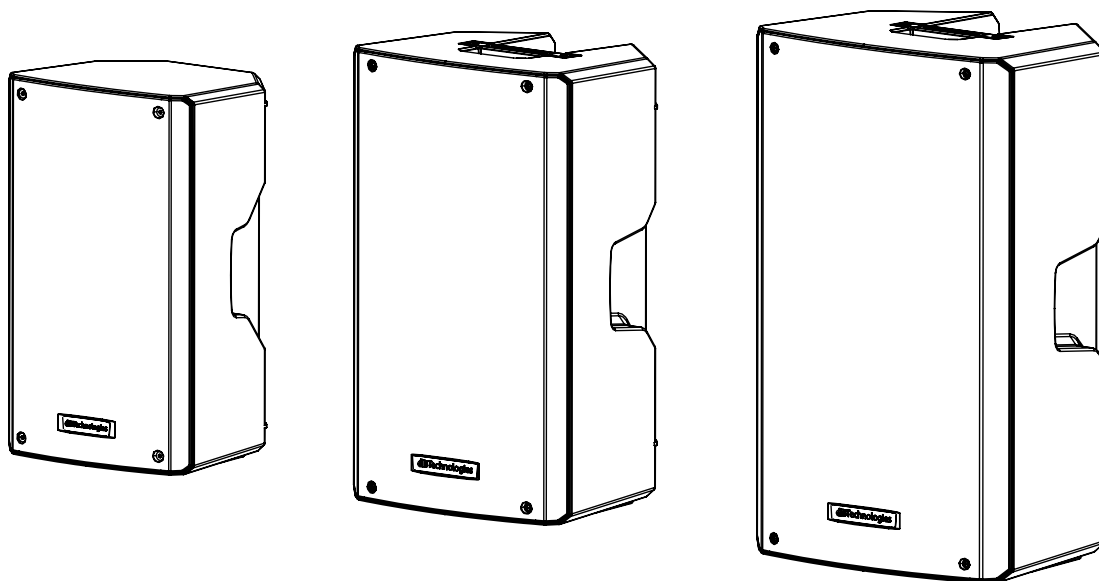


KL Series



KL10

KL12

KL15

MANUALE D'USO – Sezione 1

USER MANUAL - Section 1

BEDIENUNGSANLEITUNG - Abschnitt 1

MANUEL D'UTILISATION – Section 1

MANUAL DE USO – Sección 1

Le avvertenze nel presente manuale devono essere osservate congiuntamente al “MANUALE D'USO - Sezione 2”.

The warnings contained in this manual as well as the information listed in “USER MANUAL - Section 2” must be complied with.

Die in diesem Handbuch enthaltenen Warnhinweise müssen gemeinsam mit den Angaben in der „BEDIENUNGSANLEITUNG - Abschnitt 2“ beachtet werden.

Les avertissements dans le présent manuel doivent être respectés conjointement au « MANUEL D'UTILISATION – Section 2 ».

Respetar las advertencias en el presente manual junto al “MANUAL DE USO - Sección 2”.

CE CERTIFICATION

The full text of the EU declaration of conformity is available at the following internet address: <http://www.dbtechnologies.com/en/downloads>

EMI CLASSIFICATION

According to the standards EN 55103 this equipment is designed and suitable to KLT_e in E3 (or lower E2, E1) Electromagnetic environments.

FCC CLASS B STATEMENT ACCORDING TO TITLE 47, CHAPTER I, SUBCHAPTER A, PART 15, SUBPART B

KL10 FCC ID: 2ADDV-TLSYA10

KL12, KL15 FCC ID: 2ADDV-TLSYA12

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to KLT_e the equipment.

WARNING

Make sure that the loudspeaker is securely installed in a stable position to avoid any injuries or damages to persons or properties. For safety reasons do not place one loudspeaker on top of another without proper fastening systems. Before hanging the loudspeaker check all the components for damages, deformations, missing or damaged parts that may compromise safety during installation. If you use the loudspeakers outdoor avoid spots exposed to bad weather conditions.

Contact dBTechnologies for accessories to be used with the speakers. dBTechnologies will not accept any responsibility for damages caused by inappropriate accessories or additional devices.

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1. GENERAL INFORMATION

WELCOME!

