



## 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-I, 25-I and 28-I 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-I)
- 500W power handling (70JE-I)
- Built-in crossover network for combining CBT 70J-I and 70JE-I
- 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-I 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 MAD1 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

### 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



### 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



### 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



### 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



## COMMERCIAL MIXERS / AMPLIFIERS

### 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



### 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



### 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



### 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





## 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.



## 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



## 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



### 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



### 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



### 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



### 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



### 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

### 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



### 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



### 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



### 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



## Soundcraft MIXERS AND MONITORS

### 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



### 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



### 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



### 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**

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



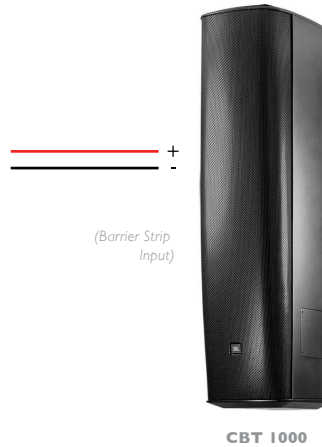
(Barrier Strip Outputs)

**OR**

**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

### Recommended Amplifiers

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



(Barrier Strip Outputs)



### Note:

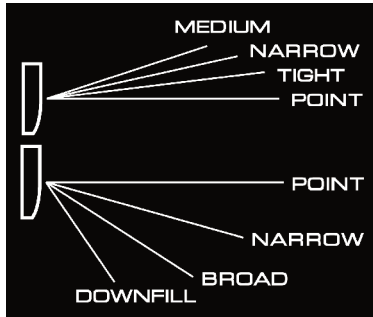
- **Important** - The CBT 1000E must be connected in parallel with the CBT 1000 and the two of them MUST be in proper polarity. "+" to "+" and "-" to "-".
- Other system configurations are available. Please contact your HARMAN Sales Rep - <https://pro.harman.com/contacts/channel> - for details. An exception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





## SELECTABLE COVERAGE PATTERNS

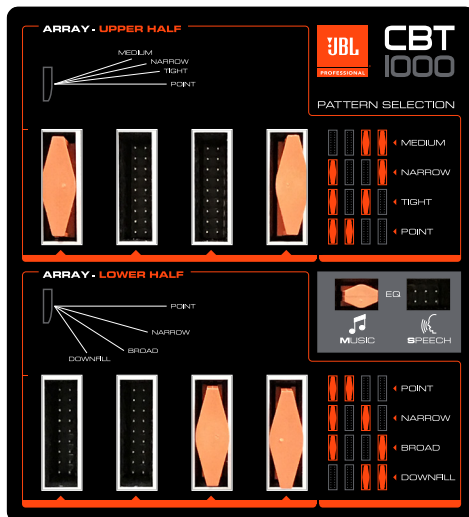
Upper-Half Coverage Pattern Selections



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-1000-1000e-eq-tunings](https://jblpro.com/en-US/site_elements/cbt-1000-1000e-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>