

DATA SHEET

Commercial Loudspeakers



MODEL H20-G

COMPACT
COMPRESSION DRIVER HORN



FEATURES

- High output voice paging and signal horn
- Rugged construction for industrial applications
- IP66 Indoor/Outdoor ready
- Permanently attached and water-sealed input wire
- Externally accessible 6-position tap switch

APPLICATIONS

DISTRIBUTED
Shopping Malls · Health and Fitness Clubs
Warehouse / Distribution Centers
Sports Facilities · Outdoor Entertainment
Exhibit Halls · Amusement and Theme Parks

DESCRIPTION

The H20-G is a powerful weatherproof industrial horn loudspeaker with compression driver. It offers high sound pressure, which makes this loudspeaker ideally suited for speech and the reproduction of alarm signals in a noisy environment.

The H20-G is ideal for long-distance and outdoor use. The stainless steel bracket and rust free bolts and screws make this horn suited for indoor and outdoor direct exposure use. The bracket also makes it possible to rotate the speaker more than 180 degrees. Because this horn speaker is constructed in high impact ABS, it is able to withstand even the harshest of elements.

The H20-G loudspeaker is equipped with a high quality 70 V/100 V transformer with multiple power taps, and can also be used in 8 ohm systems. Our technology avoids any overload of your amplifier by controlling the impedance with driver protection circuitry.

Optional accessories provide installers with multiple methods for mounting and aiming horn as well as options to help adjust mounting trim height easily. Using the 1/2" NPT conduit adapter allows the installer to run conduit directly to the horn input.

TECHNICAL SPECIFICATIONS¹

Operating Mode	Passive with selectable low-impedance or 70 V/100 V operation, Single-amplified with DSP		
Operating Environment	Indoor or Outdoor Direct Exposure		
Operating Range (-10 dB) ²	490 Hz to 6.7 kHz		
Nominal Beamwidth (H x V)	85° x 85°		
Transducer	MF: 1 x 1.4" (36 mm) voice coil compression driver		
Sensitivity ³		107 dB (2.83 V)	107 dB (1 W, 8 Ω)
Nominal Continuous Power Handling ⁴	13 V (20 W, 8 Ω rated Impedance)		
Nominal Maximum SPL ⁵ (Processed)	@ 1 m	Continuous 118 dB	Peak 124 dB
Rated Continuous Voltage ⁶	12.6 V (22 dBV)		
Rated Maximum SPL ⁷ (Processed)	@ 1 m	Continuous 118 dB	Peak 130 dB
Transformer	70 V: 20 W, 10 W, 5 W, 2.5 W, 1.25 W 100 V: 20 W, 10 W, 5 W, 2.5 W		
Protection	Internal DC-blocking capacitor		
Required Accessories	425 Hz, 6 dB / oct. Butterworth high pass filter; DSP preset		
Recommended Amplifiers	20 W - 40 W, 8 Ω (13 V - 18 V)		

PHYSICAL

Input Connection	2 x 0.3 mm ² conductor 1 m (39.3") cable
Controls	Wattage / low impedance selector switch
Mounting Provisions	U-Bracket
Compliance	IEC 62368-1 certified
Environmental Rating	IP66 per IEC 60529
Dimensions H x W x D	200 x 200 x 230 mm [7.88" x 7.88" x 9.06"]
Weight (with U-Bracket)	1.4 kg [3.15 lbs]
Finish	Refer to the Technical Drawings (page 3)

OPTIONS

Accessories	SPA-HBC100 - Beam Clamp Kit; (10 sets) SPA-HCA100 - Conduit Adapter Kit, 1/2" NPT; (10 sets) SPA-HMB100 - Dual Gang Box Mounting Bracket Kit; (10 sets) provides easy attachment to a square double gang box
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Biamp strives to improve its products on a continual basis. Specifications are therefore subject to change without notice.