Thanks for purchasing a product designed and developed in Italy by dBTechnologies! This ergonomic and versatile active speaker is the result of a long experience in the sound reinforcement industry, making use of optimized sound, electronic and material research solutions.

PRODUCT OVERVIEW

The new active KL speakers are equipped with a 1" compression driver (coil: or coil 1.35") for the high section. One 10", 12" and 15" transducer (coil: 2" or 2.5") on KL10, KL12, KL15, respectively, completes the effective acoustic performance levels on medium-low frequencies. These speakers main features include:

- an ergonomic, compact and versatile project that can be used in monitoring for small live contests
- extensive input equipment, including Bluetooth® for maximum mobile connectivity
- reliable, silent digital amplifier
- input type versatility, for instance for the amplification of a voice and an instrument at the same time
- output connection versatility, for the audio link of the mixed signal or
- selectable preset links with different equalizations for different types of use

USER REFERENCE

To make the most of your KL amplifier, we recommend that you:

- read the quick start user manual included in the package and this user manual thoroughly and keep this manual during the whole life of the product.
- Register your product at <http://www.dbtechnologies.com> under "[SUPPORT](#)".
- keep proof of purchase and WARRANTY (User manual "section 2").

MECHANICAL AND ACOUSTICAL FEATURES

DIMENSIONS

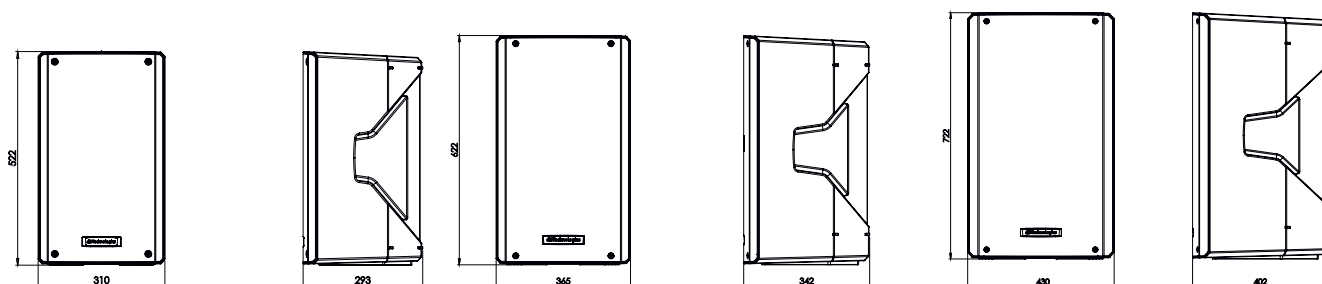
The KL series has been designed with the intent to optimise weight and dimensions.

The cabinet is light but resistant, and features 2 handles, one on the side or one at the top, for easy handling. For a quick comparison of the 3 models, the overall dimensions are the following:

Width: 310 mm (KL10) 365 mm (KL12) 430 mm (KL15)

Height: 521 mm (KL10) 622.5 mm (KL12) 722.5 mm (KL15)

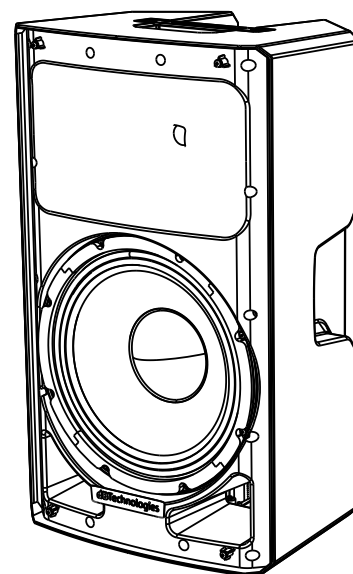
Depth: 292.5 mm (KL10) 342 mm (KL12) 402 mm (KL15)



