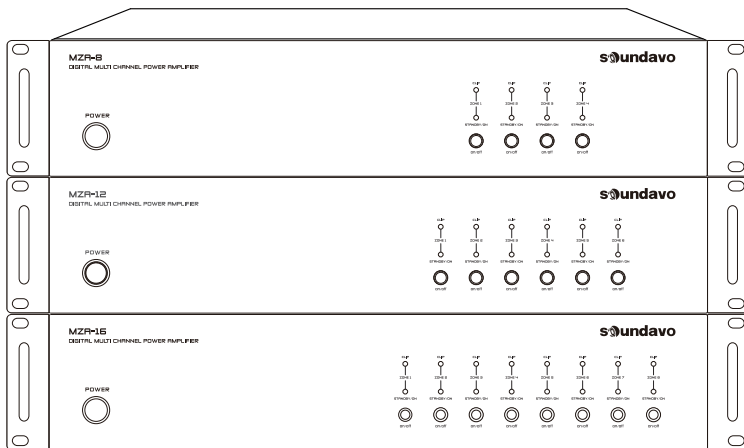


MZA-8 / MZA-12 / MZA-16

MULTI ZONE | POWER AMPLIFIER



DEAR CUSTOMER

Thank you for purchased **Soundavo** product. Please read this entire manual before using this device, paying extra attention to these safety warnings and guidelines. Please keep this manual in a safe place for future reference.

WARNING

1. Do not place or install this device in an area where it can be exposed to excessive amounts of dust, humidity, oil, smoke, or combustible vapors.
2. To prevent risk of electrical shock or fire hazard, due to overheating do not obstruct unit's ventilation openings.
3. Do not install near any source of heat, including other units that may produce heat.
4. Do not expose this device to excessively high temperatures. Do not place it in, on, or near heat sources, such as a fireplace, stove, radiator, etc. Do not leave it in direct sunlight
5. Do not touch the device, the power cord, or any other connected cables with wet hands.
6. This device ventilates excessive heat through the slots and openings in the case. Do not block or cover these openings. Ensure that the device is in an open area where it can get sufficient airflow to keep from overheating.
7. Only clean unit with a dry cloth.
8. Unplug unit during lightning storms or when not used for an extended period of time.
9. Protect the power cord from being walked on or pinched, particularly at the plugs.
10. Use unit only with accessories specified by the manufacturer.
11. Refer all servicing to qualified personnel.

CAUTION

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



INTRODUCTION

The Soundavo **MZA series** multi-channel power amplifiers are ideal for use in adding additional power in distributed audio systems or combining with the commercial sound installation and whole-home audio applications. The **MZA-8** provides 8 channels, **MZA-12** provides 12 channels and **MZA-16** provides 16 channels of digital amplifications. All models designed in great features such as stereo/bridge mode operation, global and independent one triggering, subwoofer line output for each zone with crossover built-in and two Bus Inputs/Outputs.

All amplifiers are rated at 50 watts per channel into 8 ohms, and 80 watts per channel into 4 ohms. With the Stereo/Bridge switch in the Bridge mode, each one of channels are combine for a higher powered mono output of 160 watts into 8 ohms for the high performance and ultra low distortion output.

THERMAL PROTECTION

All MZA series amplifiers are designed with special circuitry to safeguard the amplifier under a thermal overload condition. Thermal protection mode will only engage when the unit has been run at high volume for extended periods of time without adequate ventilation and/or when speaker impedances are below the minimum levels for the amplifier. In thermal protection mode the amplifier will automatically stop output. If this fault occurs, turn off the amplifier, and check that the speaker impedance rating is above the minimum rating. Also check for adequate ventilation around the amplifier and make adjustments if necessary. Once the unit has cooled to safe operating temperatures, the amplifier may be powered back on.

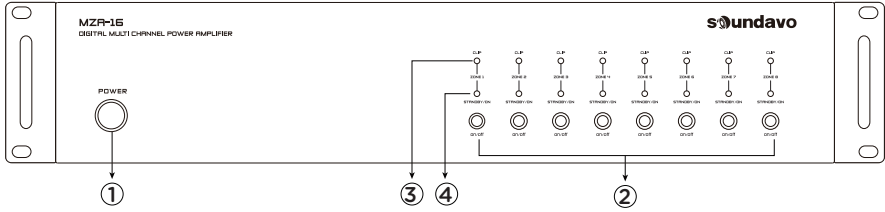
PROTECTION CIRCUITRY

Special circuitry has been designed into the amplifier to safeguard under a short-circuit condition. A faulty speaker can be also cause a short circuit condition, if by accident the speaker wires cross (touch each other), No sound or distortion will come from any speakers attached to the faulted wires until you correct the fault. If this fault condition occurs, turn off the amplifier and check speakers for short circuit conditions when appropriate.

