

## **JL Audio Dominion d110** Subwoofer

## Small but Mighty

Steven Stone

ack in the early 2000s when the home theater multichannel experience threatened to absorb two-channel audio, I attended a CEDIA (Custom Electronics Design and Installation Association) event. At that trade show, JL Audio unveiled its original Gotham subwoofer. I'd been warned that it was going to be a "loud" demo, and it certainly lived up to its billing. It was one of the first and last times I've been in a room with so much bass energy that my pant legs were not figuratively but actually flapping from the high sound pressure levels (SPLs). And, yes, JL Audio did graphically prove the point that its new sub could play louder and cleaner than any sane human could ever wish for.

Subsequently, I reviewed, and still own, two JL Audio Fathom f112 subwoofers, which reside in my main system. In fact, the f112s have been in various systems of mine for the last 16 years! During that time every other component save for my JLs and VPI HW-19 turntable has changed. Over the last two years both of my f112s went back to the factory for a complete check-over

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and refurbishment. They have since returned, and I expect I'll be using them for another twenty years. So yes, I've had some experience with JL Audio subwoofers, and for me they have delivered exceptional long-term value.

I will be the first to admit that two f112 Fathoms are not inexpensive subwoofing solutions, but fortunately JL Audio has other, less expensive options. Up until recently, its E-line comprised JL's lowest-cost free-standing subwoofers, starting at \$1650 for the E-110 with 10" driver. But now JL has introduced another, even less expensive option—the Dominion or D-series subwoofers. The series includes the 8" d108-ASH at \$900, the 8" d108-Gloss at \$1000, the 10" d110-ASH at \$1100, and the 10" d110 Gloss at \$1200. For this review I was sent two d110-Gloss subwoofers. The difference is the finish—black-ash wrap or high-gloss black.

Along with the two subwoofers JL Audio also sent me a CR-1 active crossover (\$3000). This external crossover looks very much like the control surfaces of my Fathom subs, but with some useful additions. It offers a serious "step up" for Dominion owners who feel they need more control over their subwoofer settings. I did not use the CR-1 for the first half of the review period because I felt that it was something that would not be part of the vast majority of D-series subwoofer starter setups. Down the road it offers an attractive upgrade for almost any JL Audio sub, giving users greater control over their subwoofer/main configura-

tions. During the course of

the review period I came to appreciate its value.

**Technical Tour** The Dominion d110 is a sealed-enclosure subwoofer, just like every other free-standing sub in JL's lineup. You won't find ports or passive radiators on any surface of the d110. Although a closed cabinet does not offer any of the potential augmentations to the bass response (ports and passive drivers "fool" the subwoofer by lowering internal resistance, making the enclosure seem much larger and thereby adding low-frequency extension), it also eliminates all the potential problems caused by a port, which includes group de-

Even though it is the least costly in JL's subwoofer lineup, the Dominion-series shares much of the design technology and all the philosophy of the more upscale models. The Dominion even manages to add a couple of unique new features. The most interesting innovation is the Dominion driver's basket design. It incorporates the front baffle of the subwoofer as part of its cast shape. By making it all one piece JL achieved a more rigid result than the traditional boltthe-driver-to-a-thick-piece-ofsomething method. Also, this simplifies assembly and lowers

lay and port "chuffing" noise.

cost. What differentiates Dominion from the slightly more expensive E-series? First the E-series has more sophisticated electronics. The Dominion has a similar 24dB/ octave Linkwitz-Riley filter, including continuously variable phase from 0 to 280 degrees, but Dominion doesn't offer the E-Sub's built-in two-way crossover. Other differences

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#### Specs & Pricing

Dominion Series d110 Subwoofer

Driver complement: Single 10" driver **Integral amplifier power:** 750 watts Inputs: Stereo line level, stereo speaker level

**Dimensions:** 12" x 13.4" x 15.86" Weight: 38.2 lbs.

Price: Black Ash finish, \$1000; gloss black finish, \$1200

**CR-1 Electronic Crossover** 

Max. input voltage: 8Vrms (+18dBv)

Input impedance: Unbalanced, 50k ohms; balanced, 20k ohms (10k ohms per leg)

Max. output voltage: 8Vrms (+18dBv) Output impedance: Unbalanced, 150 ohms: balanced,

300 ohms (150 ohms per leg) THD+N: <0.002% at 8Vrms

Channel separation: >80dB at 1kHz Power consumption: 30 watts **Dimensions:** 17.4" x 3.80" x 15.67" Weight: 22 lbs. Price: \$3000

jlaudio.com

E-series are primarily with the drivers. Dominion motors are smaller and the moving elements (voice coil, surround) less robust. Dominion drivers don't use the dual-spider technique of the E-Subs, and the baskets are not as deep, so they don't have the linear excursion capability of E-Subs. Because the Dominions have less power-handling capability, the Dominion amplifiers don't need to be as powerful as those in the E-series. But just because the E-se-

between the Dominion and

ries has some performance advantages doesn't mean the Dominion is "under-spec'd" or has cut corners in performance. According to JL Audio's Doug Henderson, "we are justifiably proud of all the performance packed into the Dominion range. JL Audio's 'DNA' is very evident. 30 February 2021 the absolute sound

step-up through the ranges—lower distortion, greater output capability, overall more lifelike sound. We measure Dominions by the standards set by our top models. I like to think of the Dominions as an obvious step-up from all the entry-level subwoofers on the market that don't have our standard to uphold."