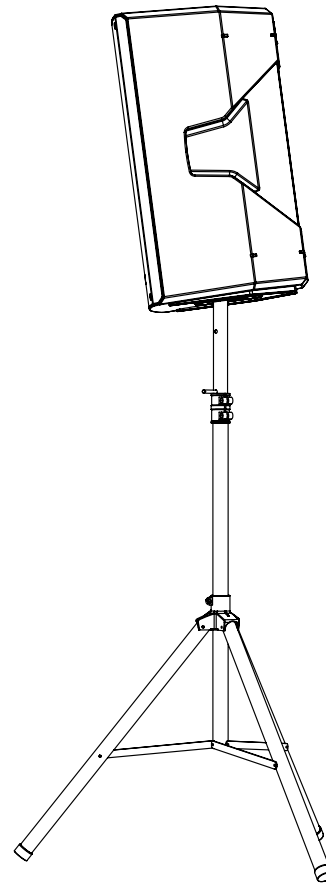
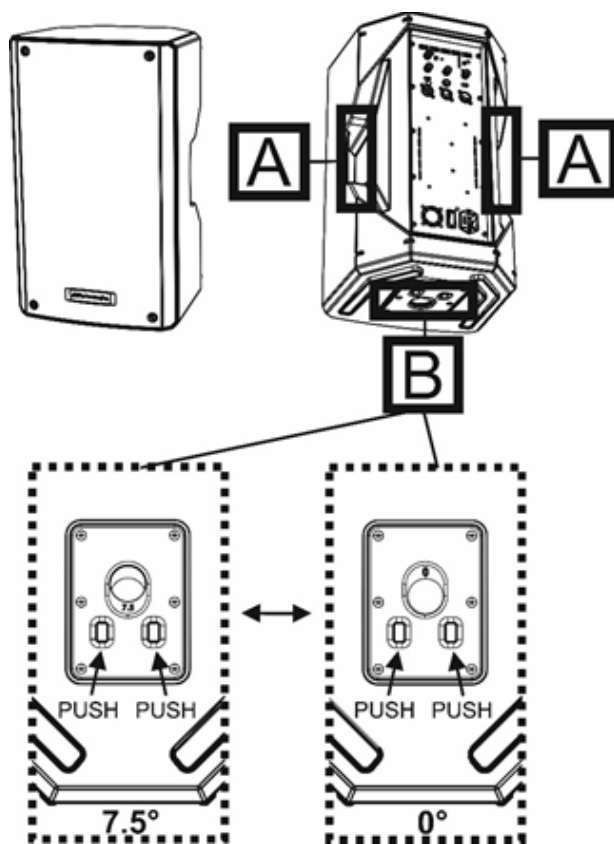
SOUND COVERAGE

The special design of the horn, shown in the figure, is common for all 3 models. With coverage: 90° x 60°.

Take these data into account, for example, when using the monitoring function.



MECHANICS



The mechanical features include:

A - Handles

B - Hole with selectable tilting range from 0° to 7.5°. To select the tilting angle, press the two indicated holes at the bottom of the speaker.

FEATURES OF THE AMPLIFIER AND CONTROL SECTIONS

The amplifier is at the heart of the KL series. The system is controlled by a dedicated powerful DSP that manages the different parameters.

The sound amplification power is 400 W Peak (KL10) and 800 W Peak (KL12-KL15).

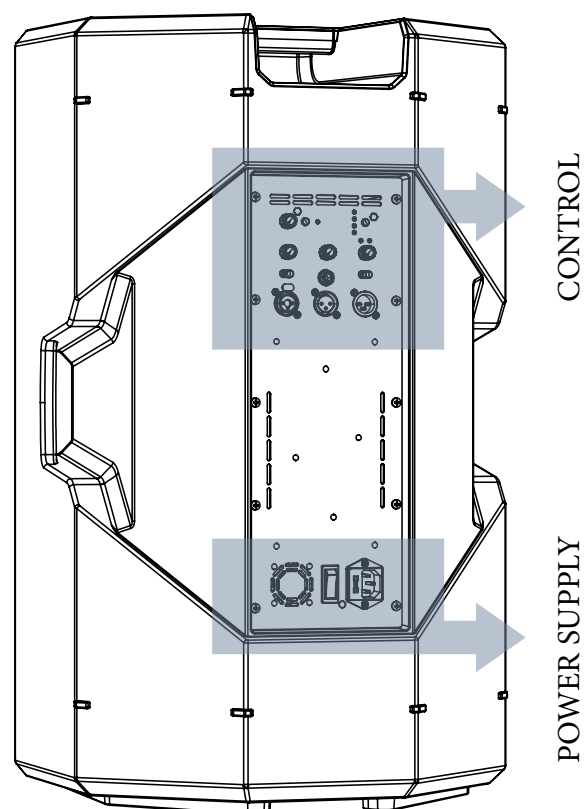


WARNING!

