

EAAW[®]

EASTERN ACOUSTIC WORKS



Install Engineered Solutions Application Guide

Install Engineered Solutions **Application Guide**

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Using the Loudspeaker

Users will need to perform the following general tasks to properly put an EAW install engineered product into use. This guide includes details for each task.

1. Design the system using the Resolution™ 2 Design & Control Software (see the [program Help File for further information about using Resolution](#)).
2. Design and install suspension points to support the product(s)/rigging in intended locations and aimed in the desired directions. If ground-stacked, provide a level surface capable of supporting the total weight of the loudspeaker(s).
3. Connect the loudspeakers to a supported EAW Processor and/or power amp.
4. Set-up and adjust overall system gain and signal processing, as needed to maximize the array's performance for the application.
5. Provide training to operate the loudspeakers within their limits.
6. Provide regular inspection and maintenance to maintain the integrity of the installation and the performance of the loudspeakers.

Sound System Design

See [Resolution Help File](#) for assistance in properly designing line array systems.

Software

EAW Resolution 2 software is designed to assist in SPL predictions, determine splay angles, and calculate rigging limits for all line array items.

Always ensure that your EAW Resolution software is up-to-date.

For a complete list of recommended system requirements, please refer to the [Resolution 2 help file](#).

Using EAW Resolution™

EAW Resolution is the key to determining the optimal loudspeaker configuration for any application. Rooted in EAW's proprietary FChart modeling and calculation engine, Resolution allows users to easily model any venue and visualize a wide variety of sound system designs to determine what particular configuration is best suited to the venue.

Users simply need to define the loudspeaker position, allowable trim, minimum clearance, and quantity available and use the Assistant to determine the optimal loudspeaker configuration for a given venue. In many situations no further prediction work will be necessary for optimal results. Users can also adjust the results after running the Assistant by manually adding/removing modules or adjusting coverage and observing changes in predicted results.

Please visit www.eaw.com to download the latest version of Resolution. Instructional videos can be viewed on education.eaw.com.

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Increased Directivity & Performance for every application in one solution

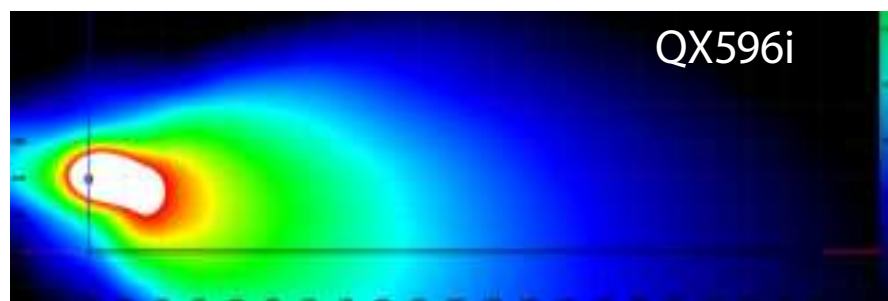
It's helpful to look at EAW install engineered products as one solution. Meaning, where one product may leave of, another can easily take it's place and complete the task.

For instance, if QX series is specified but cost is of concern, MKD series is a viable solution with only a small sacrifice in performance. Same

could be said when looking at MKD series to MKi series. Though these are different series, they compliment each other.

All have various matching horn patterns, which enables coverage matching between these products to remain seamless, with only a drop in performance and clarity.

Below are some examples on how directivity scales between each product line (1 octave, 400hz)



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UXA Installation Amplifiers



UXA4401



UXA4403



UXA4807D

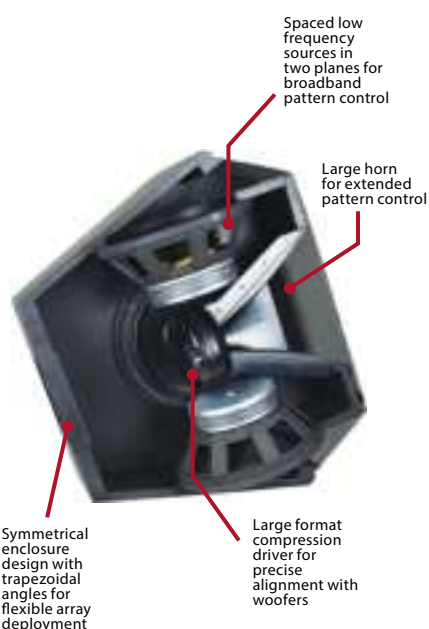
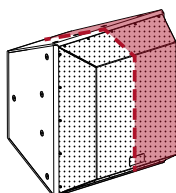
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QX Series



QX544i ▶ 45° x 45°	QX594i ▶ 90° x 45°
QX564i ▶ 60° x 45°	QX596i ▶ 90° x 60°
QX566i ▶ 60° x 60°	
QX326 ▶ 120° x 60°	QX394 ▶ 90° x 45°
QX364 ▶ 60° x 45°	QX396 ▶ 90° x 60°
QX366 ▶ 60° x 60°	QX399 ▶ 90° x 90°

INSIDE EAW TECHNOLOGIES SIDE VIEW CROSS



QX300 SERIES

TWO-WAY TRAPEZOIDAL ENCLOSURE

SUBSYSTEM

LF 4, 10-in cone
HF 1, 1.4-in. exit, 4-in. voice coil
compression driver

NOMINAL BEAMWIDTH 60° x 45° to 120° x 60°
(by Model)

FREQUENCY 60Hz – 20kHz

MAX SPL
143 – 144dB (Variable by Model)

QX500 SERIES

THREE-WAY TRAPEZOIDAL ENCLOSURE

SUBSYSTEM

LF 4x 12 in. cone
MF 1x, 2 in. exit 3.5 in. compression
HF 1x 2 in. exit, 1.75 in compression
driver

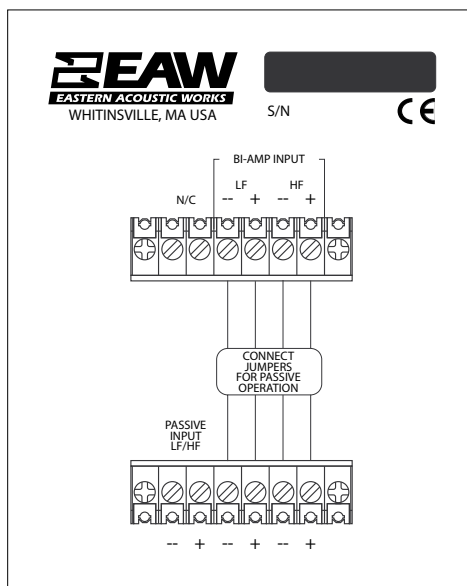
NOMINAL BEAMWIDTH 45° x 45° to 90° x 60°
(by Model)

