FR-300-R
Compact High Output Full Range Loudspeaker System

- Exceptionally Smooth Power Response
- High Power Handling Capability 200w RMS
- High Acoustic Output From Small Package
- EAW's Concert Proven Construction For Durability and Reliability

Application

The, FR-300-R high performance loudspeaker system is ideally suited for stage sound, high level playback, nearfield PA and other applications requiring accurate sound reproduction at high output levels from a compact package. The smooth extended response and low distortion even under demanding professional use makes this system clearly superior to comparably sized systems.

The complex internal crossover, in conjunction with the high power drivers, makes the system perform with consistant accuracy under the stress of continuous professional use. Field failures are virtually eliminated by this combination of quality components and advanced design. The enclosure is also designed to withstand the abuse of portable professional use, and is of the same EAW quality that has made us a leading supplier of systems for the concert sound industry.

Description

The FR-300-R is a two-way system designed to eliminate the weak midband compromises that typically plague simple systems of this type. The use of an especially massive compression driver and equalized third order crossover allow for smooth transition from bass to high frequency driver. This smooth mid-band is achieved without compromise of bandwidth, which is exceptional for a system of this size (45 Hz to 17,000 Hz). Construction is done with careful attention to detail; from the cross-grain-laminated birch cabinet material to the vinyl-coated perforated steel, the finest available components and most sophisticated techniques are maintained. The resulting system will audibly out-perform competitive units while providing better durability than any other system available.

Low Frequency Performance

Bass is provided by a 380mm (15") LF-383R driver mounted in an optimally vented enclosure for extended response and minimum response ripple. The cast frame driver has a massive magnet for low distortion and high conversion efficiency. The cone and suspension is of the latest generation low distortion type which minimises break-up modes under high power and eliminates the upper bass region cone resonances that plague simpler suspension designs.

High Frequency Horn/Driver

The FR-300-R makes use of the EAW/RCF CD2552 compression driver mounted on our HF-890A die-cast flush front radial horn. This combination when operated through the internal equalized network, permits a reasonably low crossover point (1200 Hz), while maintaining power handling and providing extended high frequency response. This is achieved by using a large 52 mm (2") voice coil and a strong composite diaphragm to provide high power handling (typically 3dB more than comparable compression driver based systems and up to 10 dB more than tweeter based systems). The driver's magnetic circuit is large and produces 17,500 gauss. Normally this combination

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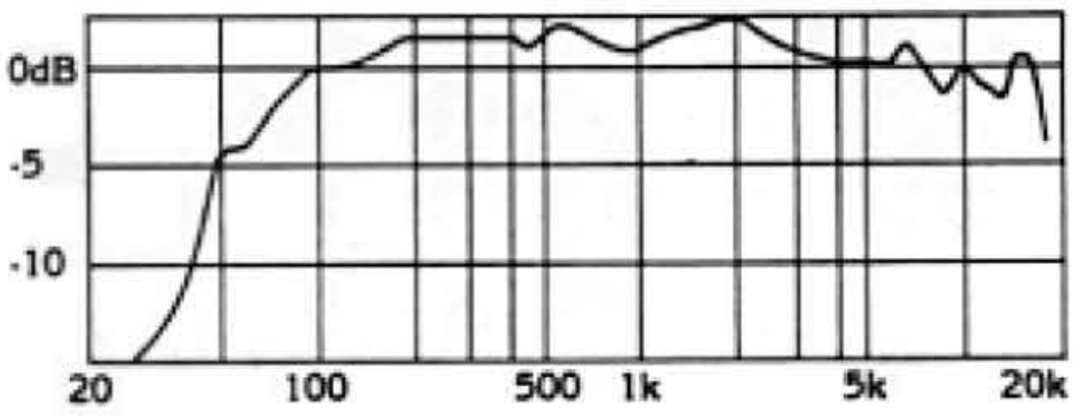
would provide high power handling and high mid band efficiency with dramatically reduced high frequency output, but through the use of a specially developed double suspension the mid band efficiency is suppressed, resulting in smooth extended response with high power handling.

Frequency Dividing Network

The crossover design of the FR-300-R system is third order with 18 dB per octave slope. This design also passively equalizes the crossover region to provide peak free response. The components in the crossover are custom made to EAW specifications including large precision air core inductors, five percent capacitators and resisters that cost many times more than the simpler designs offered in competitive systems. EAW crossovers eliminate the measurable distortion that plagues others by designing around a dynamic headroom of three times the systems power rating, the greatest overlead margin of any available crossover.



Frequency Response

FR-300-R Specifications

System Type:	Two-way, vented box	
Operating Range:	40 Hz to 18,000 Hz	
Frequency Response		
On Axis + - 3 dB:	48 Hz to 16,500 Hz	
On Axis - 10 dB:	38 Hz to 18,5000 Hz	
Power Handling		
Continuous Sine Wave:	200 W RMS	
Program:	356 W	
Maximum Continuous Output:	121 dB 1m at 200 w	
Nominal Impedance:	8 ohms	
Nominal Dispersion:	90° Horizontal 40° Vertical	
Enclosure Type:	0.090 cubic meter vented box	
Volume:	125 liter (4.5 cu. ft.)	
Material:	Cross-grain laminated Baltic birch hardwood	
Crossover Network		
Slope:	Third order, 18 dB/octave	
Frequency:	1200 Hz	
Driver Data:	**LF Driver**	**HF Driver**
EAW Model:	LF-383R	CD-2552
Diaphragm Size:	380 mm (15")	52 mm (2")
Material:	Paper	Composite
Flux Density:	11,500 gauss	17,500 gauss
Voice Coil Diameter:	75mm (3/4")	52mm (2")
Cabinet Dimensions:	30.5" H x 19.75" W x 14.25 D	
Cabinet Finish:	Catalyzed black polyurethane	

Specifications subject to change without notice.

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