CONTROL 85M

5¼" Two-Way Co-axial Mushroom Landscape Speaker

Professional Series



Key Features:

- Components:
  - 5¼" highly weather-resistant driver
  - ¾" soft-dome highly weather-resistant tweeter
- 80W Pink Noise Power Handling (160W program) in direct 8Ω setting, plus built-in 30W 70V/100V multi-tap transformer
- Tough polyethylene highly weather resistant enclosure
- Fully isolated center chamber for wiring protection
- High fidelity sound character with broad frequency range of 55Hz - 18kHz

Applications:

The Control 85M Mushroom-Style Landscape Speaker is a two-way highly weather resistant speaker providing 360 degree coverage of the listening space. A highlighted mid-range presence cuts through in high ambient environments for especially clear paging and voice content while providing excellent full-range sound quality. Designed to be mounted on or in the ground, the Control 85M can be used in a wide variety of applications including hotels, casinos, pool areas, shopping malls, theme parks, sports venues, resorts, restaurants, hospitality and leisure venues, entranceways, and anywhere a high quality music and/or paging speaker landscape speaker is required.

Its compact size allows the speaker to blend into landscaping and shrubbery, while its tough hunter green polyethylene enclosure resists abuse from lawn care equipment and the elements. The enclosure color extends throughout the material so the speaker will maintain color even when scraped or scratched.

The two part enclosure is designed to open with a twist for wiring and then close securely. The bottom base section of the enclosure can be pre-installed and then wired to the top speaker section of the enclosure. When assembled, the bottom base section becomes a fully isolated chamber, keeping the speaker and transformer (in the speaker section) highly isolated from the possibility of intruding moisture. Multiple locations on the bottom and sides are provided for the mounting of the exterior gland nut (installed by drilling a 22 mm (0.875 in, 7/8 in) diameter hole in the chosen location), and a second gland nut is positioned between the bottom base and the top speaker sections, to keep the speaker system highly weather tight. Included gland nuts maintain a water-tight seal only when used with round-jacketed cable with outside diameter between 4.0 and 9.0 mm (0.16 and 0.35 inches).

All external hardware is stainless steel, and the powder-coated stainless steel grille resists rusting. The Control 85M can be secured to the ground via third-party ground stakes using the three attachment points that extend out from the bottom section of the speaker.

The 135 mm (5.25 in) diameter low-frequency driver features a Kapton former with 35.5 mm (1.4 in) voice coil for high power handling and superior long term reliability. The polypropylene cone and polyurethane surround provide high strength and superior moisture resistance. The 19 mm (0.75 in) high frequency driver utilizes a polyetherimide dome, providing high rigidity, strength, and high temperature resistance. The high slope crossover provides natural sonic character and SonicGuard™ protected HF driver ensures long-term reliability from occasional overdriving.

In addition, the speaker contains a high-quality 30 Watt multi-tap transformer for use on 70V or 100V distributed loudspeaker lines, and is switchable for 8 ohm voice-coil direct operation. The speaker handles 80 Watts Continuous Pink Noise (160W Program, 320W Peak) in the 8 ohm mode.

The Control 85M is UL certified, per UL1480.

Specifications:

Frequency Response (-10 dB):	55 Hz - 18 kHz
Frequency Response (±3 dB):	65Hz - 16 kHz
Power Rating[1]:	160 W Continuous Program (2 hrs) 80 W (320W peak), Continuous Pink Noise (2 hrs) 45 W (180W peak) Continuous Pink Noise (100 hrs)
Maximum Input Voltage:	23.3 V
Sensitivity[2]:	86 dB, 1W @ 1m (ave. 80Hz - 16kHz)
Nominal Coverage Angle:	360° horizontal, 160° vertical (primary listening 10° to 50° up from ground).
Directivity (Q):	2.2
Directivity Index (DI):	3.4 dB
Maximum SPL [3]:	105 dB @ 1m
Nominal Impedance:	8Ω (at 8Ω setting)
Transformer Taps:	70V: 30W, 15W, 7.5W & 3.8W 100V: 30W, 15W, 7.5W
Insertion Loss:	<1.0 dB at any tap setting
Thru Setting:	8Ω nominal
Crossover Type:	2nd Order LPF on LF and 2nd Order HPF on HF
Recommended Protective High-Pass:	65 Hz for 8Ω operation, 24 dB/oct 60 Hz for 30W tap, 24 dB/oct 50 Hz for 15W, 7,5W, and 3.7W taps, 24 dB/oct
Transducer:	
Low Frequency Driver:	135 mm (5.25 in) diameter LF driver, Kapton™ former, 35.5mm (1.4 in) voice coil, polypropylene cone and polyurethane surround.
High Frequency:	19mm (0.75 in) diameter HF driver Polyetherimide (PEI) dome.
Physical:	
Enclosure Material:	LDPE Polyethylene plastic, 6 mm wall thickness, UL94V-0 rated.
Grille:	Powder coated stainless steel.
Environmental:	IP-56 rating per IEC529 (dust protected and protected against strong jets of water). Exceeds MilSpec 810 for humidity, salt spray, temperature & UV. Passes Mil-STd-202F for salt spray. Enclosure UL94V0 rated.
Agency Ratings:	UL 1480 Speakers for Fire Alarm, Emergency, and Commercial and Professional Use, 5th Edition, for outdoor wet locations; UL 1480A Speakers for Commercial and Professional Use, 1st Edition; CSA C22.2 No. 205-12, Signal Equipment. Transformer UL Recognized per UL1876, ROHS compliant.
Terminals:	Bare wire with dielectric-gel-filled wire nuts (internal to top speaker section).
Wiring:	Water ingress protected by two stages of gland nuts, one mounted on outside of enclosure (installed by installer via drilling 22 mm (0.875 in, 7/8 in) hole in any of multiple provided locations) and one between the bottom base and top speaker sections. Included gland nuts require round-jacketed wire with outside diameter between 4.0 mm and 9.0 mm (0.16" in and 0.35" in). For installation instructions see Installation Guide (# IS C80MLS).
Colors:	Hunter Green, RAL6018
Dimensions (H x W x D):	432 x 291 x 291mm (17 x 11.5 x 11.5 in.)
Net Weight:	5.5 kg (12 lb)
Shipping Weight:	7.3 kg (16 lb)
Included Accessories:	(2) wire nuts, (2) gland nuts, (1) security screwdriver
Installer-Supplied Required Tools:	22mm (0.875 in, 7/8 in) twist-type drill bit (or other type suitable for plastic) for installing gland nut into enclosure.