FREQUENCY 55Hz – 20kHz

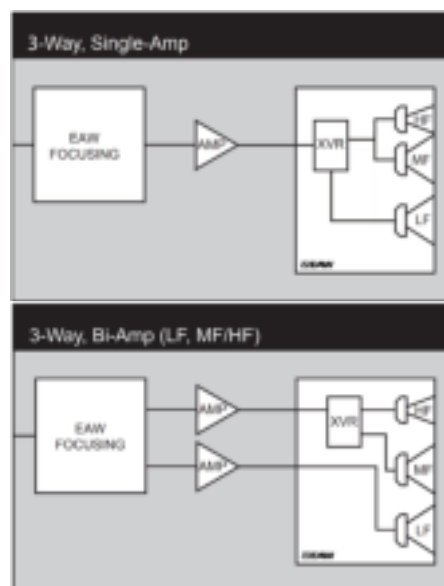
MAX SPL 145 – 147 dB (by Model)

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INPUT

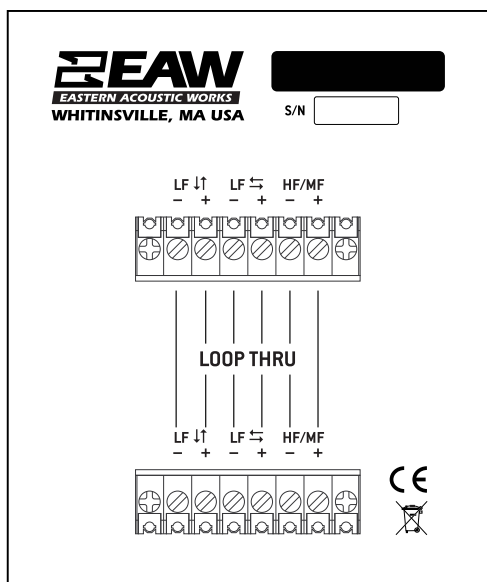


SIGNAL

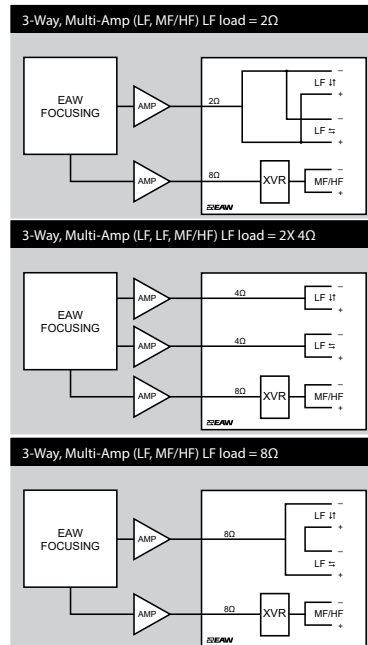


QX300

INPUT



SIGNAL

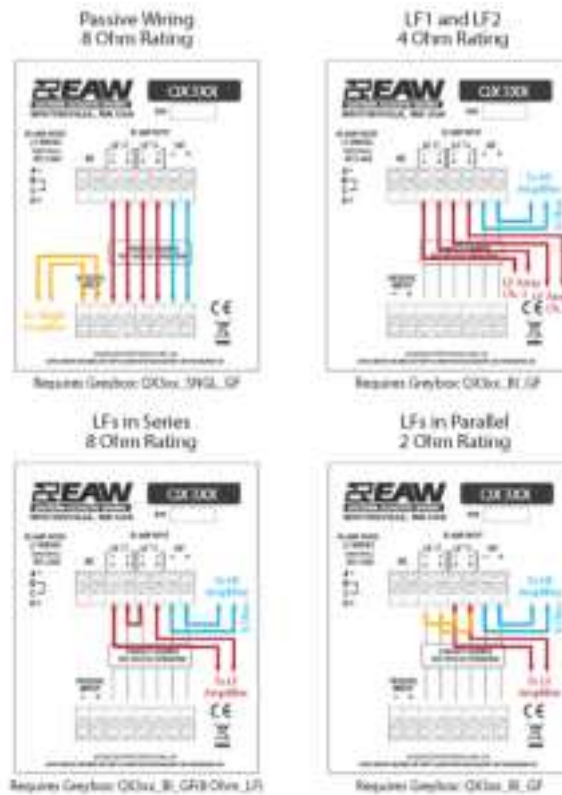


QX500i

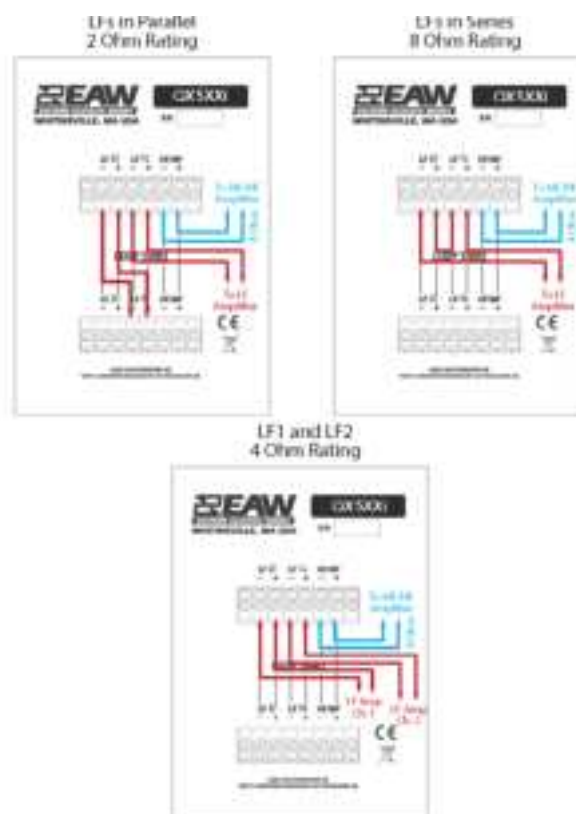
HPF	High Pass Filter for crossover or Recommended High Pass
LPF	Low Pass Filter for crossover
LF/MF/HF	Low Frequency / Mid Frequency / High Frequency
AMP	User Supplied Power Amplifier –or– Integral Amplifier
XVR	Passive LPFs, HPFs, and EQ integral to the loudspeaker
EAW Focusing	Digital Signal Processor capable of implementing EAW

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QX300 Wiring Options



QX500 Wiring Options



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QX Series Recommended Systems & Amp Pairings

QX300 Single Amp

Amplifier	Single Ended Speaker per channel	Bridge Mode Speaker per channel
UXA4401(D)	-	-
UXA4403D	-	2
UXA4807D	-	2

QX300 Bi Amp

Amplifier	Single Ended Speaker per channel	Bridge Mode Speaker per channel
UXA4401(D)	-	-
UXA4403D	LF (2X4ohm) uses 2 ch HF 2	LF 1 HF 2
UXA4807D	LF (2X4ohm) uses 2 ch HF 2	LF 1 HF 2

