



IN-CEILING SPEAKERS

Installation and Instruction Manual

Introduction

Congratulations on your purchase of RBH Sound in-ceiling speakers! Your speakers are the result of many years of research and development dedicated to producing high quality products for home audio and audio/video systems.

This manual is designed to give you, the installer or owner, basic information as to the speaker's installation and operation. We recommend you thoroughly read through the material contained in this manual before installing your speakers. This will ensure that you have an understanding of how to setup your speakers for optimum performance and allow for years of listening enjoyment.

Break In Period

Allow several hours of listening time to adequately break in the speakers. As the speakers break-in, the driver suspension will loosen. The result of break-in will be an increase in low frequency response, improved definition, clarity and detail.

Features

All RBH Sound in-ceiling speakers feature a swing out dog leg mounting system with pre-started screws for fast and easy installation. Most RBH Sound in-ceiling speakers feature directional swivel tweeters to direct the sound to the main listening area. All RBH Sound in-ceiling speakers feature polyswitch protection circuitry designed to protect the tweeter from being over driven. This circuit will automatically reset itself once the volume is turned down or the problem causing the circuit to activate is removed.

Steep acoustic slope crossovers are used to integrate the drivers. The use of steep crossover slopes allows high power handling, minimized driver interaction anomalies, and maximizes the clarity with which each driver is able to produce its respective frequency band.

Painting the Speaker and Grille

A paint shield is included with your speaker. This shield can be used to protect the speaker when painting the speaker's rim (frame). If you plan to paint your speakers, we recommend it be done prior to installation. If you decide to paint your speakers sometime in the future, it is best to remove them from the ceiling or wall.

- When painting speakers, the paint shield provided in the packaging must be installed in place of the grille. The grille can also be painted.
- Painting the speaker's grille should be done with a paint sprayer set to fine for best results.
- Remove the grille from the speaker, peel off the grille fabric on the back of the grille and set aside.
- Place the grille on a flat surface and clean thoroughly with a non-residue solvent.
- Follow one of the methods below for painting the speaker and grille.

NOTE: Do not use a brush or roller on the grilles as this will clog the holes, greatly reducing the sound quality of the speakers. Do not paint the grilles while attached to the speakers. Be sure to remove the paint shields from the speakers and replace the fabric to the back of the grilles before reinstalling them and using the speakers.

The most effective way to paint perforated grilles. Here are a few painter's tricks that work well.

Spray can or paint sprayer method:

1. Start with the inside (rear), this painting process will cover most of the perforated holes.
2. Clogged perforations can be cleared with a shot of compressed air or an air compressor.
3. Let the grille dry sufficiently.
4. Working on the front side, apply the first coating in a light dusting spray. If using a spray can tilt to about a 45 degree angle, let it dry for 15 minutes, then spray another light dusting spray for the second coat until the whole surface is covered.
5. A third or fourth light dusting spray coat may be required, but "DO NOT OVER SPRAY".
6. The grille must be completely dry before installing onto speaker.

Water based paint method:

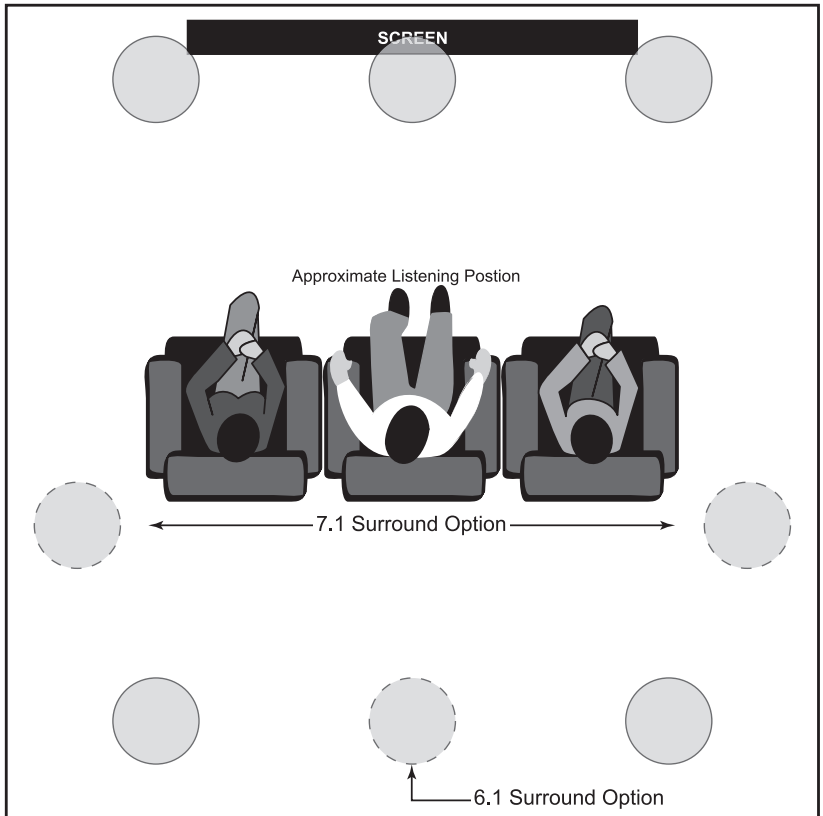
1. Add about 30% water (based on paint volume) to the water based paint to thin and mix well.
2. Dab paint over inside (rear) of the perforated grille lightly using clean rag or foam material
3. Clear clogged perforations with a shot of compressed air or an air compressor, if needed.
4. Let dry for an hour.
5. Dab paint over front side of the perforated grille with a rag or foam material.
6. Must let dry 20-30 minutes between coats.
7. Once completed, let dry for a couple hours before installing onto speaker.

