

Amplified Controllers

Preset Guide

version 5.1



LA4 Preset Library **5.1**

LA4X Preset Library **5.1**

LA8 Preset Library **5.1**

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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: 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 video tutorial**, accessible from the software.

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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.



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

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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 5.1 – 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 |

| LA4 Preset Library 5.1 – PART 2/3 | | | |
|--|--------------------|--------------------------------------|---------------|
| N° | Preset name | Description | Family |
| 034 | 12XTA_FI | 12XT active, full range, fill | 12XTA |
| 035 | 12XTA_FI_100 | 12XT active, HPF=100 Hz, fill | |
| 036 | 12XTA_FR | 12XT active, full range, FOH | |
| 037 | 12XTA_FR_100 | 12XT active, HPF=100 Hz, FOH | |
| 038 | 12XTA_MO | 12XT active, full range, monitor | |
| 039 | 12XTA_MO_100 | 12XT active, HPF=100 Hz, monitor | |
| 040 | 12XTP_FI | 12XT passive, full range, fill | 12XTP |
| 041 | 12XTP_FI_100 | 12XT passive, HPF=100 Hz, fill | |
| 042 | 12XTP_FR | 12XT passive, full range, FOH | |
| 043 | 12XTP_FR_100 | 12XT passive, HPF=100 Hz, FOH | |
| 044 | 12XT_MO | 12XT passive, full range, monitor | |
| 045 | 12XTP_MO_100 | 12XT passive, HPF=100 Hz, monitor | |
| 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 | 115XT_FI | 115XT, full range, fill | 115XT |
| 054 | 115XT_FI_100 | 115XT, HPF=100 Hz, fill | |
| 055 | 115XT_FR | 115XT, full range, FOH | |
| 056 | 115XT_FR_100 | 115XT, HPF=100 Hz, FOH | |
| 057 | 115XT_MO | 115XT, full range, monitor | |
| 058 | 115XT_MO_100 | 115XT, HPF=100 Hz, monitor | |
| 059 | 115bA_FI | MTD115b active, full range, fill | MTD115bA |
| 060 | 115bA_FI_100 | MTD115b active, HPF=100 Hz, fill | |
| 061 | 115bA_FR | MTD115b active, full range, FOH | |
| 062 | 115bA_FR_100 | MTD115b active, HPF=100 Hz, FOH | |
| 063 | 115bA_MO | MTD115b active, full range, monitor | |
| 064 | 115bA_MO_100 | MTD115b active, HPF=100 Hz, monitor | |
| 065 | 115bP_FI | MTD115b passive, full range, fill | MTD115bP |
| 066 | 115bP_FI_100 | MTD115b passive, HPF=100 Hz, fill | |
| 067 | 115bP_FR | MTD115b passive, full range, FOH | |
| 068 | 115bP_FR_100 | MTD115b passive, HPF=100 Hz, FOH | |
| 069 | 115bP_MO | MTD115b passive, full range, monitor | |
| 070 | 115bP_MO_100 | MTD115b passive, HPF=100 Hz, monitor | |

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| LA4 Preset Library 5.1 – PART 3/3 | | | |
|-----------------------------------|--------------|---|---------|
| N° | Preset name | Description | Family |
| 071 | 112XT_FI | 112XT, full range, fill | 112XT |
| 072 | 112XT_FI_100 | 112XT, HPF=100 Hz, fill | |
| 073 | 112XT_FR | 112XT, full range, FOH | |
| 074 | 112XT_FR_100 | 112XT, HPF=100 Hz, FOH | |
| 075 | 112XT_MO | 112XT, full range, monitor | |
| 076 | 112XT_MO_100 | 112XT, HPF=100 Hz, monitor | |
| 077 | 112b_FI | MTD112b, full range, fill | MTD112b |
| 078 | 112b_FI_100 | MTD112b, HPF=100 Hz, fill | |
| 079 | 112b_FR | MTD112b, full range, FOH | |
| 080 | 112b_FR_100 | MTD112b, HPF=100 Hz, FOH | |
| 081 | 112b_MO | MTD112b, full range, monitor | |
| 082 | 112b_MO_100 | MTD112b, HPF=100 Hz, monitor | |
| 083 | 108a_FI | MTD108a, full range, fill | MTD108a |
| 084 | 108a_FI_100 | MTD108a, HPF=100 Hz, fill | |
| 085 | 108a_FR | MTD108a, full range, FOH | |
| 086 | 108a_FR_100 | MTD108a, HPF=100 Hz, FOH | |
| 087 | 108a_MO | MTD108a, full range, monitor | |
| 088 | 108a_MO_100 | MTD108a, HPF=100 Hz, monitor | |
| 089 | FLAT_LA4 | Flat EQ, protection minimizing clipping risks | FLAT |

