bluePRINT®

CONTROL PANEL
PNGCP18003
PNGCP18004
PROGRAMMING MANUAL

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

Siren Control Select *

S1 Primary Speaker
S2 Secondary Speaker
Diagnostic

Arrow Control
Display

Slide Switch
LEDs

Slide (Level) Switch
(Siren & Multiple Outlets)

Siren Control
Momentary

AUXILLARY BUTTON #s
1   2   3   4
5   6   7   8
(Single Output)

LEGEND:

☐ **ON - GREEN**

☐ **OFF - BACKLIGHT ON - RED**
        BACKLIGHT OFF - OFF

⊠ **NOT APPLICABLE**

GRAYED AREAS DENOTE FACTORY DEFAULTS

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Pg. 1

NOTE:
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.

Horn Ring Configuration Settings *Siren Tone Must Be ON*

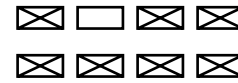| Modes		Hornring Scroll	Hornring Latch (see #4 in OTHER MODES on pg. 7.)	Hornring Timeout	Output Behavior
	Scroll	ON	X	OFF	Pressing the horn in this mode will advance to and latch the next priority tone. (W->Y->T->W...). The tone is cancelled by pressing the control panel stanyby or siren tone buttons.
				ON	Same as above with the added feature of the tone being cancelled 8 seconds after the horn is released.
	Latch/Toggle	OFF	ON	OFF	Pressing the horn in this mode will toggle between the current control panel tone and the next priority tone. If the tone can not transfer to a higher priority tone, the airhorn will sound while the horn is pressed.
				ON	Same as above with the added feature of the tone being cancelled 8 seconds after the horn is released.
	Momentary	OFF	OFF	OFF	Pressing the horn in this mode will momentarily play the next priority tone while the horn is held.
				ON	Same as above with the added feature of the tone being cancelled 8 seconds after the horn is released.

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.

⊠ ⊠ ⊠ ⊠ (row 1: ON ☐ ⊠ ⊠ ⊠)
⊠ ⊠ ⊠ ⊠

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

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

⊠ ☐ ⊠ ⊠
⊠ ⊠ ⊠ ⊠

ON = activated when +V is applied 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.

⊠ ⊠ ☐ ⊠
⊠ ⊠ ⊠ ⊠

ON = Tone Push-button Enabled
OFF = Tone Push-button Disabled
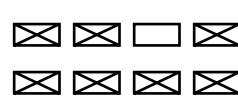
4. Level 3 tone activation*: Determines when the siren tone push-buttons on control panel are enabled.

⊠ ⊠ ⊠ ☐
⊠ ⊠ ⊠ ⊠

ON = Tone push-buttons always enabled
OFF = Tone push-buttons only enabled when slide switch is in position #3.
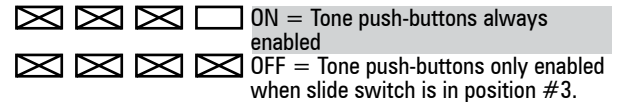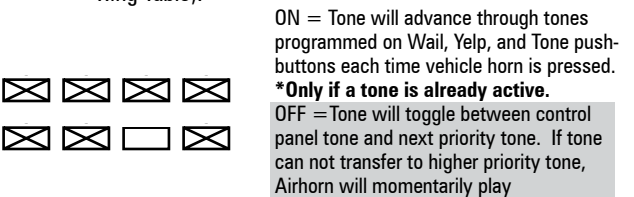
5. Horn Ring Timeout: (Alternate Horn Ring control must be disabled for function to have any effect). When vehicle horn is pressed and tone changes, determines how tone will change back to pre-vehicle horn press tone. This feature can be applied to scroll and latch modes. (See Horn Ring Table).
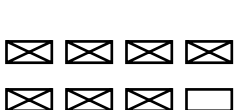
⊠ ⊠ ⊠ ⊠
☐ ⊠ ⊠ ⊠

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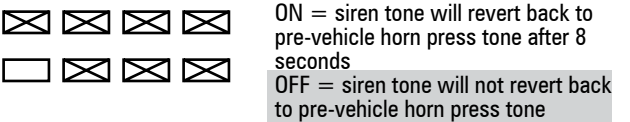
6. Park Kill Latch: When Park Kill input is triggered, determines how siren tone proceeds once park kill input is no longer active. (Disables Auxiliary Input)

⊠ ⊠ ⊠ ⊠
⊠ ☐ ⊠ ⊠

ON = Tone remains disabled until operator selects other tone
OFF = Tone resumes once Park Kill input is no longer active
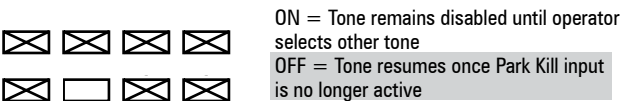
7. Horn Ring Scroll: Determines how siren tone will change each time the operator presses the vehicle horn. (See Horn Ring Table).

