

ETCPRSP01 - 8 BUTTON CONTROLLER W/ SLIDE SWITCH - KIT



Package Contents:

- 1 ea. Amplifier Box
- 1 ea. Microphone Bracket w/ Mounting Hardware
- 5 ea. Amplifier Wire Harnesses with Connectors (1-4 pin, 1-12 pin, 1-5 pin 1-14 pin and 1-8 pin)
- 2 ea. Instruction Manual
- 1 ea. Operators Warning Card to remain in vehicle for operator review
- 1 ea. Sound Pressure Warning Label that is to be attached in vehicle and in plain site of operator and occupants of the vehicle
- 1 ea. Mounting Bracket with Hardware
- 1 ea. Label Card for Aux. Switches
- 1 ea. Remote control panel

Please see page 3 for
Technical Specifications



! WARNING

Sirens produce loud sounds that may damage hearing:

- Roll up windows.
- Wear hearing protection.
- Use only for emergency response.
- Avoid exposure to siren sound outside of vehicle.



Introduction

The ETCPRSP01 is Remote Mounted Controller and amplifier with lighting control. It can drive a variety of programmable powered control lines capable of up to nine 10A and three 20A circuits.

Notice

Controllers provide an essential function of an effective visual warning system. However, this controller is only a short range secondary device. The use of this controller does not insure that all drivers can or will abide by or react to an emergency warning signal, especially at high rates of speeds or long distances. The operator of the vehicle must never take the right of way for granted and it is the operator's responsibility to proceed safely.

The effectiveness of this system is highly dependant on the correct mounting and wiring. The installer must read and follow the manufacturer's installation instructions and warnings in the manual. The vehicle operator should verify the system is securely fastened to the vehicle and properly functioning.

This system is intended for use by authorized personnel only. It is the user's responsibility to ensure they understand and operate the emergency warning devices in compliance with all applicable city, state, and federal laws and regulations. SoundOff Signal assumes no liability for any loss resulting from the use of this system.

