

## KIT-ECS-650-IC-4

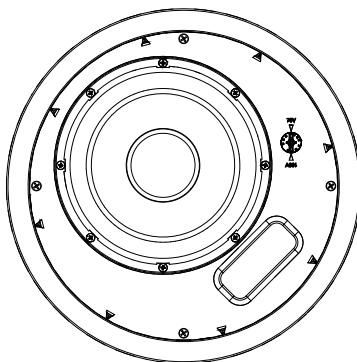
## KIT-ECS-650-IC-6

## KIT-ECS-650-ICSUB-8

### WELCOME TO EPISODE®

Thank you for purchasing a great product from Episode®, one of the best sounding speaker lines available today. We appreciate your purchase and are committed to providing the highest quality products possible.

The ECS-650-IC series speaker line is a superb choice for 70V/100V music distributed-line systems and can even be set to bypass the transformer if you need an 8 ohm speaker in a pinch. They can be installed in either drywall or acoustic ceiling tile systems and feature UL approval for plenum-rated ceilings and spaces.



### PACKAGE CONTENTS

- (1) ECS-650-IC Loudspeaker
- (1) Cut-out template
- (1) Speaker grille
- (1) Speaker grille Tool
- (2) Speaker bracket wing nuts
- (2) Speaker bracket arms
- (1) Speaker bracket ring

### TOOLS REQUIRED

- #2 Phillips Screwdriver
- Small Flathead Screwdriver
- Sheetrock Saw
- Wire Strippers

### IMPORTANT INSTRUCTIONS AND CONSIDERATIONS FOR INSTALLATION

The installation methods should be in accordance with the applicable section of the National Electrical Code, ANSI/NFPA 70, and/or the National Fire Alarm Code, ANSI/NFPA 72, as applicable. The wiring method and compartment should not interfere with the operation of the speaker.

### PAINTING SPEAKERS

It is highly recommended that the speakers be painted prior to installation. If it is necessary to paint them while installed, the provided paint mask should be used in place of the grille to protect the speaker. The grille may be painted as well with great care taken not to clog the fine holes with paint. Only paint grilles when they have been removed from the speakers.

## SPEAKER WIRING

### Overview

In a 70V or 100V system, a speaker wire is run from the amplifier location to the first speaker location. A “loop out” is run from the first speaker to the second speaker, the second speaker to the third speaker, etc. If installing with a standard receiver/amplifier (not 70V or 100V system), a separate speaker wire must be run from the amplifier to each speaker location.

### Best Practices

- In most cases, it is easiest to install a speaker system by prewiring and then installing the speakers.
- Plan the locations of the speaker holes, volume control boxes, and the amplifier and be sure wiring can be routed everywhere necessary before cutting any holes.
- Install spare wires for redundancy when you must run wire through a location that will not be accessible later.
- When you aren't enclosing speaker wire fully in conduit, make sure to leave enough of a wire loop for the speaker wiring to allow you to connect the terminal to the loudspeaker either on the ground, or at the top of the ladder. A short wire loop makes attaching the speaker wires more difficult to work with at the top of the ceiling grid.

### Recommended Wiring

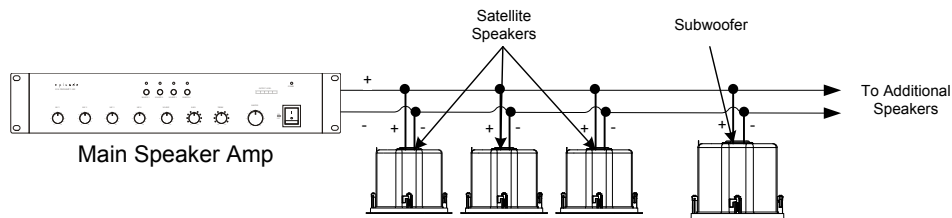
- 70/100 volt applications: 18 AWG, stranded, 2 conductor cable.
- 8 ohm applications: 16 or 14 AWG, stranded, 2 conductor cable.

**Note:** *Some ceilings are rated for use as a plenum return for heating and cooling. In these areas, you must use plenum type cable to pass building inspection. Consult with local building code enforcement to determine the requirements of each job.*

### Wiring Connections

1. Remove the access plate on top of the speaker (see illustration) and remove the set screw terminal connector. If using a conduit to route wiring into the speaker, attach the makeup access plate to the conduit fittings before attaching the wires to the connector.
2. Strip the insulation on each conductor back  $\frac{1}{4}$  inch and use your small flathead screwdriver to secure each wire into the connector. Make sure no loose strands short between the + and – connection and that the polarity is correct. There are 2 + and – connections on the terminal for ease of attaching a loop out wire to additional speakers. You may connect to either the inner or the outer connection, but we recommend keeping the wiring consistent among all of your speakers. For example, use the inner connection for your speaker connection and use the outer connection for your loop out to the next speaker.
3. Re-attach the connector and cover plate. Do not use the back plate cavity as a junction for wiring that is not powering the speaker.

