KGEAR
Smart Audio Solutions

GS1 - GS2 - GS4
Passive 12" - 18"- 2x18" - birch plywood subwoofers

USER GUIDE
V1.0

The GS Series passive subwoofers are designed for high output, accurate low-frequency reproduction, and long-term reliability in professional audio applications. The series includes three models: GS1P (12"), GS2P (18"), and GS4P (2 × 18"), suitable for both fixed installations and mobile use.

All models feature a reinforced birch plywood cabinet with a durable black polyurea coating, ensuring resistance to impacts, abrasion, and humidity (IP43 rated). All subwoofers are equipped with ferrite-magnet woofers and provide an omnidirectional radiation pattern.

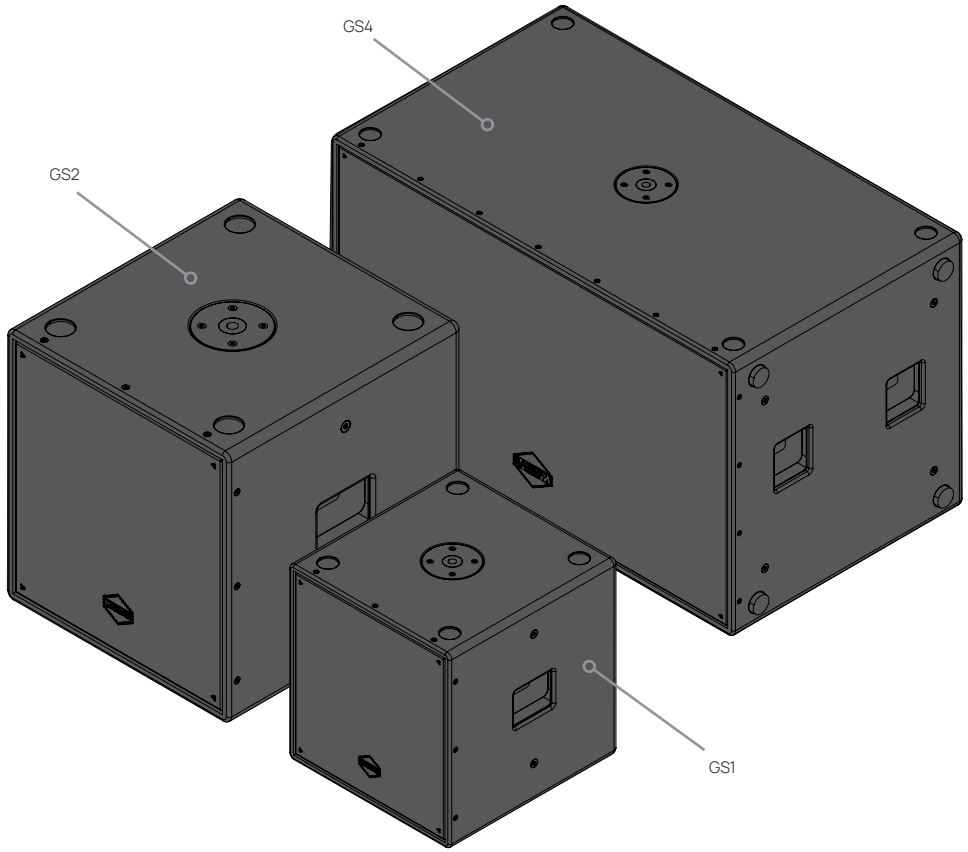
The GS1P offers a frequency response of 36 Hz – 150 Hz with a maximum SPL of 132 dB. The GS2P extends down to 34 Hz, with a maximum SPL of 134 dB. The GS4P, featuring 2 × 18" woofers, delivers 34 Hz – 150 Hz, up to 139 dB SPL, and 1600 W power handling.

GS1P and GS2P have 8 Ω nominal impedance, while GS4P is 4 Ω, all with 2 × SpeakON NL4 connectors. The GS Series is designed for use with K-array Kommander and GA amplifiers and integrates seamlessly with GH and GT loudspeakers for full-range systems.

Unpacking

Each KGEAR device is inspected before leaving the factory. Upon arrival, carefully inspect the shipping carton, then examine and test your new device. If you find any damage, immediately notify the shipping company. Check that the following parts are supplied with the product:

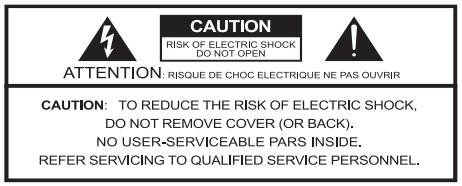
A. 1x GS1 - GS2 - GS4 passive subwoofer



• 20260327 • V.1

KGEAR
Smart Audio Solutions

IMPORTANT SAFETY INSTRUCTIONS



This symbol alerts the user to the presence of recommendations about the product's use and maintenance.

The lighting flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated, dangerous voltage within the product enclosure that may be of magnitude to constitute a risk of electrical shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in this guide.

Operator's manual; operating instructions
This symbol identifies the operator's manual that relates to the operating instructions and indicates that the operating instructions should be considered when operating the device or control close to where the symbol is placed.

For indoor use only
This electrical equipment is designed primarily for indoor use.

WEEE
Please dispose of this product at the end of its operational lifetime by bringing it to your local collection point or recycling center for such equipment.

This device complies with Restriction of Hazardous Substances Directive.

Warning. Failure to follow these safety instructions could result in fire, shock or other injury or damage to the device or other property.

General heed and warnings

- Read these instructions.
- Keep these instructions.
- Heed all warnings.
- Follow all instructions.
- Do not use this apparatus near water.
- Clean only with dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat
- Only use attachments/accessories specified by the manufacturer.
- Clean the product only with a soft and dry fabric. Never use liquid cleaning products, as this may damage the products cosmetic surfaces.
- Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/ apparatus combination to avoid injury from tip-over.
- Unplug this apparatus during lightning storms or when unused for long periods of time.
- Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

CAUTION: These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so.

These apparatus are intended for professional use.

Installation and commissioning may only be carried out by qualified and authorized personnel.

WARNING: Only use attachments/accessories specified or provided by the manufacturer (such as the exclusive supply adapter, battery, etc.)
Use only speaker cables for connecting speakers to the speaker terminals. Be sure to observe the amplifier's rated load impedance particularly when connecting speakers in parallel. Connecting an impedance load outside the amplifier's rated range can damage the apparatus.
KGEAR will not shoulder any responsibilities for products modified without prior authorization.

Service

To obtain service:

1. Please have the serial number(s) of the unit(s) available for reference.
2. Contact the official KGEAR distributor in your country: or KGEAR headquarter at info@kgear.it. Please describe the problem clearly and completely to the Customer Service.
3. You will be contacted back for on-line servicing.
4. If the problem cannot be resolved over the phone, you may be required to send the unit in for service. In this instance, you will be provided with an RA (Return Authorization) number which should be included on all shipping documents and correspondence regarding the repair. Shipping charges are the responsibility of the purchaser.