Room Setup Suggestions

With nearly endless placement options, careful consideration for placement of the in-ceiling speakers needs to be considered, as installation requires cutting a hole in your wall or ceiling! When using speakers in home theater applications follow the guidelines illustrated below.

Swivel Tweeter Placement

The swivel tweeter allows sound to be directed toward or away from the listening area depending on the application. A tweeter aimed toward your listening position improves imaging and detail. When using a speaker with a swivel tweeter as front/main home theater speakers or as stereo speakers in a distributed audio system, aim the tweeter toward the main listening position. For rear/surround speakers, aim the tweeter toward the nearest reflecting surface (an adjacent wall or ceiling) for a more diffuse sound field (for more direct sound, aim the tweeter at your listening position).



Speaker Installation

RBH Sound in-ceiling speakers are designed on an infinite baffle configuration. This means a back box is not required for the speaker to perform properly. RBH Sound in-ceiling speakers have also been designed to make installation as easy as possible. Upon opening the speaker boxes you will notice that the screws are pre-started into the dog legs. The basic idea behind in-ceiling speakers is the speaker is held in place by sandwiching the speaker and the drywall. A frame around the speaker conceals the cutout in the drywall and presses against the front of the ceiling. Behind the ceiling, the speaker has a set of dog legs which cinch the speaker to the drywall.

CAUTION: Be certain there are no electrical wires, water pipes, heating ducts or any other obstructions in the planned area of installation before starting to drill or cut into the ceiling or wall. If there is an electrical outlet nearby, turn off the circuit breaker to avoid possible injury.

Installing WITH a New Construction Bracket:

If using a new construction bracket for the size of the speaker being installed, cutting the drywall should not be necessary. Continue with *“Connecting the Speaker”* instructions on the next page.

Installing WITHOUT a New Construction Bracket:

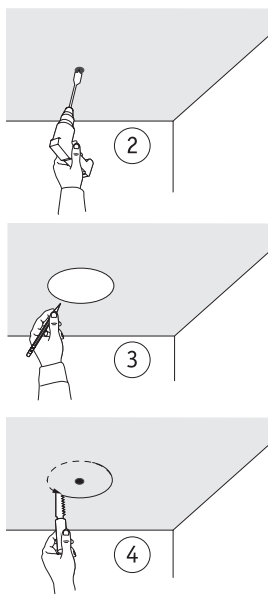
Use the cutout template supplied with the speaker for guidance in cutting the drywall, following *“Using the Template”* instructions below.

Using the Template:

1. These speakers are designed to be mounted between the framing members. Use a stud finder to locate the positions of joists and rafters. Make sure you have a 2-inch clearance from the outside of the cutout hole from joists and rafters.
2. Drill a 1/4-inch hole in the center of the area you plan to mount the speaker. Cut or bend a piece of wire (a coat hanger works well) to a 90-degree angle. Insert the wire into the pilot hole and fish around to make sure there aren't any obstructions which will interfere with the installation.

NOTE: If you must choose another location, the pilot hole can be easily patched.

3. Once a suitable location is found, use masking tape to temporarily place the supplied cutout template on the ceiling or wall, centered over the pilot hole. Draw a circle around the inside edge of the template.
4. Carefully cut the hole with the appropriate cutting tool to remove the material inside the circle inscribed by the template.



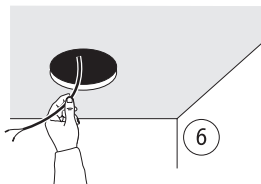
Speaker Installation (continued)

NOTE: The frame will overlap the cutting edge by about a 1/2-inch which will mask any minor cutting inaccuracies.

5. Confirm the speaker easily fits into the hole, without any gaps.

Connecting the Speaker:

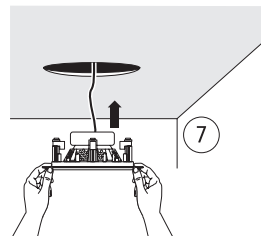
6. Pull the speaker wire out of the hole and connect the speaker. Split the two conductors of the speaker wire apart about 3-inches so they form a “Y”. Using wire strippers, remove about 1/2-inch of insulation from each of the two conductors of the wire to expose the bare metal and twist each of the conductors into a single unfrayed strand.



