

# bluePRINT®

## 400 SERIES REMOTE SIREN/SWITCH MODULE

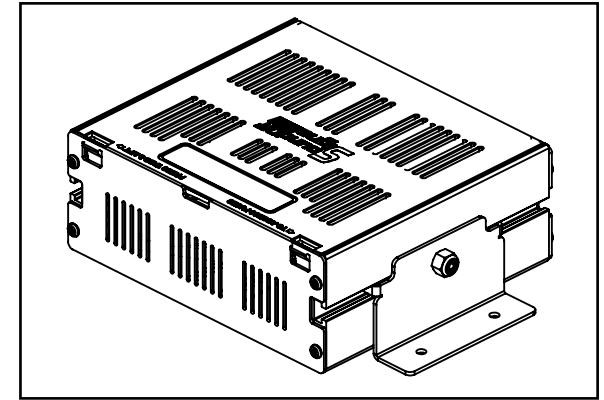
PART NUMBERS: 100W - ENGSA07141

200W - ENGSA07152

- Operates a single 100 watt speaker. 200W model operates two 100W speakers.
- 20 popular tones (up to 5 tones can be activated from Central Controller Commands):
  - wail
  - yelp
  - piercer
  - hi-lo and super hi-lo plus 4 additional air horn tones available.
- Contains a horn-cut relay to disable the OEM horn when the Horn-Ring (Hands-Free) system feature is enabled.
- Public Address (PA) and (RR) volume levels set via system control panel.
- Park/Kill feature disables the siren when the vehicle is placed in Park.
- Built-in protection against over/under voltage, over temperature, short circuit and reverse polarity.
- Contains nine 10-Amp and three 20-Amp relays which can be controlled by central controller commands.

### ⚠ WARNING

- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow crimp connector manufacturer instructions.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner's Manual for deployment zones.
- Do NOT use system to disconnect headlights, brake lights or other safety equipment.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system.
- Use proper wire gauge. All power wires connecting to positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of max. current and properly fused at power source.
- Install protective grommets when routing wire through firewall or metal.



Tech Specs	bluePRINT® 400 Series Remote Siren/Switch Module
<b>Input Voltage:</b>	10-16Vdc (Negative Ground)
<b>Total Max Relay Current:</b>	100 Amps
<b>Siren Maximum Input Current:</b>	7 Amps @ 13.6 Vdc (100W Speaker) 14 Amps @ 13.6Vdc (2x100W Speakers)
<b>Siren Power Outputs:</b>	100W/200W
<b>Sleep Current:</b>	<1 mA
<b>Inputs:</b>	1x Horn Ring Input 1x Park Kill 1x CP Back Light 1x Radio Rebroadcast 1x PA
<b>High Voltage Protection:</b>	> 18Vdc will cause siren output to cease, resume at normal
<b>Low Voltage Protection:</b>	< 9.0 Volts will cause siren output to cease and will resume when system voltage is above 10.0 Volts.
<b>Operating Temp:</b>	-40 °C to + 50 °C
<b>Dimensions:</b>	2.62"H x 7.00"W x 6.51"D
<b>Weight, Boxed:</b>	8 lbs.
<b>Valid Input Threshold - High</b>	> 10.6V - Park Kill, PTT, Aux, Horn Ring > 9.0V - Primary/Secondary Backlight
<b>Valid Input Threshold - Low</b>	< 0.6V
<b>Relay Outputs:</b>	Qty 3 - 20 Amps Qty 7 - 10 Amps (+V supplied) Qty 2 - 10 Amp (+V internally or externally supplied)

#### NOTICE:

Installers and users must comply with all applicable federal, state and local laws regarding use and installation of warning devices.

