Engineering

BT-Pro V2 Bluetooth Direct Box

Radial Engineering, of Port Coquitlam, BC, Canada, has built its business by designing clever solutions for stage and studio, including an extensive line of direct boxes. The *BT-Pro V2* is their second-generation box that receives a Bluetooth wireless signal from a phone, tablet, or laptop (or any other compliant device) then converts it to analog stereo audio, available through balanced XLR or unbalanced TRS mini-jacks. The device includes level control, which provides an appropriate output signal for mic or line inputs. As the level is variable, the *BT-Pro V2* can connect directly to a power amp or powered monitors/PA speakers. Power is provided via USB-C with the included adaptor brick, or the unit can run on 48V phantom power through one or both XLR connections.

Built like other Radial Engineering direct boxes, the *BT-Pro V2* is strong enough to survive life on the road or in a DJ's gig bag. The outer 14 gauge steel shell is lined with an injection-molded plastic insert, allowing for unimpeded transmission of wireless signals while increasing signal range. The sound quality and interface options make it equally useful on stage, studio, or at home. Version 2 of the *BT-Pro* [*Tape Op* #119] adds a phantom power option with a more advanced Bluetooth interface and an extended range. This version also allows for multiple *BT-Pro V2s* to be used in a single location/installation.

Here are a few potential uses: 1. A DJ builds a "break setlist" on their phone. Rather than put on the live version of "Radar Love," their phone streams a curated, gig-appropriate set to the PA system while they take a break at the bar. 2. A band avails themselves to any of the many synthesizer apps on their iPads. They produce a backing track and accompany it live on guitar and vocals. Rather than mess with dongles and mini headphone jacks, they can stream the backing track directly into the pro-grade PA system via the *BT-Pro V2*. 3. In the studio, a client brings some audio captured via a recording app on their iPhone. Rather than go through the trouble of emailing it to the engineer who must retrieve it, spend time converting it into the right file format, and then import into an on-going session, the client simply plays it from the iPhone via Bluetooth streaming, right into a track set up in the DAW. The engineer is happy not to have to mess with iPhone audio and a fragile Lightning-to-headphone dongle. 4. I want to listen to streaming radio (or Spotify/Qobuz/Tidal) over the main music system in the living room, but I don't want to tether my phone to the preamp. Stream it to the *BT-Pro V2*, and continue reading news or email on the phone.

Suffice to say, there are many other uses for this clever device. The ability to power the *BT-Pro V2* via phantom power makes for an easy addition to a front-of-house rig, and a streaming audio playlist can replace the old cassette tape of pre-concert music. Or the *BT-Pro V2* can be used as part of the live rig. In fact, each box has a unique Bluetooth ID code, so multiple units can be used – perhaps a band has pre-recorded audio on a laptop for live performance, and another band member is playing an iPad synth.

I used the *BT-Pro V2* as a front-end to the Bryston 4B3 power amplifier I reviewed in issue #137, streaming hours of Qobuz and Spotify to my big B&W 808 speakers from both my recent-vintage iPad and iPhone7S. In all cases, the Apple devices had no trouble pairing with the *BT-Pro V2* and audio quality was good. Radial states that most material will be down-sampled to 16 bit/44.1 kHz (CD resolution), so some of the Qobuz high-resolution material was down-converted on its way to Bluetooth. It still sounded fine.


Bluetooth
BT-PRO V2
BLUETOOTH STEREO RECEIVER
Radial
Made in Canada
BALANCED LEFT OUT
LIFT GROUND
BALANCED RIGHT OUT
LEFT OUT
LIFT
GND
RIGHT OUT
Wireless Freedom For Your Studio
Ditch the dongle with the BT-Pro V2. Wirelessly stream high-fidelity audio from any device directly to your monitors or workstation, allowing you to quickly reference tracks from a smartphone or capture samples on the fly. Balanced XLR outputs provide mic or line-level signals to easily integrate into any studio, and the BT-Pro V2 can be powered by both 48V phantom power or an included external power supply.
Complete your studio at
www.radialeng.com