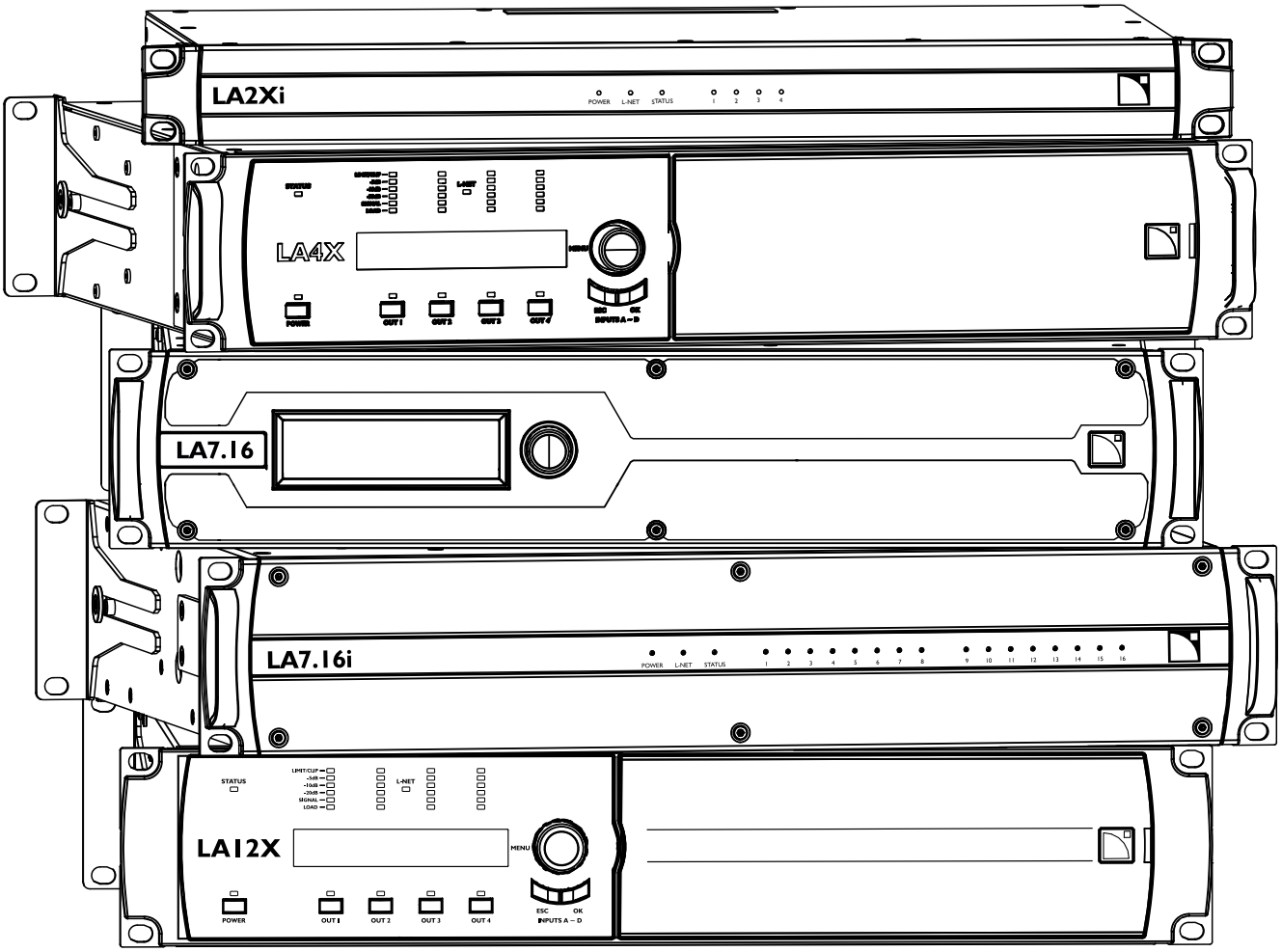
Preset Guide

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 versions 7.11(.3) of the LA2Xi, LA4, LA4X, LA8 and LA12X preset library and of the LA7.16(i) enclosure library.

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.89) 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.
23.0	Feb. 2024	• Added X8i and X6i. • Added [K3r1 *xxx*] presets. Refer to K3 (p.52). • Added [KS28 L2_C] and [KS28 L2_Cx] in LA12X preset library (p.31). • Added pre-alignment delays for X8 with SB10i or Syva Sub. • Added pre-alignment delays for Kara II as monitor with SB18. • Updated pre-alignment delay values for L2 and L2D (p.90) to take into account the extended latency applied by the Soundvision Autofilter algorithm and the updated L2/L2D presets.
24.0	May 2024	• Added preset [SYVA SUB SYVA]. • Added pre-alignement delays for [SYVA] with [SYVA SUB_100].

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.89).

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 092 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 7.11

KARA_II

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

KARA

017	[KARA]	Kara(i), full range, FOH
018	[KARA_FI]	Kara(i), 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(i) Wide or A15(i) Focus, full range
023	[A15_FI]	A15(i) Wide or A15(i) Focus, full range, fill
024	[A15_MO]	A15(i) Wide or A15(i) Focus, full range, monitor, low latency

A10

025	[A10]	A10(i) Wide or A10(i) Focus, full range
026	[A10_FI]	A10(i) Wide or A10(i) Focus, full range, fill
027	[A10_MO]	A10(i) Wide or A10(i) 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
036	[KS28 L2]	KS28, optimized for L2(D)
037	[KS28 L2_C]	KS28, cardioid pattern, optimized for L2(D)
038	[KS28 L2_Cx]	KS28, extended cardioid pattern, optimized for L2(D)

SB28

039	[SB28_60]	SB28, LPF=60 Hz
040	[SB28_100]	SB28, LPF=100 Hz
041	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
042	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
043	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
044	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

045	[KS21_60]	KS21(i), LPF=60 Hz
046	[KS21_100]	KS21(i), LPF=100 Hz
047	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
048	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
049	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
050	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