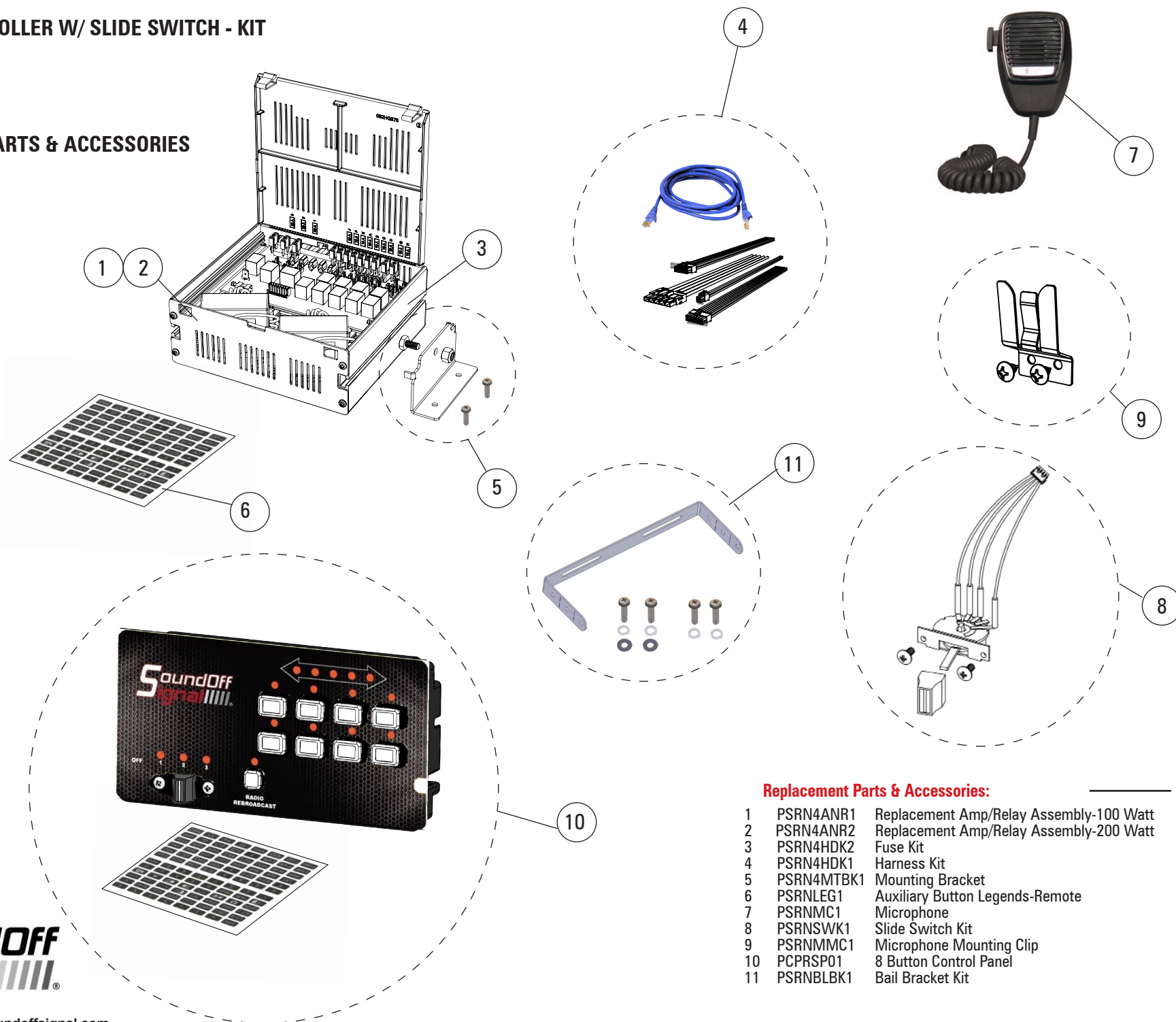
IMPORTANT NOTICE TO INSTALLER:

Make sure to read and understand all instructions and warnings before proceeding with the installation of this product. Ensure the manual and all warning cards are delivered to the end user of this equipment.

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**8 BUTTON CONTROLLER W/ SLIDE SWITCH - KIT
ETCPRSP01**

REPLACEMENT PARTS & ACCESSORIES



Replacement Parts & Accessories:

- | | | |
|----|------------|---|
| 1 | PSRN4ANR1 | Replacement Amp/Relay Assembly-100 Watt |
| 2 | PSRN4ANR2 | Replacement Amp/Relay Assembly-200 Watt |
| 3 | PSRN4HDK2 | Fuse Kit |
| 4 | PSRN4HDK1 | Harness Kit |
| 5 | PSRN4MTBK1 | Mounting Bracket |
| 6 | PSRNLEG1 | Auxiliary Button Legends-Remote |
| 7 | PSRNMC1 | Microphone |
| 8 | PSRNSWK1 | Slide Switch Kit |
| 9 | PSRNMMC1 | Microphone Mounting Clip |
| 10 | PCPRSP01 | 8 Button Control Panel |
| 11 | PSRNBLBK1 | Bail Bracket Kit |



400 SERIES AMPLIFIER BOX

PSRN4ANR1

WARNING

Do not install this product or route its wires in the air bag deployment area.

Doing so may cause damage to or reduce effectiveness of the air bag, or create projectile that could cause serious injury or death.

To determine air bag deployment area refer to vehicle manufacturer's manual.

MOUNTING

-Amplifier Installation-

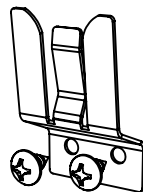
Before drilling holes, check for clearance to prevent damage. Check both sides of the mounting surface before drilling and be aware of any vehicle components or other vital parts that may be damaged during drilling.

Install grommets in any wire passage holes.