You just get more of it as you

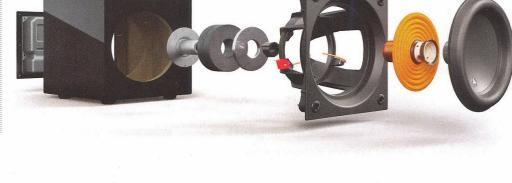
## The pair of d110 subwoofers

were placed into a system in my living room—a multi-purpose, open-concept space-where the now-discontinued ELAC AF-61VR Adante loudspeakers (\$5000) serve as the mains. I used several sets of electronics during the review including the Bel Canto E1X integrated amplifier, as well as the Oppo HA-1 DAC/pre and Gold Note DS-10S coupled to a pair of April Music S-1 Stello monoblock power amplifiers. The two subwoofers were used in stereo mode, where instead of a summed mono signal the right sub received only right-channel signals and the left only left-channel information. The subs were placed so each one was on the inside of its respective main loudspeaker. After running test tones both individually and through all the transducers, I ended up with the two subwoofer front baffles on the same plane as the Adante loudspeakers, which put their rear panels thirteen inches away from the front wall. For my first setup I ran the Adante loudspeakers full-range

with no low-end roll-off. The Dominion settings were a 55Hz crossover point with a 24dB-per-octave slope. In my room the Adante loudspeakers have substantial output below 60Hz. Successfully and convincingly melding the Andante with the Dominions without employing an external crossover such as the JL Audio CR-1 proved to be tricky. By themselves the Dominions could produce audible sinewave-generated frequencies down to 20.7Hz at the listening position and were quite linear up to 50Hz (when its internal crossover began to take effect). The problem was that 65-to-80Hz midbass was too fat, while the 45-to-55Hz range was too lean. I experimented with settings and speaker positioning, but when I got the signal refined to the point where the lean range disappeared, there was way too much low bass below 30Hz. It was impressive, but not right. Enter the CR-1. When I used the CR-1, I chose 60Hz as the crossover point

augmenting the output to the main speaker's power amplifiers by 4dB. The Dominions were also set for a 60Hz crossover point with a 24dB roll-off. The final result was the smoothest bass response that I ever achieved in this room. The dips and peaks were reduced to the point where I was getting smooth, even bass response from 25Hz up through 90Hz ±3dB! While it's easy with a turn of a knob on the CR-1's front panel to raise or lower the outputs levels of the subwoofers relative to the mains, I found that once I fine-tuned the setup I was done, and I did not need to tweak the settings for different tracks or volume levels. The system was now producing a far more linear in-room response than before.

for the main speaker's low-frequency cut-off point and ended up



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Robert Harley on the JL Audio Dominion d108

couldn't be more different than Steven's large, full-range system. My desktop rig features a pair of Audience 1+1 V2s, an outstanding one-way speaker. Thanks to its crossoverless design and innovative 4" driver, the Audience has wonderful midrange transparency and presence, coupled with a smooth and fatigue-free treble. In fact, it's of reference quality through the mids. But as you'd expect from a speaker with two 4" drivers (augmented by a pair of side-firing 4" passive radiators), the 1+1 V2's bass doesn't Enter the d108. I'd been using the 1+1 in various iterations for years, but only recently added the Dominion d108. The system is powered by a Pro-Ject Amp Box S2, with a Pro-Ject Pre Box S2 Dig-

I'm using the smallest sub in JL Audio's extensive line, the

Dominion d108 (\$900), in a desktop system. My setup

ital preamp/DAC as the front end, driven by my PC running Roon and streaming Tidal and Qobuz. It's connected via AudioQuest Water interconnects, AudioQuest RCA Y-adapters, and Audience OHNO speaker cable. The d108 sits on the floor under my desk, and I don't use any external crossover. The Audience speakers are run wide open, with the d108's crossover set to a frequency (80Hz) that complements the Audience speaker's natural roll-off. In this context, the d108 proved to be the perfect partner to the Audience speakers. JL's least expensive subwoofer provided the bass foundation lacking in the 1+1 V2. It was surprisingly easy to set up and achieve a seamless transition between the sub and the main speakers. In fact, my first guess at the crossover fre-

quency (80Hz) turned out to be ideal; I just needed to dial-in the phase and level. The whole process took about ten minutes—a record for setting up a sub. The d108 transformed the system's sound by adding back the missing bottom octaves. I could now hear a solid impact from kickdrum, along with greater warmth Sound The trick to getting better sound with subwoofers than you can get without them is to set up and configure them optimally for both your room and the loudspeakers they are paired with. I was

