

**University
Sound.**

a MARK IV company

SPECIFICATIONS

Frequency Response:

500-8,000 Hz ± 5 dB
(see Figure 3)

Power Handling,

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

Impedance,

8 ohms

Sound Pressure Level at 1 Meter,

1 Watt Input Averaged, Pink Noise
Band-Limited from 500 to 5,000 Hz:
107 dB

Horizontal Beamwidth:

85° @ 2 kHz (see Figure 2)

Vertical Beamwidth:

85° @ 2 kHz (see Figure 2)

Directivity Factor $R_0(Q)$:

9.7 @ 2 kHz

Usable Low-Frequency Limit:

450 Hz

Construction:

Non-resonant Cyclocac horn material and
durable diecast mounting bracket.
Resistant to environmental extremes

Voice-Coil Diameter:

3.81 cm (1.5 in.)

Magnet Weight:

0.28 kg (0.63 lb)

Magnet Material:

Strontium ferrite

Flux Density:

1.15 Tesla

Dimensions,

Height:

17.1 cm (6.8 in.)

Width:

30.2 cm (11.9 in.)

Depth:

26.4 cm (10.4 in.)

Net Weight,

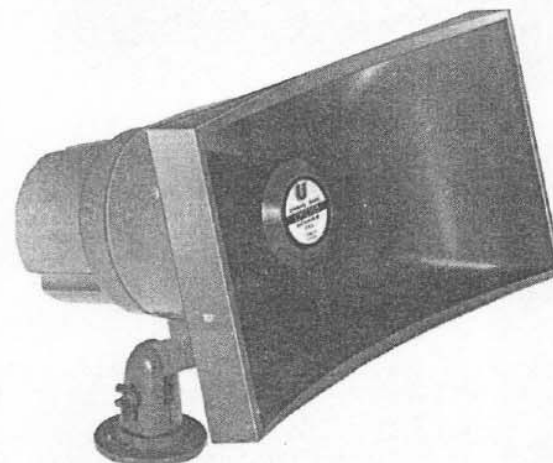
CFID15-8: 1.5 kg (3.4 lb)

CFID15T: 1.7 kg (3.8 lb)

Shipping Weight,

CFID15-8: 1.7 kg (3.8 lb)

CFID15T: 1.9 kg (4.3 lb)



**CFID15-8
CFID15T**

**Paging/Talk-Back
Speaker**

DESCRIPTION

The University Sound CFID15-8 and CFID15T are conservatively rated 15-watt wide angle paging projectors designed for high speech clarity under difficult noise conditions.

The drivers employ rugged phenolic diaphragms, 1.5-inch diameter voice coils and "rim centered" ferrite magnet structures for long life and reliability.

The transformer model CFID15T includes connections for 25 V and 70 V distributed systems and a screwdriver operated power tap select switch.

The nominal 85° horizontal by 85° vertical coverage pattern, together with a low-frequency cutoff of 450 Hz, provides excellent articulation in demanding applications.

The CFID15-8 (CFID15T) is molded from non-resonant and weatherproof Cyclocac. Exclusive Uni-Lok swivel mount allows precision mounting in a variety of installations. The gland nut connection insures a weather-tight seal.

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

POLAR RESPONSE

The directional characteristics of the CFID15 were measured by running a set of horizontal/vertical polar responses, in University's large anechoic chamber, at each one-third-octave center frequency. The test signal was one-third-octave pseudo-random pink noise centered at the indicated frequencies. The measurement microphone was placed 6.1 m (20 ft.) from the horn mouth. The polar plots shown in Figure 1 display the results of these tests. The center frequency is noted on each plot. The wider plot on each chart is the horizontal polar (—) and the narrower plot is the vertical polar (---).

BEAMWIDTH

A plot of the CFID15's 6-dB-down total included beamwidth angle is shown in Figure 2 for each one-third-octave center frequency.

FREQUENCY RESPONSE

Figure 3 shows the axial frequency response of the CFID15. It was measured at a distance of 1 meter, using a swept sine wave.

INSTALLATION

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.

The Uni-Lok swivel mount allows the speaker to be precisely positioned and locked in place. A mounting plate is furnished with the Uni-Lok but 1/2-inch pipe may be used instead.

To flush mount the horn, finish drilling the four pre-drilled holes from the rear four corners and insert #8 machine screw toggle bolts or screws to secure the unit from the front.