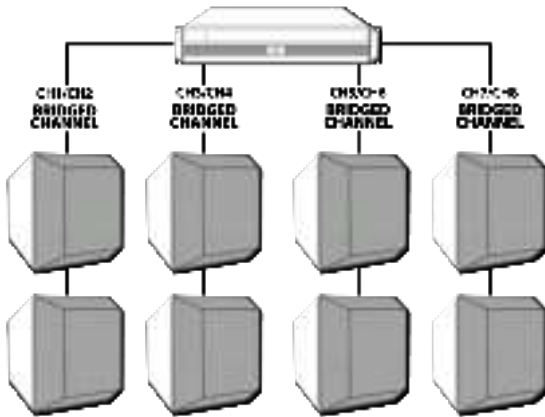
QX500 Bi Amp

Amplifier	Single Ended Speaker per channel	Bridge Mode Speaker per channel
UXA4401(D)	-	-
UXA4403D	-	LF (2x4ohm) uses 2 bridged ch HF 2
UXA4807D	-	LF (2x4ohm) uses 2 bridged ch HF 2

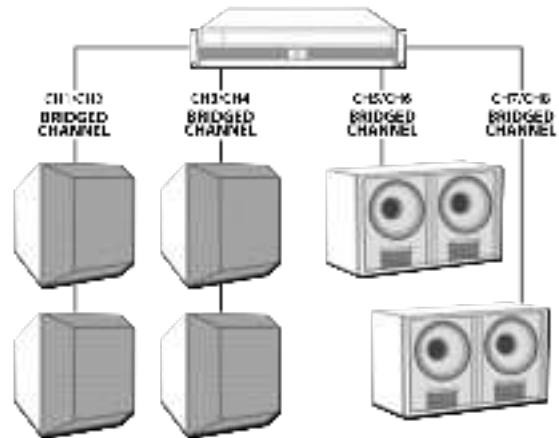
Install Engineered Solutions Application Guide

QX Series Recommended Systems & Amp Pairings

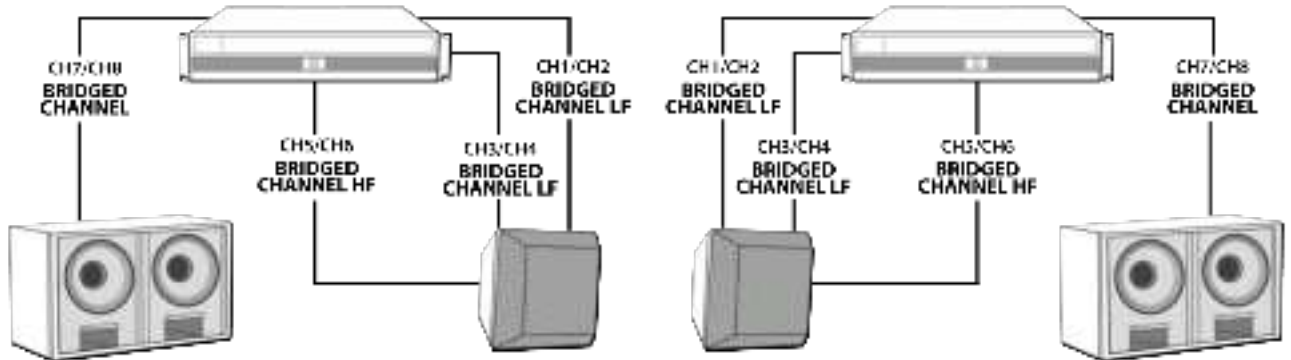
QX300 Single Amp (UXA4807D)



QX300 Single Amp w/SB528z Subwoofer (UXA4807D)

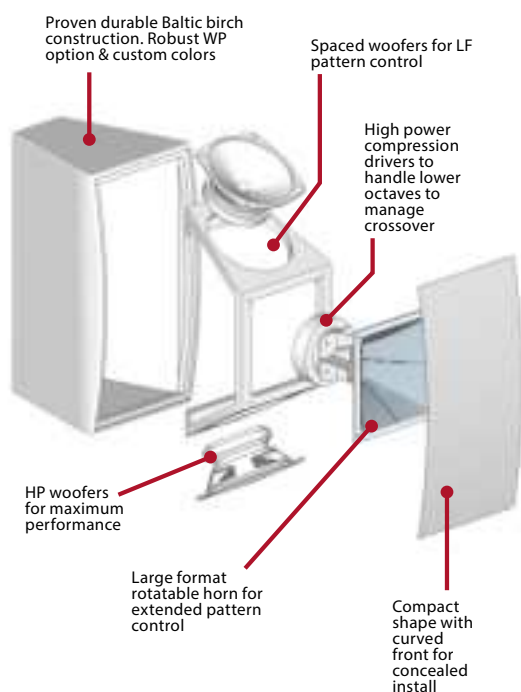


QX500 Bi Amp w/SB528z Subwoofer (UXA4807D)



Install Engineered Solutions Application Guide

MKD Series



MKD1000 - No Grill



MKD800 SERIES

3-WAY FULL RANGE LOUSPEAKER

SUBSYSTEM

2 x 8in Cone, 2in Voice-Coil, Vented
1 x 1in Exit, 2in Compression Driver,
Horn Loaded

NOMINAL BEAMWIDTH Horizontal 90°, 90°, 120°
Vertical 43°, 60°
(By Model)

FREQUENCY 62Hz - 19kHz

MAX SPL 135 dB

MKD1000 SERIES

2-WAY FULL RANGE LOUSPEAKER

SUBSYSTEM

2 x 10in Cone, 2.5in Voice-Coil, Vented
1 x 1.4in Exit, 4in Neodymium
Compression Driver, Horn Loaded

NOMINAL BEAMWIDTH 120° x 60°, 90° x 45°
90° x 60° (By Model)

FREQUENCY 57Hz - 20kHz

MAX SPL 141dB

MKD1200 SERIES

3-WAY FULL RANGE LOUSPEAKER

SUBSYSTEM

2 x 12in Cone, 3in Voice-Coil, Vented
1 x 2in Exit, 3.5in Voice-Coil,
Compression Midrange, Horn Loaded
1 x 2in Exit, 1.75in Voice-Coil,
Compression Driver, Horn Loaded

NOMINAL BEAMWIDTH 80° x 40°, 90° x 45°
(By Model)