*Improper use or installation may void warranty coverage. To review our Limited Warranty Statement & Return Policy for this or any SoundOff Signal product, visit our website at [www.soundoffsignal.com/sales-support](http://www.soundoffsignal.com/sales-support). If you have questions regarding this product, contact **Technical Services**, Monday - Friday, 8 a.m. to 5 p.m. at **1.800.338.7337** (press #4 to skip the automated message). Questions or comments that do not require immediate attention may be emailed to [techservices@soundoffsignal.com](mailto:techservices@soundoffsignal.com).*

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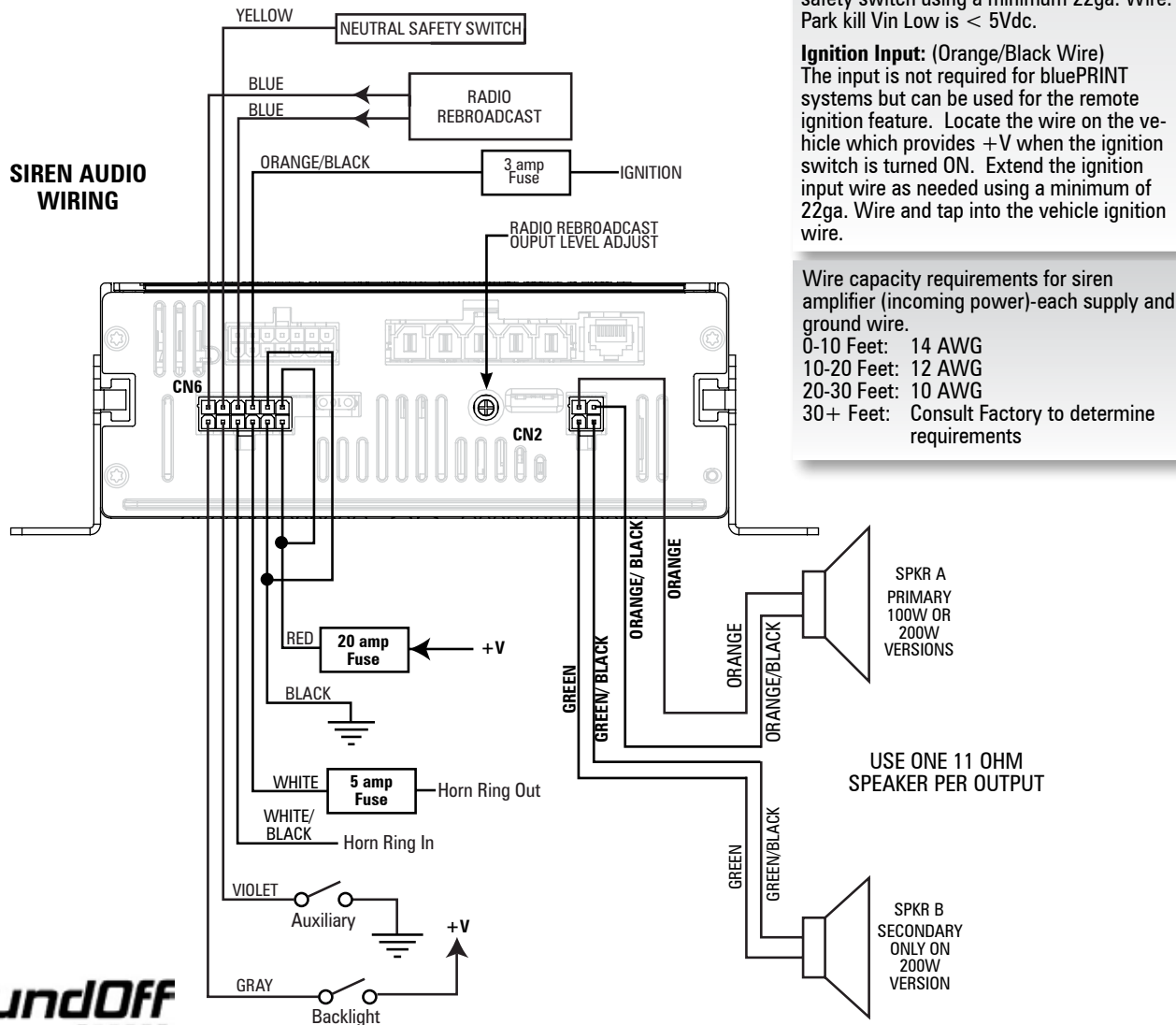
EVCS\_BP480 Siren\_ENGSA071(xx) 0418

