

JBL SCL-5 Synthesis In Ceiling Speaker Owner's Manual

JBL SCL-5 Synthesis In Ceiling Speaker

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IMPORTANT SAFETY INSTRUCTIONS

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Clean only with a dry cloth.
6. Do not block any ventilation openings. Install this apparatus in accordance with the manufacturer's instructions.
7. Do not install this apparatus near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
8. Use only attachments/accessories specified by the manufacturer.
9. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus.
When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
10. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as when the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.

Correct disposal of this product (Waste Electrical & Electronic Equipment) This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Proper disposal and recycling helps protect natural resources, human health and the environment. For more information on disposal and recycling of this product, contact your local municipality, disposal service, or the shop where you bought this product.

RoHS

This product is RoHS compliant.

This product is in compliance with Directive 2011/65/EU, and its amendments, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

REACH

REACH (Regulation No 1907/2006) addresses the production and use of chemical substances and their potential impacts on human health and the environment. Article 33(1) of REACH Regulation requires suppliers to inform the recipients if an article contains more than 0.1 % (per weight per article) of any substance(s) on the Substances of Very High Concern (SVHC) Candidate List ('REACH candidate list'). This product contains the substance "lead" (CAS-No. 7439-92-1) in a concentration of more than 0.1% per weight.

At the time of release of this product, except for the lead substance, no other substances of REACH candidate list are contained in a concentration of more than 0.1% per weight in this product.

Note: On June 27, 2018, lead was added to the REACH candidate list. The inclusion of lead in the REACH candidate list does not mean that lead-containing materials pose an immediate risk or results in a restriction of permissibility of its use.

THANK YOU FOR CHOOSING JBL®

For more than 70 years, JBL engineers have been providing audio equipment for homes, concert halls, recording studios and movie theaters around the world, and JBL products have become the hands-down choice of leading recording artists and sound engineers. The SCL-5, SCL-6, SCL-7, and SCL-8 are the latest members of the JBL Synthesis Home Theater line. To get the best performance from your new loudspeakers, please read these instructions thoroughly

PACKAGE CONTENTS

EACH JBL SCL-5 / SCL-6 / SCL-7 / SCL-8 PACKAGE CONTAINS:

- 1x SCL-6
- or
- 1x SCL-7
- 1x Square Grille
- 1x Template
- 1x Scrim Cloth
- 1x Quick Start Guide
- 1x SCL-5
- or
- 1x SCL-8
- 1x Round and 1x Square Grilles
- 1x Template
- 1x Quick Start Guide
- 2x Scrim Cloths

If you suspect that there has been shipping damage, report it immediately to your dealer. We recommend that you keep the box and packing materials for future use.

SPEAKER PLACEMENT FOR IN-CEILING AND IN-WALL

Positioning your loudspeakers properly is critical in order to achieve the sonic performance of a home theater. Please read the following section for guidance in correct and optimal placement.

Notes: For In-wall installation, please refer to bracket accessories WB52 or WB54 which are sold separately.

IN-WALL SPEAKER – LEFT AND RIGHT PLACEMENT

The SCL-6 and SCL-7 are perfect choice to serve as front left and right main speakers in a multi-channel system. Since they have been designed for uniform coverage and maximum dispersion of sound, they should be placed with the center of the speakers at about the same height on screen as the actors to aid in the illusion that the actors' voices are coming directly from their on-screen images. Ideally, the speakers will be placed about 60 degrees apart from each other viewed from the listening position, so that the distance between the speakers is the same as each speaker's distance from the listener (Figure 1). L

IN-WALL SPEAKER – CENTER CHANNEL PLACEMENT

The SCL-6 or SCL-7 may be oriented either vertically or horizontally when used as a center channel speaker. If the speaker is being used with a perforated projection screen, it should be mounted behind the center of the screen with the horizontal center axis aligned as close as possible to the center axis of the Left and Right channel speakers (Figure 3).

NOTE: Some perforated projection screens have a batten bar or crossbar centered across the screen frame (Figure 4). In such cases make sure the bar does not block the horn. Position vertically oriented speakers so that the bar crosses in front of the speakers at the edge of the horn closest to the central woofer.

If a non-perforated projection screen, LCD/plasma/OLED display is being used in the installation, the SCL-6 or SCL-7 may be used in horizontal orientation mounted directly below or above and as close as possible to the video display (Figure 5)

NOTE: It is extremely important to place the center, left and right speakers as close as possible to the same height. The horn in the center channel speaker should be no more than 2 feet (61cm) higher or lower than those in the left and right speakers. This preserves the localization integrity of "sound pans" in which the sound appears to move from left to center to right.

