

# SFGH-100SC SIREN & LIGHT SYSTEM

## Installation & Operation

The SFGH-100SC is a precision built, full function 100-watt siren system that incorporates both an alternating headlight and brake light / back-up light flasher in the same unit. The SFGH-100 draws no current unless a function is selected, so there is no battery drain. The amplifier/Flasher unit mounts in the trunk. Quick connection allows the remotely controlled siren, public address system, air horn, and flashers to be installed easily and quickly.

**PLEASE READ THESE INSTRUCTIONS COMPLETELY BEFORE ATTEMPTING INSTALLATION.**

### INSTALLATION

Proceed as follows referring to the cable diagram on back page.

#### 1. UNPACKING

- A. Carefully remove the control head box, power cable, accessory harnesses, and Amplifier/Flasher unit from the shipping carton. Remove the speaker from it's shipping carton.

#### 2. MOUNTING

- A. The Amplifier/Flasher unit should be located in the trunk on the same side of the vehicle as the battery. Preferred locations are under the rear deck or on the rear seat supports. Mount the unit using 4 sheet metal screws. Be careful that the screws don't protrude into the passenger compartment. Keep in mind the location of connectors P1, P2, and P3 and where their cables will run. **CAUTION: The transistor heatsinks must NOT touch ground. If possible, the unit should be mounted to a metal surface for adequate ventilation and heat dissipation.**
- B. Find a suitable location for speaker mounting, away from heat, moving parts, and as protected as possible. Mount the speaker securely, it is heavy. Use at least 1/4 x 20 bolts and nuts. Connect speaker leads to the 16-2 zip cord provided and route into the engine compartment.

#### 3. MAIN CABLE INSTALLATION

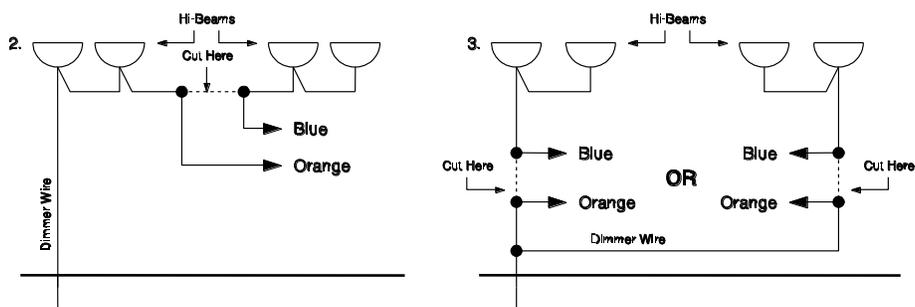
- A. The main cable included in the SFGH-100SC system is equipped with a 15-pin socket (P2) on one end, a 6 conductor cable for the engine compartment and a 5 conductor wire set for rear flash, on the other.
- B. Find a large grommet, or drill a 1" hole in the vehicle's firewall on the same side as the battery. Use a grommet or snap bushing to protect the cable. Route the cable to the trunk, leaving the *white* sense wire in the front seat area for later connection. Plug the power cable into its mating connector (P2) on the Amplifier/Flasher unit. Be sure to leave enough slack to strain relieve the cable at the connector so the plug can't pull out.
- C. The *black* ground wire should be connected to the vehicles chassis with a sheet metal screw and star type lock washer under the terminal. Make sure the connection is clean.
- D. Route the speaker wire to the *brown* and *black* wires in the main cable and butt connect them together. (Use blue nylon butt connectors provided)
- E. Butt connect the power cable wires to the *red* and *yellow* wires on the main cable. Route power cable to battery and connect fuse holders to the positive (+) terminal, or an auxilliary terminal block.
- F. *White* wire (Ignition Sense) is routed to the fuse block or other ignition source. This wire must see +12 volts when the key is turned on or the SFGH-100SC will not operate.

**CAUTION:** The battery cable connector and ignition sense lead are both fused for the SFGH-100SC's protection. The battery fuses are 20 amp. ATO and the ignition sense uses a 3 amp. ATO fuse.

**Always use the proper size fuse or serious damage could result.**

- G. If a ground side, DRL or separate flasher is to be used, jumper J-1 needs to be moved from pins 2-3 (default) to pins 1-2. J-1 is located on the flasher board inside the amplifier unit in front of the left rear relay. This allows the *orange* wire to be used as a switched power source for the flasher module. Refer to installation instructions provided with the flasher.
- H. For standard headlights refer to figures 2 & 3 below. The SFGH-100SC flasher splices into the headlight circuit at a single point. This point is after the headlight wire harness splits between the headlights. The **BLUE & ORANGE** wires in the flasher harness may be installed in either leg of the headlight wiring as shown.