FREQUENCY 47Hz - 20kHz

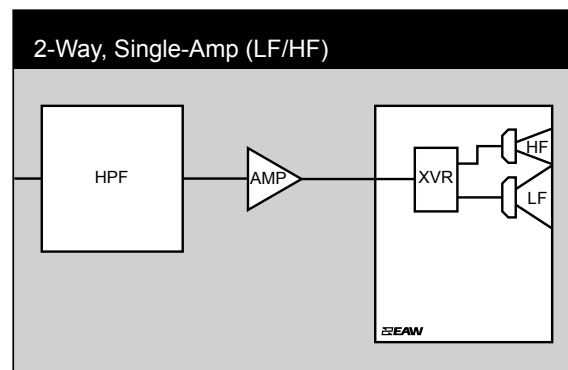
MAX SPL 147 dB

Install Engineered Solutions Application Guide

INPUT

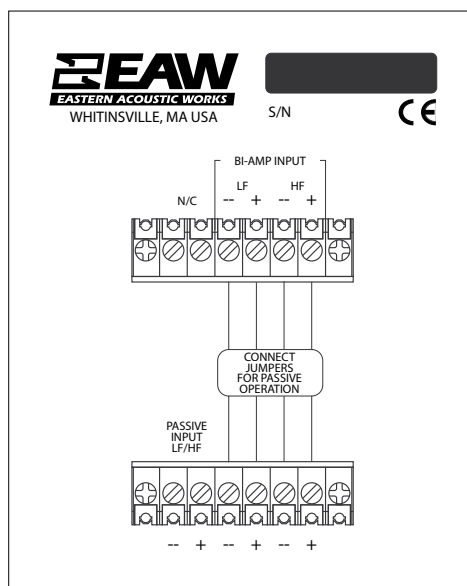


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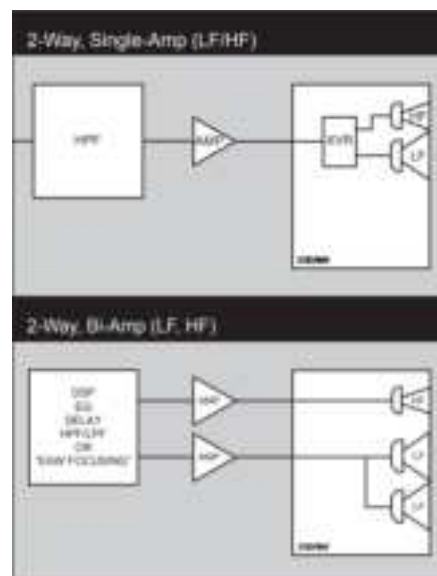


MKD800

INPUT



SIGNAL

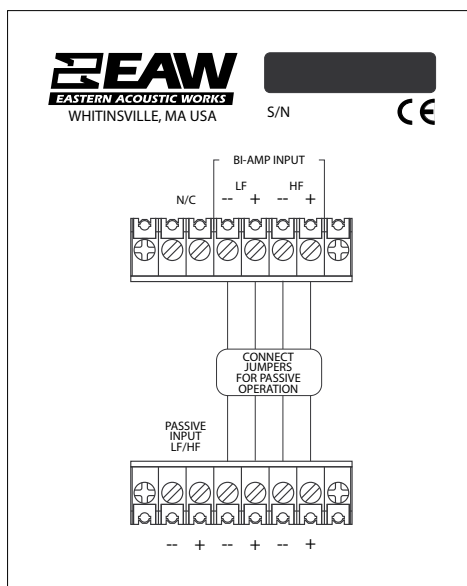


MKD1000

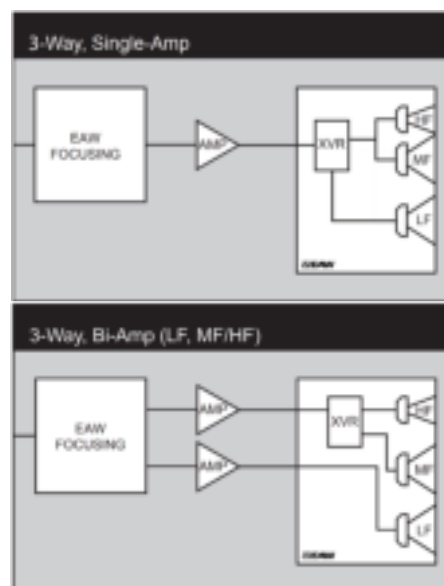
HPF	High Pass Filter for crossover or Recommended High Pass
LPF	Low Pass Filter for crossover
LF/MF/HF	Low Frequency / Mid Frequency / High Frequency
AMP	User Supplied Power Amplifier –or– Integral Amplifier
XVR	Passive LPFs, HPFs, and EQ integral to the loudspeaker
EAW Focusing	Digital Signal Processor capable of implementing EAW

Install Engineered Solutions Application Guide

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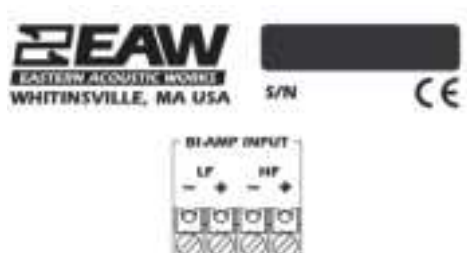


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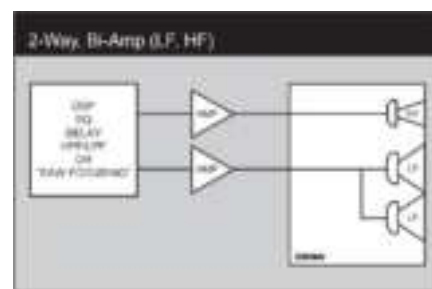


MKD1200

INPUT



SIGNAL



MKD1500

HPF	High Pass Filter for crossover or Recommended High Pass
LPF	Low Pass Filter for crossover
LF/MF/HF	Low Frequency / Mid Frequency / High Frequency
AMP	User Supplied Power Amplifier—or— Integral Amplifier
XVR	Passive LPFs, HPFs, and EQ integral to the loudspeaker
EAW Focusing	Digital Signal Processor capable of implementing EAW

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MKD Series Recommended Systems & Amp Pairings

MKD526

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	1	-	-
UXA4403D	3	-	-	-
UXA4807D	3	-	-	-

MKD800

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	-	-
UXA4807D	-	2	-	-

MKD1000

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	HF 2	LF 2 HF 2
UXA4807D	-	2	HF 2	LF 2 HF 2

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MKD Series Recommended Systems & Amp Pairings

MKD1200

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	HF 2	LF 2 HF 2
UXA4807D	-	2	HF 2	LF 2 HF 2

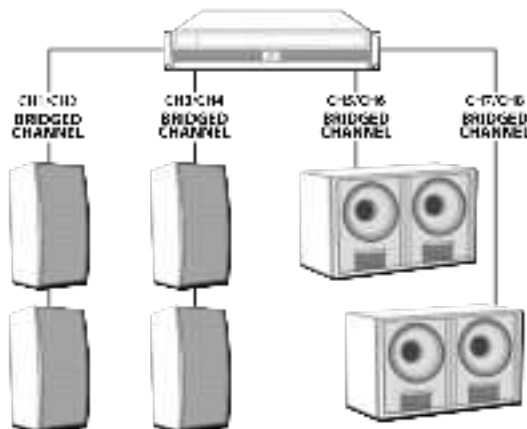
MKD1500

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	-	-	LF 1 HF 2
UXA4807D	-	-	-	LF 1 HF 2

