



LA4 PRESET LIBRARY 4.0

LA4X PRESET LIBRARY 4.0

LA8 PRESET LIBRARY 4.0

AMPLIFIED CONTROLLERS PRESETS GUIDE

VERSION 4.08

SAFETY INSTRUCTIONS

1. **Read this manual**
2. **Follow all SAFETY INSTRUCTIONS as well as DANGER and OBLIGATION warnings**
3. **Never incorporate equipment or accessories not approved by L-ACOUSTICS®**
4. **Read all the related PRODUCT INFORMATION documents before exploiting the system**
The product information document is included in the shipping carton of the related system component.
5. **Read the USER MANUAL documents before installing the system**
All the user manuals are downloadable from the L-ACOUSTICS® website.
6. **Beware of sound levels**
Do not stay within close proximity of loudspeakers in operation and consider wearing earplugs.
Preset change can force loudspeaker systems to produce very high sound pressure levels (SPL) which can instantaneously lead to permanent hearing damage to performers, production crew and audience members.
Hearing damage can also occur with prolonged exposure to sound: 8 h at 90 dB(A), 30 min at 110 dB(A), less than 4 min at 130 dB(A).

SYMBOLS

The following symbols are used in this document:



DANGER

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.



OBLIGATION

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



INFORMATION

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

WELCOME TO L-ACOUSTICS®

Thank you for choosing L-ACOUSTICS®.

This document gathers essential information about the factory presets dedicated to the operation of L-ACOUSTICS® loudspeaker enclosures with L-ACOUSTICS® amplified controllers. Carefully read this document in order to become familiar with the preset libraries.

As part of a continuous evolution of techniques and standards, L-ACOUSTICS® reserves the right to change the specifications of its products and the content of its document without prior notice.

Please check the L-ACOUSTICS® web site on a regular basis to download the latest document and software updates:
www.l-acoustics.com.

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1 INTRODUCTION

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

A preset 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 **LA4, LA4X, LA8** and **LA-RAK** user manuals.



Installing LA NETWORK MANAGER software

Download the **LA AMPLIFIED CONTROLLERS** release pack and refer to the **README** file.



Updating FIRMWARE on an L-ACOUSTICS® amplified controller

Refer to the **LA NETWORK MANAGER** tutorial, accessible from the HELP menu of the software.

2 PRESET DESIGN

2.1 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 the ones of smaller format - MTD108a, 5XT, 8XT, KIVA, SB15m and KILO - calibrated for 4 dB of headroom.

This gain structure facilitates managing the power resources of L-ACOUSTICS® systems when using various types of enclosures of the same format. With default output gain settings (0 dB), all enclosures will reach their limits for the same input signal level. The only gain adjustment to apply is -4 dB for MTD108a, 5XT, 8XT, KIVA, SB15m or KILO enclosures that would be used along with L-ACOUSTICS® loudspeaker enclosures of bigger format.

2.2 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 secure 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 sections 4 to 7 of this document are dedicated to the different L-ACOUSTICS® product families. They feature tables describing the recommended loudspeaker configurations for each system, with the corresponding factory presets and the main resulting acoustic properties.

When applicable, refer to the user manual of the related system for the limit between *coupled* vs *separated* subwoofers.

For some loudspeaker enclosure combinations, it is still necessary to adjust the delay values for time-alignment. Refer to section 8 for pre-alignment delay values.

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2.3 Frequency response contour

For coaxial loudspeaker enclosures, L-ACOUSTICS® provides 3 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 current WST® systems, L-ACOUSTICS® provides 1 or 2 distinct contours:

- A *main* preset, ensuring a reference FOH contour to the line source with usual deployment parameters;
- An additional *_FI* preset, *for some systems only*, dedicated to loudspeaker enclosures used as a fill system.

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 tutorial** and **ARRAY MORPHING white paper** for detailed information.

3 ONBOARD PRESET LIBRARIES



Power resources

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

LA8 PRESET LIBRARY covers all L-ACOUSTICS® loudspeaker enclosures. **LA4X PRESET LIBRARY** is restricted to loudspeaker enclosures that require no more than 1000 W into 8 Ω or 1000 W into 4 Ω . **LA4 PRESET LIBRARY** is restricted to loudspeaker enclosures that require no more than 800 W into 8 Ω or 1000 W into 4 Ω .

3.1 LA4 amplified controller

The LA4 onboard PRESET LIBRARY is stored in the factory memory locations (from 011 to 199) of the controller.

The memory locations from 001 to 010 are dedicated to the storage of presets modified by the user.

In the table below, each of the factory presets is described with its memory location number, name, and family.

LA4 PRESET LIBRARY 4.0 – PART 1/3			
N°	Preset name	Description	Family
011	KIVA	KIVA, full range, FOH	KIVA
012	KIVA_FI	KIVA, full range, fill	
013	KIVA_SB15	KIVA & SB15m, full range, X-OVER=100 Hz, FOH	SB15KIVA
014	KIVA_KILO	KIVA & KILO, full range, X-OVER=100 Hz, FOH	KILOKIVA
015	ARCS_LO	ARCS, full range, LO contour	ARCS
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	
021	ARCS_WIFO	ARCS WIDE or ARCS FOCUS, full range, FOH	ARCS_WF
022	ARCS_WIFO_FI	ARCS WIDE or ARCS FOCUS, full range, fill	
023	SB18_60	SB18, LPF=60 Hz	SB18
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	SB118_60	SB118, LPF=60 Hz	SB118
028	SB118_100	SB118, LPF=100 Hz	
029	SB118_60_C	SB118, LPF=60 Hz, cardioid pattern	
030	SB118_100_C	SB118, LPF=100 Hz, cardioid pattern	
031	SB15_100	SB15, LPF=100 Hz	SB15
032	SB15_100_C	SB15, LPF=100 Hz, cardioid pattern	
033	KILO	KILO, LPF=100 Hz	KILO

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LA4 PRESET LIBRARY 4.0 – PART 2/3			
N°	Preset name	Description	Family
034	I2XTA_FI	I2XT active, full range, fill	I2XTA
035	I2XTA_FI_100	I2XT active, HPF=100 Hz, fill	
036	I2XTA_FR	I2XT active, full range, FOH	
037	I2XTA_FR_100	I2XT active, HPF=100 Hz, FOH	
038	I2XTA_MO	I2XT active, full range, monitor	
039	I2XTA_MO_100	I2XT active, HPF=100 Hz, monitor	
040	I2XTP_FI	I2XT passive, full range, fill	I2XTP
046	8XT_FI	8XT, full range, fill	8XT
047	8XT_FI_100	8XT, HPF=100 Hz, fill	
048	8XT_FR	8XT, full range, FOH	
049	8XT_FR_100	8XT, HPF=100 Hz, FOH	
050	8XT_MO	8XT, full range, monitor	
051	8XT_MO_100	8XT, HPF=100 Hz, monitor	
052	5XT	5XT, full range	5XT
053	I15XT_FI	I15XT, full range, fill	I15XT
054	I15XT_FI_100	I15XT, HPF=100 Hz, fill	
055	I15XT_FR	I15XT, full range, FOH	
056	I15XT_FR_100	I15XT, HPF=100 Hz, FOH	
057	I15XT_MO	I15XT, full range, monitor	
058	I15XT_MO_100	I15XT, HPF=100 Hz, monitor	
059	I15bA_FI	MTDI15b active, full range, fill	MTDI15bA
060	I15bA_FI_100	MTDI15b active, HPF=100 Hz, fill	
061	I15bA_FR	MTDI15b active, full range, FOH	
062	I15bA_FR_100	MTDI15b active, HPF=100 Hz, FOH	
063	I15bA_MO	MTDI15b active, full range, monitor	
064	I15bA_MO_100	MTDI15b active, HPF=100 Hz, monitor	
065	I15bP_FI	MTDI15b passive, full range, fill	MTDI15bP
066	I15bP_FI_100	MTDI15b passive, HPF=100 Hz, fill	
067	I15bP_FR	MTDI15b passive, full range, FOH	
068	I15bP_FR_100	MTDI15b passive, HPF=100 Hz, FOH	
069	I15bP_MO	MTDI15b passive, full range, monitor	
070	I15bP_MO_100	MTDI15b passive, HPF=100 Hz, monitor	
071	I12XT_FI	I12XT, full range, fill	I12XT
072	I12XT_FI_100	I12XT, HPF=100 Hz, fill	
073	I12XT_FR	I12XT, full range, FOH	
074	I12XT_FR_100	I12XT, HPF=100 Hz, FOH	
075	I12XT_MO	I12XT, full range, monitor	
076	I12XT_MO_100	I12XT, HPF=100 Hz, monitor	

