Control 12SR™ Sound Reinforcement Loudspeaker

Professional Series

Key Features:

- Sensitivity: 97 dB SPL, 1 W, 1 m (3.3 ft)
- Frequency Response (± 4 dB): 55 Hz to 16.5 kHz
- High power handling (200 W, pink noise)
- Components:
  300 mm (12 in) Symmetrical Field Geometry (SFG) low frequency transducer
  44 mm (1¾ in) pure titanium diaphragm high frequency compression driver
  90° x 40° Flat-Front Bi-Radial® horn
- Lightweight, acoustically inert high-impact enclosure
- Integral attachment points for mounting flexibility
- Optional mounting hardware

The Control 12SR™ is a compact two-way loudspeaker system designed for playback and sound reinforcement in fixed or portable applications requiring a blend of outstanding high-SPL performance and compact size.

Designed through extensive acoustical analysis and modeling, the Control 12SR enclosure features both a molded-in handle for portable applications and multiple threaded attachment points that accept a variety of optional installation hardware.

The Control 12SR contains a 300 mm (12 in) low frequency transducer and a 44 mm (1¾ in) high frequency pure titanium compression driver fitted to a 90° x 40° Flat-Front Bi-Radial® horn. Developed with the latest in computer design and analysis techniques, the patented horn design provides uniform horizontal coverage of 90° from 2 kHz to 16 kHz.

Specifications:

SYSTEM:	
Frequency Response (± 4 dB):	55 Hz to 16.5 kHz
Power Capacity[1]:	200 W
Sensitivity[2]:	97 dB SPL, 1 W, 1 m (3.3 ft)
Directivity Factor (Q):	8
Directivity Index (DI):	9
Nominal Impedance:	8 ohms
Crossover Frequency:	2 kHz
Polarity:	Positive Voltage to red terminal causes outward low frequency cone motion.
GENERAL:	
Enclosure Material:	Polystyrene structural foam
Finish:	Black
Dimensions:	619 mm x 432 mm x 300 mm deep (24⅜ in x 17 in x 12 in deep)
Net Weight (each):	20 kg (44 lbs)
Shipping Weight:	21 kg (46 lbs)
ACCESSORIES:	
MTC-101 Tripod Mounting Adapter:	Allows the Control 12SR to be mounted to the JBL MT4712A aluminum tripod in either a vertical or horizontal position.
MTC-102 Wall Mount Bracket:	Allows the Control 12SR to be mounted to any rigid vertical surface with a unique polymer ball and clamp design. In addition to omnidirectional movement about the ball, the speaker's connecting wires may be run internal to the clamp.
MTC-103 Ceiling Mount Bracket:	The same as the MTC-102 except that it is designed to be mounted to a rigid ceiling surface.
MTC-106:	Nylon protective cover/carrying case.

[1] Rating based on test signal of IEC filtered random noise with a peak-to-average ratio of 6 dB, eight hours duration.

[2] Averaged from 500 Hz to 2.5 kHz, for an input of 2.83 V @ 8 ohms.

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The low frequency transducer features a 75 mm (3 in) edgewound aluminum voice coil for high efficiency and JBL's Symmetrical Field Geometry (SFG) magnet assembly for significantly reduced harmonic distortion. A rugged, die-cast aluminum frame ensures long-term precision alignment of the transducer motional and static assemblies. The pure titanium diaphragm high frequency compression driver delivers exceptional sonic performance and includes a precision-machined, copper-plated pole piece for extended high frequency output.

To blend the low and high frequency components, the Control 12SR uses a specially designed second-order network with a transition frequency of 2 kHz. The network incorporates high quality components throughout, including bypass capacitors for improved transient response, and includes power response compensation for the high frequency horn/driver combination. A continuously variable level control on the front of the Control 12SR allows optimizing the system's high frequency output for a broad range of applications.

Although the Control 12SR is rugged enough to pass the IEC 268-5 signal power test at a level of 200 watts for 8 continuous hours of operation, no compromises have been made in sonic quality to achieve this power handling capability. Particular emphasis has been given to projection and clarity in the vocal range, with the result being a versatile system as useful in live sound reinforcement as it is in recorded sound reproduction.

