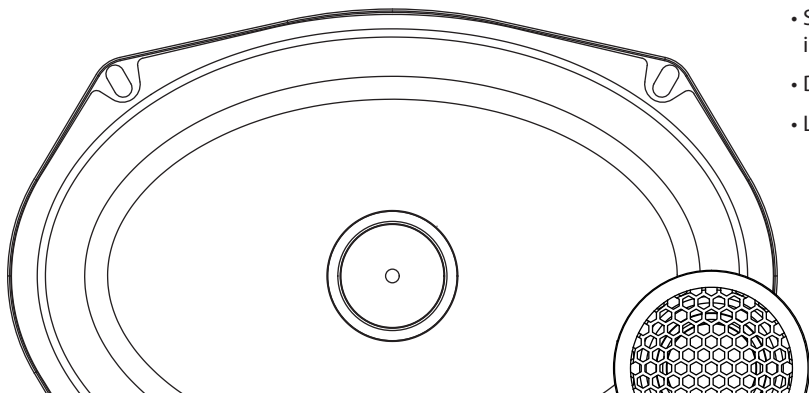


AudioControl®

Making Good Sound Great™

FEATURES

- Precision-molded glass fiber cone delivers warm, accurate sound reproduction
- Lightweight aluminum dust cap enhances sensitivity and extends frequency response
- Durable butyl rubber surround improves low-frequency performance and control
- Silk dome tweeter ensures smooth, detailed high-frequency response
- Structurally enhanced steel slimline basket allows for easy, space-saving installation
- Designed and engineered in California
- Look good enough to eat—but don't!



ALTITUDE SERIES

COMPONENT SPEAKERS / A69CS2

User Guide

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not submerge this apparatus in water.
6. Clean only with a dry cloth.
7. **WARNING:** The speakers must be properly secured in the vehicle. Improper installation may lead to permanent injury or death. Installation of the speakers must be done with great care by qualified personnel, to prevent damage to fuel lines, power and other electrical wiring, hydraulic brake lines, and other systems, that might compromise vehicle safety.
8. Use speaker wire of sufficient size to ensure adequate current to the speaker. For Altitude Series speakers, we recommend 16–18 gauge wire.
9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as the speaker input terminals are damaged, objects have fallen into the apparatus, does not operate normally, or has been dropped.
10. Exposure to high sound pressure levels may lead to permanent hearing loss. Take every precaution to protect your hearing.



The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.



Recycling notice: If the time comes and this apparatus has fulfilled its destiny, do not throw it out into the trash. It has to be carefully recycled for the good of mankind, by a facility specially equipped for the safe recycling of electronic apparatus. Please contact your local or state recycling leaders for assistance in locating a suitable nearby recycling facility. Or, contact us and we might be able to repair it for you.



Speaker Talk

Nice choice! You've just unlocked a whole new level of in-car sound with your AudioControl Altitude speakers. Get ready for every drive to sound clearer, and feel way more immersive. After you're done admiring the quality workmanship and attention to detail, you need to get these bad boys installed. If you did not attend auto shop in school or have trouble plugging in power tools, your best bet is to seek out a qualified AudioControl dealer. They have the skills, experience, and specialized tools to get your vehicle sounding like a live concert, and they usually smell alright too.

The AudioControl Altitude **A69CS2** component speaker system is engineered for precision and performance, featuring a dedicated midbass/woofer driver and a separate tweeter for enhanced sound staging and clarity. By isolating the high and low-frequency drivers, the component system allows for more flexible installation and superior imaging, making it an ideal upgrade for discerning listeners seeking a high-fidelity OEM replacement.

