

IBC8



COMMERICAL

Explosion-Proof Driver

General Product Description

The University Sound IBC8 is a conservatively rated 30-watt paging or public address loudspeaker for use under adverse ambient noise conditions.

The driver employs a rugged phenolic diaphragm, 1.5-inch diameter voice coil and "rim centered" ferrite magnet structure for long life and reliability under extreme operating conditions.

A 6-inch vinyl-jacketed cable, phased and color coded, is provided for connecting to the IBC8.

A 60° dispersion angle and a low-frequency cutoff of 350 kHz provides excellent articulation in demanding applications.

The IBC8 is constructed from heavy gauge spun aluminum and baked-on acrylic finish. A painted steel swivel bracket provides maximum mounting flexibility and ease of installation.

Ideal for both indoor and outdoor applications, this horn and driver unit is ideal for any requirement where rugged, reliable performance is necessary.

Architects' and Engineers' Specifications

The loudspeaker shall be the University Sound Model IBC8 integral horn and loudspeaker utilizing a rugged phenolic diaphragm and high-temperature rated 1.5-inch voice coil.

The axial frequency response will extend from 500 to 7,000 Hz. Sound pressure level will be 107 dB (1 W/1 M) with a 500-to-3,000-Hz pink noise signal applied, and the horn will produce a sound dispersion of 60° at 2 kHz.

The loudspeaker shall be capable of handling a 30-watt, 500-to-5,000-Hz pink noise signal with a 6-dB crest factor for a period of eight hours.

The horn shall be heavy gauge spun aluminum, capable of satisfactory mechanical performance in the temperature range from -40°C (-40°F) to 71 °C (160°F) and impervious to adverse conditions. The mounting base shall be steel, and the horn and base finished in baked-on gun metal gray acrylic.



The mounting base shall provide orientation adjustment in all three planes. Vertical adjustments are made by loosening a single wingnut on the mounting base.

The loudspeaker shall be 26.0 cm (10.3 in.) in diameter, and 22.9 cm (9.0 in.) deep.

The loudspeaker shall be the University Sound IBCB, which has a nominal impedance of eight ohms and weighs no more than 1.4 kg (3.2 lb).

Specifications:

Frequency Response:

500-7,000 Hz ± 5 dB (see Figure 3)

Power Handling:

8 Hours, 6-dB Crest Factor 30 watts (500-5,000 Hz pink noise)

Impedance,

Nominal: 8 ohms

Sound Pressure Level at 1 Meter, 1 Watt Input Averaged, Pink Noise Band-Limited from 500 to 5,000 Hz:

107dB

Voice Coil Diameter:

3.81 cm (1.5 in.)

Magnet Weight:

0.24 kg (0.53 lb)

Magnet Material:

Strontium ferrite

Flux Density:

1.2 Tesla

Construction:

Heavy gauge spun aluminum and baked-on acrylic finish combined for weather-proof construction.

Mechanical Construction of Driver:

1 3/8"-18 x 1/2"- long thread allows the 7110XC to be mounted on any University Sound horn

Dimensions,

Diameter: 26.0 cm (10.3 in.)

Length: 22.9 cm (9.0 in.)

Net Weight:

1.4 kg (3.2 lb)

Shipping Weight:

2.0 kg (4.3 lb)

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Installation

Installation of explosion-proof speakers must conform with governing electrical equipment hazardous locations and provisions of the National Electrical Code. **NO ALTERATIONS CAN BE MADE TO THESE DRIVER UNITS!**

No holes can be made, or holding devices screwed into the case to possibly weaken or otherwise endanger the structure after installation.

All main bolts on the driver case housing must be tightened. Wiring may be run in threaded rigid, or approved standard electrical flexible conduit and engage five full threads. Explosion-proof conduit boxes, junctions, and fittings are approved type and usually contain screw-in covers. Unions, elbows, and bends are also of special design.

Directional Performance

The directional characteristics of the IBC8 were measured by running a set of polar responses in University's large anechoic chamber. The test signal