Any attempt to modify or replace components of the device will invalidate your warranty. Service must be performed by an authorized K-array service center.

Cleaning

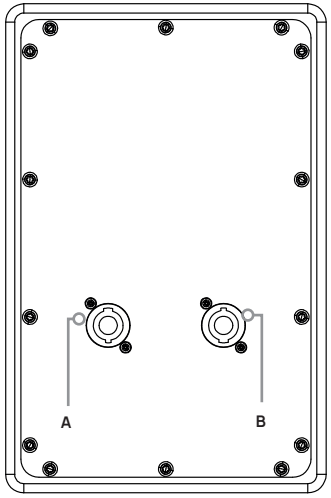
Use only a soft, dry cloth to clean the housing. Do not use any solvents, chemicals, or cleaning solutions containing alcohol, ammonia, or abrasives. Do not use any sprays near the product or allow liquids to spill into any openings.

• 20260327 • V.1

KGEAR
Smart Audio Solutions

Rear Panel

Each GS subwoofer is equipped with two SpeakON NL4 connectors located on the rear panel.



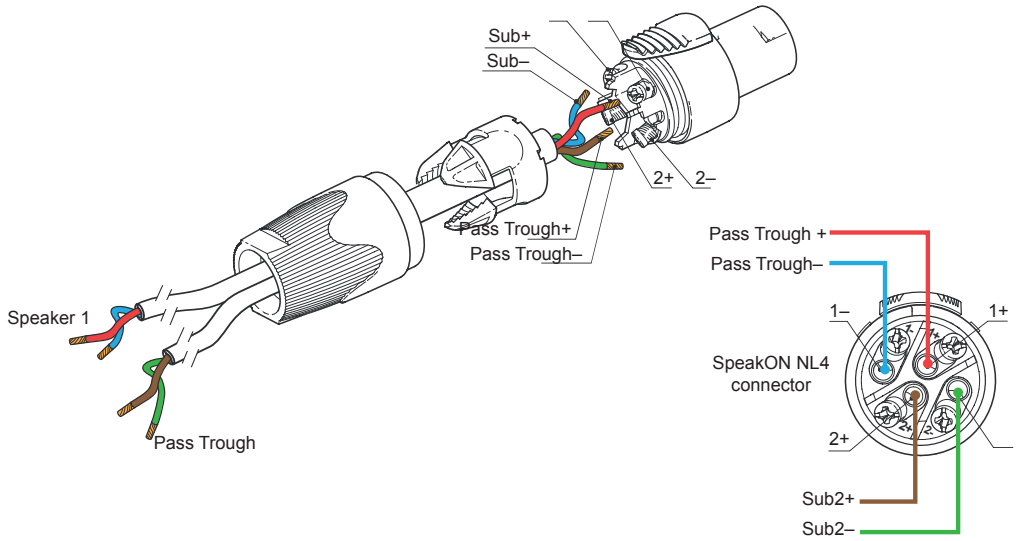
SpeakON		GS	
A	1	2+ 2-	SIGNAL / IN
		1+ 1–	THROUGH / LINK OUT
B	2	2+ 2-	SIGNAL / IN
		1+ 1–	THROUGH / LINK OUT

Wiring

The internal wiring uses pins 2+ and 2– connected to each speakON to drive the woofer (or woofers), while pins 1+ and 1– are wired in parallel between the two connectors, allowing signal pass-through to additional loudspeakers.

- Connector type: 2 × SpeakON NL4
- Wiring:
  - 2+ / 2– → connected to the subwoofer driver
  - 1+ / 1– → parallel connection (pass-through)
- Function: one connector is typically used for signal input, while the second allows pass signal to another passive satellite speaker.or passive subwoofer.

This configuration provides flexibility for complex system wiring while ensuring compatibility with standard four-pole speaker cables.



To ensure correct operation, the driving amplifier must provide the output signal on pins 2+ and 2– of the NL4 connector.
If the amplifier delivers signal only on pins 1+ / 1–, the subwoofer will not receive any input.

Impedance and Rated Power settings

Model	Impedance	Rated Power
GS1	8 Ω	800 W
GS2	8 Ω	800 W
GS4	4 Ω	1200 W

Amplifier Channel Matching

The impedance varies depending on the number of transducers connected in parallel.

To compare different subwoofer and satellite combinations and choose the proper amplifier, refer to the matching table available on the KGEAR website.
- KGEAR amplifier to KGEAR speaker Matching Table.

Please remember that the parallel connection lowers the total load impedance.

KGEAR-to-KGEAR

K-array-to -KGEAR

⚠ Always check the loudspeaker impedance before connecting the amplifier.

⚠ Always load the dedicated preset to ensure proper operation of the system components.

• 20260327 • V.1

Rigging and Hanging procedures

Suspended Unit and Array

Key rigging components must be inspected before each use.
Any rigging components found to be defective, or even suspect might be defective should be replaced with equivalent approved part.

Always use properly rated rigging hardware.

K-array is not responsible for any rigging equipment and accessories that are not manufactured by K-array.

K-array loudspeaker and hardware are intended for suspension from approved rigging points only.
Ensure that the total weight of the loudspeakers and additional hardware assembly in use is lower than the Working Load Limit (WLL) of the suspension points.

Rigging and flying loudspeaker systems shall be accomplished by knowledgeable and experienced professionals.

It is the user's responsibility to ensure that the use and suspension of heavy loudspeaker systems conform to all applicable laws and regulations in force at the time and location.

Suspended installation

Installation of Suspended Subwoofer Arrays

GS Series subwoofers can be mechanically coupled to create suspended subwoofer arrays using dedicated rigging hardware, such as the K-EXTRFRAMELITE kit, which includes joints and a bumper (flybar).

Rigging Kit Verification

Before starting the installation, ensure that all components of the rigging kit are present and in good condition.
The **K-EXTFRAMELITE** kit includes:

- 4 × joint plates with M8 screws (the screws can be removed from the side panels of the subwoofer enclosure).
  Inspect all components before use.

Do not proceed if any part is missing or damaged.

Assembly Procedure

1. Preparation
   Place the first subwoofer on a stable and flat surface.
2. Installation of Joint Plates (First Element)
- Remove the 8x M8 screws from the two side of the subwoofers enclosure)
- Fix the joint plates to the first subwoofer using the dedicated M8 screws and secure them with the 4x self-locking pins.(2x side) (A - A.1 - A.2 - A.3 - showing GS2 subwoofer mounting steps)
- The same mounting procedures and hardware are thought to mount GS4 subwoofer - shown in figures D - D.1 - D.2 - D.3 - D.4
- Ensure all plates are correctly aligned and securely fastened.

3. Pre-Lifting of the First Element
- Attach the first subwoofer to the suspension system (e.g. hoists, chains, or shackles — omega shackles can be attached to the points indicated by the arrows in the drawings.) and lift it slightly, just enough to allow the connection of the second element.