LA4 PRESET LIBRARY 4.0 – PART 3/3			
N°	Preset name	Description	Family
077	I12b_FI	MTDI12b, full range, fill	MTDI12b
078	I12b_FI_100	MTDI12b, HPF=100 Hz, fill	
079	I12b_FR	MTDI12b, full range, FOH	
080	I12b_FR_100	MTDI12b, HPF=100 Hz, FOH	
081	I12b_MO	MTDI12b, full range, monitor	
082	I12b_MO_100	MTDI12b, HPF=100 Hz, monitor	
083	I08a_FI	MTDI08a, full range, fill	MTDI08a
084	I08a_FI_100	MTDI08a, HPF=100 Hz, fill	
085	I08a_FR	MTDI08a, full range, FOH	
086	I08a_FR_100	MTDI08a, HPF=100 Hz, FOH	
087	I08a_MO	MTDI08a, full range, monitor	
088	I08a_MO_100	MTDI08a, HPF=100 Hz, monitor	
089	FLAT_LA4	Flat EQ, protection minimizing clipping risks	HYBRID

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3.2 LA4X amplified controller

The LA4X onboard PRESET LIBRARY is stored in the factory memory locations (from 011 to 063) of the controller. The memory locations from 001 to 010 are dedicated to the storage of presets modified by the user. In the table below, each of the factory presets is described with its memory location number, name, and family.

LA4X PRESET LIBRARY 4.0 – PART 1/2			
N°	Preset name	Description	Family
011	K2 70	K2, full range, 70° adjustable fins settings	K2
012	K2 90	K2, full range, 90° adjustable fins settings	
013	K2 110	K2, full range, 110° adjustable fins settings	
014	KUDO50_25	KUDO, HPF=25 Hz, 50° K-Louver settings	KUDO
015	KUDO50_40	KUDO, HPF=40 Hz, 50° K-Louver settings	
016	KUDO50_60	KUDO, HPF=60 Hz, 50° K-Louver settings	
017	KUDO80_25	KUDO, HPF=25 Hz, 80° K-Louver settings	
018	KUDO80_40	KUDO, HPF=40 Hz, 80° K-Louver settings	
019	KUDO80_60	KUDO, HPF=60 Hz, 80° K-Louver settings	
020	KUDO110_25	KUDO, HPF=25 Hz, 110° K-Louver settings	
021	KUDO110_40	KUDO, HPF=40 Hz, 110° K-Louver settings	
022	KUDO110_60	KUDO, HPF=60 Hz, 110° K-Louver settings	
023	KARA	KARA, full range, FOH	KARA
024	KARA_FI	KARA, HPF=100 Hz, fill	
025	KARADOWNKI	KARA, HPF=100 Hz, optimized delay for KI downfill	
026	KIVA	KIVA, full range, FOH	KIVA
027	KIVA_FI	KIVA, full range, fill	
028	ARCS_II	ARCS II, full range	ARCS_II
029	ARCS_WIFO	ARCS WIDE or ARCS FOCUS, full range, FOH	ARCS_WF
030	ARCS_WIFO_FI	ARCS WIDE or ARCS FOCUS, full range, fill	
031	SB18_60	SB18, LPF=60 Hz	SB18
032	SB18_100	SB18, LPF=100 Hz	
033	SB18_60_C	SB18, LPF=60 Hz, cardioid pattern	
034	SB18_100_C	SB18, LPF=100 Hz, cardioid pattern	
035	SB15_100	SB15, LPF=100 Hz	SB15
036	SB15_100_C	SB15, LPF=100 Hz, cardioid pattern	
037	KILO	KILO, LPF=100 Hz	KILO
038	HIQ_FI	HIQ, full range, fill	I15XTHiQ
039	HIQ_FI_100	HIQ, HPF=100 Hz, fill	
040	HIQ_FR	HIQ, full range, FOH	
041	HIQ_FR_100	HIQ, HPF=100 Hz, FOH	
042	HIQ_MO	HIQ, full range, monitor	
043	HIQ_MO_100	HIQ, HPF=100 Hz, monitor	

LA4X PRESET LIBRARY 4.0 – PART 2/2			
N°	Preset name	Description	Family
044	I2XTA_FI	I2XT active, full range, fill	I2XTA
045	I2XTA_FI_100	I2XT active, HPF=100 Hz, fill	
046	I2XTA_FR	I2XT active, full range, FOH	
047	I2XTA_FR_100	I2XT active, HPF=100 Hz, FOH	
048	I2XTA_MO	I2XT active, full range, monitor	
049	I2XTA_MO_100	I2XT active, HPF=100 Hz, monitor	
050	I2XTP_FI	I2XT passive, full range, fill	I2XTP
051	I2XTP_FI_100	I2XT passive, HPF=100 Hz, fill	
052	I2XTP_FR	I2XT passive, full range, FOH	
053	I2XTP_FR_100	I2XT passive, HPF=100 Hz, FOH	
054	I2XTP_MO	I2XT passive, full range, monitor	
055	I2XTP_MO_100	I2XT passive, HPF=100 Hz, monitor	
056	8XT_FI	8XT, full range, fill	8XT
057	8XT_FI_100	8XT, HPF=100 Hz, fill	
058	8XT_FR	8XT, full range, FOH	
059	8XT_FR_100	8XT, HPF=100 Hz, FOH	
060	8XT_MO	8XT, full range, monitor	
061	8XT_MO_100	8XT, HPF=100 Hz, monitor	
062	5XT	5XT, full range	5XT
063	FLAT_LA4X	Flat EQ, protection minimizing clipping risks	HYBRID

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3.3 LA8 amplified controller

The LA8 onboard PRESET LIBRARY is stored in the factory memory locations (from 011 to 199) of the controller. The memory locations from 001 to 010 are dedicated to the storage of presets modified by the user. In the table below, each of the factory presets is described with its memory location number, name, and family.

LA8 PRESET LIBRARY 4.0 – PART 1/4			
N°	Preset name	Description	Family
011	K1	K1, full range	K1
012	K2 70	K2, full range, 70° adjustable fins settings	K2
013	K2 90	K2, full range, 90° adjustable fins settings	
014	K2 110	K2, full range, 110° adjustable fins settings	
015	K1SB_60	K1-SB, LPF=60 Hz, optimized for CONTOUR configuration	K1-SB
016	K1SB_X	K1-SB, LPF=200 Hz, optimized for THROW configuration with K1	
017	K1SB_X K2	K1-SB, LPF=200 Hz, optimized for THROW configuration with K2	
018	V-DOSC_LO	V-DOSC, full range, LO contour	V-DOSC
019	V-DOSC_LO_60	V-DOSC, HPF=60 Hz, LO contour	
020	V-DOSC_LO_X	V-DOSC, full range, LO contour, optimized for [SB218_X] & [dV-S_X] presets	
021	V-DOSC_HI	V-DOSC, full range, HI contour	
022	V-DOSC_HI_60	V-DOSC, HPF=60 Hz, HI contour	
023	V-DOSC_HI_X	V-DOSC, full range, HI contour, optimized for [SB218_X] & [dV-S_X] presets	
024	KUDO50_25	KUDO, HPF=25 Hz, 50° K-Louver settings	KUDO
025	KUDO50_40	KUDO, HPF=40 Hz, 50° K-Louver settings	
026	KUDO50_60	KUDO, HPF=60 Hz, 50° K-Louver settings	
027	KUDO80_25	KUDO, HPF=25 Hz, 80° K-Louver settings	
028	KUDO80_40	KUDO, HPF=40 Hz, 80° K-Louver settings	
029	KUDO80_60	KUDO, HPF=60 Hz, 80° K-Louver settings	
030	KUDO110_25	KUDO, HPF=25 Hz, 110° K-Louver settings	
031	KUDO110_40	KUDO, HPF=40 Hz, 110° K-Louver settings	
032	KUDO110_60	KUDO, HPF=60 Hz, 110° K-Louver settings	
033	KARA	KARA, full range, FOH	KARA
034	KARA_FI	KARA, HPF=100 Hz, fill	
035	KARADOWNK1	KARA, HPF=100 Hz, optimized delay for K1 downfill	
036	dV_FI	dV-DOSC, HPF=100 Hz, fill	dV-DOSC
037	dV_LO	dV-DOSC, full range, LO contour	
038	dV_LO_100	dV-DOSC, HPF=100 Hz, LO contour	
039	dV_HI	dV-DOSC, full range, HI contour	
040	dV_HI_100	dV-DOSC, HPF=100 Hz, HI contour	
041	dV_dV-S_LO	dV-DOSC & dV-SUB, X-OVER=100 Hz, LO contour	dV-D_dVS
042	dV_dV-S_HI	dV-DOSC & dV-SUB, X-OVER=100 Hz, HI contour	
043	dV_dV-S_LO60	dV-DOSC & dV-SUB, HPF=60 Hz, X-OVER=100 Hz, LO contour	
044	dV_dV-S_HI60	dV-DOSC & dV-SUB, HPF=60 Hz, X-OVER=100 Hz, HI contour	