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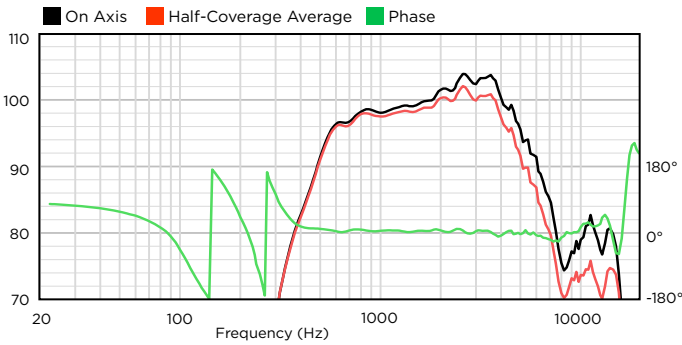
W: www.biamp.com

Commercial Loudspeakers

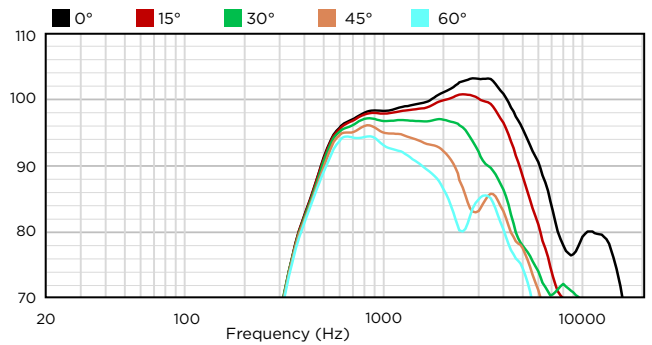
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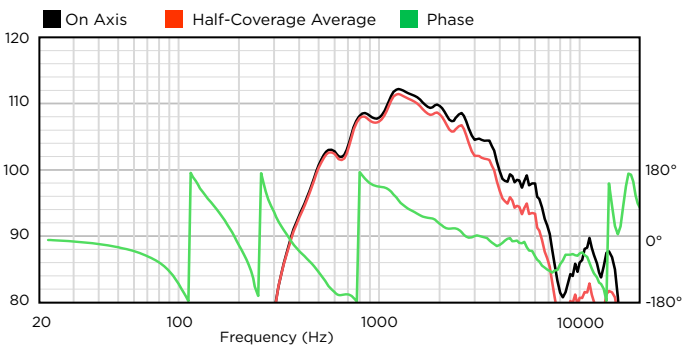
AXIAL PROCESSED SENSITIVITY (dB SPL)⁸



