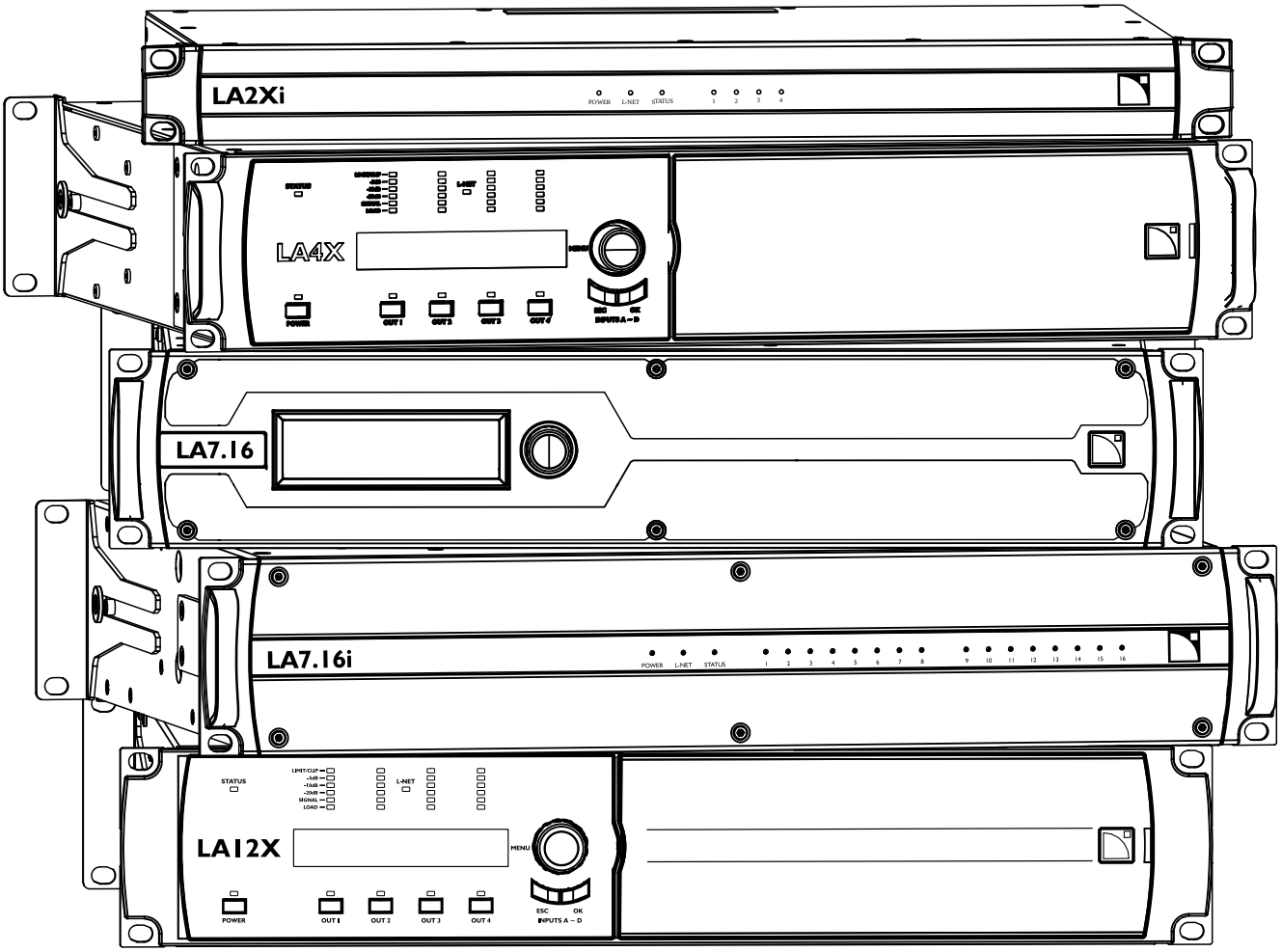
Preset Guide

owner's manual (EN)



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Contents

Introduction

The L-Acoustics amplified controllers are delivered with onboard firmware and preset library.

Presets of the onboard library can be loaded from the front panel of the amplified controller, or from the LA Network Manager software application, a management tool dedicated to the remote control and monitoring of a network of L-Acoustics amplified controllers.

LA Network Manager must be used for updating firmware on L-Acoustics amplified controllers. An up-to-date preset library is automatically installed with the firmware. Check the L-Acoustics website for the latest version of software, firmware and libraries.

Operating L-Acoustics amplified controllers

Refer to the LA2Xi, LA4, LA4X, LA7.16(i), LA8, LA12X, LA-RAK, LA-RAK II, and LA-RAK II AVB owner's manuals.

Installing LA Network Manager

Download the latest release pack from the L-Acoustics website and refer to the **LA NWM Installation** technical bulletin.

Updating firmware on an L-Acoustics amplified controller

Refer to the LA Network Manager help, accessible from the Help menu of the software.

This version of the preset guide describes the LA2Xi, LA4, LA4X, LA8 and LA12X preset library version 6.13(.0) and LA7.16(i) enclosure library version 7.7(.4).

Symbols

The following symbols are used in this document:

This symbol indicates a potential risk of harm to an individual or damage to the product.
It can also notify the user about instructions that must be strictly followed to ensure safe installation or operation of the product.

This symbol notifies the user about instructions that must be strictly followed to ensure proper installation or operation of the product.

This symbol notifies the user about complementary information or optional instructions.

Do not open unless authorized.
This symbol indicates the presence of electrical shock hazards.
It also indicates that no maintenance performed by the end user requires access to internal components.

Revision history

version number	publication date	modification
1.0	Mar. 2013	Initial version.
4.0	Dec. 2, 2013	• Added the K2 system. • Added LA4X.
4.0a	Dec. 9, 2013	• Updated information on K1 and K2 systems. • Updated the enclosure drive capacity. • Updated information on Kudo.
4.0b	Feb. 2014	Updated information on K1 and K2 systems.
4.2	Jun. 2014	Updated LA8 enclosure drive capacity.
5.1	Jun. 2015	• Updated information on the LA4X embedded preset library. • Updated information on the default output routing for subwoofers. • Updated the LA4 and LA8 enclosure drive capacities.
6.0	Oct. 2015	Added the X series.
7.0	Feb. 2016	• Added KS28. • Added LA12X.
7.1	May 2016	
8.0/8.1	Oct. 2016	• Added the Kiva II system. • Added information on the adjusted output gain in SB15m presets for improved headroom.
9.0	Jun. 2017	• Added the Syva system. • Clarified information on LA8 enclosure drive capacity.
9.1	Sep. 2017	Updated information on the Syva system.
10.0	Aug. 2018	• Added information on [KARADOWNK2]. • Added information on the adjusted output gain in subwoofer presets for improved headroom.
10.1	Nov. 2018	
11.0	Feb. 2019	Added X4i.
12.0	Jun. 2019	Added the A15 Wide/Focus system.
13.0	Oct. 2019	• Added the A15i Wide/Focus system. • Added the A10(i) Wide/Focus systems. • Added information on Cardioid eXtended presets.
13.1	Dec. 2019	Moved the enclosure drive capacity of LA4 to a separate table.
14.0	Apr. 2020	• Added the Kara II system. • Updated information on the default output routing for the X series.
15.0	Oct. 2020	• Added LA2Xi. • Added the K3 system.
16.0	Mar. 2021	Added the Kara IIi system.
17.0	Jul. 2021	Added the K3i system.
18.0	Feb. 2022	• Added pre-alignment delays for X series with subwoofers in cardioid configuration. • Added presets [A10_MO], [A15_MO], [5XT_MO], and [X4_MO]. • Added SB10i. • Moved the enclosure drive capacity of LA8 to a separate table.

version number	publication date	modification
18.1	Apr. 2022	Updated Pre-alignment delay values (p.82) for cases with Autofilter modes that extend latency.
18.2	May 2022	Updated pre-alignment delay value for [5XT_MO] + [SB15_100].
19.0	Jun. 2022	• Added LA7.16i enclosure drive capacity. • Updated pre-alignment delays for [X4_MO] with Syva Sub and SB10i.
20.0	Nov. 2022	• Added SB6i. • Added presets [X4_60] and [KARA II_MO]. • Updated pre-alignment delays for [A15_MO] and [X12_MO].
21.0	Mar. 2023	• Added Soka. • Added preset [SB10_60]. • Added LA7.16i layout library.
21.1	Mar. 2023	• Issue fixes and improvements.
22.0	Jun. 2023	• Added LA7.16 layout library and enclosure drive capacity. • Added L2 / L2D system. • Added [KARAIIDOWN*xx* 70] and [KARAIIDOWN*xx* 90] presets.

Preset design

Gain structure

The gains of all L-Acoustics factory presets are calibrated with a reference pink noise signal, representative of most demanding musical programs. The reference input level is **0 dBu** (with analog audio source) or **-22 dBFS** (with digital audio source).

When feeding L-Acoustics amplified controllers at this input level, L-Acoustics loudspeaker enclosures provide the sound engineer with 8 dB of headroom, except for smaller formats calibrated for 4 dB of headroom (MTD108A, X4i, 5XT, X8, 8XT, Kiva, Kilo, SB10i, SB6i, and Soka).

This gain structure helps managing power resources of L-Acoustics systems when using different enclosures of the same format. With default output gain settings (0 dB), all enclosures reach their limits for the same program level. Apply a gain adjustment of -4 dB for smaller format enclosures when used along with bigger format L-Acoustics enclosures.

Headroom for SB15m

SB15m presets [SB15_100] and [SB15_100_C] have 8 dB of headroom from preset library version 5.6(.5).

[SB15_100_Cx] has 8 dB of headroom.

4 dB of headroom are provided when using presets from earlier versions and preset [KIVA_SB15].

Headroom for K1-SB, KS28, SB28, SB18, SB218 and SB118

To provide 8 dB of headroom, the output gain of some subwoofer presets is adjusted in preset library 6.0 compared to previous versions.

This update aligns the L-DRIVE activity between subwoofers and full range loudspeakers for the same reference pink noise signal.

When updating presets in Session files using older versions of the preset library, adjust gains as follows to keep the same gain chain:

[SB28_60], [SB218_60]: + 4 dB
[KS28_60], [SB_28_100], [SB18_60], [SB18_100], [SB218_100], [SB118_60], [SB118_100]: + 3 dB
[KS28_100]: + 2 dB
[K1SB_60]: + 1 dB

Electro-acoustic coupling

Each recommended loudspeaker configuration provides a coherent sound source, by implementing a loudspeaker system in a specific deployment pattern and with defined factory presets.

L-Acoustics factory presets ensure the coupling between the different transducer sections, whether it is internal coupling as in active loudspeaker enclosures, or external coupling as when several loudspeaker enclosures are combined.

Users can adjust preset parameters on top of factory settings and for predefined channel sets.

Channel sets have been defined for the presets dedicated to active loudspeaker enclosures and to some specific loudspeaker configurations. A channel set maintains a coherent coupling by linking several output channels for the setting of routing, gain and delay parameters. For example, [LF HF] is a channel set for 2-way loudspeaker enclosure presets, and [SR SB SB SB] is a channel set for cardioid subwoofer presets.

The Preset Guide describes the recommended loudspeaker configurations for each system, with the corresponding factory presets and the main resulting acoustic properties.

When applicable, refer to the user documentation of the related system for the limit between coupled and separated subwoofers.

For some loudspeaker enclosure combinations, it is necessary to adjust the delay values for time-alignment. Refer to section Pre-alignment delay values (p.82).

Frequency response contour

For the X Series coaxial loudspeaker enclosures, there are two distinct contours:

- the standard preset, for all applications except stage monitor applications
- the _MO preset, dedicated to stage monitor applications

For legacy coaxial loudspeaker enclosures (XT and MTD Series), there are three distinct contours:

- the _FR presets, for most of FOH applications
- the _FI presets, for spoken word, classical music, jazz, or fill systems
- the _MO presets, for half-space loading conditions, typically monitor applications

For the A Series and Kara II WST loudspeaker enclosures, there are three distinct contours:

- the main preset, ensuring a reference FOH contour to the line source with usual deployment parameters
- the _FI preset, dedicated to loudspeaker enclosures used as a fill system
- the _MO preset, dedicated to stage monitor applications

For other current WST systems, there are one or two distinct contours:

- the main preset, ensuring a reference FOH contour to the line source with usual deployment parameters
- the _FI preset, dedicated to loudspeaker enclosures used as a fill system (for some systems only)

The oldest WST systems inherit from a legacy preset structure (_HI and _LO presets).

If necessary, users can adjust the sonic signature of L-Acoustics systems through the Contour EQ tools in LA Network Manager.

The Array Morphing tool provides two parameters, zoom factor and LF contour, that allow users to adjust the response of a WST system. At any reference listening distance and with any line source length, the engineer can obtain the sonic signature of a bigger, smaller, closer or further system, and can unify the sonic signature of multiple sources. Refer to the LA Network Manager Help and Array Morphing white paper for detailed information.

L2 / L2D LF polar pattern

L2 and L2D each feature four low cardioid (LC) loudspeakers on the sides, allowing a standard array to exhibit a broadband cardioid pattern that minimizes rear SPL at low frequencies.

- With the [L2 *xxx*] / [L2D *xxx*] presets, the array exhibits a standard cardioid pattern.
- With the [L2 *xxx*_S] / [L2D *xxx*_S] presets, the array exhibits a supercardioid pattern that minimizes side SPL at low frequencies.

Use the same LF polar pattern for the entire system. Refer to the **L2 owner's manual** for more information.

Standard, Cardioid C, and Cardioid Cx subwoofer configurations

A standard subwoofer configuration exhibits a quasi-omnidirectional pattern. It is obtained within a cluster with all subwoofers facing forward and using the associated standard preset ([*xxxx*_60]). This configuration maximizes SPL in front and ensures best temporal integrity. It should be used in applications where rear cancelation is not required, and front response is most important.

A Cardioid C configuration exhibits a cardioid pattern. It is obtained by reversing one enclosure per group of three or four subwoofers and using the associated cardioid preset ([*xxxx*_60_C]). This configuration offers rear SPL cancelation centered around the most critical frequencies with little to no compromises on front SPL and temporal integrity. It should be used in applications where rear cancelation and front response are equally important.

A Cardioid Cx configuration exhibits a cardioid pattern. It is obtained by reversing one enclosure per group of three or four subwoofers and using the associated eXtended cardioid preset ([*xxxx*_60_Cx]). This configuration offers broadband rear SPL cancelation with limited compromise on front SPL and temporal integrity. It should be used in applications where rear cancelation is most important.

Refer to the **Standard and cardioid subwoofer configurations** technical bulletin for more information on the sonic properties and physical deployment of these configurations.

Onboard preset libraries

Each onboard preset library includes the L-Acoustics loudspeaker enclosures of which power requirements match the delivering capability of the corresponding amplified controller.

amplified controllers maximum output power

Type	16 Ω load	8 Ω load	4 Ω load	2.7 Ω load
LA12X	—	4 × 1400 W	4 × 2600 W	4 × 3300 W
LA8	—	4 × 1100 W	4 × 1800 W	
LA7.16(i)	16 × 580 W	16 × 920 W	16 × 1000 W	—
LA4X	—	4 × 1000 W		—
LA4	—	4 × 800 W	4 × 1000 W	—
LA2Xi	4 × 190 W	4 × 360 W	4 × 640 W	—
	—	2 × 1260 W	—	
		—	1 × 2550 W	

CEA-2006/490A 1 kHz test method, all channels driven.

LA2Xi preset library

The LA2Xi onboard preset library is stored in the factory memory locations 011 to 082 of the controller (the memory locations 001 to 010 are dedicated to the storage of presets modified by the user). Each preset family is described in the tables below, including the presets memory location number, name, and description.

LA2Xi preset library 6.13

KARA_II

011	[KARA II 70]	Kara II, full range, 70° adjustable fins settings
012	[KARA II 90]	Kara II, full range, 90° adjustable fins settings
013	[KARA II 110]	Kara II, full range, 110° adjustable fins settings
014	[KARA II_FI]	Kara II, HPF=100 Hz, fill
015	[KARA II_MO]	Kara II, full range, monitor, low latency
016	[KARAIIDOWNK3]	Kara II, optimized delay for K3 downfill

KARA

017	[KARA]	Kara, full range, FOH
018	[KARA_FI]	Kara, HPF=100 Hz, fill
019	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

KIVA_II

020	[KIVA II]	Kiva II, full range, FOH
021	[KIVA II_FI]	Kiva II, full range, fill

A15

022	[A15]	A15 Wide or A15 Focus, full range
023	[A15_FI]	A15 Wide or A15 Focus, full range, fill
024	[A15_MO]	A15 Wide or A15 Focus, full range, monitor, low latency

A10

025	[A10]	A10 Wide or A10 Focus, full range
026	[A10_FI]	A10 Wide or A10 Focus, full range, fill
027	[A10_MO]	A10 Wide or A10 Focus, full range, monitor, low latency

ARCS_WF

028	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
029	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

KS28

030	[KS28_60]	KS28, LPF=60 Hz
031	[KS28_100]	KS28, LPF=100 Hz
032	[KS28_60_C]	KS28, LPF=60 Hz, cardioid pattern
033	[KS28_100_C]	KS28, LPF=100 Hz, cardioid pattern
034	[KS28_60_Cx]	KS28, LPF=60 Hz, extended cardioid pattern
035	[KS28_100_Cx]	KS28, LPF=100 Hz, extended cardioid pattern

SB28

036	[SB28_60]	SB28, LPF=60 Hz
037	[SB28_100]	SB28, LPF=100 Hz
038	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
039	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
040	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
041	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

042	[KS21_60]	KS21, LPF=60 Hz
043	[KS21_100]	KS21, LPF=100 Hz
044	[KS21_60_C]	KS21, LPF=60 Hz, cardioid pattern
045	[KS21_100_C]	KS21, LPF=100 Hz, cardioid pattern
046	[KS21_60_Cx]	KS21, LPF=60 Hz, extended cardioid pattern
047	[KS21_100_Cx]	KS21, LPF=100 Hz, extended cardioid pattern

SB18

048	[SB18_60]	SB18, LPF=60 Hz
049	[SB18_100]	SB18, LPF=100 Hz
050	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
051	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
052	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
053	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

054	[SB15_100]	SB15m, LPF=100 Hz
055	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
056	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

057	[SB10_60]	SB10i, LPF=60 Hz
058	[SB10_100]	SB10i, LPF=100 Hz
059	[SB10_200]	SB10i, LPF=200 Hz

SB6

060	[SB6_60]	SB6i, LPF=60 Hz
061	[SB6_100]	SB6i, LPF=100 Hz
062	[SB6_200]	SB6i, LPF=200 Hz

SYVA

063	[SYVA]	Syva, full range

SYVA_LOW

064	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz

SYVA+LOW

065	[SYVA LOW SYVA]	Syva & Syva Low (coupled)

SYVA_SUB

066	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
067	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

068	[SOKA]	Soka, full range
069	[SOKA_60]	Soka, lower LF limit and max SPL, on-wall configuration with separated sub
070	[SOKA_200]	Soka, higher LF limit and max SPL, on-wall configuration with closely coupled sub

X15HiQ

071	[X15]	X15 HiQ, full range
072	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

073	[X12]	X12, full range
074	[X12_MO]	X12, full range, monitor, low latency

X8

075	[X8]	X8, full range
076	[X8_MO]	X8, full range, monitor, low latency

5XT

077	[5XT]	5XT, full range
078	[5XT_MO]	5XT, full range, monitor, low latency

X4

079	[X4]	X4i, full range
080	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
081	[X4_MO]	X4i, full range, monitor, low latency

FLAT

082	[FLAT_LA2X]	Flat EQ, protection minimizing clipping risks

LA4 preset library

The LA4 onboard preset library is stored in the factory memory locations 011 to 097 of the controller (the memory locations 001 to 010 are dedicated to the storage of presets modified by the user). Each preset family is described in the tables below, including the presets memory location number, name, and description.

