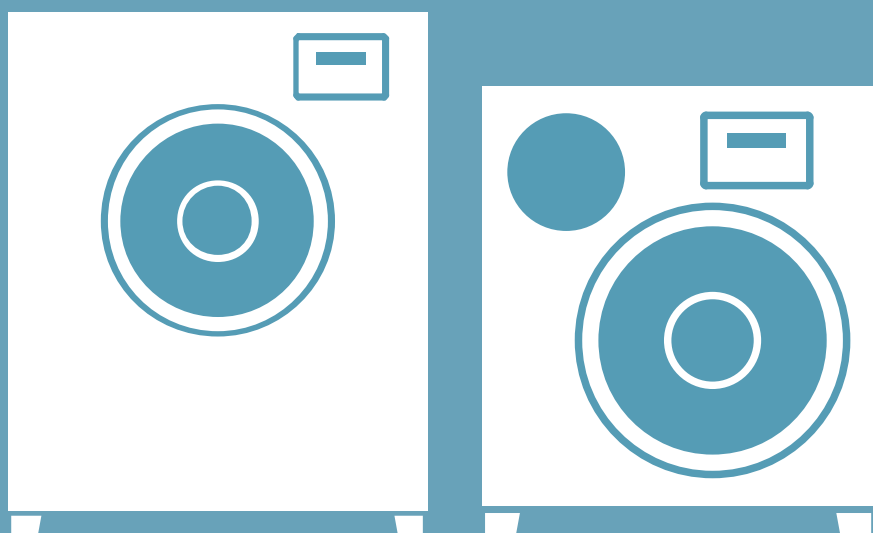


**VOLCANIX AND VOLCANIX SLIM
OWNER'S MANUAL**



SETUP IN BRIEF

The following setup procedure will help you achieve the best performance from your subwoofer:

1. Controls and features

Familiarise yourself with the controls and features of your subwoofer.

2. Positioning

Determine a suitable location for your subwoofer.

3. Connection and calibration

Connect your subwoofer to your system, adjust the settings on your subwoofer to integrate its sound with your speakers and room.

Listen to a variety of music/movies to assess the sound and settings of your subwoofer.

4. Listen and enjoy

Listen to your favourite music/movies and enjoy.



Disclaimer

Please read the important safety instructions on the back of this manual before you plug in your equipment.

Disclaimer

To the extent permissible by law:

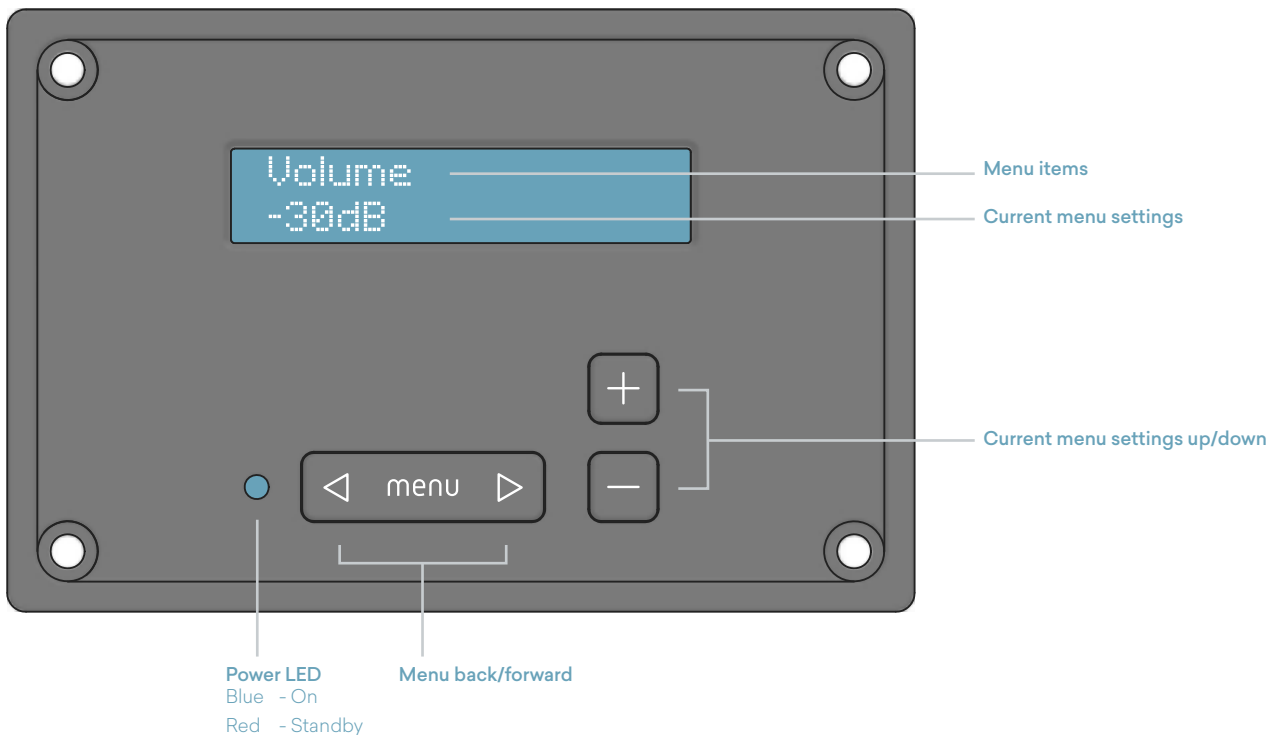
1. All warranties, conditions, representations, promises and statements relating howsoever to this product whether express or implied and whether in contract or tort are excluded to the extent permitted by law; and