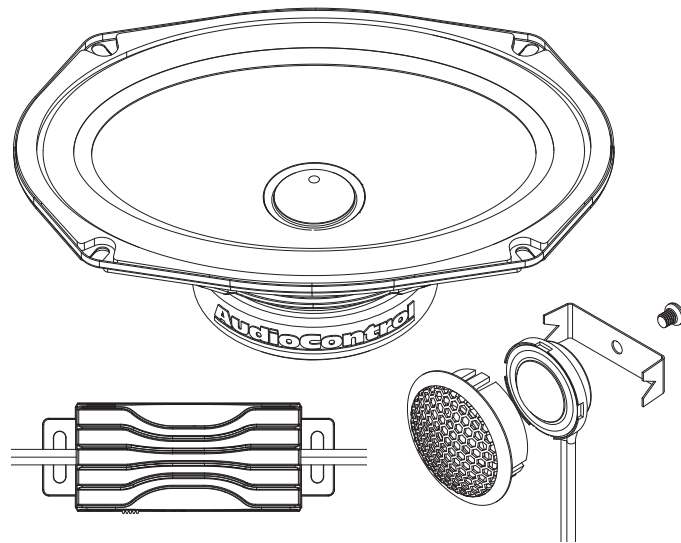
Wide frequency response – Independently optimized woofer and tweeter deliver extended, balanced sound across the full audio spectrum with improved separation and reduced distortion.

Enhanced imaging and staging – Separate tweeter placement allows for better sound directionality, creating a more immersive and spacious listening experience.

Improved system efficiency – Matched drivers and included passive crossovers ensure clean signal routing and power delivery for maximum performance.

Flexible installation – Ideal for custom or OEM upgrades, with a component layout allowing precise positioning for optimal acoustic results.

Crafted in California by our expert engineers, Altitude speakers are built for seamless integration and standout performance. Designed with efficiency and ease of installation in mind, each model offers exceptional performance in a compact form factor. Available in a range of sizes, every Altitude speaker is purpose-built to deliver high-fidelity sound while making vehicle integration effortless.



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Making Good Sound Great™

System Talk

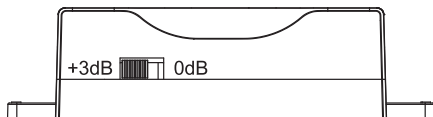
Your **A69CS2** component set includes everything you need for a great-sounding, reliable upgrade—just follow these basics to get the most out of it.

Use the Included Tweeter Crossover

Wire the tweeter through the provided passive crossover. It protects the tweeter from low frequencies and ensures a smooth transition from midbass driver to tweeter.

Tweeter Level Switch (+3 dB / 0 dB):

- Use 0 dB for most setups.
- Use +3 dB if the tweeter is hidden behind panels or aimed away from the listener.



Set the High-Pass Filter

To protect your midbass driver and clean up your sound, turn on the high-pass filter (HPF) in your amplifier or aftermarket head unit.

If using a subwoofer: set the HPF to 80 Hz

If not using a subwoofer: set the HPF to 60 Hz to bring out fuller bass. It'll cost you a little max output, but your ears might thank you. Or better yet—give the **A69CS2** a partner in crime with an AudioControl subwoofer.

This step is critical. Without an HPF, the woofer may distort or get damaged from trying to play deep bass it's not designed for.

No amp? No worries.

If your source is under 25 watts, like a factory head unit, you can skip the high-pass filter and run the midbass full range. But when you're ready to upgrade, an Altitude amplifier adds punch, power, and way more personality.

Advanced System Setup (Active Crossovers)

For advanced systems, you may choose to skip the included passive crossover and run active crossovers instead. This gives you more control over sound, provided the filters are set correctly.



Important! Never run the tweeter without a high-pass filter set to 4,500 Hz or higher.

Amplifier only (no DSP)			
Driver	HPF	LPF	Slope
Midbass	80 Hz	4,500 Hz	12 dB / Oct
Tweeter	4,500 Hz	-	12 dB / Oct

2-way active with DSP			
Driver	HPF	LPF	Slope
Midbass	80 Hz	4,500 Hz	24 dB / Oct L-R
Tweeter	4,500 Hz	-	24 dB / Oct L-R

3-way active with DSP (with A275C midrange)			
Driver	HPF	LPF	Slope
Midbass	80 Hz	400 Hz	24 dB / Oct L-R
Midrange	400 Hz	5,000 Hz	24 dB / Oct L-R
Tweeter	5,000 Hz	-	24 dB / Oct L-R

