

RX47  
RX57  
RX57DIN  
RX67  
RX67DIN  
RX87  
RX97



Boston Rally® Series  
Coaxial Speaker Systems  
Installation Instructions

**Boston**

*BostonAcoustics.com*

## Specifications

	RX97	RX87	RX67	RX67DIN	RX57	RX57DIN	RX47
Nominal Size (woofer)	6 x 9"	5 x 7"	6½" (160mm)	6½" (165mm DIN)	5¼" (130mm)	5¼" (130mm DIN)	4" (100mm)
Recommended Amplifier Power	12–200 watts	12–160 watts	12–160 watts	12–160 watts	12–140 watts	12–140 watts	12–120 watts
Nominal Impedance	4 ohms	4 ohms	4 ohms	4 ohms	4 ohms	4 ohms	4 ohms
Frequency Response (±3dB, in-car)	35–20kHz	50–20kHz	55–20kHz	55–20kHz	58–20kHz	58–20kHz	85–20kHz
Mounting Cutout Diameter	8 <sup>1</sup> / <sub>16</sub> x 6" (221 x 152mm)	7¼ x 5" (184 x 127mm)	5" (127mm)	5¼" (132mm)	4 <sup>1</sup> / <sub>16</sub> " (119mm)	4 <sup>5</sup> / <sub>8</sub> " (117mm)	3 <sup>9</sup> / <sub>16</sub> " (91mm)
Mounting Depth	3" (76mm)	2½" (64mm)	2½" (64mm)	2 <sup>5</sup> / <sub>8</sub> " (65mm)	2 <sup>5</sup> / <sub>16</sub> " (59mm)	2¼" (57mm)	1 <sup>5</sup> / <sub>8</sub> " (41mm)
Mounting Depth w/Spacer (Optional on RX67 & RX57)	3½" (92mm)	3" (76mm)	2" (51mm)	—	1 <sup>3</sup> / <sub>16</sub> " (46mm)	—	—

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### Notice

Installation of automotive stereo systems requires experience with a variety of mechanical and electrical procedures. This manual explains the installation flexibility of the Boston Rally Series coaxial speakers, not the exact installation methods to be used in any given case.

**If you do not have the experience that these procedures require, we strongly suggest you consult your Boston Acoustics dealer about professional installation.**

## Tools Required

These are the tools required to complete the basic installation of the Boston Rally Series components. Additional tools are necessary for more custom work.

1. Electric drill with  $\frac{1}{8}$ " (3mm) and  $\frac{1}{4}$ " (6mm) bits
2. Phillips screwdriver
3. Saber saw, hole saw or nibbler
4. Utility knife
5. Silicon sealant or weather stripping (optional)
6. Pliers or 7mm wrench (RX87 & RX97 only)

## Before You Begin

Familiarize yourself with the location of fuel lines, hydraulic brake lines and electrical wiring. Use extreme caution when cutting or drilling around these parts.

Shut off all stereo and other electrical devices before you start.

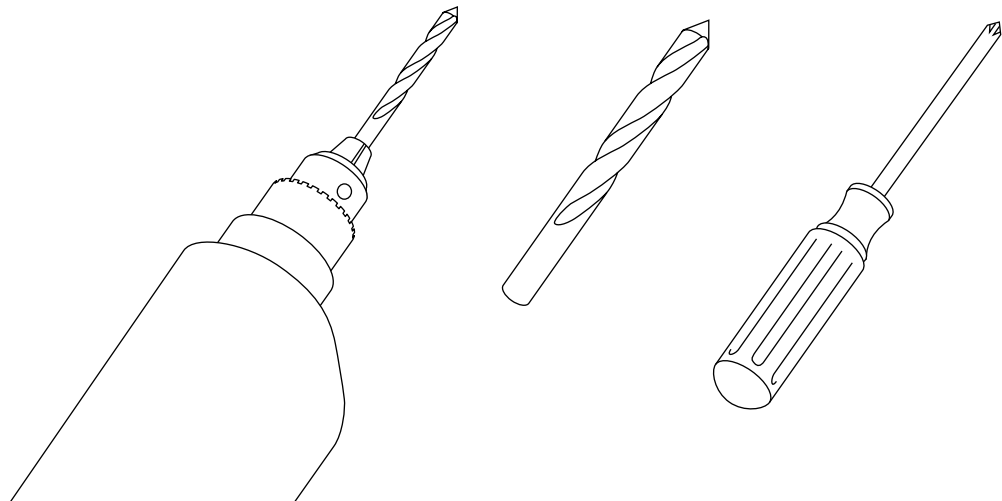
Protect the speakers by keeping them in their plastic bags until final installation. Speakers attract metal chips and filings. Always rest the speakers with their cones and tweeters facing up.

