# ID30C-8/ID30C-16/ ID30CT

## Medium-Power Compression Drivers

COMMERCIAL

## General Product Description

The ID30C-8, ID30C-16 and ID30CT are heavy-duty compression drivers for use in medium-power public address installations.

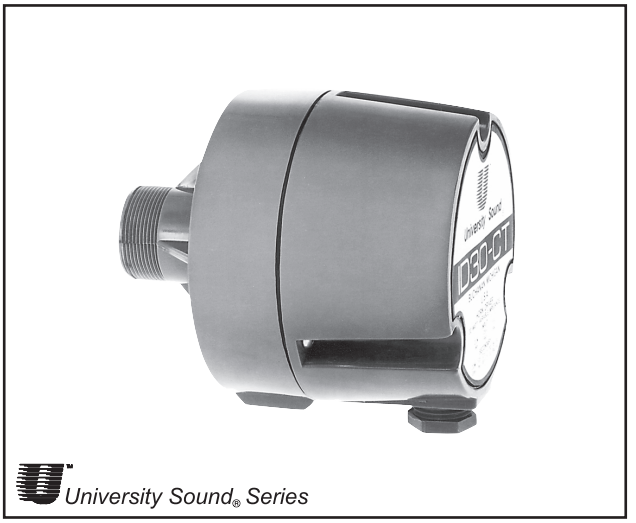
The drivers employ rugged phenolic diaphragms, 1.5-inch diameter voice coils and “rim centered” ferrite magnet structures for long life and reliability under extreme operating conditions.

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 (ID30CT) includes connections for 25-V and 70-V distributed systems and a screwdriver operated power-tap select switch.

The exterior parts are injection-molded from polycarbonate, 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, medium-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, 1.5-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 107 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 30-watt, 500- to 5,000-Hz pink-noise signal with a 6-dB crest factor for a period of eight hours.

The loudspeaker(s) shall have a diameter of 10.6 cm (4.2 in.) and a depth of 13.2 cm (5.2 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 ID30CT, which includes a 70-V/ 25-V line-matching transformer (see Table II) and weighs no more than 2.1 kg (4.5 lb), and the ID30C8, which has a nominal impedance of 8 ohms (or ID30C-16 with 16-ohm impedance) and weighs no more than 1.6 kg (3.5 lb).

## Specifications:

**Frequency Response:**

300-4,000 Hz, ±5 dB (see Figure 2)

**Power Handling, 8 hours, 6-dB crest factor:**

30 watts (500- to 5,000-Hz pink noise)

**Impedance,**

**Nominal**:

ID30C-8 ..... 8 ohms
ID30C-16 ..... 16 ohms

**Minimum, on Cobreflex Horns, Above 500 Hz:**

ID30C-8 ..... 7.5 ohms (850 Hz),
ID30C-16 ..... 14 ohms (850 Hz),

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

see Table I

**Voice-Coil Diameter: ..... 3.81 cm (1.5 in.)**

**Magnet Weight**: ..... 0.28 kg (0.63 1b)

**Magnet Material**: ..... Strontium ferrite

**Flux Density**: ..... 1.00 Tesla

**Construction:**

Rugged weatherproof finish for outdoor use

**Dimensions,**

Diameter: ..... 10.6 cm (4.2 in.)
**Height:** ..... 13.2 cm (5.2 in.)

**Net Weight,**

**ID30C-8/-16:** ..... 1.6 kg (3.5 lb)
**ID30CT:** ..... 2.1 kg (4.5 lb)

**Shipping Weight,**

**ID30C-8/-16:** ..... 1.8 kg (4.0 lb)
**ID30CT:** ..... 2.3 kg (5.1 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.

Remove the three screws from the rear of the driver housing and open the housing for access to the wiring.

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 ID30CT, connect the loudspeaker wires to the “com” terminal and the appropriate line terminal (25 V or 70 V). For the ID30C-8/-16, connect to the black and white loudspeaker wire using wire nuts.

Tighten the gland nut securely and reassemble the rear housing by replacing the screws and tightening securely.

