RENKUS-HEINZ
THE SOUND SOLUTION

C Series

High-Performance Solutions for Install Applications

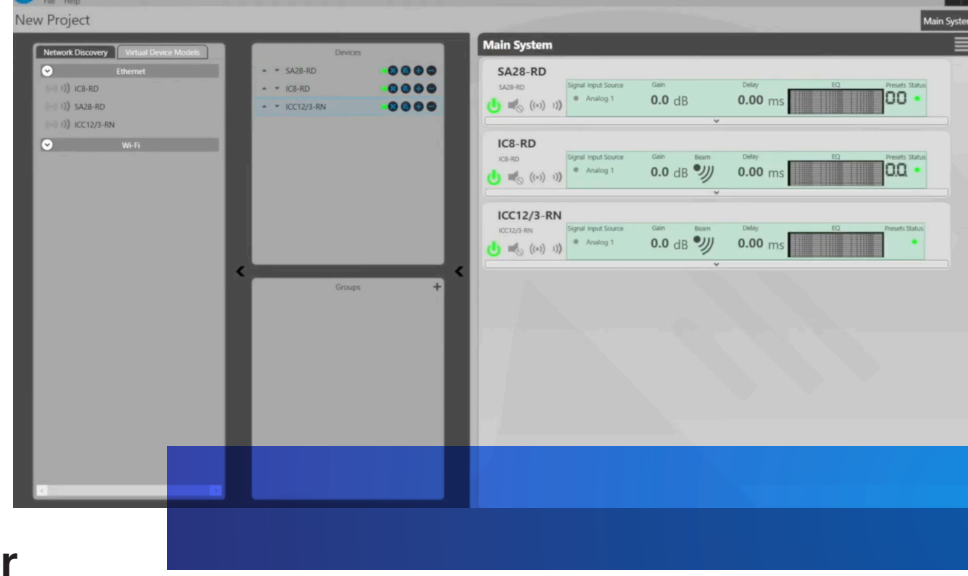
CX and CA Series

Building on the success of the popular CFX Series, Renkus-Heinz offers an improved installation series: the C Series loudspeakers. Drawing from years of experience and industry-leading technologies like Complex Conic WaveGuides, the C Series provides outstanding performance at a competitive price point.

Every C Series loudspeaker is engineered by Renkus-Heinz to unrivaled standards of quality and innovation. Before any unit is shipped, all loudspeakers have to meet our exacting requirements for durability and performance.

Externally-powered CX models include a high-quality passive crossover network, which can be easily bypassed with an internal jumper for bi-amplified operation. CX models can be field upgraded to self-powered CA, using proprietary, purpose-designed Renkus-Heinz SA amplifiers.

Self-powered CA models come equipped with the advanced SA series power amplifiers, featuring optional RHAON Network Control, Dante, and Fiber Optic inputs. With these features, all CA models are compatible with all other self-powered Renkus-Heinz loudspeakers, including the renowned Renkus-Heinz steerable columns.



RHAON II System Manager

The RHAON II System Manager software uses highly structured modular code for great stability and expandability. The result is a robust RHAON technology that's fast, reliable, with a streamlined, intuitive workflow. RHAON II is easy to program, easy to use, and fully compatible with Gen5 Renkus-Heinz products.

RHAON II's Network-agnostic interface has been designed to work with today's networking protocols as well as those of tomorrow. Currently supporting AVDECC IEEE1722.1, Dante and AES67, RHAON II has been structured to allow easy implementation of new and emerging protocols. Support for multiple NICs and (where supported) wireless operation makes RHAON II easy to integrate into an existing network infrastructure.

Complex Conic Horns

The natural, transparent sound that has come to define Renkus-Heinz loudspeakers is a result of our unique Complex Conic Horn technology. Complex Conic horns work with the spherical expansion of the acoustic pressure wave instead of trying to force it through a rectangular funnel like conventional designs. Complex Conic horns provide constant beam width, and as pattern control devices, they perform better over a wider frequency band than ordinary horns.

Complex Conic Horns solve two fundamental problems with traditional horns. The first problem is pattern flip, which is a phenomenon where the coverage pattern rotates 90 degrees in lower frequencies. This occurs because horns are very often wider than they are tall. The second problem occurs in the very highest frequencies, where the rectangular shape imposes the greatest directivity in the diagonals of the horn, narrowing the dispersion around the corners of the horn.

The Complex Conic Horn eliminates both of the above polar pattern distortions, which delivers increased pattern control and more consistent coverage both on and off axis. Complex Conic Horns simply deliver better sound at every seat.

Dante Connectivity and Networking

A Dante audio network replaces the point-to-point analog and digital connections with a standard IP network that delivers completely lossless audio, massive channel counts and near-infinite signal routing flexibility, all while being incredibly easy to deploy and use. IP-standards-based audio networking saves significant installation time and costs, and greatly increases audio system reliability, scalability, and integration flexibility.

