OUTLINE Ki SP Series Powerful Application Flexible Self Powered Loudspeaker Instruction Manual

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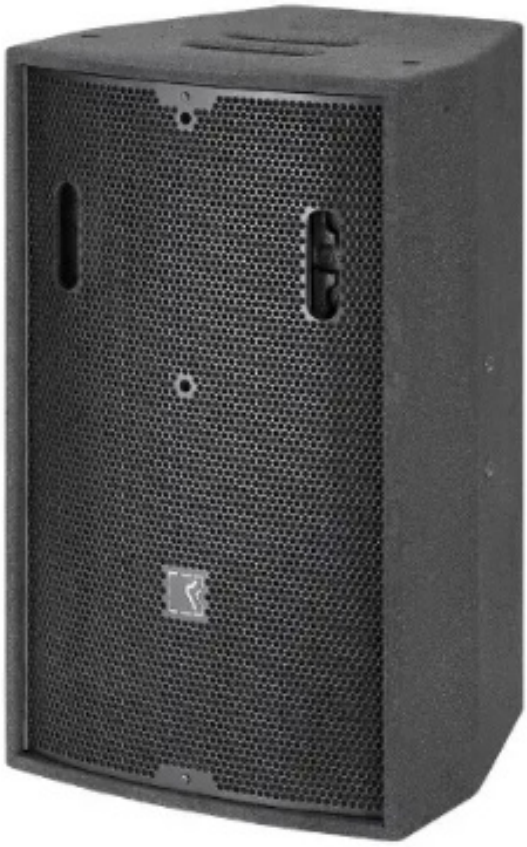
OUTLINE Ki SP Series Powerful Application Flexible Self Powered Loudspeaker



Product Information

The Ki SP series self-powered loudspeakers by OUTLINE are designed for use in sound reinforcement and audio recording systems. They offer high sound pressure levels with compact dimensions, making them suitable for various installed applications.

Usage Instructions

Safety Guidelines

- Ensure all connections are properly made before powering on to prevent damage.
- Only move the unit when cables are disconnected.
- Use dedicated accessories designed for the system or standard accessories for installation.
- Regularly inspect mechanical operation and accessories.
- Avoid exposure to high sound pressure levels that could damage hearing.
- Do not attempt to open or repair the unit yourself; seek professional help.

Disposal Instructions
Dispose of the product according to local regulations for electronic waste recycling. Do not dispose of with regular waste.

Conformity
All Outline electro-acoustic and electronic devices comply with EC/EU directives.

System Description
The Ki SP series offers flexibility and ease of use with high audio performance, engineering quality, and distinctive design.

Safety regulations

- Please ensure that you follow these guidelines for the safe and proper use of the product to avoid any risks to personal safety or warranty issues.
- This unit is specifically designed for use as part of a sound reinforcement or audio recording system.
- Any use beyond the manufacturer's intended purpose is the sole responsibility of the user.
- Do not expose the unit to rain or use it in areas with high humidity levels or near water.
- Prevent any liquids or solid objects from entering the unit. If this occurs, cease use and promptly contact an authorised service center.
- Connect the unit ONLY to the amplified output of an amplifier, powered mixer, or another unit with this type of output (e.g. a self-powered loudspeaker enclosure with an amplified auxiliary output). Always use a sui-table power cable that meets current safety standards when connecting the unit.
- Before powering on the amplifier, it is crucial to en-sure that all other components of the sound reinforcement/recording system are connected and switched on to prevent potential damage to the loudspeakers from disruptive noises.
- Move the unit only when the cables are disconnected.
- Use only dedicated accessories designed for the system or standard accessories for installation purposes.
- Periodically inspect the mechanical operation of the product and the accessories used.
- Keep in mind that this unit can produce high sound pressure levels that could damage hearing under incorrect conditions.
- Do not attempt to open or repair the unit by yourself; seek help from specialised personnel.
- For any technical assistance, contact OUTLINE or their authorised staff.