INSTALLATION

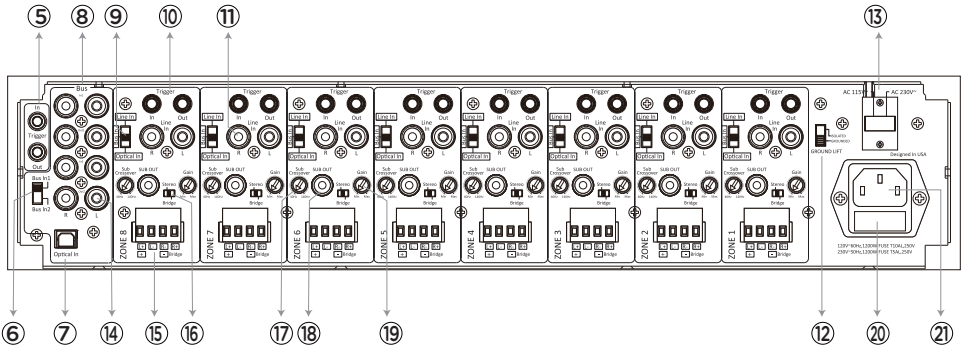
The amplifier can be placed on a shelf in an equipment rack, or on a table or cabinet. Be sure the required clearances for ventilation and heat dissipation. The amplifier will take two rack spaces with the feet removed.

FRONT PANEL



1. **Power Switch:** Press the power button to turn the amplifier.
2. **Zone On/Off Switch:** The buttons to turn each independent stereo zone on or off.
3. **Clip LED:** The LED indicates a connected source level is too high. If the Clip LED emits a flashing or steady RED light, reduce the zone input or output level.
4. **Standby/On LED:** White: The WHITE LED indicates that zone is in Active Mode (the BLUE LED indicates a zone is in Standby/Mute mode).

REAR PANEL



5. **Bus 12VDC Trigger In/Out:** The trigger input is a handy feature when connecting the amplifier to an automated audio system. The 3.5 mm mini plug jack will accept 3-30V AC/DC output from another device, or from a separate power supply. The Bus 12VDC Trigger In is used to activate all zones that are using the Bus Input and disable other one triggers or signal sensing on those zones when it is used. When the Bus 12VDC Trigger is used, all Bus-controlled zone will be active. If the Bus Trigger In has 12V applied to it, only the 12V Bus Trigger Out will have 12V and the Zone Trigger Outputs is not.
6. **Bus Input Selector:** Switch the BUS Input between the BUS IN 1 and BUS IN 2.
7. **Optical Input:** For components with Digital Optical Outputs sending digital audio signals to each zone.
8. **Bus Inputs:** The MZA series amplifier has two common or BUS inputs that receives audio signals from standard line-level audio sources that can be used to connect a single source to multiple zones. Be sure to use high quality RCA cables that feature low impedance, shielding and high quality connectors.
9. **Input Selection Switch:** Each channel is capable of delivering the source from many inputs, select the BUS IN (1 or 2), OPTICAL IN, and Local LINE IN for the output. The selection for these inputs is done via the Input Selection switch associated with each channel. Select the desired source input. Set the Input Selection switch to BUS IN (will play source connected to the BUS 1 or BUS 2 input), OPTICAL IN (will play source connected to the OPTICAL input) or LINE IN (will play source connected to that channel's LINE IN). **CAUTION:** Only change switch positions when the amplifier is turned off.
10. **12VDC Trigger In/Out (Each Zone):** The Zone 12V Trigger In is used to activate a specific zone. The Zone Trigger Out can be used to trigger other 12V devices. The delay and audio sensing are bypassed when the 12V Zone Trigger Input is used. When a Zone Trigger is active, the one LED will be white. If no voltage is present in the Zone Trigger, the Zone LED will be off.
11. **Line Input:** Local input for one (plays only on that one's output). Use for instances where the one will always play a different source than other ones. Set the Channels Input Selector switch to "LINE IN" position to use this input.

