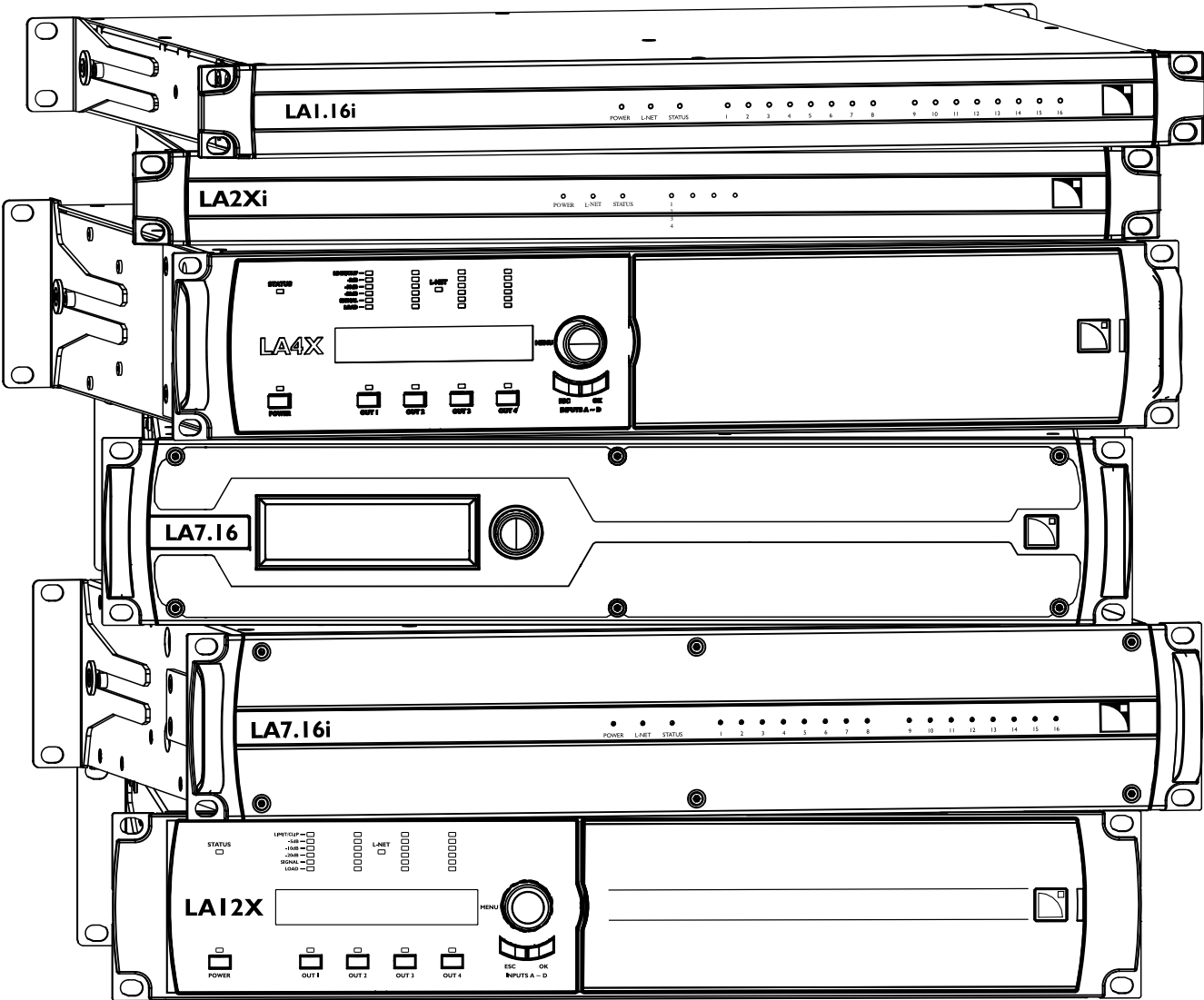


Preset Guide



owner's manual (EN)



