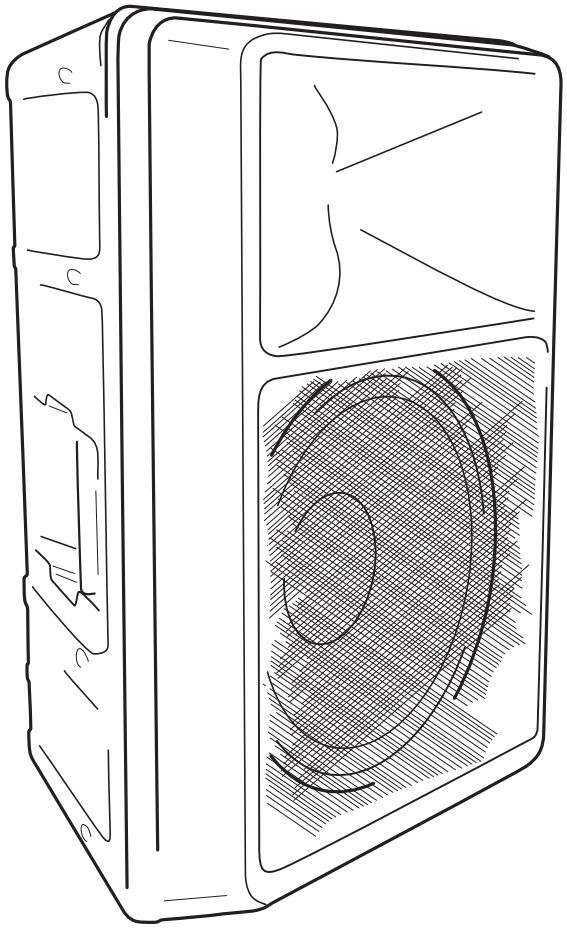
OMNITRONIC

BEDIENUNGSANLEITUNG
USER MANUAL

KB SERIES

ACTIVE SPEAKER SYSTEM



Für weiteren Gebrauch aufbewahren!
Keep this manual for future needs!

CE

English

USER MANUAL

Active Speaker System

CAUTION!
Keep this device away from rain and moisture!
Unplug mains lead before opening the housing!

For your own safety, please read this user manual carefully before you initially start-up.

Every person involved with the installation, operation and maintenance of this device has to
- be qualified
- follow the instructions of this manual
- consider this manual to be part of the total product
- keep this manual for the entire service life of the product
- pass this manual on to every further owner or user of the product
- download the latest version of the user manual from the Internet

1. INTRODUCTION

Thank you for having chosen an OMNITRONIC speaker system. If you follow the instructions given in this manual, we are sure that you will enjoy this speaker system for a long period of time. Unpack your speaker system.

2. SAFETY INSTRUCTIONS

This speaker system has left our premises in absolutely perfect condition. In order to maintain this condition and to ensure a safe operation, it is absolutely necessary for the user to follow the safety instructions and warning notes written in this user manual.

Important:
Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

Please make sure that there are no obvious transport damages. Should you notice any damages on the connection panel or on the casing, do not take the speaker system into operation and immediately consult your local dealer.

DANGER OF BURNING!
The materials used in this speaker system are easily flammable. If B1 is required at the installation place, the surface must be treated with an appropriate fire retardant in regular intervals.

DANGER TO LIFE!
A crashing speaker system can cause deadly accidents. All safety instructions given in this manual must be observed.

Please note that speaker systems could move due to bass-beats and vibrations. Furthermore, unintended pushes from DJs, musicians or the audience present further risk. This is why the speaker system must always be secured against moving or the respective area has to be blocked.

This device falls under protection-class I. The power plug must only be plugged into a protection class I outlet. The voltage and frequency must exactly be the same as stated on the device. Wrong voltages or power outlets can lead to the destruction of the device and to mortal electrical shock.

Always plug in the power plug least. The power plug must always be inserted without force. Make sure that the plug is tightly connected with the outlet.

Never let the power-cord come into contact with other cables! Handle the power-cord and all connections with the mains with particular caution! Never touch them with wet hands, as this could lead to mortal electrical shock.

Never modify, bend, strain mechanically, put pressure on, pull or heat up the power cord. Never operate next to sources of heat or cold. Disregard can lead to power cord damages, fire or mortal electrical shock.

The cable insert or the female part in the device must never be strained. There must always be sufficient cable to the device. Otherwise, the cable may be damaged which may lead to mortal damage.

Make sure that the power-cord is never crimped or damaged by sharp edges. Check the device and the power-cord from time to time.

If extension cords are used, make sure that the core diameter is sufficient for the required power consumption of the device. All warnings concerning the power cords are also valid for possible extension cords.

Always disconnect from the mains, when the device is not in use or before cleaning it. Only handle the power-cord by the plug. Never pull out the plug by tugging the power-cord. Otherwise, the cable or plug can be damaged leading to mortal electrical shock. If the power plug or the power switch is not accessible, the device must be disconnected via the mains.

