



Control[®] 18S/ST

Indoor/Outdoor
Subwoofer

Professional Series

Key Features:

- ▶ Component: Long excursion 200 mm (8 in) driver
- ▶ Built-in patented InvisiBall™ mounting hardware
- ▶ Overload protection circuitry (Control 18S)
- ▶ Complements full-range Control Contractor Series systems
- ▶ Weather resistant enclosure and transducer
- ▶ High-pass output for satellite speakers (Control 18S)
- ▶ Readily paintable



The Control 18S is designed to augment the low frequency output of any of the Control Contractor loudspeakers, and is ideal for foreground music and music/paging systems in a wide variety of applications such as restaurants, retail establishments, theme bars, music cafes, outdoor theme and water parks and health clubs.

Sharing the same cabinet enclosure dimensions as the Control 28, the Control 18S is an excellent visual and acoustic match with the Control Contractor surface-mount speakers.

The unique globally-patented InvisiBall™ mounting hardware is included in each system and makes short work of permanent installation. The InvisiBall mounting method has the additional benefit of allowing vertical rotation of up to 37° off-axis and horizontal rotation of up to 44° off-axis. Because InvisiBall adjustments are made through a hidden access behind the logo badge, the grille never needs to be removed and there exists a high degree of theft deterrence.

The Control 18S is available in black (Control 18S) and white (Control 18S-WH) and the cabinet accepts a variety of paints and finishes to match any decor.

The Control 18S is protected from overload damage by JBL's exclusive SonicGuard™ circuitry, a protection system that is inaudible to the listener, ensuring reliability while providing full fidelity sound. The premium performance capability ensures excellent sound character, providing pleasant, enveloping sound throughout the listening area.

Preliminary Specifications:

System:

Freq. Range (-10 dB):	46 Hz - 180 Hz
Power Capacity ² :	200 Watts Continuous Program Power 100 Watts Continuous Pink Noise
Nominal Sensitivity ³ :	95 dB SPL, 1W @ 1 m (3.3 ft) at wall corner near ceiling ($\pi/2$) 89 dB SPL, 1W @ 1 m (3.3 ft) in center of wall (2π)
Nominal Coverage Angle:	180° conical coverage
Rated Maximum SPL ³ :	115 dB SPL, 1W @ 1 m (3.3 ft) at wall corner near ceiling ($\pi/2$)
Nominal Impedance (18S):	8 ohms
Transformer Taps (18ST):	70V: 60W, 30W, 15W & 7.5W taps 100V: 60W, 30W, & 15W taps
Network Filter to Subwoofer:	12 dB/oct low-pass, 160 Hz
Filter to Satellite Outputs:	6 dB/oct high-pass, 160 Hz

Transducer:

Low-Frequency:	200 mm (8.0 in) Polypropylene cone 38 mm (1.5 in) coil on aluminum former
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Physical:

Enclosure:	HIPS (High Impact Polystyrene)
Overload Protection:	Full-range power limiting to protect network and transducers. (On Control 18S, not on Control 18ST)
Termination:	Spring terminals
Environmental:	Conforms to Mil Spec 810 for humidity, salt spray, temperature & UV. IEC 529 IP-X4 splashproof rating
Outside Dimensions (H x W x D):	380 x 280 x 218 mm (15.0 x 11.0 x 8.6 in)
Net Weight (ea):	Control 18S: 6.3 kg (14 lb) Control 18ST: 7.3 kg (16 lb)
Shipping Weight (pair):	Control 18S: 7.8 kg (17 lb) Control 18ST: 9.8 kg (22 lb)
Included Accessories:	InvisiBall Assembly 6 mm x 180 mm hex key

Optional Accessories:

MTV-28V:	Vertical columnar orientation of up to 3 loudspeakers, either Control 18S, Control 28 or combination
MTC-28H:	Horizontal splaying of two speakers. Three brackets array up to six loudspeakers in a 360° hanging array, either Control 18S, Control 28 or combination
MTC-28/25CM:	Ceiling-mount adapter

¹Mounted at wall near ceiling ($\pi/2$ loading)

²Continuous 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.

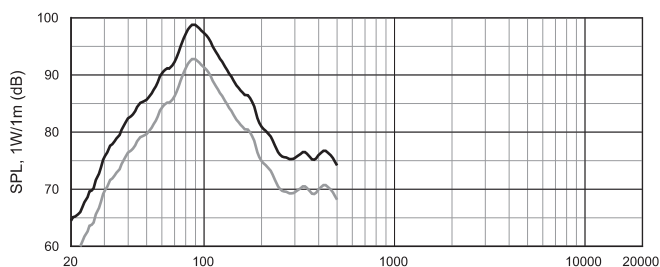
³Average 60 Hz to 100 Hz.