1. Slide 1/4" hex head bolts into amplifier t-slots.
2. Place mounting brackets over bolts.
3. Thread 1/4" lock nuts onto bolts and tighten down.
4. Use mounting bracket holes to secure amplifier
5. Install amplifier with clearance from other objects for improved ventilation.



-Microphone Bracket Installation-



A metal clip is provided for mounting the microphone. Choose a location convenient to the operator and away from any air bag deployment areas. Using the mounting clip as a template, mark the two holes to be drilled. Using a 1/8" drill bit, drill the two mounting holes. Install the two #6 screws provided with the bracket.

WIRING:

WARNING! All customer supplied wires connecting 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.

Ensure the amplifier / relay unit is mounted in dry, protected environment.

TECHNICAL SPECIFICATIONS

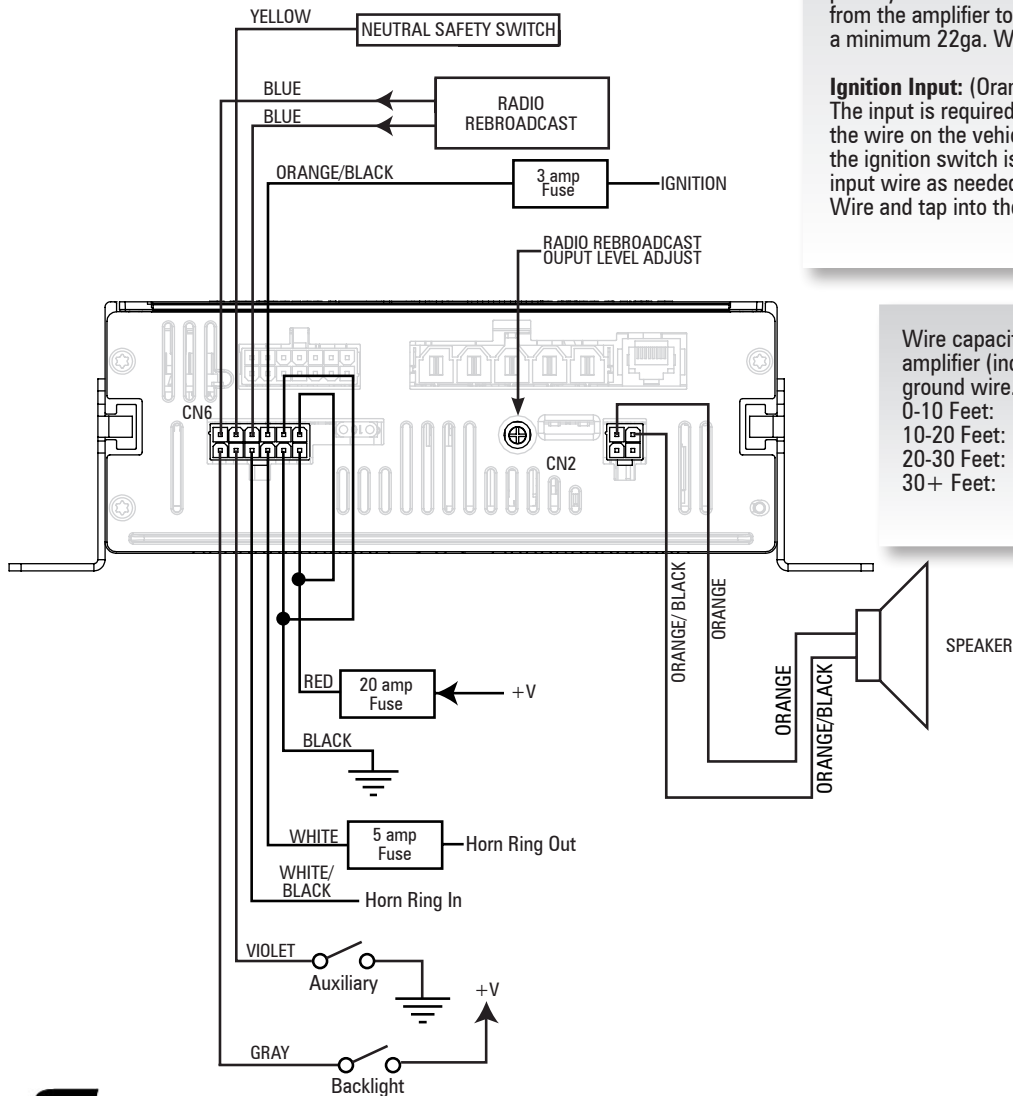
| | |
|--------------------------|---|
| Overall Dimensions: | |
| Control Panel: | 3.51" W x 6.89"H x 1.17"D |
| Amplifier/Relay: | 2.62"H x 7.00"W x 6.51"D |
| Input Voltage: | 10 - 16Vdc (negative ground) |
| Boxed Weight: | 8 lbs. |
| Operating Temperature: | -40°C to +50°C |
| Diagnostic LEDs: | Speaker shorted/open, internal fuses open, communications faults |
| Amplifier | |
| Input Current | 7 Amps @ 13.4 VDC (100W Speaker) |
| Standby Current: | |
| Ignition ON: | 500mA |
| Ignition OFF: | <10mA |
| Output Power: | ETSA481: 1x100W RMS Max (11 Ohm speaker) |
| Audio Frequency: | 500-3 kHz |
| Siren Frequency: | 675Hz - 1633Hz |
| High Voltage Protection: | Limits to <18V* |
| Low Voltage Shutdown: | Voltage <9.0V will cause siren output to cease and will resume when system voltage is >9.5V |
| Speaker Protection: | Shorted, Open: Stop output signal, preserve Amp |
| Light Control | |
| AUX button relays: | 9 total 10A max each circuit Total current not to exceed 50A for CN8 pin 5 |
| | 2 of the 9 available for external Arrow control |
| | 2 of the 9 have their source voltage switchable from internal to external via fuse location, see pg 5 |
| Slide Switch Relays: | 3 total 20A max each circuit, Total current not to exceed 50A for CN8 pin 4 |