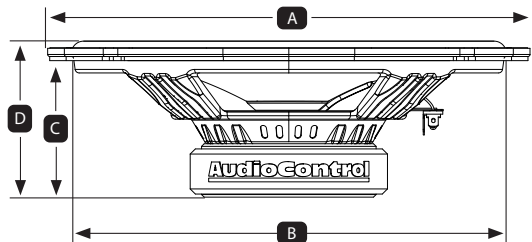
3-way active with DSP (with A35C midrange)			
Driver	HPF	LPF	Slope
Midbass	80 Hz	350 Hz	24 dB / Oct L-R
Midrange	350 Hz	5,000 Hz	24 dB / Oct L-R
Tweeter	5,000 Hz	-	24 dB / Oct L-R

Specifications - A69CS2

DC Resistance (Re).....	3.3 ohms
Voice Coil (Tw/Mid).....	0.8 / 1.2 in (20 / 30 mm)
System Frequency Response	55 Hz to 20,000 Hz
Sensitivity*	86.9 dB 1 W / 1 M
.....	89.9 dB @ 2.83 V / 1 M

Dimensions for Woofer

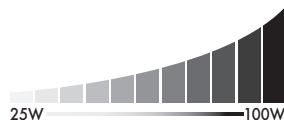
Overall Diameter (A)	6.43 x 9.27 in / 163.5 x 235.5 mm
Cut Out Diameter (B)	5.67 x 8.23 in / 144 x 209 mm
Mounting Depth (C)	2.67 in / 68 mm
Total Depth (D)	2.91 in / 74 mm



*We show sensitivity in both 2.83V/1m and 1W/1m for the most helpful comparison. Most amps work by delivering voltage, not a fixed wattage. Since 2.83 V equals 1 W into an 8 Ω speaker but 2 W into a 4 Ω speaker, this gives you a reliable way to compare speakers, no matter the impedance.

Suggested Amplifier Power

Impressive at 25 watts—absolutely thrilling with 100 watts of amplifier power!
 12 dB / octave 80 Hz high-pass filter (HPF) suggested. See page 4 for proper system settings.

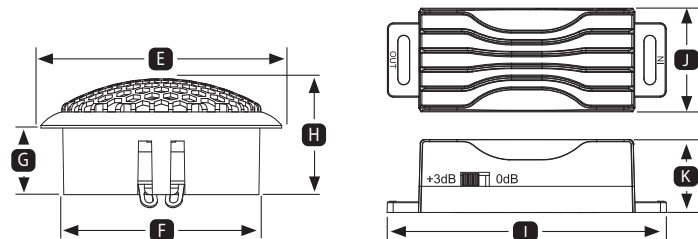


Dimensions for Tweeter

Overall Diameter (with housing) (E)	1.67 in / 42.5 mm
Cut Out Diameter (F)	1.37 in / 35 mm
Mounting Depth (G)	0.39 in / 10 mm
Overall Depth (with housing) (H)	0.73 in / 18.5 mm

