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API THE BOX Project Recording And Mixing Console

This big bad beautiful box serves as the centerpiece for a high-end small studio

We have all heard the phrase “to think outside the box” as a sort of challenge to change our way of thinking about something or to find a solution beyond the usual options. In the audio world, “in the box” usually refers to any and all work done inside a digital audio workstation (DAW), while “out of the box” means you are working with outboard recording gear, signal processors, and a real live mixing desk.

With that in mind, the team at API invite us to think outside the box by taking what’s in the box out of the box and giving us a brand new box to do it with. Specifically: API’s newest product, THE BOX!

While best known in the modern era as the company who blessed us with the popular 500 Series of recording modules and enclosures, Automated Processes Incorporated started life in the late 1960s as a large-format console company. Today API is one of few companies still producing these classic beasts for the studio world, with console series like the 1608, Legacy Plus, and Vision.

THE BOX is a scaled-down API desk that embraces the modern DAW-based studio paradigm, but still does so in an all-analog

way. While the words “scaled down” often refer to cut corners and compromise, in this case they refer only to size—THE BOX nicely retains every single element that makes an API console an API console!

THE BOX is part 4-channel sidecar and part 16-channel summing mixer, both of which are tied together with a full-featured master routing section. This master section is similar to what you would find on any of the company’s larger consoles. It features talkback and cue functions as well as an API compressor strapped across the master bus.

Inside and outside THE BOX

Internally this is a full-scale API console design in every way. While its internal signal flow and architecture is more complex than we can cover here, just know it makes liberal use of the company’s proprietary 2520 Discrete op amps and a boatload of transformers. This is true not just on the physical inputs and outputs. Almost every module and section contains its own sets of op amps and/or transformers; this adds color and weight to the sound as they run signals to each other.

THE BOX is essentially a split console design with the 4-channel sidecar/input section on the left, the summing mixer on the right, and the master section in the middle topped off with a beautiful pair of full-size backlit VU meters. API mentions that these meters, which show levels for the selected Control Room source, offer an extended range to accommodate high-output content and 0 VU = +4 dBu levels.

With its nicely finished sides, high-top slanted front, and black enamel finish, the BOX fits in perfectly with other API desks past and present. There are plenty of API’s signature knurled knobs, many of them the company’s well-known dual concentric variety, for hands-on immediacy. [One cosmetic note: since the creation of the very early units like Paul’s review BOX and the one shown in the photographs in this article, API has changed the wood side panels to a construction like that used in the 1608 console, but in light grey with the API logo milled into the sides. You can see the current design in the photo on our cover.—Ed.]

The back of the unit is jam-packed with 109 inputs, outputs, and inserts in a variety of flavors—XLR, TRS 1/4", as well as TASCAM-



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format DB25. Where applicable I will highlight some of them as we look at individual sections. (Oh, and it's actually 110 if you count the front-panel headphone jack.)

Input channels

Each of the four input channels on THE BOX's left side is built upon one of API's 548B preamps, also found in the API 1608 large-format desk. The 548B is reminiscent of the API 212L, and is one of the company's oldest and most respected designs. It has from +30 dB to +65 dB of gain and features a 20 dB pad, 48V phantom power, and a polarity/phase switch. Each channel also has a choice of balanced 1/4" TRS line input (with a 6 dB pad) or a self-switching 1/4" Hi-Z instrument input with +5 dB to +40 dB of gain.

Each input channel also features a -3 dB @ 50 Hz highpass filter with a 6 dB/octave slope, an 8-segment LED meter with full calibration that can be set pre- or post-fader, a switchable insert section, and a full contingent of routing controls allowing said channels to be used during tracking or as an additional four channels on mixdown. Finally, any of the four channels can be switched to make use of the aforementioned compressor, which I'll get to below.

550A 3-band EQ and 500 slot expansion

Channels 1 and 2 come preloaded with one of API's famous 550A equalizers (see apiaudio.com/550a.html). The 550A is a discrete 3-band EQ with ± 12 dB of boost cut at seven selectable frequencies per band. Not a true parametric EQ, the 550A makes use of a proportional Q that narrows as each frequency is cut or boosted. The high and low bands can be switched to shelf or peaking (bell curve) and the 550A also includes a unique switchable bandpass filter that rolls off below 50 Hz and above 15 kHz.

Note that THE BOX's 550A modules are hardwired, not removable. I do wish the option existed to pop them out and swap in other modules (as can be done on most other API consoles), but they're powerful and musical enough for hardwiring them to be a respectable cost-saving measure.

Having said that, channels 3 and 4 offer empty 500 Series slots in place of the 550A EQs; you can use any 500 Series module you wish—EQ, compressor, or even an alternate mic preamp. [While any single-width 500 Series module will fit the slots, for warranty reasons, API recommends only using modules that are part of its VPR Alliance, which sets standards for power consumption and so



forth.—Ed.] API sent me THE BOX preloaded with a pair of V14 4-band EQs from its sister company JDK Audio. I reviewed the 19" rackmount version of the V14 back in April 2011, and it was nice to get to play with a pair again.

