MR-109CT / B-212CT

Lower midrange reproducer **Bass reproducer**

Application

The combination of the B-212CT bass reproducer and the MR-109CT lower midrange reproducer forms the basis for a sound reinforcement stack that delivers extremely high sound quality at high SPL. This combo, when complemented by suitable high frequency transducers, reproduces concert sound with exceptionally wide dispersion and freedom from audible distortion.

Drivers are built to withstand continuous use at high average power inputs without overheating. When operated within the units' specifications, field failures are virtually unknown, making it unnecessary to haul spares around on location.

Cabinet design has been optimized to accommodate the need for quick set-up and tear-down, minimum visual blockage of the stage, and maximum usable life. Only the highest quality materials and techniques are used in these components, resulting in a product whose performance could not be audibly improved irrespective of price.

Primary application is for multiple use in stacks for indoor and outdoor concert sound reinforcement where it is necessary to provide the maximum amount of sound from a minimum of frontal area. These units have a high acoustical output per unit of weight, and may be flown where sight line requirements prevent a conventional stacking configuration.

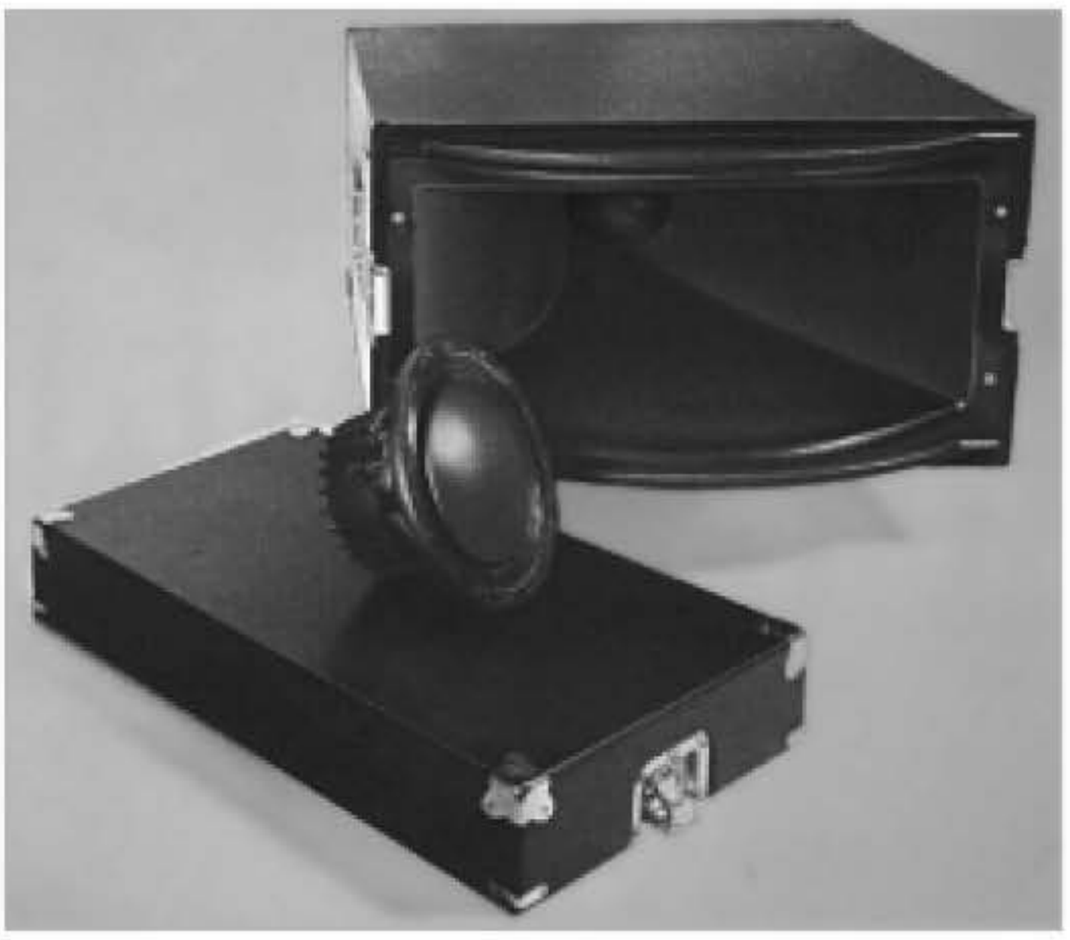
Description of Lower Midrange Unit

The MR-109CT is a straight exponential horn with a 20OHz cut-off frequency. The horn flare is constructed of hand-laminated fiberglass with high density sheets inserted to damp resonances to well below cut-off. Additional damping material is used inside the enclosure to reduce resonances, even at 130dB SPL in the throat region.

