



# Installation Manual

## QSA Series Speakers

Self-amplified ceiling speaker

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Please check following parts.

There should be one box with powered speaker enclosure unit with unpowered speakers unit, and another box with two unpowered units.

(4) of Speaker Grilles

(4) of Electrically isolated ceiling tile bridge, Pre Construction Mud Ring, or Metal C-Ring

(1) Power supply. (No power supply is included for EFS, EFM, EPS, and EPM series)

When removing the speakers from the packaging, please make sure that you keep the paint masking card board in a safe place for any painting that is to be done after the installation.

### For Suspended Ceiling Installations

Remove the ceiling tile from the selected speaker location that is to be cut from the ceiling, and an adjacent ceiling tile for access.

Place the tile to be cut, finished side down, on a flat surface. Place the tile bridge, in the desired location, on back of the tile. Make sure the edges of the tile bridge will rest on the grid portion of the ceiling. Mark the speaker hole with pencil, using the hole of the tile bridge as the template.

Place the marked tile onto an empty open box or trashcan, to catch any debris. Please make sure to have appropriate clearance for the saw blade and cut the hole with a “plunge” hand or power saw.

Replace cut ceiling tile in ceiling. Lay the tile bridge in the ceiling, lining up the hole in the tile bridge with the hole that was cut in the ceiling tile. **IT IS EXTREMELY IMPORTANT** to make sure the tile bridge is oriented so it is supported by the lip of the grid.

Fully insert the speaker from below through the hole in the tile and its tile bridge support, making sure to hold the speaker carefully to avoid damaging the speaker cone. Start tightening the screws on the face of the speaker can. Continue, checking to make sure the dog ears (flippers) are fully extended, and that the tile bridge is sitting flush against the tile. Make sure to keep a secure hold on the speaker until the dog ears are fully tightened, clamping securely onto the tile bridge and ceiling tile. **DO NOT OVER TIGHTEN!** Secure the speaker to structure above the ceiling with provided metal strap.

Attach the speaker grille, taking note to insert tabs all the way. The end of the tabs on the grill, when correctly installed, will be slightly above the tile bridge and between the tile bridge and speaker. If you find that a tab has gone underneath the tile bridge, gently pull the tab toward the speaker until the tab pops into place slightly above the tile bridge and between the tile bridge and speaker. The grill will seat flush or level against the ceiling. Any gaps between the grill and ceiling may indicate that the tab in that area has not ‘snapped’ in place. Failure to make sure the grill is ‘snapped’ in place could lead to the grill falling out.

### For Hard Lid Ceiling Installations-Retro Fit (Drywall, Gypsum, Wood, or other non-removable material)

Remove the parts to be installed from the shipping box. Each speaker set includes the main speaker enclosure, one retro fit metal C ring (SACSD), and one snap on grille. Powered units include a power supply that can be terminated with an “N” plug or a two position Phoenix style plug.

Select the desired location for the speaker. Please make sure to check for any obstructions behind the desired area. Studs, electrical, or HVAC systems should be noted on building plans.

Place the metal C Ring in the selected location, and use a pencil to mark the inside diameter of the C ring. Using a rotozip, hand saw, or other material cutting device, cut along the pencil marked area. Using a vacuum with a hose while cutting will reduce the debris during this process.

Dry fit the speaker in the hole to make sure you have proper clearance and that the speaker slides in easily. Place your tie off on the structure above. Now place the metal C ring in the ceiling. Due to the opening in the C ring, you will have to turn the C ring into the hole and set it on the top of the hard lid.

Make any wiring connections, with the speaker below the hole. Attach the wiring according to the speaker model and type of connectors on the top of the enclosure. For Phoenix type style connections use the following schematics, paying close attention to the polarity and position. For N type power and RCA style line level connections, use the schematics, paying close attention to the polarity and position.

Fully insert the speaker from below through the hole, taking note of where the opening of the C ring is at. **ALL DOG EARS (FLIPPERS) MUST BE SEATED ON THE METAL PORTION OF THE C RING.** Failing to do this may cause damage to the hard lid, during tightening or during grill installation/removal. Please make sure to hold the speaker carefully to avoid damaging the speaker cone. Start tightening the screws on the face of the speaker can. **DO NOT OVER TIGHTEN.**


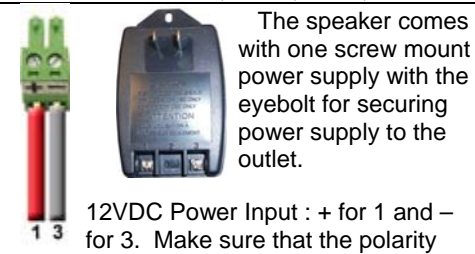

Attach the speaker grille, taking note to insert tabs all the way. The grill should ‘snap’ in place, if it does not you must loosen the dog ears (flippers) and adjust the seating of the speaker. The grill will seat flush or level against the hard lid. Any gaps between the grill and hard lid may indicate that the tab in that area has not ‘snapped’ in place. Failure to make sure the grill is ‘snapped’ in place could lead to the grill falling out.

