

single Ended Triode amplifiers are said by their detractors to illustrate in caricature the high-end audio buff's passion for the implausible: These tube amps are usually rather expensive, put out so little power you need highly sensitive speakers to begin to do them justice, and are often tricky to set up and maintain.

So why would we even bother to tell you about them? Most of all, because a large body of audiophiles is in love with the SET sound: liquid, sweet, defined, relaxing and exciting all at once. This is, they say, the height of music reproduction. Detractors retort that yes, that's true, if you like white elephants—expensive, hard to feed and keep healthy, not popular on the open market. Ah, the fans reply, they are simple circuits, easy to fix if aught goes awry, and the sound—the sound is pure seduction. Sometimes even the hardest solid-state aficionado will melt before their music.

To understand the controversy, hearing a good SET set up well with proper speakers is something you should try to experience. To do so may let you know, if you don't already, what audiophilia is all about—the pursuit of maximum sonic purity at any cost. Reading about the best examples among SET designs may make you seek out that experience. And that is what we are all about.

### The Manley Neo-Classic SE/PP 300B, Viva 300B, and NAT Se-1

any months ago I began what I thought were to be the first parts of a relatively straightforward SET survey. Since then, I moved twice and went almost a year without proper listening facilities. I persevered, however, and have auditioned at good length three new Single Ended Triode amplifiers, each from different designers and countries: the Viva 300B integrated from Italy, the Manley Labs Neo-Classic SE/PP 300B monoblocks from California, and the NAT Se1 monoblocks from Yugoslavia. Both the mono Manleys and the integrated Viva designs use the venerable 300B output tube, while the NATs go with a vintage 1942 US military radio tube, the VT-4-C. All amplifiers employ tube rectification and eschew feedback (although the Manleys have an adjustable feedback control for those who want it, they performed best with my speakers with no feedback applied). SET power output ranged from the Viva's 8 wpc to 25 a side for the big NATs. The Manleys make 11 wpc in SE mode and 24 per when in Push-Pull mode, which is switchable on the fly.

I tried several speakers during my listening sessions with these amplifiers, and two proved to be the most revealing and easily driven: the Lamhorn 1.8 and the Reference 3A Royal Virtuoso, both in conjunction with subwoofers from both VBT Technologies and Acarian Systems. The Lamhorns were the most efficient, at about 100 dB/watt, and featured just one full-range driver, the AER MK-1, which is loaded into a rear-wave horn enclosure with a 1.8-cubic-foot mouth (hence the 1.8 designation). No crossover is employed; the driver is wired directly to the amplifier. Use of a subwoofer is pretty much mandatory with the Lamhorns, as their effective lower limit is in the neighborhood of 60 Hz. The Ref 3A also uses a direct-drive driver for the bass/midrange, and a sensitivity-matched tweeter that uses a single capacitor for protection against low frequencies. At "only" 92 dB/watt, the 3A speakers would not play as loudly as the Lamhorns, but they would, believe me, play loudly enough for all kinds of music with each amp, even the Viva. Although the 3As make considerably more bass than the Lamhorns and normally do not need low-



frequency reinforcement to sound full, I used them, as well as the Lamhorns, well out into the room (thus avoiding almost all boundary reinforcement) in favor of dimensionality and immediacy of midrange projection. Thus both systems sounded best when augmented with a sub or subs.

To avoid confusion and make things as fair and controlled as possible, I listened to one pair of speakers while monitoring the SPL with a meter to get an idea of average and peak levels, and then I substituted the other pair in a following session and replay the same material at the same level (as close as I could come). This way I got a better grip on the various aspects of the amps' performance while sampling the rather different flavors of the loudspeakers.