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### Park Kill Input: (Yellow Wire)

The input will silence the siren tone when the input wire is activated. The input is typically connected to the transmission neutral safety switch. If this feature is required, the installer needs to determine if the signal wire from the neutral safety switch is switching the +V or ground side of the circuit. Refer to the programming instructions on how to set the park kill polarity on the siren. Extend the park kill input wire from the siren amplifier to the neutral safety switch using a minimum 22ga. Wire. Park kill Vin Low is < 5Vdc.

### Ignition Input: (Orange/Black Wire)

The input is not required for bluePRINT systems but can be used for the remote ignition feature. Locate the wire on the vehicle which provides +V when the ignition switch is turned ON. Extend the ignition input wire as needed using a minimum of 22ga. Wire and tap into the vehicle ignition wire.

Wire capacity requirements for siren amplifier (incoming power)-each supply and ground wire.

- 0-10 Feet: 14 AWG
- 10-20 Feet: 12 AWG
- 20-30 Feet: 10 AWG
- 30+ Feet: Consult Factory to determine requirements

### Auxiliary Input: (Violet Wire)

The input is an optional input which will remotely activate the siren when the auxiliary input wire is connected to ground. If this feature is needed, connect the auxiliary input wire to a switch which provides a ground connection when activated.

### Radio Rebroadcast Input: (Blue Wires)

The 2 – 18ga blue wires on the 12 pin Molex connector are used to connect your two-way radio's external speaker through the siren amplifier and broadcast through the warning siren speaker and is optional. Radio Rebroadcast will not work with remotely amplified speakers due to the signal amplitude being too low. Locate the 2 wires that connect the external speaker to the two-way radio. T-tap one blue wire into the one of the external speaker wires. T-tap the other blue wire into the other external speaker wire. If the blue wires need to be extended, use a minimum of 20ga. Wire. The Radio Rebroadcast volume must be adjusted prior to placing vehicle into service. Set the volume of the two-way radio to the normal operating level. Press the Radio Rebroadcast push-button on the siren control panel. With a small screwdriver, adjust the radio rebroadcast volume potentiometer located on the back of the siren amplifier to obtain the proper volume out the speaker. Turn potentiometer clockwise to increase volume and counter-clockwise to decrease volume.

### Horn Ring Input: (White + White/Black Wire)

The input will allow the operator to control the siren function by pressing the vehicle horn ring. Refer to wiring diagram for details on how to connect the horn ring input wires to the vehicle's horn ring wiring. If this feature is required, the installer needs to determine if the signal wire from the horn ring is switching +V or ground side of the circuit. Extend the horn ring input wires from the siren amplifier to the horn ring switch using a minimum of 18ga wire. The horn ring circuit is capable of handling a maximum of 5 amps and must be fused by the installer. Horn ring input polarity and tone settings are set via bluePRINT Software.

**Siren Speaker Output: (Orange + Orange/Black Wires), (Green + Green/Black wires)** Route the Orange and Orange/Black wires from the 4 position connector to the siren speaker. Use a minimum of 18ga. wire to extend the wires as needed. Connect the Orange wire to the primary Speaker High wire. Connect the Orange/Black wire to the primary Speaker Low wire. For ETSA482 only connect the Green wire to the secondary Speaker High Wire. Connect the Green/Black wire to the secondary Speaker Low Wire.

### Backlight Input: (Gray Wire)

The input will turn on the backlighting of the control panel whenever +V is applied to the backlight input wire. Route the siren amplifier backlight input wire to the vehicle's marker light wiring using a minimum of 22ga. Wire to extend as needed. T-tap the backlight input wire into the vehicle's marker light +V wire.