3.2 LA4X Amplified Controller

The LA4X onboard Preset Library is stored in the factory memory locations (from 011 to 065) 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 5.1 – 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 | KARADOWNK1 | Kara, HPF=100 Hz, optimized delay for K1 downfill | |
| 026 | KIVA | Kiva, full range, FOH | KIVA |
| 027 | KIVA_FI | Kiva, full range, fill | |
| 028 | KIVA_SB15 | Kiva & SB15m, X-OVER=100 Hz, full range, FOH | SB15KIVA |
| 029 | KIVA_KILO | Kiva & Kilo, full range, X-OVER=100 Hz, FOH | KILOKIVA |
| 030 | ARCS_II | ARCS II, full range | ARCS_II |
| 031 | ARCS_WIFO | ARCS Wide or ARCS Focus, full range, FOH | ARCS_WF |
| 032 | ARCS_WIFO_FI | ARCS Wide or ARCS Focus, full range, fill | |
| 033 | SB18_60 | SB18, LPF=60 Hz | SB18 |
| 034 | SB18_100 | SB18, LPF=100 Hz | |
| 035 | SB18_60_C | SB18, LPF=60 Hz, cardioid pattern | |
| 036 | SB18_100_C | SB18, LPF=100 Hz, cardioid pattern | |
| 037 | SB15_100 | SB15, LPF=100 Hz | SB15 |
| 038 | SB15_100_C | SB15, LPF=100 Hz, cardioid pattern | |
| 039 | KILO | Kilo, LPF=100 Hz | KILO |

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| LA4X Preset Library 5.1 – PART 2/2 | | | |
|------------------------------------|--------------|---|----------|
| N° | Preset name | Description | Family |
| 040 | HIQ_FI | 115XTHiQ, full range, fill | 115XTHiQ |
| 041 | HIQ_FI_100 | 115XTHiQ, HPF=100 Hz, fill | |
| 042 | HIQ_FR | 115XTHiQ, full range, FOH | |
| 043 | HIQ_FR_100 | 115XTHiQ, HPF=100 Hz, FOH | |
| 044 | HIQ_MO | 115XTHiQ, full range, monitor | |
| 045 | HIQ_MO_100 | 115XTHiQ, HPF=100 Hz, monitor | |
| 046 | 12XTA_FI | 12XT active, full range, fill | 12XTA |
| 047 | 12XTA_FI_100 | 12XT active, HPF=100 Hz, fill | |
| 048 | 12XTA_FR | 12XT active, full range, FOH | |
| 049 | 12XTA_FR_100 | 12XT active, HPF=100 Hz, FOH | |
| 050 | 12XTA_MO | 12XT active, full range, monitor | |
| 051 | 12XTA_MO_100 | 12XT active, HPF=100 Hz, monitor | |
| 052 | 12XTP_FI | 12XT passive, full range, fill | 12XTP |
| 053 | 12XTP_FI_100 | 12XT passive, HPF=100 Hz, fill | |
| 054 | 12XTP_FR | 12XT passive, full range, FOH | |
| 055 | 12XTP_FR_100 | 12XT passive, HPF=100 Hz, FOH | |
| 056 | 12XTP_MO | 12XT passive, full range, monitor | |
| 057 | 12XTP_MO_100 | 12XT passive, HPF=100 Hz, monitor | |
| 058 | 8XT_FI | 8XT, full range, fill | 8XT |
| 059 | 8XT_FI_100 | 8XT, HPF=100 Hz, fill | |
| 060 | 8XT_FR | 8XT, full range, FOH | |
| 061 | 8XT_FR_100 | 8XT, HPF=100 Hz, FOH | |
| 062 | 8XT_MO | 8XT, full range, monitor | |
| 063 | 8XT_MO_100 | 8XT, HPF=100 Hz, monitor | |
| 064 | 5XT | 5XT, full range | 5XT |
| 065 | FLAT_LA4X | Flat EQ, protection minimizing clipping risks | FLAT |