2. Our liability to you under a condition or warranty (if any) implied into this sale and purchase agreement relating to this subwoofer by the Trade Practices Act 1974 (as amended) or any other law (whether a law of Australia or any other country) other than a condition implied by Section 69 of the said Act is limited at our option to:

- the replacement of the product; or
- the supply of an equivalent product; or
- the repair of the product.

If you do not accept the above conditions, return this product (in the original packaging) with proof of purchase for a full refund.

CONTROLS AND FEATURES



Use the back/forward arrows to access the following menus

Volume

Adjusts the subwoofer's output level.

Low pass

Adjusts the point at which higher frequencies are filtered from the subwoofer.

Phase

Adjusts the phase of the subwoofer to be

0° or 180°. The default setting is 0°

High pass Q

Adjusts the character of low frequency extension of the subwoofer such that the output at 20Hz remains constant, but the shape or knee of the roll off above and below this frequency is altered. The default setting of **0.9** is suitable for most applications. The minimum setting of **0.5** offers a more gradual roll-off suited to excessively boomy sounding rooms. The maximum setting of **1.0** offers more punch and output at 40Hz.

Power mode

Can be set to **auto sense** or **12V trigger**.

When set to **auto sense** the subwoofer will automatically switch on when a signal is present. The auto sense circuit monitors both the speaker level or line level inputs. After 15 minutes the subwoofer will switch into standby if no signal is present.

When set to **12V trigger** the subwoofer will switch on from standby when 12V is applied to the trigger input on the rear panel of your subwoofer. This allows the subwoofer to switch between on and standby in perfect synchronisation with an AV amp/receiver equipped with a trigger output.

Auto sensitivity

Adjusts the subwoofers switch-on sensitivity when a signal is present. When adjusting the sensitivity, the power LED will respond to the signal level without any time delay. This menu is only available when power mode is set to auto sense.

Display contrast

Allows the display contrast to be adjusted to suit the lighting conditions and viewing angle.

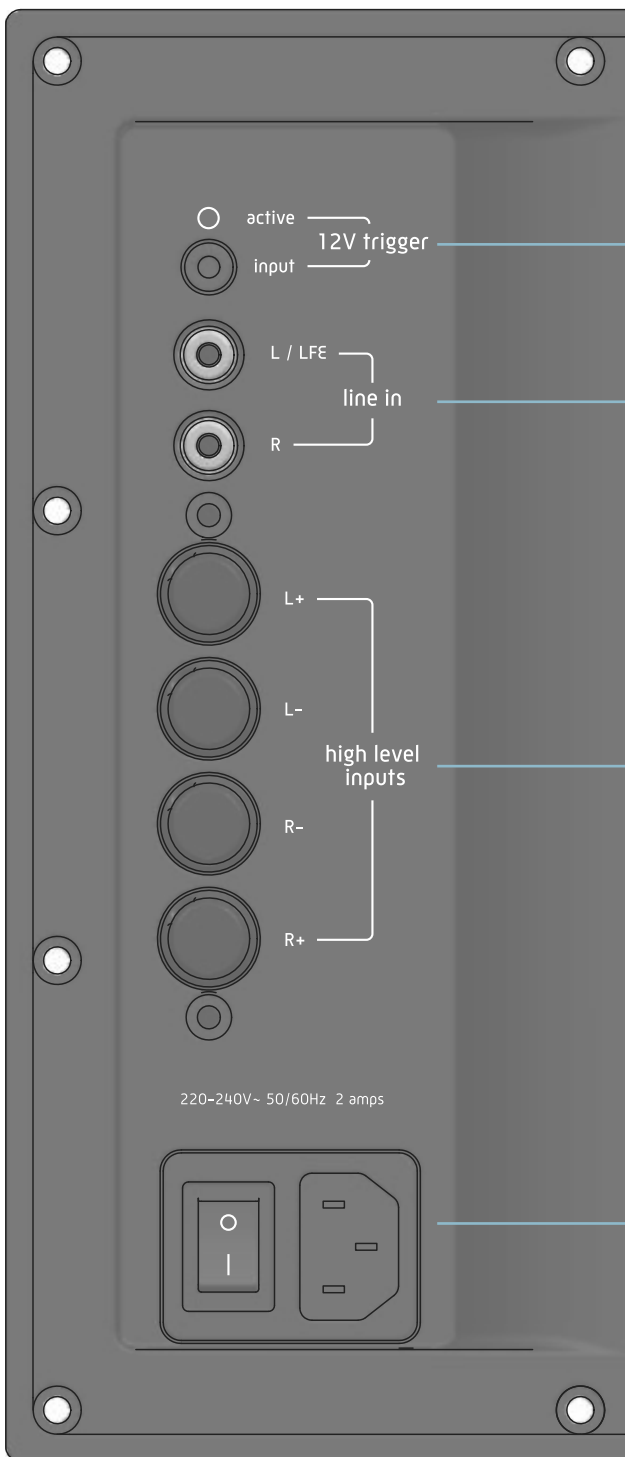
Restore defaults

Resets all menu settings to factory default values. Press and hold **+** and **-** buttons simultaneously to restore defaults.