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400 SERIES AMPLIFIER BOX

PSRN4ANR1

AUDIO WIRING



Park Kill Input: (Yellow Wire)

The input will silence the tones 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 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 required to enable this system. 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 unit 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. *Park kill disables any active auxiliary tone. The auxiliary tone can be reactivated when Park Kill is activated by toggling the Auxiliary Input.

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 amplifier and broadcast through the warning 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 amplifier to obtain the proper volume out the speaker. Turn potentiometer clockwise to increase volume and counter-clockwise to decrease volume.

Speaker Output: (Orange + Orange/Black Wires), (Green + Green/Black wires) Route the Orange and Orange/Black wires from the 4 position connector to the 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.

Backlight Input: (Gray Wire)

The input will turn on the backlighting of the control panel whenever +V is applied to the backlight input wire.

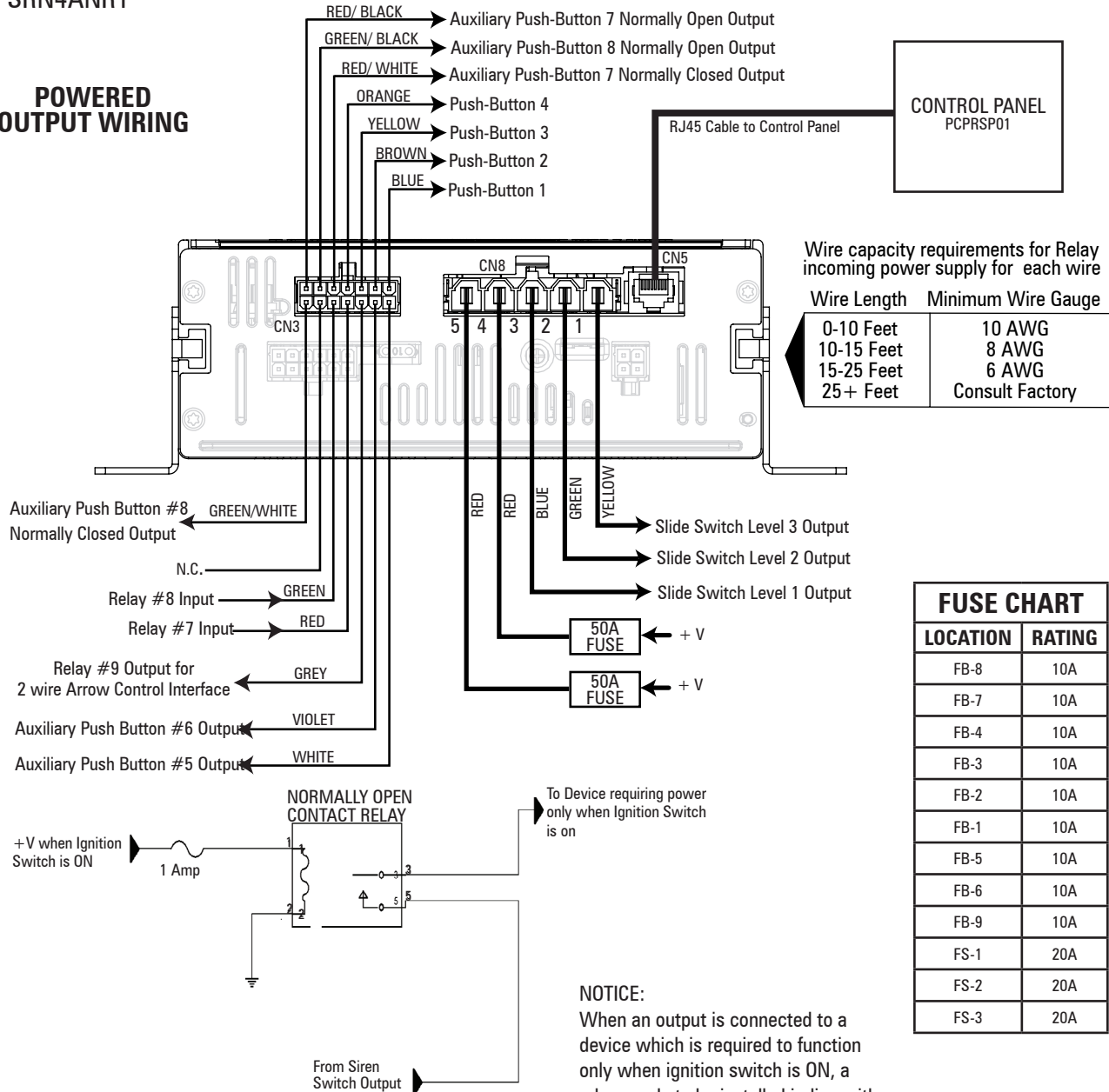
Route the amplifier backlight input wire to the vehicle's marker light wiring using a minimum of 22ga. Wire to extend as needed. T-tap the backlight input wire into the vehicle's marker light +V wire.

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PSRN4ANR1

POWERED OUTPUT WIRING



| 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:

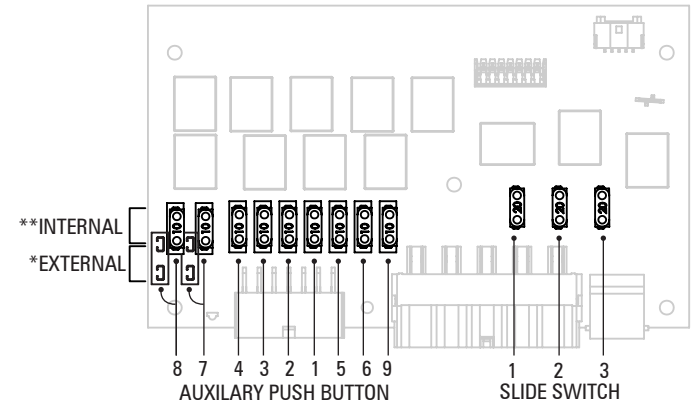
1. Remove power connectors CN8 and CN6 or remove power to unit.
2. Remove unit from console or obtain access to full top of unit.
3. Depress snaps on top cover and lift open.
4. See chart below for output fuse locations and ratings.
5. Fuse Ratings: Replace with same rated part.
6. Close cover, reinstall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