If the power plug or the device is dusty, the device must be taken out of operation, disconnected and then be cleaned with a dry cloth. Dust can reduce the insulation which may lead to mortal electrical shock. More severe dirt in and at the device should only be removed by a specialist.

There must never enter any liquid into power outlets, extension cords or any holes in the housing of the device. If you suppose that also a minimal amount of liquid may have entered the device, it must immediately be disconnected. This is also valid, if the device was exposed to high humidity. Also if the device is still running, the device must be checked by a specialist if the liquid has reduced any insulation. Reduced insulation can cause mortal electrical shock.

There must never be any objects entering into the device. This is especially valid for metal parts. If any metal parts like staples or coarse metal chips enter into the device, the device must be taken out of operation and disconnected immediately. Malfunction or short-circuits caused by metal parts may cause mortal injuries.

Before the device is switched on all faders and volume controls have to be set to "0" or "minimum" position.

CAUTION: Turn the speaker system on last and off first!

Keep away children and amateurs!

HEALTH HAZARD!

By operating amplifying systems, you can produce excessive sound pressure levels that may lead to permanent hearing loss.

There are no serviceable parts inside the speaker system. Maintenance and service operations are only to be carried out by authorized dealers.

3. OPERATING DETERMINATIONS

This speaker system is an active system which can be used for permanent installations or for mobile use. This product was designed for indoor use only and is allowed to be operated with an alternating current of 115/230 V, 50/60 Hz ~. The operating voltage can be adjusted with the voltage selector.

The given maximum power of the speaker system describes short-term peaks the system can handle as a maximum. The correspondent RMS power is - as of all comparable systems (also from other manufacturers) - significantly lower. The maximum power of the speaker system must never be exceeded. When operating the speaker system, please make sure that the loudspeakers always sound well. When distortions can be heard, either the amplifier or the loudspeaker is overloaded. Overloads can quickly lead to amplifier or speaker damage. In order to avoid damage, please reduce the volume immediately when distortions can be heard. When speaker systems are destroyed by overload, the guarantee becomes void.

By operating speaker systems with an amplifier, you can produce excessive sound pressure levels that may lead to permanent hearing loss. Please refer to the explanations under "Legal instructions".

WARNING!

Speaker systems must only be operated by instructed persons.
Danger of Life due to crashing speaker systems or hearing loss due to excessive sound pressure levels! The different local conditions have to be considered in terms of safety rules.

This speaker system must never be operated or stockpiled in surroundings where splash water, rain, moisture or fog may harm the speaker system. When using smoke machines, make sure that the speaker system is never exposed to the direct smoke jet and is installed in a distance of 0.5 meters between smoke machine and speaker system.

The ambient temperature must always be between -5° C and +45° C. Keep away from direct insulation (particularly in cars) and heaters.

The relative humidity must not exceed 50 % with an ambient temperature of 45° C.

This device must only be operated in an altitude between -20 and 2000 m over NN.

This speaker system must only be installed at a solid, plane, anti-slip, vibration-free, oscillation-free and fire-resistant location.

Please note: when using this speaker system in public or industrial areas, a series of safety instructions have to be followed that this manual can only give in part. The operator must therefore inform himself on the current safety instructions and consider them.

Before installing the system, make sure that the installation area can hold a minimum point load of 5 times the system's load (e.g. weight 20 kg - point load 100 kg).

The speaker system must never be installed higher than 100 cm without secondary attachment.

The installation of the speaker system has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

DANGER!

This speaker system must never be stacked - Danger to Life due to crashing speaker systems!

DANGER!

This speaker system must never be suspended - Danger to Life due to crashing speaker systems!

This speaker system can be installed on top of a subwoofer (satellite system), on a speaker stand, an appropriate stand or an appropriate wall mounting. The carrying capacity of the distance-tube, the speaker stand, the stand or the wall mounting must never be exceeded.

The satellite system must always provide enough stability. Satellite systems are only allowed if the subwoofer's weight is twice as much as the top speaker's weight. Furthermore, the subwoofer's base surface must always be sufficiently dimensioned in relation to the top speaker in order to prevent tilting over.

Make sure that the area below the installation place is blocked when rigging, derigging or servicing the fixture.

Operate the speaker system only after having familiarized with its functions. Do not permit operation by persons not qualified for operating the speaker system. Most damages are the result of unprofessional operation!

This speaker system is not designed for road use. The speaker system is designed only for seldom transports. When transporting this speaker system, it must be moved carefully and without force.

Speaker systems must never be transported with cranes.

Never stack heavy objects on this speaker system. Persons must never climb onto this speaker system.

Never use solvents or aggressive detergents in order to clean the speaker system! Rather use a soft and damp cloth.

Please consider that unauthorized modifications on the speaker system are forbidden due to safety reasons!

