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Installation Guide: Alpha™ Series Siren Amplifier

DANGER! Sirens produces extremely loud emergency warning tones! Exposure to these tones without proper and adequate hearing protection, could cause ear damage and/or hearing loss! The Occupational Safety & Health Administration (www.osha.gov) provides information necessary to determine safe exposure times in Occupational Noise Exposure Section 1910.95. Until you have determined the safe exposure times for your specific application, operators and anyone else in the immediate vicinity should be required to wear an approved hearing protection device. **FAILURE TO FOLLOW THIS RECOMMENDATION COULD CAUSE HEARING LOSS!**

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.
- If mounting this product requires drilling holes, the installer **MUST** be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.
- If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro®, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.
- Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.
- For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the **NEGATIVE (-)** battery post.
- If this product uses a remote device to activate or control this product, make sure this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition. **DO NOT ATTEMPT TO ACTIVATE OR CONTROL THIS DEVICE IN A HAZARDOUS DRIVING SITUATION.**
- It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

**ACTIVATION OF THIS
SIREN MAY DAMAGE
UNPROTECTED EARS!**



CAUTION

Loud siren noise can cause hearing damage and/or loss. Refer to OSHA Section 1910.95 prior to putting ANY siren into service!

For warranty information regarding this product, visit www.whelen.com/warranty

Mounting the Alpha™ Series Siren Amplifier:

The Alpha siren, although technologically advanced, is simple to install. An aftermarket center console is recommended for the mounting location of the siren. This not only allows the driver to reach the controls easily, but also keeps the unit safely out of the path of the vehicle's SRS air-bag. Follow the console manufacturer's instructions for mounting information. If a console-type mount is not possible, the siren includes a bail strap mounting kit for over or under dash mounting.

The following steps will guide you through the bail strap installation process:

1. Select a mounting location for the Alpha siren, either on top of, or below your vehicle's dashboard.
2. Using the bail strap as a guide, drill two 1/8" holes and secure the bail strap to the dashboard with two #10 x 1" Phillips pan head sheet metal screws (user supplied). Refer to Figure 1.

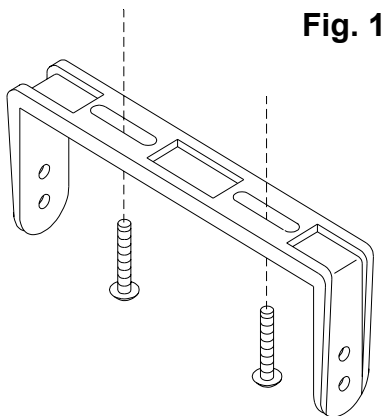


Fig. 1

3. Slide the carriage bolts into the middle of the mounting tracks on the siren amplifier and fit an external-tooth lock washer onto each of the carriage bolts.

4. Insert the Alpha siren amplifier into the bail strap, as shown in Figure 2. Please note that it will be necessary to spread the bail strap arms slightly apart to accept the Alpha's carriage bolts into their mounting holes.