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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 LA1.16i, LA2Xi, LA4, LA4X, LA7.16(i), LA8, LA12X, LA-RAK, LA-RAK II, LA-RAK II AVB, and LA-RAK III 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 version 7.14 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	<ul style="list-style-type: none"> Added the K2 system. Added LA4X.
4.0a	Dec. 9, 2013	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Added KS28. Added LA12X.
7.1	May 2016	
8.0/8.1	Oct. 2016	<ul style="list-style-type: none"> Added the Kiva II system. Added information on the adjusted output gain in SB15m presets for improved headroom.
9.0	Jun. 2017	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Added the Kara II system. Updated information on the default output routing for the X series.
15.0	Oct. 2020	<ul style="list-style-type: none"> Added LA2Xi. Added the K3 system.
16.0	Mar. 2021	Added the Kara Ili system.
17.0	Jul. 2021	Added the K3i system.
18.0	Feb. 2022	<ul style="list-style-type: none"> 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.91) 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	<ul style="list-style-type: none"> Added LA7.16i enclosure drive capacity. Updated pre-alignment delays for [X4_MO] with Syva Sub and SB10i.
20.0	Nov. 2022	<ul style="list-style-type: none"> Added SB6i. Added presets [X4_60] and [KARA II_MO]. Updated pre-alignment delays for [A15_MO] and [X12_MO].
21.0	Mar. 2023	<ul style="list-style-type: none"> Added Soka. Added preset [SB10_60]. Added LA7.16i layout library.
21.1	Mar. 2023	<ul style="list-style-type: none"> Issue fixes and improvements.
22.0	Jun. 2023	<ul style="list-style-type: none"> Added LA7.16 layout library and enclosure drive capacity. Added L2 / L2D system. Added [KARAIIDOWNxx 70] and [KARAIIDOWNxx 90] presets.
23.0	Feb. 2024	<ul style="list-style-type: none"> Added X8i and X6i. Added [K3r1 xxx] presets. Refer to K3 (p.53). 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.92) to take into account the extended latency applied by the Soundvision Autofilter algorithm and the updated L2/L2D presets.
24.0	May 2024	<ul style="list-style-type: none"> Added preset [SYVA SUB SYVA]. Added pre-alignment delays for [SYVA] with [SYVA SUB_100].
25.0	Oct. 2024	<ul style="list-style-type: none"> [K3r1 xxx] presets are renamed [K3 xxx] and legacy [K3 xxx] presets are removed. For more information, refer to the LA Network Manager 3.9.0 release notes. Added preset [SYVA SUB_60], compatible with Soka, X6i, and X8i.
26.0	Mar. 2025	Added Enclosure maximum SPL per amplified controller (p.123).
27.0	Jun. 2025	<ul style="list-style-type: none"> Added LA1.16i enclosure drive capacity and enclosure maximum SPL. Updated pre-alignment delays for L2/L2D with KS28.

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.



LA1.16i SE and BTL, LA2Xi SE

With LA1.16i in SE and BTL modes, and LA2Xi in SE mode, specific rules apply depending on the enclosure type, so that the power gauge reflects the power that is available on the amplified controllers.

Refer to the power gauge indications in Soundvision and LA Network Manager.

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 versions of the preset library that are older than version 6.0, 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.91).

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 two, 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 two, 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 × 700 W	4 × 1400 W	4 × 2600 W	4 × 3300 W
LA8		4 × 550 W	4 × 1100 W	4 × 1800 W	
LA7.16(i)		16 × 580 W	16 × 920 W	16 × 1000 W	—
LA4X		4 × 500 W	4 × 1000 W		—
LA4		4 × 400 W	4 × 800 W	4 × 1000 W	—
LA2Xi	SE	4 × 190 W	4 × 360 W	4 × 640 W	—
	BTL	2 × 710 W	2 × 1260 W	—	
	PBTL	—	—	1 × 2550 W	
LA1.16i	SE	16 × 40 W	16 × 80 W	16 × 120 W	—
	BTL	8 × 160 W	8 × 230 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 093 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 7.14

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	[KARAIIIDOWNK3]	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
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SYVA_LOW

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

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

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

070	[SYVA SUB_60]	Syva Sub, LPF=60 Hz
071	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
072	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

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

X15HiQ

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

X12

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

X8

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

X8i

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

X6i

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

5XT

088	[5XT]	5XT, full range
089	[5XT_MO]	5XT, full range, monitor, low latency

X4

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

FLAT

093	[FLAT_LA2X]	Flat EQ, protection minimizing clipping risks
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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 7.14

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
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KILOKIVA

014	[KIVA_KILO]	Kiva & Kilo, full range, X-OVER=100 Hz, FOH
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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
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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
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LA4X preset library

The LA4X onboard preset library is stored in the factory memory locations 011 to 127 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 7.14

K2

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

K3

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

KUDO

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

KARA_II

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

KARA

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

KIVA_II

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

KIVA

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

SB15KIVA

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

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

045	[ARCS II]	ARCS II, full range
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A15

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

A10

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

ARCS_WF

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

KS21

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

SB18

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

SB15

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

SB10

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

SB6

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

KILO

075	[KILO]	Kilo, LPF=100 Hz
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SYVA

076	[SYVA]	Syva, full range
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SYVA_LOW

077	[SYVA_LOW_100]	Syva Low (separated), LPF=100 Hz
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SYVA+LOW

078	[SYVA_LOW SYVA]	Syva & Syva Low (coupled)
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SYVA+SUB

079	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)
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SYVA_SUB

080	[SYVA SUB_60]	Syva Sub, LPF=60 Hz
081	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
082	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

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

X15HiQ

086	[X15]	X15 HiQ, full range
087	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

088	[X12]	X12, full range
089	[X12_MO]	X12, full range, monitor, low latency

X8

090	[X8]	X8, full range
091	[X8_MO]	X8, full range, monitor, low latency

X8i

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

X6i

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

115XTHiQ

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

12XTA

104	[12XTA_FI]	12XT active, full range, fill
105	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
106	[12XTA_FR]	12XT active, full range, FOH
107	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
108	[12XTA_MO]	12XT active, full range, monitor
109	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

110	[12XTP_FI]	12XT passive, full range, fill
111	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
112	[12XTP_FR]	12XT passive, full range, FOH
113	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
114	[12XTP_MO]	12XT passive, full range, monitor
115	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

116	[8XT_FI]	8XT, full range, fill
117	[8XT_FI_100]	8XT, HPF=100 Hz, fill
118	[8XT_FR]	8XT, full range, FOH
119	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
120	[8XT_MO]	8XT, full range, monitor
121	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