If this speaker system will be operated in any way different to the one described in this manual, the product may suffer damages and the guarantee becomes void. Furthermore, any other operation may lead to dangers like crashes, hearing loss etc.

4. LEGAL INSTRUCTIONS

Operating an amplification system can produce extremely high noise levels that may cause a permanent hearing loss. The legal instructions for using an amplification system vary from country to country. The user must always inform himself on the legal instructions valid in his country and apply them to his situation.

Always monitor the sound pressure level when operating an amplification system in discotheques, concerts etc. Never exceed the permissible noise level exposures as specified by your authorities. The monitoring of the noise levels must be documented in an appropriate way.

In Germany, the following instructions are binding:

Strafgesetzbuch § 223 ff: bundesrecht.juris.de/bundesrecht/stgb
TA Lärm: www.umweltdaten.de
DIN 15905-5: www.din.de
Arbeitsstättenverordnung § 15: www.lgl.bayern.de/arbeitsschutz
Berufsgenossenschaftliche Vorschrift BGV B3: www.pr-o.info
VDI-Richtlinie: VDI 2058 Blatt 2: www.vdi.de

Hearing damage caused by high noise levels can be treated as physical injury and persecuted by law.

Please note that the organizer is responsible for keeping to a specified noise level. If this noise level will be exceeded, the event may be cancelled immediately.

If the organizer does not fulfil his safety duties, he is reliable by civil law for any damages occurred, e.g.:
Pay the treatment costs of the damaged person.
Pay a smart money to the damaged person.

Economic damage caused can be demanded from the operator of the amplification system.

If hired persons work with amplification systems: the noise levels of music events are almost always too high. This is why the entrepreneur has to set up warning signs and provide hearing protectors. The staff has to use these.

Please note: OMNITRONIC cannot be made liable for damages caused by incorrect installations and excessive noise levels!

4.1 Information on hearing loss

More and more young people suffer from hearing loss of 25 decibel or more, mainly caused by loud music from portable MP3 and CD players or discotheques. Everybody operating amplification systems should know to what sound pressure levels he exposes his or the audience's hearing. As an average levels between 75 and 105 dB(A) in the discotheque or 95 and 115 dB(A) at a rock concert are reached. Individual peaks can exceed the pain level at 130 dB(A). Such levels are typical for motor chainsaws or jack hammers.

Overview on the different noise levels	
10 dB Heartbeat	80 dB Heavy traffic or telephone ringing
20 - 30 dB Whisper	90 dB Pneumatic drill
40 dB Average home	100 dB Power mower
50 dB Light traffic	120 dB Boom box in car
60 dB Normal conversation	130 dB Pain level
70 dB Vacuum cleaner	140 dB Jet plane 30 meters overhead

It is important to know that doubling the power increases the noise level by 3 dB. The human hearing does only recognizes a doubling of the sound level when the noise level is increased by 10 dB. Damaging the hearing does not depend on the sound level but on the noise level and starts way before the pain level.

Many people deceive themselves by thinking that noise is something they can get accustomed to. It is possible that a positive opinion of a certain noise can reduce the physiological reaction, but the slow impacts on the inner hearing must not be neglected: over stimulation and continuous elimination of the Cortic organ's hair cells.
The reason why some people have got accustomed to a certain noise level and are no longer disturbed is that they have already suffered a hearing damage. This damage make the insensitive to those frequencies forming the loudest part of the noise. Getting accustomed to noise does not mean anything other than trying to get along with the hearing loss in everyday life. The hearing loss itself cannot be healed, it can only be compensated by hearing aids.

Subjectively, the hearing loss feels like dampened ears. This effect weakens with the time, but a loss in hearing sensitivity often remains.

In order to relax the hearing sufficiently, the noise level should not exceed 70 dB(A) for 10 hours. Higher noise levels during this relaxing period can prevent the relaxation and promote a permanent hearing damage (Tinitus) or hearing loss.

Therefore: Whoever wants to maintain his hearing should use hearing protectors!

5. INSTALLATION

The speaker system can be set up as desired. The location must be solid, plane, anti-slip, vibration-free, oscillation-free, and fire-resistant. The installation area must hold a minimum point load of 5 times the system's load (e.g. weight 20 kg - point load 100 kg). The speaker system must never be installed higher than 100 cm without secondary attachment.

The speaker system can also be installed on a subwoofer, stand or wall mounting via the flange on the bottom.

The speaker system features two transportation handles (except for model [**KB-208A**]). It should be carried without force by two persons of the same size. Carrying the speaker system by one person should be avoided as the high weight and the strain could lead to back damages and torsions. Please note that all speaker systems with more than 25 kg weight must be transported with two persons.

Installing and orienting the speaker system

When installing the speaker system on e.g. a stage, microphones and turntables should always be located behind the speaker systems. In this way, you can avoid dangerous and unpleasant feedback. If you cannot install the speaker systems this way, the microphones and turntables should be located as far away as possible from the speaker systems. When using the speaker system as monitor-system make sure to avoid feedback.

