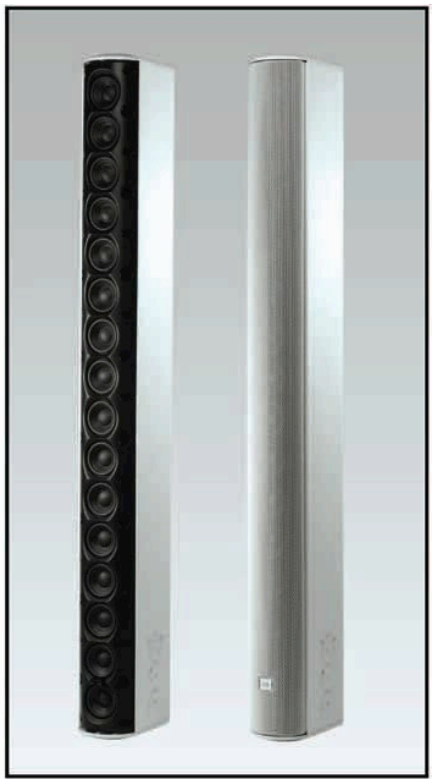
CBT 100LA-LS

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

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).
- Vertical pattern coverage switchable between 40° for medium-throw coverage and 15° for long-throw applications.
- 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 thru capability.

Overview:

The CBT 100LA-LS, with Constant Beamwidth Technology™, represents a breakthrough in pattern control consistency, utilizing complex analog delay beam-forming and amplitude tapering to accomplish superior, consistent vertical coverage without the narrow vertical beaming and out-of-coverage lobing that are typical of straight form-factor column speakers.

The slim, compact design fits well into virtually any architectural decor. The 100 cm (39.4 in) tall line array height provides consistent pattern control throughout the intelligibility band, making the CBT 100LA-LS ideal for difficult acoustic environments. The combination of superior sound quality, excellent pattern control, and compact design makes CBT 100LA-LS ideal for applications such as lecture halls, transit centers, conference rooms, cathedrals, multipurpose spaces, architectural spaces, and in-wall recessed locations, among many others.

The innovative coverage adjustability allows switching between broad and narrow vertical coverage settings to allow matching the coverage and throw requirements of the application. Coverage can be easily switched in-venue with the speaker already installed. This innovation allows a single loudspeaker model to excel in an extremely wide variety of project types.

The voicing can be set to match the application through the Music/Speech switch. 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, resulting in increased high frequency extension and reduced 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, plus eighteen M6 inserts on the back panel fit the spacing of common third-party mounting brackets, or can be utilized to suspend the speaker using forged shoulder steel eyebolts, providing installation versatility.

CBT 100LA-LS can be installed either indoors or outdoors. The drivers are weather-treated, the fiberglass reinforced ABS cabinet is excellent for outdoor applications, external screws are stainless steel screws, and the painted aluminum grille resists rusting in the harshest conditions.

Available in black or white (-WH).

CBT 100LA-LS Line Array Column Loudspeaker with Sixteen 50 mm (2 in) Drivers

Specifications:

Components:	Sixteen 50 mm (2 in) Full-Range
Frequency Range (-10 dB)[1]:	120 Hz – 20 kHz
Coverage Pattern:	Vertical: Narrow Mode: 15° (2 kHz - 16 kHz) (±10°) Broad Mode: 40° (1 kHz - 16 kHz) (±10°) Horizontal: 150° (ave, 1 kHz – 4 kHz, ±20°)
Coverage Angles (by Frequency and Switch Mode):	4000 Hz 20000 Hz 1000 Hz 500 Hz In Music Voicing, Broad Vertical Switch Settings: Vertical: 37° 32° 49° 66° Horizontal: 125° 185° 235° 360° In Speech Voicing, Broad Vertical Switch Settings: Vertical: 37° 32° 49° 66° Horizontal: 125° 185° 236° 360° In Music Voicing, Narrow Vertical Switch Settings: Vertical: 17° 24° 43° 66° Horizontal: 126° 185° 237° 360° In Speech Voicing, Narrow Vertical Switch Settings: Vertical: 17° 24° 43° 66° Horizontal: 127° 186° 236° 360°
Sensitivity (2.83V@ 1m)[1]:	Narrow: (speech mode) 96 dB (2 kHz - 14 kHz) (music mode) 93 dB (300 Hz - 18 kHz) Broad: (speech mode) 93 dB (2 kHz - 14 kHz) (music mode) 90 dB (300 Hz - 18 kHz)
EN54 Sensitivity (@ 4m)[4/5]:	76 dB (per EN54:24 spectrum and measurement conditions at 4 meters, set at broad/music mode.)
Nominal Impedance:	5 ohms (in Thru mode) 15w@70v; 30w@100v Tap = 333Ω 30w@70v; 60w@100v Tap = 167Ω 60w@70v; 120w@100v Tap = 83Ω 120w@70v; N/C@100v Tap = 42Ω
Power Capacity (5 ohm setting)[2]:	325 W (1300W peak), 2hrs 200 W (800W peak), 100 hrs
Max SPL[3]:	Narrow: (speech mode) 121 dB cont ave (127 peak) (music mode) 118 dB cont ave (124 peak) Broad: (speech mode) 118 dB cont ave (124 peak) (music mode) 115 dB cont ave (121 peak)
EN54 Max SPL (@ 4m)[4/5]:	92 dB (per EN54:24 spectrum and measurement conditions, at 4 meters)
70V/100V Transformer Taps:	120W, 60W, 30W, (15W at 70V only), and thru, via switch
Reference Axis[4]:	Specification and measurement referenced on-axis vertically and horizontally to the center point of the speaker baffle.
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:	18 M6 insert points on back panel.
Mounting:	Included swivel (pan)/tilt wall bracket provides continuously variable +/-80 degree 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 degree tilt, as well as 5 degree fixed increment points. Eighteen 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):	1000 x 98.5 x 153 (39.4 in x 3.8 in x 6.0 in)
Net Weight:	7.2 kg (15.8 lb)
Safety Agency:	EN54-24:2008 certified (Certificate No. 0359-CPR-00432), when installed with MTC-PC2 terminal panel cover. Cabinet UL94-5VB flammability rated. In accordance with the requirements of IEC60849/EN60849. Transformer UL registered per UL1876.
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

[1] Full space
[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] Full space (free field) environment utilized for measurements, including the EN54 measurements.
[5] Per EN54-24 Components of voice alarm system - loudspeakers: Input signal for Sensitivity and Max SPL has 2-to-1 peak-to-average ratio. Measurements taken at distance of 4 meters. Max SPL measured with 100V RMS input signal at top 100V tap.

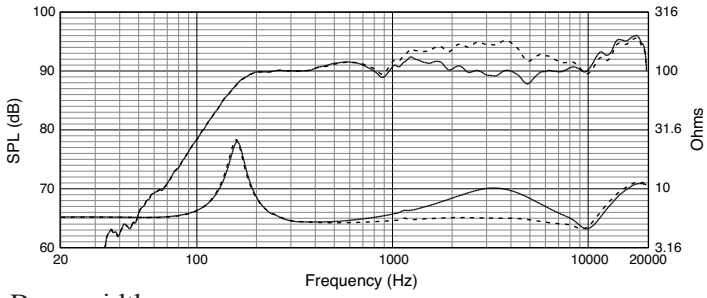
JBL continually engages in research related to product improvement.
Changes introduced into existing products without notice are an expression of that philosophy.

CBT 100LA-LS Line Array Column Loudspeaker with Sixteen 50 mm (2 in) Drivers

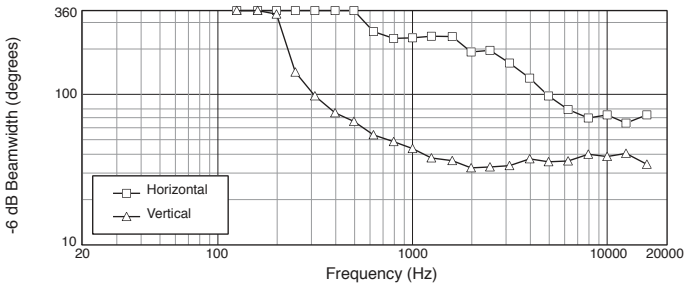
Broad Setting

Frequency Response:

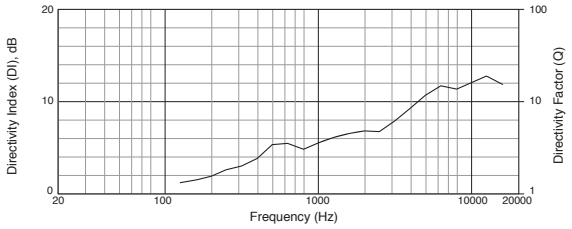
"Music" Mode (solid); "Speech" Mode (dotted),
1W, 1m, and Impedance (full-space, on-axis)



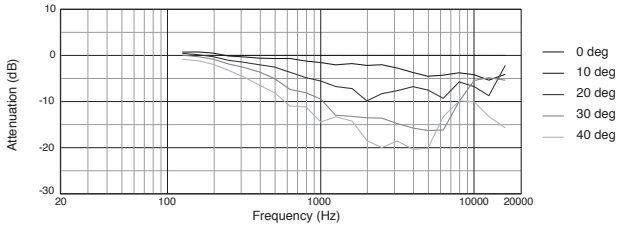
Beamwidth:



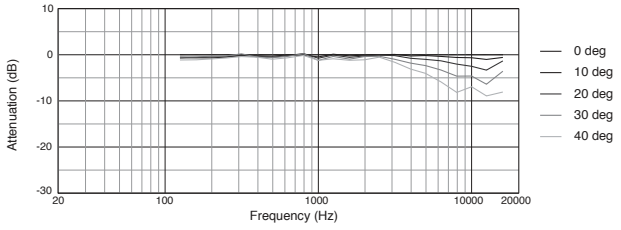
Directivity, Q



Vertical Off-Axis Frequency Response



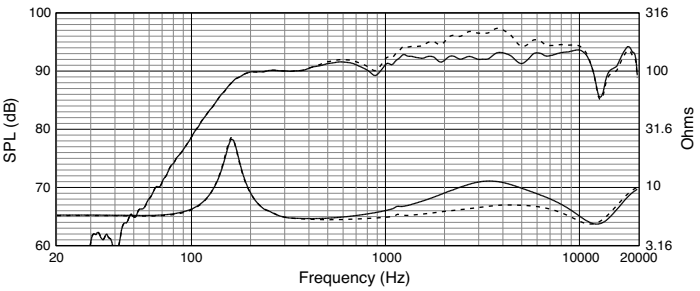
Horizontal Off-Axis Frequency Response



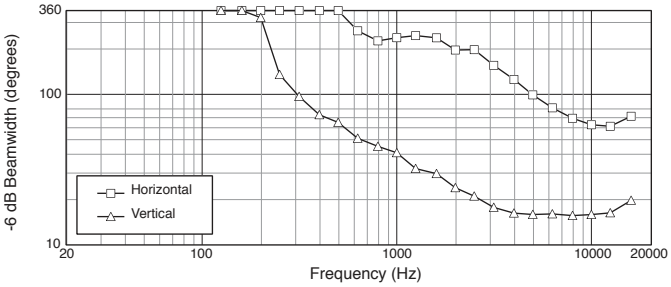
Narrow Setting

Frequency Response:

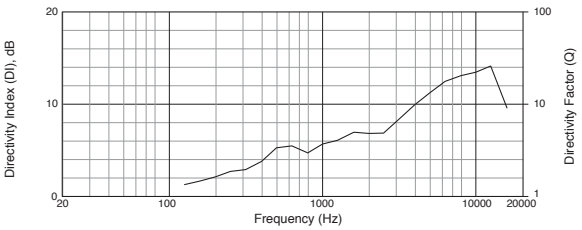
"Music" Mode (solid); "Speech" Mode (dotted),
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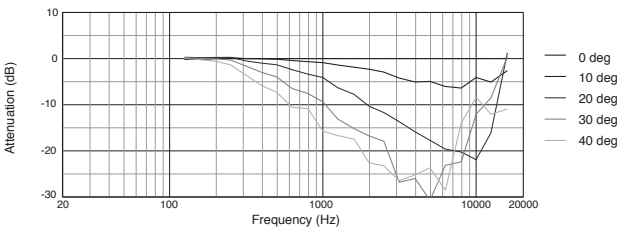
Beamwidth:



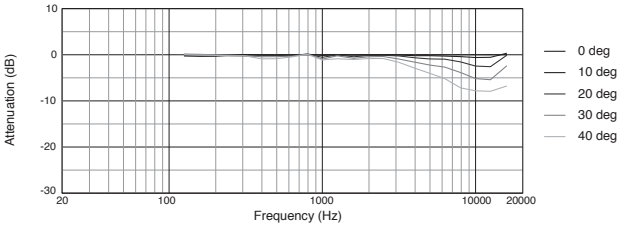
Directivity, Q



Vertical Off-Axis Frequency Response



Horizontal Off-Axis Frequency Response

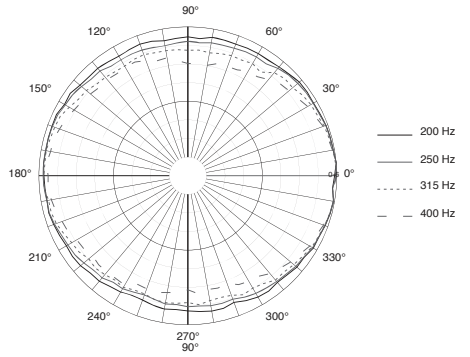


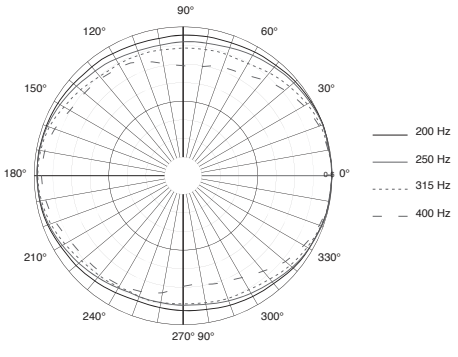
CBT 100LA-LS Line Array Column Loudspeaker with Sixteen 50 mm (2 in) Drivers