#### Viva 300B

n my earlier SET articles published in *The* Absolute Sound (Issues 128 and 129), I worked my way up a ladder of perceived quality among the contenders, but this time I will go in order of output power, starting at the bottom with the Class-A Viva 300B integrated. In many ways, this is the cleanest and most pure-sounding amplifier of the bunch. In the Viva tradition, designer Amedeo Schembri has voiced this amp in much the same manner as the others in his line that use 845 tubes (he used to use Svetlana 572B triode tubes in all of his amp designs, but that proved physically and electrically fragile, so he phased it out). There is very much a Viva "house" sound in evidence here: natural and liquid midrange textures combined with



remarkable frequency extension at the extremes, along with considerably more raw "punch" than one would think such a low-power amp capable of. I was able to play the Viva pretty much as loudly I wanted to with either set of speakers (95-100 dB on peaks), however, so power alone ceased to be an issue except with grand opera, where the more powerful amps had more headroom in big moments. But for most listening, I felt no lack of grunt from the Viva; right up to its limit, it sounded clean and ready for more. What comes out of the amplifier right up to that limit is a clear, pristine, and three-dimensional soundstage with a surprisingly tight and dynamic, though rather lean, midbass foundation. Treble extension seemed especially good for a 300B, considering that most SET designs I have heard that use this tube seem a bit soft in the top octave. In a similar manner, most other 300B SET amps I know have reasonable midbass authority but almost nothing in the bottom octave; any sense of power or pitch definition or transient control is usually blunted and turgid. The 300B is generally not the tube of choice for listening to organ music, for instance.

But with the Viva, I got the sense that, while the bulk of its best energy and cohesiveness lay in a broad range from around 150 Hz to 12 kHz or so, there was some actual bottom octave response (I could hear test tones and organ notes and bass-drum fundamentals to well below 40 Hz), and what was there was tight and clean and pitch-correct. Ultimate dynamic authority at the bottom the Viva does not have, but what it *does* possesses in spades is transparency and an amazing clarity in the midbass that allows one to easily follow lines of rhythm and composition in all music—pop/rock, classical, jazz (I do not listen to much country, though one Dwight Yoakam record, a great Michael Fremer choice, *Buenas Noches From a Lonely Room* [Reprise LP 25749], sounded excellent). It also manages, much like the Wyetech



Labs SET designs that I have heard, to float instruments on a cushion of air with a modicum of space around them. High-frequency transients, in particular, are precisely articulated and rendered with such a lack of distortion that one can listen for extended periods with no fatigue.

The Viva has, interestingly, three ways to listen built-in. You can use it as an integrated amp through any of its four line-level inputs in the conventional manner, adjusting volume with the front-panel knob. Alternately, you can employ a separate preamplifier and set the Viva's input selector on "direct" and bypass the last stage of gain, which means that the volume pot is out of the circuit. The third way is to use that other preamp, but input the signal though one of the "normal" inputs of the Viva, turn the volume knob all the way up, and control overall level via the other preamp. The last is the way that I found the Viva to be at its best, at least for my listening bias. Used as a straight integrated amp, the Viva has that special 300B liquidity and midband sweetness and bloom that the SET folks adore. When using it "direct" with another preamp, such as the solid-state Plinius M-16 or the tubed Emotive Audio Sira, the Viva takes on a more lean and intense character (similar to the sound of Wyetech Lab's excellent SET designs), beguiling in its own right but without as much flesh on the musical bones as when used as an integrated. Finally, I tried it with the Plinius and the Emotive Audio line stages through one of the regular inputs with the volume of the Viva fully advanced. What a shock: Not only did the sound become much more dynamic and explosive, but that lovely and right-sounding midbass warmth and midrange magic was back, and without the leanness and intensity of the "direct" mode.

In the end, this was a slightly tricky amp to get the best out of, but one certainly worth the trouble. One can certainly use it as a "direct" power amplifier, as I have described above, but then it does seem a pity to have to pay for the input switching and volume control. And using a regular input with the volume up and a separate linestage makes one wish for the same circuit with but a power switch. Still, it is useful to have the three options of different sound from the same amplifier, and I imagine that different users will prefer different balances, depending on sonic and musical taste, speakers, and rooms. In such a light, the Viva 300B seems more attractive when considered in a vacuum (no pun intended). I am awaiting the arrival of a set of substitute "premium" 300B tubes from Ayon (formerly Vaic) of Prague, and I will report on any difference that these "premium" tubes make <sup>1</sup>.

