KARABAR
SINCE2006
PROFESSIONAL AUDIO SYSTEM

# Karabar®

Professional speaker system

Karabar

SINCE2006

## Professional speaker system

# Technical Manual

Karabar

# Overview

## Karabar-the sound leader

The original innovation of Karabar speaker is created for global people who require the highest performance. The design technology is based on construction-sound theory, so Karabar speaker allows you to do adjustment effectively according to the sound space you meet. The most desirable product Karabar has obtained the patented license from several countries.

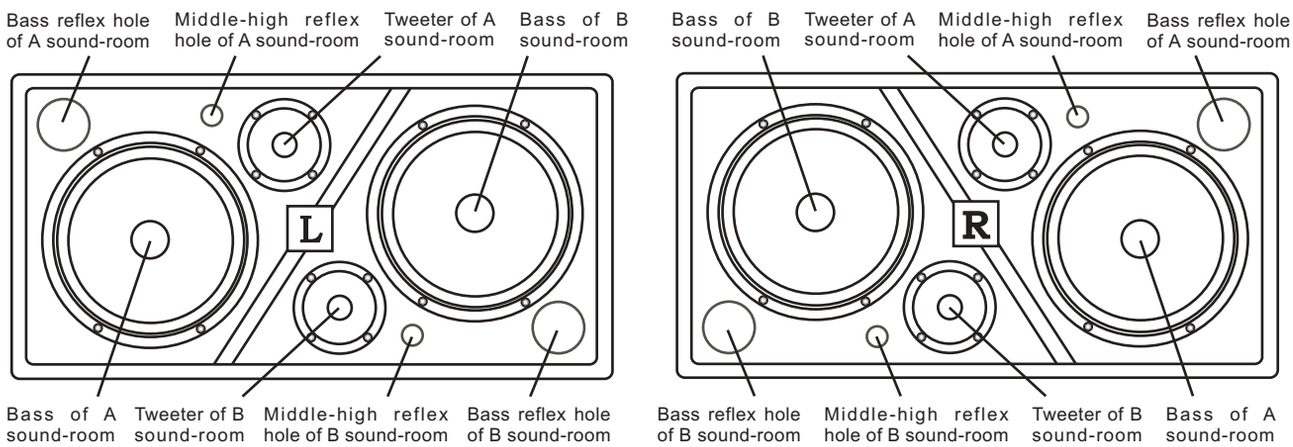
## Original Innovation

The space required for the optimal performance of each audio system is different; furthermore, no two environments are identical. These complicated factors then affect the audio system in hard to predict ways. And the problem just comes out when speakers are placed in a given sound space. These are very common problems but even professionals are at a loss as to what to do and the only plausible solution is to change the sound system but this rarely completely solves the problem. The wiring and sound compartment design of the Karabar speakers aims to solve these problems. Please refer to instructions of this technical manual. And thank you for purchasing Karabar speaker, hopefully it is useful for you to solve sound problems.

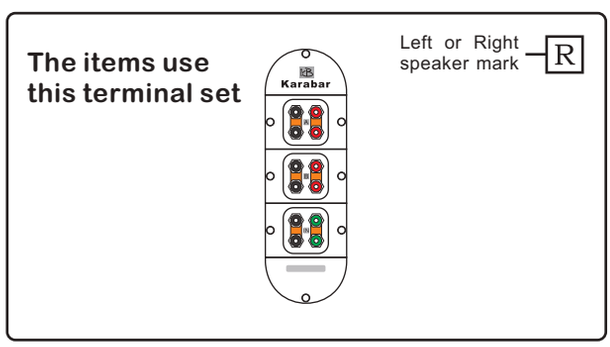
Note: If you are not sure about wiring connection, are welcome to contact us. Any improper wiring connection is not allowed.

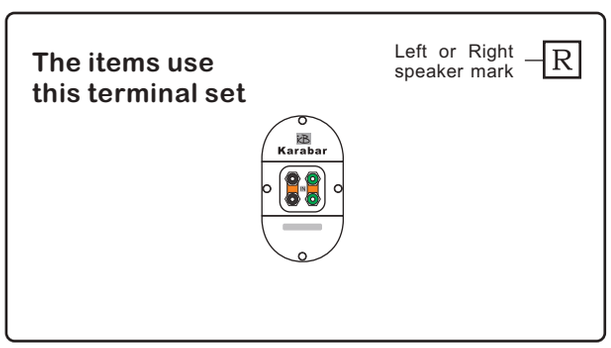
# Karabar Configuring the speaker and crossover

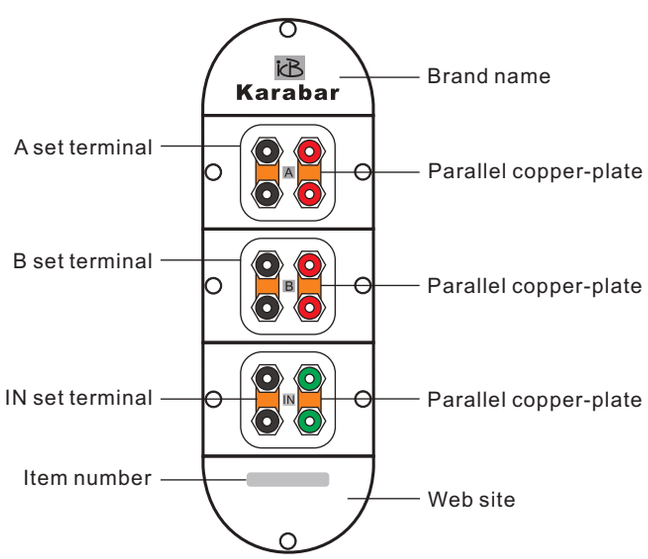
## (The front speaker configuration)




## (The rear speaker configuration)

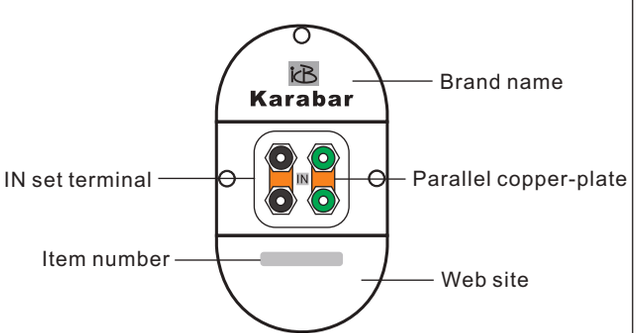



(If take parallel copper-plate out from A/B/IN set terminal, the each driver of A/B sound- room become independent, up-in-terminal becomes bass of A sound-room, down-in-terminal becomes bass of B sound-room.)

## (The crossover configuration)




(If take parallel copper-plate out, then the circuit becomes bi-wire type.)

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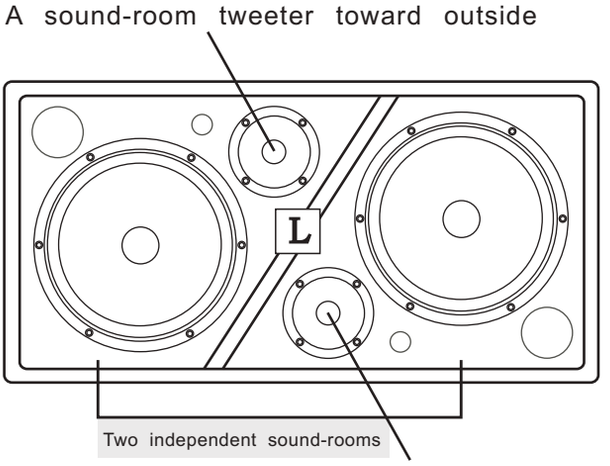
# Drivers placed symmetrically

## (FA)

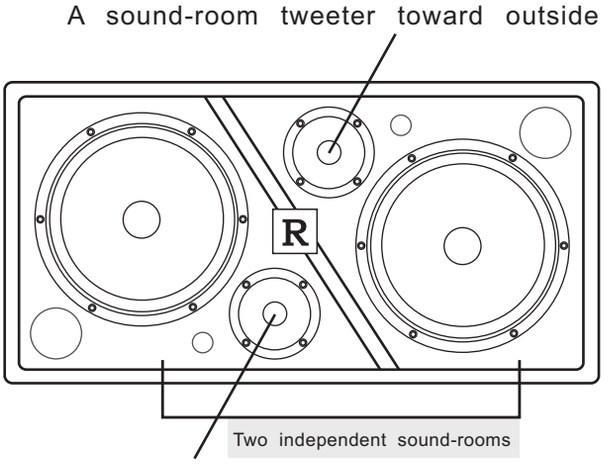
(FA- When the tweeter of both A sound-room is toward outside, the sound field will be expanded.)

A sound-room tweeter toward outside




B sound-room tweeter toward inside

A sound-room tweeter toward outside

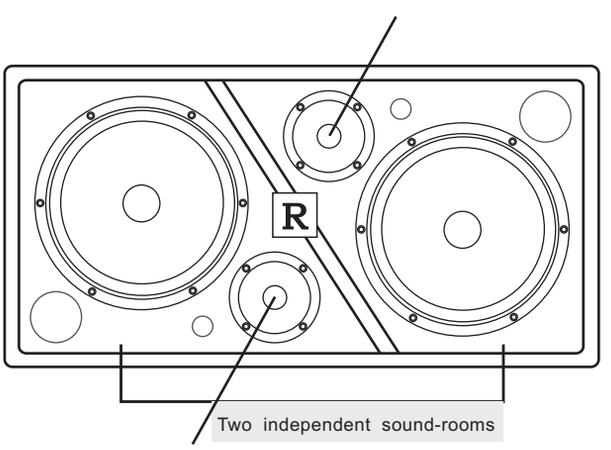



B sound-room tweeter toward inside

## (FB)

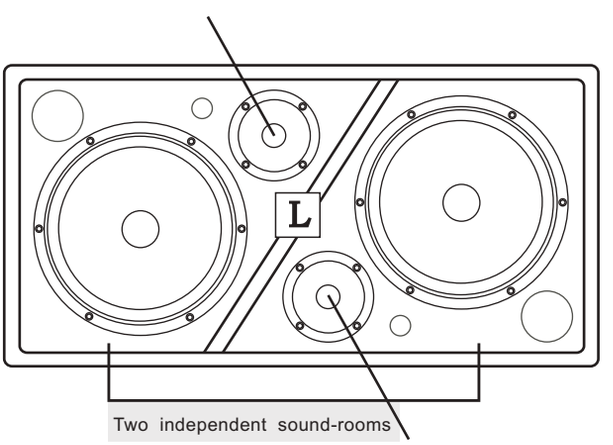
(FB When the tweeter of both A sound-room is toward inside, the sound field will be centralized.)

A sound-room tweeter toward inside




B sound-room tweeter toward outside

A sound-room tweeter toward inside

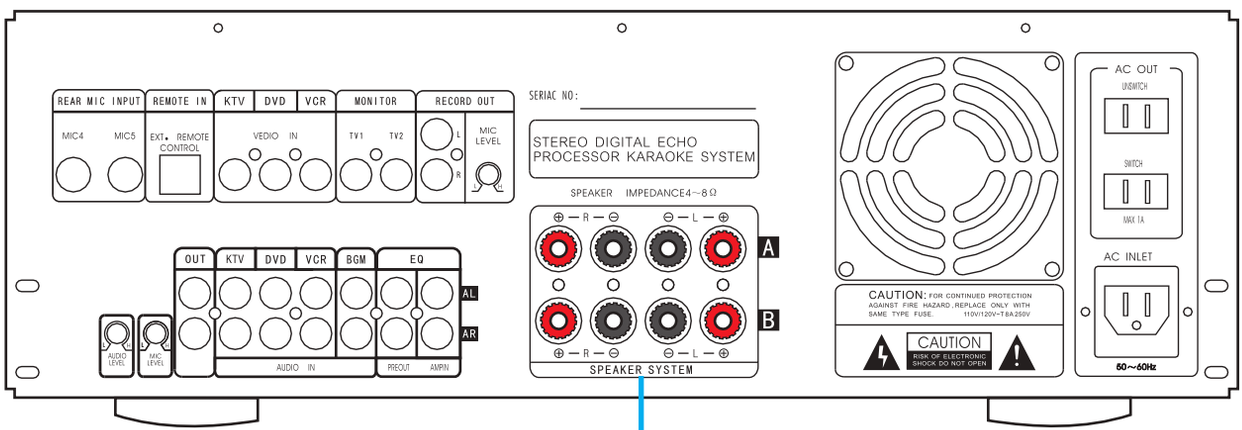


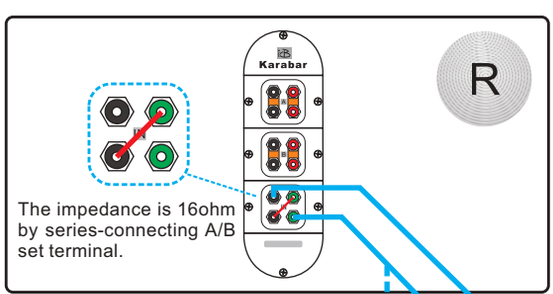

B sound-room tweeter toward outside

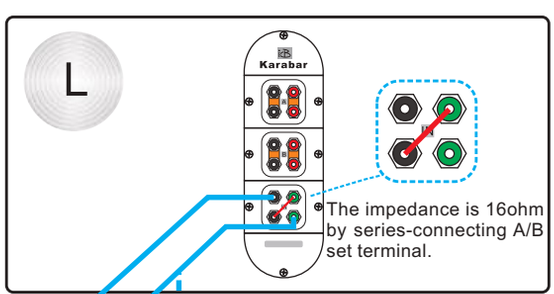
The technology of Karabar speaker is two independent sound-rooms combined in one enclosure, so the different speaker placement will cause different sound field.

