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**LASERVIEWS**

***"WOW!...QUICK INTENSITY THAT SHOOK THE SOFA AND WALLS."***



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***"...one of the best subwoofers (perhaps the best subwoofer) I have ever tested ...incredible performance with accurate, quick, low bass."***

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**A** good subwoofer can enhance the listening experience of a Dolby Digital movie soundtrack where sound engineers have augmented the sound with real-life low bass effects. Paradigm is a Canadian company that produces what are considered high-performance, value-priced speakers.

#### FEATURES

The sealed cabinet design houses a 15-inch Kevlar-reinforced woofer that contains a bifilar voice coil and aluminum/nomex former. The driver is claimed to provide 1-inch peak-to-peak excursion. The closed servo system operates with a 400-watt RMS high-current amplifier with large toroidal transformer and distortion rating at .05 percent or lower. The closed-servo operates in a system that uses an accelerometer to measure the output of the driver. A comparator circuit then compares the measured output of the subwoofer to the input at the amplifier. If excessive distortion is detected, the servo corrects the anomaly by using amplifier power.

The Servo-15's cabinet is made from medium density fiber board (MDF) and is interior-braced to isolate it

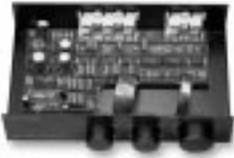
from audible colorations and resonances. The sub measures 20-inches high by 18-inches wide by 22-inches deep. The 78-pound weight is manageable by one person.

***"...a best buy and an absolute recommendation ...the Paradigm Reference Servo-15 subwoofer is my new reference."***

The Servo-15 is available with several options including floor spikes and outboard Paradigm X-Series crossover. My evaluation unit was sent with the top-of-the-line X-30 crossover. The subwoofer amp's power switch enables continuous on or standby mode. The Servo-15 is claimed to produce bass output down to an earth-shaking 14 Hz in typical listening rooms, down only -3 dB compared to reference levels.

BY

JOHN GATSKI



## SET UP

The Paradigm unit was placed in my normal subwoofer location – the right corner just behind the couch. The Servo-15 was used with my normal reference system, including the full-featured Denon AVP-8000 Dolby Digital preamplifier, Adcom GFA-7000 five-channel amplifier, Panasonic DVD-A300 DVD player and Denon LA-3500 Dolby Digital laserdisc player. Speakers on hand included an NHT front left/center/right and surround left/right ensemble.

Generating test tones with the AudioControl Richter Scale EQ/generator and reading them with the lab microphone, the Paradigm Servo-15 subwoofer was fairly flat at the lowest tone of 22 Hz, using 80 Hz as a reference. The response up to 80 Hz was fairly flat as well, except for the expected 40 Hz-50 Hz room resonance peak that I typically measure in my basement home theater room. For most of the evaluation I used the internal THX® subwoofer crossover of the Denon AVP-8000.



## THE AUDITION

The Servo-15 came along just at the right time, as DVD had just hit the streets. I went out and purchased a trio of DVD's and also delved into my supply of laserdiscs to round out the audition samples. My first laserdisc was Broken Arrow. I immediately dialed in the scene where the nuclear device is detonated in the mine shaft. Wow! The Paradigm shook the couch and other parts of the room, but the bass wasn't of the overly boomy quality that can be more audible from lesser subwoofers, but not very accurate.

I then popped in Star Trek Generations. The scene where the saucer crashes to the surface contains several intense impact "bounce" sounds. I have heard subwoofers that could not reproduce these bass bursts loudly without excessive distortion and bass overhang. The Paradigm, however, relayed them with quick intensity that shook the sofa and walls.

Moving on to DVD, I popped in my just-purchased copy of Eraser. The laserdisc's Pro Logic-only soundtrack had been disappointing, considering that True Lies employed first-rate Dolby Digital. With the Eraser DVD, the soundtrack was much more impressive, with an extended bass that the laserdisc didn't produce. The Servo-15 ignited the low-end of a natural gas explosion of an early scene with an all-enveloping, low fast roar. The Independence Day laserdisc is another impressive sound effects movie, and the Paradigm showcased the low bass quite satisfactorily. The explosions, the sound of vehicles moving, and space crafts crashing worked out the subwoofer quite nicely.

## CONCLUSION

The Paradigm Servo-15 is one of the best subwoofers (perhaps the best subwoofer) I have ever tested for home theater. It offers incredible performance with accurate, quick, low bass. The sophisticated design, ample features and its reasonable cost make this a best buy and an absolute recommendation. As the name suggests, the Paradigm Reference Servo-15 subwoofer is my new reference.

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**AudioVideo  
Shopper**

By: Michael Gelfand

When something costs more than the competition, it's understandable to expect more performance. Given the Servo-15's price, it's safe to say that you should expect a lot

more. And with this sub, you'll get more than you've dreamed of. In every respect – from its sleek, black woodgrain enclosure to its bold and rewarding performance – the Servo-15 serves notice to all contenders and pretenders alike: I've got the goods – don't mess with me.

**"...the Servo-15 serves notice to all contenders and pretenders alike: I've got the goods – don't mess with me."**

Unlike our other contestants, the Servo-15 includes a high-quality interconnect and an external Paradigm X-Series Subwoofer Control Unit. The company makes two models: the X-20 and the X-30. I used the X-30, which is equipped with a built-in, line-level high-pass crossover and employs three different crossover points (50 Hz, 80 Hz, 120 Hz) to choose from. As small as the X-30 is, you might shy away from the idea of having another box lying around, but you'll get over it once you hear the Servo-15 do its thing.

**"...absolutely awe inspiring...this is a butt-kicking speed demon with tons of headroom, plenty of 'thock,' and almost magical detail."**

Measuring 20 by 18 by 21.75 inches (h/w/d), the Servo-15 is deeper than all other comers, but that extra depth helps accommodate the extra oomph you'll be getting from its forward-firing driver and 400-watt amp. A servo system doles out the juice by continually measuring the woofer's movement, comparing it to the signal, and adjusting power accordingly to keep them in perfect sync. The sub itself sports only line-level inputs, a finely calibrated level control, and a three-position power switch. Once you've hooked up the crossover module and balanced its level control against the one on the subwoofer, sit back and prepare yourself, 'cos this is serious stuff.

From the moment The Lizard kicked in with their bass-heavy assault, I knew the Servo-15 was for real. There wasn't a hint of hesitancy, with the Servo-15 matching da Lizard's thunderous pace, beat for beat. Acoustic bass was equally appealing, with detailed attack and a rich extension that made me all gooey inside. Synth bass was absolutely awe inspiring – I actually had to look at the cuffs of my pants to see if they were ruffling. And that stomping and roaring tyrannosaurus on *Jurassic* shook the room with crisp, breathtaking dynamics.

If you're a bass fanatic or into seriously headbanging movie effects, you won't do much better than the Servo-15. This is a butt-kicking speed demon with tons of headroom, plenty of "thock," and almost magical detail. If you can live with an outboard controller, you can live – and live well – with this subwoofer.