051	[SB18_60]	SB18, LPF=60 Hz
052	[SB18_100]	SB18, LPF=100 Hz
053	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
054	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
055	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
056	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

057	[SB15_100]	SB15m, LPF=100 Hz
058	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
059	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

060	[SB10_60]	SB10i(r), LPF=60 Hz
061	[SB10_100]	SB10i(r), LPF=100 Hz
062	[SB10_200]	SB10i(r), LPF=200 Hz

SB6

063	[SB6_60]	SB6i(r), LPF=60 Hz
064	[SB6_100]	SB6i(r), LPF=100 Hz
065	[SB6_200]	SB6i(r), LPF=200 Hz

SYVA

066	[SYVA]	Syva, full range

SYVA_LOW

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

SYVA+LOW

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

SYVA+SUB

069	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)

SYVA_SUB

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

SOKA

072	[SOKA]	Soka(r), full range
073	[SOKA_60]	Soka(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
074	[SOKA_200]	Soka(r) for on-wall configuration with closely coupled sub

X15HiQ

075	[X15]	X15 HiQ, full range
076	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

077	[X12]	X12, full range
078	[X12_MO]	X12, full range, monitor, low latency

X8

079	[X8]	X8, full range
080	[X8_MO]	X8, full range, monitor, low latency

X8i

081	[X8i]	X8i, full range
082	[X8i_40]	X8i, lower LF limit, max SPL reduced by 6 dB
083	[X8i_MO]	X8i, full range, monitor, low latency

X6i

084	[X6i]	X6i, full range
085	[X6i_50]	X6i, lower LF limit, max SPL reduced by 6 dB
086	[X6i_MO]	X6i, full range, monitor, low latency

5XT

087	[5XT]	5XT, full range
088	[5XT_MO]	5XT, full range, monitor, low latency

X4

089	[X4]	X4i(r), full range
090	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
091	[X4_MO]	X4i(r), full range, monitor, low latency

FLAT

092	[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 096 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 7.11

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

12XTA

037	[12XTA_FI]	12XT active, full range, fill
038	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
039	[12XTA_FR]	12XT active, full range, FOH
040	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
041	[12XTA_MO]	12XT active, full range, monitor
042	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

043	[12XTP_FI]	12XT passive, full range, fill
044	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
045	[12XTP_FR]	12XT passive, full range, FOH
046	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
047	[12XTP_MO]	12XT passive, full range, monitor
048	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

049	[8XT_FI]	8XT, full range, fill
050	[8XT_FI_100]	8XT, HPF=100 Hz, fill
051	[8XT_FR]	8XT, full range, FOH
052	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
053	[8XT_MO]	8XT, full range, monitor
054	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

055	[5XT]	5XT, full range
056	[5XT_MO]	5XT, full range, monitor, low latency

X4

057	[X4]	X4i(r), full range
058	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
059	[X4_MO]	X4i(r), full range, monitor, low latency

115XT

060	[115XT_FI]	115XT, full range, fill
061	[115XT_FI_100]	115XT, HPF=100 Hz, fill
062	[115XT_FR]	115XT, full range, FOH
063	[115XT_FR_100]	115XT, HPF=100 Hz, FOH
064	[115XT_MO]	115XT, full range, monitor
065	[115XT_MO_100]	115XT, HPF=100 Hz, monitor

MTD115bA

066	[115bA_FI]	MTD115b active, full range, fill
067	[115bA_FI_100]	MTD115b active, HPF=100 Hz, fill
068	[115bA_FR]	MTD115b active, full range, FOH
069	[115bA_FR_100]	MTD115b active, HPF=100 Hz, FOH
070	[115bA_MO]	MTD115b active, full range, monitor
071	[115bA_MO_100]	MTD115b active, HPF=100 Hz, monitor

MTD115bP

072	[115bP_FI]	MTD115b passive, full range, fill
073	[115bP_FI_100]	MTD115b passive, HPF=100 Hz, fill
074	[115bP_FR]	MTD115b passive, full range, FOH
075	[115bP_FR_100]	MTD115b passive, HPF=100 Hz, FOH
076	[115bP_MO]	MTD115b passive, full range, monitor
077	[115bP_MO_100]	MTD115b passive, HPF=100 Hz, monitor

112XT

078	[112XT_FI]	112XT, full range, fill
079	[112XT_FI_100]	112XT, HPF=100 Hz, fill
080	[112XT_FR]	112XT, full range, FOH
081	[112XT_FR_100]	112XT, HPF=100 Hz, FOH
082	[112XT_MO]	112XT, full range, monitor
083	[112XT_MO_100]	112XT, HPF=100 Hz, monitor

MTD112b

084	[112b_FI]	MTD112b, full range, fill
085	[112b_FI_100]	MTD112b, HPF=100 Hz, fill
086	[112b_FR]	MTD112b, full range, FOH
087	[112b_FR_100]	MTD112b, HPF=100 Hz, FOH
088	[112b_MO]	MTD112b, full range, monitor
089	[112b_MO_100]	MTD112b, HPF=100 Hz, monitor

MTD108a

090	[108a_FI]	MTD108a, full range, fill
091	[108a_FI_100]	MTD108a, HPF=100 Hz, fill
092	[108a_FR]	MTD108a, full range, FOH
093	[108a_FR_100]	MTD108a, HPF=100 Hz, FOH
094	[108a_MO]	MTD108a, full range, monitor
095	[108a_MO_100]	MTD108a, HPF=100 Hz, monitor

FLAT

096	[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 129 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 7.11

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

K3r1

014	[K3r1 70]	Up-to-date K3(i) with "R1" sticker, full range, 70° adjustable fins settings
015	[K3r1 90]	Up-to-date K3(i) with "R1" sticker, full range, 90° adjustable fins settings
016	[K3r1 110]	Up-to-date K3(i) with "R1" sticker, full range, 110° adjustable fins settings

K3

017	[K3 70]	Legacy K3(i) full range, 70° adjustable fins settings
018	[K3 90]	Legacy K3(i) , full range, 90° adjustable fins settings
019	[K3 110]	Legacy K3(i) , full range, 110° adjustable fins settings

