CBT 70JE
Purpose-Designed Extension for CBT 70J Line Array Column Speaker

Key Features:

CBT 70JE:
- Components: Four 125 mm (5 in) high-power LF drivers
- 500 Watt power handling
- Built-in purpose-designed crossover network, for combining with CBT 70J
- Coupler plate included

CBT 70J + 70JE ARRAY SYSTEM:
- Extended pattern control (to 400 Hz for ± 20° control, to 200 Hz for substantial off-axis cancellation)
- Extended bass response to 45 Hz.
- Components: Sixteen 25 mm (1 in) soft dome tweeters and eight 125 mm (5 in) high-power LF drivers.
- Patent-pending ConstantBeamwidth Technology™ provides constant directivity up to the highest frequencies and reduces out-of-coverage lobbing.
- Vertical pattern coverage switchable between 45° for medium-throw coverage and 25° for long-throw applications.
- Switchable voicing provides flat response in music mode or mid-range presence peak in speech modes.
- Coupler plate and wall tilt bracket included (near-insert-point pattern fits standard third-party brackets)

Overview:

CBT 70JE
The CBT 70JE cabinet contains four low frequency drivers and a crossover network purposely designed for use in the CBT 70J + 70JE System, in a tough fiberglass-reinforced ABS enclosure. The 500W power handling and high sensitivity delivers powerful low frequency output.

The drivers have lightweight dual magnet neodymium motors with 38 mm (1.5 in) diameter voice coils. The dual-magnet system provides maximum flux in a compact package. The magnet structure is magnetically shielded and the pole tips are magnetically saturated for lower flux modulation and minimum distortion. The 16 mm (0.63 in) long coils provide high linear drive and high power handling in a compact driver. The drivers feature damped blended surrounds and coated sealed paper cones found in high performance large format drivers. Drivers feature coated diaphragm materials to provide moisture, UV and salt resistance for outdoor capability.

CBT 70J + 70JE ARRAY SYSTEM
When connected to a CBT 70J line array column speaker, the CBT 70JE Extension provides extended bass response, extended pattern control, and increased sound output levels. The combined array system provides Constant Beamwidth Technology™, which represents a breakthrough in pattern control consistency, utilizing complex analog beamforming and amplitude tapering to accomplish superior, consistent vertical coverage without the narrow vertical beaming and out-of-coverage lobing that are typical of passive column speakers.

The CBT 70JE attaches to the top of the CBT 70J, utilizing the included coupler plate, resulting in a very well controlled progressive line array with asymmetrical vertical coverage. This coverage produces a higher concentration of sound with a tighter pattern projecting to the far areas of the listening space, and a lower concentration with a broader vertical pattern projecting toward the near area of the space. This results in more even front-to-back SPL levels than would be the case from a traditional speaker or column that projects symmetrically.

The CBT 70J + 70JE System provides a wide 45–20 kHz bandwidth, and the slim footprint fits well into virtually any architectural décor. The 140 cm (55.2 in) tall line array height provides consistent pattern control throughout the intelligibility band, making the System work well in difficult acoustic environments.

Applications
The superior sound quality, excellent pattern control, asymmetrical vertical coverage and compact design makes the CBT 70J + 70JE System ideal for applications such as performance spaces, lecture halls, classrooms, A/V transit centers, school stadiums, multipurpose spaces, racetracks, theme parks, and fill applications, among many others.

Adjustable Coverage to Fit the Application
The innovative coverage adjustability of the CBT 70J + 70JE System 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 system to excel in a wide range of project types.

User Variable Voicing
The voicing of the CBT 70J + 70JE System can be set to match the application through a 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, along with increased midrange sensitivity for higher midrange maximum output capability.

SonicGuard™
Dynamic SonicGuard protection of the CBT 70J + 70JE System (built into the CBT 70J) protects the high frequency section, minimizing distortion at high drive levels by limiting driver excursion dynamically. This maximizes music clarity and speech intelligibility at high drive levels while protecting the drivers from damage due to occasional overpowering.

Bracketry
A thick coupler plate for connecting the CBT 70J + 70JE end-to-end is included with the 70JE. The CBT 70J + 70JE System can utilize the wall bracket that is included with the 70J, or can utilize industry-standard mounting points on the coupler plate (OmniMount™ 60.0 and 120.0 patterns) for attaching to a wall. Alternatively, the M6 inserts on the back panel can be utilized to suspend the speaker using forged shoulder steel eyebolts or swivel mounting rings, providing installation versatility.