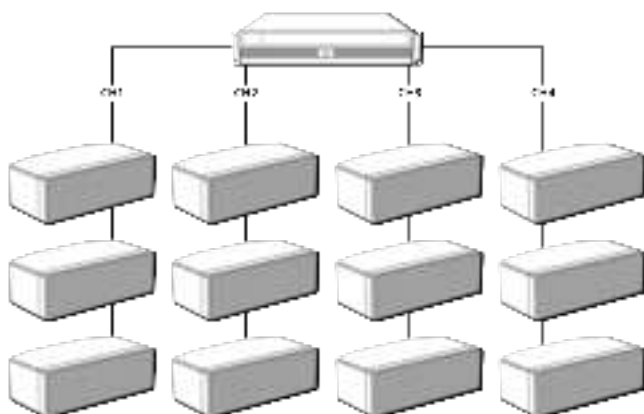
Install Engineered Solutions **Application Guide**

MKD Series Recommended Systems & Amp Pairings

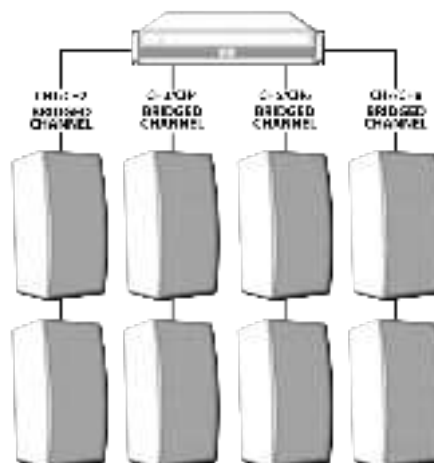
MKD1000 Single Amp w/SB528z Subwoofer (UXA4807D)



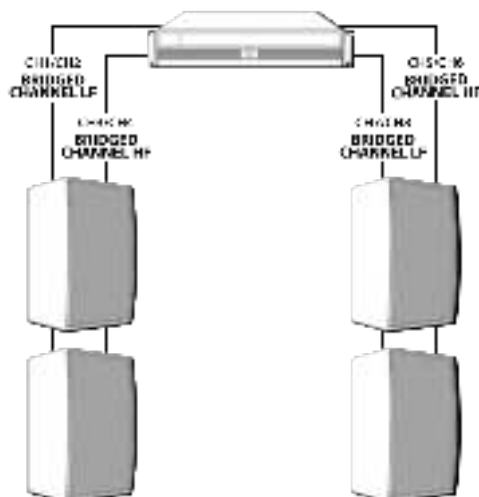
MKD526 (UXA4403D)



MKD1000 Single Amp (UXA4807D)



MKD1200 Single Amp (UXA4807D)



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MK Series

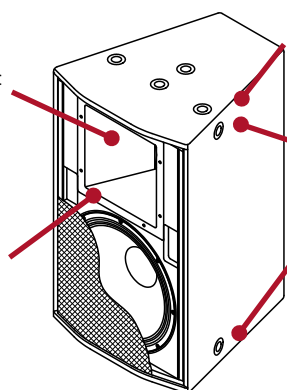


MK5326i ▶ 120° x 60°	MK5394i ▶ 90° x 45°
MK5364i ▶ 60° x 45°	MK5396i ▶ 90° x 60°
MK5366i ▶ 60° x 60°	MK5399i ▶ 90° x 90°
MK2326i ▶ 120° x 60°	MK2394i ▶ 90° x 45°
MK2364i ▶ 60° x 45°	MK2396i ▶ 90° x 60°
MK2366i ▶ 60° x 60°	MK2399i ▶ 90° x 90°
MK8126i ▶ 120° x 60°	MK8196z ▶ 90° x 60°

INSIDE EAW TECHNOLOGIES

Coverage options with specific beamwidth matched crossovers

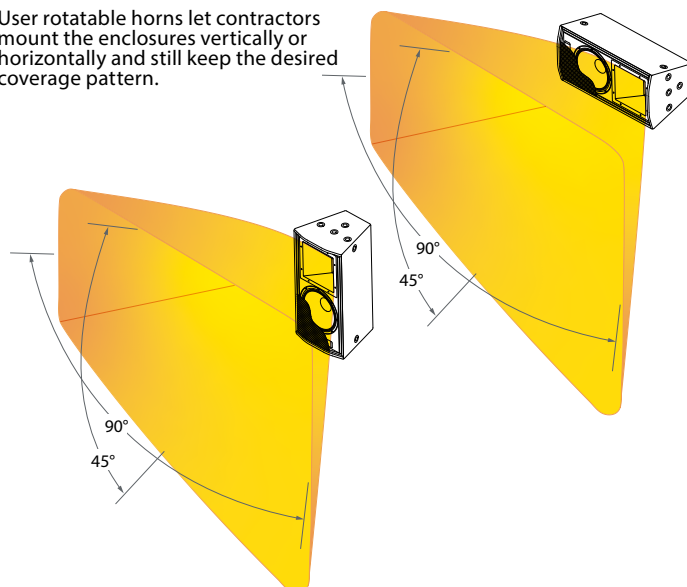
Rotatable horns



Common dimensions between MK2300 and MK5300 series

Multiple mounting points for flexible mounting options

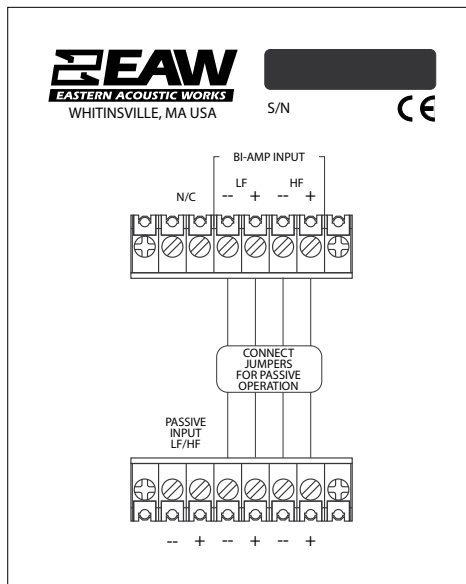
User rotatable horns let contractors mount the enclosures vertically or horizontally and still keep the desired coverage pattern.