122	[5XT]	5XT, full range
123	[5XT_MO]	5XT, full range, monitor, low latency

X4

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

FLAT

127	[FLAT_LA4X]	Flat EQ, protection minimizing clipping risks
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LA8 preset library

The LA8 onboard preset library is stored in the factory memory locations 011 to 192 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 7.14

K1

011	[K1]	K1, full range
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K2

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

K3

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

K1-SB

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

V-DOSC

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

KUDO

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

KARA_II

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

KARA

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

dV-DOSC

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

dV-D_dVS

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

dV-SUB

058	[dV-S_60_100]	dV-SUB, HPF=60 Hz, LPF=100 Hz
059	[dV-S_100]	dV-SUB, LPF=100 Hz
060	[dV-S_60_X]	dV-SUB, HPF=60 Hz, LPF=200 Hz, optimized for [V-DOSC_xx_60] presets
061	[dV-S_X]	dV-SUB, LPF=200 Hz, optimized for [V-DOSC_xx_X] presets

ARCS_II

062	[ARCS II]	ARCS II, full range
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ARCS

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

A15

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

A10

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

ARCS_WF

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

SB28

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

KS21

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

SB218

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

SB18

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

SB118

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

SB15

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

SB10

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

KILO

108	[KILO]	Kilo, LPF=100 Hz
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KIVA_II

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

KIVA

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

SB15KIVA

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

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

115	[SYVA]	Syva, full range
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SYVA_LOW

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

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

118	[SYVA SUB_60]	Syva Sub, LPF=60 Hz
119	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
120	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

X15HiQ

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

X12

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

X8

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

115XTHiQ

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

12XTA

133	[12XTA_FI]	12XT active, full range, fill
134	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
135	[12XTA_FR]	12XT active, full range, FOH
136	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
137	[12XTA_MO]	12XT active, full range, monitor
138	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

139	[12XTP_FI]	12XT passive, full range, fill
140	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
141	[12XTP_FR]	12XT passive, full range, FOH
142	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
143	[12XTP_MO]	12XT passive, full range, monitor
144	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

145	[8XT_FI]	8XT, full range, fill
146	[8XT_FI_100]	8XT, HPF=100 Hz, fill
147	[8XT_FR]	8XT, full range, FOH
148	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
149	[8XT_MO]	8XT, full range, monitor
150	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

151	[5XT]	5XT, full range
152	[5XT_MO]	5XT, full range, monitor, low latency

X4

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

115XT

156	[115XT_FI]	115XT, full range, fill
157	[115XT_FI_100]	115XT, HPF=100 Hz, fill
158	[115XT_FR]	115XT, full range, FOH
159	[115XT_FR_100]	115XT, HPF=100 Hz, FOH
160	[115XT_MO]	115XT, full range, monitor
161	[115XT_MO_100]	115XT, HPF=100 Hz, monitor

MTD115bA

162	[115bA_FI]	MTD115b active, full range, fill
163	[115bA_FI_100]	MTD115b active, HPF=100 Hz, fill
164	[115bA_FR]	MTD115b active, full range, FOH
165	[115bA_FR_100]	MTD115b active, HPF=100 Hz, FOH
166	[115bA_MO]	MTD115b active, full range, monitor
167	[115bA_MO_100]	MTD115b active, HPF=100 Hz, monitor

MTD115bP

168	[115bP_FI]	MTD115b passive, full range, fill
169	[115bP_FI_100]	MTD115b passive, HPF=100 Hz, fill
170	[115bP_FR]	MTD115b passive, full range, FOH
171	[115bP_FR_100]	MTD115b passive, HPF=100 Hz, FOH
172	[115bP_MO]	MTD115b passive, full range, monitor
173	[115bP_MO_100]	MTD115b passive, HPF=100 Hz, monitor

112XT

174	[112XT_FI]	112XT, full range, fill
175	[112XT_FI_100]	112XT, HPF=100 Hz, fill
176	[112XT_FR]	112XT, full range, FOH
177	[112XT_FR_100]	112XT, HPF=100 Hz, FOH
178	[112XT_MO]	112XT, full range, monitor
179	[112XT_MO_100]	112XT, HPF=100 Hz, monitor

MTD112b

180	[112b_FI]	MTD112b, full range, fill
181	[112b_FI_100]	MTD112b, HPF=100 Hz, fill
182	[112b_FR]	MTD112b, full range, FOH
183	[112b_FR_100]	MTD112b, HPF=100 Hz, FOH
184	[112b_MO]	MTD112b, full range, monitor
185	[112b_MO_100]	MTD112b, HPF=100 Hz, monitor

MTD108a

186	[108a_FI]	MTD108a, full range, fill
187	[108a_FI_100]	MTD108a, HPF=100 Hz, fill
188	[108a_FR]	MTD108a, full range, FOH
189	[108a_FR_100]	MTD108a, HPF=100 Hz, FOH
190	[108a_MO]	MTD108a, full range, monitor
191	[108a_MO_100]	MTD108a, HPF=100 Hz, monitor

FLAT

192	[FLAT_LA8]	Flat EQ, protection minimizing clipping risks
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LA12X preset library