High-Quality Crossover Networks (CX Models)

Loudspeakers with high-quality, built-in crossover networks eliminate the need for a separate electronic crossover and bi-amplification. Renkus-Heinz audio crossovers are advanced electronic filter circuitry that split an audio signal into two or more frequency ranges so the signals can be directed to the speaker drivers designed to produce the individual, specific frequency range. Some Renkus-Heinz loudspeaker models can be switched from fully passive operation using the internal crossover to bi-amplified operation using an external controller/crossover/DSP unit. Renkus-Heinz advanced crossover networks also maintain time alignment through the crossover, assuring optimum point-source behavior.

Andermatt Concert Hall Delivers Intimate, World-Class, Acoustically-Accurate Performance Experience With The Help Of Renkus-Heinz

The Andermatt Concert Hall, located in the village of Andermatt in the Ursern Valley of the Swiss Alps, opened its doors in 2019 to rave reviews by hosting the Berlin Philharmonic, bringing world-class classical music performance to the alpine wonderland.

The concert hall is a beautiful venue with seating for up to 650 and offers an up-close and intimate atmosphere with enough room for a 75-piece orchestra. The hall's stage and lower level are below ground level, and the space features a high ceiling with upper-level walls of glass, wood-finished ceilings, and a wrap-around balcony. Studio Seilern Architects created a captivating space, integrating acoustically optimized "origami" panels to provide an immersive, lively acoustic in every seat. A new enhanced acoustic system was also deployed to increase the subjective volume of the space for varying performances.

To address acoustic challenges, Andermatt Swiss Alps brought in KahleAcoustics, specialists in space acoustics for concert and performance venues, and Amadeus Active Acoustics, developers of the Amadeus multi-channel, active acoustic and immersive sound system. They were challenged to design and deploy a high-quality sound system that was both accurate and natural. To do this, the team used 75 CX41 loudspeakers and eight CX118S subwoofers from Renkus-Heinz to cover the performers and audience.

Room Enhancement System

Evan Green, Acoustician Associate at KahleAcoustics, said the challenge with a large orchestra, especially in a relatively small space, is how to control the sound level from being overwhelming. The sound pressure level generated by a full orchestra in a concert hall is enormous.

"Once you have a fixed volume, the way you make it quieter is to add sound-absorbing elements and surfaces," Green said. "But when you do that, the room becomes less reverberant, less resonant and the sound has less life to it, so we recommended a room enhancement sound system approach."

A room enhancement system involves installing many loudspeakers that fully surround the audience to create an enhanced version of the hall's acoustics. In the case of the Andermatt Concert Hall, the immersive sound processing system from Amadeus Active Acoustics uses 32 microphones to pick up all sound within the hall. Those signals are individually processed with natural active acoustic algorithms and then routed to the discreet Renkus-Heinz loudspeaker and subwoofer channels.

"Our ultimate goal is that the performers and audience are never aware that any of this is happening," said Fabio Kaiser, Principal Acoustician, Amadeus Acoustics GmbH. "The space simply sounds like the natural acoustics of the room, but it's created in a way that doesn't add to the loudness issue. The natural acoustic character is still very present, and the scale of the room is expanded and enhanced by the active acoustics system."

The Sound Solution

Seventy-five Renkus-Heinz CX41 speakers are strategically installed throughout the hall. The speakers are color-matched with the walls, wood accents, and ceilings. They are also located behind acoustically-transparent screens, making them virtually invisible.

The CX41 is a highly adaptable, compact, four-inch, two-way, non-powered loudspeaker featuring a versatile enclosure design, go-anywhere hardware, and rugged construction. This full-range, miniaturized enclosure delivers a very accurate, 100Hz to 20kHz frequency response and a wide 150°H x 150°V dispersion.

“The sound quality, size, width of dispersion pattern, and frankly, the affordability of the CX41 loudspeakers make them a perfect choice for this application,” said Kaiser.

To support the loudspeakers, a set of eight Renkus-Heinz CX118S 18-inch, high-performance subwoofers are installed. These subwoofers provide the high-impact sub-bass energy needed in many venues. These non-powered subwoofers feature an accurate and natural 35Hz to 100Hz frequency response.

“It’s important for musicians to feel that they’re inhabiting the same space as the audience, so we need to make sure every direction is covered, and everyone gets sound from every direction, so they feel completely enveloped in sound,” said Kaiser. “When you attend a performance at Andermatt Concert Hall, the system is on, but it just sounds like the natural sound of the room. Extremely high-profile musicians have performed here who been astounded by the active acoustics in place.”

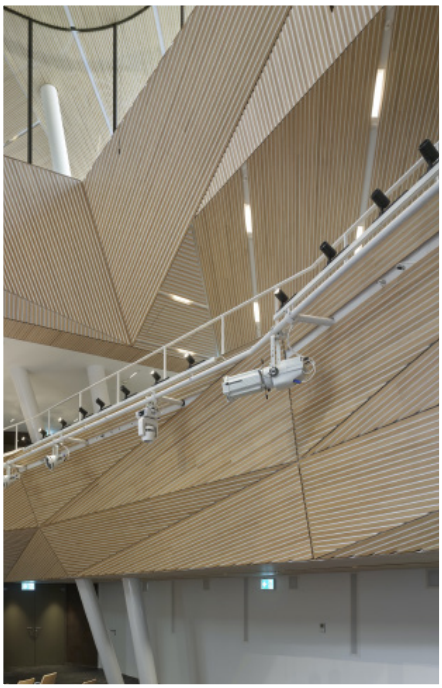
Green agreed that the Andermatt Concert Hall managers, performers and audiences alike have been very impressed with the system.