A foam insert (CFID15F) is available to screen against nesting birds and insects.

TRANSFORMER MODEL (CFID15T)

A transformer and power selector switch are installed in the rear housing.

The level of the CFID15T may be adjusted by moving the switch setting; clockwise increases the power.

Power	70-Volt Lines		25-Volt Lines	
	Impedance	Capacitance	Impedance	Capacitance
15 W	350	2 mf	45	20
10 W	500	1.3 mf	63	13 mf
5 W	1000	0.7 mf	125	7 mf
2.5 W	2000	0.4 mf	250	4 mf
1.25 W	4000	0.2 mf	500	2 mf
1.25 W	4000	0.2 mf	500	2 mf
0.65 W	8000	0.1 mf	1000	1 mf

TABLE I — Series Protection Capacitors for 200 Hz and Below

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 transformer, capacitor(s) in series with driver or transformer primary is recommended. Table I above indicates recommended values.

ARCHITECTS' AND ENGINEERS' SPECIFICATIONS

The loudspeaker(s) shall have a rectangular reflex horn with an exponential expansion rate. The driver employs a rugged phenolic diaphragm and high-temperature rated 3.81 cm (1.5 in.) voice coil.

The axial frequency response will extend from 500 to 8,000 Hz and the horn shall exhibit a low-frequency a low-frequency cutoff of 450 Hz. Sound pressure level will be 107 dB (1 W/1 M) with a 500-to-5,000-Hz pink noise signal applied, and the horn will produce a horizontal beamwidth of 85° and a vertical beamwidth of 85° at 2 kHz.

The loudspeaker shall be capable of handling a 15-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 weatherproof Cyclocap capable of satisfactory mechanical performance in extreme weather conditions with a field-replaceable plug-in diaphragm and voice coil assembly (spare part #344).

A gland nut shall be provided for a weather-tight seal and a Uni-Lok swivel mount for rotation in both the horizontal and vertical planes. The Uni-Lok shall fit standard 1/2-inch pipe thread.

The loudspeakers shall be the University Sound CFID15T, which includes a 70 V/25 V line matching transformer and weighs no more than 1.7 kg (3.8 lb) and the University Sound CFID15-8, which has a nominal impedance of 8 ohms and weighs no more than 1.5 kg (3.4 lb).

WARRANTY (Limited) — University Sound Speakers and Speaker Systems (excluding active electronics) are guaranteed for five years from date 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.

Service and repair address for this product: University Sound, Inc., 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831)

Applications and technical information for University Sound products: University Sound, Inc., Attention Technical Coordinator, 600 Cecil Street, Buchanan, MI 49107 (AC/616-695-6831).

Specifications subject to change without notice.

