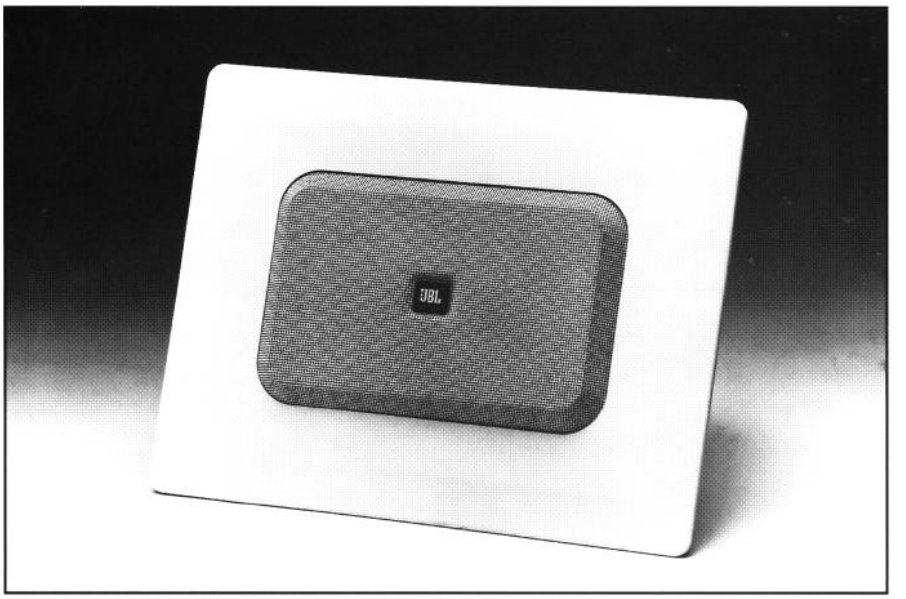
Control® 1CM Ceiling Mount Control Monitor Loudspeaker System

Control Series



Key Features:

- Integral ceiling flush-mounting hardware, including spring-loaded grille
- Self-contained in molded enclosure
- High sensitivity (90 dB SPL, 2.83 V @ 1 m)
- Tapped, switchable autotransformer for use on 100 V lines may be bypassed
- High power handling (150 W continuous pink noise with autotransformer bypassed) with internal protection network
- Components:
  135 mm (5¼ in) low frequency loudspeaker
  19 mm (¾ in) polycarbonate dome tweeter

The JBL Control 1CM provides the monitor sound of the Control 1 in a self-contained package specifically designed for unobtrusive flush-mounted ceiling installation in offices, stores, clubs, restaurants, discotheques and other locations where highest sound quality is required and visual considerations preclude surface mounting of the loudspeakers. Its integral mounting hardware allows fast and easy installation, and its spring-loaded grille quickly snaps in place to provide a neat, professional appearance. No additional mounting accessories are needed.

The Control 1CM features the acclaimed acoustical performance of the Control 1 and adds to it a high quality internal autotransformer which allows easy connection to a constant-voltage loudspeaker distribution line. The autotransformer may be set to 7.5, 15, 30 or 60 watts when fed from a 100 volt line, and it can be bypassed to connect the system directly to the power amplifier. The screwdriver adjusted autoformer switch is mounted on the enclosure baffle, under the grille, for easy access after installation.

Specifications:

SYSTEM:	
Frequency Response (±3 dB):	120 Hz to 20 kHz (autotransformer bypassed)
Power Capacity[1]:	150 W
Sensitivity[2]:	90 dB SPL, 2.83 V, 1 m (3.3 ft)
Directivity Factor (Q):	2.8
Directivity Index (DI):	4.5
Nominal Impedance:	4 ohms
Autotransformer Taps[3]:	7.5, 15, 30, 60 W plus bypass, externally switchable
Autotransformer Insertion Loss:	Less than 1 dB
Autotransformer Distortion:	Less than 0.5% THD at or below rated power
Crossover Frequency:	6 kHz
Polarity:	Positive voltage to + (red) terminal causes outward low frequency cone motion
GENERAL:	
Enclosure Material:	Polypropylene structural foam
Grille Material:	Steel
Finish:	Cream white
Enclosure Dimensions:	230 mm L x 154 mm W x 132 mm D above ceiling (9⅛ in L x 6⅛ in W x 5⅛ in D above ceiling)
Ceiling Mount Clearance:	304 mm L x 231 mm W 12 in L x 9⅛ in W
Grille Dimensions:	(330 mm L x 254 mm W x 15 mm D below ceiling) 13 in L x 10 in W x ⅝ in D below ceiling
Net Weight (each):	3.2 kg (7 lb)
Shipping Weight (six):	26.7 kg (58.8 lb)

[1] Rating based on test signal of filtered random noise conforming to international standard IEC 268-5 (pink noise with 12 dB/octave rolloff below 40 Hz and above 5000 Hz with a peak-to-average ratio of 6 dB), two hours duration.

[2] Averaged from 500 to 2.5 kHz.

[3] When driven from a 100 V line.

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The JBL Control 1CM utilizes 135 mm (5¼ in) low frequency and 19 mm (¾ in) high frequency drivers, and features the same high power handling (150 W continuous pink noise), high sensitivity (90 dB SPL, 2.83 V at 1 m), excellent frequency response (120 Hz – 20 kHz + 3 dB with autotransformer bypassed), internal protection network, and molded enclosure design as the Control 1.