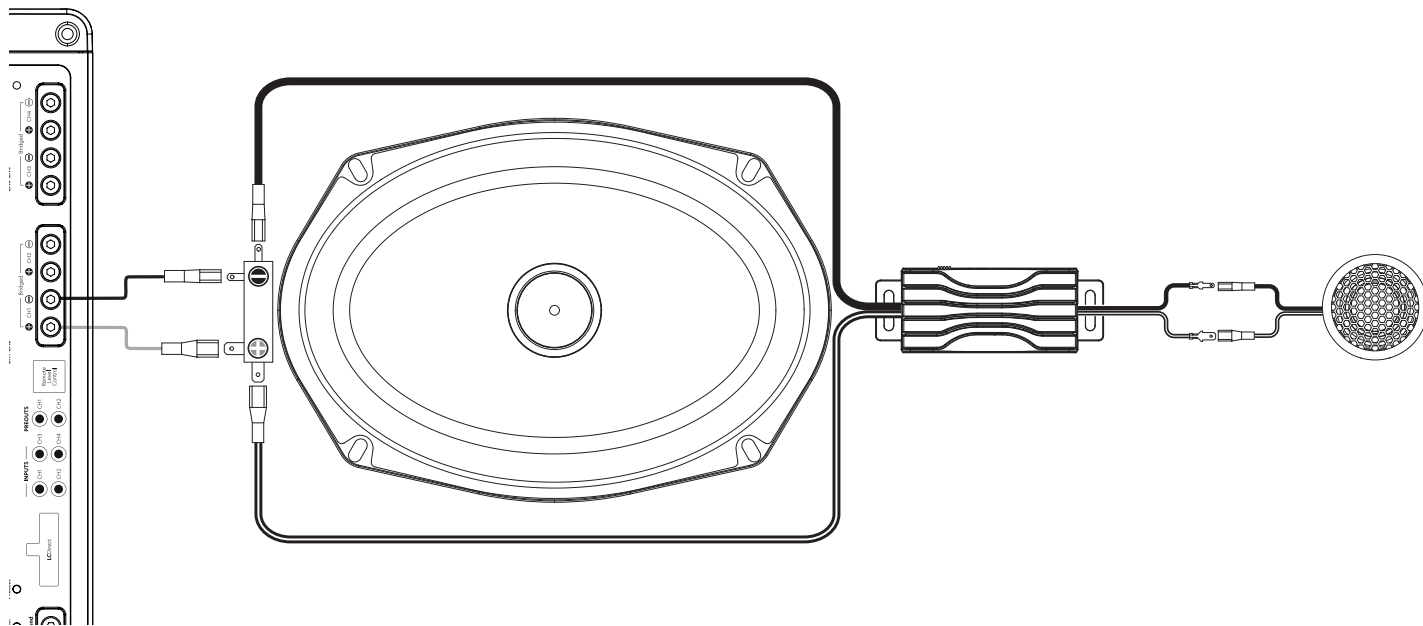
Dimensions for Crossover

Length (I)	3.6 in / 92 mm
Width (J)	1.3 in / 34 mm
Height (K)	0.94 in / 24 mm



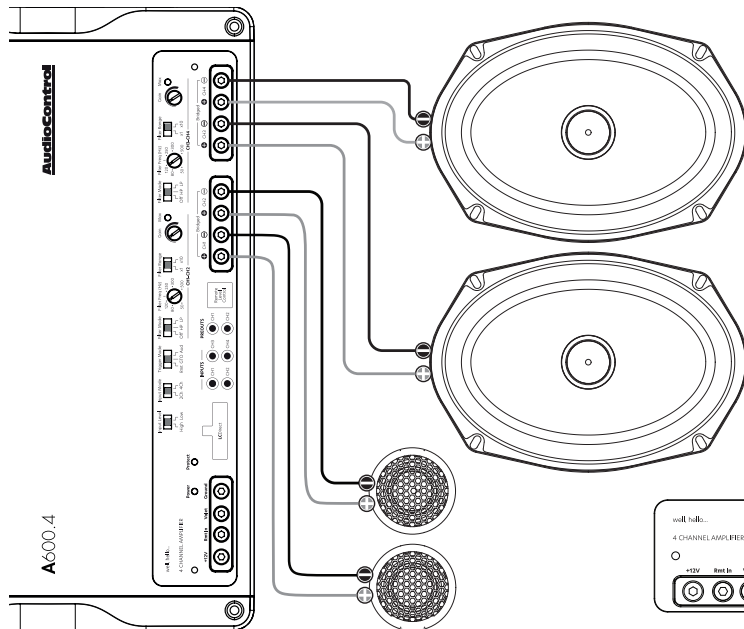
Component Speaker Connection Diagram (Passive)

When installing the **A69CS2** in its passive configuration using the Altitude crossover, follow the diagram below. This setup should be duplicated for each speaker in the audio system.