Menu lock

Allows control panel to be locked. Press and hold **+** and **-** buttons simultaneously to lock. Press and hold **+** and **-** buttons simultaneously again to unlock.

CONTROLS AND FEATURES



12V trigger

When a 12V signal is applied to the **trigger input** the subwoofer will switch on from standby and the red **active** LED will illuminate. Use a 3.5mm mono lead to make the connection to an AV amp/receiver equipped with a trigger output (5-15V DC or AC may be used to trigger the subwoofer, polarity is not critical).

Line in

Line level stereo input with summing function.

High level inputs

High level inputs with summing function, for use with amplifier speaker outputs.

Power switch and socket

Unit should be switched off when not in use for extended periods.

CONTROLS AND FEATURES

Krix Volcanix and Volcanix Slim innovation

Front panel controls

Unlike conventional subwoofers with hard to reach rear controls, the Volcanix and Volcanix Slim feature a front panel with precision digital adjustment. There is no longer any need to pull your subwoofer out of a cabinet or away from a wall to set up your system, all functionality is accessible via the front panel interface. The front panel display is backlit to aid viewing in low light conditions. After 45 seconds of button inactivity the display will return to the volume menu and the backlight will fade out.



ICEpower® amplification

Your subwoofer is powered by a low distortion ICEpower® amplifier designed by Bang & Olufsen ICEpower a/s. This high efficiency Class-D amplifier generates far less heat than conventional amplifiers and therefore requires no bulky external heatsinking. A high-current switch-mode power-supply ensures full power can be delivered for sustained periods, producing maximum dynamics and impact from your subwoofer.



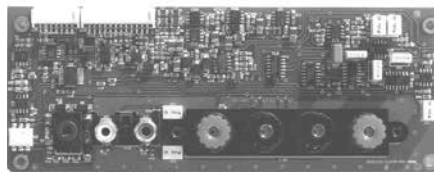
Signal processor

The Volcanix and Volcanix Slim subwoofers feature a high integrity signal processor through the use of analogue control stages that form a short and direct connection from the input terminals to the ICEpower® amplifier, whilst still allowing maximum control over the incoming audio signal.

In place of conventional mechanical potentiometers, the signal processor utilises Microchip® laser trimmed digital potentiometers. This offers precision adjustment of volume and filter controls, as well as eliminating noise, distortion and reliability issues associated with conventional potentiometers.

This all-analogue signal path features only high quality plastic film coupling capacitors and JFET operational amplifiers for stable low noise audio performance.

All aspects of the signal processor, including fault and monitoring signals, are under the control of a Microchip® PIC16F690 microcontroller, which is commanded from the front control panel via a high reliability balanced RS485 serial data link. The front control panel has its own PIC16F690 microcontroller dedicated to managing the LCD display and user interface.



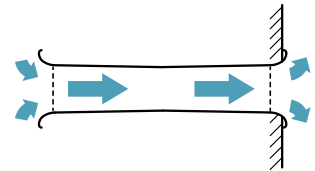
High performance driver

The Volcanix and Volcanix Slim both feature high power, long throw low frequency drivers. Both units incorporate a 50mm four layer voice coil and motor system, optimised for low distortion at extreme sound pressure levels.



Flared vent

Cabinet enclosures feature bass reflex venting, with the vent exhibiting the same flare radius internally and externally. This lowers subwoofer distortion and serves to reduce vent turbulence or “chuffing” at high drive levels.



Clipping protection

The ICEpower® amplifier features sound optimised soft clipping protection and will accurately amplify the input signal to full power without compression or loss of dynamics. If an input signal is applied beyond the ICEpower® amplifiers maximum power limit, soft limiting will minimise distortion and protect the loudspeaker driver.

Fault protection

Subwoofer amplifiers feature comprehensive protection systems that will protect the amplifier and loudspeaker from a range of possible fault conditions.

The microcontroller constantly monitors the ICEpower® amplifier module for possible over-temperature and over-current events, as well as checking that the AC mains voltage is not too low for proper operation.

If any of these fault conditions occur, the amplifier will immediately be disabled to prevent any permanent damage from occurring. After the fault condition clears, the unit will resume normal operation. Please see the troubleshooting guide on page 10 for further information.

Isolation Feet

The Volcanix and Volcanix Slim both feature soft rubber feet to stop unwanted vibration being transmitted to the floor.

POSITIONING

The most 'obvious' position for your subwoofer is not always the best

The bass produced by a subwoofer is omnidirectional and very hard for your ears to localise. Therefore a subwoofer can be placed virtually anywhere in your listening room and provide the impression that the bass is radiating from your main speakers. The quality of bass however is affected by the position of your subwoofer due to complex acoustic interactions with your listening room. Depth, punch, and integration with your main speakers are all affected by the position of your subwoofer. Experimentation is always recommended to achieve the most satisfying results.