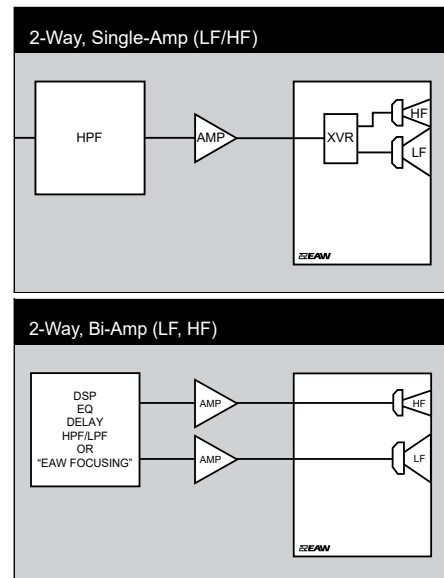
Features	Benefits
Proven track record over many years	Confidence that the system will be built to last
Wide-ranging product family with three size tiers (8", 12", 15")	Outfit an entire project with loudspeakers that share a common tonality, making tuning easier
Available in range of colors and finishes	Standard white or black for typical applications, color-matching for specific visual environments and WP for outdoors
Large-format horns and beamwidth-matched crossovers	Consistent tonality throughout the entire coverage pattern
Rotatable horns	Can be easily used for horizontal or vertical installations
Enhanced with Greybox processing	

Install Engineered Solutions **Application Guide**

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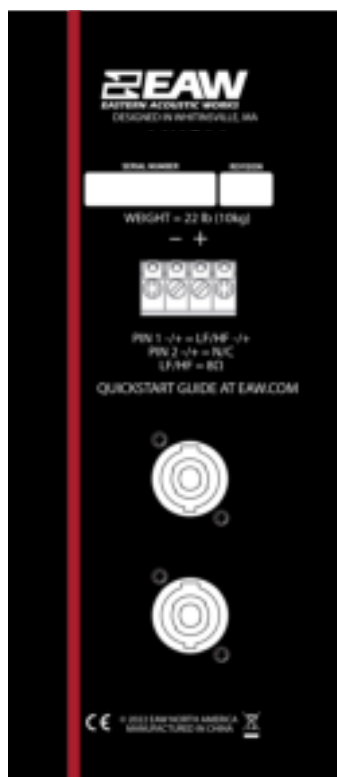


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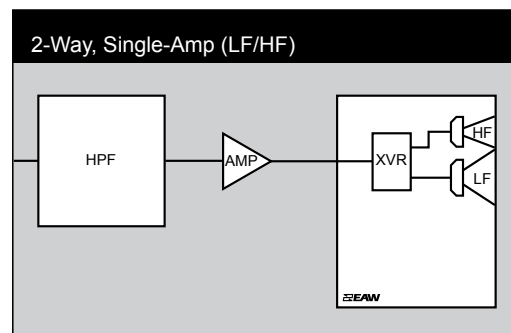


MK2300i & MK5300i

INPUT



SIGNAL



MK8100

Install Engineered Solutions **Application Guide**

MK Series Recommended Systems & Amp Pairings

MK8100

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	1	-	-
UXA4403D	2	-	-	-
UXA4807D	2	-	-	-

MK2300

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	HF 2	LF 2 HF 2
UXA4807D	-	2	HF 2	LF 2 HF 2

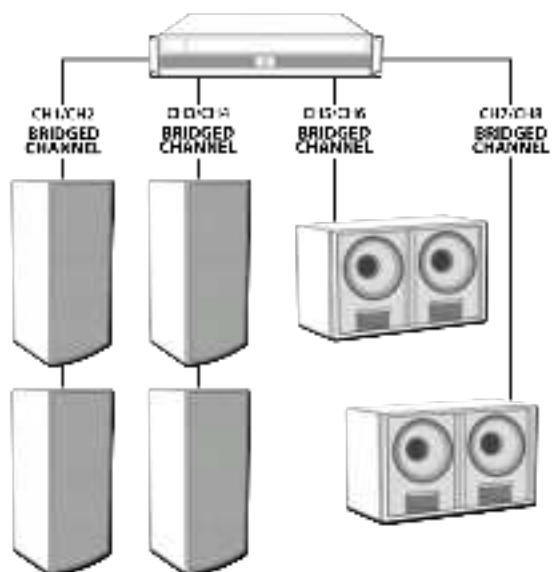
MK5300

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	HF 2	LF 2 HF 2
UXA4807D	-	2	HF 2	LF 2 HF 2

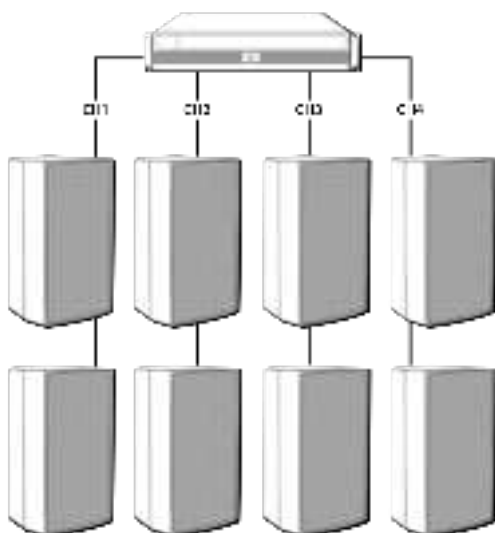
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MK Series Recommended Systems & Amp Pairings

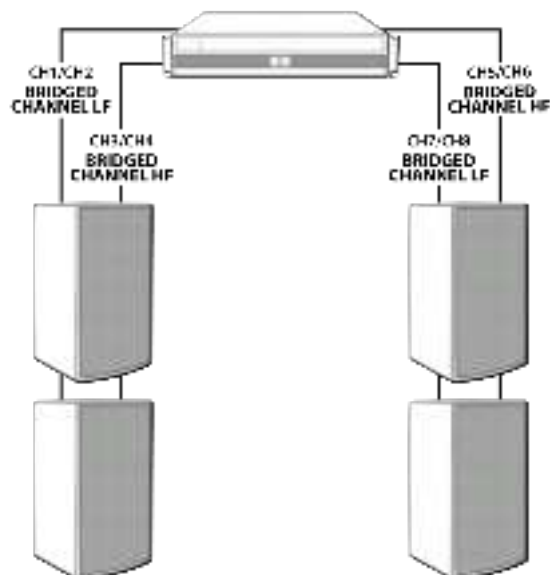
MK2300 Single Amp w/SB528z Subwoofer (UXA4807D)



MK8100 (UXA4403D)



MK5300 Bi Amp (UXA4807D)



Install Engineered Solutions Application Guide

MKC Series



MKC50 - No grill



MKC80 - No grill

- ▶ Available in four models, MKC50, MKC60, MKC80, MKC120 (coaxial 5", 6", 8", and 12" respectively).
- ▶ MKC50 & MKC60 1 in Dome tweeter provides superior dispersion, fidelity and output.
- ▶ MKC80 & MKC120 Patented CSA coaxial horn provides superior control, fidelity and output.
- ▶ MKC80 & MKC120 Integrated handle and pole mount.
- ▶ MKC120 Integrated M10 mounting points.
- ▶ Inherent weather resistance for outdoor use when used under cover.
- ▶ Available WP Models for long term outdoor installations.
- ▶ Multitap transformer options provide solutions for distributed and fill systems.
- ▶ MKC Series can be deployed in either vertical or horizontal orientations.