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 5.1 – 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 | |

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| LA8 Preset Library 5.1 – PART 2/4 | | | |
|-----------------------------------|--------------|---|----------|
| N° | Preset name | Description | Family |
| 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 | |
| 45 | 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 | 115XTHiQ, full range, fill | 115XTHiQ |
| 059 | HIQ_FI_100 | 115XTHiQ, HPF=100 Hz, fill | |
| 060 | HIQ_FR | 115XTHiQ, full range, FOH | |
| 061 | HIQ_FR_100 | 115XTHiQ, HPF=100 Hz, FOH | |
| 062 | HIQ_MO | 115XTHiQ, full range, monitor | |
| 063 | HIQ_MO_100 | 115XTHiQ, 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 | |



| LA8 Preset Library 5.1 – PART 3/4 | | | |
|--|--------------------|--|---------------|
| N° | Preset name | Description | Family |
| 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 | |
| 084 | KIVA_SB15 | Kiva & SB15m, X-OVER=100 Hz, full range, FOH | SB15KIVA |
| 085 | KIVA_KILO | Kiva & Kilo, full range, X-OVER=100 Hz, FOH | KILOKIVA |
| 086 | 12XTA_FI | 12XT active, full range, fill | 12XTA |
| 087 | 12XTA_FI_100 | 12XT active, HPF=100 Hz, fill | |
| 088 | 12XTA_FR | 12XT active, full range, FOH | |
| 089 | 12XTA_FR_100 | 12XT active, HPF=100 Hz, FOH | |
| 090 | 12XTA_MO | 12XT active, full range, monitor | |
| 091 | 12XTA_MO_100 | 12XT active, HPF=100 Hz, monitor | |
| 092 | 12XTP_FI | 12XT passive, full range, fill | 12XTP |
| 093 | 12XTP_FI_100 | 12XT passive, HPF=100 Hz, fill | |
| 094 | 12XTP_FR | 12XT passive, full range, FOH | |
| 095 | 12XTP_FR_100 | 12XT passive, HPF=100 Hz, FOH | |
| 096 | 12XTP_MO | 12XT passive, full range, monitor | |
| 097 | 12XTP_MO_100 | 12XT 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 | 115XT_FI | 115XT, full range, fill | 115XT |
| 106 | 115XT_FI_100 | 115XT, HPF=100 Hz, fill | |
| 107 | 115XT_FR | 115XT, full range, FOH | |
| 108 | 115XT_FR_100 | 115XT, HPF=100 Hz, FOH | |
| 109 | 115XT_MO | 115XT, full range, monitor | |
| 110 | 115XT_MO_100 | 115XT, HPF=100 Hz, monitor | |