Never use force when installing any speaker.

Check clearances on both sides of a mounting surface before drilling any holes or installing any screws. Some screws require over an inch of clearance behind the mounting surface.

Use a utility knife to cut fabric away from hole locations before you drill or cut. Fabric is easily snagged by drill bits and hole saws.

Always wear protective eyewear when cutting and drilling holes or when using power tools.



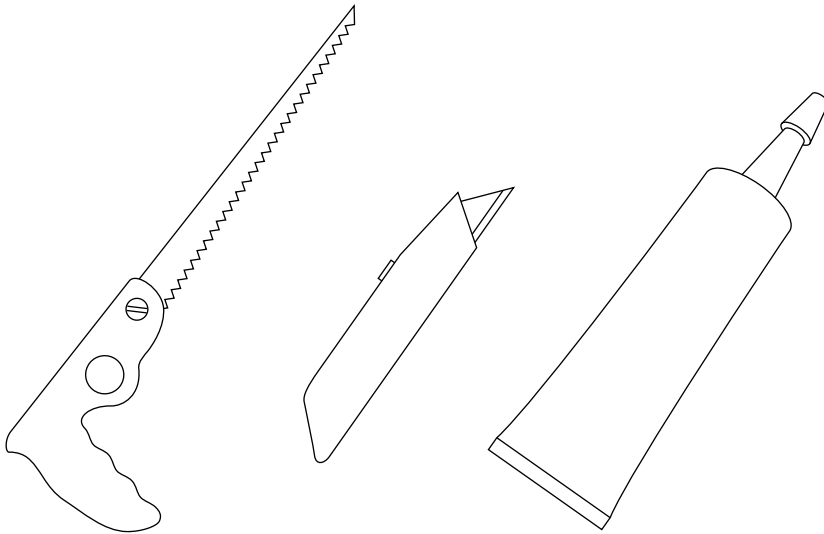
## Planning the Installation

Read all instructions carefully before you attempt any installation procedures. Make sure all operations are clear to you.

Make sure you have adequate time and shelter to complete the installation. Many installations require multiple days to complete.

Examine the Boston Rally Series speakers and hardware so that you are familiar with them before you start the installation.

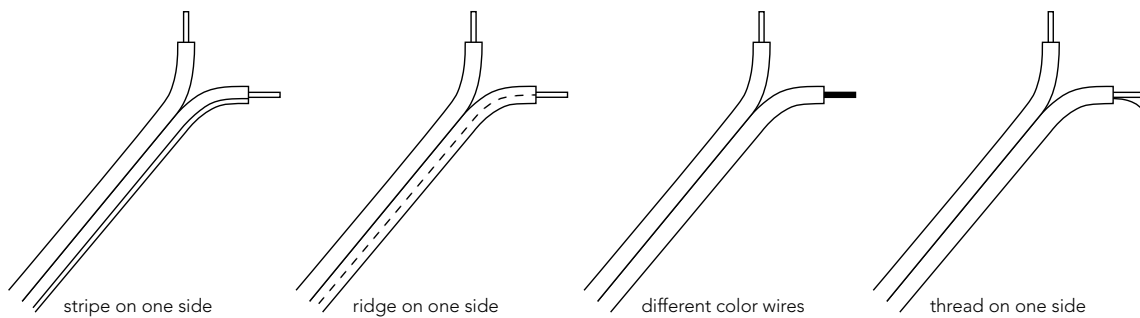
1. Decide on speaker placement.
2. Run the speaker wires.
3. Install the speakers and complete the wiring.