KUDO

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

KARA_II

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

KARA

037	[KARA]	Kara(i), full range, FOH
038	[KARA_FI]	Kara(i), HPF=100 Hz, fill
039	[KARADOWNK1]	Kara, HPF=100 Hz, optimized delay for K1 downfill
040	[KARADOWNK2]	Kara, HPF=100 Hz, optimized delay for K2 downfill
041	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

KIVA_II

042	[KIVA II]	Kiva II, full range, FOH
043	[KIVA II_FI]	Kiva II, full range, fill

KIVA

044	[KIVA]	Kiva, full range, FOH
045	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

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

KILOKIVA

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

ARCS_II

048	[ARCS II]	ARCS II, full range

A15

049	[A15]	A15(i) Wide or A15(i) Focus, full range
050	[A15_FI]	A15(i) Wide or A15(i) Focus, full range, fill
051	[A15_MO]	A15(i) Wide or A15(i) Focus, full range, monitor, low latency

A10

052	[A10]	A10(i) Wide or A10(i) Focus, full range
053	[A10_FI]	A10(i) Wide or A10(i) Focus, full range, fill
054	[A10_MO]	A10(i) Wide or A10(i) Focus, full range, monitor, low latency

ARCS_WF

055	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
056	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

KS21

057	[KS21_60]	KS21(i), LPF=60 Hz
058	[KS21_100]	KS21(i), LPF=100 Hz
059	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
060	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
061	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
062	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

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

SB15

069	[SB15_100]	SB15m, LPF=100 Hz
070	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
071	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

072	[SB10_60]	SB10i(r), LPF=60 Hz
073	[SB10_100]	SB10i(r), LPF=100 Hz
074	[SB10_200]	SB10i(r), LPF=200 Hz

SB6

075	[SB6_60]	SB6i(r), LPF=60 Hz
076	[SB6_100]	SB6i(r), LPF=100 Hz
077	[SB6_200]	SB6i(r), LPF=200 Hz

KILO

078	[KILO]	Kilo, LPF=100 Hz

SYVA

079	[SYVA]	Syva, full range

SYVA_LOW

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

SYVA+LOW

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

SYVA+SUB

082	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)

SYVA_SUB

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

SOKA

085	[SOKA]	Soka(r), full range
086	[SOKA_60]	Soka(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
087	[SOKA_200]	Soka(r) for on-wall configuration with closely coupled sub

X15HiQ

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

X12

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

X8

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

X8i

094	[X8i]	X8i, full range
095	[X8i_40]	X8i, lower LF limit, max SPL reduced by 6 dB
096	[X8i_MO]	X8i, full range, monitor, low latency

X6i

097	[X6i]	X6i, full range
098	[X6i_50]	X6i, lower LF limit, max SPL reduced by 6 dB
099	[X6i_MO]	X6i, full range, monitor, low latency

115XTHiQ

100	[HiQ_FI]	115XT HiQ, full range, fill
101	[HiQ_FI_100]	115XT HiQ, HPF=100 Hz, fill
102	[HiQ_FR]	115XT HiQ, full range, FOH
103	[HiQ_FR_100]	115XT HiQ, HPF=100 Hz, FOH
104	[HiQ_MO]	115XT HiQ, full range, monitor
105	[HiQ_MO_100]	115XT HiQ, HPF=100 Hz, monitor

12XTA

106	[12XTA_FI]	12XT active, full range, fill
107	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
108	[12XTA_FR]	12XT active, full range, FOH
109	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
110	[12XTA_MO]	12XT active, full range, monitor
111	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

112	[12XTP_FI]	12XT passive, full range, fill
113	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
114	[12XTP_FR]	12XT passive, full range, FOH
115	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
116	[12XTP_MO]	12XT passive, full range, monitor
117	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

118	[8XT_FI]	8XT, full range, fill
119	[8XT_FI_100]	8XT, HPF=100 Hz, fill
120	[8XT_FR]	8XT, full range, FOH
121	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
122	[8XT_MO]	8XT, full range, monitor
123	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

124	[5XT]	5XT, full range
125	[5XT_MO]	5XT, full range, monitor, low latency

X4

126	[X4]	X4i(r), full range
127	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
128	[X4_MO]	X4i(r), full range, monitor, low latency

FLAT

129	[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 194 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 7.11

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

K3r1

015	[K3r1 70]	Up-to-date K3(i) with "R1" sticker, full range, 70° adjustable fins settings
016	[K3r1 90]	Up-to-date K3(i) with "R1" sticker, full range, 90° adjustable fins settings
017	[K3r1 110]	Up-to-date K3(i) with "R1" sticker, full range, 110° adjustable fins settings

K3

018	[K3 70]	Legacy K3(i) full range, 70° adjustable fins settings
019	[K3 90]	Legacy K3(i) , full range, 90° adjustable fins settings
020	[K3 110]	Legacy K3(i) , full range, 110° adjustable fins settings

K1-SB

021	[K1SB_60]	K1-SB, LPF=60 Hz, optimized for CONTOUR configuration
022	[K1SB_X]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K1
023	[K1SB_X K2]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K2

V-DOSC

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

KUDO

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

KARA_II

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

KARA

047	[KARA]	Kara(i), full range, FOH
048	[KARA_FI]	Kara(i), HPF=100 Hz, fill
049	[KARADOWNK1]	Kara, HPF=100 Hz, optimized delay for K1 downfill
050	[KARADOWNK2]	Kara, HPF=100 Hz, optimized delay for K2 downfill
051	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

dV-DOSC

052	[dV_FI]	dV-DOSC, HPF=100 Hz, fill
053	[dV_LO]	dV-DOSC, full range, LO contour
054	[dV_LO_100]	dV-DOSC, HPF=100 Hz, LO contour
055	[dV_HI]	dV-DOSC, full range, HI contour
056	[dV_HI_100]	dV-DOSC, HPF=100 Hz, HI contour

dV-D_dVS

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

dV-SUB

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

ARCS_II

065	[ARCS II]	ARCS II, full range

ARCS

066	[ARCS_LO]	ARCS, full range, LO contour
067	[ARCS_LO_60]	ARCS, HPF=60 Hz, LO contour
068	[ARCS_LO_100]	ARCS, HPF=100 Hz, LO contour
069	[ARCS_HI]	ARCS, full range, HI contour
070	[ARCS_HI_60]	ARCS, HPF=60 Hz, HI contour
071	[ARCS_HI_100]	ARCS, HPF=100 Hz, HI contour