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| LA8 Preset Library 5.1 – PART 4/4 | | | |
|-----------------------------------|--------------|---|----------|
| N° | Preset name | Description | Family |
| 111 | 115bA_FI | MTD115b active, full range, fill | MTD115bA |
| 112 | 115bA_FI_100 | MTD115b active, HPF=100 Hz, fill | |
| 113 | 115bA_FR | MTD115b active, full range, FOH | |
| 114 | 115bA_FR_100 | MTD115b active, HPF=100 Hz, FOH | |
| 115 | 115bA_MO | MTD115b active, full range, monitor | |
| 116 | 115bA_MO_100 | MTD115b active, HPF=100 Hz, monitor | |
| 117 | 115bP_FI | MTD115b passive, full range, fill | MTD115bP |
| 118 | 115bP_FI_100 | MTD115b passive, HPF=100 Hz, fill | |
| 119 | 115bP_FR | MTD115b passive, full range, FOH | |
| 120 | 115bP_FR_100 | MTD115b passive, HPF=100 Hz, FOH | |
| 121 | 115bP_MO | MTD115b passive, full range, monitor | |
| 122 | 115bP_MO_100 | MTD115b passive, HPF=100 Hz, monitor | |
| 123 | 112XT_FI | 112XT, full range, fill | 112XT |
| 124 | 112XT_FI_100 | 112XT, HPF=100 Hz, fill | |
| 125 | 112XT_FR | 112XT, full range, FOH | |
| 126 | 112XT_FR_100 | 112XT, HPF=100 Hz, FOH | |
| 127 | 112XT_MO | 112XT, full range, monitor | |
| 128 | 112XT_MO_100 | 112XT, HPF=100 Hz, monitor | |
| 129 | 112b_FI | MTD112b, full range, fill | MTD112b |
| 130 | 112b_FI_100 | MTD112b, HPF=100 Hz, fill | |
| 131 | 112b_FR | MTD112b, full range, FOH | |
| 132 | 112b_FR_100 | MTD112b, HPF=100 Hz, FOH | |
| 133 | 112b_MO | MTD112b, full range, monitor | |
| 134 | 112b_MO_100 | MTD112b, HPF=100 Hz, monitor | |
| 135 | 108a_FI | MTD108a, full range, fill | MTD108a |
| 136 | 108a_FI_100 | MTD108a, HPF=100 Hz, fill | |
| 137 | 108a_FR | MTD108a, full range, FOH | |
| 138 | 108a_FR_100 | MTD108a, HPF=100 Hz, FOH | |
| 139 | 108a_MO | MTD108a, full range, monitor | |
| 140 | 108a_MO_100 | MTD108a, HPF=100 Hz, monitor | |
| 141 | FLAT_LA8 | Flat EQ, protection minimizing clipping risks | FLAT |

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_LA8] 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 |

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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.x 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | Gain | Delay | Polarity | Mute |
| K1 | 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.



[K1SB_X] and [K1SB_60]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | Gain | Delay | Polarity | Mute |
| K2 | 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.

[KARADOWNK1]

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

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

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4.2 K2

| Loudspeaker configuration | Preset(s) | | | Acoustic properties |
|---|-----------|-------------|-----------|--|
| | K2 | K1-SB | 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 + SB28 subwoofers | [K2 xxx] | - | [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 xxx]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | Gain | Delay | Polarity | Mute |
| K2 | 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.

[K1SB_X K2] and [K1-SB_60]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 |

4.3 Kudo

| Loudspeaker configuration | LA8 preset(s) | | Acoustic properties |
|---------------------------------------|---------------|----------------|--|
| | Kudo | SB18 or SB28 * | |
| Kudo line source | [KUDO**_25] | - | 35 Hz – 20 kHz |
| | [KUDO**_40] | | 40 Hz – 20 kHz |
| | [KUDO**_60] | | 60 Hz – 20 kHz |
| Kudo line source + SB subwoofer | [KUDO**_40] | [SB**_60] | Down to 25 Hz (SB28) or 32 Hz (SB18) Reinforced LF contour |

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



K-LOUVER® and presets

Always ensure that the K-LOUVER® panels are set in accordance with the selected preset:

[KUDO50_**]: 50°

[KUDO80_**]: 80°

[KUDO110_**]: 110°

Refer to the **Kudo user manual** for details.

[KUDO**_**]

| Loudspeaker elements | | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | | Routin | 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.

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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 | | | | |
|----------------------|----|-------------------|----------|--------------------|------|-------|----------|------|
| | | | | Routin | 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 | | | | |
|----------------------|----|-------------------|----------|--------------------|------|-------|----------|------|
| | | | | Routin | 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 |



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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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.

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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**_**_C].

[KIVA]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | Gain | Delay | Polarity | Mute |
| Kilo | OUT 1 | LF | IN A | 0 dB | 0 ms | + | ON |
| Kiva | OUT 2 | PA | | | | | ON |
| Kiva | OUT 3 | PA | | | | | ON |
| Kiva | OUT 4 | PA | | | | | ON |

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

[KILO]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 |

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[SB218_X]

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

[dV_FI]

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

[dV-S_100] and [dV-S_60_100]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 | IN B | 0 dB | 0 ms | + | ON |
| | HF | OUT 4 | | | | | HF |

* 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.