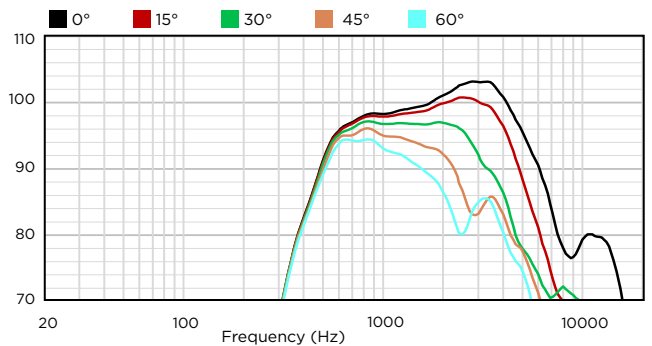
HORIZONTAL OFF-AXIS RESPONSE (dB)⁹



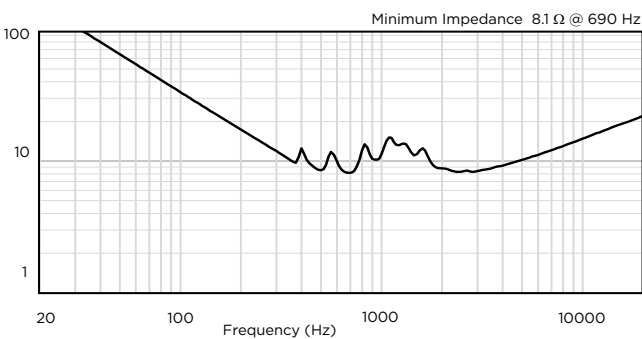
AXIAL SENSITIVITY (dB SPL)⁸



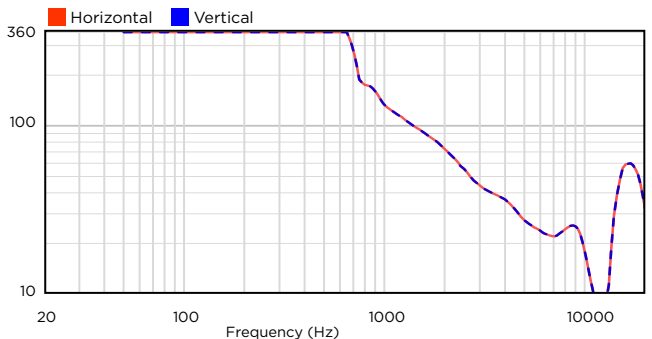
VERTICAL OFF-AXIS RESPONSE (dB)⁹



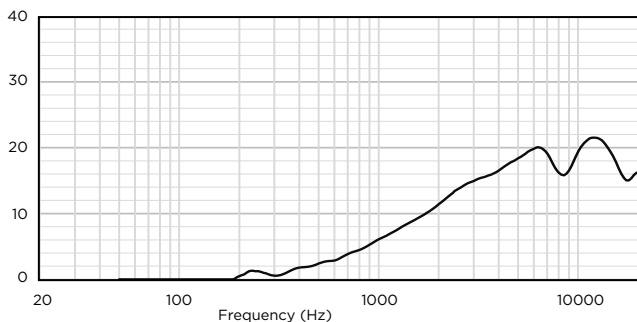
IMPEDANCE (Ω)



BEAMWIDTH (degrees)¹¹



DIRECTIVITY INDEX (dB)¹⁰



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TECHNICAL DRAWING / DIMENSIONS / FINISH

H x W x D
(200 x 200 x 230 mm)
[7.88" x 7.88" x 9.06"]

Unit Weight
1.4 Kg [3.15 lbs]

