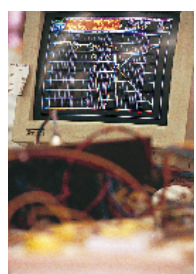


**EAW Design Philosophy:
Total System Engineering**



EAW engineers design each loudspeaker system to provide flat power response with minimal distortion while solving the problems of its particular application.

EAW Engineering's goal for every loudspeaker system is to provide flat power response with minimal distortion as those criteria apply to the system's given application. To achieve this goal EAW engineers performance-optimize each component – cone and compression drivers, horns and waveguides, internal passive crossover/filter networks and the enclosure itself – and then integrate them into a single acoustical system that not only performs flawlessly but solves the problems of the system's given application.



EAW's computer-designed crossover/filter networks are precisely aligned to the systems they control so our loudspeakers sound "flat" out of the box.

EAW'S TOTAL SYSTEM APPROACH

Applying the laws of physics to problems identified with critical listening skills, EAW design engineers develop and refine products until rigorous performance criteria are met not just for specific components but for the total system.

EAW works with the world's leading transducer manufacturers to create purpose-designed cone transducers and compression drivers

which design engineers then integrate into total systems optimized for particular applications.

Whenever possible, we employ true three-way design. Requiring each subsystem to handle a more narrow bandwidth compared to a two-way design virtually eliminates distortion resulting from excessive driver excursion and maximizes the effectiveness of pattern control devices.

EAW's computer-designed crossover/filter networks do more than merely divide the signal between the subsystems; they provide coherent summation across the transition range, creating loudspeakers that require virtually no equalization to deliver flat

response. Using an exacting iterative development process, our engineers create circuits precisely tailored to integrate each loudspeaker's set of components into a total system. Our use of only heavy-duty components ensures that the circuits will not introduce distortion, even at concert-level SPLs. Where appropriate, EAW's total signal processing system may include active, passive and even acoustical filters.

From our first bass bin to our latest cinema system, EAW historically has led the industry in horn-loading technology, setting new standards for predictable pattern control and smooth power response. Our proprietary construction techniques let us manufacture large, acoustically rigid horns without sacrificing the mathematical accuracy of the flares.

Finally, we examine every aspect of the loudspeaker – from handles and casters to enclosure shape and size – to make the systems as easy to work with as they are to listen to. No matter what the application, once the needs of the loudspeaker system have been defined, EAW Engineering creates a total system solution optimized for that application's needs.

