SPECSHEET

Control® 16C/T

Professional Series – Two-Way 6.5” Coaxial Ceiling Loudspeaker

Key Features:

- Components:
  - 165 mm (6.5 in) high output driver with polypropylene cone and butyl rubber surround
  - 19 mm (0.75 in) soft-dome liquid-cooled tweeter
- Blind-mount backcan for quick and easy install
- Dual conduit/cable clamps
- Combined 70V/100V and low impedance direct operation:
  - 50 Watts at 8Ω nominal setting
  - 30W multi-tap at 70V/100V
- 62 Hz – 20 kHz bandwidth with wide 110° coverage
- High 91 dB sensitivity for high maximum SPL
- White or black (-BK)



Included grille not shown

Description:

Control 16C/T is a full-range ceiling speaker consisting of a 165 mm (6.5 inch) high-tech cone driver and a 19 mm liquid cooled soft-dome tweeter mounted in a vented, paintable baffle made of UV resistant UL94-V0 and UL94-5HB material, with a pre-attached blind-mount backcan for quick and easy installation. The speaker is designed to provide excellent sound quality for a wide variety of medium to high volume applications such as music cafes, business music systems, retail stores, music/paging systems, airports, reception/waiting rooms, lounges, courtrooms, convention centers, hotels, educational facilities, and more.

The speaker delivers consistent sound quality for listeners located both off and on axis.

The high-technology 165 mm (6.5 in) low frequency driver is designed with a lightweight, high temperature anodized aluminum voice coil former and high-temperature-grade voice coil for stable performance and reliability under long-term/high-power working conditions. The butyl rubber surround provides long-term durability and excellent sonic damping while the polypropylene cone is water and humidity resistant.

The FEA-optimized motor construction and cone geometry, along with linear suspension spider design, allow for a smooth frequency response and more consistent off-axis performance. The 19 mm (3/4 in) high frequency driver features a highly damped and treated silk dome for clear and warm sound, a lightweight Kapton™ voice coil for better high frequency response and excellent reliability, low viscosity liquid cooling for power handling and reliability, and a wide dispersion waveguide design to produce wide coverage and smooth frequency response.

The removable locking connector has screw terminals for secure wire termination and “loop through” terminals. A dual strain relief assembly provides clamping for use with cable or flex conduit.

Ideal for a wide variety of projects, the Control 16C/T is switchable for use as either an 8 ohm low-impedance speaker or as part of a 70V or 100V distributed loudspeaker system with a 30W multi-tap transformer. The speaker comes complete with two tile rail supports, one C-ring support backing plate, cutout template, paint shield, and grille. A safety seismic attachment ring is provided on the top surface. Available in white or black (-BK).

Specifications:

System	
Frequency Range (-10 dB)[1]	62 Hz – 20 kHz
Frequency Response (±3 dB)[1]	96 Hz – 15 kHz
Power Capacity (at low-Z)[2]	100W Continuous Program Power 50W Continuous Pink Noise
Nominal Sensitivity[3]	91 dB
Nominal Coverage Angle[3]	110° conical coverage
Directivity Factor (Q)[3]	7.8
Directivity Index (DI)[3]	8.2 dB
Rated Maximum SPL	108 dB @ 1 m (3.3 ft) average, 116 dB peak
Nominal Impedance	8 ohms (in direct/bypass 8Ω setting)
Transformer Taps	30 W, 15 W, 7.5 W @ 70V or 100V (plus 3.8 W @ 70V only)
Crossover Network	12 dB/oct (2nd order) low-pass to LF driver, 12 dB/oct (2nd order) high-pass to HF driver

Transducers	
LF Driver	165 mm (6.5 inch) with polypropylene cone, butyl rubber surround, anodized aluminum voice coil former, high-temperature voice coil
HF Driver	19 mm (3/4 in), highly damped and treated silk dome, Kapton™ voice coil, liquid cooling, wide dispersion waveguide
Enclosure	
Input Connector	Removable locking 4-pin connector with screw-down terminals; max wire size 12 AWG (2.5 mm²)
Connector Wiring	Pin 1 = + In Pin 2 = - In Pin 3 = + Loop Thru Pin 4 = - Loop Thru
Strain Reliefs	Strain relief for two cables or two flex conduits via coupled clamping mechanism

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Specifications (Continued):