I tried these slots with pairs of Chandler Little Devil EQs (reviewed June 2010), Louder Than Liffoff Chop Shop filters (April 2014), Daking Comp 500s (August 2013), and a new pair of Daking EQ500 module (review forthcoming). Each one integrated seamlessly and worked flawlessly. Each 500 Series slot also has its own alternate and independent ins and outs on the rear panel, so you can get creative and do some external patching if you wish.

Last but not least, each of the four channels has two mono Aux sends, one stereo Aux/Cue send, program bus assignment, backlit mute and solo function buttons, pan pot, and blue-capped 100mm analog fader.

Gimme sum

THE BOX's right side has the 16-channel summing mixer. To fit 16 channels into the smallest possible space, channels are staggered one atop the next in vertical pairs with their white-capped 100mm faders placed close together. The even channels are on the top row and the odds on the bottom. This did take me some time to get used to; I kept accidentally trying to group and pan physically-adjacent channels like 1 and 3 together.

The summing channels are much simpler than the inputs, with only the mono and stereo sends, program bus routing, pan pot, mute, solo, and fader. However, each summing channel does have two important tricks up its sleeve. The first is that each summing channel has a switchable insert point, allowing you to patch in your favorite EQs and compressors of choice—turning THE BOX into a fully functional high-quality analog line mixer. The second function is a zero fader bypass button. Engaging this control disengages the faders, locks the incoming signal at 0 dB, and effectively turns this section from a line mixer into a fixed summing box where all levels are set and controlled strictly in your DAW.

Mission control

The heart of THE BOX is its center section, where all channel buses, effects, cues, soloed channels, and more, come together and then get routed to the mains, the control room, and/or your headphones. This section will take some getting used to if you have only ever worked in the DAW world; it can be as simple or complex as you need it to be.

This section offers a full-featured Control Room monitoring/routing system with a sum-to-mono feature, user-trimmable monitor dim, cut/mute, and an alternate output control. There's a large black API-style knurled knob for overall Control Room listening level, while the Master mix has a single red-capped ganged-stereo fader. Control Room and Cue sources can be selected from the program bus or the four input channels.

This section also has Aux masters for the mono and stereo aux sections, Cue trims, solo controls with trim, AFL mode, and more. There is full control over headphone levels and routing with a choice of Main or Cue mixes in the cans. You get a full-featured Talkback section that can be sent to Slate, Aux or Cue mixes, each with its own recessed trim control, along with a good-quality electret talkback mic in the face of the console. This mic offers plenty of volume and is one of the better built-in mics I've used; since THE BOX is so big and solid, you don't suffer through all the annoying clicks and thunks that you get when pushing buttons on a small standalone monitor controller that has a talkback mic.

This section may seem like no big deal if you are used to mixing on a large-format console. But in the world of DAWs, compact digital consoles, monitor controllers, and minimalist rackmount summing mixers, many of these features are a rarity. I can't remember the last time I was able to have this much control over talkback routing, as well as control over solo levels and... oh, wait, yes I can. It was the last time I got to use a large-format desk!

Compressors

The compressor section on THE BOX is a pair of API 527 compressors that can be



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patched in individually or in stereo, pre- or post-EQ/500 slot on any of the four input channels, or they can be applied to THE BOX's master bus, providing something similar to having an API 2500 strapped across your mains. Like the 550A modules on channels 1 and 2, the 527 compressor modules in THE BOX are not removable like their 500 Series counterparts.

In its native form the API 527 is a 500 Series module, a VCA-style compressor that uses both 2510 and 2520 Discrete op amps along with a transformer output. It starts with standard compression controls like a +10 to -20 dBu threshold, ratio settable from 1:1 to infinity:1, attack from 1 to 25 milliseconds, and release from 0.3 to 3 seconds, all continuously variable. Compression can be set between a hard or soft knee, and you can choose between Old-style feedback compression or the feed-forward variety, labeled New. Each compression channel has its own LED gain reduction meter.

The 527 compressor features API's patented Thrust circuit, also found on the 2500 compressor and the JDK Audio R22 compressor (April 2011). The Thrust circuit is similar to a highpass filter, as it allows low-frequency information to pass through the threshold circuit without causing it to clamp down. This gives the effect of a punchier and more present low end while the mids and highs are brought under control around it. As I mentioned in the JDK R22 review, this feature is fairly common in many modern compressors, but API was one of the first companies to implement the idea, first in the 1980s in the Paragon live mixing consoles from then-parent company ATI, and then in API's own 2500 compressor.

Putting THE BOX to work

I had the pleasure of two months with THE BOX in my studio. Once I found a place for it—not trivial for something this size in an existing studio—I put it to work for tracking and mixing down several sessions, as well as remixing a few projects I had already mixed previously in my DAW.