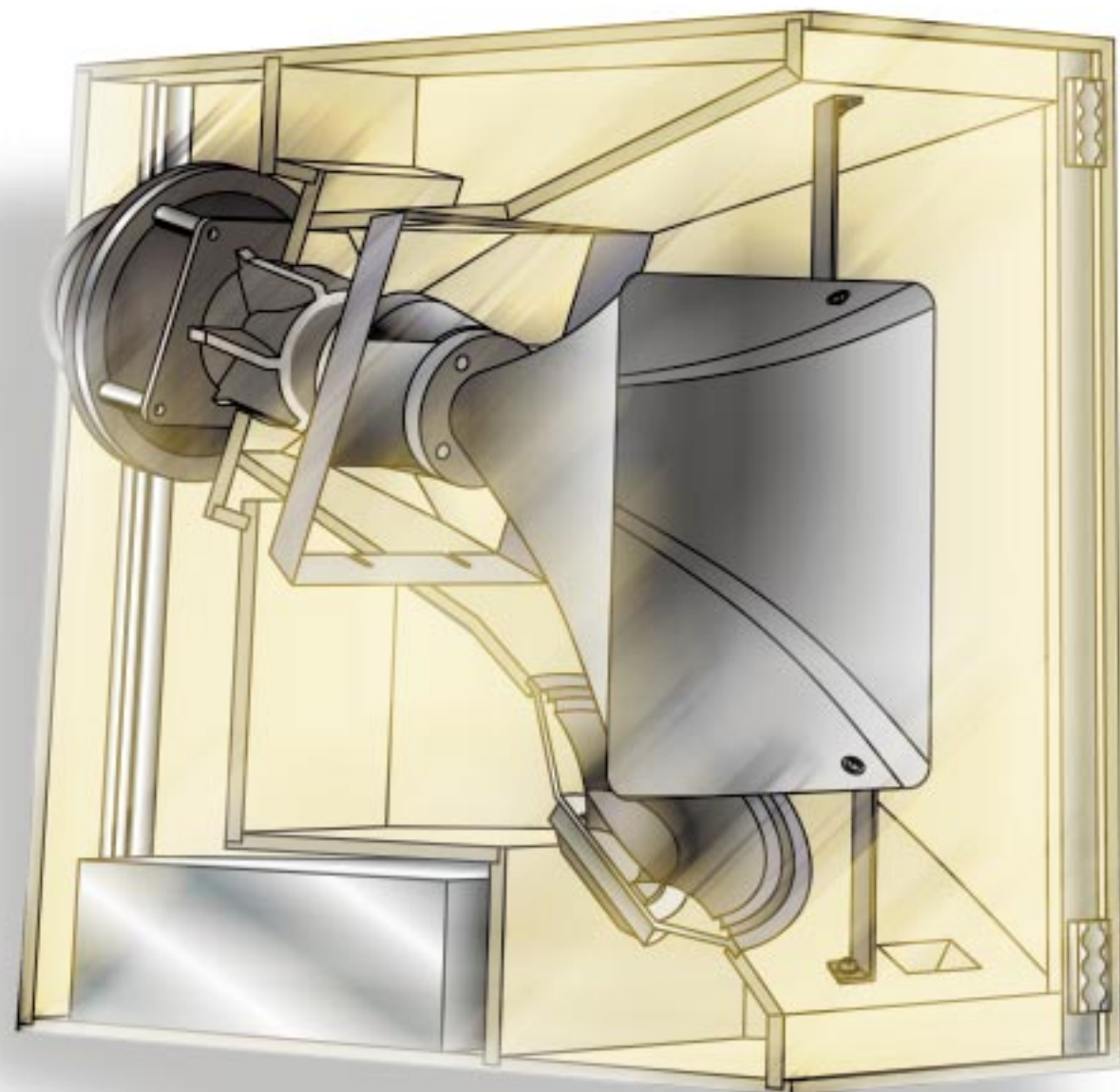
EAW'S ENGINEERING CREDO

EAW engineering's goal for every loudspeaker system is to provide flat power response and minimal distortion as those criteria apply to the system's given application. As a result, the entire EAW product range sounds remarkably similar, from the ultra-compact UB12 to the massive MH692.