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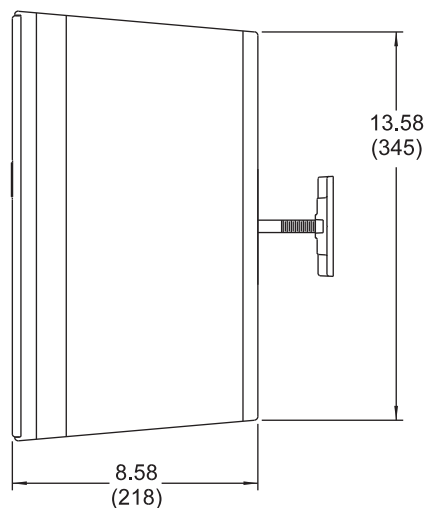
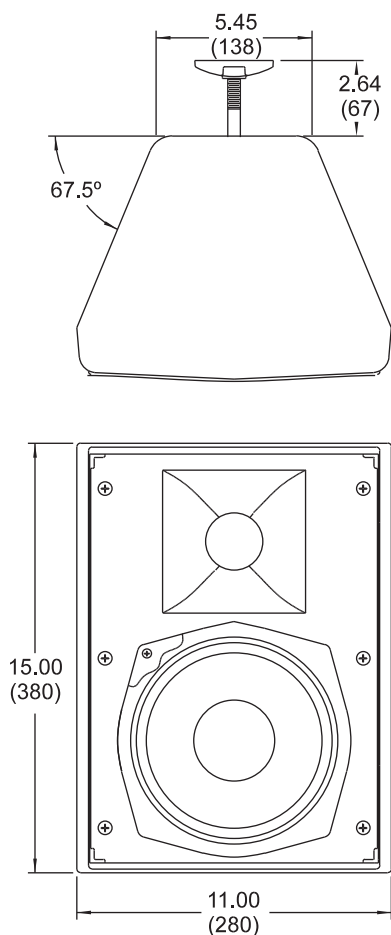
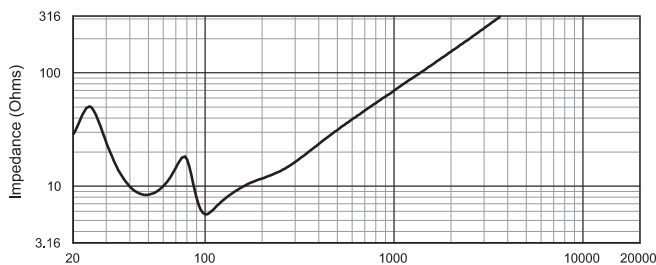
The Control 18S can be connected into a system in a number of configurations: In parallel with full-range speakers resulting in a bass-overlap configuration (which is often acceptable); With an electronic crossover and separate amplifier channel, or; Running a full-range signal into the Control 18S and looping through the high-passed satellite output to full-range speaker(s).

The optional Control 18ST version (and Control 18ST-WH in white) includes a high quality multitap transformer designed specifically for subwoofer use in either 70.7V or 100V distributed-line systems. Multiple transformer taps at 60W, 30W and 15W (plus 7.5W at 70.7V) allow the Control 18ST to fit a wide variety of listening situations. Taps are selected with a rotary switch conveniently located on the back of the cabinet. The transformer effectively limits the power to the speaker, so SonicGuard is not included in the Control 18ST

Frequency response (1W, 1 m) is measured on-axis with two boundary junction (π loading, gray line) and with three boundary junction ($\pi/2$ loading, black line)



Impedance vs. Frequency



Dimensions in inches (mm)

Architectural Specifications:

The subwoofer loudspeaker shall consist of a 200 mm (8.0 in) low frequency transducer in a vented enclosure. The voice coil shall be 38 mm (1½ in) in diameter and the coil former shall be of aluminum for maximum heat dissipation.

Performance specifications of a typical production unit shall be as follows: Measured sensitivity (SPL at 1m [3.3 ft] with 2.83V input, averaged from 60 Hz to 100 Hz) shall be at least 95 dB-SPL ($\pi/2$ loading). Usable frequency response shall extend from 42 Hz to 200 Hz (10 dB below rated sensitivity) with no external equalization. Rated power shall be at least 100 watts continuous pink noise power, defined as conforming to international standard IEC268-5 (shaped pink noise with peak-to-average ratio of 6 dB) for a period of 100 continuous hours.

The system shall be protected against damage from occasional overpowering via full range series lamps that limit the power to the transducer (Control 18S, not Control 18ST).

The enclosure shall be constructed of high-impact polystyrene for protection against the elements in outdoor applications, and for paintability. The grille shall be completely zinc-coated for resistance against rusting, shall be bake-painted and shall be secured via screws to keep it in place when facing downward.

The transducer shall have a polypropylene cone and a butyl rubber surround. The system shall withstand Mil Spec 810 testing with specified time durations for exposure to the following environments with no effect on its acoustical performance or structural integrity: salt spray (method 509.3), temperature -19°C to 49°C (method 501.3 and 502.3), 95% humidity (method 507.3) and ultraviolet (method 505.3). The system shall have an IEC 529 splashproof rating of IP-X4.

For theft deterrence, the installation access area shall be hidden behind a snap-out cover, and the access area shall be on the front of the loudspeaker for ease of installation and adjustment. The loudspeaker shall be rotatable over a minimum of $\pm 35^\circ$ in all directions via a ball-type mounting system. The ball mechanism shall be internal to the cabinet to allow low-profile mounting and better stability via a short moment arm. The logo shall be rotatable for proper orientation when the loudspeaker is mounted horizontally or vertically.

The external wiring connectors shall be spring loaded and gold plated, and shall accept bare wire. Overall cabinet dimensions shall be no greater than 380 mm (15.0 in) high by 280 mm (11.0 in) wide by 218 mm (8.6 in) deep.

Control 18S: The loudspeaker shall weight no more than 6.3 kg (14 lb) and nominal impedance shall be 8 ohms.

Control 18ST: The loudspeaker shall weight no more than 7.3 kg (16 lb) and shall be equipped with a special subwoofer-capable transformer for use in either 70.7 or 100V distributed-line speaker systems, with taps selectable by rotary switch located on the front panel so that the speaker does not have to be removed to adjust tap settings. Taps shall be nominally 60W @ 70V, 30W @ 70V (60W @ 100V), 15W @ 70V (30W @ 100V), and 7.5W @ 70V (15W @ 100V).

The loudspeaker shall be the JBL Model Control 18S (Control 18ST).

▶ Control® 18S/ST Indoor/Outdoor Subwoofer



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