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N°	Preset name	Description	Family
045	dV-S_60_100	dV-SUB, HPF=60 Hz, LPF=100 Hz	dV-SUB
046	dV-S_100	dV-SUB, LPF=100 Hz	
047	dV-S_60_X	dV-SUB, HPF=60 Hz, LPF=200 Hz, optimized for [V-DOSC_**_60] presets	
048	dV-S_X	dV-SUB, LPF=200 Hz, optimized for [V-DOSC_**_X] presets	
049	ARCS_II	ARCS II, full range	ARCS_II
050	ARCS_LO	ARCS, full range, LO contour	ARCS
051	ARCS_LO_60	ARCS, HPF=60 Hz, LO contour	
052	ARCS_LO_100	ARCS, HPF=100 Hz, LO contour	
053	ARCS_HI	ARCS, full range, HI contour	
054	ARCS_HI_60	ARCS, HPF=60 Hz, HI contour	
055	ARCS_HI_100	ARCS, HPF=100 Hz, HI contour	
056	ARCS_WIFO	ARCS WIDE or ARCS FOCUS, full range, FOH	ARCS_WF
057	ARCS_WIFO_FI	ARCS WIDE or ARCS FOCUS, full range, fill	
058	HIQ_FI	HIQ, full range, fill	I15XTHiQ
059	HIQ_FI_100	HIQ, HPF=100 Hz, fill	
060	HIQ_FR	HIQ, full range, FOH	
061	HIQ_FR_100	HIQ, HPF=100 Hz, FOH	
062	HIQ_MO	HIQ, full range, monitor	
063	HIQ_MO_100	HIQ, HPF=100 Hz, monitor	
064	SB28_60	SB28, LPF=60 Hz	SB28
065	SB28_100	SB28, LPF=100 Hz	
066	SB28_60_C	SB28, LPF=60 Hz, cardioid pattern	
067	SB28_100_C	SB28, LPF=100 Hz, cardioid pattern	
068	SB218_60	SB218, LPF=60 Hz	SB218
069	SB218_100	SB218, LPF=100 Hz	
070	SB218_X	SB218, LPF=200 Hz, optimized for [V-DOSC_**_X] presets	
071	SB18_60	SB18, LPF=60 Hz	SB18
072	SB18_100	SB18, LPF=100 Hz	
073	SB18_60_C	SB18, LPF=60 Hz, cardioid pattern	
074	SB18_100_C	SB18, LPF=100 Hz, cardioid pattern	
075	SB118_60	SB118, LPF=60 Hz	SB118
076	SB118_100	SB118, LPF=100 Hz	
077	SB118_60_C	SB118, LPF=60 Hz, cardioid pattern	
078	SB118_100_C	SB118, LPF=100 Hz, cardioid pattern	
079	SB15_100	SB15, LPF=100 Hz	SB15
080	SB15_100_C	SB15, LPF=100 Hz, cardioid pattern	
081	KILO	KILO, LPF=100 Hz	KILO
082	KIVA	KIVA, full range, FOH	KIVA
083	KIVA_FI	KIVA, full range, fill	

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N°	Preset name	Description	Family
084	KIVA_SBI5	KIVA & SBI 5m, X-OVER=100 Hz, full range, FOH	SBI5KIVA
085	KIVA_KILO	KIVA & KILO, full range, X-OVER=100 Hz, FOH	KILOKIVA
086	I2XTA_FI	I2XT active, full range, fill	I2XTA
087	I2XTA_FI_100	I2XT active, HPF=100 Hz, fill	
088	I2XTA_FR	I2XT active, full range, FOH	
089	I2XTA_FR_100	I2XT active, HPF=100 Hz, FOH	
090	I2XTA_MO	I2XT active, full range, monitor	
091	I2XTA_MO_100	I2XT active, HPF=100 Hz, monitor	
092	I2XTP_FI	I2XT passive, full range, fill	I2XTP
093	I2XTP_FI_100	I2XT passive, HPF=100 Hz, fill	
094	I2XTP_FR	I2XT passive, full range, FOH	
095	I2XTP_FR_100	I2XT passive, HPF=100 Hz, FOH	
096	I2XTP_MO	I2XT passive, full range, monitor	
097	I2XTP_MO_100	I2XT passive, HPF=100 Hz, monitor	
098	8XT_FI	8XT, full range, fill	8XT
099	8XT_FI_100	8XT, HPF=100 Hz, fill	
100	8XT_FR	8XT, full range, FOH	
101	8XT_FR_100	8XT, HPF=100 Hz, FOH	
102	8XT_MO	8XT, full range, monitor	
103	8XT_MO_100	8XT, HPF=100 Hz, monitor	
104	5XT	5XT, full range	5XT
105	I15XT_FI	I15XT, full range, fill	I15XT
106	I15XT_FI_100	I15XT, HPF=100 Hz, fill	
107	I15XT_FR	I15XT, full range, FOH	
108	I15XT_FR_100	I15XT, HPF=100 Hz, FOH	
109	I15XT_MO	I15XT, full range, monitor	
110	I15XT_MO_100	I15XT, HPF=100 Hz, monitor	
111	I15bA_FI	MTDI15b active, full range, fill	MTDI15bA
112	I15bA_FI_100	MTDI15b active, HPF=100 Hz, fill	
113	I15bA_FR	MTDI15b active, full range, FOH	
114	I15bA_FR_100	MTDI15b active, HPF=100 Hz, FOH	
115	I15bA_MO	MTDI15b active, full range, monitor	
116	I15bA_MO_100	MTDI15b active, HPF=100 Hz, monitor	
117	I15bP_FI	MTDI15b passive, full range, fill	MTDI15bP
118	I15bP_FI_100	MTDI15b passive, HPF=100 Hz, fill	
119	I15bP_FR	MTDI15b passive, full range, FOH	
120	I15bP_FR_100	MTDI15b passive, HPF=100 Hz, FOH	
121	I15bP_MO	MTDI15b passive, full range, monitor	
122	I15bP_MO_100	MTDI15b passive, HPF=100 Hz, monitor	

LA8 PRESET LIBRARY 4.0 – PART 4/4			
N°	Preset name	Description	Family
123	I12XT_FI	I12XT, full range, fill	I12XT
124	I12XT_FI_100	I12XT, HPF=100 Hz, fill	
125	I12XT_FR	I12XT, full range, FOH	
126	I12XT_FR_100	I12XT, HPF=100 Hz, FOH	
127	I12XT_MO	I12XT, full range, monitor	
128	I12XT_MO_100	I12XT, HPF=100 Hz, monitor	
129	I12b_FI	MTDI12b, full range, fill	MTDI12b
130	I12b_FI_100	MTDI12b, HPF=100 Hz, fill	
131	I12b_FR	MTDI12b, full range, FOH	
132	I12b_FR_100	MTDI12b, HPF=100 Hz, FOH	
133	I12b_MO	MTDI12b, full range, monitor	
134	I12b_MO_100	MTDI12b, HPF=100 Hz, monitor	
135	I08a_FI	MTDI08a, full range, fill	MTDI08a
136	I08a_FI_100	MTDI08a, HPF=100 Hz, fill	
137	I08a_FR	MTDI08a, full range, FOH	
138	I08a_FR_100	MTDI08a, HPF=100 Hz, FOH	
139	I08a_MO	MTDI08a, full range, monitor	
140	I08a_MO_100	MTDI08a, HPF=100 Hz, monitor	
141	FLAT_LA8	Flat EQ, protection minimizing clipping risks	HYBRID

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3.4 FLAT presets



Protection

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 amplifier.

