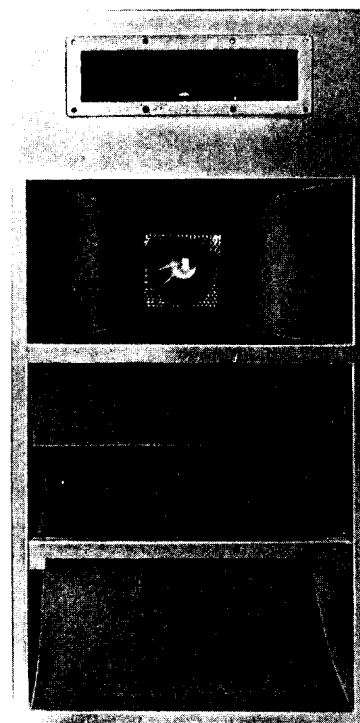


# Forsythe Series JF500

**Horn Loaded  
"One Box"  
High Output  
Full Range System**

The EAW JF500 is designed to duplicate the smooth response, low distortion and wide dynamic range of EAW's famous horn loaded component system in a compact, portable, flexible "one box" package. It is intended for use in a wide range of high level sound reinforcement and playback applications. It will provide accurate response over the 50 to 18,000 Hz band with good directivity and high output.



## **Description**

This system consists of three horn/driver subsystems totally integrated into a single package for coherent, full bandwidth reproduction and simplicity of transport and set-up. The system can operate in either bi-amplified or tri-amplified modes, selected by a rear panel switch. The internal passive electronic network provides driver protection, component equalization and phase alignment in both the bi and tri-amplified modes. The enclosure is "road ready", offering the unsurpassed durability that is characteristic of all EAW sound reinforcement systems. Packaging features include 18 ply hardwood exterior and high density polyurethane foam reinforced horn wall construction. Catalyzed polyurethane chemical coating finish with vinyl coated perforated steel driver grills, recessed handles and slant back with casters are standard on the JF500 with optional aircraft style hanging hardware available.

## **The Advantages Of Full Bandwidth Horn Loading**

The JF500's use of true horn loading over its entire bandwidth provides lower harmonic and intermodulation distortion, high efficiency and better control over directivity and coverage than any direct radiating system. EAW's proprietary horn technology enables you to gain these benefits of a horn design without sacrificing response linearity as with most other horn systems. This has been clearly demonstrated during the 1983 Japanese Audio Consulting Competition where EAW's horn loaded system offered smoother response than the best vented systems from the likes of JBL, EV and TOA, while offering considerably greater output and lower distortion that is typical of a horn system.

The result of the JF500's horn loading is a continuous output of greater than 130 dB SPL at 1m with the directivity needed for good articulation in medium to long throw "semi-reverberant" environments. Additionally, the JF500's smooth response and constant coverage of 100 degrees results in a very natural sound character, like that associated with nearfield high output hifi systems.

## Low Frequency

The JF500's unsurpassed low frequency performance is the result of its Forsythe designed bent bass horn, which permits a very low flare rate and long horn length in a compact box without the discontinuities of air loaded impedance characteristics that plague all folded horn designs. Additionally, efficiency and directivity are much better than with any system employing multiple vented 15 or 18 inch drivers. The JF500's bass horn is loaded with a single RCF LAB L15/554 15-inch driver for smooth response down to 50 Hz.

## Mid Frequency

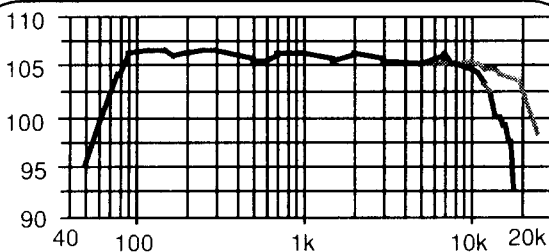
The mid frequency section is the heart of any system as it is where most vocal and speech information is contained, and it is where the JF500 clearly leaves competitive systems behind. Kenton Forsythe's world famous mid bass horn technology enables the JF500's mid frequency horn to provide constant horizontal coverage of greater than 100 degrees, with axial response +/- 1.5 dB over its entire operating range. No direct radiating system or simple horn design can match this impressive performance. Examples of the JF500's advanced mid horn technology include the cast displacement / phasing plug, high density polyurethane reinforced horn flare and "State of the Art" RCF LAB L10/750 driver. The net result is smooth response on and off axis with very low distortion, totally eliminating the characteristic "honk" of competitive high output systems.

