ID60D-8
ID60DT

Heavy-Duty Compression Drivers

COMMERCIAL

General Product Description

The ID60D-8 and ID60DT are heavy-duty compression drivers for use in high-power public address installations.

The drivers employ rugged phenolic diaphragms, 2-inch diameter voice coils and “rim centered” ferrite magnet structures for long life and reliability under extreme operating conditions.

A hinged cycolac rear housing for easy access and connection to a sound system, via a BX conduit connector, is provided together with a plug-in, field replaceable diaphragm assembly.

The transformer model (ID60DT) includes connections for 25-V and 70-V distributed systems and a screwdriver operated power-tap select switch.

The exterior is finished in durable, weatherproof paint, and all metal parts have been tropicalized for resistance to high humidity and fungus.

Ideal for both indoor and outdoor applications, these drivers are well suited for any installation requiring rugged, high-power performance.

University Sound® Series

Architects’ and Engineers’ Specifications

The loudspeaker(s) shall be of the compression-driver type utilizing a rugged phenolic diaphragm and a high-temperature rated, 2-in. diameter voice coil.

The loudspeaker(s) shall exhibit essentially flat power response from 300 to 4,000 Hz with a smoothly rolled-off response beyond. Their sensitivity, when mounted on a PH horn, will be 108 dB (1 W/1 m) with a 500- to 5,000-Hz pink-noise signal applied.

The loudspeaker(s) shall be capable of handling a 60-watt, 500- to 5,000-Hz pink-noise signal with a 6-dB crest factor for a period of 8 hours.

The loudspeaker(s) shall have a diameter of 14.3 cm (5.6 in.) and a depth of 16.2 cm (6.4 in.) They shall have a 2.41 cm (0.95 in.) throat opening with a 1 3/8-18 thread for mounting.

The loudspeaker shall be the ID60DT, which includes a 70-V/25-V line-matching transformer and weighs no more than 3 4 kg (7.4 lb), and the ID60D-8, which has a nominal impedance of 8 ohms and weighs no more than 2.7 kg (5.9 lb).

Specifications:

Frequency Response:

..... 300 - 4,000 Hz ±5 dB (see Figure 2)

Power Handling, 8 Hours, 6-dB Crest Factor:

..... 60 watts (500-5,000 Hz pink noise)

Impedance, Nominal: ..... 8 ohms
Minimum: 7.5 ohms (Cobraflex Horns above 500 Hz)

Sound Pressure Level at 1 Meter, 1 Watt Input Averaged, Pink Noise Band-Limited from 300-3,000 Hz:

..... See Table I

Voice Coil Diameter: ..... 5.08 cm (2.0 in.)

Magnet Weight: ..... 0.48 kg (1.06 lb)

Magnet Material: ..... Strontium ferrite

Flux Density: ..... 1.17 Tesla

Construction:

Rugged diecast housing with weatherproof finish for outdoor use

Mechanical Construction of Driver:

1 3/8"-18 thread, 1/2 long allows the ID60 to be mounted on any University Sound horn.

Dimensions:

Diameter: ..... 14.3 cm (5.6 in.)
Height: ..... 16.2 cm (6.4 in.)

Net Weight:

ID60D-8: ..... 2.7 kg (5.9 lb)
ID60DT: ..... 3.4 kg (7.4 lb)

Shipping Weight:

D60D-8:: ..... 2.9 kg (6.3 lb)
ID60DT: ..... 3.6 kg (7.9 lb)

Recommended Horns:

Cobreflex IIB, Cobreflex III, PH, 2WP, SMH, SH

Installation

Remove the plastic cap from the threaded throat of the driver and screw the driver into the horn until firmly seated.

Install the horn/driver assembly in intended location, referring to the instructions provided with the horn.

Loosen the captive screw in the center of the plastic cover at the rear of the driver, and open the hinged cover to expose wiring. Note the O-ring in the annular housing groove.

Loosen the gland nut in the side of the driver housing enough to admit the loudspeaker wire/cable. Alternately, a 1/2-inch conduit fitting can be substituted for the gland nut. However, the sealing washer must be retained.

For the ID60DT, connect the loudspeaker wires to the “com” terminal and the appropriate line terminal (25 V or 70 V). For the ID60D-8, connect to the “com” and “8-ohm” terminals.

Tighten the gland nut securely and check that the O-ring is positioned correctly before closing the clear plastic cover.

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 driver, amplifier, and transformer (if driver with built-in transformer is used), capacitor(s) in series with driver, or transformer primary are recommended. Table I indicates recommended values. The values shown are for 200 Hz. Values for other frequencies can be determined by using the formula:

$$C = \left[C_{200} \times \frac{200}{f} \right]$$

C_{200} Values shown in the following table

f = New Frequency

For drivers without transformers: 8-ohm driver, 25 V - 100 *mf* 150 Vdc or 150 V non-polarized electrolytic, or two 150 Vdc electrolytics of two times required value in series, back to back, for 70 volt lines.