When driving a 3rd party loudspeaker enclosure, it is then recommended to use an external DSP device with a preset specifically designed for this model.

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] preset with LA4 or LA4X provides 6 dB of headroom. Using the [FLAT] preset with LA8 provides 8 dB of headroom.

[FLAT]

Amplifier outputs	Channels	Default parameters				
		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

4 VARIABLE CURVATURE WST® SYSTEMS

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.

4.1 K1



Compatibility issues

[K1] and [KARADOWNK1] from PRESET LIBRARY 4.0 are not compatible with [K1] and [KARADOWNK1] from earlier versions of the PRESET LIBRARY.

[K2 ***] presets are not compatible with [K1] from earlier versions of the PRESET LIBRARY.

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	LA8 preset(s)			Acoustic properties
	K1	K1-SB	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 + SB28 subwoofers	[K1]	-	[SB28_60]	Down to 25 Hz Reinforced LF contour

* With SB28 subwoofers as a cardioid array, use [SB28_60_C].



Downfill options for additional vertical coverage

K2 enclosures driven by [K2_110].

KARA enclosures driven by [KARADOWNK1].

[K1]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
K1	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.

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[K1SB_X] and [K1SB_60]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
K1-SB	OUT 1	SB	IN A	0 dB	0 ms	+	ON
K1-SB	OUT 2	SB	IN A	0 dB	0 ms	+	ON
K1-SB	OUT 3	SB	IN A	0 dB	0 ms	+	ON
K1-SB	OUT 4	SB	IN A	0 dB	0 ms	+	ON

[K2 x x x]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
K2	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.

[KARADOWNKI]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay*	Polarity	Mute
KARA	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
KARA	LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

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

4.2 K2

Loudspeaker configuration	Preset(s)			Acoustic properties
	K2	K1-SB	SB28 *	
K2 line source	[K2 x x x]	-	-	35 Hz-20 kHz Adjustable horizontal directivity
K2 / K1-SB line source (K1-SB on top)	[K2 x x x]	[K1SB_X K2]	-	Enhanced LF throw
K2 line source + coupled K1-SB subwoofers (on top, beside or behind)	[K2 x x x]	[K1SB_60]	-	Down to 30 Hz Reinforced LF contour LF rejection (side polarized or rear cardioid)
K2 line source + SB28 subwoofers	[K2 x x x]	-	[SB28_60]	Down to 25 Hz Reinforced LF contour

* With SB28 subwoofers as a cardioid array, use [SB28_60_C].



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 user manual for details.

[K2 x x x]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
K2	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 [K1-SB_60]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
K1-SB		OUT 1	SB	IN A	0 dB	0 ms	+	ON
K1-SB		OUT 2	SB	IN A	0 dB	0 ms	+	ON
K1-SB		OUT 3	SB	IN A	0 dB	0 ms	+	ON
K1-SB		OUT 4	SB	IN A	0 dB	0 ms	+	ON

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4.3 KUDO®

Loudspeaker configuration	LA8 preset(s)		Acoustic properties
	KUDO	SB18 or SB28 *	
KUDO line source	[KUDOxx_25]	-	35 Hz – 20 kHz
	[KUDOxx_40]		40 Hz – 20 kHz
	[KUDOxx_60]		60 Hz – 20 kHz
KUDO line source + SB subwoofer	[KUDOxx_40]	[SBxx_60]	Down to 25 Hz (SB28) or 32 Hz (SB18) Reinforced LF contour

* With SB subwoofers as a cardioid array, use [SBxx_xx_C].



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		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
KUDO	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.

4.4 KARA®



KARA® and KARA®i are different versions of the same enclosure. They share the same factory presets and recommended loudspeaker configurations.

Loudspeaker configuration	LA8 preset(s)		Acoustic properties
	KARA	SB18 or SB28 *	
KARA line source	[KARA]	-	55 Hz – 20 kHz
KARA line source + Coupled SB subwoofer	[KARA]	[SB**_100]	Down to 32 Hz (SB18) or 25 Hz (SB28) Reinforced LF contour
KARA line source + Separated SB subwoofer	[KARA]	[SB**_60]	
Single or pair of KARA enclosures	[KARA_FI]	-	High-pass at 100 Hz Flat response

* With SB subwoofers as a cardioid array, use [SB**_**_C].

[KARA]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
KARA	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
KARA	LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

[KARA_FI]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
KARA	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
KARA	LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

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4.5 KIVA SB15m

Loudspeaker configuration	Preset(s)		Acoustic properties
	KIVA	SB15m *	
KIVA line source	[KIVA]	-	80 Hz – 20 kHz
KIVA line source + Coupled SB15m	[KIVA_SB15]		Down to 40 Hz Reinforced LF contour
	[KIVA]	[SB15_100]	
Single or pair of KIVA enclosures	[KIVA_FI]	-	80 Hz – 20 kHz Flat response
Pair of KIVA enclosures + Coupled SB15m	[KIVA_FI]	[SB15_100]	Down to 40 Hz Reinforced LF contour

* With SB subwoofers as a cardioid array, use [SB**_**_C].

[KIVA]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
KIVA	OUT 1	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 3	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 4	PA	IN A	0 dB	0 ms	+	ON

[KIVA_FI]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
KIVA	OUT 1	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 3	PA	IN B	0 dB	0 ms	+	ON
KIVA	OUT 4	PA	IN B	0 dB	0 ms	+	ON

[KIVA_SB15] *

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
SB15m	OUT 1	LF	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA					ON
KIVA	OUT 3	PA					ON
KIVA	OUT 4	PA					ON

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

4.6 KIVA-KILO

Loudspeaker configuration	Preset(s)			Acoustic properties
	KIVA	KILO	SB18 *	
KIVA line source	[KIVA]	-	-	80 Hz – 20 kHz
KIVA line source + Coupled KILO	[KIVA_KILO]		-	Down to 50 Hz
KIVA line source + Coupled KILO + SB18	[KIVA_KILO]		[SB18_60]	Down to 32 Hz Reinforced LF contour
Single or pair of KIVA enclosures	[KIVA_FI]	-	-	80 Hz – 20 kHz Flat response

* With SB subwoofers as a cardioid array, use [SB*x*_x*_C].

[KIVA]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
KIVA	OUT 1	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 3	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 4	PA	IN A	0 dB	0 ms	+	ON

[KIVA_FI]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
KIVA	OUT 1	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA	IN A	0 dB	0 ms	+	ON
KIVA	OUT 3	PA	IN B	0 dB	0 ms	+	ON
KIVA	OUT 4	PA	IN B	0 dB	0 ms	+	ON

[KIVA_KILO] *

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
KILO	OUT 1	LF	IN A	0 dB	0 ms	+	ON
KIVA	OUT 2	PA					ON
KIVA	OUT 3	PA					ON
KIVA	OUT 4	PA					ON

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

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[KILO]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
KILO	OUT 1	SB	IN A	0 dB	0 ms	+	ON
KILO	OUT 2	SB	IN A	0 dB	0 ms	+	ON
KILO	OUT 3	SB	IN B	0 dB	0 ms	+	ON
KILO	OUT 4	SB	IN B	0 dB	0 ms	+	ON

4.7 V-DOSC®

Loudspeaker configuration	LA8 preset(s)				Acoustic properties
	V-DOSC	dV-SUB	SB28/SB218	dV-DOSC	
V-DOSC line source	[V-DOSC_LO] or [V-DOSC_HI]	-	-	-	40 Hz – 20 kHz
V-DOSC line source + Coupled dV-SUB	[V-DOSC_**_X]	[dV-S_X]	-	-	Down to 35 Hz Reinforced LF contour
V-DOSC line source + SB28	[V-DOSC_**_60]	-	[SB28_60]	-	Down to 25 Hz Reinforced LF contour
V-DOSC line source + Coupled SB218	[V-DOSC_**_X]	-	[SB218_X]	-	
V-DOSC line source + Coupled dV-SUB + SB28	[V-DOSC_**_60]	[dV-S_60_X]	[SB28_60]	-	Down to 25 Hz Reinforced LF contour Additional LF resources
V-DOSC line source + Coupled dV-DOSC	[V-DOSC_**]	-	-	[dV_**_100]	Downfill coverage

* Standard HF contour with [**_LO] or increased HF contour with [**_HI]

** With SB subwoofers as a cardioid array, use [SB**_**_C].

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

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
V-DOSC	Left LF *	OUT 1	IN A	0 dB	0 ms	+	ON
	Right LF *	OUT 2					ON
	MF	OUT 3					ON
	HF	OUT 4					ON

* Left/right when looking at the front face of the enclosure.

