

ALON THUNDERBOLT SUBWOOFER

Scot Markwell



Thunderbolt subs in both black and cherry with and without Napoleon satellites

I think the first thing that I need to do here is discuss in some detail my listener bias and experience when it comes to subwoofers. I admit that, like many young people, I liked bass to, shall we say, a fair excess when I was more youthful. Heavy bass and lots of it was the credo. Things such as realistic definition and superior pitch accuracy were buzzwords that I simply did not understand for the simple reason that I had not heard good enough subwoofers. I built my own since I was about 13 or so, first with the "by gosh and by golly" method and later from various plans and dissections of

existing models. Seemed like anything but rocket science and this was fine for years.

Then I got hold of an old, beat-down Janis and realized that all that I was woefully behind the power curve. The thoughtfully designed, slot-loaded semi-bandpass enclosure of the Janis seemed to make all the difference between performance that was satisfying and performance that was *electrifying*. I almost immediately blew out the old driver in the thing (I tried several replacements, settling at last on a pair of efficient 15" *Blue Thunder* car stereo drivers that are designed to perform optimally in a relatively small box. I managed to cram both of them in a push-pull/isobaric configuration, both firing out of the slot. Now I had deep, tight, quick, powerful bass from a small, though heavy box. In combination with a stout transistor amp, an old Carver subwoofer crossover, and a remote-controlled linestage acting as a volume control, I was in control and felt that I was actually hearing a good deal of what was on my discs for the first time. The thing surely sounded better than almost any other bass system that I experienced in the meantime. This period of smug self-certainty lasted for several years, and I came to realize that authority had to be balanced with finesse, articulation, control, and pitch and transient accuracy for a subwoofer system to be really worth the trouble of having it around. Time and again, as I listened to other makes and models, I realized just how smeared most units make music sound; often it seemed that one was better off with the things disengaged. Home Theater, in many respects, has not helped this situation, as even the smallest, most ubiquitous of subs' claims to fame is high-output, big room-shaking bass, often at the expense of any true sense of musical authority. Big deal: usually all they have to do in a movie is reproduce various effects, which are non-musical by nature and thus more easily thrust on the senses without internal rebellion.

Of course, this is not always true, and there are a number of truly high-quality subwoofers on the market these days, for both music and Home Theater, such as offerings from REL, Audio Physic, and several others, virtually all self-powered. But they tend to be rather large and heavy, and often difficult to place for best overall effect. Then along came VBT Magellans, little boxes that I discussed last year in one of my reviews: a stunning package, that could, at least at Herculean playback levels, compete with the best there was in terms of speed, articulation, depth of response, and clarity of line. You just could not play them past a certain point in loudness unless you ran two or more units. But with a box that was on fourteen inches square, six tall, and only 6 pounds of weight, what can one seriously expect? They are so good at what they do, and so easy to place in a room, that they truly spoil you in terms of quality and it is hard to go back to other systems. Hell, I would routinely return to my modded Janis just to be able to play 3-4 db louder, and would always go back to the VBTs just to hear their superior rendition of the music.

And then along comes Mary... Er, uh, I mean Carl. Carl Marchisotto of Acarian Systems, one-time Dalquist Chief Designer...

Marchisotto has sure been busy the last couple of years. First he came up with the Lotus, ostensibly designed for SET amps and thus reasonably efficient and easily driven. These were actually a revelation, especially in terms of the quality, if not ultimate quantity, of their bass response. Evolutionary rather than revolutionary, these speakers for some reason never got the attention from the "mainstream" press that

they deserved. Then came his original Exotica, a major departure from his usual "house sound" in loudspeakers, one that got the midbass right without the slight excess warmth that some of his previous designs exhibited. Those earlier speakers, though mostly excellent from a musical point of view, were nonetheless flawed. The Exotica, however, with its sealed-back midrange and Raven ribbon tweeter, set new high standards for true musical fidelity from an Alon design. The Exotica threw a wide-open window on the music and inspired him to make the Exotica Grand Reference, which currently resides as reference in Sea Cliff. With its eight low-mass twelve inch bass drivers and critically-tuned enclosures, this is the most realistic and capable bass system that I have ever heard.