- A.** Often the best place for a subwoofer is in a corner at the front of your room. This position generally provides the maximum output from your subwoofer. If your subwoofer sounds excessively 'boomy' in this location try moving it out 20-50cm from the corner or along one of the adjacent walls.
- B.** Placing your subwoofer along the front wall of your room, within a metre of a front speaker, is also a good option. In some setups this will provide a smoother tonal balance than corner placement. This position is particularly good for smaller satellite/bookshelf speakers to help integrate the sound of the subwoofer and main speakers.

C. Some people prefer to hide their subwoofer next to or behind a couch. Listeners on the couch may enjoy the extra vibrations felt through the couch, however the bass produced from your subwoofer may be easier to localise. Therefore it may be harder to integrate the sound of your subwoofer with your main speakers.

D. Placing your subwoofer away from your walls can result in satisfying results but maximum output from your subwoofer may be reduced.

E. Subwoofers may also be placed inside cabinetry.

⚠ The subwoofer is not magnetically shielded; do not place near magnetic media.

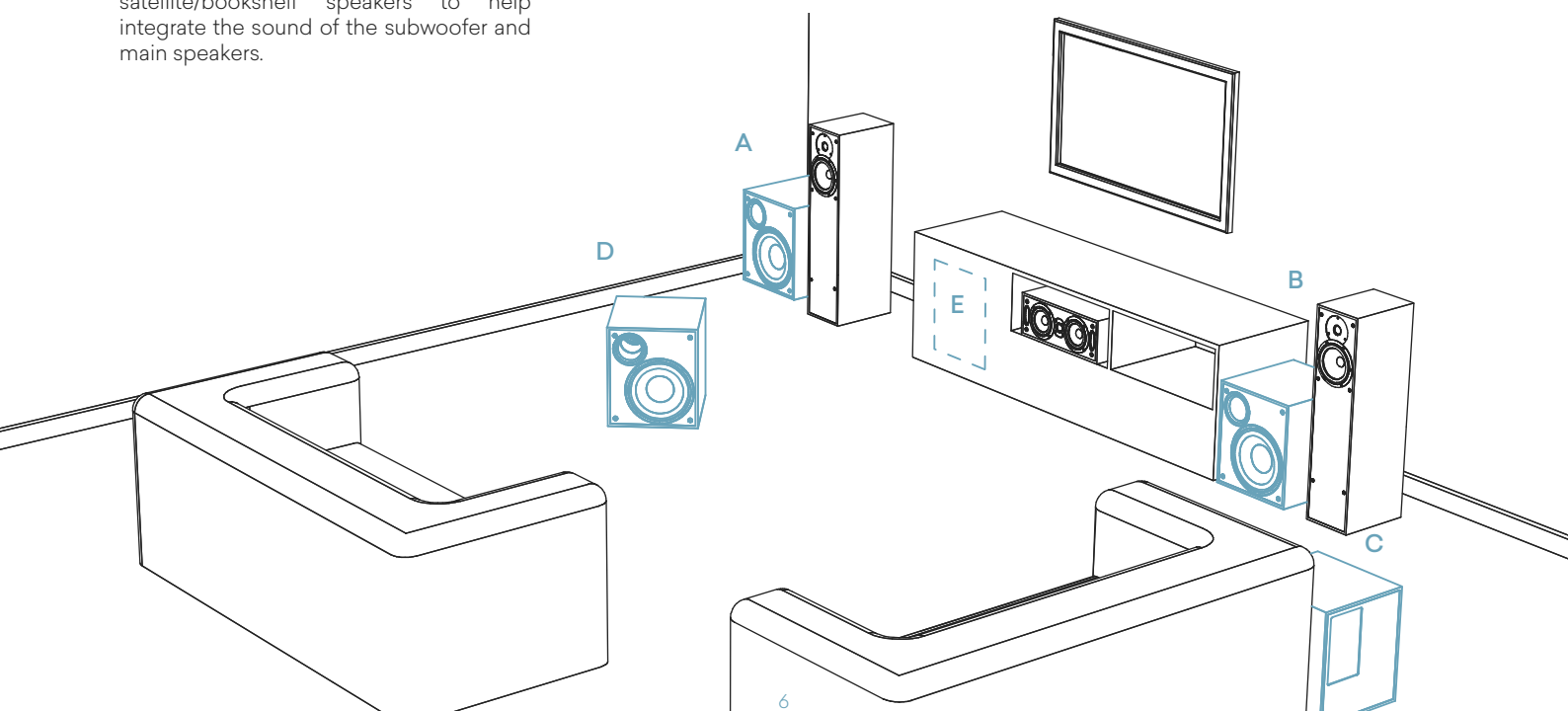
⚠ Avoid placing your subwoofer near sources of heat, direct sunlight, humidity etc.

⚠ The rear amplifier panel can get hot, ensure adequate ventilation. Read the safety instructions on the back of this manual for more details.