# The changeable impedance application by series/parallel connection

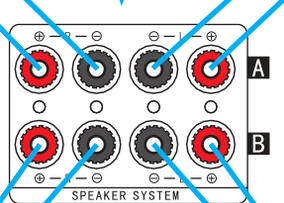
## Amplifier matched to 2pairs KB-2348P speakers



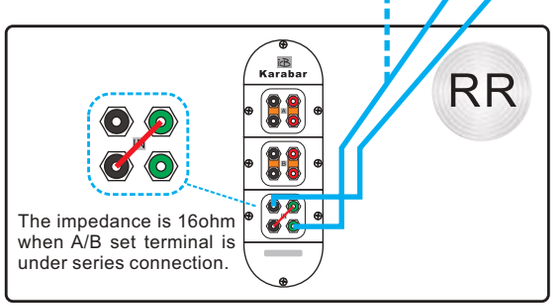



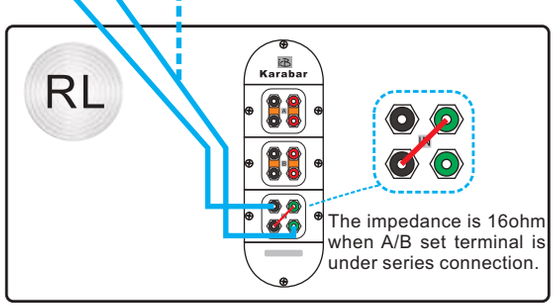




It's parallel circuit when amplifier A/B speaker terminals are under output condition at the same time, therefore when speaker R(16ohm) and speaker RR(16ohm) is connected by parallel connection then entire system impedance become 8ohm.

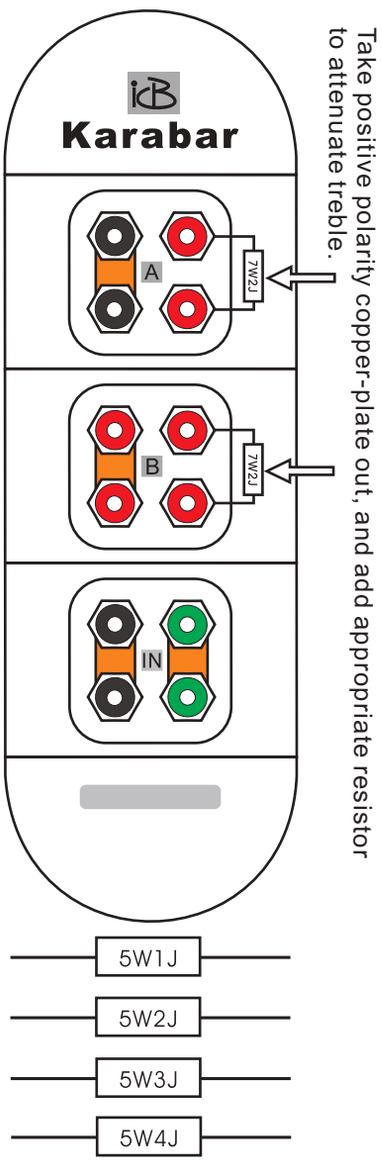



It's parallel circuit when amplifier A/B speaker terminals are under output condition at the same time, therefore when speaker L(16ohm) and speaker LL(16ohm) is connected by parallel connection then entire system impedance become 8ohm.



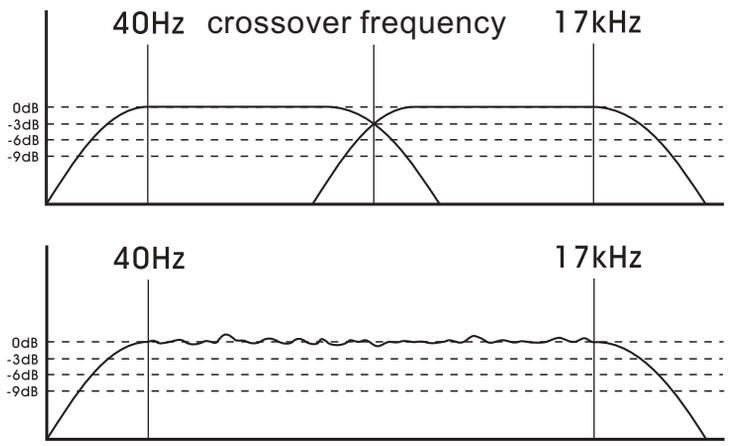



# Karabar The introduction of how to restrain feedback




(F1)

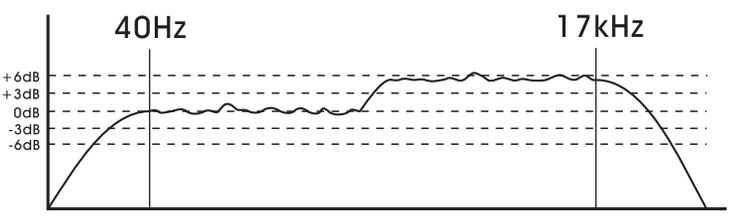
Assume the frequency graphic is presented smoothly.




(F2)

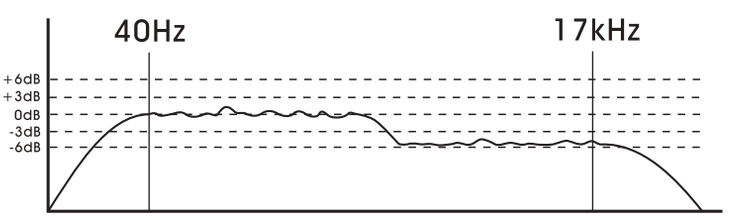
Too much treble caused feedback

(FA)



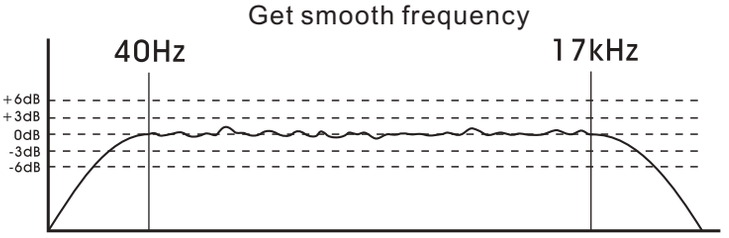

To attenuate treble by added appropriate resistor with tweeter series-connection.

(FB)




Get smooth frequency

(FC)




The frequency graphic should be smooth when is tested in studio, unfortunately it's opposite results at real occasions. The treble feedback always happens in Karaoke system. It can be improved by functions offered by amplifier, which only provides single frequency modification therefore the performance is not satisfied at all. The treble feedback happens on several segments of frequency and Karabar can gives you the best solution. You are allowed to add resistor into crossover directly by series-connection to restrain feedback. The resistor specification is usually adopted with 1-4ohm/5-10w.

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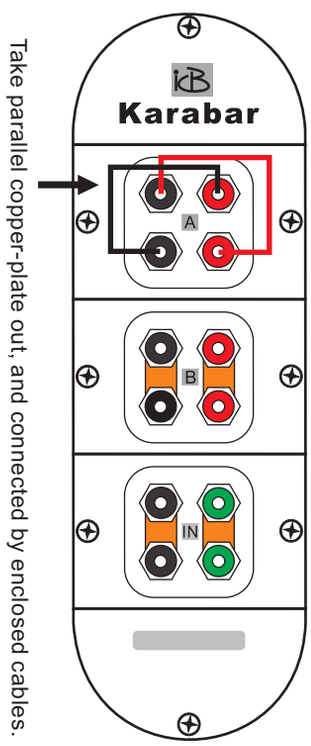
# Sound field adjustment by tweeter inverting connection

## Varied tweeter inverting connection ( As figure below)

The item has dual crossovers design, which is available to improve sound field by numerous wiring connection.

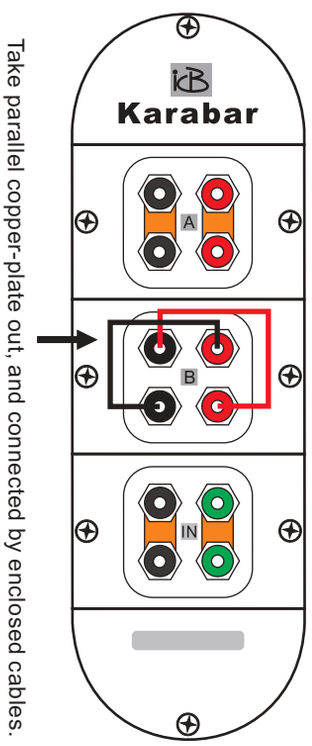
### (FA)

Inverting connection tweeter of A sound-room



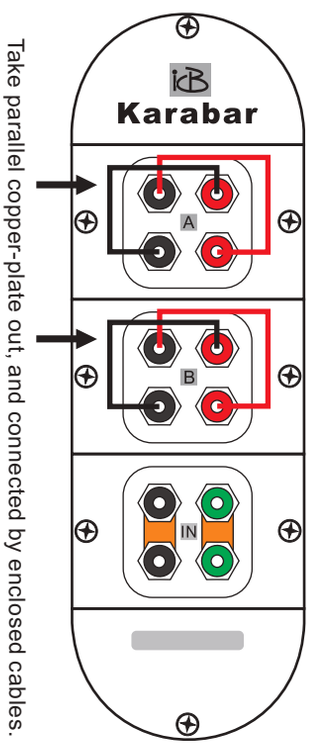

### (FB)

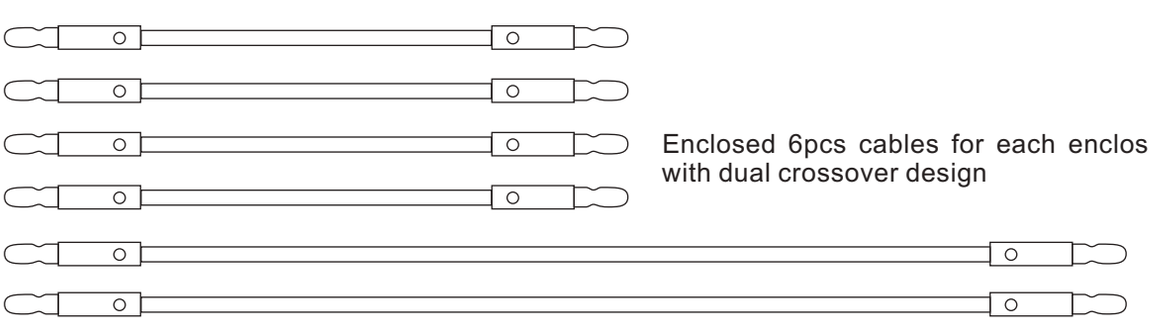
Inverting connection tweeter of B sound-room




### (FC)

Inverting connection tweeter of A/B sound-room



Enclosed 6pcs cables for each enclosure with dual crossover design

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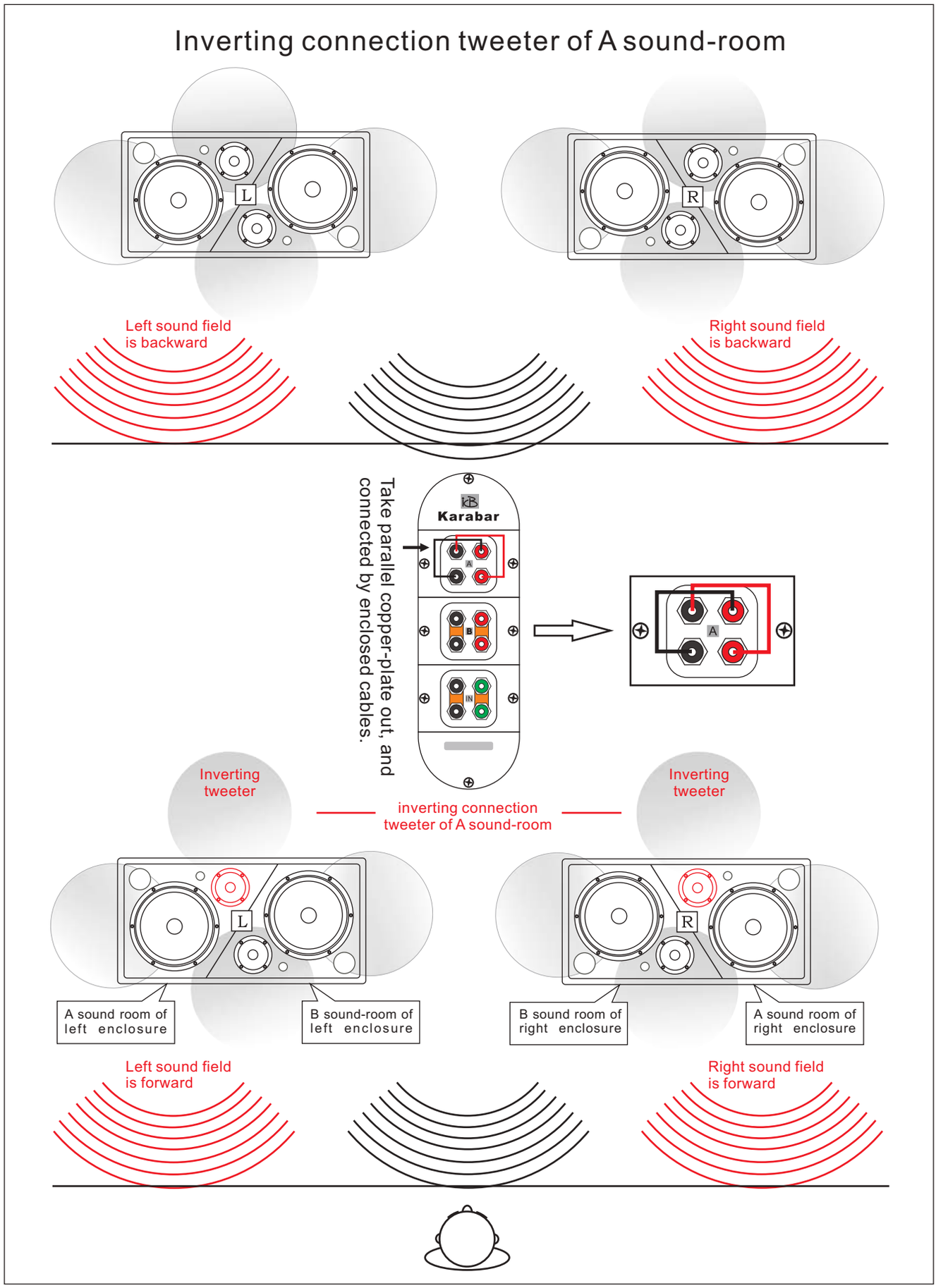
# Sound field adjustment by tweeter inverting connection




To figure out the best sound performance, you may adjust the function buttons of amplifier offered.