LA4 preset library 6.13

KIVA

011	[KIVA]	Kiva, full range, FOH
012	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

013	[KIVA_SB15]	Kiva & SB15m, X-OVER=100 Hz, full range, FOH

KILOKIVA

014	[KIVA_KILO]	Kiva & Kilo, full range, X-OVER=100 Hz, FOH

ARCS

015	[ARCS_LO]	ARCS, full range, LO contour
016	[ARCS_LO_60]	ARCS, HPF=60 Hz, LO contour
017	[ARCS_LO_100]	ARCS, HPF=100 Hz, LO contour
018	[ARCS_HI]	ARCS, full range, HI contour
019	[ARCS_HI_60]	ARCS, HPF=60 Hz, HI contour
020	[ARCS_HI_100]	ARCS, HPF=100 Hz, HI contour

ARCS_WF

021	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
022	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

SB18

023	[SB18_60]	SB18, LPF=60 Hz
024	[SB18_100]	SB18, LPF=100 Hz
025	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
026	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
027	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
028	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB118

029	[SB118_60]	SB118, LPF=60 Hz
030	[SB118_100]	SB118, LPF=100 Hz
031	[SB118_60_C]	SB118, LPF=60 Hz, cardioid pattern
032	[SB118_100_C]	SB118, LPF=100 Hz, cardioid pattern

SB15

033	[SB15_100]	SB15m, LPF=100 Hz
034	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
035	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

KILO

036	[KILO]	Kilo, LPF=100 Hz

SYVA_SUB

037	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

12XTA

038	[12XTA_FI]	12XT active, full range, fill
039	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
040	[12XTA_FR]	12XT active, full range, FOH
041	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
042	[12XTA_MO]	12XT active, full range, monitor
043	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

044	[12XTP_FI]	12XT passive, full range, fill
045	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
046	[12XTP_FR]	12XT passive, full range, FOH
047	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
048	[12XTP_MO]	12XT passive, full range, monitor
049	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

050	[8XT_FI]	8XT, full range, fill
051	[8XT_FI_100]	8XT, HPF=100 Hz, fill
052	[8XT_FR]	8XT, full range, FOH
053	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
054	[8XT_MO]	8XT, full range, monitor
055	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

056	[5XT]	5XT, full range
057	[5XT_MO]	5XT, full range, monitor, low latency

X4

058	[X4]	X4i, full range
059	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
060	[X4_MO]	X4i, full range, monitor, low latency

115XT

061	[115XT_FI]	115XT, full range, fill
062	[115XT_FI_100]	115XT, HPF=100 Hz, fill
063	[115XT_FR]	115XT, full range, FOH
064	[115XT_FR_100]	115XT, HPF=100 Hz, FOH
065	[115XT_MO]	115XT, full range, monitor
066	[115XT_MO_100]	115XT, HPF=100 Hz, monitor

MTD115bA

067	[115bA_FI]	MTD115b active, full range, fill
068	[115bA_FI_100]	MTD115b active, HPF=100 Hz, fill
069	[115bA_FR]	MTD115b active, full range, FOH
070	[115bA_FR_100]	MTD115b active, HPF=100 Hz, FOH
071	[115bA_MO]	MTD115b active, full range, monitor
072	[115bA_MO_100]	MTD115b active, HPF=100 Hz, monitor

MTD115bP

073	[115bP_FI]	MTD115b passive, full range, fill
074	[115bP_FI_100]	MTD115b passive, HPF=100 Hz, fill
075	[115bP_FR]	MTD115b passive, full range, FOH
076	[115bP_FR_100]	MTD115b passive, HPF=100 Hz, FOH
077	[115bP_MO]	MTD115b passive, full range, monitor
078	[115bP_MO_100]	MTD115b passive, HPF=100 Hz, monitor

112XT

079	[112XT_FI]	112XT, full range, fill
080	[112XT_FI_100]	112XT, HPF=100 Hz, fill
081	[112XT_FR]	112XT, full range, FOH
082	[112XT_FR_100]	112XT, HPF=100 Hz, FOH
083	[112XT_MO]	112XT, full range, monitor
084	[112XT_MO_100]	112XT, HPF=100 Hz, monitor

MTD112b

085	[112b_FI]	MTD112b, full range, fill
086	[112b_FI_100]	MTD112b, HPF=100 Hz, fill
087	[112b_FR]	MTD112b, full range, FOH
088	[112b_FR_100]	MTD112b, HPF=100 Hz, FOH
089	[112b_MO]	MTD112b, full range, monitor
090	[112b_MO_100]	MTD112b, HPF=100 Hz, monitor

MTD108a

091	[108a_FI]	MTD108a, full range, fill
092	[108a_FI_100]	MTD108a, HPF=100 Hz, fill
093	[108a_FR]	MTD108a, full range, FOH
094	[108a_FR_100]	MTD108a, HPF=100 Hz, FOH
095	[108a_MO]	MTD108a, full range, monitor
096	[108a_MO_100]	MTD108a, HPF=100 Hz, monitor

FLAT

097	[FLAT_LA4]	Flat EQ, protection minimizing clipping risks

LA4X preset library

The LA4X onboard preset library is stored in the factory memory locations 011 to 119 of the controller (the memory locations 001 to 010 are dedicated to the storage of presets modified by the user). Each preset family is described in the tables below, including the presets memory location number, name, and description.

LA4X preset library 6.13

K2

011	[K2 70]	K2, full range, 70° adjustable fins settings
012	[K2 90]	K2, full range, 90° adjustable fins settings
013	[K2 110]	K2, full range, 110° adjustable fins settings

K3

014	[K3 70]	K3, full range, 70° adjustable fins settings
015	[K3 90]	K3, full range, 90° adjustable fins settings
016	[K3 110]	K3, full range, 110° adjustable fins settings

KUDO

017	[KUDO50_25]	Kudo, HPF=25 Hz, 50° K-Louver settings
018	[KUDO50_40]	Kudo, HPF=40 Hz, 50° K-Louver settings
019	[KUDO50_60]	Kudo, HPF=60 Hz, 50° K-Louver settings
020	[KUDO80_25]	Kudo, HPF=25 Hz, 80° K-Louver settings
021	[KUDO80_40]	Kudo, HPF=40 Hz, 80° K-Louver settings
022	[KUDO80_60]	Kudo, HPF=60 Hz, 80° K-Louver settings
023	[KUDO110_25]	Kudo, HPF=25 Hz, 110° K-Louver settings
024	[KUDO110_40]	Kudo, HPF=40 Hz, 110° K-Louver settings
025	[KUDO110_60]	Kudo, HPF=60 Hz, 110° K-Louver settings

KARA_II

026	[KARA II 70]	Kara II, full range, 70° adjustable fins settings
027	[KARA II 90]	Kara II, full range, 90° adjustable fins settings
028	[KARA II 110]	Kara II, full range, 110° adjustable fins settings
029	[KARA II_FI]	Kara II, HPF=100 Hz, fill
030	[KARA II_MO]	Kara II, full range, monitor, low latency
031	[KARAIIDOWNK1]	Kara II, optimized delay for K1 downfill
032	[KARAIIDOWNK2]	Kara II, optimized delay for K2 downfill
033	[KARAIIDOWNK3]	Kara II, optimized delay for K3 downfill

KARA

034	[KARA]	Kara, full range, FOH
035	[KARA_FI]	Kara, HPF=100 Hz, fill
036	[KARADOWNK1]	Kara, HPF=100 Hz, optimized delay for K1 downfill
037	[KARADOWNK2]	Kara, HPF=100 Hz, optimized delay for K2 downfill
038	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

KIVA_II

039	[KIVA II]	Kiva II, full range, FOH
040	[KIVA II_FI]	Kiva II, full range, fill

KIVA

041	[KIVA]	Kiva, full range, FOH
042	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

043	[KIVA_SB15]	Kiva & SB15m, X-OVER=100 Hz, full range, FOH

KILOKIVA

044	[KIVA_KILO]	Kiva & Kilo, full range, X-OVER=100 Hz, FOH

ARCS_II

045	[ARCS II]	ARCS II, full range

A15

046	[A15]	A15 Wide or A15 Focus, full range
047	[A15_FI]	A15 Wide or A15 Focus, full range, fill
048	[A15_MO]	A15 Wide or A15 Focus, full range, monitor, low latency

A10

049	[A10]	A10 Wide or A10 Focus, full range
050	[A10_FI]	A10 Wide or A10 Focus, full range, fill
051	[A10_MO]	A10 Wide or A10 Focus, full range, monitor, low latency

ARCS_WF

052	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
053	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

KS21

054	[KS21_60]	KS21, LPF=60 Hz
055	[KS21_100]	KS21, LPF=100 Hz
056	[KS21_60_C]	KS21, LPF=60 Hz, cardioid pattern
057	[KS21_100_C]	KS21, LPF=100 Hz, cardioid pattern
058	[KS21_60_Cx]	KS21, LPF=60 Hz, extended cardioid pattern
059	[KS21_100_Cx]	KS21, LPF=100 Hz, extended cardioid pattern

SB18

060	[SB18_60]	SB18, LPF=60 Hz
061	[SB18_100]	SB18, LPF=100 Hz
062	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
063	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
064	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
065	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

066	[SB15_100]	SB15m, LPF=100 Hz
067	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
068	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

069	[SB10_60]	SB10i, LPF=60 Hz
070	[SB10_100]	SB10i, LPF=100 Hz
071	[SB10_200]	SB10i, LPF=200 Hz

SB6

072	[SB6_60]	SB6i, LPF=60 Hz
073	[SB6_100]	SB6i, LPF=100 Hz
074	[SB6_200]	SB6i, LPF=200 Hz

KILO

075	[KILO]	Kilo, LPF=100 Hz

SYVA

076	[SYVA]	Syva, full range

SYVA_LOW

077	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz

SYVA+LOW

078	[SYVA LOW SYVA]	Syva & Syva Low (coupled)

SYVA_SUB

079	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
080	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

081	[SOKA]	Soka, full range
082	[SOKA_60]	Soka, lower LF limit and max SPL, on-wall configuration with separated sub
083	[SOKA_200]	Soka, higher LF limit and max SPL, on-wall configuration with closely coupled sub

X15HiQ

084	[X15]	X15 HiQ, full range
085	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

086	[X12]	X12, full range
087	[X12_MO]	X12, full range, monitor, low latency

X8

088	[X8]	X8, full range
089	[X8_MO]	X8, full range, monitor, low latency

115XTHiQ

090	[HiQ_FI]	115XT HiQ, full range, fill
091	[HiQ_FI_100]	115XT HiQ, HPF=100 Hz, fill
092	[HiQ_FR]	115XT HiQ, full range, FOH
093	[HiQ_FR_100]	115XT HiQ, HPF=100 Hz, FOH
094	[HiQ_MO]	115XT HiQ, full range, monitor
095	[HiQ_MO_100]	115XT HiQ, HPF=100 Hz, monitor

12XTA

096	[12XTA_FI]	12XT active, full range, fill
097	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
098	[12XTA_FR]	12XT active, full range, FOH
099	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
100	[12XTA_MO]	12XT active, full range, monitor
101	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

102	[12XTP_FI]	12XT passive, full range, fill
103	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
104	[12XTP_FR]	12XT passive, full range, FOH
105	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
106	[12XTP_MO]	12XT passive, full range, monitor
107	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

108	[8XT_FI]	8XT, full range, fill
109	[8XT_FI_100]	8XT, HPF=100 Hz, fill
110	[8XT_FR]	8XT, full range, FOH
111	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
112	[8XT_MO]	8XT, full range, monitor
113	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

114	[5XT]	5XT, full range
115	[5XT_MO]	5XT, full range, monitor, low latency

X4

116	[X4]	X4i, full range
117	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
118	[X4_MO]	X4i, full range, monitor, low latency

FLAT

119	[FLAT_LA4X]	Flat EQ, protection minimizing clipping risks

LA8 preset library

The LA8 onboard preset library is stored in the factory memory locations 011 to 191 of the controller (the memory locations 001 to 010 are dedicated to the storage of presets modified by the user). Each preset family is described in the tables below, including the presets memory location number, name, and description.

LA8 preset library 6.13

K1

011	[K1]	K1, full range

K2

012	[K2 70]	K2, full range, 70° adjustable fins settings
013	[K2 90]	K2, full range, 90° adjustable fins settings
014	[K2 110]	K2, full range, 110° adjustable fins settings

K3

015	[K3 70]	K3, full range, 70° adjustable fins settings
016	[K3 90]	K3, full range, 90° adjustable fins settings
017	[K3 110]	K3, full range, 110° adjustable fins settings

K1-SB

018	[K1SB_60]	K1-SB, LPF=60 Hz, optimized for CONTOUR configuration
019	[K1SB_X]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K1
020	[K1SB_X K2]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K2

V-DOSC

021	[V-DOSC_LO]	V-DOSC, full range, LO contour
022	[V-DOSC_LO_60]	V-DOSC, HPF=60 Hz, LO contour
023	[V-DOSC_LO_X]	V-DOSC, full range, LO contour, optimized for [SB218_X] & [dV-S_X] presets
024	[V-DOSC_HI]	V-DOSC, full range, HI contour
025	[V-DOSC_HI_60]	V-DOSC, HPF=60 Hz, HI contour
026	[V-DOSC_HI_X]	V-DOSC, full range, HI contour, optimized for [SB218_X] & [dV-S_X] presets

KUDO

027	[KUDO50_25]	Kudo, HPF=25 Hz, 50° K-Louver settings
028	[KUDO50_40]	Kudo, HPF=40 Hz, 50° K-Louver settings
029	[KUDO50_60]	Kudo, HPF=60 Hz, 50° K-Louver settings
030	[KUDO80_25]	Kudo, HPF=25 Hz, 80° K-Louver settings
031	[KUDO80_40]	Kudo, HPF=40 Hz, 80° K-Louver settings
032	[KUDO80_60]	Kudo, HPF=60 Hz, 80° K-Louver settings
033	[KUDO110_25]	Kudo, HPF=25 Hz, 110° K-Louver settings
034	[KUDO110_40]	Kudo, HPF=40 Hz, 110° K-Louver settings
035	[KUDO110_60]	Kudo, HPF=60 Hz, 110° K-Louver settings

KARA_II

036	[KARA II 70]	Kara II, full range, 70° adjustable fins settings
037	[KARA II 90]	Kara II, full range, 90° adjustable fins settings
038	[KARA II 110]	Kara II, full range, 110° adjustable fins settings
039	[KARA II_FI]	Kara II, HPF=100 Hz, fill
040	[KARA II_MO]	Kara II, full range, monitor, low latency
041	[KARAIIDOWNK1]	Kara II, optimized delay for K1 downfill
042	[KARAIIDOWNK2]	Kara II, optimized delay for K2 downfill
043	[KARAIIDOWNK3]	Kara II, optimized delay for K3 downfill

KARA

044	[KARA]	Kara, full range, FOH
045	[KARA_FI]	Kara, HPF=100 Hz, fill
046	[KARADOWNK1]	Kara, HPF=100 Hz, optimized delay for K1 downfill
047	[KARADOWNK2]	Kara, HPF=100 Hz, optimized delay for K2 downfill
048	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

dV-DOSC

049	[dV_FI]	dV-DOSC, HPF=100 Hz, fill
050	[dV_LO]	dV-DOSC, full range, LO contour
051	[dV_LO_100]	dV-DOSC, HPF=100 Hz, LO contour
052	[dV_HI]	dV-DOSC, full range, HI contour
053	[dV_HI_100]	dV-DOSC, HPF=100 Hz, HI contour

dV-D_dVS

054	[dV_dV-S_LO]	dV-DOSC & dV-SUB, X-OVER=100 Hz, LO contour
055	[dV_dV-S_HI]	dV-DOSC & dV-SUB, X-OVER=100 Hz, HI contour
056	[dV_dV-S_LO60]	dV-DOSC & dV-SUB, HPF=60 Hz, X-OVER=100 Hz, LO contour
057	[dV_dV-S_HI60]	dV-DOSC & dV-SUB, HPF=60 Hz, X-OVER=100 Hz, HI contour

dV-SUB

058	[dV-S_60_100]	dV-SUB, HPF=60 Hz, LPF=100 Hz
059	[dV-S_100]	dV-SUB, LPF=100 Hz
060	[dV-S_60_X]	dV-SUB, HPF=60 Hz, LPF=200 Hz, optimized for [V-DOSC_*xx*_60] presets
061	[dV-S_X]	dV-SUB, LPF=200 Hz, optimized for [V-DOSC_xx_X] presets

ARCS_II

062	[ARCS II]	ARCS II, full range

ARCS

063	[ARCS_LO]	ARCS, full range, LO contour
064	[ARCS_LO_60]	ARCS, HPF=60 Hz, LO contour
065	[ARCS_LO_100]	ARCS, HPF=100 Hz, LO contour
066	[ARCS_HI]	ARCS, full range, HI contour
067	[ARCS_HI_60]	ARCS, HPF=60 Hz, HI contour
068	[ARCS_HI_100]	ARCS, HPF=100 Hz, HI contour

A15

069	[A15]	A15 Wide or A15 Focus, full range
070	[A15_FI]	A15 Wide or A15 Focus, full range, fill
071	[A15_MO]	A15 Wide or A15 Focus, full range, monitor, low latency

A10

072	[A10]	A10 Wide or A10 Focus, full range
073	[A10_FI]	A10 Wide or A10 Focus, full range, fill
074	[A10_MO]	A10 Wide or A10 Focus, full range, monitor, low latency

ARCS_WF

075	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
076	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

SB28

077	[SB28_60]	SB28, LPF=60 Hz
078	[SB28_100]	SB28, LPF=100 Hz
079	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
080	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
081	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
082	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

083	[KS21_60]	KS21, LPF=60 Hz
084	[KS21_100]	KS21, LPF=100 Hz
085	[KS21_60_C]	KS21, LPF=60 Hz, cardioid pattern
086	[KS21_100_C]	KS21, LPF=100 Hz, cardioid pattern
087	[KS21_60_Cx]	KS21, LPF=60 Hz, extended cardioid pattern
088	[KS21_100_Cx]	KS21, LPF=100 Hz, extended cardioid pattern

SB218

089	[SB218_60]	SB218, LPF=60 Hz
090	[SB218_100]	SB218, LPF=100 Hz
091	[SB218_X]	SB218, LPF=200 Hz, optimized for [V-DOSC_xx_X] presets

SB18

092	[SB18_60]	SB18, LPF=60 Hz
093	[SB18_100]	SB18, LPF=100 Hz
094	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
095	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
096	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
097	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB118

098	[SB118_60]	SB118, LPF=60 Hz
099	[SB118_100]	SB118, LPF=100 Hz
100	[SB118_60_C]	SB118, LPF=60 Hz, cardioid pattern
101	[SB118_100_C]	SB118, LPF=100 Hz, cardioid pattern

SB15

102	[SB15_100]	SB15m, LPF=100 Hz
103	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
104	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

105	[SB10_60]	SB10i, LPF=60 Hz
106	[SB10_100]	SB10i, LPF=100 Hz
107	[SB10_200]	SB10i, LPF=200 Hz

KILO

108	[KILO]	Kilo, LPF=100 Hz

KIVA_II

109	[KIVA II]	Kiva II, full range, FOH
110	[KIVA II_FI]	Kiva II, full range, fill

KIVA

111	[KIVA]	Kiva, full range, FOH
112	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

113	[KIVA_SB15]	Kiva & SB15m, X-OVER=100 Hz, full range, FOH

KILOKIVA

114	[KIVA_KILO]	Kiva & Kilo, full range, X-OVER=100 Hz, FOH

SYVA

115	[SYVA]	Syva, full range

SYVA_LOW

116	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz

SYVA+LOW

117	[SYVA LOW SYVA]	Syva & Syva Low (coupled)

SYVA_SUB

118	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
119	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

X15HiQ

120	[X15]	X15 HiQ, full range
121	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

122	[X12]	X12, full range
123	[X12_MO]	X12, full range, monitor, low latency

X8

124	[X8]	X8, full range
125	[X8_MO]	X8, full range, monitor, low latency

115XTHiQ

126	[HiQ_FI]	115XT HiQ, full range, fill
127	[HiQ_FI_100]	115XT HiQ, HPF=100 Hz, fill
128	[HiQ_FR]	115XT HiQ, full range, FOH
129	[HiQ_FR_100]	115XT HiQ, HPF=100 Hz, FOH
130	[HiQ_MO]	115XT HiQ, full range, monitor
131	[HiQ_MO_100]	115XT HiQ, HPF=100 Hz, monitor

12XTA

132	[12XTA_FI]	12XT active, full range, fill
133	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
134	[12XTA_FR]	12XT active, full range, FOH
135	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
136	[12XTA_MO]	12XT active, full range, monitor
137	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

