

# University Sound <sup>®</sup> ID30C-8/ID30C-16/ID30CT

a MARK IV company

## MEDIUM-POWER COMPRESSION DRIVERS

### SPECIFICATIONS

#### Frequency Response:

300-4,000 Hz,  $\pm 5$  dB (see Figure 2)

#### Power Handling,

8 hours, 6-dB crest factor:

30 watts

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

#### Impedance,

##### Nominal:

8 ohms, ID30C-8

16 ohms, ID30C-16

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

7.5 ohms (850 Hz), ID30C-8

14 ohms (850 Hz), ID30C-16

#### 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 lb)

#### 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

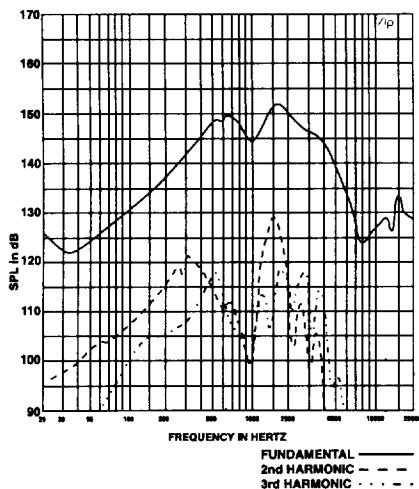
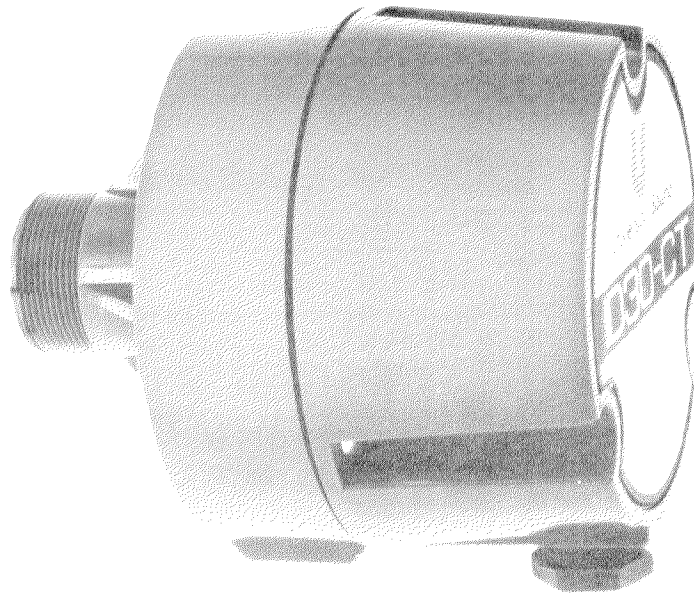


FIGURE 1

Distortion Response—Cobreflex III Horn



### DESCRIPTION

The University Sound 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 cyclolac 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.

### 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.

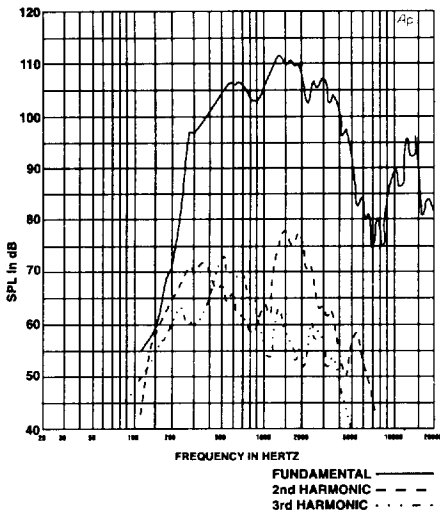
Loosen the gland nut in the side of the driver housing enough to admit the loudspeaker wire/cable. Alternately, a 1/2-inch conduit fitting can be substituted for the gland nut. However, the sealing washer must be retained.

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.