## Speaker Wiring

For your convenience, two sets of two-conductor wire are provided to use between the speakers and the amplifier or head-unit. Other wire may be substituted if desired as long as it is at least 18 gauge.

Two-conductor speaker wire connects the positive and negative terminals of each speaker to the corresponding positive and negative terminals on the amp or head-unit. One side of the wire will be marked in some way. Use the marked conductor to connect the positive terminals and the plain conductor to connect the negative terminals.



### Routing the Wires

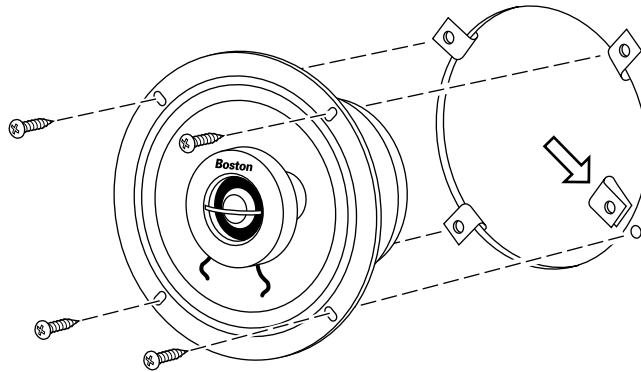
Include a large safety margin when estimating the length of each wire.

**For Doors:** Run the wires through factory harnesses or existing holes, if possible. If drilling new holes, file the edges and install rubber grommets and PVC tubing to protect the wires against abrasion.

**For Rear Deck:** Run wires along the door sills just inside the car, lifting and replacing carpet as required. You may have to remove the rear seat to pass wires back to the rear.

## Installing Speakers in Factory Cutouts

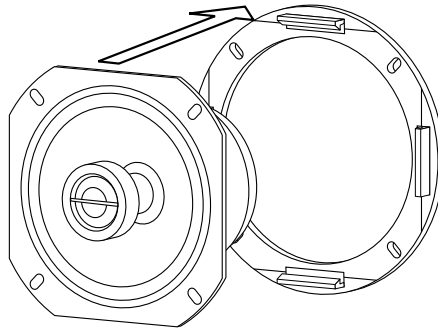
1. Make sure the mounting surface provides a complete air seal between the front and the back of the speaker. If the surface is uneven, or if air can leak directly from the back of the speaker to the front, seal the air leaks with silicon sealant or weather stripping. Make sure that the sealing material does not touch any moving part of the speaker.
2. Attach the wires to the speaker.
3. Attach the assembly to the factory cutout using four of the supplied #8 sheet metal screws or other hardware. Tighten the screws just enough to seal the woofer against the mounting surface. Do not over-tighten the screws.



### RX47 Notice

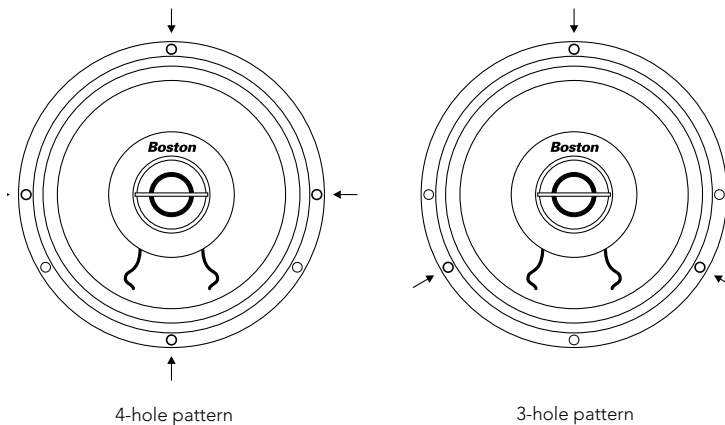
The RX47 is supplied with the grille adapter ring attached to the metal basket of the speaker. For many factory cutouts, this adapter ring will have to be removed for installation.

