



25500229 Rev. A1 0917

## **Safety Message to Installers of Siren Speakers**

### **▲ WARNING**

People's lives depend on your proper installation and servicing of Federal Signal products. It is important to read and follow all instructions shipped with this product and the original product. Listed below are some other important safety instructions and precautions you should follow:

#### **Before Installation**

##### *Qualifications*

- To properly install an electronic siren, you must have a good understanding of automotive electrical procedures and systems, along with proficiency in the installation and service of safety warning equipment. Always refer to the vehicle's service manuals when installing equipment on a vehicle.

##### *Sound Hazards*

- Your hearing and the hearing of others, in or near your emergency vehicle, could be damaged by loud sounds. This can occur from short exposures to very loud sounds, or from longer exposures to moderately loud sounds. For hearing conservation guidance, refer to federal, state, or local recommendations. OSHA Standard 1910.95 offers guidance on "Permissible Noise Exposure."
- All effective sirens and horns produce loud sounds (120 dB) that may cause permanent hearing loss. Always minimize your exposure to siren sound and wear hearing protection. Do not sound the siren indoors or in enclosed areas where you and others will be exposed to the sound.
- Federal Signal siren amplifiers and speakers are designed to work together as a system. Combining a siren and speaker from different manufacturers may reduce the warning effectiveness of the siren system and may damage the components. You should verify or test your combination to make sure the system works together properly and meets federal, state and local standards or guidelines.

#### **During Installation**

- DO NOT get metal shavings inside the product. Metal shavings can cause the system to fail. If drilling must be done near the unit, place an ESD-approved cover over the unit to prevent metal shavings from entering the unit. Inspect the unit after mounting to be sure there are no shavings present in or near the unit.
- DO NOT connect this system to the vehicle battery until ALL other electrical connections are made, mounting of all components is complete, and you have verified that no shorts exist. If wiring is shorted to vehicle frame, high current conductors can cause hazardous sparks resulting in electrical fires or flying molten metal.
- Be sure the siren amplifier and speaker(s) in your installation have compatible wattage ratings.
- In order for the electronic siren to function properly, the ground connection must be made to the NEGATIVE battery terminal.
- Sound output will be severely reduced if any objects are in front of the speaker. If maximum sound output is required for your application, you should ensure that the front of the speaker is clear of any obstructions.
- Install the speaker(s) as far forward on the vehicle as possible, in a location that provides maximum signaling effectiveness while minimizing the sound reaching the vehicle's occupants. Refer to the National Institute of Justice guide 500-00 for further information.

- Mounting the speakers behind the grille will reduce the sound output and warning effectiveness of the siren system. Before mounting speakers behind the grille, make sure the vehicle operators are trained and understand that this type of installation is less effective for warning others.
- Sound propagation and warning effectiveness will be severely reduced if the speaker is not facing forward. Carefully follow the installation instructions and always install the speaker with the projector facing forward.
- DO NOT install the speaker(s) or route the speaker wires where they may interfere with the operation of airbag sensors.
- Installation of two speakers requires that you wire the speakers in phase.
- Never attempt to install aftermarket equipment, which connects to the vehicle wiring, without reviewing a vehicle wiring diagram, which is available from the vehicle manufacturer. Insure that your installation will not affect vehicle operation and safety functions or circuits. Always check vehicle for proper operation after installation.
- DO NOT install equipment or route wiring or cord in the deployment path of an airbag.
- Locate the control head so the vehicle, controls, and microphone can be operated safely.
- When drilling into a vehicle structure, be sure that both sides of the surface are clear of anything that could be damaged.

### **After Installation**

- After installation, test the siren system and light system to ensure that it is operating properly.
- Test all vehicle functions, including horn operation, vehicle safety functions and vehicle light systems, to ensure proper operation. Ensure that installation has not affected vehicle operation or changed any vehicle safety function or circuit.
- After testing is complete, provide a copy of these instructions to the instructional staff and all operating personnel.
- File these instructions in a safe place and refer to them when maintaining and/or reinstalling the product.

Failure to follow all safety precautions and instructions may result in property damage, serious injury, or death.

### **Overview**

This publication has instructions for using the 750501-11 Bracket Kit to mount the AS124 or ES100C in front of radiator on a 2015 Chevy Tahoe. It can be mounted on either the driver or passenger side. A driver side install is shown. **NOTE:** For electrical installation instructions, refer to the Installation and Maintenance Instructions packed with the lighthouse.