The speaker systems of a PA system are normally located left and right to the stage. Do not install the speaker systems on the stage, but rather on appropriate tables or platforms in front of the stage.

In order to produce a clear sound, the speaker systems should be installed in a way that they throw the sound over the audience's heads. A full-range speaker system should be installed at listeners' eye level. Please refer to the safety instructions under Installation.

Loudspeaker combinations need to be installed bass-middle-high (from bottom to top). Make sure that the membranes of all speakers are in one line vertically and horizontally. Only in this way all frequency ranges are produced at the same time and without any time or phase delays.

Always install the speaker systems in a way that a minimum distance of three meters to the audience is kept. This is the only way to avoid hearing damage for unreasonable listeners. Block the area in front of the speaker systems with appropriate means.

Avoiding feedback

One of the most frequent problems when operating speaker systems are feedback. They can be recognized by howling and growling loudspeakers. Feedback are created then a signal is recorded by a microphone, amplified, played back by a loudspeaker and then again recorded by the microphone.

The prerequisite for feedback is that the played back signal is louder than the original signal. A feedback never cover the whole frequency range but only one overboosted frequency.

Make sure that you install especially the monitor-speakers so far away from the microphone that another recording of the microphone signal is impossible.

Extreme levels like feedback, bass-hum or the beats of a dropping microphone can destroy the loudspeakers within very short time and produce immediate hearing damage. Such extreme levels must be avoided at any rate. We recommend to use appropriate equalizers and compressors/limiters.

5.1 Overhead rigging

Please note: when using this speake system in public or industrial areas, a series of safety instructions have to be followed that this manual can only give in part. The operator must therefore inform himself on the current safety instructions and consider them.

DANGER TO LIFE!
Please consider the EN 60598-2-17and the respective national norms during the installation!
The installation must only be carried out by an authorized dealer!

The installation of the speake system has to be built and constructed in a way that it can hold 10 times the weight for 1 hour without any harming deformation.

The installation must always be secured with a secondary safety attachment, e.g. an appropriate catch net. This secondary safety attachment must be constructed in a way that no part of the installation can fall down if the main attachment fails.

When rigging, derigging or servicing the speake system staying in the area below the installation place, on bridges, under high working places and other endangered areas is forbidden.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert before taking into operation for the first time and after changes before taking into operation another time.

The operator has to make sure that safety-relating and machine-technical installations are approved by an expert after every four year in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are approved by a skilled person once a year.

Procedure:
The speake system should be installed outside areas where persons may walk by or be seated.
IMPORTANT! Overhead rigging requires extensive experience, including (but not limited to) calculating working load limits, installation material being used, and periodic safety inspection of all installation material and the speake system. If you lack these qualifications, do not attempt the installation yourself, but instead use a professional structural rigger. Improper installation can result in bodily injury and or damage to property.

The speake system has to be installed out of the reach of people.

Caution: Speake systems in hanging installations may cause severe injuries when crashing down! If you have doubts concerning the safety of a possible installation, do NOT install the speake system!

Before rigging make sure that the installation area can hold a minimum point load of 10 times the speake system's weight.

For overhead use, always install a safety-rope that can hold at least 12 times the weight of the fixture. You must only use safety-ropes with quick link with screw cap. Pull the safety-rope through the attachment eyelet on the speake system and over the trussing system or a safe fixation spot. Insert the end in the quick link and tighten the safety screw.

The maximum drop distance must never exceed 20 cm.

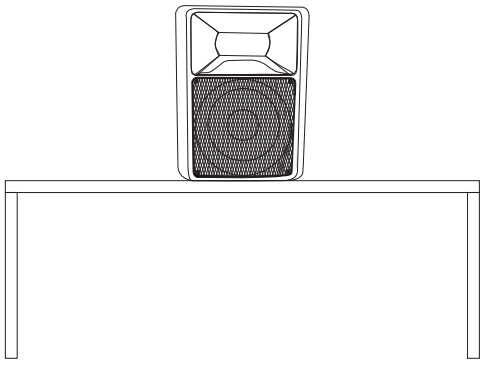
A safety rope which already hold the strain of a crash or which is defective must not be used again.

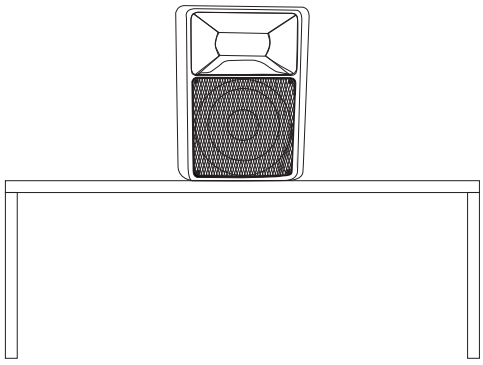
DANGER TO LIFE!
Before taking into operation for the first time, the installation has to be approved by an expert!