1. Hold the speaker between both of your palms with the speaker cone facing you. Hook your fingers behind the magnet assembly.
2. Push one locking tab out and back with your thumbs to release it from the speaker frame (see diagram). Repeat this on all sides of the adapter until the adapter falls free.



### RX67/RX67DIN Mounting Screw Locations

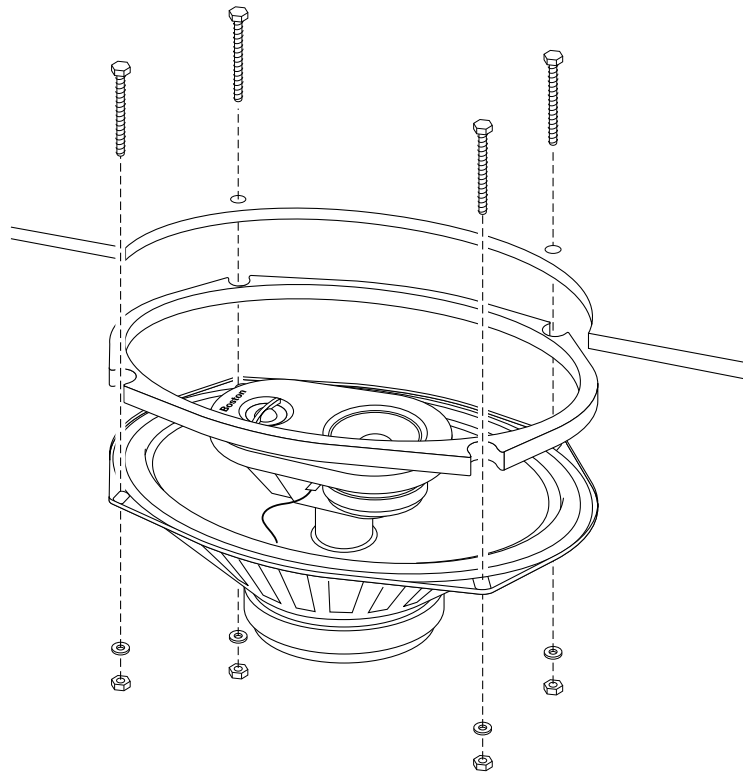
Factory speaker locations for 6-inch (160mm & 165mm) speakers provide various screw holes for mounting the speaker. The RX67 and RX67DIN include several different sets of holes. Rotate the speaker until the correct holes line up.





### RX87 and RX97 Installation Option

The RX87 and RX97 can also be installed from underneath the rear deck to reduce the installed height of the tweeter module. A spacer is supplied with these speakers to protect the rubber surround. The spacer is installed between the speaker and the mounting surface as shown in the diagram.



## Installing Speakers In Nonstandard Locations

Check the clearance of both speaker locations. Your vehicle may not be symmetrical. (There may be multiple window controls on the driver's side, for example.)

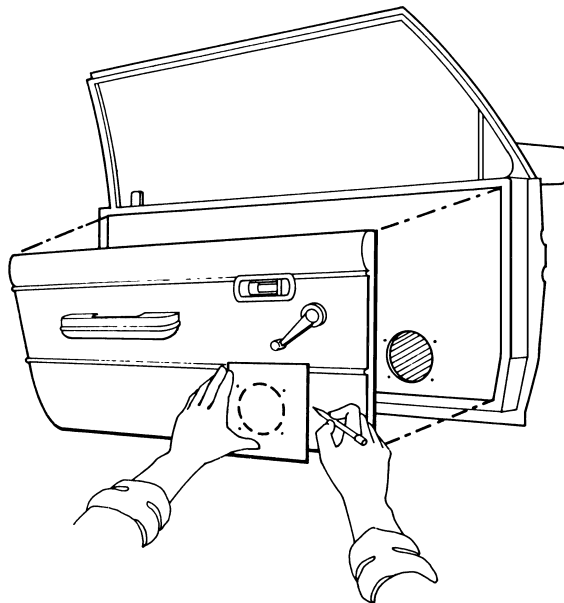
If installing in the doors, remove the interior panel. Avoid possible speaker contact with door frames, handles and window tracks. Check the window clearance by rolling the window up and down. Also check for clearance with the door open and closed.

