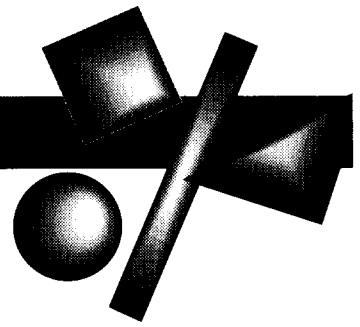


# FORSYTHE SERIES



## MH102, & BH800

### Horn Loaded, High Output Array Reproducers

#### MH102 Features

**New Generation Forsythe Design** large diaphragm (300mm) horn loaded mid-bass unit with compound flare rate and center displacement/phasing plug for flat power response and constant coverage.

**Exceptionally High Output Capabilities** of more than 136 dB SPL peak output at 1 meter makes the MH102 Series the natural choice for larger sound reproduction applications.

**Precise Coverage down to the 250 Hz region** enables easy construction of minimal interaction arrays enabling higher definition and reduced design and installation costs.

**Uniform Frequency Response** — From the bottom of the vocal band right up to the highest cymbal overtones the MH102 Series provides flat power response.

#### BH800 Features

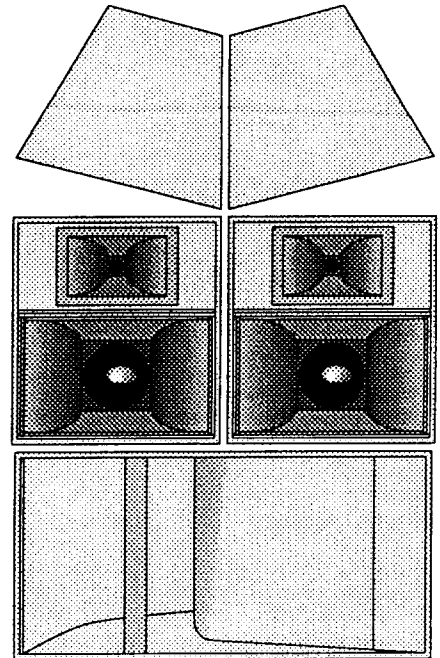
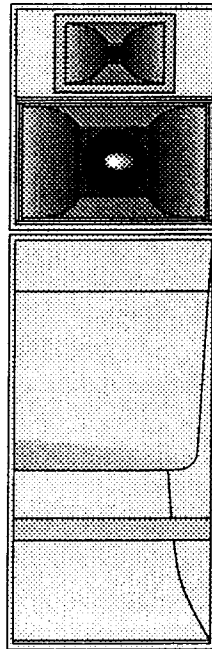
**Construction** — Most commercial production methods yield only gross approximations of true mathematical horns. Our proprietary construction techniques combine a thin, flexible layer of birch or fiberglass with reinforcing structures of high-density polyurethane.

These methods allow us to build more complex structures, flares that are truer realizations of the mathematically correct horn expansion, while maintaining acoustic rigidity. In particular, EAW horn flares exhibit an extremely smooth air-loaded impedance characteristic. This produces flat response over the entire operating range and eliminates the "honk" so typical of ordinary horns.

**True 3D Throat Subassembly** — Precise driver loading in the initial section of the horn is crucial to optimum efficiency. For this reason, we pay particular attention to the throat area. Our high frequency horns are formed in collapsible molds. This is a more expensive construction technique, but it allows us to narrow the initial section of the throat without interrupting the smooth taper by gluing two sections together.

**Computer-Optimized Driver** — EAW's L18/851K driver is specifically designed for horn loaded use, with massive motor assemblies, specially developed cone materials, etc. The result is a unique combination of low distortion and high efficiency.

**Traditional EAW Construction Quality** including polyurethane reinforced birch mid & bass horns, all cross-grain-laminated birch enclosure, vinyl coated impact proof perforated steel grills, catalyzed polyurethane chemical coating finish and multi-point flying system.



#### Applications

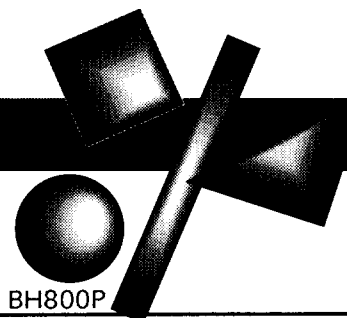
The MH102/BH800 based systems combination of exceptionally flat power response, and extremely low distortion at high sound pressure levels makes it ideal for fixed installations requiring true high definition reproduction to large audiences.

Typical installation applications for arrays of MH102's along with BH800's or an appropriate low frequency system include motion picture theaters, theme park amphitheaters, high level dance systems, club sound reinforcement systems and performing arts facilities. Additionally, MH102's can be used to augment fringe area coverage of full range system arrays where the main full range array exhibits decreased directivity at low frequencies providing sufficient level but inadequate mid and high frequency definition.



