CBT 50LA-LS

Line Array Column Loudspeaker with Eight 50 mm (2 in) Drivers and EN54:24 Certification

SPEC SHEET

CBT SERIES
CONSTANT BEAMWIDTH TECHNOLOGY™



KEY FEATURES

- **Patent-pending Constant Beamwidth Technology™** provides constant directivity up to the highest frequencies and reduces out-of-coverage lobing.
- **EN54-24 Compliant** (when installed with included MTC-PC2 panel cover).
- **Switchable voicing** provides flat response in music mode or mid-range presence peak in speech mode.
- **Dynamic SonicGuard™** overload protection.
- Swivel (pan)/tilt **wall bracket included.**
- **Built-in 70V/100V transformer,** plus 8Ω direct capability.

OVERVIEW

The **CBT 50LA-LS**, with Constant Beamwidth Technology™, represents a breakthrough in pattern control, utilizing analog delay beamforming and amplitude tapering to accomplish consistent vertical coverage without the narrow vertical beaming and out-of-coverage lobing that are typical of straight form-factor passive column speakers.

The slim, compact design fits well into virtually any architectural decor. The combination of superb sound quality, excellent pattern control, and compact (53 cm [20.8 in] tall by 10 cm [3.9 in] wide) design makes **CBT 50LA-LS** ideal for a wide variety of applications, such as retail stores, concourses, transit spaces, fill applications, conference rooms, architectural spaces, audio for video, lecture halls, and other applications where such a combination is desired.

The voicing can be set to match the application through the Music/Speech switch, conveniently located on the side of the cabinet. The Music setting provides flat frequency response, while the Speech setting produces a mid-range presence boost to provide clear, intelligible speech even at the longest throw distances.

The drivers feature dual neodymium magnets for light weight. Copper-capped pole pieces lower both the driver inductance and the flux modulation. This increases high frequency extension and reduces distortion at high drive levels. Butyl rubber surrounds provide long life even in high humidity environments. The drivers are shielded.

Dynamic SonicGuard™ minimizes distortion at high drive levels by limiting low frequency excursion dynamically. This maximizes clarity at high drive levels while protecting the drivers from damage due to overpowering.

A swivel (pan) / tilt wall-mount bracket is included and ten M6 inserts on the back panel fit the spacing of common mounting brackets, or can be utilized to suspend the speaker using M6 forged shoulder steel eyebolts, providing versatility of installation.

CBT 50LA-LS can be installed either indoors or outdoors. The drivers are weathertreated, the fiberglass reinforced ABS cabinet with UV resistant paint is excellent for outdoor applications, external screws are stainless steel, and the painted aluminum grille resists rusting in the harshest conditions.

Available in black or white (-WH).

CBT 50LA-LS

Line Array Column Loudspeaker with Eight 50 mm (2 in) Drivers and EN54:24 Certification

JBL PROFESSIONAL

SPEC SHEET

SPECIFICATIONS

Components	Eight 50 mm (2 in) Full-Range
Frequency Range (-10 dB)[1]	120 Hz – 20 kHz
Coverage Pattern	**Vertical:** 20° (1.5 kHz - 16 kHz, ±10°) **Horizontal:** 150° (ave, 1 kHz – 4 kHz, ±20°)
Coverage Angles	**4000 Hz** **20000 Hz** **1000 Hz** **500 Hz** **Vertical:** 18° 32° 55° 100° **Horizontal:** 135° 194° 247° 360°
Sensitivity (1W @ 1m)[1]: (1W @ 4m):	(speech mode) 93 dB (2 kHz - 14 kHz) (music mode) 89 dB (300 Hz - 18 kHz) (speech mode) 78.8 dB SPL (100 Hz - 10 kHz) (music mode) 76.5 dB SPL (100 Hz - 10 kHz)
Nominal Impedance:	8Ω (in bypass mode) 7.5w@70v; 15w@100v Tap = 667Ω 15w@70v; 30w@100v Tap = 333Ω 30w@70v; 60w@100v Tap = 167Ω 60w@70v; N/C@100v Tap = 83Ω
Power Capacity (8Ω setting)[2]:	150W (600W peak), 2 hrs 100W (400W peak), 100 hrs
Max SPL[3]:	**Speech:** 115 dB cont ave (121 peak @ 1m); 103 dB cont ave (109 peak @ 4m) **Music:** 111 dB cont ave (117 peak @ 1m); 99 dB cont ave (105 peak @ 4m)
EN54 Max SPL (@ 4m):	**Speech:** 96 dB **Music:** 93 dB
70V/100V Transformer Taps[4]:	60W, 30W, 15W, (7.5W at 70V only), and 8 thru, via switch
Enclosure:	Fiberglass reinforced ABS cabinet with UL94-5VB flammability rating, painted aluminum grille
Outdoor Capability:	IP-55 rated, per IEC529, when installed with optional MTC-PC2 panel cover. UV, moisture and 200-hr ASTM G85 acid-air/salt-spray
Colors:	Black or White (-WH)
Insert Points:	Ten M6 swivel (pan)/tilt insert points on back panel
Mounting:	Included swivel (pan)/tilt wall bracket provides continuously variable +/-80° left-right swivel aiming (at no up/down tilt – see Bracket Guide for maximum swivel range at various up/down tilt angles), continuously adjustable ±15° tilt, as well as 5° fixed increment points. Ten threaded mounting points located on back panel conform to industry standard rectangular 108 x 51 mm (4.25 x 2.0 in) pattern for OmniMount® 30.0 and other compatible third-party brackets. Threaded mounting points can be utilized for suspension.
Dimensions (H x W x D):	528 x 99 x 153 mm (20.8 x 3.9 x 6.0 in)
Net Weight:	4.1 kg (9.0 lb)
Safety Agency:	EN54-24:2008 certified, when installed with MTC-PC2 terminal panel cover. In accordance with the requirements of IEC60849/EN60849.
Included Accessories:	Swivel (pan) / tilt wall bracket MTC-PC2 terminal panel cover
Optional Accessories:	MTC-CBT-FM1 flush-mount low-profile wall-mount bracket MTC-CBT-SMB1 Stand-Mount Bracket for use with 35 mm speaker stand