Component Speaker Connection Diagram (Active)

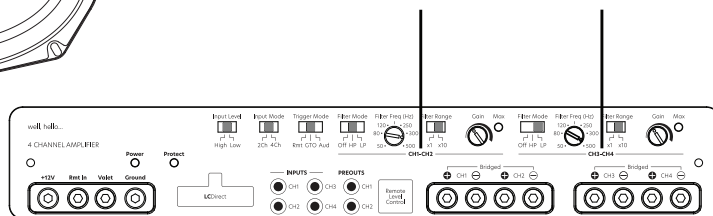
In this example, the speakers are connected directly to an **Altitude A600.4** amplifier using its internal crossovers. The tweeters are connected to CH1/2, crossed over to play frequencies above 4,500 Hz, while the mid-woofers are connected to CH3/4, crossed over to play up to 4,500 Hz.



When installing the Altitude **A69CS2** in an active system, the passive crossover can be removed. Instead, use the amplifier's built-in high-pass and low-pass filters (HPF/LPF) and activate the x10 multiplier switch as indicated. This configuration enables precise tuning of the crossover point between the midwoofer and tweeter. The x10 multiplier expands the adjustable frequency range, allowing for greater flexibility and more accurate control over your system's bandwidth and performance.

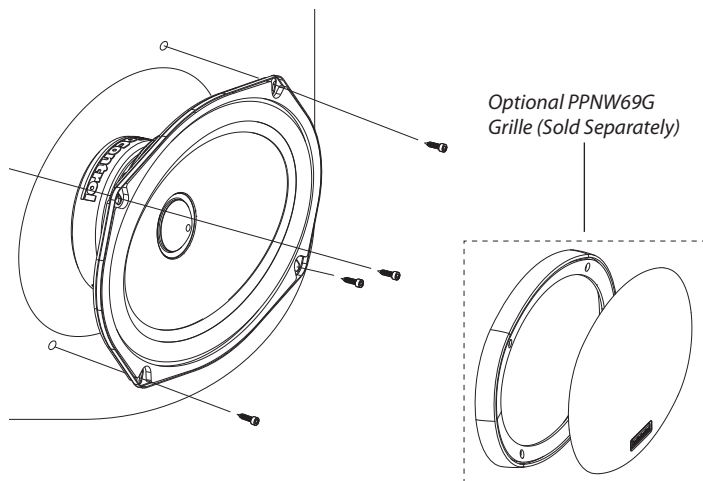
Altitude tweeter
 Ch1/2 HPF range set to x10
 and filter set to 4,500 Hz

Altitude mid-woofer
 Ch3/4 LPF range set to x10
 and filter set to 4,500 Hz.



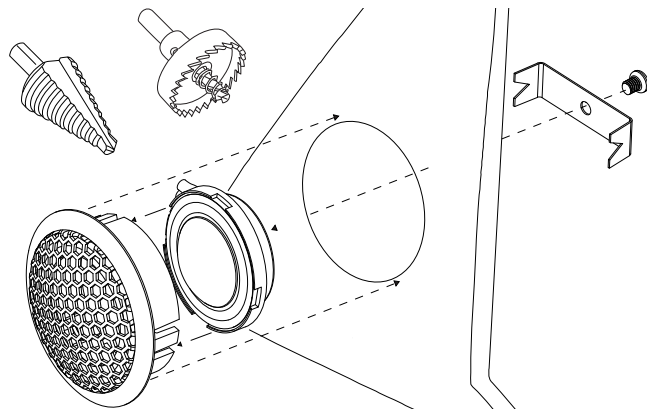
Speaker Installation

- Determine the mounting location for the speaker.
- Ensure the surface is flat and suitable for mounting—either for direct fitment or with a speaker adapter ring.
- Check the mounting depth at the selected location (refer to page 6 for speaker mounting dimensions).
- Cut the marked hole using an appropriate tool, if the installation requires it.
- Wire the speaker according to your system layout.
- Insert the speaker into the mounting hole.
- Secure it using the supplied mounting hardware.