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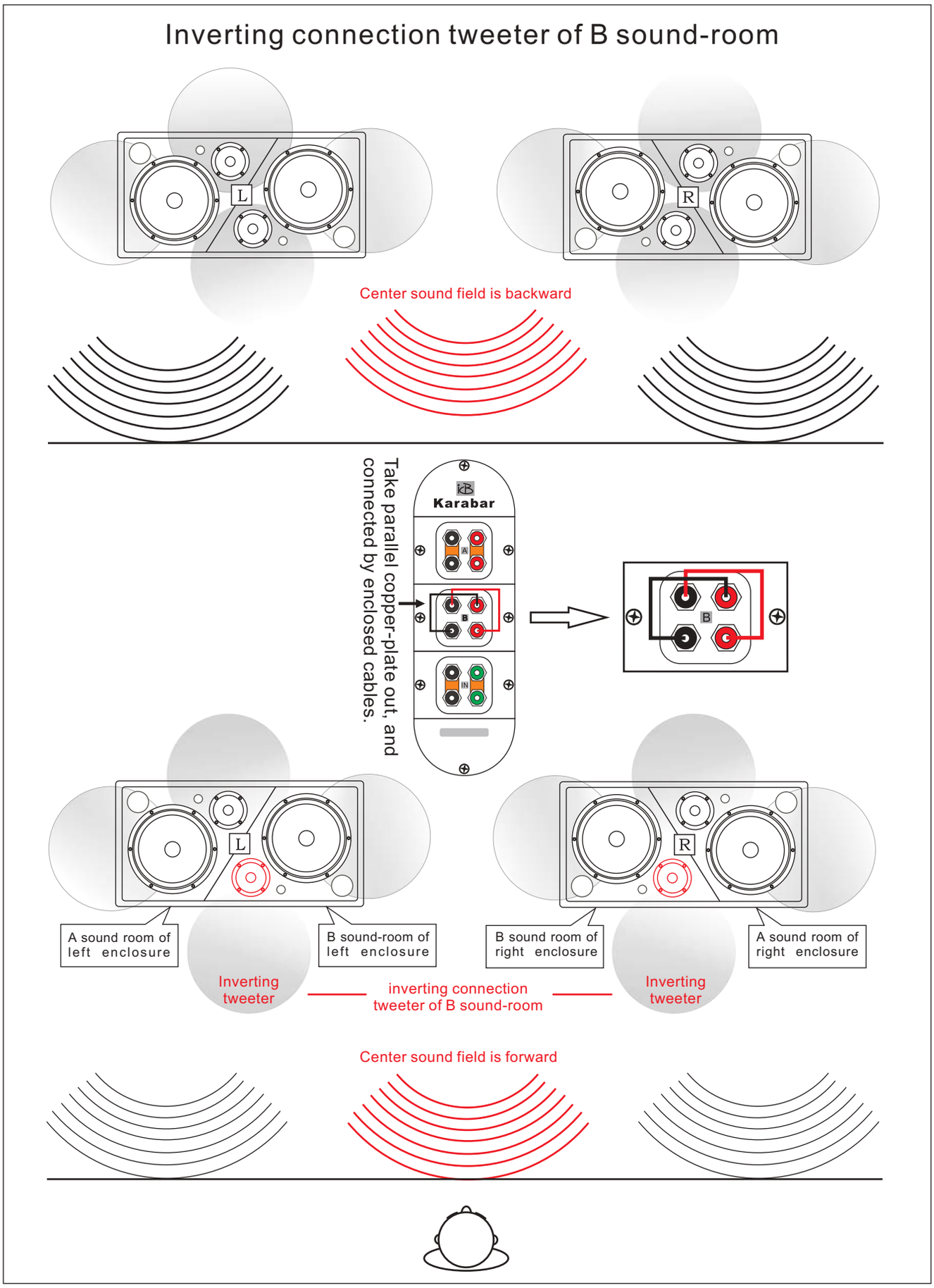
# Sound field adjustment by tweeter inverting connection

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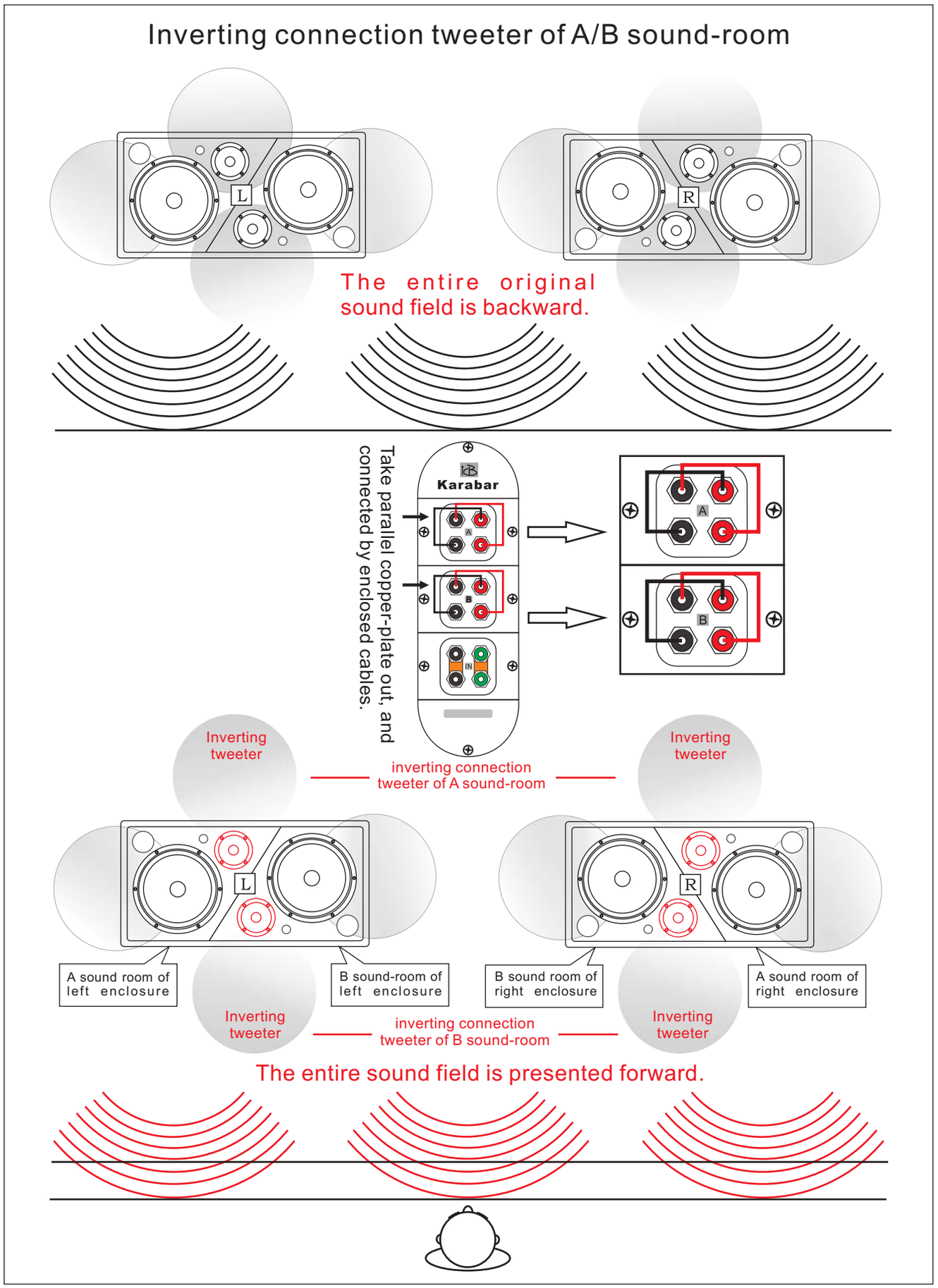
# Sound field adjustment by tweeter inverting connection




To figure out the best sound performance, you may adjust the function buttons of amplifier offered.

# Karabar Single enclosure delivers stereo sound

## Amplifier connected to speaker-the rear configuration

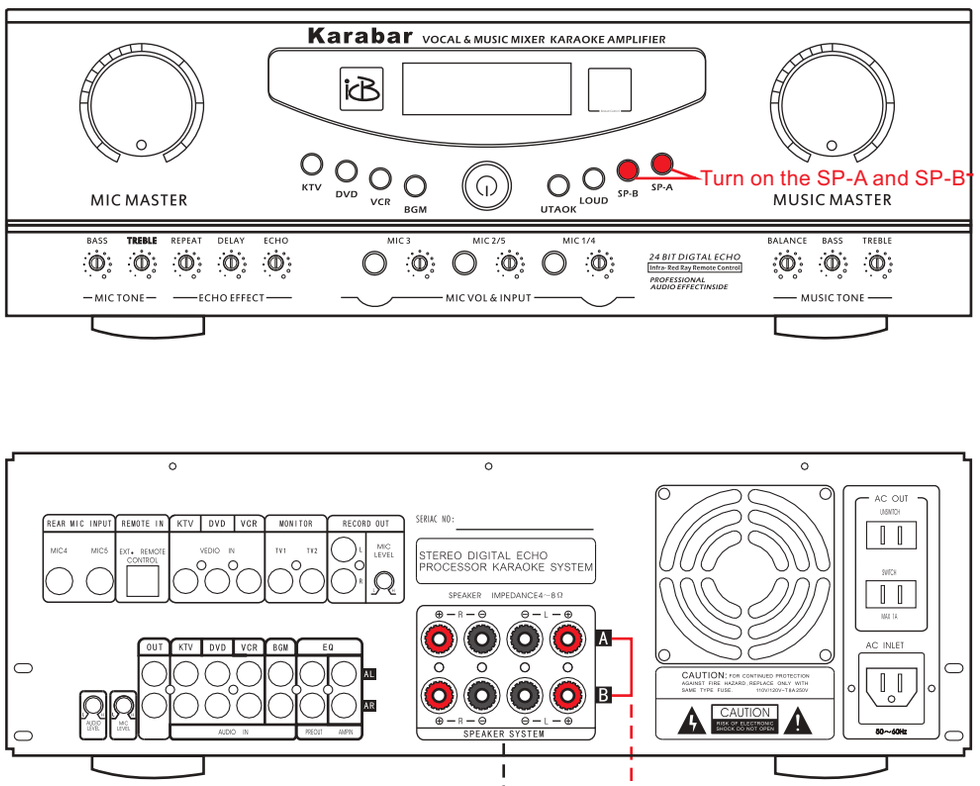
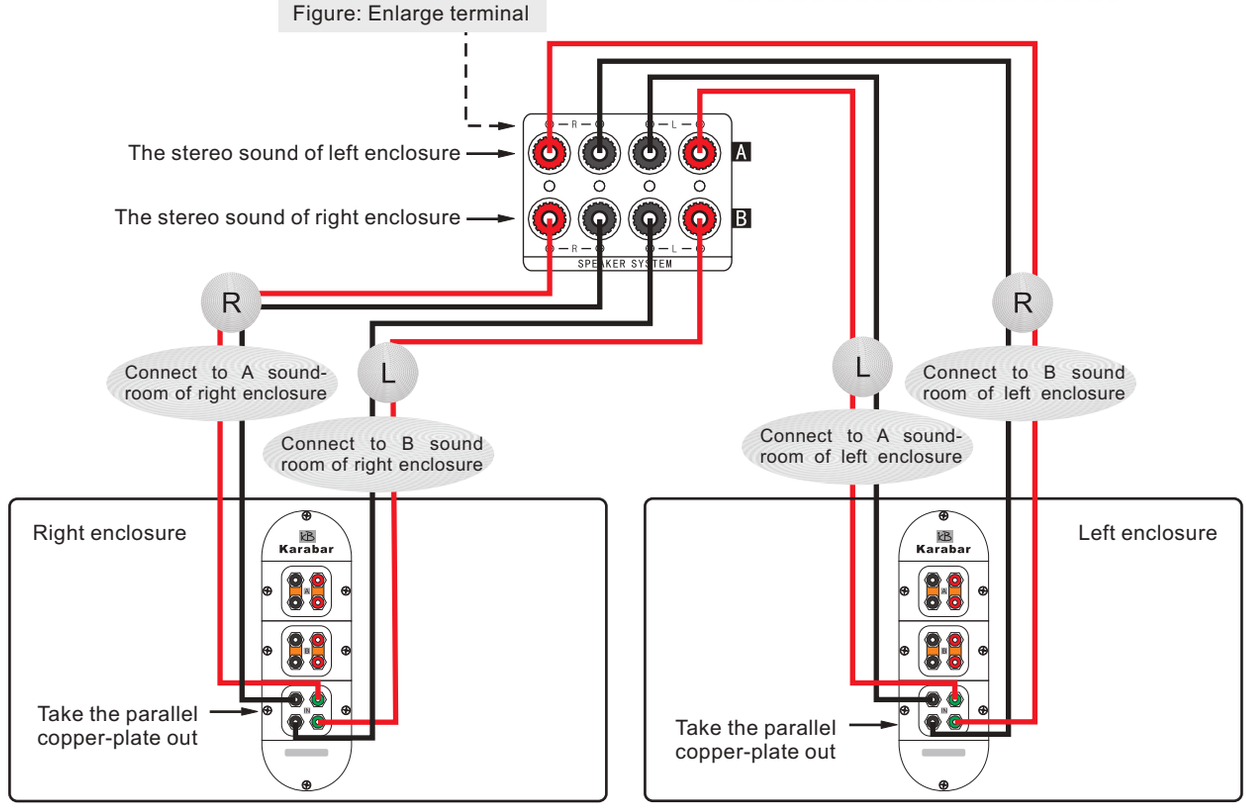
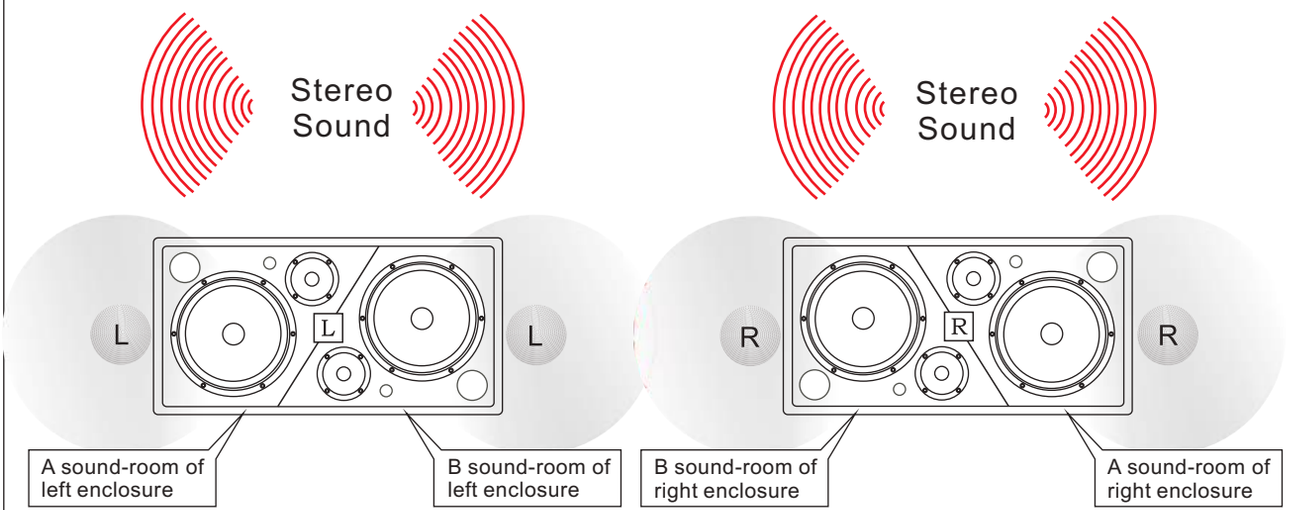