Note 1: I managed to get the tubes just before posting time and I have to say that they show great promise. Liquid and lovely but with no fat or lack of treble extension. Stay tuned for more information.



#### Manley Neo-Classic SE/PP 300B



ext up, with 11 wpc in SE (Single Ended) mode and 24 in PP (Push-Pull), are the Manley Labs Neo-Classic SE/PP 300B monoblocks. Switchable "on the fly" from SE to PP operation, and equipped with variable feedback, the Manleys have a slight edge on the competition in that you can match the amplifier to different speakers more easily. However, with the speakers that I used for this comparison, I found that I preferred the Neos, either in SE or PP modes, with no feedback at all. That way, the amps presented a vivid, intensely present sound that, although a bit more colored than the Viva, was much

more dynamic and powerful than 11 wpc would suggest. With the Reference 3As, in particular, the parallel-tubed Neos delivered really punchy and authoritative bass, but without quite the leanness of texture and superb delineation of line that the Viva had to spare. However, the Neos could *really* boogie when the music called for it, especially in PP mode. Since this is supposed to be a survey of SET amps, however, I will comment but in passing on the Neos in PP: they sound great. Not quite as sweet as in SE mode, but with considerably more control and visceral impact in the midbass and below. So, the Neos represent a compromise of sorts, but one that most users will enjoy because of the extra power and versatility.

The Neos are so seductive, so dynamic, and play music with such intensity and tonal vividness that they will prove to be the 300B amp of choice for many who want a "true" 300B design, but crave a bit more voluptuousness in their reproduction than the Viva gives. With an overall signature more like a classic 300B single-tube SET, but with a good bit more muscle, control, and adjustability, the Manley Neos straddle the line between SET "purity" and intelligent, real-world amplification. With all manner of music, from the Telarc CD of Rimsky-Korsakov's Russian Easter Overture, etc. [CD-80378], to the Peter, Paul, & Mary LP on Warner Bros. 1449, the Neos sound rich, full, sweet, and dimensional. They get to the heart of the music and let it flow with a degree of continuousness that escapes the other two. At the same time, they look at the world through slightly rose-colored glasses, in that they impart a "flavor" to the signal passing through them. Kind of like a 300B SET on steroids with an iron will and a personality knob. Come to think of it, that is pretty much what they are! I don't mean to sound flip about these amplifiers, and if you have the pocket and the desire to hear what the "classic/real" 300B "sound" is all about, modernized and refined, then hear these amps. They have the Right Stuff but with modern and sensible circuitry that makes them work as they should. And they are, by far, the quietest amps in this group.



#### NAT Se-1

his leaves us with the NAT Se1 monoblocks from Yugoslavia, an amazing set of amplifiers, the first I have ever seen that use the VT-4-C output tube. As I mentioned, the ones that came with my review amplifiers were marked 1942 US Military. A radio-transmitting tube similar in spec and performance to the more familiar 845, the VT-4-C makes 25 wpc of pure Class-A power in the Se1 amps. Designer Nikic Dejan has packed into these \$5900/pair units both a double dose of SET magic and real-world amplifier control and voicing. These things remind me, to a large extent, of the Wyetech Topaz 572 amps that I



reviewed a couple of years ago in *The Absolute Sound* (Issue 129). They definitely are of the tubed persuasion, but with a good bit more bass control and high-frequency extension than most other SETs. While retaining a trace of the 845-style warmth in the upper bass, the Se1s can open up and play with dynamic authority and a sense of verve and swagger that is usually the province of much larger push-pull designs. With the Lamhorns, these amps took on a pleasing "perfect pitch" leanness in the upper midbass and a sense of three-dimensional articulation in the midrange with imaging ability that reminded me, more than anything else, of the solid-state 200 wpc Gamut D-200 amplifier, which is the finest-imaging SS amp that I have heard. I want to stress here that this type of output tube had not had my "vote of approval" in several amplifiers I heard employing them circa 1993; those amps all sounded too tubey, fat, and with little top-octave response. But the Se1s, along with the Antique Sound LabsAQ1006 (845) DT monoblocks (http://www.divertech.com/aq1006845dt.html), seem to reaffirm the notion that "God is in the details." Dejan has hit upon something here.

