VOICE ACOUSTIC
professional german loudspeaker systems

Voice-Acoustic manual

HDSP GEN3 rack amplifier and self-powered loudspeakers
Operation and connection options

Instructions and useful information
Stand V1.1, October 2025

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FR = FR stands for 'full range'. This refers to a deeper separation of the top section in order to reproduce frequencies below 100 Hz.
Cut Top = Top section mode. This term refers to top sections that are separated from low frequencies. This mode is usually used with subwoofers to reduce the amount of high-energy low frequencies in the top section. This gives the top section more headroom before the limiter kicks in.
SP = Self-powered. This term refers to loudspeakers with built-in amplifier electronics that can power themselves.
Passiv = This term refers to multi-way loudspeakers in which the frequency response is divided between individual components (e.g. tweeters and midrange drivers) via passive crossover components. This setup requires only one amplifier channel.
Active= Subs or tops that are actively separated using an external crossover or DSP amplifier, and operated with one amplifier channel per speaker. This term is often used colloquially for self-powered systems. However, 'active system' refers to a loudspeaker system in which the frequency response is divided between the channels before reaching the loudspeaker. For example, a subwoofer without an internal crossover is an active subwoofer, not a passive one. A subwoofer with built-in amplifier electronics is self-powered.
Bi-Amp = This refers to a two-way top section that is actively separated and driven via two amplifier channels. A 3-way top section that is actively separated and driven via three amplifier channels would be called a tri-amp.
DSP = A digital signal processor (DSP) is a type of digital processor designed for processing audio signals. When installed in a 19-inch device without an amplifier, it is referred to as a loudspeaker management system. Alternatively, a DSP can be built into an amplifier, in which case it is referred to as a 'smart' DSP amplifier.
Summiert = This occurs when a sum is formed from a left-right stereo signal, for example by assigning both left and right input signals to a subwoofer amplifier channel.
Cardioid or Cardio = refers to a technology in which multiple loudspeakers are arranged and controlled in such a way that the sound is directed mainly forwards. The sound radiated backwards cancels itself out through interference and becomes significantly quieter. ‘Active cardioid’ refers to sound interference caused by additional speakers that are positioned and turned around, or by speaker transducer that are built into the same housing at the rear or side. With passive cardioid technology, sound interference towards the rear is created by a passive delay in the enclosure, e.g. by deflection paths or side or rear openings with thick foam in front of them.
CSAG = Cardioid Subwoofer Array Endfire principle. The aim is to achieve a similar result to that of the CSAG principle. CSAG and CSAE do not differ in terms of loudspeaker design, but rather in terms of signal processing and the result. Both methods have advantages and disadvantages, so technicians can choose the one that suits them best depending on the application.
CSAE = Cardioid Subwoofer Array Endfire principle. The aim is to achieve a similar result to that achieved with the CSAG principle. CSAG and CSAE do not differ in terms of loudspeaker setup, but rather in terms of signal processing and the result. Both methods have advantages and disadvantages, so technicians can choose the one that suits them best depending on the application.
AES, AES3 oder AES/EBU is a digital audio standard developed by the Audio Engineering Society/European Broadcast Union. It involves digitally transmitting the audio signal from the mixing console to the amplifier, eliminating the need for conversion from digital to analogue in the digital console and then from analogue to digital in the amplifier.
Dante = Digital Audio Network Through Ethernet (Dante) is a technology developed by the Australian company Audinate. It enables uncompressed digital audio signals to be transmitted with low latency over a standard Ethernet network (audio over IP). Depending on the installed Dante chip, up to 512 different audio signals can be transported. The various audio channels can be assigned using software (Dante Controller) from the transmitter (e.g. mixing consoles or interfaces) to the receivers (e.g. amplifiers). Remote software for controlling and monitoring digital signal processor (DSP) amplifiers can also be transmitted via the audio network, minimising the amount of cabling required.
Dante-Interface = A Dante interface is a device that can convert analogue or digital AES/EBU signals into the Dante protocol, and vice versa.
Milan = Similar to Dante, Milan is a technology that allows audio signals to be transmitted over an Ethernet network (audio over IP). It is an open network standard for professional audio applications, based on the IEEE Time-Sensitive Networking (TSN) standard (AVB). MILAN was developed by leading professional audio companies within the Avnu Alliance. Manufacturers using Milan must test their devices to ensure they function properly and obtain a one-time licence. Unlike Dante from Audinate, no additional licences are required for Milan chips, reducing costs for manufacturers and users alike. Although Milan is much younger than Dante, it is becoming increasingly popular in the market.
Daisy-Chain Topologie = A term for network cabling in which devices are connected in series.
Sternförmige Topologie = Each device is connected to a central hub, usually a switch, with its own cable.
PoE = PoE stands for 'Power over Ethernet' and refers to a technology that allows network data and electrical power to be transmitted to other devices via a single Ethernet cable simultaneously.
Directivity = Directionality describes how a loudspeaker focuses sound in specific directions rather than distributing it evenly in all directions.
Crosslink = Refers to the twisting of the pin assignment of a cable or plug contact for special cabling cases.

Amplifier comparison matrix

Model:		VADAS-12K4D	VADAS-8K4D	HDSP-16K4D	HDSP-16K8D	HDSP-8K4D or Paveosub-sp-8K4	HDSP-8K8D	HDSP-4K4D
Channels:		4	4	4	8	4	8	4
Power (W)	8Ω	1900** (1800*)	1500** (1400*)	3000*	1000**	1000**	750*	750*
	4Ω	3000** (2700*)	2300** (2000*)	4000*	2000**	2000**	1000*	1000*
	2Ω	2000*	2000*	n/a	n/a	n/a	750*	750*
	8Ω (BRIDGED)	5400	4000	n/a	n/a	n/a	n/a	n/a
	4Ω (BRIDGED)	4000	4000	n/a	n/a	n/a	n/a	n/a
Maximum output voltage:		180 Vpeak	155 Vpeak	270 Vpeak	150 Vpeak	150 Vpeak	135 Vpeak	135 Vpeak
Maximum output current:		>55 Apeak	>55 Apeak	100 Apeak	54 Apeak	54 Apeak	50 Apeak	50 Apeak
Analog Inputs (XLR female):		4	4	4	4	2	4	2
Analog Outputs (XLR male link):		4	4	4	4	2	4	2
Digital AES3 Inputs (XLR female):		4 channels	4 channels	4 channels***	4 channels***	2 channels***	4 channels***	2 channels***
Digital AES3 Outputs (XLR male link):		4 channels	4 channels	4 channels***	4 channels***	2 channels***	4 channels***	2 channels***
Digital Dante/AES67 (Ethercon):		4 channels	4 channels	8 channels	8 channels	4 channels	8 channels	4 channels
Digital Milan (Ethercon):		n/a	n/a	8 channels	8 channels	4 channels	8 channels	4 channels
Output (Speakon NL4):		4	4	4	8	4	8	4

*All channels loaded symmetrically
**Channels loaded asymmetrically, e.g. two channels with subwoofers and two channels with tops
*** Analogue or digital AES possible

Maximum number of speakers per amplifier channel and speakers per amplifier

Model	Imp.	Paveosub-sp-8K4 4 x 1000W/8Ω 4 x 2000W/4Ω - /2Ω		HDSP-16K4 4 x 3000W/8Ω 4 x 4000W/4Ω - /2Ω		HDSP-16K8 8 x 1000W/8Ω 8 x 2000W/4Ω - /2Ω		HDSP-8K4 4 x 1000W/8Ω 4 x 2000W/4Ω - /2Ω		HDSP-8K8 8 x 750W/8Ω 8 x 1000W/4Ω 8 x 750W/2Ω		HDSP-4K4 4 x 750W/8Ω 4 x 1000W/4Ω 4 x 750W/2Ω		VADAS-12K4D 4 x 1800W/8Ω 4 x 3000W/4Ω 4 x 2000W/2Ω		VADAS-8K8D 4 x 1400W/8Ω 4 x 2000W/4Ω 4 x 2000W/2Ω	
		Max Speaker		Max Speaker		Max Speaker		Max Speaker		Max Speaker		Max Speaker		Max Speaker		Max Speaker	
		per CH	per Amp	per CH	per Amp	per CH	per Amp	per CH	per Amp	per CH	per Amp	per CH	per Amp	per CH	per Amp	per CH	per Amp
Paveosub-121	8Ω	1*	1	1(8Ω/1800W)	4	-	-	-	-	-	-	-	-	1(8Ω/1800W)	4	-	-
Paveosub-218	4Ω	1(4Ω/2400W)	1	1(4Ω/2400W)	4	1(4Ω/2400W)	4	1(4Ω/2400W)	2	-	-	-	-	1(4Ω/2400W)	4	1(4Ω/2400W)	2**
Paveosub-118	8Ω	2(4Ω/2400W)	3	2(4Ω/2400W)	8	2(4Ω/2400W)	8	2(4Ω/2400W)	4	-	-	-	-	2(4Ω/2400W)	8	2(4Ω/2400W)	4**
Paveosub-115	8Ω	2(4Ω/2400W)	3	2(4Ω/2400W)	8	2(4Ω/2400W)	8	2(4Ω/2400W)	4	1(8Ω/1200W)	4	1(8Ω/1200W)	2	2(4Ω/2400W)	8	2(4Ω/2400W)	8
Paveosub-112	8Ω	2(4Ω/2400W)	3	2(4Ω/2400W)	8	2(4Ω/2400W)	8	2(4Ω/2400W)	4	1(8Ω/1200W)	4	1(8Ω/1200W)	2	2(4Ω/2000W)	8	2(4Ω/2000W)	8
Ikarray-12 Bi-Amp	16Ω	4(4Ω/1600W)	4(mono)	4(4Ω/1600W)	8	4(4Ω/1600W)	16	4(4Ω/1600W)	8	-	-	-	-	4(4Ω/1600W)	8	4(4Ω/1600W)	8
Ikarray-8	4Ω	1(4Ω/500W)	3	1(4Ω/500W)	4	1(4Ω/500W)	8	1(4Ω/500W)	4	1(4Ω/500W)	8	1(4Ω/500W)	4	2(2Ω/1000W)***	8	2(2Ω/1000W)***	8
Ikarray-6	16Ω	4(4Ω/1600W)	12	4(4Ω/1600W)	16	4(4Ω/1600W)	32	4(4Ω/1600W)	16	2(8Ω/800W)	16	2(8Ω/800W)	8	4(4Ω/1600W)	16	4(4Ω/1600W)	16
VENIA-8 Bi-Amp	8Ω	24Ω/2000W)	2(mono)	24Ω/2000W)	4	24Ω/2000W)	8	24Ω/2000W)	4	-	-	-	-	2(4Ω/2000W)	4	2(4Ω/2000W)	4
VENIA-6	8Ω	2(4Ω/1600W)	6	2(4Ω/1600W)	8	2(4Ω/1600W)	16	2(4Ω/1600W)	8	1(8Ω/800W)	8	1(8Ω/800W)	4	2(4Ω/1600W)	8	2(4Ω/1600W)	8
Modular-15P	8Ω	2(4Ω/1800W)	6	2(4Ω/1800W)	8	2(4Ω/1800W)	16	2(4Ω/1800W)	8	-	-	-	-	2(4Ω/1800W)	8	2(4Ω/1800W)	8
Modular-15 Bi-Amp	8Ω	2(4Ω/1700W)	2(mono)	2(4Ω/1700W)	4	2(4Ω/1700W)	8	2(4Ω/1700W)	4	-	-	-	-	2(4Ω/1700W)	4	2(4Ω/1700W)	4
Modular-12P	8Ω	2(4Ω/900W)	6	2(4Ω/900W)	8	2(4Ω/900W)	16	2(4Ω/900W)	8	2(4Ω/900W)	16	2(4Ω/900W)	8	3(2,7Ω/1350W)	12	3(2,7Ω/1350W)	12
Modular-12 Bi-Amp	8Ω	2(4Ω/900W)	2(mono)	2(4Ω/900W)	4	2(4Ω/900W)	8	2(4Ω/900W)	4	2(4Ω/900W)	8	2(4Ω/900W)	4	3(2,7Ω/1350W)	6	3(2,7Ω/1350W)	6
Score-8	4Ω	1(4Ω/500W)	3	1(4Ω/500W)	4	1(4Ω/500W)	8	1(4Ω/500W)	4	1(4Ω/500W)	8	1(4Ω/500W)	4	2(2Ω/1000W)	8	2(2Ω/1000W)	8
Score-6	12Ω	2(6Ω/1280W)	6	2(6Ω/1280W)	12	2(6Ω/1280W)	16	2(6Ω/1280W)	8	-	-	-	-	3(4Ω/1920W)	12	3(4Ω/1920W)	12
Score-5	12Ω	3(4Ω/600W)	9	3(4Ω/600W)	12	3(4Ω/600W)	24	3(4Ω/600W)	12	3(4Ω/600W)	24	3(4Ω/600W)	12	4(3Ω/800W)	16	4(3Ω/800W)	16
LA-Stick 12x4	5,3Ω	1(5,3Ω/360W)	3	1(5,3Ω/360W)	4	1(5,3Ω/360W)	8	1(5,3Ω/360W)	4	2(2,7Ω/720W)	16	2(2,7Ω/720W)	8	2(2,7Ω/720W)	8	2(2,7Ω/720W)	8
LA-Stick 8x4	8Ω	2(4Ω/480W)	6	2(4Ω/480W)	8	2(4Ω/480W)	16	2(4Ω/480W)	8	3(2,7Ω/720W)	24	2(2,7Ω/720W)	12	3(2,7Ω/720W)	12	3(2,7Ω/720W)	12
LA-Stick 4x4	16Ω	4(4Ω/480W)	12	4(4Ω/480W)	16	4(4Ω/480W)	32	4(4Ω/480W)	16	6(2,7Ω/720W)	48	6(2,7Ω/720W)	24	6(2,7Ω/720W)	24	6(2,7Ω/720W)	24
Aleasub-10	8Ω	-	-	2(4Ω/700W)	8	2(4Ω/700W)	16	2(4Ω/700W)	8	2(4Ω/700W)	16	2(4Ω/700W)	8	3(2,7Ω/1050W)	12	3(2,7Ω/1050W)	12
Alea-5	8Ω	2(4Ω/300W)	6	2(4Ω/300W)	8	2(4Ω/300W)	16	2(4Ω/300W)	8	4(2Ω/600W)	24	4(2Ω/600W)	12	4(2Ω/600W)	16	4(2Ω/600W)	16
Alea-4	16Ω	4(4Ω/120W)	12	4(4Ω/120W)	16	4(4Ω/120W)	32	4(4Ω/120W)	16	8(2Ω/240W)	64	8(2Ω/240W)	32	8(2Ω/240W)	32	8(2Ω/240W)	32
CXN-16P	8Ω	2(4Ω/2000W)	6	2(4Ω/2000W)	8	2(4Ω/2000W)	16	2(4Ω/2000W)	8	-	-	-	-	2(4Ω/2000W)	8	2(4Ω/2000W)	8
CXN-16 Bi-Amp	8Ω	2(4Ω/2000W)	2(mono)	2(4Ω/2000W)	4	2(4Ω/2000W)	8	2(4Ω/2000W)	4	-	-	-	-	2(4Ω/2000W)	4	2(4Ω/2000W)	4
CXN-12	8Ω	2(4Ω/800W)	6	2(4Ω/800W)	8	2(4Ω/800W)	16	2(4Ω/800W)	8	2(4Ω/800W)	16	2(4Ω/800W)	8	3(2,7Ω/1200W)	12	3(2,7Ω/1200W)	12

The number of speakers per amp in the Paveosub-sp-8K4 series refers to the additional speakers that can be powered by the self-powered subwoofer's electronics. For instance, a Paveosub-115sp-8K4 can power additional three 15” subwoofers alongside the internally integrated 15” transducer. A Paveosub-218sp-8K4 can power one additional Paveosub-218.

*The Paveosub-121sp-4K1 has a one-channel amplifier module.
** For 18" subwoofers, the VADAS-8K4D should only be used asymmetrically, with two channels for the top units and two for the 18" subs. For 18" and 21" subwoofers, the preferred amplifier in the VADAS series is the VADAS-12K4D, which has more power and power supply reserves.
***It is technically possible to operate two Ikarray-8s at 2 Ω on one amplifier channel of the VADAS series. However, only Ikarray-8 elements with the same degree number can be operated in parallel as the DSP filters of the 100x5° and 100x15° elements differ. We generally recommend using a separate amplifier channel for each Ikarray-8 element, so that each element in the array can be adjusted individually.

The drawings in the manual show the Score-6 and the Paveosub-115/SP, as these are small speakers that take up minimal space. The cabling instructions also apply to all other self-powered subwoofers except the Paveosub-121. The Paveosub-121SP-4K1 has a single-channel power amplifier module which cannot be used to power top units.

When you switch on your new HDSP amplifier or self-powered subwoofer for the first time, the ‘Factory Default’ preset (no. 1) is loaded. With this preset, all output channels are muted, meaning that no sound is produced even if a signal is present. This protective feature ensures that you must select the correct preset for your top/subwoofer combination, preventing you from sending a signal to the speakers when the preset settings are incorrect. Using a speaker with incorrect preset settings can cause damage. Reasons for this include the crossover frequencies and limiter values being incorrect or inappropriate.

Most Voice-Acoustic tops are available with different horn directivities. Please download the preset that matches the directivity angle of your speaker. Example: The Score-6 is available with a 60x40°, 90x60° or 120x40° horn. If you have the Score-6 with the 90x60° horn, there are two presets for this top section: 'Score6-90 Top' and 'Score6-90 FR'. When used with a subwoofer, select the 'Top' preset. This preset gives the speaker the most headroom as it does not have to transmit low, energetic frequencies. If using the speaker as a standalone unit, monitor, etc., select the 'FR' full-range preset. Since the DSP filter values vary greatly between the different horns, the top unit will not sound good if the wrong preset for a different dispersion angle is selected. You can purchase the different horns individually. This means that you can also change the dispersion angle at a later date by converting the horn.

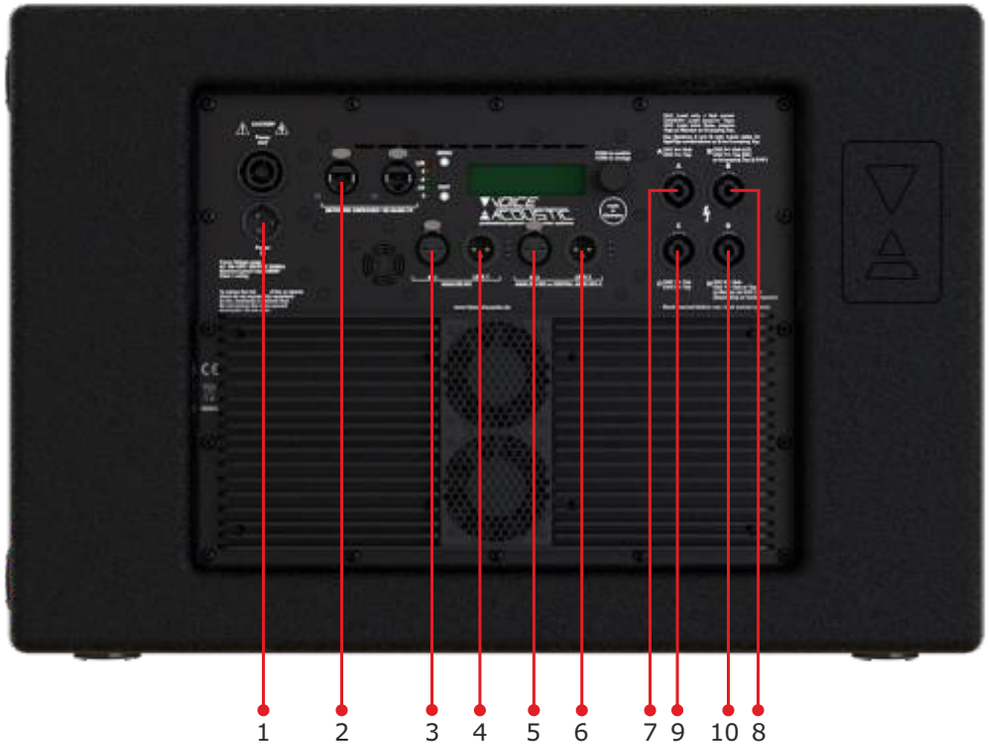
The GEN3's service-friendly active electronics are installed in a modular design on a connection plate (SP-Kit Paveosub-SP-8K4, item no. 249108402, or SP-Kit Paveosub-SP-8K4D with Dante, item no. 249108403). This design enables users to convert a passive subwoofer into an active subwoofer. To achieve this, the large blanking plate with the passive connection panel on the rear of the subwoofer must be removed, and the SP kit containing the active electronics must be installed in the existing cut-out. The conversion takes no longer than ten minutes with a cordless screwdriver. If servicing is required, the active electronics can be quickly removed and returned to us in the provided packaging. There is no need to ship the entire active subwoofer. This saves a considerable amount of time and money.