Many modern receivers include automatic room correction features. It is recommended that these correction features are run after an optimal subwoofer position has been determined.

To get the most from your subwoofer we recommend experimenting with the following positioning technique:

- Place the subwoofer in your central listening position (You may need to purchase a long subwoofer input cable).
- Disconnect all speakers other than the subwoofer.
- Play some music or a movie with heavy bass content.
- Move around your room, listening at floor level. Note any changes in the tonal quality of the bass.
- Mark out one or more potential locations that offer a smooth, extended sound or a sound quality you enjoy. Relocate your subwoofer to this location, reconnect speakers, and listen again from your central listening positioning. Permanently locate your subwoofer to this new location if you notice an improvement in the sound quality from your subwoofer.

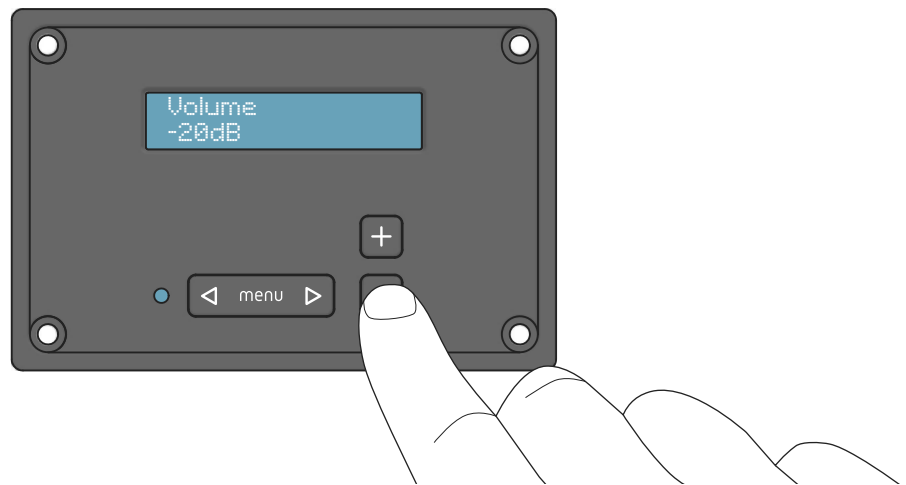
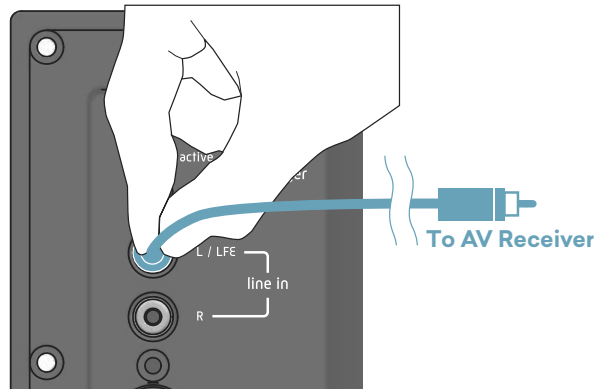


CONNECTION AND CALIBRATION - AV RECEIVER

Connection and defaults

It is recommended that you use line level RCA connections for home theatre applications.

- Ensure the mains power switch is off and connect the mains power cord.
- Connect the subwoofer pre-out (SW) on your receiver/processor to the line in L/LFE input on your subwoofer (see advanced connection methods p.9 for alternatives).
- Switch on mains power switch
- Check volume on your subwoofer is set to the default level, -20dB.
- Set subwoofer low pass to (maximum) LFE bypass setting. The AV receiver will manage the crossover/low pass frequency.
- Check Phase is set to 0° (default)
- Set power mode to auto (default).
- At this time you may wish to perform the AV receiver's automatic calibration procedure. Alternatively refer to the manual setup procedure below.



Manual receiver setup

Ensure subwoofer is set to ON or YES in your receiver setup (refer to your receiver/processor manual for more information).

Use the default subwoofer channel level setting on your receiver.

On your receiver select desired crossover frequency/low pass setting. As a guide, use the 80Hz setting.

⚠ If your speakers are small (bass driver is smaller than 5") use a higher setting (100Hz, 120Hz, 150Hz) to send more of the bass information to your subwoofer. Consult your receiver manual for further bass management options and settings.

Manual subwoofer calibration

When using the subwoofer in a home theatre installation it is beneficial to listen to movies with periods of low bass (explosions, rumbles etc). This will allow you to evaluate the 'impact' and 'depth' of your subwoofer.

It is also beneficial to select music that you are familiar with when carrying out listening tests. As a suggestion, play clean unprocessed recordings that use double bass, bass guitar, cellos, organ or kick drum that cover a wide bass spectrum.

Begin by playing the movie/music and slowly adjust the volume setting on the subwoofer to your desired level.

For final tweaking of your subwoofer

⚠ level you may wish to sit in the primary listening position and adjust the subwoofer channel level using your receiver's remote control (Refer to your receiver's manual for more information).

Now set the phase setting. The correct phase setting will produce the most bass. You may need to listen to a variety of recordings to hear any subtle change in bass energy. If no change in bass energy can be heard between phase settings, set phase to 0° default setting.

