HARMAN

A **SAMSUNG** COMPANY

HARMAN QUICK PITCH GUIDE

CEILING SPEAKERS

LCT 81C/T
LOW-PROFILE LAY-IN 2' X 2' CEILING TILE LOUDSPEAKER
- High efficiency 200 mm (8 in) dual-cone driver
- Perforated metal grille included
- Combined 70V/100V and low impedance direct operation
- 20 Watts at 8Ω (low-impedance) direct setting
- 10 Watt multi-tap at 70V/100V with taps at 10W, 5W, 2.5W (and 1.3W for 70V only)

CONTROL CONTRACTOR 20 SERIES
BLIND-MOUNT SMALL FORMAT CEILING SPEAKERS
- Provide full-range, high-fidelity sound reinforcement for applications such as background music or music-plus-paging systems
- 4'' to 6.5'' speaker size versions (70V and 8 ohm capable)
- Deliver extremely wide, even coverage enabling fewer speakers to be utilized.
- Two subwoofer models available
- Paintable

CONTROL CONTRACTOR 20 SERIES
SURFACE MOUNT SPEAKERS
- 13 models and sizes with an assortment of coverage patterns and output ranges
- Deliver superior fidelity with high SPL output and wide, consistent coverage
- Weather-resistant transducers and enclosures with high-impact polystyrene s
- Recently updated 23-1, 25-1 and 28-1 models provide higher power handling extended frequency range and U-bracket option
- Patented JBL InvisiBall™ mounting enables easy install and theft deterrence

CONTROL CONTRACTOR 40 SERIES
CONSTANT-DIRECTIVITY CEILING SPEAKERS
- Premium, in-ceiling, specialty loudspeakers provide outstanding pattern control and superior sonic performance
- Patented RBI Radiation Boundary Integrator® provides uniform 120° conical coverage
- Six models including a low-profile model for tight ceiling spaces and a subwoofer with built-in passive crossover
- High intelligibility even off axis so you can potentially use less speakers
- Paintable

COLUMN SPEAKERS

CBT 50LA-I
PASSIVE CONTROLLED-COVERAGE COLUMN SPEAKER WITH EIGHT 50 MM DRIVERS
- Patent-pending Constant Beamwidth Technology™ provides constant directivity up to the highest frequencies and reduces out-of-coverage lobing
- Switchable voicing: flat response in music mode or mid-range presence peak in speech mode
- Dynamic SonicGuard™ overload protection
- Built-in 70V/100V transformer, plus 8 ohm direct capability

CBT 70J-I + 70JE-I
PASSIVE CONTROLLED-COVERAGE COLUMN SPEAKER WITH EXTENSION SYSTEM
- Components: Four 125 mm (5'') high-power LF drivers (70JE-1)
- 500W power handling (70JE-1)
- Built-in crossover network for combining CBT 70J-1 and 70JE-1
- Extended bass response to 45 Hz.
- Patent-pending Constant Beamwidth Technology™
- Switchable voicing: flat response in music mode or mid-range presence peak in speech mode

CBT 100LA-I
PASSIVE CONTROLLED-COVERAGE COLUMN SPEAKER WITH SIXTEEN 50 MM DRIVERS
- Vertical coverage switchable between 40° for medium-throw and 15° for long-throw
- Dynamic SonicGuard™ overload protection
- Built-in 70V / 100V transformer, plus 8 ohm direct capability
- Life safety (LS) model also available
- CBT 200LA-1 model also available with thirty two 50 mm drivers in 200 cm housing

CBT 1000 + CBT 1000E
PASSIVE CONTROLLED-COVERAGE COLUMN SPEAKER / EXTENSION SYSTEM
- Components: Six (6) 165 mm (6.5'') high-excursion LF drivers (CBT1000E)
- 1500W power handling (CBT1000E) or 3000W power handling (CBT1000+1000E)
- Patent-pending Constant Beamwidth Technology™
- Patent-pending tapered horizontal in both front and rear corners of a room (CBT1000)
- Switchable voicing for music mode or speech mode

PROFESSIONAL AMPLIFIERS

*6 YEAR WARRANTY PROMO ON ALL CROWN AMPLIFIERS

CROWN DRIVECORE SERIES

ANALOG + BLU LINK INPUT AMPLIFIERS

- Available in 300W, 600W, 1200W per channel versions
- 2-and 4-c frame sizes (2RU rack space)
- High Z or Low Z operation (8, 4, 2 ohm, 70V or 100V)
- Blu Link versions available to use with BSS Audio Architect
- JBL speaker tunings pre-loaded for easy install
- Front Panel display for easy programming