Figure: Enlarge terminal



# Karabar Single enclosure delivers stereo sound

## Amplifier connected to speaker-the front configuration



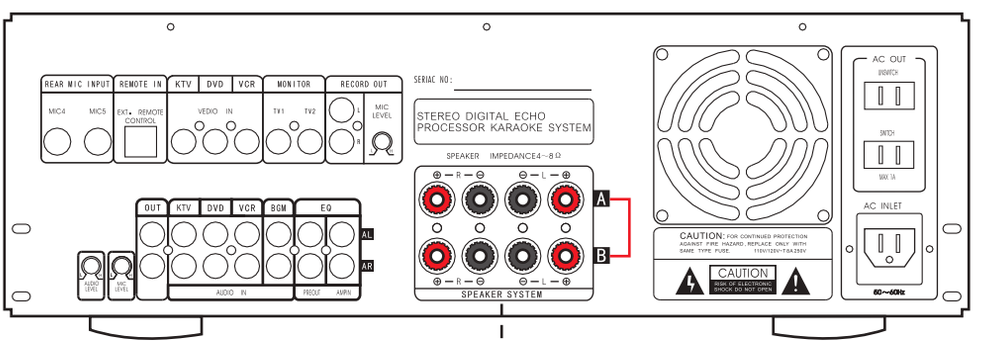
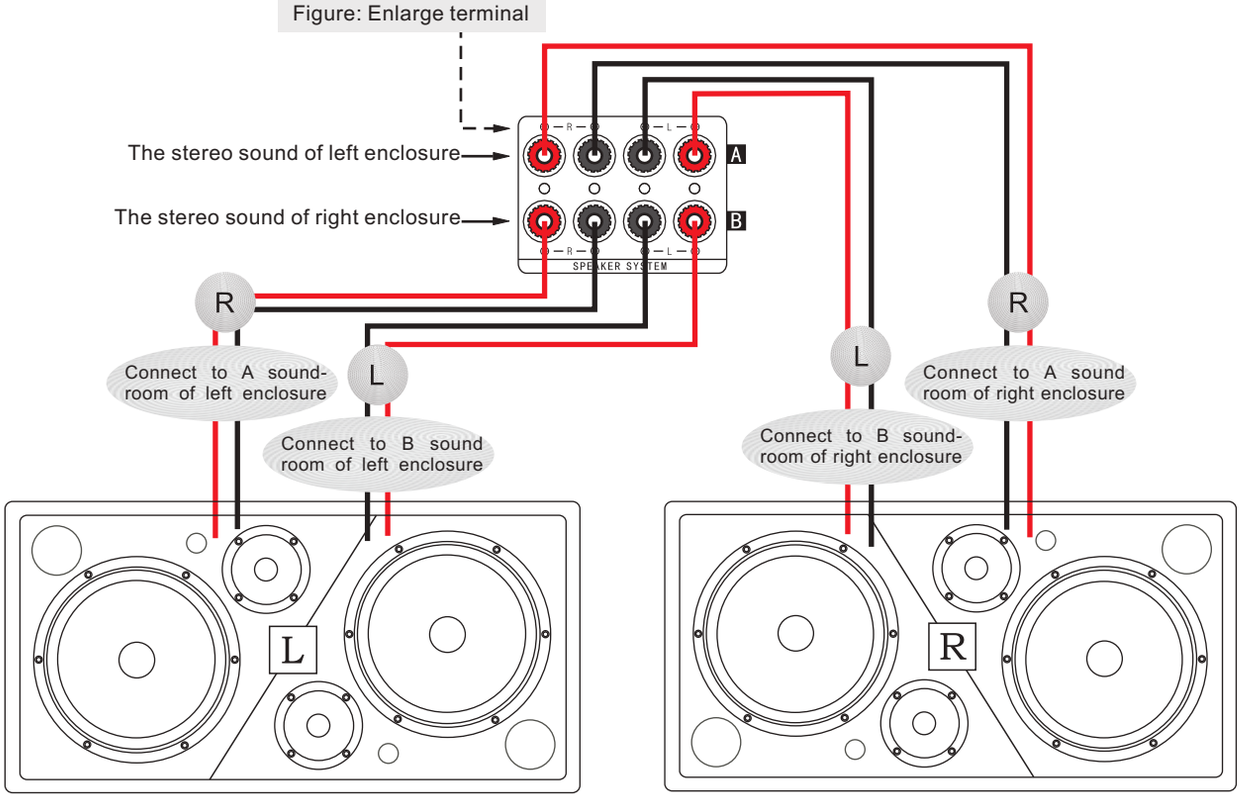
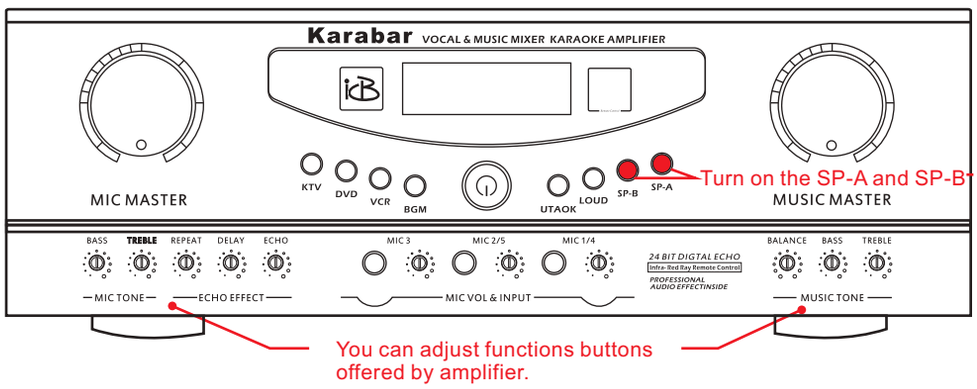




Figure: Enlarge terminal



# Karabar Single enclosure delivers stereo sound

## The connecting of how to balance sound filed to achieve stereo sound



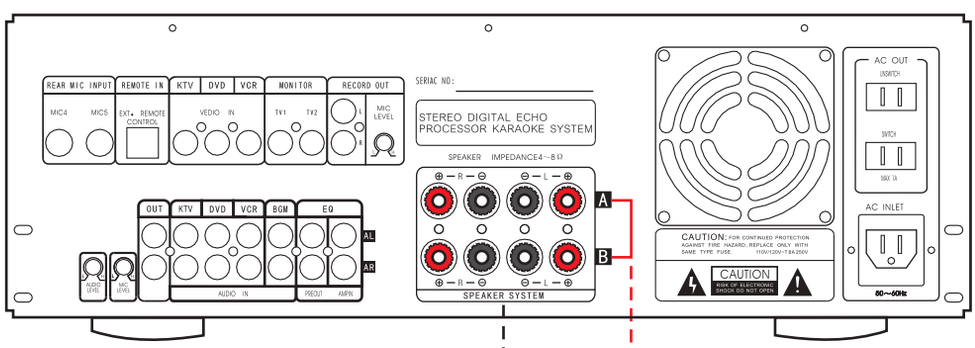
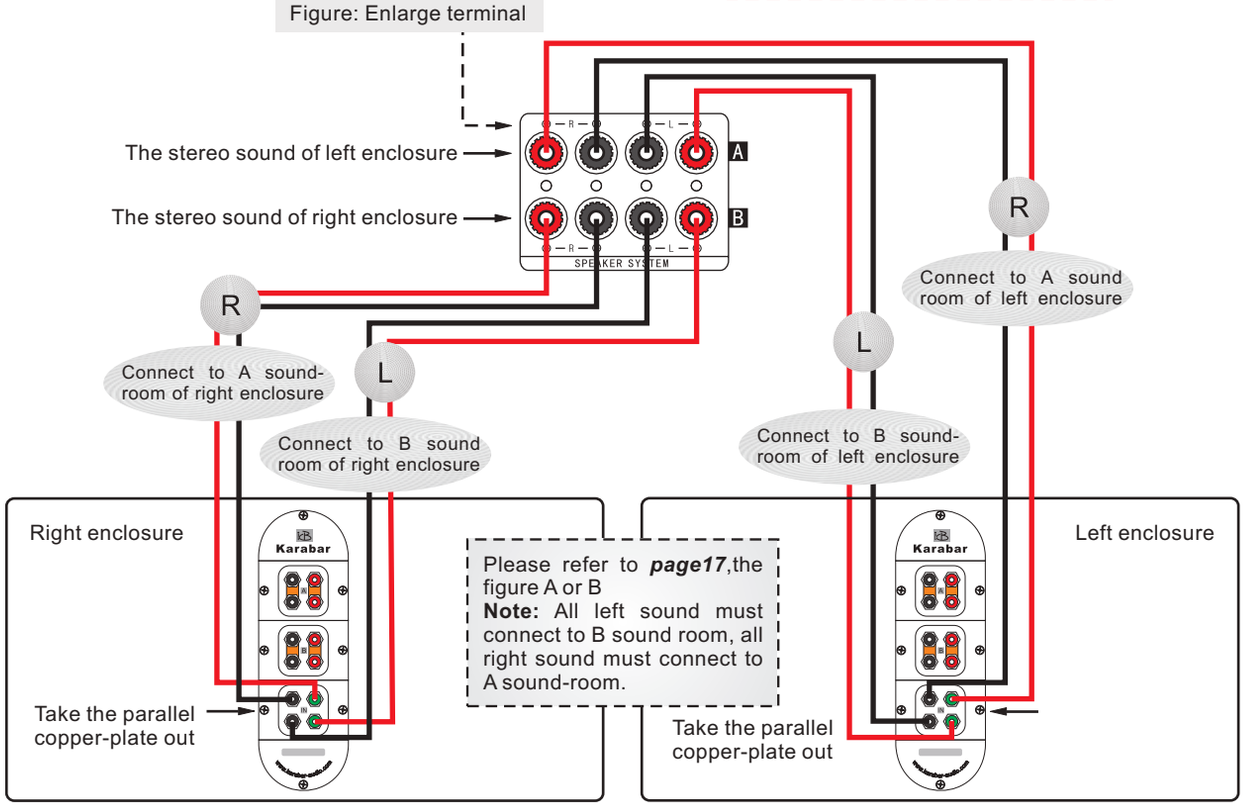