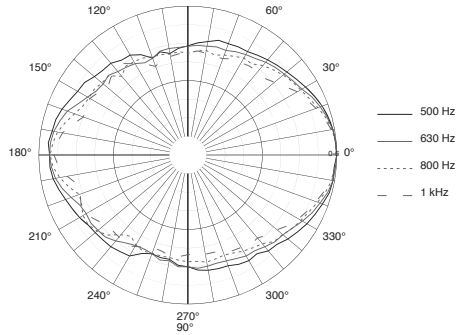
Broad Setting

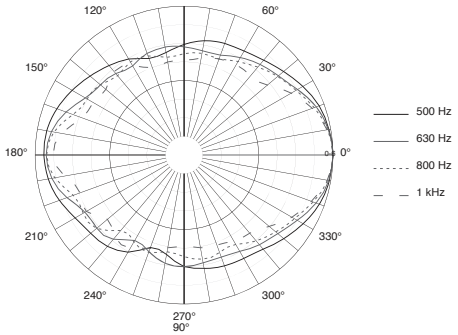
Narrow Setting

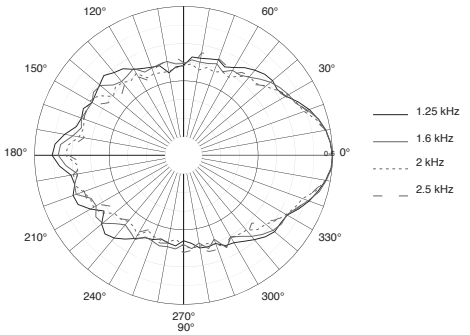
Vertical 1/3 Octave Polars

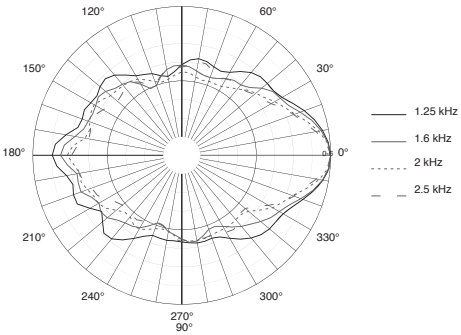


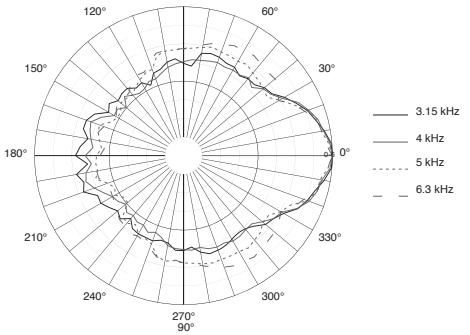


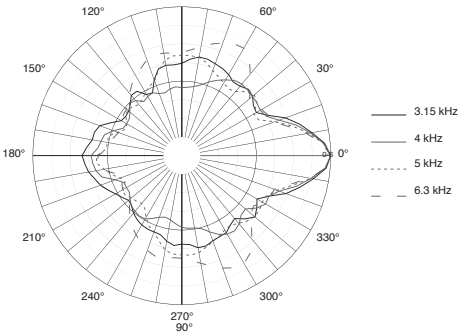


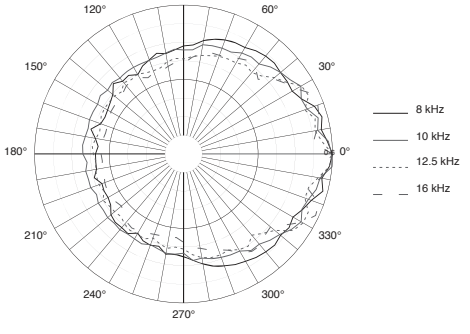


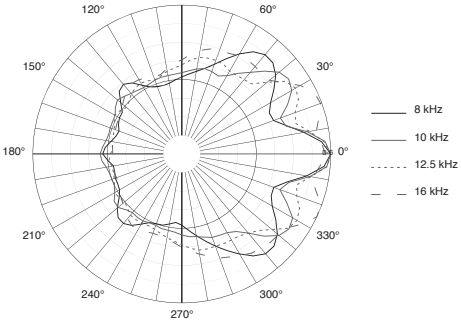










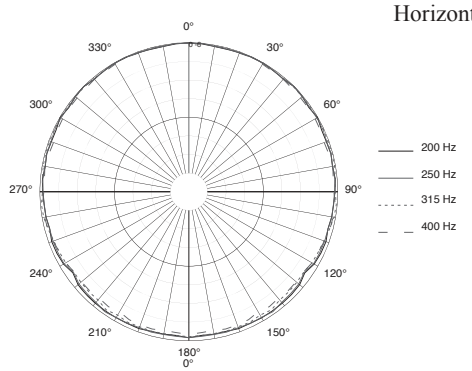


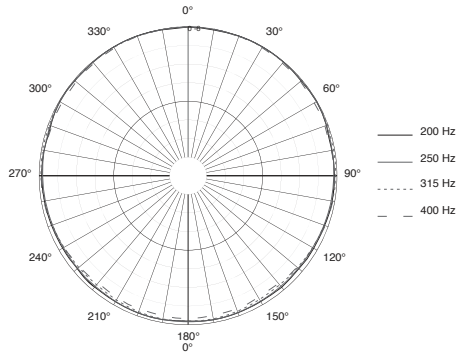
CBT 100LA-LS Line Array Column Loudspeaker with Sixteen 50 mm (2 in) Drivers