SPECIFICATIONS NOTES

1 Free field
2 IEC standard, full bandwidth pink noise with 6 dB crest factor.
3 Calculated based on power rating and measured sensitivity, exclusive of power compression.
4 Per EN54-24 Components of voice alarm system - loudspeakers 70V/60W (35V RMS, 70V peak), 100V/60W (50V RMS, 100V peak)

JBL continually engages in research related to product improvement.
Changes introduced into existing products without notice are an expression of that philosophy.

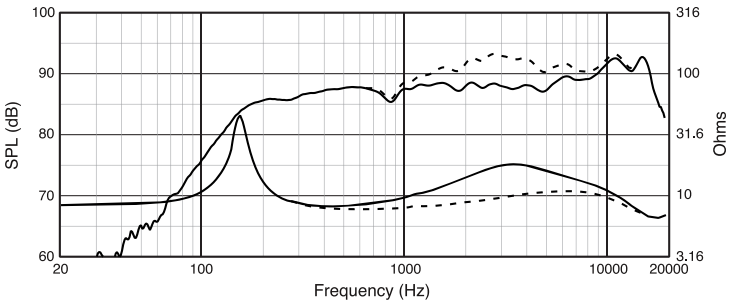
CBT 50LA-LS

Line Array Column Loudspeaker with Eight 50 mm (2 in) Drivers and EN54:24 Certification

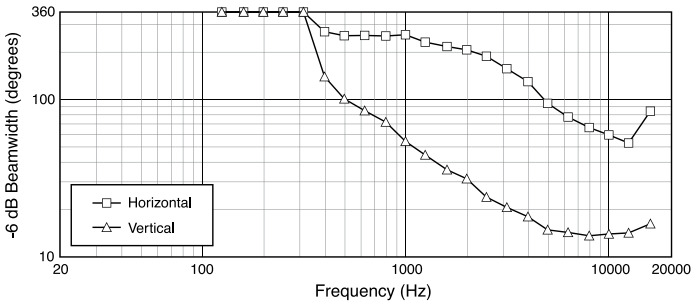
SPEC SHEET

Frequency Response:

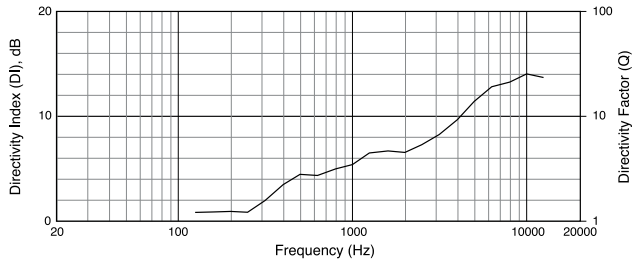
"Music" Mode (solid); "Speech" Mode (dotted), 1W, 1m, and Impedance:



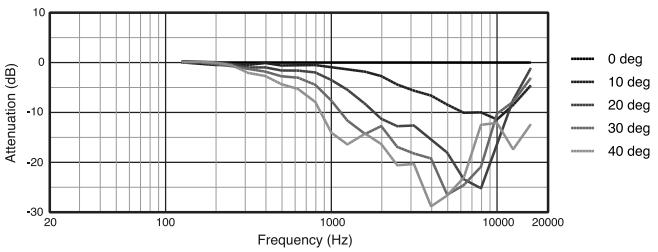
Beamwidth:



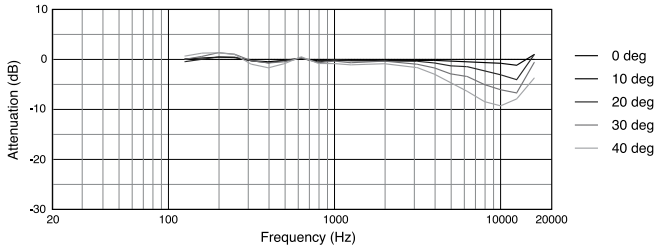
Directivity, Q



Vertical Off-Axis Frequency Response



Horizontal Off-Axis Frequency Response

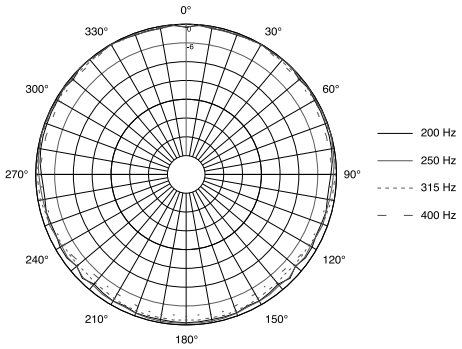


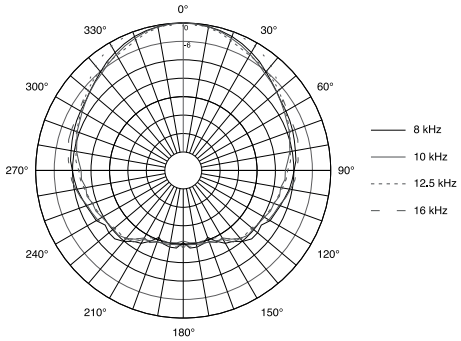
CBT 50LA-LS

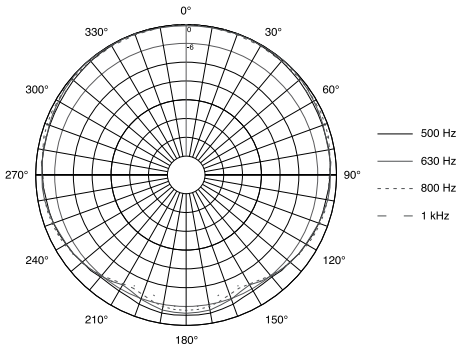
Line Array Column Loudspeaker with Eight 50 mm (2 in) Drivers and EN54:24 Certification

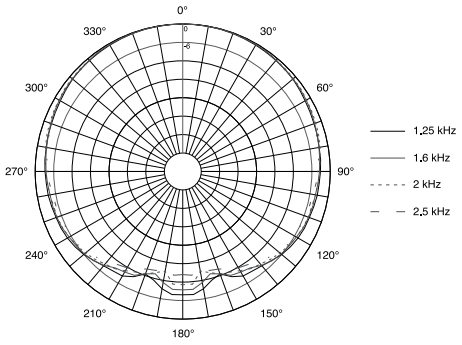
SPEC SHEET

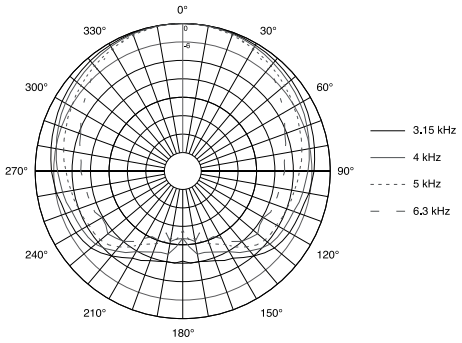
Horizontal 1/3 Octave Polars



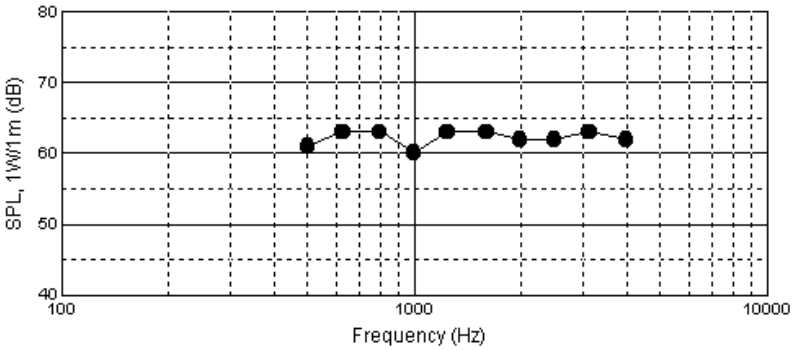








One-Third Octave Contributions to Maximum SPL (per EN54-24):