A15

072	[A15]	A15(i) Wide or A15(i) Focus, full range
073	[A15_FI]	A15(i) Wide or A15(i) Focus, full range, fill
074	[A15_MO]	A15(i) Wide or A15(i) Focus, full range, monitor, low latency

A10

075	[A10]	A10(i) Wide or A10(i) Focus, full range
076	[A10_FI]	A10(i) Wide or A10(i) Focus, full range, fill
077	[A10_MO]	A10(i) Wide or A10(i) Focus, full range, monitor, low latency

ARCS_WF

078	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
079	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

SB28

080	[SB28_60]	SB28, LPF=60 Hz
081	[SB28_100]	SB28, LPF=100 Hz
082	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
083	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
084	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
085	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

086	[KS21_60]	KS21(i), LPF=60 Hz
087	[KS21_100]	KS21(i), LPF=100 Hz
088	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
089	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
090	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
091	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB218

092	[SB218_60]	SB218, LPF=60 Hz
093	[SB218_100]	SB218, LPF=100 Hz
094	[SB218_X]	SB218, LPF=200 Hz, optimized for [V-DOSC_xx_X] presets

SB18

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

SB118

101	[SB118_60]	SB118, LPF=60 Hz
102	[SB118_100]	SB118, LPF=100 Hz
103	[SB118_60_C]	SB118, LPF=60 Hz, cardioid pattern
104	[SB118_100_C]	SB118, LPF=100 Hz, cardioid pattern

SB15

105	[SB15_100]	SB15m, LPF=100 Hz
106	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
107	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

108	[SB10_60]	SB10i(r), LPF=60 Hz
109	[SB10_100]	SB10i(r), LPF=100 Hz
110	[SB10_200]	SB10i(r), LPF=200 Hz

KILO

111	[KILO]	Kilo, LPF=100 Hz

KIVA_II

112	[KIVA II]	Kiva II, full range, FOH
113	[KIVA II_FI]	Kiva II, full range, fill

KIVA

114	[KIVA]	Kiva, full range, FOH
115	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

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

KILOKIVA

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

SYVA

118	[SYVA]	Syva, full range

SYVA_LOW

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

SYVA+LOW

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

SYVA_SUB

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

X15HiQ

123	[X15]	X15 HiQ, full range
124	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

125	[X12]	X12, full range
126	[X12_MO]	X12, full range, monitor, low latency

X8

127	[X8]	X8, full range
128	[X8_MO]	X8, full range, monitor, low latency

115XTHiQ

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

12XTA

135	[12XTA_FI]	12XT active, full range, fill
136	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
137	[12XTA_FR]	12XT active, full range, FOH
138	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
139	[12XTA_MO]	12XT active, full range, monitor
140	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

141	[12XTP_FI]	12XT passive, full range, fill
142	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
143	[12XTP_FR]	12XT passive, full range, FOH
144	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
145	[12XTP_MO]	12XT passive, full range, monitor
146	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

147	[8XT_FI]	8XT, full range, fill
148	[8XT_FI_100]	8XT, HPF=100 Hz, fill
149	[8XT_FR]	8XT, full range, FOH
150	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
151	[8XT_MO]	8XT, full range, monitor
152	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

153	[5XT]	5XT, full range
154	[5XT_MO]	5XT, full range, monitor, low latency

X4

155	[X4]	X4i(r), full range
156	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
157	[X4_MO]	X4i(r), full range, monitor, low latency

115XT

158	[115XT_FI]	115XT, full range, fill
159	[115XT_FI_100]	115XT, HPF=100 Hz, fill
160	[115XT_FR]	115XT, full range, FOH
161	[115XT_FR_100]	115XT, HPF=100 Hz, FOH
162	[115XT_MO]	115XT, full range, monitor
163	[115XT_MO_100]	115XT, HPF=100 Hz, monitor

MTD115bA

164	[115bA_FI]	MTD115b active, full range, fill
165	[115bA_FI_100]	MTD115b active, HPF=100 Hz, fill
166	[115bA_FR]	MTD115b active, full range, FOH
167	[115bA_FR_100]	MTD115b active, HPF=100 Hz, FOH
168	[115bA_MO]	MTD115b active, full range, monitor
169	[115bA_MO_100]	MTD115b active, HPF=100 Hz, monitor

MTD115bP

170	[115bP_FI]	MTD115b passive, full range, fill
171	[115bP_FI_100]	MTD115b passive, HPF=100 Hz, fill
172	[115bP_FR]	MTD115b passive, full range, FOH
173	[115bP_FR_100]	MTD115b passive, HPF=100 Hz, FOH
174	[115bP_MO]	MTD115b passive, full range, monitor
175	[115bP_MO_100]	MTD115b passive, HPF=100 Hz, monitor

112XT

176	[112XT_FI]	112XT, full range, fill
177	[112XT_FI_100]	112XT, HPF=100 Hz, fill
178	[112XT_FR]	112XT, full range, FOH
179	[112XT_FR_100]	112XT, HPF=100 Hz, FOH
180	[112XT_MO]	112XT, full range, monitor
181	[112XT_MO_100]	112XT, HPF=100 Hz, monitor

MTD112b

182	[112b_FI]	MTD112b, full range, fill
183	[112b_FI_100]	MTD112b, HPF=100 Hz, fill
184	[112b_FR]	MTD112b, full range, FOH
185	[112b_FR_100]	MTD112b, HPF=100 Hz, FOH
186	[112b_MO]	MTD112b, full range, monitor
187	[112b_MO_100]	MTD112b, HPF=100 Hz, monitor