- Protect the unit from moisture.
- Never attempt to disassemble the amplifier in any way.
- In the event of a malfunction, remove power supply immediately by disconnecting the unit from the power mains and contact an authorised repair centre.

The amplifier panel is made up of:

- Input, Output and Control Section
- Power Supply Unit Section



INPUT, OUTPUT AND CONTROL SECTION

1. "CH1" INPUT SECTION

Equipped with a Combo connector to connect cables with both XLR and TRS connectors (balanced and unbalanced), it includes the regulation of the channel level and a switch to adapt the impedance to line level ("Line"), or to microphone level ("Mic").

2. "CH2" INPUT SECTION

Equipped with alternative connector to connect cables with XLR and TRS connectors, it includes the regulation of the line channel level.

3. DSP PRESET

The selectable presets are shown in this table as a reminder.

Playback, suitable for a recorded music program playback
Flat, optimised for a response without equalizations or frequency emphasis

Bass boost, with emphasis on low frequencies

Wedge, optimised for use in monitor mode

4. Bluetooth® volume

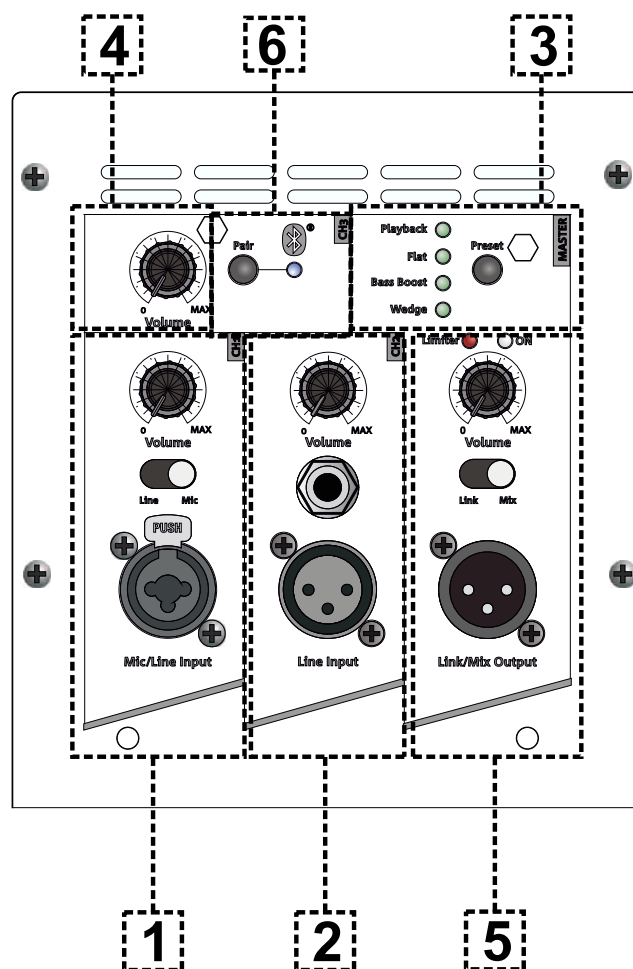
Bluetooth® channel audio level

5. "Output" SECTION

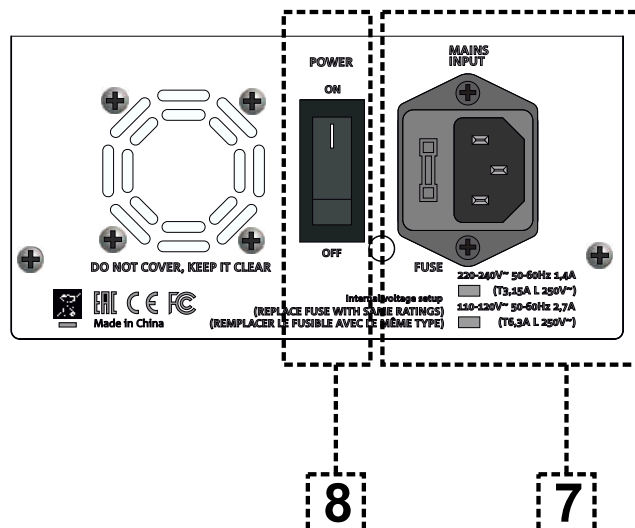
Equipped with connector for balanced cable (XLR), it includes the Link/Mix Output selector

6. PAIR Bluetooth® key

Bluetooth® input synchronisation key.