The button 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



Slide Switch Level Outputs 1-3 and Button Outputs 1-6 are active high (vehicle supply level).

NOTICE:

When an output is connected to a device which is required to function only when ignition switch is ON, a relay needs to be installed in-line with the siren switch output to ensure an operator can't activate the device without the ignition switch ON. See wiring diagram details:








REMOTE CONTROL PANEL

ETCPRSP01 - 8 Button Controller w/ Radio Rebroadcast and Slide Switch



PROGRAMMING MANUAL

LEGEND:

-  ON 
-  OFF 
-  NOT APPLICABLE

GRAYED AREAS DENOTE FACTORY DEFAULTS

NOTE: For All programming modes: Momentarily depress Radio Rebroadcast push-button to exit.

To hear samples of all the tones available go to www.soundoffsignal.com website.



WARNING

- Sirens produce loud sounds that may damage hearing:
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 - Wear hearing protection.
 - Use only for emergency response.
 - Avoid exposure to siren sound outside of vehicle.

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REMOTE CONTROL PANEL

ETCPRSP01 - 8 Button Controller w/ Radio Rebroadcast and Slide Switch

PROGRAMMING MODES

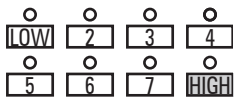
SLIDE SWITCH SETTINGS:

1. Press and hold Auxiliary Push-Button "1" and "4" until slide switch #2 indicator LED flashes.
2. Press Auxiliary Push-Button "1", "2" or "3" depending on which configuration for the slide switch is required.

| SLIDE SWITCH SETTINGS | | | | | |
|-----------------------|---------------------------------------|-----------------|-----------------|-----------------|-----------------------|
| MODE | | RELAY OUTPUT #1 | RELAY OUTPUT #2 | RELAY OUTPUT #3 | SLIDE SWITCH POSITION |
| 1 | AUXILIARY PUSH-BUTTON '1' IS SELECTED | ✓ | | | 1 |
| | | ✓ | ✓ | | 2 |
| | | ✓ | ✓ | ✓ | 3 |
| 2 | AUXILIARY PUSH-BUTTON '2' IS SELECTED | ✓ | | | 1 |
| | | | ✓ | | 2 |
| | | | | ✓ | 3 |
| 3 | AUXILIARY PUSH-BUTTON '3' IS SELECTED | ✓ | | | 1 |
| | | | ✓ | | 2 |
| | | ✓ | ✓ | ✓ | 3 |

Setting PA Volume:

1. Press and Hold Auxiliary Push-Button "1" and "2" until slide switch #2 and #3 indicator LED flashes.
2. Depress and hold PA switch on microphone and press Push-button "1"- "8" depending on volume required. When correct volume is determined, press Radio Rebroadcast and the volume setting will be permanently stored.



