



## The Sophisticated Technology Behind the ForceField Powered Subwoofers

Of course, to achieve a tour de force like the ForceFields, the basic concept is absolutely key. The ForceFields all combine high-power forward-radiating ultra-long-throw sub-bass drivers coupled to downward-firing quadratic planar infrasonic radiators. This brings together the superior transient response and detail of moderately sized active drivers with the subsonic capability and extraordinary room-filling coupling of large diaphragm radiators. In fact the radiators, in combination with the slot-loading to the floor, approximate the near perfect impedance match to the air of a well-tuned transmission line. This combination is also very flexible in terms of room-placement requirements.

*“handled low-frequency barrages with floor-shaking confidence”* — Mark Fleischmann, *Home Theater*

Next, the engineering team spent countless hours developing a unique high-power (FF 5–1500 Watts, FF 4–1200 Watts, FF 3–1000 Watts) DSP controlled class D digital amplifier. This sophisticated amp has a Programmable Logic Device (PLD) based state machine with a nearly instantaneous 278 nano-second update time, to perfectly manage a myriad of functions including: soft-clipping, DC offset control, output-stage anti-saturation protection and discrete multi-band limiting. The DSP control also allows for very precise equalization. In addition, intrinsic THD is extremely low, so very little negative feedback is required, thus ensuring optimum transient performance.

*“remarkably agile...palpable with organic flare”* — Andrew Robinson, *HomeTheaterReview.com*

Finally, a unique cabinet shape was chosen, both for its undeniable aesthetic appeal, as well as its performance enhancing attributes. The non-parallel cabinet walls dramatically cut down and help control internal reflections, as well as stiffen the cabinet structure itself. The end result is stunning impact, superbly musical bass articulation and breath-taking infrasonic capabilities that can powerfully pressurize a room in a way that leaves listeners breathless. The unique achievement of the ForceFields means they can bring the power of T Rex into your living room, as well as the musical subtlety of YoYo Ma or Sting.

### FORCEFIELD 3 SPECIFICATIONS

**Dimensions:** 11-1/2" W x 15-3/4" D x 11" H (height is with feet installed). **Frequency Response:** 18 Hz – 250 Hz. **Driver Complement:** One 8" long-throw high-output bass driver, One 9" x 11" quadratic planar infrasonic radiator. **Amplifier:** 1000-Watt ForceField digital amplifier. **Speaker Level High-Pass Filter:** 6 dB per octave at 150 Hz (approx.). **Speaker Level Low-Pass Filter:** 12 dB per octave continuously variable from 40 – 150 Hz. **Low-Level Input (Mono):** Unfiltered (no low pass), direct-coupled.

### FORCEFIELD 4 SPECIFICATIONS

**Dimensions:** 13-1/2" W x 17-7/8" D x 12-3/4" H (height is with feet installed). **Frequency Response:** 14 Hz – 250 Hz. **Driver Complement:** One 10" long-throw high-output bass driver, One 11" x 13" quadratic planar infrasonic radiator. **Amplifier:** 1200-Watt ForceField digital amplifier. **Speaker Level High-Pass Filter:** 6 dB per octave at 150 Hz (approx.). **Speaker Level Low-Pass Filter:** 12 dB per octave continuously variable from 40 – 150 Hz. **Low-Level Input (Mono):** Unfiltered (no low pass), direct-coupled.

### FORCEFIELD 5 SPECIFICATIONS

**Dimensions:** 15" W x 18" D x 14-1/2" H (height is with feet installed). **Frequency Response:** 12 Hz – 200 Hz. **Driver Complement:** One 12" long-throw high-output bass driver, One 12-3/4" x 14-1/2" quadratic planar infrasonic radiator. **Amplifier:** 1500-Watt ForceField digital amplifier. **Speaker Level High-Pass Filter:** 6 dB per octave at 150 Hz (approx.). **Speaker Level Low-Pass Filter:** 12 dB per octave continuously variable from 40 – 150 Hz. **Low-Level Input (Mono):** Unfiltered (no low pass), direct-coupled.

\*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

*“Extraordinary bass prowess...I’ve never heard a sub this small go that deep”*

— Steve Guttenberg, *CNET The Audiophile*



### State-of-the-Art GoldenEar Drivers



Ultra-Long-Throw Sub-Bass Driver

- Ultra-Long Throw High-Output Bass Driver for Powerful Room-Shaking Bass
- Superior Transient Performance for Exceptional Detail
- Computer Optimized Ultra-Stiff Fiber Cone
- Massive High-Gauss Magnet Assembly



Quadratic Planar Infrasonic Radiator

- Pressure-Coupled Loading Extends Usable Bass Performance to the Infrasonic Region
- Performs Like a Well-Tuned Transmission Line but with Superior Transient Performance and Control
- Used in all ForceField Subwoofers

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