Re-adjust volume if necessary.

CONNECTION AND CALIBRATION - STEREO SYSTEM

Connection and defaults

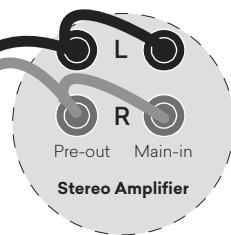
Connect the subwoofer to a stereo amplifier either via the high level speaker inputs or the line level inputs.

- Ensure the mains power switch is off and connect the mains power cord.
- Connect subwoofer to your stereo amplifier using one of the methods on this page.
- Using both connection methods simultaneously is not recommended.

Connection Method 1: Line Level

Requires your amplifier to feature L and R pre-out connections.

- Use two Y cables to connect each pre-out channel on your amplifier (or pre-amplifier) to the corresponding subwoofer and main amplifier inputs. If main inputs are not present on your amplifier simply connect the pre-outputs to subwoofer line inputs.

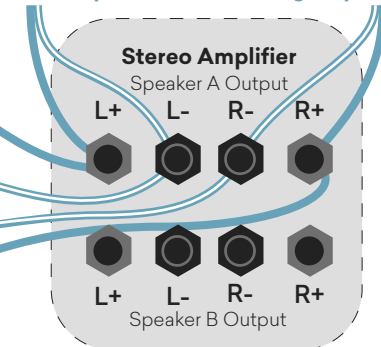


Connection Method 2: High Level Inputs

⚠ Not suitable for use with bridge-mode amplifiers.

Connect the speaker level outputs on your main amplifier to the speaker level inputs on the rear panel of the subwoofer.

To left speaker To right speaker



Also connect the speaker level outputs on your main amplifier to each of your left and right speakers. The subwoofer 'senses' the speaker level signal. No additional load will be placed on your amplifier. Be sure to maintain correct phasing for each set of speaker leads, red (positive +) to (+) and black (negative -) to (-).

Where your amplifier has A & B speaker outputs you may wish to connect your main speakers to A and subwoofer to B. Use amplifier A+B setting to activate subwoofer and A only setting to mute the subwoofer.

Calibration

- Switch on mains power switch (on the rear panel).
- Check the **volume** on your subwoofer is set to the default level, -20dB.
- Select desired **low pass** (crossover frequency) setting on your subwoofer. As a guide, set the subwoofer low pass to 20Hz above the main speakers low frequency limit (refer to main speaker specifications e.g. 60Hz-20kHz speaker would require 80Hz setting).
- Set **phase** to 0°.
- Set **power mode** to **auto** (middle position).

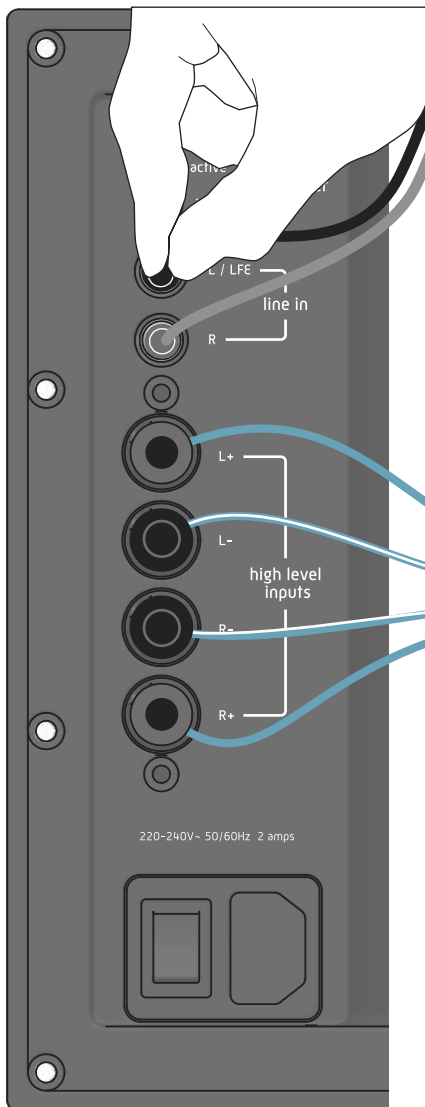
It is beneficial to select music that is familiar to you when carrying out listening tests and calibration procedures. As a suggestion, play clean unprocessed recordings that use double bass, bass guitar, cellos, organ or kick drum etc that cover a wide bass spectrum.

Begin by playing music and slowly adjust the volume setting on the subwoofer to your desired level. For final tweaking of your subwoofer level, you may wish to sit in the primary listening position and ask an assistant to adjust the volume setting on your subwoofer.

Now set the phase setting switch. The correct phase setting will produce the most bass. You may need to listen to a variety of recordings to hear any subtle change in bass energy. If no change in bass energy can be heard between phase settings, set phase to 0° default position.

Re-adjust volume if necessary.