The LA12X onboard preset library is stored in the factory memory locations 011 to 135 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 7.14

K1

011	[K1]	K1, full range
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K2

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

K3

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

K1-SB

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

KARA_II

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

KARA

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

ARCS_II

034	[ARCS_II]	ARCS II, full range
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A15

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

A10

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

ARCS_WF

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

KS28

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

SB28

052	[SB28_60]	SB28, LPF=60 Hz
053	[SB28_100]	SB28, LPF=100 Hz
054	[SB28_60_C]	SB28, LPF=60 Hz, cardioid pattern
055	[SB28_100_C]	SB28, LPF=100 Hz, cardioid pattern
056	[SB28_60_Cx]	SB28, LPF=60 Hz, extended cardioid pattern
057	[SB28_100_Cx]	SB28, LPF=100 Hz, extended cardioid pattern

KS21

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

SB18

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

SB15

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

SB10

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

SB6

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

KIVA_II

079	[KIVA II]	Kiva II, full range, FOH
080	[KIVA II_FI]	Kiva II, full range, fill

KIVA

081	[KIVA]	Kiva, full range, FOH
082	[KIVA_FI]	Kiva, full range, fill

SB15KIVA

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

084	[SYVA]	Syva, full range
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SYVA_LOW

085	[SYVA LOW_100]	Syva Low (separated), LPF=100 Hz
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SYVA+LOW

086	[SYVA LOW SYVA]	Syva & Syva Low (coupled)
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SYVA+SUB

087	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)
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SYVA_SUB

088	[SYVA SUB_60]	Syva Sub, LPF=60 Hz
089	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
090	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

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

X15HiQ

094	[X15]	X15 HiQ, full range
095	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

096	[X12]	X12, full range
097	[X12_MO]	X12, full range, monitor, low latency

X8

098	[X8]	X8, full range
099	[X8_MO]	X8, full range, monitor, low latency

X8i

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

X6i

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

115XTHiQ

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

12XTA

112	[12XTA_FI]	12XT active, full range, fill
113	[12XTA_FI_100]	12XT active, HPF=100 Hz, fill
114	[12XTA_FR]	12XT active, full range, FOH
115	[12XTA_FR_100]	12XT active, HPF=100 Hz, FOH
116	[12XTA_MO]	12XT active, full range, monitor
117	[12XTA_MO_100]	12XT active, HPF=100 Hz, monitor

12XTP

118	[12XTP_FI]	12XT passive, full range, fill
119	[12XTP_FI_100]	12XT passive, HPF=100 Hz, fill
120	[12XTP_FR]	12XT passive, full range, FOH
121	[12XTP_FR_100]	12XT passive, HPF=100 Hz, FOH
122	[12XTP_MO]	12XT passive, full range, monitor
123	[12XTP_MO_100]	12XT passive, HPF=100 Hz, monitor

8XT

124	[8XT_FI]	8XT, full range, fill
125	[8XT_FI_100]	8XT, HPF=100 Hz, fill
126	[8XT_FR]	8XT, full range, FOH
127	[8XT_FR_100]	8XT, HPF=100 Hz, FOH
128	[8XT_MO]	8XT, full range, monitor
129	[8XT_MO_100]	8XT, HPF=100 Hz, monitor

5XT

130	[5XT]	5XT, full range
131	[5XT_MO]	5XT, full range, monitor, low latency

X4

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

FLAT

135	[FLAT_LA12X]	Flat EQ, protection minimizing clipping risks
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LA7.16i layout library

The LA7.16i onboard layout library is stored in the factory memory locations 01 to 074 of the controller. Each layout family is described in the tables below, including the layouts memory location number, name, and description.

LA7.16i layout library 7.14

L2

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

02	[L2D 110]	L2D, full range, 110° adjustable fins settings
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K2

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

K3

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

KARA_II

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

A15

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

A10

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

KS21

023	[KS21_60]	KS21(i), LPF=60 Hz
024	[KS21_100]	KS21(i), LPF=100 Hz
025	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
026	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
027	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
028	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

029	[SB18_60]	SB18, LPF=60 Hz
030	[SB18_100]	SB18, LPF=100 Hz
031	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
032	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
033	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
034	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

035	[SB15_100]	SB15m, LPF=100 Hz
036	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
037	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

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

SB6

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

KIVA_II

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

SYVA

046	[SYVA]	Syva, full range
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SYVA_LOW

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

048	[SYVA LOW SYVA]	Syva & Syva Low (coupled)
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SYVA+SUB

049	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)
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SYVA_SUB

050	[SYVA SUB_60]	Syva Sub, LPF=60 Hz
051	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
052	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

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

X15HiQ

056	[X15]	X15 HiQ, full range
057	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

058	[X12]	X12, full range
059	[X12_MO]	X12, full range, monitor, low latency

X8

060	[X8]	X8, full range
061	[X8_MO]	X8, full range, monitor, low latency

X8i

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

X6i

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

5XT

068	[5XT]	5XT, full range
069	[5XT_MO]	5XT, full range, monitor, low latency

X4

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

FLAT

073	[FLAT_LA7.16_8R]	Flat EQ, protection minimizing clipping risks. Use for loads of 8 Ω and more.
074	[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 074 of the controller. Each layout family is described in the tables below, including the layouts memory location number, name, and description.