### **Unpacking the Kit**

After unpacking the kit, inspect it for damage that may have occurred in transit. If it has been damaged, do not attempt to install or operate it. File a claim immediately with the carrier, stating the extent of damage. Carefully check all envelopes, shipping labels, and tags before removing or destroying them. Ensure that the parts listed in Table 1 are included in the package. If you are missing any parts, contact Customer Support at 1-800-264-3578, 7 a.m. to 5 p.m., Monday through Friday (CT). Disposal of all shipping materials must be carried out in accordance with national and local codes and standards.

Table 1 Kit contents

Qty.	Description	Part Number
1	Bracket, AS124-ES100C, TAH15	865001308
1	1/4-20 x 1 Hex Cap Screw 18-8 SS	7000A311-16
2	Bolt, Cap, 5/16"-18, Hex, SS	7002A005-14
2	Screw, #14, Hex Washer Head, TEK	7011243-16
1	1/4-20 KEPS Nut 18"-8 SS	7058050
1	1/4 SAE Flat Washer, 1/16" Thick, 18"-8 SS	7072A024
2	Lockwasher, Split 1/4" Screw SS	7074A016
2	Lockwasher, Split 5/16" Screw SS	7074A020

## Mounting the Speaker

**IMPORTANT:** Plan all cable routing before installation.

### **⚠ WARNING**

**AIRBAG DEPLOYMENT:** Do not install equipment or route wiring in the deployment path of an airbag. Failure to observe this warning will reduce the effectiveness of the airbag or potentially dislodge the equipment, causing serious injury or death.

### **NOTICE**

**DRILLING PRECAUTIONS:** Before drilling holes, check the area into which you plan to drill to ensure you do not damage vehicle components. All drilled holes should be deburred and all sharp edges should be smoothed. All wires going through drilled holes should be protected by a grommet or convolute/split-loom tubing.

To mounting the speaker:

1. Remove the fascia per the manufacturer's service manual to access the area in front of the radiator.
2. Position the bracket as shown in Figure 1 on page 4, and mark the location of the two holes in the diagonal brace and the lower hole on the baffle.
3. Drill two 13/64" holes in the diagonal brace, and a 9/32" hole in the baffle.
4. See Figure 2 on page 4. Install the speaker to the bracket. The AS124 uses hardware supplied with the speaker, the ES100C uses the 5/16" bolts and lockwashers in this kit.
5. Install the 1/4" bolt through the bracket and baffle to locate the bracket, and then secure the bracket to the brace with the #14 screws and lockwashers. Do not overtighten.
6. Install the 1/4" flat washer and KEPS nut on the 1/4" bolt and tighten the nut.

### **⚠ WARNING**

**SOUND HAZARD:** All effective sirens and horns produce loud sounds (120 dB) that may cause permanent hearing loss. Always minimize your exposure to siren sound and wear hearing protection. Do not sound the siren indoors or in enclosed areas where you and others will be exposed to the sound.