[1] Continuous Pink Noise rating is IEC-shaped pink noise with a 6 dB crest factor. Continuous program power is defined as 3 dB above the Continuous Pink Noise Rating. In 8 ohm mode.

[2] Half-space, 2π loading (in-ground recessed), 360° horizontal, vertical averaged 10 to 50 degrees from ground.

[3] 8 ohm mode, calculated from sensitivity and power handling, exclusive of power compression.

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SPL Level Varation Chart by Layout Spacing

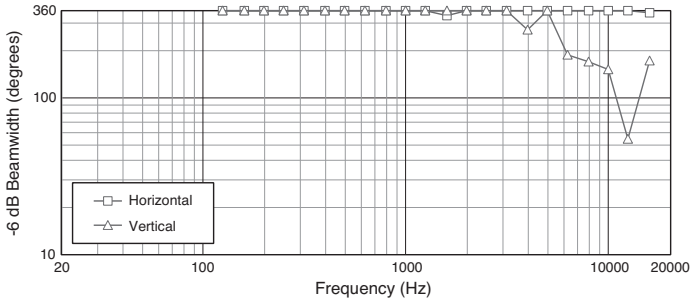
SPL Level Variation Within the Listening Space	Distance Apart
±1.5 dB	4.0 meters (13 feet) apart
±3.0 dB	6.7 meters (23 feet) apart
±4.5 dB	10.0 meters (33 feet) apart

At listening height of 1.5 meters (5 feet)

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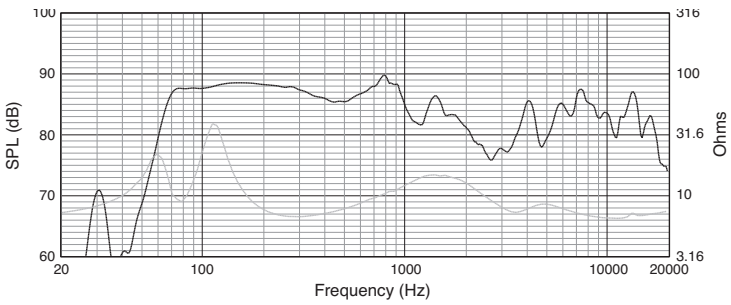
Beamwidth:

-6 dB coverage by frequency



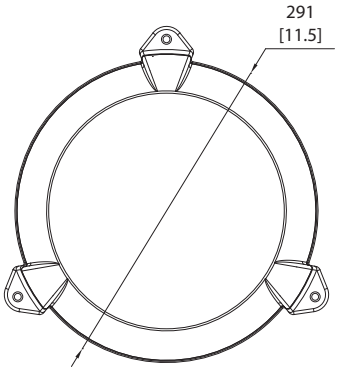
Frequency Response:

In half-space (2π, in ground), plus impedance curve
[Frequency response[2], Impedance graph]

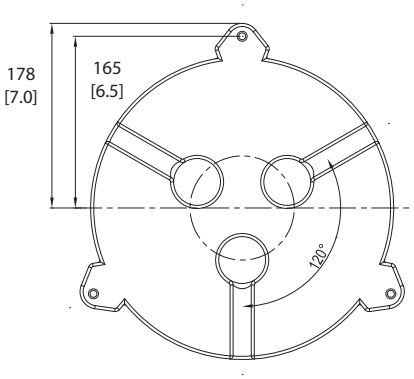


Dimensions:

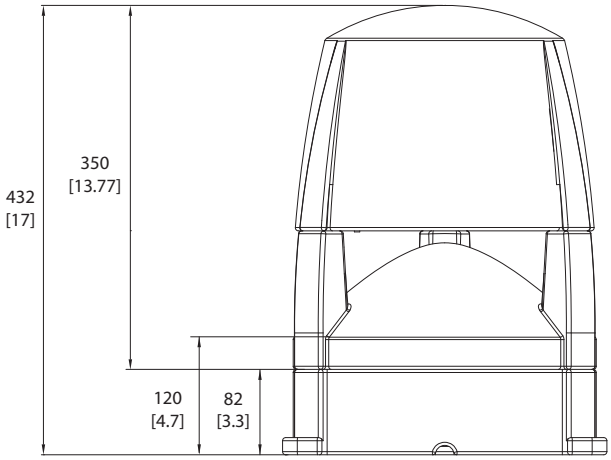
TOP VIEW



BOTTOM VIEW



SIDE VIEW



Dimensions in mm [inches]

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