LA7.16 layout library 7.14

L2

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

02	[L2D 110]	L2D, full range, 110° adjustable fins settings
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K2

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

K3

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

KARA_II

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

A15

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

A10

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

KS21

023	[KS21_60]	KS21(i), LPF=60 Hz
024	[KS21_100]	KS21(i), LPF=100 Hz
025	[KS21_60_C]	KS21(i), LPF=60 Hz, cardioid pattern
026	[KS21_100_C]	KS21(i), LPF=100 Hz, cardioid pattern
027	[KS21_60_Cx]	KS21(i), LPF=60 Hz, extended cardioid pattern
028	[KS21_100_Cx]	KS21(i), LPF=100 Hz, extended cardioid pattern

SB18

029	[SB18_60]	SB18, LPF=60 Hz
030	[SB18_100]	SB18, LPF=100 Hz
031	[SB18_60_C]	SB18, LPF=60 Hz, cardioid pattern
032	[SB18_100_C]	SB18, LPF=100 Hz, cardioid pattern
033	[SB18_60_Cx]	SB18, LPF=60 Hz, extended cardioid pattern
034	[SB18_100_Cx]	SB18, LPF=100 Hz, extended cardioid pattern

SB15

035	[SB15_100]	SB15m, LPF=100 Hz
036	[SB15_100_C]	SB15m, LPF=100 Hz, cardioid pattern
037	[SB15_100_Cx]	SB15m, LPF=100 Hz, extended cardioid pattern

SB10

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

SB6

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

KIVA_II

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

SYVA

046	[SYVA]	Syva, full range
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SYVA_LOW

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

048	[SYVA LOW SYVA]	Syva & Syva Low (coupled)
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SYVA+SUB

049	[SYVA SUB SYVA]	Syva & Syva Sub (coupled)
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SYVA_SUB

050	[SYVA SUB_60]	Syva Sub, LPF=60 Hz
051	[SYVA SUB_100]	Syva Sub, LPF=100 Hz
052	[SYVA SUB_200]	Syva Sub, LPF=200 Hz, optimized for [X4] preset

SOKA

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

X15HiQ

056	[X15]	X15 HiQ, full range
057	[X15_MO]	X15 HiQ, full range, monitor, low latency

X12

058	[X12]	X12, full range
059	[X12_MO]	X12, full range, monitor, low latency

X8

060	[X8]	X8, full range
061	[X8_MO]	X8, full range, monitor, low latency

X8i

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

X6i

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

5XT

068	[5XT]	5XT, full range
069	[5XT_MO]	5XT, full range, monitor, low latency

X4

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

FLAT

073	[FLAT_LA7.16_8R]	Flat EQ, protection minimizing clipping risks. Use for loads of 8 Ω and more.
074	[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.
- Using the [FLAT_LA1.16] layout with LA1.16i provides -2 dB of headroom.
- Using the [FLAT_LA1.16 BTL] layout with LA1.16i provides 0 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] / [FLAT_LA1.16] / [FLAT_LA1.16 BTL]

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



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]	—	[xx28_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [xx28_60_C] or [xx28_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]	—	[xx28_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [xx28_60_C] or [xx28_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 Ili are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

loudspeaker configuration	preset(s)		acoustic properties
	K3	KS28 or KS21 *	
K3 line source	[K3 xxx]	—	42 Hz - 20 kHz adjustable horizontal directivity
K3 line source + subwoofers	[K3 xxx]	[KSxx_60]	down to 29 Hz (KS21) or 25 Hz (KS28) reinforced LF contour

* with subwoofers as a cardioid array, use [KSxx_xx_C] or [KSxx_xx_Cx]



K3 adjustable fins and presets

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

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

Refer to the K3 owner's manual for details.



Downfill options for additional vertical coverage

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

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

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

[K3 xxx]

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

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

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



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



The factory parameters already include optimal delay value for the coupling of a K3 line source with Kara or Kara II as a downfill.

[KARADOWNK3] / [KARAIIDOWNK3] / [KARAIIDOWNK3 70] / [KARAIIDOWNK3 90] provide 15 dB of headroom.



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

Kara II



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

SB18 and SB18 Ili 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 [SB1x_xx_C] or [SB1x_xx_Cx]

[KIVA II]

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

[KIVA II_FI]

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



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

Kiva SB15m

loudspeaker configuration	preset(s)		acoustic properties
	Kiva	SB15m*	
line source	[KIVA]	—	80 Hz - 20 kHz
line source + coupled subwoofer	[KIVA_SB15]		down to 40 Hz
	[KIVA]	[SB15_100]	reinforced LF contour
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					ON
KIVA	OUT 2	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 3	PA					ON
KIVA	OUT 4	PA					ON



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



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					ON
KIVA	OUT 2	PA	IN A	0 dB	0 ms	+	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	[KUDOxx_25]	—	35 Hz - 20 kHz
	[KUDOxx_40]		40 Hz - 20 kHz
	[KUDOxx_60]		60 Hz - 20 kHz
line source + subwoofer	[KUDOxx_40]	[xxx8_60]	down to 25 Hz (KS28 and SB28) or 32 Hz (SB18) reinforced LF contour

* with subwoofers as a cardioid array, use [xxx8_60_C] or [xxx8_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.