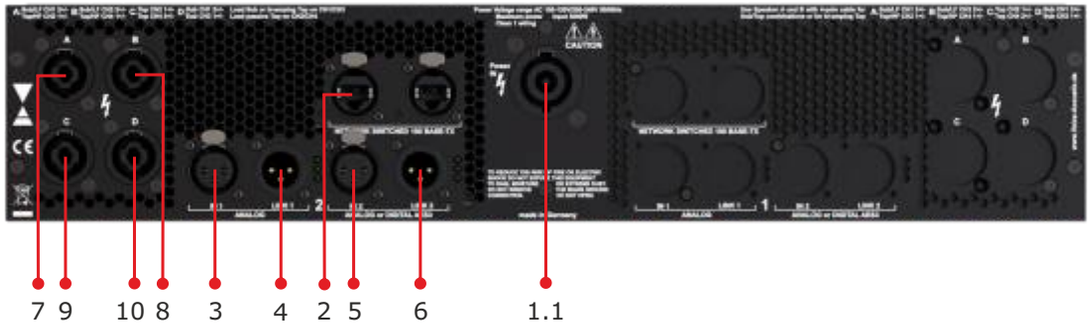
We can convert a 4-channel HDSP GEN3 rack power amplifier into an 8-channel power amplifier at our factory. Please note that we do not send out components for conversion, and the conversion process, including final inspection and testing, must be carried out on our premises.

You can combine self-powered loudspeakers with those powered by an HDSP rack amplifier. The electronic components (DSP, amp module and network interface) and presets are identical. The GEN3 system electronics come with linear-phase FIR presets as standard and are compatible with the FIR library of the Voice-Acoustic VADAS amplifier platform in terms of time, phase and frequency response. This allows for mixed operation.

Once updated with the FIR library, GEN2 (DA/DDA series) system electronics can be fully integrated with GEN3 and VADAS platforms.

However, the GEN1 (A series) system electronics cannot technically process FIR filters and cannot be updated with a FIR library. Therefore, the A series electronics are not acoustically compatible with amplifier electronics that have FIR presets. Mixed operation should therefore be avoided, as this will not produce an optimal sound result.





7. Speaker connection A, Speakon NL4, CH1: 2+/2-, CH2: 1+/1-, Sub/Top (with HDSP Amp also bi-amping tops, e.g. VENIA-8)

8. Speaker connection B, Speakon NL4, CH3: 2+/2-, CH4: 1+/1-, sub/top or bi-amping top

9. Speaker connection C, Speakon NL4, CH2: 1+/1-, CH4: 2+/2-, Top/Top

10. Speaker connection D, Speakon NL4, CH1: 2+/2-, CH3: 1+/1-, sub/sub or additional top/monitor/delay line (load top preset on CH3)

⚠ *The Speakon speaker connection assignment is the same for the HDSP amps and the Paveosub-112/115/118/218sp. This simplifies handling for users working with both internal and external amplification.* ***For the self-powered subwoofers, the internal bass transducer is connected to channel 1 (CH1).***

1. Mains connection, 16A Neutrik powerCON True 1 IN and OUT (for IN plug NAC3F, OUT plug NAC3M). 3m connection cable included.

1.1 Mains connection, 32A Neutrik powerCON IN (for NAC3FC-HC plug). Sufficient for 16A power connection in 230V mains operation. 1.5m connection cable included.

2. Ethernet connection, RJ45 Neutrik etherCON IN and Out for remote control and audio network (DANTE or MILAN). With integrated switch for daisy-chain cabling of the remote control network. When setting up a DANTE or MILAN network, cabling should be star-shaped via an external AV switch.

3. Analogue signal IN 1, 3-pin balanced Neutrik XLR female

4. Analogue signal OUT 1, 3-pin balanced Neutrik XLR male. The output signal is not processed by the DSP. Input signal = output signal

5. Analogue signal IN 2 or digital AES3 (2CH digital), 3-pin balanced Neutrik XLR female. The input can be switched from analogue to digital in the software.

6. Analogue signal OUT 2 or digital AES3 (2CH digital), 3-pin balanced Neutrik XLR male.

Dante interface connection for 4 signal inputs and remote control software, without switch

Cat-cable Dante-Audio

Cat-cable VA Remote-Control Software

DANTE-Interface 4CH

IN4 IN3 IN2 IN1

Booth monitor or AUX out

Main IN Stereo L/R

Cat-cable Dante-Audio

Cat-cable VA Remote-Control Software

DANTE-Interface 4CH

IN4 IN3 IN2 IN1

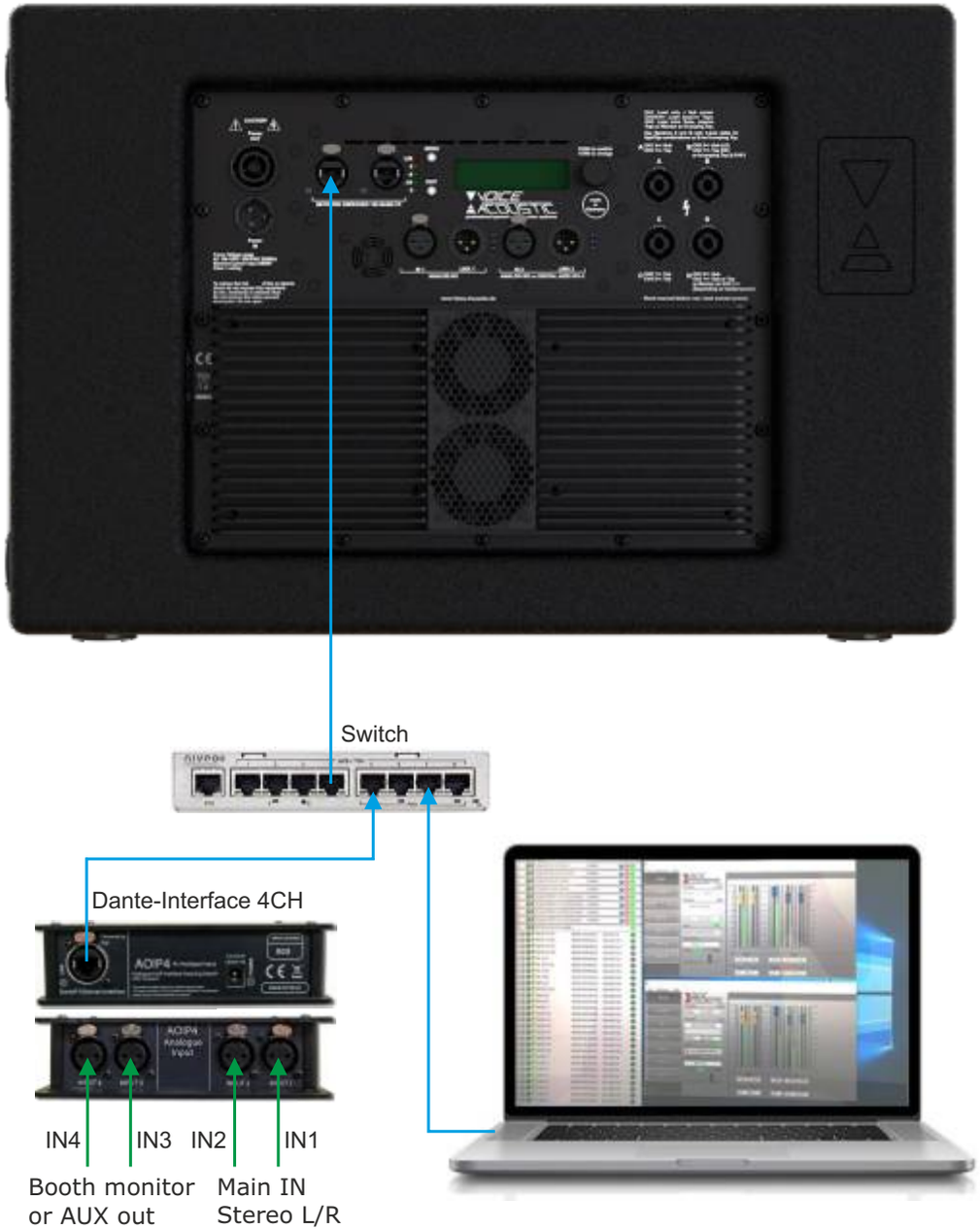
Booth monitor or AUX out

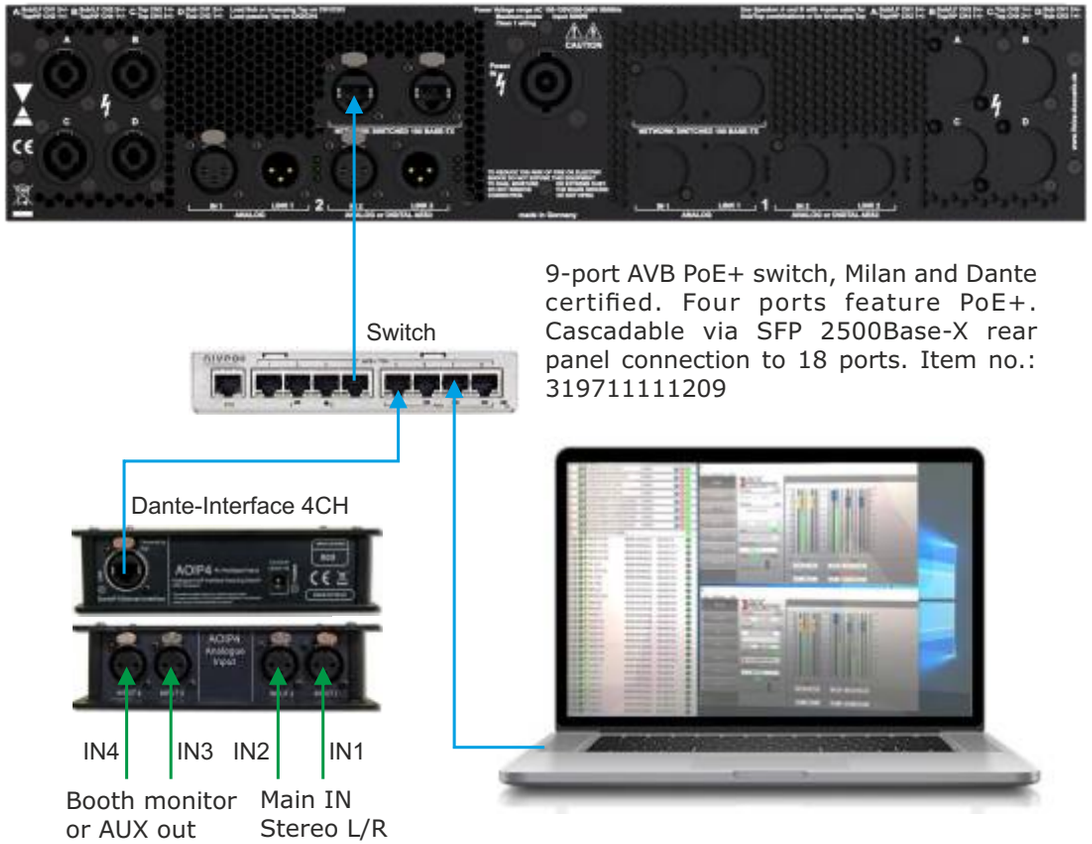
Main IN Stereo L/R

⚠ *An external power supply (item no. GOOBAY 64974) is required for the DANTE Interface 4CH (item no. 319700043) if no POE switch is used.*

⚠ *The DANTE interface must be configured using the Dante Controller software before it can be connected to the amplifier electronics. It does not work on a plug-and-play basis.If you purchase a set from us, however, we can carry out this pre-configuration for you. Our service team will be delighted to help.*

Dante interface connection for 4 signal inputs and remote control software, with switch



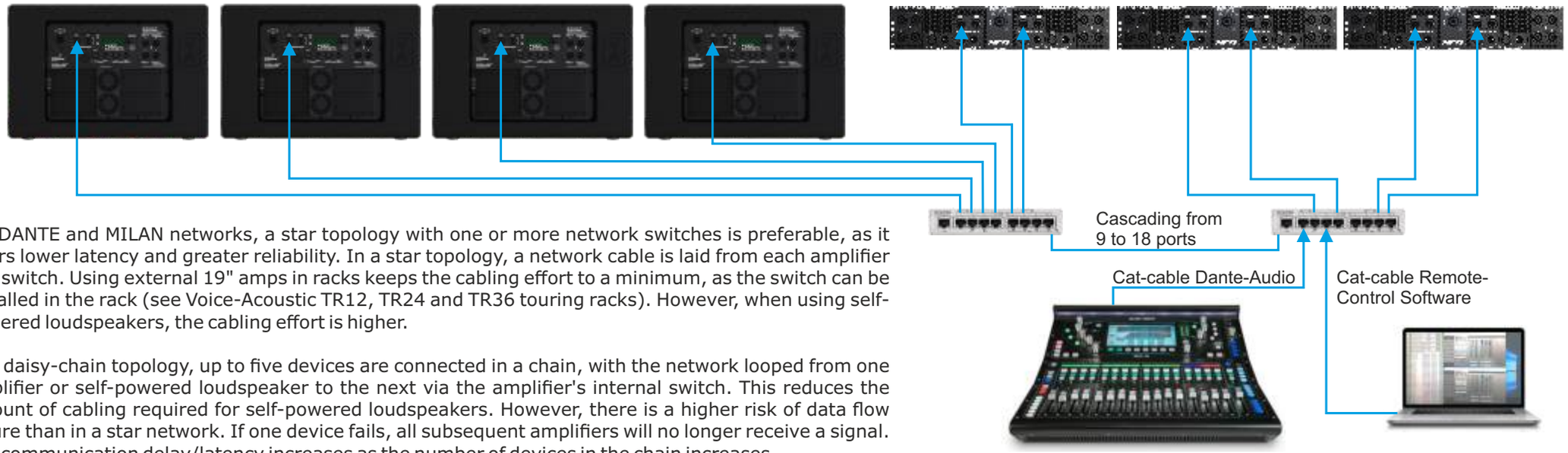


9-port AVB PoE+ switch, Milan and Dante certified. Four ports feature PoE+. Cascadable via SFP 2500Base-X rear panel connection to 18 ports. Item no.: 319711111209

Using a switch allows four audio signals and remote control software to be transmitted via a single Cat cable. This saves time during setup and dismantling, as well as minimising the amount of cabling required. When using a PEO switch, the DANTE interface can be powered via the switch itself. For larger DANTE or MILAN networks, we recommend professional AV switches. Please ask us for a recommendation.

Note! Pure remote control networks can be daisy-chained(i.e. looped from one amplifier to another).However, audio networks (DANTE and MILAN) should be connected in a star topology. switch to each amplifier.

Setting up a simple DANTE and remote network with AV switches in star topology, without redundancy



For DANTE and MILAN networks, a star topology with one or more network switches is preferable, as it offers lower latency and greater reliability. In a star topology, a network cable is laid from each amplifier to a switch. Using external 19" amps in racks keeps the cabling effort to a minimum, as the switch can be installed in the rack (see Voice-Acoustic TR12, TR24 and TR36 touring racks). However, when using self-powered loudspeakers, the cabling effort is higher.

In a daisy-chain topology, up to five devices are connected in a chain, with the network looped from one amplifier or self-powered loudspeaker to the next via the amplifier's internal switch. This reduces the amount of cabling required for self-powered loudspeakers. However, there is a higher risk of data flow failure than in a star network. If one device fails, all subsequent amplifiers will no longer receive a signal. The communication delay/latency increases as the number of devices in the chain increases.

The star topology is the preferred method for professional Dante networks as it ensures the secure, high-performance transmission of audio signals. Daisy chaining is only suitable for small setups with a limited number of devices (max. 5) where there are no high reliability or latency requirements.

Small Dante networks are easy to set up, even for those without expertise. However, the Dante interface is not plug-and-play compatible with amplifier electronics. However, using Audionate's Dante Controller software, the transmitter (i.e. the Dante interface or Dante-enabled mixing console) only needs to be matched with the receiver (i.e. the amplifier or self-powered loudspeaker) once.
Softwaredownload:
https://www.getdante.com/de/products/software-essentials/dante-controller/
Video tutorial:
https://www.youtube.com/watch?v=tIKWwTDYrvg&list=PLdUGgpZvMrQ91m1uL7SS5lCQy-E8C6jeI

Our service team will be delighted to assist you in connecting your Dante devices.

This manual cannot cover the extensivesubject of audio networks in detail. Large and redundant audio networks require training in network technology.

If you are interested in this topic, we recommend Jochen Schulz's blog (German).: https://www.jochenschulz.me/de/blog
or Raimund Förnzler's bachelor thesis (German):
https://curdt.home.hdm-stuttgart.de/PDF/Foernzler.pdf
or the seminars by Bodo Felusch (German): https://www.felusch.de
YouTube also offers many video tutorials, such as those on the Audinate channel (English):
https://www.youtube.com/@audinate
or the AV Training channel (English):
https://www.youtube.com/@avtraining1059

1. Store and Load Local, use Store to save presets on your PC. Use Load to load a preset stored on your PC into the DSP.

2. Store and Load Unit, clicking on the 'Snapshot Library' (preset combinations) opens a window showing all the stored top-sub combinations for the most common sets. Select your speaker combination (5) — in this example, Paveosub-115 with Score-6 — and click Load (2) to retrieve the snapshot from the internal DSP memory. If you create your own speaker combinations by loading single output presets, you can save your selection as a snapshot in the memory. To do this, enter a new name in field 3, select a free memory location in the snapshot library (5), then click Store (2).

3. Snapshot-Name, displays the loaded snapshot. Definition: A snapshot is a combination of up to eight single output presets that can be saved as a preset combination or block preset.

4. Unit Name, this shows the name of your self-powered loudspeaker or amplifier. You can change or add to this name to help you keep track of the connected devices in the remote software. This name will also then appear on the amplifier's LCD display.

5. Snapshot-Library, click on the black arrow to open a library window containing all saved snapshots. To select a snapshot, click on its name and then click Load (2).

6. Input-selection, click on the black arrow to assign a signal selection to one of the DSP's four inputs.The following options are available: Analogue CH 1–2, AES CH A and B, Dante CH 1–4 and Milan CH 1–4 (when Milan is enabled). To test the PA system without an input signal, you can activate a pink or white noise generator or a sine wave generator here. Lower the gain before activating the signal generator! Our DSP input board has two analogue and two AES inputs. The analogue and digital AES inputs cannot be used in parallel as they use the same XLR inputs and are switched by a relay. To use all four inputs of the DSP (e.g. for monitoring applications), this must be done via Dante or Milan (with Milan on board). We also offer a 4-channel Dante interface for this purpose.