**Figures 2 & 3 Location of Cut into Hi-Beam Headlight Wiring:**



The Brake Back-up flasher utilizes the existing vehicle lights creating an effective rear warning signal. Make connections as close to the lights as possible.

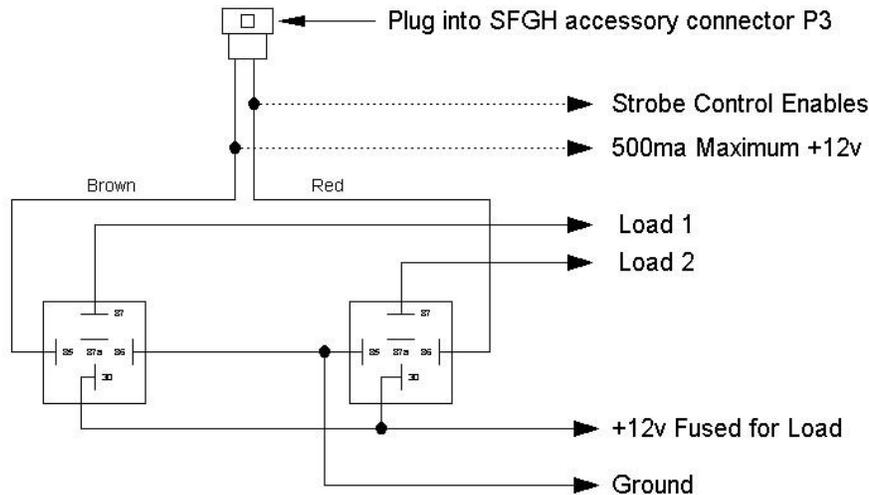
- I. **3-wire** installation is used when both the brake and turn signal lights use the same bulb.
  - a. At the rear of the vehicle locate and cut the wire that feeds the left turn/brake light. Connect the *pink/black* wire to the lead that goes to the bulb and the *pink* wire to the remaining lead that goes back to the front of the vehicle.
  - b. Locate and cut the wire that feeds the right turn/brake light. Connect the *green/black* wire to the lead that goes to the bulb and the *green* wire to the remaining lead that goes back to the front of the vehicle.
  - c. Locate the vehicle back-up light wire and T-tap the *yellow/black* wire into it.
- J. **4-wire** installation is used when turn signals and brake light use separate bulbs.
  - a. Locate and cut the wire that feeds the brake lights. Connect the *green/black* wire to the lead that goes to the bulb and the *green* wire to the remaining lead that goes back to the front of the vehicle.
  - b. Locate the vehicle back-up light wire and T-tap the *yellow/black* wire into it.

#### 4. CONTROL HEAD & CABLE INSTALLATION

- A. Find a location where the SFGH-100SC Control Head can easily be operated, and if necessary concealed. If using the Control Head mounting bracket, mount it to the Control Head using the 6-32 x 3/8" thread cutting screws provided. Carefully mount the bracket to the vehicle.
- B. Route the 12-pin plug (P1) under the carpet to the trunk, and plug it into the Amplifier/Flasher unit P1 connector. Be sure to strain relieve the cable.
- C. If radio rebroadcast is desired, connect the 22ga. zip cord provided across the speaker terminals of the radio to be monitored. The rebroadcast feature can be disabled by unplugging the in-line 2-pin connector.

**5. AUXILLARY CONTROL OUTPUTS - P3** Can be used to control other equipment with the SFGH-100SC Control Head. Relays **MUST** be used when current exceeds 400 ma.

- A. Activating ALT LTS on the control head will turn on the *brown* wire.
- B. Activating HDLPS on the control head will turn on the *red* and *brown* wire.



**IMPORTANT TEST:** Set the parking brake and start the vehicle. With the flasher OFF attempt to shift the transmission out of PARK with out depressing the brake pedal. With the flasher ON attempt to shift the transmission out of PARK with out depressing the brake pedal. If the vehicle shifts from PARK, restore vehicle wiring and contact Lund Industries, Inc. for further instructions.

**OPERATION**

All functions of the SFGH-100SC are controlled from a small Control Head. The vehicles key will turn the unit on & off. The SFGH-100 draws no current unless a function is activated. Control Head functions are as follows:

**HDLPS & ALT LTS** In the **ALT LTS**. (Down) position the Rear lights are flashing. In the **HDLPS & ALT LTS** (Up) position the headlights are also flashing. When the Headlights are flashing, using the Hi-beam lights will override the flasher operation. An indicator above the switch shows when either flasher is on.

**RADIO** Provides radio rebroadcast through the siren speaker. Rebroadcast volume is controlled by the P.A. Volume Control, and should always be set to its' lowest position then advanced to a comfortable level. 2-way radio volume should be set at approximately 1/3 to avoid overdriving the amplifier and causing distortion.