Disposal of waste materials.
Your product is designed and manufactured with high quality materials and components, which can be recycled and reused. When this crossed-out wheeled bin symbol is attached to a product, it means the product is covered by the European Directive 2012/19/EU and subsequent amendments. This means that the product must NOT be disposed with other waste. It is the user's responsibility to dispose of their electrical and electronic equipment by handing it over to an approved re-processor. For more information about where you can send your equipment for recycling, please contact your local distributor. The correct disposal of your old product will help prevent potential negative consequences for the environment and human health.

Conformity.
All Outline electro-acoustic and electronic devices are in conformity with the provisions of EC/EU directives (as stated in our CE Declaration of conformity).

Declaration of Conformity

The company OUTLINE SRL, with headquarters in Via Leonardo da Vinci 56, Flero (BS), declares under its sole responsibility that all electro-acoustic and electronic audio low frequency professional products, speakers components and loudspeakers included, are manufactured in ITALY according to the below stated standards and directives (where applicable). The technical files for the products (where applicable) are compiled by Outline s.r.l.

- Directive 2006/42/CE of 17 May 2006 "Machinery Directive"
- Legislative Decree 17 of 27/01/10, "Implementation of Directive 2006/42/CE regarding machinery, and which modifies directive 95/16/CE regarding lifts (elevators)";
- Legislative Decree 81 of 9/04/08, "Implementation of Art. 1 of law N° 123 of 3/08/07 on the matter of safeguarding health and safety in workplaces" and later amendments regarding the improvement of safety and

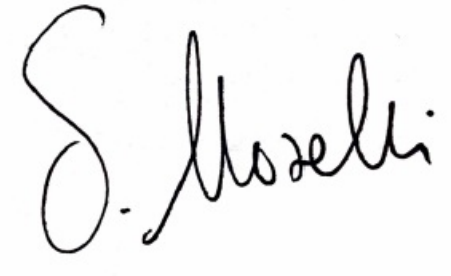
health of workers in workplaces;

- Directive 2014/35/EU, “Low Voltage”;
- Directive 2014/30/EU, “Electromagnetic Compatibility”;
- Directive 2003/10/CE (Legislative Decree 195/06), “Protection from noise”;
- Directive 2011/65/UE (RoHS) Restriction of the use of certain hazardous substances in electrical and electronic equipment.
- Legislative Decree 195 of 10/04/06, “Implementation of Directive 2003/10/CE regarding the exposure of workers to risks arising from physical agents (noise)”;
- UNI EN ISO 12100 (2010), “Safety of machinery – General principles for design – Risk assessment and risk reduction”;
- UNI EN ISO 13857 (2020), “Safety of machinery — Safety distances to prevent hazard zones being reached by upper and lower limbs”;
- UNI EN ISO 13854 (2020), “Safety of machinery – minimum gaps to avoid crushing of parts of the human body”;
- UNI EN ISO 13850 (2015), “Safety of machinery – Emergency stop – Principles for design”;
- UNI EN 614-1 (2009), “Safety of machinery – Ergonomic design principles – Part 1: Terminology and general principles”;
- UNI EN 614-2 (2009), “ Safety of machinery – Ergonomic design principles – Interaction between machinery design and work tasks”;
- UNI EN 894-1 (2009), “Safety of machinery – Ergonomics requirements for the design of displays and control actuators – General principles for human interactions with displays and control actuators”;
- UNI EN 894-2 (2009), “Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Displays”;
- UNI EN 894-3 (2009), “Safety of machinery – Ergonomics requirements for the design of displays and control actuators – Control actuators”;
- UNI EN ISO 14120 (2015), “Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards”;
- UNI EN 981 (2009), “Safety of machinery – Systems of auditory and visual danger and information signals”
- UNI EN ISO 13849-1 (2016) “Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design”;
- UNI EN ISO 13855 (2010) “Safety of machinery – Positioning of protective equipment with respect to the approach speeds of parts of the human body”
- UNI EN ISO 14188 (2018), “Safety of machinery – Prevention of unexpected start-up”;
- UNI EN ISO 13856-2 (2013), “Safety of machinery – Pressure sensitive protective devices – Part 2: General principles for the design and testing of pressure sensitive edges”.
- UNI EN ISO 4871 (2009) “Acoustics — Declaration and verification of noise emission values of machinery and equipment”;
- CEI EN 60204-1 (2018), (CEI 44-5), “Safety of machinery – Electrical equipment of machines – Part 1: General rules”;
- CEI EN IEC 60947-1 (2021), (CEI 121-21), “Low-voltage switchgear and control gear – Part 1: General rules”;
- CEI EN 60446 (2008), (CEI 16-4), “Basic and safety principles for man-machine interface, marking and identification – Identification of conductors by colours or alphanumeric”;
- CEI EN 61310-1 (2008), (CEI 44-8), “Safety of machinery – Indication, marking and actuation – Part 1:

Requirements for visual, acoustic and tactile signals";

- CEI EN 61310-2 (2008), (CEI 44-9), "Safety of machinery – Indication, marking and actuation – Part 2: Requirements for marking";
- UNI EN 1990 (2006), "Eurocode – General structural design criteria";
- UNI EN 1991-1-1 (2004), "Eurocode 1 – Actions on structures – Part 1-1: General actions – Densities, self-weight and imposed loads for buildings"
- CEI EN 62368-1:2014+A11:2017: Audio/video, information and communication technology equipment – Part 1: Safety requirements
- CEI EN 61000-6-4 Electromagnetic compatibility (EMC) Part 6-4: Generic standards – Emission standard for industrial environments
- CEI EN 61000-6-2 Electromagnetic compatibility (EMC) Part 6-2: Generic standards – Immunity standard for industrial environments
- CEI EN 55032:2015, EN 55032:2015/A11:2020: Electromagnetic compatibility of multimedia equipment. Emission requirements
- CEI EN 55035:2017, EN 55035:2017/A11:2020: Electromagnetic compatibility of multimedia equipment. Immunity requirements
- CEI EN 61000-3-2:2014: Limits for harmonic current emissions for equipment input current ≤ 16 A per phase
- CEI EN 61000-3-3:2013: Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤16 A per phase
- EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

OUTLINE SRL
Stefano Noselli – Production and Purchase Director Release date 20 March 2024



System description

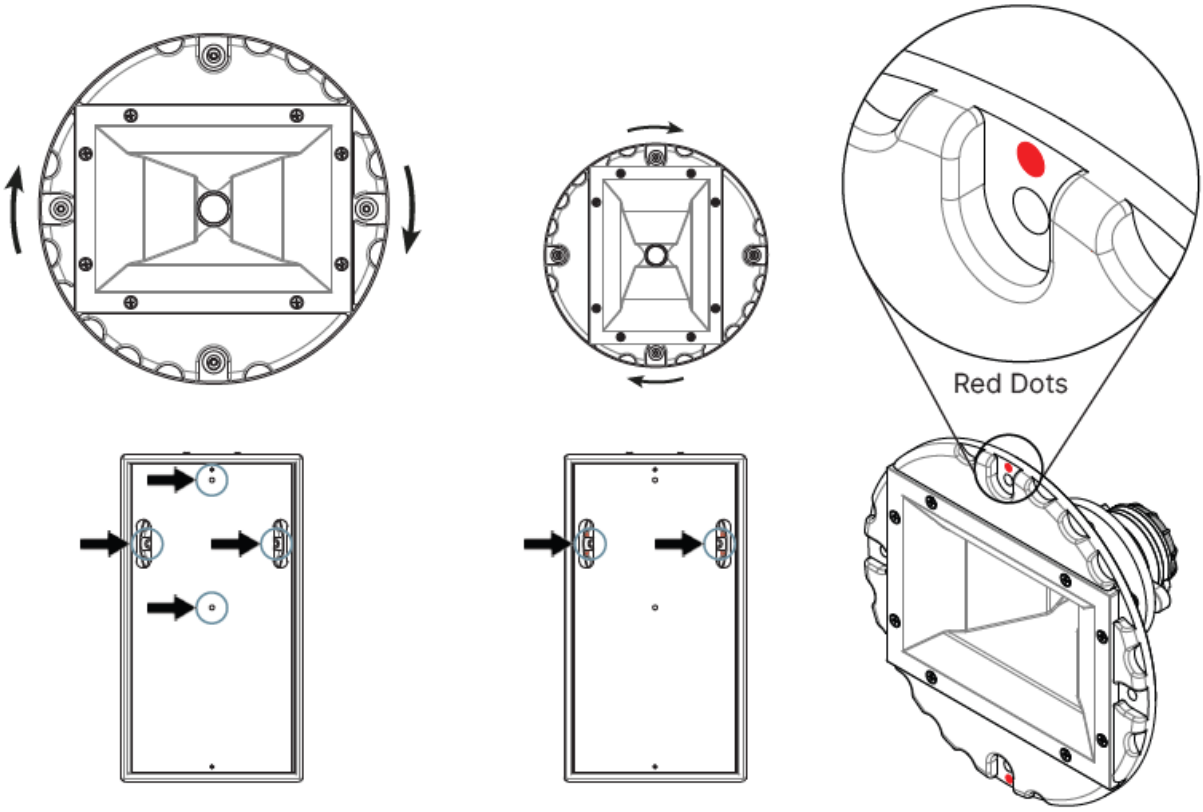
Conceived and manufactured to give clients a flexible and easy to use product introduction to Outline, the new Ki SP series brings the engineering quality, distinctive lines and audio performance that have made the Italian brand an international reference point in sound reinforcement. Both Ki 10 SP and Ki 12 SP's compact dimensions, audio performance and thoughtful design make them ideal solutions for a wide variety of permanently installed applications.
Ki 10 SP and Ki 12 SP self-powered loudspeakers are equipped with 10" and 12" LF transducers respectively, both of which feature a 2.5" voice coil for high power and reliability. A 1.5" diaphragm compression driver provides the HF reproduction. The Outline-designed passive crossover networks fitted to both models also make them very efficient in terms of amplifier channels and external control.