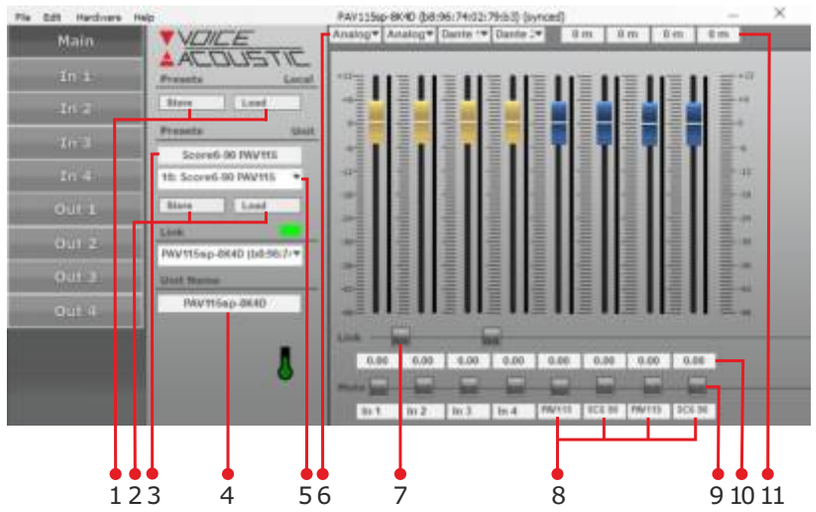
7. Channel Link, when the link is activated, all filter settings that you make, e.g. for noise correction or flavour EQs, are also transferred to CH2.

8. Output-Single-Presets, clicking on the short name opens a pop-up window displaying all the available speaker presets. You can load one preset per output channel, and for maximum flexibility you can create your own combinations and save them as snapshots.

9. Mute Button

10. Gain Settings, can be entered as a number or by pressing the up/down arrow keys.

11. Delay, you can enter a delay in metres for each output channel.



⚠ *The CH1 and CH3 channels have a particularly high capacity and should be used for subwoofers. CH2 and CH4 are intended for top units.*

⚠ *For self-powered subwoofers, connect the internal speaker transducer to CH1. Never load a preset that does not correspond to the subwoofer model. For cardioid applications, the preset on CH1 must be allowed to be changed, even for self-powered subwoofers.*

⚠ *Bi-amped loudspeakers, such as the VENIA-8, should be connected to CH3 in self-powered subwoofers and to CH1 or CH3 in 19" HDSP amplifiers. The tweeter preset is automatically loaded on the next higher channel.*

⚠ *In the output presets, all presets are stored as either 'top' or 'full-range' (FR). The limiter kicks in earlier with the full-range presets. When using subwoofers, you should use the top preset. Thanks to the FIR filters with optimised phase response, tops in full-range mode can also be operated with subs in overlap mode, even in the transition range.*

The input selection (6) is always preset to the following default settings:
IN 1: Analogue 1
IN 2: Analogue 2
IN 3: Dante 1
IN 4: Dante 2

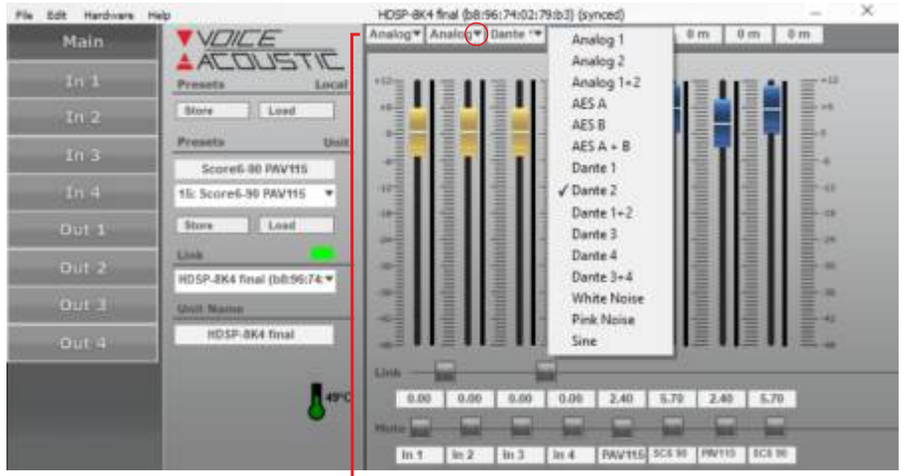
Click on the black arrow to open the menu window. Here, you can select the input signal for each channel.

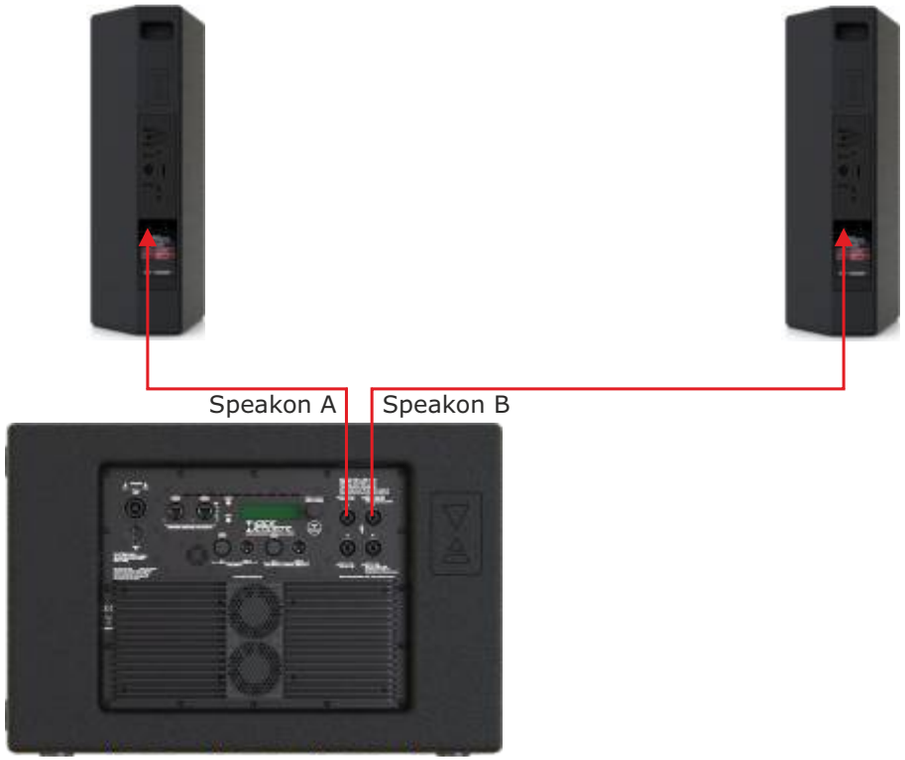
Out channels 1–4 are routed so that both analogue and Dante signals are available. This means that the systems are plug-and-play capable for rental use with analogue and Dante signals, without the need for additional routing settings. Using the Audinate Dante Controller software, the transmitter (mixing console with Dante card or a Dante interface) and receiver (our system electronics) only need to be connected.

⚠ ***Important note**: If only two of the four input channels are set to Dante and Dante is also being used, the analogue input channels should always be muted or the fader pulled down completely! Open analogue inputs that are not connected to a mixing console with balanced XLR cables can generate noise such as crackling, as they can pick up electrical interference. Electromagnetic pollution is a colloquial term for artificial electric, magnetic and electromagnetic fields emitted by devices and systems such as mobile phones, Wi-Fi and high-voltage power lines.*

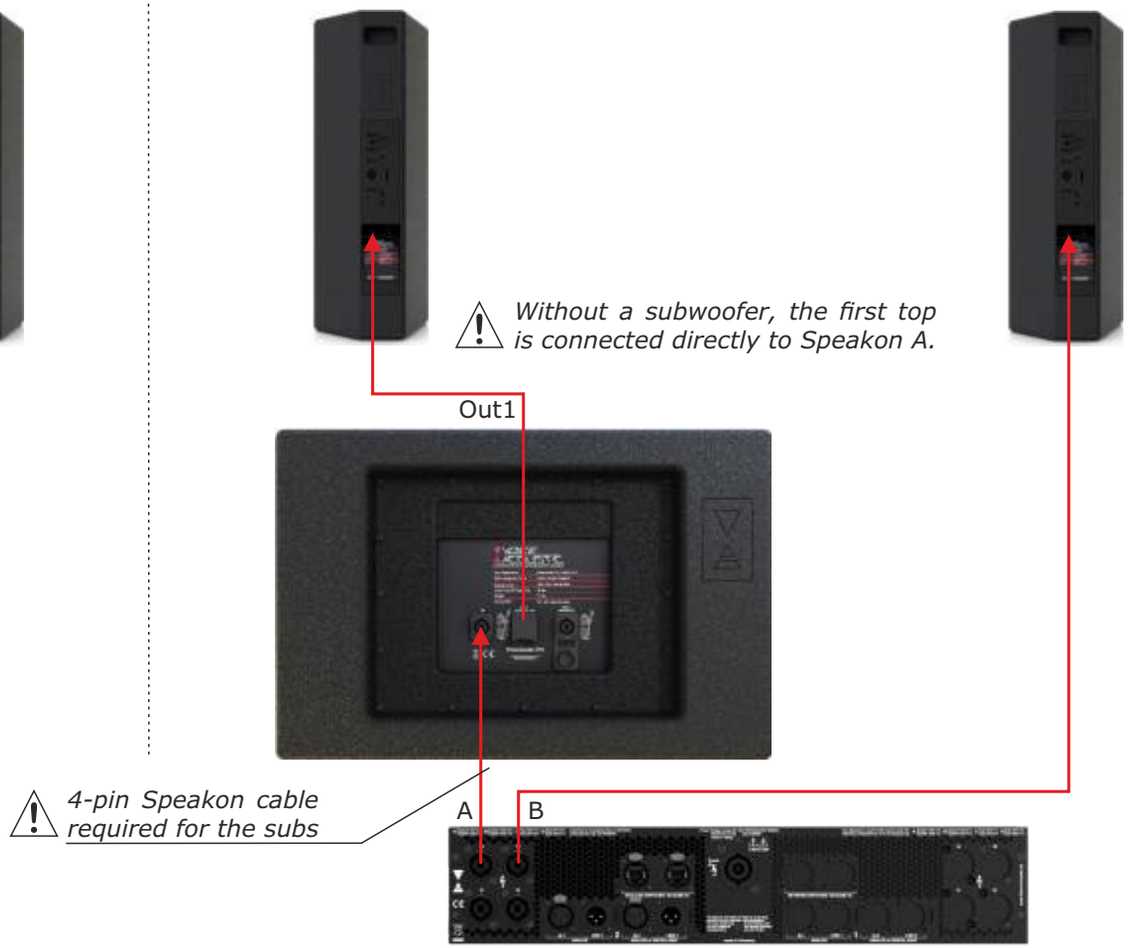
⚠ *Please note that if the input channels are muted in the software and there is no available laptop with the remote software for the next use, it is not possible to unmute the channels manually via the display and encoder. The mute function can only be disabled by reloading the preset via manual intervention on the display. However, this only works if the muted channel has not been saved in the preset. Therefore, it is recommended that you lower the open analogue inputs to -48 dB using the yellow input fader to mute them. The channel closes at -48 dB, but can be manually reopened via the display and encoder by increasing the gain.*

Even if you only use two of the four input channels, the remaining open Dante channels do not need to be muted or pulled down if you have assigned a Dante channel to all four input channels. No noise can be generated via the open channels.





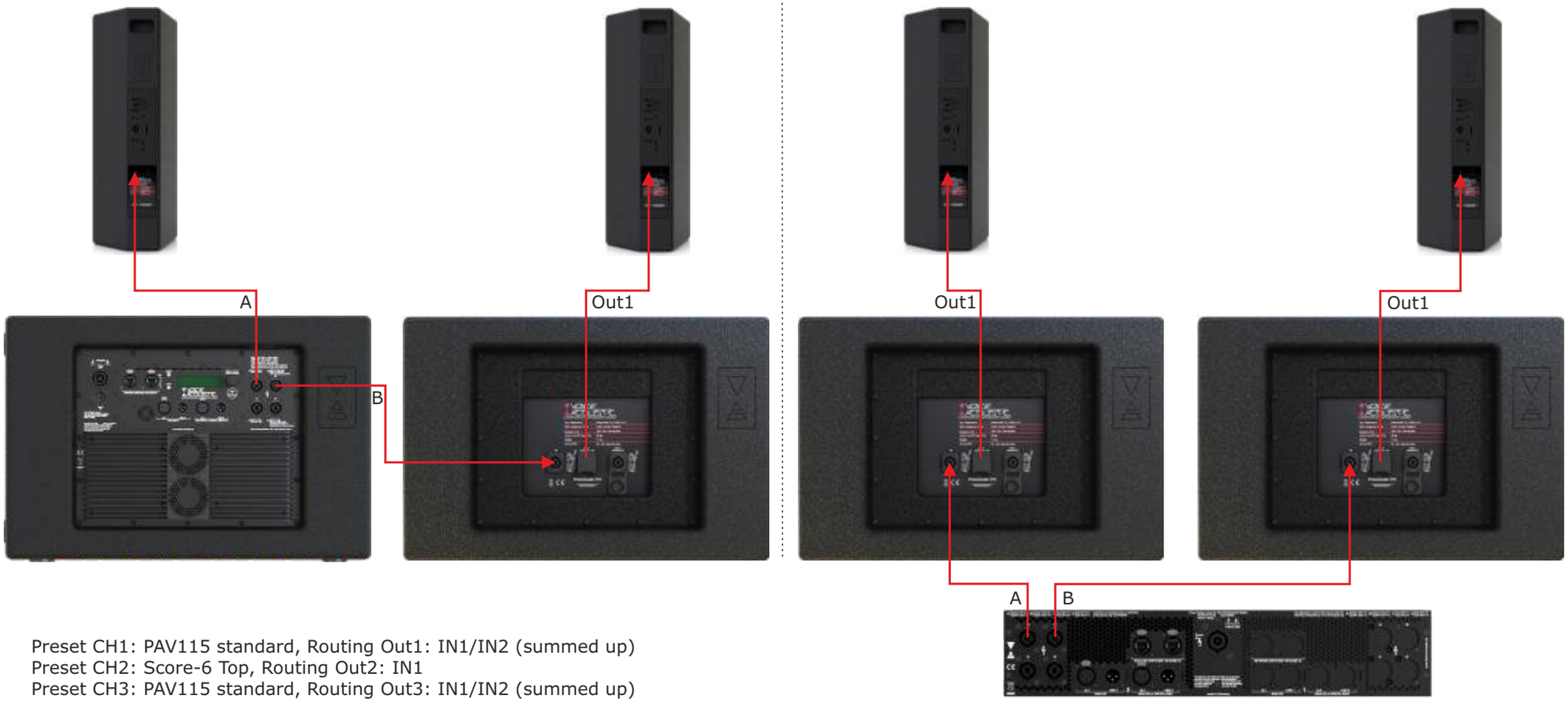
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2 (summed up)
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH4: Score-6 Top, Routing Out4: IN2



The user must set the gain values between bass and treble during the sound check. Here, we can only set approximate values for the snapshots. The volume ratio between the bass and the tops must be adjusted depending on the size of the venue, the nature of the ground (e.g. tent floor, grass or solid ground), the average age of the audience and the style of music. This can be done manually via the display (see the 'Loading presets and adjusting the volume ratio' section of the quick guide) or conveniently via the remote software.

Voice-Acoustic tops and monitors are wired to Speakon assignment 1+/- and subwoofers to assignment 2+/-. When using 4-pin cables, you can loop through from the bass to the top. Four-pin cables must be used between subwoofers to establish a connection between assignments 2+/- and 2-/-. Two-pin cables are always connected to assignments 1+/-.When bi-amping speakers, connect the low-mid section to 2+/- and the high-frequency section to 1+/1-.

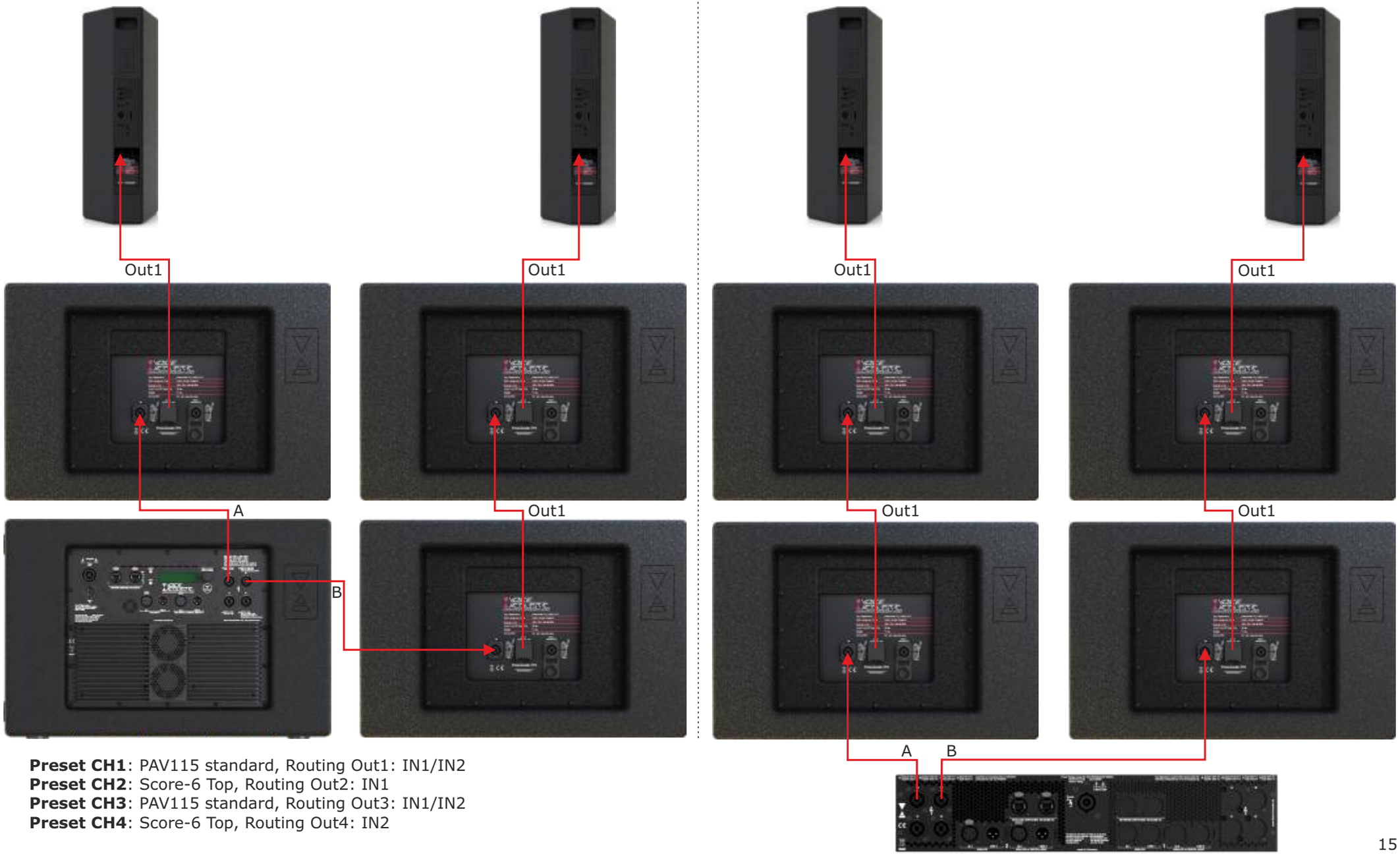
Connection
2x top units, 2x sub



Preset CH1: PAV115 standard, Routing Out1: IN1/IN2 (summed up)
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1/IN2 (summed up)
Preset CH4: Score-6 Top, Routing Out4: IN2