POWER SUPPLY UNIT SECTION



7. MAINS INPUT

Input for VDE connector for connection to the mains.

8. ON/OFF SWITCH

Switch for turning device ON or OFF.



ATTENTION!

Use only high quality and in good condition cables. The use of poor quality or damaged cables could affect speaker operation.

2. FIRST POWER-UP

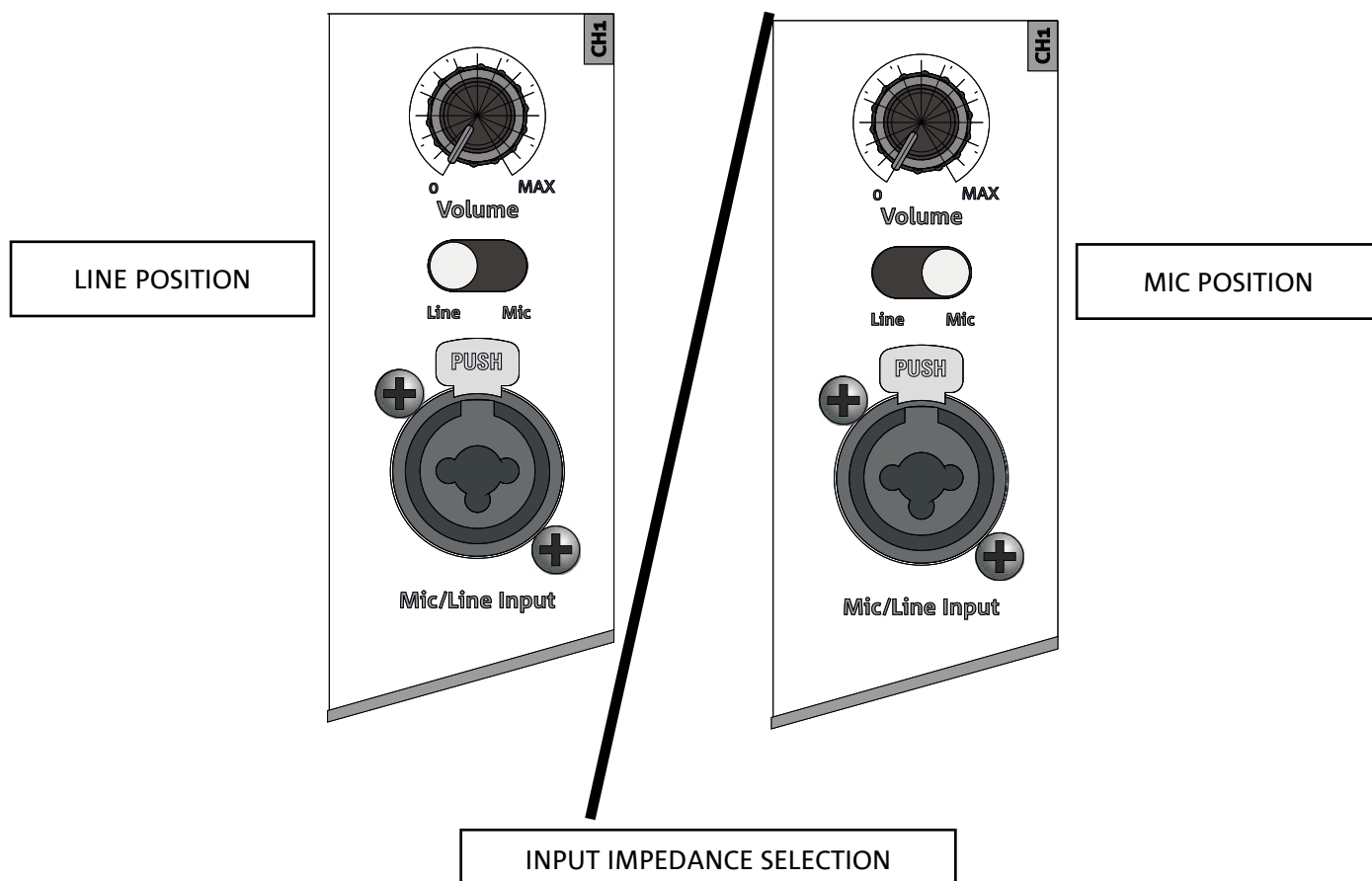
PACKAGE CONTENTS

Check that the package content of the KL 10, KL 12 or KL 15 loudspeaker is complete.
The package contains:

- KL speaker
- cover
- VDE power cable
- quick start user manual and warranty documents

USE

INPUT CONNECTIONS



It is possible to connect up to 2 wired inputs in the input and control section at the back of the speaker, in addition to the Bluetooth® connection.