Both products also feature another Outline first, a brand new design of rotatable waveguide. Many comparable loudspeakers offer this facility but Outline's Ki-series are the first to allow the installer to quickly and easily rotate the entire horn and HF section without any disassembly of the loudspeaker. This piece of original engineering offers a real advantage in small rooms or those with low headroom, as the HF horn can be quickly adjusted to ensure the required dispersion (100° x 50° or 50° x 100°) regardless of the orientation of the cabinet.

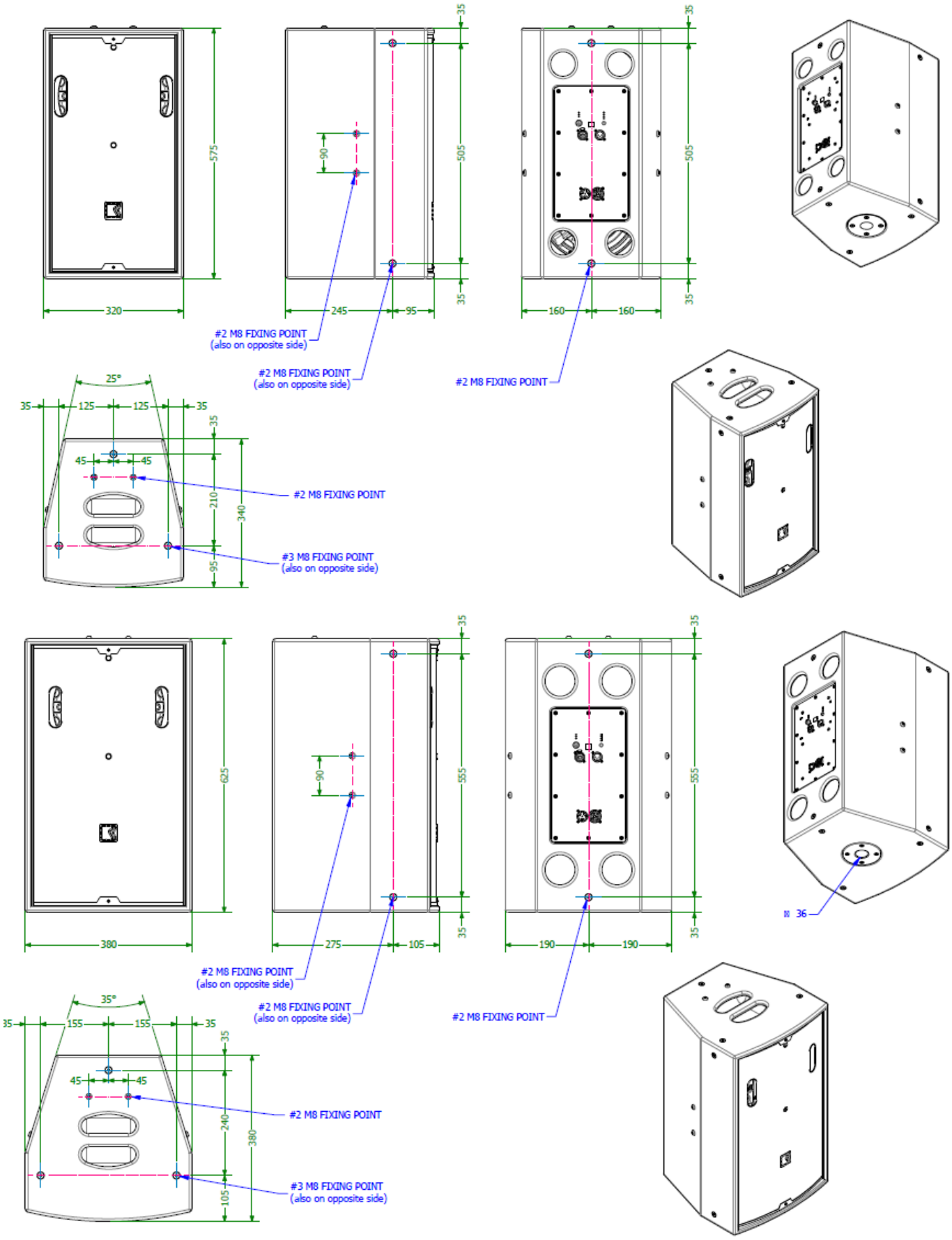
Operation

(rotatable horn)

It is possible to rotate the Ki's horn without removing the front grille. Just unlock the four screws and spin the wheel using the two openings on the front of the speaker. Then retighten the screws to lock the horn in the new position. Please note that when the horn is in vertical position it is shown through four dedicated red dots in the openings (one on each side as shown in the figure below).