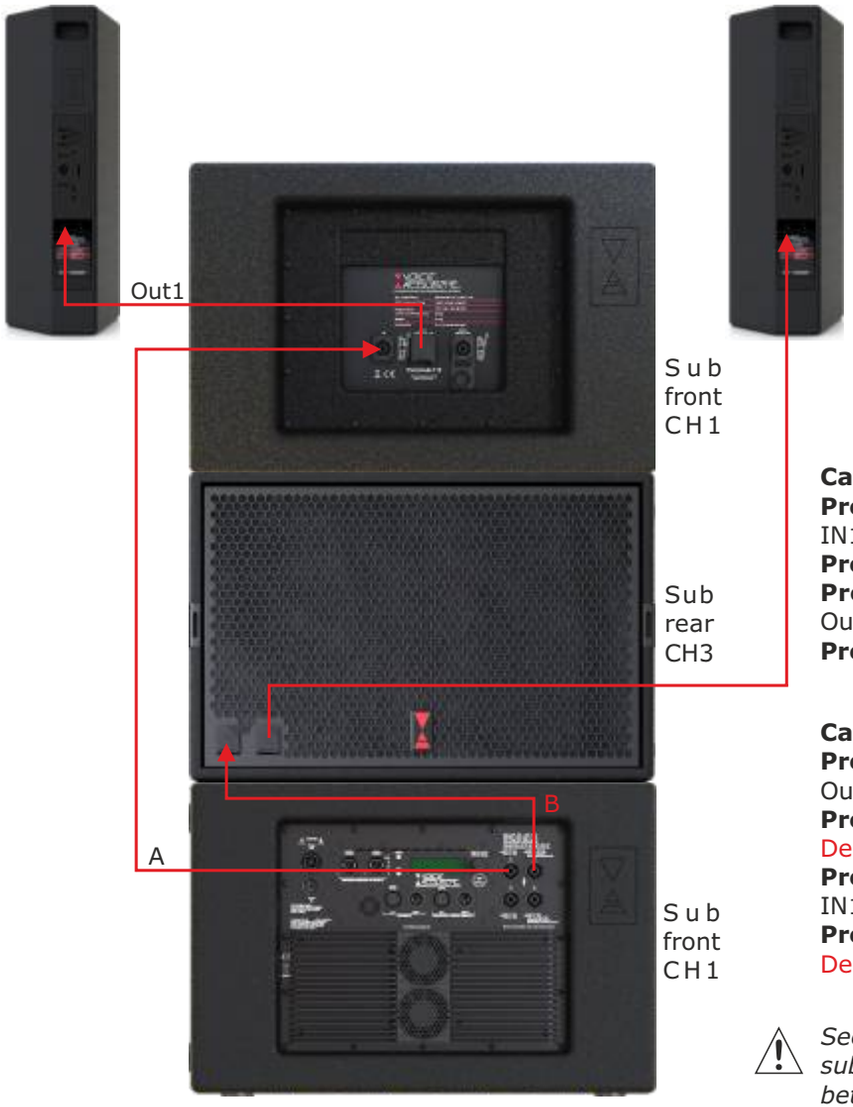
⚠ *Technically, two subwoofers can be connected in parallel to channels CH1 and CH3, respectively. With two subwoofers, it makes sense to connect the second one to CH3 to utilise the power supply more symmetrically.*

Connection
2x top units, 4x sub



Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1/IN2
Preset CH4: Score-6 Top, Routing Out4: IN2

Connection option 1:
2x top units, 3x subs in a cardioid ratio of 2:1

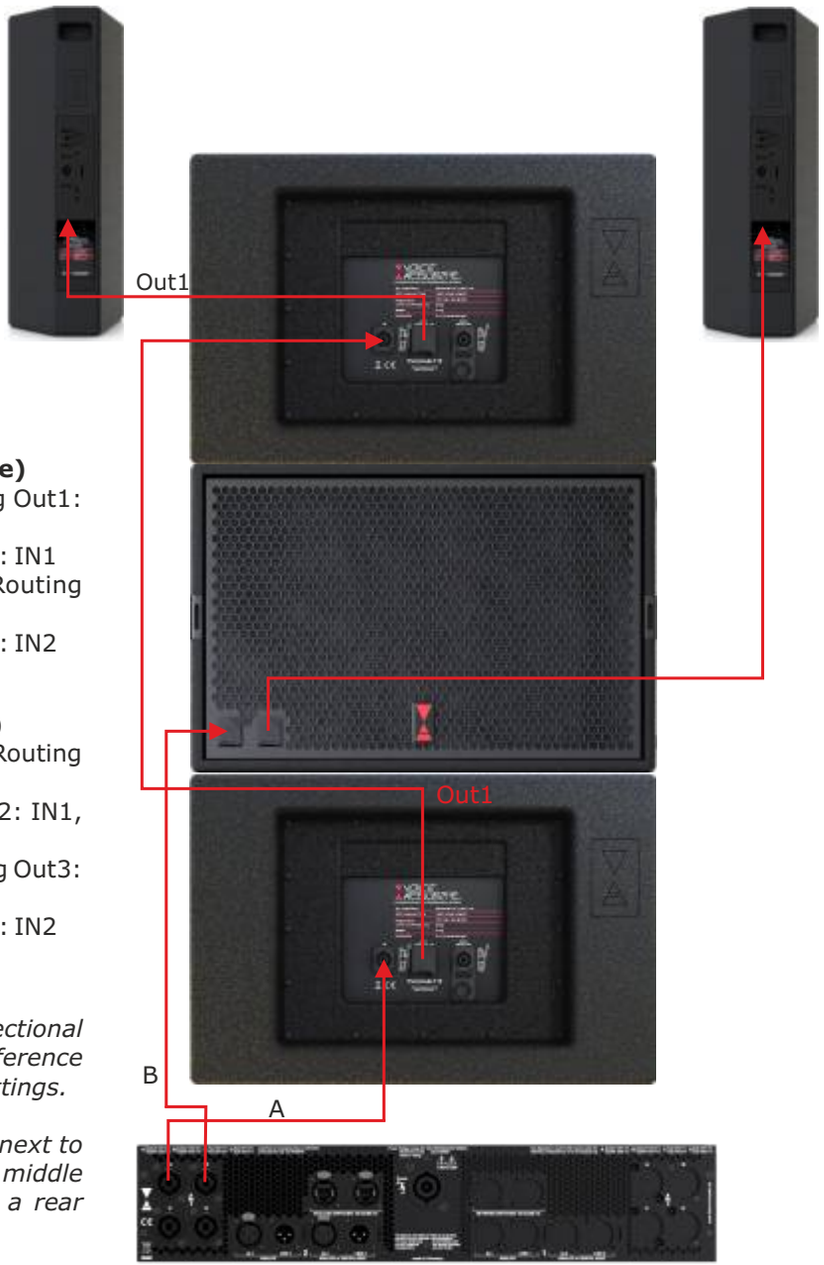


Cardio Gradient Presets (CSAG-Mode)
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 CSAG rear, Routing Out3: IN1/IN2
Preset CH4: Score-6 Top, Routing Out4: IN2

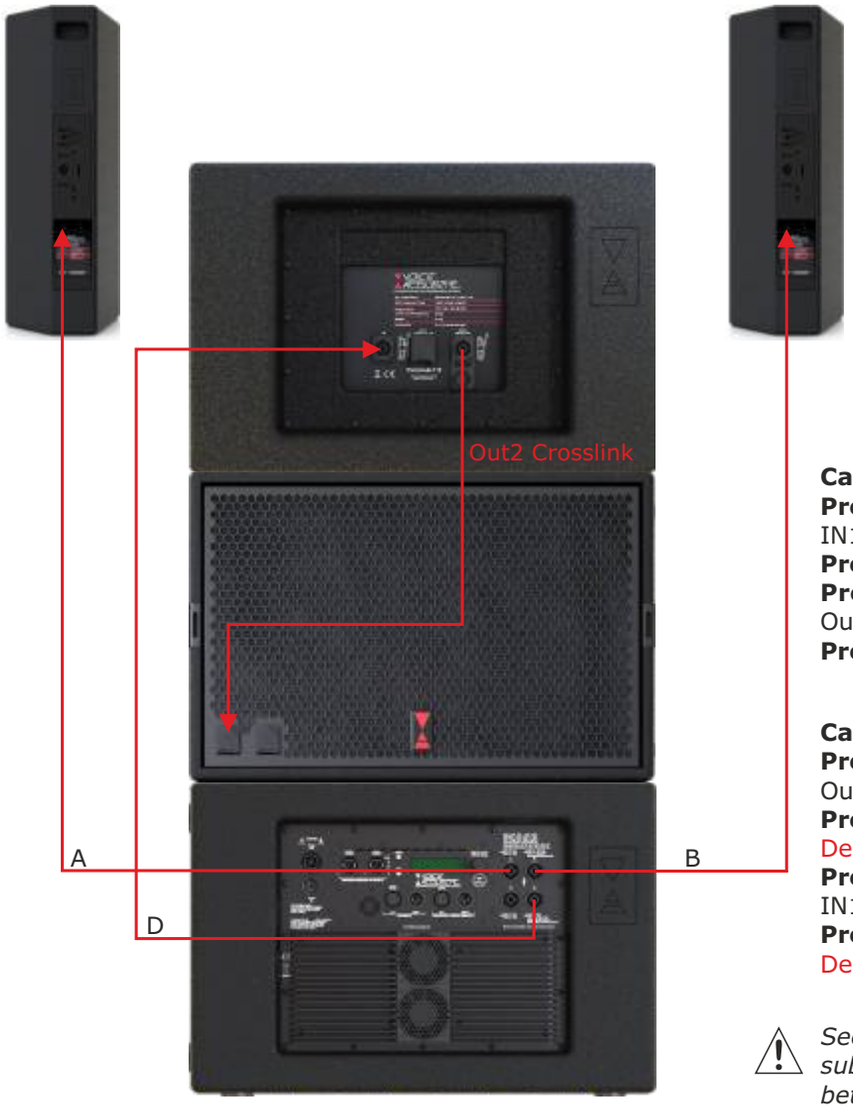
Cardio Endfire Presets (CSAE-Mode)
Preset CH1: PAV115 CSAE front, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1, Delay: 1,38m (4ms)
Preset CH3: PAV115 CSAE rear, Routing Out3: IN1/IN2
Preset CH4: Score-6 Top, Routing Out4: IN2
Delay: 1,38m (4ms)

⚠ *See the instructions in the manual 'Directional subwoofer configurations' for the difference between Gradient and Endfire Cardio settings.*

⚠ *The subwoofers can also be placed flat next to each other on the floor. In this case, the middle subwoofer is rotated too and used as a rear subwoofer.*



Connection option 2:
2x top units, 3x subs in a cardioid ratio of 2:1

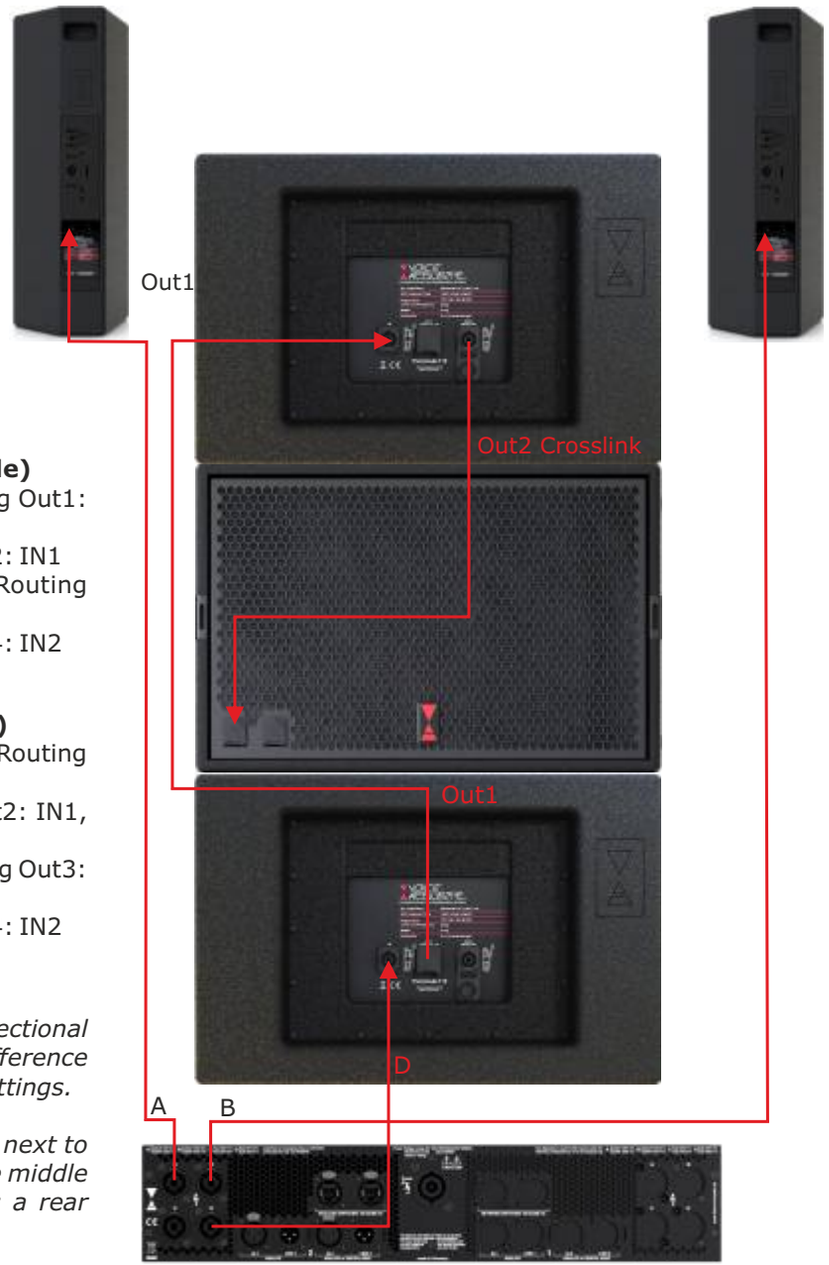


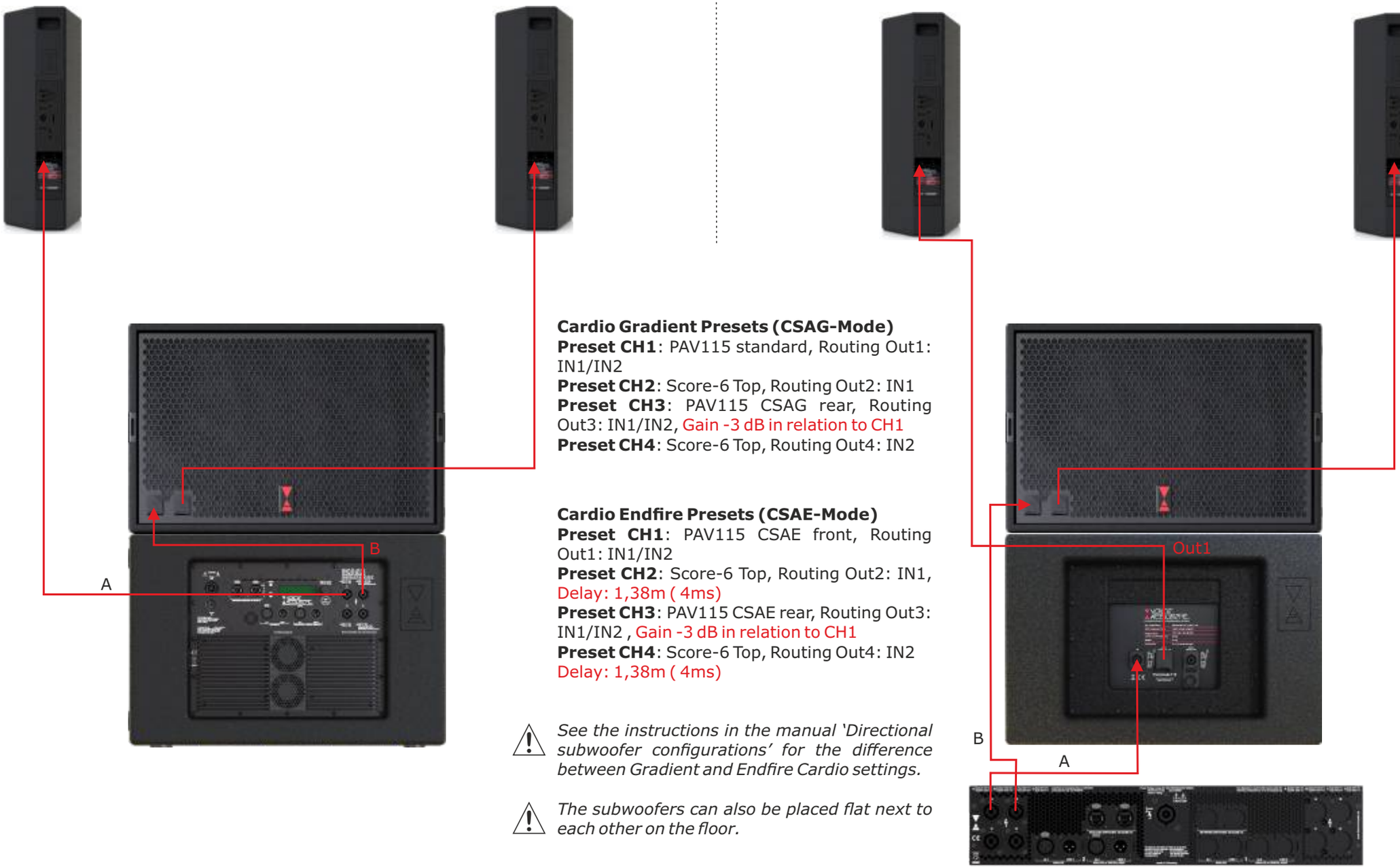
Cardio Gradient Presets (CSAG-Mode)
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 CSAG rear, Routing Out3: IN1/IN2
Preset CH4: Score-6 Top, Routing Out4: IN2

Cardio Endfire Presets (CSAE-Mode)
Preset CH1: PAV115 CSAE front, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1, Delay: 1,38m (4ms)
Preset CH3: PAV115 CSAE rear, Routing Out3: IN1/IN2
Preset CH4: Score-6 Top, Routing Out4: IN2
Delay: 1,38m (4ms)

⚠ *See the instructions in the manual 'Directional subwoofer configurations' for the difference between Gradient and Endfire Cardio settings.*

⚠ *The subwoofers can also be placed flat next to each other on the floor. In this case, the middle subwoofer is rotated too and used as a rear subwoofer.*





Cardio Gradient Presets (CSAG-Mode)
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 CSAG rear, Routing Out3: IN1/IN2, Gain -3 dB in relation to CH1
Preset CH4: Score-6 Top, Routing Out4: IN2

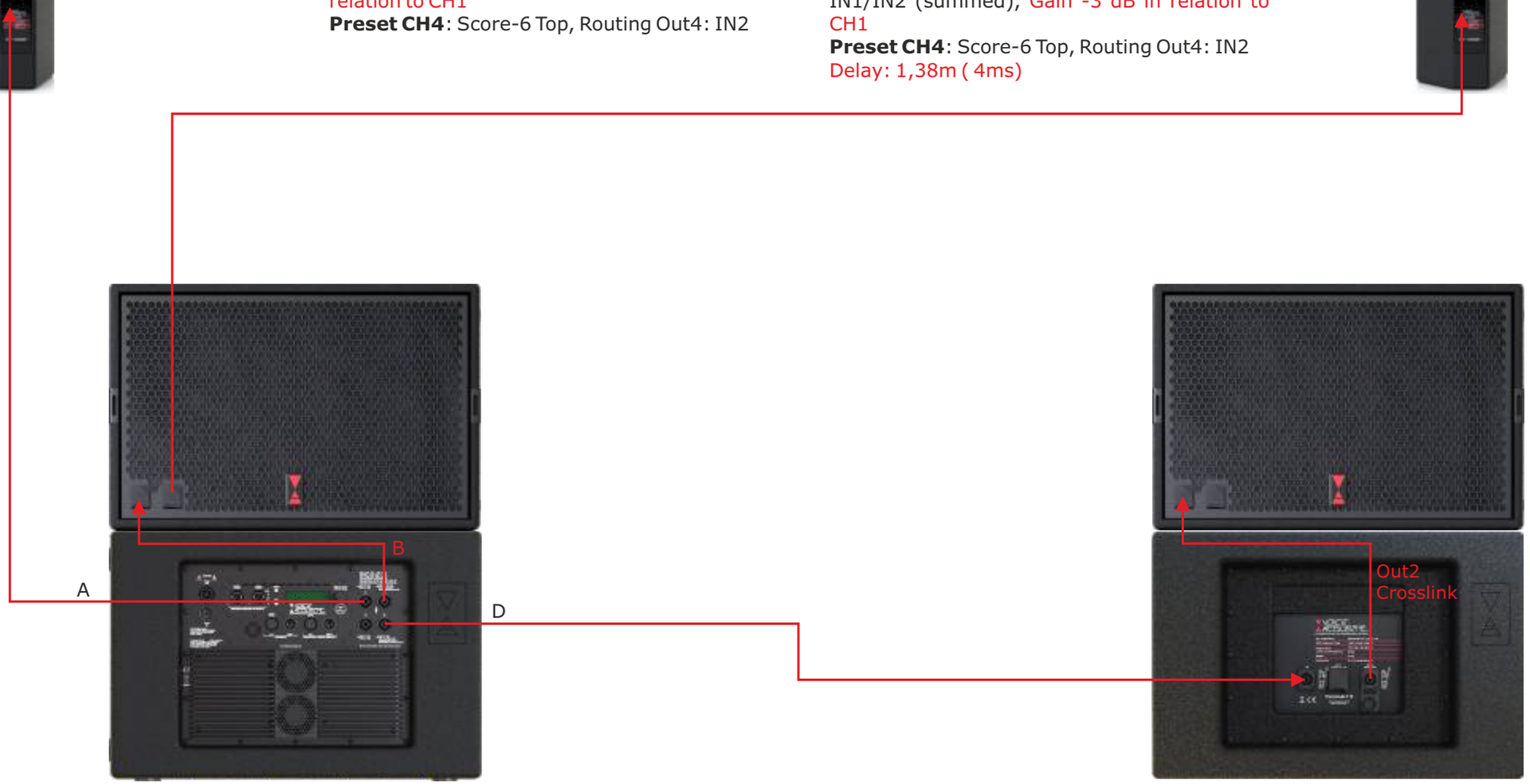
Cardio Endfire Presets (CSAE-Mode)
Preset CH1: PAV115 CSAE front, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1, Delay: 1,38m (4ms)
Preset CH3: PAV115 CSAE rear, Routing Out3: IN1/IN2 , Gain -3 dB in relation to CH1
Preset CH4: Score-6 Top, Routing Out4: IN2
Delay: 1,38m (4ms)