“This turned out to be the best solution possible for this hall. We now have good speech intelligibility for conferences and banquets, as well as excellent quality, resonance, and an enveloping acoustic environment for classical music,” said Green. “I look forward to working on more projects with Renkus-Heinz products.”

Location
Andermatt, Switzerland

Products Used
CX41, CX118S

Design & Installation
Studio Seilern Architects, KahleAcoustics, Amadeus Active Acoustics



Self-Powered Optimization (CA Models)

Renkus-Heinz has always believed in the control of the entire signal chain, dating back to the early 80s with our original “Smart Systems.” This mind-set still carries through today with our self-powered loudspeakers. Our SA-Amplifiers bring many benefits sonically, and all of our loudspeakers are designed with our electronics in mind. The transducer, amplifier, and cabinet have to work together in tandem, and when purchasing a self-powered Renkus-Heinz system you can be sure there will be a level of optimization that is not possible when using other electronics packages.

Rigorous destruction testing is done on all models to ensure that proper multi-stage limiting is intact on every amplifier channel and pass-band, ensuring reliability night after night, so you can count on your speakers to continue to sound great for years to come.

Proprietary Features:

- Nine user presets (Three factory presets)
- Enhanced S/N with automatic Mute on program pause
- Instant fail-over (2ms) from Dante to Analog

SA Series Amplifier Modules

Renkus-Heinz SA Series Amplifiers are designed to provide the cleanest possible sound quality and performance, even with the most complex audio signals. Renkus-Heinz SA Amplifiers will ultimately enable all Renkus-Heinz loudspeaker models to be freely combined. Standard inputs include Analog and AES, with single and redundant Dante optional, as are Fiber Optic inputs. Ethernet connectivity and control is standard with RHAON II. Any pause in program audio triggers proprietary Amplifier Mute. All SA Series Amplifiers are equipped with native DSP, including delay, equalization and nine available preset memories.

SA Amplifier Key Features:

- High performance Class D technology
- Integrated multi-channel DSP
- Volume, Mute, up to 340ms Delay, 8 band PEQ
- RHAON II Control and monitoring
- Multi-band thermal and peak protection
- Flexible input options
  - “A” Analog Only
  - “RN” Analog and AES/EBU with Ethernet and RHAON
  - “RD” Dante with redundant Dante network
  - Optional Optical Fiber connections

CX41 Compact Four-Inch Coaxial Two-Way Loudspeakers

The externally powered CX41 is a perfect companion to other Renkus-Heinz loudspeakers and to the Renkus-Heinz Iconyx line of digitally steerable column arrays. It features a high-performance audiophile-quality coaxial transducer in a miniaturized vented enclosure that can be easily and inconspicuously mounted almost anywhere. It was designed to meet the needs of audio professionals seeking a very small, full-range loudspeaker to support a wide range of low-profile applications; stage lip, under-balcony, reverberation assistance, side and front fill, effect and distributed systems all benefit from its compact design and smooth, full-range performance.

CX42 Compact High-Performance Two-Way Stairstep Speakers

The externally powered CX42 was developed specifically for stage lip fill or other front fill applications needing full-size performance from a very compact fill loudspeaker that could be easily mounted in stair risers, stage aprons or walls. Despite its very compact size, the CX42 has enough output to keep up with even full-sized concert line arrays in stage lip or platform step fill applications. It features a 1-inch, high-frequency compression driver with a 1-inch throat coupled to a diffraction slot and dual 4-inch woofers.

CX/CA61 Compact Two-Way Complex Conic Loudspeaker System

The CX/CA61 has been designed for applications needing consistent directivity and great sonics from a very compact cabinet. This compact, 6-inch, Complex Conic loudspeaker is perfect for any application where very small size, consistent directivity and great sonic performance are required, such as with side fill or under-balcony applications or in the foreground and high-quality distributed sound systems.

CX/CA62 Two-Way Complex Conic Loudspeaker System

Designed to deliver great directivity and sonic performance, the CX/CA62 features dual woofers that provide additional output and tighter vertical pattern control from a compact cabinet. The patented Complex Conic horn eliminates high-frequency beaming and provides wide-angle coverage out to 20 kHz and beyond. The high-efficiency 6-inch woofers produce a strong low end. Together these deliver a surprisingly high 126 dB peak output level from 100 Hz to 20 kHz.

CX/CA81 Compact Two-Way Complex Conic Loudspeaker System

The CX/CA81 was developed for applications needing consistent directivity and great sonics from a very compact cabinet. The high-efficiency 8-inch woofer produces a strong low end. Together these deliver a surprisingly high 123 dB peak output level from 90 Hz to 20 kHz. It features a 1.4-inch voice coil high-frequency compression driver with a 1-inch throat coupled to a Complex Conic horn. This compact 8-inch Complex Conic loudspeaker is perfect for any application where very small size, consistent directivity and great sonic performance are required.