4. Preparation of the Second Element
- Install the joint plates on the second subwoofer using the dedicated M8 screws.

5. Coupling of the Second Element
- Position the second subwoofer under the first one and align the joint plates
- connect the two elements using the dedicated self-locking pins, ensuring they are fully inserted and properly secured. (B)

6. Additional Elements
   Repeat the same procedure for all additional subwoofers, ensuring proper alignment and secure connection of each element before proceeding with further lifting.(C)

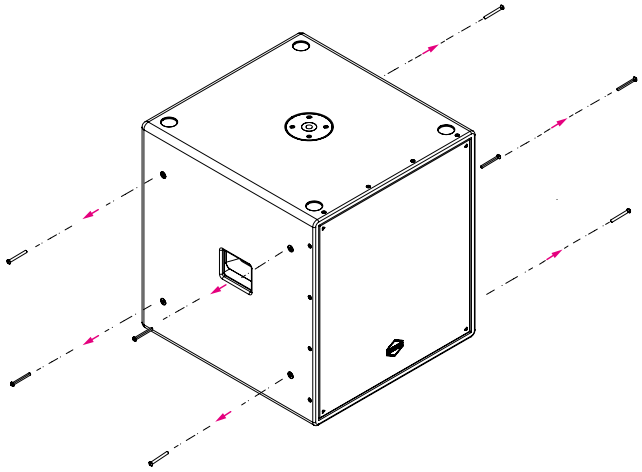
Ensure the subwoofer is securely attached to a certified suspension system before lifting.
Lift slowly and only as required for assembly.
Improper rigging may result in serious injury or damage.

• 20260327 • V.1

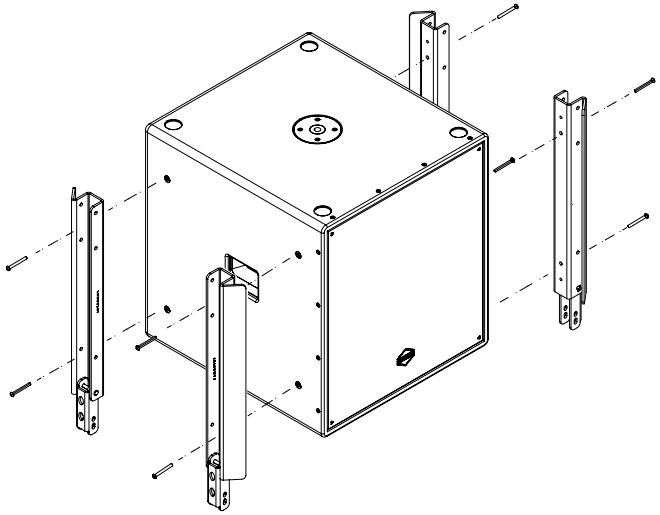
GS1 - GS2 - GS4

KGEAR
Smart Audio Solutions

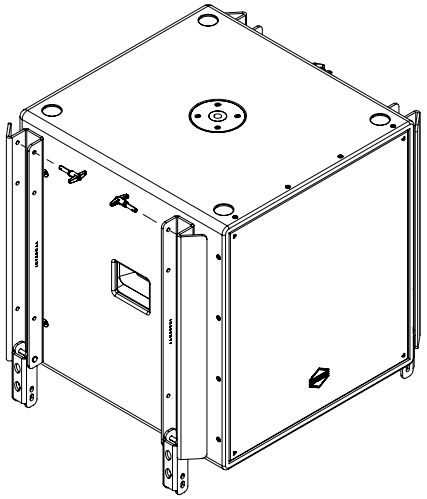
A



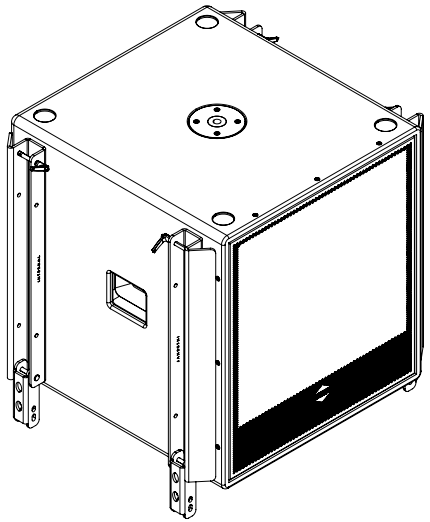
A.1



A.2



A.3

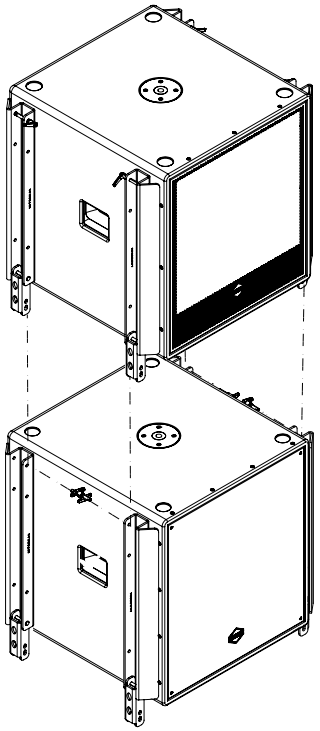


• 20260327 • V.1

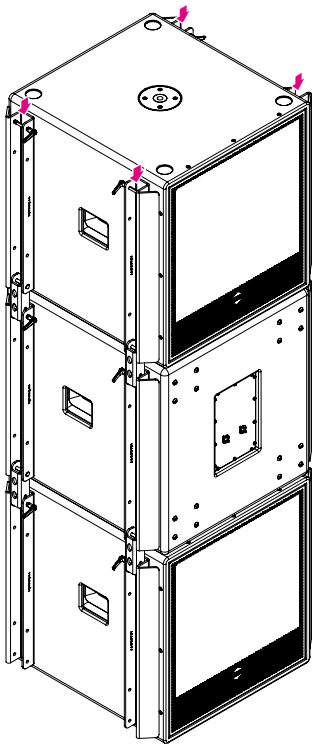
GS1 - GS2 - GS4

K GEAR
Smart Audio Solutions

B



C



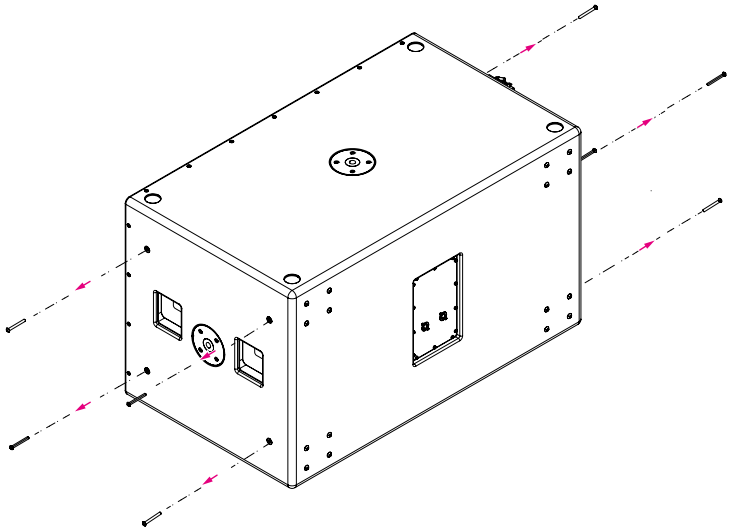
Do not exceed the maximum suspended load permitted for the rigging system. The K-EXTFRAMELITE rigging hardware has been verified with a safety factor of 7:1. Always refer to manufacturer-approved configurations and never suspend a greater number of units than officially specified.