5.2 Stacking

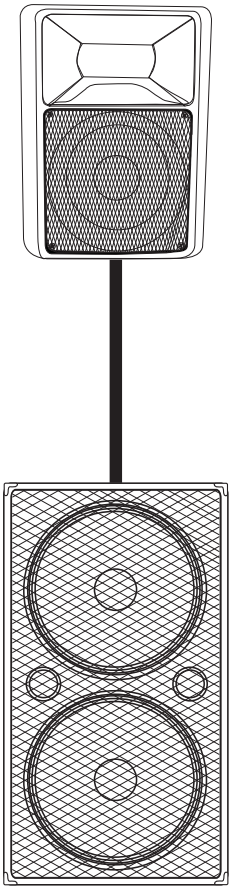
DANGER!
This speaker system must never be stacked - Danger to Life due to crashing speaker systems!

This speaker system may only be installed on the floor or appropriate stage elements etc.





5.3 Satellite systems



A satellite system is a system where a speaker system with flange is installed on top of a subwoofer. The satellite system must always provide enough stability. The subwoofer's base surface must always be sufficiently dimensioned in relation to the top speaker in order to prevent tilting over.

The subwoofer and the top speaker must only be connected via an appropriate distance tube and flange.

The carrying capacity of the distance tube must never be exceeded.

Suitable distance tubes:

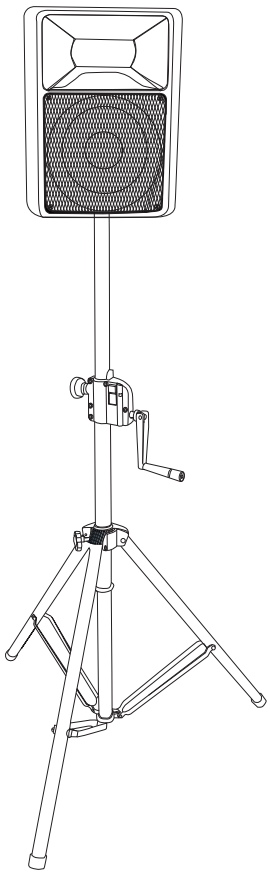
Distance tube bassbox/satellite 80cm	No. 60004550
Distance tube bassbox/satellite 100cm	No. 60004552
Distance tube bassbox/satellite 120cm	No. 60004554
Distance tube bassbox/satellite variable	No. 60004560

A satellite system or a combination of speaker system/speaker stand or speaker system/stand must only be installed on the ground!

When choosing the installation spot, please make sure that such an installation has to be installed in a way that no person can enter the area below the system! Make sure that the respective area is blocked.

An unintended movement of the load has to be avoided - also in case of fire!
The installation is only allowed on carrying areas. In some cases, an appropriate substructure, e.g. via an balancing foot, has to be created.
The system must never be moved before the top speaker is uninstalled!
When choosing the installation material, optimum dimensions have to be chosen in order to secure maximum safety.

5.4 Installation on a stand or speaker stand



Stands or satellite systems must only be installed on a plane area with a maximum inclination angle of 5°.

Caution: Speaker systems installed on stands or satellite systems may cause severe injuries when crashing!

When using stands or satellite systems under the influence of horizontal forces, e.g. through wind, the standing safety can be impaired. This is why additional safety measures like attaching ballast weights have to be taken.

If inclined tension cables or prolonged outriggers are used, the area of danger has to be marked or even be blocked.

Before lifting or lowering the telescopic tubes, you must always block a safety area around the stand or satellite system. This safety area must have a diameter of 1.5 times the maximum height.

Lifted telescopic tubes always have to be secured with a secondary securing!

The total weight of the installation (=total weight of all individual parts) must never exceed the maximum load of the installation area.

The stand has to be installed out of the reach of people.

An unintended movement of the load has to be avoided - also in case of fire!

The installer is responsible for adhering to the carrying capacity given by the manufacturer, the safety requirements and the qualification of possible co-workers.

When people are located below the load, all necessary safety measures have to be taken in order to avoid injury.

The personnel has to be instructed on the content of the user manual and on the dangers related with operating stands.

Depending upon the individual installation spot, all necessary measures against movement and for securing the standing safety have to be created.

The installation is only allowed on carrying areas. In some cases, an appropriate substructure, e.g. via an balancing foot, has to be created.

The system must never be moved before the top speaker is uninstalled!

When choosing the installation material, optimum dimensions have to be chosen in order to secure maximum safety.

Loosen the fixation screws of the legs. Pull the legs out until the cross struts stand at a 90° angle to the legs. Tighten the fixation screws of the legs.

DANGER!
If installing on slippery surfaces, the legs must be secured with screws or nails via the provided holes or a anti-slippery mat has to be used.