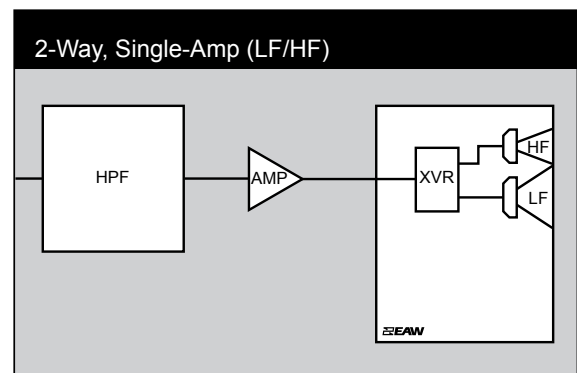
MKC60 - No grill

Install Engineered Solutions **Application Guide**

INPUT



SIGNAL

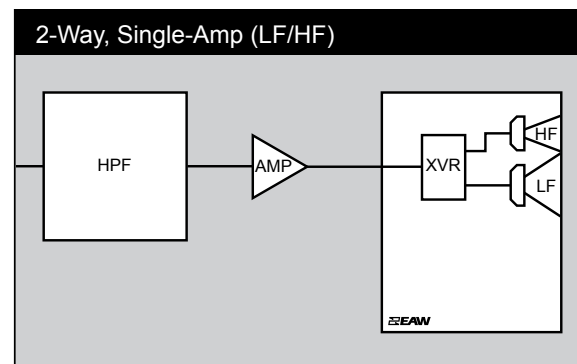


MKC80 & MKC120

INPUT



SIGNAL



MKC50 & MKC60

Install Engineered Solutions **Application Guide**

MKC Series Recommended Systems & Amp Pairings

MKC50

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	1	-	-	-
UXA4403D	4	-	-	-
UXA4807D	4	-	-	-

MKC60

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	1	-	-
UXA4403D	3	-	-	-
UXA4807D	3	-	-	-

MKC80

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	3	-	-	-
UXA4807D	3	-	-	-

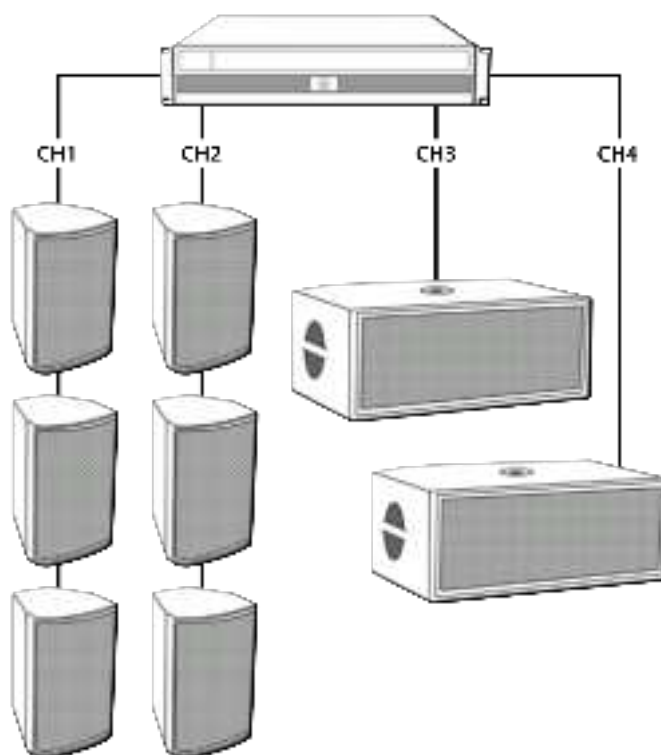
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MKC Series Recommended Systems & Amp Pairings

MKC120

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	-	-
UXA4807D	-	2	-	-

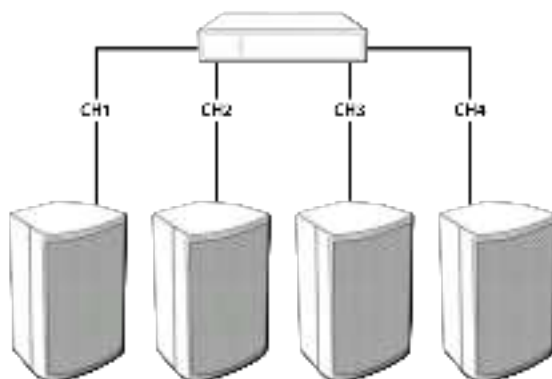
MKC60 w/SB210 Subwoofer (UXA4403D)



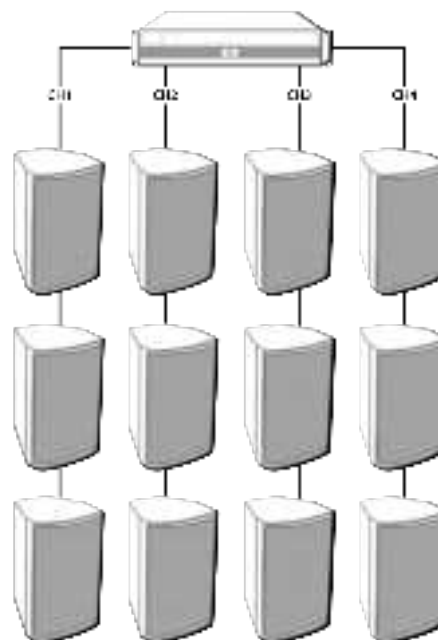
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MKC Series Recommended Systems & Amp Pairings

MKC50 (UXA4401)



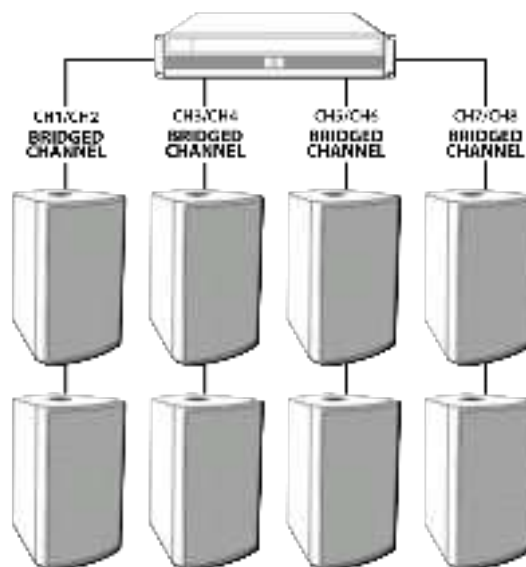
MKC60 (UXA4403D)



MKC80 (UXA4403D)



MKC120 (UXA4807D)



Install Engineered Solutions **Application Guide**

SB Series Subwoofers



Clockwise (starting from top left) - SB528zP, SB250zP, SB120zP, SB210

- ▶ Available models: SB120z, SB150z, SB180z, SB250z, SB528z, SB210
- ▶ Direct radiating, with optimally tuned, vented enclosures
- ▶ High output, large-format systems with proven performance
- ▶ Optimally tuned with large very low turbulence port