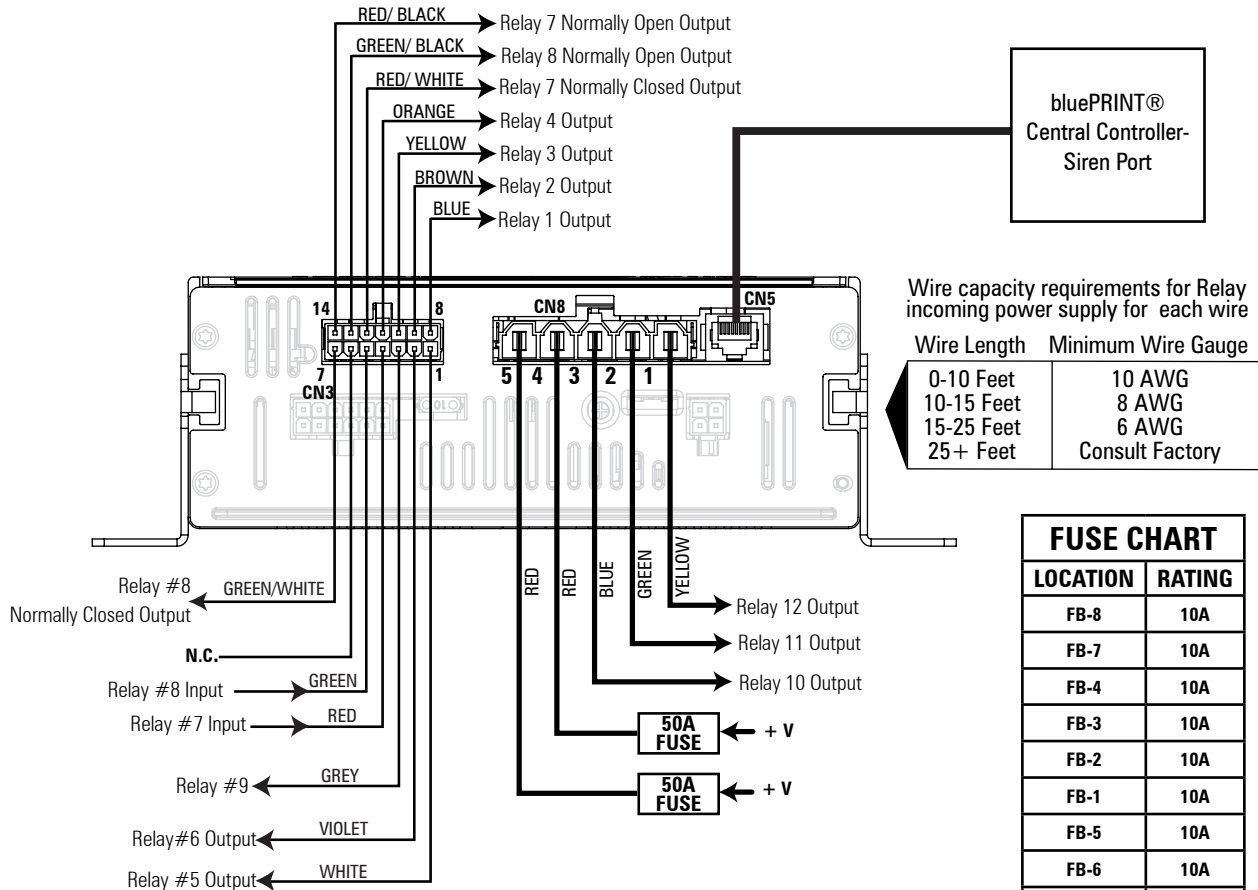
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EVCS\_480 Siren\_ENGSA071(xx) 0318