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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 | | | | |
|----------------------|----|-------------------|----------|--------------------|------|-------|----------|------|
| | | | | Routin | 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].

[ARCS_WIFO] and [ARCS_WIFO_FI]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 |

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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 | | | | |
|----------------------|----|-------------------|----------|--------------------|------|-------|----------|------|
| | | | | Routin | 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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 |

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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)

[***_FR], [***_FI], [***_MO] and [***_**_100]

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

6.3 Active coaxial loudspeaker enclosures (12XTA, 115XT HiQ, MTD115bA, 115XT)

Preset names

| Coaxial enclosure | Preset |
|------------------------|------------|
| 12XT in active mode | [12XTA_**] |
| 115XT HiQ | [HiQ_**] |
| MTD115b in active mode | [115bA_**] |
| 115XT | [115XT_**] |

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

[***_FR], [***_FI], [***_MO] and [***_**_100]

| Loudspeaker elements | | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|----|-------------------|----------|--------------------|------|-------|----------|------|
| | | | | Routin | Gain | Delay | Polarity | Mute |
| Active *** | LF | OUT 1 | LF | IN A | 0 dB | 0 ms | + | ON |
| | HF | OUT 2 | HF | | | | | ON |
| Active *** | LF | OUT 3 | LF | IN B | 0 dB | 0 ms | + | ON |
| | HF | OUT 4 | HF | | | | | ON |

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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, ARCSII |
| | [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 | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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 A | 0 dB | 0 ms | + | ON |
| SB** | OUT 4 | SB | IN A | 0 dB | 0 ms | + | ON |

[SB**_**_C]

| Loudspeaker elements | Amplifier outputs | Channels | Default parameters | | | | |
|----------------------|-------------------|----------|--------------------|------|-------|----------|------|
| | | | Routin | 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.

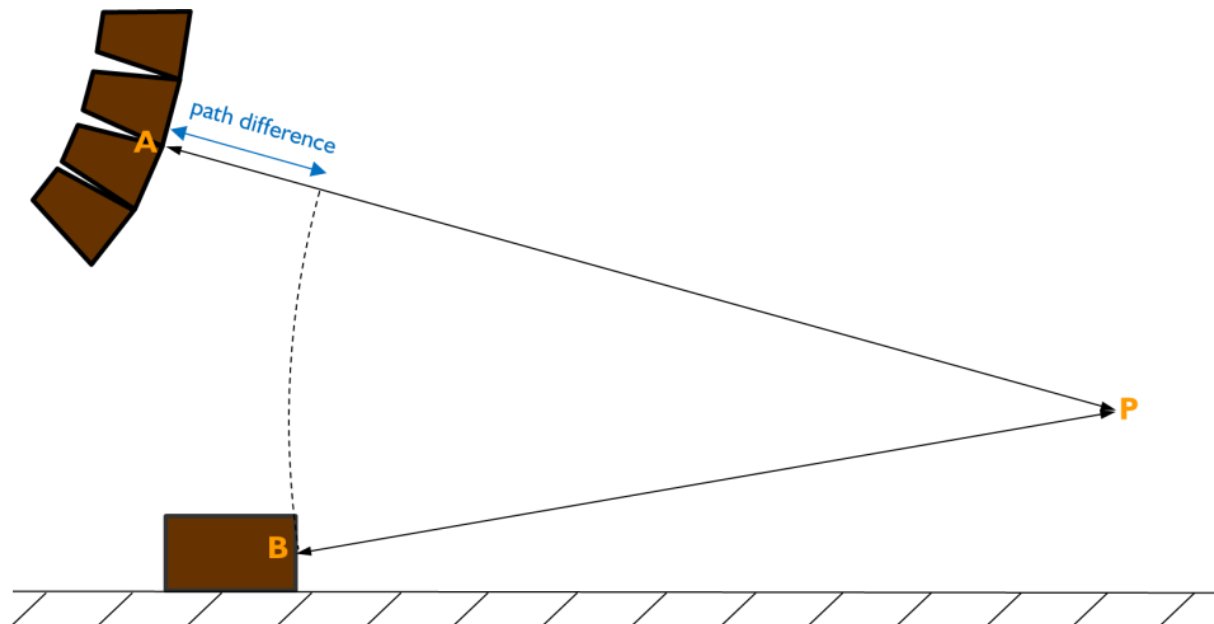
Pre-alignment delays have been measured with the enclosures at the same geometric location, front face on the same plane.