• 20260327 • V.1

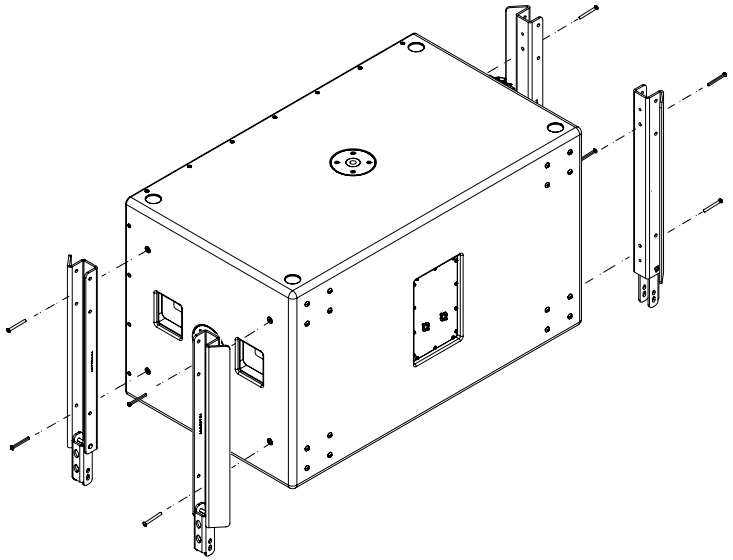
GS1 - GS2 - GS4

KGEAR
Smart Audio Solutions

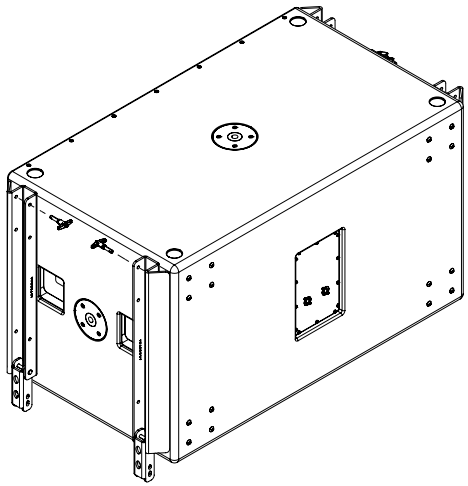
D



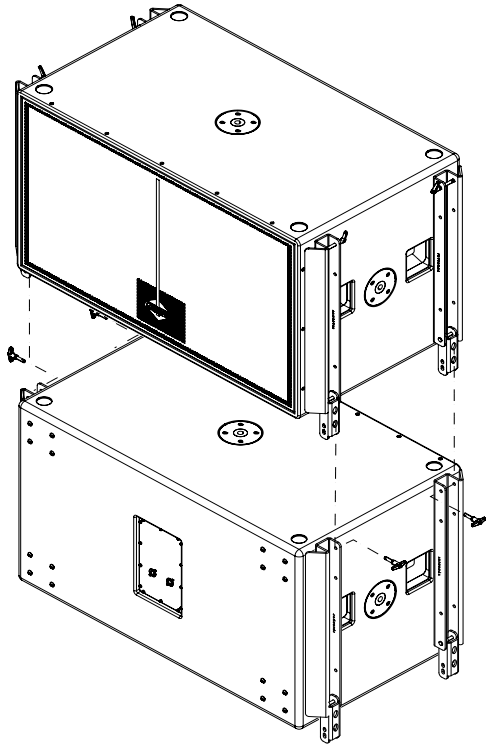
D.1



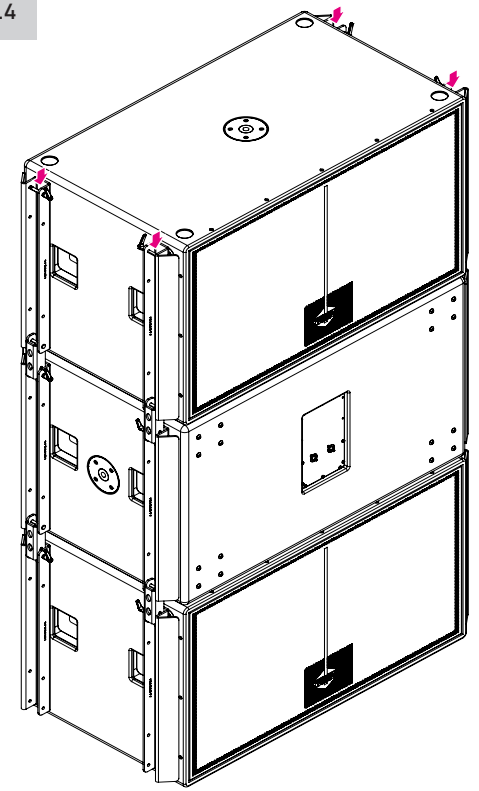
D.2



D.3



D.4



• 20260327 • V.1

KGEAR
Smart Audio Solutions

System Configurations

The GS series subwoofers are designed to deliver optimal performance when used as part of a complete audio system.
Their characteristics make them highly effective when paired with loudspeakers from the GT and GH series, ensuring coherent system behavior and balanced full-range reproduction.