The Boston Rally Series speakers are heavy, and must be held in place by a strong, rigid structure.

Check for signs of excessive water leakage inside the door. If the door has a plastic moisture barrier, cut a flap to shield the speakers, or make a flap from heavy sheet plastic and attach it to the inside of the door above the speaker.

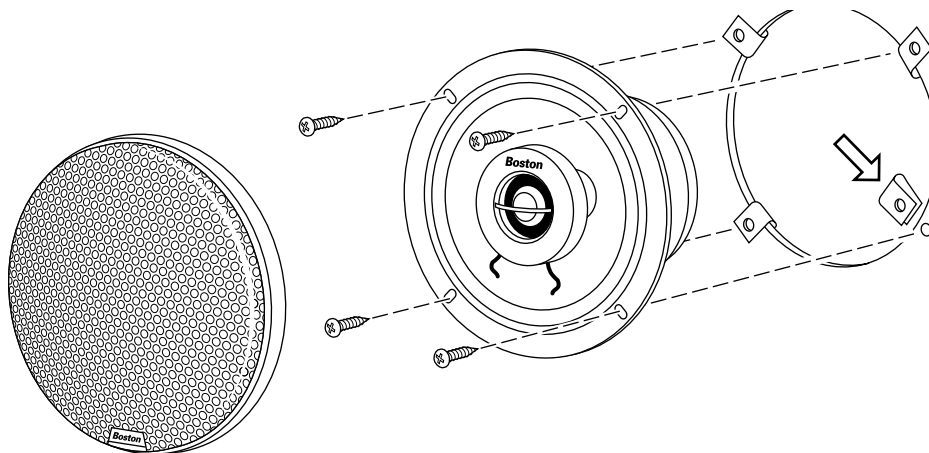
1. Trace the template onto the mounting panel. Mark the pilot hole, the edges of the large cutout and the locations of the screws.

2. Make sure that the mounting surface provides a complete air seal between the front and the back of the speaker. If the surface is uneven, or if air can leak directly from the back of the speaker to the front, seal the air leaks with silicon sealant or weather stripping. Make sure that the sealing material does not touch any moving part of the speaker.



#### RX47/RX57/RX67

3. Drill the pilot hole at the center of the cutout, then drill four  $\frac{1}{8}$ " holes for the speaker's mounting screws. Make the large circular cutout with a saber saw, hole saw or nibbler (depending on the material).
4. Slip "U"-clips over the screw holes. Position the flat side toward the speaker as shown in the diagram.
5. Attach the wires to the speaker.
6. Attach the assembly to the cutout as shown in the diagram. Use four of the supplied #8 x 1" sheet metal screws or other hardware. Tighten the screws just enough to seal the woofer against the mounting surface. Do not overtighten the screws.



7. Attach the grille. Snap the grille on to the speaker assembly from the front. Be sure to align the logo on the bottom of the grille before attaching the grille.

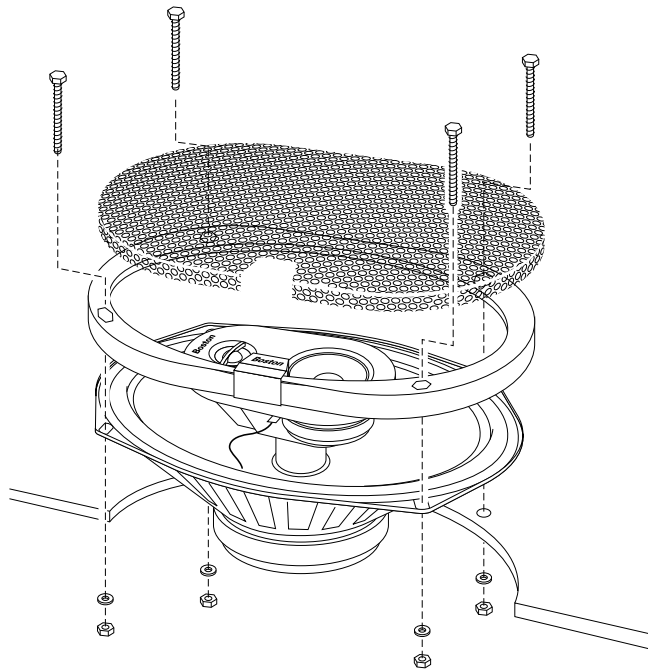
#### Optional Spacers

To reduce the mounting depth by  $\frac{1}{2}$ ", optional spacers are available that can be mounted behind the RX57 or the RX67.