IN-WALL SPEAKER – SURROUND PLACEMENT

Please consult your authorized JBL Synthesis dealer for selection of appropriate JBL Synthesis speakers for your home theater.

IN-WALL SPEAKEAR – 5.1-CHANNEL SYSTEMS PLACEMENT

Surround speakers should be placed in the side walls no closer to the screen than the first row of viewing chairs. If there are two rows of chairs, these speakers should be placed between the two rows. Surround speakers should be placed higher than the seating area, at least 2 feet above seated ear level (Figure 6).

IN-WALL SPEAKEAR – 7.1-CHANNEL SYSTEMS PLACEMENT

In a 7.1-channel system, two speakers are added for rear fill, in addition to the surround speakers in a 5.1-channel system. The two additional speakers are placed on the rear wall or near the rear wall in the ceiling (Figure 7).

IN-CEILING SPEAKER – LEFT AND RIGHT PLACEMENT

Place the left and right loudspeakers the same distance from the primary listening area (or as close to the same

distance as possible). The distance from each speaker to its nearest side wall should also be as close to the same distance as possible.

Ideally, the distance between the left and right loudspeakers should be slightly less than their distance from the primary listening area.

IN-CEILING SPEAKEAR – 5.1-CHANNEL SYSTEMS PLACEMENT

- The surround left and surround right loudspeakers should be located to the sides of, and approximately 10 degrees behind, the main listening area.
- The front left, center and front right loudspeakers should be centered relative to the video display.
- The front left, center, and front right loudspeakers should be closer to the video display than to the main listening area. For example, if the video display is 10 ft (3m) from the main listening area, the loudspeakers should be 6 ft (1.8m) or further from the main listening area.
- The front left and front right loudspeakers should be relatively close to the sides of the video display. For example, front left and front right loudspeakers used with a 50-in (1.2m) video display should generally not be more than 80 in (2m) apart.
- The center loudspeaker should be aligned with the center of the video display.
- The surround-channel loudspeakers should be as far from the main listening area as possible but at least 2 feet (0.6m) from side and front walls.

IN-CEILING SPEAKEAR – 7.1-CHANNEL SYSTEMS PLACEMENT

- Two speakers are added for rear fill, in addition to the surround speakers in a 5.1-channel system. The two additional speakers are placed on the rear wall or near the rear wall in the ceiling.
- The surround back left and surround back right loudspeakers should be equidistant from the primary listening area and generally as far from it as possible but at least 2 ft (0.6m) from the side and rear walls.

WARNING: HARMAN International assumes no responsibility for improper installation of hardware or for any personal injuries or product damages resulting from improper installation or a fallen loudspeaker.

PREPARING THE HOOK-UP WIRE

1. First determine the distance between your amplifier and the most distant speaker in each group (fronts, surrounds, back surrounds, passive subwoofers).
2. Now make the hookup wires for all speakers in each group this length, even if one speaker is much closer to your amplifier than the other.
This will help maintain proper signal balance. Remember to make extra wires for bi-amp or bi-wire usage should this be selected.
3. Strip off 3/8" of insulation from both ends of each conductor.
4. Twist each set of stranded wires into a tightly bunched spiral. Run wires through walls to the mounting positions.
5. Speakers and electronics terminals have corresponding (+) and (–) terminals. Most manufacturers of speakers and electronics, including JBL, Inc., use red to denote the (+) terminal and black for the (–) terminal. Please confirm before connecting.

It is important to connect all speakers identically: (+) on the speaker to (+) on the amplifier and (–) on the speaker to (–) on the amplifier. Wiring “out of phase” (+ to – and – to +) results in thin sound, weak bass and poor imaging.

With multichannel surround sound systems, connecting all of the speakers in your system with the correct polarity remains equally important to preserve the proper ambience and frequency response of the program material.

Now find a visual difference between the two conductors of each molded pair of speaker wires. Differentiating marks can be a different color wire (copper or silver); a strand of yarn in one conductor; thin, raised ribs on one part of the outer insulation; or a printed marking on one part of the outer insulation. It doesn't matter which of the two strands go to the (+) and (–) on the speakers and amplifiers, as long as all speakers are connected identically. When attaching to the back box, push on the top of the spring-loaded post and insert the bare wire into the hole on the side.

