

Alpine SPS-610C

Alpine SPS-610C 6-1/2" Component 2-Way Type-S Speaker System

User Manual

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, and maintenance of your Alpine SPS-610C 6-1/2" Component 2-Way Type-S Speaker System. Please read this manual thoroughly before installation and use to ensure proper function and longevity of your speakers. The Alpine SPS-610C system is designed to deliver enhanced audio performance in automotive environments.

2. SAFETY INFORMATION

- **Professional Installation Recommended:** Due to the complexity of car audio systems, professional installation is highly recommended. Incorrect installation can lead to damage to the speakers, vehicle, or personal injury.
- **Disconnect Battery:** Always disconnect the vehicle's negative battery terminal before beginning any electrical work to prevent short circuits and electrical hazards.
- **Wiring:** Ensure all wiring is correctly routed and secured to prevent pinching, chafing, or interference with vehicle moving parts. Use appropriate gauge wiring.
- **Volume Levels:** Prolonged exposure to high volume levels can cause permanent hearing damage. Set the volume to a comfortable level.
- **Environmental Factors:** Protect speakers from excessive moisture, dust, and extreme temperatures.
- **Vehicle Operation:** Do not attempt to adjust or troubleshoot the audio system while driving.

3. PACKAGE CONTENTS

The Alpine SPS-610C system typically includes the following components:

- Two (2) 6-1/2 inch Woofers
- Two (2) 1 inch Silk Dome Tweeters

- Two (2) In-line Crossovers for Tweeters
- Mounting Hardware (screws, clips, brackets for tweeters)
- Speaker Grilles (optional, sold separately as KTE-S610G)



Image 1: Rear view of an Alpine 6-1/2 inch woofer, showing the magnet, wiring terminals, and mounting frame. The model number S-565C is visible on the magnet, indicating a similar design to the SPS-610C series.

4. SETUP AND INSTALLATION

Careful installation is essential for optimal performance. Refer to your vehicle's service manual for specific panel removal and wiring diagrams.

4.1. Woofer Installation

1. **Preparation:** Remove the factory speakers and any necessary door panels or trim. Ensure the mounting location is clean and free of obstructions.
2. **Fitment Check:** The 6-1/2 inch woofers may have a larger magnet structure than factory speakers. Verify clearance behind the mounting surface. Modifications to the vehicle's door panel or speaker opening may be required for proper fitment.
3. **Wiring:** Connect the woofer wires to the appropriate speaker outputs from your amplifier or head unit. Observe correct polarity (+ to + and - to -).
4. **Mounting:** Secure the woofers using the provided screws. Ensure a tight, rattle-free fit. Consider using speaker baffles to protect the speakers from moisture and improve sound quality.

4.2. Tweeter Installation

The 1-inch silk dome tweeters offer flexible mounting options to optimize sound staging.

- **Flush Mount:** Install the tweeters flush into a panel (e.g., door sail panel, A-pillar) using the provided flush-

mount cups. This requires cutting a circular opening.

- **Surface Mount:** Mount the tweeters directly onto a flat surface using the surface-mount cups.
- **Angle Mount:** Utilize the swivel-mount feature to direct the tweeter's sound towards the listening position.
- **Wiring:** Connect the tweeter wires to the in-line crossover, then connect the crossover to the appropriate output from your amplifier or head unit. Ensure correct polarity.

4.3. Crossover Connection

The SPS-610C system features built-in crossovers for the woofers and in-line crossovers for the tweeters. The in-line crossovers filter out low frequencies from reaching the tweeters, protecting them from damage and ensuring clear high-frequency reproduction.

- Connect the speaker output from your amplifier or head unit to the input side of the tweeter's in-line crossover.
- Connect the output side of the in-line crossover to the tweeter.
- Ensure all connections are secure and insulated to prevent short circuits.

5. OPERATING INSTRUCTIONS

Once installed, your Alpine SPS-610C speakers will operate as part of your vehicle's audio system. Follow these guidelines for optimal performance:

- **Initial Power-Up:** After installation, turn on your head unit at a low volume setting. Gradually increase the volume to check for proper operation and sound quality.
- **Break-in Period:** Speakers typically require a break-in period of several hours of normal use to achieve their full sound potential. During this time, avoid playing music at extremely high volumes.
- **Audio Adjustments:** Use your head unit's equalizer and tone controls (bass, treble, balance, fader) to fine-tune the sound to your preference. Avoid excessive bass or treble boost, which can lead to distortion or speaker damage.
- **Amplifier Settings:** If using an external amplifier, ensure its gain settings are properly matched to your head unit's output to prevent clipping and distortion.

6. MAINTENANCE

The Alpine SPS-610C speakers are designed for durability and require minimal maintenance.

- **Cleaning:** Gently wipe the speaker grilles and surrounds with a soft, damp cloth. Avoid using harsh chemicals or abrasive cleaners.
- **Inspection:** Periodically check speaker connections for tightness and ensure no wires are frayed or exposed.
- **Environmental Protection:** While designed for automotive use, avoid exposing the speakers directly to water or extreme temperatures.

7. TROUBLESHOOTING

If you experience issues with your speakers, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
No sound from speakers	<ul style="list-style-type: none"> Loose or incorrect wiring Head unit or amplifier not powered on Fader/balance settings incorrect Blown fuse in head unit/amplifier 	<ul style="list-style-type: none"> Check all speaker and power connections. Ensure head unit and amplifier are on. Adjust fader/balance to center. Inspect and replace fuses if necessary.
Distorted or unclear sound	<ul style="list-style-type: none"> Volume too high, causing clipping Incorrect amplifier gain settings Loose speaker mounting Damaged speaker cone or voice coil 	<ul style="list-style-type: none"> Reduce volume. Adjust amplifier gain to match head unit output. Tighten speaker mounting screws. Inspect speakers for physical damage.
One speaker not working	<ul style="list-style-type: none"> Loose connection to that specific speaker Damaged speaker wire Faulty speaker 	<ul style="list-style-type: none"> Check connections for the non-working speaker. Inspect speaker wire for breaks. Test speaker with another known good source if possible.

If problems persist, consult a qualified car audio technician or contact Alpine customer support.

8. SPECIFICATIONS

Model: SPS-610C

Speaker Type: Component 2-Way System

Woofers Size: 6.5 Inches (16.5 cm)

Tweeter Size: 1 Inch (2.5 cm) Silk Dome

Maximum Output Power: 240 Watts (Peak)

Connectivity Technology: Coaxial (for system integration)

Audio Output Mode: Stereo

Enclosure Material: Plastic (for speaker frame)

Color: Black

Item Weight: Approximately 3 Pounds (per system)

Manufacturer: Alpine

UPC: 793276601575

9. WARRANTY AND SUPPORT

Alpine products are manufactured to high-quality standards. This product comes with a limited warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Alpine website. For technical support, troubleshooting assistance, or service inquiries, please contact Alpine customer support directly.

Alpine Customer Support: Refer to the contact information provided on the Alpine website or in your product packaging.