### RX87/RX97

3. Drill four 1/4" holes for the speaker's mounting screws. Make the large elliptical cutout with a saber saw or nibbler (depending on the material).

4. Attach the assembly to the cutout as shown in the diagram. Use the supplied machine screws and nuts or other hardware. Tighten the nuts just enough to seal the woofer against the mounting surface. Do not over-tighten the hardware.



5. Attach the wires to the speaker.

6. Attach the grille front. Snap the grille on to the grille frame from the front. Be sure to align the notch on the grille with the logo on the grille frame.

## Professional Tips

- Some installers construct mounting surfaces from MDF. This dense material dampens resonances and provides a rigid mounting surface.
- In cases where the speaker is being mounted on the surface of the interior door panel and there is a gap between the panel and the metal of the door, an appropriate thickness of MDF can be used as a spacer.
- When mounting the speakers in nonstandard locations in the front of the car, try mounting them as high up and forward in the doors as possible to avoid firing into knees, seats and other obstructions.

## Adding Subwoofers and Electronic Crossovers

The best way to combine a subwoofer with your Boston Rally Series speaker system is with an electronic crossover. Level matching (making the subwoofer play at the same level as the coaxial system) and precise frequency division are much easier to get right with an electronic crossover. Additionally, electronic crossovers have no insertion loss, and they isolate the coaxial speakers from the subwoofer's back EMF.

### Subwoofer Crossover Frequency Recommendations

It is hard to predict the ideal crossover frequency to use between subwoofers and the Boston Rally Series RX47, RX57, RX57DIN, RX67, RX67DIN, RX87 or RX97 coaxial speakers. Factors such as the interior dimensions of the car, the type of subwoofers and the installation method all play a role in determining the required crossover frequency. We recommend using an electronic crossover flexible enough to easily change crossover frequencies. Ideally, the subwoofer crossover frequency and level should be independent from the high-pass section(s).

**Only through experimentation can the optimum crossover frequency be determined. However, you can use the following guide as a starting point.** Start with a crossover frequency of 100Hz for the RX47, 90Hz for the RX57/RX57DIN, 80Hz for the RX67/RX67DIN or RX87 and 70Hz for the RX97.

Experiment with the crossover frequency to achieve a natural, balanced sound. Keep in mind that an electrical gap in crossover frequencies is often necessary to achieve a flat acoustical response.

Depending on the installation location, it may become necessary to invert the phase of the coaxial speakers relative to the subwoofers. Even though they may be electrically correct, they may be acoustically incorrect.

## Limited Warranty

For one year from the date of purchase, Boston Acoustics will repair for the original owner any defect in materials or workmanship that occurs in normal use, without charge for parts or labor.

Your responsibilities are to use the speaker system according to the instructions supplied, to provide safe and secure transportation to the authorized Boston Acoustics service representative and to present proof of purchase in the form of your sales slip when requesting service.

Excluded from this warranty is damage that results from abuse, misuse, accidents, shipping, or repairs or modification by anyone other than an authorized service representative. This warranty is void if the serial number has been removed or defaced.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

### If Service Seems Necessary

First, contact the retailer from whom you purchased this product.

If that's not possible, write to:

Boston Acoustics, Inc.  
Service Department  
300 Jubilee Drive  
Peabody, MA 01960

We will promptly advise you of what action to take. If it is necessary to return your speaker to the factory, ship it prepaid. After it is repaired, we will return it freight prepaid to the U.S. and Canada.

**Boston**

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