Control® 1AW Compact All Weather Loudspeaker System

Control Series

Key Features:

- Designed for use in heat, humidity and salt air
- 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 stainless steel grille and screened port opening for protection from harsh environments
- Accepts all Control 1 optional MTC mounting hardware

The JBL Control 1AW solves the problems of bringing monitor sound quality outdoors. This all-weather system features the acclaimed acoustical performance of the Control 1 along with resistance to outdoor environmental hazards such as humidity, corrosive salt air and insect infestation. Its 135 mm (5 ¼ in) low frequency and 19 mm (¾ in) high frequency drivers are protected from physical damage, front and back, by a stainless steel grille and a screened port, and its low frequency cone and high frequency diaphragm resist the elements.

The Control 1AW's high quality internal autotransformer simplifies the sound system installer's task of running multiple loudspeakers from a common power amplifier, yet does not compromise the system's acoustical performance. 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 protected from weather by a rubber cover.

The all-weather Control 1AW features the same high power handling (150 W continuous pink noise with autoformer bypassed), high sensitivity (90 dB SPL, 2.83 V at 1 m), excellent frequency response (120 Hz — 20 kHz ± 3 dB), internal

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
Grille Material:	Stainless steel, black finish
Dimensions:	235 mm H x 159 mm W x 149 mm D (9¼ in H x 6¼ in W x 5⅞ 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 1AW 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 1AW 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 1AW 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 MTC-6 (Japanese) Stand Adapter:	This unit allows the Control 1AW to be mounted on a microphone stand with European (Japanese) standard threads when used in conjunction with an MTC-1.
MTC-7 American Microphone Stand Adapter:	This unit allows the Control 1AW 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.

[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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protection network, magnetically shielded driver structures and molded enclosure design as the Control 1, 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 1AW is without equal.

Architectural Specifications:

The loudspeaker shall consist of a 135 mm (5 ¼ 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, with integral shielding of the external magnetic field. The low frequency cone shall be treated for resistance to environmental elements. 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 switch shall be furnished with a removable rubber cover on its externally accessible portion for protection from exposure to environmental elements. 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.

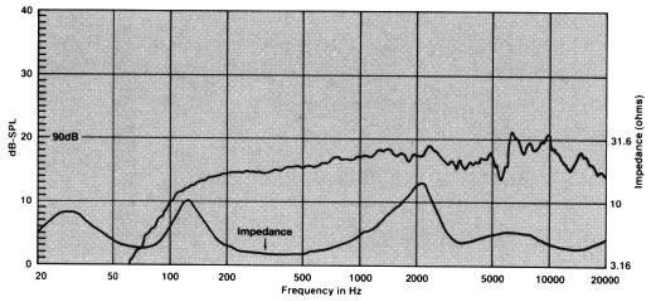
The internal autotransformer performance specifications measured from any wattage tap shall be as follows: frequency response shall be within plus or minus 2 dB from 40 Hz to 10 kHz. Total harmonic distortion shall be less than 0.5% at or below rated power levels. Insertion loss shall be less than 1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

The system shall withstand 96 hours of exposure to all of the following environments with no effect on its acoustical performance or structural integrity: salt fog, 85°C, -40°C, 95% relative humidity @ 55°C and heavy ultra-violet.

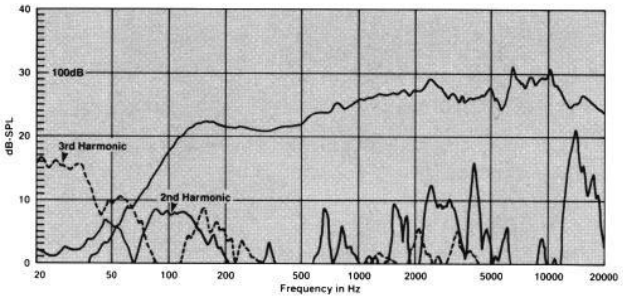
The entire enclosure shall be manufactured of molded polypropylene structural foam. The port shall have an internal screen to prevent insects from entering the enclosure. Optional mounting brackets shall be available for positioning of the loudspeaker at various angles for both temporary and permanent installations. Overall dimensions shall be no greater than 235 mm (9¼ in) by 159 mm (6¼ in) by 149 mm (5 ⅞ in) deep. Finish shall be black, with stainless steel grille and
rubber end protectors.

The system shall be the JBL Model Control 1AW.

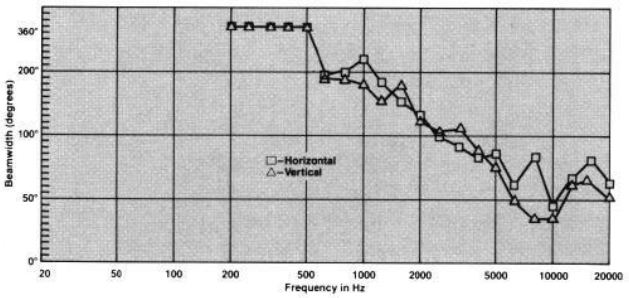
Frequency Response at 1 W, 1 meter; Impedance



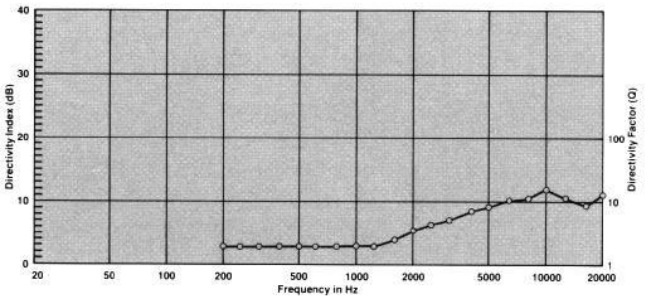
Distortion vs. Frequency 10 W, Distortion Raised 20 dB



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



Directivity vs. Frequency



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