IN-CEILING INSTALLATION GUIDE

For New Construction

If you wish to pre-install a rough-in frame for the speakers before the drywall is installed in new construction, you will need to purchase the correct rough-in frame kit for your loudspeaker model from your authorized JBL Synthesis dealer. Detailed mounting instructions are supplied with the rough-in kit. After the drywall is installed, follow the installation instructions in For Existing Construction, below.

For Existing Construction

Note: The installation procedure is the same for all models covered by this manual.

1. Ensure that the drywall, plywood or other ceiling material is 1/2" – 2" (13mm – 51mm) thick and capable of withstanding the weight of the speaker being installed.

Make sure to allow at least 3/4" (19mm) between the edge of the supplied installation template and any rafters or other obstructions behind the wall, so the speaker's locking mechanism will have room to engage fully.

Perform an obstruction survey to be sure that there are no studs, lengths of conduit, pipes, heating ducts or air returns in the ceiling cavity that will interfere with the speaker.

2. Determine the correct speaker location and use the template included with the speaker to mark the ceiling material.

3. Cut the ceiling drywall along the mark you made in Step 2 to create the mounting opening.

4. Connect the speaker to the amplifier as explained on page 8.

5. Attach the speaker's seismic tab to a support line, as per local safety regulations.

6. Make sure all speaker clamps are in their “ready-to-mount” position.

7. Insert the speaker straight into the mounting opening. Tighten the speaker clamp screws on the front of the speaker baffle. The speaker clamps will automatically rotate into position and begin clamping the speaker.

When you notice resistance on the screws the speaker has been clamped successfully.

IMPORTANT: Always use low-torque settings. NEVER over-tighten the clamp screws.

8. Attach the supplied round or square grille. Powerful magnets in the speaker frame will securely hold the grille in place.

PAINTING THE GRILLE

JBL Synthesis architectural loudspeaker grilles can be painted to match any décor. If you wish to change the

grille's color, its satin finish will function as a primer coat. For the best results follow this procedure:

1. Gently remove the scrim cloth from the back side of the grille before painting.
2. Use a high-quality spray paint and apply a thin coat of color. Ensure that the grille perforations remain free of paint. Filling them with paint will diminish the speaker's sound quality. If any perforations are plugged, use compressed air to blow the paint out of the perforations.

Note: If you find any grille perforations that are plugged with paint after the paint has dried, carefully use a straight pin or sewing needle to remove the paint.

3. We have included round and/or rectangular replacement scrim cloths. After the paint has dried, apply a light coat of spray adhesive to the inside of the perforated grille and attach a new scrim cloth. **IMPORTANT:** Never spray adhesive on the cloth. The scrim cloth on model SCL-5 or SCL-8 has pre-attached foam pads that help prevent the square grille from vibrating against the ceiling.

BOUNDARY COMPENSATION CONTROL

The Boundary Compensation control reduces the speaker's bass output level to compensate for the greater reflection of bass energy when the speaker is placed near a wall.

When possible, avoid mounting the speaker within 2 ft (0.6m) of a wall. If such placement is unavoidable, set the Boundary Compensation control to the "NEAR" position.

SPECIFICATIONS

	SCL-5	SCL-8
Type:	2-Way In-ceiling loudspeaker	
Low Frequency Driver:	7" (180mm) advanced Aluminum Matrix cone cast- frame woofer (JW180P B-6)	5.25" (130mm) advanced Aluminum Matrix cone cast- frame woofer (JW130AI-4)
High Frequency Driver:	1" (25mm) 2409H Tenex® annular ring-diaphragm compression driver	1" (25mm) 2410H-2 Tenex® annular ring-diaphragm compression driver
Recommended Amplifier Power:	25 – 125W RMS	25 – 100W RMS
Impedance:	6Ohms	4Ohms
Loudspeaker Sensitivity:	86dB/2.83 V/1m	85dB/2.83 V/1m
Frequency Response:	48Hz – 32kHz (-6dB on-axis), 2pi anechoic	55Hz – 30kHz (-6dB on-axis), 2pi anechoic