⚠ *See the instructions in the manual 'Directional subwoofer configurations' for the difference between Gradient and Endfire Cardio settings.*

⚠ *The subwoofers can also be placed flat next to each other on the floor.*

Cardio Gradient Presets (CSAG-Mode)
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2 (summed)
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 CSAG rear, Routing Out3: IN1/IN2 (summiert), Gain -3 dB in relation to CH1
Preset CH4: Score-6 Top, Routing Out4: IN2

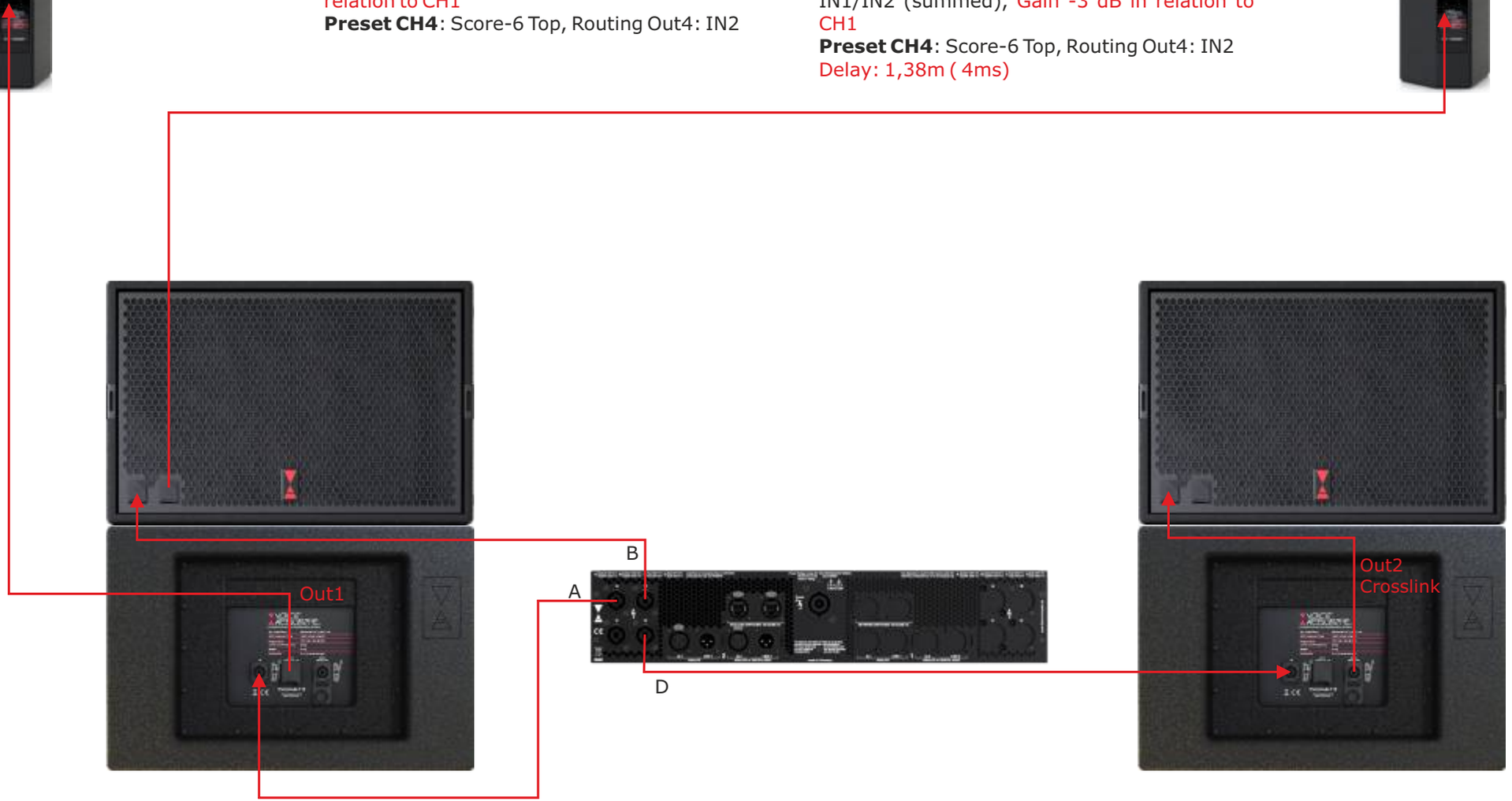
Cardio Endfire Presets (CSAE-Mode)
Preset CH1: PAV115 CSAE front, Routing Out1: IN1/IN2 (summed)
Preset CH2: Score-6 Top, Routing Out2: IN1, Delay: 1,38m (4ms)
Preset CH3: PAV115 CSAE rear, Routing Out3: IN1/IN2 (summed), Gain -3 dB in relation to CH1
Preset CH4: Score-6 Top, Routing Out4: IN2
Delay: 1,38m (4ms)



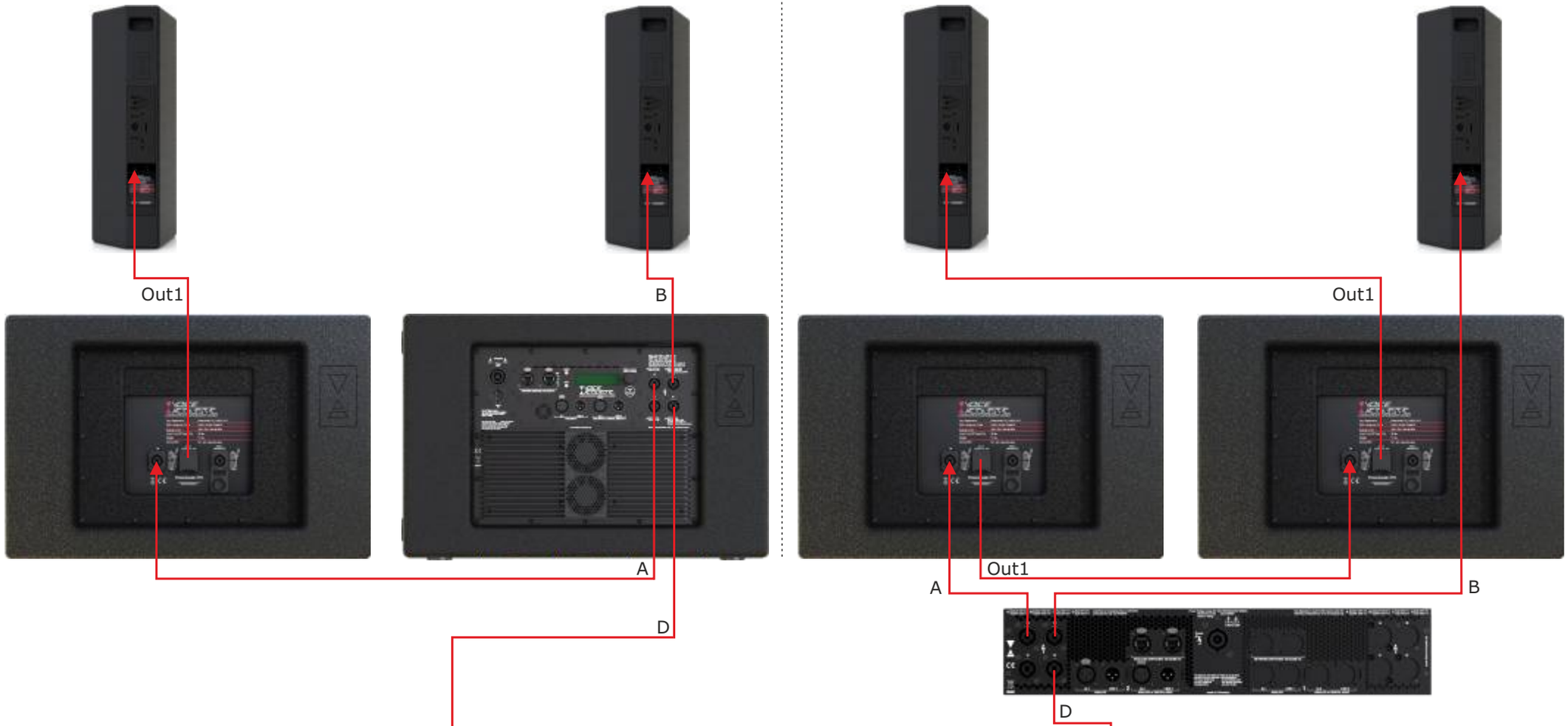
Connection:
2x top units, 4x subs in cardioid configuration 1:1 on an HDSP-8K4 amplifier

Cardio Gradient Presets (CSAG-Mode)
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2 (summed)
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 CSAG rear, Routing Out3: IN1/IN2 (summiert), Gain -3 dB in relation to CH1
Preset CH4: Score-6 Top, Routing Out4: IN2

Cardio Endfire Presets (CSAE-Mode)
Preset CH1: PAV115 CSAE front, Routing Out1: IN1/IN2 (summed)
Preset CH2: Score-6 Top, Routing Out2: IN1, Delay: 1,38m (4ms)
Preset CH3: PAV115 CSAE rear, Routing Out3: IN1/IN2 (summed), Gain -3 dB in relation to CH1
Preset CH4: Score-6 Top, Routing Out4: IN2
Delay: 1,38m (4ms)

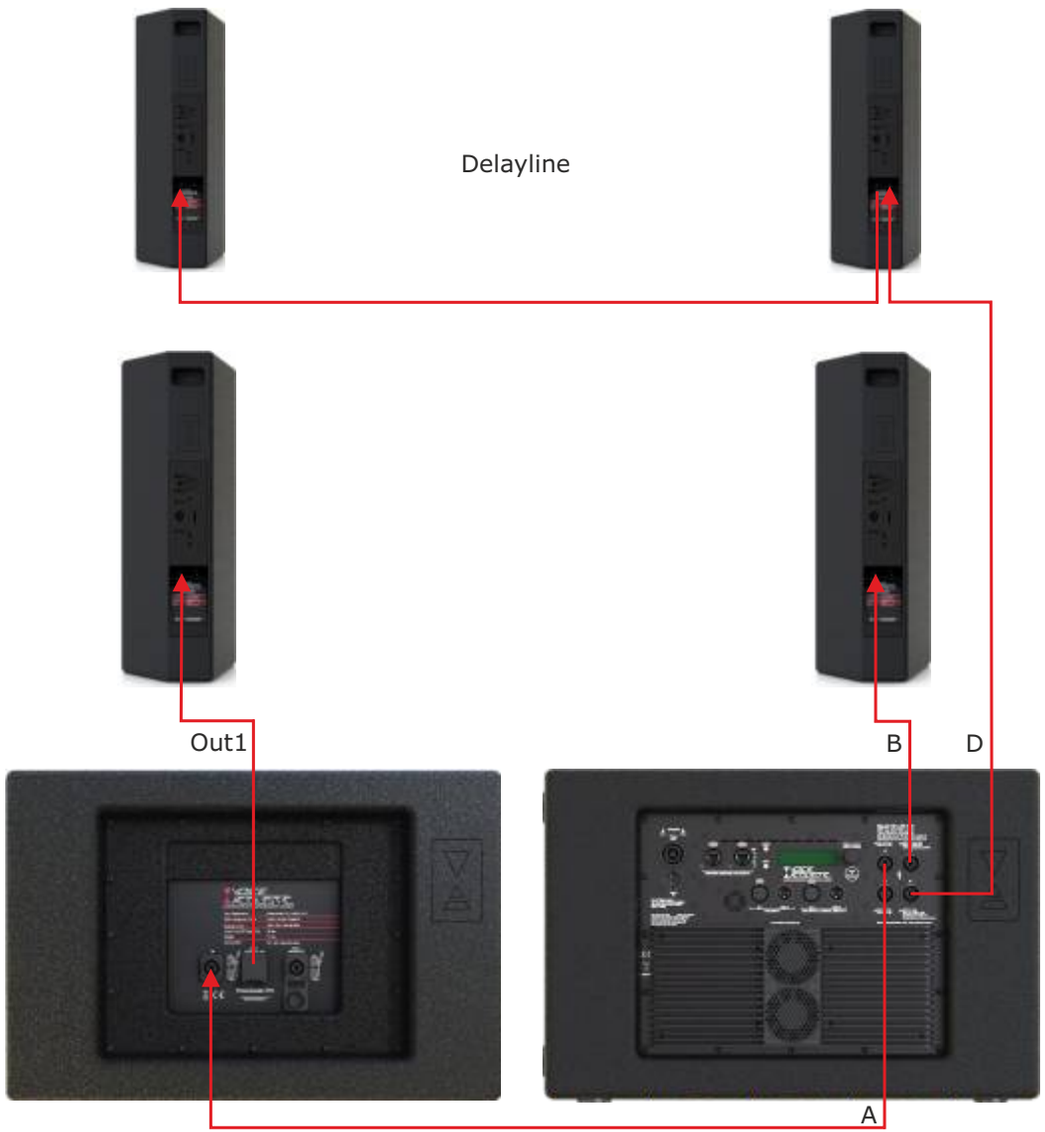


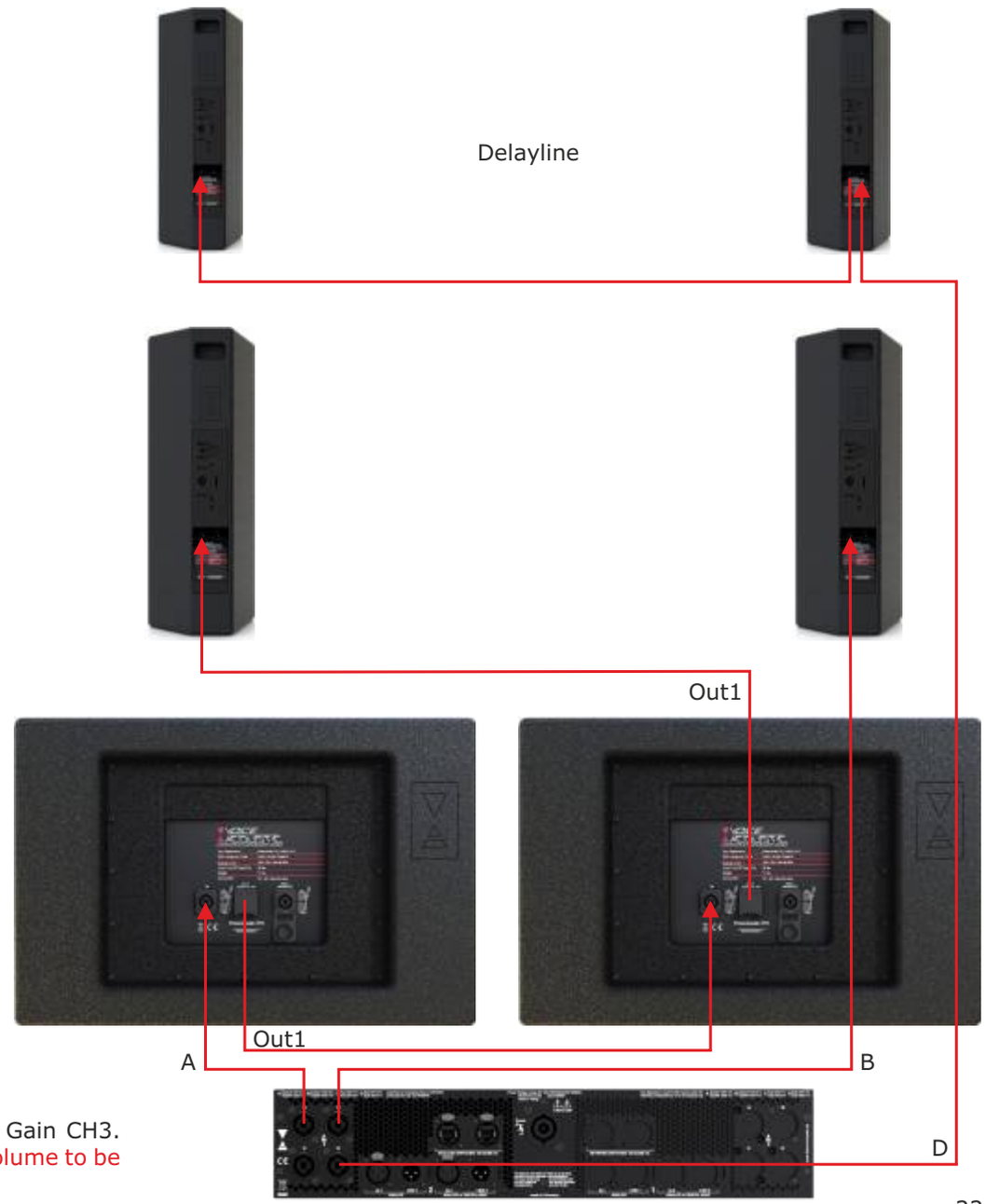
Connection
2x top units, 2x sub, plus monitoring (mono)



Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: CXN-12, Routing Out3: IN1/IN2, volume adjustable via the Gain CH3.
When using a Dante or Milan input, Out3 routing can be set to IN3, allowing the volume to be controlled from the mixing console via an aux path or booth monitor output connected to IN3.
Preset CH4: Score-6 Top, Routing Out4: IN2