- 12. Ground Lift Switch:** If there is a problem with a 60Hz ground loop with this amplifier due to poor house electrical grounding, this switch can sometimes help eliminate the noise or hum problem that can occur.
- 13. Voltage Switch:** The unit is set at the factory for 115V US operation; simply connect the included IEC power cord to your wall outlet. For 230V operation, move the voltage selector switch to the 230V position. When operating at 230V the internal fuse located in the IEC socket should also be changed in most 230V applications a separate power cord will be required and is not included.
- 14. Bus Output:** The BUS line outputs are passive pass through the corresponding of the Bus Inputs and can be used to daisy chain the source to other amplifiers in the system. Be sure to use high quality RCA cables that feature low impedance, shielding and high quality connectors.
- 15. Speaker Outputs:** The MZA-Series amplifier uses high quality Phoenix style connectors for the speaker connections. Use 14-18 gauge stranded two-conductor loudspeaker wire. Ensure that at least 2 inches of each conductor are separated. Strip away 1/4 inch of insulation from each conductor. Connect the appropriate conductor to each screw terminal, observing correct polarity. Also, please observe proper speaker wiring when bridging channels. The minimum speaker impedance is 4 ohms for Stereo Mode and 8 ohms for Bridge Mode.
- 16. Stereo/Bridge Switch:** Select whether a pair of left and right output channels are individual or bridged together for a more powerful mono channel, the Bridge Output mode is ideal for powering larger speakers or speakers on long cable runs.
- Stereo Mode:** Stereo mode will play the audio entering the audio entering the amplifier through the Left & Right input channels out to the Left & Right speakers attached to that zone.
- Bridge Mode:** Bridged mode will take the audio entering the LEFT channel of the zone ONLY and send it out of the outermost ports of the phoenix connector (Bridged mode will output up to 160W @8Ω)
- Bridge mode must see an 8Ω signal, lower than 8Ω will damage the amplifier**
- 17. Sub Crossover:** This knob is used to adjust the crossover frequencies (40Hz to 140Hz) sent out of the "SUB OUT" RCA jack.
- 18. Sub Out:** The mono output for connecting the powered/active subwoofer speaker, or additional power amplifier + passive subwoofer speaker.
- 19. Gain Controls:** Left and Right channel gain control per each zone will combined to this Gain control, this knob adjusts the output level for each zone independent. Set the input gain control to your desired level and make sure the speakers are not distorting at very loud volumes (Counterclockwise for minimum; clockwise for maximum). This allows the output level of each speaker to be perfectly matched to its area.
- 20. Fuse Holder:** Make sure the fuse value is match the voltage, the factory default will be 110-120V (see the SPECIFICATIONS page for more information)
- 21. AC Input:** Apply the correct voltage before operate the amplifier, the factory default input AC voltage switch is set to 115V, if using this amplifier in a location where you will be using 230V than you MUST undo the screws holding the clear glass over the voltage switch and push the slider to the 230V setting.

SPECIFICATIONS

Power Output:

80W /Channel, 1kHz into 4 Ohms, One Zone Driven

50W /Channel, 1kHz into 8 Ohms, One Zone Driven

160W, 1kHz into 8 ohms, Bridge

Amplifier Channels:

MZA-8: 8 Channels, 4 Zones

MZA-12: 12 Channels, 6 Zones

MZA-16: 16 Channels, 8 Zones

Signal-to-Noise Ratio: >90dB A-weighted

Frequency Response: 20Hz to 20KHz +1.7/-1dB at 1W output into 8 Ohms

Input Sensitivity: 600 mV for 80W @ 1 KHz 4 Ohm One Zone

700 mV for 50W @ 1 KHz 8 Ohm One Zone

Input Impedance: >22K Ohms Line Input

Trigger Inputs/Outputs: Bus and Zone @12VDC

Zone Line Input: Line In, Bus In 1 or 2, Optical In select switch per zone

Bridge Mode: Select Stereo or Bridge mode per zone 8 Ohm only

Speaker Connectors: Detachable speaker terminals support up to 14awg wire

Power Requirements (Switchable):

MZA-8: 100-120VAC 60Hz 600W Max

220-240VAC 50Hz 600W Max

MZA-12: 100-120VAC 60Hz 900W Max

220-240VAC 50Hz 900W Max

MZA-16: 100-120VAC 60Hz 1200W Max

220-240VAC 50Hz 1200W Max

Fuse Rating:

MZA-8: 100-120V/T5A, 250V

220-240V/T2.5A, 250V

MZA-12: 100-120V/T8A, 250V

220-240V/T4A, 250V

MZA-16: 100-120V/T10A, 250V

220-240V/T5A, 250V

Dimensions:

MZA-8: 16.81" W x 3.46" H x 16.14" D (42.7 x 8.8 x 41.0 cm)

MZA-12: 16.81" W x 3.46" H x 16.14" D (42.7 x 8.8 x 41.0 cm)

MZA-16: 16.81" W x 3.46" H x 16.14" D (42.7 x 8.8 x 41.0 cm)

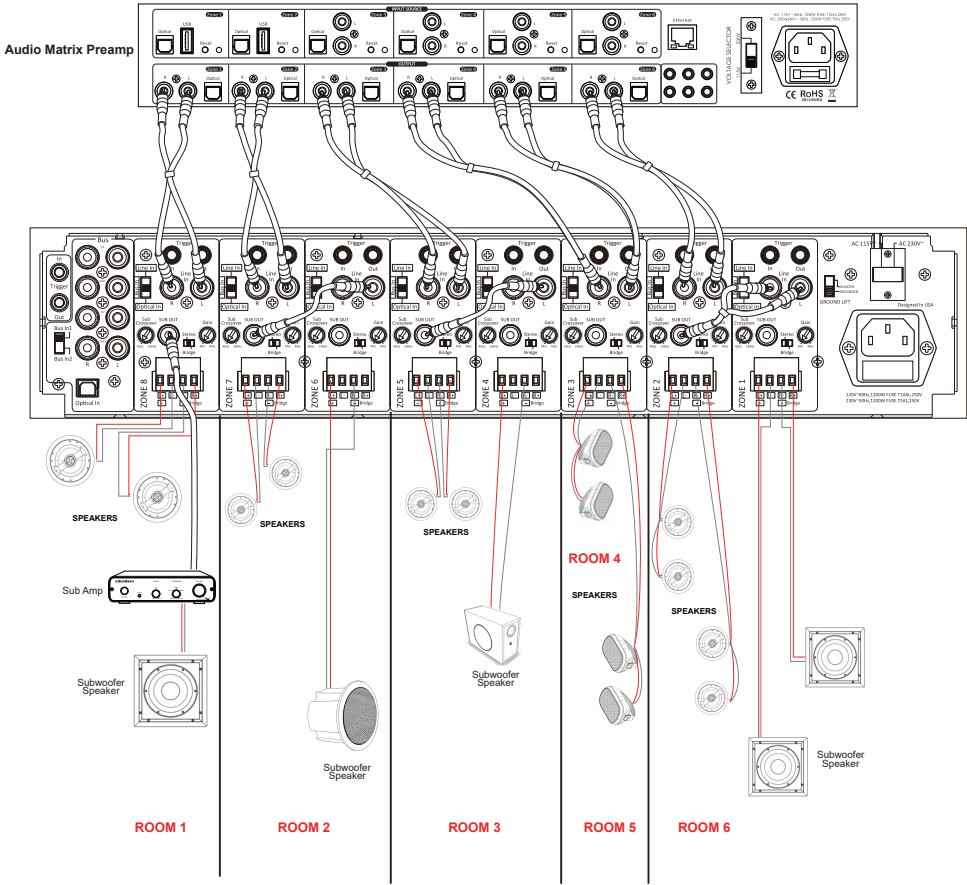
Weight:

MZA-8: 8.6Kg (19lbs.)

MZA-12: 9.3Kg (20.5lbs.)

MZA-16: 10Kg (22.0lbs.)

SAMPLE HOME INSTALLATION

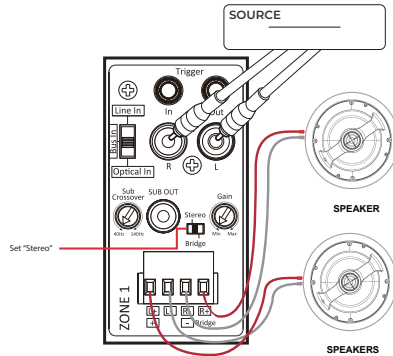


FUNCTION

Standard Speaker Installation

- * Attach your source to the "LINE IN", "S/PDIF IN" or "BUS IN"
- * Set the input switch to the appropriate source.
- * Set the Main Speaker Zone to "Stereo" position
- * Now attach your two speakers to the phoenix connector, Left & Right channel.