138	[12XTP_FI]	12XT passive, full range, fill
139	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
140	[12XTP_FR]	12XT passive, full range, FOH
141	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
142	[12XTP_MO]	12XT passive, full range, monitor
143	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

144	[8XT_FI]	8XT, full range, fill
145	[8XT_FI_100]	8XT, HPF=100 Hz, fill
146	[8XT_FR]	8XT, full range, FOH
147	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
148	[8XT_MO]	8XT, full range, monitor
149	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

150	[5XT]	5XT, full range
151	[5XT_MO]	5XT, full range, monitor, low latency

X4

152	[X4]	X4i, full range
153	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
154	[X4_MO]	X4i, full range, monitor, low latency

115XT

155	[115XT_FI]	115XT, full range, fill
156	[115XT_FI_100]	115XT, HPF=100 Hz, fill
157	[115XT_FR]	115XT, full range, FOH
158	[115XT_FR_100]	115XT, HPF=100 Hz, FOH
159	[115XT_MO]	115XT, full range, monitor
160	[115XT_MO_100]	115XT, HPF=100 Hz, monitor

MTD115bA

161	[115bA_FI]	MTD115b active, full range, fill
162	[115bA_FI_100]	MTD115b active, HPF=100 Hz, fill
163	[115bA_FR]	MTD115b active, full range, FOH
164	[115bA_FR_100]	MTD115b active, HPF=100 Hz, FOH
165	[115bA_MO]	MTD115b active, full range, monitor
166	[115bA_MO_100]	MTD115b active, HPF=100 Hz, monitor

MTD115bP

167	[115bP_FI]	MTD115b passive, full range, fill
168	[115bP_FI_100]	MTD115b passive, HPF=100 Hz, fill
169	[115bP_FR]	MTD115b passive, full range, FOH
170	[115bP_FR_100]	MTD115b passive, HPF=100 Hz, FOH
171	[115bP_MO]	MTD115b passive, full range, monitor
172	[115bP_MO_100]	MTD115b passive, HPF=100 Hz, monitor

112XT

173	[112XT_FI]	112XT, full range, fill
174	[112XT_FI_100]	112XT, HPF=100 Hz, fill
175	[112XT_FR]	112XT, full range, FOH
176	[112XT_FR_100]	112XT, HPF=100 Hz, FOH
177	[112XT_MO]	112XT, full range, monitor
178	[112XT_MO_100]	112XT, HPF=100 Hz, monitor

MTD112b

179	[112b_FI]	MTD112b, full range, fill
180	[112b_FI_100]	MTD112b, HPF=100 Hz, fill
181	[112b_FR]	MTD112b, full range, FOH
182	[112b_FR_100]	MTD112b, HPF=100 Hz, FOH
183	[112b_MO]	MTD112b, full range, monitor
184	[112b_MO_100]	MTD112b, HPF=100 Hz, monitor

MTD108a

185	[108a_FI]	MTD108a, full range, fill
186	[108a_FI_100]	MTD108a, HPF=100 Hz, fill
187	[108a_FR]	MTD108a, full range, FOH
188	[108a_FR_100]	MTD108a, HPF=100 Hz, FOH
189	[108a_MO]	MTD108a, full range, monitor
190	[108a_MO_100]	MTD108a, HPF=100 Hz, monitor

FLAT

191	[FLAT_LA8]	Flat EQ, protection minimizing clipping risks

LA12X preset library

The LA12X onboard preset library is stored in the factory memory locations 011 to 124 of the controller (the memory locations 001 to 010 are dedicated to the storage of presets modified by the user). Each preset family is described in the tables below, including the presets memory location number, name, and description.

LA12X preset library 6.13

K1

011	[K1]	K1, full range

K2

012	[K2 70]	K2, full range, 70° adjustable fins settings
013	[K2 90]	K2, full range, 90° adjustable fins settings
014	[K2 110]	K2, full range, 110° adjustable fins settings

K3

015	[K3 70]	K3, full range, 70° adjustable fins settings
016	[K3 90]	K3, full range, 90° adjustable fins settings
017	[K3 110]	K3, full range, 110° adjustable fins settings

K1-SB

018	[K1SB_60]	K1-SB, LPF=60 Hz, optimized for CONTOUR configuration
019	[K1SB_X]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K1
020	[K1SB_X K2]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K2

KARA_II

021	[KARA II 70]	Kara II, full range, 70° adjustable fins settings
022	[KARA II 90]	Kara II, full range, 90° adjustable fins settings
023	[KARA II 110]	Kara II, full range, 110° adjustable fins settings
024	[KARA II_FI]	Kara II, HPF=100 Hz, fill
025	[KARA II_MO]	Kara II, full range, monitor, low latency
026	[KARAIIDOWNK1]	Kara II, optimized delay for K1 downfill
027	[KARAIIDOWNK2]	Kara II, optimized delay for K2 downfill
028	[KARAIIDOWNK3]	Kara II, optimized delay for K3 downfill

KARA

029	[KARA]	Kara, full range, FOH
030	[KARA_FI]	Kara, HPF=100 Hz, fill
031	[KARADOWNK1]	Kara, HPF=100 Hz, optimized delay for K1 downfill
032	[KARADOWNK2]	Kara, HPF=100 Hz, optimized delay for K2 downfill
033	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

ARCS_II

034	[ARCS II]	ARCS II, full range

A15

035	[A15]	A15 Wide or A15 Focus, full range
036	[A15_FI]	A15 Wide or A15 Focus, full range, fill
037	[A15_MO]	A15 Wide or A15 Focus, full range, monitor, low latency

A10

038	[A10]	A10 Wide or A10 Focus, full range
039	[A10_FI]	A10 Wide or A10 Focus, full range, fill
040	[A10_MO]	A10 Wide or A10 Focus, full range, monitor, low latency

ARCS_WF

041	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
042	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

KS28

043	[KS28_60]	KS28, LPF=60 Hz
044	[KS28_100]	KS28, LPF=100 Hz
045	[KS28_60_C]	KS28, LPF=60 Hz, cardioid pattern
046	[KS28_100_C]	KS28, LPF=100 Hz, cardioid pattern
047	[KS28_60_Cx]	KS28, LPF=60 Hz, extended cardioid pattern
048	[KS28_100_Cx]	KS28, LPF=100 Hz, extended cardioid pattern

SB28

049	[SB28_60]	SB28, LPF=60 Hz
050	[SB28_100]	SB28, LPF=100 Hz
051	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
052	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
053	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
054	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

055	[KS21_60]	KS21, LPF=60 Hz
056	[KS21_100]	KS21, LPF=100 Hz
057	[KS21_60_C]	KS21, LPF=60 Hz, cardioid pattern
058	[KS21_100_C]	KS21, LPF=100 Hz, cardioid pattern
059	[KS21_60_Cx]	KS21, LPF=60 Hz, extended cardioid pattern
060	[KS21_100_Cx]	KS21, LPF=100 Hz, extended cardioid pattern

SB18

061	[SB18_60]	SB18, LPF=60 Hz
062	[SB18_100]	SB18, LPF=100 Hz
063	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
064	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
065	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
066	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

067	[SB15_100]	SB15m, LPF=100 Hz
068	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
069	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

070	[SB10_60]	SB10i, LPF=60 Hz
071	[SB10_100]	SB10i, LPF=100 Hz
072	[SB10_200]	SB10i, LPF=200 Hz

SB6

073	[SB6_60]	SB6i, LPF=60 Hz
074	[SB6_100]	SB6i, LPF=100 Hz
075	[SB6_200]	SB6i, LPF=200 Hz

KIVA_II

076	[KIVA II]	Kiva II, full range, FOH
077	[KIVA II_FI]	Kiva II, full range, fill

KIVA

078	[KIVA]	Kiva, full range, FOH
079	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

080	[KIVA_SB15]	Kiva & SB15m, X-OVER=100 Hz, full range, FOH

SYVA

081	[SYVA]	Syva, full range

SYVA_LOW

082	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz

SYVA+LOW

083	[SYVA LOW SYVA]	Syva & Syva Low (coupled)

SYVA_SUB

084	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
085	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

086	[SOKA]	Soka, full range
087	[SOKA_60]	Soka, lower LF limit and max SPL, on-wall configuration with separated sub
088	[SOKA_200]	Soka, higher LF limit and max SPL, on-wall configuration with closely coupled sub

X15HiQ

089	[X15]	X15 HiQ, full range
090	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

091	[X12]	X12, full range
092	[X12_MO]	X12, full range, monitor, low latency

X8

093	[X8]	X8, full range
094	[X8_MO]	X8, full range, monitor, low latency

115XTHiQ

095	[HiQ_FI]	115XT HiQ, full range, fill
096	[HiQ_FI_100]	115XT HiQ, HPF=100 Hz, fill
097	[HiQ_FR]	115XT HiQ, full range, FOH
098	[HiQ_FR_100]	115XT HiQ, HPF=100 Hz, FOH
099	[HiQ_MO]	115XT HiQ, full range, monitor
100	[HiQ_MO_100]	115XT HiQ, HPF=100 Hz, monitor

12XTA

101	[12XTA_FI]	12XT active, full range, fill
102	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
103	[12XTA_FR]	12XT active, full range, FOH
104	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
105	[12XTA_MO]	12XT active, full range, monitor
106	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

107	[12XTP_FI]	12XT passive, full range, fill
108	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
109	[12XTP_FR]	12XT passive, full range, FOH
110	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
111	[12XTP_MO]	12XT passive, full range, monitor
112	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

113	[8XT_FI]	8XT, full range, fill
114	[8XT_FI_100]	8XT, HPF=100 Hz, fill
115	[8XT_FR]	8XT, full range, FOH
116	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
117	[8XT_MO]	8XT, full range, monitor
118	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

119	[5XT]	5XT, full range
120	[5XT_MO]	5XT, full range, monitor, low latency

X4

121	[X4]	X4i, full range
122	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
123	[X4_MO]	X4i, full range, monitor, low latency

FLAT

124	[FLAT_LA12X]	Flat EQ, protection minimizing clipping risks

LA7.16i layout library

The LA7.16i onboard layout library is stored in the factory memory locations 01 to 066 of the controller. Each layout family is described in the tables below, including the layouts memory location number, name, and description.

LA7.16i layout library 7.7

01	[L2 110]	L2, full range, 110° adjustable fins settings
02	[L2D 110]	L2D, full range, 110° adjustable fins settings

K2

03	[K2 70]	K2, full range, 70° adjustable fins settings
04	[K2 90]	K2, full range, 90° adjustable fins settings
05	[K2 110]	K2, full range, 110° adjustable fins settings

K3

06	[K3 70]	K3, full range, 70° adjustable fins settings
07	[K3 90]	K3, full range, 90° adjustable fins settings
08	[K3 110]	K3, full range, 110° adjustable fins settings

KARA II

09	[KARA II 70]	Kara II, full range, 70° adjustable fins settings
010	[KARA II 90]	Kara II, full range, 90° adjustable fins settings
011	[KARA II 110]	Kara II, full range, 110° adjustable fins settings
012	[KARA II_FI]	Kara II, HPF=100 Hz, fill
013	[KARA II_MO]	Kara II, full range, monitor, low latency
014	[KARAIIDOWNK1]	Kara II, optimized delay for K1 downfill
015	[KARAIIDOWNK2]	Kara II, optimized delay for K2 downfill
016	[KARAIIDOWNK3]	Kara II, optimized delay for K3 downfill

A15

017	[A15]	A15 Wide or A15 Focus, full range
018	[A15_FI]	A15 Wide or A15 Focus, full range, fill
019	[A15_MO]	A15 Wide or A15 Focus, full range, monitor, low latency

A10

020	[A10]	A10 Wide or A10 Focus, full range
021	[A10_FI]	A10 Wide or A10 Focus, full range, fill
022	[A10_MO]	A10 Wide or A10 Focus, full range, monitor, low latency

KS21

023	[KS21_60]	KS21, LPF=60 Hz
024	[KS21_100]	KS21, LPF=100 Hz

KS21_C

025	[KS21_60_C]	KS21, LPF=60 Hz, cardioid pattern
026	[KS21_100_C]	KS21, LPF=100 Hz, cardioid pattern
027	[KS21_60_Cx]	KS21, LPF=60 Hz, extended cardioid pattern
028	[KS21_100_Cx]	KS21, LPF=100 Hz, extended cardioid pattern

SB18

029	[SB18_60]	SB18, LPF=60 Hz
030	[SB18_100]	SB18, LPF=100 Hz

SB18_C

031	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
032	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
033	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
034	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

035	[SB15_100]	SB15m, LPF=100 Hz

SB15_C

036	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
037	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

038	[SB10_60]	SB10i, LPF=60 Hz
039	[SB10_100]	SB10i, LPF=100 Hz
040	[SB10_200]	SB10i, LPF=200 Hz

SB6

041	[SB6_60]	SB6i, LPF=60 Hz
042	[SB6_100]	SB6i, LPF=100 Hz
043	[SB6_200]	SB6i, LPF=200 Hz

KIVA II

044	[KIVA II]	Kiva II, full range, FOH
045	[KIVA II_FI]	Kiva II, full range, fill

SYVA

046	[SYVA]	Syva, full range

SYVA LOW

047	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz
048	[SYVA LOW SYVA]	Syva & Syva Low (coupled)

SYVA SUB

049	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
050	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

051	[SOKA]	Soka, full range
052	[SOKA_60]	Soka, lower LF limit and max SPL, on-wall configuration with separated sub
053	[SOKA_200]	Soka, higher LF limit and max SPL, on-wall configuration with closely coupled sub

X15

054	[X15]	X15 HiQ, full range
055	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

056	[X12]	X12, full range
057	[X12_MO]	X12, full range, monitor, low latency

X8

058	[X8]	X8, full range
059	[X8_MO]	X8, full range, monitor, low latency

5XT

060	[5XT]	5XT, full range
061	[5XT_MO]	5XT, full range, monitor, low latency

X4

062	[X4]	X4i, full range
063	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
064	[X4_MO]	X4i, full range, monitor, low latency

FLAT_LA7.16_8R

065	[FLAT_LA7.16_8R]	Flat EQ, protection minimizing clipping risks. Use for loads of 8 Ω and more.

FLAT_LA7.16_4R

066	[FLAT_LA7.16_4R]	Flat EQ, protection minimizing clipping and overcurrent risks. Use for loads comprised between 4 Ω and 8 Ω.

LA7.16 layout library

The LA7.16 onboard layout library is stored in the factory memory locations 01 to 066 of the controller. Each layout family is described in the tables below, including the layouts memory location number, name, and description.

LA7.16 layout library 7.7

01	[L2 110]	L2, full range, 110° adjustable fins settings
02	[L2D 110]	L2D, full range, 110° adjustable fins settings

K2

03	[K2 70]	K2, full range, 70° adjustable fins settings
04	[K2 90]	K2, full range, 90° adjustable fins settings
05	[K2 110]	K2, full range, 110° adjustable fins settings

K3

06	[K3 70]	K3, full range, 70° adjustable fins settings
07	[K3 90]	K3, full range, 90° adjustable fins settings
08	[K3 110]	K3, full range, 110° adjustable fins settings

KARA II

09	[KARA II 70]	Kara II, full range, 70° adjustable fins settings
010	[KARA II 90]	Kara II, full range, 90° adjustable fins settings
011	[KARA II 110]	Kara II, full range, 110° adjustable fins settings
012	[KARA II_FI]	Kara II, HPF=100 Hz, fill
013	[KARA II_MO]	Kara II, full range, monitor, low latency
014	[KARAIIDOWNK1]	Kara II, optimized delay for K1 downfill
015	[KARAIIDOWNK2]	Kara II, optimized delay for K2 downfill
016	[KARAIIDOWNK3]	Kara II, optimized delay for K3 downfill

A15

017	[A15]	A15 Wide or A15 Focus, full range
018	[A15_FI]	A15 Wide or A15 Focus, full range, fill
019	[A15_MO]	A15 Wide or A15 Focus, full range, monitor, low latency

A10

020	[A10]	A10 Wide or A10 Focus, full range
021	[A10_FI]	A10 Wide or A10 Focus, full range, fill
022	[A10_MO]	A10 Wide or A10 Focus, full range, monitor, low latency

KS21

023	[KS21_60]	KS21, LPF=60 Hz
024	[KS21_100]	KS21, LPF=100 Hz

KS21_C

025	[KS21_60_C]	KS21, LPF=60 Hz, cardioid pattern
026	[KS21_100_C]	KS21, LPF=100 Hz, cardioid pattern
027	[KS21_60_Cx]	KS21, LPF=60 Hz, extended cardioid pattern
028	[KS21_100_Cx]	KS21, LPF=100 Hz, extended cardioid pattern

SB18

029	[SB18_60]	SB18, LPF=60 Hz
030	[SB18_100]	SB18, LPF=100 Hz

SB18_C

031	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
032	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
033	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
034	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

035	[SB15_100]	SB15m, LPF=100 Hz

SB15_C

036	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
037	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

038	[SB10_60]	SB10i, LPF=60 Hz
039	[SB10_100]	SB10i, LPF=100 Hz
040	[SB10_200]	SB10i, LPF=200 Hz

SB6

041	[SB6_60]	SB6i, LPF=60 Hz
042	[SB6_100]	SB6i, LPF=100 Hz
043	[SB6_200]	SB6i, LPF=200 Hz

KIVA II

044	[KIVA II]	Kiva II, full range, FOH
045	[KIVA II_FI]	Kiva II, full range, fill

SYVA

046	[SYVA]	Syva, full range

SYVA LOW

047	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz
048	[SYVA LOW SYVA]	Syva & Syva Low (coupled)

SYVA SUB

049	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
050	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

051	[SOKA]	Soka, full range
052	[SOKA_60]	Soka, lower LF limit and max SPL, on-wall configuration with separated sub
053	[SOKA_200]	Soka, higher LF limit and max SPL, on-wall configuration with closely coupled sub

X15

054	[X15]	X15 HiQ, full range
055	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

056	[X12]	X12, full range
057	[X12_MO]	X12, full range, monitor, low latency

X8

058	[X8]	X8, full range
059	[X8_MO]	X8, full range, monitor, low latency

5XT

060	[5XT]	5XT, full range
061	[5XT_MO]	5XT, full range, monitor, low latency

X4

062	[X4]	X4i, full range
063	[X4_60]	X4i, lower LF limit and max SPL, on-wall configuration with separated sub
064	[X4_MO]	X4i, full range, monitor, low latency

FLAT_LA7.16_8R

065	[FLAT_LA7.16_8R]	Flat EQ, protection minimizing clipping risks. Use for loads of 8 Ω and more.

FLAT_LA7.16_4R

066	[FLAT_LA7.16_4R]	Flat EQ, protection minimizing clipping and overcurrent risks. Use for loads comprised between 4 Ω and 8 Ω.

FLAT presets

The transducer connected to an output channel of a FLAT preset is not protected by L-DRIVE.
The only active limitation allows minimizing clipping risks to protect the amplified controller.
Therefore, when driving a third party loudspeaker enclosure, it is recommended to connect an external DSP device using a preset specifically designed for this model before the amplified controller.

With a FLAT preset, an input signal is amplified and directly routed to output without any modification of the frequency response. All the output parameters are accessible (Mute, Gain, Delay, Polarity, and Routing).

- Using the [FLAT_LA2X] preset with LA2Xi in SE mode provides 0 dB of headroom.
- Using the [FLAT_xxxx] preset with LA2Xi in BTL/PBTL modes, LA4, or LA4X provides 6 dB of headroom.
- Using the [FLAT_LA8] preset with LA8 provides 8 dB of headroom.
- Using the [FLAT_LA12X] preset with LA12X provides 9.5 dB of headroom.
- Using the [FLAT_LA7.16_4R] or [FLAT_LA7.16_8R] layouts with LA7.16(i) provides 8 dB of headroom.