Tweeter Installation

- Select a suitable location for the tweeters.
- Ensure the surface is flat and appropriate for installation.
- Verify the available depth at the selected location. Refer to page 6 for full mounting dimensions.
- If mounting in factory location use a flat head screwdriver to release the tabs from the outer housing to provide the smaller overall tweeter for installation.
- For the **A1** tweeter, a step drill bit (unibit) or 1 3/8 (35 mm) hole saw is recommended to achieve a clean, flush-fit opening.
- Wire the tweeter according to your system layout and polarity requirements.
- Place the tweeter into the prepared mounting hole.
- Use the supplied mounting hardware to firmly secure the tweeter in place.



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Making Good Sound Great™

The Warranty

In just the same way as being covered in honey and thrown into a dark pit full of hungry woodchucks, people are scared of warranties. Lots of fine print. Months of waiting around. Well, fear no more. This warranty is designed to make you rave about AudioControl. It's a warranty that looks out for you and your client, plus helps you resist the temptation to have your friend Sparky, who's "good with electronics," try to repair your AudioControl product. So go ahead, read this warranty, then register the information at www.audiocontrol.com/product-registration and include your comments.

Our warranty has conditional conditions! "Conditional" doesn't mean anything ominous. The Federal Trade Commission tells all manufacturers to use the term to indicate that certain conditions have to be met before they'll honor the warranty. If you meet all of these conditions, AudioControl will, at its discretion, repair or replace any AudioControl speaker products that exhibit defects in materials and/or workmanship for one (1) year from the date you bought it. We will repair or replace it, at our option, during that time.

Here are the conditional conditions:

1. You must fully register your purchase within 15 days of the purchase date by going to the AudioControl product registration page at:

www.audiocontrol.com/product-registration

Failure to register your product will negate the warranty.
2. You need to hold on to your sales receipt! All warranty service requires original sales receipt documentation. The warranty only applies to the original purchaser from an authorized AudioControl dealer. Note: Products purchased from unauthorized dealers are not covered under warranty.

3. The AudioControl speaker products must have originally been purchased from an authorized AudioControl dealer. **If an authorized AudioControl dealer installs your AudioControl product, the warranty is extended to two (2) years.**
4. Our warranty covers AudioControl products that have been installed according to the instructions in this manual.
5. You cannot let anyone who isn't: (A) the AudioControl factory; or (B) someone authorized in writing by AudioControl, service your AudioControl product. If anyone other than (A), or (B) messes with your AudioControl product, the warranty is void.
6. The warranty is void if the serial number is altered, defaced or removed, or if your product has been used improperly. Now that may sound like a big loophole, but here is what we mean by this: Unwarranted abuse is: (A) physical damage (don't use your product to pound in fence posts); (B) improper connections (120 volts into the speaker terminals can fry the poor thing). This is the best product we know how to build, but for example, if you mount it to the front bumper of your car, drop it over Niagara Falls, or use it for anchoring your boat, something will go wrong.

Assuming you conform to 1 through 6, and it really isn't all that hard to do, we get the option of fixing your product, or replacing it with a new one, at our discretion.

In the event that your product is out of warranty or not covered under our warranty, you may request to have any damage repaired at our normal "Out of Warranty" repair cost.

Legalese

The warranty above is the only warranty issued by AudioControl. This warranty gives you specific legal rights, and you may also have rights that vary from state to state.

Promises of how well your AudioControl product will work are not implied by this warranty. Other than what we've said we'll do in this warranty, we have no obligation, express or implied. We make no warranty of merchantability or fitness for any particular purpose. Also neither we nor anyone else who has been involved in the development or manufacture of the unit will have any liability of any incidental, consequential, special or punitive damages, including but not limited to any lost profits or damage to other parts of your system by hooking up to the unit (whether the claim is one for breach of warranty, negligence of other tort, or any other kind of claim). Some states do not allow limitations of consequential damages.

For more information about this fine product, and for additional details of the limited warranty and repair services, please visit **www.audiocontrol.com**

For technical questions, visit **www.audiocontrol.com/knowledge-base/**

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As technology advances, AudioControl reserves the right to continuously change our specifications, like our Pacific Northwest weather, although we are working on changing that as well.

The End (we appreciate your patience)


ALTITUDE SERIES
A69CS2



915-056-0 Rev A