



# CONTROL<sup>®</sup> 89MS

## 8" MUSHROOM LANDSCAPE SUBWOOFER

PROFESSIONAL SERIES

### Key Features:

- **Component:**
  - 200 mm (8-inch) long-throw driver with polypropylene cone, long-excursion TPV surround, and large-diameter 50 mm (2-inch) voice coil on glass fiber former
- 150W Pink Noise Power Handling (300W program) in direct 8Ω setting, plus built-in 80W subwoofer-band 70V/100V multi-tap transformer
- Tough polyethylene enclosure resists abuse from lawn care equipment and the elements
- Fully sealed center chamber for wiring protection
- Frequency range: 40 Hz–150 Hz



### Applications:

The JBL-Control 89MS Mushroom-Style Landscape Subwoofer augments the low-frequency performance of the JBL Control 80 Series landscape speaker line (and other outdoor systems) to provide rich bass in lawn, garden, and entrance areas of hotels, restaurants and other hospitality and retail complexes, as well as theme parks, sports venues, resorts, entrances, and anywhere a highly weather-resistant speaker is required.

This sleek, attractive, compact subwoofer features a down-firing, long-throw 200 mm (8-inch) driver which delivers 115 dB (peak) of clean, powerful bass down to 40 Hz. The built-in low-pass crossover features a dual-slope filter which begins with a gentle slope at the crossover frequency and transitions to a steeper slope at higher frequencies), creating a balanced subwoofer transition regardless whether the speaker is driven from a full-range or a dedicated subwoofer amplifier channel. The premium-grade dedicated-subwoofer-band multi-tap transformer (and tap selector with 8Ω bypass) allows the JBL-Control 89MS to be used in 70V and 100V distributed systems or driven directly at low impedance, for maximum versatility.

The JBL-Control 89MS is IP56-rated to withstand the elements, with a tough polyethylene enclosure and a fully-sealed center wiring chamber. The enclosure color extends throughout the cabinet so the speaker maintains color even when scraped or scratched. All external hardware is stainless steel, and the powder-coated stainless steel grille resists rusting.

The two-part enclosure is designed to open with a twist for wiring and then close securely with an included security screw. The bottom base section of the

enclosure can be preinstalled and then wired to the top speaker section of the enclosure when the top gets installed. When assembled, the bottom base section becomes a fully isolated chamber, and the wiring/speaker chamber is further sealed by a water-tight bulkhead, keeping the speaker and transformer (in the top 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, interior gland nut is positioned in the bulkhead 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). The Control 89MS 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 200 mm (8.0 in) diameter long-throw subwoofer driver features a waterproof and highly corrosion-resistant polypropylene cone and long-excursion corrosion-resistant TPV (thermoplastic vulcanized surround), and a large 50 mm (2-inch) voice coil on a glass fiber coil-former for high power handling and superior long-term reliability.

The speaker handles 150 Watts Continuous Pink Noise (300W Program, 600W Peak) in the 8Ω mode. The Control 89MS is UL certified, per UL1480A.



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### Specifications:

Frequency Range (-10 dB) <sup>1</sup>	40 Hz – 150 Hz
Frequency Response (±3 dB) <sup>1</sup>	53 Hz – 110 Hz
Power Rating <sup>2</sup>	<b>300 W:</b> Continuous Program (2 hrs) <b>150 W:</b> (600 W Peak), Continuous Pink Noise (2 hrs) <b>100 W:</b> (400 W Peak), Continuous Pink Noise (100 hrs)
Maximum Input Voltage	31V (based on 2 hr. Continuous Pink Noise rating and min-Z)
Sensitivity <sup>3</sup>	87 dB (ave. 60 Hz – 105 Hz)
Nominal Coverage Angle	360° horizontal, 160° vertical (primary listening 10° to 50° up from ground).
Directivity (Q)	2.0 (with half-space, 2 $\pi$ , on-ground loading)
Directivity Index (DI):	3.0
Rated Maximum SPL <sup>4</sup>	115 dB peak (109 dB continuous, 2 hr) @ 1m
Nominal Impedance	8 $\Omega$ (at 8 $\Omega$ tap)
Minimum Impedance	7.2 $\Omega$ at 85 Hz
Transformer Taps	<b>70V:</b> 80 W, 40 W, 20 W, 10 W <b>100V:</b> 80 W, 40 W, 20 W
Insertion Loss	<0.8 dB at any tap setting
Thru Setting	8 $\Omega$ nominal
Crossover Type	Complex dual-slope 2nd order low-pass with additional impedance compensation
Recommended Protective High-Pass	40 Hz for 8 $\Omega$ operation and for all tap settings, 24 dB/oct