MTD108a

188	[108a_FI]	MTD108a, full range, fill
189	[108a_FI_100]	MTD108a, HPF=100 Hz, fill
190	[108a_FR]	MTD108a, full range, FOH
191	[108a_FR_100]	MTD108a, HPF=100 Hz, FOH
192	[108a_MO]	MTD108a, full range, monitor
193	[108a_MO_100]	MTD108a, HPF=100 Hz, monitor

FLAT

194	[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 137 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 7.11

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

K3r1

015	[K3r1 70]	Up-to-date K3(i) with "R1" sticker, full range, 70° adjustable fins settings
016	[K3r1 90]	Up-to-date K3(i) with "R1" sticker, full range, 90° adjustable fins settings
017	[K3r1 110]	Up-to-date K3(i) with "R1" sticker, full range, 110° adjustable fins settings

K3

018	[K3 70]	Legacy K3(i) full range, 70° adjustable fins settings
019	[K3 90]	Legacy K3(i) , full range, 90° adjustable fins settings
020	[K3 110]	Legacy K3(i) , full range, 110° adjustable fins settings

K1-SB

021	[K1SB_60]	K1-SB, LPF=60 Hz, optimized for CONTOUR configuration
022	[K1SB_X]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K1
023	[K1SB_X K2]	K1-SB, LPF=200 Hz, optimized for THROW configuration with K2

KARA_II

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

KARA

032	[KARA]	Kara(i), full range, FOH
033	[KARA_FI]	Kara(i), HPF=100 Hz, fill
034	[KARADOWNK1]	Kara, HPF=100 Hz, optimized delay for K1 downfill
035	[KARADOWNK2]	Kara, HPF=100 Hz, optimized delay for K2 downfill
036	[KARADOWNK3]	Kara, HPF=100 Hz, optimized delay for K3 downfill

ARCS_II

037	[ARCS II]	ARCS II, full range

A15

038	[A15]	A15(i) Wide or A15(i) Focus, full range
039	[A15_FI]	A15(i) Wide or A15(i) Focus, full range, fill
040	[A15_MO]	A15(i) Wide or A15(i) Focus, full range, monitor, low latency

A10

041	[A10]	A10(i) Wide or A10(i) Focus, full range
042	[A10_FI]	A10(i) Wide or A10(i) Focus, full range, fill
043	[A10_MO]	A10(i) Wide or A10(i) Focus, full range, monitor, low latency

ARCS_WF

044	[ARCS_WIFO]	ARCS Wide or ARCS Focus, full range, FOH
045	[ARCS_WIFO_FI]	ARCS Wide or ARCS Focus, full range, fill

KS28

046	[KS28_60]	KS28, LPF=60 Hz
047	[KS28_100]	KS28, LPF=100 Hz
048	[KS28_60_C]	KS28, LPF=60 Hz, cardioid pattern
049	[KS28_100_C]	KS28, LPF=100 Hz, cardioid pattern
050	[KS28_60_Cx]	KS28, LPF=60 Hz, extended cardioid pattern
051	[KS28_100_Cx]	KS28, LPF=100 Hz, extended cardioid pattern
052	[KS28 L2]	KS28, optimized for L2(D)
053	[KS28 L2_C]	KS28, cardioid pattern, optimized for L2(D)
054	[KS28 L2_Cx]	KS28, extended cardioid pattern, optimized for L2(D)

SB28

055	[SB28_60]	SB28, LPF=60 Hz
056	[SB28_100]	SB28, LPF=100 Hz
057	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
058	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
059	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
060	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

061	[KS21_60]	KS21(i), LPF=60 Hz
062	[KS21_100]	KS21(i), LPF=100 Hz
063	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
064	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
065	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
066	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

067	[SB18_60]	SB18, LPF=60 Hz
068	[SB18_100]	SB18, LPF=100 Hz
069	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
070	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
071	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
072	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

073	[SB15_100]	SB15m, LPF=100 Hz
074	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
075	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

076	[SB10_60]	SB10i(r), LPF=60 Hz
077	[SB10_100]	SB10i(r), LPF=100 Hz
078	[SB10_200]	SB10i(r), LPF=200 Hz

SB6

079	[SB6_60]	SB6i(r), LPF=60 Hz
080	[SB6_100]	SB6i(r), LPF=100 Hz
081	[SB6_200]	SB6i(r), LPF=200 Hz

KIVA_II

082	[KIVA II]	Kiva II, full range, FOH
083	[KIVA II_FI]	Kiva II, full range, fill

KIVA

084	[KIVA]	Kiva, full range, FOH
085	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

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

SYVA

087	[SYVA]	Syva, full range

SYVA_LOW

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

SYVA+LOW

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

SYVA+SUB

090	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)

SYVA_SUB

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

SOKA

093	[SOKA]	Soka(r), full range
094	[SOKA_60]	Soka(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
095	[SOKA_200]	Soka(r) for on-wall configuration with closely coupled sub

X15HiQ

096	[X15]	X15 HiQ, full range
097	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

098	[X12]	X12, full range
099	[X12_MO]	X12, full range, monitor, low latency

X8

100	[X8]	X8, full range
101	[X8_MO]	X8, full range, monitor, low latency

X8i

102	[X8i]	X8i, full range
103	[X8i_40]	X8i, lower LF limit, max SPL reduced by 6 dB
104	[X8i_MO]	X8i, full range, monitor, low latency

X6i

105	[X6i]	X6i, full range
106	[X6i_50]	X6i, lower LF limit, max SPL reduced by 6 dB
107	[X6i_MO]	X6i, full range, monitor, low latency

115XTHiQ

108	[HiQ_FI]	115XT HiQ, full range, fill
109	[HiQ_FI_100]	115XT HiQ, HPF=100 Hz, fill
110	[HiQ_FR]	115XT HiQ, full range, FOH
111	[HiQ_FR_100]	115XT HiQ, HPF=100 Hz, FOH
112	[HiQ_MO]	115XT HiQ, full range, monitor
113	[HiQ_MO_100]	115XT HiQ, HPF=100 Hz, monitor