CX/CA82 Two-Way Complex Conic Loudspeaker System

The CX/CA82 compact, dual 8-inch Complex Conic loudspeaker was engineered for applications needing consistent directivity and great sonics from a compact cabinet. Dual woofers provide additional output and tight vertical pattern control. CX/CA82 features a 1.4-inch voice coil high-frequency compression driver with a 1-inch throat coupled to a Complex Conic horn. The Complex Conic horn is field rotatable allowing the installer the flexibility of installing the loudspeaker either vertically or horizontally while maintaining the dispersion necessary for the project.

CX/CA121 Two-Way Complex Conic Loudspeaker System

The CX/CA121 was developed for applications needing consistent directivity and great sonics from an attractive loudspeaker — at an attractive price. The system features a 1.75-inch voice coil high-frequency compression driver with a 1-inch throat coupled to a large Complex Conic horn. The high-efficiency 12-inch woofer produces a very strong low end. Together these deliver a surprisingly high 128 dB peak output level from 60 Hz to 20 kHz. The CX/CA121 is perfect for a wide range of medium- and large-size, high-quality distributed systems for houses of worship, stadiums, gyms, arenas and more.

CX/CA151 Two-Way Complex Conic Loudspeaker System

The CX/CA151 features a high-efficiency, 15-inch woofer that produces a very strong low end. The system also features a 1.75-inch voice coil high frequency compression driver with a 1-inch throat coupled to a large Complex Conic horn. The patented Complex Conic horn eliminates high frequency beaming and provides wide angle coverage out to 20 kHz and beyond. Together these deliver a high 129 dB peak output level from 55 Hz to 20 kHz.

CX/CA112S 12 Inch High-Performance Subwoofer

C112S subwoofers were designed as companion pieces to the Renkus-Heinze, full-range C Series loudspeakers. These subwoofers feature a 2.5-inch voice coil, cast frame, and treated paper cone woofer. The system's high-efficiency 12-inch woofer produces a very strong, tight bass response and the large ports ensure that no chuffing or fluttering noise ever hinders the sound. A 500 watt program power rating leads to a high 127 dB peak output level from 40 Hz to 120 Hz. The CX/CA112S subwoofer provides the high-impact sub bass energy needed in many venues, and is a great match to nearly any system.

CX118S 18-inch High-Performance Subwoofer

C118S subwoofers were developed as companion pieces to full-range C Series loudspeakers. The C Series subwoofers incorporate the latest components to provide clean, natural sound and tight bass response. Direct radiating designs ensure the most natural response and deepest bass without coloration or resonances. A 900-watt program power rating leads to a surprisingly high 131 dB peak output level from 35 Hz to 120 Hz. The CX118S is a great match to nearly any system.

CX/CA121M Two-Way Complex Conic Loudspeaker Systems

The CX/CA121M perfectly meets the requirements for applications needing consistent directivity and great sonics from a compact cabinet. The system can be used as a main loudspeaker, as a side fill, or a delay in larger systems. It also is suitable for many monitoring and fold back applications for large platforms or stages. The system features a high-efficiency 12-inch woofer and a 1.75-inch voice coil high-frequency compression driver with a 1-inch throat, coupled to a large Complex Conic horn.

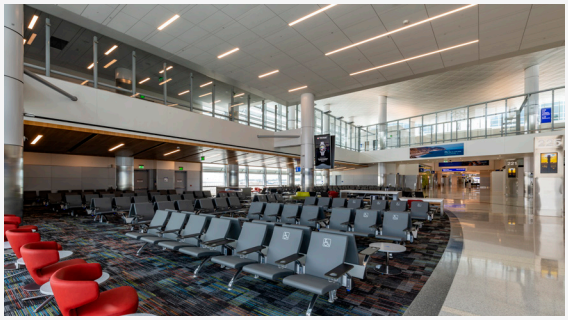
C Series Applications

Venues & Events

Theaters, nightclubs, and performance venues of all types need high-quality sound systems as flexible as the events they host. Ideal for mains, fills, delays, distributed, and playback systems, the C Series was developed for applications needing consistent directivity and outstanding sonic performance from a very compact cabinet.

Education

The necessity for distance learning and hybrid classroom strategies during the pandemic powerfully highlighted the importance of AV technologies in education. Quality audio is critical for optimum instructor and student engagement, lesson/content comprehension, and in eliminating audio fatigue for all audiences. From lecture halls to classrooms to overflow areas, Renkus-Heinz C Series loudspeakers offer the natural, smooth, intelligible sound quality needed to meet today's ever-evolving AV applications.



Transportation

Arrival and departure announcements, gate information, safety, and security alerts, paging, music — if a transportation hub's sound system is not adequately designed and managed, these environments can become stressful, distracting, confusing, and even dangerous for travelers. C Series loudspeakers are the ideal solution for compact, full-range sound reinforcement where smooth, high-quality music and intelligible speech are critically important.