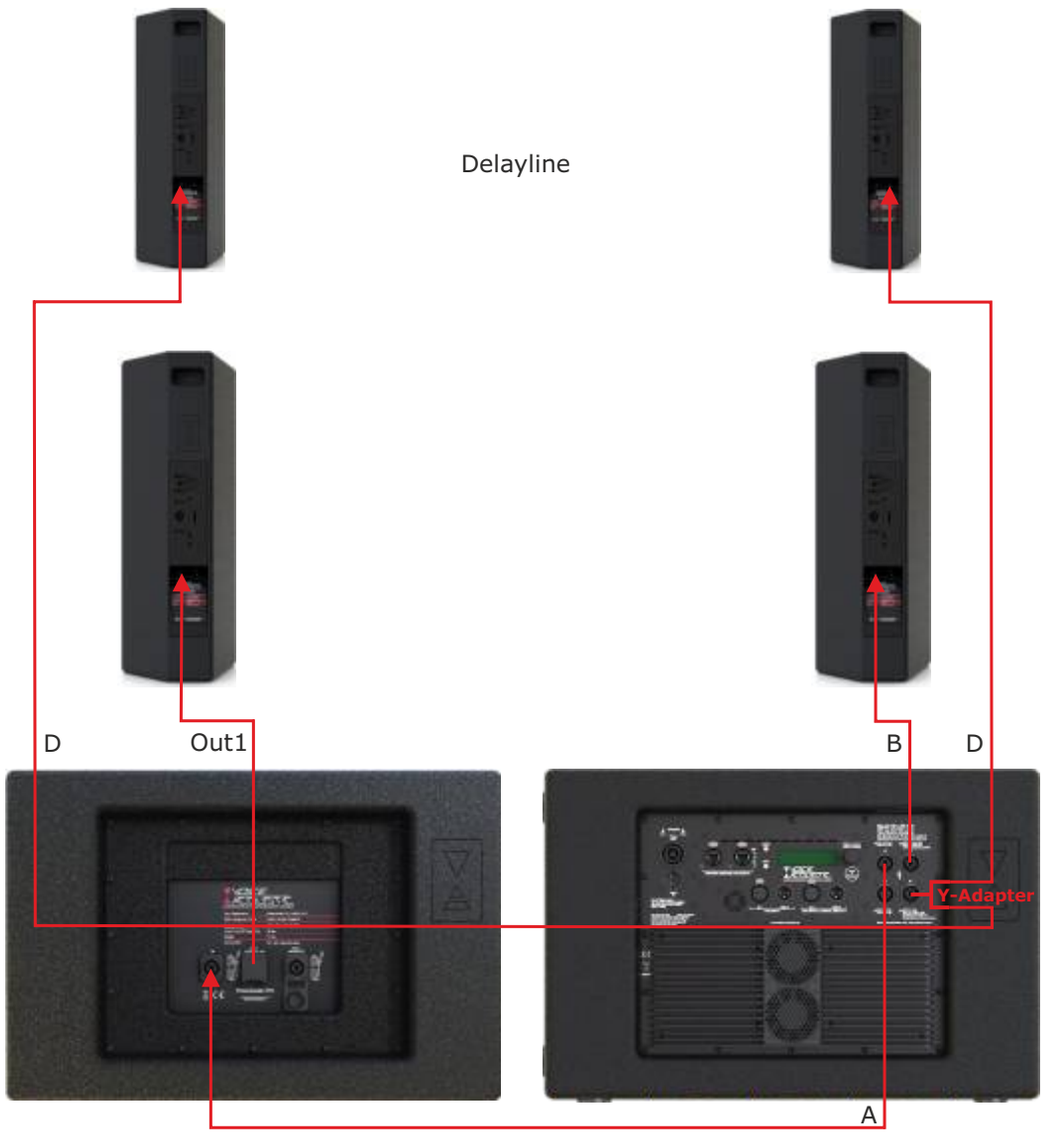
Connection option 1:
2x top sections, 2x subwoofers, plus delay line (mono) in daisy-chain cabling

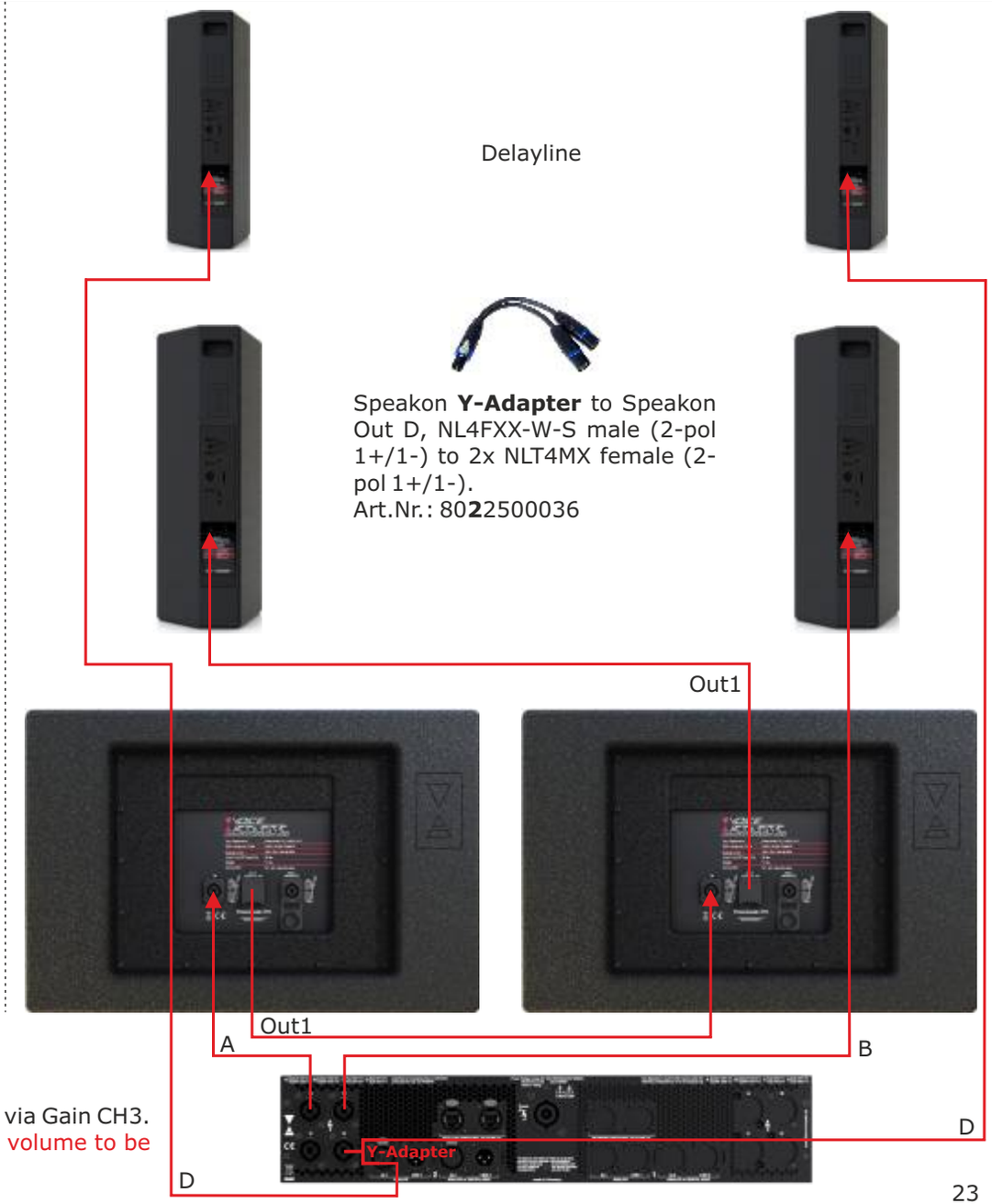




Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: Score-6 FR, Routing Out3: IN1/IN2, the volume is adjustable via Gain CH3. When using a Dante or Milan input, Out3 routing can be set to IN3, allowing the volume to be controlled from the console via an aux path connected to IN3.
Preset CH4: Score-6 Top, Routing Out4: IN2

Connection option 1:
2x top sections, 2x subwoofers, plus delay line (mono) in star-shaped cabling

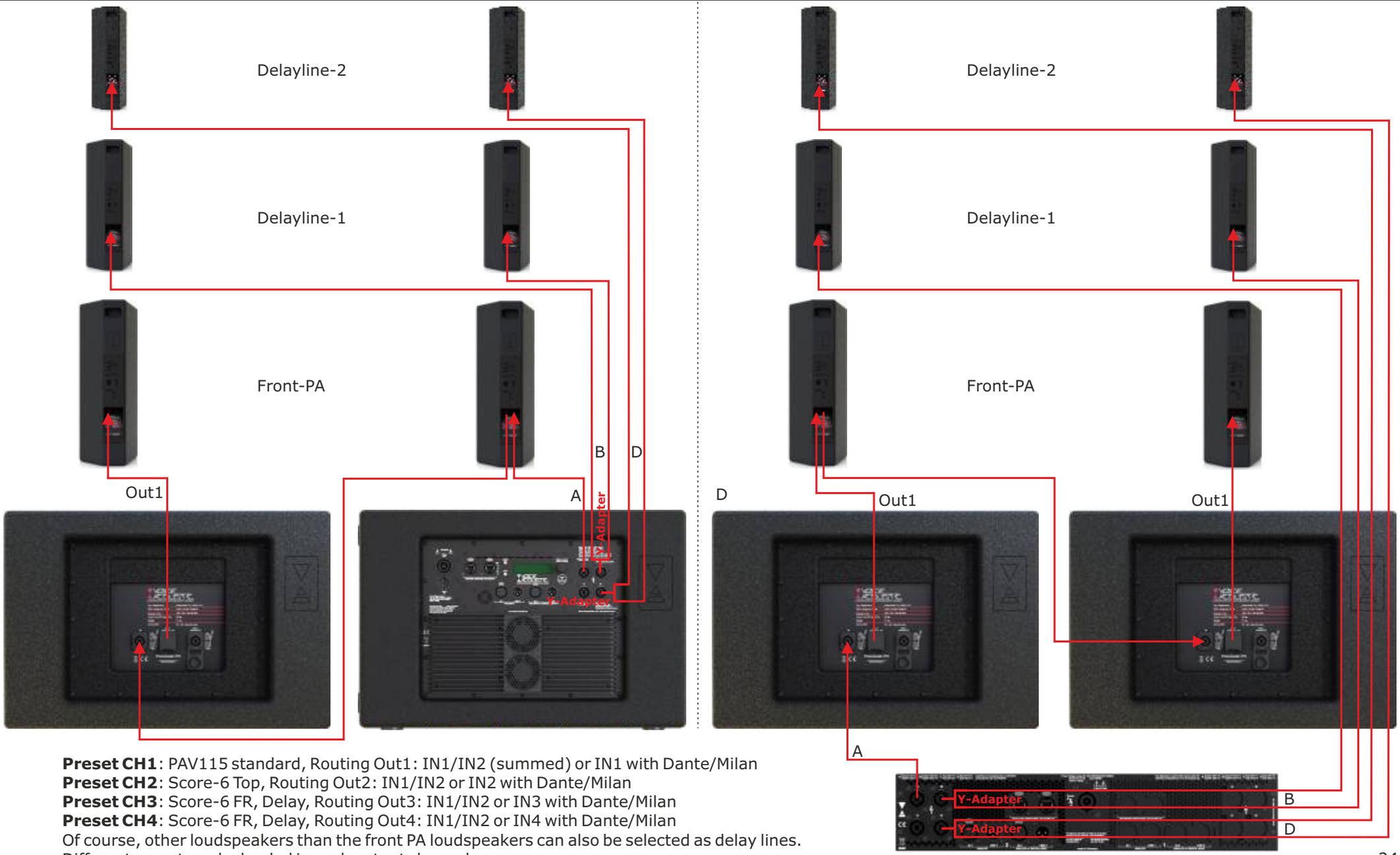




Speakon **Y-Adapter** to Speakon Out D, NL4FXX-W-S male (2-pol 1+/1-) to 2x NLT4MX female (2-pol 1+/1-).
Art.Nr.: 80**2**2500036

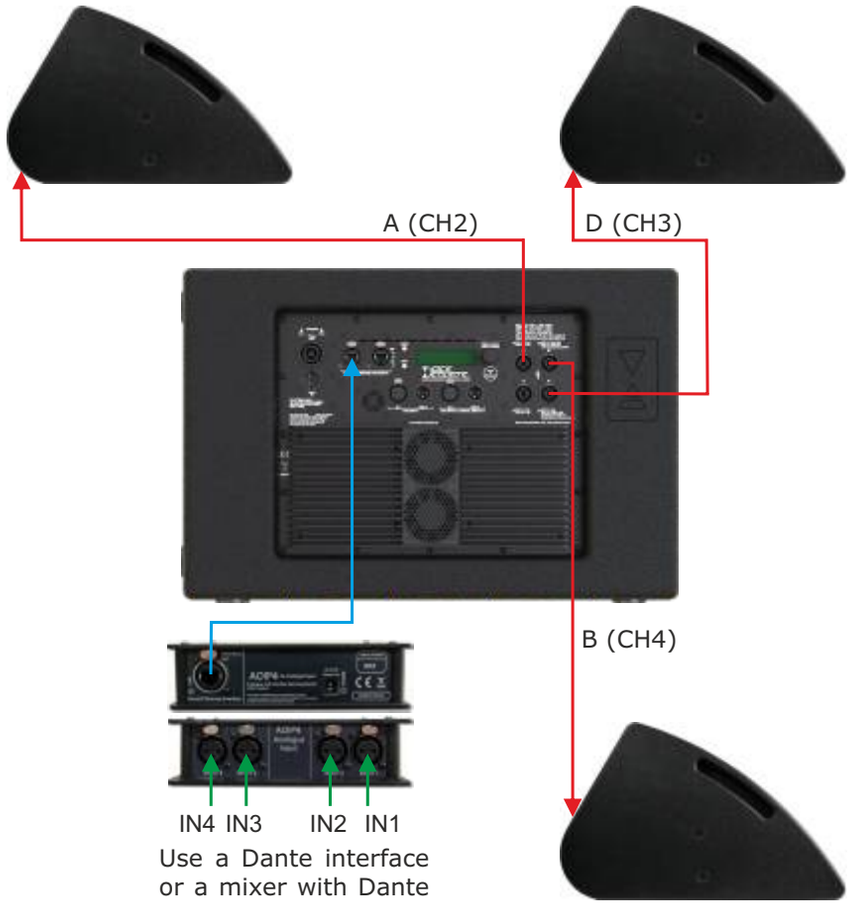
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: Score-6 FR, Delay, Routing Out3: IN1/IN2, the volume is adjustable via Gain CH3.
When using a Dante or Milan input, Out3 routing can be set to IN3, allowing the volume to be controlled from the console via an aux path connected to IN3.
Preset CH4: Score-6 Top, Routing Out4: IN2

Connection options:
Front PA with 2x delay line (all mono)



Preset CH1: PAV115 standard, Routing Out1: IN1/IN2 (summed) or IN1 with Dante/Milan
Preset CH2: Score-6 Top, Routing Out2: IN1/IN2 or IN2 with Dante/Milan
Preset CH3: Score-6 FR, Delay, Routing Out3: IN1/IN2 or IN3 with Dante/Milan
Preset CH4: Score-6 FR, Delay, Routing Out4: IN1/IN2 or IN4 with Dante/Milan
Of course, other loudspeakers than the front PA loudspeakers can also be selected as delay lines.
Different preset can be loaded in each output channel.

Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: CXN12 Monitor, Routing Out2: IN2
Preset CH3: CXN12 Monitor, Routing Out3: IN3
Preset CH4: CXN12 Monitor, Routing Out4: IN4

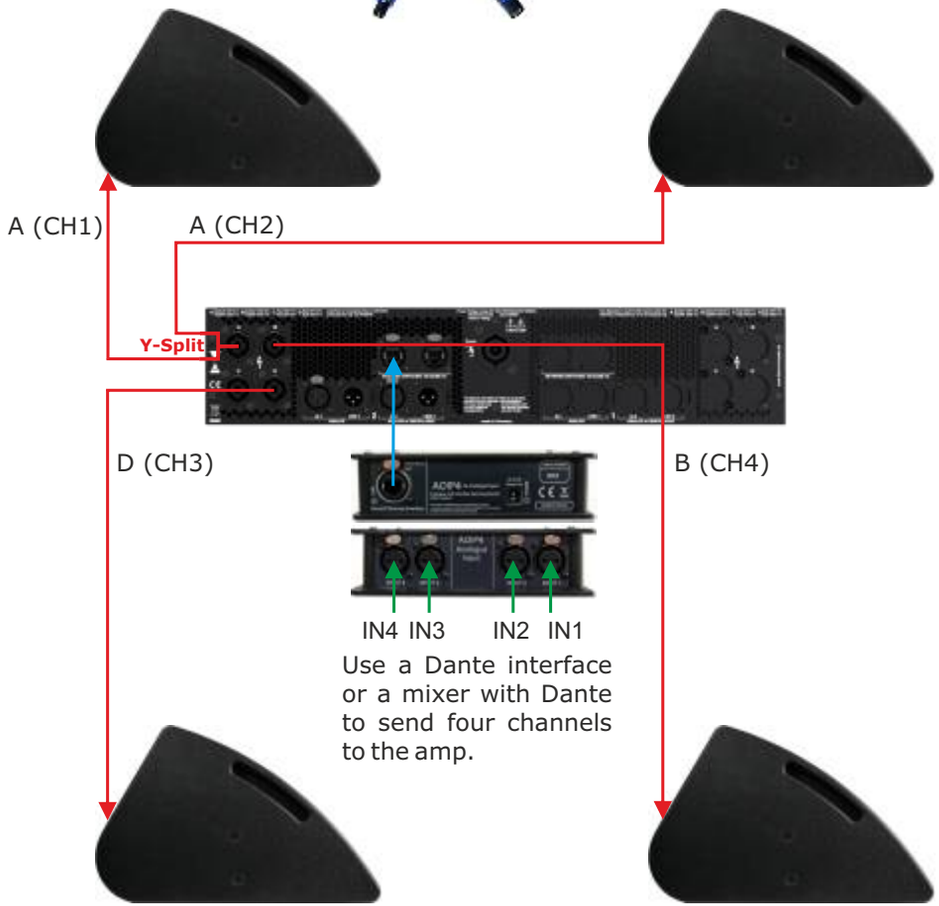


Use a Dante interface or a mixer with Dante to send four channels to the amp.

Preset CH1: CXN12 Monitor, Routing Out1: IN1
Preset CH2: CXN12 Monitor, Routing Out2: IN2
Preset CH3: CXN12 Monitor, Routing Out3: IN3
Preset CH4: CXN12 Monitor, Routing Out4: IN4

Speakon **Y-Split** to Speakon Out A, NL4FXX-W-S male (4-pol 1+/1-, 2+/2-) to 2x NLT4MX female (2-pol 1+/1-)
Art.Nr.: 80**4**2500036

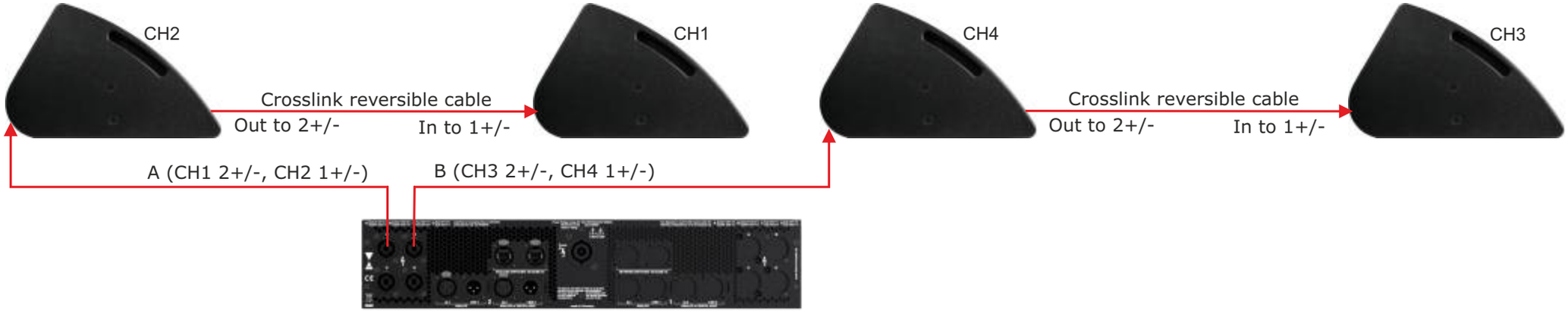
⚠ *The Y-split is necessary if 4 tops or monitors are to be connected, because CH1 is not routed to 1+/- on any Speakon.*

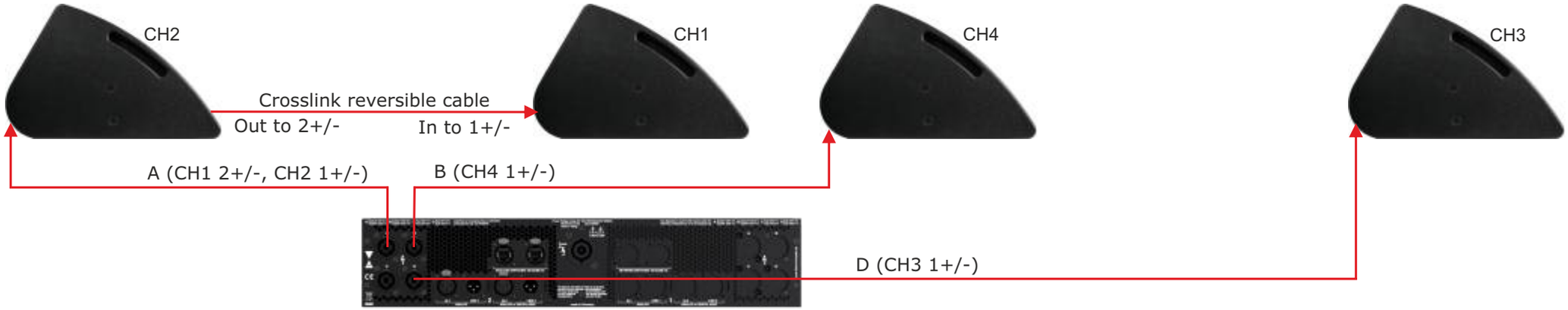


Use a Dante interface or a mixer with Dante to send four channels to the amp.