**EASTERN ACOUSTIC WORKS, INC.**

# SPECIFICATIONS



Model	MH102-90P	MH102-60P	BH800P
Frequency Response	250 to 18k Hz $\pm 2.5$ dB	250 to 18k Hz $\pm 2.5$ dB	60 to 400 Hz $\pm 3$
Low Frequency Limit	- 3 dB: 220 Hz -10 dB: 160 Hz Horn Flare Rate: 160 Hz	220 Hz 160 Hz 160 Hz	60 Hz (47 Hz Quad Array) 45 Hz (36 Hz Quad Array) 44 Hz
Axis: Sensitivity	MF (LF): 109 dB SPL (1w@1m) HF: 110 dB SPL (1w@1m)	110 dB SPL (1w@1m) 111 dB SPL (1w@1m)	108.5 dB SPL (1w@1m) NA
Power Handling	MF (LF): 500 watts AES 200 watts 100H Sine Wave HF: 150 watts AES 60 watts 100H Sine Wave	500 watts AES 200 watts 100H Sine Wave 150 watts AES 60 watts 100H Sine Wave	1000 watts AES 350 watts 100H Sine Wave NA NA
Maximum Output	MF (LF): 136 dB SPL (peak) 132 dB SPL (long term) HF: 131.8 dB SPL (peak) 127.8 dB SPL (long term)	137 dB SPL (peak) 133 dB SPL (Long Term) 132.8 dB SPL (peak) 128.8 dB SPL (long term)	138.5 dB SPL (peak) 133.9 dB SPL (long Term) NA NA
Nominal Impedance	MF (LF): 8 ohms HF: 16 ohms	8 ohms 16 ohms	8 ohms NA
Coverage Angles	Horizontal: 90° (-6 dB) Vertical: 40° (-6 dB)	60° (-6 dB) 40° (-6 dB)	NA NA
MF (LF) Subsystem	Construction: Polyurethane Reinforced Wood Horn Design: With Center Displacement Plug Driver: 12-in. LAB L12/P110K	Construction: Polyurethane Reinforced Wood Horn Design: With Center Displacement Plug Driver: 12-in. LAB L12/P110K	Bent Horn Design L18/851K
HF Subsystem	Horn Type: Constant Coverage Horn: H9040 Driver: 50 mm (2-in.) Exit Compression Driver Model: TAD TD4001	Constant Coverage H6040 50 mm (2-in.) Exit Compression Driver TAD TD4001	NA NA NA NA
Crossover Data	Network: HF Driver High Pass Protection & EQ (MH102 only) Powering Mode: The MH102 is Bi-amplified (typically as part of tri or quad - amplified system) Crossover Required: User Supplied Electronic Crossover with 24 dB/Oct Slopes	Network: HF Driver High Pass Protection & EQ (MH102 only) Powering Mode: The MH102 is Bi-amplified (typically as part of tri or quad - amplified system) Crossover Required: User Supplied Electronic Crossover with 24 dB/Oct Slopes	Network: HF Driver High Pass Protection & EQ (MH102 only) Powering Mode: The MH102 is Bi-amplified (typically as part of tri or quad - amplified system) Crossover Required: User Supplied Electronic Crossover with 24 dB/Oct Slopes
Crossover Frequencies	LF / MF: 24 dB/Oct @ 250 Hz Ideal (24 dB/Oct @ 180 Hz minimum) MF / HF: 24 dB/Oct @ 1.6k Hz Ideal (24 dB/Oct @ 2k Hz maximum)	LF / MF: 24 dB/Oct @ 250 Hz Ideal (24 dB/Oct @ 180 Hz minimum) MF / HF: 24 dB/Oct @ 1.6k Hz Ideal (24 dB/Oct @ 2k Hz maximum)	LF / MF: 24 dB/Oct @ 250 Hz Ideal (24 dB/Oct @ 180 Hz minimum) MF / HF: 24 dB/Oct @ 1.6k Hz Ideal (24 dB/Oct @ 2k Hz maximum)
Additional Descriptive Data	Connectors: Barrier Strip & Banana Test Points Cabinet Construction: Cross-Grain-Laminated Birch Hardwood (18 plies/inch) Finish: Catalyzed Polyurethane Black Chemical Coating Grills: Vinyl Coated Perforated Steel	Connectors: Barrier Strip & Banana Test Points Cabinet Construction: Cross-Grain-Laminated Birch Hardwood (18 plies/inch) Finish: Catalyzed Polyurethane Black Chemical Coating Grills: Vinyl Coated Perforated Steel	Connectors: Barrier Strip & Banana Test Points Cabinet Construction: Cross-Grain-Laminated Birch Hardwood (18 plies/inch) Finish: Catalyzed Polyurethane Black Chemical Coating Grills: None
Dimensions & Weights	Height: 24.63 in. Width: 29.75 in. Depth: 26.625 in. Back Width: 19.75 in. Weight: 150 lbs	Height: 24.63 in. Width: 29.75 in. Depth: 26.625 in. Back Width: 19.75 in. Weight: 150 lbs	Height: 60.50 in. Width: 29.75 in. Depth: 29.75 in. Back Width: 29.75 in. Weight: 260 lbs



**Eastern Acoustic Works, Inc.**  
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