## High Frequency

The JF500 is available in two different high frequency configurations. The JF500C comes with the new RCF N481 driver with flat response to 14,000 Hz and the JF500XT utilizes the TAD 2001 compression driver for flat response to 20,000 Hz. Both systems utilize the H3709 horn which provides constant 100 degree horizontal coverage. The internal passive network assures proper time and amplitude alignment between the mid and high frequency horns in both bi and tri-amplified modes.

# Forsythe Series JF500

Specifications:	JF500C	JF500XT	
<b>Frequency Response</b>			
Single Unit: -10 dB:	45 to 20,000 Hz	45 to 24,000 Hz	
+/- 2.5 dB:	80 to 14,000 Hz	80 to 20,000 Hz	
Quad Array: -10 dB:	42 to 20,000 Hz	42 to 24,000 Hz	
+/- 3 dB:	48 to 16,000 Hz	48 to 20,000 Hz	
<b>Sensitivity</b>			
System:	107 dB SPL 1w 1m	107 dB SPL 1w 1m	
LF Unit:	107 dB SPL 1w 1m	107 dB SPL 1w 1m	
MF Unit:	109 dB SPL 1w 1m	109 dB SPL 1w 1m	
HF Unit:	106 dB SPL 1w 1m	112 dB SPL 1w 1m	
<b>Maximum Acoustic Output (Half Space)</b>			
Single Unit:	60 acoustic watts		
Quad Array:	240 acoustic watts		
<b>Power Handling Capacity</b>			
Bi-amplified Mode	Sine Wave	AES	Sine Wave
50 to 250 Hz:	200 w 500 w	200 w	500 w
250 to 20k Hz:	150 w 400 w	150 w	400 w
Tri-Amplified Mode			
50 to 250 Hz:	200 w 500 w	200 w	500 w
250 to 1.8k Hz:	150 w 500 w	150 w	500 w
1.8k to 20k Hz:	75 w 200 w	50 w	100 w
<b>Nominal Beamwidth</b>			
Horizontal:	100 degrees		
Vertical:	50 degrees		
Nominal Directivity Factor:	Q=14		
<b>Driver Components</b>			
LF:	RCF LAB L15/554 380 mm (15-inch) 100 mm Voice Coil	RCF LAB L15/P200 380 mm (15-inch) 100 mm Voice coil	
MF:	RCF LAB L10/750 250 mm (10-inch) 75 mm Voice Coil	RCF LAB L10/750 250 mm (10-inch) 75 mm Voice Coil	
HF:	RCF N481	TAD 2001	
<b>Crossover Frequencies</b>			
High Pass:	40 Hz 18 dB per octave (optional)		
LF/MF:	250 Hz 18 dB per octave		
MF/HF:	1,800 Hz 18 dB per octave		
<b>Nominal Impedance</b>			
LF:	8Ω	8Ω	
MF:	8Ω	8Ω	
HF:	12Ω	16Ω	
<b>Dimensions</b>			
Height	Width	Depth	Weight
50 3/16 in	24 5/8 in	29 3/4 in	232 lbs
1275 mm	625 mm	756 mm	510.4 kg
<b>Enclosure Material:</b>			
Crossgrain Laminated Birch Hardwood			
<b>LF &amp; MF Horn Construction:</b>			
4 mm Birch Former with High Density Polyurethane Foam Reinforcing.			
<b>Enclosure Finish:</b>			
Black Catalyzed Polyurethane Chemical Coating			
<b>Standard Enclosure Features:</b>			
Slant Back with Casters, Recessed Handles, Perforated Steel Speaker Grills			
<b>Optional Enclosure Features:</b>			
Aircraft Style Hanging Rings or EAW Multi-Balance Hanging System			
<b>Standard Input Connectors:</b>			
Banana Jacks and 1/4 inch phone plugs			
<b>Optional Input Connectors:</b>			
Cannon EP Series, AMP, or Twist Locks			



— JF500C    - - - JF500XT Axial Response

Eastman Audio Products