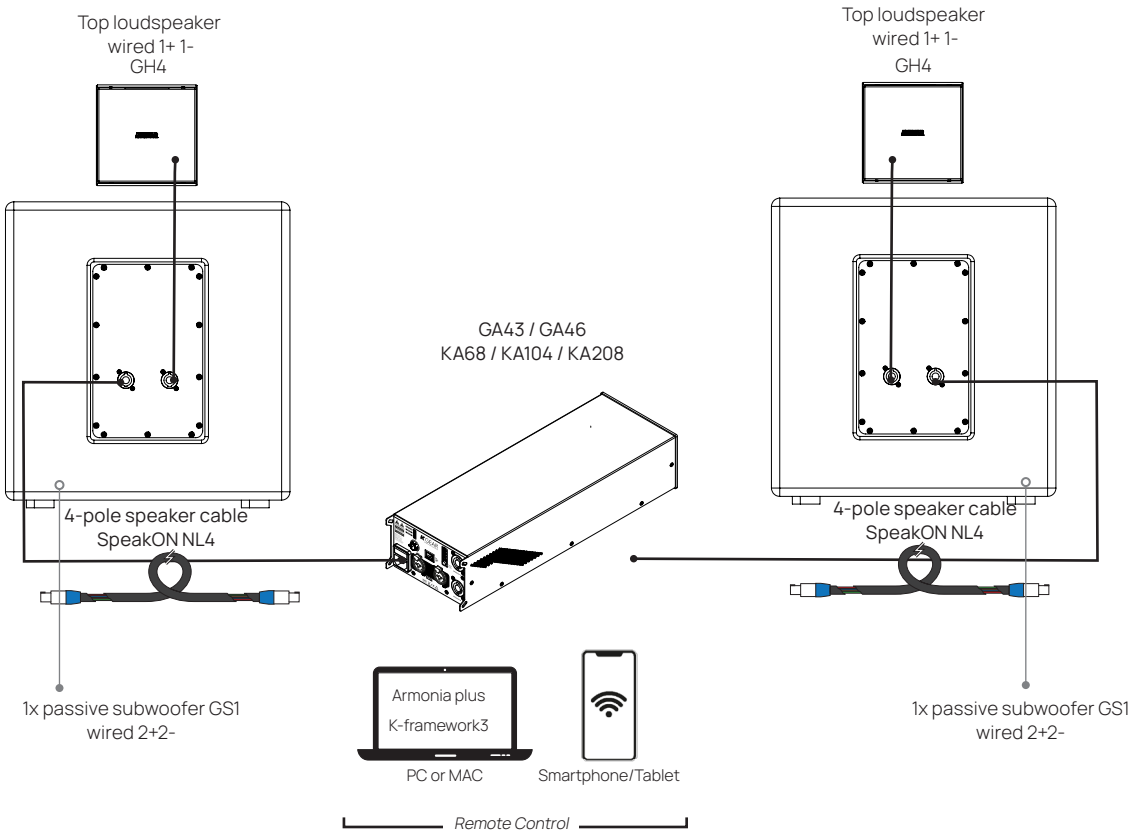
These recommended combinations are based not only on acoustic performance, such as proper low frequency extension, system headroom and tonal matching, but also on commercial considerations, offering practical and cost-effective system configurations.

For detailed information on the recommended bundles and compatible satellite models, please refer to the bundle reference table included in this manual.

> ⚠ Always load the dedicated preset to ensure proper operation of the system components.

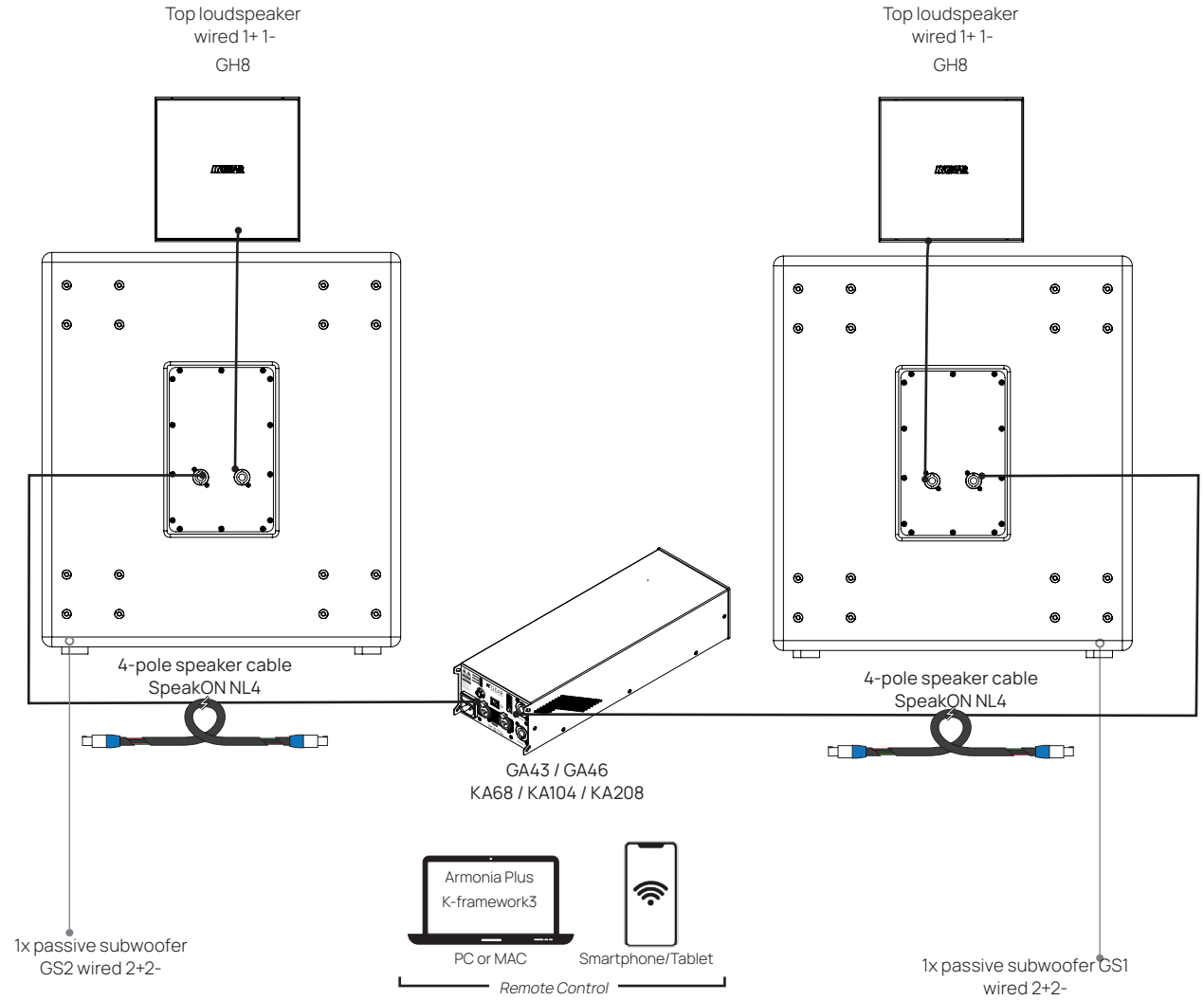
	Subwoofer	Speaker	Amplifier KG	Amplifier KA
KGEAR systems	GS1	GH4	GA43[1] / GA46	KA68[1] / KA104 / KA208
	GS2	GH8 / GT8	GA43[1] / GA46	KA68[1] / KA104 / KA208
	GS4	GT12	GA43[2] / GA46	KA104[1] / KA208

1 2x GS1 and GS2 units driven at not full-power (-3dB to -6dB loss) by GA43 and KA68 according to Amp-to-speaker matching table
2 1x GS4 unit at not full-power driven by GA43 and KA68 according to Amp-to-speaker-matching table
For complete information about Amplifier settings and matching, please refer to the Amp-to-speaker matching tables on k-array.com