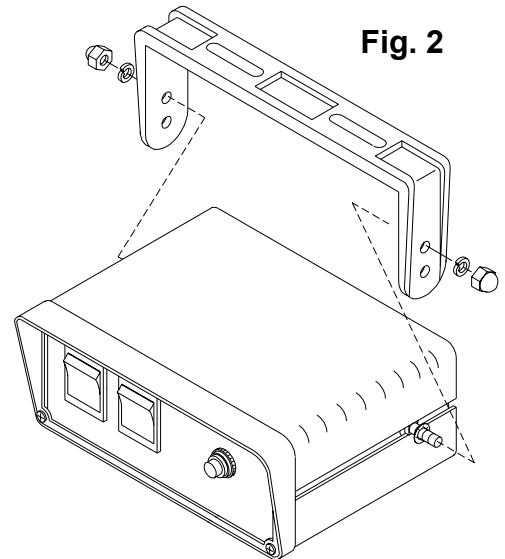


Fig. 2

5. Place a lock washer and an acorn nut on each carriage bolt and tighten with a 3/8" wrench. Do not over-tighten!

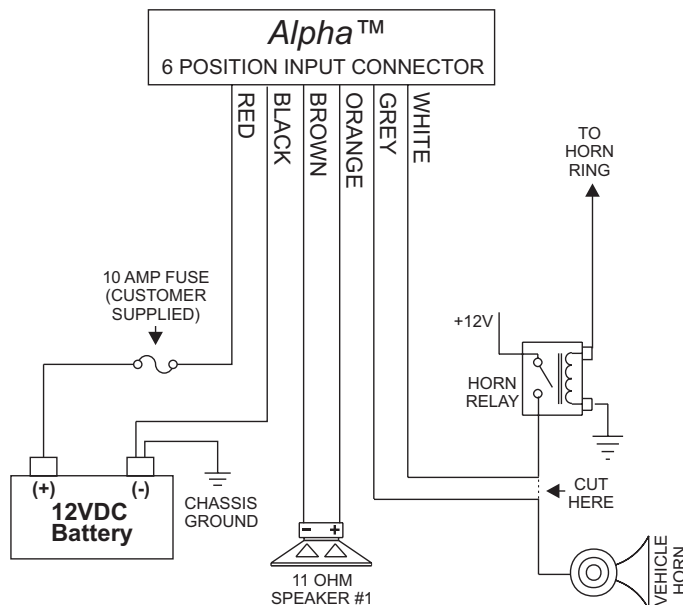
Wiring the Alpha™ Series Siren Amplifier

Connecting to power:

1. Extend the RED and BLACK wires through the firewall and into the engine compartment.
2. Follow factory wiring harness towards the vehicle's battery.

WARNING! All customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

3. Connect the RED wire to one end of a user supplied, 10 amp fuse block. *Do not connect this unit to the battery yet!*
4. Connect the BLACK wire directly to the NEGATIVE battery terminal.



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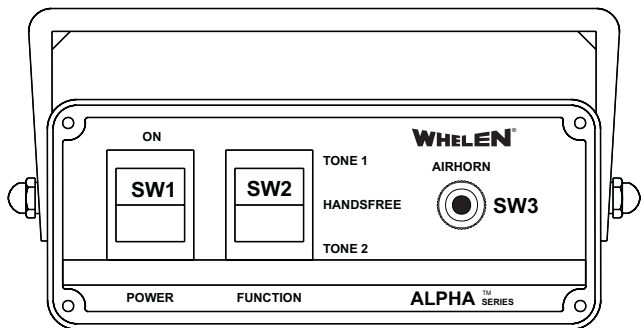
Connecting to your Horn Relay:

1. Route the WHITE and GREY wires along the factory wire harness and through the firewall at the same point as the RED and BLACK wires.
2. Locate your vehicle's horn relay and route the WHITE and GREY wires to this. If possible, follow the factory wire harness to this relay.
3. Locate the wire that connects the vehicle horn to the horn relay. Cut this wire.
4. Connect the WHITE wire to the wire coming from the horn relay.
5. Connect the GREY wire to the wire coming from the horn.

Connecting to your Speaker (100 watt):

1. Route the ORANGE and BROWN wires along the factory wiring harness towards your speaker.
2. Connect the ORANGE wire to the POSITIVE (+) terminal on the speaker.
3. Connect the BROWN wire to the NEGATIVE (-) terminal on the speaker.

The installation of your Alpha Series siren amplifier will be complete after the fuse block wire is connected to the POSITIVE (+) terminal of the battery. After this connection has been made, visually inspect the fuses at the back of the amplifier and at the battery. If either of these fuses is blown, carefully inspect all of the circuit wires and make sure they are wired correctly. Replace the blown fuses with ones of an identical amp rating as the original. If these fuses blow after installation or activation, contact Whelen Engineering Technical Support.