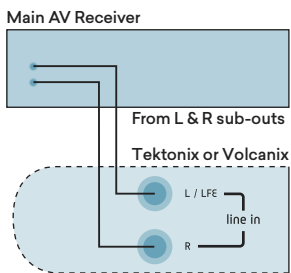
You may wish to fine-tune the crossover frequency/low pass setting. This will vary the amount of overlap from the subwoofer to the main speakers and increase or decrease the level at those frequencies. The effect is a strengthening or weakening of the upper bass region. Unpleasant 'woody' or 'chesty' sound qualities may suggest the low pass setting is too high. If the sound lacks 'body' the low pass setting may be too low. Re-adjust low pass setting, volume and then phase. Re-evaluate results.



ADVANCED CONNECTION METHODS

One subwoofer Stereo connection

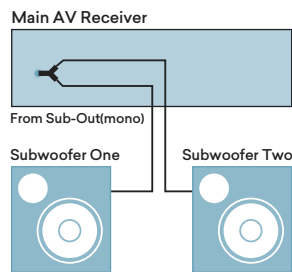
If your receiver has a stereo L and R subwoofer output feature, connect both L and R outputs to your subwoofers L and R line inputs.



Two (or more) subwoofers Mono connection

Using multiple subwoofers can be useful in large or troublesome installations where more uniform bass coverage is desired.

If your receiver has only one subwoofer output, use a RCA Y-connector to connect both subwoofer L/LFE inputs to the one mono SUB output.

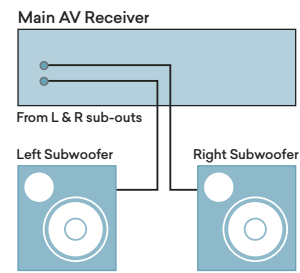


Left and right subwoofers Stereo connection

If your receiver has stereo line level subwoofer outputs, a left and right subwoofer may be used to allow stereo low bass reproduction.

Connect each receiver sub output to the corresponding subwoofer:

- L sub out to the left subwoofer L/LFE input
- R sub out to right subwoofer L/LFE input



TROUBLE SHOOTING

Symptom	Cause	Treatment
Power LED - double flashing red	Low mains voltages or brown-out in your area.	Contact your power provider.
Power LED - flashing red	Amplifier over-temperature condition. May be the result of continual use of the subwoofer at high volume levels.	Subwoofer will resume normal operation when unit cools. If problem persists contact your Krix retailer or Krix directly.
Power LED - flashing blue	Amplifier overcurrent condition.	Switch off and switch on unit to reset. If problem persists contact your Krix dealer or Krix directly.
No sound from subwoofer (Power LED is red)	Incorrect or faulty cabling.	Check interconnection cables.
	AV amp/receiver subwoofer output settings incorrectly set.	Refer to AV amp/receiver for subwoofer setup procedure.
Minimal deep bass produced (Power LED is blue)	Volume of sub not set correctly.	Refer to AV amp/receiver for subwoofer setup (may differ for music and movies).
	AV amp/receiver sending bass to main speakers only (may differ for music and movies).	Play different source material.
	Program material has little bass content.	Adjust AVR or gain on subwoofer.
	Subwoofer influenced by room placement.	Reposition subwoofer, refer to page 6.
Subwoofer will not switch into standby. (Power LED is always blue)	If power mode is set to auto sense, noise in your system may be triggering the auto sense circuit causing your subwoofer to stay switched on.	Reduce auto sensitivity menu setting until unit switches off when no program material is playing.
	If power mode is set to 12V trigger and trigger cable is connected to AV amp/receiver the trigger logic may be incorrectly set.	Refer to AV amp/receiver for trigger setup procedure.
Subwoofer will not turn on or will go into standby when very quiet source material is played.	If power mode is set to auto sense, the auto sense circuit may not be responding to your low level source material.	Increase auto sensitivity menu setting until unit switches on when very quiet source material is played. If problem persists you may also wish to increase the subwoofer output level on your A/V receiver. Refer to AV amp/receiver for subwoofer setup procedure.
	If power mode is set to 12V trigger and trigger cable is connected to AV amp/receiver, subwoofer may not be receiving a 12V signal.	Check trigger cable connection and then refer to AV amp/receiver for trigger setup procedure.
Communication Error (1 or 2) on display	The front control panel is unable to communicate with the rear panel.	Turn subwoofer mains power off and on. If problem persists contact your Krix retailer or Krix directly.
Subwoofer will not turn on (Power LED not illuminated)	Amplifier not receiving power.	Check power switch is set to 'I'.
		Check mains outlet is supplying power using another appliance (e.g. lamp).
		If problem persists contact your Krix retailer or Krix directly.

SPECIFICATION

Queries

If you have any queries regarding the Volcanix or the Volcanix Slim setup procedure or any other Krix product, please contact your nearest Krix retailer or Krix directly. Contact details are on the back cover of this booklet.