Install Engineered Solutions **Application Guide**

SB Series Recommended Systems & Amp Pairings

SB120z

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	-	-
UXA4807D	-	2	-	-

SB150z

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	-	-
UXA4807D	-	2	-	-

SB180z

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	2	-	-
UXA4807D	-	2	-	-

Install Engineered Solutions **Application Guide**

SB Series Recommended Systems & Amp Pairings

SB210

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	1	-	-	-
UXA4807D	1	-	-	-

SB250z

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	1	-	-
UXA4807D	-	1	-	-

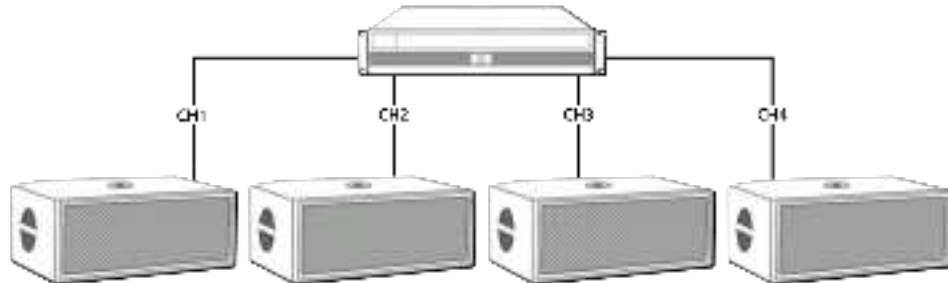
SB528z

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	-	1	-	-
UXA4807D	-	1	-	-

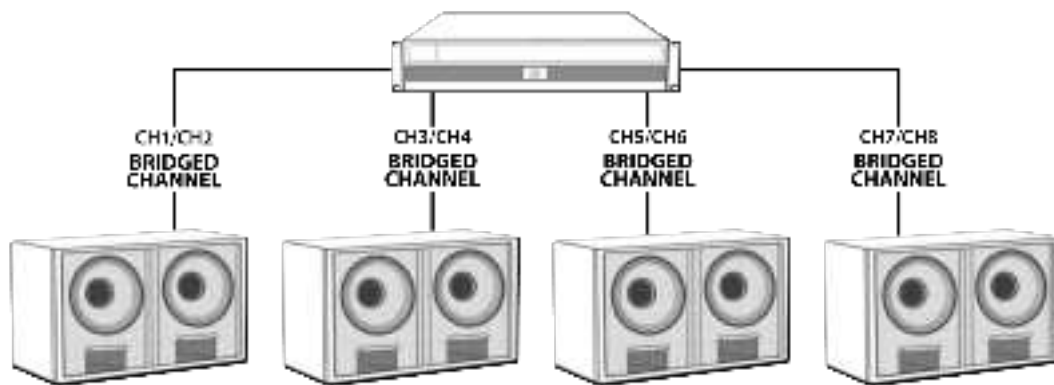
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SB Series Recommended Systems & Amp Pairings

SB210 (UXA4403D)



SB528z (UXA4807D)



Install Engineered Solutions **Application Guide**

CIS & LS Series



From left to right - CIS400, LS432i, LS432i white, LS832i

- ▶ CIS series available models: CIS300, CIS400
- ▶ LS series available models: LS432i, LS832i

Install Engineered Solutions **Application Guide**

CIS/LS Series Recommended Systems & Amp Pairings

LS432i

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	4	-	-	-
UXA4807D	4	-	-	-

LS832i

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	-	-	-	-
UXA4403D	3	-	-	-
UXA4807D	3	-	-	-

CIS300

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	4	-	-	-
UXA4403D	-	-	-	-
UXA4807D	-	-	-	-

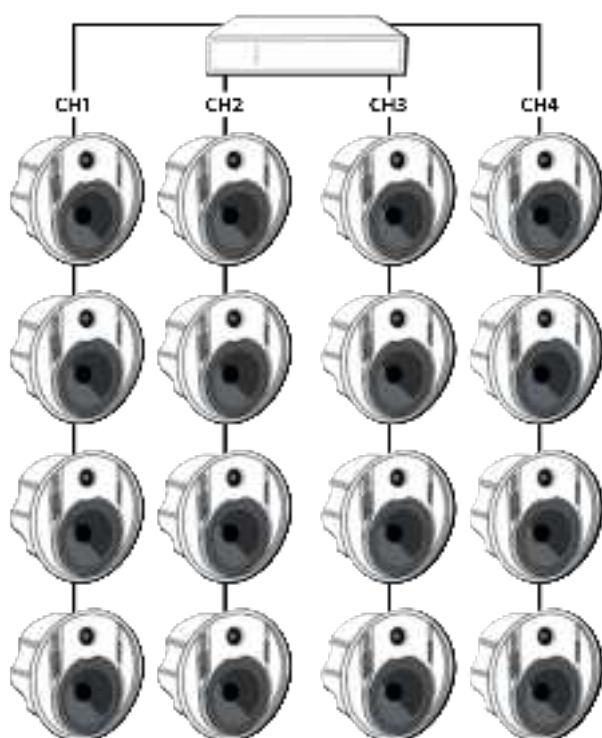
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CIS/LS Series Recommended Systems & Amp Pairings

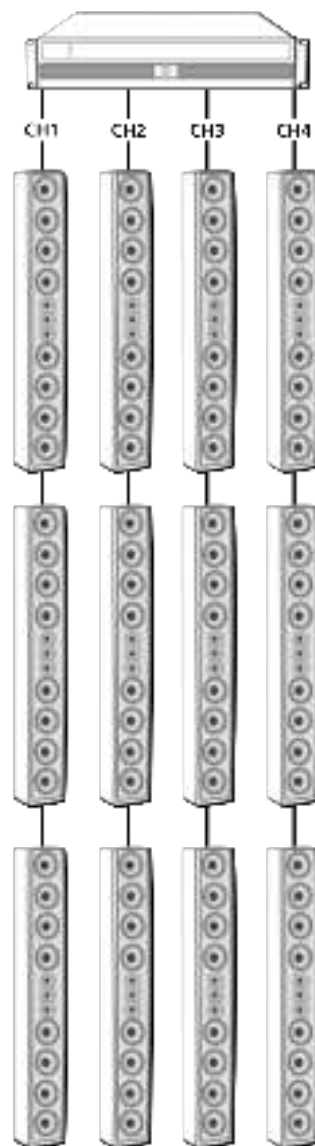
CIS400

Amplifier	Single Ended Single Amp Speaker per ch	Bridge Mode Single Amp Speaker per ch	Single Ended Bi Amp Speaker per ch	Bridge Mode Bi Amp Speaker per ch
UXA4401(D)	4	-	-	-
UXA4403D	-	-	-	-
UXA4807D	-	-	-	-

CIS400 (UXA4401)



LS482i (UXA4403D)



EAW Warranty

These EAW products were designed and engineered at our headquarters in Whitinsville, MA USA and go through multiple quality checks during manufacturing. We guarantee our loudspeakers against defects in workmanship, materials and against malfunctions for a period of 6 years from date of delivery. Terms and conditions apply. Download the complete warranty policy at

www.eaw.com/warranty



Product Damaged in Transport? Contact the freight carrier immediately and note concealed shipping damage. Then contact EAW for replacement.

Scan code to contact EAW



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