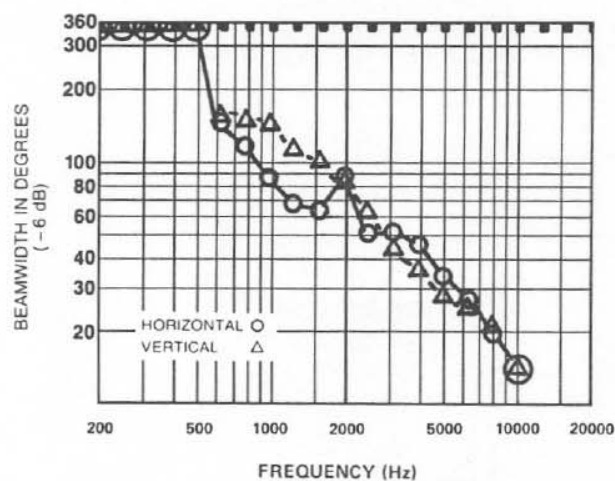
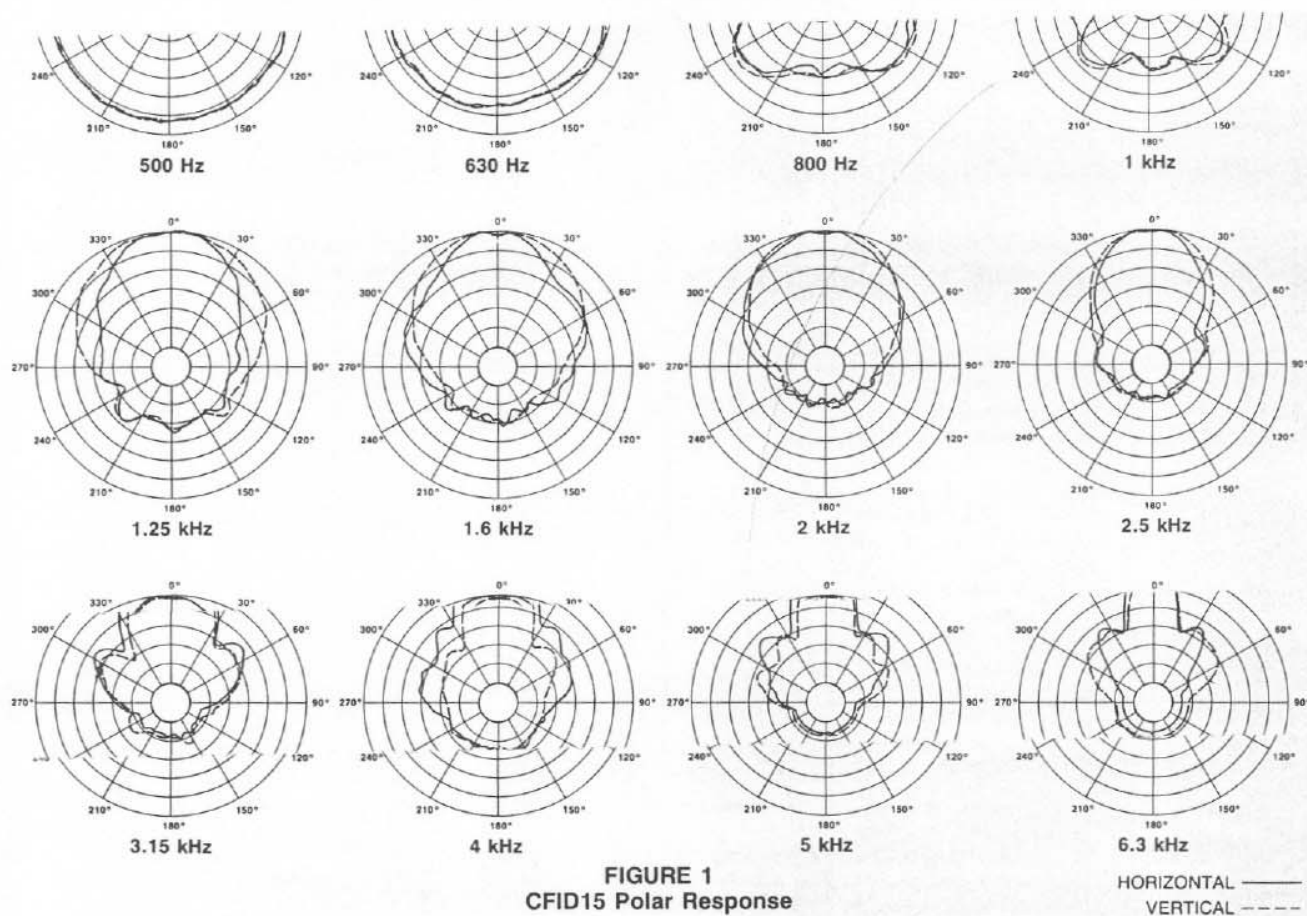


FIGURE 2
CFID15 Beamwidth vs. Frequency

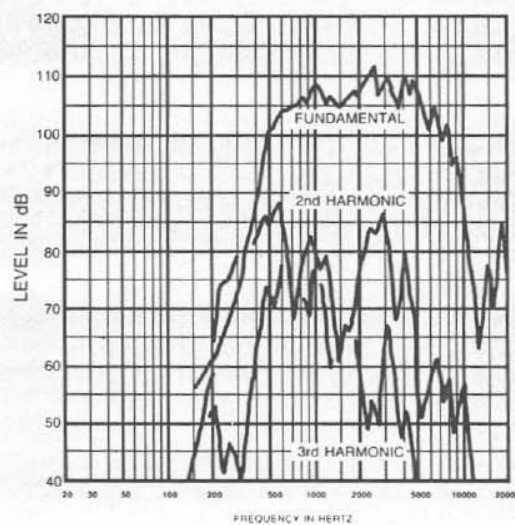


FIGURE 3
CFID15 Frequency Response
(1 watt at 1 meter)