Government & Military

Government and military institutions use AV systems for meetings, training events, employee messaging, public information, emergency alerts, entertainment, and much more. In all cases, clear, intelligible sound system solutions are needed to communicate efficiently and effectively. C Series offers a wide range of compact, flexible, non-powered, and powered speaker solutions to meet any facility's sound system requirements.

Retail

Faced with heavy competition from online shopping — and to bring customers back in a post-pandemic era — retail stores are now leveraging all available tools to attract and retain customers and deliver a unique shopping experience. Renkus-Heinz's high-quality, pleasant, and accurate C Series sound systems help attract, relax, and entertain customers and keep them coming back for more.

Hospitality & Leisure

Large hotels, casinos, and resorts can be thought of as small cities unto themselves. With a range of common indoor/outdoor areas, restaurants and bars, retail shops, theaters, and business/conference areas, a hospitality facility's sound system needs vary greatly. From background music to supporting the latest DJ artist in the hotel's nightclub, C Series offers high-quality, full-range, compact enclosure designs combined with a wide range of mounting options and associated hardware to provide excellent installation flexibility.

Immersive Events

From home theaters and cinemas to performance art venues and concert halls, immersive sound has become the next big thing in professional audio. By using dozens of audio channels and perhaps hundreds of loudspeakers throughout a venue, sound engineers can paint an amazing soundscape across an audience. Renkus-Heinz compact, C Series loudspeakers deliver the quality, accuracy, dynamics, and controllability that perfectly meet today's immersive sound system requirements.

Live Events

Purpose-built theaters and auditoriums, ballrooms, art galleries, even churches, and school cafeterias — practically any space can become a space for a live event. Performances can range from the spoken word to theatrical productions to solo recitals and large concerts. For all live events, sound system quality and flexibility are essential. With Complex Conic Horn technology, C Series loudspeakers have been specifically engineered to offer the fidelity, tight pattern control, and output power needed to perfectly support any live event.

C Series Specifications

	CX41 Specifications	CX42 Specifications	CA/CX61 Specifications
Sensitivity:	89 dB (1W/1m)	95 dB (1W/1m)	CX61: 94 dB (1W/1m) CA61-A / -RN / -RD: 1.4 volt for rated output, analog
Power:	50 W pgm at 8 Ohms	240 Watts program at 16 Ohms	CX61: Passive: 100 W AES @ 16 ohms, Bi-amp: 100 W AES @ 16 ohms, LF 20 W AES @ 16 ohms, HF CA61-A / -RN / -RD: See SA625 amplifier specs below
Maximum SPL:	115 dB peak	127 dB peak	120 dB peak
Dispersion:	150° H by 150° V	150° H by 60° V	150° horizontal x 60° vertical, Rotatable Complex Conic Horn
Freq. Resp:	± 3 dB, 100 Hz to 18 kHz	300 Hz to 18 kHz (+- 3dB; 100 Hz - 10 dB)	100 Hz to 20 kHz (+/- 3dB) Crossover Frequency: CX61:2.2 kHz, passive, bi-amp selectable CA61-A / -RN / -RD: 2.2 kHz active electronic
Transducer:	4" coaxial with a 4" treated fiber cone woofer and a 1" dome tweeter; 25 W RMS @ 8 Ohms, 50 W pgm, RH model SSL4-5	Dual 4", model SSL4-6; 4" Woofers; 60 W AES, 120 W program each.	Woofer: SSL6.5-18 High Frequency Driver: SSD1445-16 Replacement HF Diaphragm CD1445-16
Enclosure:	Hardwood, perforated metal grille	5 3/8"" H x 16 5/8" W x 9 5/8" D 137 mm x 422 mm x 244 mm	11 ply birch plywood
Connectors:	Screw terminals & looping 4-pin Neutrik Speakon style connectors	Screw terminals & looping 4-pin Neutrik Speakon style connectors	CX61: 2 x Speakon® NL4, Four-place terminal strip, all paralleled CA61-A:2 x XLR-3, In & Loop-out CA61-RN / -RD: 2 x XLR-3, In & Loop-out Analog and AES 2 x RJ45, primary & secondary
Finish:	Black or White paint	Black or White paint (Grille only)	Black or White paint
Hardware:	U-bracket attachment points	Screw terminals & looping 4-pin Neutrik Speakon style connectors	12 x M6 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT61B (black), UBRKT/CT61W (white)
Dimensions:	6" H x 7" W x 6" D (15.2 cm x 17.8 cm x 15.2 cm)	5 5/8" H, x 16 7/8" W x 13 3/16" D 142 mm x 430 mm x 335 mm	7-7/8" w x 16" h x 9-3/8" d 200 mm w x 406 mm h x 238 mm d
Net Weight:	4.8 Lbs (1.9 Kg)	16.8 lbs/ 7.7 kg, net	CX61:20 lbs/ 9 kg CA61-A / -RN / -RD:19 lbs/ 8 .6 kg (This is correct, the amp is lighter than the passive input connection/crossover plate.)
Assoc. Item:	UBRKT/41 U-Bracket	All analog inputs and outputs comply with AES Standard 48-2005 on interconnecting, grounding and shielding.	16 GA powder-coated, plated steel Grille