The Line/Mic input selection is set to select the impedance to line level or microphone level.

The Out Routing Selector (5) in "Link" position allows providing the output of the second speaker with only the signal coming from the CH1 channel. In the "Mix" position, it allows channel mixing.

Adjust the level of each connected channel.

Once inputs are connected, select the correct DSP preset (3).

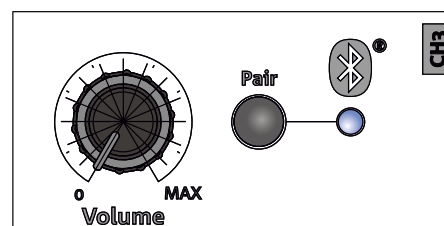
USING THE BLUETOOTH®

To perform Bluetooth® synchronisation, first enable its function on the mobile device to be connected.

Then, on the KL speaker, press the PAIR key; the relevant LED flashes.

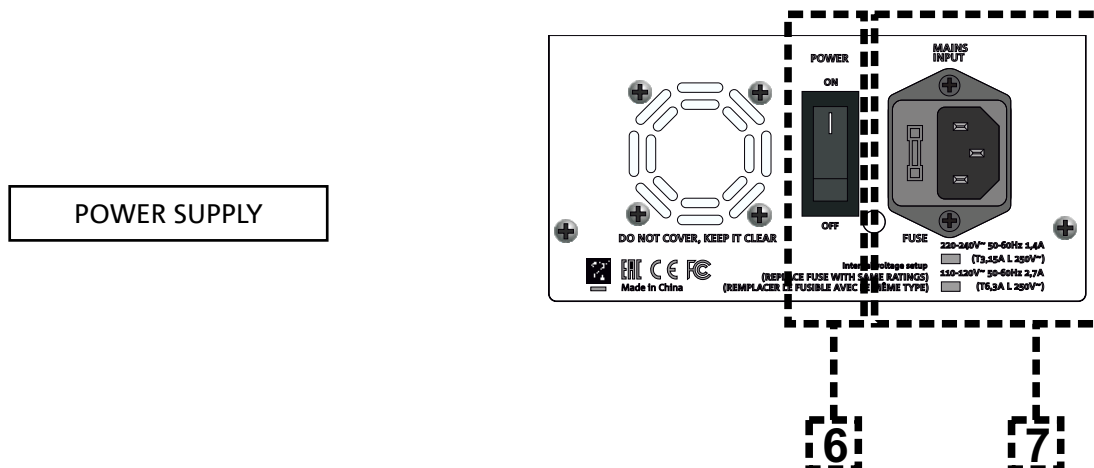
At this point, the model name will appear on the mobile device: enable the connection, the relevant LED becomes steady.

Now the audio streaming can be played by the speaker.

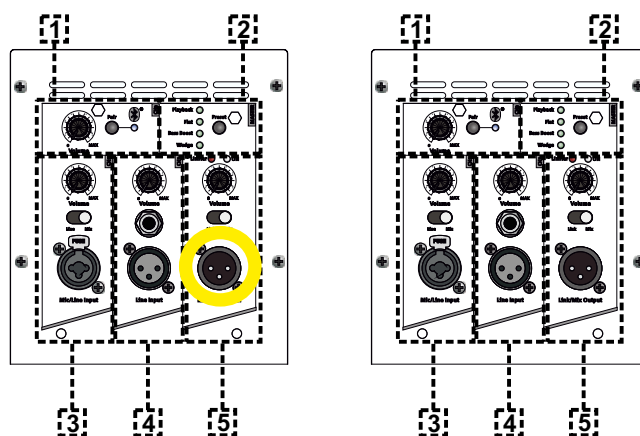


POWER SUPPLY CONNECTION

- Connect the power cable to the socket (7), then set the turning on selector (6) to ON.