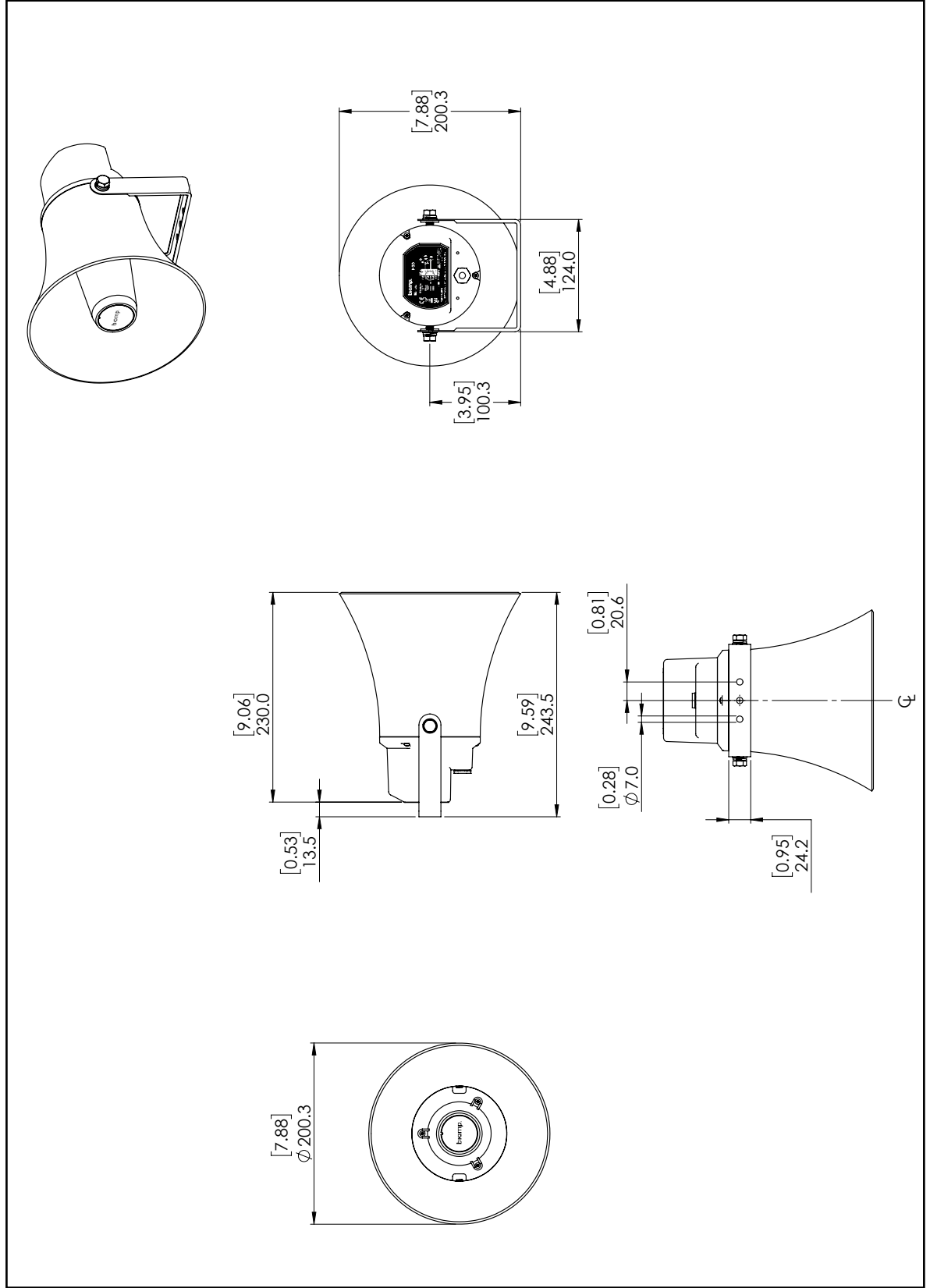
Shipping Weight
1.6 Kg [3.6 lbs]

Enclosure / Finish

High Impact ABS enclosure, grey
(RAL9006 - subject to slight deviations)

Bracket

Stainless steel

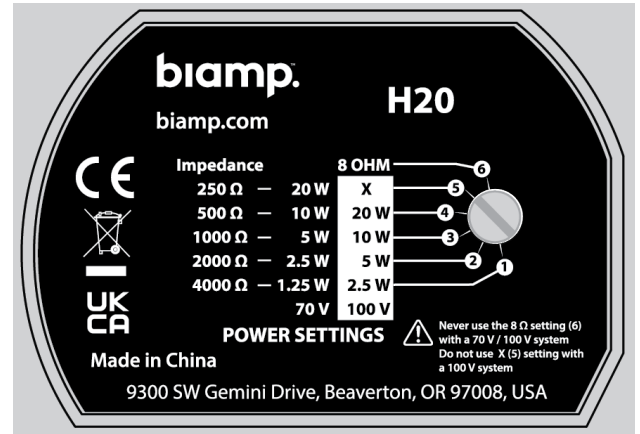
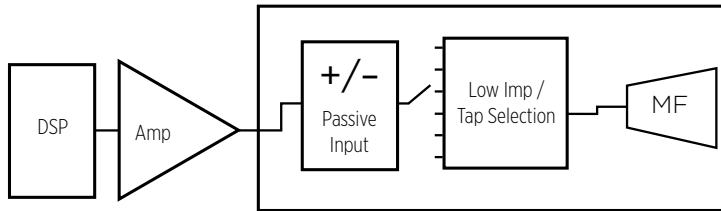