Figure: Enlarge terminal



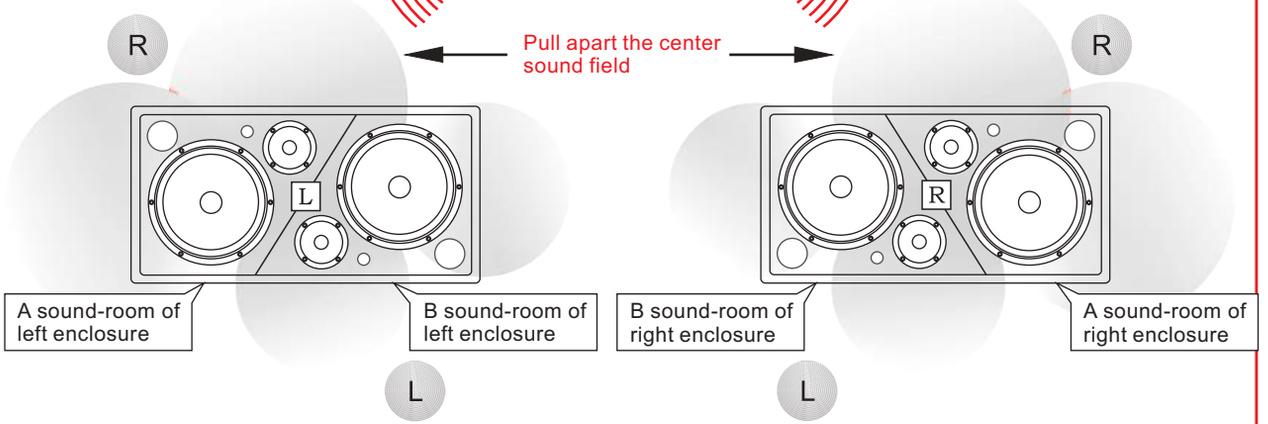
# Karabar Single enclosure delivers stereo sound

## The instruction of how to balance sound filed to achieve stereo sound

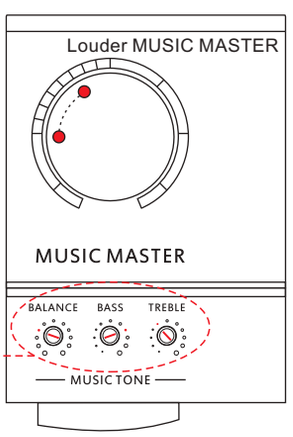
(FA)

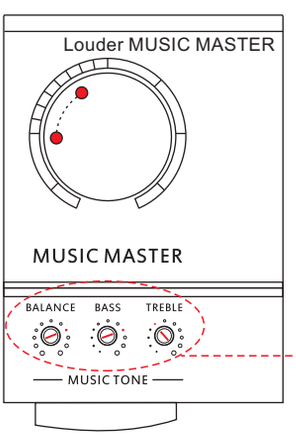
The way to solve the case, if the distance is too closed between two enclosure caused the center sound filed is overlapped.

Pull apart the center sound field




You can adjust the **BALANCE** button to make louder volume from A sound-room than B sound-room to pull apart the center sound field, furthermore adjust function buttons offered by amplifier.



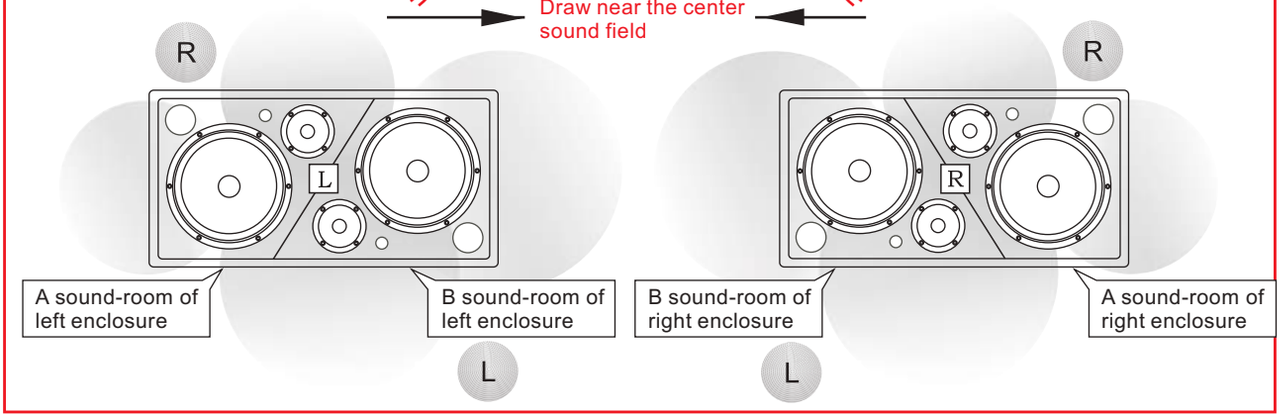




You can adjust the **BALANCE** button to make louder volume from B sound-room than A sound-room to draw near the center sound field, furthermore adjust function buttons offered by amplifier.

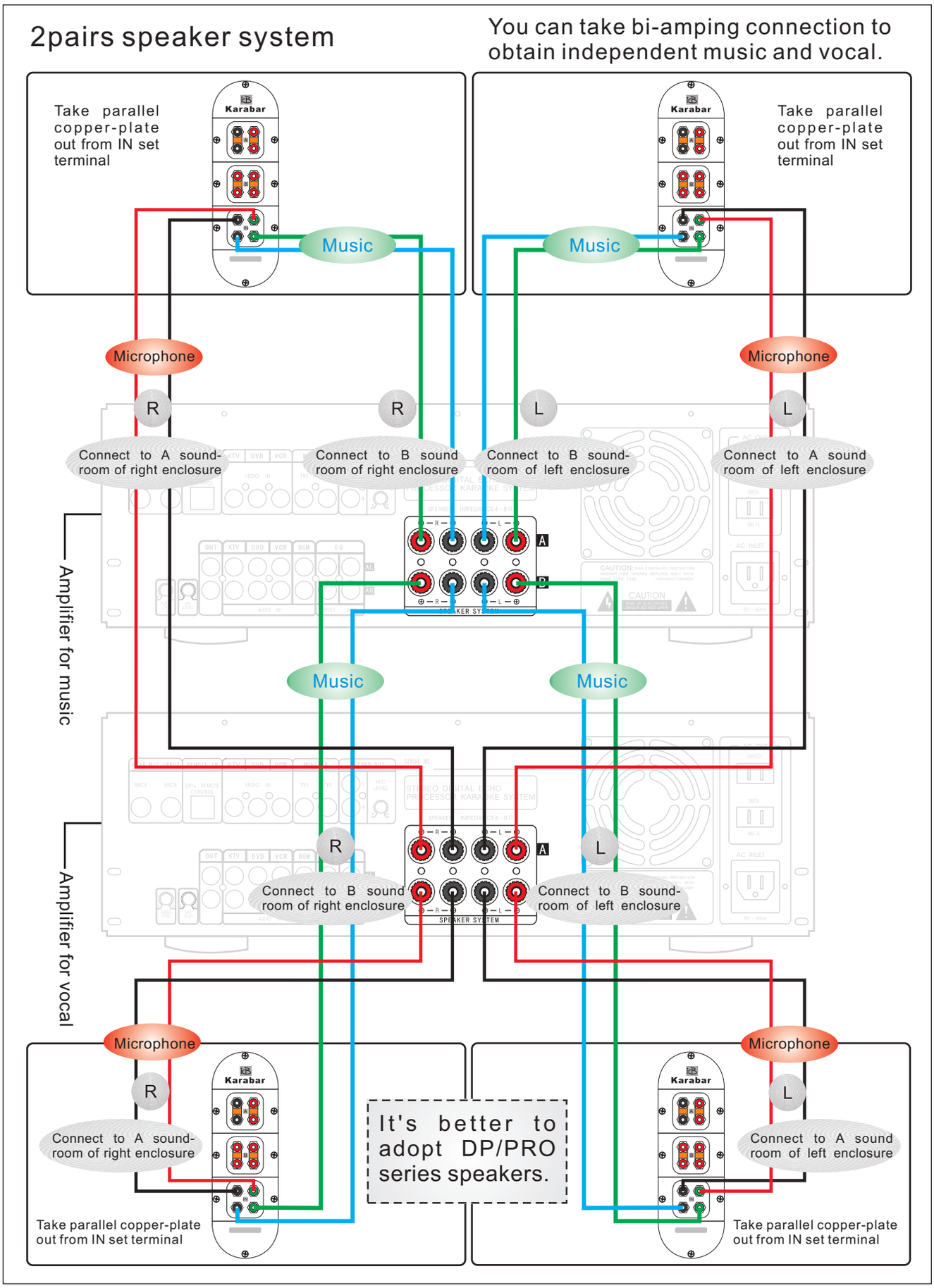
(FB)

The way to solve the case, if the distance is too far between two enclosures caused the center sound filed is empty.

Draw near the center sound field



# The connection of independent music and vocal



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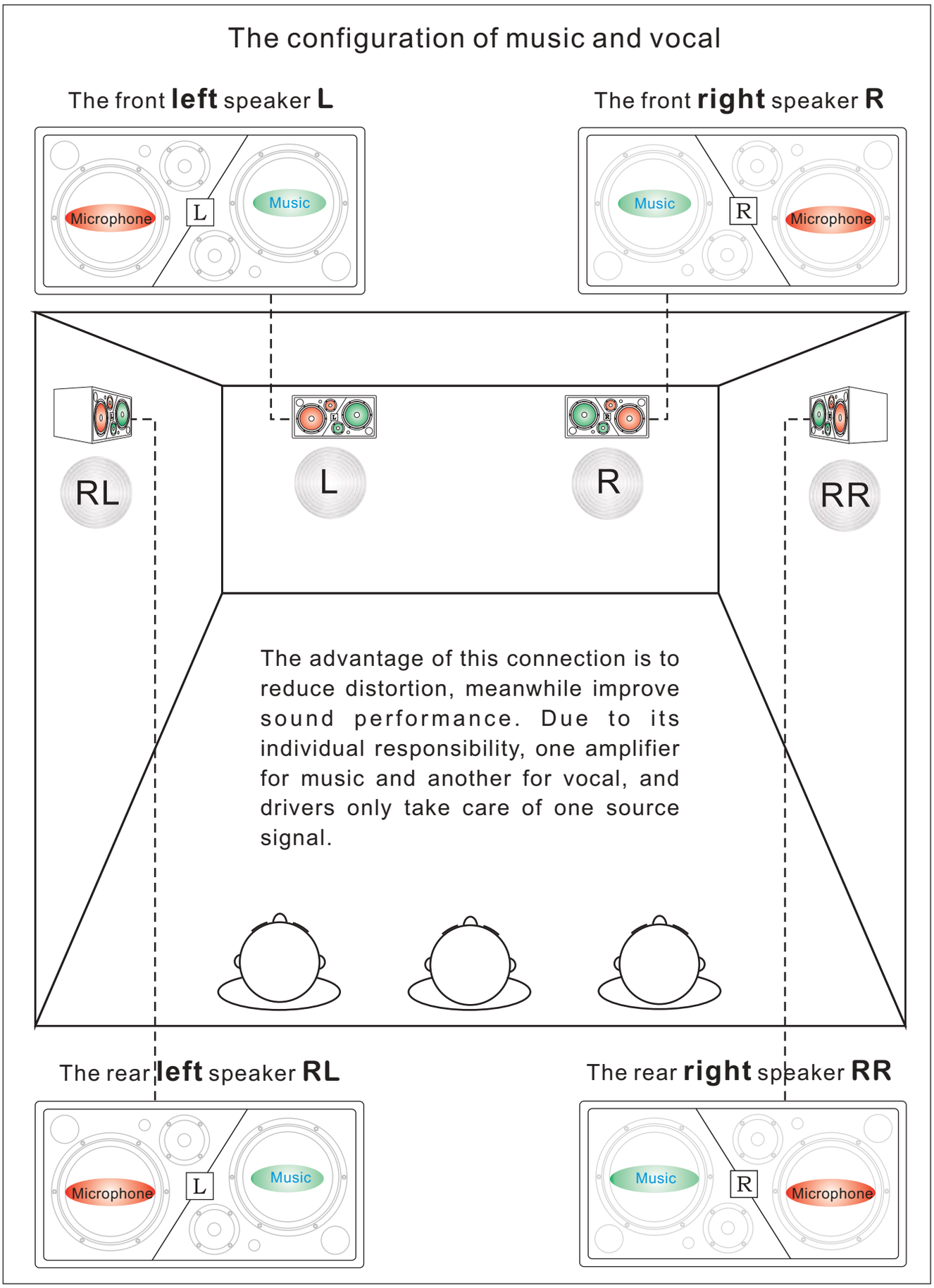
# The connection of independent music and vocal



