

Bel Canto REF500M and the Rogue Audio M-180 amplifiers

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Throughout much of 2010, preoccupied as I was with more pressing emotional issues, I went back and forth between the new Bel Canto REF500m and the Rogue M-180 monoblocks, and never found myself wanting in any way shape or form. However, as regards the pistols at twenty paces, dueling amplifiers, blind A/B shoot-outs so many audio fans crave, well, that's not really a practical critical strategy. Comparing the sound of an ice cold amp to one that has been playing music for an extended period of time is pretty pointless; more so when the audio designers take very different paths to achieve their musical goals—which are to strip away all manner of noise and artifice and colorations which stand between the listener and the experience of the music.

However as warmer weather approached, I spent several months treating the Bel Cantos as my Spring-Summer Amps, while with the chill onset of post-Labor Day weather, the Rogues became my Fall-Winter amp of choice... to every season there is a reason... turn, turn, turn... In both cases, while I found little to quibble about with their performance (and I was frankly startled by the rock solid stability of the M-180's tube bias after several months in hibernation), putting some extended hours on these fine musical instruments only brought the bloom of their impressive musicality to full flower.



The Bel Canto REF500m monoblocks benefit in particular from a good solid, extended burn-in, and I have been advised by more than one fellow traveler that once on, it is best to leave them on, as they are exceptionally quiet and efficient, run remarkably cool and draw relatively little power when just sitting around all day, waiting for Daddy to come home and take them for a walk. Likewise, the Rogue M-180s, when wakened from their deep sleep seemed a tad constrained

(particularly in the top end) until all the components had a chance to burn in and run for a few hours, let alone for the two-three days I kept them going continuously with some sort of music signal; at which point, I again checked the bias for each individual tube, and discovered that there had not been any drift whatsoever—pretty rocking engineering quality.

I was originally inspired to approach these amps anew in the spirit of a follow-up. I had originally reviewed the Bel Canto Ref1000 way back in [Positive Feedback Issue 38](#) at the behest of John Potis. As I wrote at the time: "John has always had a passion for the elegant sonic signature of low-powered tube amps (such as the Art Audio Carissa, the Canary CA 330 and the Opera Audio Cyber 211), whereas I've always been drawn to the dynamic possibilities of power, and so when he began speaking with something approaching real reverence for the REF1000's I took heed. He spoke enthusiastically of their seemingly limitless reserves of power, their tube-like warmth and most significantly what he described as a real sense of "presence" in their portrayal not only of small musical details, but the totality of a musical presentation." I loved the warmth and power and accuracy and dynamic ease of the Ref1000, and was taken by the tube-like characteristics which held John Potis spellbound.



As regards the Rogue M-150 monoblocks, which I reviewed in [Positive Feedback Issue 36](#), I had over a period of some years, critiqued several Rogue pre-amps and amplifiers including the M-150 monoblocks' predecessor, the Rogue Magnum M-120 monoblocks back in 2002 for [Stereophile](#). Though superficially similar, the M-150s represented a substantially different amplifier, with a completely new output section, individual biasing for each tube (instead of cathode biasing), a KT-88 based platform instead of 6550's (though users could

bias the amp to accept either tube, as well as KT-90 and EL34s), and a transformer-coupled input (for single-ended or balanced operation). The M-180 monoblocks proceed from a KT-90 platform, building upon the M-150's advances with vastly decreased noise, greater dynamic range, accuracy and enhanced transparency due in good measure to a fifty percent increase in power supply storage; different input circuitry and a series of power supply mods; the use of higher performance PRP resistors at several critical signal path junctures, as well as the use of polypropylene bypass caps and Hex Fred high-speed diodes for the bias supply; a fancier selection of Cardas binding posts, Cardas input wiring, and Cardas RCA jacks; and upgraded small signal tubes

Likewise, the REF500m's features an advanced new input stage, fully-regulated low-heat, ultra-efficient switch-mode power supplies and class-A analog output control circuitry, while custom power supply rectification and filters increase the power supply's capacity for energy storage while lowering the noise floor. And as writer Guido D. Corona detailed in his thorough-going analysis of the Bel Canto REF500m monoblocks' design details and performance parameters ([Positive Feedback Issue 50](#)), the very heart and soul of this new Class D switching amplifier design, is the latest version of the B&O ICEpower 125ASX2 power conversion module in a bridged mono configuration—a more advanced design than that of amps featuring the older generation of ASP modules.