• 20260327 • V.1

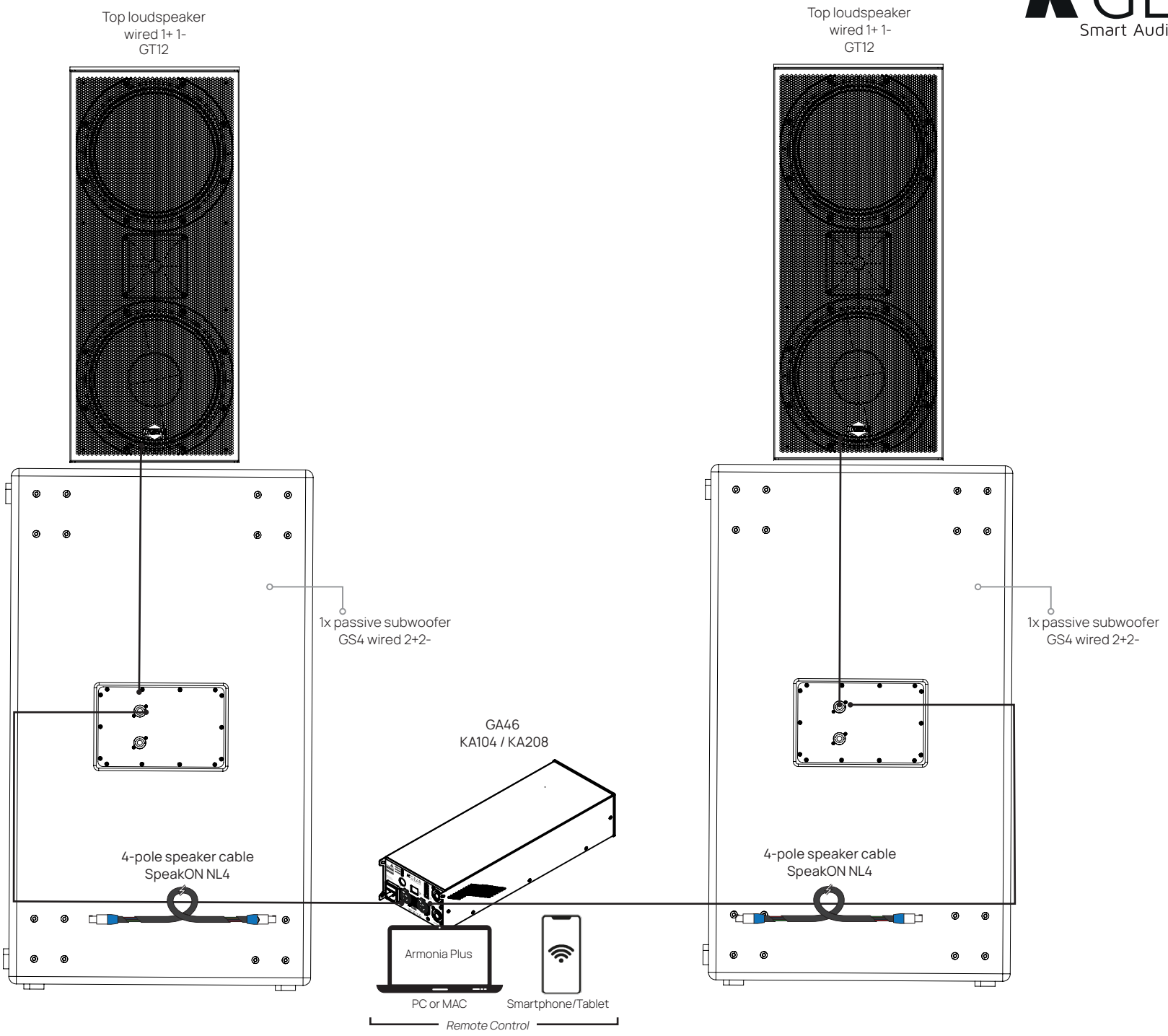
GS1 - GS2 - GS4



• 20260327 • V.1

GS1 - GS2 - GS4

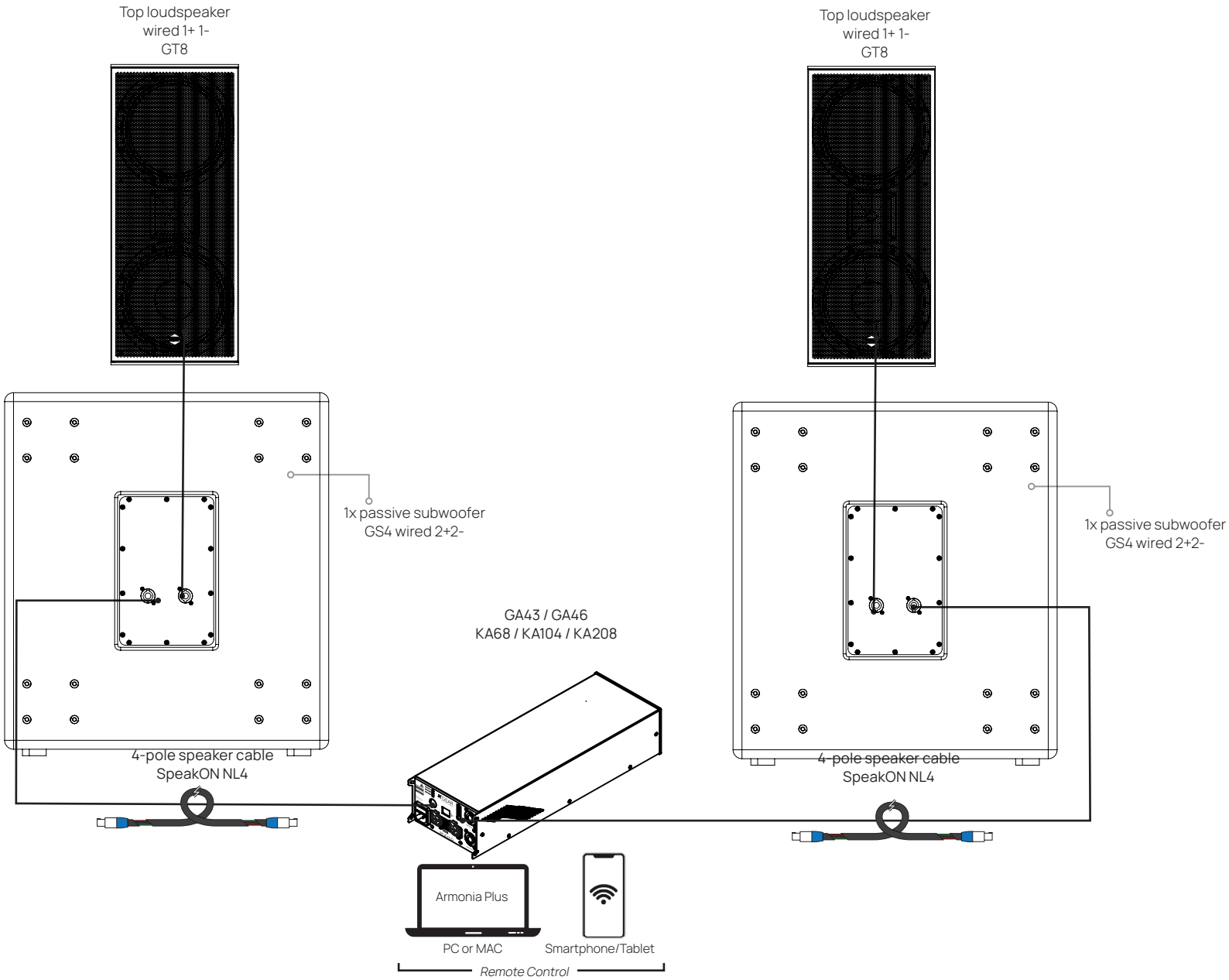
KGEAR
Smart Audio Solutions



• 20260327 • V.1

GS1 - GS2 - GS4

KGEAR
Smart Audio Solutions



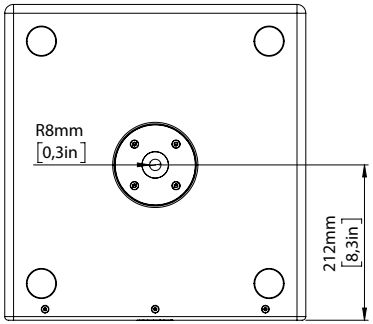
• 20260327 • V.1

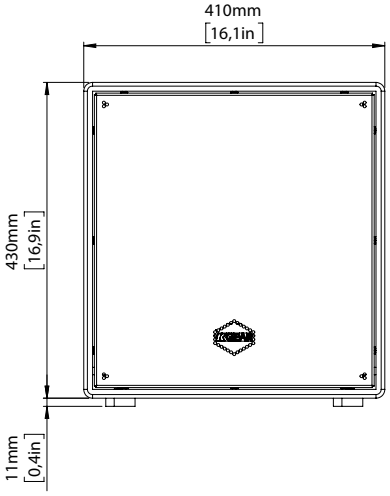
GS1 - GS2 - GS4

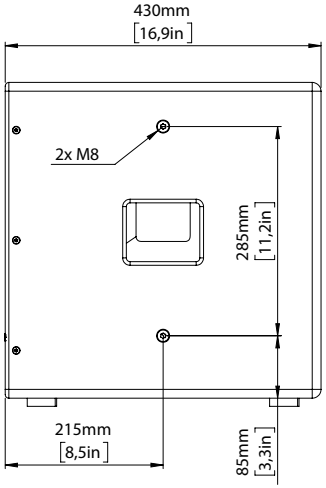
KGEAR Smart Audio Solutions

Mechanical Drawings

GS1





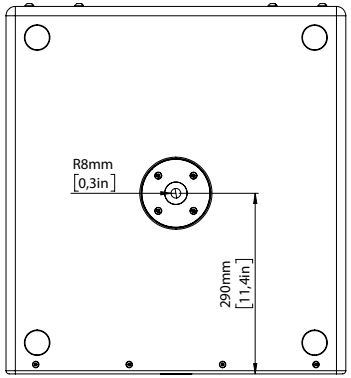


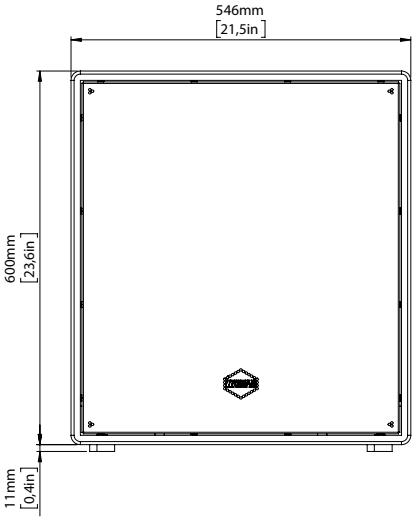
• 20260327 • V.1

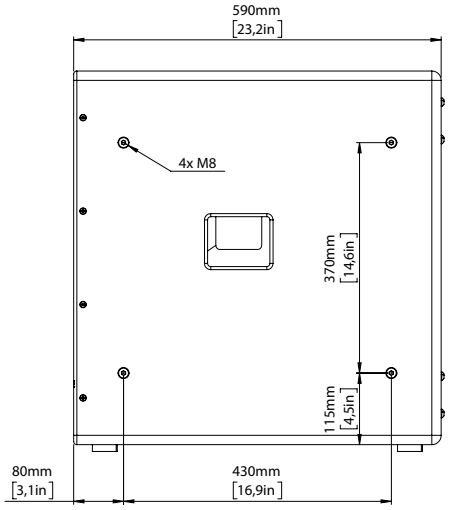
GS1 - GS2 - GS4

KGEAR
Smart Audio Solutions

GS2





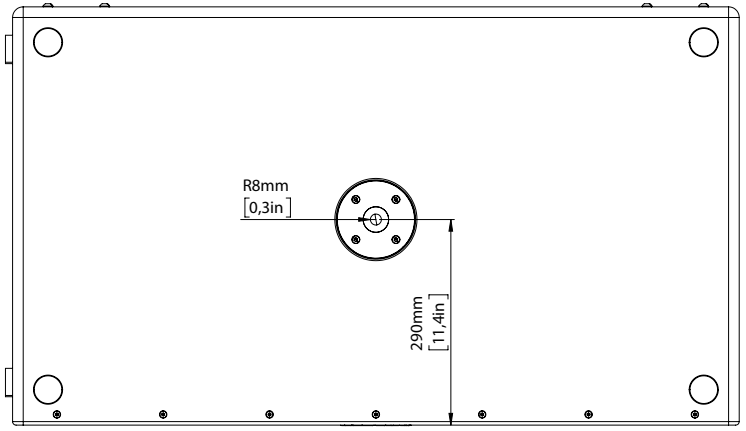


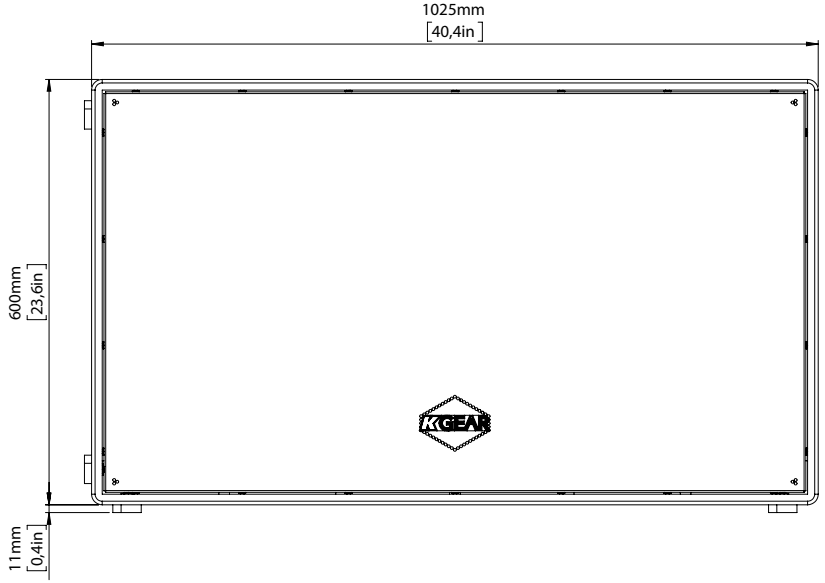
• 20260327 • V.1

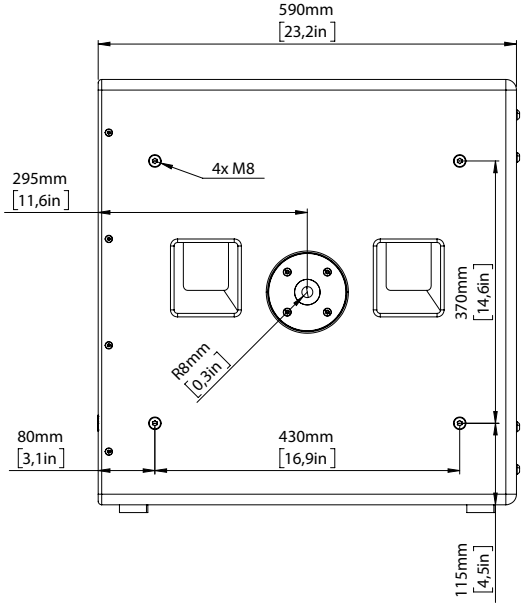
GS1 - GS2 - GS4

KGEAR Smart Audio Solutions

GS4



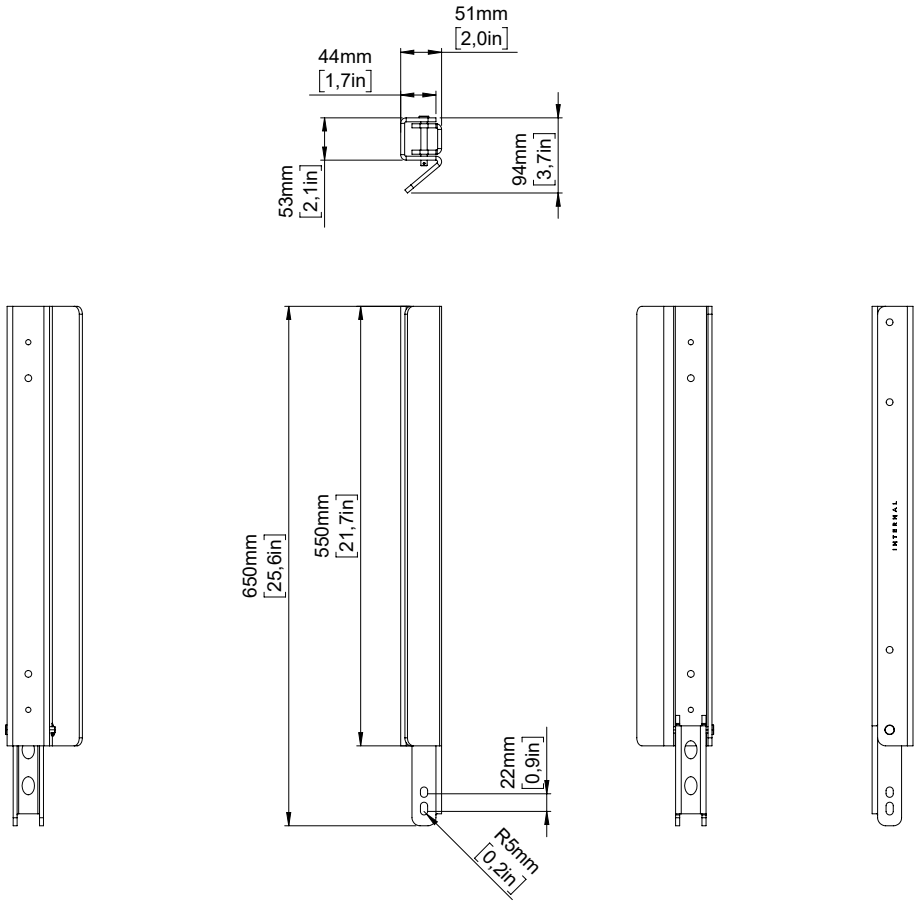




• 20260327 • V.1

GS1 - GS2 - GS4

K-EXTFRAMELITE



• 20260327 • V.1

GS1 - GS2 - GS4

KGEAR