7. Test the siren for proper operation.

Figure 1 Mounting hole locations for speaker bracket

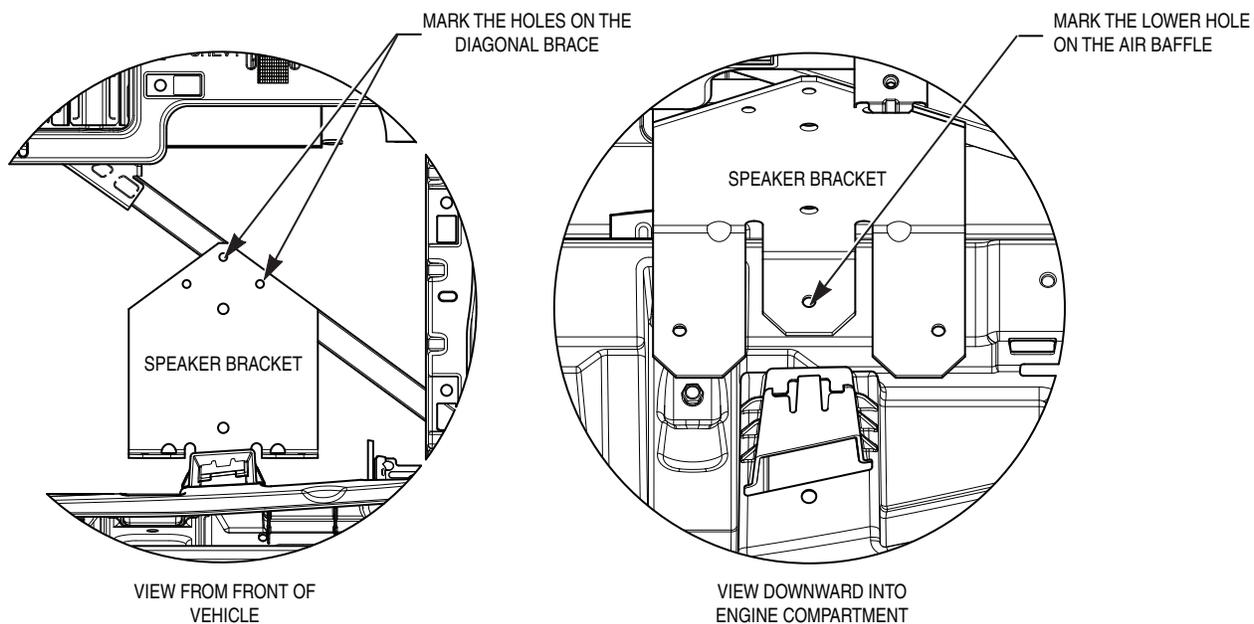
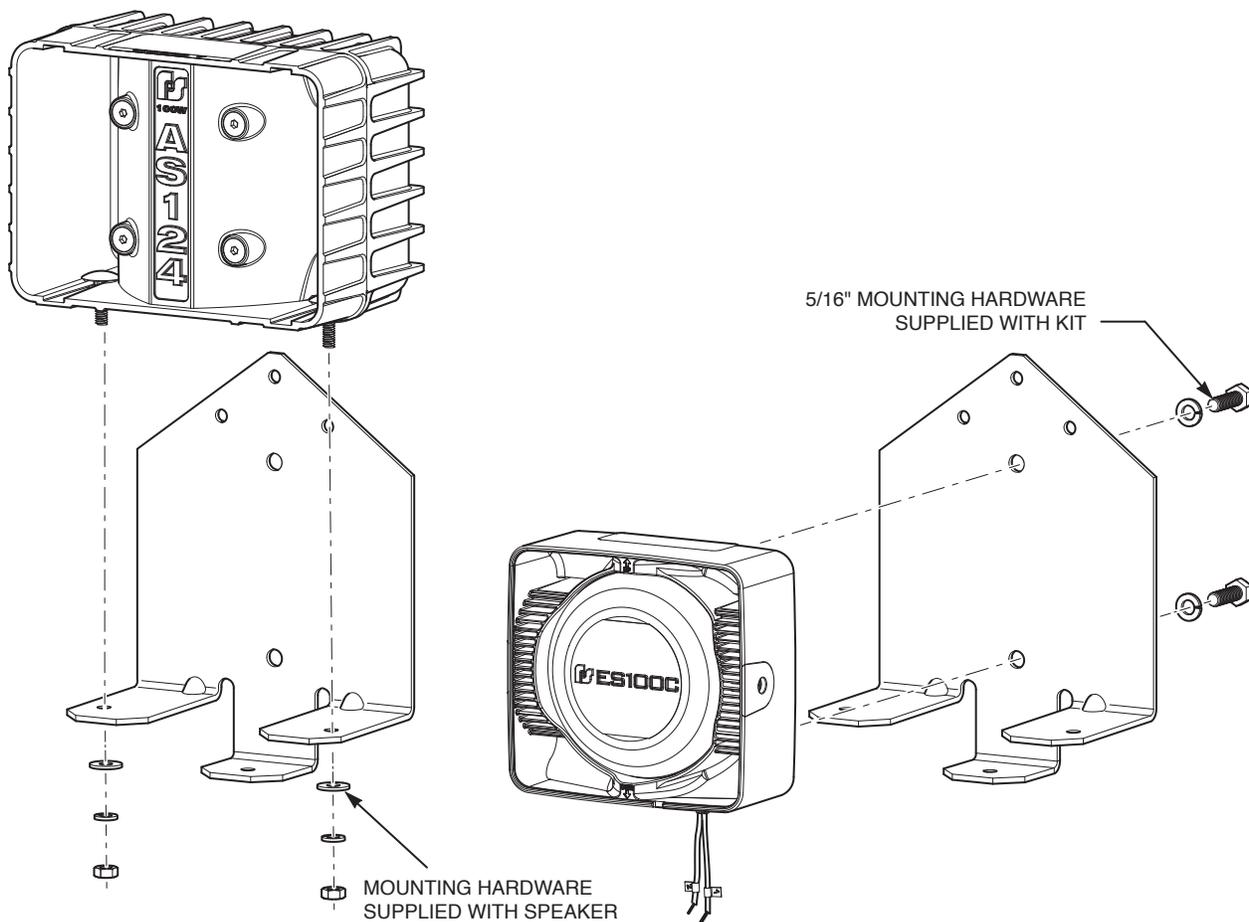


Figure 2 AS124 for speaker bracket



## **Safety Message to Operators of Federal Signal Electronic Sirens**

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### *Qualifications*

- To properly use an electronic siren and speaker(s), you must have a good understanding of general vehicle operation, a high proficiency in the use of safety warning equipment, and thorough knowledge of state and federal UNIFORM TRAFFIC CODES.