## 400 SERIES REMOTE SIREN/SWITCH MODULE PART NUMBERS: 100W - ENGSA07141 200W - ENGSA07152



FUSE CHART	
LOCATION	RATING
FB-8	10A
FB-7	10A
FB-4	10A
FB-3	10A
FB-2	10A
FB-1	10A
FB-5	10A
FB-6	10A
FB-9	10A
FS-1	20A
FS-2	20A
FS-3	20A

### Internal Relay Board Fuse replacement:

To replace fuses:

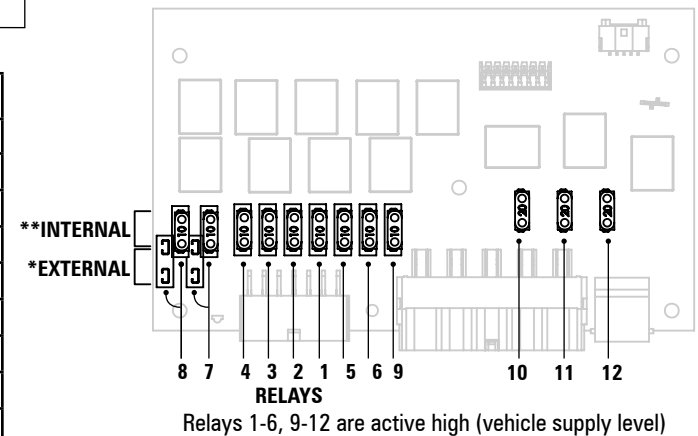
1. Remove power connectors CN8 and CN6 or remove power to unit.
2. Remove unit from console or obtain access to full top of unit.
3. Depress snaps on top cover and lift open.
4. See chart below for output fuse locations and ratings.
5. Fuse Ratings: Replace with same rated part.
6. Close cover, reinstall connectors and reinstall unit in console.

Relay outputs 7 and 8 have the ability to receive power from an independent external power source or from the internal +V as supplied to CN8. Both of these outputs use a separate internal 10A mini-ATO fuse which rely on position to determine the source selection. Each fuse may be placed in one of 2 locations. See diagram below.

\* If the fuse is placed in the fuse holder near the back edge of the PCB that output will be powered from an external source, labeled "relay #(x) input" on CN3.

\*\* If the fuse is placed in the fuse holder away from the back edge of the PCB that output will be powered from the internal +V source that comes from CN8 pin 5.