[FLAT_xxxx]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

[FLAT_LA7.16_4R] / [FLAT_LA7.16_8R]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN 1	0 dB	0 ms	+	ON
OUT 2	PA	IN 2	0 dB	0 ms	+	ON
OUT 3	PA	IN 3	0 dB	0 ms	+	ON
OUT 4	PA	IN 4	0 dB	0 ms	+	ON
OUT 5	PA	IN 5	0 dB	0 ms	+	ON
OUT 6	PA	IN 6	0 dB	0 ms	+	ON
OUT 7	PA	IN 7	0 dB	0 ms	+	ON
OUT 8	PA	IN 8	0 dB	0 ms	+	ON
OUT 9	PA	IN 9	0 dB	0 ms	+	ON
OUT 10	PA	IN 10	0 dB	0 ms	+	ON
OUT 11	PA	IN 11	0 dB	0 ms	+	ON
OUT 12	PA	IN 12	0 dB	0 ms	+	ON
OUT 13	PA	IN 13	0 dB	0 ms	+	ON
OUT 14	PA	IN 14	0 dB	0 ms	+	ON
OUT 15	PA	IN 15	0 dB	0 ms	+	ON
OUT 16	PA	IN 16	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Progressive Curvature WST systems presets

The factory layouts dedicated to progressive curvature WST line sources are optimized for long throw applications.

In the following sections, tables describe the loudspeaker configurations and the factory layouts for each system.

Discriminant acoustic properties of each loudspeaker configuration are given, such as -10 dB bandwidth or LF limit, or frequency response contour.

L2 / L2D

loudspeaker configuration	preset(s)			acoustic properties
	L2	L2D	KS28 *	
L2 / L2D line source	[L2 70] / [L2 90] / [L2 110]	[L2D 70] / [L2D 90] / [L2D 110]	—	45 Hz - 20 kHz LF rejection (rear cardioid)
	[L2 70_S] / [L2 90_S] / [L2 110_S]	[L2D 70_S] / [L2D 90_S] / [L2D 110_S]		45 Hz - 20 kHz supercardioid pattern
L2 / L2D line source + subwoofers	[L2 70] / [L2 90] / [L2 110]	[L2D 70] / [L2D 90] / [L2D 110]	[KS28 L2]	down to 25 Hz reinforced LF contour
	[L2 70_S] / [L2 90_S] / [L2 110_S]	[L2D 70_S] / [L2D 90_S] / [L2D 110_S]		

* with subwoofers as a cardioid array, use [KS28_C L2] or [KS28_Cx L2].

L2 / L2D adjustable fins and presets

Always ensure that the L2 / L2D adjustable fins on each Panflex module are set in accordance with the presets selected in the preset layout:

For L2: [L2 70] / [L2 70_S]: 70°, [L2 90] / [L2 90_S]: 90°, [L2 110] / [L2 110_S]: 110°.

For L2D: [L2D 70] / [L2D 70_S]: 70°, [L2D 90] / [L2D 90_S]: 90°, [L2D 110] / [L2D 110_S]: 110°. The two bottom modules are fixed at 110°.

Refer to the **L2 owner's manual** for more details.

L2 / L2D LF polar pattern

Select the same polar pattern ([L2 *xxx*] / [L2D *xxx*] or [L2 *xxx*_S] / [L2D *xxx*_S]) for the entire system. Refer to Preset design (p.8) for more information.

LC: Low Cardioid

L2 and L2D each feature four low cardioid (LC) loudspeakers on the sides, allowing a standard array to exhibit a broadband cardioid pattern that minimizes rear SPL at low frequencies.

[L2 70] [L2 90] [L2 110] [L2 70_S] [L2 90_S] [L2 110_S] [L2D 70] [L2D 90] [L2D 110] [L2D 70_S] [L2D 90_S] [L2D 110_S]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	LC	IN 1	0 dB	0 ms	+	ON
OUT 2	LF	IN 1				ON
OUT 3	HF	IN 1				ON
OUT 4	HF	IN 1				ON
OUT 5	LC	IN 1				ON
OUT 6	LF	IN 1				ON
OUT 7	HF	IN 1				ON
OUT 8	HF	IN 1				ON
OUT 9	LC	IN 1				ON
OUT 10	LF	IN 1				ON
OUT 11	HF	IN 1				ON
OUT 12	HF	IN 1				ON
OUT 13	LC	IN 1				ON
OUT 14	LF	IN 1				ON
OUT 15	HF	IN 1				ON
OUT 16	HF	IN 1				ON

[KS28 L2]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

[KS28_C L2] [KS28_Cx L2]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
SR	OUT 1	SR	IN A	0 dB	0 ms	+	ON
SB	OUT 2	SB					ON
SB	OUT 3	SB					ON
SB	OUT 4	SB					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Variable Curvature WST systems presets

The factory presets dedicated to variable curvature WST line sources are optimized for long throw applications. In the following sections, tables describe the loudspeaker configurations and the factory presets for each system. Discriminant acoustic properties of each loudspeaker configuration are given, such as -10 dB bandwidth or LF limit, frequency response contour, or directivity specificity.

K1

Compatibility issues

[K1], [KARADOWNK1] and [K2 *xxx*] presets from versions 4.*x* and later of the preset library are not compatible with [K1] and [KARADOWNK1] from versions of the preset library prior to 4.0.

Compatibility issues may occur when working from a Session file with units using older presets. Use the same version of the preset library for all units within a single line source.

loudspeaker configuration	preset(s)			acoustic properties
	K1	K1-SB	KS28 or SB28*	
K1 line source	[K1]	—		35 Hz - 20 kHz
K1 / K1-SB line source (K1-SB on top)	[K1]	[K1SB_X]	—	enhanced LF throw
K1 line source + coupled K1-SB subwoofers (beside or behind)	[K1]	[K1SB_60]	—	down to 30 Hz reinforced LF contour LF rejection (side polarized or rear cardioid)
K1 line source + subwoofers	[K1]	—	[*xx*28_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [*xx*28_60_C] or [*xx*28_60_Cx]

Downfill options for additional vertical coverage

K2 enclosures driven by [K2 110], [K2 90], or [K2 70].

Kara enclosures driven by [KARADOWNK1] or Kara II enclosures driven by [KARAIIDOWNK1] (110°), [KARAIIDOWNK1 70], or [KARAIIDOWNK1 90].

Always ensure that the K2 or Kara II adjustable fins are set in accordance with the selected preset.

[K1] and [K2 *xxx*]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
left LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
right LF	OUT 2	LF					ON
MF	OUT 3	MF					ON
HF	OUT 4	HF					ON

left/right when looking at the front face of the enclosure

[K1SB_X] and [K1SB_60]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

[KARADOWNK1] / [KARAIIDOWNK1] / [KARAIIDOWNK1 70] / [KARAIIDOWNK1 90]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

The [KARAIIDOWNK1] preset is optimized for a **110°** fins setting on Kara II.

The factory parameters already include optimal delay value for the coupling of a K1 line source with Kara or Kara II as a downfill.

Routing, gain, delay, polarity and mute parameters can be modified by the user.

K2

loudspeaker configuration	preset(s)			acoustic properties
	K2	K1-SB	KS28 or SB28 *	
K2 line source	[K2 *xxx*]	—		35 Hz - 20 kHz adjustable horizontal directivity
K2 / K1-SB line source (K1-SB on top)	[K2 *xxx*]	[K1SB_X K2]	—	enhanced LF throw
K2 line source + coupled K1-SB subwoofers (on top, beside or behind)	[K2 *xxx*]	[K1SB_60]	—	down to 30 Hz reinforced LF contour LF rejection (side polarized or rear cardioid)
K2 line source + subwoofers	[K2 *xxx*]	—	[*xx*28_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [*xx*28_60_C] or [*xx*28_60_Cx]

K2 adjustable fins and presets

Always ensure that the K2 adjustable fins are set in accordance with the selected preset:
[K2 70]: 70°, [K2 90]: 90°, [K2 110]: 110°
Refer to the K2 owner's manual for details.

Downfill options for additional vertical coverage

Kara enclosures driven by [KARADOWNK2] or Kara II enclosures driven by [KARAIIDOWNK2] (110°), [KARAIIDOWNK2 70], or [KARAIIDOWNK2 90].
Always ensure that the Kara II adjustable fins are set in accordance with the selected preset.

[K2 *xxx*]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
left LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
right LF	OUT 2	LF					ON
MF	OUT 3	MF					ON
HF	OUT 4	HF					ON

left/right when looking at the front face of the enclosure

[K1SB_X K2] and [K1SB_60]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

[K1SB_X K2] provides 10 dB of headroom.

[KARADOWNK2] / [KARAIIDOWNK2] / [KARAIIDOWNK2 70] / [KARAIIDOWNK2 90]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

The [KARAIIDOWNK2] preset is optimized for a **110°** fins setting on Kara II.

The factory parameters already include optimal delay value for the coupling of a K2 line source with Kara or Kara II as a downfill.
[KARADOWNK2] / [KARAIIDOWNK2] / [KARAIIDOWNK2 70] / [KARAIIDOWNK2 90] provide 11 dB of headroom.

Routing, gain, delay, polarity and mute parameters can be modified by the user.

K3

K3 and K3i are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

KS21 and KS21i are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

Kara II and Kara IIi are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

loudspeaker configuration	preset(s)		acoustic properties
	K3	KS28 or KS21 *	
K3 line source	[K3 *xxx*]	—	42 Hz - 20 kHz adjustable horizontal directivity
K3 line source + subwoofers	[K3 *xxx*]	[*xxxx*_60]	down to 29 Hz (KS21) or 25 Hz (KS28) reinforced LF contour

* with subwoofers as a cardioid array, use [*xxxx_xx*_C] or [*xxxx_xx*_Cx]

K3 adjustable fins and presets

Always ensure that the K3 adjustable fins are set in accordance with the selected preset:

[K3 70]: 70°, [K3 90]: 90°, [K3 110]: 110°

Refer to the K3 owner's manual for details.

Downfill options for additional vertical coverage

For K3: Kara enclosures driven by [KARADOWNK3] or Kara II enclosures driven by [KARAIIDOWNK3] (110°), [KARAIIDOWNK3 70], or [KARAIIDOWNK3 90].

For K3i: Kara IIi enclosures driven by [KARAIIDOWNK3] (110°), [KARAIIDOWNK3 70], or [KARAIIDOWNK3 90].

Always ensure that the Kara II or Kara IIi adjustable fins are set in accordance with the selected preset.

[K3 *xxx*]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

[KARADOWNK3] / [KARAIIDOWNK3] / [KARAIIDOWNK3 70] / [KARAIIDOWNK3 90]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

The [KARAIIDOWNK3] preset is optimized for a **110°** fins setting on Kara II(i).

The factory parameters already include optimal delay value for the coupling of a K3 line source with Kara or Kara II as a downfill.
[KARADOWNK3] / [KARAIIDOWNK3] / [KARAIIDOWNK3 70] / [KARAIIDOWNK3 90] provide 15 dB of headroom.

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Kara II

Kara II and Kara IIi are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

SB18 and SB18 IIi are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

KS21 and KS21i are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

loudspeaker configuration	preset(s)			acoustic properties
	Kara II	SB18 or KS21*	KS28 or SB28 *	
line source	[KARA II *xxx*]	—	—	55 Hz - 20 kHz
line source + coupled subwoofers	[KARA II *xxx*]	[*xxxx*_100]	—	down to 32 Hz (SB18), 31 Hz (KS21) or 25 Hz (KS28 or SB28) reinforced LF contour
line source + separated subwoofers	[KARA II *xxx*]	[*xxxx*_60]	—	
line source + coupled subwoofers + KS28 or SB28	[KARA II *xxx*]	[*xxxx*_100]	[*xxxx*_60]	
single or pair of enclosures	[KARA II_FI]	—	—	high-pass at 100 Hz flat response
single or pair of enclosures + coupled subwoofers	[KARA II_FI]	[*xxxx*_100]	—	down to 32 Hz (SB18) or 31 Hz (KS21) flat response reinforced LF contour
up to three enclosures	[KARA II_MO]	—	—	55 Hz - 20 kHz low latency
up to three enclosures + coupled subwoofers	[KARA II_MO]	[*xxxx*_60]	—	down to 32 Hz (SB18) or 29 Hz (KS21) reinforced LF contour low latency

* with subwoofers as a cardioid array, use [*xxxx_xx*_C] or [*xxxx_xx*_Cx].

Kara II(i) adjustable fins and presets

Always ensure that the Kara II(i) adjustable fins are set in accordance with the selected preset:

[KARA II 70]: 70°, [KARA II 90]: 90°, [KARA II 110]: 110°

Refer to the Kara II(i) owner's manual for details.

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

Avoid using Kara and Kara II in the same line source

The acoustic coupling between Kara and Kara II is not optimal.

[KARA II 70] / [KARA II 90] / [KARA II 110]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

[KARA II_FI] and [KARA II_MO]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

The [KARA II_FI] and [KARA II_MO] presets are optimized for a **110°** fins setting on Kara II.

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Kara

Kara and Karai are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

loudspeaker configuration	preset(s)		acoustic properties
	Kara	KS28, SB28, SB18 or KS21*	
line source	[KARA]	—	55 Hz - 20 kHz
line source + coupled subwoofer	[KARA]	[*xxxx*_100]	down to 32 Hz (SB18), 31 Hz (KS21) or 25 Hz (KS28 or SB28) reinforced LF contour
line source + separated subwoofer	[KARA]	[*xxxx*_60]	
single or pair of enclosures	[KARA_FI]	—	high-pass at 100 Hz flat response

* with subwoofers as a cardioid array, use [*xxxx_xx*_C] or [*xxxx_xx*_Cx]

[KARA]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

[KARA_FI]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Kiva II

loudspeaker configuration	preset(s)			acoustic properties
	Kiva II	SB15m*	SB18*	
line source	[KIVA II]	—		70 Hz - 20 kHz
line source + coupled subwoofer	[KIVA II]	[SB15_100]	[SB18_60]	down to 32 Hz (SB18) / 40 Hz(SB15m) reinforced LF contour
up to three enclosures	[KIVA II_FI]	—		70 Hz - 20 kHz flat response
up to three enclosures + coupled subwoofer	[KIVA II_FI]	[SB15_100]	—	down to 40 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [SB1*x*_*xx*_C] or [SB1*x*_*xx*_Cx]

[KIVA II]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[KIVA II_FI]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Kiva SB15m

loudspeaker configuration	preset(s)		acoustic properties
	Kiva	SB15m*	
line source	[KIVA]	—	80 Hz - 20 kHz
line source + coupled subwoofer	[KIVA_SB15]		down to 40 Hz reinforced LF contour
	[KIVA]	[SB15_100]	
single or pair of enclosures	[KIVA_FI]	—	80 Hz - 20 kHz flat response
pair of enclosures + coupled subwoofer	[KIVA_FI]	[SB15_100]	down to 40 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [SB15_100_C] or [SB15_100_Cx]

[KIVA]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[KIVA_FI]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

[KIVA_SB15]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
SB15m	OUT 1	LF	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA					ON
KIVA	OUT 3	PA					ON
KIVA	OUT 4	PA					ON

i Hybrid preset combining [KIVA] with [SB15_100], pre-alignment delay included.

i Routing, gain, delay, polarity and mute parameters can be modified by the user.

Kiva Kilo

loudspeaker configuration	preset(s)			acoustic properties
	Kiva	Kilo	SB18*	
line source	[KIVA]	—		80 Hz - 20 kHz
line source + coupled Kilo	[KIVA_KILO]		—	down to 50 Hz
line source + coupled Kilo + SB18	[KIVA_KILO]		[SB18_100]	down to 32 Hz reinforced LF contour
single or pair of enclosures	[KIVA_FI]	—		80 Hz - 20 kHz flat response

* with subwoofers as a cardioid array, use [SB18_100_C] or [SB18_100_Cx]

[KIVA]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[KIVA_FI]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

[KIVA_KILO]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
KILO	OUT 1	LF	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA					ON
KIVA	OUT 3	PA					ON
KIVA	OUT 4	PA					ON

Hybrid preset combining [KIVA] with [KILO], pre-alignment delay included.

[KILO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Kudo

loudspeaker configuration	preset(s)		acoustic properties
	Kudo	KS28 or SB28 or SB18 *	
line source	[KUDO*xx*_25]	—	35 Hz - 20 kHz
	[KUDO*xx*_40]		40 Hz - 20 kHz
	[KUDO*xx*_60]		60 Hz - 20 kHz
line source + subwoofer	[KUDO*xx*_40]	[*xxx*8_60]	down to 25 Hz (KS28 and SB28) or 32 Hz (SB18) reinforced LF contour

* with subwoofers as a cardioid array, use [*xxx*8_60_C] or [*xxx*8_60_Cx]

K-LOUVER and presets
Always ensure that the K-LOUVER panels are set in accordance with the selected preset:
[KUDO50_*xx*]: 50°, [KUDO80_*xx*]: 80°, [KUDO110_*xx*]: 110°
Refer to the Kudo user manual for details.

[KUDO*xx_xx*]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
left LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
right LF	OUT 2	LF					ON
MF	OUT 3	MF					ON
HF	OUT 4	HF					ON

left/right when looking at the front face of the enclosure

Routing, gain, delay, polarity and mute parameters can be modified by the user.

V-DOSC

loudspeaker configuration	preset(s)			acoustic properties
	V-DOSC*	dV-SUB	KS28 / SB28 / SB218 **	
line source	[V-DOSC_LO] or [V-DOSC_HI]	—		40 Hz - 20 kHz
line source + coupled dV-SUB	[V-DOSC_*xx* _X]	[dV-S_X]	—	down to 35 Hz reinforced LF contour
line source + KS28 / SB28	[V-DOSC _*xx*_60]	—	[*xx*28_60]	down to 25 Hz reinforced LF contour
line source + coupled SB218	[V-DOSC_*xx* _X]	—	[SB218_X]	
line source + coupled dV-SUB + KS28 / SB28	[V-DOSC _*xx*_60]	[dV-S_60_X]	[*xx*28_60]	down to 25 Hz reinforced LF contour additional LF resources

* standard HF contour with [*xx*_LO] or increased HF contour with [*xx*_HI]

** with subwoofers as a cardioid array, use [*xxxx_xx*_C], or [*xx*28_*xx*_Cx] (KS28 / SB28)

Downfill options for additional vertical coverage
dV-DOSC enclosures driven by [dV_xx_100].

[V-DOSC_LO], [V-DOSC_HI], [V-DOSC_*xx*_60] and [V-DOSC_*xx*_X]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
left LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
right LF	OUT 2	LF					ON
MF	OUT 3	MF					ON
HF	OUT 4	HF					ON

left/right when looking at the front face of the enclosure

[dV-S_X], [dV-S_60_X] and [SB218_X]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

[dV_xx_100]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

dV-DOSC

loudspeaker configuration	preset(s)			acoustic properties
	dV-DOSC*	dV-SUB	KS28, SB218, SB28, SB18 or SB118**	
line source	[dV_LO] or [dV_HI]	—		65 Hz - 20 kHz
line source + coupled dV-SUB	[dV_dV-S_*xx*]		—	down to 35 Hz reinforced LF contour
	[dV_*xx*_100]	[dV-S_100]		
line source + coupled subwoofer	[dV_*xx*_100]	—	[*xxxx*_100]	down to 32 Hz (SB18/SB118) or 25 Hz (KS28 / SB28 / SB218)
line source + coupled dV-SUB + coupled subwoofer	[dV_dV-S_*xx*60]		[*xxxx*_60]	
	[dV_*xx*_100]	[dV-S_60_100]		
single or pair of enclosures	[dV_FI]	—		high-pass at 100 Hz flat response

* standard HF contour with [*xx*_LO] or increased HF contour with [*xx*_HI]

** with subwoofers as a cardioid array, use [*xxxx_xx*_C], or [*xxxx_xx*_Cx] (KS28 / SB28 / SB18)

[dV_LO], [dV_HI], [dV_*xx*_60] and [dV_*xx*_100]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

[dV_FI]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

[dV-S_100] and [dV-S_60_100]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

[dV_dV-S_HI], [dV_dV-S_HI60], [dV_dV-S_LO] and [dV_dV-S_LO60]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
dV-SUB	OUT 1	SB	IN A	0 dB	0 ms	+	ON
dV-SUB	OUT 2	SB					ON
dV-DOSC LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
dV-DOSC HF	OUT 4	HF					ON

[dV_dV-S_*xx*] are hybrid presets combining [dV_LO_100] or [dV_HI_100] with [dV-S_100], pre-alignment delay included.

[dV_dV-S_*xx*60] are hybrid presets combining [dV_LO_100] or [dV_HI_100] with [dV-S_60_100], pre-alignment delay included.

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Constant Curvature WST systems presets

The factory presets dedicated to constant curvature WST line sources are optimized for medium throw applications.