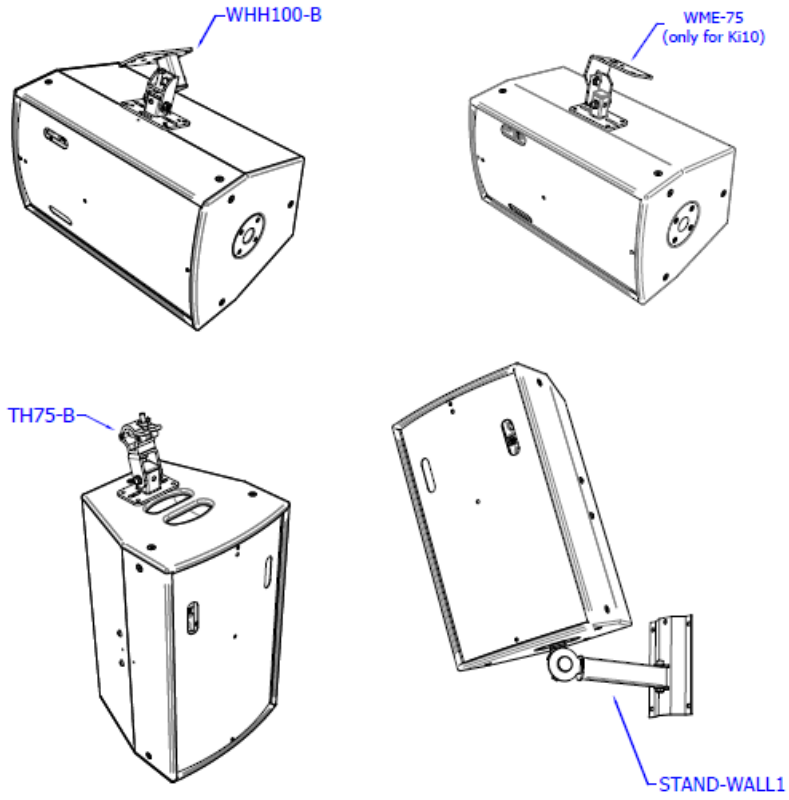
Overall dimensions



Rigging instructions

- This series offers many rigging possibilities: eighteen M8 points are available for multiple purposes. The loudspeaker can be rigged using the appropriate wall mount accessories (WME75 for Ki 10 SP, WHH100-B,
- TH100-B and STAND-WALL1 for both). Outline recommends to always use a secondary safety device when

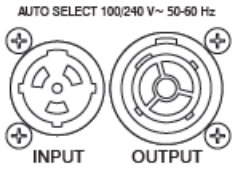
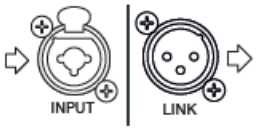
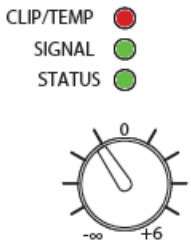
the system are rigged. The loudspeaker can also be mounted directly on a 35 mm speaker stand.



Amplification.

- The amplifiers are directly integrated into the cabinet. The amplifier module is completely autonomous and designed to be immediately ready for use (plug & play) once connected to the power.
- The integrated DSP allows the management of the input signal and control through the dedicated section available by connecting to the processor with a USB cable (type B). Before doing this connection, you need to download and install the ArmoníaPlus, amplifiers' management software.

Below you will find the elements offered by the management panel:

	Input & Output power: Powercon True1 (IP65) with a parallel output link at 220 V or 110 V.
	Analog signal input: XLR connector for balanced analog signal. Analog signal link: XLR connector in parallel to the input connector.
	Potentiometer and LEDs: the system gain can be regulated with the dedicated potentiometer which can be set from -∞ to +6 dB. STATUS LED: if it is off, the system is down. If it is GREEN, the system is ready to play and standby mode is disabled. If it is CYAN the system is ready to play but standby