12XTA

114	[12XTA_FI]	12XT active, full range, fill
115	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
116	[12XTA_FR]	12XT active, full range, FOH
117	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
118	[12XTA_MO]	12XT active, full range, monitor
119	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

120	[12XTP_FI]	12XT passive, full range, fill
121	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
122	[12XTP_FR]	12XT passive, full range, FOH
123	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
124	[12XTP_MO]	12XT passive, full range, monitor
125	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

126	[8XT_FI]	8XT, full range, fill
127	[8XT_FI_100]	8XT, HPF=100 Hz, fill
128	[8XT_FR]	8XT, full range, FOH
129	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
130	[8XT_MO]	8XT, full range, monitor
131	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

132	[5XT]	5XT, full range
133	[5XT_MO]	5XT, full range, monitor, low latency

X4

134	[X4]	X4i(r), full range
135	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
136	[X4_MO]	X4i(r), full range, monitor, low latency

FLAT

137	[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 076 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

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

K3r1

06	[K3r1 70]	Up-to-date K3(i) with "R1" sticker, full range, 70° adjustable fins settings
07	[K3r1 90]	Up-to-date K3(i) with "R1" sticker, full range, 90° adjustable fins settings
08	[K3r1 110]	Up-to-date K3(i) with "R1" sticker, full range, 110° adjustable fins settings

K3

09	[K3 70]	Legacy K3(i) full range, 70° adjustable fins settings
010	[K3 90]	Legacy K3(i) , full range, 90° adjustable fins settings
011	[K3 110]	Legacy K3(i) , full range, 110° adjustable fins settings

KARA II

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

A15

020	[A15]	A15(i) Wide or A15(i) Focus, full range
021	[A15_FI]	A15(i) Wide or A15(i) Focus, full range, fill
022	[A15_MO]	A15(i) Wide or A15(i) Focus, full range, monitor, low latency

A10

023	[A10]	A10(i) Wide or A10(i) Focus, full range
024	[A10_FI]	A10(i) Wide or A10(i) Focus, full range, fill
025	[A10_MO]	A10(i) Wide or A10(i) Focus, full range, monitor, low latency

KS21

026	[KS21_60]	KS21(i), LPF=60 Hz
027	[KS21_100]	KS21(i), LPF=100 Hz

KS21_C

028	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
029	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
030	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
031	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

032	[SB18_60]	SB18, LPF=60 Hz
033	[SB18_100]	SB18, LPF=100 Hz

SB18_C

034	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
035	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
036	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
037	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

038	[SB15_100]	SB15m, LPF=100 Hz

SB15_C

039	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
040	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

041	[SB10_60]	SB10i(r), LPF=60 Hz
042	[SB10_100]	SB10i(r), LPF=100 Hz
043	[SB10_200]	SB10i(r), LPF=200 Hz

SB6

044	[SB6_60]	SB6i(r), LPF=60 Hz
045	[SB6_100]	SB6i(r), LPF=100 Hz
046	[SB6_200]	SB6i(r), LPF=200 Hz

KIVA II

047	[KIVA II]	Kiva II, full range, FOH
048	[KIVA II_FI]	Kiva II, full range, fill

SYVA

049	[SYVA]	Syva, full range

SYVA LOW

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

SYVA SUB

052	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)
053	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
054	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

055	[SOKA]	Soka(r), full range
056	[SOKA_60]	Soka(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
057	[SOKA_200]	Soka(r) for on-wall configuration with closely coupled sub

X15

058	[X15]	X15 HiQ, full range
059	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

060	[X12]	X12, full range
061	[X12_MO]	X12, full range, monitor, low latency

X8

062	[X8]	X8, full range
063	[X8_MO]	X8, full range, monitor, low latency

X8i

064	[X8i]	X8i, full range
065	[X8i_40]	X8i, lower LF limit, max SPL reduced by 6 dB
066	[X8i_MO]	X8i, full range, monitor, low latency

X6i

067	[X6i]	X6i, full range
068	[X6i_50]	X6i, lower LF limit, max SPL reduced by 6 dB
069	[X6i_MO]	X6i, full range, monitor, low latency

5XT

070	[5XT]	5XT, full range
071	[5XT_MO]	5XT, full range, monitor, low latency

X4

072	[X4]	X4i(r), full range
073	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
074	[X4_MO]	X4i(r), full range, monitor, low latency

FLAT_LA7.16_8R

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

FLAT_LA7.16_4R

076	[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 076 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

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

K3r1

06	[K3r1 70]	Up-to-date K3(i) with "R1" sticker, full range, 70° adjustable fins settings
07	[K3r1 90]	Up-to-date K3(i) with "R1" sticker, full range, 90° adjustable fins settings
08	[K3r1 110]	Up-to-date K3(i) with "R1" sticker, full range, 110° adjustable fins settings

K3

09	[K3 70]	Legacy K3(i) full range, 70° adjustable fins settings
010	[K3 90]	Legacy K3(i) , full range, 90° adjustable fins settings
011	[K3 110]	Legacy K3(i) , full range, 110° adjustable fins settings

KARA II

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

A15

020	[A15]	A15(i) Wide or A15(i) Focus, full range
021	[A15_FI]	A15(i) Wide or A15(i) Focus, full range, fill
022	[A15_MO]	A15(i) Wide or A15(i) Focus, full range, monitor, low latency

A10

023	[A10]	A10(i) Wide or A10(i) Focus, full range
024	[A10_FI]	A10(i) Wide or A10(i) Focus, full range, fill
025	[A10_MO]	A10(i) Wide or A10(i) Focus, full range, monitor, low latency

KS21

026	[KS21_60]	KS21(i), LPF=60 Hz
027	[KS21_100]	KS21(i), LPF=100 Hz

KS21_C

028	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
029	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
030	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
031	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

032	[SB18_60]	SB18, LPF=60 Hz
033	[SB18_100]	SB18, LPF=100 Hz

SB18_C

034	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
035	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
036	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
037	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

