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API Select T12 Tube Mic Preamp

A classic American console maker's first foray into tubes

REVIEW BY PAUL VNUK JR.

Automated Processes Incorporated (API) is well known for its recording desks, rackmount processors, and being the inventor of the ubiquitous 500 Series format for modules and enclosures. Many of us refer to the classic API Op-Amp and transformer topology as the archetypal 'American' sound. One thing API is *not* known for however, is using tubes. The launch of the new API Select Series is about to change that, as we now introduce the API Select T12 Tube Microphone Preamp.

API Select

While API is not typically associated with 2U/19" devices, sister-company JDK Audio adopted this format over a decade ago. The new API SR22 Dual Compressor and SR24 Dual-channel Parametric Equalizer represent the solid state side of the Select Series and are updates of the previous JDK R22 and R24 (reviewed April 2011); the 2U/19" API T25 compressor and T12 preamp on review here are the tube-based Select Series offerings. The Select Series also contains a pair of TranzFormer stomp boxes.

Blue and bold

Each Select Series thick metal faceplate is resplendent in deep metallic blue, with large-scale API-style black/silver knobs and backlit push buttons.

Both T-models feature large circular analog VU meters and bright orange glowing tubes behind stylish metal grates designed for venting. The T12 is also generously top vented, and the heat is well dispersed.

The Select T12

The T12 is a two-channel microphone preamplifier. It is a Class A design with 12AT7WC and 12BH7 dual-triode vacuum tubes, an AP2516 transformer on the input stage and a new custom API transformer on the output.

Each channel has a set of four backlit buttons for polarity, +48v phantom power, -20dB pad and input selection, with XLR mic/line ins on the back and instrument inputs on the front.

Levels

For levels, the T12 features a pair of eleven-position stepped switches. Gain (input) has a range of +20 to +70dB in roughly 4.5 steps. Level (output) is entirely on when set full-clockwise and allows you to trim the signal down 5dB in .5dB steps.

Low cut and impedance switching

A final pair of stepped pots control a four-position low cut filter (Off, 60, 120, and 240 Hz) and a four-position impedance

switch (500, 1500, 2000, and 2500 ohms); the instrument input impedance is fixed at 500k ohms. 1500 ohms is the usual API standard. The T12 has a 75 ohm output impedance, maximum input level of +24dBu, 70dB total gain range, 98dB signal-to-noise ratio and a 20 Hz – 30 kHz frequency response.

A select sound

At clean input/output settings and with a 1500-ohm mic load, the sound of the T12 falls pretty close to the classic API 312/512 tone, due mainly to the punchy AP2516 transformer. The T12 diverges from the tight focus of its op-amp counterparts with what I would call a diffuse glow that gives sources a slightly wider, rich, airy tonality.

A giant pallet of sound

The sound of the T12 is dependent on how hard you drive it. When set with the output at full and the pad out, like all API preamps it takes minimal level to get a strong clean signal yielding a mid-focused, tight, forward sound. As you push the gain harder while attenuating the level down, including the use of the 20dB pad, the sound will start to saturate and thicken—not so much in excessive warmth or mud, but rather a delicious, dusty relaxing of the previously mentioned tightness.

I am a big fan of impedance switching preamps because they offer the ability to milk more textures from your mic collection. I purposely use the word 'texture' rather than 'tonality' because while altering the reactive load, a microphone will change its sound; it's not the same as an EQ, and all mics will react a little differently.

So many mics, so little time

I tried the T12 with classic condensers like the AKG C414 XLS, Neumann TLM103 (acoustic guitars), and a Neumann KM84 (hi-hat). For tube mics, it was the Pearlman TM-47 (percussion) and newer modern specimens like the clean and neutral Peluso P-280 and the just-released Warm Audio WA-8000 (vocals). On the dynamic side, I reached for a Telefunken M80 (snare), Audix D6 (kick) and of course, the venerable Shure SM7B (vocals). I rounded out my tests with a Royer R-121 on a guitar amp.

Thanks to a Teknosign Box Line DPS mic splitter, I simultaneously compared all of the above with one channel of the T12 set clean and the other driven hard, alongside an API 512c, a Chandler

REDD.47 tube preamp and the tube preamp section of a Manley VOXBOX. This was a great exercise to remind me that the overall difference in quality/boutique preamps is measured in feet rather than miles, and I could achieve stellar results with them all. As a tube preamp, I noticed that the breakup and overdrive are more pleasant and varied than its solid-state 512c sibling.

Tones and textures

The T12 separates itself from the pack because it exhibits a very broad throw of sonic options, from clean to driven, combined with the impedance choices. While typically more noticeable on dynamic and ribbon mics, the impedance variations on the T12 were nicely apparent on the condenser and tube mics as well. In general, 500 ohms was a touch laid back and soft sounding. Switching to 1500 ohms snapped the sound to life and pushed the upper mids nicely to attention. At 2000 ohms, the sound becomes more neutral and fuller, while 2500 ohms made almost every mic sound thicker, grittier, and bolder; if you

are craving a romanticized vintage tube tone, 2500 ohms combined with hefty gain fits the bill nicely. 2000 and 2500 ohms are both great for taming harsh transients and brighter mics. If the low-end blooms too much, the effective low-cut is your friend.

I also tried various levels of input drive on my Rickenbacker 4003 bass to great effect.

Final thoughts

If you get the impression that I enjoyed having the API Select T12 in my studio, you would be abso-freakin-lutely correct. From sonics to build, the T12 is API quality all the way. Even without the impedance switching and three levels of low-cut, this is a top-notch tube preamp that sits proudly alongside similarly styled heavy hitters. As mentioned, the quality of sound, coupled with the broad tonal offerings, puts it into a league of its own. Welcome to the world of tubes, API! What took you so long? ➡

Price: \$2085

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