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Audio System R 165 EM EVO

Audio System R 165 EM EVO 2-Way Component System User Manual

Model: R 165 EM EVO

1. Introduction

Thank you for choosing the Audio System R 165 EM EVO 2-Way Component System. This high-quality car audio system is designed to deliver superior sound performance with easy installation. This manual provides essential information for the proper setup, operation, and maintenance of your new audio system.

The R 165 EM EVO system features a 165 mm (6.5 inch) mid-bass speaker, a 24 mm (0.94 inch) tweeter, and a plug-and-play crossover network, ensuring a balanced and dynamic audio experience in your vehicle.



Figure 1: Overview of the Audio System R 165 EM EVO 2-Way Component System components, including the mid-bass speaker, tweeter, and crossover network.

2. Safety Instructions

Please read these safety instructions carefully before installation and operation. Failure to follow these guidelines may result in damage to the product, vehicle, or personal injury.

- Always disconnect the vehicle's battery before performing any electrical work.

- Ensure proper wiring and insulation to prevent short circuits.
- Do not install speakers in locations that obstruct driver visibility or vehicle controls.
- Avoid exposing the speakers to excessive moisture or extreme temperatures.
- Seek professional installation if you are unsure about any steps.
- Operate the audio system at safe volume levels to prevent hearing damage.

3. Package Contents

Verify that all components are present and undamaged upon opening the package:

- 2 x AS 165 EVO Mid-bass Speakers (165 mm / 6.5 inch)
- 2 x HS 24 EVO Tweeters (24 mm / 0.94 inch)
- 2 x FWK EM Plug and Play Crossovers/Frequency Filters
- Mounting Hardware (screws, clips, etc. - specific items may vary)

4. Setup and Installation

The R 165 EM EVO system is designed for easy mounting and plug-and-play connectivity. Follow these general steps for installation:

1. **Preparation:** Disconnect the vehicle's negative battery terminal. Identify suitable mounting locations in your vehicle's doors or kick panels.
2. **Mid-bass Speaker Installation:**
    - The mid-bass speakers require a mounting diameter of 143 mm (5.63 inches) and a mounting depth of 62 mm (2.44 inches).
    - Securely mount the AS 165 EVO speakers using the provided hardware.
3. **Tweeter Installation:**
    - Mount the HS 24 EVO tweeters in a suitable location, typically near the mid-bass speakers or on the dashboard/A-pillars for optimal sound staging.
    - Ensure they are securely fastened.
4. **Crossover Connection:**
    - Connect the FWK EM crossovers between your amplifier/head unit and the speakers. These are plug-and-play for simplified wiring.
    - Ensure correct polarity (+ to + and - to -) for all connections.
    - The FWK EM crossovers offer 3 adjustment settings to fine-tune the sound to your preference. Refer to the crossover's markings for specific adjustment options.
5. **Wiring:** Run speaker wires from your amplifier or head unit to the crossovers, and then from the crossovers to the respective mid-bass speakers and tweeters. Use appropriate gauge wiring for optimal performance.
6. **Testing:** Once all connections are made, reconnect the vehicle's battery and test the system at a low volume. Gradually increase the volume to check for proper operation and sound quality.

For detailed vehicle-specific installation instructions, consult your vehicle's service manual or a qualified car audio installer.

5. Operating Instructions

Once installed, your Audio System R 165 EM EVO component system will enhance your in-car audio experience. Here

are some general operating tips:

- **Initial Playback:** Begin playback at a low volume and gradually increase it. This allows the speaker components to "break-in" and perform optimally over time.
- **Volume Control:** Use your head unit or amplifier's volume control to adjust the sound level. Avoid pushing the system to distortion, as this can damage the speakers.
- **Equalization (EQ):** Utilize your head unit's or amplifier's equalizer settings to fine-tune the sound to your personal preference. Experiment with bass, treble, and mid-range settings.
- **Crossover Adjustments:** The FWK EM crossovers provide 3 adjustment options. These settings typically control the tweeter output level or crossover point. Adjust them to achieve the desired balance between the mid-bass and tweeter.
- **Impedance:** The system has an impedance of 3 Ohm. Ensure your amplifier is stable and compatible with a 3 Ohm load to prevent damage to the amplifier or speakers.

6. Maintenance

Proper maintenance will ensure the longevity and performance of your Audio System R 165 EM EVO speakers:

- **Cleaning:** Use a soft, dry cloth to wipe down the speaker grilles and surrounds. Avoid using harsh chemicals or abrasive cleaners.
- **Environmental Protection:** Protect the speakers from direct sunlight, extreme temperatures, and excessive moisture.
- **Secure Mounting:** Periodically check that the speakers are securely mounted and that all connections are tight. Vibrations can loosen screws over time.
- **Avoid Overpowering:** Do not continuously play the speakers at maximum volume or with excessive bass boost, as this can lead to overheating and damage.

7. Troubleshooting

If you encounter issues with your Audio System R 165 EM EVO, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
No sound from speakers	Loose or incorrect wiring; amplifier off or in protect mode; head unit issue.	Check all wiring connections for tightness and correct polarity. Verify amplifier power and status. Test head unit with another speaker.
Distorted or unclear sound	Volume too high; improper gain settings on amplifier; damaged speaker; incorrect crossover settings.	Reduce volume. Adjust amplifier gain settings. Check speakers for physical damage. Verify crossover adjustments.
One speaker not working	Loose connection to that specific speaker or crossover; damaged speaker.	Check wiring for the affected speaker. Swap speakers (if possible) to isolate the issue.
Lack of bass or treble	Incorrect crossover settings; EQ settings; phase issues.	Adjust crossover settings. Check head unit/amplifier EQ. Ensure speaker polarity is correct.

If the problem persists after attempting these solutions, contact your dealer or a qualified service technician.

8. Specifications

Technical specifications for the Audio System R 165 EM EVO 2-Way Component System:

- **Model:** R 165 EM EVO
- **Speaker Type:** 2-Way Component System
- **Mid-bass Speaker Size:** 165 mm (6.5 inches)
- **Tweeter Size:** 24 mm (0.94 inches)
- **Components:** 2 x AS 165 EVO Mid-bass, 2 x HS 24 EVO Tweeters, 2 x FWK EM Crossovers
- **Mounting Depth (Mid-bass):** 62 mm (2.44 inches)
- **Mounting Diameter (Mid-bass):** 143 mm (5.63 inches)
- **Impedance:** 3 Ohm
- **Power Handling (RMS):** 90 Watts per channel
- **Power Handling (Max):** 130 Watts per channel (as per product description)
- **Package Dimensions:** 41.2 x 21 x 9.2 cm (16.2 x 8.3 x 3.6 inches)
- **Package Weight:** 2.74 kg (6.04 lbs)

9. Warranty and Support

Audio System products are manufactured to high-quality standards. For warranty information and support, please refer to the warranty card included with your product or contact your authorized Audio System dealer or the manufacturer directly.

Keep your purchase receipt as proof of purchase for warranty claims.

For further assistance, you may visit the official Audio System website or contact their customer service department.

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