The speaker terminals will accommodate any speaker wire up to 14-gauge. Select an appropriate wire gauge from the following chart:

- 18 gauge for up to 50-feet
- 16 gauge for up to 100-feet
- 14 gauge for up to 200-feet

NOTE: When connecting a speaker it is very important to retain the correct polarity (improper polarity will cause reduced bass performance and unnatural imaging effects). To do this, be sure the wire attached to the positive terminal on the speaker (marked [+] or colored red) connects to the positive terminal on the amplifier. Similarly, the negative terminal (marked [-] or colored black) must connect to the negative terminal on the amplifier.



Finishing the Installation

7. Slide the speaker into the pre-cut hole in drywall or new construction bracket keeping the speaker cable above and out of the way to prevent pinching it.
8. Tighten the screws. The dog legs will automatically swing out and tighten (pinch) themselves against the new construction bracket or the drywall with the turning of the screws and will hold the speaker solidly in place. Don't over-tighten screws, if you over-tighten the screws the speaker frame may bend which will make it difficult to properly install the grille.

NOTE: If using a drill/driver, set the clutch to a low setting to prevent over-tightening and possible damage to the frame or dog legs. If using hand tools, tighten just until firm.

9. If the speaker has any tone controls or has a pivoting tweeter, leave the grille off until you can listen to the speaker. Once the speaker is adjusted, install the grille.

NOTE: Handle the grille carefully, as they pressure-fit into the installed speaker. If the grille does not install easily, try loosening the mounting screws before resorting to forcing the grille onto the speaker.

Speaker Accessories

Back Cans

Back Cans (BC's) attach neatly and directly to the back of in-ceiling speakers to prevent sound from being transferred into adjacent floors or rooms. Back cans on in-ceiling speakers are needed to meet building code requirements in select areas. All RBH Sound back cans are UL rated.



Back Cans

Blank Plates

Blank plates are a very clean and efficient way to cover the holes left in drywall when a new construction bracket is used or a speaker is removed. Install blank plates when in-wall/in-ceiling speakers will not be immediately installed after drywall is finished.



Short Back Can

New Construction Brackets

An excellent way to guarantee placement of in-wall and in-ceiling speakers prior to drywall installation, New Construction Brackets (NCB's) also make installation of in-wall and in-ceiling speakers faster and easier by reducing time and mess. Once drywall is installed, just connect the speaker to the speaker wire and install. New Construction Brackets eliminate the time and need to locate and cut drywall before speaker installation.



Blank Plates

Quick Install Brackets

Quick install brackets are exactly what their name implies; affordable speaker installation brackets that are no-brainers to install.



New Construction Bracket

Metal Tile Bracket

This metal bracket is designed expressly for commercial use with in-ceiling speakers, but can be used with most RBH Sound 6½-inch in-ceiling speaker model. The MTB-6.5 metal bracket distributes the weight of the speaker and keeps the speaker in place in the event the suspended ceiling tile the speaker is installed in becomes damaged. This bracket can be adjusted and slid into position before the self tapping screws are tightened down, making installation much easier than the competition's brackets. This bracket is a must for meeting most building code safety standards for speaker installation in suspended ceiling tiles.



Quick Install Bracket

For more information on RBH Sound in-ceiling speaker accessories go to www.rbhsound.com.



Metal Tile Bracket

Specifications



Model:	A-600	A-605/70	A-607
Series:	Architectural	Architectural	Architectural
System Type:	In-ceiling 2-way Speaker	In-ceiling 2-way Speaker (8 Ohms 70/100 Volt Ready)	In-ceiling 2-way Speaker
Frequency Response:	50Hz-20kHz \pm 3dB	88Hz-20kHz \pm 3dB	56Hz-20kHz \pm 3dB
Sensitivity:	90dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)
Recommended/Rated Power:	2-80 Watts	2-60 Watts ¹	10-70 Watts
Woofers(s):	(1) 6½" (165mm) Polypropylene	(1) 6½" (165mm) Poly Graphite	(1) 6½" (165mm) Polypropylene
Tweeter(s)	(1) ¾" (19mm) Silk Dome	(1) ¾" (19mm) Silk Dome	(1) 1" (25mm) Silk Dome
Swivel Tweeter(s):	No	Yes	Yes
Tweeter Protection:	No	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	3,000 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms 70/100 Volt ¹	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminum (paintable)	White Aluminum (paintable)	White Aluminum (paintable)
Cutout Dimensions:	8" (203mm) Dia.	8" (203mm) Dia.	7-3/4" (197mm) Dia.
Finished Dimensions:	9-1/8" (232mm) Dia. x 4-1/2" (232mm Dia. x 114mm D)	9-1/8" (232mm) Dia. x 4-1/2" (232mm Dia. x 114mm D)	9-1/8" Dia. x 3-7/8" D (232mm Dia. x 98mm D)
Weight:	3.75 lbs. (1.70 Kg)	4 lbs. (1.81 Kg)	3.45 lbs. (1.56 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-6R	Included with Speaker	BC-6R
Blank Plates:	BP-6R	N/A	BP-6R
New Construction Bracket:	NCB-6R	N/A	NCB-6R