The drive unit incorporates a large Alcomax magnet, thermally bonded to a heatsink to improve heat dissipation, minimize stray magnetic f ields and maximize the efficiency of return magnetic fields. This magnetic structure produces 12,000 Gauss on the 75mm. copper edgewound ribbon voice coil.

The coil is bonded with high temperature adhesive (similar to that used in automotive disc brakes) to an aluminum former for maximum heat dissipation. All interior surfaces are anodized black to absorb heat radiated by the voice coil assembly. The frame is six-spoke, pressure cast aluminum. Machined onto the drive unit is a precision integral phase correcting plug to improve dispersion and high frequency response.

The horn box is constructed of cross grain laminated Baltic birch, and is equipped with metal corners, skids, handles and a protective lid that clamps on with recessed, spring-loaded twist catches. An internal passive 200Hz crossover is provided to protect the system from inadvertent low frequency signals. Input connections are male and female 15 amp twist-lock connectors, dual 1/4" phone jacks and dual banana plugs.



The MR-109CT lower midrange unit is specifically designed to meet the demanding requirements of high level sound reinforcement. The MR-109CT excels in both power handling and distortion as compared to other competitive compression driver/horn combinations. This new level of performance results in exceptional clarity and definition in the principal music band. In addition, high frequency distortion is reduced by allowing a higher crossover frequency to the high frequency drivers.

Specifications

Sensitivity at 1 watt at 1 meter	107 dB
Maximum SPL at 1 meter	128 dB SPL
Frequency response	
±3dB	200-1,600 Hz
±6dB	160-2,250 Hz
Recommended crossover frequencies	30OHz; 1,60OHz
Power handling capacity	150 watts continuous, test tones 250 watts continuous, program
Distortion	Less than 4% full power; Typically less than 1%
Dispersion	100°Hx40°V
Impedance	Nominal 8 ohms Minimum, 5.5 ohms
Finish	Semi-gloss, black catalyzed polyurethane
Dimensions	151/2" H x 25" W x 28" D
Weight	82 lbs.

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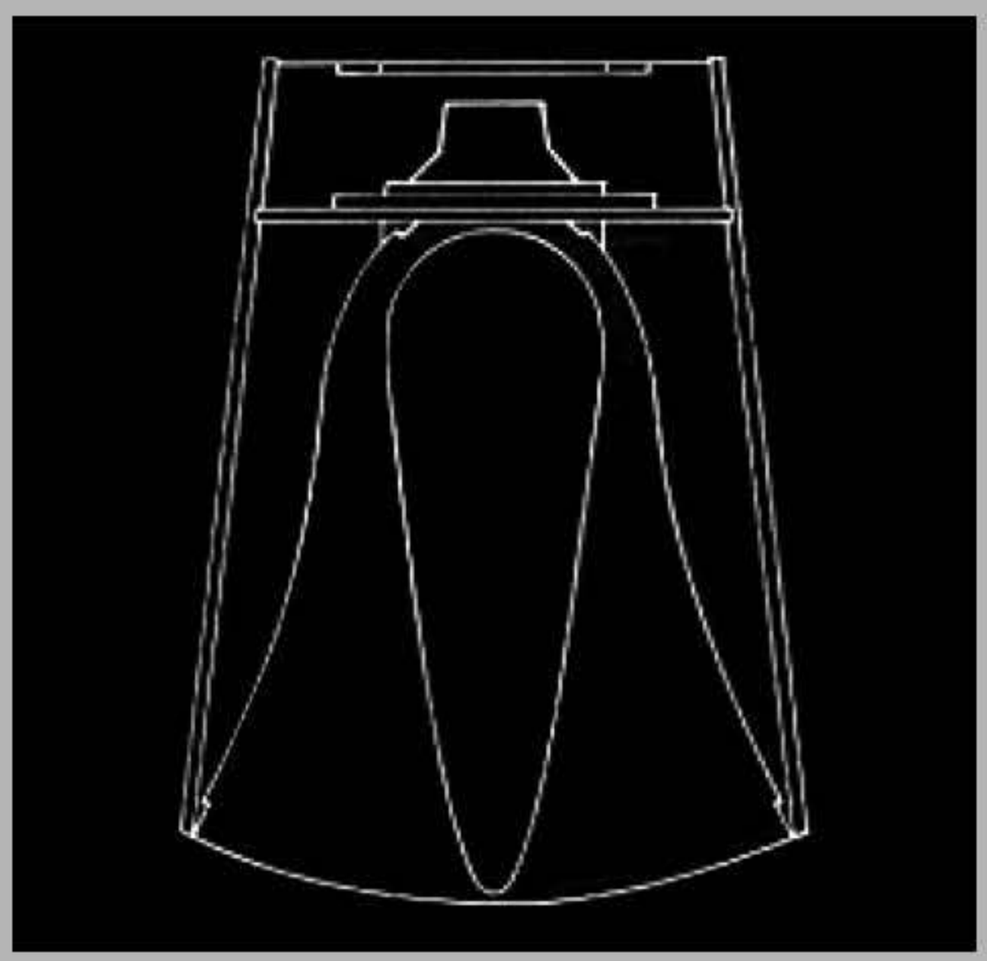