Which brings us, finally, around to Marchisotto's most recent effort, the Thunderbolt Subwoofer, essentially a scaled-down, 1/8-size version of the big boys. Plus it is powered with a class A/B custom amplifier Marchisotto says is of "adequate" power (gee, just like a Rolls Royce) to drive the unit to extremely high levels without danger. In other words, you may audibly clip the drive amp if you really push it, but you simply then turn it down. You cannot blow the driver with the amp that is in the box. A wise thing, in my opinion. With one twelve inch driver similar to those in the Grand Reference and a critically-tuned, all-wood, heavily braced box, what we have here is a baby Tyrannosaurus Rex of the subwoofer field: fast, vicious in its attack, and thunderous in its power. OK, so it also has finesse and clarity in spades, but this is a sub that can truly do double duty for music and Home Theater. The Thunderbolt is like its namesake, in that it is like a burst of energy in the clouds waiting to be unleashed and strike. I have used the thunderbolt for a few months now and with two different speaker systems in my home, as well as experiencing two of them in hp's reference video system, and I have to say that as of today, they are my favorite overall of anything that I have heard (except for the Grand Reference towers, of course...). I grant you I have not heard them all, but I have heard many more than my share, and the Thunderbolt is fundamentally just more "right" than all the rest. The exception is the VBT Magellans in terms of the *quality* of bass; the Thunderbolts can still put out far more sheer volume without coming apart than the VBTs.

So if they are sitting at the top of the food chain, just what makes them so special? This is best explained by trying to give you an idea of their invisibility. The best example I have so far is to describe using the Thunderbolt as a system device in the Alon Napoleon stereo system, which consists of two small two-way satellites and the Thunderbolt. When used together and adjusted carefully, one is hard-pressed to hear the sub at all, except when there is material playing that actually has content in its range. I found I could mute and unmute the sub at random points in most music and almost never be able to tell when it was in or out if the music contained no real low-bass information. But switch it back in when the goods are there and you stare at the satellites with a funny look because they themselves seem to be doing that great bottom end, not the sub. The blend is not as perfect with the Reference 3A Master Virtuosos, but it is still the best sub I have ever had in my system. The ability of the low-mass cone to respond to signals quickly, combined with the well-matched amp that features only solid engineering and no servo controls, makes this a formidable performer in music, where it simply has none of the muddiness that mars so many other designs. The Thunderbolt's level of articulation, explosive dynamic ability, output capability, and depth of response is staggering. Music sound so good correctly supported. Cellos, double bases, and big drums have the correct tonality and foundation to make a convincing portrayal of the orchestra. Bass guitar, synth lines, and drum kits all ring true in timbre and impact in rock and pop, and all manner of effects are superbly reproduced in movies. Listen to the *Royal Ballet Gala* on the Hobson reissue set (Classic/RCA LSC-6065) and not only will you hear the harp have more natural body and weight than it would seem to have any right to, but the various rumblings of the subway and things such as tape splices are so evident that you wonder why you never heard them before. DVD movies such as *Star Wars Episode II: Attack of the Clones*, are spectacularly devastating in their dramatic and visceral impact. All this with a simple and easy placement strategy that seems, for some reason, far less sensitive than with other subs, at least in my room.

It is still early running with this subwoofer, and I will have more to say as I do more listening to it in the Napoleon system, as well as others, but it is, along with the VBTs, my new reference. Stay tuned.

Specifications:	
System Type:	: Powered, front firing ported subwoofer Front firing allows it to be placed in various locations, such as in a cabinet, without affecting performance.
Driver Diameter:	12 inches We developed a unique driver with the attack speed of a small woofer and the very deep bass of a large one.
Driver Construction:	A blend formulation consisting of both natural and synthetic fibers Highly rigid with lower mass than Kevlar, aluminum, magnesium or titanium drivers.
Response:	20Hz to 160Hz We roll off the response below 20Hz to eliminate spurious low frequency noise found in some digital discs.
Crossover Frequency:	Continuously variable low pass 40Hz to 160Hz, fixed high pass 100Hz The wide range, low pass crossover allows proper integration with a wide range of large and small speakers.
Phase:	Continuously variable from 0 to 180 degrees Allows subwoofer's sound wave to properly integrate with loudspeaker, independent of room placement.
Power:	Manual or auto on/off, detachable power cord, 120 or 240 Volt operation Sensing circuit allows subwoofer to be automatically powered on and off by preamplifier or receiver.
Amplifier:	Fully discrete Class A/B outputs Wattage output is ample enough to provide more low-end impact than any competitor's subwoofer.
Finish:	Black or cherry wood veneer The cabinet is handcrafted to very high wood finishing standards to compliment the finest of furnishings.
Cabinet Size:	16" H x 16"W x 18"D (20"D with allowance for grille and power cord) Small size allows for ease of placement in any room.
Weight:	85 lbs.

Manufacturer information:

Acarian Systems, Ltd.

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Price: \$1695 with black finish; \$1795 with cherry wood veneer finish.

Source: Manufacturer loan