(Diagram shows input set to "LINE IN")



Subwoofer Wiring

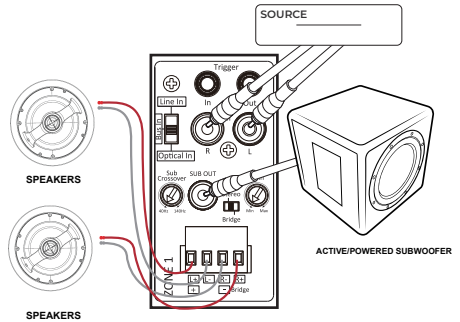
There are multiple way to configure setup of a subwoofer on the MZA-series amplifier

1. To an active/powered subwoofer speaker
2. To a Subwoofer Amplifier with the passive subwoofer speaker

(1) Using the Subwoofer RCA output to a stand alone active/powered subwoofer.

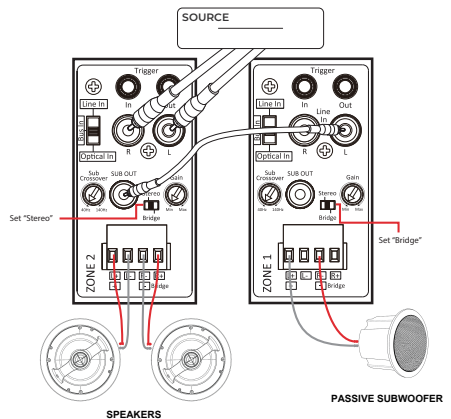
- * Attach your source to the "LINE IN", "S/PDIF IN" or "BUS IN"
- * Set the input switch to the appropriate source.
- * Attach a single RCA wire from the "SUB OUT" for that zone to active/powered subwoofer speaker
- * Turn the crossover knob clockwise all the way to the 140Hz position on the MZA-series amplifier. Now use the crossover on your powered subwoofer speaker, or subwoofer amplifier.

(Diagram shows input set to "LINE IN")

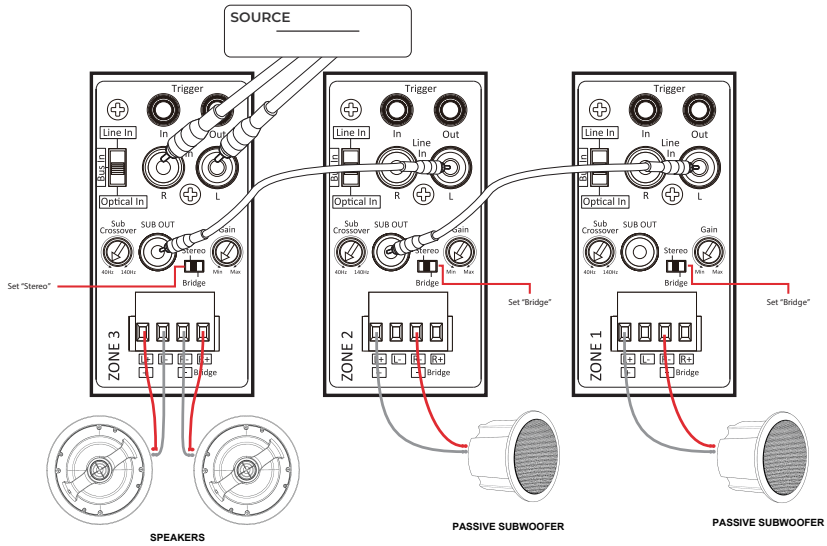


(2) Outputting a subwoofer signal over speaker wire to the passive subwoofer speaker

- * Attach your source to the "LINE IN", "S/PDIF IN" or "BUS IN"
- * Set the input switch to the appropriate source.
- * Attach a single RCA wire from the "SUB OUT" for that zone to the next zone "LINE IN" LEFT channel.
- * Set the Main Speaker Zone to "Stereo" and attach your two speakers to the phoenix connector.
- * Next set that Subwoofer Zone to "Bridge" position, and attach the subwoofer wires to that zone to the outermost portions of the phoenix connector (the Bridge mode terminals).
- * Now play music and adjust the crossover and the gain knobs on both zones till you get the music and subwoofer sounding the way you like. Use your source volume to increase and decrease the sound.