on "Passage to Agra" from the Simon Philips album Protocol 4, and Philips' low-tuned toms had just the right measure of impact and weight without sounding bloated. The d108 was fast, tight, and defined, with excellent transient performance. Significantly, adding the d108 didn't thicken the Audience speakers' wonderful midrange clarity and openness. Often, adding a sub involves some tradeoffs, but I heard none with the d108. I should add that in this desktop context, I never pushed the d108 near its limits. I sit two feet from the speakers, and don't listen at a very loud level. Although I had JL Audio's CR-1 crossover on hand, and tried it with the d108, it didn't transform the sound the way that it has with larger subs and main speakers that I've used with the CR-1. In the end, it wasn't worth the added complexity and space it consumed. In other words, you don't need a \$3000 crossover to enjoy the benefits of the d108. The d108 brings many of the virtues of JL Audio's bigger subwoofers to a smaller and more affordable Incidentally, I also attended the press launch of JL Audio's home subwoofer back in the early 2000s. As Steven recounts in the review, JL did play bass-heavy music and film soundtracks at very high levels to demonstrate the products' capabilities (they handed out earplugs on the way in—not a good sign). But JL began the

and weight from bass guitar. Bass lines that were only hinted at

by the Audience speakers were fully fleshed out by the d108. The

JL sub brought out Ernest Tubbs' inventive electric bass playing

demo by playing Bill Evans' Waltz for Debbie, which was surprising for a subwoofer company at a home-theater show. JL knows that satisfying bass reproduction involves revealing texture, tone color, dynamic agility, and finesse, which the products did just as well as pumping out low bass on the bombastic material. The demo was one of the most memorable I've attended. nals to reproduce, the amps Dynamic contrast was also gained additional headroom expanded by the addition of for dynamic peaks. Also, the Dominion and CR-1. It loudspeakers' drivers wasn't that louder parts were no longer had to travel that

### very pleasantly surprised by the many ways in which the addition of the CR-1 and the stereo Dominion d110 subwoofers

improved the overall sound of my system. The first and most obvious improvement was bass extension. Listening to the song "Heaven" by Meshell Ndegeocello, which combines her luscious voice with a real piano and synthetic bass, it was hard not to be wowed with the Dominion's low-frequency performance. The bass was powerfully big-phat but also controlled, with well-defined textures and detail. Oh, and clean, too. Liberating the Elac AF-61 of the task of reproducing bass frequencies below 60Hz had several effects. On the electronic/mechanical side, the April Music monoblock amplifiers had an easier task driving them; with no mid- or low-bass sig-32 February 2021 the absolute sound

mid- and low bass. This was especially noticeable on busy, bass-heavy tracks such as "I Miss You (DRAM remix)" by Clean Bandit featuring Julia Michaels, where the low bass didn't muddy the upper bass and lower midrange and the entire soundstage seemed to gain in overall dimension-

ries?

extra amount to reproduce

but the delineation of and transitions between dynamic levels were quicker, cleaner, and more discernible. Listening to my DSD5.6 recording of Andy Statman/mandolin and Jim Whitney/acoustic bass, which I made at a house concert with a single stereo microphone, it was even easier hear all the micro-dynamic subtleties of Statman's

louder or softer parts softer,

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contrapuntal humming as he played (similar to Glenn Gould in that respect).

The CR-1 crossover/Do-

minion d110 system made a

major difference in the way my room interacted with the ELAC AF-61s, and that difference was even more sonically impactful to the overall sound than the additional ble effect was an increase in overall bass clarity and definition and a reduction of overhang and midbass bloat. It was a real surprise to hear the whole room become a listen some more!" Summary

better listening environment as a result of the addition of the CR-1/Dominion system. The room went from "really good for a slightly sonically challenged multi-purpose room" to "oh...my...let's The E-series used to be the

expensive offerings

from JL Audio. Both Robert

Harley and Jonathan Valin

reviewed these subwoofers

sible for generating frequen-

cies below 60Hz. The audi-

Price is one reason. If you want to run with stereo subwoofers, you could, in a smaller room, use two d108-ASH at \$900 each,

for a total of \$1800, where two of the least-expensive E-series offerings, the d110 10" subwoofers at \$1650 each would total \$3300. That's a \$1500 difference, which gets you halfway to the cost of a JL Audio CR-1. If you are like me, and hardly ever listen at SPLs above 95dB, and never above 100dB at the listening position, you may not need the added horsepower of the E-series or the E-series' more

and were impressed with the high level of performance and

moderate price. Given their enthusiastic recommendations, why

would someone opt for the new Dominion instead of the E-se-

robustly constructed driver designed to handle higher SPLs. During my listening time with the Dominion stereo pair I never heard any signs of them running outside of their comfort zone, and the pair was easily able to propagate a 20.7Hz tone in my

room. So, if you're in a similar situation you may question whether you really need more subwoofer than the d110. For my multi-purpose living-room system, the combination of two Dominion d110s and CR-1 proved to be just the thing to help the system go from extremely good to arrestingly excellent.

They could do the same thing for you. 185

headroom and reduced phys-

ical stress on the loudspeakers and power amplifier. Shunting the mid- and low bass away from the mains and into the Dominion subwoofer removed a noticeable amount of excess midbass bloat and huffiness coming from interactions between

the room and the AF-61s,

when ELACs were respon-