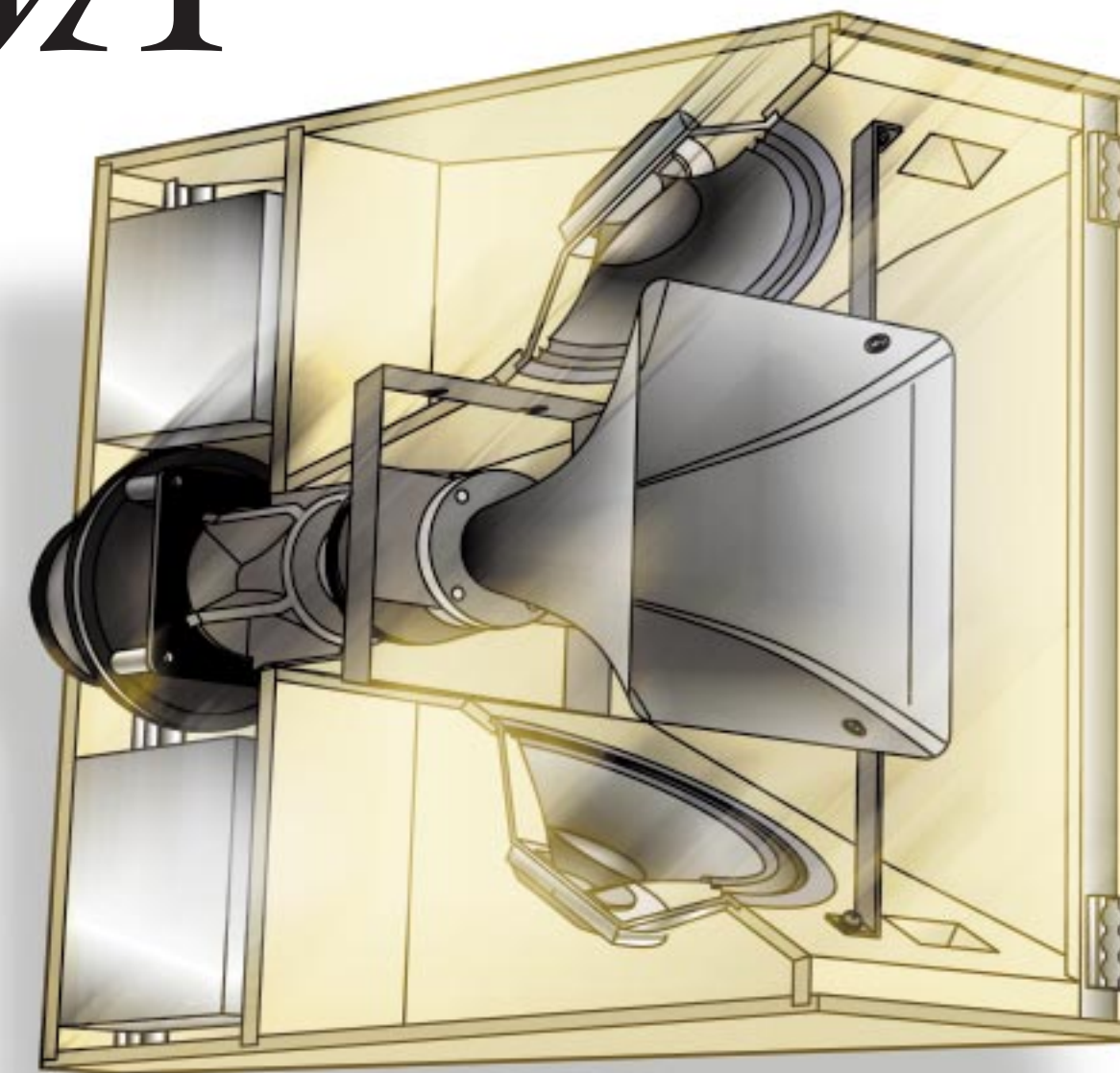
EAW uses advanced measurement equipment at our automated testing facilities to compile the most comprehensive data sets in the industry.

As we have integrated active electronic signal processing into the total system, we have insisted that our processors not employ dynamic effects so the sound quality remains consistent at all output levels. At their heart, all EAW processors are designed as crossovers precisely aligned to the systems they are designed to control.



KF755
FULL RANGE DOWNFILL LOUDSPEAKER MODULE

VA⁴ *It's about Time.*



KF750
FULL RANGE LOUDSPEAKER MODULE



The Laws of Physics / The Art of Listening



The Laws of Physics / The Art of Listening

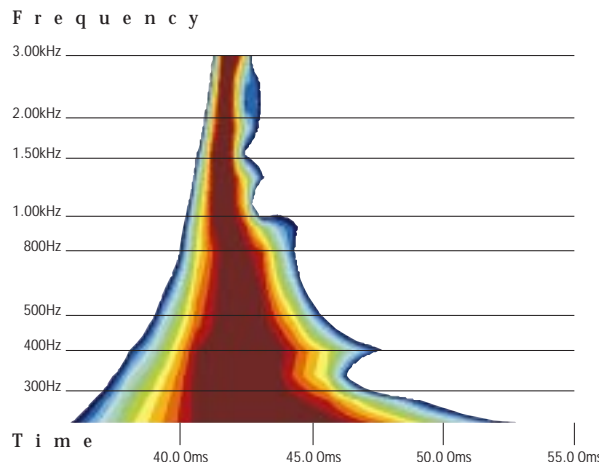
VA⁴ Acoustic Singularity™

It's about Time: Virtual Array in the Fourth Dimension

In the 1980's the KF850's Virtual Array Technology™ significantly reduced interaction between array modules in the horizontal plane. Today, VA⁴ Technology™ extends that same level of array control to the vertical plane. And it goes one step beyond, solving problems in the fourth dimension: Time.

For the first time ever, the KF750's Acoustic Singularity™ design creates a unified space/ time origin over the entire audible spectrum, eliminating the temporal smearing that has plagued all previous loudspeaker designs, even our own KF850 – the most accepted touring array module in the world. A broadband unified arrival enhances the clarity and impact of any sonic event.