(2a) Adding multiple passive subwoofer speakers

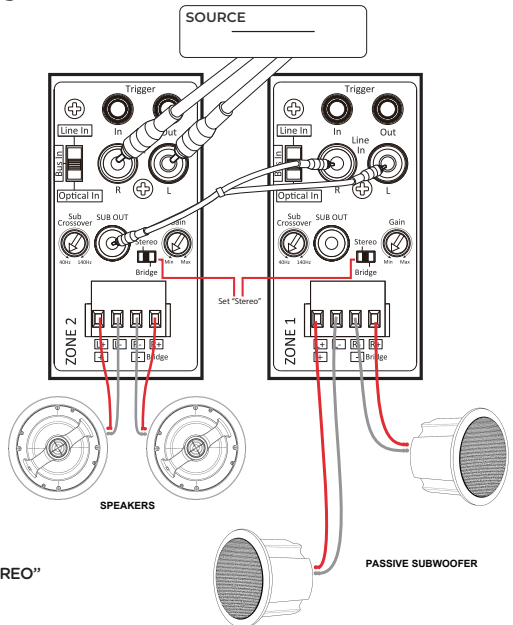


(3) Output a subwoofer signal over speaker wire to (TWO) passive subwoofer speakers from a single zone.

- * Attach your source to the "LINE IN", "S/PDIF IN" or "BUS IN"
- * Set the input switch to the appropriate source.
- * Set the Main Speaker Zone to "Stereo" position
- * Attach the speaker wires for your main speakers.
- * From the Main Speaker Zone attach a single RCA cable from the "SUB OUT" for that zone to the next zone "LINE IN" Left & Right channel.
- * Next set that Subwoofer Zone to "Stereo" position, and attach each subwoofer wires to the phoenix connector (the Stereo mode terminals)
- * Now play music and adjust the crossover and the gain knobs on both zones till you get the music and subwoofer sounding the way you like. Use your source volume to increase and decrease the sound.

This configuration of 2 subwoofers will not be any louder than 1 subwoofer but it will enable you to spread out od the bass more evenly in a large room

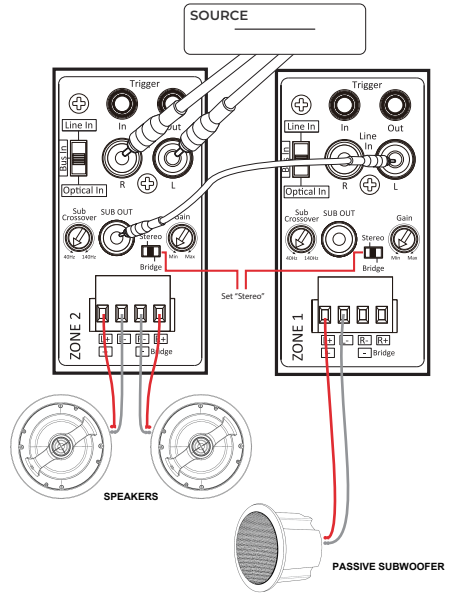
(Diagram shows input set to "LINE IN")



NOTE: The subwoofer channel MUST BE switched to "STEREO" position, not the "BRIDGE" mode (in this example)

(4) Output a subwoofer signal over speaker wire to (ONE) passive subwoofer speaker at 4Ω

- * Attach your source to the "LINE IN", "S/PDIF IN" or "BUS IN"
- * Set the input switch to the appropriate source.
- * Set the Main Speaker Zone to "Stereo" position.
- * Attach the main speaker to that zone.
- * From the Main Speaker Zone attach a single RCA cable from the "SUB OUT" for that zone to the next zone "LINE IN" LEFT channel.
- * Next set that Subwoofer Zone to "Stereo" position, and attach the passive subwoofer wires to the LEFT channel of the phoenix connector.
- * Now play music and adjust the crossover on the first zone, and the gain knobs on both zones till you get the music and subwoofer sounding the way you like. Use your source volume to increase and decrease the sound.
(Diagram shows input set to "LINE IN")

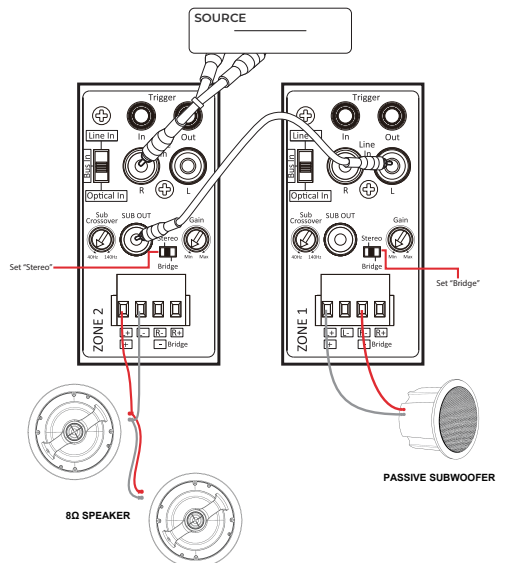


NOTE: The subwoofer channel MUST BE switched to "STEREO" position, not the "BRIDGE" mode (in this example)