AUXILIARY SWITCH SETTINGS:

Refer to Siren Amplifier Diagnostic Indicator Chart below for Button and LED locations and terminology

1. Press and Hold Auxiliary Button #1 and #8 until slide switch #1 LED flashes.
2. Press the button which setting is going to be viewed/changed 1 time.
3. Monitor the 5 LED's for the arrow controller to determine setting
 - ⊙⊙⊙⊙⊙- *Arrow Controller (Left, Right, Center, OFF), Dual Output; 1 & 9
 - ⊙⊙⊙⊙⊙- Alternate Action Switch (Press ON / Press OFF)
 - ⊙⊙⊙⊙⊙- Momentary Action Switch (ON only when depressed)
 - ⊙⊙⊙⊙⊙- 8 Second ON Time (ON for 8 seconds when depressed)
 - ⊙⊙⊙⊙⊙- Level 1 Disable (Turns OFF Level 1 Output)
 - ⊙⊙⊙⊙⊙- Level 2 Disable (Turns OFF Level 2 Output)
 - ⊙⊙⊙⊙⊙- Left Arrow, Single Output
 - ⊙⊙⊙⊙⊙- Right Arrow, Single Output
 - ⊙⊙⊙⊙⊙- Center Arrow, Single Output
 - ⊙⊙⊙⊙⊙- Warning Bar Output

*Can only be programmed to one button and will disable Left, Right and Center Arrow Single Outputs if they are used.

4. Press and release button until desired mode is selected.
5. Continue steps 2-3 for any other buttons that need to be programmed.

Default Settings:

Button #1: Arrow Controller
 Button #2-7: Alternate Action Switch
 Button #8: 8 Second Gun Lock

BACKLIGHT INTENSITY:

While pressing Radio Rebroadcast Button, press Auxiliary Button 1-8 to adjust backlight intensity. Button 1 = Lowest intensity, Button 8 = Highest intensity. Backlight must be enabled by the Gray wire on CN6.




REMOTE CONTROL PANEL

ETCPRSP01 - 8 Button Controller w/ Radio Rebroadcast and Slide Switch

ALTERNATE MODES:

Press and Hold Auxiliary Button "2" and "6" until Slide Switch indicator #1 and indicator #2 LED flashes.


1. DISABLE RELAY ERROR FOR AUX 7 & 8:


 ON = Disable fault detect indication for Aux relays 7& 8.

 OFF = Fault detect normal.

2. SLIDE SWITCH ENABLED WITHOUT IGNITION:

After ignition is turned off, device will stay on in lower power mode and allow (ONLY the slider to operate.)

 ON = With ignition off, slider relays will still turn on if slider is in position 1, 2, or 3. Device will turn off if no ignition after 18 hours, or if battery is below 10.5V after 2 hours.

 OFF = Device turns off normally, sliders will not work when off.

OTHER MODES:

Press and Hold Auxiliary Button "1" and "5" until slide switch #1 and #3 indicator LED flashes.

1. Buzzer:

Audible tone from control panel whenever operator presses push-button or changes position of slide/rotary switch.


 ON = Buzzer enabled.

 OFF = Buzzer disabled.

2. Power Down:

Determines siren operation after ignition wire input has no voltage.

 ON = Timed Power Down: Siren will power down 10 min. after last activity.

 OFF = Immediate Power Down: Siren will go into lowest power state within 10 seconds.

3. 8 Second Buzzer alert:

Provides audible beep whenever any auxiliary switches are ON or level 1,2, or 3 is active.

 ON = Enabled.

 OFF = Disabled.

SLIDE SWITCH MAPPING PROGRAMMING:

Allows the operator to have the siren automatically turn on auxiliary push-buttons based on the position of the slide switch.

If an auxiliary push-button is programmed to turn ON when the slide switch position is selected, the auxiliary push-button will turn OFF when the programmed slide switch position is no longer selected.

The operator can override the automatic activation of the auxiliary push-button by momentarily pressing the auxiliary push-button.

To program:

1. Press auxiliary push-buttons '4' and '5' for 2 seconds until Radio Rebroadcast indicator LED flashes.
2. Move slide switch to desired position.
3. Press auxiliary push-buttons '1' – '8', as required.

| | |
|----------------------|---|
| LED ON (GREEN) | Auxiliary push-button will automatically turn ON when level switch position is activated. |
| LED OFF (RED OR OFF) | Auxiliary push-button will NOT automatically turn ON when level switch position is activated. |

4. Repeat steps 2 and 3 for other slide switch positions as required.
5. Place appropriate button legend over activity indicator for each programmed button.