¹ 70/100 Volt transformer included. Taps @ 2, 4, 8, 16 and 32 Watts.

Specifications (continued)



Model:	A-615	A-615DS	A-615L
Series:	Architectural	Architectural	Architectural
System Type:	In-ceiling 2-way Speaker	In-ceiling 2-way Dual Channel Speaker	In-ceiling 15-degree Fixed Offset LCR Speaker
Frequency Response:	55Hz-20kHz \pm 3dB	55Hz-20kHz \pm 3dB	55Hz-20kHz \pm 3dB
Sensitivity:	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)
Recommended/Rated Power:	10-80 Watts	10-80 Watts	10-80 Watts
Woofers(s):	(1) 6½" (165mm) Poly Graphite	(1) 6½" (165mm) Poly Graphite	(1) 6½" (165mm) Poly Graphite
Tweeter(s)	(1) ¾" (19mm) Silk Dome	(2) ¾" (19mm) Silk Dome	(2) 1" (25mm) Silk Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	3,000 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms x 2	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminum (paintable)	White Aluminum (paintable)	White Aluminum (paintable)
Cutout Dimensions:	7-3/4" (197mm) Dia.	7-3/4" (197mm) Dia.	8-14" (210mm) Dia.
Finished Dimensions:	9-1/8" Dia. x 3-7/8" D (232mm Dia. x 98mm D)	9-1/8" Dia. x 4" D (232mm Dia. x 102mm D)	9-3/8" Dia. x 4-1/2" D (238mm Dia. x 114mm D)
Weight:	3.45 lbs. (1.56 Kg)	3.35 lbs. (1.52 Kg)	3.2 lbs. (1.46 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-6R	BC-6R (can be used if modified)	N/A
Blank Plates:	BP-6R	BP-6R	N/A
New Construction Bracket:	NCB-6R	NCB-6R	NCB-6RL

Specifications (continued)



Model:	A-815	A-815L	MC-615
Series:	Architectural	Architectural	MC
System Type:	In-ceiling 2-way Speaker	In-ceiling 15-degree Fixed Offset LCR Speaker	In-ceiling 2-way Speaker
Frequency Response:	50Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB
Sensitivity:	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)
Recommended/Rated Power:	10-100 Watts	10-100 Watts	15-120 Watts
Woofers(s):	(1) 8" (203mm) Poly Graphite	(1) 8" (203mm) Poly Graphite	(1) 6½" (165mm) Aluminum
Tweeter(s):	(1) 1" (25mm) Silk Dome	(1) 1" (25mm) Silk Dome	(1) ¾" (19mm) Aluminum Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	3,000 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminum (paintable)	White Aluminium (paintable)	White Aluminum (paintable)
Cutout Dimensions:	9-3/4" (248mm) Dia.	10-1/4" (260mm) Dia.	7-3/4" (197mm) Dia.
Finished Dimensions:	10-3/4" Dia. X 4-3/4" D (273mm Dia. x 121mm D)	11-5/8" Dia. X 5-1/4" D (295mm Dia. x 133mm D)	9-1/8 x Dia. x 4-3/8" D (232mm Dia. x 111mm D)
Weight:	5 lbs. (2.27 Kg)	4.8 lbs. (2.16 Kg)	3.85 lbs. (1.75 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-8R	N/A	BC-6R
Blank Plates:	BP-8R	N/A	BP-6R
New Construction Bracket:	NCB-8R	NCB-8RL	NCB-6R

Specifications (continued)