While the Dipolar Array™ LF section's dual woofers are positioned above and below the mid/high axis, their acoustic center is exactly on that axis. Since all acoustic centers are on the same line, simple signal delay makes the entire broadband audio image originate from one specific point in time. This is the first three-way concert touring array module that acts as a true point source.



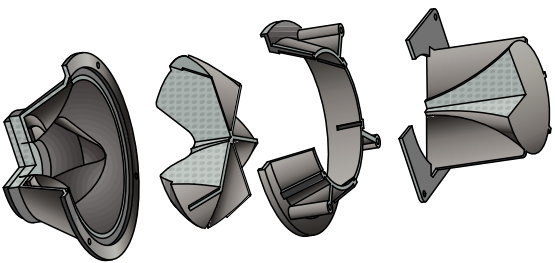
IT'S ABOUT TIME Achieving VA's dramatic improvements in the temporal domain required the use of sophisticated development tools like this wavelet image which indicates amplitude in color (brown represents 0 dB, violet represents -12 dB) over time (horizontal axis) by frequency (vertical axis).

The example above of a KF750's response shows a smooth, steep, tightly-packed slope through the entire measured range which clearly indicates the unified arrivals of all sonic events. Learn more about reading wavelets in the VA⁴ whitepaper.

Powering and Processing

The KF750 is a triamplified three-way system available with or without an internal Close Coupled Power Module™. While the CCPM™ developed with high-end multi-amp specialists CyberLogic® provides optimum performance and system protection, users can achieve excellent results using existing amp racks developed to power other triamped three-way systems.

When external amps are to be used, EAW will supply preconfigured processor settings for EAW's MX8600 (EPROM upgrades available).



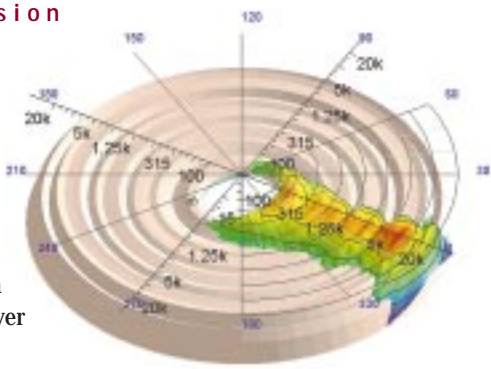
HOW SOON IS NOW? Until now, all mid frequency cone drivers created temporal smearing of critical vocal intelligibility information because the energy from the cone, dustcap and surround arrived at different times. EAW engineers developed the cone and the new generation phase plug as a single unit that creates a unified arrival of all mid frequency energy at the throat of the horn.

A more complete explanation of this breakthrough technology is available in the VA⁴ whitepaper.

Close Coupled Power Modules™ (CCPM™)

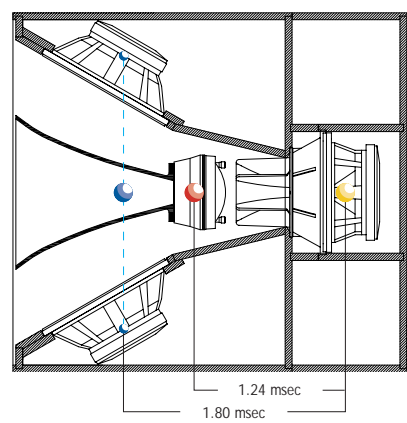
The KF700 Series' CCPM was designed around these systems' specific needs to produce very high levels of distortion-free output with complete reliability.

The real-time soft clipping system protection circuitry is virtually inaudible. During development, listeners needed to check the LED indicators to see whether or not it was engaged. Even when driven to maximum output, the tonal balance remains virtually unchanged. The KF700 Series' modular design allows an immediate upgrade from external to internal amplification as well as future upgrades to accept DSP and remote monitoring.

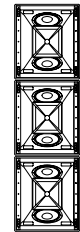


Topographical Power Response Image™ (TPRI™) To meet our goals of flat power response, we developed new tools to let us see how a loudspeaker fills its nominal coverage pattern. This TPRI illustrates the KF750's broadband pattern control and smooth power response in the horizontal plane displaying amplitude (color) over frequency (radius) and space (circumference).

A complete description of how TPRI's are generated as well as comparative examples is provided in the VA⁴ whitepaper.



Since all three subsystems' acoustic centers are on the same axis, appropriate signal delay creates a unified space/time origin for the entire system making it the only three-way array system that acts as a true point source.