Volcanix: Specifications

Drivers

Bass Driver	Nominal 305mm (12") diameter paper cone driver, 50mm long throw voice coil, developed for high level, low frequency reinforcement	
-------------	---	--

Electronics

Amplifier power	450 watts RMS into the nominal 4 ohm driver	
Amplifier S/N	>90dB	

Distortion - Input to speaker	<0.1% - @ 400 watts RMS	
-------------------------------	-------------------------	--

Line level inputs	Left Input (mono)	300mV RMS for maximum output
	Left + Right Input (stereo)	150mV RMS for maximum output

General

Frequency range	16Hz - 200Hz (-6dB) in room response	
-----------------	--------------------------------------	--

Output	125dB maximum SPL in room response	
--------	------------------------------------	--

Auto power On/Off	15 minute delay before switching to standby after no input signal	
-------------------	---	--

Phase select	0° or 180° (relative to input signal)	
--------------	---------------------------------------	--

Filters	Low pass filter 50-195Hz, Bypass	
---------	----------------------------------	--

Cabinet	High pass filter to limit driver excursion below 22Hz	
----------------	---	--

Enclosure type	Bass reflex, front vented	
----------------	---------------------------	--

Dimensions	506mm high x 400mm wide x 470mm deep (including grille and feet)	
------------	--	--

Material	18mm MDF	
----------	----------	--

Finish	Vinyl or lacquered timber veneer	
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Weight	23 kg	
--------	-------	--

Volcanix Slim: Specifications

Drivers

Bass Driver	Nominal 305mm (12") diameter paper cone driver, 50mm long throw voice coil, developed for high level, low frequency reinforcement	
-------------	---	--

Electronics

Amplifier power	450 watts RMS into the nominal 4 ohm driver	
Amplifier S/N	>90dB	

Distortion - Input to speaker	<0.1% - @ 400 watts RMS	
-------------------------------	-------------------------	--

Line level inputs	Left Input (mono)	300mV RMS for maximum output
	Left + Right Input (stereo)	150mV RMS for maximum output

General

Frequency range	15Hz - 200Hz (-6dB) in room response	
-----------------	--------------------------------------	--

Output	125dB maximum SPL in room response	
--------	------------------------------------	--

Auto power On/Off	15 minute delay before switching to standby after no input signal	
-------------------	---	--

Phase select	0° or 180° (relative to input signal)	
--------------	---------------------------------------	--

Filters	Low pass filter 50-195Hz, Bypass	
---------	----------------------------------	--

Cabinet	High pass filter to limit driver excursion below 22Hz	
----------------	---	--

Enclosure type	Bass reflex, down-firing vents	
----------------	--------------------------------	--

Dimensions	630mm high x 500mm wide x 309mm deep (including grille and feet)	
------------	--	--

Material	18mm MDF	
----------	----------	--

Finish	Vinyl	
--------	-------	--

Weight	23kg	
--------	------	--

Krix Loudspeakers Pty Ltd

14 Chapman Road
Hackham SA 5163
Australia

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listen@krix.com

BRH.O VLVLS 01

krix.com

Please read these important safety instructions before you plug in this equipment.

Please retain these instructions for future reference.

This equipment is manufactured to a very high standard and it should give you many years of reliable service. To minimise the chance of any problems with this equipment, take note of the following:

-  This appliance is a class II double insulated device. All external parts are protected from hazardous voltages by two layers of insulation.

This equipment uses electricity at very high voltages. To avoid injury to persons, fire or damage to the unit:

- Shall not be exposed to dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the unit.
- Clean the unit with a dry cloth only – do not use solvents. Unplug the unit before cleaning.
- Do not plug the unit into a power source other than the one specified.
- Make sure the power cable is protected and remains free from defects.
- Never disconnect the ground prong on the mains plug.
- Ensure the plug or appliance connector remains accessible at all times.
- When removing the power plug from the power source, do not pull on the cord.
- Do not open the unit. Refer any service to qualified service personnel.
- Do not place any object or any part of your body into the unit.

This unit may get hot when it is being used. To avoid injury to persons, fire or damage to the unit:

- Do not put the unit near any heating source.
- Keep the unit out of direct sunlight.
- Make sure all ventilation openings remain clear.
- Do not cover unit with blankets or any other materials.
- Do not place unit against curtains or furnishings.

This equipment is heavy. To avoid injury to persons:

- Be careful when you lift the unit.
- Install the unit on the ground so that it cannot fall onto anyone.

This equipment can cause extreme vibrations. To avoid injury to persons, fire or damage to the unit:

- Do not put the unit near things that might be damaged by vibration.
- Do not put the unit near things that might be moved by vibration (for example vases, candles or glass objects).
- Do not put objects on top of the unit.

This equipment is delicate. To avoid damage to the unit:

- If it starts to make a distorted or unusual noise, turn the volume down. If that makes no difference, turn the unit off and have it checked by qualified service personnel.
- If you are not going to use the unit for an extended period, unplug it from the wall socket.
- If there is a storm with lightning, unplug it from the wall socket.
- Never force any switches or controls. If they are difficult to operate, have the unit checked by qualified service personnel.

Avoid damage to your hearing. You only have one set of ears!

All sound equipment is capable of damaging your hearing or the hearing of others. Exposing your hearing to high volume levels for extended periods of time will cause permanent hearing damage. Even short periods at extremely high levels will cause permanent hearing damage. Children's hearing is especially sensitive and extra care should be taken when exposing children to high volume levels. Hearing damage is cumulative and it may be too late when you find out that your hearing has been damaged. We recommend that you avoid long periods of exposure at excessive volume levels.