Model:	MC-615L	MC-815	MC-815L
Series:	MC	MC	MC
System Type:	In-ceiling 15-degree Fixed Offset LCR Speaker	In-ceiling 2-way Speaker	In-ceiling 15-degree Fixed Offset LCR Speaker
Frequency Response:	50Hz-20kHz \pm 3dB	45Hz-20kHz \pm 3dB	45Hz-20kHz \pm 3dB
Sensitivity:	88dB (2.83V @ 1 Meter)	92dB (2.83V @ 1 Meter)	91dB (2.83V @ 1 Meter)
Recommended/Rated Power:	15-120 Watts	15-150 Watts	15-150 Watts
Woofers(s):	(1) 6½" (165mm) Aluminum	(1) 8" (203mm) Aluminum	(1) 8" (203mm) Aluminum
Tweeter(s):	(2) 1" (25mm) Aluminum Dome	(1) 1" (25mm) Aluminum Dome	(2) 1" (25mm) Aluminum Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	2,500 Hz	2,500 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminum (paintable)	White Aluminium (paintable)	White Aluminium (paintable)
Cutout Dimensions:	8-1/4" (197mm) Dia.	9-3/4" (248mm) Dia.	10-1/4" (260mm) Dia.
Finished Dimensions:	9-3/8" Dia. x 4-3/4" D (238mm Dia. x 121mm D)	10-3/4" Dia. X 5" D (273mm Dia. x 127mm D)	11-5/8" Dia. X 5½" D (295mm Dia. x 140mm D)
Weight:	3.7 lbs. (1.68 Kg)	6.15 lbs. (2.79 Kg)	5.95 lbs. (2.70 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	N/A	BC-8R	N/A
Blank Plates:	N/A	BP-8R	N/A
New Construction Bracket:	NCB-6RL	NCB-8R	NCB-8RL

Specifications (continued)



Model:	TK-615	VA-615	VA-615DS
Series:	TK	Visage	Visage
System Type:	In-ceiling 2-way Speaker	In-ceiling 2-way Speaker	In-ceiling 2-way Dual Channel Speaker
Frequency Response:	50Hz-20kHz \pm 3dB	55Hz-20kHz \pm 3dB	55Hz-20kHz \pm 3dB
Sensitivity	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)
Recommended/Rated Power:	15-100 Watts	10-80 Watts	10-80 Watts
Woofer(s)	(1) 6½" (165mm) Fiberglass	(1) 6½" (165mm) Poly Graphite	(1) 6½" (165mm) Poly Graphite
Tweeter(s):	(1) ¾" (19mm) Aluminum Dome	(1) 1" (25mm) Silk Dome	(2) ¾" (19mm) Silk Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	3,000 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms	8 Ohms x2
Cabinet/Color:	White Frame (paintable)	Black Frame	Black Frame
Grille:	White Aluminum (paintable)	Magnetic White Steel (paintable)	Magnetic White Steel (paintable)
Cutout Dimensions:	7-3/4" (197mm) Dia.	7-3/4" (197mm) Dia.	7-3/4" (197mm) Dia.
Finished Dimensions:	9-1/8" Dia. x 4-3/8" D (232mm Dia. x 111mm D)	9" Dia. x 3-7/8" D (229mm Dia. x 98mm D)	9" Dia. x 3-7/8" D (229mm Dia. x 98mm D)
Weight:	3.8 lbs. (1.72 Kg)	3.25 lbs. (1.48 Kg)	3.25 lbs. (1.48 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-6R	BC-6R	BC-6R (can be used if modified)
Blank Plates:	BP-6R	BP-6R	BP-6R
New Construction Bracket:	NCB-6R	NCB-6R	NCB-6R

Specifications (continued)



Model:	VA-615L	VF-615	VM-615
Series:	Architectural	Visage	Visage
System Type:	In-ceiling 15-degree Fixed Offset LCR Speaker	In-ceiling 2-way Speaker	In-ceiling 2-way Speaker
Frequency Response:	55Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB
Sensitivity	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)
Recommended/Rated Power:	10-80 Watts	15-100 Watts	15-120 Watts
Woofers:	(1) 6½" (165mm) Poly Graphite	(1) 6½" (165mm) Fiberglass	(1) 6½" (165mm) Aluminum
Tweeter(s):	(1) 1" (25mm) Silk Dome	(1) 1" (25mm) Aluminum Dome	(1) 1" (25mm) Aluminum Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	3,000 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms	8 Ohms
Cabinet/Color:	Black Frame	Black Frame	Black Frame
Grille:	Magnetic White Steel (paintable)	Magnetic White Steel (paintable)	Magnetic White Steel (paintable)
Cutout Dimensions:	8-1/4" (210mm) Dia.	7-3/4" (197mm) Dia.	7-3/4" (197mm) Dia.
Finished Dimensions:	9-3/8" Dia. x 4-1/2" D (238mm Dia. x 114mm D)	9" Dia. x 4-1/8" D (229mm Dia. x 105mm D)	9" x Dia. x 4-3/8" D (229mm Dia. x 111mm D)
Weight:	3.25 lbs. (1.48 Kg)	3.60 lbs. (1.63 Kg)	3.65 lbs. (1.66 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	N/A	BC-6R	BC-6R
Blank Plates:	N/A	BP-6R	BP-6R
New Construction Bracket:	NCB-6RL	NCB-6R	NCB-6R

Specifications (continued)