### Transducers

Driver	200 mm (8-inch) driver, polypropylene injection cone, long-excursion corrosion-resistant TPV (thermoplastic vulcanizate) surround, and 50 mm (2-inch) voice coil on 80% glass fiber + polyamide coil former.
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### Physical

Enclosure Material	LDPE Polyethylene plastic, 6 mm minimum wall thickness, UL94V-HB rated, color throughout.
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 UL94V-HB rated.
Agency Ratings	UL1480A Speakers for Commercial and Professional Use, for outdoor wet locations; 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 in the bulkhead 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-B)
Colors	Hunter Green, RAL 6018
Dimension (H x W x D)	524 x 355 x 355 mm (20.7 x 14.0 x 14.0 inches)
Net Weight	10.9 kg (24.0 lbs)
Shipping Weight	13.6 kg (30.0 lbs)
Included Accessories	(2) wire nuts, (2) gland nuts, (1) security screwdriver
Installer-Supplied Required Tools	22 mm (0.875 in, 7/8 in) twist-type drill bit (or other type suitable for plastic) for installing gland nut into enclosure.

<sup>1</sup> In half-space (located on the ground, 2 $\pi$  loading)

<sup>2</sup> Continuous Pink Noise rating is AES spectrum (45 Hz – 450 Hz), with 6 dB crest factor. Continuous program power is defined as 3 dB above the Continuous Pink Noise Rating. In 8 ohm mode.

<sup>3</sup> Half-space, 2 $\pi$  loading (on-ground recessed), 360° horizontal, vertical averaged 10 to 50 degrees from ground.

<sup>4</sup> 8 ohm mode, calculated from sensitivity and power handling, exclusive of power compression.

JBL continually engages in research related to product improvement. Some materials, production methods, and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.



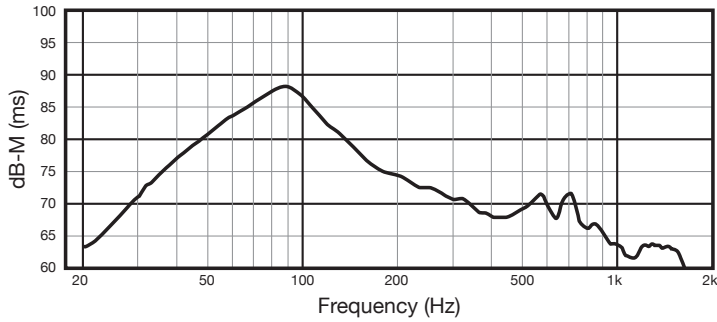
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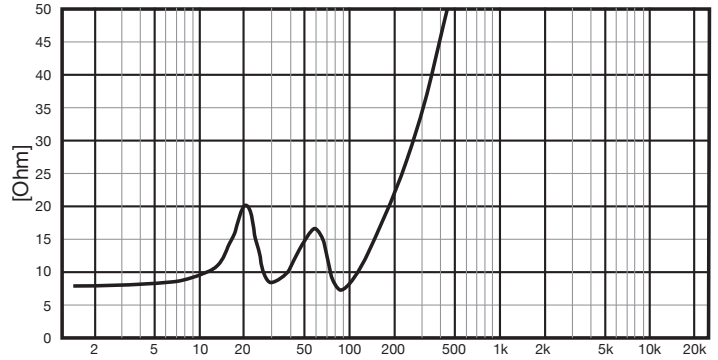
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### Frequency Response:

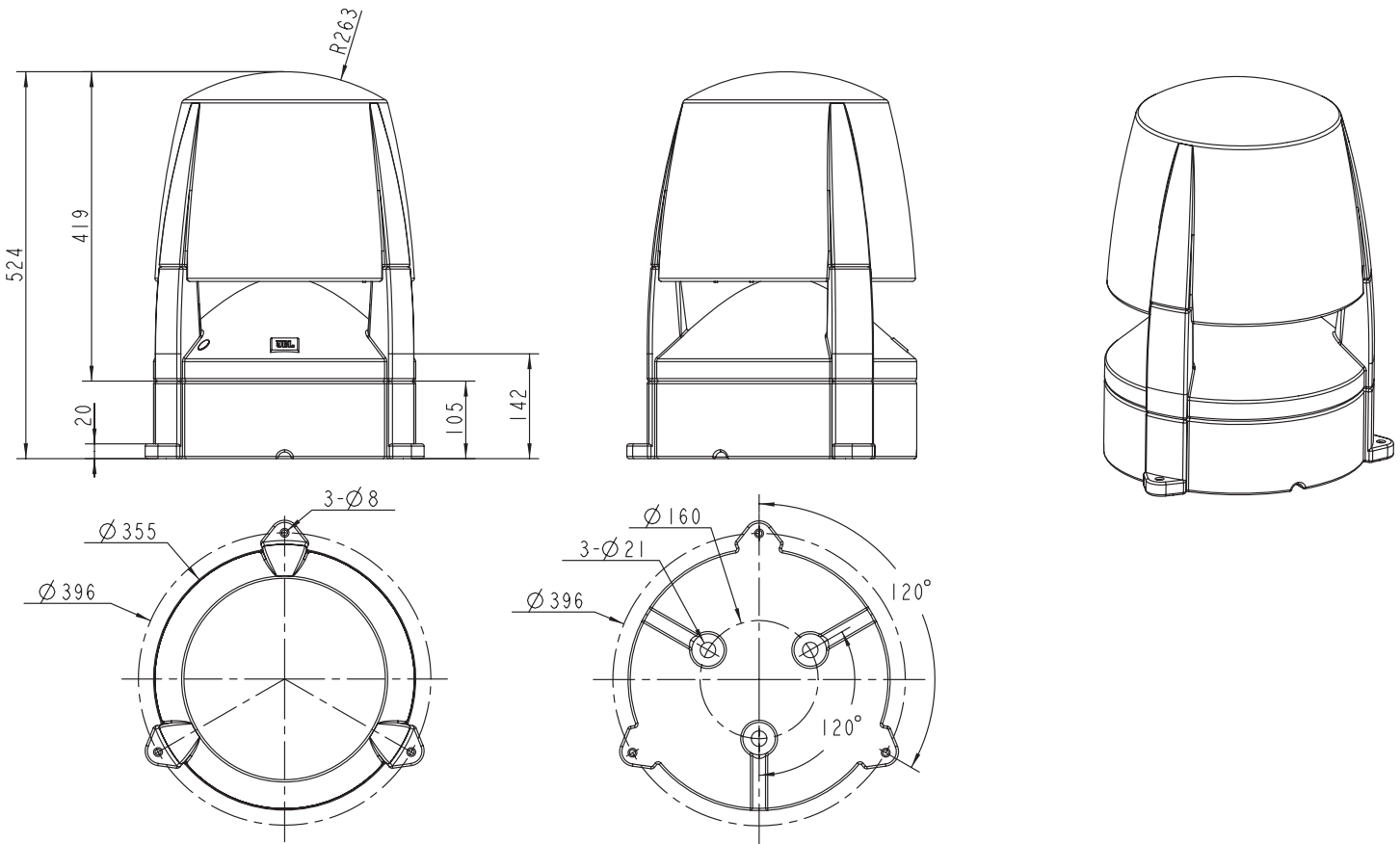
In half-space ( $2\pi$ , on-ground).



### Impedance:



### Dimensions:



HARMAN Professional 8500 Balboa Blvd. Northridge, CA 91329 USA

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