Initially I assumed that THE BOX would be a real bugbear to hook up and interface with my existing setup, but once I got the hang of the overall paradigm, it went really smooth. If you consider THE BOX as a sum of its component sections and hook it up just as you would four channel strips, a summing mixer, and a monitor controller, it's pretty simple.

Having said that, I highly recommend budgeting for a patch bay or two so you can have convenient access to all of THE BOX's I/O points, especially its insert sections on



the summing mixer! With this mixer, almost every component in the chain can be tapped into or out of, and for maximum enjoyment and flexibility you will want to use them all. And of course you will want to be able to route in your favorite external effects!

The input channels are classic API all the way, from the punchy forward mic pres to the unique classic EQ to the smooth yet bold compressors. One simply can't argue with the sound, feel and function of these channel strips... other than wanting more of them, of course.

Mixing with THE BOX is a very organic experience. Since you can't automate the faders, just as with a vintage desk, you have to memorize and preplan your movements and mix in real time.

I have tested quite a few analog summing devices over the years and my biggest problem with many of them is that despite adding analog mojo, they mess with my workflow. Since many lack inserts, let alone faders and routing, channel processing and bus compressors need to be run in line prior to the summing box's inputs, or after the main output in the case of bus compression and EQ. THE BOX can be set up as a no-frills summing box if you want (um, why...?), but since it has inserts and Aux sends on every channel, it is really best thought of as a full-on line mixer, whether or not you use the faders.

The integrated large format console experience

What struck me as most significant about THE BOX was its overall unified sound. One of the biggest debates I often see online is the argument of choice vs. integration. Some engineers love having a mic pre for vocals and another brand's mic pre for guitars, then drums, etc. To my ears, THE BOX elegantly illustrates the other side of the argument in a very tangible way.

While I have mixed on large-format desks before, boards from Yamaha to SSL, Soundcraft, Crest, TASCAM and others, I must humbly admit that my experience with API has until now been limited to mic pres, EQs, and compressors in 500 Series and 19" rackmount forms. While they all sound stellar on their own, there is something even more sonically magical that happens when they combine in one unit.

People often talk about the "air" and the "grit" of analog. Thanks to THE BOX's signal flow of transformers into transformers and discrete op amps into other op amps and all the internal combinations in between, there is an effortless analog ease to the sound. People talk about "chasing the sound of a real album," and to my ears, *this is it*. Sounds seem to inhabit more space, depth and dimensionality than they do when you're just using individual rack pieces patched into your DAW.

I know this all sounds like hype, but if all you have ever done is worked in the plug-in realm, the sound of a high-end large-format console may blow your mind. Make no mistake, small size notwithstanding, THE BOX is absolutely a high-end large-format console.

Sticker shock

There is one sobering reality to THE BOX that I have not mentioned until now, and that is its price tag. This is one of those "if you have to ask..." moments, because The Box will set you back a cool \$17,000. Considering the high price tags of most API desks, THE BOX is actually highly affordable on the large-format console scale.

So who is it for? In my mind THE BOX is the type of device that forms the centerpiece of a serious project studio, a pro overdub suite, or even a B Room in a full-fledged facility. With this issue's focus on studio ergonomics and optimization, THE

BOX is the kind of device around which you build the serious home studio of your dreams. Its flexibility makes it a perfect bridge between the DAW world and "out of the box" mixing and tracking.

Of course it won't be perfect for everyone. For some studios four input channels is too limiting, especially if you track full bands and/or full drum kits. For many situations, though, four channels is a perfect number, if not two too many. For example I do entire projects with just four channels of matching mic preamps often; I record drums old-school with a four-mic Glyn Johns set up. In those sessions, the input side of THE BOX fits my workflow perfectly, and if I need extra channels THE BOX works just fine along with all of my other normal outboard fare.

If you do the math, you can buy four of API's own 19" channel strips, a high-end summing mixer with fader pack, and an API 2500 bus compressor, all for quite a bit less. But when you think about the overall integration of each piece, the internal circuitry and its sonic magic, and the fact that I have rarely seen a center section this full-featured in any standalone studio product before... The Box really is greater than the sum of its parts.

It also allows you to expand at will in the API sonic world by starting with THE BOX and then adding a few API 500 Series enclosures along with additional mic preamps, EQs, and compressors. You could eventually turn The Box into a world-class 20-input console!

Conclusions

Even with my glamorous job as a recording engineer and gear reviewer, I knew at the start that after a few short months I would have to say goodbye to THE BOX... if for no other reason than, well, I have a studio already. The experience, however, has been completely worth the heartache of the farewell; I now feel like I have heard tangible sonic evidence of what an API large-format console brings to the recording world, after having my head stuck "in the box" for so long. This truly is the sound of a full API desk in a small-format package.

If I ever redo my room from scratch, I would have zero qualms about making THE BOX a centerpiece of my studio. Coupled with a good DAW, 16 channels of great converters, and just a handful of additional outboard items, THE BOX covers most recording and mixing needs in a conveniently sized, stellar-sounding package. ☺

Price: \$17,000

More from: API, www.apiaudio.com

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