[KUDOxx_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]	—	[xx28_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]	[xx28_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 [xx28_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_xx60]		[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_xx60] 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]	[xx28_60]	down to 25 Hz reinforced LF contour

* with subwoofers as a cardioid array, use [xx28_60_C] or [xx28_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.77).



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

Soka

loudspeaker configuration	preset(s)		acoustic properties
	Soka	SB6i / SB10i / Syva Sub	
colinear source	[SOKA]	—	100 Hz - 20 kHz
colinear source + closely coupled subwoofers	[SOKA_200]	[SBxx_200]	down to 32 Hz (SB6i) or 29 Hz (SB10i) reinforced LF contour
colinear source + coupled subwoofers	[SOKA]	[SBxx_100]	down to 29 Hz (SB6i) or 27 Hz (SB10i) reinforced LF contour
colinear source + separated subwoofers	[SOKA_60]	[xxx_60]	down to 29 Hz (SB6i) or 25 Hz (SB10i) or 26 Hz (Syva Sub) 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]	[SBxx_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]	[SBxx_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]	[SBxx_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 / Syva Sub	
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]	[SBxx_200]	down to 32 Hz (SB6i) or 29 Hz (SB10i) reinforced LF contour
single enclosure + coupled subwoofers		[SBxx_100]	down to 29 Hz (SB6i) or 27 Hz (SB10i) reinforced LF contour
single enclosure + separated subwoofers	[X6i_50]	[SYVA SUB_60]	down to 26 Hz



[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 (SB10i / KS21) or 26 Hz (Syva Sub) 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]	[SBxx_100]	down to 40 Hz (SB15m) or 32 Hz (SB18/SB118) reinforced LF contour	

* with subwoofers as a cardioid array, use [SBxx_xx_C] or [SBxx_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]	[SBxx_100]	down to 32 Hz reinforced LF contour	

* with subwoofers as a cardioid array, use [SBxx_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).



LA1.16i SE and BTL, LA2Xi SE

With LA1.16i in SE and BTL modes, and LA2Xi in SE mode, specific rules apply depending on the enclosure type, so that the power gauge reflects the power that is available on the amplified controllers.

Refer to the power gauge indications in Soundvision and LA Network Manager.

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 versions of the preset library that are older than version 6.0, 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 enclosures	preset(s)	optimal compatibility
KS28	[KS28_60] / [KS28_60_C] / [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] / [KS28_100_Cx]	dV-DOSC, Kara, ARCS (coupled)
	[KS28 L2] / [KS28 L2_C] / [KS28 L2_Cx]	L2, L2D
SB28	[SB28_60] / [SB28_60_C] / [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] / [SB28_100_Cx]	dV-DOSC, Kara, ARCS (coupled)
KS21(i)	[KS21_60] / [KS21_60_C] / [KS21_60_Cx]	A15(i) Wide/Focus, Kara(i), Kara II(i), K3(i), X8i
	[KS21_100] / [KS21_100_C] / [KS21_100_Cx]	A10(i) Wide/Focus, X15 HiQ, X12, XT, Kara(i), Kara II(i), X8i
SB18(i/m) SB18 Ili	[SB18_60] / [SB18_60_C] / [SB18_60_Cx]	Kudo, Kara, Kara II(i), Kiva/Kilo, ARCS, ARCS Wide, ARCS Focus
	[SB18_100] / [SB18_100_C] / [SB18_100_Cx]	Kara, Kara II(i), ARCS, XT, X series, Kiva II
SB218	[SB218_60]	V-DOSC, Kudo, dV-DOSC/dV-SUB, ARCS

subwoofer enclosures	preset(s)	optimal compatibility
	[SB218_100]	dV-DOSC, ARCS (coupled)
SB118	[SB118_60] / [SB118_60_C]	Kudo, dV-DOSC/dV-SUB, Kiva/Kilo, ARCS
	[SB118_100] / [SB118_100_C]	dV-DOSC, ARCS, XT, MTD (coupled)
SB15m	[SB15_100] / [SB15_100_C] / [SB15_100_Cx]	Kiva (coupled), Kiva II (coupled), XT, X12, X8
SB10i	[SB10_60]	X8i, X6i
	[SB10_100]	X4i (coupled), 5XT, X8i, X6i
	[SB10_200]	X6i (closely coupled)
SB6i	[SB6_60]	X4i, X6i
	[SB6_100]	X4i (coupled), X6i (coupled)
	[SB6_200]	X6i (closely coupled)
Syva Low	[SYVA LOW SYVA]	Syva (coupled), Syva + Syva Sub (coupled)
	[SYVA LOW_100]	Syva, Syva + Syva Sub
Syva Sub	[SYVA SUB_60]	Soka, X8i, X6i
	[SYVA SUB_100]	Syva/Syva Low, Syva/Syva Low (coupled), X8i
	[SYVA SUB_200]	X4i

Acoustic properties of subwoofers

loudspeaker configuration¹	preset(s)²	acoustic properties
standard	[xxxx_60] / [xxxx_100] / [xxxx_200]	down to: 25 Hz (KS28 / SB28 / SB218 / SB10i), 26 Hz (Syva Sub), 27 Hz (Syva Low), 29 Hz (KS21, SB6i), 32 Hz (SB18 / SB118), 40 Hz (SB15m, Syva Low)
cardioid C	[xxxx_60_C] / [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] / [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], [xxxx_100], [xxxx_200],

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], [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.