Crossover Frequency:	1575Hz	1.8kHz
High Frequency Coverage Angle (-6 dB):	60° Vertical (Up: 30°, Down: 30°, from 45° Vertical Center line), 120° Horizontal, from 2kHz to 10kHz.	60° Vertical (Up: 30°, Down: 30°, from 45° Vertical Center line), 120° Horizontal, from 2kHz to 10kHz.
Enclosure Type:	Open back	
Controls:	Boundary Proximity Control	
Grille Dimensions:	Round: 12.52" (318mm) x 0.28" (7mm) Square: 12.52" (318mm) x 12.52" (318mm) x 0.28" (7mm)	Round: 10.75" (273mm) x 0.25" (6.2mm) Square: 10.75" (273mm) x 10.75" (273mm) x 0.25" (6.2mm)
Product Dimensions (with grille):	12.5" H x 12.5" W x 5.98" D (318mm x 318mm x 151.9mm)	10.77" H x 10.77" W x 4.73" D (273mm x 273mm x 120mm)
Cut-out Diameter:	11.22" (285mm)	9.72" (247mm)
Mounting Depth:	5.58" (141.8mm)	4.68" (119mm)
Input Type	Dual gold-plated spring-loaded binding posts	
Product Weight:	8.6lb. (3.9kg)	7.8lb. (3.5kg)
Shipping Weight:	12.5lb. (5.7kg)	10.6lb. (4.8kg)
Shipping Units of Measure:	Each	
Warranty:	5 Years	

	SCL-6	SCL-7
Type:	2.5-way In-Ceiling loudspeaker	
Low Frequency Driver:	Quad 5.25" (130mm) Black Anodized Aluminum cone woofer (JW130AI-4)	Dual 5.25" (130mm) Black Anodized Aluminum cone woofer (JW130AI-8)

High Frequency Driver:	1" (25mm) 2401H-2 annular ring, Tenex® diaphragm compression driver	1" (25mm) 2401H-2 annular ring, Tenex® diaphragm compression driver
Recommended Amplifier Power:	25 – 200W RMS	25 – 150W RMS
Impedance:	4Ohms	4Ohms
Loudspeaker Sensitivity:	91dB/2.83 V/1m	88dB/2.83 V/1m
Frequency Response:	50Hz-30kHz (-6dB on-axis), 2pi anechoic	55Hz-30kHz (-6dB on-axis), 2pi anechoic
Crossover Frequency:	1.8kHz	2.0kHz
High Frequency Coverage Angle (-6 dB):	80° Ver X 80° Hour from 2kHz to 17kHz	60° Ver, 90° Hour (Left: 30°, Right: 60°, from center line), from 2kHz to 15kHz
Enclosure Type:	Open back	
Controls:	Boundary Proximity Control	
Grille Dimensions:	7.28" (185mm) X 31.34" (796mm) X 0.25" (6.2mm)	7.32" (186mm) X 19.14" (486mm) X 0.25" (6.2mm)
Product Dimensions (with grille):	7.29" (185mm) X 31.32" (796mm) X 3.82" (97.1mm)	7.32" (186mm) X 19.15" (486mm) X 3.88" (99mm)
Cut-out Diameter:	30.18" (766mm) x 6.18" (157mm)	18.03" (458mm) x 6.18" (157mm)
Mounting Depth:	3.82" (97mm)	3.82" (97mm)
Input Type	Dual gold-plated spring-loaded binding posts	
Product Weight:	22.2lbs (10.07kg)	12.6lbs (5.72kg)
Shipping Weight:	25.6lbs (11.61kg)	14.6lbs (6.62kg)
Shipping Units of Measure:	Each	

Warranty:	5 Years	
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Note: Dimensions are subject to change without notice.

Customer Support

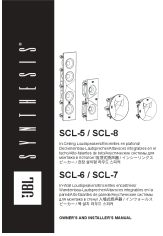
www.jblsynthesis.com

Manufacturer: Harman International Industries, Incorporated Address: 8500 Balboa Blvd, Northridge, CA 91329, UNITED STATES European Representative: Harman International Industries, Incorporated EMEA Liaison Office, Dan zig remade 16, 1013 AP Amsterdam, The Netherlands Harman International Industries, Limited, Ground Floor, Westside 2, London Road, Aspley, Heel Hempstead, Hertfordshire, HP3 9TD, United Kingdom © 2021 HARMAN International Industries, Incorporated. All rights reserved. JBL Synthesis and HDI (High Definition Imaging) are trademarks of HARMAN International Industries, Incorporated, registered in the United States and/or other countries. Tenex is a registered trademark of DuPont Tenjin Films. Features, specifications and appearance are subject to change without notice.

For additional languages, please visit www.jblsynthesis.com

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Documents / Resources

	<p>JBL SCL-5 Synthesis In Ceiling Speaker [pdf] Owner's Manual</p> <p>SCL-5, SCL-8, SCL-5 Synthesis In Ceiling Speaker, Synthesis In Ceiling Speaker, In Ceiling Speaker, Ceiling Speaker, Speaker, SCL-6, SCL-7</p>
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References

- [User Manual](#)