BH-215-LR

Forsythe Series Bass Horn Reproducer

Application

The BH-215-LR is designed for concert sound, motion picture, high level playback, or any other sound reproduction application where high output bass is required down to the 40 Hz region. This vented horn is designed to offer the finest performance available in applications requiring crossover in the 500 to 800 Hz area. True exponential design combined with unequaled quality construction make this unit unparalleled in both sonic quality and field durability.

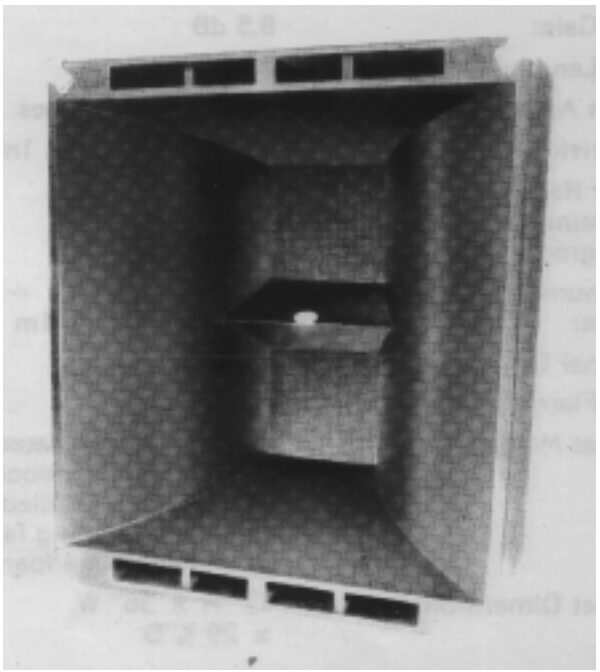
Description

The **BH-215-LR** is built to the highest standards in the professional sound industry, with careful attention to design and construction. The unit was designed to eliminate the problems associated with typical low horn efficiency. This was achieved by using a mathematically correct true exponential horn flare, as opposed to the typical radial or semi-exponential horns available. This design improvement provides increased efficiency and smoother response. To provide deep bass from a reasonably sized package, vent loading is provided to the driver chamber enabling the usable low frequency response to extend down to 40 Hz. The direct radiating of the drivers maintains smooth response to 800 Hz with a roll-off above this, for crossover in the favorable 500 to 800 Hz region (critical in many two-way systems). The unique phasing shelf between the drivers minimizes the interaction of the drivers, also adding to the upper response of the system.

The LF-383-R drivers that are standard in the BH-215-LR (also available as BH-215-UL without drivers) provide smooth response and excellent deep bass performance. These units will reproduce bass below 100 Hz, with a minimum of distortion where the driver is often called upon to make up for the failing efficiency of the system by handling more power through low frequency equalization. The LF-383-R's will handle this demanding use with ease, while many other drivers will produce exceptionally high levels of distortion and, in many cases, have a severely shortened service life.

Construction

The BH-215 is the unit that EAW's world **famous reputation** for quality and durability in enclosure construction is based on. Thousands of these units are in the field throughout the world. Day in and **day out they continue** to perform under the stress of heavy professional use without failure or fatigue.



All exterior surfaces of the horn are fabricated w cross-grain laminated Baltic birch hardwood, with 18 plys the inch. This multiple hardwood has a much higher streng to weight ratio than ordinary plywood or particle boa found in most other cabinets. In addition, the quality birch an order in magnitude lower in panel resonances than oth materials often used for bass horn construction, includi fiberglass, compositeboard and simple plywood. The narro band resonances which plague all competitive systems a created by cabinet walls or the horn flare sympathetica vibrating with the audio signal. This robs efficiency and al creates a series of narrow band steep dips in the syste response. To virtually eliminate resonances, the interi construction of BH-215LR's uses a combination extensive internal bracing and specially develop polyurethane reinforcing in the horn flare. This techniqu exclusive to EAW, provides total freedom from cabir resonances over the operating range of the system.

The BH-215's superior construction adds to it's va in portable applications. Not only does it haddto the sou quality, but also makes it significantly more durable under t rigors of road abuse. The BH-215LIR's all birch constructi and catalyzed polyurethane finish make it moisture, chemi and scuff resistant. Many options, including wheels, hand and corners can be ordered for the BH-215-LR, but even basic form it is a unique combination of sonic performan and physical durability for any application.

BH-215-LR Speciftations

Drivers:	Two 380mm (15") EAW LF-383R*
Nominal Frequency Range:	40 Hz to 1,000 Hz'
Frequency Response:	90 Hz to 800 Hz ± 3 dB
Lowest Usable Frequency:	40 Hz -10 dB
Recommended Crossover Frequency:	400 Hz to 800 Hz
Horn Gain:	8.5 dB
Horn Length:	21.5"
Mouth Area:	1,214 square inches
Sensitivity:	108 dB SPL 1w at 1m
Power Handling	
Continuous Sine Wave:	400 w RMS
Program:	700 w
Maximum Continuous Output:	134 dB 400 w at 1m
Nominal Dispersion:	80* Vertical
Horn Flare Rate:	90 Hz
Cabinet Material:	Cross-grain laminated Baltic birch Hardwood, horn flare voids filled with high damping factor polyurethane foam.
Cabinet Dimensions:	42" H x 36" W x 29 %"D

*For comprehensive driver information please see LF383R data sheet.