DRIVECORE INSTALL SERIES

DCi NETWORK AMPLIFIERS

- 300W and 600W per channel models with 2, 4 or 8 channels
- 1250W and 2400W per channel models with 2 or 4 channels
- Analog and Digital inputs (HARMAN Blu Link)
- Network and Monitoring Control via HiQnet using Audio Architect
- Full DSP includes LevelMAX Limiter, EQ, Delay, Matrix Mixer and Speaker Line Monitoring

DRIVECORE INSTALL NETWORK DISPLAY SERIES

DCi NETWORK AMPLIFIERS WITH AVB

- Two models available: 4-channel with 1250W output or 8-channel with 600W output
- Certified by the AVnu Alliance® as compliant with Audio Video Bridging and Time Sensitive Networking standards
- Designed to meet the requirements of mission critical, network-based multimedia applications where synchronization is paramount

CROWN XTI 2 SERIES

XTI 1002, 2002, 4002, 6002

- Premium output 2-channel amps in 500W, 800W, 1200W and 2100W per channel versions
- PeakX Plus Limiters
- Enhanced control with Sub-harmonic Synth Selection
- Three user-definable fan modes
- 50 presets (49 user-definable)

ANALOG AND DIGITAL MIXERS

NOTEPAD SERIES

SOUNDCRAFT ANALOG MIXERS

- Legendary Soundcraft sound for music, podcasts or videos
- Built-in USB audio interface to use with editing software
- Renowned Soundcraft mic preamps
- Well-suited for home studio or portable studio requirements
- Not just for musicians – perfect for podcasters too

SOUNDCRAFT Ui SERIES

Ui16, Ui12, Ui24R DIGITAL MIXERS

- 12-, 16- and 24-channel frame sizes and integrated Wi-Fi
- Remote Control Digital Mixer from up to 10 smart devices simultaneously
- Signal Processing from dbx®, Digitech®, and Lexicon®
- Ui24 model enables multi-track recording, expansion option, Studer-designed mic pre-amps, and UDP Control Recall

Ableton 10 Lite s/w Included!

SOUNDCRAFT Si SERIES

Si DIGITAL MIXERS

- 16-, 24- and 32-channel frame sizes
- Up to 80 channels to mix
- Motorized faders and very tactile control
- Card slot expansion for apps such as Stagebox, Blu Link, Dante or digital recording
- HiQnet port for wireless control via ViSi app or ViSi Listen app
- BSS, DBX and Lexicon built in
- VCA's on some models

SOUNDCRAFT VI SERIES

Vi DIGITAL MIXERS

- Premium mixing console available in multiple frame sizes
- Up to 128 inputs and 32 mono/stereo busses
- Dante and MADI built-in; 2 expansion card slots
- Motorized faders and very tactile control
- HiQnet port for wireless control via ViSi app or ViSi Listen app
- BSS, DBX and Lexicon built-in

AUDIO PROCESSORS

COMMERCIAL MIXERS / AMPLIFIERS

DBX SIGNAL PROCESSORS
ZONEPRO DIGITAL ZONE PROCESSORS
- 12x6 or 6x4 I/O choices; "M" versions added mic/line inputs
- Fixed architecture with easy setup using the wizard tool
- Optional ZC Wall Controllers for zone control of volume, input source, and presets
- AFS Advanced Feedback Suppression built-in
- Stackable Expansion option
- RS-232 for third-party control

JBL COMMERCIAL AUDIO
CSA SERIES AMPLIFIERS
- Eight options available with 1 or 2 channels and between 40W and 300W per channel, depending on model
- Built-in 70V and 100V
- Fanless, space-saving 1U design
- Sleep mode disable function
- Energy-efficient amplifier

DBX SIGNAL PROCESSORS
ZONE CONTROLLERS
- Nine options including break-out boxes and wall mount controllers provide added utility to DBX Signal Processors
- Utilize analog DC voltage and Cat 5 cable connectivity for distances up to 1,000 feet
- Wall-mounted ZCs provide convenient access to source selection, volume, muting, and scenes / presets
- ZC-FIRE model provides specialized Fire Safety interface