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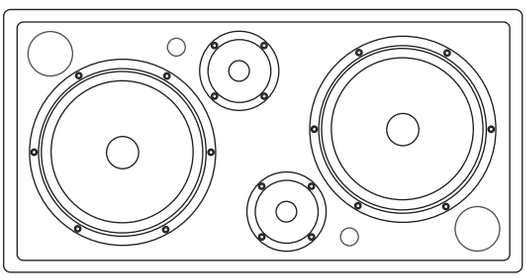
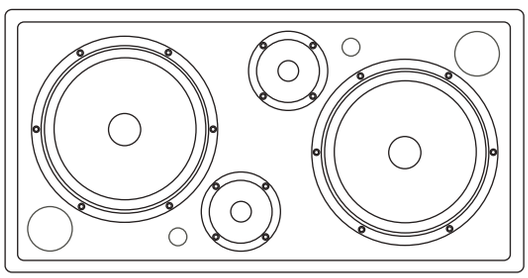
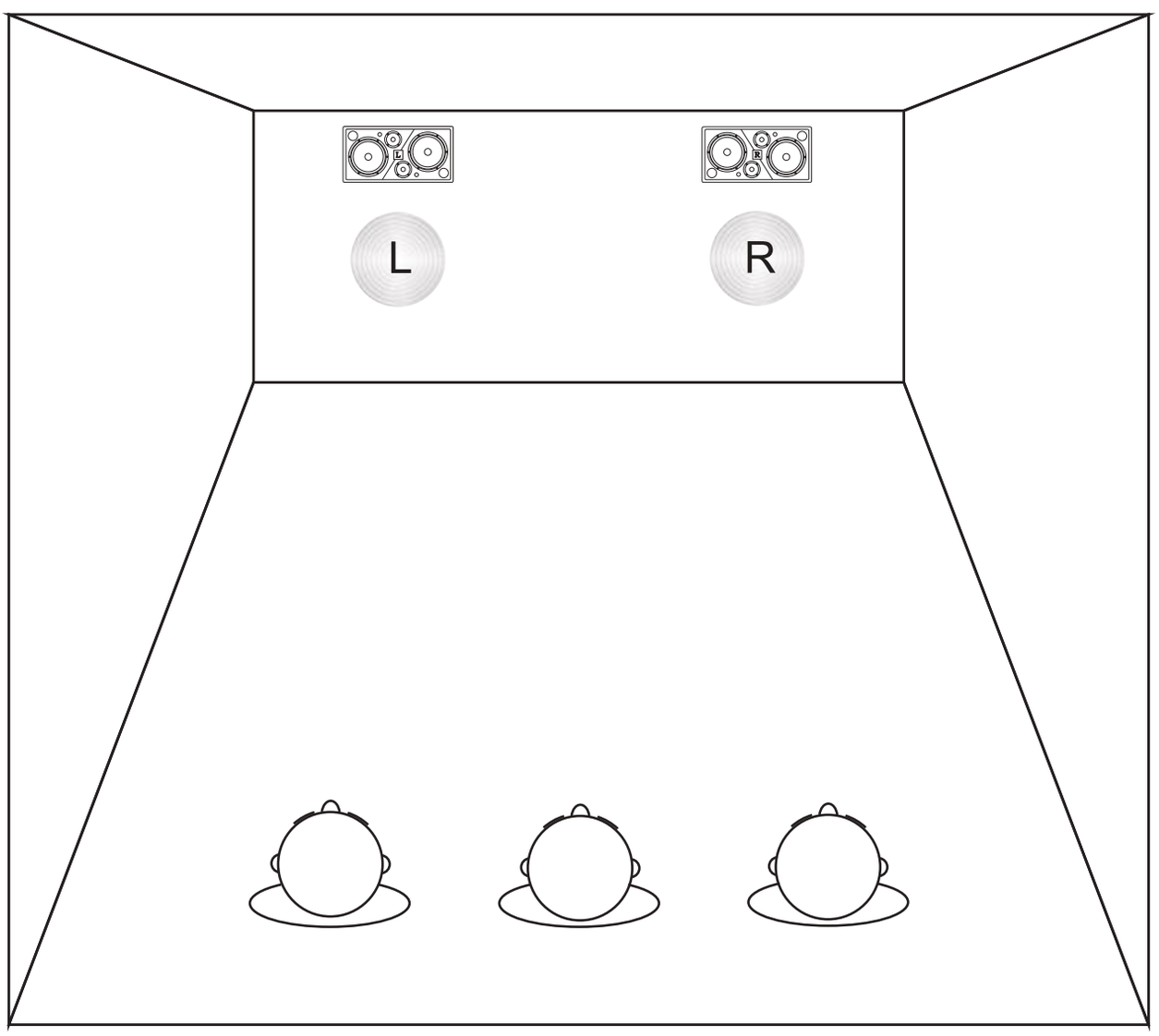
# One pair speaker system

The front **left** speaker **L**

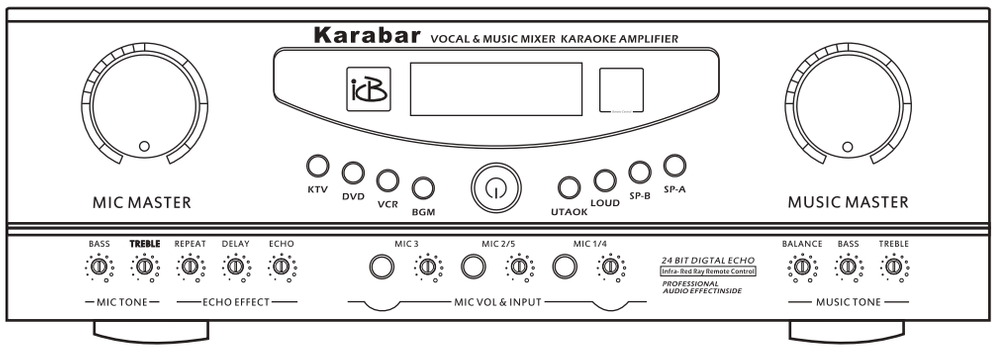


The front **right** speaker **R**





# The traditional terminal connection for one pair speaker system



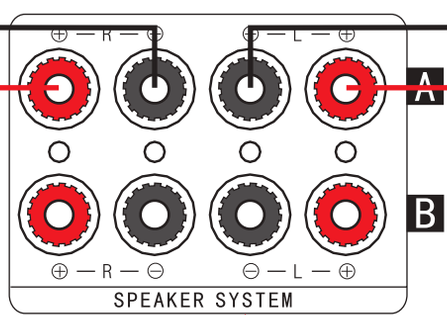
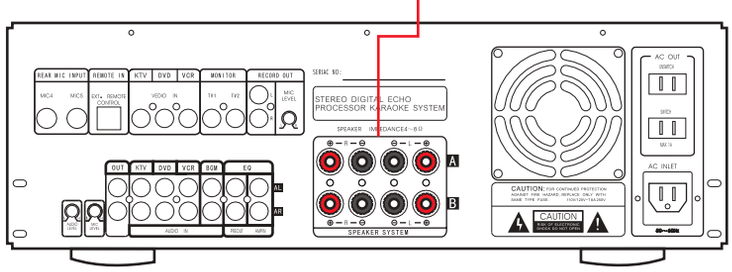




Figure: Enlarge terminal



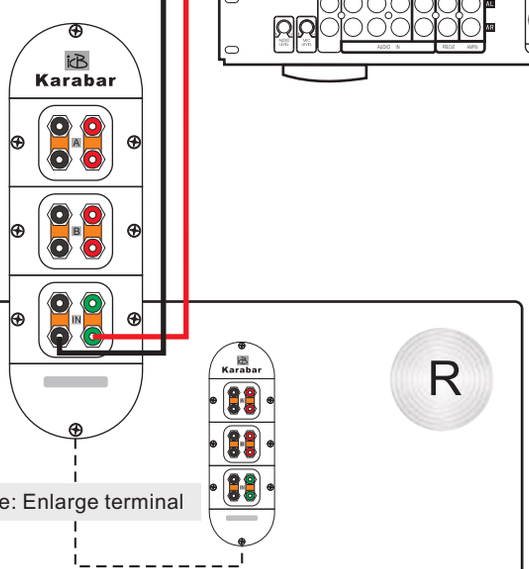




Figure: Enlarge terminal

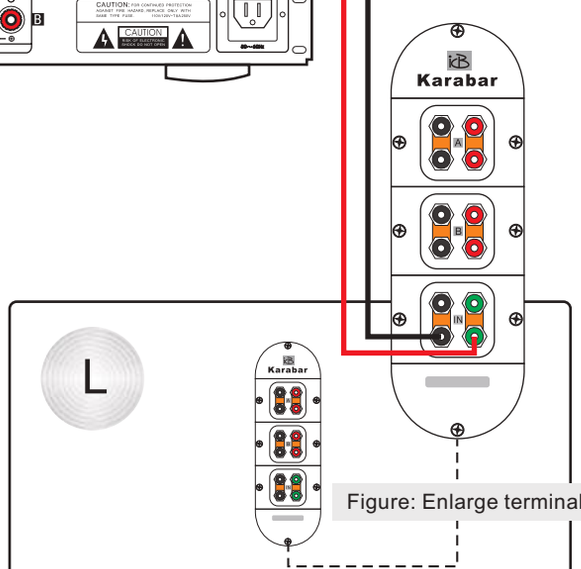



Figure: Enlarge terminal

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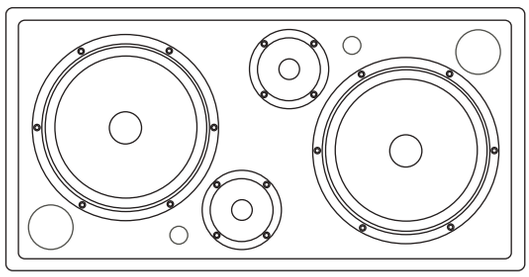
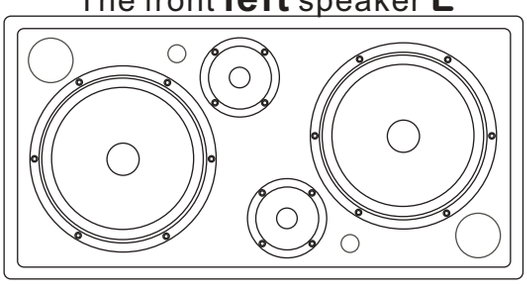
# One pair speaker with center speaker system

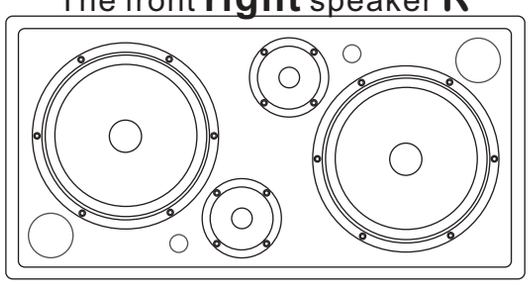
**Center** speaker **C**

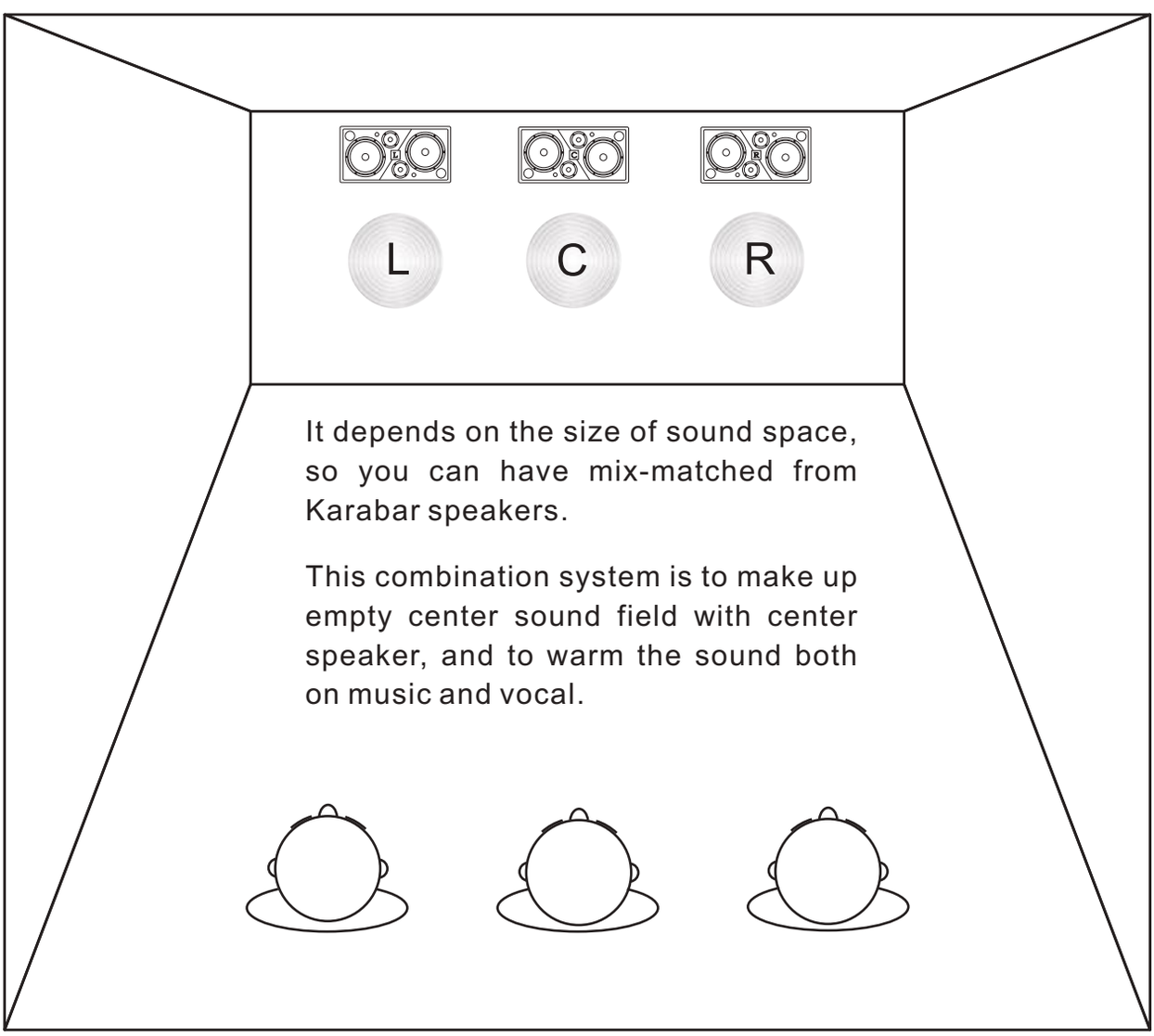


The front **left** speaker **L**



The front **right** speaker **R**






It depends on the size of sound space, so you can have mix-matched from Karabar speakers.

