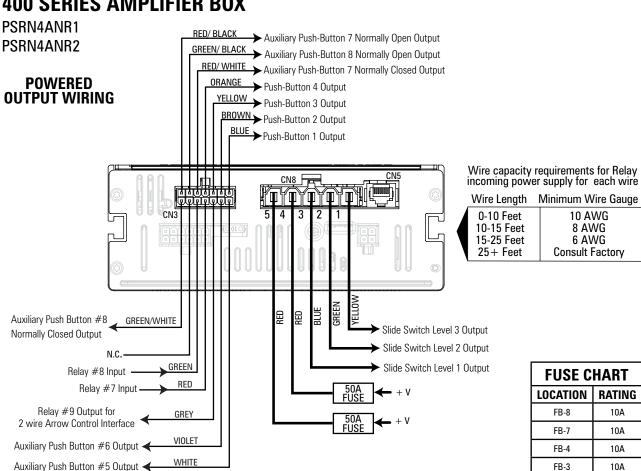
# **400 SERIES AMPLIFIER BOX**



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			

10 AWG

8 AWG 6 AWG

Consult Factory

# **Internal Relay Board Fuse replacement:**

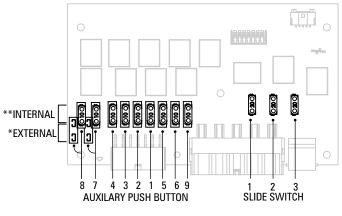
To replace fuses:

- Remove power connectors CN8 and CN6 or remove power to unit.
- Remove unit from console or obtain access to full top of unit.
- Depress snaps on top cover and lift open.
- See chart below for output fuse locations and ratings.
- Fuse Ratings: Replace with same rated part.
- 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).

# When an output is connected to a device which is required to function

NORMALLY OPEN

**CONTACT RELAY** 

From Siren Switch Output

'oundOff Smart Design.

+V when lanition Switch is ON

1 Amp

1.800.338.7337 / www.soundoffsignal.com

See wiring diagram details: 5

without the ignition switch ON.

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

To Device requiring power

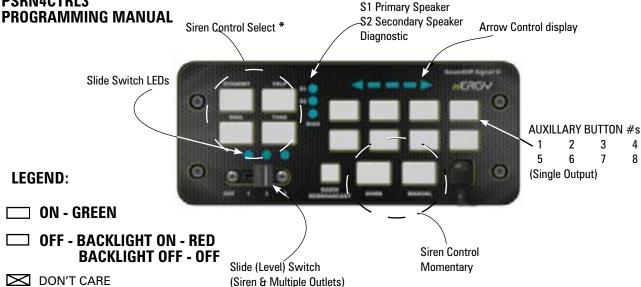
only when lanition Switch

NOTICE:

is on

# **CONTROL PANEL** PSRN4CTRL2 **PSRN4CTRL3**

## PUSH BUTTON (SHOWN BELOW) SIMILAR TO ROTARY SWITCH (NOT SHOWN)



# GRAYED AREAS DENOTE FACTORY DEFAULTS

### NOTE:

LEGEND:

- A. For All programming modes: Momentarily depress Radio Rebroadcast push-button to exit.
- B. To hear samples of all the tones available go to www. soundoffsignal.com website.
- C. The Push Button version (shown above) works the same as the rotary switch version with 2 exceptions:
  - 1. Gun Release Interlock (Button:STBY; Rotary: RR)
  - 2: Rotary Switch version only Parasidic Current- To place unit in lowest possible current consumption mode (with ignition off), rotary switch must be in "off" position.
- \* Siren Control Select for push button or rotary switch versions program the same.



## **INPUT SETTINGS:**

- 1. Press and Hold Auxiliary Button 1 and 3 until slide switch #3 LED flashes.
- 1. Park Kill Polarity Mode: Determines what voltage level will activate park kill functions.
- $\boxtimes\boxtimes$

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

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

2. Horn Ring Polarity Mode: Determines what voltage level will activate Horn Ring functions.

 $\boxtimes$  $\boxtimes\boxtimes\boxtimes$  ON = activated when +V isapplied to Horn Ring input wire OFF = activated when Ground is applied to Horn Ring input wire

3. Tone Select\*: Determines if the Tone Select activation will allow a siren tone to be produced.

 $\boxtimes$ 

ON = Tone Push-button Fnabled

 $\boxtimes\boxtimes\boxtimes$ 

OFF = Tone Push-button Disabled

4. Level 3 tone activation\*: Determines when the siren tone push-buttons on control panel are enabled.

 $\bigcirc$  ON = Tone push-buttons always enabled

OFF = Tone push-buttons only enabled when slide switch is in position #3.