### FUSE LOCATIONS ON RELAY PCB



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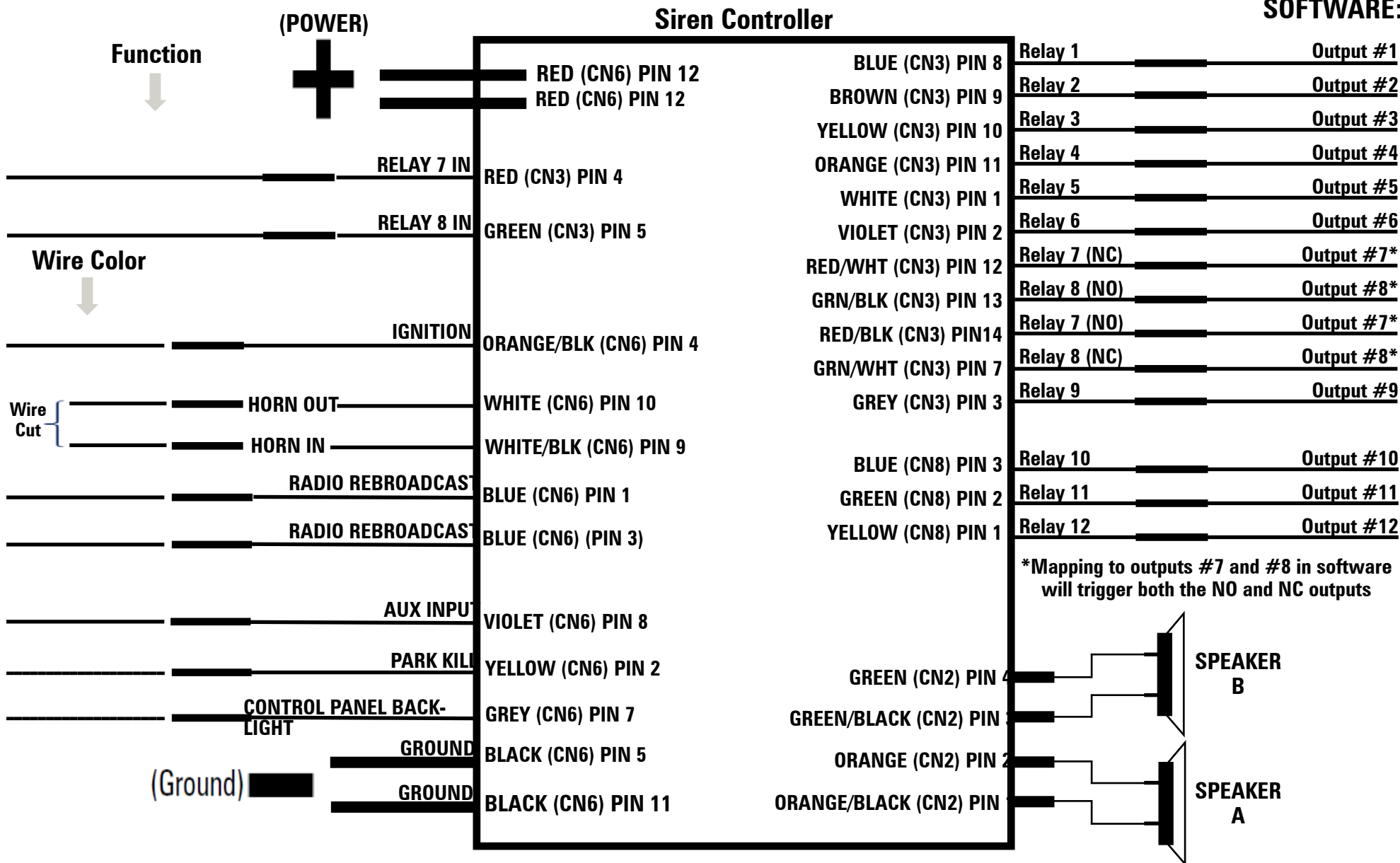
Department: \_\_\_\_\_

