

Klipsch R-5650-S II

Klipsch R-5650-S II In-Wall Speaker User Manual

Model: R-5650-S II

1. INTRODUCTION

Thank you for purchasing the Klipsch R-5650-S II In-Wall Speaker. This manual provides essential information for the proper installation, operation, and maintenance of your speaker. Please read these instructions thoroughly before beginning installation or use to ensure optimal performance and safety.

Key Features:

- Dual 1-inch (2.54cm) Titanium diaphragm compression driver mated to a pivoting 90° x 90° square Tractrix Horn.
- 6.5-inch Cerametallic cone woofer for robust bass response.
- Two vertically stacked Tractrix Horn-loaded tweeters designed to enhance surround sound effects.
- Horn-loaded technology engineered to increase acoustic output and reduce distortion.
- IR receiver knock out for integration with remote control systems.

2. SAFETY INSTRUCTIONS

Always observe the following safety precautions to prevent damage to the speaker or injury to yourself:

- **Read Instructions:** All safety and operating instructions should be read before the product is operated.
- **Retain Instructions:** The safety and operating instructions should be retained for future reference.
- **Heed Warnings:** All warnings on the product and in the operating instructions should be adhered to.
- **Installation:** Installation should only be performed by qualified personnel. Ensure the mounting surface can support the speaker's weight.
- **Wiring:** Ensure all wiring is correctly connected and insulated to prevent short circuits or electrical hazards. Turn off power to the amplifier before making connections.
- **Moisture:** This speaker is not waterproof. Do not expose it to water or excessive moisture.
- **Cleaning:** Unplug the product from the amplifier before cleaning. Use a dry cloth only.

3. PACKAGE CONTENTS

The Klipsch R-5650-S II In-Wall Speaker package typically includes:

- One (1) Klipsch R-5650-S II In-Wall Speaker
- Installation Template (usually printed on the packaging)

Note: Additional tools and wiring are required for installation and are not included.

4. SETUP AND INSTALLATION

Proper installation is crucial for optimal sound performance and speaker longevity. Consult a professional installer if you are unsure about any steps.

4.1 Planning Speaker Placement

For surround sound applications, position the R-5650-S II speakers on the side or rear walls, typically at or slightly above ear level when seated. The unique horn array allows for flexible placement while maintaining an enveloping sound field.

4.2 Wall Preparation

1. **Locate Studs:** Use a stud finder to locate wall studs and avoid them when choosing your mounting location. Ensure there are no electrical wires or plumbing in the desired area.
2. **Trace Cutout:** Use the provided cutout template to trace the opening on the wall.
3. **Cut Opening:** Carefully cut the opening in the drywall using a drywall saw.

4.3 Wiring Connections

Before making any connections, ensure your amplifier or receiver is turned off and unplugged from the power outlet.

1. Run speaker wire (minimum 16-gauge, heavier for longer runs) from your amplifier to the wall opening.
2. Strip approximately 1/2 inch (12mm) of insulation from the ends of the speaker wires.
3. Connect the positive (+) terminal of the speaker to the positive (+) terminal of the amplifier. Connect the negative (-) terminal of the speaker to the negative (-) terminal of the amplifier. Ensure correct polarity for all speakers in your system.



Figure 1: Internal view of the Klipsch R-5650-S II In-Wall Speaker, showing the woofer, dual tweeters, and crossover components.

4.4 Mounting the Speaker

1. Carefully insert the speaker into the wall opening.
2. Tighten the dog-leg mounting clamps (usually by turning screws on the front baffle) until the speaker is securely fastened to the wall. Do not overtighten.
3. Attach the magnetic grille to the speaker baffle. The grille is designed to snap into place.

5. OPERATING INSTRUCTIONS

Once installed and connected, your Klipsch R-5650-S II In-Wall Speaker is ready for use.

1. Ensure all connections are secure.
2. Plug in and power on your amplifier or receiver.
3. Select the appropriate input source on your amplifier.
4. Start playback at a low volume and gradually increase it to your desired listening level.

The pivoting Tractrix Horn allows you to direct the high-frequency sound towards the primary listening area for optimized sound imaging.

6. MAINTENANCE

Your Klipsch R-5650-S II In-Wall Speaker requires minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to gently wipe the speaker grille and frame. Avoid using abrasive cleaners, solvents, or excessive moisture.
- **Grille Care:** The magnetic grille can be removed for cleaning if necessary. Handle with care to avoid bending or damaging it.
- **Inspection:** Periodically check speaker wire connections to ensure they remain secure.

7. TROUBLESHOOTING

If you encounter issues with your speaker, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
No sound from speaker	Incorrect wiring connections Amplifier/receiver off or incorrect input selected Speaker wire damaged	Check speaker wire polarity and connections at both speaker and amplifier. Ensure amplifier is on and correct input is selected. Inspect speaker wire for breaks or shorts; replace if necessary.
Distorted or unclear sound	Over-driving the speaker Loose connections Incorrect amplifier settings	Reduce volume level. Check all speaker wire connections. Refer to your amplifier's manual for proper settings.
Speaker rattling or buzzing	Loose mounting Object vibrating against speaker	Ensure mounting clamps are securely tightened (do not overtighten). Check for any loose objects in the wall cavity or near the speaker.

8. SPECIFICATIONS

Feature	Specification
Model Name	R-5650-S II
Brand	Klipsch
Speaker Type	In-Wall
Material	Acrylonitrile Butadiene Styrene (ABS)
Woofer Diameter	6.5 Inches (Cerametallic cone)
Tweeter	Dual 1-inch Titanium diaphragm compression driver with pivoting Tractrix Horn
Impedance	8 Ohms
Frequency Response (low end)	60 Hz (Full range not specified)
Recommended System Configuration	5.1 Surround Sound
Product Dimensions (D x W x H)	3.75"D x 9.3"W x 14.3"H
Mounting Type	Wall Mount
Waterproof	No
UPC	743878024005

9. WARRANTY INFORMATION

The Klipsch R-5650-S II In-Wall Speaker comes with a limited warranty. For detailed information regarding warranty coverage, terms, and conditions, please refer to the official Klipsch website or the warranty card included with your purchase. Keep your proof of purchase for warranty claims.

10. SUPPORT

For further assistance, technical support, or to view additional product information, please visit the official Klipsch website:

www.klipsch.com