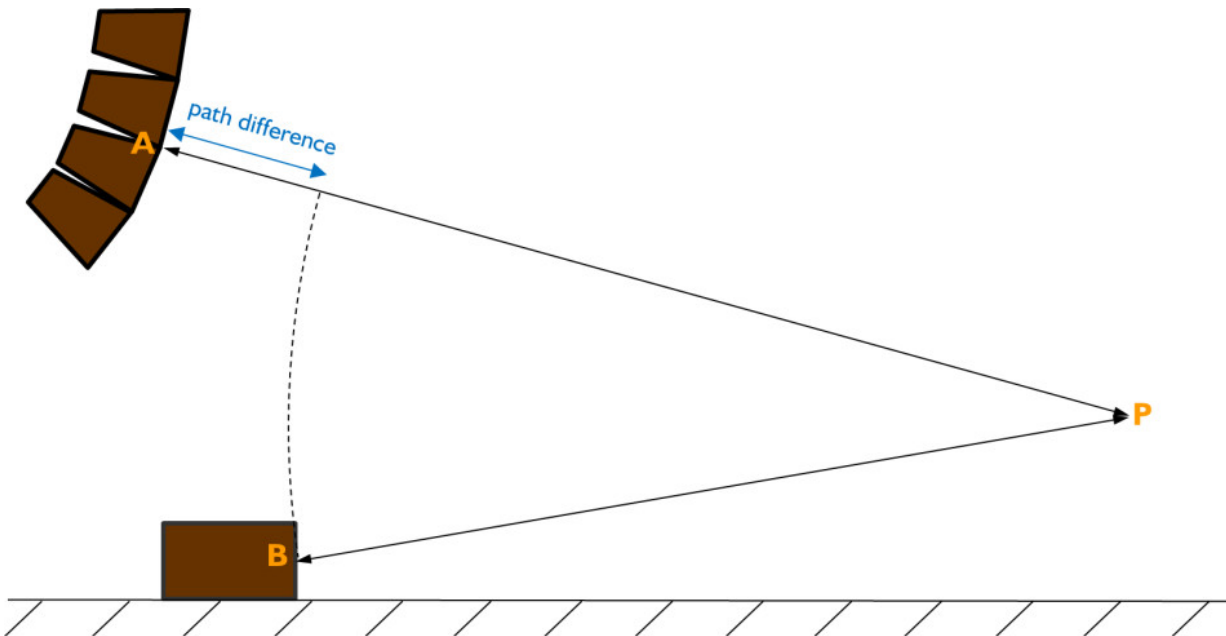
After adding these values to the factory presets, time-alignment is then obtained by adding the geometric delay to the closest system. The geometric delay is calculated from the path difference between a reference listening point and the center of each system.



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): $\text{Path difference (m)} / \text{Sound velocity (m.s}^{-1}\text{)}$, with:
 - sound velocity $\approx 340 \text{ m.s}^{-1}$ 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 $\neq 0$, 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 = 6 ms	
[L2]/[L2D] + [KS28 L2_Cx]	L2/L2D = 0 ms		KS28 = 3 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	

presets	pre-alignment delay values and polarity settings			
[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	

Soka + Syva Sub

presets	pre-alignment delay values and polarity settings			
[SOKA_60] + [SYVA SUB_60]	Soka = 5.6 ms		Syva Sub = 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_40] + [SYVA SUB_60]	X8i = 3.5 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	



X6i + Syva Sub

presets	pre-alignment delay values and polarity settings			
[X6i_50] + [SYVA SUB_60]	X6i = 0 ms		Syva Sub = 0.4 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.119) 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.

For L-SMART compatible amplified controllers (LA1.16i and LA7.16(i)), values are 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. For LA7.16(i), when powered by a 100 V power supply, reduce the number of enclosures in order not to exceed 75% of the power gauge.

For LA1.16i, the maximum number of connected enclosures in total may differ depending on the preset. Refer to Soundvision and LA Network Manager for Power Budget monitoring.

	LA1.16i		LA2Xi			LA4X	LA7.16(i)	LA12X
	per output [*] / total		per output [*] / total			per output [*] / total	per output [*] / total	per output [*] / total
	SE	BTL	SE	BTL	PBTL			
coaxial enclosures								
X4i	3 / 48	2 / 12	4 / 16	—		4 / 16	4 / 64	6 / 24
5XT	3 / 48	2 / 14	4 / 16	—		4 / 16	3 / 48	6 / 24
X6i	2 / 20	1 / 8	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
X8	2 / 32	1 / 8	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
X8i	2 / 30	1 / 8	2 / 8	1 / 2	—	2 / 8	1 / 16	3 / 12
X12	—	1 / 4	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	2 / 26	1 / 4	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	—	1 / 4	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