Materials	ABS baffle with UL94-V0 and UL94-5VB flame class fire rating; zinc-plated steel backcan
Safety Agency	UL1480, UL2043, NFPA90 & NFPA70; S7232/ UL listed, suitable for use in air handling spaces, signaling speaker; transformer UL registered per UL1876; ROHS, C-tick N108, CE compliant; baffle meets UL94-V0 and UL94-5VB flammability rating; in accordance with IEC60849/EN60849 systems
Dimensions	253 mm diameter x 225 mm depth from back of baffle (10.0 in diameter x 8.8 in depth)
Ceiling Cutout Size	Circular cutout with 223 mm (8.8 in) diameter (cardboard cutout template included)
Ceiling Thickness Range	Up to 38 mm (1.5 in) with stock dogears; MTC-TCD thick-ceiling dogears available for up to 60 mm (2.4 in) ceiling thicknesses
Safety Seismic Attachment	One point, top surface
Net Weight	3.4 kg (7.4 lbs, one speaker)
Shipping Weight	11.2 kg (24.7 lbs, pair in master carton)

Included Accessories	» C-ring support backing plate » 2 tile support rails (for 2 ft or 600 mm tile spans; optional MTC-48TR extension available for larger 4 ft or 1200 mm tile spans) » Cutout template » Paint shield » Removable locking multi-pin connector » Grille
Optional Accessories	» MTC-26NC new construction bracket » MTC-26MR mud-ring construction bracket » MTC-TCD thick-ceiling dogears for ceiling thicknesses up to 60 mm (2.4 in, ordering one set = 24 dogears for 6 speakers) » MTC-48TR tile rail for 1200 mm (4 ft) tile spans » MTC-16WG (& 16WG-BK) high-humidity grille

[1] Half-space (flush mounted in ceiling)

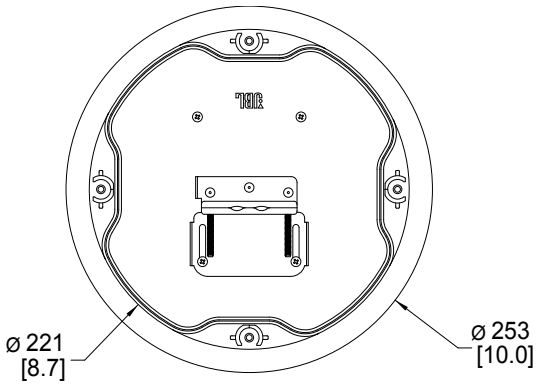
[2] Continuous Pink Noise Rating is IEC-shaped pink noise with a 6 dB crest factor for 100 hours continuously. Continuous Program Power is a conservative expression of the system’s ability to handle normal speech and music program material, and is defined as 3 dB above the Continuous Pink Noise Rating.

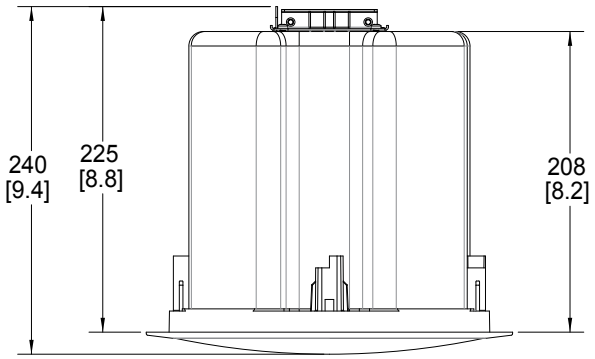
[3] Half-space (in ceiling) average 1 kHz to 16 kHz

JBL continually engages in research related to product improvement. Changes introduced into existing products without notice are an expression of that philosophy.

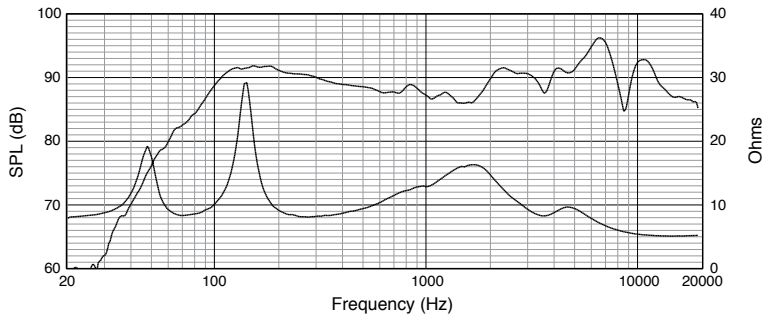
Mounting Dimensions:

Dimensions in mm (inches)





Frequency Response, Impedance:



Frequency response in half-space (2pi, mounted in ceiling), impedance at 8Ω (low-impedance) setting