Installation of the TV pin (only for stands)
Attach an appropriate TV pin to the top end of the stand and fasten it with the handle at the side.

Suitable TV pin: EUROLITE TV-35 TV-pin for speakers, No. 60000735

Installation of the speaker system
Caution: The loads have to be installed in a balanced way. The carrying capacity of the stand or speaker stand must never be exceeded!

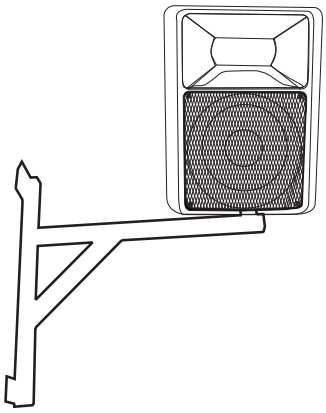
Install the speaker system via the flange on the speaker stand or via the TV pin on the stand.

Make sure that the maximum lifting height of the tube is never exceeded.

Lifted telescopic tubes always have to be secured with a secondary securing!

5.5 Installation on a wall mounting

Suitable wall mountings:
Wall-mounting for Speakers w. flange No. 60004610
Wall-mounting XY for Speakers w. flange No. 60004620



Before attaching the speaker system, make sure that the installation area can hold a minimum point load of 5 times the speaker system's weight.

The wall mounting must be installed out of the reach of people.

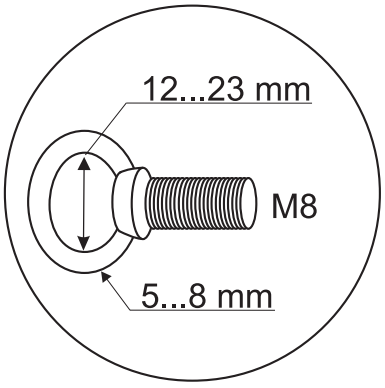
The durability of the installation depends very much on the material used at the installation area (building material) such as wood, concrete, gas concrete, brick etc. This is why the fixing material must be chosen to suit the wall material. Always ask a specialist for the correct plug/screw combination indicating the maximum load and the building material.

The wall mounting must always be installed via all fixation holes. Do only use appropriate screws and make sure that the screws are properly connected with the ground.

The wall mounting's maximum service life must never be exceeded.

A safety rope which already hold the strain of a crash or which is defective must not be used again.

The speaker system must always be secured via an appropriate eye-bolt.



Appropriate eye-bolts:
Eye-bolt M8 No. 30001165

Procedure:

Step 1: On the wall-mounting, there are holes for the installation.
Step 2: Hold the wall mounting onto the location where it is to be installed.
Step 3: Mark the boreholes with a pen or a suitable tool.
Step 4: Drill the holes.
Step 5: Hold the wall mounting in the desired position and tighten the screws.
Step 6: Install the speaker on the wall-mounting.

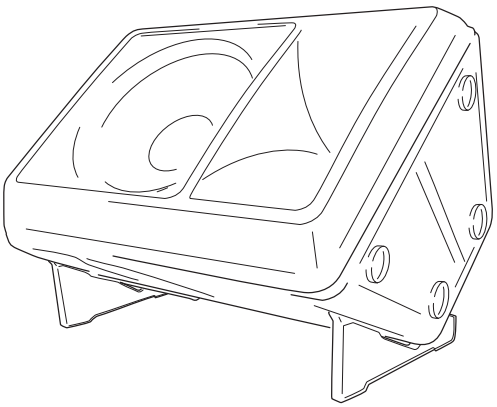
5.6 Suspended installation

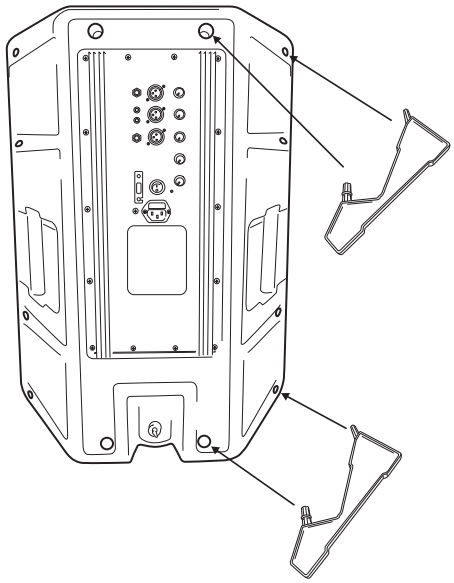
> This speaker system must never be suspended - Danger to Life due to crashing speaker systems!

5.7 Use as floor monitor

Attach the included brackets at the rear end of the box.

ⓘ Not for model [**KB-208A**].





6. CONNECTIONS

All connections have to be made or changed only if the speaker system is switched off!