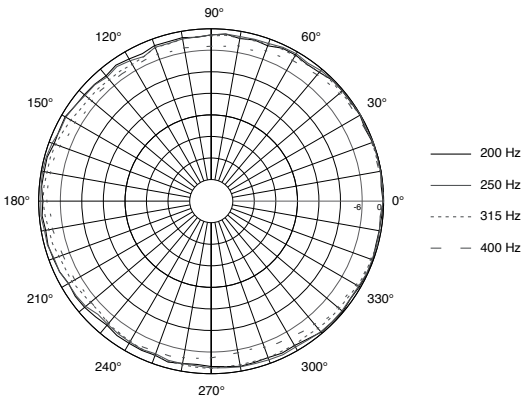
Contribution of each mid-range one-third-octave frequency band to the SPL (per EN54-24) when system is driven to Rated Maximum SPL (111 dB @ 1m; 99 dB @ 4m - in Music mode) using specified broadband pink-noise signal, 60W tap setting, 4m (Contribution figures: 500 Hz = 61 dB; 630 Hz = 63 dB; 800 Hz = 63 dB; 1000 Hz =60 dB; 1250 Hz = 63 dB; 1600 Hz =63 dB; 2000 Hz =62 dB; 2500 Hz =62 dB; 3150 Hz =63 dB; 4000 Hz = 62 dB).

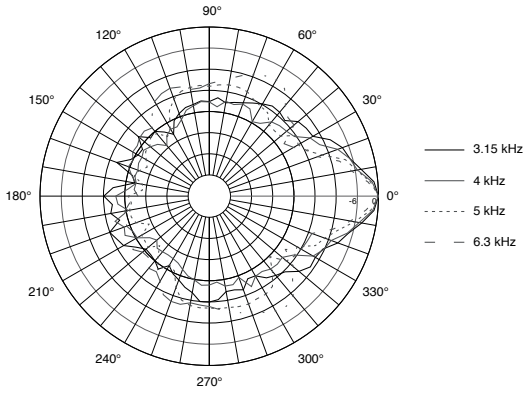
CBT 50LA-LS

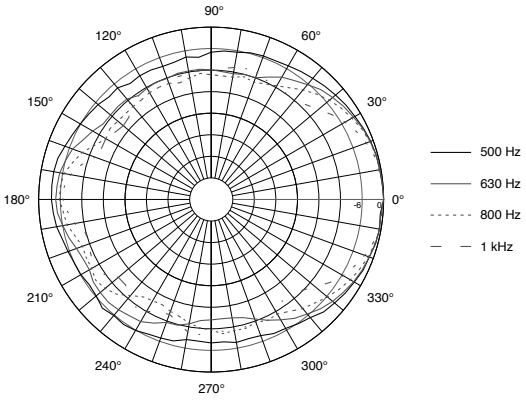
Line Array Column Loudspeaker with Eight 50 mm (2 in) Drivers and EN54:24 Certification