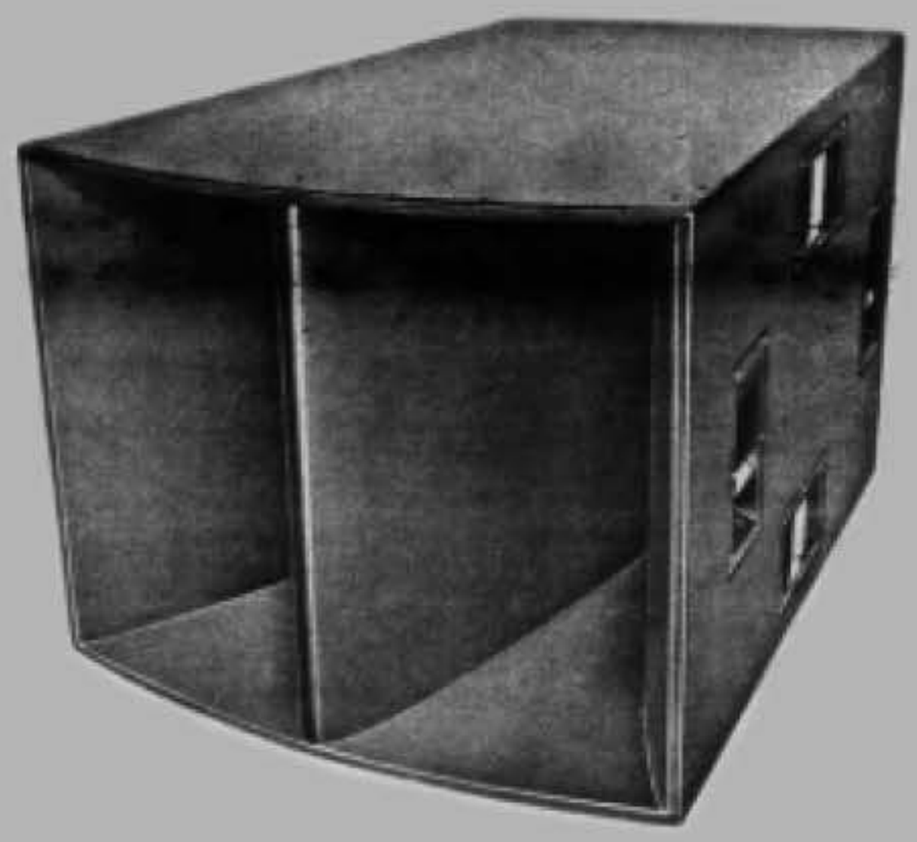

B-212 Bass Reproducer

Description of Bass Unit

The B-212CT dual 12-inch bass reproducer repre- sents the "state of the art" in bass enclosures for concert sound reinforcement. The bass horn incorporates a novel means of efficiently coupling the bass drivers to the throat of the device. It achieves a true, smooth, exponential transition, which minimizes discontinuity in the air loaded impedance characteristic. It also eliminates degeneration of SPL and high frequency response due to step transitions, which occur in other generally available bass horns.

The B-212CT is built to the highest standards in the professional sound industry. The method of construction in- cludes the use of foams and specially developed damping compounds to support the birch horn. The whole device is cased in cross grain laminated Baltic birch and is supplied with complete hardware and handles. Also available are four heavy duty casters fabricated to our specifications. Input con- nectors are dual 15 amp twist-lock, dual 1/4" phone jacks, and dual banana plugs. A catalyzed polyurethane finish offers maximum durability in combination with long life and good looks.

Specifications

Sensitivity at 1 watt at 1 meter	105 dB SPL
High frequency limit	450 Hz
Recommended crossover frequency	350 Hz
Horn length (mean path)	42 in.
Mouth area 950 sq. in.	
Mouth cut off	approx.. 100 Hz
Flare rate	62 hz
Low frequency -3dB point	
Single unit	70 Hz
Quad array	42 Hz
Drivers required	2 ATC PA-75-314 BLCR
Power handling capacity	300 watts continuous
Nominal impedance	4 ohms
Dimensions	Depth 48", front width 36", back width 26", height 29"
Weight	230 lbs. (loaded)

Specifications subject to change without notice.

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