**NOTE:** *The amplifier is ON in this position and drawing current.*

**STBY** Standby position of the siren system. All functions are ready. **Switch should normally be in this position.**

**WAIL** Provides a slow, continuous rising & falling sound.

**YELP** Provides a fast, continuous rising & falling sound.

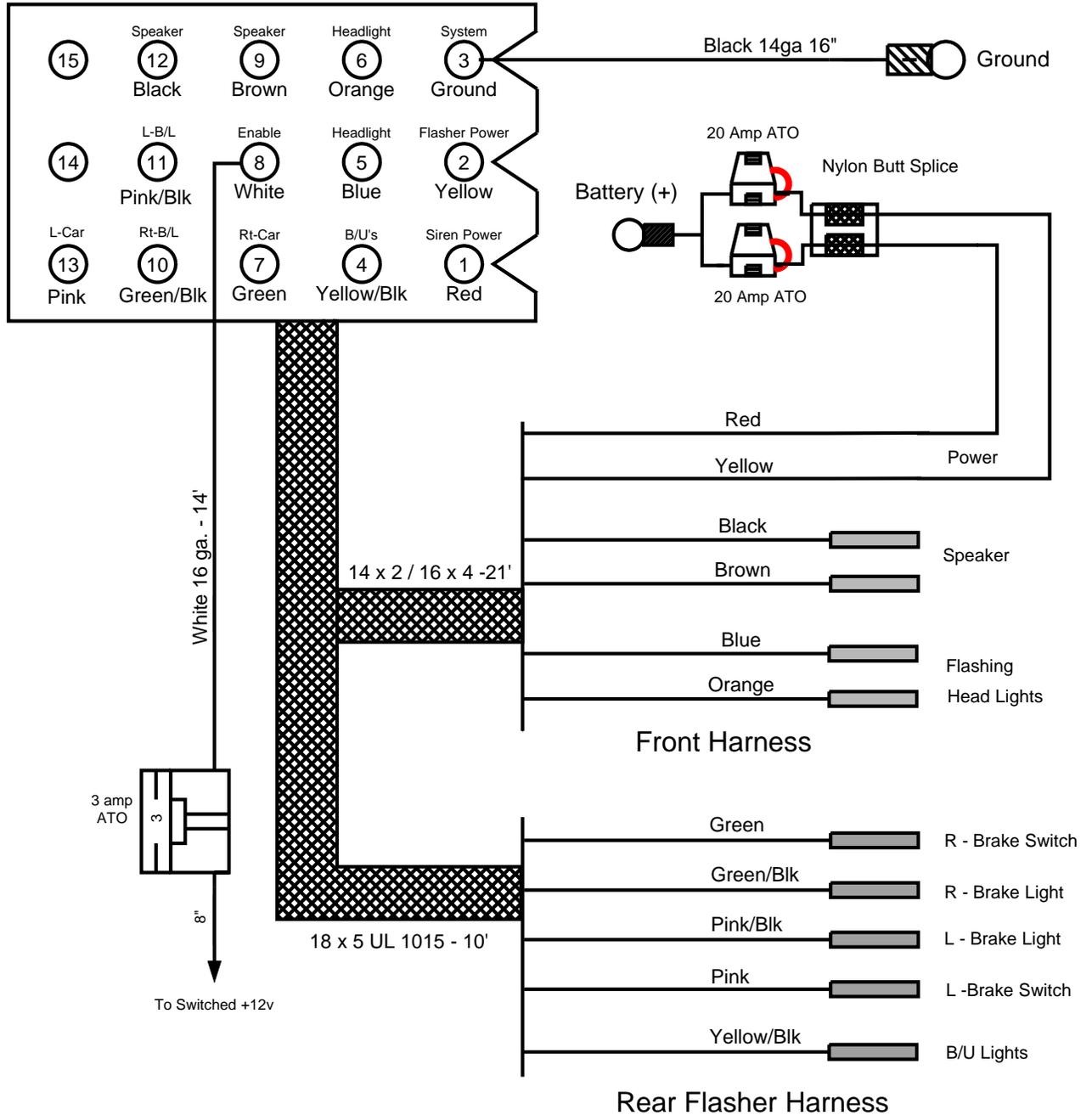
**P.A. VOLUME** Provides volume control of the Public Address system and radio rebroadcast. Keying the P.A. microphone overrides all siren functions.

**AIR HORN** Pressing this button provides a simulated air horn sound. AIR HORN overrides all siren functions and the P.A. system.

If there are any questions concerning the installation or operation of the SFGH-100SC system, please call the factory and service center at **(847) 459-1460** or **(800) 504-1460** and we will be happy to assist you.

# P(2) Main Cable Receptacle

Rev. 6/15



## SFGH-100SC Main Cable Termination



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