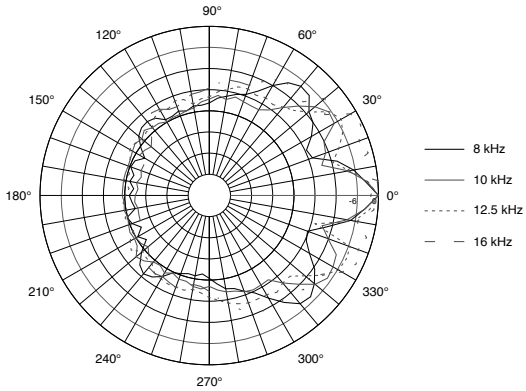
SPEC SHEET

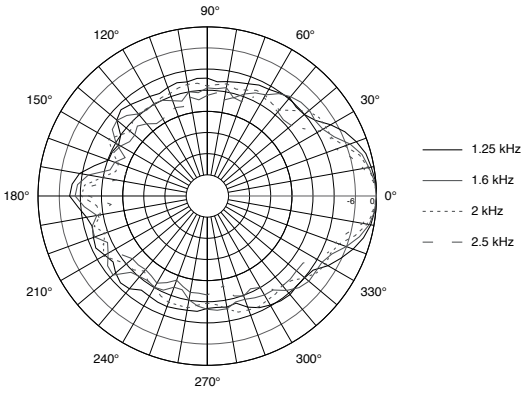
Vertical 1/3 Octave Polars











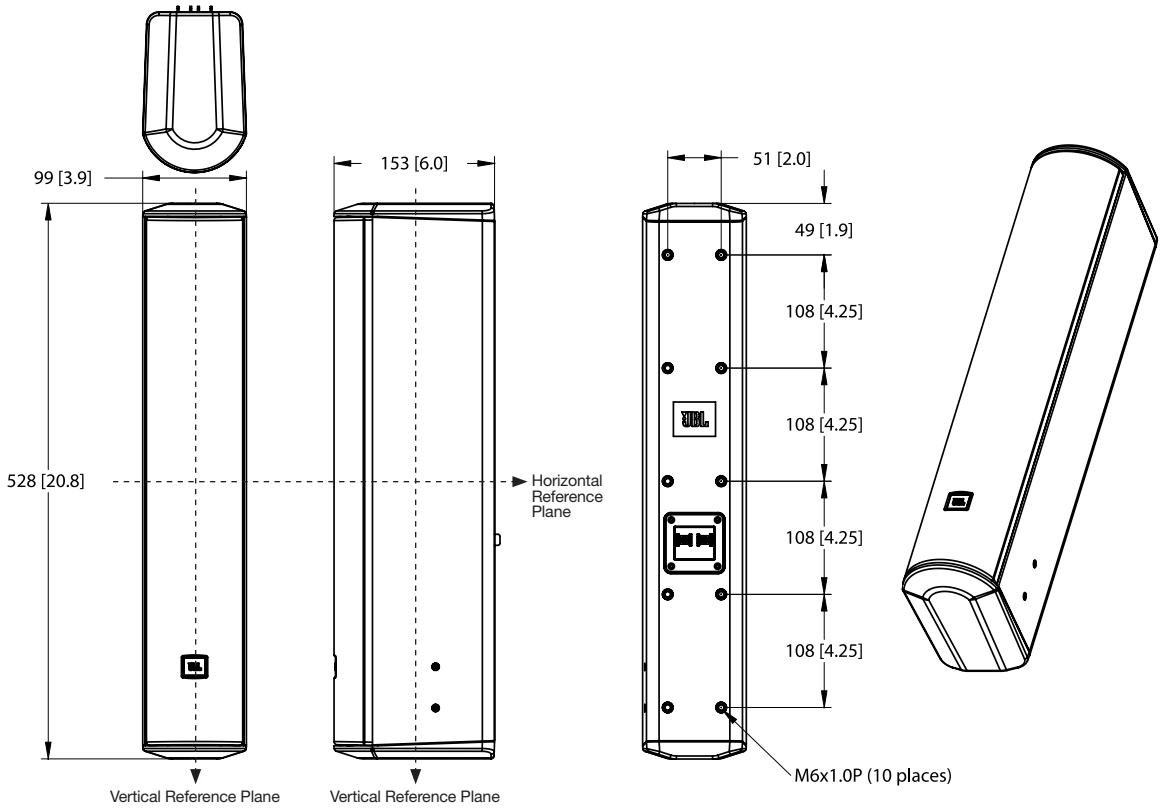
CBT 50LA-LS

Line Array Column Loudspeaker with Eight 50 mm (2 in) Drivers and EN54:24 Certification

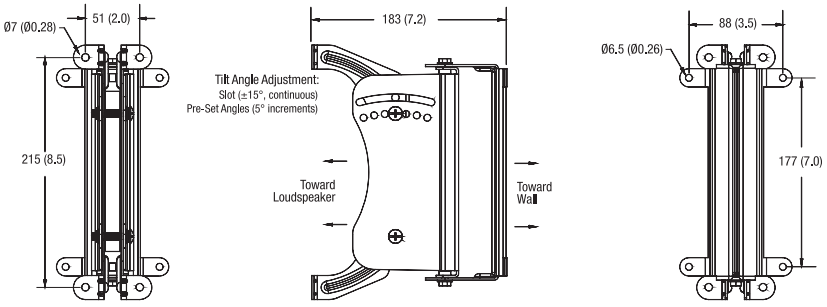
SPEC SHEET

DIMENSIONS ■

Dimensions in mm (in)



Wall Bracket



Loudspeaker-Mount Section

Assembled Bracket

Wall-Mount Section

© 2024 HARMAN International Industries, Incorporated. All rights reserved.
Features, specifications and appearance are subject to change without notice.