JBL COMMERCIAL AUDIO
CSM SERIES ANALOG MIXERS
- 4 or 8 inputs with 1- or 2-channel outputs
- Fanless, space-saving 1U design
- Configurable output routing (on 2-channel models only)
- Independent base/treble controls
- Priority muting, VOX ducking, and phantom power
- CSM-21 and CSM-32 models offer specialized features for Public Address applications including one line input for priority audio, music EQ, and global mic EQ

BSS AUDIO SIGNAL PROCESSORS
SOUNDWEB FIXED I/O DEVICES
- Professional-grade Audio DSP with five options
- Expandable with break in and break out boxes
- Digital audio connectivity with BSS proprietary Blu Link topology
- AEC Acoustic Echo Cancellation available
- VOIP and POTS line available for audio-conferencing
- RS-232 for third-party control

JBL COMMERCIAL AUDIO
VMA SERIES MIXER / AMPLIFIERS
- Several configuration models available:
  - 5 inputs with single output of 60W, 120W, or 240W
  - 8 inputs with two outputs of 60W or 120W
- Independent bass and treble controls for each output channel
- 100V and 70V output, or 4 ohms / 8 ohms
- Paging Chime, and Priority muting
- Works with JBL CSR-V wall controllers

BSS SIGNAL PROCESSORS
CONTRIO CONTROLLERS
- Six options provide enhanced control and audio routing flexibility when installed with BSS Soundweb devices
- Model options include various combinations including volume knob, 4-8 multi-color programmable buttons, backlit LCD display, and ethernet or analog control
- Compatible with stylish black or white Decora style switch plates in single or dual-gang configurations

JBL COMMERCIAL AUDIO
CSMA SERIES MIXER / AMPLIFIERS
- Several configuration models available:
  - Inputs with single output of 80W or 120W
  - 8 inputs with two outputs of 40W, 80W or 120W
- Fanless, space saving 1U design
- Independent bass and treble controls for each output channel
- Supports 70V and 100V distributed audio systems without the need for a separate transformer

HARMAN
A SAMSUNG COMPANY

COMPACT POWERED SPEAKERS

IRX SERIES

POWERED LOUDSPEAKERS WITH BLUETOOTH
· Models include 8'' or 12'' JBL woofer and a robust 1300W amplifier
· Bluetooth integration enables streaming source audio
· Four real-world EQ presets take the guesswork out of optimizing sound
· dbx AFS Automatic Feedback Suppression stops feedback before it starts.
· One-touch ducking automatically lowers music volume when speech is detected
· Lightweight design: <28 lbs.

ALL-IN-ONE PORTABLE PA

EON ONE COMPACT

ALL-IN-ONE BATTERY POWERED PORTABLE PA WITH 4-CHANNEL MIXER
· 112 dB output the highest volume in its class
· 8'' woofer with deep low-frequency performance down to 37.5 Hz
· Ultralight unit weighs just 17.6 lbs. (8 kg)
· Set up quickly and easily using JBL EON ONE Compact Control App
· Tool-free, swappable battery provides up to 12 hours of playtime
· Bluetooth integration enable music streaming and connection 4 EON ONE Compact units

EON ONE

ALL-IN-ONE LINEAR ARRAY PA WITH 6-CHANNEL MIXER
· 380W of power, 118 dB max SPL for clear, detailed audio
· Patent-pending linear-array configuration offers exceptional sound coverage
· Unobstructed 10'' bass-reflex subwoofer for accurate low-frequency response
· Bluetooth connectivity for streaming audio from your mobile device
· Powerful 6-channel mixer with easy-to-use controls

EON ONE PRO

ALL-IN-ONE BATTERY-POWERED PA WITH 7-CHANNEL MIXER
· Unobstructed 8'' subwoofer and linear array delivers powerful bass and great coverage
· Performs for up to 6 hours without recharging
· Lightweight (~35 lbs.) and compact modular design for easy breakdown and transport
· 7-channel analog mixer featuring Hi-Z inputs and phantom power
· Stream break music or backing tracks from your mobile device via Bluetooth

POWERED LOUDSPEAKERS

EON600 SERIES

POWERED LOUDSPEAKERS WITH BLUETOOTH CONTROL
· 10'', 12'', 15'' two-way speakers and 18'' subwoofer
· JBL Waveguide Technology
· 1000W Class D Amplifier
· Bluetooth control of DSPs via EON Connect App
· Designed for flexible use: On side, standing up, pole mount, M10 Suspension Points