It's about Space: Virtual Array and your Truck's Dimensions

Because the KF700 Series' design is so compact, it takes up less space in the air.

And in your truck.

At only 31-in. high, KF700 Series loudspeakers can stack three high, cutting the amount of truck space needed for any given array by one third. Since many arrays are three high, you just drop each column onto a pallet and roll it away. Specially designed truck pack tools keep the load stable while rolling and lock together in the truck.

And at only 190 pounds per enclosure, a KF750 is 60 pounds lighter than a KF850, potentially reducing the weight of your loudspeaker load by 24%.

KF700 Series Array Modules

KF750

The KF750 is the high "Q" full range loudspeaker system that serves as the primary array building block. Even with its exceptional long throw capabilities, its smooth power response and coherent tonal quality allow it to work in nearfield applications as well.

At its core, a KF750 is a very large mid frequency horn. Allowing the horn to fill nearly the entire front of the enclosure enhances pattern control in the lower midrange, minimizing interaction between adjacent array modules.

The 10-in mid frequency cone transducer and phase plug assembly was developed specifically to eliminate the temporal smearing that degrades vocal intelligibility in all other array systems. It is so unique that US and international patents are pending.

The high- and low-frequency subsystems fit within the mid horn, minimizing both size and weight.

KF755

The KF755 provides dedicated downfill coverage in array configurations where trim height requires additional nearfield output.

The KF755 can be inverted to provide upfill to auditorium balconies and can even be used as a stand-alone system in applications requiring that coverage angle.

In addition to the single 12-in woofer, it contains the same mid and high frequency transducers as the KF750 loaded on vertically asymmetrical horns.

Sample Venues and Configurations



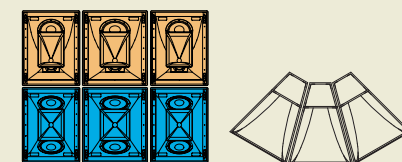
To give users an idea of the scalability of the KF700 Series, we've developed array configurations for some of our hometown venues that represent typical venue types that most touring audio pros encounter. By no means do these arrays cover the total range of pro audio applications.

The KF750 and KF755 feature tightly controlled 35° horizontal coverage patterns letting system designers accommodate specific venues and applications requiring wider or narrower horizontal coverage by simply adding or subtracting array columns.

Similarly, vertical coverage can be tailored by adding or subtracting array rows as well as by inverting KF755's for upfill. This is the technique we employed for the Orpheum where, as many of you know, flying arrays is discouraged.

With both long throw and downfill modules providing full range frequency response, KF700 arrays generate consistent SPL's from almost directly under the array to hundreds of feet away.

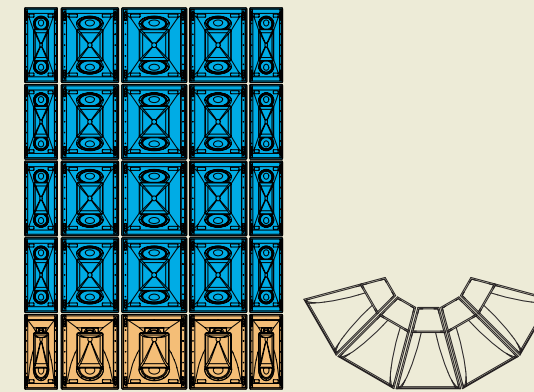
Most users will never need to "barrel" arrays with complicated rigging schemes – almost all KF700 arrays will be dead hung using VA's simple, no-nonsense rigging system.



ORPHEUM THEATRE

SMALL THEATRE
1 Hamilton Place, Boston, MA
Capacity: 2,000
Distance to FOH: 80 feet
Horizontal Coverage: 105°
Array Height: 5.25 ft

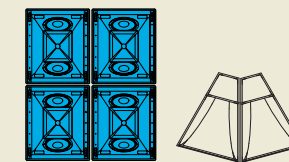
KF700 SERIES SYSTEMS (PER SIDE)
KF750: 3 wide x 1 deep per side under
KF755: 3 wide x 1 deep per side inverted for upfill
SYSTEM POWER HANDLING (CONTINUOUS, PER SIDE)
HF – 1200 Watts / MF – 2400 Watts / LF – 5400 Watts
APPROXIMATE CONTINUOUS OUTPUT AT FOH
HF – 120 dB / MF – 115 dB / LF – 117 dB
APPROXIMATE PEAK OUTPUT AT FOH
HF – 125 dB / MF – 120 dB / LF – 123 dB