Retrofit application

(Adding a subwoofer to a room that has only two speakers)

- * Attach your source using a single RCA "Y" cable to the "LINE IN" LEFT channel on ZONE 2.
- * Run a single RCA wire from the "SUB OUT" ZONE 2 to ZONE 1 "LINE IN" on the Left channel.
- * Set Zone 2 to "Stereo" and ZONE 1 to "Bridge"
- * Attach both of your previously installed speakers to the same wire coming from the Left channel.
- * Attach the newly installed passive subwoofer speaker to the other speaker wire and now attach that wire to ZONE 1 to the "Bridge" mode output.
- * Now play music and adjust the crossover on the first zone, and the gain knobs on both zones till you get the music and subwoofer sounding the way you like. Use your source volume to increase and decrease the sound.



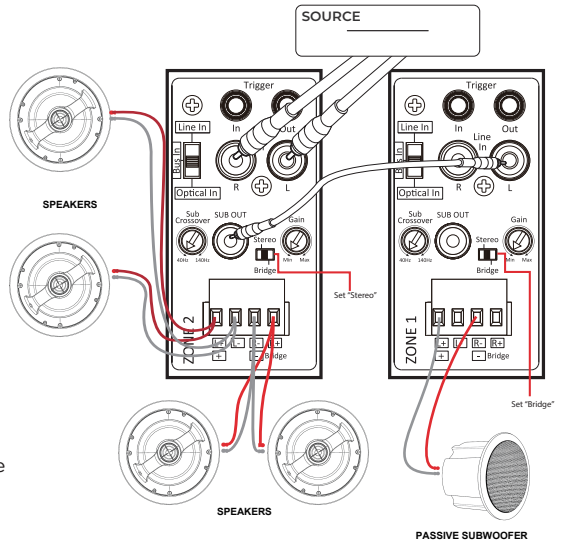
NOTE: The speakers must be 8Ω each

Wiring a room with four 8Ω speakers and one passive subwoofer speaker: using 2 zones of the MZA-series amplifier

- * Attach your source to the "LINE IN", "S/PDIF IN" or "BUS IN"
- * Run a single RCA wire from the "SUB OUT" ZONE 2 to ZONE 1 "LINE IN" on the Left channel.
- * Set Zone 2 to "Stereo" and ZONE 1 to "Bridge"
- * Attach 4 of your speakers to the Zone 2 (2 speakers to the Left channel and 2 speakers to the Right channel)

NOTE: All 4 speakers must be 8Ω

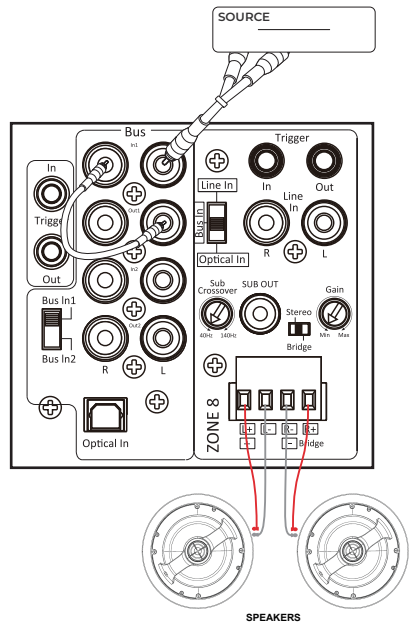
- * Attach the passive subwoofer speaker to ZONE 1 ("Bridge" mode output)
- * Now play music and adjust the crossover on the first zone, and the gain knobs on both zones till you get the music and subwoofer sounding the way you like. Use your source volume to increase and decrease the sound.



Mono Wiring - How to wire the MZA-series amplifier to output a mono signal using the BUS inputs & outputs

- * Using a "Y" cable, combine the audio signal (Left & Right) together from your source and run it to BUS 1 input "LEFT"
- * Use a single RCA cable and attached the BUS 1 out "LEFT" to BUS IN "RIGHT".
- * Now you can hear that audio source come through any speaker by choosing "BUS 1" for that channel.