	CA/CX62 Specifications	CA/CX81 Specifications	CA/CX82 Specifications
Sensitivity:	97 dB (1W/1m) 1.4 volt for rated output, analog	CX81: 96 dB (1W/1m) CA81-A / -RN / -RD: 1.4 volt for rated output, analog	CX82: 99 dB (1W/1m) CA82-A/-RN/-RD: 1.4 volt for rated output, analog
Power Handling:	Passive: 200 W AES @ 8 ohms, Bi-amp: 200 W AES @ 8 ohms, LF 20 W AES @ 16 ohms, HF CA62A- / -RN / -RD: See SA625 amplifier specs below	Passive: 125 W AES @ 16 ohms, Bi-amp: 125 W AES @ 16 ohms, LF 20 W AES @ 16 ohms, HF CA81-A / -RN / -RD: See SA625 amplifier specs below	CX82: Passive: 250 W AES @ 8 ohms Bi-amp: 250 W AES @ 8 ohms, LF 20 W AES @ 16 ohms, HF CA82-A/-RN/-RD: See SA625 amplifier specs below
Maximum SPL:	CX62: 126 dB Peak CA62-A: 124 dB Peak CA62-RN: 124 dB Peak CA62-RD: 124 dB Peak	123 dB peak	CX82: 129 dB Peak CA82-A: 126 dB Peak CA82-RN: 126 dB Peak CA82-RD: 126 dB Peak
Dispersion:	150° horizontal x 60° vertical, Rotatable Complex Conic Horn	120° horizontal x 60° vertical, Rotatable Complex Conic Horn	120° horizontal x 60° vertical, Rotatable Complex Conic Horn
Frequency Response:	100 Hz to 20 kHz (+/- 3dB)	90 Hz to 20 kHz (+/- 3dB)	90 Hz to 20 kHz (+/- 3dB)
Crossover Freq. :	CX62: 2.2 kHz, passive, bi-amp selectable CA62A- / -RN / -RD: 2.2 kHz active electronic	CX81: 2.2 kHz, passive, bi-amp selectable CA81-A / -RN / -RD: 2.2 kHz active electronic	CX82: 2.2 kHz, passive, bi-amp selectable CA82-A/-RN/-RD: 2.2 kHz active electronic
Transducer:	Woofer: 2 x SSL6.5-18 High Frequency Driver: SSD1445-16 Replacement HF Diaphragm CD1445-16	Woofer: SSL8-20 High Frequency Driver: SSD1445-16 Replacement HF Diaphragm CD1445-16	Woofer: 2 x SSL8-20 High Frequency Driver: SSD1445-16 Replacement HF Diaphragm CD1445-16 Finish: Black (RAL9010) or White (RAL9011) paint
Enclosure:	11 ply birch plywood	11 ply birch plywood	11 ply birch plywood
Connectors:	CX62: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA62-A: 2 x XLR-3, In & Loop-out CA62-RN / -RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary	CX81: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA81-A: 2 x XLR-3, In & Loop-out CA81-RN / -RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary	CX82: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA82-A: 2 x XLR-3, In & Loop-out CA82-RN/-RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary
Finish:	Black (RAL9010) or White (RAL9011) paint	Black (RAL9010) or White (RAL9011) paint	Black (RAL9010) or White (RAL9011) paint
Grille:	16 GA powder-coated, plated steel	16 GA powder-coated, plated steel	16 GA powder-coated, plated steel
Dimensions:	7-7/8" w x 21" h x 9-3/8" d 200 mm w x 533 mm h x 238 mm d	10-5/16" w x 21" h x 10-1/2" d 262 mm w x 533 mm h x 267 mm d	10-5/16" w x 28-1/2" h x 10-1/2" d 262 mm w x 724 mm h x 267 mm d
Weight:	CX62: 26 lbs/ 11. 8 kg CA62A- / -RN / -RD: 25 lbs/ 11. 3 kg (This is correct, the amp is lighter than the passive input connection/crossover plate.)	Weight: 25 lbs/11.3 kg	Weight: 34 lbs/ 15.4 kg
Mounting:	12 x M6 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT62B (black), UBRKT/CT62W (white)	12 x M6 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT81B (black), UBRKT/CT81W (white)	2 x M6 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT82B (black), UBRKT/CT82W (white)