In the following sections, tables describe the loudspeaker configurations and the factory presets for each system.

Discriminant acoustic properties of each loudspeaker configuration are given, such as -10 dB bandwidth or LF limit, or frequency response contour.

ARCS Wide / ARCS Focus

loudspeaker configuration	preset(s)		acoustic properties
	ARCS Wide / ARCS Focus	SB18*	
line source	[ARCS_WIFO]	—	55 Hz - 20 kHz
line source + SB18	[ARCS_WIFO]	[SB18_60]	down to 32 Hz reinforced LF contour
single enclosure	[ARCS_WIFO_FI]	—	55 Hz - 20 kHz flat response
single enclosure + SB18m	[ARCS_WIFO_FI]	[SB18_60]	down to 32 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [SB18_60_C] or [SB18_60_Cx]

[ARCS_WIFO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[ARCS_WIFO_FI]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

A10 Wide/Focus

A10 Wide/Focus and A10i Wide/Focus are different versions of the same enclosures. They share the same factory presets and recommended loudspeaker configurations.

KS21 and KS21i are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

loudspeaker configuration	preset(s)		acoustic properties
	A10 Wide/Focus	KS21*	
line source	[A10]	—	66 Hz - 20 kHz (A10 Focus) 67 Hz - 20 kHz (A10 Wide)
line source + KS21	[A10]	[KS21_100]	down to 31 Hz reinforced LF contour
single enclosure	[A10_FI]	—	66 Hz - 20 kHz (A10 Focus) 67 Hz - 20 kHz (A10 Wide) flat response
	[A10_MO]	—	66 Hz - 20 kHz (A10 Focus) 67 Hz - 20 kHz (A10 Wide) flat response low latency
single enclosure + KS21	[A10_FI]	[KS21_100]	down to 31 Hz reinforced LF contour
	[A10_MO]	[KS21_100]	down to 31 Hz reinforced LF contour low latency

* with subwoofers as a cardioid array, use [KS21_100_C] or [KS21_100_Cx]

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[A10]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[A10_FI] and [A10_MO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

A15 Wide/Focus

A15 Wide/Focus and A15i Wide/Focus are different versions of the same enclosures. They share the same factory presets and recommended loudspeaker configurations.

KS21 and KS21i are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

loudspeaker configuration	preset(s)		acoustic properties
	A15 Wide/Focus	KS21*	
line source	[A15]	—	41 Hz - 20 kHz (A15 Focus) 42 Hz - 20 kHz (A15 Wide)
line source + KS21	[A15]	[KS21_60]	down to 29 Hz reinforced LF contour
single enclosure	[A15_FI]	—	42 Hz - 20 kHz (A15 Focus) 43 Hz - 20 kHz (A15 Wide) flat response
	[A15_MO]	—	42 Hz - 20 kHz (A15 Focus) 43 Hz - 20 kHz (A15 Wide) flat response low latency
single enclosure + KS21	[A15_FI]	[KS21_60]	down to 29 Hz reinforced LF contour
	[A15_MO]	[KS21_60]	down to 29 Hz reinforced LF contour low latency

* with subwoofers as a cardioid array, use [KS21_60_C] or [KS21_60_Cx]

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[A15]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[A15_FI] and [A15_MO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

ARCS II

loudspeaker configuration	preset(s)		acoustic properties
	ARCS II	KS28 or SB28*	
line source	[ARCS II]	—	50 Hz - 20 kHz
line source + subwoofer	[ARCS II]	[*xx*28_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [*xx*28_60_C] or [*xx*28_60_Cx]

[ARCS II]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

ARCS

loudspeaker configuration	preset(s)		acoustic properties
	ARCS*	SB18/SB118 or KS28/SB28/SB218**	
line source	[ARCS_LO] or [ARCS_HI]	—	50 Hz - 20 kHz
line source + subwoofer	[ARCS_*xx*_60]	[*xxxx*_60]	down to 32 Hz (SB18/SB118) or 25 Hz (KS28 / SB28 / SB218) reinforced LF contour
line source + coupled subwoofer	[ARCS_*xx*_100]	[*xxxx*_100]	

* standard HF contour with [*xx*_LO] or increased HF contour with [*xx*_HI]

** with subwoofers as a cardioid array, use [*xxxx_xx*_C], or [*xxxx_xx*_Cx] (SB18/KS28/SB28)

[ARCS_LO], [ARCS_HI], [ARCS_*xx*_60] and [ARCS_*xx*_100]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Colinear systems presets

The factory presets dedicated to colinear sources are optimized for medium throw applications.

In the following sections, tables describe the loudspeaker configurations and the factory presets for each system.

Discriminant acoustic properties of each loudspeaker configuration are given, such as -10 dB bandwidth or LF limit, or frequency response contour.

Syva

loudspeaker configuration	preset(s)			acoustic properties
	Syva	Syva Low	Syva Sub	
colinear source	[SYVA]	—	—	87 Hz - 20 kHz
colinear source + coupled Syva Low	[SYVA LOW SYVA]		—	down to 40 Hz reinforced LF contour
colinear source + separated Syva Low	[SYVA]	[SYVA LOW_100]	—	
colinear source + coupled Syva Low + Syva Sub	[SYVA LOW SYVA]		[SYVA SUB_100]	down to 27 Hz reinforced LF contour
colinear source + separated Syva Low + Syva Sub	[SYVA]	[SYVA LOW_100]	[SYVA SUB_100]	

No pre-alignment delay values are required for the Syva system.

[SYVA]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

[SYVA LOW SYVA]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
Syva Low	OUT 1	LF	IN A	0 dB	0 ms	+	ON
Syva	OUT 2	PA					ON
Syva Low	OUT 3	LF	IN B	0 dB	0 ms	+	ON
Syva	OUT 4	PA					ON

Hybrid preset combining Syva and Syva Low.

Use only with AutoConnect or when Syva and Syva Low are within 60 cm (24 in) from each other, that is, acoustically coupled.

When Syva and Syva Low are more than 60 cm (24 in) apart, create a custom preset in LA Network Manager combining [SYVA] and [SYVA LOW_100].

[SYVA SUB_100] polarity is reversed to optimize Syva Sub acoustic summation with Syva/Syva Low.

Do not use [SYVA SUB_200] with Syva.
[SYVA SUB_200] is optimized for use with the [X4] preset.
Refer to X4i (p.71).

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Soka

loudspeaker configuration	preset(s)		acoustic properties
	Soka	SB6i / SB10i	
colinear source	[SOKA]	—	100 Hz - 20 kHz
colinear source + closely coupled subwoofers	[SOKA_200]	[SB*xx*_200]	down to 32 Hz (SB6i) or 29 Hz (SB10i) reinforced LF contour
colinear source + coupled subwoofers	[SOKA]	[SB*xx*_100]	down to 29 Hz (SB6i) or 27 Hz (SB10i) reinforced LF contour
colinear source + separated subwoofers	[SOKA_60]	[SB*xx*_60]	down to 29 Hz (SB6i) or 25 Hz (SB10i) reinforced LF contour

[SOKA]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN A	0 dB	0 ms	+	ON
OUT 4	PA	IN A	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Coaxial loudspeaker enclosures presets

The factory presets dedicated to coaxial enclosures are optimized for short throw applications. In the following sections, tables describe the loudspeaker configurations and the factory presets for each system. Discriminant acoustic properties of each loudspeaker configuration are given, such as -10 dB bandwidth or LF limit, or frequency response contour.

X4i

X4i is a passive coaxial loudspeaker enclosure.

loudspeaker configuration	preset(s)			acoustic properties
	X4i	SB6i / SB10i	Syva Sub	
single enclosure	[X4]	—	—	120 Hz - 20 kHz
	[X4_MO]	—	—	120 Hz - 20 kHz low latency
single or pair of enclosures + closely coupled subwoofer	[X4]	[SB*xx*_200]	[SYVA SUB_200]	down to 32 Hz (SB6i) or 29 Hz (SB10i and Syva Sub) reinforced LF contour
	[X4_MO]			down to 32 Hz (SB6i) or 29 Hz (SB10i and Syva Sub) reinforced LF contour low latency
single or pair of enclosures + coupled subwoofer	[X4]	[SB*xx*_100]	—	down to 29 Hz (SB6i) or 27 Hz (SB10i) reinforced LF contour
	[X4_MO]			down to 29 Hz (SB6i) or 27 Hz (SB10i) reinforced LF contour low latency
single or pair of enclosures + separated subwoofer	[X4_60]	[SB*xx*_60]	—	down to 29 Hz (SB6i) or 25 Hz (SB10i) reinforced LF contour

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[X4], [X4_60], and [X4_MO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

5XT

5XT is a passive coaxial loudspeaker enclosure.

loudspeaker configuration	preset(s)		acoustic properties
	5XT	SB15m* / SB10i	
single enclosure	[5XT]	—	95 Hz - 20 kHz
	[5XT_MO]	—	95 Hz - 20 kHz low latency
single enclosure + subwoofer	[5XT]	[*xxxx*_100]	down to 40 Hz (SB15m) or 27 Hz (SB10i) reinforced LF contour
	[5XT_MO]		down to 40 Hz (SB15m) or 27 Hz (SB10i) reinforced LF contour low latency

* with subwoofers as a cardioid array, use [SB15_100_C] or [SB15_100_Cx]

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[5XT] and [5XT_MO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

X8

X8 is a passive coaxial loudspeaker enclosure.

loudspeaker configuration	preset(s)		acoustic properties
	X8	SB15m*	
single enclosure	[X8]	—	60 Hz - 20 kHz
	[X8_MO]	—	55 Hz - 20 kHz low latency
single enclosure + SB15m	[X8]	[SB15_100]	down to 40 Hz reinforced LF contour
	[X8_MO]		down to 40 Hz reinforced LF contour low latency

* with subwoofers as a cardioid array, use [SB15_100_C] or [SB15_100_Cx]

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[X8] and [X8_MO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

X12

X12 is a passive coaxial loudspeaker enclosure.

loudspeaker configuration	preset(s)		acoustic properties
	X12	**SB15m/SB18/KS21***	
single enclosure	[X12]	—	59 Hz - 20 kHz
	[X12_MO]	—	57 Hz - 20 kHz low latency
single enclosure + subwoofer	[X12]	[*xxxx*_100]	down to 40 Hz (SB15m) or 32 Hz (SB18) reinforced LF contour
	[X12_MO]		down to 40 Hz (SB15m) or 32 Hz (SB18) reinforced LF contour low latency

* with subwoofers as a cardioid array, use [*xxxx*_100_C] or [*xxxx*_100_Cx]

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[X12] and [X12_MO]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

X15 HiQ

X15 HiQ is an active coaxial loudspeaker enclosure.

loudspeaker configuration	preset(s)		acoustic properties
	X15 HiQ	SB18/KS21*	
single enclosure	[X15]	—	55 Hz - 20 kHz
	[X15_MO]	—	52 Hz - 20 kHz low latency
single enclosure + subwoofer	[X15]	[*xxxx*_100]	down to 32 Hz reinforced LF contour
	[X15_MO]		down to 32 Hz reinforced LF contour low latency

* with subwoofers as a cardioid array, use [*xxxx*_100_C] or [*xxxx*_100_Cx]

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

[X15] and [X15_MO]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

8XT, 12XTP, MTD108a, MTD112b and MTD115bP

8XT, 12XTP, MTD108a, MTD112b and MTD115bP are passive coaxial loudspeaker enclosures.

Preset names

passive coaxial loudspeaker enclosure	preset
8XT	[8XT_*xx*]
12XTP (in passive mode)	[12XTP_*xx*]
MTD108a	[108a_*xx*]
MTD112b	[112b_*xx*]
MTD115b (in passive mode)	[115bP_*xx*]

loudspeaker configuration	preset(s)		acoustic properties	
	passive ***xxx***	SB15m, SB18 or SB118*		
coaxial	[*xxx*_FR], [*xxx*_FI] or [*xxx*_MO]	—	nominal bandwidth	choice between 3 contours**
coaxial + coupled subwoofer	[*xxx_xx*_100]	[SB*xx*_100]	down to 40 Hz (SB15m) or 32 Hz (SB18/SB118) reinforced LF contour	

* with subwoofers as a cardioid array, use [SB*xx_xx*_C] or [SB*xx_xx*_Cx]

** [*xxx*_FR] for FOH application, [*xxx*_FI] for speech, classical music or fill, [*xxx*_MO] flat in half-space loading conditions (floor, wall or ceiling)

[*xxx*_FR], [*xxx*_FI], [*xxx*_MO] and [*xxx_xx*_100]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	PA	IN A	0 dB	0 ms	+	ON
OUT 2	PA	IN A	0 dB	0 ms	+	ON
OUT 3	PA	IN B	0 dB	0 ms	+	ON
OUT 4	PA	IN B	0 dB	0 ms	+	ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

12XTA, 115XT, 115XT HiQ and MTD115bA

12XTA, 115XT, 115XT HiQ and MTD115bA are active coaxial loudspeaker enclosures.

Preset names

active coaxial loudspeaker enclosure	**preset**
12XT (in active mode)	[12XTA_*xx*]
115XT HiQ	[HiQ_*xx*]
MTD115b (in active mode)	[115bA_*xx*]
115XT	[115XT_*xx*]

loudspeaker configuration	**preset(s)**		**acoustic properties**	
	active *xxx*	**SB18 or SB118***		
coaxial	[*xxx*_FR], [*xxx*_FI] or [*xxx*_MO]	—	nominal bandwidth	choice between 3 contours**
coaxial + coupled subwoofer	[*xxx_xx*_100]	[SB*xx*_100]	down to 32 Hz reinforced LF contour	

* with subwoofers as a cardioid array, use [SB*xx_xx*_C], or [SB18_100_Cx]

** [*xxx*_FR] for FOH application, [*xxx*_FI] for speech, classical music or fill, [*xxx*_MO] flat in half-space loading conditions (floor, wall or ceiling)

[*xxx*_FR], [*xxx*_FI], [*xxx*_MO] and [*xxx_xx*_100]

loudspeaker elements	**outputs**	**channels**	**routing**	**gain**	**delay**	**polarity**	**mute**
LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
HF	OUT 2	HF					ON
LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
HF	OUT 4	HF					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Subwoofer loudspeaker enclosures presets

In this section, tables describe the loudspeaker configurations for L-Acoustics versatile subwoofers, and the corresponding factory presets. Discriminant acoustic properties of each loudspeaker configuration are given, such as -10 dB bandwidth or LF limit, or directivity specificity.

For more information about cardioid configurations, refer to Preset design (p.8).

Headroom for SB15m

SB15m presets [SB15_100] and [SB15_100_C] have 8 dB of headroom from preset library version 5.6(.5).

[SB15_100_Cx] has 8 dB of headroom.

4 dB of headroom are provided when using presets from earlier versions and preset [KIVA_SB15].

Headroom for K1-SB, KS28, SB28, SB18, SB218 and SB118

To provide 8 dB of headroom, the output gain of some subwoofer presets is adjusted in preset library 6.0 compared to previous versions.

This update aligns the L-DRIVE activity between subwoofers and full range loudspeakers for the same reference pink noise signal.

When updating presets in Session files using older versions of the preset library, adjust gains as follows to keep the same gain chain:

[SB28_60], [SB218_60]: + 4 dB
[KS28_60], [SB_28_100], [SB18_60], [SB18_100], [SB218_100], [SB118_60], [SB118_100]: + 3 dB
[KS28_100]: + 2 dB
[K1SB_60]: + 1 dB

Optimal subwoofer compatibilities

subwoofer	presets	optimal compatibility
KS28	[KS28_60],[KS28_60_C], or [KS28_60_Cx]	K1, K2, K3(i), V-DOSC, Kudo, dV-DOSC/dV-SUB, Kara/SB18, Kara II(i), ARCS, ARCS II
	[KS28_100], [KS28_100_C], or [KS28_100_Cx]	dV-DOSC, Kara, coupled ARCS
	[KS28 L2], [KS28_C L2], or [KS28_Cx L2]	L2, L2D
SB28	[SB28_60],[SB28_60_C], or [SB28_60_Cx]	K1, K2, V-DOSC, Kudo, dV-DOSC/dV-SUB, Kara/SB18, Kara II(i), ARCS, ARCS II
	[SB28_100], [SB28_100_C], or [SB28_100_Cx]	dV-DOSC, Kara, coupled ARCS
KS21(i)	[KS21_60],[KS21_60_C], or [KS21_60_Cx]	A15(i) Wide/Focus, Kara(i), Kara II(i), K3(i)
	[KS21_100], [KS21_100_C], or [KS21_100_Cx]	A10(i) Wide/Focus, X15 HiQ, X12, XT, Kara(i), Kara II(i)
SB18(i/m) **SB18 IIi**	[SB18_60],[SB18_60_C], or [SB18_60_Cx]	Kudo, Kara, Kara II(i), Kiva/Kilo, ARCS, ARCS Wide, ARCS Focus
	[SB18_100],[SB18_100_C], or [SB18_100_Cx]	Kara, Kara II(i), ARCS, XT, X series, Kiva II
SB218	[SB218_60]	V-DOSC, Kudo, dV-DOSC/dV-SUB, ARCS
	[SB218_100]	dV-DOSC, coupled ARCS
SB118	[SB118_60] or [SB118_60_C]	Kudo, dV-DOSC/dV-SUB, Kiva/Kilo, ARCS
	[SB118_100] or [SB118_100_C]	dV-DOSC, ARCS, XT, coupled MTD
SB15m	[SB15_100],[SB15_100_C], or [SB15_100_Cx]	Coupled Kiva, coupled Kiva II, XT, X12, X8

subwoofer	presets	optimal compatibility
SB10i	[SB10_100]	coupled X4i, 5XT
SB6i	[SB6_60]	separated X4i
	[SB6_100]	coupled X4i
Syva Low	[SYVA LOW SYVA]	coupled Syva, coupled Syva + Syva Sub
	[SYVA LOW_100]	Syva, Syva + Syva Sub
Syva Sub	[SYVA SUB_100]	Syva/Syva Low, coupled Syva/Syva Low
	[SYVA SUB_200]	X4i

Acoustic properties of subwoofers

loudspeaker configuration[1]	preset(s)[2]	acoustic properties
standard	[*xxxx*_60] or [*xxxx*_100]	down to: 25 Hz (KS28 / SB28 / SB218 / SB10i), 27 Hz (Syva Low+Syva Sub), 29 Hz (KS21, SB6i), 32 Hz (SB18 / SB118), 40 Hz (SB15m, Syva Low)
cardioid C	[*xxxx*_60_C] or [*xxxx*_100_C]	down to: 25 Hz (KS28 / SB28), 29 Hz (KS21), 32 Hz (SB18 / SB118), 40 Hz (SB15m) cardioid directivity pattern
cardioid Cx	[*xxxx*_60_Cx], or [*xxxx*_100_Cx]	down to: 25 Hz (KS28 / SB28), 29 Hz (KS21), 32 Hz (SB18), 40 Hz (SB15m) extended cardioid directivity pattern

[1] Refer to the subwoofer manual for the recommended deployment patterns in each configuration.
[2] SB28 and SB218 are exclusively driven by LA8 and LA12X amplified controllers. KS28 is driven by LA2Xi and LA12X amplified controllers.

[*xxxx*_60] or [*xxxx*_100]

outputs	channels	routing	gain	delay	polarity	mute
OUT 1	SB	IN A	0 dB	0 ms	+	ON
OUT 2	SB	IN A	0 dB	0 ms	+	ON
OUT 3	SB	IN A	0 dB	0 ms	+	ON
OUT 4	SB	IN A	0 dB	0 ms	+	ON

[*xxxx*_60_C], [*xxxx*_100_C], [*xxxx*_60_Cx], or [*xxxx*_100_Cx]

loudspeaker elements	outputs	channels	routing	gain	delay	polarity	mute
SR	OUT 1	SR	IN A	0 dB	0 ms	+	ON
SB	OUT 2	SB					ON
SB	OUT 3	SB					ON
SB	OUT 4	SB					ON

Routing, gain, delay, polarity and mute parameters can be modified by the user.

Pre-alignment delay values

Time alignment from geometric measurements

When combining several loudspeaker systems, it is important to adjust their delay values to optimize acoustic summation. If no acoustic measurement tool is available, it is possible to use the pre-alignment delay values given in the tables on this section.