[dV-S_X] and [dV-S_60_X]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
dV-SUB	OUT 1	SB	IN A	0 dB	0 ms	+	ON
dV-SUB	OUT 2	SB	IN A	0 dB	0 ms	+	ON
dV-SUB	OUT 3	SB	IN B	0 dB	0 ms	+	ON
dV-SUB	OUT 4	SB	IN B	0 dB	0 ms	+	ON

[SB218_X]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
SB218	OUT 1	SB	IN A	0 dB	0 ms	+	ON
SB218	OUT 2	SB	IN A	0 dB	0 ms	+	ON
SB218	OUT 3	SB	IN B	0 dB	0 ms	+	ON
SB218	OUT 4	SB	IN B	0 dB	0 ms	+	ON

4.8 dV-DOSC®

Loudspeaker configuration	LA8 preset(s)			Acoustic properties
	dV-DOSC *	dV-SUB	SB118, SB18 SB218 or SB28 **	
dV-DOSC line source	[dV_LO] or [dV_HI]	-	-	65 Hz – 20 kHz
dV-DOSC line source + Coupled dV-SUB	[dV_dV-S_**]		-	Down to 35 Hz Reinforced LF contour
	[dV_**_100]	[dV-S_100]		
dV-DOSC line source + Coupled SB subwoofer	[dV_**_100]	-	[SB**_100]	Down to 32 Hz (SB18/SB118) or 25 Hz (SB28/SB218)
dV-DOSC line source + Coupled dV-SUB + SB subwoofer	[dV_dV-S_**60]		[SB**_60]	
	[dV_**_100]	[dV-S_60_100]		
Single or pair of dV-DOSC enclosures	[dV_FI]	-	-	High-pass at 100 Hz Flat response

* Standard HF contour with [**_LO] or increased HF contour with [**_HI]

** With SB subwoofers as a cardioid array, use [SB**_**_C].

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

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
dV-DOSC	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
dV-DOSC	LF	OUT 3	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

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[dV_FI]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
dV-DOSC	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
dV-DOSC	LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

[dV-S_100] and [dV-S_60_100]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
dV-SUB		OUT 1	SB	IN A	0 dB	0 ms	+	ON
dV-SUB		OUT 2	SB	IN A	0 dB	0 ms	+	ON
dV-SUB		OUT 3	SB	IN B	0 dB	0 ms	+	ON
dV-SUB		OUT 4	SB	IN B	0 dB	0 ms	+	ON

[dV_dV-S_**] * and [dV_dV-S_**60] **

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
dV-SUB		OUT 1	SB	IN A	0 dB	0 ms	+	ON
dV-SUB		OUT 2	SB	IN A	0 dB	0 ms	+	ON
dV-DOSC	LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

* Hybrid preset combining [dV_LO_100] or [dV_HI_100] with [dV-S_100], pre-alignment delay included.

** Hybrid preset combining [dV_LO_100] or [dV_HI_100] with [dV-S_60_100], pre-alignment delay included.

5 CONSTANT CURVATURE WST® SYSTEMS

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.

5.1 ARCS® II

Loudspeaker configuration	LA8 preset(s)		Acoustic properties
	ARCS II	SB28 *	
ARCS II line source	[ARCS_II]	-	50 Hz - 20 kHz
ARCS II line source + SB28	[ARCS_II]	[SB28_60]	Down to 25 Hz Reinforced LF contour

* With SB subwoofers as a cardioid array, use [SB**_**_C].

[ARCS II]

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
ARCS II	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
ARCS II	LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

5.2 ARCS® WIDE / ARCS® FOCUS

Loudspeaker configuration	Preset(s)		Acoustic properties
	ARCS WIDE/FOCUS	SB18m *	
WIFO line source	[ARCS_WIFO]	-	55 Hz - 20 kHz
WIFO Line source + SB18m	[ARCS_WIFO]	[SB18_60]	Down to 32 Hz Reinforced LF contour
Single WIFO enclosure	[ARCS_WIFO_FI]	-	55 Hz - 20 kHz Flat response
Single WIFO enclosure + SB18m	[ARCS_WIFO_FI]	[SB18_60]	Down to 32 Hz Reinforced LF contour

* With SB subwoofers as a cardioid array, use [SB**_**_C].

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[ARCS_WIFO] and [ARCS_WIFO_FI]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
ARCS WIDE/FOCUS	OUT 1	PA	IN A	0 dB	0 ms	+	ON
ARCS WIDE/FOCUS	OUT 2	PA	IN A	0 dB	0 ms	+	ON
ARCS WIDE/FOCUS	OUT 3	PA	IN B	0 dB	0 ms	+	ON
ARCS WIDE/FOCUS	OUT 4	PA	IN B	0 dB	0 ms	+	ON

5.3 ARCS®

Loudspeaker configuration	Preset(s)		Acoustic properties
	ARCS *	SB18/SB118 or SB28/SB218 **	
ARCS line source	[ARCS_LO] or [ARCS_HI]	-	50 Hz – 20 kHz
ARCS line source + SB subwoofer	[ARCS_**_60]	[SB**_60]	Down to 32 Hz (SB18/SB118) or 25 Hz (SB28/SB218) Reinforced LF contour
ARCS line source + Coupled SB subwoofer	[ARCS**_100]	[SB**_100]	

* Standard HF contour with [**_LO] or increased HF contour with [**_HI]

** With SB subwoofers as a cardioid array, use [SB**_**_C].

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

Loudspeaker elements		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
ARCS	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
ARCS	LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

6 COAXIAL LOUDSPEAKER ENCLOSURE

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.

6.1 5XT

Loudspeaker configuration	Preset(s)		Acoustic properties
	5XT	SB15m *	
5XT	[5XT]	-	95 Hz - 20 kHz
5XT+ SB15m	[5XT]	[SB15_100]	Down to 40 Hz Reinforced LF contour

* With SB subwoofers as a cardioid array, use [SB**_**_C].

[5XT]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
5 XT	OUT 1	PA	IN A	0 dB	0 ms	+	ON
5 XT	OUT 2	PA	IN A	0 dB	0 ms	+	ON
5 XT	OUT 3	PA	IN B	0 dB	0 ms	+	ON
5 XT	OUT 4	PA	IN B	0 dB	0 ms	+	ON

6.2 Other PASSIVE coaxial loudspeaker enclosures (8XT, 12XTP, MTD108a, MTD112b, MTD115bP)



Preset names

Passive coaxial	Preset
8XT	[8XT_**]
12XT in passive mode	[12XTP_**]
MTD108a	[108a_**]
MTD112b	[112b_**]
MTD115b in passive mode	[115bP_**]

Loudspeaker configuration	Preset(s)		Acoustic properties	
	Passive ***	SB15m, SB18 or SB118 *		
Coaxial	[***_FR],[***_FI] or [***_MO]	-	Nominal bandwidth	Choice between 3 contours **
Coaxial + Coupled SB subwoofer	[***_**_100]	[SB**_100]	Down to 40 Hz (SB15m) or 32 Hz (SB18/SB118) Reinforced LF contour	

* With SB subwoofers as a cardioid array, use [SB**_**_C].

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

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[xxx_FR], [xxx_FI], [xxx_MO] and [xxx_xx_100]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
Passive xxx	OUT 1	PA	IN A	0 dB	0 ms	+	ON
Passive xxx	OUT 2	PA	IN A	0 dB	0 ms	+	ON
Passive xxx	OUT 3	PA	IN B	0 dB	0 ms	+	ON
Passive xxx	OUT 4	PA	IN B	0 dB	0 ms	+	ON

6.3 ACTIVE coaxial loudspeaker enclosures (I2XTA, I15XT HiQ, MTDI15bA, I15XT)



Preset names

Coaxial enclosure	Preset
I2XT in active mode	[I2XTA_xx]
I15XT HiQ	[HiQ_xx]
MTDI15b in active mode	[I15bA_xx]
I15XT	[I15XT_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 SB subwoofer	[xxx_xx_100]	[SBxx_100]	Down to 32 Hz Reinforced LF contour	

* With SB subwoofers as a cardioid array, use [SBxx_xx_C].