CONNECTING THE OUTPUTS OF MULTIPLE MODULES (audio daisy chain)



It is possible to connect the output of an KL speaker to a second speaker using a cable with XLR balanced connector, which connects the output (5) of the first speaker to the input (3) or (4) of the second speaker. If necessary, set the relevant selector to "LINE".

The Out Routing Selector (5) in "Link" position allows providing the output of the second speaker with only the signal coming from the CH1 channel. In the "Mix" position, it allows channel mixing.



ATTENTION!

Use only good quality cables.

Replace any damaged cable to prevent malfunctioning and sound poor quality.

3. USAGE EXAMPLES



- Types of installation other than those here described are not allowed.
- Never use the handles to suspend the speaker
- Always check that the positioning is stable and that the installation does not pose a danger to people, animals or property.
- Perform the installation on a flat, not tilted surface, otherwise an additional safety fastening is mandatory.

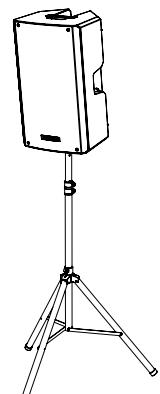
INSTALLATION ON STAND

1 KL speaker can be installed on a tripod stand, coming as standard option (accessory SSB2) with a 35 mm diameter pole. The maximum allowed height between the speaker base and the floor is 150 cm for KL10, KL12, KL15.



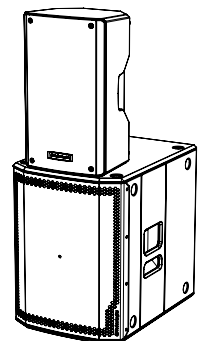
ATTENTION!

- Use a suitably sized stand with the central leg pointing forward to provide appropriate stability.



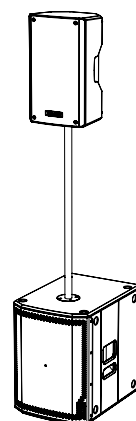
INSTALLATION ON SUBWOOFER

Through the installation with the DS2-S accessory, it is possible to use 1 KL directly on subwoofer provided with M20 flange. For further information, refer to the relevant accessory manual.



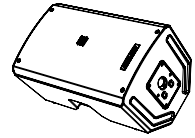
INSTALLATION ON SUBWOOFER WITH POLE

It is possible to use only one speaker mounted on a 35 mm diameter pole. The maximum allowed height between the speaker base and the floor is 150 cm for KL10, KL12, KL15. In case of DVA S08DP or SUB 28D subwoofer, an additional mechanical fastening or a belt fastening is required to correctly and safely fix the installation.



WEDGE (MONITORING) USE

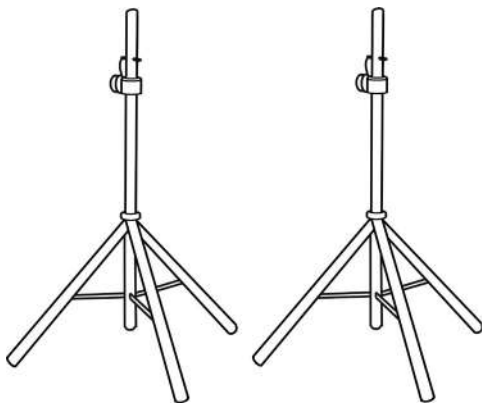
The KL series speakers can be used as monitors for small live contests. In this case, lay them horizontally on the tilted side. Be reminded of the sound coverage features reported in the relevant section. Use the suitable DSP settings as indicated in the "DSP preset" table in wedge mode.



4. ACCESSORIES

To completion of the series, the following accessories are provided as options:

- SSB2, set of tripod stands with diameter 35 mm



SSB2 (PAIR OF TRIPOD STANDS)



WARNING!

- Never suspend the speaker from the handles!

Please read the corresponding manuals for more details.

For all updates on accessories, refer to the website www.dbtechnologies.com

5. TROUBLESHOOTING

The loudspeaker will not turn on:

1. Check that power supply is present upstream of the installation.
2. Ensure that the power supply cable with VDE connector is properly plugged in.