Operating the Alpha Series Siren Amplifier:

Power Switch - This switch has two positions: Down (Alpha - Off) and Up (Alpha - On). When this switch is in the Off position, the siren will not function. When the switch is in the On position the siren is functional and may be activated at the operator's discretion.

NOTE: If the Alpha is connected to the vehicle's horn ring circuit, the vehicle horn is disabled when the Alpha power switch is in the ON position.

Airhorn Button - When the Airhorn button is pressed, a simulated "air horn" siren tone will be generated by your vehicle's loudspeaker. This tone is continuous until the Airhorn button is released.

Function Switch - The Function Switch controls the siren functions of the Alpha. There are 3 positions that may be selected. Each position and it's function is outlined below:

Tone 1 (WAIL) - When the function switch is in the Tone 1

position, a steady, rise and fall tone is produced ("Wail"). A single "tap" on the vehicle's steering wheel horn button (if the vehicle's horn has been wired to the Alpha), changes the siren tone to a "Yelp" pattern (a fast, rise and fall tone). A second "tap", and the siren returns to a "Wail" tone.

HF (Hands-Free Operation) - When the function switch is in the Hands-Free position, the siren functions of the Alpha are placed in a stand-by mode. Siren tones are activated by a single "tap" on the vehicle's steering wheel horn button (if the vehicle's horn has been wired to the Alpha). The first tap produces a Wail tone (a steady, rise and fall tone). A second tap produces a Yelp tone (a fast, rise and fall tone). A third tap produces a Piercer™ tone (an extremely fast, rise and fall tone). The next tap returns the siren to a Wail tone and the cycle repeats itself. Two quick, successive taps stop the siren.

Tone 2 (YELP) - When the function switch is in the Tone 2 position, a fast, rise and fall tone is produced (Yelp). A single tap on the vehicle's steering wheel horn button (if the vehicle's horn has been wired to the Alpha), changes the siren tone to a Piercer™ pattern (an extremely fast, rise and fall tone). With a second tap, it will return to Yelp.

ALPHA SIREN SPECIFICATIONS

INPUT VOLTAGE	13.5 VDC ± 20%
INPUT CURRENT (OFF)	0 mA
INPUT CURRENT (STANDBY)	10 mA (TYP.)
INPUT CURRENT (SIREN)	8 Amps (TYP.)
OUTPUT VOLTAGE	34 V RMS (MAX.)
SPEAKER	(1) 11 ohm
OUTPUT POWER @ 15 VDC	105 WATTS (MAX.)
H/R VOLTAGE	INPUT VOLTAGE or GROUND
H/R CURRENT	15 mA (TYP.)
OPERATING TEMP.	-30° C. to +60° C.
OPERATING HUMIDITY	95% NON-CONDENSING

Dip Switch Functions:

Some of the default functions of the Alpha siren amplifier can be customized (via dip switches) to suit the needs of the operator. In the default factory configuration, each dip switch is in the down (ON) position. The following section will explain dip switch functionality in both the ON and OFF position:

Down= On (Closed) Up = Off (Open)

- Dip Switch #1** Down = 3rd Tone is Active
Up = 3rd Tone is Off
- Dip Switch #2** Down = 3rd Tone is Piercer™
Up = 3rd Tone is Hi/Low
- Dip Switch #3** Down = Piercer Override for Yelp
Up = Airhorn Override for Yelp
- Dip Switch #4** Down = Wail has Normal Yelp Override
Up = Wail has 10 second Yelp Override
- Dip Switch #5** Down = Manual Stop
Up = Manual Coast
- Dip Switch #6** Down = Hands Free position is Hands-Free
Up = Hands Free Position is Manual
- Dip Switch #7** Down (With Switch 8 Down) =Tone 2 is Yelp
Down (With Switch 8 Up) =Tone 2 is Hi/Low
- Dip Switch #8** Up (With Switch 7 Down) =Tone 2 is Hi/Low
Up (With Switch 7 Up) =Tone 2 is Manual