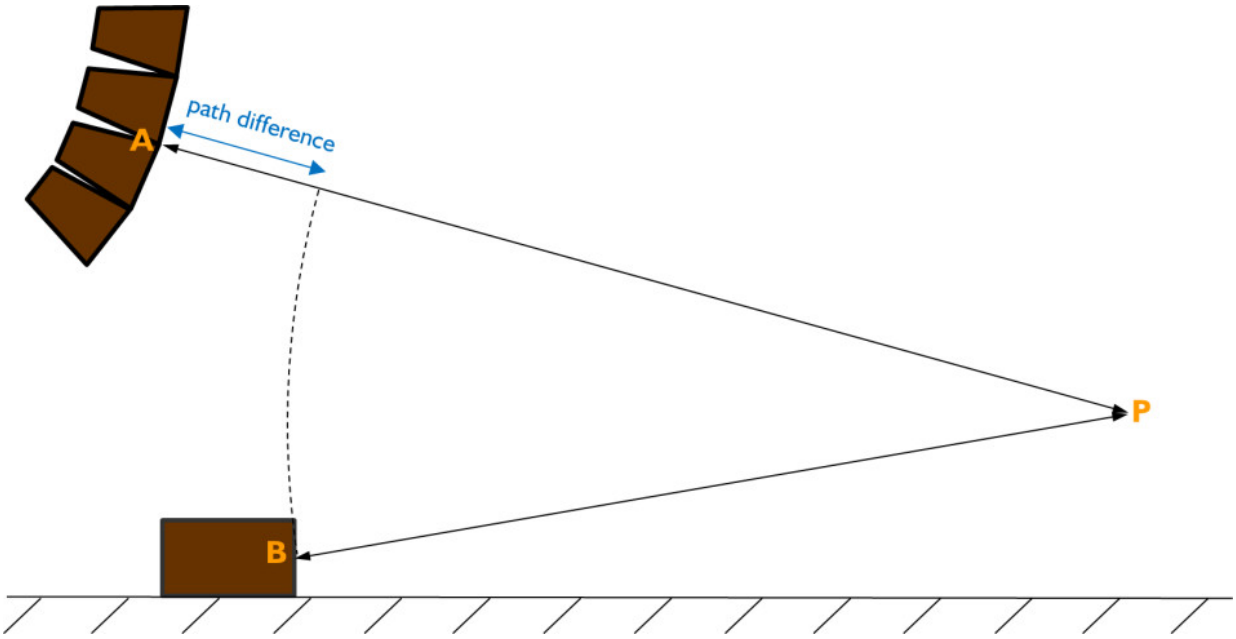
Pre-alignment delays have been measured with the enclosures at the same geometric location, front face on the same plane.

After adding these values to the factory presets, time-alignment is then obtained by adding the geometric delay to the closest system. The geometric delay is calculated from the path difference between a reference listening point and the center of each system.

Laser rangefinders

The L-Acoustics Tech Toolcase includes two laser devices that can be used for geometric measurements: TruPulse™ 200 (trademark of Laser Technology, Inc.) and Leica DISTO™ D3 (trademark Leica Geosystems).

line source + separated subwoofer



Procedure

1. Measure the path difference: PA - PB, with:

   P: reference listening point

   A: center of the further system, named system a

   B: center of the closest system, named system b
2. Calculate the Geometric delay(s): Path difference (m) / Sound velocity (m.s-1), with:
   sound velocity ≈ 340 m.s-1 at 20°C and in dry air
3. Refer to the tables of this section to find the **Pre-alignment delay a** and the **Pre-alignment delay b**, corresponding to the system a + system b combination.
4. Add the Alignment delay to the factory preset of each system. Being the closest to the reference listening point, the geometric delay must be added to the system b only:
   a) alignment delay (ms) for system a = **Pre-alignment delay a** (ms)
   b) alignment delay (ms) for system b = **Pre-alignment delay b** (ms) + Geometric delay (ms)

   Normalization: If ≠ 0, subtract **Pre-alignment delay a** to both Alignment delay values.

Autofilter in **Default** or **Bypassed LF filters** modes extends the latency of the amplified controller to 6.50 ms for the main system.

To align the main system using Autofilter in these modes and subwoofers in standard latency, either:

Add 2.66 ms to the subwoofer delay, or if possible,
Subtract 2.66 ms to the main system delay.

Refer to the **Soundvision** and **LA Network Manager** helps for more information about Autofilter.

Progressive curvature WST systems

L2/L2D + KS28

presets	pre-alignment delay values and polarity settings			
[L2]/[L2D] + [KS28 L2]	L2/L2D = 0 ms	+	KS28 = 2.5 ms	+
[L2]/[L2D] + [KS28_C L2]	L2/L2D = 2.6 ms	+	KS28 = 0 ms	+
[L2]/[L2D] + [KS28_Cx L2]	L2/L2D = 0 ms	+	KS28 = 2.5 ms	+

Variable curvature WST systems

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

K1 + K1-SB

presets	pre-alignment delay values and polarity settings			
[K1] + [K1SB_X]	K1 = 0 ms	+	K1-SB = 0 ms	+
[K1] + [K1SB_60]	K1 = 6 ms	+	K1-SB = 0 ms	+

K1 + SB28

presets	pre-alignment delay values and polarity settings			
[K1] + [SB28_60]	K1 = 0.5 ms	+	SB28 = 0 ms	-
[K1] + [SB28_60_C]	K1 = 6 ms	+	SB28 = 0 ms	-
[K1] + [SB28_60_Cx]	K1 = 4 ms	+	SB28 = 0 ms	-

K1 + KS28

presets	pre-alignment delay values and polarity settings	
[K1] + [KS28_60]	K1 = 0.5 ms +	KS28 = 0 ms -
[K1] + [KS28_60_C]	K1 = 6 ms +	KS28 = 0 ms -
[K1] + [KS28_60_Cx]	K1 = 4 ms +	KS28 = 0 ms -

K1 + K1-SB + SB28

presets	pre-alignment delay values and polarity settings		
[K1] + [K1SB_X] + [SB28_60]	K1 = 0 ms +	K1-SB = 0 ms +	SB28 = 0 ms -
[K1] + [K1SB_X] + [SB28_60_C]	K1 = 5.5 ms +	K1-SB = 5.5 ms +	SB28 = 0 ms -
[K1] + [K1SB_X] + [SB28_60_Cx]	K1 = 3.5 ms +	K1-SB = 3.5 ms +	SB28 = 0 ms -
[K1] + [K1SB_60] + [SB28_60]	K1 = 6 ms +	K1-SB = 0 ms +	SB28 = 6 ms -
[K1] + [K1SB_60] + [SB28_60_C]	K1 = 6 ms +	K1-SB = 0 ms +	SB28 = 0.5 ms -
[K1] + [K1SB_60] + [SB28_60_Cx]	K1 = 6 ms +	K1-SB = 0 ms +	SB28 = 4 ms -

K1 + K1-SB + KS28

presets	pre-alignment delay values and polarity settings		
[K1] + [K1SB_X] + [KS28_60]	K1 = 0 ms +	K1-SB = 0 ms +	KS28 = 0 ms -
[K1] + [K1SB_X] + [KS28_60_C]	K1 = 5.5 ms +	K1-SB = 5.5 ms +	KS28 = 0 ms -
[K1] + [K1SB_X] + [KS28_60_Cx]	K1 = 3.5 ms +	K1-SB = 3.5 ms +	KS28 = 0 ms -
[K1] + [K1SB_60] + [KS28_60]	K1 = 6 ms +	K1-SB = 0 ms +	KS28 = 6 ms -
[K1] + [K1SB_60] + [KS28_60_C]	K1 = 6 ms +	K1-SB = 0 ms +	KS28 = 0.5 ms -
[K1] + [K1SB_60] + [KS28_60_Cx]	K1 = 6 ms +	K1-SB = 0 ms +	KS28 = 4 ms -

K2 + K1-SB

presets	pre-alignment delay values and polarity settings	
[K2] + [K1SB_X K2]	K2 = 0 ms +	K1-SB = 0 ms +
[K2] + [K1SB_60]	K2 = 6 ms +	K1-SB = 0 ms +

K2 + SB28

presets	pre-alignment delay values and polarity settings	
[K2] + [SB28_60]	K2 = 0.5 ms +	SB28 = 0 ms -
[K2] + [SB28_60_C]	K2 = 6 ms +	SB28 = 0 ms -
[K2] + [SB28_60_Cx]	K2 = 4 ms +	SB28 = 0 ms -

K2 + KS28

presets	pre-alignment delay values and polarity settings	
[K2] + [KS28_60]	K2 = 0.5 ms +	KS28 = 0 ms -
[K2] + [KS28_60_C]	K2 = 6 ms +	KS28 = 0 ms -
[K2] + [KS28_60_Cx]	K2 = 4 ms +	KS28 = 0 ms -

K2 + K1-SB + SB28

presets	pre-alignment delay values and polarity settings		
[K2] + [K1SB_X K2] + [SB28_60]	K2 = 0 ms +	K1-SB = 0 ms +	SB28 = 0 ms -
[K2] + [K1SB_X K2] + [SB28_60_C]	K2 = 5.5 ms +	K1-SB = 5.5 ms +	SB28 = 0 ms -
[K2] + [K1SB_X K2] + [SB28_60_Cx]	K2 = 3.5 ms +	K1-SB = 3.5 ms +	SB28 = 0 ms -
[K2] + [K1SB_60] + [SB28_60]	K2 = 6 ms +	K1-SB = 0 ms +	SB28 = 6 ms -
[K2] + [K1SB_60] + [SB28_60_C]	K2 = 6 ms +	K1-SB = 0 ms +	SB28 = 0.5 ms -
[K2] + [K1SB_60] + [SB28_60_Cx]	K2 = 6 ms +	K1-SB = 0 ms +	SB28 = 4 ms -

K2 + K1-SB + KS28

presets	pre-alignment delay values and polarity settings		
[K2] + [K1SB_X K2] + [KS28_60]	K2 = 0 ms +	K1-SB = 0 ms +	KS28 = 0 ms -
[K2] + [K1SB_X K2] + [KS28_60_C]	K2 = 5.5 ms +	K1-SB = 5.5 ms +	KS28 = 0 ms -
[K2] + [K1SB_X K2] + [KS28_60_Cx]	K2 = 3.5 ms +	K1-SB = 3.5 ms +	KS28 = 0 ms -
[K2] + [K1SB_60] + [KS28_60]	K2 = 6 ms +	K1-SB = 0 ms +	KS28 = 6 ms -
[K2] + [K1SB_60] + [KS28_60_C]	K2 = 6 ms +	K1-SB = 0 ms +	KS28 = 0.5 ms -
[K2] + [K1SB_60] + [KS28_60_Cx]	K2 = 6 ms +	K1-SB = 0 ms +	KS28 = 4 ms -

K3 + KS28

presets	pre-alignment delay values and polarity settings			
[K3] + [KS28_60]	K3 = 0.5 ms	+	KS28 = 0 ms	-
[K3] + [KS28_60_C]	K3 = 6 ms	+	KS28 = 0 ms	-
[K3] + [KS28_60_Cx]	K3 = 4 ms	+	KS28 = 0 ms	-

K3 + KS21

presets	pre-alignment delay values and polarity settings			
[K3] + [KS21_60]	K3 = 0 ms	+	KS21 = 0 ms	-
[K3] + [KS21_60_C]	K3 = 5.5 ms	+	KS21 = 0 ms	-
[K3] + [KS21_60_Cx]	K3 = 5 ms	+	KS21 = 0 ms	+

Kudo + SB118

presets	pre-alignment delay values and polarity settings			
[KUDOxx_60] + [SB118_60]	Kudo = 0 ms	+	SB118 = 3.5 ms	+
[KUDOxx_60] + [SB118_60_C]	Kudo = 2 ms	+	SB118 = 0 ms	+

Kudo + SB18

presets	pre-alignment delay values and polarity settings			
[KUDOxx_60] + [SB18_60]	Kudo = 0 ms	+	SB18 = 3.9 ms	+
[KUDOxx_60] + [SB18_60_C]	Kudo = 1.6 ms	+	SB18 = 0 ms	+

Kudo + SB218

presets	pre-alignment delay values and polarity settings			
[KUDOxx_60] + [SB218_60]	Kudo = 0 ms	+	SB218 = 5 ms	+

Kudo + SB28

presets	pre-alignment delay values and polarity settings			
[KUDOxx_60] + [SB28_60]	Kudo = 0 ms	+	SB28 = 5 ms	+
[KUDOxx_60] + [SB28_60_C]	Kudo = 0.5 ms	+	SB28 = 0 ms	+

Kudo + KS28

presets	pre-alignment delay values and polarity settings	
[KUDOxx_60] + [KS28_60]	Kudo = 0 ms +	KS28 = 5 ms +
[KUDOxx_60] + [KS28_60_C]	Kudo = 0.5 ms +	KS28 = 0 ms +

Kara + SB18

presets	pre-alignment delay values and polarity settings	
[KARA] + [SB18_100]	Kara = 0 ms +	SB18 = 0 ms +
[KARA_FI] + [SB18_100]	Kara = 3 ms +	SB18 = 0 ms +
[KARA] + [SB18_100_C]	Kara = 5.5 ms +	SB18 = 0 ms +
[KARA] + [SB18_100_Cx]	Kara = 4 ms +	SB18 = 0 ms -
[KARA_FI] + [SB18_100_C]	Kara = 8.5 ms +	SB18 = 0 ms +
[KARA_FI] + [SB18_100_Cx]	Kara = 7 ms +	SB18 = 0 ms -
[KARA] + [SB18_60]	Kara = 2.5 ms +	SB18 = 0 ms +
[KARA] + [SB18_60_C]	Kara = 8 ms +	SB18 = 0 ms +
[KARA] + [SB18_60_Cx]	Kara = 6.5 ms +	SB18 = 0 ms -

Kara + KS21

presets	pre-alignment delay values and polarity settings	
[KARA] + [KS21_60]	Kara = 0.5 ms +	KS21 = 0 ms +
[KARA] + [KS21_60_C]	Kara = 6 ms +	KS21 = 0 ms +
[KARA] + [KS21_60_Cx]	Kara = 5.5 ms +	KS21 = 0 ms -
[KARA] + [KS21_100]	Kara = 0 ms +	KS21 = 0.5 ms +
[KARA] + [KS21_100_C]	Kara = 5 ms +	KS21 = 0 ms +
[KARA] + [KS21_100_Cx]	Kara = 4 ms +	KS21 = 0 ms -
[KARA_FI] + [KS21_100]	Kara = 0 ms +	KS21 = 2.5 ms -
[KARA_FI] + [KS21_100_C]	Kara = 3 ms +	KS21 = 0 ms -
[KARA_FI] + [KS21_100_Cx]	Kara = 2 ms +	KS21 = 0 ms +

Kara + SB28

presets	pre-alignment delay values and polarity settings	
[KARA] + [SB28_100]	Kara = 0 ms +	SB28 = 1 ms +
[KARA] + [SB28_100_C]	Kara = 4.5 ms +	SB28 = 0 ms +
[KARA] + [SB28_100_Cx]	Kara = 7.5 ms +	SB28 = 0 ms -
[KARA] + [SB28_60]	Kara = 0 ms +	SB28 = 5 ms -
[KARA] + [SB28_60_C]	Kara = 0.5 ms +	SB28 = 0 ms -
[KARA] + [SB28_60_Cx]	Kara = 4.5 ms +	SB28 = 0 ms +

Kara + KS28

presets	pre-alignment delay values and polarity settings	
[KARA] + [KS28_100]	Kara = 0 ms +	KS28 = 1 ms +
[KARA] + [KS28_100_C]	Kara = 4.5 ms +	KS28 = 0 ms +
[KARA] + [KS28_100_Cx]	Kara = 7.5 ms +	KS28 = 0 ms -
[KARA] + [KS28_60]	Kara = 0 ms +	KS28 = 5 ms -
[KARA] + [KS28_60_C]	Kara = 0.5 ms +	KS28 = 0 ms -
[KARA] + [KS28_60_Cx]	Kara = 4.5 ms +	KS28 = 0 ms +

Kara + SB18 + SB28

presets	pre-alignment delay values and polarity settings		
[KARA] + [SB18_100] + [SB28_60]	Kara = 0 ms +	SB18 = 0 ms +	SB28 = 5.5 ms -
[KARA] + [SB18_100] + [SB28_60_C]	Kara = 0 ms +	SB18 = 0 ms +	SB28 = 0 ms -
[KARA] + [SB18_100] + [SB28_60_Cx]	Kara = 5.5 ms +	SB18 = 5.5 ms +	SB28 = 0 ms +

Kara + SB18 + KS28

presets	pre-alignment delay values and polarity settings		
[KARA] + [SB18_100] + [KS28_60]	Kara = 0 ms +	SB18 = 0 ms +	KS28 = 5.5 ms -
[KARA] + [SB18_100] + [KS28_60_C]	Kara = 0 ms +	SB18 = 0 ms +	KS28 = 0 ms -
[KARA] + [SB18_100] + [KS28_60_Cx]	Kara = 5.5 ms +	SB18 = 5.5 ms +	KS28 = 0 ms +

Kara + KS21 + SB28

presets	pre-alignment delay values and polarity settings		
[KARA] + [KS21_100] + [SB28_60]	Kara = 0 ms +	KS21 = 0.5 ms +	SB28 = 5.5 ms -
[KARA] + [KS21_100] + [SB28_60_C]	Kara = 0 ms +	KS21 = 0.5 ms +	SB28 = 0 ms -
[KARA] + [KS21_100] + [SB28_60_Cx]	Kara = 5.5 ms +	KS21 = 6 ms +	SB28 = 0 ms +

Kara + KS21 + KS28

presets	pre-alignment delay values and polarity settings		
[KARA] + [KS21_100] + [KS28_60]	Kara = 0 ms +	KS21 = 0 ms +	KS28 = 5.5 ms -
[KARA] + [KS21_100] + [KS28_60_C]	Kara = 0 ms +	KS21 = 0.5 ms +	KS28 = 0 ms -
[KARA] + [KS21_100] + [KS28_60_Cx]	Kara = 5.5 ms +	KS21 = 6 ms +	KS28 = 0 ms +

Kara II + SB18

presets	pre-alignment delay values and polarity settings	
[KARA II] + [SB18_100]	Kara II = 0 ms +	SB18 = 0 ms +
[KARA_II_FI] + [SB18_100]	Kara II = 3 ms +	SB18 = 0 ms +
[KARA II] + [SB18_100_C]	Kara II = 5.5 ms +	SB18 = 0 ms +
[KARA II] + [SB18_100_Cx]	Kara II = 4 ms +	SB18 = 0 ms -
[KARA_II_FI] + [SB18_100_C]	Kara II = 8.5 ms +	SB18 = 0 ms +
[KARA_II_FI] + [SB18_100_Cx]	Kara II = 7 ms +	SB18 = 0 ms -
[KARA II] + [SB18_60]	Kara II = 2.5 ms +	SB18 = 0 ms +
[KARA II_MO] + [SB18_60]	Kara II = 2.5 ms +	SB18 = 0 ms +
[KARA II] + [SB18_60_C]	Kara II = 8 ms +	SB18 = 0 ms +
[KARA II] + [SB18_60_Cx]	Kara II = 6.5 ms +	SB18 = 0 ms -

Kara II + KS21

presets	pre-alignment delay values and polarity settings			
[KARA II] + [KS21_60]	Kara II = 0.5 ms	+	KS21 = 0 ms	+
[KARA II] + [KS21_60_C]	Kara II = 6 ms	+	KS21 = 0 ms	+
[KARA II] + [KS21_60_Cx]	Kara II = 5.5 ms	+	KS21 = 0 ms	-
[KARA II_MO] + [KS21_60]	Kara II = 0 ms	+	KS21 = 0 ms	+
[KARA II] + [KS21_100]	Kara II = 0 ms	+	KS21 = 0.5 ms	+
[KARA II] + [KS21_100_C]	Kara II = 5 ms	+	KS21 = 0 ms	+
[KARA II] + [KS21_100_Cx]	Kara II = 4 ms	+	KS21 = 0 ms	-
[KARA_II_FI] + [KS21_100]	Kara II = 0 ms	+	KS21 = 2.5 ms	-
[KARA_II_FI] + [KS21_100_C]	Kara II = 3 ms	+	KS21 = 0 ms	-
[KARA_II_FI] + [KS21_100_Cx]	Kara II = 2 ms	+	KS21 = 0 ms	+