## Connection Diagram



## SPEAKER INSTALLATION

### General Guidelines

- Keep speakers about 2 feet away from corners and other surfaces that might interfere with or reflect sound, such as tall furniture.
- For rooms less than 300 square feet, two speakers should suffice. The further apart they are, the better the sound will be. However, keep the distance at a maximum of 8-10 feet to avoid a "hole" in the middle.
- For rooms larger than 300 square feet, use 3 or more speakers. Stagger them across the space for ideal sound dispersion

### Acoustic Ceilings

See "Wiring Connections" for instructions on wiring before installing the loudspeaker. The removable connector on the rear makes it easy to wire the connections ahead of time and attach the wiring to the loudspeaker at the end of the installation.

1. Assemble the tile bridge. Attach the wings to the ring using the supplied wing nuts as shown in the drawing.  
(Figure 1)

Figure 1



2. Plan your loudspeaker locations. Make sure there are no obstacles in the ceiling space above the tiles where you plan to install any loudspeakers.
3. Using the supplied cut out template centered on the tile, mark the tile on the cosmetic side where you plan to cut. Tip: Sit the tile on top of a trash can or empty box to help catch any debris from cutting in the hole.
4. Using your sheetrock saw, carefully cut the opening. Be sure to plunge the saw into the cosmetic side of the tile to avoid chips of the tile from showing around the bezel after the install. Test fit the loudspeaker.
5. Flip the ceiling tile and place the tile bridge over the cutout, centering it around the opening.
6. While holding the tile bridge in place, flip the tile, leaving the cosmetic side facing up.
7. Insert the loudspeaker into the opening. Tighten the four dog screws using a #2 Phillips Screwdriver. Make sure the tile bridge stays centered and that the mounting dogs clamp onto the ring. Be careful, over-tightening the screw can damage the ceiling tile and/or the speaker.

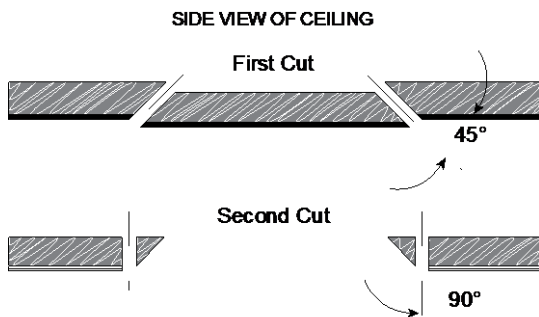
8. Set the loudspeaker tap to the appropriate setting using the rotary switch on the front of the loudspeaker.
9. Insert the loudspeaker grille into the baffle, pressing gently on each side until it is fully seated.

**Tip:** If you aren't sure of the tap settings needed for the loudspeaker, leave the grille off so that settings can easily be adjusted using the rotary knob.

10. Return the loudspeaker/tile assembly to the ceiling grid, attaching the removable wire connector when appropriate.
11. Attach a security tie wire to the eyelet on top of the loudspeaker and attach the other end to the ceiling support system per your local building code.

### Permanent Ceilings

1. Choose a location for each speaker that is free of obstructions created by joists, HVAC ductwork, electrical wire runs, plumbing or anything else that might not allow for the depth of the speaker or create interference or noise.
2. Once you have determined your locations, mark the hole to cut out for the speaker using the supplied template. Don't forget to allow for the size of the speaker bezel if you are choosing to install the speaker near a side wall or other item that could become an obstacle.
3. If you are unsure of potential obstacles, carefully cut your holes using an angle to the inside of the cutout area as illustrated. This will allow you to 'plug' the hole easily if needed. If the area is clear and a good location for the speaker, cut the edges of the opening at 90 degrees to accommodate the speaker diameter.