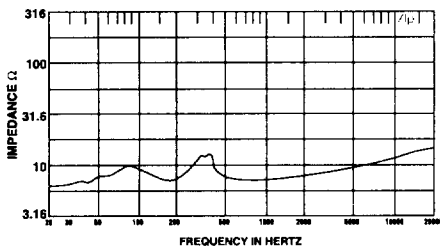
Tighten the gland nut securely and reassemble the rear housing by replacing the screws and tightening securely.

### TRANSFORMER MODEL (ID30CT)

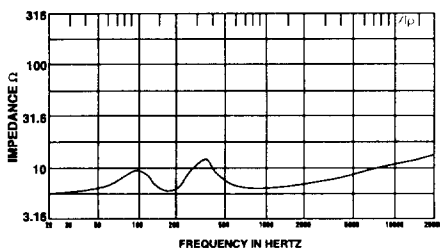
A transformer and power-selector switch are installed in the base of the housing. Color coding for the transformer is listed in Table II. Transformer wiring with respect to Table II is illustrated by Figure 5.



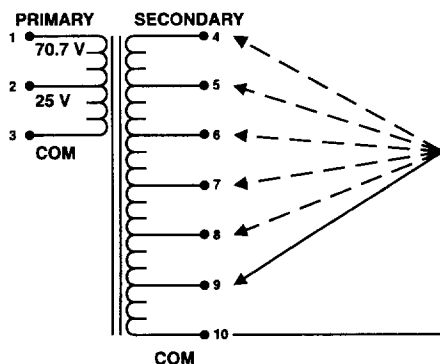
**FIGURE 2**  
Distortion Response—  
Plane Wave Tube (1 watt/1 meter)



**FIGURE 3**  
Impedance Response—  
1-Inch Plane Wave Tube



**FIGURE 4**  
Impedance Response—  
Cobreflex III Horn



**FIGURE 5**  
Transformer Wiring

Horn	SPL for 1 W/1 m
Cobreflex IIB	106 dB
Cobreflex III	106 dB
PH	107 dB
2WP	102 dB
SMH	108 dB
SH	105 dB

**TABLE I—**  
Sound Pressure Level  
for ID30 with  
Various Horns

	Wire Color	Function
Primary	Black	70.7-V speaker system
	Red	25-V speaker system
	White	Common for spkr system
Secondary	Purple	30-watt power tap
	Blue	15-watt power tap
	Green	10-watt power tap
	Orange	5-watt power tap
	Brown	2.5-watt power tap
	Yellow	1.25-watt power tap
	Gray	Common for transformer

**TABLE II—** Line Transformer

	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 III—** Series Protection Capacitors for 200 Hz and Below

### LOW-FREQUENCY DRIVER PROTECTION

When frequencies below the low-frequency cut-off 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 III indicates recommended values. The values shown are for 200 Hz. Values for other frequencies can be determined by using the formula:

$$C = C_{200} \times \frac{200}{f} \quad \text{where } C_{200} = \text{Values shown in Table III; } f = \text{New Frequency}$$

For drivers without transformers: 8-ohm driver, 25 V – 100 mf

### 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 University Sound 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<sup>3</sup>/<sub>8</sub>-18 thread for mounting.

The loudspeaker shall be the University Sound 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 University Sound ID30C-8, 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).

### WARRANTY (LIMITED) —

University Sound Speakers and Speaker Systems (excluding active electronics) are guaranteed for five years from date of original purchase against malfunction due to defects in workmanship and materials. If such malfunction occurs, unit will be repaired or replaced (at our option) without charge for materials or labor if delivered prepaid to University Sound. Unit will be returned prepaid. Warranty does not extend to finish, appearance items, burned coils, or malfunction due to abuse or operation under other than specified conditions, including cone and/or coil damage resulting from improperly designed enclosures, nor does it extend to incidental or consequential damages. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you. Repair by other than University Sound will void this guarantee. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For warranty repair, service information or a listing of the repair facilities nearest you, contact the service repair department at: 800/845-8727 FAX: 405/577-3274

For technical assistance, call: 800/234-6831.

Specifications subject to change without notice.