Kara II + SB28

presets	pre-alignment delay values and polarity settings			
[KARA II] + [SB28_100]	Kara II = 0 ms	+	SB28 = 1 ms	+
[KARA II] + [SB28_100_C]	Kara II = 4.5 ms	+	SB28 = 0 ms	+
[KARA II] + [SB28_100_Cx]	Kara II = 7.5 ms	+	SB28 = 0 ms	-
[KARA II] + [SB28_60]	Kara II = 0 ms	+	SB28 = 5 ms	-
[KARA II] + [SB28_60_C]	Kara II = 0.5 ms	+	SB28 = 0 ms	-
[KARA II] + [SB28_60_Cx]	Kara II = 4.5 ms	+	SB28 = 0 ms	+

Kara II + KS28

presets	pre-alignment delay values and polarity settings	
[KARA II] + [KS28_100]	Kara II = 0 ms +	KS28 = 1 ms +
[KARA II] + [KS28_100_C]	Kara II = 4.5 ms +	KS28 = 0 ms +
[KARA II] + [KS28_100_Cx]	Kara II = 7.5 ms +	KS28 = 0 ms -
[KARA II] + [KS28_60]	Kara II = 0 ms +	KS28 = 5 ms -
[KARA II] + [KS28_60_C]	Kara II = 0.5 ms +	KS28 = 0 ms -
[KARA II] + [KS28_60_Cx]	Kara II = 4.5 ms +	KS28 = 0 ms +

Kara II + SB18 + SB28

presets	pre-alignment delay values and polarity settings		
[KARA II] + [SB18_100] + [SB28_60]	Kara II = 0 ms +	SB18 = 0 ms +	SB28 = 5.5 ms -
[KARA II] + [SB18_100] + [SB28_60_C]	Kara II = 0 ms +	SB18 = 0 ms +	SB28 = 0 ms -
[KARA II] + [SB18_100] + [SB28_60_Cx]	Kara II = 5.5 ms +	SB18 = 5.5 ms +	SB28 = 0 ms +

Kara II + SB18 + KS28

presets	pre-alignment delay values and polarity settings		
[KARA II] + [SB18_100] + [KS28_60]	Kara II = 0 ms +	SB18 = 0 ms +	KS28 = 5.5 ms -
[KARA II] + [SB18_100] + [KS28_60_C]	Kara II = 0 ms +	SB18 = 0 ms +	KS28 = 0 ms -
[KARA II] + [SB18_100] + [KS28_60_Cx]	Kara II = 5.5 ms +	SB18 = 5.5 ms +	KS28 = 0 ms +

Kara II + KS21 + SB28

presets	pre-alignment delay values and polarity settings		
[KARA II] + [KS21_100] + [SB28_60]	Kara II = 0 ms +	KS21 = 0.5 ms +	SB28 = 5.5 ms -
[KARA II] + [KS21_100] + [SB28_60_C]	Kara II = 0 ms +	KS21 = 0.5 ms +	SB28 = 0 ms -
[KARA II] + [KS21_100] + [SB28_60_Cx]	Kara II = 5.5 ms +	KS21 = 6 ms +	SB28 = 0 ms +

Kara II + KS21 + KS28

presets	pre-alignment delay values and polarity settings		
[KARA II] + [KS21_100] + [KS28_60]	Kara II = 0 ms +	KS21 = 0 ms +	KS28 = 5.5 ms -
[KARA II] + [KS21_100] + [KS28_60_C]	Kara II = 0 ms +	KS21 = 0.5 ms +	KS28 = 0 ms -
[KARA II] + [KS21_100] + [KS28_60_Cx]	Kara II = 5.5 ms +	KS21 = 6 ms +	KS28 = 0 ms +

Kiva + Kilo

presets	pre-alignment delay values and polarity settings	
[KIVA] + [KILO]	Kiva = 0 ms +	Kilo = 1.5 ms +

Kiva/Kilo + SB118

presets	pre-alignment delay values and polarity settings	
[KIVA_KILO] + [SB118_60]	Kiva/Kilo = 0 ms +	SB118 = 5.9 ms +
[KIVA_KILO] + [SB118_60_C]	Kiva/Kilo = 0 ms +	SB118 = 0.4 ms +

Kiva/Kilo + SB18

presets	pre-alignment delay values and polarity settings	
[KIVA_KILO] + [SB18_60]	Kiva/Kilo = 0 ms +	SB18 = 6.3 ms +
[KIVA_KILO] + [SB18_60_C]	Kiva/Kilo = 0 ms +	SB18 = 0.8 ms +

Kiva + SB15m

presets	pre-alignment delay values and polarity settings	
[KIVA] + [SB15_100]	Kiva = 0 ms +	SB15m = 1.4 ms +
[KIVA] + [SB15_100_C]	Kiva = 2.4 ms +	SB15m = 0 ms +
[KIVA_FI] + [SB15_100]	Kiva = 0 ms +	SB15m = 0.6 ms +

Kiva/SB15m + SB18

presets	pre-alignment delay values and polarity settings	
[KIVA_SB15] + [SB18_60]	Kiva/SB15m = 0 ms +	SB18 = 8.5 ms +
[KIVA_SB15] + [SB18_60_C]	Kiva/SB15m = 0 ms +	SB18 = 3 ms +

Kiva II + SB15m

presets	pre-alignment delay values and polarity settings	
[KIVA II] + [SB15_100]	Kiva II = 0 ms +	SB15m = 1 ms +
[KIVA II] + [SB15_100_C]	Kiva II = 2.5 ms +	SB15m = 0 ms +
[KIVA II] + [SB15_100_Cx]	Kiva II = 4.5 ms +	SB15m = 0 ms -
[KIVA II_FI] + [SB15_100]	Kiva II = 0 ms +	SB15m = 1 ms +
[KIVA II_FI] + [SB15_100_C]	Kiva II = 2.5 ms +	SB15m = 0 ms +
[KIVA II_FI] + [SB15_100_Cx]	Kiva II = 5 ms +	SB15m = 0 ms -

Kiva II + SB15m + SB18

presets	pre-alignment delay values and polarity settings		
[KIVA II] + [SB15_100] + [SB18_60]	Kiva II = 0 ms +	SB15m = 1 ms +	SB18 = 1 ms -
[KIVA II] + [SB15_100] + [SB18_60_C]	Kiva II = 4.5 ms +	SB15m = 5.5 ms +	SB18 = 0 ms -
[KIVA II] + [SB15_100] + [SB18_60_Cx]	Kiva II = 1 ms +	SB15m = 2 ms +	SB18 = 0 ms +
[KIVA II] + [SB15_100_C] + [SB18_60]	Kiva II = 2.5 ms +	SB15m = 0 ms +	SB18 = 3.5 ms -
[KIVA II] + [SB15_100_C] + [SB18_60_C]	Kiva II = 4.5 ms +	SB15m = 2 ms +	SB18 = 0 ms -
[KIVA II] + [SB15_100_C] + [SB18_60_Cx]	Kiva II = 3 ms +	SB15m = 0.5 ms +	SB18 = 0 ms +

V-DOSC + SB218

presets	pre-alignment delay values and polarity settings	
[V-DOSC_xx_X] + [SB218_X]	V-DOSC = 1.8 ms +	SB218 = 0 ms +
[V-DOSC_xx_60] + [SB218_60]	V-DOSC = 0 ms +	SB218 = 3.8 ms +

V-DOSC + SB28

presets	pre-alignment delay values and polarity settings	
[V-DOSC_xx_60] + [SB28_60]	V-DOSC = 0 ms +	SB28 = 3.8 ms +
[V-DOSC_xx_60] + [SB28_60_C]	V-DOSC = 1.7 ms +	SB28 = 0 ms +

V-DOSC + KS28

presets	pre-alignment delay values and polarity settings	
[V-DOSC_xx_60] + [KS28_60]	V-DOSC = 0 ms +	KS28 = 3.8 ms +
[V-DOSC_xx_60] + [KS28_60_C]	V-DOSC = 1.7 ms +	KS28 = 0 ms +

V-DOSC + dV-SUB

presets	pre-alignment delay values and polarity settings	
[V-DOSC_xx_X] + [dV-S_X]	V-DOSC = 0 ms +	dV-SUB = 0.2 ms +

V-DOSC + dV-SUB + SB218

presets	pre-alignment delay values and polarity settings		
[V-DOSC_xx_60] + [dV-S_60_ X] + [SB218_60]	V-DOSC = 0 ms +	dV-SUB = 0.2 ms +	SB218 = 3.7 ms +

V-DOSC + dV-SUB + SB28

presets	pre-alignment delay values and polarity settings		
[V-DOSC_xx_60] + [dV-S_60_ X] + [SB28_60]	V-DOSC = 0 ms +	dV-SUB = 0.2 ms +	SB28 = 3.7 ms +
[V-DOSC_xx_60] + [dV-S_60_ X] + [SB28_60_C]	V-DOSC = 1.9 ms +	dV-SUB = 2 ms +	SB28 = 0 ms +

V-DOSC + dV-SUB + KS28

presets	pre-alignment delay values and polarity settings		
[V-DOSC_xx_60] + [dV-S_60_ X] + [KS28_60]	V-DOSC = 0 ms +	dV-SUB = 0.2 ms +	KS28 = 3.7 ms +
[V-DOSC_xx_60] + [dV-S_60_ X] + [KS28_60_C]	V-DOSC = 1.9 ms +	dV-SUB = 2 ms +	KS28 = 0 ms +

V-DOSC + dV-DOSC

presets	pre-alignment delay values and polarity settings	
[V-DOSC_xx_60] + [dV_xx_100]	V-DOSC = 0 ms +	dV-DOSC = 0 ms +

V-DOSC + dV-DOSC downfill

presets	pre-alignment delay values and polarity settings	
[V-DOSC_xx_60] + [dV_xx_100]	V-DOSC = 0 ms +	dV-DOSC = 0.04 ms +

dV-DOSC + SB118

presets	pre-alignment delay values and polarity settings	
[dV_xx_100] + [SB118_100]	dV = 2.7 ms +	SB118 = 0 ms +
[dV_xx_100] + [SB118_100_C]	dV = 8.3 ms +	SB118 = 0 ms +

dV-DOSC + SB218

presets	pre-alignment delay values and polarity settings	
[dV_xx_100] + [SB218_100]	dV = 0.8 ms +	SB218 = 0 ms +

dV-DOSC + SB18

presets	pre-alignment delay values and polarity settings	
[dV_xx_100] + [SB18_100]	dV = 2.4 ms +	SB18 = 0 ms +
[dV_xx_100] + [SB18_100_C]	dV = 8 ms +	SB18 = 0 ms +

dV-DOSC + SB28

presets	pre-alignment delay values and polarity settings	
[dV_xx_100] + [SB28_100]	dV = 0.8 ms +	SB28 = 0 ms +
[dV_xx_100] + [SB28_100_C]	dV = 6.3 ms +	SB28 = 0 ms +

dV-DOSC + KS28

presets	pre-alignment delay values and polarity settings	
[dV_xx_100] + [KS28_100]	dV = 0.8 ms +	KS28 = 0 ms +
[dV_xx_100] + [KS28_100_C]	dV = 6.3 ms +	KS28 = 0 ms +

dV-DOSC + dV-SUB

presets	pre-alignment delay values and polarity settings	
[dV_xx_100] + [dV-S_100]	dV = 0 ms +	dV-SUB = 0 ms +

dV-DOSC + dV-SUB + SB118

presets	pre-alignment delay values and polarity settings		
[dV_xx100] + [dV-S_60_100] + [SB118_60]	dV = 0 ms +	dV-SUB = 0.75 ms +	SB118 = 4 ms +
[dV_xx_100] + [dV-S_60_100] + [SB118_60_C]	dV = 1.5 ms +	dV-SUB = 2.25 ms +	SB118 = 0 ms +

dV-DOSC + dV-SUB + SB218

presets	pre-alignment delay values and polarity settings		
[dV_xx_100] + [dV-S_60_100] + [SB218_60]	dV = 0 ms +	dV-SUB = 0.75 ms +	SB218 = 4.5 ms +

dV-DOSC + dV-SUB + SB18

presets	pre-alignment delay values and polarity settings		
[dV_xx_100] + [dV-S_60_100] + [SB18_60]	dV = 0 ms +	dV-SUB = 0.75 ms +	SB18 = 4.4 ms +
[dV_xx_100] + [dV-S_60_100] + [SB18_60_C]	dV = 1.1 ms +	dV-SUB = 1.85 ms +	SB18 = 0 ms +

dV-DOSC + dV-SUB + SB28

presets	pre-alignment delay values and polarity settings		
[dV_xx_100] + [dV-S_60_100] + [SB28_60]	dV = 0 ms +	dV-SUB = 0.75 ms +	SB28 = 4.5 ms +
[dV_xx_100] + [dV-S_60_100] + [SB28_60_C]	dV = 1 ms +	dV-SUB = 1.75 ms +	SB28 = 0 ms +

dV-DOSC + dV-SUB + KS28

presets	pre-alignment delay values and polarity settings		
[dV_xx_100] + [dV-S_60_100] + [KS28_60]	dV = 0 ms +	dV-SUB = 0.75 ms +	KS28 = 4.5 ms +
[dV_xx_100] + [dV-S_60_100] + [KS28_60_C]	dV = 1 ms +	dV-SUB = 1.75 ms +	KS28 = 0 ms +

Constant curvature WST systems

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

ARCS + SB118

presets	pre-alignment delay values and polarity settings	
[ARCS_xx_60] + [SB118_60]	ARCS = 0.8 ms +	SB118 = 0 ms +
[ARCS_xx_60] + [SB118_60_C]	ARCS = 6.3 ms +	SB118 = 0 ms +
[ARCS_xx_100] + [SB118_100]	ARCS = 1.4 ms +	SB118 = 0 ms +
[ARCS_xx_100] + [SB118_100_C]	ARCS = 6.9 ms +	SB118 = 0 ms +

ARCS + SB18

presets	pre-alignment delay values and polarity settings	
[ARCS_xx_60] + [SB18_60]	ARCS = 0.4 ms +	SB18 = 0 ms +
[ARCS_xx_60] + [SB18_60_C]	ARCS = 5.9 ms +	SB18 = 0 ms +
[ARCS_xx_100] + [SB18_100]	ARCS = 1.1 ms +	SB18 = 0 ms +
[ARCS_xx_100] + [SB18_100_C]	ARCS = 6.6 ms +	SB18 = 0 ms +

ARCS + SB218

presets	pre-alignment delay values and polarity settings	
[ARCS_xx_60] + [SB218_60]	ARCS = 0 ms +	SB218 = 0.9 ms +
[ARCS_xx_100] + [SB218_100]	ARCS = 0 ms +	SB218 = 0.3 ms +

ARCS + SB28

presets	pre-alignment delay values and polarity settings	
[ARCS_xx_60] + [SB28_60]	ARCS = 0 ms +	SB28 = 0.6 ms +
[ARCS_xx_60] + [SB28_60_C]	ARCS = 4.9 ms +	SB28 = 0 ms +
[ARCS_xx_100] + [SB28_100]	ARCS = 0 ms +	SB28 = 0.5 ms +
[ARCS_xx_100] + [SB28_100_C]	ARCS = 5.0 ms +	SB28 = 0 ms +

ARCS + KS28

presets	pre-alignment delay values and polarity settings			
[ARCS_xx_60] + [KS28_60]	ARCS = 0 ms	+	KS28 = 0.6 ms	+
[ARCS_xx_60] + [KS28_60_C]	ARCS = 4.9 ms	+	KS28 = 0 ms	+
[ARCS_xx_100] + [KS28_100]	ARCS = 0 ms	+	KS28 = 0.5 ms	+
[ARCS_xx_100] + [KS28_100_C]	ARCS = 5.0 ms	+	KS28 = 0 ms	+

ARCS II + SB28

presets	pre-alignment delay values and polarity settings			
[ARCS_II] + [SB28_60]	ARCS II = 0 ms	+	SB28 = 2 ms	+
[ARCS_II] + [SB28_60_C]	ARCS II = 3.5 ms	+	SB28 = 0 ms	+
[ARCS_II] + [SB28_60_Cx]	ARCS II = 7.5 ms	+	SB28 = 0 ms	-

ARCS II + KS28

presets	pre-alignment delay values and polarity settings			
[ARCS_II] + [KS28_60]	ARCS II = 0 ms	+	KS28 = 2 ms	+
[ARCS_II] + [KS28_60_C]	ARCS II = 3.5 ms	+	KS28 = 0 ms	+
[ARCS_II] + [KS28_60_Cx]	ARCS II = 7.5 ms	+	KS28 = 0 ms	-

ARCS Wide/Focus + SB18m

presets	pre-alignment delay values and polarity settings			
[ARCS_WIFO] or [ARCS_WIFO_FI] + [SB18_60]	ARCS Wide/Focus = 1.5 ms	+	SB18m = 0 ms	+
[ARCS_WIFO] or [ARCS_WIFO_FI] + [SB18_60_C]	ARCS Wide/Focus = 7 ms	+	SB18m = 0 ms	+
[ARCS_WIFO] or [ARCS_WIFO_FI] + [SB18_60_Cx]	ARCS Wide/Focus = 6 ms	+	SB18m = 0 ms	-

A15 Wide/Focus + KS21

presets	pre-alignment delay values and polarity settings			
[A15] or [A15_FI] or [A15_MO] + [KS21_60]	A15 Wide/Focus = 0 ms	+	KS21 = 2.3 ms	+
[A15] or [A15_FI] + [KS21_60_C]	A15 Wide/Focus = 9 ms	+	KS21 = 0 ms	-
[A15] or [A15_FI] + [KS21_60_Cx]	A15 Wide/Focus = 8 ms	+	KS21 = 0 ms	+

A10 Wide/Focus + KS21

presets	pre-alignment delay values and polarity settings	
[A10] or [A10_FI] or [A10_MO] + [KS21_100]	A10 Wide/Focus = 0 ms +	KS21 = 0 ms +
[A10] or [A10_FI] + [KS21_100_C]	A10 Wide/Focus = 5.5 ms +	KS21 = 0 ms +
[A10] or [A10_FI] + [KS21_100_Cx]	A10 Wide/Focus = 0 ms +	KS21 = 0 ms +

Colinear systems

No pre-alignment delay values are required for the Syva system.

Soka + SB6i

presets	pre-alignment delay values and polarity settings	
[SOKA] + [SB6_100]	Soka = 1.4 ms +	SB6i = 0 ms +
[SOKA_200] + [SB6_200]	Soka = 1.9 ms +	SB6i = 0 ms +
[SOKA_60] + [SB6_60]	Soka = 3.6 ms +	SB6i = 0 ms -

Soka + SB10i

presets	pre-alignment delay values and polarity settings	
[SOKA] + [SB10_100]	Soka = 2.6 ms +	SB10i = 0 ms +
[SOKA_200] + [SB10_200]	Soka = 3.2 ms +	SB10i = 0 ms +
[SOKA_60] + [SB10_60]	Soka = 9 ms +	SB10i = 0 ms -

Coaxial loudspeaker enclosures

[*xx*_MO] presets (except for legacy XT and MTD enclosures) use the amplified controller low latency operating mode. When used along with subwoofers, it is recommended to use the subwoofers in low latency operating mode.

On 4-output amplified controllers, create custom presets combining low latency channel sets and subwoofer channel sets.

If the subwoofers are driven from a dedicated 4-output amplified controller using a subwoofer factory preset, they are operated in normal latency mode. Therefore, an additional delay should be set to the [*xx*_MO] low latency channels to align them: 2.66 ms on LA4 and LA8 or 3.00 ms on LA2Xi, LA4X, and LA12X.

On 16-outputs amplified controllers, select the [*xx*_MO] preset for the companion subwoofer to benefit from the low latency.