FLEETCENTER

ARENA
One Fleet Center, Boston, MA
Capacity: 20,000
Distance to FOH: 150 feet
Horizontal Coverage: 175°
Array Height: 13.25 ft

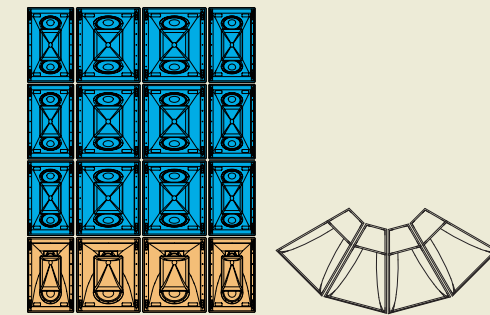
KF700 SERIES SYSTEMS (PER SIDE)
KF750: 5 wide x 4 deep per side over
KF755: 5 wide x 1 deep per side
SYSTEM POWER HANDLING (CONTINUOUS, PER SIDE)
HF – 5000 Watts / MF – 10000 Watts / LF – 27000 Watts
APPROXIMATE CONTINUOUS OUTPUT AT FOH
HF – 118 dB / MF – 113 dB / LF – 124 dB
APPROXIMATE PEAK OUTPUT AT FOH
HF – 124 dB / MF – 119 dB / LF – 130 dB



AVALON

MEDIUM CLUB
15 Lansdowne Street, Boston, MA
Capacity: 1,450
Distance to FOH: 70 feet
Horizontal Coverage: 105°
Array Height: 5.25 ft

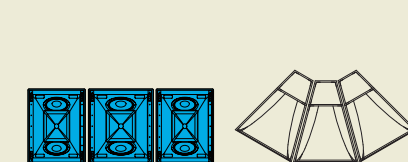
KF700 SERIES SYSTEMS (PER SIDE)
KF750: 2 wide x 2 deep per side
SYSTEM POWER HANDLING (CONTINUOUS, PER SIDE)
HF – 800 Watts / MF – 1600 Watts / LF – 3600 Watts
APPROXIMATE CONTINUOUS OUTPUT AT FOH
HF – 120 dB / MF – 115 dB / LF – 117 dB
APPROXIMATE PEAK OUTPUT AT FOH
HF – 126 dB / MF – 121 dB / LF – 123 dB
Note: The Avalon's deep, narrow shape requires 4x KF750's per side to reach the back wall.



GREAT WOODS Center for the Performing Arts SHED

Mansfield, MA
Capacity: 8,000 in the Pavilion
Distance to FOH: 120 feet
Horizontal Coverage: 140°
Array Height: 10.58 ft

KF700 SERIES SYSTEMS (PER SIDE)
KF750: 4 wide x 3 deep per side over
KF755: 4 wide x 1 deep per side
SYSTEM POWER HANDLING (CONTINUOUS, PER SIDE)
HF – 3200 Watts / MF – 6400 Watts / LF – 16800 Watts
APPROXIMATE CONTINUOUS OUTPUT AT FOH
HF – 117 dB / MF – 112 dB / LF – 119 dB
APPROXIMATE PEAK OUTPUT AT FOH
HF – 123 dB / MF – 118 dB / LF – 125 dB



AXIS

SMALL CLUB
13 Lansdowne Street, Boston, MA
Capacity: 500
Distance to FOH: 45 feet
Horizontal Coverage: 105°
Array Height: 2.58 ft

KF700 SERIES SYSTEMS (PER SIDE)
KF750: 3 wide x 1 deep per side
SYSTEM POWER HANDLING (CONTINUOUS, PER SIDE)
HF – 600 Watts / MF 1200 Watts / LF 3600 Watts
APPROXIMATE CONTINUOUS OUTPUT AT FOH
HF – 121 dB / MF – 116 dB / LF – 118 dB
APPROXIMATE PEAK OUTPUT AT FOH
HF – 127 dB / MF – 122 dB / LF – 124 dB
Note: Axis's wide, shallow shape requires 3x KF750's for horizontal coverage.