Model:	VM-615L	VA-815	VM-815L
Series:	Visage	Visage	Visage
System Type:	In-ceiling 15-degree Fixed Offset LCR Speaker	In-ceiling 2-way Speaker	In-ceiling 15-degree Fixed Offset LCR Speaker
Frequency Response:	50Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB	45Hz-20kHz \pm 3dB
Sensitivity	88dB (2.83V @ 1 Meter)	92dB (2.83V @ 1 Meter)	91dB (2.83V @ 1 Meter)
Recommended/Rated Power:	15-120 Watts	10-100 Watts	15-150 Watts
Woofers:	(1) 6½" (165mm) Aluminum	(1) 8" (203mm) Poly Graphite	(1) 8" (203mm) Aluminum
Tweeter(s):	(1) 1" (25mm) Aluminum Dome	(1) 1" (25mm) Silk Dome	(2) 1" (25mm) Aluminum Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	2,500 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms	8 Ohms
Cabinet/Color:	Black Frame	Black Frame	Black Frame
Grille:	Magnetic White Steel (paintable)	Magnetic White Steel (paintable)	Magnetic White Steel (paintable)
Cutout Dimensions:	8-1/4" (210mm) Dia.	9-3/4" (197mm) Dia.	10-1/4" (260mm) Dia.
Finished Dimensions:	9-3/8" Dia. x 4-3/4" D (238mm Dia. x 121mm D)	10-3/4" Dia. x 4-3/4" D (273mm Dia. x 121mm D)	11-5/8" Dia. X 5½" D (295mm Dia. x 140mm D)
Weight:	3.75 lbs. (1.70Kg)	4.80 lbs. (2.18 Kg)	6.00 lbs. (2.73 Kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	N/A	BC-8R	N/A
Blank Plates:	N/A	BP-8R	N/A
New Construction Bracket:	NCB-6RL	NCB-8R	NCB-8RL

Discontinued Product—Specifications



Model:	A-504D	A-505R	A-506
Series:	Architectural	Architectural	Architectural
System Type:	In-ceiling Dual Channel Speaker	In-ceiling 2-way Speaker	In-ceiling 2-way Synchronous Speaker
Frequency Response:	60Hz-20kHz \pm 3dB	60Hz-20kHz \pm 3dB	60Hz-20kHz \pm 3dB
Sensitivity:	88dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)
Recommended/Rated Power:	10-75 Watts	10-75 Watts	10-75 Watts
Woofers(s):	(1) 5 $\frac{1}{4}$ " (133mm) Poly Graphite	(1) 5 $\frac{1}{4}$ " (133mm) Poly Graphite	(1) 5 $\frac{1}{4}$ " (133mm) Poly Graphite
Tweeter(s):	(1) 1" (25mm) Mylar Dome	(1) $\frac{3}{4}$ " (19mm) Mylar Dome	(1) $\frac{3}{4}$ " (19mm) Mylar Dome
Swivel Tweeter(s):	No	No	No
Tweeter Protection:	Yes	Yes	No
Crossover Frequency:	2,500 Hz	3,000 Hz	3,000 Hz
Crossover Slope:	6dB/Octave	6dB/Octave	6dB/Octave
Impedance:	8 Ohms x2	8 Ohms	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminium (paintable)	White Aluminum (paintable)	White Aluminium (paintable)
Cutout Dimensions:	6-3/4" (172mm) Dia.	6-3/4" (171mm) Dia.	6-3/4" (172mm) Dia.
Finished Dimensions:	8" Dia. X 2-1/2" D (203mm Dia. x 64mm D)	7-3/4" Dia. x 3-1/2" D (197mm Dia. x 89mm D)	7-3/4" W x 11" H x 3-3/4" D (197mm W x 95mm D)
Weight:	1.95 lbs. (.88 Kg)	2.7 lbs. (1.22 Kg)	2.3 lbs. (1.04 kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-5R	BC-5R	BC-5R
Blank Plates:	BP-5R	BP-5R	BP-5R
Construction Bracket:	NCB-5R	NCB-5R	NCB-5R
Discontinued Date:	September 2007	August 2012	September 2007

* 70 volt transformer included. Taps @ 2, 4, 8, 16, and 32 Watts.

Discontinued Product—Specifications (continued)