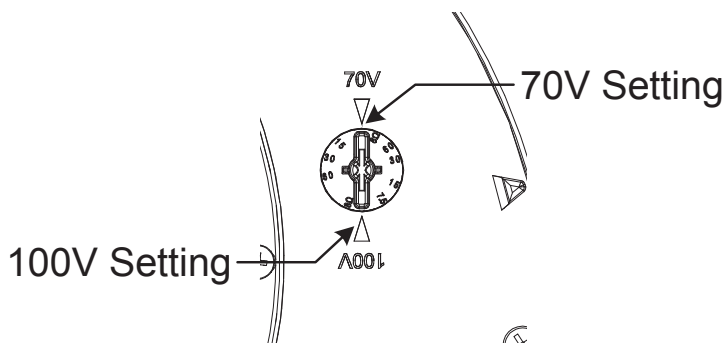


4. Make up the speaker wiring connection before installing the speaker. See "Wiring Connections" for instructions.
5. Insert the speaker into the opening from below. Tighten the dogs on the speaker, making sure they clamp on the sheetrock. Be careful- over tightening the clamps can cause the speaker bezel to warp and may crack the ceiling.

## TRANSFORMER SETTING

After the speaker is installed, set the transformer to the correct setting.

**Warning!** Do not set the speaker for 8 ohm operation if using 70V or 100V amplifier. This could cause permanent damage to the speaker or amplifier.



## SPEAKER GRILLE

1. Insert the speaker grille by pressing gently around the edges. The grille is designed for a tight fit but will still install easily. Do not force or bend the grille as this could affect the final fit and appearance.
2. To remove the grille, use the supplied screen removal tool and carefully pull the grille down. Pull the grille near the edges to avoid bending it with the removal tool.

## SPECIFICATIONS

<b>ECS-650-IC-4</b>	
<b>Woofers:</b>	4" Polypropylene
<b>Tweeter:</b>	1" Silk Dome
<b>Power Handling:</b>	40 Watts RMS (@ 8 Ω)
<b>Nominal Impedance:</b>	8 Ohms
<b>Tap Settings:</b>	- 70V: 3.75w, 7.5w, 15w, 30w - 100V: 7.5w, 15w, 30w - 8 Ω Bypass
<b>Frequency Response (-6dB):</b>	65Hz - 20KHz
<b>Sensitivity -2.83 V / 1 Meter:</b>	84 dB
<b>Crossover Frequency:</b>	3.3 kHz
<b>Weight:</b>	4.5 lbs. each
<b>Grille Type:</b>	Powder Coated Perforated
<b>Cutout Dimensions:</b>	7.9" Diameter

<b>ECS-650-IC-6</b>	
<b>Woofers:</b>	6½" Polypropylene
<b>Tweeter:</b>	1" Silk Dome
<b>Power Handling:</b>	60 Watts RMS (@ 8 Ω)
<b>Nominal Impedance:</b>	8 Ohms
<b>Tap Settings:</b>	- 70V: 7.5w, 15w, 30w, 60w - 100V: 15w, 30w, 65w - 8 Ω Bypass
<b>Frequency Response (-6dB):</b>	60Hz - 20KHz
<b>Sensitivity -2.83 V / 1 Meter:</b>	87 dB
<b>Crossover Frequency:</b>	2.8 kHz
<b>Weight:</b>	5.8 lbs. each
<b>Grille Type:</b>	Powder Coated Perforated
<b>Cutout Dimensions:</b>	9.7" Diameter

ECS-650-ICSUB-8	
Woofers:	8" Polypropylene
Power Handling:	100 Watts RMS (@ 8 Ω)
Nominal Impedance:	8 Ohms
Tap Settings:	- 70V: 10w, 20w, 40w, 80w - 100V: 20w, 40w, 80w - 8 Ω Bypass
Frequency Response (-6dB):	50Hz - 120Hz
Sensitivity -2.83 V / 1 Meter:	86 dB
Weight:	10.5 lbs. each
Grille Type:	Powder Coated Perforated
Cutout Dimensions:	12.2" Diameter

## TROUBLESHOOTING

Episode® speakers are designed to function trouble-free. Most problems that occur are due to simple issues. If you have trouble, please check the list of simple fixes below. If the problem persists, contact Episode® Customer Service at 1.866.838.5052

### No Sound

- Verify that there is audio coming from the source selected. Select another source if necessary.
- Ensure that the audio source is turned on and connected properly.

## WARRANTY



### ***Limited Lifetime Warranty***

Episode® in-wall, in-ceiling and bookshelf Speakers have a Lifetime Limited Warranty. This warranty includes parts and labor repairs on all components found to be defective in material or workmanship under normal conditions of use. This warranty shall not apply to products which have been abused, modified or disassembled. Products to be repaired under this warranty must be returned to SnapAV or a designated service center with prior notification and an assigned return authorization number (RA).

## CONTACTING TECHNICAL SUPPORT

Phone: (866) 838-5052

Email: [Techsupport@snapav.com](mailto:Techsupport@snapav.com)

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