X15 HiQ + SB18

presets	pre-alignment delay values and polarity settings			
[X15] + [SB18_100]	X15 HiQ = 4 ms	+	SB18 = 0 ms	-
[X15_MO] + [SB18_100]	X15 HiQ = 0 ms	+	SB18 = 1 ms	+
[X15] + [SB18_100_C]	X15 HiQ = 9.7 ms	+	SB18 = 0 ms	-
[X15] + [SB18_100_Cx]	X15 HiQ = 8.25 ms	+	SB18 = 0 ms	+

X15 HiQ + KS21

presets	pre-alignment delay values and polarity settings			
[X15] + [KS21_100]	X15 HiQ = 0 ms	+	KS21 = 1.5 ms	+
[X15_MO] + [KS21_100]	X15 HiQ = 0 ms	+	KS21 = 1.5 ms	+
[X15] + [KS21_100_C]	X15 HiQ = 3.9 ms	+	KS21 = 0 ms	+
[X15] + [KS21_100_Cx]	X15 HiQ = 2.6 ms	+	KS21 = 0 ms	-

X12 + SB15m

presets	pre-alignment delay values and polarity settings			
[X12] + [SB15_100]	X12 = 1.5 ms	+	SB15m = 0 ms	-
[X12_MO] + [SB15_100]	X12 = 0 ms	+	SB15m = 2.85 ms	+
[X12] + [SB15_100_C]	X12 = 5.1 ms	+	SB15m = 0 ms	-
[X12] + [SB15_100_Cx]	X12 = 3 ms	+	SB15m = 0 ms	-

X12 + SB18

presets	pre-alignment delay values and polarity settings			
[X12] + [SB18_100]	X12 = 0 ms	+	SB18 = 0 ms	+
[X12_MO] + [SB18_100]	X12 = 0 ms	+	SB18 = 0 ms	+
[X12] + [SB18_100_C]	X12 = 5.7 ms	+	SB18 = 0 ms	+
[X12] + [SB18_100_Cx]	X12 = 4 ms	+	SB18 = 0 ms	-

X12 + KS21

presets	pre-alignment delay values and polarity settings			
[X12] + [KS21_100]	X12 = 0 ms	+	KS21 = 1 ms	+
[X12_MO] + [KS21_100]	X12 = 0 ms	+	KS21 = 0.4 ms	+
[X12] + [KS21_100_C]	X12 = 4.8 ms	+	KS21 = 0 ms	+
[X12] + [KS21_100_Cx]	X12 = 3.4 ms	+	KS21 = 0 ms	-

X8 + SB15m

presets	pre-alignment delay values and polarity settings			
[X8] + [SB15_100]	X8 = 2 ms	+	SB15m = 0 ms	-
[X8_MO] + [SB15_100]	X8 = 0 ms	+	SB15m = 3 ms	+
[X8] + [SB15_100_C]	X8 = 5.7 ms	+	SB15m = 0 ms	-
[X8] + [SB15_100_Cx]	X8 = 3.8 ms	+	SB15m = 0 ms	-

5XT + SB15m

presets	pre-alignment delay values and polarity settings			
[5XT] + [SB15_100]	5XT = 0 ms	+	SB15m = 0 ms	+
[5XT_MO] + [SB15_100]	5XT = 0.2 ms	+	SB15m = 0 ms	+

5XT + SB10i

presets	pre-alignment delay values and polarity settings			
[5XT] or [5XT_MO] + [SB10_100]	5XT = 0 ms	+	SB10i = 1.6 ms	-

X4i + Syva Sub

presets	pre-alignment delay values and polarity settings			
[X4] or [X4_MO] + [SYVA SUB_200]	X4i = 0 ms	+	Syva Sub = 0.5 ms	+

X4i + SB6i

presets	pre-alignment delay values and polarity settings			
[X4_60] + [SB6_60]	X4i = 1.8 ms	+	SB6i = 0 ms	-
[X4] or [X4_MO] + [SB6_100]	X4i = 0 ms	+	SB6i = 0.4 ms	+
[X4] or [X4_MO] + [SB6_200]	X4i = 0.6 ms	+	SB6i = 0 ms	-

X4i + SB10i

presets	pre-alignment delay values and polarity settings			
[X4_60] + [SB10_60]	X4i = 7.2 ms	+	SB10i = 0 ms	-
[X4] or [X4_MO] + [SB10_100]	X4i = 0.8 ms	+	SB10i = 0 ms	+
[X4] + [SB10_200]	X4i = 1.9 ms	+	SB10i = 0 ms	-
[X4_MO] + [SB10_200]	X4i = 0 ms	+	SB10i = 0 ms	+

115XT HiQ + SB118

presets	pre-alignment delay values and polarity settings			
[HIQ_FI_100] + [SB118_100]	HiQ = 2.6 ms	+	SB118 = 0 ms	+
[HIQ_FR_100] + [SB118_100]	HiQ = 2.6 ms	+	SB118 = 0 ms	+
[HIQ_MO_100] + [SB118_100]	HiQ = 2.5 ms	+	SB118 = 0 ms	+

115XT HiQ + SB18

presets	pre-alignment delay values and polarity settings			
[HIQ_FI_100] + [SB18_100]	HiQ = 2.3 ms	+	SB18 = 0 ms	+
[HIQ_FR_100] + [SB18_100]	HiQ = 2.3 ms	+	SB18 = 0 ms	+
[HIQ_MO_100] + [SB18_100]	HiQ = 2.2 ms	+	SB18 = 0 ms	+

115XT HiQ + dV-SUB

presets	pre-alignment delay values and polarity settings			
[HIQ_FI_100] + [dV-S_100]	HiQ = 0.6 ms	+	dV-SUB = 0 ms	+
[HIQ_FR_100] + [dV-S_100]	HiQ = 0.6 ms	+	dV-SUB = 0 ms	+
[HIQ_MO_100] + [dV-S_100]	HiQ = 0.5 ms	+	dV-SUB = 0 ms	+

Active 12XT + SB118

presets	pre-alignment delay values and polarity settings			
[12XTA_FI_100] + [SB118_100]	12XTA = 2.6 ms	+	SB118 = 0 ms	+
[12XTA_FR_100] + [SB118_100]	12XTA = 2.6 ms	+	SB118 = 0 ms	+
[12XTA_MO_100] + [SB118_100]	12XTA = 2.5 ms	+	SB118 = 0 ms	+

Active 12XT + SB18

presets	pre-alignment delay values and polarity settings	
[12XTA_FI_100] + [SB18_100]	12XTA = 2.3 ms +	SB18 = 0 ms +
[12XTA_FR_100] + [SB18_100]	12XTA = 2.3 ms +	SB18 = 0 ms +
[12XTA_MO_100] + [SB18_100]	12XTA = 2.2 ms +	SB18 = 0 ms +

Passive 12XT + SB118

presets	pre-alignment delay values and polarity settings	
[12XTP_FI_100] + [SB118_100]	12XTP = 2.4 ms +	SB118 = 0 ms +
[12XTP_FR_100] + [SB118_100]	12XTP = 2.4 ms +	SB118 = 0 ms +
[12XTP_MO_100] + [SB118_100]	12XTP = 2.4 ms +	SB118 = 0 ms +

Passive 12XT + SB18

presets	pre-alignment delay values and polarity settings	
[12XTP_FI_100] + [SB18_100]	12XTP = 2.1 ms +	SB18 = 0 ms +
[12XTP_FR_100] + [SB18_100]	12XTP = 2.1 ms +	SB18 = 0 ms +
[12XTP_MO_100] + [SB18_100]	12XTP = 2.1 ms +	SB18 = 0 ms +

8XT + SB118

presets	pre-alignment delay values and polarity settings	
[8XT_FI_100] + [SB118_100]	8XT = 3.1 ms +	SB118 = 0 ms +
[8XT_FR_100] + [SB118_100]	8XT = 3.2 ms +	SB118 = 0 ms +
[8XT_MO_100] + [SB118_100]	8XT = 3.0 ms +	SB118 = 0 ms +

8XT + SB18

presets	pre-alignment delay values and polarity settings	
[8XT_FI_100] + [SB18_100]	8XT = 2.8 ms +	SB18 = 0 ms +
[8XT_FR_100] + [SB18_100]	8XT = 2.9 ms +	SB18 = 0 ms +
[8XT_MO_100] + [SB18_100]	8XT = 2.7 ms +	SB18 = 0 ms +

115XT + SB118

presets	pre-alignment delay values and polarity settings	
[115XT_FI_100] + [SB118_100]	115XT = 2.6 ms +	SB118 = 0 ms +
[115XT_FR_100] + [SB118_100]	115XT = 2.5 ms +	SB118 = 0 ms +
[115XT_MO_100] + [SB118_100]	115XT = 2.9 ms +	SB118 = 0 ms +

115XT + SB18

presets	pre-alignment delay values and polarity settings	
[115XT_FI_100] + [SB18_100]	115XT = 2.3 ms +	SB18 = 0 ms +
[115XT_FR_100] + [SB18_100]	115XT = 2.2 ms +	SB18 = 0 ms +
[115XT_MO_100] + [SB18_100]	115XT = 2.6 ms +	SB18 = 0 ms +

Active MTD115 + SB118

presets	pre-alignment delay values and polarity settings	
[115bA_FI_100] + [SB118_100]	115bA = 2.4 ms +	SB118 = 0 ms +
[115bA_FR_100] + [SB118_100]	115bA = 2.5 ms +	SB118 = 0 ms +
[115bA_MO_100] + [SB118_100]	115bA = 2.7 ms +	SB118 = 0 ms +

Active MTD115 + SB18

presets	pre-alignment delay values and polarity settings	
[115bA_FI_100] + [SB18_100]	115bA = 2.1 ms +	SB18 = 0 ms +
[115bA_FR_100] + [SB18_100]	115bA = 2 ms +	SB18 = 0 ms +
[115bA_MO_100] + [SB18_100]	115bA = 2.4 ms +	SB18 = 0 ms +

Passive MTD115 + SB118

presets	pre-alignment delay values and polarity settings	
[115bP_FI_100] + [SB118_100]	115bP = 2.1 ms +	SB118 = 0 ms +
[115bP_FR_100] + [SB118_100]	115bP = 2.2 ms +	SB118 = 0 ms +
[115bP_MO_100] + [SB118_100]	115bP = 2.8 ms +	SB118 = 0 ms +

Passive MTD115 + SB18

presets	pre-alignment delay values and polarity settings	
[115bP_FI_100] + [SB18_100]	115bP = 1.8 ms +	SB18 = 0 ms +
[115bP_FR_100] + [SB18_100]	115bP = 1.9 ms +	SB18 = 0 ms +
[115bP_MO_100] + [SB18_100]	115bP = 2.5 ms +	SB18 = 0 ms +

112XT + SB118

presets	pre-alignment delay values and polarity settings	
[112XT_FI_100] + [SB118_100]	112XT = 2.3 ms +	SB118 = 0 ms +
[112XT_FR_100] + [SB118_100]	112XT = 2.3 ms +	SB118 = 0 ms +
[112XT_MO_100] + [SB118_100]	112XT = 2.6 ms +	SB118 = 0 ms +

112XT + SB18

presets	pre-alignment delay values and polarity settings	
[112XT_FI_100] + [SB18_100]	112XT = 2 ms +	SB18 = 0 ms +
[112XT_FR_100] + [SB18_100]	112XT = 2 ms +	SB18 = 0 ms +
[112XT_MO_100] + [SB18_100]	112XT = 2.3 ms +	SB18 = 0 ms +

MTD112b + SB118

presets	pre-alignment delay values and polarity settings	
[112b_FI_100] + [SB118_100]	112b = 2.4 ms +	SB118 = 0 ms +
[112b_FR_100] + [SB118_100]	112b = 2.5 ms +	SB118 = 0 ms +
[112b_MO_100] + [SB118_100]	112b = 3.0 ms +	SB118 = 0 ms +

MTD112b + SB18

presets	pre-alignment delay values and polarity settings	
[112b_FI_100] + [SB18_100]	112b = 2.1 ms +	SB18 = 0 ms +
[112b_FR_100] + [SB18_100]	112b = 2.2 ms +	SB18 = 0 ms +
[112b_MO_100] + [SB18_100]	112b = 2.7 ms +	SB18 = 0 ms +

MTD108a + SB118

presets	pre-alignment delay values and polarity settings	
[108a_FI_100] + [SB118_100]	108a = 3.5 ms +	SB118 = 0 ms +
[108a_FR_100] + [SB118_100]	108a = 3.6 ms +	SB118 = 0 ms +
[108a_MO_100] + [SB118_100]	108a = 4.0 ms +	SB118 = 0 ms +

MTD108a + SB18

presets	pre-alignment delay values and polarity settings	
[108a_FI_100] + [SB18_100]	108a = 3.2 ms +	SB18 = 0 ms +
[108a_FR_100] + [SB18_100]	108a = 3.3 ms +	SB18 = 0 ms +
[108a_MO_100] + [SB18_100]	108a = 3.7 ms +	SB18 = 0 ms +

Impedance load

Most enclosures have a nominal impedance of 8 Ω. The exceptions are:

- 16 Ω:
  - K2 (HF section), Kiva II, V-DOSC (HF section), 5XT, X4i
- 4 Ω:
  - SB28, KS28, Syva Low, K1-SB, SB6i

total impedance

Nominal	number of enclosures/sections in parallel				
	2	**3**	**4**	**5**	**6**
16 Ω	8 Ω	5.3 Ω	4 Ω	3.2 Ω	2.7 Ω
8 Ω	4 Ω	2.7 Ω	—	—	—

4 Ω enclosures cannot be connected in parallel.*

Refer to Enclosure drive capacity per amplified controller (p.108) for the maximum number of enclosures/sections per output and in total on each amplified controller.

* with the exception of Syva Low and SB6i

Enclosure drive capacity per amplified controller

Risks of output mute, global attenuation, or loss of audio quality.
Do not exceed the maximum number of connected enclosures per channel and in total.
Driving more enclosures than indicated can trigger the amplified controller protection systems.

	LA2Xi			LA4X	LA7.16(i)	LA12X
	per output* / total			per output* / total	per output* / total[b]	per output* / total
	SE[a]	BTL	PBTL			
coaxial enclosures						
X4i	4 / 16	—		4 / 16	4 / 64	6 / 24
5XT	4 / 16	—		4 / 16	3 / 48	6 / 24
X8	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
X12	1 / 4	1 / 2	—	1 / 4	1 / 14	3 / 12
X15 HiQ	1 / 2	—		1 / 2	1 / 8	3 / 6
8XT	—			2 / 8	—	3 / 12
Active 12XT	—			2 / 4	—	3 / 6
Passive 12XT	—			1 / 4	—	3 / 12
112XT	—			2 / 4	—	3 / 6
115XT HiQ	—			1 / 2	—	3 / 6
115XT	—			1 / 2	—	3 / 6
MTD108a	—			2 / 8	—	3 / 12
MTD112b	—			1 / 4	—	2 / 8
Active MTD115b	—			1 / 2	—	2 / 4
Passive MTD115b	—			1 / 4	—	2 / 8
colinear sources						
Soka	1 / 4	1 / 2	—	2 / 8	1 / 16	3 / 12
Syva	1 / 4	1 / 2	—	1 / 4	1 / 10	3 / 12
constant curvature WST enclosures						
A10(i) Wide/Focus	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
A15(i) Wide/Focus	1 / 4	1 / 2	—	1 / 4	1 / 10	3 / 12
ARCS Wide/Focus	1 / 4	1 / 2	—	1 / 4	—	3 / 12
ARCS II	—			1 / 2	—	3 / 6
ARCS	—			1 / 2	—	3 / 6
variable curvature WST enclosures						
K1	—			—	—	2 / 2
K1-SB	—			—	—	1 / 4
K2	—			1 / 1	1 / 4	3 / 3
K3(i)	—			1 / 2	1 / 8	3 / 6
Kara(i)	2 / 4	—		2 / 4	—	3 / 6

	LA2Xi			LA4X	LA7.16(i)	LA12X
	per output* / total			per output* / total	per output* / total[b]	per output* / total
	SE[a]	BTL	PBTL			
Kara II(i)	2 / 4	—		2 / 4	1 / 8	3 / 6
Kiva II	2 / 8	2 / 4	—	2 / 8	2 / 32	6 / 24
Kiva / Kilo	—			2 / 8	—	3 / 12
Kudo	—			1 / 1	—	3 / 3
V-DOSC	—			—	—	2 / 2
dV-DOSC	—			—	—	3 / 6
progressive curvature WST enclosures						
L2 / L2D	—			—	1 / 1	—
subwoofer enclosures						
KS28	1 / 4	—	1 / 1	—	—	1 / 4
SB28	1 / 4	—	1 / 1	—	—	1 / 4
KS21(i)	1 / 4	1 / 2	—	1 / 4	1 / 8	2 / 8
SB18(i/m) / SB18 IIi	1 / 4	1 / 2	—	1 / 4	1 / 6	3 / 12
SB218	—			—	—	1 / 4
SB118	—			1 / 4	—	2 / 8
SB15m	1 / 4	1 / 2	—	1 / 4	1 / 9	3 / 12
Syva Low	1 / 4	—		1 / 4	1 / 8	2 / 6[c]
Syva Sub	1 / 4	1 / 2	—	1 / 4	1 / 16	3 / 12
SB10i	2 / 8	1 / 2	—	2 / 8	2 / 32	3 / 12
SB6i	1 / 4	—		1 / 4	1 / 16	2 / 8
dV-SUB	—			—	—	1 / 4

* For passive loudspeakers, the value corresponds to the number of enclosures in parallel on the output. For active loudspeakers, the value corresponds to the number of sections in parallel on the output.

[a] Maximum SPL is reduced in SE operating mode for all systems except X4i, 5XT, and SB6i. Refer to the LA2Xi owner's manual for more information.

[b] Given for nominal use, assuming that all channels are driven at full power. When sending the same signal to all outputs, never exceed the maximum numbers, regardless of the Power Budget values, otherwise the Fuse Protect algorithm may be triggered. When powered by a 100 V power supply, reduce the number of enclosures in order not to exceed 75% of the power gauge.

[c] LA12X can drive up to two Syva Low per output, but no more than six per controller at high level.

Enclosure drive capacity per LA4 / LA8

Risks of output mute, global attenuation, or loss of audio quality.
Do not exceed the maximum number of connected enclosures per channel and in total.
Driving more enclosures than indicated can trigger the amplified controller protection systems.

	LA4	LA8
	per output* / total	per output* / total
coaxial enclosures		
X4i	4 / 16	6 / 24
5XT	3 / 12	6 / 24
X8	–	3 / 8 [a]
X12	–	2 / 8
X15 HiQ	–	2 / 4
8XT	2 / 8	3 / 12
Active 12XT	2 / 4	3 / 6
Passive 12XT	1 / 4	2 / 8
112XT	2 / 4	3 / 6
115XT HiQ	1 / 2	2 / 4
115XT	1 / 2	3 / 6
MTD108a	2 / 8	3 / 12
MTD112b	1 / 4	2 / 8
Active MTD115b	1 / 2	2 / 4
Passive MTD115b	1 / 4	2 / 8
colinear sources		
Syva	–	2 / 8
constant curvature WST enclosures		
ARCS Wide/Focus	1 / 4	2 / 8
A10(i) Wide/Focus	–	2 / 8
A15(i) Wide/Focus	–	2 / 8
ARCS II	–	2 / 4
ARCS	1 / 2	3 / 6
variable curvature WST enclosures		
K1	–	2 / 2
K1-SB	–	1 / 4
K2	–	3 / 3
K3(i)	–	2 / 4
Kara(i)	–	3 / 6
Kara II(i)	–	3 / 6

[a] LA8 can drive up to three X8 per output, but no more than eight per controller at high level.

	LA4	LA8
	per output* / total	**per output* / total**
Kiva II	–	4 / 16
Kiva / Kilo	2 / 8	3 / 12
Kudo	–	3 / 3
V-DOSC	–	2 / 2
dV-DOSC	–	3 / 6
subwoofer enclosures		
KS28	–	—
SB28	–	1 / 4
KS21(i)	–	2 / 6 [b]
SB18(i/m) / SB18 IIi	1 / 4	2 / 6 [c]
SB218	–	1 / 4
SB118	1 / 4	2 / 8
SB15m	1 / 4	2 / 6 [d]
SB10i	–	3 / 12
Syva Low	–	1 / 4
Syva Sub	1 / 4	2 / 8
dV-SUB	–	1 / 4

[b] LA8 can drive up to two KS21 or KS21i per output, but no more than six per controller at high level.
[c] LA8 can drive up to two SB18, SB18i, SB18m or SB18 IIi per output, but no more than six per controller at high level.
[d] LA8 can drive up to two SB15m per output, but no more than six per controller at high level.
* For passive loudspeakers, the value corresponds to the number of enclosures in parallel on the output. For active loudspeakers, the value corresponds to the number of sections in parallel on the output.

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