This combination system is to make up empty center sound field with center speaker, and to warm the sound both on music and vocal.

# The connection of one pair speaker with center speaker system

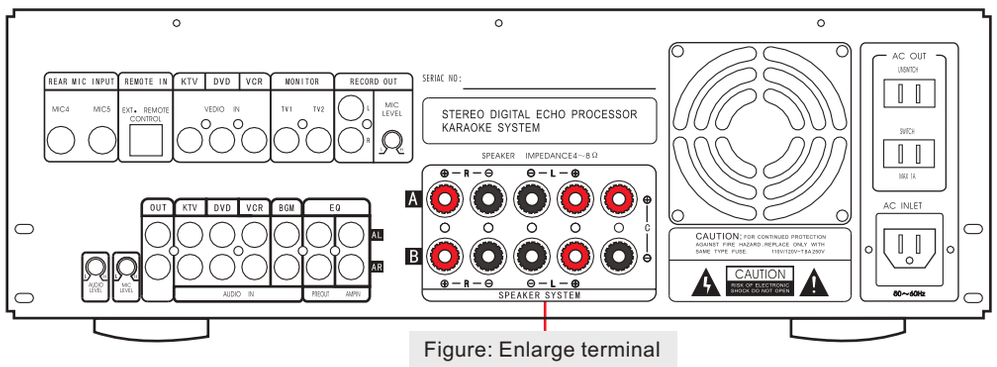



Figure: Enlarge terminal

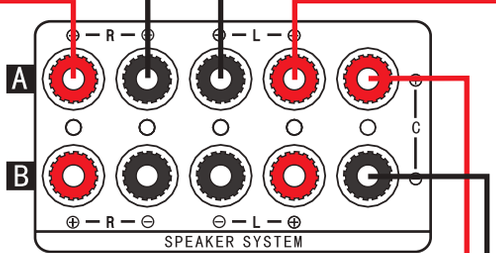
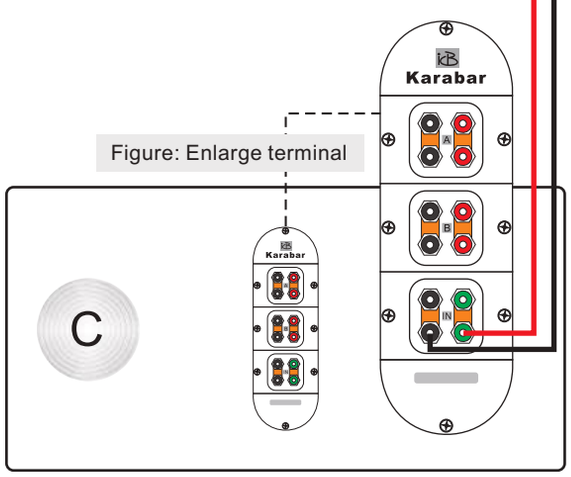



Figure: Enlarge terminal



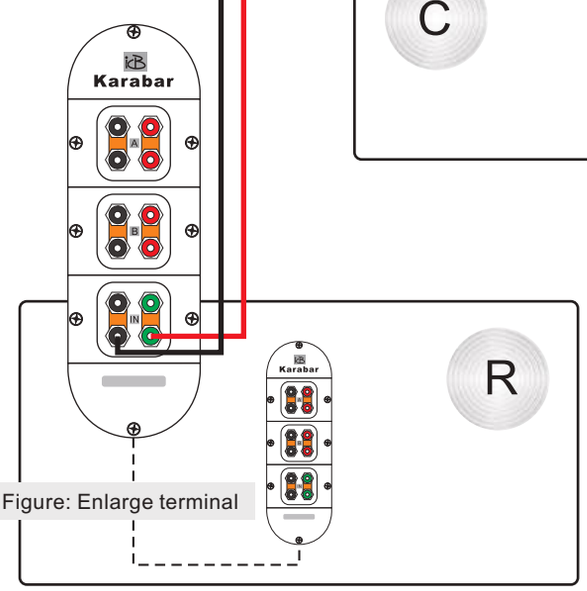




Figure: Enlarge terminal

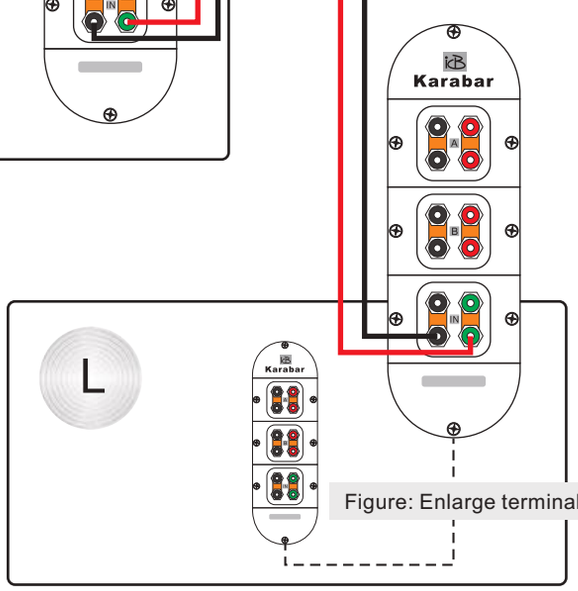
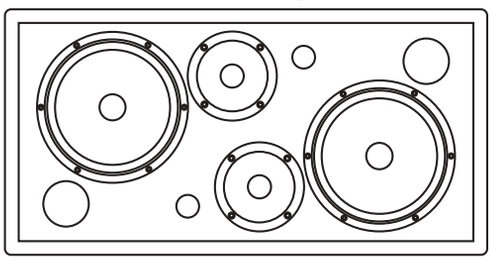



Figure: Enlarge terminal

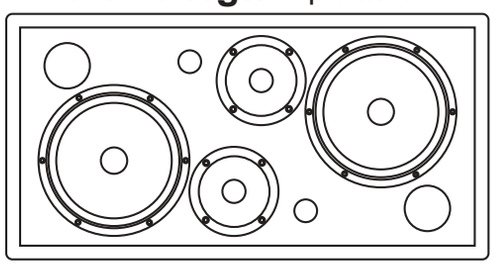
Karabar

# 2pairs speakers system

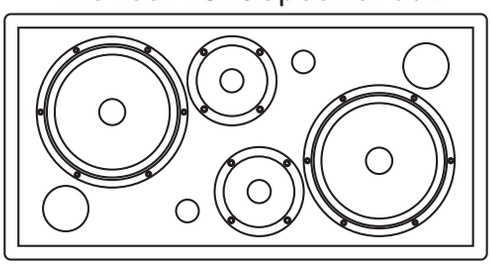
The front **left** speaker **L**



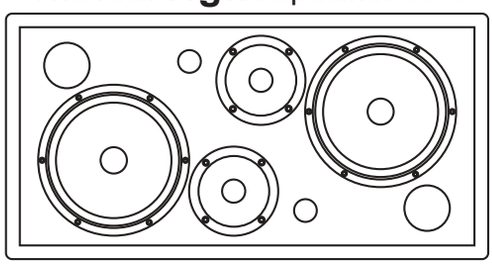
The front **right** speaker **R**

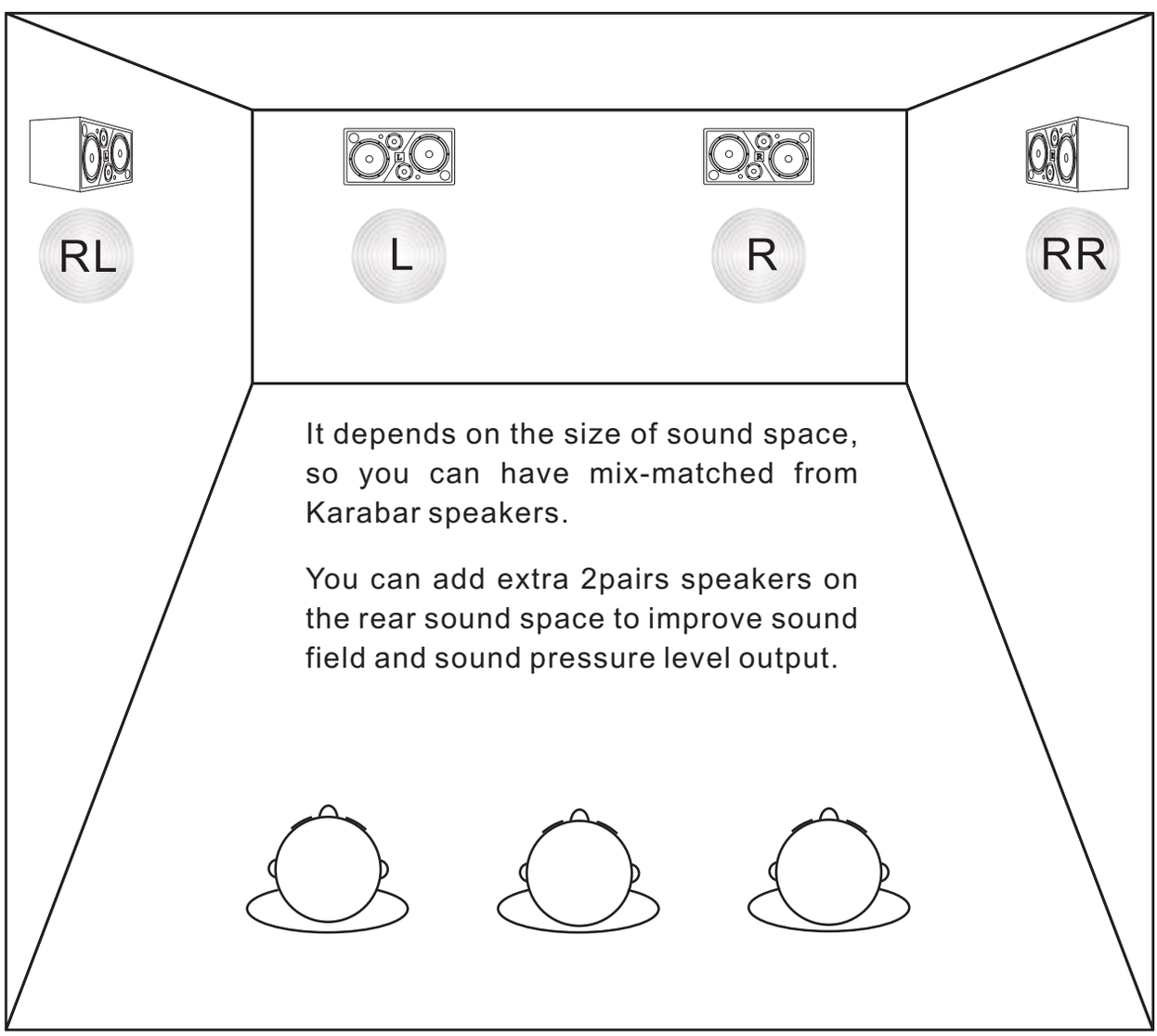


The rear **left** speaker **RL**



The rear **right** speaker **RR**

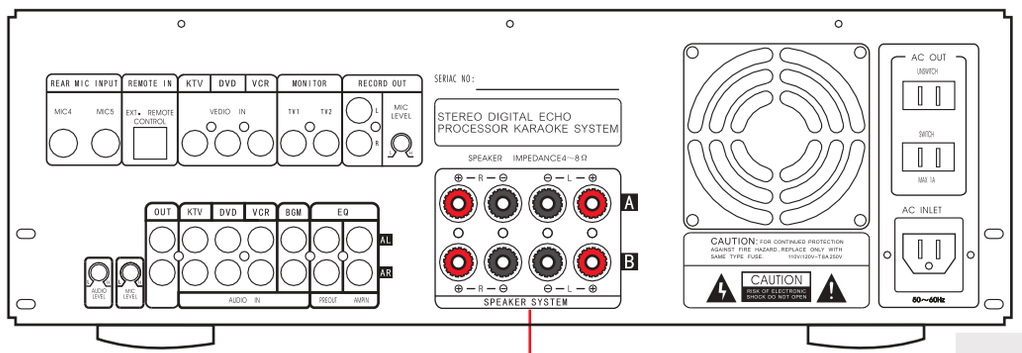




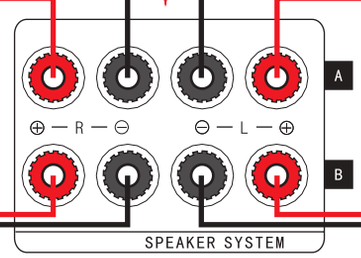

It depends on the size of sound space, so you can have mix-matched from Karabar speakers.

You can add extra 2pairs speakers on the rear sound space to improve sound field and sound pressure level output.

# The connection of 2pairs speakers system




KB-A2250 is a 2 channel-sound amplifier. In the case if we connect SPA and SPB terminal to become 4 channel-sound. As amplifier is parallel circuit, we have to notice the impedance matched issue, usually it can not be lower 4ohm.