mode is enabled. It is BLUE when the system is in standby mode*; SIGNAL LED: when it is off there is no input signal, when the signal is present and the output level is in the linear range, it is GREEN. If it is YELLOW, the input signal is strong enough to engage the output limiter. If it is RED Input signal is too high; CLIP/TEMP LED: when it is off the system temperature is ok and there is no signal clipping. A YELLOW clip/temp LED indicates high system temperature and the DSP will lower the clipping voltage level to reduce the output power and limit the increase of temperature. If it is RED, there is an output signal clipping. *By factory default the 'standby mode' is active. By pressing the preset select push-button for at least 3 seconds the user can toggle the standby mode: when active, after 15 minutes of no input signal (input level below -45 dBu) the Ki-SP enters a low power operating mode (standby) and sends a signal to the power amplifier that turn off the output stages. The system turns back operating when the input signal level exceeds -45 dBu.
	Preset selection: button for the selection of one of the four available presets. It is possible to see the active preset with the help of the dedicated LEDs.
	USB input type B: USB port dedicated to DSP control through PC and *Armonía Plus* software.

Presets.
Outline has made available four presets that are potentially useful in any situation.

On the rear panel there is a button for selecting one of the available presets. These presets are named according to the needs they were designed for:

- FLAT
- BASS BOOST
- LOUDNESS, for low volume listening;
- PRESENCE, for speech applications.

Ki 10 SP Technical specifications.