Given the pleasure I took in listening to music with the Ref1000 and M-150, I was disinclined to move on—you've got a good thing, why mess with it. But the REF500m and M-180 so swept me up in their advanced technology and enhanced musicality that over time—over the better part of a year—I came to think of them not so much as upgrades, but as fundamentally different amps, with singular voicings all their own.

Ironically, in toggling between the original Bel Canto Ref1000 and the Rogue Audio M-150's, I was unable to fall back and revisit the thematic strains of earlier reviews in which I praised the solid-state Ref1000 for its tube like-tonal qualities, while kvelling about the tubed M-150's control, accuracy and sundry other attributes which seemed uncharacteristically solid-state in nature.

Straight away, even before I'd had a chance to really burn them in and take the full measure of the REF500m's sonic signature, I was immediately impressed by how much more zesty and musical the sound was. Nor did I find myself lusting after power as if I had lost something substantial in halving the wattage, because to these ears the REF500 seemed far quicker, sweeter, quieter and more sensitive than its predecessor. Rated at 500 watts per channel driving a four-ohm load (as presented by my beloved reference loudspeakers, the Dynaudio Confidence C1), I felt as though if anything I could drive my speakers substantially harder with the REF500m than with the older REF1000, due to their greater clarity and an absence of noise artifacts—not that the Ref1000 was unduly unruly. Still, sometimes in the throes of a psychotropic state, I would forget that I was listening to mini-monitors, and irrespective of the Confidence C1's capacity to reproduce deep bass with authority, they were when all is said and done NOT Floor-Standing Speakers, and simply cranking an amp does not suffice.



Nor did that I find myself repeating that experience over time with the REF500m because (and I did not have the opportunity to A/B them with their newly minted big brothers, the REF1000m), while they had less overall wattage, they seemed to have greater reserves of power, a quality which manifested itself when driving the system at much lower than customary volume levels; the low level resolution was significantly more convincing than with the older, more powerful amp—in no small part, because in its newer iteration, the sonic signature of the newer REF500m was far more solid-state in character.

That might seem a dubious way of describing a solid state amp, for crying out loud, but over the course of John Stronczer's career as an audio designer, he was originally respected as the designer and manufacturer of some of the most coveted tube amplifiers in high-end audio. And one could make an argument than on a certain level, in terms of voicing his amps that John might have had a certain subliminal sense of what an amp sounded like—if on some ideal plane an amp may be said to have any sound at all.

Well, kiss those muscle memories goodbye, because the Bel Canto REF500m sounds like nothing so much as a state of the art, high performance/high value solid state amp. I would happily make my stand with these diminutive little juggernauts against solid-state muscle amps costing far more than \$3995 per pair (no need to recalibrate your sensory apparatus, pilgrims, that's what they sell for), and which not incidentally weigh hundreds of pounds more in their huge wife-threatening sarcophaguses. Yes, indeed, the REF500m is the little amp that can... can DO, and at a price which would allow you to invest far more in your music, a high quality pre-amp or digital front end—let alone in demanding loudspeaker loads that would make lesser amps wilt trying to fill a large acoustic space.

And finally, while I still have the strength to gush with some barbecue, leave us point out that while you may come for the power, you will stay for the musicality. Did I say that the Bel Canto REF500m were considerably sweeter than their predecessors? Well, they are not only sweeter, but more open and transparent, with greater clarity and control (particularly of the bass), a more relaxed

presentation (particularly on the top end), and really remarkable rhythm and pacing. That is to say, in listening to music with the Bel Canto REF500m, I experience all audio events as occurring in real time; in the here and now—in the hear and how, with an immediacy which bespeaks the quickness of its response time. The Bel Canto's ample power reserves allow it to track the leading edge of transients, as well as the rise and fall of dynamics with incredible accuracy, timing... and presence, while depicting a focused, convincing soundstage. On every level it offers musical intimacy and seemingly limitless realms of dynamic headroom. The REF500m gets out of the way and allows the music to speak its peace and permeate your soul.

Musically, you want for so little, it's hard to imagine wanting anything more..

Unless of course you want to dial up the a certain level of detail and tonal subtlety that is ineluctable, indescribable and incandescent—and that is spelled V-A-C-U-U-M T-U-B-E-S, and which is pronounced... the Rogue M-180 monoblocks.