	CA/CX121 Specifications:	CA/CX151 Specifications	CA/CX112S Specifications
Connectors:	CX121: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA121-A: 2 x XLR-3, In & Loop-out CA121-RN / -RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary	CX151: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA151-A: 2 x XLR-3, In & Loop-out CA151-RN / -RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary	2 x Speakon® NL4 Four-place terminal strip, all paralleled CA112S-A: 2 x XLR-3, In & Loop-out CA112S-RN /-RD1/RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary
Sensitivity:	CA121:97 dB (1W/1m) CA121-A / -RN / -RD: 1.4 volt for rated output, analog	CX151: 98 dB (1W/1m) CA151-A / -RN / -RD: 1.4 volt for rated output, analog	CX112S: 97 dB (1W/1m) CA112S/-A/-RN/-RD1/RD: 1.4 volt for rated output, analog
Power Handling:	CX121: Passive: 350 W AES @ 8 ohms Bi-amp: 350 W AES @ 8 ohms, LF 60 W AES @ 8 ohms, HF CA121-A / -RN / -RD: See SA1250 amplifier specs below	CX151: Passive: 350 W AES @ 8 ohms, Bi-amp: 350 W AES @ 8 ohms, LF 60 W AES @ 8 ohms, HF CA151-A / -RN / -RD: See SA1250 amplifier specs below	CX112S: 250 W AES @ 8 ohms CA112S/-A/-RN/-RD1/RD: See SA625 amplifier specs below
Crossover Frequency:	CX121: 1.6 kHz, passive, bi-amp selectable CA121-A / -RN / -RD: 1.6 kHz active electronic	CX151: 1.6 kHz, passive, bi-amp selectable CA151-A / -RN / -RD: 1.6 kHz active electronic	CX112S: 100 Hz, 4th order Butterworth recommended CA112S/-A/-RN/-RD1/RD: 100 Hz, 4th order Butterworth
Max. SPL:	CX121: 128 dB Peak CA121-A: 127 dB Peak CA121-RN: 127 dB Peak CA121-RD: 127 dB Peak	CX151: 129 dB Peak CA151-A: 128 dB Peak CA151-RN: 128 dB Peak CA151-RD: 128 dB Peak	CX112S: 127 dB peak, half space CA112S-A: 124 dB peak, half space CA112S-RN: 124 dB peak, half space CA112S-RD: 124 dB peak, half space
Weight:	45 lbs./ 20.4 kg	52 lbs./ 23.6 kg	52 lbs./ 23.6 kg
Frequency Response:	60 Hz to 20 kHz (+/- 3dB)	55 Hz to 20 kHz (+/- 3dB)	40 Hz to 120 Hz (+/- 3dB)
Dispersion:	90° horizontal x 40° vertical, Rotatable Complex Conic Horn	60° horizontal x 40° vertical, Complex Conic Horn	
Enclosure:	11 ply birch plywood	11 ply birch plywood	11 ply birch plywood
Grille:	16 GA powder-coated, plated steel	16 GA powder-coated, plated steel	16 GA powder-coated, plated steel
Transducers:	Woofer: SSL12-26 High Frequency Driver:SSD1747-8; Replacement HF Diaphragm CD1747-8	Woofer: SSL12-26; High Frequency Driver: SSD1747-8 Replacement HF Diaphragm CD1747-8	Woofer: SSL12-23
Finish:	Black (RAL9010) or White (RAL9011) paint	Black (RAL9010) or White (RAL9011) paint	Black (RAL9010) paint
Mounting:	12 x M10 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT121B (black), UBRKT/CT121W (white)	12 x M10 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT151B (black), UBRKT/CT151W (white)	12 x M10 UMH points 1 x 35 mm pole socket

	CA/CX118S Specifications	CA/CX121M Specifications
Connectors:	CX118S: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA118S-A: 2 x XLR-3, In & Loop-out CA118S-RN/-RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary	CX121M: 2 x Speakon® NL4 Four-place terminal strip, all paralleled CA121M-A: 2 x XLR-3, In & Loop-out CA121M-RN/-RD: 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45, primary & secondary
Sensitivity:	CX118S: 97 dB (1W/1m) CA118S-A/-RN/-RD: 1.4 volt for rated output, analog	CX121M: 96 dB (1W/1m) CA121M-A/-RN/-RD: 1.4 volt for rated output, analog
Power Handling:	CX118S: 250 W AES @ 8 ohms CA118S-A/-RN/-RD: See SA1250 amplifier specs below	CX121M: Passive: 350 W AES @ 8 ohms, Bi-amp: 350 W AES @ 8 ohms, LF 60 W AES @ 8 ohms, HF CA121M-A/-RN/-RD: See SA625 amplifier specs below
Crossover Frequency:	CX118S: 100 Hz, 4th order Butterworth recommended CA118S-A/-RN/-RD: 100 Hz, 4th order Butterworth	CX121M: 1.6 kHz, passive, bi-amp selectable CA121M-A/-RN/-RD: 1.6 kHz active electronic
Max. SPL:	CX118S: 131 dB peak, half space CA118S-A: 128 dB peak, half space CA118S-RN: 128 dB peak, half space CA118S-RD: 128 dB peak, half space	130 dB peak, Half-Space
Weight:	88 lbs./ 39.9 kg	45 lbs./ 20.4 kg
Frequency Response:	35 Hz to 120 Hz (+/- 3dB)	70 Hz to 18 kHz (-3 dB) 55 Hz to 20 kHz (-10 dB)
Enclosure:	11 ply birch plywood	11 ply birch plywood
Grille:	16 GA powder-coated, plated steel	16 GA powder-coated, plated steel
Transducers:	Woofer: SSL18-10	Woofer: SSL12-26 High Frequency Driver: SSD1747-8 Replacement HF Diaphragm CD1747-8
Finish:	Black (RAL9010) paint	Black (RAL9010) or White (RAL9011) paint
Mounting:	12 x M10 UMH points 1 x 35 mm pole socket	12 x M10 UMH points; 2 x M10 u-bracket nutplate. Optional: UBRKT/CT121B (black), UBRKT/CT121W (white)
Dimensions:	22-1/4” w x 29-3/8” h x 23-1/2” d 445 mm w x 724 mm h x 432 mm d	14-3/8” w x 27” h x 14-1/4” d 365 mm w x 686 mm h x 362 mm d