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* $\approx 340\ m.s^{-1}$ at $20^{\circ}C$ 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

i Laser rangefinders

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

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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 | |

| 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 = |
| 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 = SB18m = 0 |

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8.4 Coaxial loudspeaker enclosures

| Combination PART 1/2 | Presets | Pre-alignment delay values (ms) | |
|------------------------|------------------------------|---------------------------------|------------|
| 115XTHiQ + SB118 | [HIQ_FL_100] + [SB118_100] | 115XTHiQ = 2.6 | SB118 = 0 |
| | [HIQ_FR_100] + [SB118_100] | 115XTHiQ = 2.6 | SB118 = 0 |
| | [HIQ_MO_100] + [SB118_100] | 115XTHiQ = 2.5 | SB118 = 0 |
| 115HIQ + SB18 | [HIQ_FL_100] + [SB18_100] | 115XTHiQ = 2.3 | SB18 = 0 |
| | [HIQ_FR_100] + [SB18_100] | 115XTHiQ = 2.3 | SB18 = 0 |
| | [HIQ_MO_100] + [SB18_100] | 115XTHiQ = 2.2 | SB18 = 0 |
| 115HIQ + dV-SUB | [HIQ_FL_100] + [dV-S_100] | 115XTHiQ = 0.6 | dV-SUB = 0 |
| | [HIQ_FR_100] + [dV-S_100] | 115XTHiQ = 0.6 | dV-SUB = 0 |
| | [HIQ_MO_100] + [dV-S_100] | 115XTHiQ = 0.5 | dV-SUB = 0 |
| Active 12XT + SB118 | [12XTA_FL_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_FL_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_FL_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_FL_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_FL_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_FL_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 |
| 115XT + SB118 | [115XT_FL_100] + [SB118_100] | 115XT = 2.6 | SB118 = 0 |
| | [115XT_FR_100] + [SB118_100] | 115XT = 2.5 | SB118 = 0 |
| | [115XT_MO_100] + [SB118_100] | 115XT = 2.9 | SB118 = 0 |
| 115XT + SB18 | [115XT_FL_100] + [SB18_100] | 115XT = 2.3 | SB18 = 0 |
| | [115XT_FR_100] + [SB18_100] | 115XT = 2.2 | SB18 = 0 |
| | [115XT_MO_100] + [SB18_100] | 115XT = 2.6 | SB18 = 0 |
| Active MTD115 + SB118 | [115bA_FL_100] + [SB118_100] | 115bA = 2.4 | SB118 = 0 |
| | [115bA_FR_100] + [SB118_100] | 115bA = 2.5 | SB118 = 0 |
| | [115bA_MO_100] + [SB118_100] | 115bA = 2.7 | SB118 = 0 |
| Active MTD115 + SB18 | [115bA_FL_100] + [SB18_100] | 115bA = 2.1 | SB18 = 0 |
| | [115bA_FR_100] + [SB18_100] | 115bA = 2. | SB18 = 0 |
| | [115bA_MO_100] + [SB18_100] | 115bA = 2.4 | SB18 = 0 |
| Passive MTD115 + SB118 | [115bP_FL_100] + [SB118_100] | 115bP = 2.1 | SB118 = 0 |
| | [115bP_FR_100] + [SB118_100] | 115bP = 2.2 | SB118 = 0 |
| | [115bP_MO_100] + [SB118_100] | 115bP = 2.8 | SB118 = 0 |
| Passive MTD115 + SB18 | [115bP_FL_100] + [SB18_100] | 115bP = 1.8 | SB18 = 0 |
| | [115bP_FR_100] + [SB18_100] | 115bP = 1.9 | SB18 = 0 |
| | [115bP_MO_100] + [SB18_100] | 115bP = 2.5 | SB18 = 0 |