Model:	A-605	A-615/70	A-815D
Series:	Architectural	Architectural	Architectural
System Type:	In-ceiling 2-way Speaker	In-ceiling 2-way (8 Ohms / 70 Volt Ready)	In-ceiling 2-way Speaker
Frequency Response:	50Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB	50Hz-20kHz (\pm 3dB)
Sensitivity:	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)	90dB (2.83V @ 1 Meter)
Recommended/Rated Power:	2-80 Watts	2-80 Watts*	20-100 Watts
Woofers(s):	(1) 6½" (165mm) Polypropylene	(1) 5¼" (133mm) Poly Graphite	(1) 8" (203mm) Poly Graphite
Tweeter(s):	(1) ¾" (19mm) Silk Dome	(1) ¾" (19mm) Silk Dome	(2) 1" (25mm) Silk Dome
Swivel Tweeter(s):	No	Yes	Yes
Tweeter Protection:	No	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	2,500 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms	8 Ohms / 70 Volt*	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminum (paintable)	White Aluminium (paintable)	White Aluminium (paintable)
Cutout Dimensions:	8" (203mm) Dia.	8-3/4" (222mm) Dia.	9-3/4" (248mm) Dia.
Finished Dimensions:	9-1/8" (232mm) Dia. x 4-1/2" (232mm Dia. x 114mm D)	10-3/16" Dia. x 9-1/8" D (262mm Dia. x 232mm D)	10-3/4" Dia. x 4-3/4" D (273mm Dia. x 121mm D)
Weight:	3.75 lbs. (1.70 Kg)	7.6 lbs. (3.45 kg)	4.95 lbs. (2.25 kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-6R	BC-6R	BC-8R
Blank Plates:	BP-6R	BP-6R	BP-8R
Construction Bracket:	NCB-6R	NCB-6R	NCB-8R
Discontinued Date	January 2013	September 2007	September 2007

* 70 volt transformer included. Taps @ 2, 4, 8, 16, and 32 Watts.

Discontinued Product—Specifications (continued)



Model:	A-615D	MC-615/70	TK-815
Series:	Architectural	MC	TK
System Type:	In-ceiling 2-way Dual Channel Speaker	In-ceiling 2-way (8 Ohms / 70 Volt Ready)	In-ceiling 2-way Speaker
Frequency Response:	55Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB	50Hz-20kHz \pm 3dB
Sensitivity:	90dB (2.83V @ 1 Meter)	88dB (2.83V @ 1 Meter)	91dB (2.83V @ 1 Meter)
Recommended/Rated Power:	10-80 Watts	15-120 Watts	15-150 Watts
Woofer(s):	(1) 6½" (165mm) Poly Graphite	(1) 5¼" (133mm) Aluminum	(1) 8" (203mm) Fiberglass Matrix Cone
Tweeter(s):	(1) ¾" (19mm) Silk Dome	(1) ¾" (19mm) Aluminum Dome	(1) 1" (25mm) Aluminum Dome
Swivel Tweeter(s):	Yes	Yes	Yes
Tweeter Protection:	Yes	Yes	Yes
Crossover Frequency:	3,000 Hz	3,000 Hz	2,500 Hz
Crossover Slope:	12dB/Octave	12dB/Octave	12dB/Octave
Impedance:	8 Ohms x2	8 Ohms / 70 Volt*	8 Ohms
Cabinet/Color:	White Frame (paintable)	White Frame (paintable)	White Frame (paintable)
Grille:	White Aluminium (paintable)	White Aluminium (paintable)	White Aluminium (paintable)
Cutout Dimensions:	7-3/4" (197mm) Dia.	8-3/4" (222mm) Dia.	9-3/4" (248mm) Dia.
Finished Dimensions:	9-1/8" Dia. x 4" D (232mm Dia. x 102mm D)	10-3/16" Dia. x 9-1/8" D (262mm Dia. x 232mm D)	10-3/4" Dia. x 4-7/8" D (273mm Dia. x 124mm D)
Weight:	3.35 lbs. (1.52 kg)	7.6 lbs. (3.45 kg)	5.5 lbs. (2.49 kg)
Warranty:	25 Years	25 Years	25 Years
Back Can:	BC-6R	BC-5R	BC-8R
Blank Plates:	BP-6R	BP-5R	BP-8R
Construction Bracket:	NCB-6R	NCB-5R	NCB-8R
Discontinued Date	January 2012	September 2007	September 2007

Troubleshooting

Situation	Probable Cause	Solution
No sound from speakers.	Speaker wire not connected. Speaker selector on amplifier is not on.	Make sure wire is properly connected to the speaker and the amplifier observing proper polarity. Activate proper speaker selector on amplifier.
No sound from one speaker.	Balance control on receiver or preamp is not centered. Speaker wire not completely connected.	Place balance control in the center. Check all connections at amplifier and speakers.
Very little bass and/or imaging	Speakers are wired out of phase.	Check entire system for proper polarity and make adjustments as necessary.