** [xxx_FR] for FOH applications, [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		Amplifier outputs	Channels	Default parameters				
				Routing	Gain	Delay	Polarity	Mute
Active xxx	LF	OUT 1	LF	IN A	0 dB	0 ms	+	ON
	HF	OUT 2	HF					ON
Active xxx	LF	OUT 3	LF	IN B	0 dB	0 ms	+	ON
	HF	OUT 4	HF					ON

7 SUBWOOFER ENCLOSURES

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.



Subwoofer	Available presets	Optimal compatibility
SB15m	[SB15_100] or [SB15_100_C]	Coupled KIVA, XT
SB18(i) SB18m	[SB18_60] or [SB18_60_C]	KUDO®, KARA®, KIVA/KILO, ARCS®, ARCS®WIDE, ARCS® FOCUS
	[SB18_100] or [SB18_100_C]	KARA®, ARCS®, XT
SB118	[SB118_60] or [SB118_60_C]	KUDO®, dV-DOSC/dV-SUB, KIVA/KILO, ARCS®
	[SB118_100] or [SB118_100_C]	dV-DOSC, ARCS®, XT, coupled MTD
SB28	[SB28_60] or [SB28_60_C]	K1, K2, V-DOSC®, KUDO®, dV-DOSC/dV-SUB, KARA®/SB18, ARCS®, ARCS®II
	[SB28_100] or [SB28_100_C]	dV-DOSC, KARA®, coupled ARCS®
SB218	[SB218_60]	V-DOSC®, KUDO®, dV-DOSC/dV-SUB, ARCS®
	[SB218_100]	dV-DOSC, coupled ARCS®

Loudspeaker configuration *	Preset **	Acoustic properties
Standard	[SB**_60] or [SB**_100]	Down to 40 Hz (SB15m), 32 Hz (SB18/SB118) or 25 Hz (SB28/SB218)
Cardioid	[SB**_60_C] or [SB**_100_C]	Down to 40 Hz (SB15m), 32 Hz (SB18/SB118) or 25 Hz (SB28) Cardioid directivity pattern

* Refer to the subwoofer user manual for the recommended deployment patterns in each configuration.

** SB28 and SB218 are exclusively driven by the LA8 amplified controller.

[SB**_60] and [SB**_100]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
SB**	OUT 1	SB	IN A	0 dB	0 ms	+	ON
SB**	OUT 2	SB	IN A	0 dB	0 ms	+	ON
SB**	OUT 3	SB	IN B	0 dB	0 ms	+	ON
SB**	OUT 4	SB	IN B	0 dB	0 ms	+	ON

[SB**_**_C]

Loudspeaker elements	Amplifier outputs	Channels	Default parameters				
			Routing	Gain	Delay	Polarity	Mute
Reversed SB**	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

8 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.

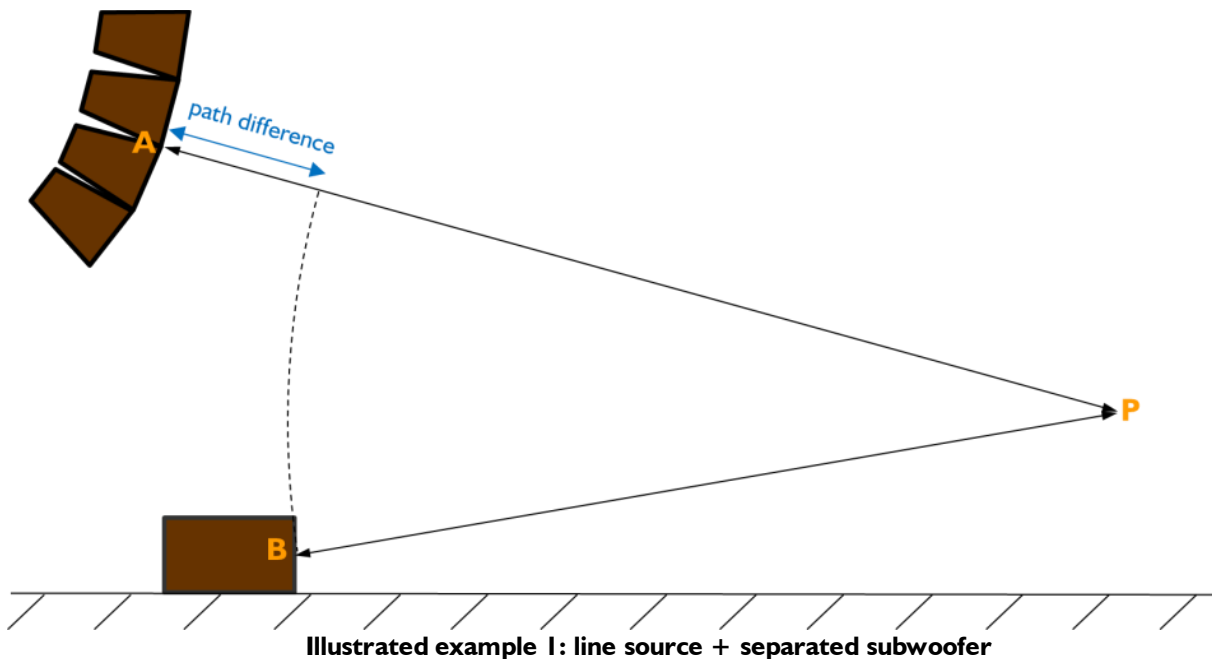
Pre-alignment delays have been measured with the enclosures at the same geometric location, front face on the same plane.

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.

How to proceed?

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

Normalization: If $\neq 0$, retrieve *Pre-alignment delay a* to both *Alignment delay* values.



Illustrated example 1: line source + separated subwoofer



Laser rangefinders

The L-ACOUSTICS® **Tech Toolcase** includes two laser devices that can be used for geometric measurements: TruPulse™ 200 and Leica DISTO™ D3.