**Transformer Model (1829T)**

A transformer and power-selector switch are installed in the base of the housing. Color coding for the transformer is listed in Table II. Transformer wiring with respect to Table II is illustrated by Figure 5.

**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*

| Horn | SPL for 1 W @ 1 M |
|---|---|
| Cobreflex IIB | 106 dB |
| Cobreflex III | 106 dB |

***Table I. Sound Pressure Level for 1829 with Various Horns***

| | 70-Volt Lines | | 25-Volt Lines | |
|---|---|---|---|---|
| **Power** | **Impedance** | **Capacitance** | **Impedance** | **Capacitance** |
| 30 W | 167 ohms | 5 *mf* | 21 ohms | 40 *mf* |
| 15 W | 335 ohms | 2 *mf* | 42 ohms | 20 *mf* |
| 10 W | 500 ohms | 1.3 *mf* | 63 ohms | 13 *mf* |
| 5 W | 1,000 ohms | 0.7 *mf* | 125 ohms | 7 *mf* |
| 2.5 W | 2,000 ohms | 0.4 *mf* | 250 ohms | 4 *mf* |
| 1.25 W | 4,000 ohms | 0.2 *mf* | 500 ohms | 2 *mf* |

***Table II. Series Protection Capacitors for 200 Hz and Below***

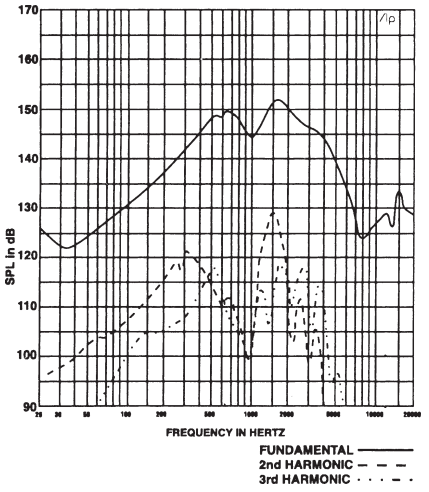



***Figure 1.***
***Disortion Response - Plane Wave Tube (1 inch)***
***(6 watt input)***

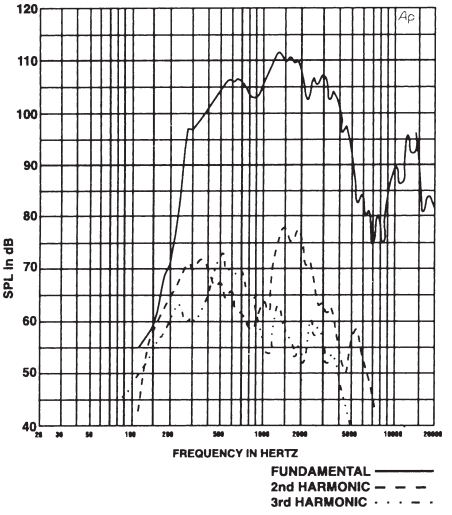



***Figure 2.***
***Disortion Response - FC100 Horn***

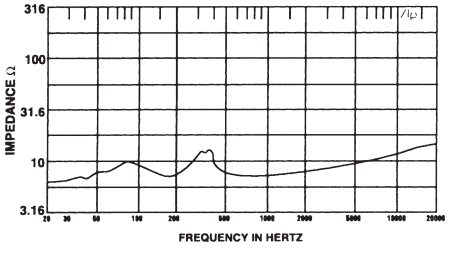



***Figure 3.***
***Impedance Response - Plane Wave Tube (1 inch)***

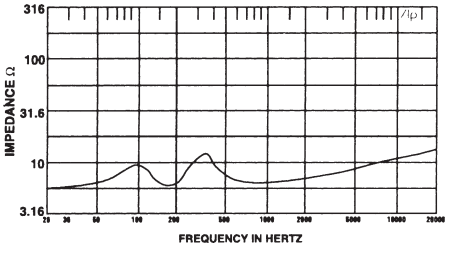



***Figure 4.***
***Impedance Response - FC100 Horn***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