	SA625 Amplifier Specifications	SA1250 Amplifier Specifications
Audio Connections:	SA625-A: 2 x XLR-3, In & Loop-out, Analog SA625-RN: 2 x XLR-3, In & Loop-out, Analog and AES SA625-RD1 (Ultimo): 2 x XLR-3, In & Loop-out, Analog and AES 1 x RJ45 Dante Ethernet SA625-RD (Brooklyn II): 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45 Dante Primary & Secondary Ethernet	SA1250-A: 2 x XLR-3, In & Loop-out, Analog SA1250-RN: 2 x XLR-3, In & Loop-out, Analog and AES SA1250-RD (Brooklyn II): 2 x XLR-3, In & Loop-out, Analog and AES 2 x RJ45 Dante Primary & Secondary Ethernet
Latency:	SA625-A: 6.25 ms SA625-RN: 6.25 ms SA625-RD1 (Ultimo): 6.25 ms Analog & AES 6.25 ms + Dante transport latency SA625-RD (Brooklyn II): 6.25 ms Analog & AES 6.25 ms + Dante transport latency	SA1250-A / -RN: 6.25 ms SA1250-RD (Brooklyn II): 6.25 ms Analog & AES 6.25 ms + Dante transport latency
User DSP:	SA625-A: None SA625-RN: Eight fully parametric filters, high/low shelf, high/low pass filters, delay to 340 ms. SA625-RD1 (Ultimo): Eight fully parametric filters, high/low shelf, high/low pass filters, delay to 340 ms. SA625-RD (Brooklyn II): Eight fully parametric filters, high/low shelf, high/low pass filters, delay to 340 ms.	SA1250-A / -RN: None SA1250-RD (Brooklyn II): Eight fully parametric filters, high/low shelf, high/low pass filters, delay to 340 ms
Software:	SA625-A: None SA625-RN: RHAON II SA625-RD1 (Ultimo): RHAON II and Dante Controller SA625-RD (Brooklyn II): RHAON II and Dante Controller	SA1250-A: None SA1250-RN: RHAON II SA1250-RD: RHAON II and Dante Controller
Max. Input Level:	SA625-A: +22 dBu, Analog SA625-RN: +22 dBu, Analog, 0 dBFS digital SA625-RD1 (Ultimo): +22 dBu, Analog, 0 dBFS digital SA625-RD (Brooklyn II): +22 dBu, Analog, 0 dBFS digital	SA1250-A: +22 dBu, Analog SA1250-RN: +22 dBu, Analog, 0 dBFS digital SA1250-RD: +22 dBu, Analog, 0 dBFS digital
Network Connections:	SA625-A: None SA625-RN: 2 x RJ45, Looping Ethernet/RHAON SA625-RD1 (Ultimo): 2 x RJ45, DANTE/Looping Ethernet/ RHAON (Note: Dante and RHAON share a single Ethernet network.) SA625-RD (Brooklyn II): 2 x RJ45 Dante Primary & Secondary Ethernet/RHAON (Note: Dante and RHAON share a single or redundant Ethernet network.)	SA1250-A: None SA1250-RN: 2 x RJ45, Looping Ethernet/RHAON SA1250-RD: 2 x RJ45 Dante Primary & Secondary Ethernet/RHAON (Note: Dante and RHAON share a single or redundant Ethernet network.)
Power Output:	LF= 500 watts, @ 8 ohms Multi-band peak and thermal limiting protects the driver.	LF= 1000 watts, @ 8 ohms / HF = 250 watts @ 8 ohms. Multi-band peak and thermal limiting on both channels protects the drivers.
Mains Voltage:	100-240 volts, 50/60 Hz auto-switching	100-240 volts, 50/60 Hz auto-switching
Power Consumption:	Idle: 200 mW. 1/8 power: 120 W (onset of limiting) 1/3 power: 240 W (hard limiting)	Idle: 300 mW. 1/8 power: 240 W (onset of limiting) 1/3 power: 550 W (hard limiting)
Power Connector:	Neutrik powerCON TRUE-1	Neutrik powerCON TRUE-1
Temperature Limits	Max.: 140º F/60º C, with no direct sun exposure; Min.: -22º F/-30º C; leave unit on to keep interior warm below 32º F/0º C. Note: All analog inputs and outputs comply with AES Standard 48-2005 on interconnecting, grounding and shielding.	Max.: 140º F/60º C, with no direct sun exposure; Min.: -22º F/-30º C; leave unit on to keep interior warm below 32º F/0º C. Note: All analog inputs and outputs comply with AES Standard 48-2005 on interconnecting, grounding and shielding.

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