Special NOTE: Mono is not poor sound (like in the old days), it is just a lack of separation of both Left & Right channels. Both Left & Right channels are combined together and heard through one speakers. Best used for outdoor systems or indoors where the listener may move around and NOT be located in the sweet spot between both speakers.



The MZA-series amplifiers are stable to 4Ω, if the amplifier goes below 4Ω's there is a good chance the zone will fail:

To fix you will need to bring the impedance back up to 4Ω or greater

Note: Most 8Ω speakers have TRUE impedance of slightly less than 8Ω which could sometimes cause an issue.

If you are in Bridge mode and the speaker stopped working.

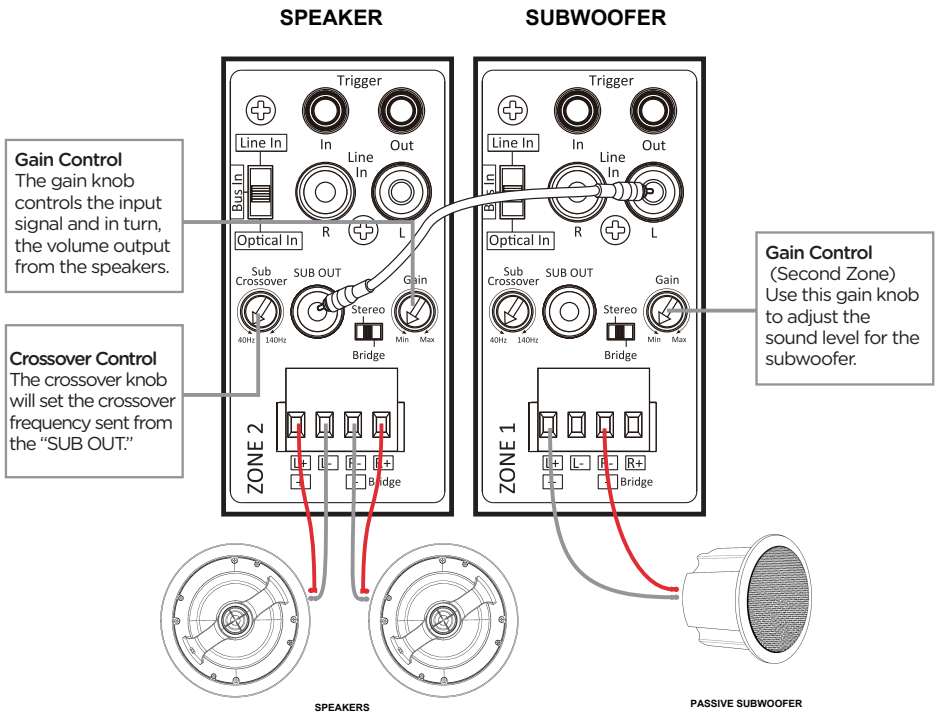
Please check that the wiring is correctly connected to the phoenix connector and the speaker has an 8Ω rating. Speaker with less than an 8Ω rating CAN NOT be bridged.

If your speakers are very loud and the subwoofer is not:

You can turn the input gain on the speakers down and turn the input gain up for the subwoofer.

There is a delay of about 10 - 15 seconds to hear music from the time you hit play:

This happens because of amplifier standards we must be in compliance with if you would like to avoid the delay you can leave the amp in "ON" mode (when the MZA-series amplifier is not playing music for about 20 minutes it will automatically go into lower power mode)



In an effort to constantly provide our valued customers with the latest advancements in technology, Soundavo Inc specifications are subject to change from time to time without notice.

Contact Information:

Soundavo Inc

E-Mail: support@soundavo.com

Web: www.soundavo.com

WARRANTY:

Soundavo amplifiers are warranted to be free from defects in workmanship and materials for a period of one (1) years from the date of purchase without charge for parts or labour. This warranty applies only to the original owner. The owners responsibilities are to provide proof of purchase from an authorized Soundavo dealer/distributor and transportation to the dealer/distributor the unit was purchased from or Soundavo. This warranty does not apply to units that have been subject to misuse, abuse, neglect or improper installation, and does not apply to repairs or alterations made by unauthorized personnel. This warranty specifically excludes responsibility for consequential damage.

Retention of your original bill of sale is required to obtain service under the terms of this warranty.

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