PRX800 SERIES

POWERED LOUDSPEAKERS WITH WI-FI CONTROL
· Powerful line-up includes a 12'' two-way, 15'' two-way, 15'' three-way speaker and single or dual 18'' subwoofers
· Built-in Wi-Fi for wireless control of your system from anywhere in the venue
· Class-leading 1500W amplifier delivers ample power to fill your venue
· JBL Differential Drive® transducers for higher SPL in a lightweight design
· Updated tuning delivers flat frequency response and smooth off-axis behavior

SRX800 SERIES

POWERED LOUDSPEAKERS WITH HIQNET NETWORKING
· Line-up includes 12'' two-way, 15'' two-way, 15'' three-way speakers and single or dual 18'' subwoofer
· 2000W Crown DriveCore Amplification
· JBL Premium Transducers
· User-configurable Advanced DSP with network control
· LCD Screen and glow in the dark ink on back panel
· Tour-worthy lightweight and durable cabinets and M10 Suspension Points

VRX900 SERIES

CONSTANT CURVATURE LINE ARRAY SYSTEM
· Passive and Powered versions in 8'' or 12'' models (white finish also available), as well as subwoofer and stage monitor models
· 1750W peak power with built-in JBL DrivePack® DPC-2 amplifier module
· Modular components deliver stunningly cohesive sound in any configuration
· DSP based resident input module provides system optimization and EQ
· Durable construction and integrated rigging hardware for reliability and easy install

AKG — MICROPHONES AND HEADPHONES

Soundcraft JBL PROFESSIONAL — MIXERS AND MONITORS

AKG P120
CONDENSER MICROPHONE
- Clear, accurate and affordable vocal microphone
- Rugged, all-metal body and robust design
- Versatile, general-purpose microphone
- Excellent for recording, content creation, or presentation

SOUNDCRAFT NOTEPAD SERIES
ANALOG MIXERS
- Legendary Soundcraft sound for music, podcasts or videos
- Built-in USB audio interface to use with editing software
- Renowned Soundcraft mic preamps
- Well-suited for home studio or portable studio requirements
- Not just for musicians – perfect for podcasters too

AKG K361-BT/K371-BT
BLUETOOTH HEADSETS
- Over-ear, closed back for optimal comfort and sound quality
- Built-in microphone
- Incredible AKG sound clarity
- Great for working, creating content or studying from home

JBL 104-BT
BLUETOOTH STUDIO MONITORS
- Excellent sound for the price – available in either black or white
- Acoustically optimized for desktop placement
- Three sets of inputs and built-in Bluetooth
- Great for content creators, home workers, musicians

AKG LYRA
USB MICROPHONE
- Ultra-HD sound with elegant retro design
- Plug in headphones and control volume from the Lyra
- Automatically reduces noise and improves signal levels
- Ideal for podcasting, creating content, gaming or working from home

JBL 3 SERIES MKII
STUDIO MONITORS
- Next generation JBL transducers for optimized response
- New Boundary EQ settings
- Powerful sound from dual integrated Class-D amplifiers
- Image Control Waveguide delivers precise detail and bigger sweet spot

AKG PODCASTER ESSENTIALS
AUDIO PRODUCTION KIT
- Includes AKG Lyra microphone and K371 headphones
- Ultra-HD sound quality
- K series headphones offer excellent comfort for all-day use
- The perfect bundle for home workers and content creators

JBL LSR310S
POWERED STUDIO SUBWOOFER
- 10'' studio subwoofer with patented Slip-Stream™ port design
- XLF – Extended Low Frequency setting
- Custom 10'' down-firing high-excursion, low-frequency drive
- Professional balanced inputs and outputs
- Selectable input sensitivity

WIRING GUIDE FOR 1X CBT 1000 SPEAKER
Connect 1 amplifier channel to each CBT 1000 speaker

Recommended Amplifiers

Crown XTi 6002 - 2100W @ 4 ohms
(One channel for each CBT 1000)

(NL4 or Binding Post Outputs)

OR

(Barrier Strip Input)

Crown CDi6000 - 2100W @ 4 ohms
(One channel for each CBT 1000)

(Barrier Strip Outputs)

OR

CBT 1000

Crown DCi2x2400N - 2400W @ 4 ohms
(One channel for each CBT 1000)