5. Horn Ring Timeout: (Alternate Horn Ring control must be disabled and hands free mode must be enabled for function to have any effect). When vehicle horn is pressed and tone changes, determines how tone will change back to pre-vehicle horn press tone.

ON = siren tone will revert back to pre-vehicle horn press tone after 8 seconds

OFF = siren tone will not revert back to pre-vehicle horn press tone

6. Park Kill Latch: When Park Kill input is triggered, determines how siren tone proceeds once park kill input is no longer active. (Disables Auxiliary Input)

ON = Tone remains disabled until operator selects other tone

 $\boxtimes \square \boxtimes \boxtimes$ 

OFF = Tone resumes once Park Kill input is no longer active

7. Horn Ring Scroll: (Hands Free Mode must be enabled for function to have any effect) Determines how siren tone will change each time the operator presses the vehicle horn.

ON = Tone will advance through tones programmed on Wail, Yelp, and Tone push-buttons each time vehicle horn is pressed

 $oldsymbol{\boxtimes}oldsymbol{\boxtimes}oldsymbol{\boxtimes}$ 

OFF = Tone will switch between tones programmed on Wail and Yelp pushbuttons each time vehicle horn is pressed

8. Auxiliary Input: Determines which siren tone will be activated when auxiliary input is activated.

 $\boxtimes\boxtimes\boxtimes$ 

ON = Air Horn tone

OFF = Tone which is programmed on Wail push-button

# **CONTROL PANEL** PSRN4CTRL2 **PSRN4CTRL3** PROGRAMMING MANUAL

#### **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		
		J			1		
1	1 AUXILIARY PUSH-BUTTON 1 IS SELECTED	✓	✓		2		
		<b>√</b>	<b>√</b>	V	3		
		<b>√</b>			1		
2	AUXILIARY PUSH-BUTTON 2 IS SELECTED		V		2		
	10 SEELOTED			V	3		
					1		
3	AUXILIARY PUSH-BUTTON 3 IS SELECTED		<b>√</b>		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.

LOW	2	3	4
5	6	7	HIGH

# **BACKLIGHT INTENSITY:**

While pressing RADIO REBROADCAST BUTTON. press Auxiliary Push-Button "1"-"8" to adjust backligh intensity. "1" = Lowest intensity, "8" = Highest intensity. Backlight must be enabled by the Gray wire on CN6.



#### **ALTERNATE MODES:**

- 1. Press and Hold Auxiliary Push-Button "2" and "6" until Slide Switch indicator #1 and indicator #2 LED flashes.
  - 1. Alternate Horn Ring control: Custom operation of vehicle horn when pressed. Refer to figure below for details.

	ON = Enabled
$\boxtimes \boxtimes \boxtimes \boxtimes$	OFF = Disabled

2. Alternate Horn Ring control option: (Alternate Horn Ring Control must be enabled). Custom operation of vehicle horn when pressed. Refer to figure below for details.

 $\boxtimes \square \boxtimes \boxtimes$ ON = Option 2OFF = Option 1

	ALTERNATE HORN RING CONTROL			
	OPTION 1 OPTION 2			
STANDBY	OEM HORN	OEM HORN		
LEVEL 1	OEM HORN	OEM HORN		
LEVEL 2	Air Horn or Wail Button Tone while Pressed *	Tap to Turn On Warning Tone, Tap again to Change Warning Tone. Press and Hold for Air Horn Tone		
LEVEL 3	Tap to turn ON Warning Tone, Tap again to change Warning Tone. Press and Hold for Air Horn Tone	TONE SWITCH OFF: Air Horn Tone or Wail Button Tone while Pressed *	TONE SWITCH ON: Tap to change Warning Tone, Press and Hold for Air Horn Tone	

<sup>\*</sup> Set in "Other Modes" 6. Horn Ring Standby Tone

#### 3. GUN LOCK SECURITY:

ON = Operator must press Standby button within 1 second after pressing 8  $oldsymbol{ol{olgmbiol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{oldsymbol{ol{ol}}}}}}}}}}}}}}}}$ second time delay button to active  $oldsymbol{ol}oldsymbol{ol}oldsymbol{ol}}}}}}}}}}}}}}}}}}$ switch OFF = 8 second time delay switch is activated immediately when pressed

#### OTHER MODES:

- 1. Press and Hold Auxiliary Button "1" and "5" until slide switch #1 and #3 indicator LFD flashes.
  - 1. Horn Ring Activation: Determines when pressing the Vehicle Horn will activate siren tone