6.1 Connecting audio devices

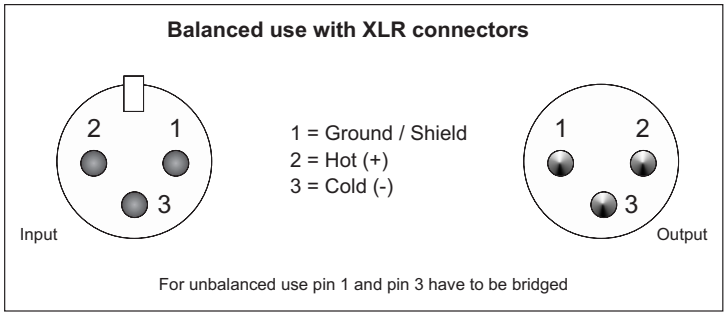
1. Connect the signal source optionally via an XLR plug or a RCA cable to the input [**LINE IN**]. It is possible to connect the line output of e.g. a mixer or CD player.
2. Connect a microphone optionally via an XLR or 6.3 mm plug to the respective microphone input [**MIC IN**]. The XLR and 6.3 mm jacks are balanced, but they can also be connected unbalanced.

ⓘ Model [**KB-208A**] only features an XLR input.

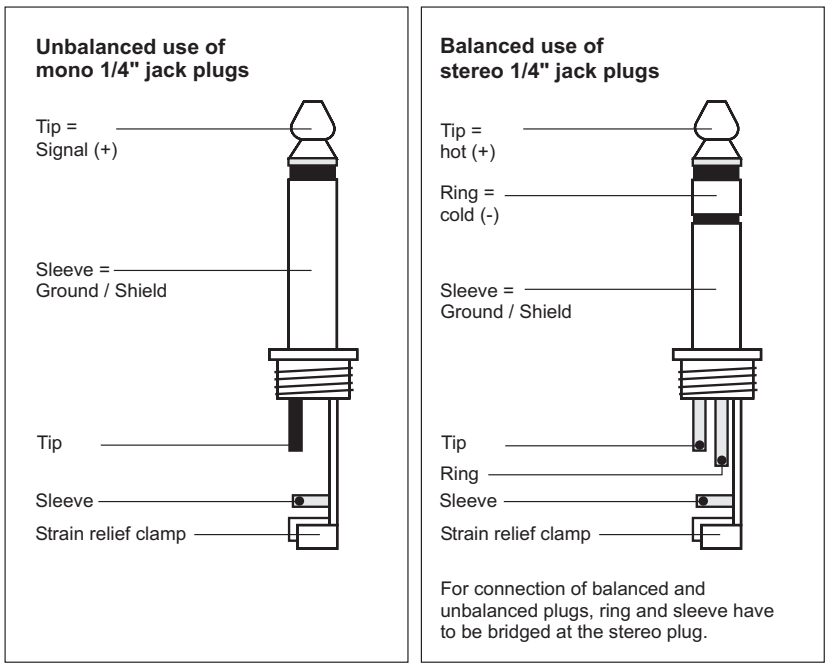
3. The line input signal fed-through is available at the jack [**LINE OUT**]. This output allows to connect the line input of e.g. another active speaker system optionally via an XLR or 6.3 mm plug.

ⓘ Model [**KB-208A**] does not have an XLR output.

Pin connection of the XLR connectors:



Occupation jack plug:



6.2 Information on installing audio cables

- A good cable run improves the sound quality remarkably. Signal cables should be short and direct, since high frequencies will mostly be absorbed if cables are unnecessarily long. Besides that a longer cable may lead to humming and noise trouble. If long cable runs are unavoidable, you should use balanced cables. In order to obtain highest sound quality, only use high-quality cables for connecting the devices.
- Always treat cables carefully and protect them from damages during transportation.
- Install cables always in a structured way and protect them from damage.
- Cables must be installed in a way that no person can stumble over them. Always fix cables with an appropriate tape.
- Cables should be installed directly (no loops, S-shaped overlengths).
- Always install cables far away from power cables (never closely parallel).
- Never put heavy objects like speaker systems, flightcases etc. on cables.
- Never operate cables wound up.

6.3 Connection with the mains

Finally, connect the supplied power supply cable to the corresponding input and the mains plug to an outlet (230 V AC, 50 Hz ~). The speakers can also be operated with 115 V AC, 60 Hz ~. For this purpose, set the [**VOLTAGE SELECTOR SWITCH**] to the position [**115 V**].

Cable	**Pin**	**International**
Brown	Live	L
Blue	Neutral	N
Yellow/Green	Earth	⏚

The earth has to be connected! If the device will be directly connected with the local power supply network, a disconnection switch with a minimum opening of 3 mm at every pole has to be included in the permanent electrical installation. The device must only be connected with an electric installation carried out in compliance with the IEC standards. The electric installation must be equipped with a Residual Current Device (RCD) with a maximum fault current of 30 mA.