Like the other systems in the renowned Control Series, the JBL Control 1CM sets an industry standard: it is the new standard in ceiling loudspeakers for the discriminating user.

Architectural Specifications:

The loudspeaker shall consist of a 135 mm (5¼ in) low frequency transducer, 19 mm (¾ in) dome high frequency transducer, frequency dividing network and autotransformer installed in a ported enclosure. The magnetic assemblies shall use ferrite magnets. The low frequency voice coil shall be 25 mm (1 in) in diameter. The frequency dividing network shall have a crossover frequency of 6 kHz and shall utilize polypropylene bypass capacitors to reduce hysteresis effects on the signal. The autotransformer shall be installed in the interior of the enclosure and shall have an externally accessible switch for selecting its taps for power settings of 7.5, 15, 30 and 60 watts when driven from a 100 volt line. The external wiring connectors shall be spring loaded and gold plated, and shall accept bare wire, single or dual banana-type connectors with 19 mm spacing.

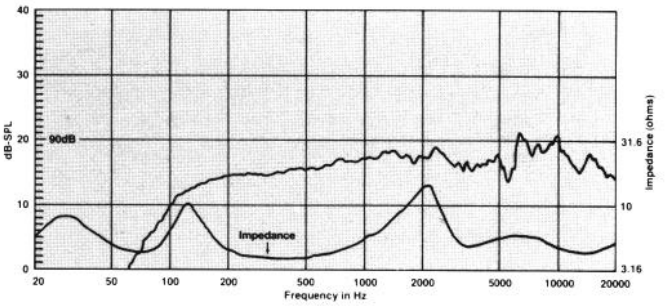
Performance specifications of a typical production unit with the autotransformer switched to bypass shall be as follows: measured sensitivity (SPL at 1 m [3.3 ft] with 2.83 V input, swept from 500 Hz to 2.5 kHz) shall be at least 90 dB SPL. Frequency response shall be within plus or minus 3 dB from 120 Hz to 20 kHz. Usable frequency response shall extend downward to 70 Hz. Nominal impedance shall be 4 ohms. Rated power capacity shall be at least 150 watts continuous pink noise, based on a test signal of filtered random noise conforming to international standard IEC 268- 5 (pink noise with 12 dB/octave rolloff below 40 Hz and above 5 kHz with a peak to average ratio of 6 dB), two hours duration.

The internal autotransformer performance specifications measured from any wattage tap shall be as follows: frequency response shall be within plus or minus 2 dB from 40 Hz to 10 kHz. Total harmonic distortion shall be less than 0.5% at or below rated power levels. Insertion loss shall be less than 1 dB.

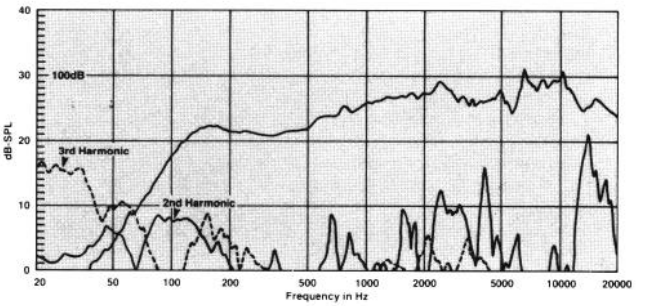
The entire enclosure shall be manufactured of molded polypropylene structural foam. Mounting hardware shall be supplied for ceiling installation, and a spring-loaded grille to cover installation cutouts shall be included. Overall dimensions shall be no greater than 235 mm (9¼ in) by 159 mm (6¼ in) by 149 mm (5⅞ in) deep. Finish shall be cream white.

The system shall be the JBL Model Control 1CM.

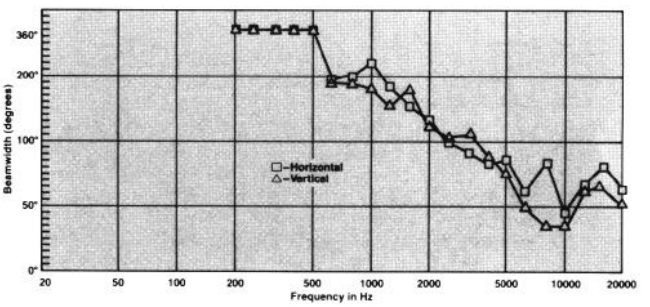
Frequency Response at 1 W, 1 meter; Impedance



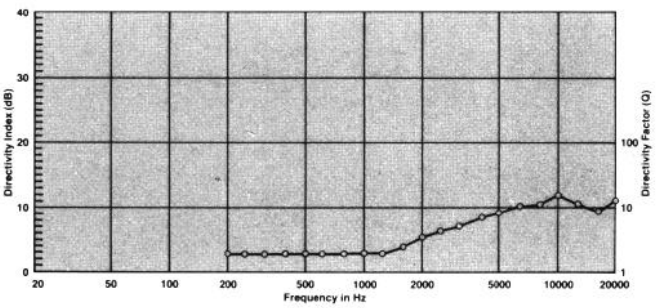
Distortion vs. Frequency 10 W, Distortion Raised 20 dB



Horizontal and Vertical Beamwidth (-6 dB) vs. Frequency



Directivity vs. Frequency



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