Connection option 2:
Monitoring or maximum number of top section channels
HDSP connection option 2: via reversible cable

Preset CH1: CXN12 Monitor, Routing Out1: IN1
Preset CH2: CXN12 Monitor, Routing Out2: IN2
Preset CH3: CXN12 Monitor, Routing Out3: IN3
Preset CH4: CXN12 Monitor, Routing Out4: IN4





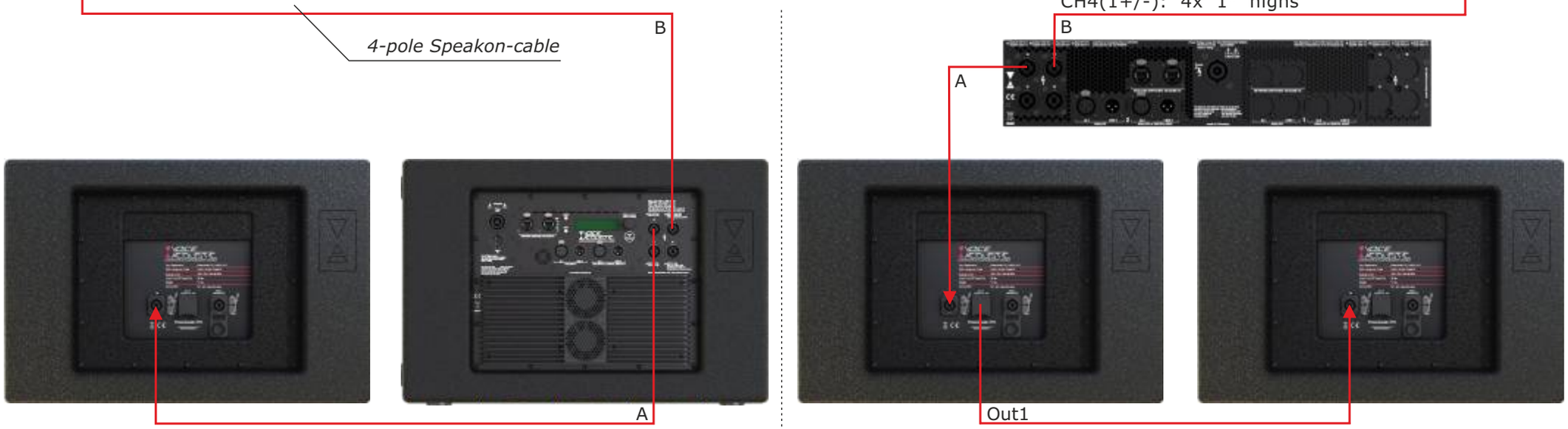
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: It is free and can be used for near-fill, monitoring, etc. It can also be used with Speakon C on 1+/-.
Preset CH3: VENIA8 Top, Routing Out3: IN1. When a bi-amping preset is loaded onto CH3, the preset for the tweeters is automatically loaded onto the next higher channel (CH4).
Preset CH4: VEN8HF, loads automatically. Routing must be set identically to CH3!

⚠ *A bi-amping preset can only be loaded onto CH3 with a self-powered Paveosub. Two self-powered subwoofers are required for a stereo setup.However, with a 4-channel HDSP amplifier, a bi-amping preset can be loaded onto either CH1 or CH3. This makes a stereo setup with tops possible without to connect subs.*

⚠ *The gain ratio between the two bi-amping channels must never be altered; otherwise, the frequency response will no longer be linear. For example, the preset gain for the 8" low-mid section of the VENIA-8 is 4 dB higher than the gain for the tweeters. To lower the level of the VENIA-8 by 3 dB, for example, this must be done on both channels: VEN8LF +0.7 dB and VEN8HF -3.3 dB.*
Currently, it is not possible to graphically map bi-amped loudspeakers as single channels in the HDSP software, so the user cannot accidentally adjust the gain ratio. This has already been solved in the VADAS platform, where the user only has one gain for volume adjustment which is automatically transferred to both channels.

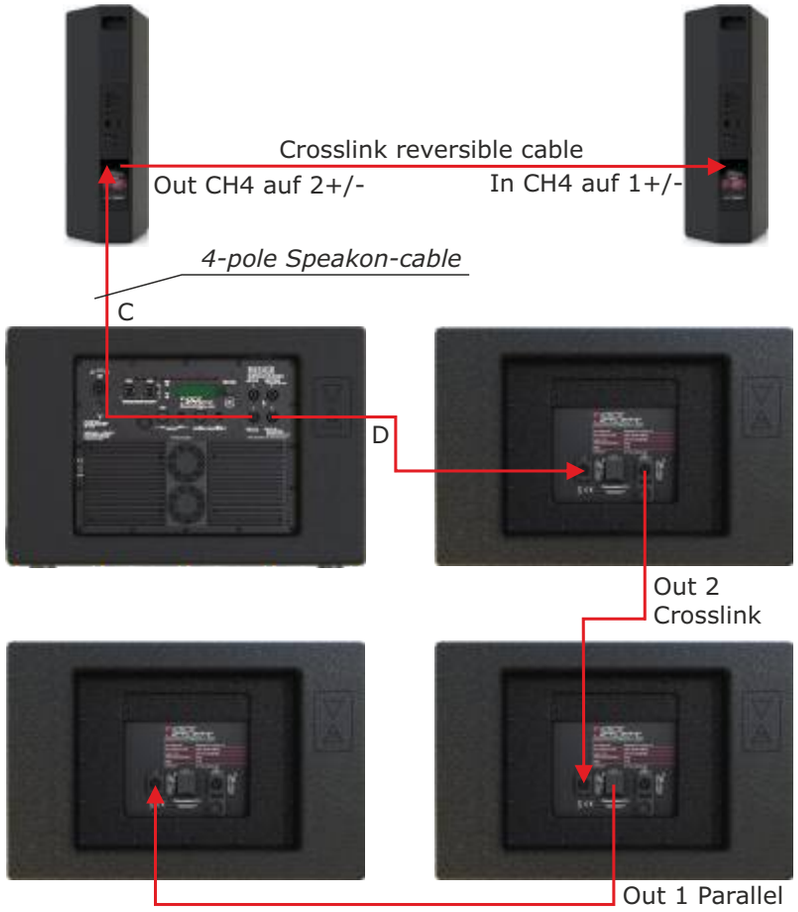
VENIA-8 bi-amping
2+/-: 4x 8" low-mids
1+/-: 4x 1" highs

CH3 (2+/-): 4x 8" low-mids
CH4(1+/-): 4x 1" highs



Special features of the Speakon socket C and D

Both top channels (CH2/4) and both sub channels (CH1/3) are output via Speakon sockets C and D respectively. This configuration is useful if the subs are positioned in front of the stage and the tops are suspended on the truss. With a single 4-pin Speakon cable, both top channels (CH2 and CH4) can be routed to the truss via Speakon C, and with a reversible cable between the tops, CH4 can also be fed to the other top. Paveosub basses of the 2025 generation have a practical Out-2-Crosslink socket on the connection panel, eliminating the need for a reversible cable between Sub 2 and Sub 3. This reduces the number of cables required by half, speeding up setup and dismantling and resulting in significant savings, particularly for larger setups. Socket C is also important for efficiently cabling an Ikarray-8 system.



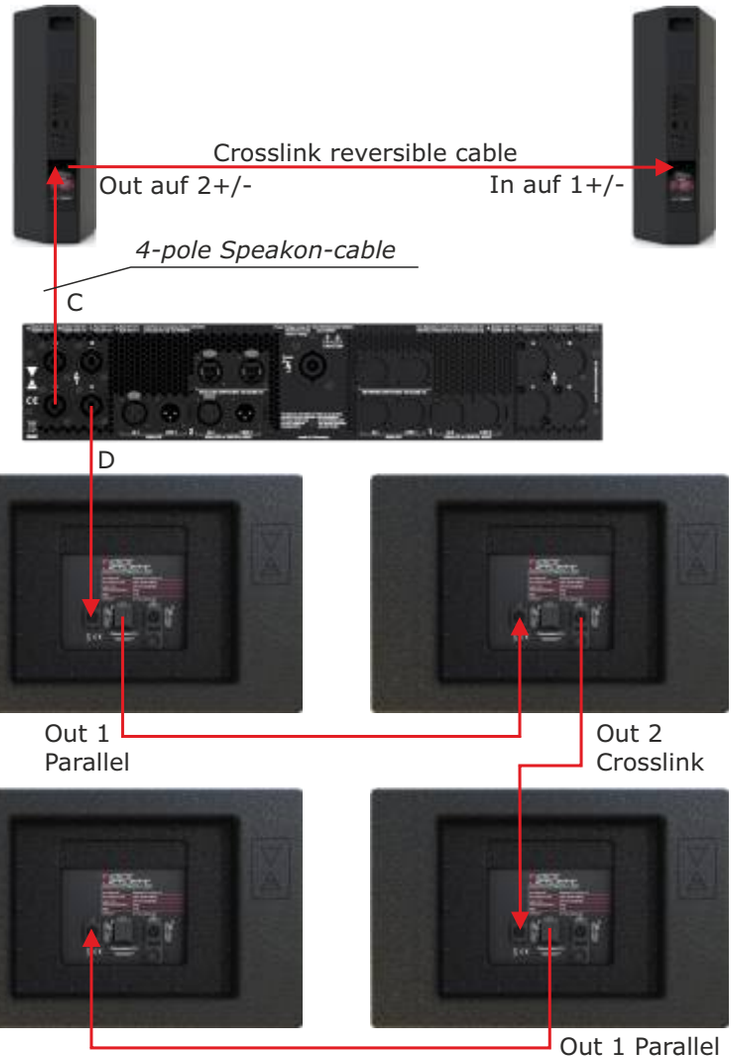
Speakon C: Top channel CH2(1+/-) und Top channel CH4(2+/-)

Speakon D: Sub channel CH1(2+/-) und Sub channel CH3(1+/-)

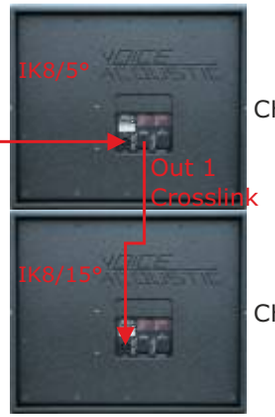
Preset CH1: PAV115 standard, Routing Out1: IN1/IN2
Preset CH2: Score-6 Top, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1/IN2
Preset CH4: Score-6 Top, Routing Out4: IN2

⚠ *CH1 and CH3 are the particularly high-current channels and should be used for subwoofers. CH2 and CH4 are for top units.*

In this example, the tops can of course also be connected separately via Speakon A and B, with only the subwoofers connected together via Speakon D.

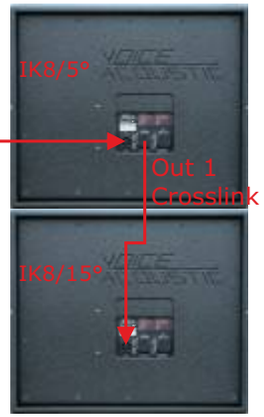


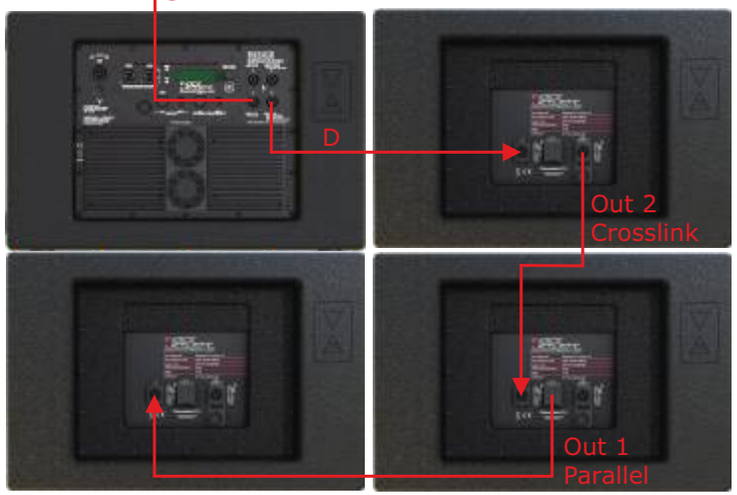
Ikarray-8 connection
2 elements per side with 4 subs
to self-powered sub or HDSP-8K4



The Ikarray-8 has an impedance of 4 ohms and is designed to achieve full performance on the 800-watt channels of older HDSP GEN1 and GEN2 amps. It is not currently intended for 2-ohm parallel operation, but it has a Parallel Out2 socket on the far right to ensure it is future-proof. The standard Crosslink socket is located in the centre, next to the left input socket, and is designed for Crosslink output. Each Ikarray-8 operates via the Crosslink socket on a separate amplifier channel.
Both amp top channels (CH2/4) can be connected to the Ikarray-8 or other future loudspeakers with a Crosslink-Out socket via the amplifier's Speakon-Out C. This saves on cable runs and setup time.

⚠ *To facilitate quick deployment, we have ready-made snapshots of Ikarray-8 configurations in the system electronics. This means that you won't need to spend a long time thinking about which output preset to load onto which channel.*

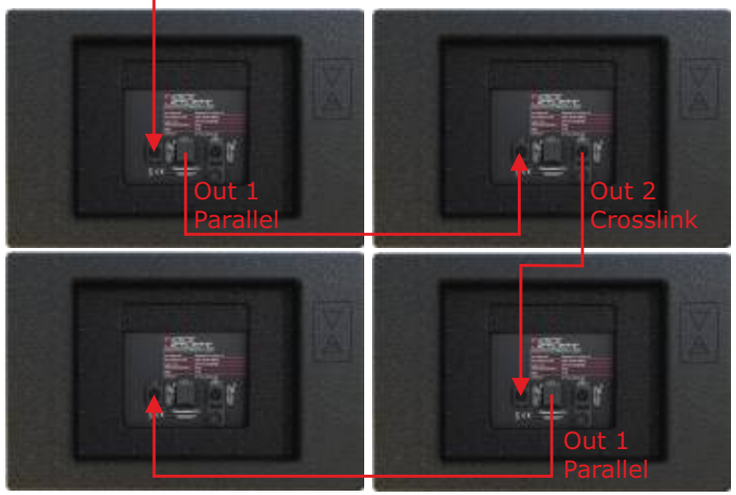


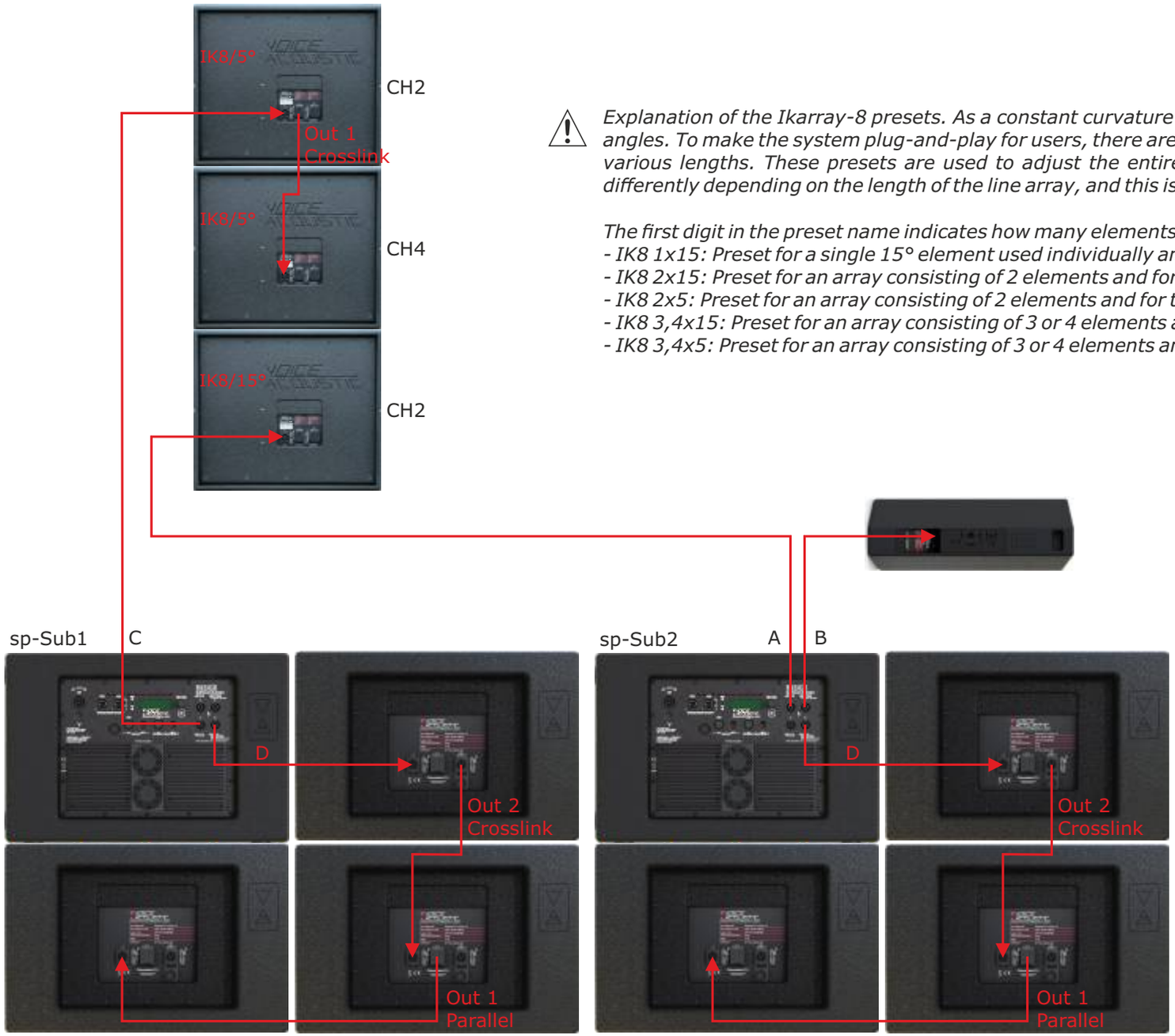


Speakon C: Top channel CH2(1+/-) und Top channel CH4(2+/-)

Speakon D: Sub channel CH1(2+/-) und Sub channel CH3(1+/-)

Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 2x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 2x15, Routing Out4: IN1