	ON = Enabled only when slide in level position 3	
$\boxtimes\boxtimes\boxtimes$	OFF = Fnahled whenever siren	

 $\mathsf{OFF} = \mathsf{Enabled}$  whenever siren is  $\mathsf{ON}$ 

witch is

**2**. Buzzer: Audible tone from control panel whenever operator presses push-button or changes position of slide/rotary switch ON = Buzzer enabled  $\boxtimes \Box \boxtimes \boxtimes$ 

OFF = Buzzer disabled

3. Speakers diag LED disable: Disabling S2 LED does not turn off secondary speaker channel

ON enable S2 LED (200W system)  $\boxtimes\boxtimes\boxtimes$ OFF disable S2 LED (100W system)

4 Hands Free Mode: (Alternate Horn Ring Control Must be Disabled) Activates the siren tone when operator momentarily presses on Vehicle Horn.

 $\boxtimes\boxtimes\Box$ ON = Fnabled

OFF = Disabled  $\boxtimes\boxtimes\boxtimes\boxtimes$ 

5. Power Down: Determines siren operation after ignition wire input has no voltage

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

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

6. Horn Ring Standby Tone: (Hands Free Mode must be disabled for this function to work) (Alternate Horn Ring Control Must be Disabled) Determines which tone to output when siren is in standby and vehicle horn is pressed

ON = Air Horn $\boxtimes\boxtimes\boxtimes$  $\boxtimes \cap \boxtimes \boxtimes$ OFF = Wail Tone

7. 8 Second Buzzer alert: Provides audible beep whenever any auxiliary switches are ON or level 1,2, or 3 is active.

 $\boxtimes\boxtimes\boxtimes$ ON = Enabled OFF = Disabled

**8**. Air Horn Button Output Channels

ON = In standby mode, Air Horn tone is output on Spkr A & B. When Warning Tone is Active, Warning Tone continues on Spkr A & Air Horn Button Tone is output on Spkr B

> OFF = Air Horn Button Tone always produced on Spkr A & B.

> > ETSA48(x)CSX 3.4.13

# CONTROL PANEL PSRN4CTRL2 PSRN4CTRL3 PROGRAMMING MANUAL

# **PROGRAMMING MODES**

#### **AUXILIARY SWITCH SETTINGS:**

Refer to Figure at bottom center for Button and LED locations and terminology

- 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 

  OOOO- \*Arrow Controller (Left, Right, Center, OFF), Dual Output; 1 & 9

  OOOO- Alternate Action Switch (Press ON / Press OFF)
- ⊙⊙⊙⊙- Momentary Action Switch (ON only when depressed)○⊙⊙⊙⊙- 8 Second ON Time (ON for 8 seconds when depressed)
- OOOO 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 ON Time

**Denotes Factory Default Setting** 



#### Auxiliary Push-button to 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' and or Siren Control Select as required.

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

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

# pping programming: TONE PROGRAMMING:

- Press and hold "buttons" "2" and "7" for 2 seconds until Slide switch LED'S 1,2, and 3 flash
- Press Control Select to be programmed (Wail, Yelp, Tone, Manual, or Horn). Auxillary button 1 = HORN, button 2 = MANUAL
- 3. Auxillary buttons 5-8 will determine which tone is to be played when the user presses the button.
- 4. Repeat steps 2 and 3 for each tone button

## MANUAL BUTTON TONE DURATION

MOMENTARY: When played solo

LATCHED: When played over other tones.

# SIREN AMPLIFIER DIAGNOSTIC INDICATORS:

DIAG	<b>S</b> 1	S2	CONDITION
FLASHING	ON	ON	OVER-TEMPERATURE, (380R ONLY)
FLASHING	OFF	ON	UNDER-VOLTAGE
FLASHING	ON	0FF	OVER-VOLTAGE
FLASHING	FLASHING	-	COMM FAULT - RELAY
FLASHING	-	FLASHING	COMM FAULT - AMP
FLASHING	FLASHING	FLASHING	COMM FAULT -RELAY AND AMP
-	-	-	-
*OFF	ON	-	SPKR 1 IS ACTIVE
*OFF	-	ON	SPKR 2 IS ACTIVE
*OFF	OFF	-	SPKR 1 IS NOT-FUNCTIONING
*OFF	-	0FF	SPKR 2 IS NOT-FUNCTIONING

<sup>\*</sup> SIREN AUDIO BUTTON ACTIVATED (EXCEPT RADIO REBROADCAST)