038	[SB15_100]	SB15m, LPF=100 Hz

SB15_C

039	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
040	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

041	[SB10_60]	SB10i(r), LPF=60 Hz
042	[SB10_100]	SB10i(r), LPF=100 Hz
043	[SB10_200]	SB10i(r), LPF=200 Hz

SB6

044	[SB6_60]	SB6i(r), LPF=60 Hz
045	[SB6_100]	SB6i(r), LPF=100 Hz
046	[SB6_200]	SB6i(r), LPF=200 Hz

KIVA II

047	[KIVA II]	Kiva II, full range, FOH
048	[KIVA II_FI]	Kiva II, full range, fill

SYVA

049	[SYVA]	Syva, full range

SYVA LOW

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

SYVA SUB

052	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)
053	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
054	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

055	[SOKA]	Soka(r), full range
056	[SOKA_60]	Soka(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
057	[SOKA_200]	Soka(r) for on-wall configuration with closely coupled sub

X15

058	[X15]	X15 HiQ, full range
059	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

060	[X12]	X12, full range
061	[X12_MO]	X12, full range, monitor, low latency

X8

062	[X8]	X8, full range
063	[X8_MO]	X8, full range, monitor, low latency

X8i

064	[X8i]	X8i, full range
065	[X8i_40]	X8i, lower LF limit, max SPL reduced by 6 dB
066	[X8i_MO]	X8i, full range, monitor, low latency

X6i

067	[X6i]	X6i, full range
068	[X6i_50]	X6i, lower LF limit, max SPL reduced by 6 dB
069	[X6i_MO]	X6i, full range, monitor, low latency

5XT

070	[5XT]	5XT, full range
071	[5XT_MO]	5XT, full range, monitor, low latency

X4

072	[X4]	X4i(r), full range
073	[X4_60]	X4i(r), lower LF limit, max SPL reduced by 6 dB, for on-wall configuration with separated sub
074	[X4_MO]	X4i(r), full range, monitor, low latency

FLAT_LA7.16_8R

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

FLAT_LA7.16_4R

076	[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 ultra-dense line source presets

The factory layouts dedicated to progressive ultra-dense 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 L2_C] or [KS28 L2_Cx].

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 L2_C] [KS28 L2_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

i 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*] or [K3r1 *xxx*]	—	42 Hz - 20 kHz adjustable horizontal directivity
K3 line source + subwoofers	[K3 *xxx*] or [K3r1 *xxx*]	[KS*xx*_60]	down to 29 Hz (KS21) or 25 Hz (KS28) reinforced LF contour

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

Choosing between [K3 *xxx*] and [K3r1 *xxx*] presets

[K3r1 *xxx*] presets must only be used for K3(i) enclosures that were updated during the HF diaphragm replacement campaign (launched mid-2023) or that were manufactured after this campaign. Up-to-date enclosures have an "R1" sticker on the identification label.

If the "R1" sticker is not present on the label, use the legacy [K3 *xxx*] presets and contact your L-Acoustics representative to make the update. Do not use a [K3r1 *xxx*] preset on a K3(i) that is not up-to-date because the preset could damage the HF driver.

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*] / [K3r1 *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

i 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 A	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 + closely coupled Syva Low	[SYVA LOW SYVA]		—	down to 42 Hz reinforced LF contour
colinear source + coupled Syva Low	[SYVA]	[SYVA LOW_100]	—	down to 40 Hz reinforced LF contour
colinear source + closely coupled Syva Sub	[SYVA SUB SYVA]	—	[SYVA SUB SYVA]	down to 28 Hz
colinear source + coupled Syva Sub	[SYVA]	—	[SYVA SUB_100]	down to 27 Hz
colinear source + closely 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]	

When using [SYVA] with [SYVA SUB_100], reduce the Syva gain by 5 dB to obtain a flat response.

[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

[SYVA SUB SYVA]

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

Hybrid preset combining Syva and Syva Low/Syva Sub.
Use the hybrid preset only when Syva is on top of Syva Low or Syva Sub using AutoConnect.
When Syva and Syva Low/Syva Sub are further apart, create a custom preset in LA Network Manager combining [SYVA] and [SYVA LOW_100]/[SYVA SUB_100].

Do not use [SYVA SUB_200] with Syva.
[SYVA SUB_200] is optimized for use with the [X4] preset.
Refer to X4i (p.76).

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.

X6i

X6i is a passive coaxial loudspeaker enclosure.

loudspeaker configuration	preset(s)		acoustic properties
	X6i	SB6i / SB10i*	
single enclosure	[X6i]	—	69 Hz - 20 kHz
	[X6i_50]		54 Hz - 20 kHz
	[X6i_MO]		65 Hz - 20 kHz low latency
single enclosure + closely coupled subwoofers	[X6i] or [X6i_50]	[SB*xx*_200]	down to 32 Hz (SB6i) or 29 Hz (SB10i) reinforced LF contour
single enclosure + coupled subwoofers		[SB*xx*_100]	down to 29 Hz (SB6i) or 27 Hz (SB10i) reinforced LF contour

* with subwoofers as a cardioid array, use [SB*xx*_*xxx*_C] or [SB*xx*_*xxx*_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.

[X6i], [X6i_50] and [X6i_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.

X8i

X8i is a passive coaxial loudspeaker enclosure.

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
	X8i	**SB10i / KS21 / Syva Sub***	
single enclosure	[X8i]	—	67 Hz - 20 kHz
	[X8i_40]		43 Hz - 20 kHz
	[X8i_MO]		59 Hz - 20 kHz low latency
single enclosure + coupled subwoofers	[X8i] or [X8i_40]	[*xxx*_100]	down to 27 Hz (SB10i or Syva Sub), 31 Hz (KS21) reinforced LF contour
single enclosure + separated subwoofers		[*xxx*_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [*xxxx_xxx*_C] or [*xxxx_xxx*_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.

[X8i], [X8i_40] and [X8i_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 L2_C], or [KS28 L2_Cx]	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.