Vehicle: \_\_\_\_\_

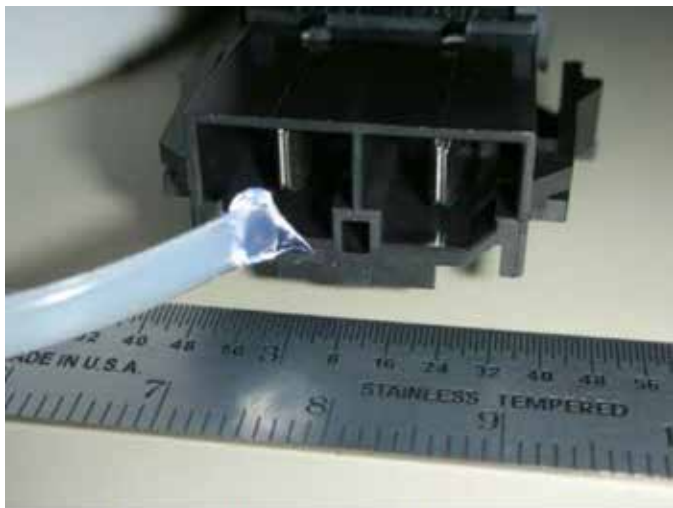
Installer / Date: \_\_\_\_\_

Mounting Location: \_\_\_\_\_

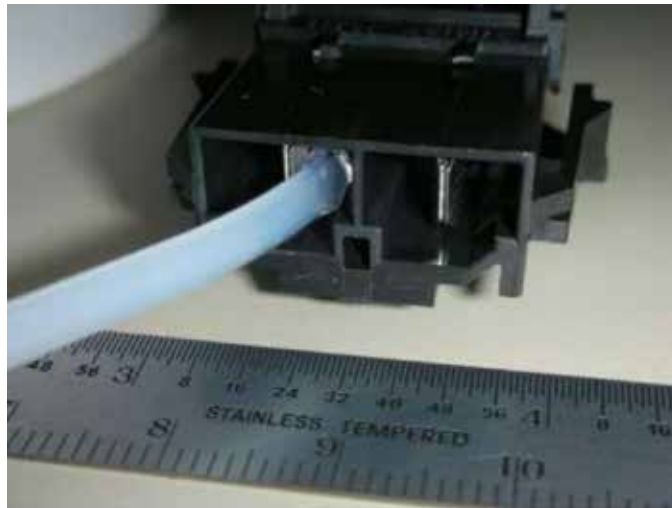
### SOFTWARE:



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Carefully insert Nyogel 760G into the housing.



Apply Nyogel 760G to both sides of every male terminal.

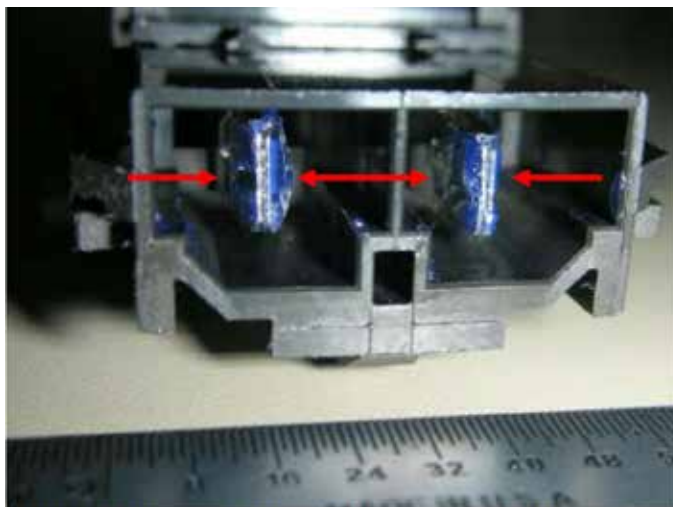


Photo of Nyogel 760G applied to both sides of each male terminal, covering the contact areas.



## Dielectric Grease on Molex Connectors

### Introduction

Molex has advised to add dielectric grease for “Mini-Fit Sr.” connectors. On the SoundOff Signal 400 Series Sirens this includes the Connector (CN8) on the back of the siren. Connector CN8 is used on the 400 Series Sirens to supply power to the Slide and Auxiliary outputs of the siren. This connector is a member of the “Mini-Fit Sr.” family manufactured by Molex. The dielectric grease / lubricant should be applied to these tin-plated terminals that are used for CN8 and/or the mating connector included with the Siren. The application of the grease should take no more than 5 minutes for each siren.

### Application Instruction

The dielectric grease should be applied after all crimping, soldering, and assembly is complete. It should be applied to all five (5) terminals. Care must be taken to prevent any scratching or damage to the plating in the contact area. Avoid contamination from dust, dirt, or other materials.

Molex recommends Nye lubricant, Nyogel 760G and provides detailed instructions in this application specification:

[https://www.molex.com/pdm\\_docs/as/AS-42815-001.pdf](https://www.molex.com/pdm_docs/as/AS-42815-001.pdf)

A single use packet of Nyogel 760G has been included in the siren harness kit for application.

NYLEX SAFETY DATA SHEET: [https://www.nyelubricants.com/datasheet/SDS\\_US\\_English\\_NYOGEL+760G.pdf](https://www.nyelubricants.com/datasheet/SDS_US_English_NYOGEL+760G.pdf)

### NOTE:

The mating harness that has been included in the kit uses correctly matched tin plated terminals. Do not mix terminals with other plating types such as silver or gold.

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