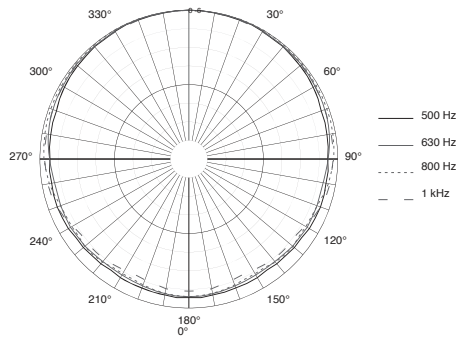
Broad Setting

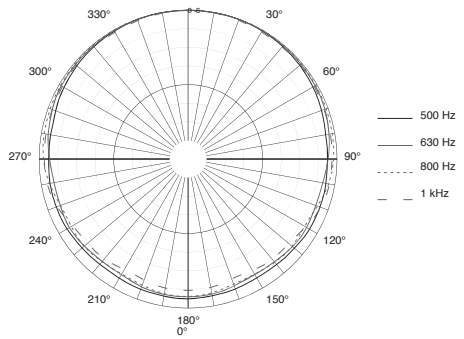
Narrow Setting

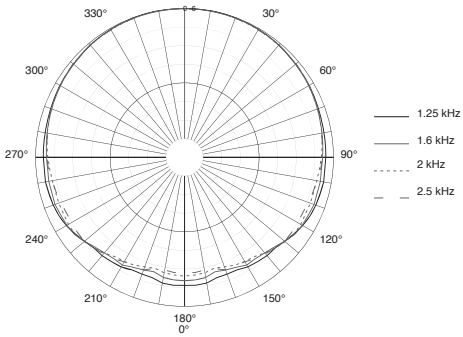
Horizontal 1/3 Octave Polars

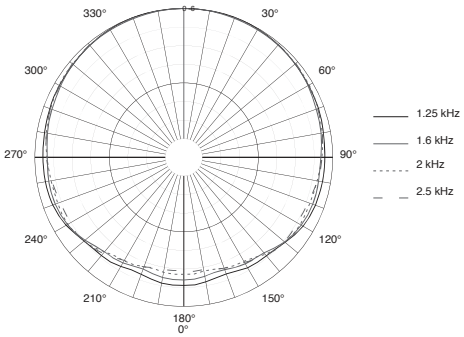


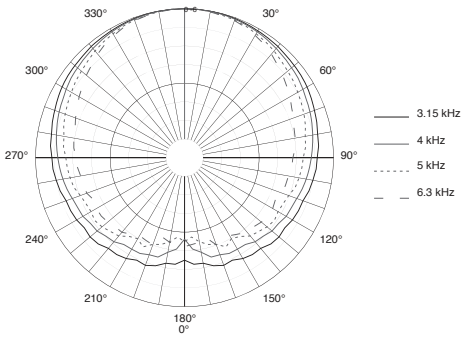


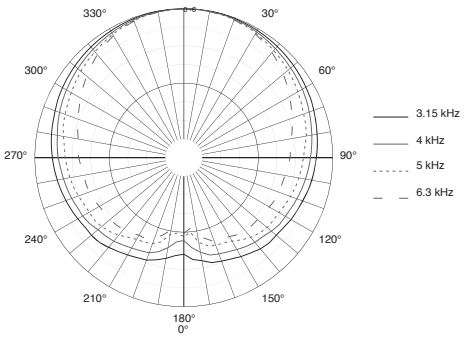


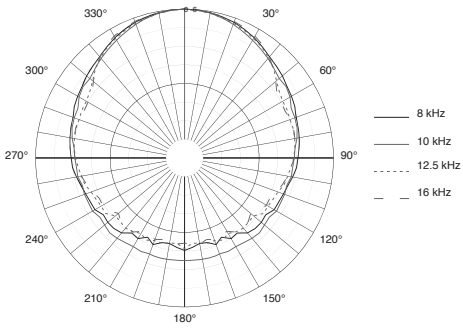


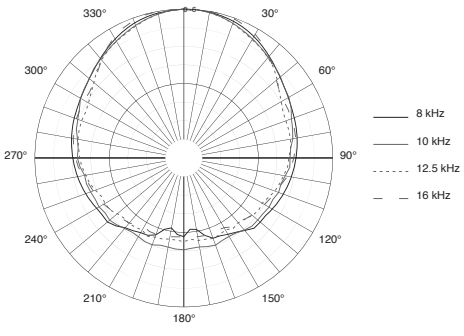