Smart Audio Solutions

GS1

Technical specifications

Type	Passive subwoofer
Transducer	12" ferrite magnet woofer
Frequency Response[1]	36 Hz - 150 Hz (-6dB)
Max SPL[3]	132 dB
Rated power	800 W
Coverage	omni
Connectors	2x SpeakON NL4 (2+2- sig / 1+1- pass through)
Nominal Impedance	8Ω
IP rating	IP43

Handling & Finishes

Dimensions (WxLxH)	W: 410mm (16.14 in) H: 440mm (17.32 in) D: 430mm (16.92 in)"
Weight	19 kg (41.8 lb)
Material	Birch Plywood
Color	Black

1 With built-in low pass filter / 40 - 150 Hz with dedicated preset
2 Maximum SPL is calculated using a signal with crest factor 4 (12 dB) measured at 8 m then scaled at 1 m

GS2

Technical specifications

Type	Passive subwoofer
Transducer	18" ferrite magnet woofer
Frequency Response[1]	34 Hz - 150 Hz (-6dB)
Max SPL[3]	134 dB
Rated power	800 W
Coverage	omni
Connectors	2x SpeakON NL4 (2+2- sig / 1+1- pass through)
Nominal Impedance	8Ω
IP rating	IP43

Handling & Finishes

Dimensions (WxLxH)	W: 546mm(21.49 in), H: 610mm (24.02 in), D: 590mm (23.22 in)"