Architectural Specifications:

The loudspeaker system shall consist of a 300 mm (12 in) low frequency transducer, Bi-Radial® horn, and 44 mm (1¾ in) pure titanium diaphragm high-frequency compression driver mounted to the horn. The second-order frequency dividing network shall have a crossover frequency of 2 kHz and shall utilize polypropylene bypass capacitors to reduce hysteresis effects on the signal.

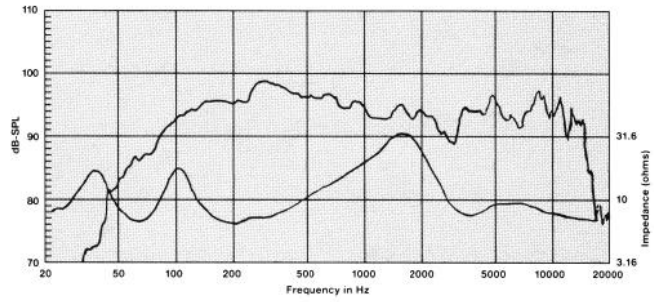
Performance specifications of a typical production unit shall be as follows: measured sensitivity [SPL at 1 m (3.3 ft) with 2.83 V input, swept from 500 Hz to 2.5 kHz] shall be at least 97 dB SPL. Frequency response shall be within plus or minus 4 dB from 55 Hz to 16.5 kHz. Nominal impedance shall be 8 ohms, with minimum impedance being 6.4 ohms @ 450 Hz. Rated power capacity shall be at least 200 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), eight hours duration.

The entire enclosure shall be manufactured of molded high impact polystyrene structural foam, and shall incorporate integral attachment points to accept mounting brackets. Optional mounting brackets shall be available for both temporary and permanent installation of the loudspeaker at various angles to the mounting surface.

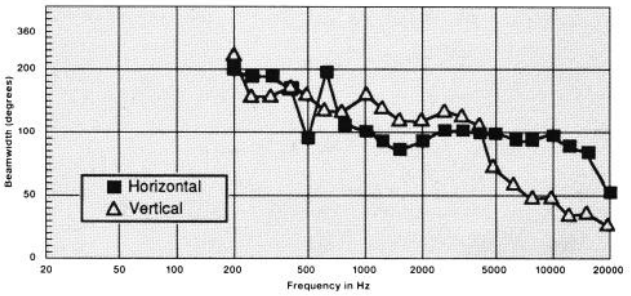
Cabinet finish shall be satin black with black metal grille and black rubber corner protectors, and overall outside dimensions shall be no greater than 619 mm (24⅜ in) x 432 mm (17 in) x 300 mm (12 in).

The system shall be the JBL Model Control 12SR.

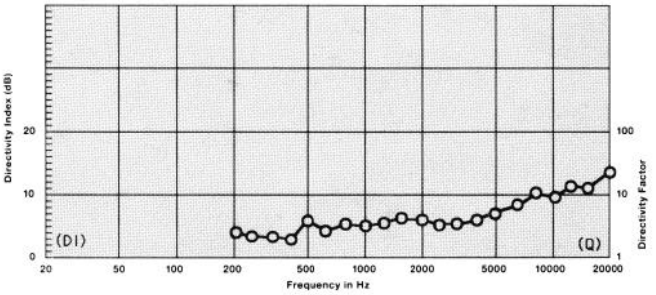
Frequency Response at 1 W, 1 meter; Impedance



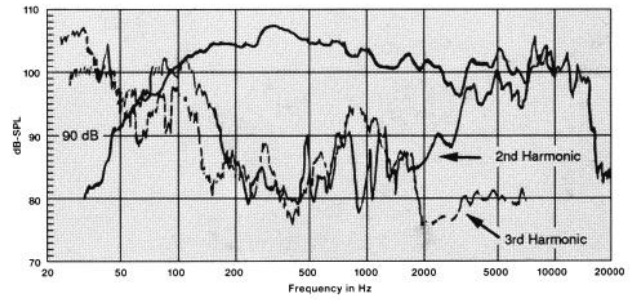
Horizontal and Vertical Beamwidth (− 6 dB) vs. Frequency



Directivity vs. Frequency



Distortion vs. Frequency 10 W, Distortion Raised 20 dB



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