| Combination PART 2/2 | Presets | Pre-alignment delay values (ms) | |
|-----------------------------|------------------------------|--|-----------|
| 112XT + SB118 | [112XT_FI_100] + [SB118_100] | 112XT = 2.3 | SB118 = 0 |
| | [112XT_FR_100] + [SB118_100] | 112XT = 2.3 | SB118 = 0 |
| | [112XT_MO_100] + [SB118_100] | 112XT = 2.6 | SB118 = 0 |
| 112XT + SB18 | [112XT_FI_100] + [SB18_100] | 112XT = 2 | SB18 = 0 |
| | [112XT_FR_100] + [SB18_100] | 112XT = 2 | SB18 = 0 |
| | [112XT_MO_100] + [SB18_100] | 112XT = 2.3 | SB18 = 0 |
| MTD112b + SB118 | [112b_FI_100] + [SB118_100] | 112b = 2.4 | SB118 = 0 |
| | [112b_FR_100] + [SB118_100] | 112b = 2.5 | SB118 = 0 |
| | [112b_MO_100] + [SB118_100] | 112b = 3.0 | SB118 = 0 |
| MTD112b + SB18 | [112b_FI_100] + [SB18_100] | 112b = 2.1 | SB18 = 0 |
| | [112b_FR_100] + [SB18_100] | 112b = 2.2 | SB18 = 0 |
| | [112b_MO_100] + [SB18_100] | 112b = 2.7 | SB18 = 0 |
| MTD108a + SB118 | [108a_FI_100] + [SB118_100] | 108a = 3.5 | SB118 = 0 |
| | [108a_FR_100] + [SB118_100] | 108a = 3.6 | SB118 = 0 |
| | [108a_MO_100] + [SB118_100] | 108a = 4.0 | SB118 = 0 |
| MTD108a + SB18 | [108a_FI_100] + [SB18_100] | 108a = 3.2 | SB18 = 0 |
| | [108a_FR_100] + [SB18_100] | 108a = 3.3 | SB18 = 0 |
| | [108a_MO_100] + [SB18_100] | 108a = 3.7 | SB18 = 0 |

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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 | 3 | 12 |
| | 8XT | 2 | 8 |
| | Active 12XT | 2 | 4 |
| | Passive 12XT | 1 | 4 |
| | 115XT HiQ | 1 | 2 |
| | 112XT | 2 | 4 |
| | 115XT | 2 | 4 |
| | MTD108a | 2 | 8 |
| | MTD112b | 1 | 4 |
| | Active MTD115b | 1 | 2 |
| | Passive MTD115b | 1 | 4 |
| Constant Curvature WST | ARCS® Wide/Focus | 1 | 4 |
| | ARCS | 1 | 2 |
| Variable Curvature WST | Kiva / Kilo | 2 | 8 |
| Subwoofers | SB15m | 1 | 4 |
| | SB18 | 1 | 4 |
| | SB118 | 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.



For ARCS, SB118, the MTD series, 112XT and 115XT, refer to the enclosure drive capacity table for LA4.

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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 |
| | 112XT | 3 | 6 |
| | 115XT | 3 | 6 |
| | MTD108a | 3 | 12 |
| | MTD112b | 2 | 8 |
| | Active MTD115b | 2 | 4 |
| | Passive MTD115b | 2 | 8 |
| Constant Curvature WST | ARCS® Wide/Focus | 2 | 8 |
| | ARCS® II | 2 | 4 |
| | ARCS | 3 | 6 |
| Variable Curvature WST | Kiva / Kilo | 3 | 12 |
| | Kara® | 3 | 6 |
| | Kudo® | 3 | 3 |
| | K2 | 3 | 3 |
| | K1® | 2 | 2 |
| | K1-SB | 1 | 4 |
| | V-DOSC | 2 | 2 |
| | dV-DOSC | 3 | 6 |
| Subwoofers | SB15m | 2 | 8 |
| | SB18 | 2 | 8 |
| | SB28 | 1 | 4 |
| | SB118 | 2 | 8 |
| | SB218 | 1 | 4 |
| | 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.



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