⊠ ⊠ ⊠ ⊠
⊠ ⊠ ☐ ⊠

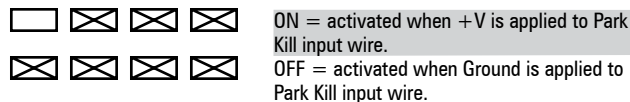ON = Tone will advance through tones programmed on Wail, Yelp, and Tone push-buttons each time vehicle horn is pressed. ***Only if a tone is already active.**
OFF =Tone will toggle between control panel tone and next priority tone. If tone can not transfer to higher priority tone, Airhorn will momentarily play

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

⊠ ⊠ ⊠ ⊠
⊠ ⊠ ⊠ ☐

ON = Air Horn tone
OFF = Tone which is programmed on Wail push-button

CONTROL PANEL
PNGCP18003
PNGCP18004
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.

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.

LOW	2	3	4

5	6	7	HIGH

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

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ALTERNATE MODES:
1. Press and Hold Auxiliary Push-Button "2" and "6" until Slide Switch indicator #1 and #2 LED flashes.

1. Alternate Horn Ring control: Custom operation of vehicle horn when pressed. Refer to figure below for details.

☐ ☒ ☒ ☒   ON = Enabled

☒ ☒ ☒ ☒   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.

☒ ☐ ☒ ☒   ON = Option 2

☒ ☒ ☒ ☒   OFF = 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

* 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 second time delay button to active switch

☒ ☒ ☒ ☒   OFF = 8 second time delay switch is activated immediately when pressed

6. DISABLE RELAY ERROR FOR AUX 7 & 8:

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

☒ ☐ ☒ ☒   OFF = Fault detect normal.

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7. 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.

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

8. Invert Backlight Color: Swap the background and active colors of buttons.

ON = Backlight color is green, active is red.

OFF = Backlight color is red, active is green.

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

1. Horn Ring Activation: Determines when pressing the Vehicle Horn will activate siren tone

☐ ☒ ☒ ☒   ON = Enabled whenever siren is ON

☒ ☒ ☒ ☒   OFF = Enabled only when slide switch is in level position 3

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

☒ ☐ ☒ ☒   ON = Buzzer enabled

☒ ☒ ☒ ☒   OFF = Buzzer disabled

3. Speakers Diag LED disable: Disabling Diagnostic LED does not turn off secondary speaker channel

☒ ☒ ☐ ☒   ON enable Diagnostic LED (200W)

☒ ☒ ☒ ☒   OFF disable Diagnostic LED (100W)

4. Horn Ring Latch Mode: (Alternate Horn Ring Control Must be Disabled) Activates the siren tone per scroll mode off settings when operator momentarily presses on Vehicle Horn. *Wail Only. Only works when tone is already active. (See Horn Ring Table).
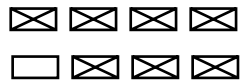
☒ ☒ ☒ ☐   ON = Horn ring Toggle Switch Mode

☒ ☒ ☒ ☒   OFF = Horn ring Momentary Switch Mode

PNGCP1800(x) 0419

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CONTROL PANEL
PNGCP18003
PNGCP18004
PROGRAMMING MANUAL

OTHER MODES CONTINUED:

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 activity.

☐ ⊠ ⊠ ⊠   OFF = Immediate Power Down: Siren will power down immediately after ignition is turned off.

6. Horn Ring Standby Tone: (Alternate Horn Ring Control Must be Disabled) Determines which tone to output when siren is in standby and vehicle horn is pressed
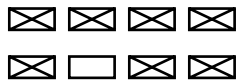
⊠ ⊠ ⊠ ⊠   ON = Air Horn Tone

⊠ ☐ ⊠ ⊠   OFF = Manual Button Tone

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

⊠ ⊠ ⊠ ⊠   ON = Enabled

⊠ ⊠ ☐ ⊠   OFF = Disabled

8. Air Horn Button Output Channels

⊠ ⊠ ⊠ ⊠   ON = In standby mode, 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 = Horn Button Tone always produced on Spkr A & B.