The CBT 70J + 70JE System 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, and the painted aluminum grille resists rusting. Available in black or white (-WH).
**CBT 70JE Purpose-Designed Extension for CBT 70J Line Array Column Speaker**

### Specifications:

**CBT 70JE EXTENSION LOUDSPEAKER**
- **Components:** Four (4) 130 mm (5 in) LF drivers
- **Frequency Range (-10 dB):** 45 Hz – 700 Hz
- **Sensitivity (2.83V @ 1m):** 90 dB full space, 96 dB half-space (65 Hz - 300 Hz)
- **Nominal Impedance:** 8 ohms
- **Power Capacity:** 500 W (2000 W peak), 2 hrs.
- **Max SPL:** 117 dB
- **Net Weight:** 8.2 kg (18 lb)

**CBT 70J + 70JE SYSTEM** (connected end-to-end, driven in parallel)
- **Components:** Eight (8) 130 mm (5 in) LF drivers, Sixteen (16) 25 mm (1 in) HF drivers
- **Frequency Range (-10 dB):** 45 Hz – 20 kHz
- **Coverage:** Vertical (selectable via switch)
  - Narrow Mode: 25° (2 kHz – 16 kHz) (±10°)
  - Broad Mode: 45° (500 Hz – 16 kHz) (±10°)
- **Sensitivity (@1m):**
  - Narrow (speech mode): 98 dB @ 2.83V, 95 dB @ 2.0V (150 Hz – 8 kHz)
  - (music mode): 94 dB @ 2.83V, 91 dB @ 2.0V (80 Hz – 18 kHz)
  - Broad (speech mode): 97 dB @ 2.83V, 94 dB @ 2.0V (100 – 8 kHz)
  - (music mode): 93 dB @ 2.83V, 90 dB @ 2.0V (70 Hz – 18 kHz)
- **Nominal Impedance:** 4 ohms
- **Power Capacity:** 1000 W (4000 W peak), 2 hrs.
- **Max SPL:** Narrow (speech mode) 125 dB cont ave (131 peak)
  - (music mode) 124 dB cont ave (127 peak)
  - Broad (speech mode) 124 dB cont ave (130 peak)
  - (music mode) 120 dB cont ave (126 peak)

**Transducers:**
- **Low Frequency Drivers:** 8 pcs, 130 mm (5 in) drivers, dual magnet neodymium, 58 mm (2.3 in) voice coil, damped blended textile surround, coated diaphragm for moisture, UV and salt resistance, shielded.
- **High Frequency Drivers:** 16 pcs, 25 mm (1 in) drivers, dual magnet neodymium, encased magnet and coated diaphragm for moisture, UV and salt resistance, shielded.

**Enclosure:**
- **Enclosure:** Fiberglass-reinforced ABS cabinet, painted aluminum grille.
- **Outdoor Capability:** IP-54 rated, per IEC 529, UV, moisture and salt-spray resistant.
- **Colors:** Black or white (-WH)
- **Insert Points:** 20 insert points total, 8 utilized for coupler plate, M6 (16 mm deep) on back panel
- **Mounting:** Coupler plate joins the CBT 70J and 70JE end-to-end. Threaded points on coupler plate accepts Omnimount™ 60.0 Series and 120.0 Series compatible wall-mount brackets, as well as points for the wall bracket that is included with CBT 70J.
- **Dimensions (H x W x D):** 1588 x 170 x 237 mm (54.8 x 6.7 x 9.3 in)
- **Net Weight:** 20.4 kg (45 lb)

**Included Accessories:** Coupler plate (included with 70JE)
- **Wall tilt bracket (included with 70J)**

**Optional Accessories:** MTC-PC2 terminal panel cover
- **Note:** MTC-CBT-SMB1 speaker stand mount bracket is not recommended for the CBT 70J/70JE System

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**Full-space**
- IEC standard, full bandwidth pink noise with 6 dB crest factor.
- Calculated based on power rating and measured sensitivity, exclusive of power compression.
- JBL continually engages in research related to product improvement. Some materials, production methods and design refinements are introduced into existing products without notice as a routine expression of that philosophy. For this reason, any current JBL product may differ in some respect from its published description, but will always equal or exceed the original design specifications unless otherwise stated.

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**CBT70JE**

**Frequency Response (full-space, 4π) and Impedance**

![Frequency Response Graph](image-url)
CBT70J + 70JE Array System

Broad Setting
Frequency Response:
“Music” Mode (solid); “Speech” Mode (dotted), 1W (2.83V, full-space, 4π), 1m, and Impedance

Narrow Setting
Frequency Response:
“Music” Mode (solid); “Speech” Mode (dotted), 1W (2.83V, full-space, 4π), 1m, and Impedance

Beamwidth:

Directivity, Q

Vertical Off-Axis Frequency Response, Up

Vertical Off-Axis Frequency Response, Down

Horizontal Off-Axis Frequency Response
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CBT70J + 70JE Array System

Broad Setting

Narrow Setting

Horizontal 1/3 Octave Polars

- 200 Hz
- 250 Hz
- 315 Hz
- 400 Hz

- 330°
- 210°
- 300°
- 240°
- 270°
- 0°
- 180°
- 90°
- 60°
- 120°
- 30°

- 500 Hz
- 630 Hz
- 800 Hz
- 1 kHz

- 1.25 kHz
- 1.6 kHz
- 2 kHz
- 2.5 kHz

- 3.15 kHz
- 4 kHz
- 5 kHz
- 6.3 kHz

- 8 kHz
- 10 kHz
- 12.5 kHz
- 16 kHz
CBT70J + 70JE Array System
Broad Setting
Vertical 1/3 Octave Polars

Narrow Setting
Vertical 1/3 Octave Polars
CBT 70JE Purpose-Designed Extension for CBT 70J Line Array Column Speaker

Dimensions:
Dimensions in mm [in]

CBT 70JE

Coupler Plate

CBT 70J + 70JE System

Wall Bracket

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