Horn	SPL for 1 W @ 1 M
Cobreflex IIB	107 dB
Cobreflex III	107 dB

Table I. Sound Pressure Level for ID60 with Various Horns

	70-Volt Lines		25-Volt Lines	
Power	**Impedance**	**Capacitance**	**Impedance**	**Capacitance**
60 W	83 ohms	10 *mf*	10 ohms	80 *mf*
30 W	166 ohms	5 *mf*	21 ohms	40 *mf*
15 W	333 ohms	2 *mf*	42 ohms	20 *mf*
7.5 W	667 ohms	1 *mf*	83 ohms	10 *mf*
3.75 W	1,300 ohms	0.5 *mf*	166 ohms	5 *mf*
1.88 W	2,700 ohms	0.2 *mf*	333 ohms	2 *mf*

Table II. Series Protection Capacitors for 200 Hz and Below

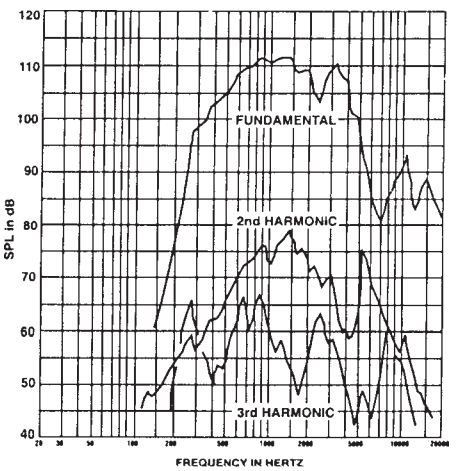

Figure 1.
Disortion Response - Plane Wave Tube (1 inch)
(6 watt input)

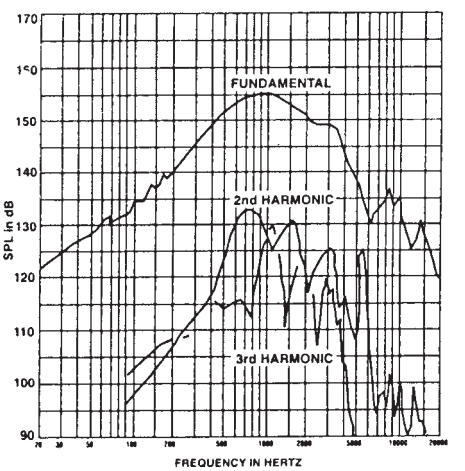

Figure 2.
Disortion Response - FC100 Horn

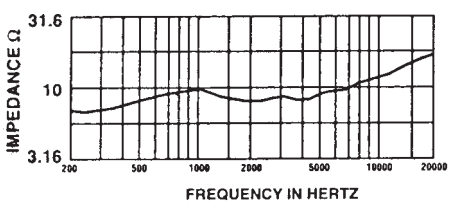

Figure 3.
Impedance Response - Plane Wave Tube (1 inch)

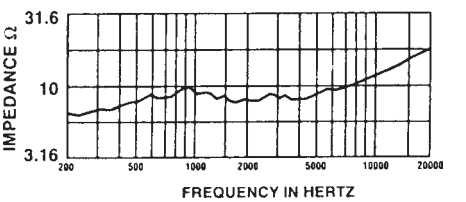

Figure 4.
Impedance Response - FC100 Horn

USA 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-884-4051, FAX: 952-884-0043
Canada 705 Progress Avenue, Unit 46,Scarborough, Ontario, Canada, M1H2X1,Phone: 416-431-4975, 800-881-1685, FAX: 416-431-4588
Switzerland Keltenstrasse 11, CH-2563 IPSACH, Switzerland, Phone: 41/32-331-6833. FAX: 41/32-331-1221
Germany Hirschberger Ring 45, D94315, Straubing, Germany, Phone: 49 9421-706 392, FAX: 49 9421-706 287
France Parc de Courcerin, Alle Lech Walesa, Lognes, 77185 Marne La Vallee, France, Phone: 33/1-6480-0090, FAX: 33/1-6480-4538
Australia Unit 23, Block C, Slough Business Park, Slough Avenue, Silverwater, N.S.W. 2128, Australia, Phone: 61/2-9648-3455, FAX: 61/2-9648-5585
Hong Kong Unit E & F, 21/F, Luk Hop Industrial Bldg., 8 Luk Hop St., San PO Kong, Kowloon, Hong Kong, Phone: 852-2351-3628, FAX: 852-2351-3329
Japan 2-5-60 Izumi, 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. El. Parque Edo. Mex. 53390, Phone: (52) 5358-5434, FAX: (52) 5358-5588
UK 4, The Willows Centre, Willow Lane, Mitcham, Surrey CR4 4NX, 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
Latin America 12000 Portland Ave South, Burnsville, MN 55337, Phone: 952-887-7491, FAX: 952-887-9212

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