8.1 Variable curvature WST® systems

Combination PART 1/2	Presets	Pre-alignment delay values (ms)		
K1 + K1-SB	[K1] + [K1SB_X]	K1 = 0	K1-SB = 0	
	[K1] + [K1SB_60]	K1 = 6	K1-SB = 0	
K1 + SB28	[K1] + [SB28_60]	K1 = 0	SB28 = 6	
	[K1] + [SB28_60_C]	K1 = 0	SB28 = 0.5	
K1 + K1-SB + SB28	[K1] + [K1SB_X] + [SB28_60]	K1 = 0	K1-SB = 0	SB28 = 6
	[K1] + [K1SB_X] + [SB28_60_C]	K1 = 0	K1-SB = 0	SB28 = 0.5
	[K1] + [K1SB_60] + [SB28_60]	K1 = 8	K1-SB = 2	SB28 = 0
	[K1] + [K1SB_60] + [SB28_60_C]	K1 = 13.5	K1-SB = 7.5	SB28 = 0
K2 + K1-SB	[K2] + [K1SB_X K2]	K2 = 0	K1-SB = 0	
	[K2] + [K1SB_60]	K2 = 6	K1-SB = 0	
K2 + SB28	[K2] + [SB28_60]	K2 = 0	SB28 = 6	
	[K2] + [SB28_60_C]	K2 = 0	SB28 = 0.5	
K2 + K1-SB + SB28	[K2] + [K1SB_X K2] + [SB28_60]	K2 = 0	K1-SB = 0	SB28 = 6
	[K2] + [K1SB_X K2] + [SB28_60_C]	K2 = 0	K1-SB = 0	SB28 = 0.5
	[K2] + [K1SB_60] + [SB28_60]	K2 = 8	K1-SB = 2	SB28 = 0
	[K2] + [K1SB_60] + [SB28_60_C]	K2 = 13.5	K1-SB = 7.5	SB28 = 0
KUDO + SB118	[KUDO**_60] + [SB118_60]	KUDO = 0	SB118 = 3.5	
	[KUDO**_60] + [SB118_60_C]	KUDO = 2	SB118 = 0	
KUDO + SB18	[KUDO**_60] + [SB18_60]	KUDO = 0	SB18 = 3.9	
	[KUDO**_60] + [SB18_60_C]	KUDO = 1.6	SB18 = 0	
KUDO + SB218	[KUDO**_60] + [SB218_60]	KUDO = 0	SB218 = 5	
KUDO + SB28	[KUDO**_60] + [SB28_60]	KUDO = 0	SB28 = 5	
	[KUDO**_60] + [SB28_60_C]	KUDO = 0.5	SB28 = 0	
KARA + SB18	[KARA] + [SB18_100]	KARA = 0	SB18 = 0	
	[KARA] + [SB18_100_C]	KARA = 5.5	SB18 = 0	
	[KARA] + [SB18_60]	KARA = 2.5	SB18 = 0	
	[KARA] + [SB18_60_C]	KARA = 8	SB18 = 0	
KARA + SB28	[KARA] + [SB28_100]	KARA = 0	SB28 = 1.35	
	[KARA] + [SB28_100_C]	KARA = 4.2	SB28 = 0	
	[KARA] + [SB28_60]	KARA = 0.3	SB28 = 0	
	[KARA] + [SB28_60_C]	KARA = 5.9	SB28 = 0	
KARA + SB18 + SB28	[KARA] + [SB18_100] + [SB28_60]	KARA = 0	SB18 = 0	SB28 = 1.3
	[KARA] + [SB18_100] + [SB28_60_C]	KARA = 4.2	SB18 = 4.2	SB28 = 0
KIVA + KILO	[KIVA] + [KILO]	KIVA = 0	KILO = 1.5	
KIVA/KILO + SB118	[KIVA_KILO] + [SB118_60]	KIVA/KILO = 0	SB118 = 5.9	
	[KIVA_KILO] + [SB118_60_C]	KIVA/KILO = 0	SB118 = 0.4	
KIVA/KILO + SB18	[KIVA_KILO] + [SB18_60]	KIVA/KILO = 0	SB18 = 6.3	
	[KIVA_KILO] + [SB18_60_C]	KIVA/KILO = 0	SB18 = 0.8	
KIVA + SB15m	[KIVA] + [SB15_100]	KIVA = 0	SB15m = 1.4	
	[KIVA] + [SB15_100_C]	KIVA = 2.4	SB15m = 0	
	[KIVA_FI] + [SB15_100]	KIVA = 0	SB15m = 0.6	
KIVA/SB15m + SB18	[KIVA_SB15] + [SB18_60]	KIVA/SB15m = 0	SB18 = 8.5	
	[KIVA_SB15] + [SB18_60_C]	KIVA/SB15m = 0	SB18 = 3	

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Combination PART 2/2	Presets	Pre-alignment delay values (ms)
V-DOSC + SB218	[V-DOSC_**_X] + [SB218_X]	V-DOSC = 1.8 SB218 = 0
	[V-DOSC_**_60] + [SB218_60]	V-DOSC = 0 SB218 = 3.8
V-DOSC + SB28	[V-DOSC_**_60] + [SB28_60]	V-DOSC = 0 SB28 = 3.8
	[V-DOSC_**_60] + [SB28_60_C]	V-DOSC = 1.7 SB28 = 0
V-DOSC + dV-SUB	[V-DOSC_**_X] + [dV-S_X]	V-DOSC = 0 dV-SUB = 0.2
V-DOSC + dV-SUB + SB218	[V-DOSC_**_60] + [dV-S_60_X] + [SB218_60]	V-DOSC = 0 dV-SUB = 0.2 SB218 = 3.7
V-DOSC + dV-SUB + SB28	[V-DOSC_**_60] + [dV-S_60_X] + [SB28_60]	V-DOSC = 0 dV-SUB = 0.2 SB28 = 3.7
	[V-DOSC_**_60] + [dV-S_60_X] + [SB28_60_C]	V-DOSC = 1.9 dV-SUB = 2 SB28 = 0
V-DOSC + dV-DOSC	[V-DOSC_**_60] + [dV_**_100]	V-DOSC = 0 dV-DOSC = 0
V-DOSC + dV-DOSC downfill	[V-DOSC_**_60] + [dV_**_100]	V-DOSC = 0 dV-DOSC = 0.04
dV-DOSC + SB118	[dV_**_100] + [SB118_100]	dV = 2.7 SB118 = 0
	[dV_**_100] + [SB118_100_C]	dV = 8.3 SB118 = 0
dV-DOSC + SB218	[dV_**_100] + [SB218_100]	dV = 0.8 SB218 = 0
dV-DOSC + SB18	[dV_**_100] + [SB18_100]	dV = 2.4 SB18 = 0
	[dV_**_100] + [SB18_100_C]	dV = 8 SB18 = 0
dV-DOSC + SB28	[dV_**_100] + [SB28_100]	dV = 0.8 SB28 = 0
	[dV_**_100] + [SB28_100_C]	dV = 6.3 SB28 = 0
dV-DOSC + dV-SUB	[dV_**_100] + [dV-S_100]	dV = 0 dV-SUB = 0
dV-DOSC + dV-SUB + SB118	[dV_**_100] + [dV-S_60_100] + [SB118_60]	dV = 0 dV-SUB = 0.75 SB118 = 4
	[dV_**_100] + [dV-S_60_100] + [SB118_60_C]	dV = 1.5 dV-SUB = 2.25 SB118 = 0
dV-DOSC + dV-SUB + SB218	[dV_**_100] + [dV-S_60_100] + [SB218_60]	dV = 0 dV-SUB = 0.75 SB218 = 4.5
dV-DOSC + dV-SUB + SB18	[dV_**_100] + [dV-S_60_100] + [SB18_60]	dV = 0 dV-SUB = 0.75 SB18 = 4.4
	[dV_**_100] + [dV-S_60_100] + [SB18_60_C]	dV = 1.1 dV-SUB = 1.85 SB18 = 0
dV-DOSC + dV-SUB + SB28	[dV_**_100] + [dV-S_60_100] + [SB28_60]	dV = 0 dV-SUB = 0.75 SB28 = 4.5
	[dV_**_100] + [dV-S_60_100] + [SB28_60_C]	dV = 1 dV-SUB = 1.75 SB28 = 0

8.2 Constant curvature WST® systems

Combination	Presets	Pre-alignment delay values (ms)
ARCS + SB118	[ARCS_**_60] + [SB118_60]	ARCS = 0.8 SB118 = 0
	[ARCS_**_60] + [SB118_60_C]	ARCS = 6.3 SB118 = 0
	[ARCS_**_100] + [SB118_100]	ARCS = 1.4 SB118 = 0
	[ARCS_**_100] + [SB118_100_C]	ARCS = 6.9 SB118 = 0
ARCS + SB18	[ARCS_**_60] + [SB18_60]	ARCS = 0.4 SB18 = 0
	[ARCS_**_60] + [SB18_60_C]	ARCS = 5.9 SB18 = 0
	[ARCS_**_100] + [SB18_100]	ARCS = 1.1 SB18 = 0
	[ARCS_**_100] + [SB18_100_C]	ARCS = 6.6 SB18 = 0
ARCS + SB218	[ARCS_**_60] + [SB218_60]	ARCS = 0 SB218 = 0.9
	[ARCS_**_100] + [SB218_100]	ARCS = 0 SB218 = 0.3
ARCS + SB28	[ARCS_**_60] + [SB28_60]	ARCS = 0 SB28 = 0.6
	[ARCS_**_60] + [SB28_60_C]	ARCS = 4.9 SB28 = 0
	[ARCS_**_100] + [SB28_100]	ARCS = 0 SB28 = 0.5
	[ARCS_**_100] + [SB28_100_C]	ARCS = 5.0 SB28 = 0
ARCS II + SB28	[ARCS_II] + [SB28_60]	ARCS II = 0 SB28 = 2.6
	[ARCS_II] + [SB28_60_C]	ARCS II = 2.9 SB28 = 0
ARCS WIDE/FOCUS + SB18m	[ARCS_WIFO] or [ARCS_WIFO_FI] + [SB18_60]	ARCS WIDE/FOCUS = 1.7 SB18m = 0
	[ARCS_WIFO] or [ARCS_WIFO_FI] + [SB18_60_C]	ARCS WIDE/FOCUS = 7.2 SB18m = 0