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CONNECTION DIAGRAMS



Rear Label / Tap Selection
(protective cap removed)

NOTES

- PERFORMANCE SPECIFICATIONS** All measurements are performed using a time-windowed impulse response to eliminate reflections, approximating an anechoic environment, at a distance of at least 6 m. All acoustic specifications are rounded to the nearest whole number. An external DSP using settings provided by Biamp is required to achieve the specified performance; further performance gains can be realized using the FIR loudspeaker optimization presets available in Biamp's Community Amplified Loudspeaker Controllers (ALCs).
- OPERATING RANGE** The frequency range over which the on-axis equalized/processed response remains within 10 dB of the rated sensitivity, in accordance with IEC 60268-5.
- SENSITIVITY** The broadband SPL of the loudspeaker when pink noise is applied (band limited to the loudspeaker's Operating Range) at an input voltage of 2.83 V, in accordance with IEC 60268-5. Also listed for a voltage that would produce 1 watt into the rated impedance. Measured in whole space with no external processing applied, except where indicated.
- NOMINAL CONTINUOUS POWER HANDLING** The maximum continuous nominal input voltage at the rated impedance that the system can withstand, without damage, for a period of 2 hours using an IEC 60268-1 defined spectrum with recommended signal processing and protection filters.
- NOMINAL MAXIMUM SPL** The SPL produced when an IEC 60268-1 signal is applied, at the maximum continuous nominal input voltage, to the equalized/processed loudspeaker system. Referenced to a distance of 1 meter. The peak SPL represents the 2:1 (6 dB) crest factor of the IEC 60268-1 test signal.
- RATED CONTINUOUS VOLTAGE** The maximum continuous rated input voltage for the system that results in no more than a 3 dB change in the system's response during operation using an IEC 60268-1 defined spectrum with recommended signal processing and protection filters.
- RATED MAXIMUM SPL** The SPL produced when a typical program material signal is applied to the equalized/processed loudspeaker system, at a level which drives at least one subsection to its rated continuous voltage limit. Referenced to a distance of 1 meter. The peak SPL represents the 4:1 (12 dB) crest factor of the program signal.
- AXIAL PROCESSED SENSITIVITY** The variation in acoustic output level with frequency for a swept-sine measurement signal. The Processed measurement uses the recommended signal processing for the loudspeaker system. The other sensitivity measurements use no additional external processing. All data are referenced to 1 meter. The on-axis magnitude and phase responses, as well as the average magnitude response, calculated over one-half of the nominal coverage angles, are shown. The responses have 1/6 octave smoothing applied.
- HORIZONTAL / VERTICAL OFF-AXIS RESPONSES** The loudspeaker's magnitude response at various off-axis angles using the recommended signal processing in the operating mode which utilizes the largest number of individually amplified pass bands. The responses have 1/3 octave smoothing applied.
- DIRECTIVITY INDEX** The ratio of the on-axis SPL to the mean SPL at the same distance for all points within the measurement sphere for each given frequency; expressed in dB. The response has 1/3 octave smoothing applied.
- BEAMWIDTH** The included angle between the -6 dB points in the polar response of the loudspeaker when driven in the operating mode which utilizes the largest number of individually amplified pass bands. The responses have 1/3 octave smoothing applied.

Data presented on this spec sheet represents a selection of the basic performance specifications for the model. These specifications are intended to allow the user to perform a fair, straightforward evaluation and comparison with other loudspeaker spec sheets. For a detailed analysis of this loudspeaker's performance, please download the GLL file and/or the CLF file from our website.

CAUTION: Installation of loudspeakers should only be performed by trained and qualified personnel. It is strongly recommended that a licensed and certified professional structural engineer approve the mounting design.