

JBL

Control[®] 1AT

Control Monitor Loudspeaker System

Control Series

Key Features:

- ▶ 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
- ▶ Molded enclosure with shielded magnetic structures
- ▶ Accepts all Control 1 optional MTC mounting hardware

Sound system installers have used many thousands of JBL Control 1 loudspeakers in restaurants, clubs, discotheques, shopping centers, and other locations where multiple loudspeaker systems are driven by a common source. The JBL Control 1AT is designed to simplify installation of multiple systems in these environments.

The Control 1AT 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 autoformer switch is mounted on the rear of the enclosure exterior and is screwdriver adjusted.



Specifications:

SYSTEM:	
Frequency Response (± 3 dB):	120 Hz to 20 kHz
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
Finish:	Black
Dimensions:	235 mm H x 159 mm W x 149 mm D (9 1/4 in H x 6 1/4 in W x 5 7/8 in D)
Net Weight (each):	2.2 kg (5 lb)
Shipping Weight (pair):	5.3 kg (12 lb)
ACCESSORIES:	
MTC-1 Adapter:	This clamp-on unit allows the Control 1AT to be mounted on photographic tripods, microphone stands (with the MTC-4 or MTC-6) and other manufacturers' wall or clamp mount systems. Pair packed
MTC-2 + Wall/Ceiling Mount:	This unit allows the Control 1AT to be mounted to any rigid surface while permitting the speaker to be aimed in almost any direction. Optional colors available: gray and white.
MTC-3 + Clamp Mount System:	This unit allows the Control 1AT to be clamped onto a variety of objects such as shelves, poles or table tops while permitting a range of adjustments. Optional colors available: gray and white.
MTC-4 (European) Microphone Stand Adapter:	This unit allows the Control 1AT to be mounted on a microphone stand with European (Japanese) standard threads when used in conjunction with an MTC-1.
MTC-6 (Japanese) Microphone Stand Adapter:	This unit allows the Control 1AT to be mounted on a microphone stand with American standard threads. It includes the MTC-1.
MTC-7 American Microphone Stand Adapter:	This unit allows the Control 1AT to be mounted on a microphone stand with American standard threads. It includes the MTC-1.
MTC-8 Wall Mount Bracket:	Low cost, fixed angle wall mount bracket. Optional colors available: gray and white.

¹Rating 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.

²Averaged from 500 to 2.5 kHz.

³When driven from a 100 V line.

► Control® 1AT Control Monitor Loudspeaker System

The JBL Control 1AT has the same magnetically shielded 135 mm (5 1/4 in) low frequency and 19 mm (3/4 in) high frequency drivers as the Control 1, so it can be mounted in close proximity to video monitors without interference with the picture. It 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), internal protection network, and molded enclosure design, and it accepts all Control 1 optional MTC mounting accessories.

For monitor sound quality, easy and unobtrusive installation, and long, reliable life, the JBL Control 1AT is without equal.

Architectural Specifications:

The loudspeaker shall consist of a 135 mm (5 1/4 in) low frequency transducer, 19 mm (3/4 in) dome high frequency transducer, frequency dividing network and autotransformer installed in a ported enclosure. The magnetic assemblies shall use ferrite magnets, with integral shielding of the external magnetic field. 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 75, 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.

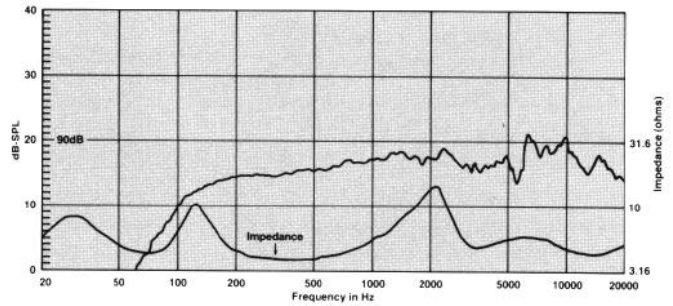
The internal autotransformer performance specifications measured from any wattage tap shall be as follows: frequency response shall be within plus or minus 2 dB from 40 Hz to 10 kHz. Total harmonic distortion shall be less than 0.5% at or below rated power levels. Insertion loss shall be less than 1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

The entire enclosure shall be manufactured of molded polypropylene structural foam. Optional mounting brackets shall be available for positioning of the loudspeaker at various angles for both temporary and permanent installations. Overall dimensions shall be no greater than 235 mm (9 1/4 in) by 159 mm (6 1/4 in) by 149 mm (5 7/8 in) deep. Finish shall be black, with metal grille and rubber end protectors.

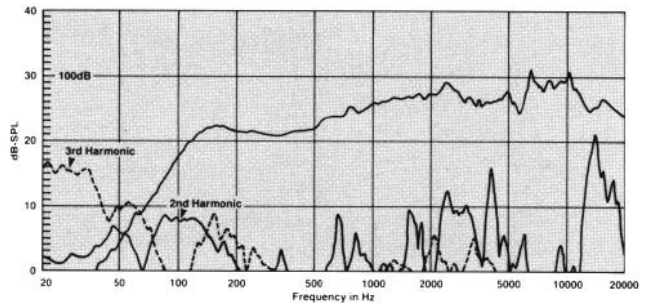
The system shall be the JBL Model Control 1AT.

JBL continually engages in research related to product improvement. New 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.

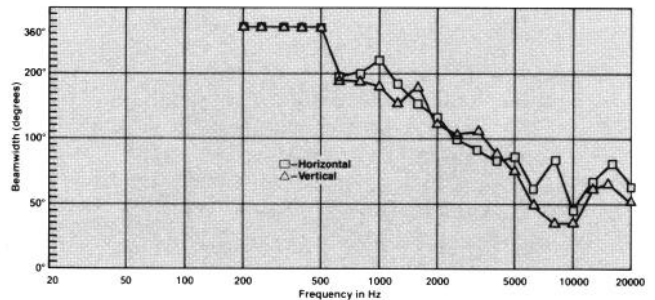
Frequency Response at 1 W, 1 meter; Impedance



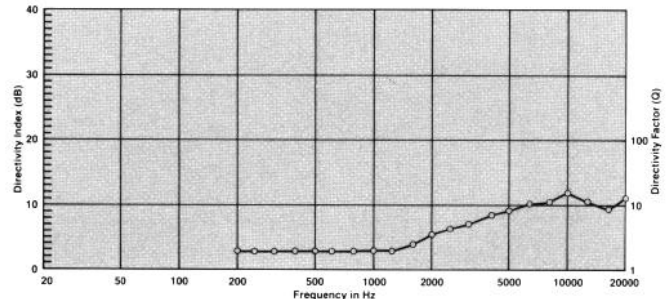
Distortion vs. Frequency 10 W, Distortion Raised 20 dB



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



Directivity vs. Frequency



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