7. OPERATION

1. Prior to switching on, turn the [**MASTER**] control to minimum to avoid a possible switching-on noise. Then switch on the speaker system with the [**POWER**] switch.
2. Turn up the [**MASTER**] control so that the mixing ration of the input channels can be adjusted in an optimum way.
3. Adjust the desired volume ratio with the [**LEVEL**] controls of the microphone channel and the line input.
4. Adjust the desired sound with the tone controls. By adjusting the tone controls, the high frequencies (control [**TREBLE**]) and the low frequencies (control [**BASS**]) can be boosted or attenuated. With the controls in mid-position, the frequency response is not affected.
5. Adjust the definite level of the overall volume with the [**MASTER**] control. In case of overload, the [**CLIP**] indicator lights up. In this case, reduce the volume correspondingly.
6. When operating the speaker system, please make sure that the loudspeakers always sound well. When distortions can be heard, either the amplifier or the loudspeakers are overloaded. Overloads can quickly lead to amplifier or speaker damage. In order to avoid damage, please reduce the volume immediately when distortions can be heard. When speaker systems are destroyed by overload, the guarantee becomes void. Always check the sound pressure level with a meter in order to keep to the threshold.
7. After operation, set the [**MASTER**] control to minimum, then switch off the speaker system with the power switch.

8. CLEANING AND MAINTENANCE

DANGER TO LIFE!

Disconnect from mains before starting maintenance operation!

The operator has to make sure that safety-relating and machine-technical installations are inspected by an expert after every four years in the course of an acceptance test.

The operator has to make sure that safety-relating and machine-technical installations are inspected by a skilled person once a year.

The following points have to be considered during the inspection:

1) All screws used for installing the speaker systems or parts of the speaker system have to be tightly connected and must not be corroded.
2) There must not be any deformations on housings, fixations and installation spots (ceiling, suspension, trussing).
3) The electric power supply cables must not show any damages, material fatigue (e.g. porous cables) or sediments. Further instructions depending on the installation spot and usage have to be adhered by a skilled installer and any safety problems have to be removed.

We recommend a frequent cleaning of the speaker system. Please use a soft lint-free and moistened cloth. Never use alcohol or solvents!

There are no serviceable parts inside the device except for the fuse. Maintenance and service operations are only to be carried out by authorized dealers.

8.1 Replacing the fuse

If the fine-wire fuse of the device fuses, only replace the fuse by a fuse of same type and rating.

Before replacing the fuse, unplug mains lead.

Procedure:

Step 1: Open the fuseholder on the rear panel with a fitting screwdriver.
Step 2: Remove the old fuse from the fuseholder.
Step 3: Install the new fuse in the fuseholder.
Step 4: Replace the fuseholder in the housing.

If the speaker system distorts, one of the loudspeakers may be defective. Test the speaker system once more with another amplifier. If the sound remains distorted, the speaker system should not be operated any more in order to prevent further damage. Please contact your dealer.

If clacking sounds are heard from the speaker system, screws may have loosened due to the continuous vibrations. The speaker system should be checked by a specialist. Especially for public use, the speaker system should be checked before every operation so that the speaker system and the speakers in the systems are always well fixed.

Should you need any spare parts, please use genuine parts.

If the power supply cable of this device becomes damaged, it has to be replaced by a special power supply cable available at your dealer.

Should you have further questions, please contact your dealer.

9. TECHNICAL SPECIFICATIONS

	KB-208A	KB-210A	KB-212A	KB-215A
Power supply:	115/230 V AC, 50/60 Hz ~			
Rated power:	80 W RMS	120 W RMS	150 W RMS	180 W RMS
Program power:	160 W	240 W	300 W	360 W
Components:	8" woofer, 1" horn	10" woofer, 1.35" horn	12" woofer, 1.35" horn	15" woofer, 1.75" horn
Inputs:				
Mic	bal. 3-pin XLR	bal. 6.3 mm jack, 3-pin XLR	bal. 6.3 mm jack, 3-pin XLR	bal. 6.3 mm jack, 3-pin XLR
Line	bal. 3-pin XLR	stereo RCA, bal. 3-pin XLR	stereo RCA, bal. 3-pin XLR	stereo RCA, bal. 3-pin XLR
Feed-through output:	-	bal. 6.3 mm jack, 3-pin XLR	bal. 6.3 mm jack, 3-pin XLR	bal. 6.3 mm jack, 3-pin XLR
Max. SPL:	102 dB	110 dB	115 dB	120 dB
Frequency ange:	65 Hz - 18 kHz	55 Hz - 18 kHz	50 Hz - 18 kHz	40 Hz - 18 kHz
Dimensions (HxW D):	400 x 277 x 257 mm	510 x 350 x 285 mm	580 x 480 x 325 mm	740 x 555 x 400 mm
Weight:	8 kg	14 kg	18 kg	27 kg

Please note: Every information is subject to change without prior notice. 09.06.2011 ©