Be aware that the Se1s do not sound their best right out of the box (both the Viva and the Manleys came to me already played a good bit), and took a long while to really hit their stride. But with time came relaxation and an openness to the soundfield that never lost its excitement. I would play records I had nearly forgotten, only to think of them to play through the NAT amps because of the amps' incredible imaging and convincingly realistic presentation, especially with vocal music, both operatic and rock/pop. I sought out and played about 10 sides from my Culshaw/Decca [Teldec pressing entire set 410-234-1] Wagner *Ring* cycle just to wallow in the sound of the Sofiensall and Culshaw's musical and sonic vision and taste, never mind Wagner. Many other such musical journeys ensued and I only now, with great reluctance, am packing them for return.

I will go out on a limb here and say that if you can get these amps at a reasonable price (hey, please do realize that these days almost anything is negotiable over the net, especially if there is no official distribution), and play them with an appropriate speaker, you will not be disappointed sonically. I must at this point make a disclaimer that I really have no reports of reliability for these amps except for my own experience. With me, the things were perfect from the get-go and never even burped during six months of continuous use. This is pretty good performance go. And remember that SET amps are pretty simple circuits and easily repaired if you know a decent tech. These days, you can take an occasional chance if you know your way around town...



The level of performance in the three amps under consideration was so high that, despite obvious differences in the units I tested, each was stellar in its own way, a first in my experience. Maybe my nose for the best gear is honed or I just got lucky this time. So this time, it really does depend on what you want. The Viva integrated, beautiful and calling your name, is a perfect choice if you want to play medium-level pop or rock or any kind of jazz. Orchestral music is also well-served, but big moments can stress the amp if pushed too hard. I know that this kind of conclusion goes somewhat against the grain of traditional TAS style, but with SET amps taste, musical preference and loudness levels required are very much a part of the equation. If you love jazz, especially, the Viva is an extraordinarily gifted performer, and will make you really happy if you have highly efficient speakers. Designer Schembri truly loves music and it shows.

If you want to play all manner of music and push to higher sound pressure levels, but still want go single-ended, the NAT Se1s are something to seriously consider. This leaves the Manley Neo-Classic SE/PP 300B monoblocks. These are undeniably expensive, at \$7200/pair, but they are a truly outstanding example of a modern 300B amplifier that does not hide what it is: a 300B amplifier. The U.S. Army and EveAnna Manley have at least one thing in common—brilliant performance at the edge of technology. For sheer musical delight and a high level of adjustability for many speaker systems, the Neos are an excellent example of authentic 300B SET sound with none of the headaches and few of the limitations of most others of their kind.

It must be remembered that all SET amps are a serious compromise in that to use them effectively you *must* be prepared to match system components quite carefully. These are no different, but I achieved excellent results with the speakers I had on hand. The journalist in me demands that I find something critical to report, but truth to tell, each of these three amplifiers, in its own way, is outstanding, and each has earned my best endorsement for sound and (thus far) reliability. Although all are fairly premium-priced (except for the NATs, which are at this point a bargain), they are also beautifully made and represent, in my opinion, fair value in today's marketplace. If you can, hear all of them. With an appropriate set of loudspeakers, I do not think you can go wrong with any of these.



# **Specifications**

#### Viva 300B

There are no specs available for the Viva 300B integrated amp save that it weighs 70 lbs. and makes 8 Class-A wpc. The amplifier has four line inputs, a "direct" input for use as a power amplifier, and a volume knob. It is compatible with speakers of 4-ohm impedance and above.

It uses 2 x 300B tubes, 2 x 6SN7 input/drive tubes, and a pair of 5U4s for rectification.