PARK KILL SETTINGS:


Press and Hold Auxiliary Button 1 and 3 until slide switch #3 LED flashes.

Enables auxiliary outputs to be disabled when Park Kill input is active. Auxiliary outputs can be turned back on by pushing the buttons again.

1. Park Kill Polarity Mode:

Determines what voltage level will activate park kill functions.

 ON = activated when +V is applied to Park Kill input wire.

 OFF = activated when Ground is applied to Park Kill input wire.

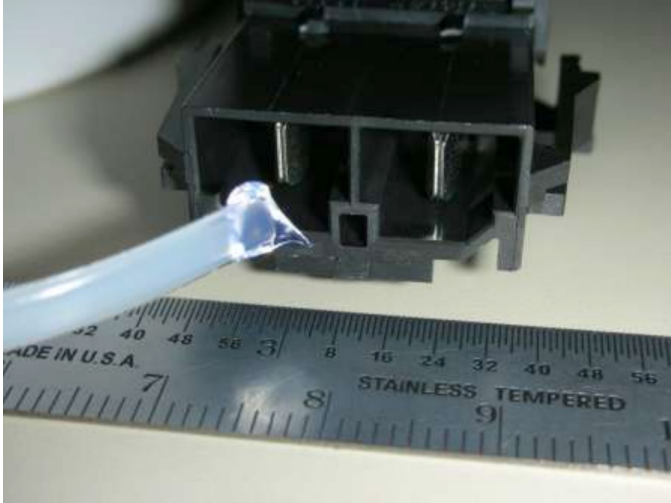
2. Press the Radio Rebroadcast button to exit programming mode.
3. Push and hold Auxiliary Push-Buttons 2 & 3 until arrow indicator LEDs flash.
4. Press Push-Buttons 1-8 to toggle whether that auxiliary output will turn off when Park Kill input becomes active. LED on means output will turn off.
5. Press the Radio Rebroadcast button to exit programming mode.



400 SERIES REMOTE SIREN W/ 380R REMOTE CONTROL PANEL

ETSA481RSP - 100W

ETSA482RSP - 200W



Carefully insert Nyogel 760G into the housing.



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

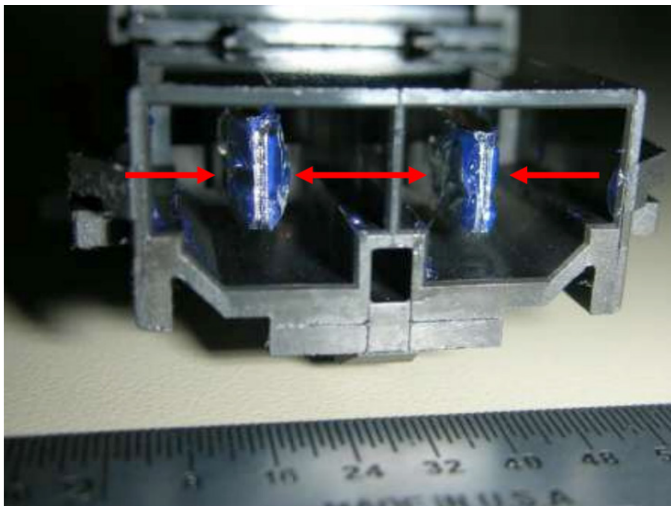


Photo of Nyogel 760G applied to both sides of each male terminal, covering the contact areas.

⚠ WARNING

Dielectric grease must be applied to connector CN8.

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

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

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.

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/tech-services/returns/. If you have questions regarding this product, contact **Technical Services**, Monday - Friday, 8 a.m. to 5 p.m. or after hours 5 p.m. to 8 p.m. ET at 1.800.338.7337 (press #4). Questions or comments that do not require immediate attention may be emailed to techservices@soundoffsignal.com.

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