(Barrier Strip Outputs)
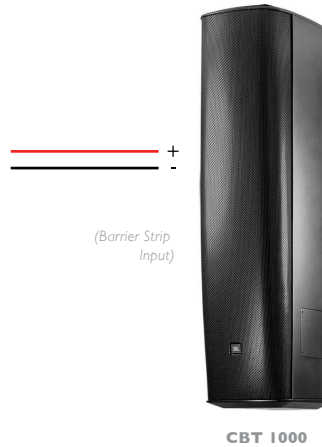
Amplifier Selection Considerations
· How much power is needed (less powerful amplifiers can be used if you don't need all the SPL the speaker is capable of producing. However, pushing a lower-power amplifier into clipping can damage the speaker).
· How much DSP and which DSP functions are required.
· Whether the amp needs to be networked (DCi-N).
· Project's budget.

WIRING GUIDE FOR 1X CBT 1000 SPEAKER + 1X CBT 1000E ARRAY
Connect 1 amplifier channel to each CBT 1000 speaker + CBT 1000E array

CBT 1000

Recommended Amplifiers

Crown DCi 2x2400N - 2400W @ 4 ohms
(One channel for each CBT 1000)

*(Barrier Strip Outputs)*

(Barrier Strip Input)

Note:
· **Important** - The CBT 1000E must be connected in parallel with the CBT 1000 and the two of them MUST be in proper polarity. "+" to "+" and "−" to "−".
· Other system configurations are available. Please contact your HARMAN Sales Rep - **https://pro.harman.com/contacts/channel** - for details. An exception request may be required, depending on equipment utilized.

(Barrier Strip Input)

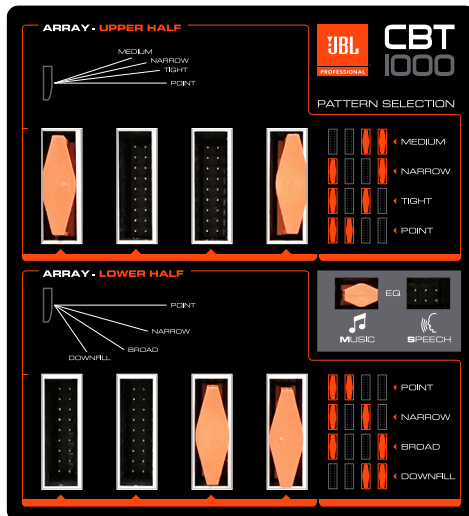**CBT 1000E**

SELECTABLE COVERAGE PATTERNS

Upper-Half Coverage Pattern Selections
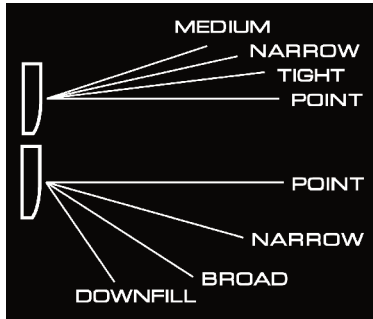
Lower-Half Coverage Pattern Selections

Selectable Coverage Patterns - Located on side of cabinet; covered by plate. Remove screws using #1 Phillips-head screwdriver (not included).

Position the orange headers to select the Upper and Lower coverage patterns and Music/Speech voicing.

(Header position example shown above: Upper Half NARROW pattern setting;
Lower Half DOWNFILL pattern setting; EQ is MUSIC/FLAT setting.)

DSP PROCESSOR SETTINGS FOR 1X CBT 1000 OR FOR 1X CBT 1000 + 1X CBT 1000E ARRAY

High-Pass and Limiter Settings:

• Protective High-Pass: 35 Hz, 24 dB/oct, Linkwitz-Riley
• LevelMax™ Limiter Settings:
      - RMS Threshold (VRMS): 65V
      - Click the "Automatic" Radial Button to set Peak
      - Threshold, Peak Release, and RMS Release to "Auto"
• Transducer Thermal Limiting, Thermal Voltage: 52V
• Thermal Response Time (Sec): 10 Sec

For recommended on- and off-wall EQ settings, go to:
https://jblpro.com/en-US/site_elements/cbt-1000-1000-e-eq-tunings

For more information about the CBT 1000 and CBT 1000E, go to:
https://jblpro.com/en-US/products/cbt-1000
https://jblpro.com/en-US/products/cbt-1000-plus-cbt-1000e-system