**Price:** \$6500

#### Manley Labs Neo-Classic SE/PP 300B

**Vacuum Tubes:** 2 x 300B (Output), 1 x 6SN7 (Driver), 1 x 6SL7 (Input), 2 x 5U4 (Rectifier)

**Output Power** @ 1Khz with 5 dB Feedback in **SINGLE-ENDED**: 11 Watts @ 3% THD

Output Power @ 1Khz with 5 dB Feedback in PUSH-PULL: 24 Watts @ 1.5% THD.

**Frequency Response** with 5 dB FB in **SINGLE-ENDED:** 15 Hz - 15 kHz +/- 0.5 dB (measured at 5 watts)

Frequency Response with 5 dB FB in PUSH-PULL: 10 Hz - 20 kHz +/- 0.5 dB

Gain: 20db w/10dB FB setting; 30dB w/0dB FB setting in SE mode

Input Sensitivity with 5db FB SINGLE ENDED: 700mV

Input Sensitivity with 5db FB PUSH-PULL: 450mV

S/N Ratio: SINGLE ENDED: 83.5dB Ref. 1W; 2.83v//8 ohms, 20KHz BW; 5dB FB.

Push-Pull: 85.4dB Ref. 1W; 2.83v//8 ohms; 20KHz BW; 5dB FB.

Dynamic Range: SINGLE ENDED: 94dB Ref. 3% THD; 20KHz BW; 5dB FB.

**Push-Pull:** 99.5dB Ref. 1.5% THD; 20KHz BW; 5dB FB.

Input Impedance: 1 Mega ohm, direct coupled.

**Load Impedance (switchable):** 4 to 12 Ohms appropriate for 4 & 8 ohm speakers 12 to 20 Ohms appropriate for 16 ohm speakers

Power Consumption: 240 Watts max.

Mains Fuse: 100, 110, 120V use 3 A (Slo-Blo) 220, 240 V uses 1.5 A (Slo-Blo)

B+ Fuse: 400 mA, (Slo-Blo) Ceramic Body.

**Lamp:** 1/4" X 1 1/4" "fuse- lamp" 8 volt, 0.3 amp

Dimensions: 8.5" wide, 23" deep, 9 inches high, including projecting controls and

parts

Shipping Weight: 41 lbs. each

Price: \$7200/pair

#### **NAT Audio Se1**

Type: Single Ended Class "A"

Frequency Response: 8 Hz to 65 kHz @ 8 ohms taps

Input Impedance: 100 kohms

Input Sensitivity: 1.8 V RMS for 25-Watts Output

Rise Time: 5.0 microsecond

Noise: 102 dB below rated output "A" weighted

Vacuum Tubes: 2 x 6N1P-EV, 1 x VT-4-C, 2 x 5R4GYB

Power Requirement: 110 VAC or 220 VAC @ 50 to 60 Hz, 220 VA

**Dimensions:** 11.8" wide x 29.1" deep x 10.2" high **Net Weight:** approx. 75 lbs. unpacked / per piece

Shipping Weight: 106 lbs per piece

Price: \$5900/pair MSRP



### **Manufacturer Information**

#### Viva Audio

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<u>www.vivaaudio.com</u>

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Viva amplifiers are sold though a network of dealer/agents. Please contact Viva

Audio for details on a dealer near you.

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## **Associated Equipment**

VPI HW-19 MK IV turntable w/VPI JMW Memorial 10.5 arm, VPI Aries Scout turntable w/VPI JMW 9 Memorial arm; Benz LP, Clearaudio Harmony Wood, and Madrigal Carnegie 1 MC cartridges; Plinius M-14 phono section, Plinius M-16 (solid-state) and Emotive Audio Sira (tubed) line stages; NAT Se1, Viva 300B, and Manley Labs Neo-Classic SE/PP 300B SET amplifiers; Lamhorn 1.8 and Reference 3A Royal Virtuoso loudspeakers, Acarian Systems Thunderbolt and VBT Magellan subwoofers; Siltech Gen III, Audio Magic, and Stealth Technologies interconnects and loudspeaker cabling, Arcic Suspense Rack