Weight	32,7 kg (72.1 lb)
Material	Birch Plywood
Color	Black

1 With built-in low pass filter / 40 - 150 Hz with dedicated preset
2 Maximum SPL is calculated using a signal with crest factor 4 (12 dB) measured at 8 m then scaled at 1 m

GS4

Technical specifications

Type	Passive subwoofer
Transducer	2 x18" ferrite magnet woofers
Frequency Response[1]	34 Hz - 150 Hz (-6dB)
Max SPL[3]	139 dB
Rated power	1600 W
Coverage	omni
Connectors	2x SpeakON NL4 (2+2- sig / 1+1- pass through)
Nominal Impedance	4Ω
IP rating	IP43

Handling & Finishes

Dimensions (WxLxH)	W: 1025mm (40.35 in) H:610mm (24.02 in) D: 590mm (23.22 in)
Weight	55,7 kg (122.8 lb)
Material	Birch Plywood
Color	Black

1 With built-in low pass filter / 40 - 150 Hz with dedicated preset
2 Maximum SPL is calculated using a signal with crest factor 4 (12 dB) measured at 8 m then scaled at 1 m

• 20260327 • V.1

KGEAR by K-array surl
via P. Romagnoli 17 - 50038 - Scarperia e San Piero -
Firenze - Italy - www.kgear.it