I mean, having lived with the Rogue M-150s and graduated to the M-180 upgrades, there is something about the imaging and sound-staging and sense of venue, the physical immediacy, which is ungodly convincing; something about the midrange, which while not exactly screaming tubes as in lushness, is nevertheless undeniably smooth and expansive and richly detailed in a manner that when all is said and done, is the purview of vacuum tubes, and vacuum tubes alone. Which is not an indictment of solid state, per se, as the midrange of the REF500m is beautifully layered and offers pristinely stable images.

But there is a reach out and touch me quality to the midrange in the M-180, a sense of venue, a sonic aura, a capacity to captivate the listener—it's not so much that the system disappears, as the room itself disappears and one is transported to an acoustic space. We are rarely privileged to experience an acoustic space in its ideal state in a live venue, but the Rogue M-180 routinely punches your ticket and seats you in the optimum sweet spot—a prime seat 10th row center seat for every performance.

Want to move back and enjoy a more distant perspective, from say the 25th row? Simply switch over from Ultralinear to Triode performance. Find the KT-90's a little too subtle and undemonstrative for your tastes? Want to dial up more cream in your coffee? Well, then, swap out the KT-90's for a set of EL-34. Want to pay a while lot more for smaller and smaller increments of performance, power and distinction? Well, uh, it's your money pilgrim, and far be it for me to discount the musical attributes of the many superb tube amps out on the marketplace, both of the SET and damn the torpedoes, full-speed ahead variety. I've heard my share, and coveted many (hey, I'm only human), but for most mere mortals, unless you have a really huge room, really inefficient speakers (or for that matter, super-efficient speakers that can happily engage you with only a few watts), at \$5495, the Rogue M-180 monoblocks are all the amplifier you will likely need.

Having said all that, if you already own a set of M-150 monoblocks and were feeling oddly content until reading this review, do not despair.

First of all, remember this—if it ain't broke, don't fix it. I know that some writers have declared categorically that the M-180 is a better amp than the M-150, and

on some levels that argument surely holds water. However, in my experience, many of the differences, as perceived by your ears, are of a more subjective nature, and while the KT-90 equipped M-180 may offer wider dynamic swings and enhanced accuracy, the M-150 offered a more soulful tube voicing and tangible Triode perspective.

You mean the M-180 is not a genuine upgrade; it is not a better amp? Hey, don't bust my balls, Sarah Palin... it is surely an evolutionary step forward, and a significant one. It is surely a more powerful amp, and on many levels a more refined one, but does that necessarily make it a more musical one? For many people, you bet it is, but not necessarily for you, and that is why Rogue continues to manufacture the M-150. Why? Because to these ears, it is a substantially different amp, with a voicing all its own.

Let me see if I can break it down for you. To the degree that on some ideal plane an amp may be said to have any sound at all, the M-180 offers a relative level of neutrality, a degree of solid-state control that is quite exceptional for a tube amp. But then designer Mark O'Brien's goal was not to create a tube signature, but a musical signature—a more dynamic, accurate amp—and as a painter's medium might be oils, O'Brien's are tubes. By comparison to some of your favorite tube amps, the M-180 might seem curiously lacking in the subjective warmth and musical colorations which defines the old school appeal of tube amps for some listeners.

It's a matter of personal taste; it might very well be a matter of system synergy... maybe you have a bright room and want to warm things up a tad—there are all sorts of considerations, not the least of which are the tendencies of your speakers, and how you want to voice your system.

And no, it's neither surprising nor objectionable for people to feel that a tube amp should have a more idiomatically tube-like voicing. And while the M-150 is hardly a radical exemplar of tube timbre, when outfitted with KT-88's it is a substantially different amp and undeniably a more lushly voiced circuit than the M-180.

To wit, I listened the vast majority of the time to the M-150 in its Triode mode, whereas with the M-180 upgrade, the Ultralinear mode simply rules. In my experience of the M-150, I found the the Triode mode's warmth and liquidity more pleasing, more engaging than the Ultralinear mode's dynamic immediacy, and while I like the punch and presence of the former, the sweetness and detailing, the sense of air, the realism of the Triode mode invariably drew me in, unless I was listening to some rock or funk or electronic music that just demanded the hammer—and lots it. Some this reflects the tonal qualities of the KT-88, and the nature of my room. For instance, in my wife's piano studio, where we have a Rogue Cronus Magnum integrated amp driving a set of Meadowlark Swallows, I found that when voiced with EL-34 tubes I was able to back off of the amp's forceful, immediate presentation with rather than the standard KT-90 tubes; the creaminess and bloom of the EL-34's midrange summed out to greater ease of presentation, a more musical balance in a smaller space.