8.4 Coaxial loudspeaker enclosures

Combination PART 1/2	Presets	Pre-alignment delay values (ms)	
I15XTHIQ + SB118	[HIQ_FI_100] + [SB118_100]	HiQ = 2.6	SB118 = 0
	[HIQ_FR_100] + [SB118_100]	HiQ = 2.6	SB118 = 0
	[HIQ_MO_100] + [SB118_100]	HiQ = 2.5	SB118 = 0
I15HIQ + SB18	[HIQ_FI_100] + [SB18_100]	HiQ = 2.3	SB18 = 0
	[HIQ_FR_100] + [SB18_100]	HiQ = 2.3	SB18 = 0
	[HIQ_MO_100] + [SB18_100]	HiQ = 2.2	SB18 = 0
I15HIQ + dV-SUB	[HIQ_FI_100] + [dV-S_100]	HiQ = 0.6	dV-SUB = 0
	[HIQ_FR_100] + [dV-S_100]	HiQ = 0.6	dV-SUB = 0
	[HIQ_MO_100] + [dV-S_100]	HiQ = 0.5	dV-SUB = 0
Active 12XT + SB118	[12XTA_FI_100] + [SB118_100]	12XTA = 2.6	SB118 = 0
	[12XTA_FR_100] + [SB118_100]	12XTA = 2.6	SB118 = 0
	[12XTA_MO_100] + [SB118_100]	12XTA = 2.5	SB118 = 0
Active 12XT + SB18	[12XTA_FI_100] + [SB18_100]	12XTA = 2.3	SB18 = 0
	[12XTA_FR_100] + [SB18_100]	12XTA = 2.3	SB18 = 0
	[12XTA_MO_100] + [SB18_100]	12XTA = 2.2	SB18 = 0
Passive 12XT + SB118	[12XTP_FI_100] + [SB118_100]	12XTP = 2.4	SB118 = 0
	[12XTP_FR_100] + [SB118_100]	12XTP = 2.4	SB118 = 0
	[12XTP_MO_100] + [SB118_100]	12XTP = 2.4	SB118 = 0
Passive 12XT + SB18	[12XTP_FI_100] + [SB18_100]	12XTP = 2.1	SB18 = 0
	[12XTP_FR_100] + [SB18_100]	12XTP = 2.1	SB18 = 0
	[12XTP_MO_100] + [SB18_100]	12XTP = 2.1	SB18 = 0
8XT + SB118	[8XT_FI_100] + [SB118_100]	8XT = 3.1	SB118 = 0
	[8XT_FR_100] + [SB118_100]	8XT = 3.2	SB118 = 0
	[8XT_MO_100] + [SB118_100]	8XT = 3.0	SB118 = 0
8XT + SB18	[8XT_FI_100] + [SB18_100]	8XT = 2.8	SB18 = 0
	[8XT_FR_100] + [SB18_100]	8XT = 2.9	SB18 = 0
	[8XT_MO_100] + [SB18_100]	8XT = 2.7	SB18 = 0
5XT + SB15m	[5XT] + [SB15_100]	5XT = 0.3	SB15 = 0
I15XT + SB118	[I15XT_FI_100] + [SB118_100]	I15XT = 2.6	SB118 = 0
	[I15XT_FR_100] + [SB118_100]	I15XT = 2.5	SB118 = 0
	[I15XT_MO_100] + [SB118_100]	I15XT = 2.9	SB118 = 0
I15XT + SB18	[I15XT_FI_100] + [SB18_100]	I15XT = 2.3	SB18 = 0
	[I15XT_FR_100] + [SB18_100]	I15XT = 2.2	SB18 = 0
	[I15XT_MO_100] + [SB18_100]	I15XT = 2.6	SB18 = 0
Active MTD115 + SB118	[I15bA_FI_100] + [SB118_100]	I15bA = 2.4	SB118 = 0
	[I15bA_FR_100] + [SB118_100]	I15bA = 2.5	SB118 = 0
	[I15bA_MO_100] + [SB118_100]	I15bA = 2.7	SB118 = 0
Active MTD115 + SB18	[I15bA_FI_100] + [SB18_100]	I15bA = 2.1	SB18 = 0
	[I15bA_FR_100] + [SB18_100]	I15bA = 2.	SB18 = 0
	[I15bA_MO_100] + [SB18_100]	I15bA = 2.4	SB18 = 0
Passive MTD115 + SB118	[I15bP_FI_100] + [SB118_100]	I15bP = 2.1	SB118 = 0
	[I15bP_FR_100] + [SB118_100]	I15bP = 2.2	SB118 = 0
	[I15bP_MO_100] + [SB118_100]	I15bP = 2.8	SB118 = 0
Passive MTD115 + SB18	[I15bP_FI_100] + [SB18_100]	I15bP = 1.8	SB18 = 0
	[I15bP_FR_100] + [SB18_100]	I15bP = 1.9	SB18 = 0
	[I15bP_MO_100] + [SB18_100]	I15bP = 2.5	SB18 = 0

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Combination PART 2/2	Presets	Pre-alignment delay values (ms)	
I12XT + SB118	[I12XT_FI_100] + [SB118_100]	I12XT = 2.3	SB118 = 0
	[I12XT_FR_100] + [SB118_100]	I12XT = 2.3	SB118 = 0
	[I12XT_MO_100] + [SB118_100]	I12XT = 2.6	SB118 = 0
I12XT + SB18	[I12XT_FI_100] + [SB18_100]	I12XT = 2	SB18 = 0
	[I12XT_FR_100] + [SB18_100]	I12XT = 2	SB18 = 0
	[I12XT_MO_100] + [SB18_100]	I12XT = 2.3	SB18 = 0
MTDI12b + SB118	[I12b_FI_100] + [SB118_100]	I12b = 2.4	SB118 = 0
	[I12b_FR_100] + [SB118_100]	I12b = 2.5	SB118 = 0
	[I12b_MO_100] + [SB118_100]	I12b = 3.0	SB118 = 0
MTDI12b + SB18	[I12b_FI_100] + [SB18_100]	I12b = 2.1	SB18 = 0
	[I12b_FR_100] + [SB18_100]	I12b = 2.2	SB18 = 0
	[I12b_MO_100] + [SB18_100]	I12b = 2.7	SB18 = 0
MTDI08a + SB118	[I08a_FI_100] + [SB118_100]	I08a = 3.5	SB118 = 0
	[I08a_FR_100] + [SB118_100]	I08a = 3.6	SB118 = 0
	[I08a_MO_100] + [SB118_100]	I08a = 4.0	SB118 = 0
MTDI08a + SB18	[I08a_FI_100] + [SB18_100]	I08a = 3.2	SB18 = 0
	[I08a_FR_100] + [SB18_100]	I08a = 3.3	SB18 = 0
	[I08a_MO_100] + [SB18_100]	I08a = 3.7	SB18 = 0

9 ENCLOSURE DRIVE CAPACITY PER AMPLIFIED CONTROLLER

The tables below describe the maximum number of enclosures a single amplified controller can drive.

9.1 LA4 amplified controller

Technology	Loudspeaker enclosure	Max number of connections per output *	Max number of enclosures per controller
Coaxial	5XT	4	16
	8XT	2	8
	Passive 12XT	1	4
	Active 12XT	2	4
	115XT HiQ	1	2
Constant Curvature WST	ARCS® WIDE/FOCUS	1	4
Variable Curvature WST	KIVA KILO	2	8
Subwoofers	SB15m	1	4
	SB18	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.

9.2 LA4X amplified controller

Technology	Loudspeaker enclosure	Max number of connections per output *	Max number of enclosures per controller
Coaxial	5XT	4	16
	8XT	2	8
	Passive 12XT	1	4
	Active 12XT	2	4
	115XT HiQ	1	2
Constant Curvature WST	ARCS® WIDE/FOCUS	1	4
	ARCS® II	1	2
Variable Curvature WST	KIVA KILO	2	8
	KARA®	2	4
	KUDO®	1	1
	K2	1	1
Subwoofers	SB15m	1	4
	SB18	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.

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9.3 LA8 amplified controller

Technology	Loudspeaker enclosure	Max number of connections per output *	Max number of enclosures per controller
Coaxial	5XT	6	24
	8XT	3	12
	Passive 12XT	2	8
	Active 12XT	3	6
	115XT HiQ	2	4
Constant Curvature WST	ARCS® WIDE/FOCUS	2	8
	ARCS® II	3	6
Variable Curvature WST	KIVA KILO	3	12
	KARA®	3	6
	KUDO®	3	3
	K2	3	3
	K1®	2	2
Subwoofers	SB15m	2	8
	SB18	2	8
	SB28	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.



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