Warranty

Your RBH Sound in-ceiling speaker is covered by a limited warranty against defects in materials and workmanship for a period of 25 years. This warranty is provided by the authorized RBH Sound dealer where the speaker was purchased. Warranty repair will be performed only when your purchase receipt is presented as proof of ownership and date of purchase. Defective parts will be repaired or replaced without charge by your dealer's store or by RBH Sound authorized locations to service RBH Sound products. Charges for unauthorized service and transportation cost are not reimbursable under this warranty. This warranty becomes void if the product has been damaged by alteration, misuse or neglect. RBH Sound assumes no liability for property damage or any other incidental or consequential damage whatsoever which may result from the failure of this product. Any and all warranties of merchantability and fitness implied by law are limited to the duration of this express warranty. Some states do not allow limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

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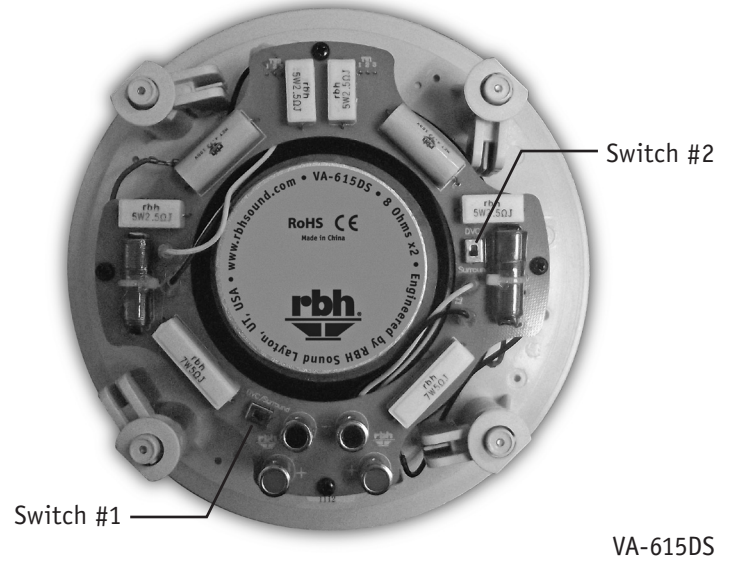
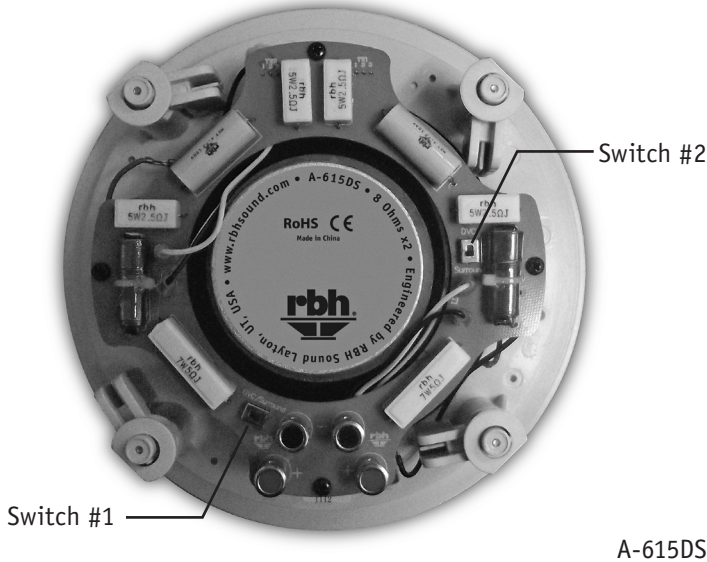


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A-615DS and VA-615DS SURROUND/DVC SWITCHES



Below are the basic instructions for the switch configuration for both the A-615Ds and VA-615DS in-ceiling surround speakers.

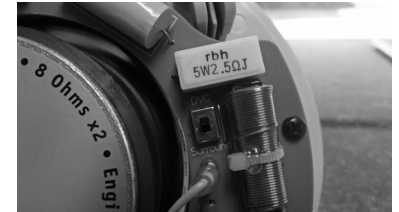
DVC

Set both #1 and #2 switches to "DVC" and connect one channel to the left set of speaker terminals, and the other to the right set of speaker terminals.

WARNING: DO NOT OPERATE THIS CONFIGURATION WITH SWITCH #1 SET TO SURROUND MODE. DAMAGE TO THE SPEAKER AND/OR AMPLIFIER MAY RESULT.



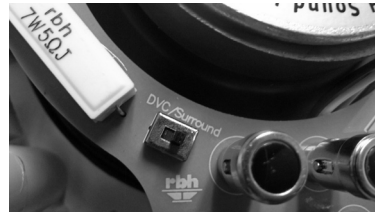
Switch #1



Switch #2

MONO SURROUND (Single Channel Surround)

Set both #1 and #2 switches to "Surround" and connect the speaker wires to either the left or right set of speaker terminals.



Switch #1



Switch #2

STEREO SURROUND (Dual Channel Surround)

Set the switch #1 next to the speaker terminals to "DVC" and switch #2 by the right coil to "Surround".

WARNING: DO NOT OPERATE THIS CONFIGURATION WITH SWITCH #1 SET TO SURROUND MODE. DAMAGE TO THE SPEAKER AND/OR AMPLIFIER MAY RESULT.



Switch #1



Switch #2

For assistance, please call 800-543-2205 or check <http://www.rbhsound.com> for updated instructions.