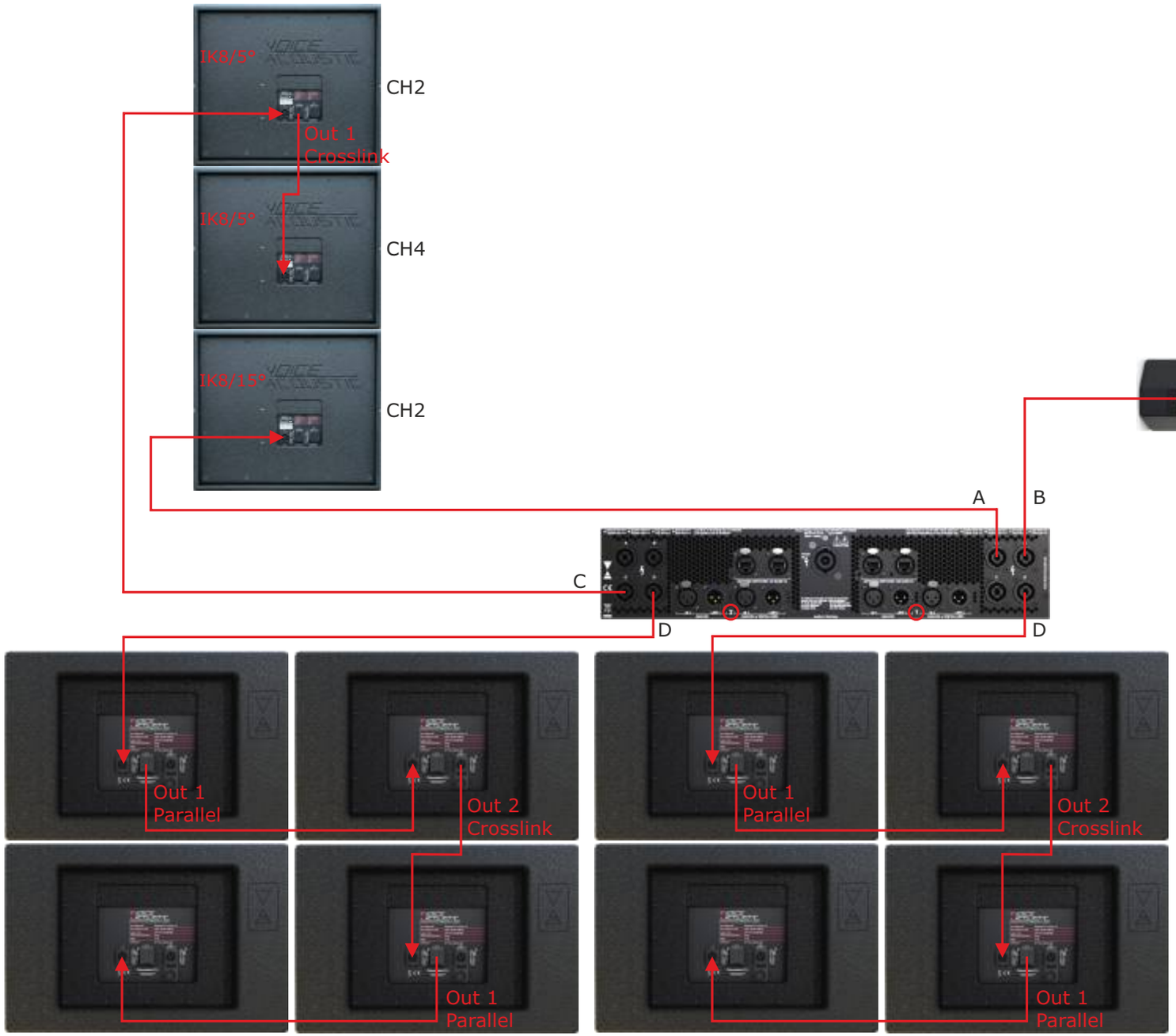
⚠ *Explanation of the Ikarray-8 presets. As a constant curvature line array, the Ikarray-8 has fixed cabinet angles. To make the system plug-and-play for users, there are different presets for the array elements at various lengths. These presets are used to adjust the entire system. The system must be equalised differently depending on the length of the line array, and this is taken into account in the presets.*

The first digit in the preset name indicates how many elements the array consists of:
- IK8 1x15: Preset for a single 15° element used individually and not in an array
- IK8 2x15: Preset for an array consisting of 2 elements and for the 15° element in a pair of arrays
- IK8 2x5: Preset for an array consisting of 2 elements and for the 5° element in a two-element array
- IK8 3,4x15: Preset for an array consisting of 3 or 4 elements and for the 15° element in the array
- IK8 3,4x5: Preset for an array consisting of 3 or 4 elements and for the 5° elements in the array

sp-Sub1
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 3,4x5, Routing Out4: IN1

sp-Sub2
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x15, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: Score-6 Top, Routing Out4: IN1

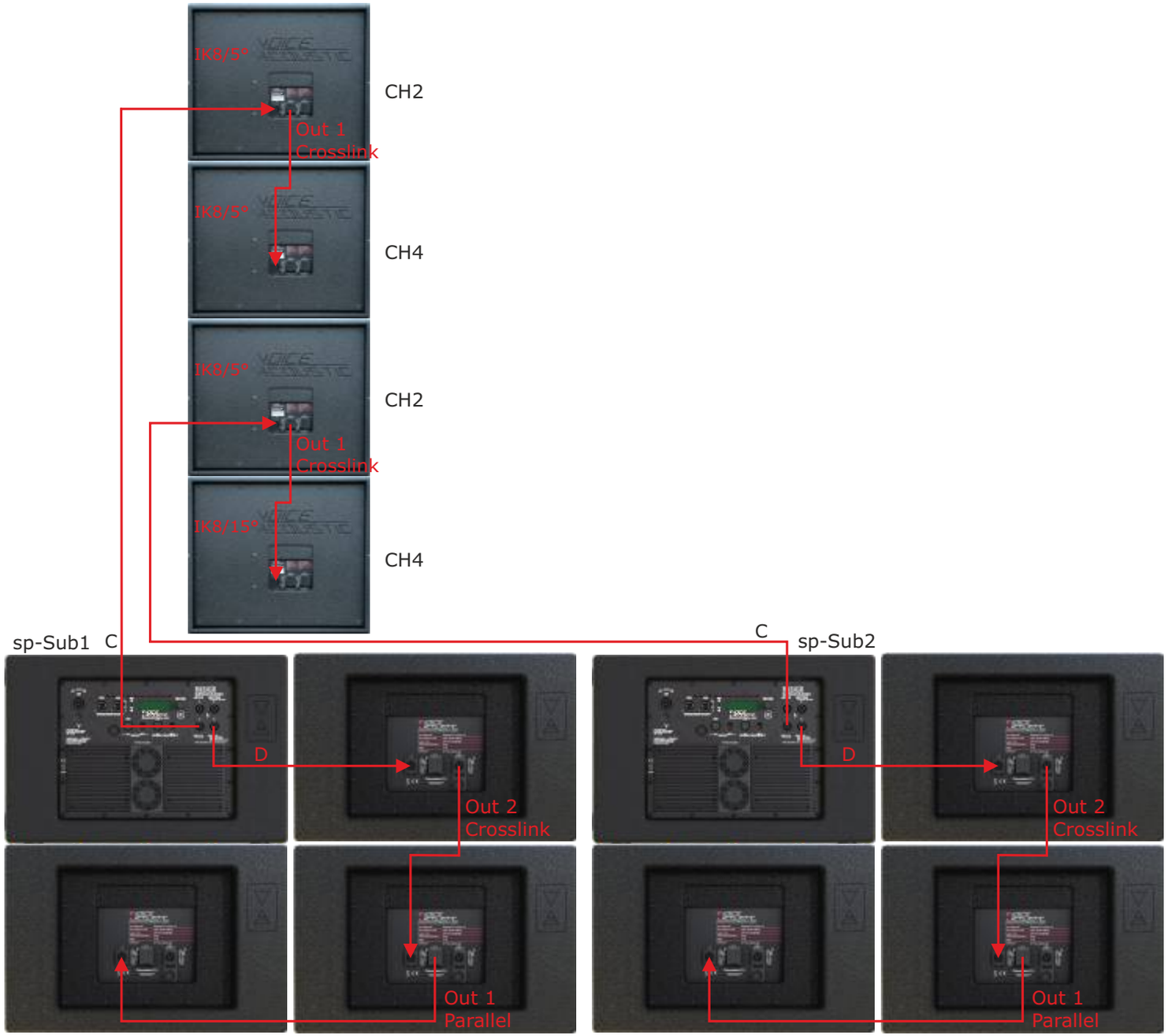
Ikarray-8 connection to HDSP-16K8, 3 elements per side with nearfill and up to 8 subs



HDSP-16K8, Seite 2
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 3,4x5, Routing Out4: IN1

HDSP-16K8, Seite 1
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x15, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: Score-6 Top, Routing Out4: IN1

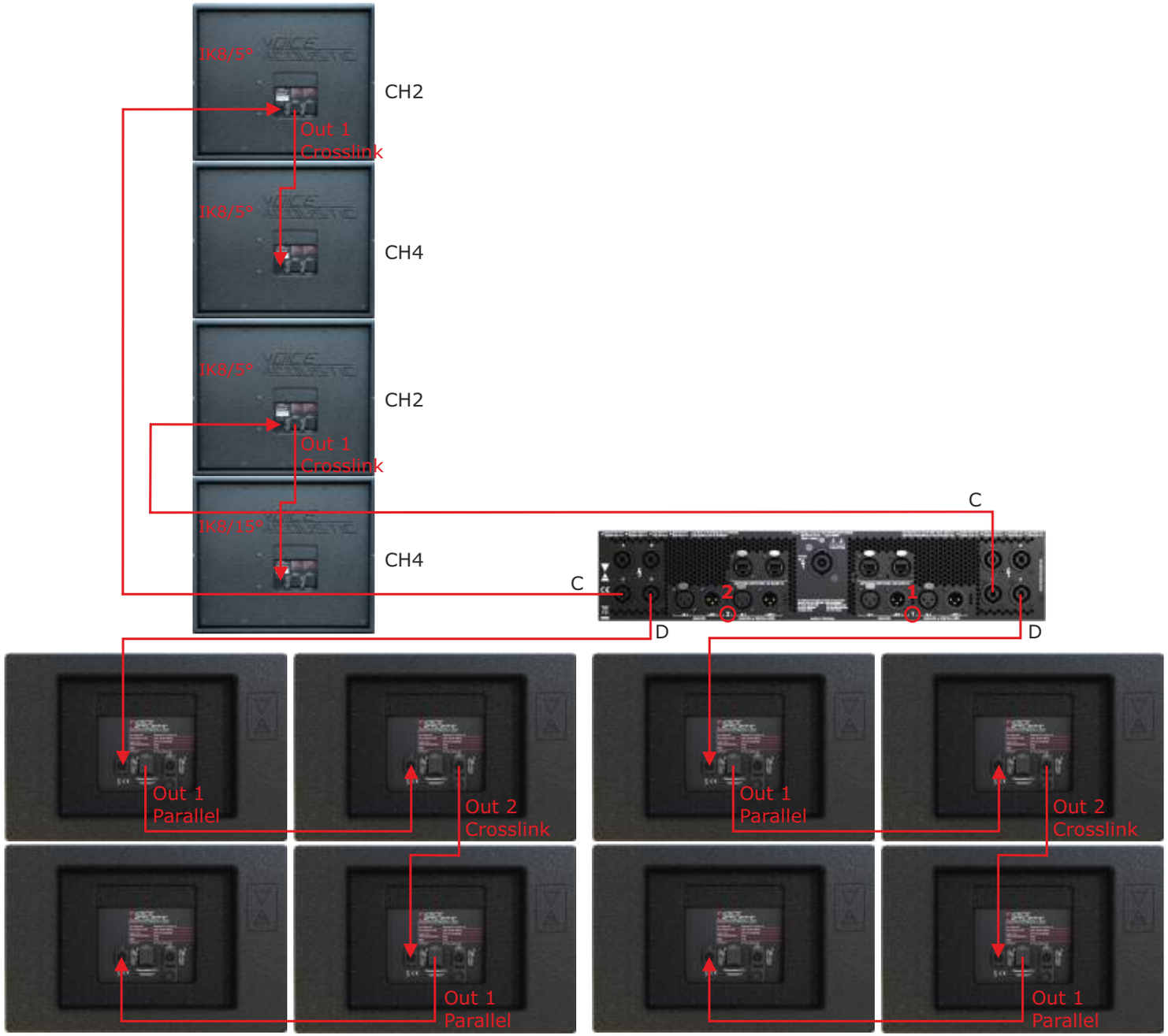
Ikarray-8 connection to self-powered subs, 4 elements per side and up to 8 subs



sp-Sub1
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 3,4x5, Routing Out4: IN1

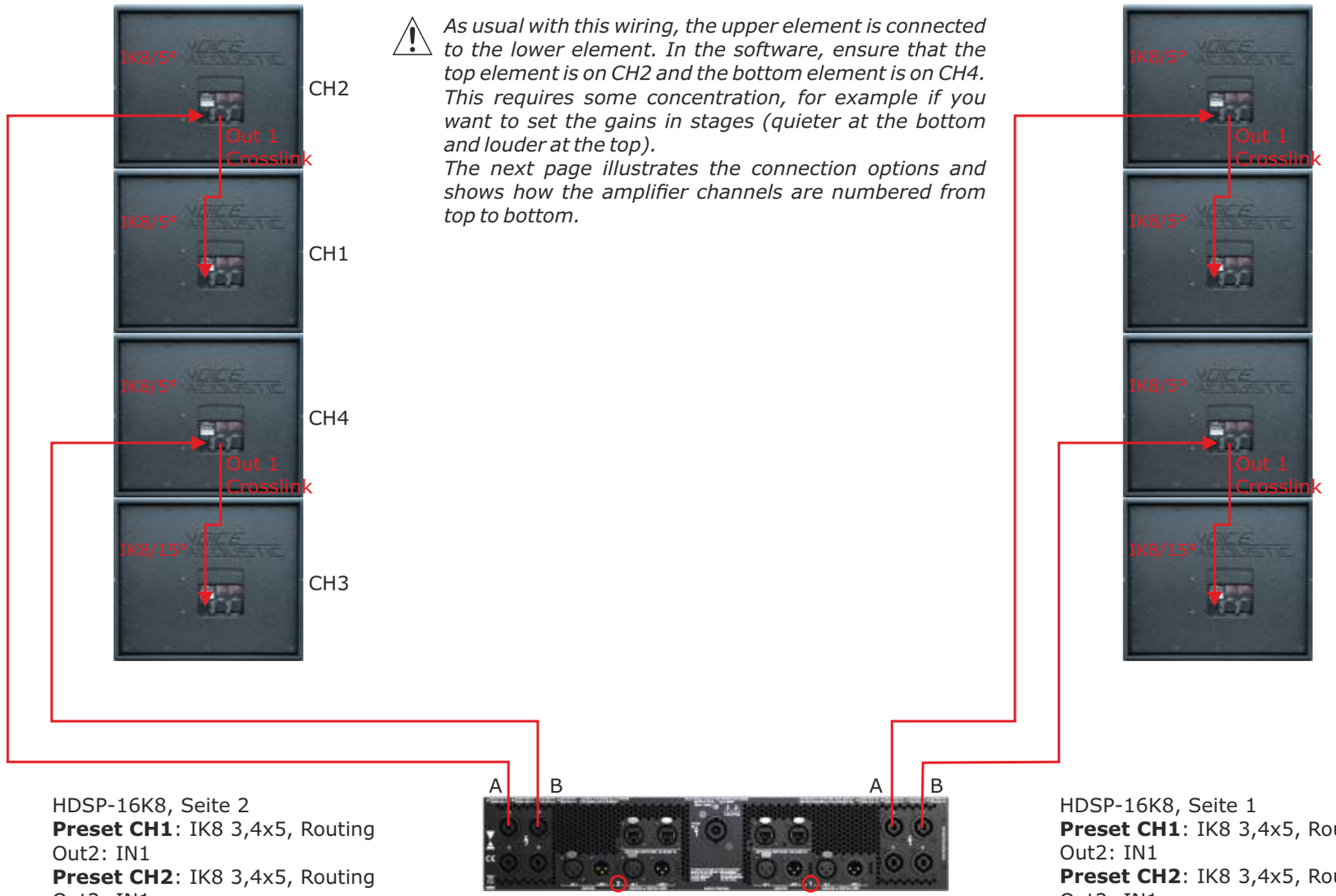
sp-Sub2
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 3,4x15, Routing Out4: IN1

Ikarray-8 connection to HDSP-16K8, 4 elements per side and up to 8 subs



HDSP-16K8, side 2
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 3,4x5, Routing Out4: IN1

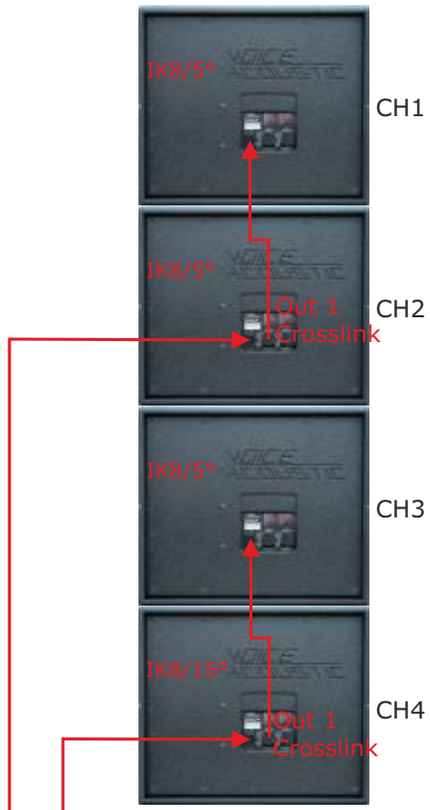
HDSP-16K8, side 1
Preset CH1: PAV115 standard, Routing Out1: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: PAV115 standard, Routing Out3: IN1
Preset CH4: IK8 3,4x15, Routing Out4: IN1



⚠ *As usual with this wiring, the upper element is connected to the lower element. In the software, ensure that the top element is on CH2 and the bottom element is on CH4. This requires some concentration, for example if you want to set the gains in stages (quieter at the bottom and louder at the top).*
The next page illustrates the connection options and shows how the amplifier channels are numbered from top to bottom.

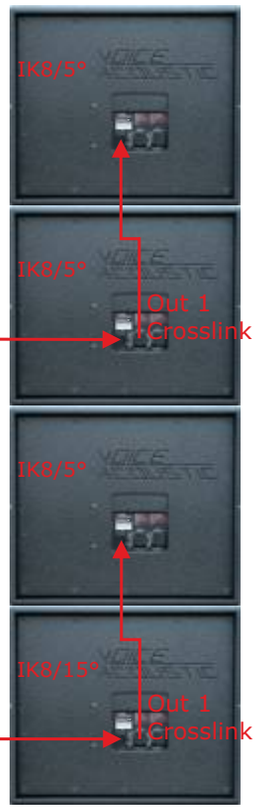
HDSP-16K8, Seite 2
Preset CH1: IK8 3,4x5, Routing Out2: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: IK8 3,4x15, Routing Out2: IN1
Preset CH4: IK8 3,4x5, Routing Out4: IN1

HDSP-16K8, Seite 1
Preset CH1: IK8 3,4x5, Routing Out2: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: IK8 3,4x15, Routing Out2: IN1
Preset CH4: IK8 3,4x5, Routing Out4: IN1



With this connection option, the wiring runs from the lower element to the upper element. This ensures that the power amplifier channels (CH1–4) are arranged in the correct order from top to bottom.

Please note that the presets on CH3 and CH4 must be changed! In the pre-configured snapshot and in the example on the previous page, the IK8 3.4x15° is located on CH3, but with this cabling it must be located on CH4.



HDSP-16K8, Seite 2
Preset CH1: IK8 3,4x5, Routing Out2: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: IK8 3,4x5, Routing Out2: IN1
Preset CH4: IK8 3,4x15, Routing Out4: IN1

HDSP-16K8, Seite 1
Preset CH1: IK8 3,4x5, Routing Out2: IN1
Preset CH2: IK8 3,4x5, Routing Out2: IN1
Preset CH3: IK8 3,4x5, Routing Out2: IN1
Preset CH4: IK8 3,4x15, Routing Out4: IN1

All specifications in this manual are based on information available at the time of publishing for the features and safety guidelines of the described products. Technical specifications, measurements, weights and properties are not guaranteed.

The manufacturer reserves the right to make technical modifications according to legal regulations stipulating the continual improvement of product features. For the safe operation of the unit, this manual and all other required information must be available to all users at the time of assembly and disassembly of the unit, and during operation.

Assemble or operate the unit only after reading and understanding this manual, and keeping it at hand at all times at the site.

We are happy to receive your suggestions and proposals for the enhancement of this manual.

Please send us your ideas to the following address:

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