	LA1.16i		LA2Xi			LA4X	LA7.16(i)	LA12X
	per output* / total		per output* / total			per output* / total	per output* / total	per output* / total
	SE	BTL	SE	BTL	PBTL			
ARCS	—		—			1 / 2	—	3 / 6
variable curvature WST enclosures								
K1	—		—			—	—	2 / 2
K1-SB	—		—			—	—	1 / 4
K2	—		—			1 / 1	1 / 4	3 / 3
K3(i)	—		—			1 / 2	1 / 8	3 / 6
Kara(i)	—		2 / 4	—		2 / 4	—	3 / 6
Kara II(i)	—		2 / 4	—		2 / 4	1 / 8	3 / 6
Kiva II	—	2 / 10	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 Ili	—		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 ^a
Syva Sub	—	1 / 4	1 / 4	1 / 2	—	1 / 4	1 / 16	3 / 12
SB10i	2 / 20	1 / 4	2 / 8	1 / 2	—	2 / 8	2 / 32	3 / 12
SB6i	1 / 12	—	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 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 Ili	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 Ili 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.

Enclosure maximum SPL per amplified controller

Peak level measured at 1 m, under free field conditions for full range loudspeakers and half space conditions for subwoofers, using pink noise with crest factor 4.

product	preset	LA1.16i		LA2Xi			LA4X	LA7.16(i)	LA12X
		SE	BTL	SE	BTL	PBTL			
X4i	[X4]	107 dB	115 dB	116 dB	—	—	116 dB		
	[X4_60]	104 dB	110 dB	110 dB	—	—	110 dB		
5XT	[5XT]	112 dB	120 dB	121 dB	—	—	121 dB		
X6i	[X6i_50]	110 dB	117 dB	117 dB	—	—	117 dB		
	[X6i]	115 dB	122 dB	122 dB	123 dB	—	123 dB		
X8	[X8]	117 dB	124 dB	125 dB	129 dB	—	129 dB		
X8i	[X8i_40]	114 dB	121 dB	121 dB	123 dB	—	123 dB		
	[X8i]	117 dB	124 dB	125 dB	129 dB	—	129 dB		
X12	[X12]	—	131 dB	131 dB	136 dB	—	136 dB		
X15 HiQ	[X15]	—	—	133 dB	—	—	138 dB		
Soka	[SOKA]	119 dB	127 dB	128 dB	130 dB	—	130 dB		
	[SOKA_60]	114 dB	122 dB	124 dB	124 dB	—	124 dB		
	[SOKA_200]	121 dB	130 dB	130 dB	133 dB	—	133 dB		
Syva	[SYVA]	—	—	130 dB	137 dB	—	137 dB		
A10(i) Wide	[A10] (70°)	—	132 dB	133 dB	137 dB	—	137 dB		
A10(i) Focus	[A10] (70°)	—	135 dB	136 dB	140 dB	—	140 dB		
A15(i) Wide	[A15] (70°)	—	—	136 dB	141 dB	—	141 dB		
A15(i) Focus	[A15] (70°)	—	—	139 dB	144 dB	—	144 dB		
K1	[K1]	—	—	—	—	—	—	—	149 dB
K1-SB	[K1SB_60]	—	—	—	—	—	—	—	141 dB
	[K1SB_X]	—	—	—	—	—	—	—	145 dB
K2	[K2 70]	—	—	—	—	—	147 dB		
K3(i)	[K3 70]	—	—	—	—	—	143 dB		
Kara II(i)	[KARA II 70]	—	—	137 dB	—	—	142 dB		
Kiva II	[KIVA II]	—	132 dB	133 dB	138 dB	—	138 dB		
L2	[L2 70]	—	—	—	—	—		155 dB (entire enclosure)	
L2D	[L2D 70]	—	—	—	—	—		151 dB (entire enclosure)	
KS28	[KS28_100]	—	—	136 dB	—	143 dB	—	—	143 dB
KS21(i)	[KS21_100]	—	—	131 dB	138 dB	—	138 dB		
SB18 (Ili)	[SB18_100]	—	—	133 dB	138 dB	—	138 dB		
SB15m	[SB15_100]	—	—	131 dB	137 dB	—	137 dB		

product	preset	LA1.16i		LA2Xi			LA4X	LA7.16(i)	LA12X
		SE	BTL	SE	BTL	PBTL			
Syva Low	[SYVA LOW_100]	—	—	131 dB	—	—	137 dB		
Syva Sub	[SYVA SUB_60]	—	119 dB	122 dB	—	—	122 dB		
	[SYVA SUB_100]	—	122 dB	123 dB	128 dB	—	128 dB		
	[SYVA SUB_200]	—	123 dB	125 dB	130 dB	—	130 dB		
SB10i	[SB10_60]	111 dB	118 dB	119 dB	—	—	119 dB		
	[SB10_100]	112 dB	120 dB	120 dB	122 dB	—	122 dB		
	[SB10_200]	114 dB	123 dB	123 dB	125 dB	—	125 dB		
SB6i	[SB6_60]	106 dB	—	110 dB	—	—	110 dB		
	[SB6_100]	106 dB	—	111 dB	—	—	111 dB		
	[SB6_200]	108 dB	—	115 dB	—	—	115 dB		



L-Acoustics

13 rue Levacher Cintrat - 91460 Marcoussis - France
+33 1 69 63 69 63 - info@l-acoustics.com
www.l-acoustics.com

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