### For Hard Lid Installation- New Construction



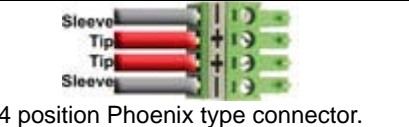


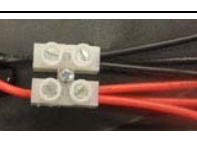
The only difference between the retro fit installation and the new construction is that the pre-construction mud ring (MD8) is used. The mud ring is placed between two studs, metal or wood, prior to the hard lid being installed. Installation after the hard lid is installed is identical to the retro fit instructions above.

# Wire Connections

## POWER SUPPLY WIRE CONNECTIONS

MODELS: <b>QSA615-SM, OM, JFS, JFM</b>	MODELS <b>QSA615 – CFS, CFM, RPS, RPM</b>	MODELS <b>QSA615 – EFS, EFM, EPS, EPM</b>
 <p>12VDC Power 2.5 N Plug: For N type power, use the schematics above for attaching wires, paying close attention to polarity and position.</p>	 <p>The speaker comes with one screw mount power supply with the eyebolt for securing power supply to the outlet.</p> <p>12VDC Power Input : + for 1 and – for 3. Make sure that the polarity connection is correct.</p>	 <p>The speaker comes WITHOUT a power supply. User has an option for power source. 2 position phoenix type connector is included.</p> <p>12VOLT for external higher amperage multi unit supply (User option for power source)</p>

## AUDIO CONNECTIONS

Models <b>QSA615-SM, RPS, EPS</b>	Models <b>QSA615-OM, RPM, EPM</b>	Models <b>QSA615-CFS, JFS, EFS</b>
 <p>There are 2 RCA jacks on these models for stereo to mono unbalanced RCA plug connection.</p>	 <p>One RCA jack on these models for one unbalanced RCA plug connection.</p>	 <p>4 position Phoenix type connector. Stereo to mono unbalanced stereo audio to unbalanced input.</p>
<p>Models <b>QSA615-CFM, JFM, EFM</b></p>  <p>3 position Phoenix type connector. Unbalanced line audio to balanced input.</p>	<p>Models <b>QSA615-CFM, JFM, EFM</b></p>  <p>3 position Phoenix type connector. Balanced audio to balanced input.</p>	<p style="text-align: center;"><b>Companion Speaker Connections</b></p>  <p>The weco-style connectors are wired using red to red and black to black polarity. The 3 companion speakers are <b>connected in parallel</b>.</p>

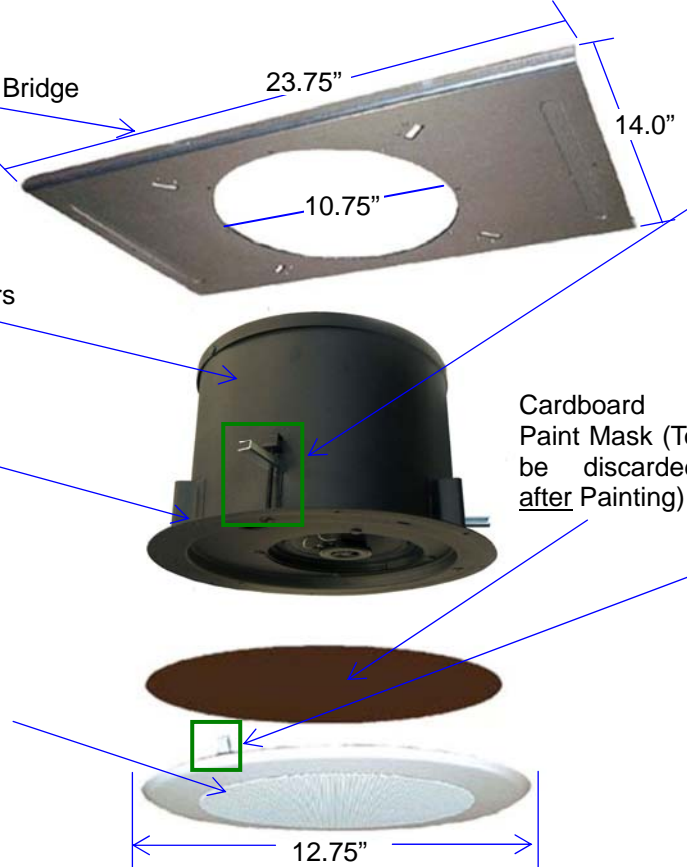
## QSA 615 ILLUSTRATION

Standard Ceiling Tile Bridge

Plenum Compatible Back Enclosure  
**NFPA-70** National Electric Code, **UL 1480** and **UL 2043**, Speakers for Fire Protective Signaling Systems

Guide for alignment of enclosure to tile bridge for grille installation

White Perforated Metal Grille




23.75"

14.0"

10.75"

12.75"



The all-metal swivel clamp makes it easy to install the speaker assembly to the ceiling

The clip-on mechanism on the grille makes it easy to install the grille to the back enclosure. This is AMK's revolutionary "snap-on" grille installation system.