The speaker turns on but produces no sound:

1. Check that the input connections of the audio signal (CH1 and/or CH2) are carried out correctly.
2. Check the cables for damage.
3. Ensure that the mixer or audio source is on and an output signal is present.
4. Check that the input levels (CH1 and/or CH2) are appropriate.

Speaker sound is distorted or not sufficient:

1. Adjust the first source volume, then set the input (CH1 and/or CH2) gain to an adequate level. Check the cables for damage and replace them as required (a damaged cable may lead to signal loss or alteration).
2. Check that the input selection settings (CH1 --> Mic/Line, CH2 --> Line/Instr) are correct with respect to the source
3. Check that the "DSP preset" settings are suitable for the use selected.

A background hum can be heard:

1. Disconnect all connected devices and turn power supply off.
2. Check that the Ground Lift switch is correctly set.
3. Check the connection cables for damage.
4. Connect cables again and turn speaker on.

6. SPECIFICATIONS

GENERAL INFORMATION

Type:	2-way active speaker
-------	----------------------

ACOUSTICAL SPECIFICATIONS

Frequency response [-10dB]:	55 Hz - 18 kHz (KL10) / 52 Hz - 18 kHz (KL12) / 48 Hz - 18 kHz (KL15)
Frequency response [-6dB]:	58 Hz - 17 kHz (KL10) / 55 Hz - 17 kHz (KL12) / 52 Hz - 17 kHz (KL15)
Max SPL:	125 dB (KL10) / 127 dB (KL12) / 128 dB (KL15)
HF voice coil:	1" (KL10) / 1.35" (KL12/KL15)
HF compression driver (output):	1"
LF:	10" (KL10) / 12" (KL12) / 15" (KL15)
LF Voice coil:	2" (KL10) / 2.5" (KL12/KL15)
Crossover frequency (24 dB/oct):	2000 Hz (KL10) - 1800 Hz (KL12-KL15)
Coverage:	90° x 60°

AMPLIFIER

Type:	Class D(LF)+Class AB(HF)
Amplification class:	Class D
Power supply	1 x VDE

Peak power:

400 W (KL10) / 800 W (KL12-KL15)

PROCESSOR

Internal controller:

28-bit/56-bit DSP

A/D D/A converter:

48 kHz

Limiter:

Peak, RMS, Limiter

USER INTERFACE

Controls:

Bluetooth® Control (level/pair), CH1/CH2 level, Master level, Preset, Link-Mix

INPUTS & OUTPUTS

Inputs:

1 x Combo (XLR/Jack), 1 x (TRS or XLR), 1 x Bluetooth®

Outputs:

1x XLR link OUT

Power supply:

1 x VDE

POWER SUPPLY SPECIFICATIONS (ABSORPTION / INSTALLATION)

Absorption at 1/8th of power in medium use conditions (*):

0.45 A (230 V) - 0.75 A (115 V) [KL10] /

Absorption at 1/3rd of power in maximum use conditions (**):

1.1 A (230 V) - 1.7 A (115 V) [KL10] /
1.4 A (230 V) - 2.7 A (115 V) [KL12-KL15]

Absorption with speaker on in no-signal condition (idle):

22.5 W

Inrush current:

14.07 A

* **NOTE FOR INSTALLER:** Values refer to 1/8th of power, under average operating conditions (music programme with occasional or no clipping). For any type of configuration we recommend to consider them as minimum sizing values.

** **NOTE FOR INSTALLER:** Values refer to 1/3rd of power, under heavy operating conditions (music programme with frequent clipping and limiter activation). In case of professional installations and tours we recommend sizing according to these values.

DIMENSIONS

Material:	Reinforced PP polypropylene
Grille:	NC-machined
Provisions for fly bar:	Yes
Handles:	2 (on side, on top)
Pole mount:	Yes, 36 mm
Width:	310 mm (KL10) 365 mm (KL12) 430 mm (KL15)
Height:	521 mm (KL10) 622.5 mm (KL12) 722.5 mm (KL15)
Depth:	292.5 mm (KL10) 342 mm (KL12) 402 mm (KL15)
Weight:	11.7 kg (KL10) 16.5 kg (KL12) 19.3 kg (KL15)

Product features, specifications and appearance are subject to changes without prior notice. dBTechnologies reserves the right to make changes or improvements in design or manufacture without any obligation to incorporate such changes or improvements in products manufactured before their introduction.



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