# CONTROL PANEL PSRN4CTRL2 PSRN4CTRL3 PROGRAMMING MANUAL

# WAIL CONTROL SELECT

BUTTON #6	BUTTON #7	BUTTON SPKR A #8		SPKR B
OFF	OFF	OFF	WAIL 1	WAIL 1
OFF	OFF	ON	WAIL 2	WAIL 2
0FF	ON	OFF	WAIL 1	WAIL 2
OFF	ON	ON	WAIL 1	YELP 1
ON	OFF	OFF	WAIL 1	ALERT A
ON	OFF	ON	WAIL 1	HiLo
ON	ON	OFF	WAIL 2	SUPER HiLo
ON	ON	ON	WAIL 2	PIERCER

# \*TONE SCROLL

TOITE CONCE			
SPKR A	SPKR B		
WAIL 1	WAIL 2		
WAIL 2	YELP 1		
YELP 1	YELP 2		
YELP 2	PIERCER		
PIERCER	ALERT A		
ALERT A	WAIL 1		

# YELP CONTROL SELECT

BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B
OFF	OFF	OFF	YELP 1	YELP 1
0FF	OFF	ON	YELP 2	YELP 2
0FF	ON	OFF	YELP 1	YELP 2
OFF	ON	ON	YELP 1	ALERT A
ON	OFF	OFF	YELP 1	PIERCER
ON	OFF	ON	YELP 1	HiLo
ON	ON	OFF	YELP 2	SUPER HiLo
ON	ON	ON	YELP 2	PIERCER

# TONE CONTROL SELECT

BUTTON #5	BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B
OFF	OFF	OFF	OFF	TONE SCROLL*	TONE SCROLL*
0FF	OFF	OFF	ON	PIERCER	PIERCER
OFF	OFF	ON	OFF	HiLo	HiLo
0FF	OFF	ON	ON	SUPER HiLo	SUPER HiLo
OFF	ON	OFF	OFF	ALERT A	ALERT A
OFF	ON	OFF	ON	ALERT A	HiLo
OFF	ON	ON	OFF	ALERT A	SUPER HiLo
OFF	ON	ON	ON	HiLo	SUPER HiLo
ON	OFF	OFF	OFF	HiLo	PIERCER
ON	OFF	OFF	ON	ALERT A	ALERT B
ON	OFF	ON	OFF	PIERCER	ALERT B
ON	OFF	ON	ON	PIERCER	ALERT A
ON	ON	OFF	OFF	SUPER HiLo	PIERCER
ON	ON	OFF	ON	WAIL 1	WAIL 2
ON	ON	ON	OFF	YELP 1	YELP 2
ON	ON	ON	ON	WAIL 1	YELP 1

# **HORN BUTTON**

HOME DOLLON						
BUTTON #5	BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B	
OFF	0FF	OFF	OFF	HORN 1	HORN 1	
0FF	OFF	OFF	ON	HORN 2	HORN 2	
0FF	OFF	ON	OFF	HORN 3	HORN 3	
OFF	OFF	ON	ON	HORN 4	HORN 4	
OFF	ON	OFF	0FF	HORN 1	HORN 2	
OFF	ON	OFF	ON	HORN 1	HORN 3	
0FF	ON	ON	OFF	HORN 1	HORN 4	
0FF	ON	ON	ON	HORN 2	HORN 3	
ON	0FF	OFF	OFF	HORN 2	HORN 4	
ON	OFF	OFF	ON	HORN 3	HORN 4	
ON	OFF	ON	OFF	HORN 1	WAIL 1	
ON	OFF	ON	ON	HORN 1	YELP 1	
ON	ON	OFF	OFF	HORN 1	PIERCER	
ON	ON	OFF	ON	HORN 2	YELP 1	
ON	ON	ON	OFF	HORN 3	YELP 1	
ON	ON	ON	ON	HORN 4	SUPER Hilo	

# **MANUAL BUTTON (SOLO PLAY ONLY)**

BUTTON #6	BUTTON #7	BUTTON #8	SPKR A/B
OFF	OFF	OFF	WAIL 1 FREQUENCY DECREASE WHEN RELEASED
OFF	OFF	ON	WAIL 1 IMMEDIATE OFF WHEN RELEASED
0FF	ON	0FF	YELP 1
0FF	ON	ON	PIERCER
ON	OFF	OFF	ALERT A
ON	OFF	ON	HiLo
ON	ON	OFF	SUPER HiLo
ON	ON	ON	WAIL 1 IMMEDIATE OFF WHEN RELEASED

**Denotes Factory Default Setting** 