PERFORMANCE

Frequency Response (-10 dB)	46 Hz-22 kHz*
Nominal Dispersion H x V (-6 dB)	100° x 50°
Maximum Output SPL*	130 dB SPL**
Number of Acoustic Ways	2
Number of Amplifier Channels	2
Power Amplifier	100-240 V ±10%, 50-60 Hz 2000 W max 520 W 1/4 rated power
On-board Presets	1. FLAT; 2. BASS BOOST; 3. LOUDNESS, for low volume listening; 4. PRESENCE, for speech applications
IP Rating	IP 34
Operating Temperature	-25 ° C / +60 ° C
* with Preset 2 ** calculated from measured SPL @ 1W/1m using +10 dB Crest Factor signal, Free Field	

PHYSICAL

Transducers	1 x 10″ Fe low frequency driver 2.5'' VC; 1 x 1'' exit Nd high frequency driver, 1.5″ VC
Connectors	Signal: 1 XLR + 1 Link Out Control: USB Type-B Mains: 1 Powercon True1 + 1 Link Out
Cabinet Material	Baltic birch plywood
Cabinet Finish	Polyurea coating
Grille	Epoxy powder coated
Handling	1 recessed handle on top
Mounting Points	18 x M8 threaded points, 35 mm pole mount socket
Dimensions (H x W x D)	575 x 320 x 340 mm – 22 5/8″ x 12 5/8'' x 13 3/8''
Weight	17.8 kg – 39.2 lb
Standard Colour / RAL	Black / RAL 9005

SHIPPING DETAILS

Shipping dimensions (H x W x D)	630 x 420 x 500 mm – 24 3/4″ x 16 1/2’’ x 19 3/4’’
Shipping weight	21.3 kg – 47 lb
Order code	O1Ki10-SP
Taric number (HS code)	8518.22.00

PERFORMANCE

Frequency Response (-10 dB)	49 Hz-22 kHz*
Nominal Dispersion H x V (-6 dB)	100° x 50°
Maximum Output SPL*	132 dB SPL**
Number of Acoustic Ways	2
Number of Amplifier Channels	2
Power Amplifier	100-240 V ±10%, 50-60 Hz 2000 W max 520 W 1/4 rated power
On-board Presets	1. FLAT; 2. BASS BOOST; 3. LOUDNESS, for low volume listening; 4. PRESENCE, for speech applications
IP Rating	IP 34
Operating Temperature	-25 ° C / +60 ° C
* with Preset 2 ** calculated from measured SPL @ 1W/1m using +10 dB Crest Factor signal, Free Field	

PHYSICAL

Transducers	1 x 12″ Fe low frequency driver, 2.5’’ VC 1 x 1’’ exit Nd high frequency driver, 1.5″ VC
Connectors	Signal: 1 XLR + 1 Link Out Control: USB Type-B Mains: 1 Powercon True1 + 1 Link Out
Cabinet Material	Baltic birch plywood
Cabinet Finish	Polyurea coating
Grille	Epoxy powder coated
Handling	1 recessed handle on top
Mounting Points	18 x M8 threaded points, 35 mm pole mount socket
Dimensions (H x W x D)	625 x 380 x 380 mm – 24 5/8″ x 15’’ x 15’’
Weight	19.4 kg – 42.8 lb
Standard Colour / RAL	Black / RAL 9005

SHIPPING DETAILS

Shipping dimensions (H x W x D)	690 x 550 x 500 mm – 27 1/8″ x 21 5/8’’ x 19 3/4’’
Shipping weight	23.6 kg – 52 lb
Order code	O1Ki12-SP
Taric number (HS code)	8518.22.00

OUTLINE S.R.L.

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- VAT IT02902720982

FAQ

- **Q: Can I use the Ki SP series loudspeakers outdoors?**
  - A: The Ki SP series is designed for indoor use. Outdoor use may expose the product to environmental conditions that could affect performance.
- **Q: How can I obtain technical assistance for the Ki SP series loudspeakers?**
  - A: For technical assistance, contact OUTLINE or their authorized staff for support.

Documents / Resources

	OUTLINE Ki SP Series Powerful Application Flexible Self Powered Loudspeaker [pdf] Instruction Manual Ki SP Series Powerful Application Flexible Self Powered Loudspeaker, Ki SP Series, Powerful Application Flexible Self Powered Loudspeaker, Application Flexible Self Powered Loudspeaker, Flexible Self Powered Loudspeaker, Self Powered Loudspeaker, Powered Loudspeaker, Loudspeaker

References

- User Manual