However, with the KT-90 voiced M-180's, I find the difference between Triode and Ultralinear to be more a matter of perspective than of timbre or tonality; Triode offers similar tonal qualities, but on a smaller scale; the soundstage is more localized between the speakers, more laid back, less forward...less front to back depth. By contrast, the M-180's dynamic swings in Ultralinear are far more realistic and convincing; the depth and breadth of the soundstaging, the sense of dimensionality, is much more pronounced; it offers more clarity, dynamic range, transparency and frequency extension. The physical immediacy and control of the low end, the tight, tuneful focus, the undistorted punch, is a Rogue trademark. The M-180 is a more accurate amplifier, and in Ultralinear, a more visceral, compelling instrument with Triode delicacy, layering and air.

While the M-150 in Triode with KT-88's might be subjectively more colored, it could be said to offer a more traditional, mainstream Triode personality—a little bit more forgiving and ingratiating—whereas in the Ultralinear mode, the M-150 sounded a tad less natural, a little more amplified, not as though you were listening through a P.A. for God's sake, but less supple, less subtle—more flex, but less sex. Whereas on the M-180, Mark O'Brien pulls off a perfect balance between Triode's sweetness and refinement, and Ultralinear's transient immediacy, commanding dynamic swings and muscularity: there is even greater image detailing and stability; more soundstaging depth and breadth; greater transparency and detail. I particularly like how expansive and dimensional the sound is; one's perspective is never defined as a space merely localized between the loudspeakers, and there is an airy, expansive, full-bodied natural quality to the sound that keeps me coming back for more. And whereas the midrange on the M-150 was more compelling in Triode, there is simply more there there, more detail, more layering, more richness—MORE OF A SENSE OF SCALE—in Ultralinear on the M-180's.

I cannot recall listening more in Ultralinear than in Triode on any tube amp; and I surely never favored Pentode or Tetrode over Triode on any tube amp—for all the heft and power, Pentode/Tetrode sounded comparably coarser, less relaxed and engaging than Triode.

In drawing to a blessed close, no doubt many readers, in the spirit of boxing and sports bars, would like of me to make a definitive call between the M-150 and the M-180; they want me to come down with a decisive judgment between the Bel Canto REF500m and the Rogue M-180; they want me to tell them which tubes to use.

Sorry folks, no can do. It's a matter of personal taste; nor can I (nor will I) tell you that you should favor tubes over solid state or vice versa—that's elitist bullshit. There are so many variables, such as room size and acoustics. What are the nature of your components and what kind of music do you most favor.

And of course, a lot depends on the what kind of speakers you are using; there's a very complex set of impedance relationships between the Triode/Ultralinear circuit itself, the output transformer and the crossover network of the speakers. Which means that while my Dynaudio Confidence C1 sounded better in Triode with the Rogue M-150's and in Ultralinear with the M-180s, your results may differ entirely based on the nature of your speakers; likewise, whether you prefer the signature of the REF500m to that of the Rogue M-180's might come down to what's in your signal chain, what kind of gastrointestinal and neurological AC cords and cable connections you have—your own sense of presentation and style.

Me? Winter, spring, summer or fall, I can live with the Bel Cantos or Rogues better than I can live without either at all—as a professional listener I'm in need of reference points I can bet the ranch on, but I'm in it every bit as much for musical pleasure—the Bel Canto REF500m and Rogue M-180's are more than equal to the challenge of any and all solid state and tube electronics. I am not saying they are the best, I am saying that they are superb, no-compromise, made-in-America musical instruments, and to me, they represent elevated standards of value and performance in high end audio—and as such they are more than worthy of your consideration. Despite the superb track record audio designers John Stronczer and Mark O'Brien enjoy for both price/performance and no-compromise gear, the very fact that they are never satisfied with last year's best, and keep pushing the envelope forward, fills me with respect, admiration and affection.