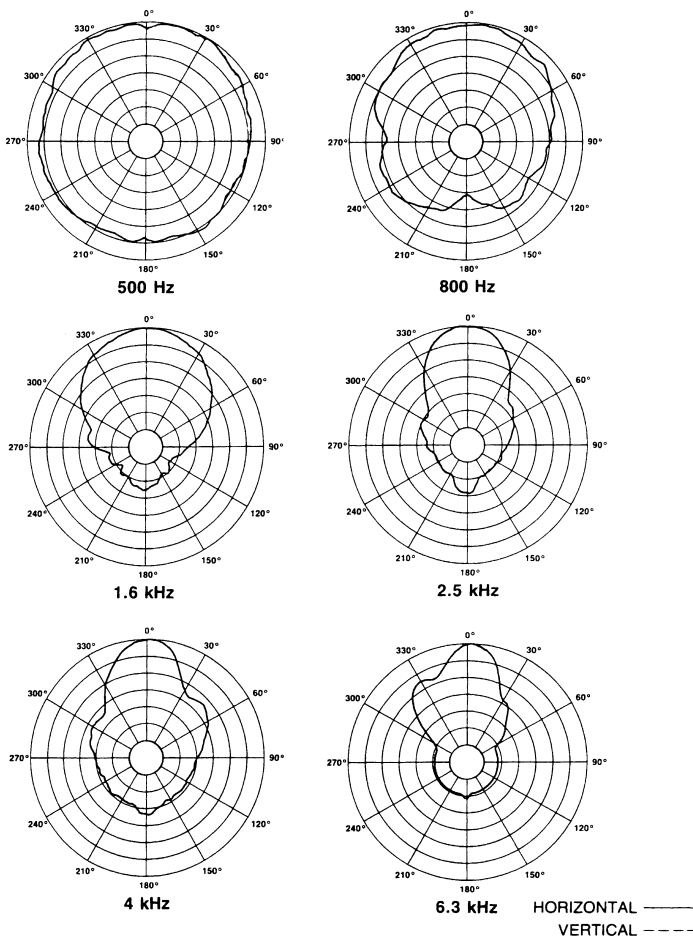


Figure 1
IBC8 Polar Response

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Canada 705 Progress Avenue, Unit 46, Scarborough, Ontario, Canada, M1 H2 X1, Phone: 416-431-4975, 800-881-1685, FAX: 416-431-4588
Switzerland Kellenstrasse 11, CH-2663 IPSACH, Switzerland, Phone: 41132-331-6833, FAX: 41132-331-1221
Germany Hirschberger Ring 45, 094315, Shooting, Germany, Phone: 49 9421-706 392, Fax: 49 9421-706 287
France Parc de Courcerin, Alice Lech Walesa, Lognes, 77185 Marne La Vallee, France, Phone: 3311-6480-0090, FAX: 3311-6480-4538
Australia Unit 23, Block C, Slough Business Park, Slough Avenue, Silverwater, N.S.W. 2128, Australia, Phone: 6112-9648-3455, FAX: 6112-9648-5585
Hong Kong Unit E & F, 211F, Luk Hop Industrial Bldg., 8 Luk Hop St., San PO Kong, Kowloon, Hong Kong, Phone: 852-2351-3628, FAX: 852-2351-3329
Japan 2-5-601zumi, Suginami-ku, Tokyo, Japan 168, Phone: 81-3-3325-7900, FAX: 81-3-3325-7789
Singapore 3015A Ubi Rd 1, 05-10, Kampong Ubi Industrial Estate, Singapore 408705, Phone: 65-746-8760, FAX: 65-746-1206
Mexico Av. Parque Chapultepec #66-201, Col. FI. Parque Edo Mex. 53390, Phone: (52)5358-5434, FAX: (52) 5358-5588
UK 4, The Willows Centre, Willow Lane, Mitcham, Surrey CR4 41 UK, Phone: 44 181 640 9600, FAX: 44 181 646 7084
Africa, Mid-East 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-887-7424, FAX: 952-887-9212
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was one-third octave-band-limited pseudo-random pink noise centered at the ISO standard frequencies indicated in Figure 1.

Additional typical data is provided in Figure 2 which indicates 6-dB-down beamwidth versus frequency for an IBC8.

Frequency Response

Figure 3 shows the axial frequency response of the IBC8. It was measured at a distance of 1 meter, using a swept sine wave.

Low-Frequency Driver Protection

When frequencies below the low-frequency cutoff for the horn assembly are fed to the driver, excessive current may be drawn by the driver. For protection of the driver and amplifier, capacitors in series with the driver, is recommended.

For 8-ohm driver, 25 V-100 mf.

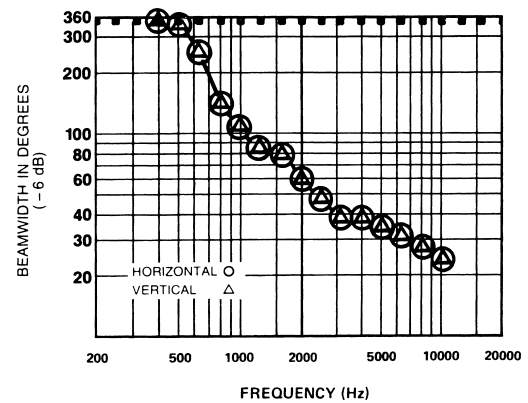


Figure 2
IBC8 Beamwidth vs. Frequency

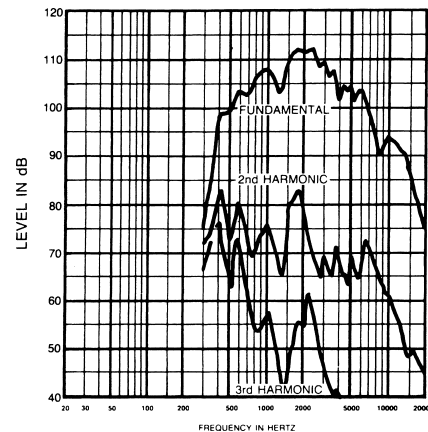


Figure 3
IBC8 Frequency Response (1 watt at 1 meter)



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U.S.A. and Canada only.
For customer orders, contact the Customer Service department at
800/392-3497 Fax: 800/955-6831

For warranty repair or service information, contact the Service
Repair department at 800/105-2606

For technical assistance, contact Technical Support at 800/392-3497

Please refer to the Engineering Data Sheet for warranty information.
Specifications subject to change without notice.