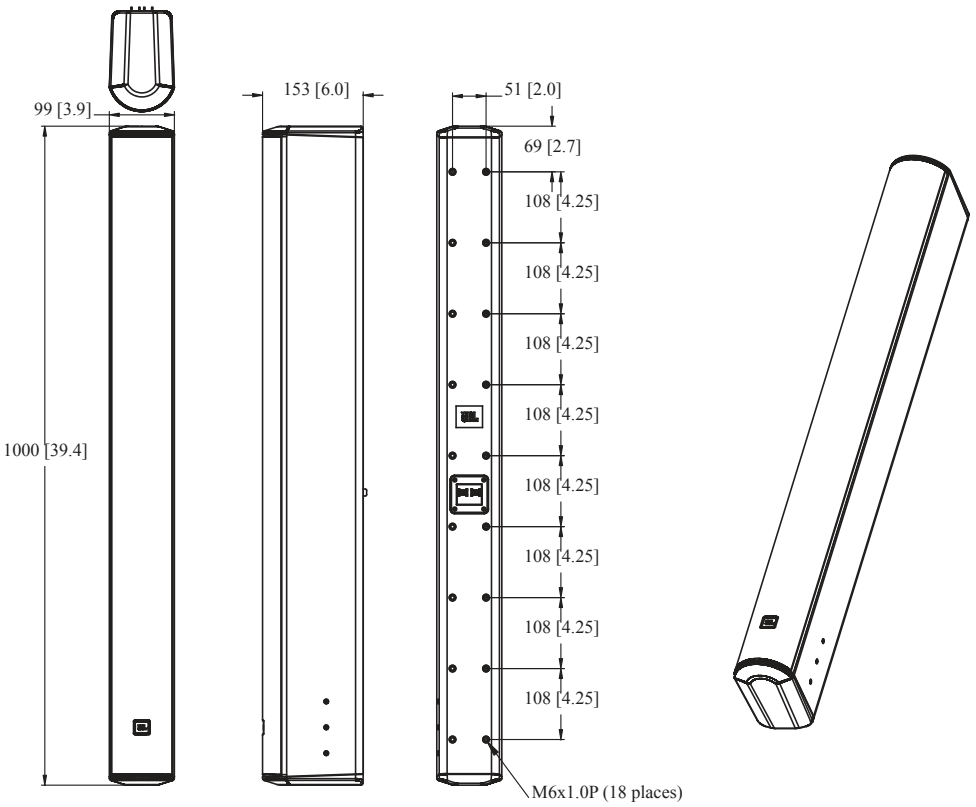




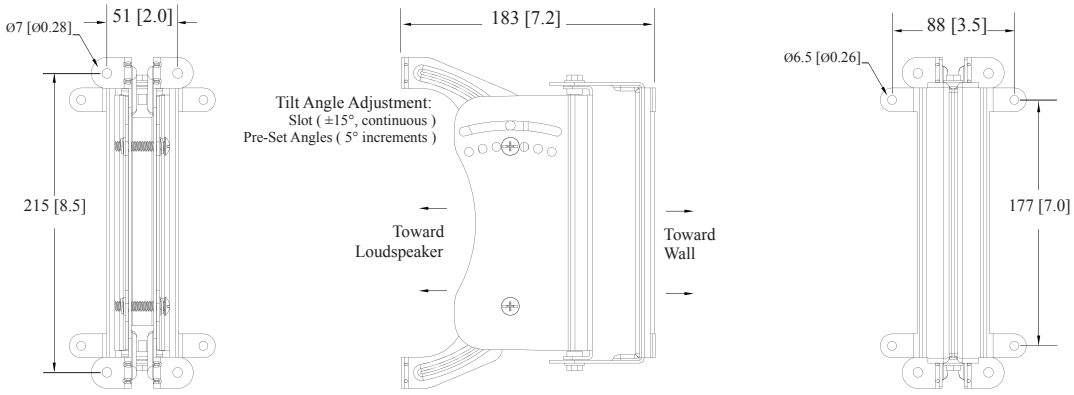
CBT 100LA-LS Line Array Column Loudspeaker with Sixteen 50 mm (2 in) Drivers

Dimensions:

Dimensions in mm (in)



Wall Bracket



Loudspeaker-Mount Section

Assembled Bracket

Wall-Mount Section

JBL Professional
8500 Balboa Boulevard
Northridge, California 91325 U.S.A.

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