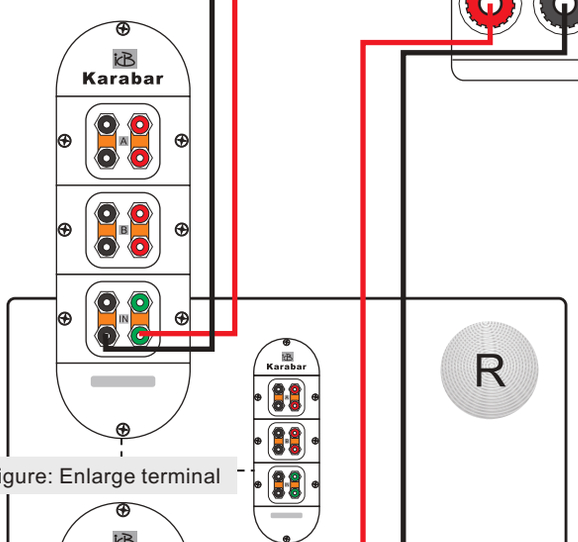




Figure: Enlarge terminal

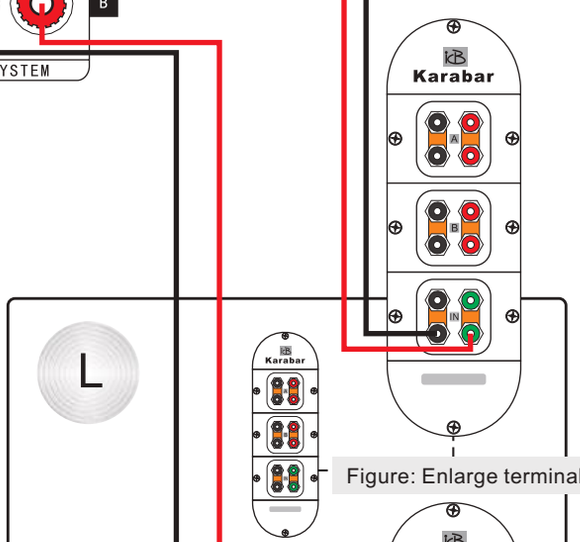



Figure: Enlarge terminal

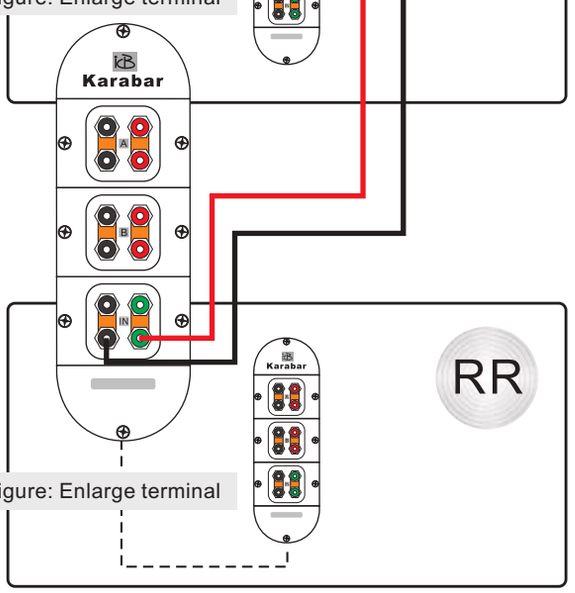



Figure: Enlarge terminal

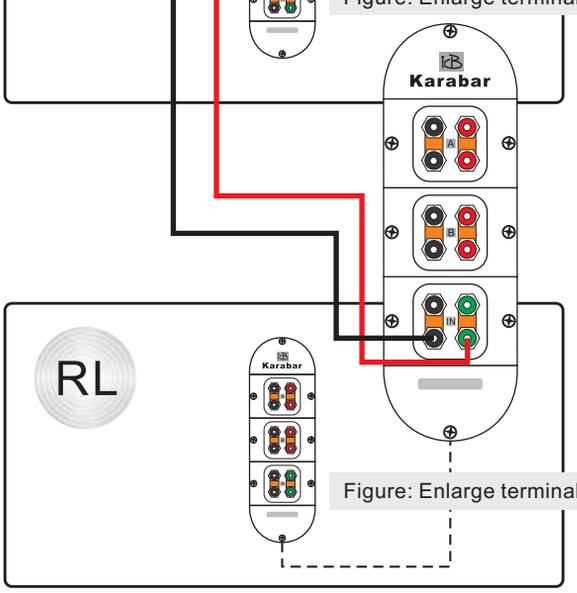
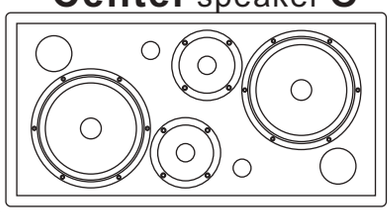



Figure: Enlarge terminal

Karabar

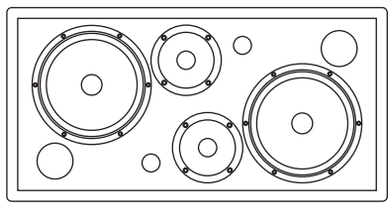
# 2pairs speakers with center speaker system

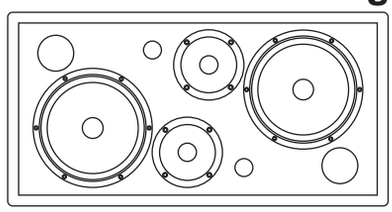
**Center** speaker **C**



The front **left** speaker **L**

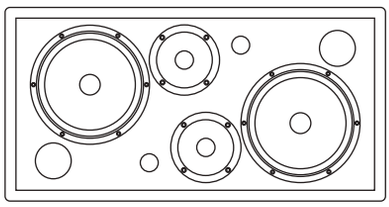
The front **right** speaker **R**

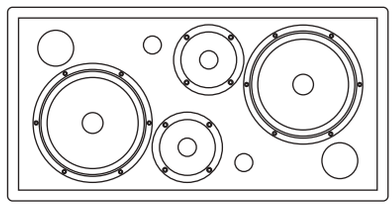


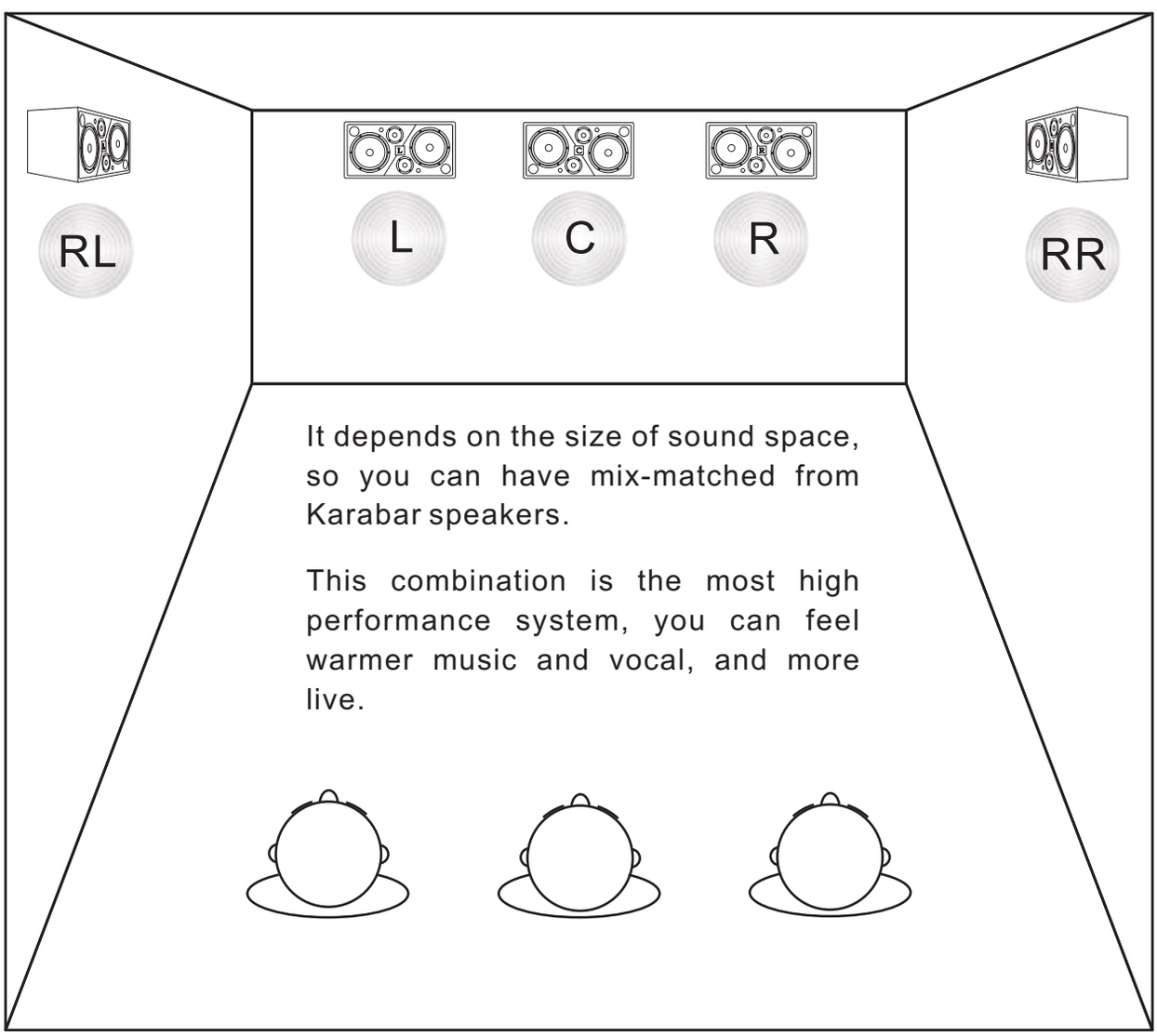


The rear **left** speaker **RL**

The rear **right** speaker **RR**



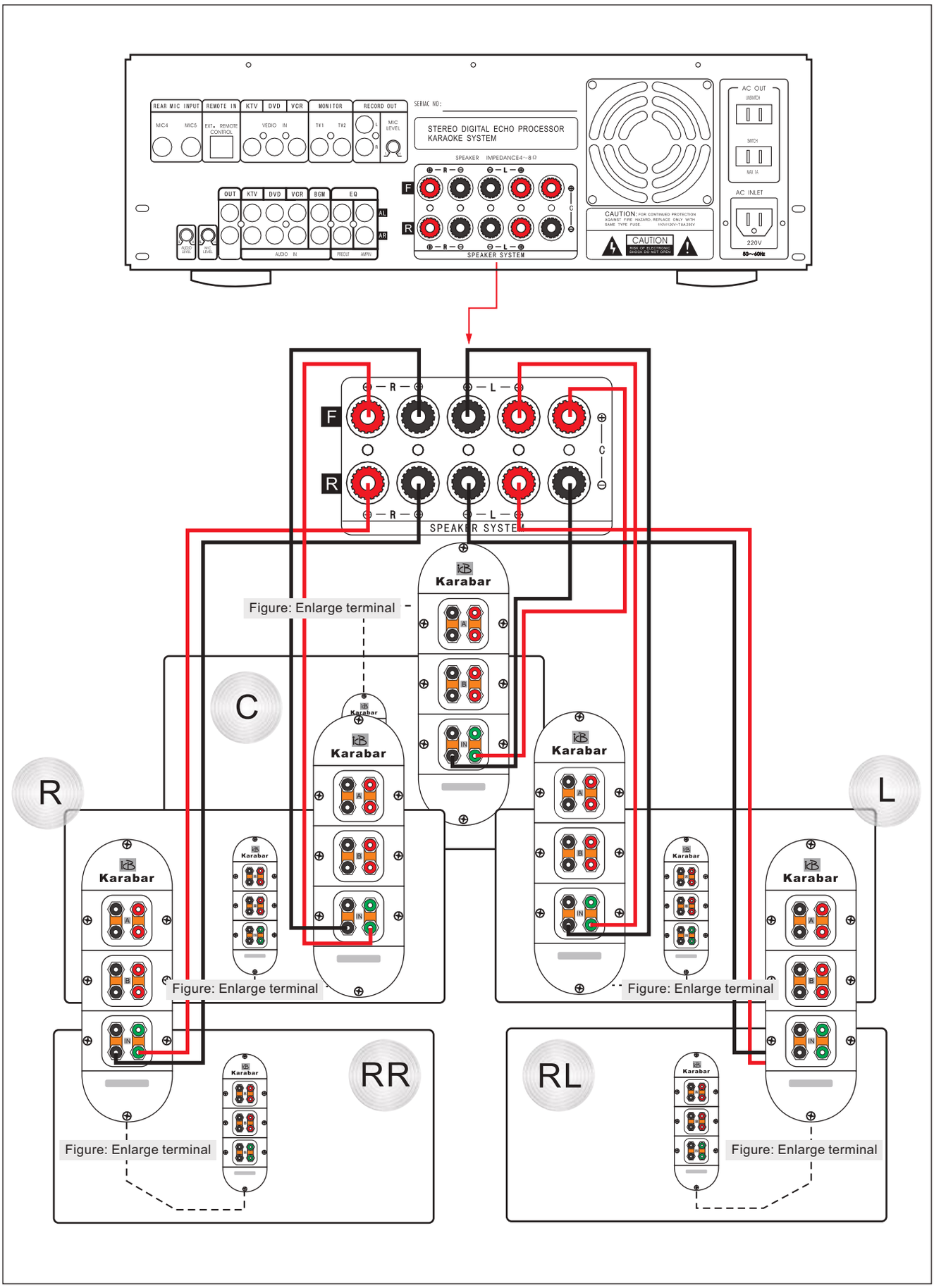





It depends on the size of sound space, so you can have mix-matched from Karabar speakers.

This combination is the most high performance system, you can feel warmer music and vocal, and more live.

# The connection of 2pairs speakers with center speaker system



# REMARK


professional speaker system
Karabar
SINCE2006