### *Sound Hazards*

- Your hearing and the hearing of others, in or close to your emergency vehicle, could be damaged by loud sounds. This can occur from short exposures to very loud sounds, or from longer exposures to moderately loud sounds. For hearing conservation guidance, refer to federal, state, or local recommendations. OSHA Standard 1910.95 offers guidance on “Permissible Noise Exposure.”
- All effective sirens and horns produce loud sounds (120 dB) that may cause permanent hearing loss. Always minimize your exposure to siren sound, roll up your windows and wear hearing protection.
- Do not sound the siren indoors or in enclosed areas where you and others will be exposed to the sound. Only use the siren for emergency response situations.

### *Sound Limitations*

- Before using the vehicle, check to see if the siren speakers are concealed from view. If the siren speaker is not in clear view on the front of the vehicle, use extra caution when operating the vehicle. A concealed siren speaker installation is less effective at warning others.
- Maximum sound output will be severely reduced if any objects are in front of the speaker. If your installation has obstructions in front of the speaker, drive even more cautiously.
- Frequently inspect the speaker to ensure that it is clear of any obstruction, such as mud or snow, which will reduce maximum sound output.

### *Signaling Limitations*

- Be aware that the use of your visual and audible signaling devices does not give you the right to force your way through traffic. Your emergency lights, siren, and actions are REQUESTING the right-of-way.
- Although your warning system is operating properly, it may not alert everyone. People may not hear, see, or heed your warning signal. You must recognize this fact and continue driving cautiously.
- Situations may occur which obstruct your warning signal when natural or man-made objects are between your vehicle and others. This can also occur when you raise your hood or trunk lid. If these situations occur, be especially careful.

### *Driving Limitations*

At the start of your shift, you should ensure that the light/sound system is securely attached to the vehicle and operating properly.

- If the unique combination of emergency vehicle equipment installed in your vehicle has resulted in the siren controls being installed in a position that does not allow you to operate them by touch only, OPERATE CONTROLS ONLY WHILE YOUR VEHICLE IS STOPPED.

- If driving conditions require your full attention, you should avoid operating the siren controls while the vehicle is in motion.

#### *Continuing Education*

- File these instructions in a safe place and refer to them periodically. Give a copy of these instructions to new recruits and trainees.

Failure to follow these safety precautions may result in property damage, serious injury, or death to you, to passengers, or to others.

## **Getting Technical Support and Service**

This speaker has no field-serviceable parts. Opening the speaker will void the warranty. The factory can and will service your speaker. If you are experiencing any problems with the speaker, please contact:

Service Department  
Federal Signal Corporation  
Phone: 1-800-433-9132  
Fax: 1-800-343-9706  
Email: [empserviceinfo@fedsig.com](mailto:empserviceinfo@fedsig.com)

## **Ordering Replacement Parts**

To order replacement parts for the mounting system, please contact your local dealer/distributor or:

Customer Support  
Federal Signal Corporation  
Phone: 1-800-264-3578

## **Returning a Product to Federal Signal**

Before returning a product to Federal Signal, call 800-264-3578, 800-433-9132, or 800-824-0254 to obtain a Returned Merchandise Authorization number (RMA number). To expedite the process please be prepared with the following information:

- Your Federal Signal customer or account number.
- The purchase order number under which the items were purchased.
- The shipping method.
- The model or part number of the product being returned.
- The quantity of products being returned.
- Drop ship information as needed.
- Any estimate required.

When you receive your RMA Number:

- Write the RMA number on the outside of the box of returned items.
- Reference the RMA number on your paperwork inside of the box.
- Write the RMA number down, so that you can easily check on status of the returned equipment.

Send all material with the issued RMA Number to:

Federal Signal Corp.  
2645 Federal Signal Drive  
University Park, IL 60484-3167  
Attn: Service Department  
RMA: # \_\_\_\_\_  
800-433-9132  
800-343-9706 (fax)  
www.fedsig.com

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## ***Installation Instructions for the AS124 or ES100C Speaker on the 2015 Chevy Tahoe***

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- Frequently inspect the speaker to ensure that it is clear of any obstruction, such as mud or snow, which will reduce maximum sound output.

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