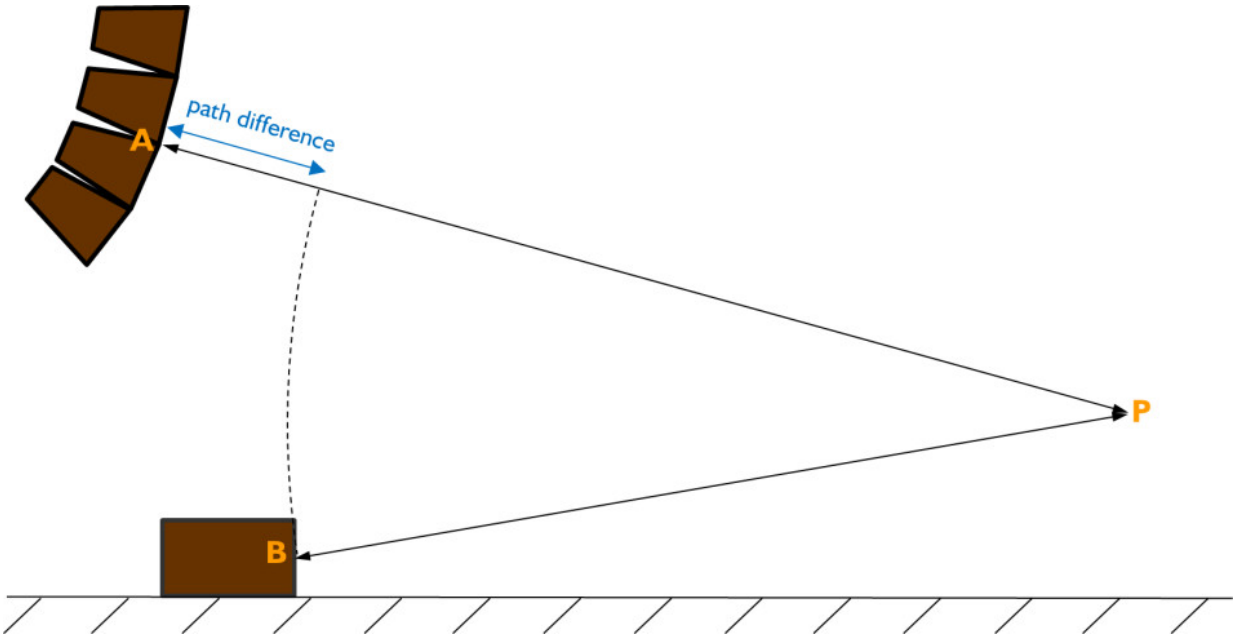
Pre-alignment delays have been measured with the enclosures at the same geometric location, front face on the same plane.

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 ultra-dense line sources

Pre-alignment delay values are optimized considering the extended latency applied by the Soundvision Autofilter algorithm.

L2/L2D + KS28

presets	pre-alignment delay values and polarity settings			
[L2]/[L2D] + [KS28 L2]	L2/L2D = 0 ms	+	KS28 = 5 ms	-
[L2]/[L2D] + [KS28 L2_C]	L2/L2D = 0 ms	+	KS28 = 0 ms	-
[L2]/[L2D] + [KS28 L2_Cx]	L2/L2D = 0 ms	+	KS28 = 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_MO] + [SB18_100]	Kara II = 0 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

Syva + Syva Sub

presets	pre-alignment delay values and polarity settings	
[SYVA] + [SYVA SUB_100]	Syva = 0 ms +	Syva Sub = 2.6 ms +

Syva + Syva Low + Syva Sub

presets	pre-alignment delay values and polarity settings		
[SYVA] + [SYVA LOW_100] + [SYVA SUB_100]	Syva = 0 ms +	Syva Low = 0 ms +	Syva Sub = 3.8 ms +

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 + SB10i

presets	pre-alignment delay values and polarity settings			
[X8] + [SB10_100]	X8 = 0 ms	+	SB10i = 3.2 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	-

X8 + Syva Sub

presets	pre-alignment delay values and polarity settings			
[X8] + [SYVA SUB_100]	X8 = 0 ms	+	Syva Sub = 0.7 ms	-

X8i + SB10i

presets	pre-alignment delay values and polarity settings			
[X8i] + [SB10_100]	X8i = 0 ms	+	SB10i = 0.5 ms	+
[X8i_40] + [SB10_60]	X8i = 0 ms	+	SB10i = 3 ms	+

X8i + Syva Sub

presets	pre-alignment delay values and polarity settings			
[X8i] + [SYVA SUB_100]	X8i = 0 ms	+	Syva Sub = 0 ms	-

X8i + KS21

presets	pre-alignment delay values and polarity settings			
[X8i] + [KS21_100]	X8i = 0 ms	+	KS21 = 0 ms	+
[X8i_40] + [KS21_60]	X8i = 4.8 ms	+	KS21 = 0 ms	-

X6i + SB6i

presets	pre-alignment delay values and polarity settings			
[X6i] + [SB6_200]	X6i = 0 ms	+	SB6i = 0 ms	-
[X6i] + [SB6_100]	X6i = 0 ms	+	SB6i = 1.2 ms	+
[X6i_50] + [SB6_60]	X6i = 0 ms	+	SB6i = 2 ms	+

X6i + SB10i

presets	pre-alignment delay values and polarity settings			
[X6i] + [SB10_200]	X6i = 1.4 ms	+	SB10i = 0 ms	-
[X6i] + [SB10_100]	X6i = 0 ms	+	SB10i = 0 ms	+
[X6i_50] + [SB10_60]	X6i = 0 ms	+	SB10i = 6.8 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.116) 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
X6i	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
X8	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
X8i	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

	LA2Xi			LA4X	LA7.16(i)	LA12X
	per output* / total			per output* / total	per output* / total[b]	per output* / total
	SE[a]	BTL	PBTL			
K3(i)	—			1 / 2	1 / 8	3 / 6
Kara(i)	2 / 4	—		2 / 4	—	3 / 6
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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