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PROGRAMMING MODES

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 ON Time

> Denotes Factory Default Setting

SIREN AMPLIFIER DIAGNOSTIC INDICATORS:

* SIREN AUDIO BUTTON ACTIVATED (EXCEPT RADIO REBROADCAST)

DIAG	S1	S2	CONDITION
FLASHING	OFF	ON	UNDER-VOLTAGE
FLASHING	ON	OFF	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	-	OFF	SPKR 2 IS NOT-FUNCTIONING

Slide switch mapping programming:
Allows the operator to have the siren automatically turn on auxiliary push-buttons or tones based on the position of the slide switch.

If an auxiliary or tone 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 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.

5. Place appropriate button legend over activity indicator for each programmed button.

PNGCP1800(x) 0419

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CONTROL PANEL
PNGCP18003
PNGCP18004
PROGRAMMING MANUAL

PARK KILL SETTINGS: Enables auxiliary and slider outputs to be disabled when Park Kill input is active. Auxiliary outputs can be turned back on by pushing the buttons again; slider outputs are disabled as long as the Park Kill input is active.

1. Push and hold Auxiliary Push-Buttons 2 & 3 until arrow indicator LEDs flash.
2. 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.
3. Move slider switch to position 1, 2 or 3. Press the Manual button to toggle whether that output relay is disabled while Park Kill is active. LED on means that relay will be off. E.g: if LED for slide position 3 is on, Slide Switch Level 3 Output will be disabled; Level 1 & 2 outputs can still be on when slider is in position 3.
4. Repeat step 3 as needed.
5. Press the Radio Rebroadcast button to exit programming mode.

TONE PROGRAMMING:
1. Press and hold "buttons" "2" and "7" for 2 seconds until Slide switch LEDs 1,2, and 3 flash
2. Press Control Selected 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.

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PNGCP18003
PNGCP18004
PROGRAMMING MANUAL

Denotes Factory Default Setting

MANUAL BUTTON TONE DURATION

MOMENTARY: When played solo

LATCHED: When played over other tones.

*TONE SCROLL

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

TONE BUTTON

BUTTON #5	BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B
OFF	OFF	OFF	OFF	TONE SCROLL*	TONE SCROLL*
OFF	OFF	OFF	ON	PIERCER	PIERCER
OFF	OFF	ON	OFF	HiLo	HiLo
OFF	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	YELP 1
ON	OFF	ON	ON	PIERCER	WAIL 1
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

BUTTON #1	BUTTON #5	BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B
ON	OFF	OFF	OFF	OFF	HORN 1	HORN 1
ON	OFF	OFF	OFF	ON	HORN 2	HORN 2
ON	OFF	OFF	ON	OFF	HORN 3	HORN 3
ON	OFF	OFF	ON	ON	HORN 4	HORN 4
ON	OFF	ON	OFF	OFF	HORN 1	HORN 2
ON	OFF	ON	OFF	ON	HORN 1	HORN 3
ON	OFF	ON	ON	OFF	HORN 1	HORN 4
ON	OFF	ON	ON	ON	HORN 2	HORN 3
ON	ON	OFF	OFF	OFF	HORN 2	HORN 4
ON	ON	OFF	OFF	ON	HORN 3	HORN 4
ON	ON	OFF	ON	OFF	HORN 1	WAIL 1
ON	ON	OFF	ON	ON	HORN 1	YELP 1
ON	ON	ON	OFF	OFF	HORN 1	PIERCER
ON	ON	ON	OFF	ON	HORN 2	YELP 1
ON	ON	ON	ON	OFF	HORN 3	YELP 1
ON	ON	ON	ON	ON	HORN 4	SUPER HiLo

YELP BUTTON

BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B
OFF	OFF	OFF	YELP 1	YELP 1
OFF	OFF	ON	YELP 2	YELP 2
OFF	ON	OFF	YELP 1	YELP 2
OFF	ON	ON	YELP 1	WAIL 1
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

MANUAL BUTTON (SOLO PLAY ONLY)

BUTTON #2	BUTTON #6	BUTTON #7	BUTTON #8	SPKR A/B
ON	OFF	OFF	OFF	WAIL 1 FREQUENCY DECREASE WHEN RELEASED
ON	OFF	OFF	ON	WAIL 1 IMMEDIATE OFF WHEN RELEASED
ON	OFF	ON	OFF	YELP 1
ON	OFF	ON	ON	PIERCER
ON	ON	OFF	OFF	ALERT A
ON	ON	OFF	ON	HiLo
ON	ON	ON	OFF	SUPER HiLo

WAIL BUTTON

BUTTON #6	BUTTON #7	BUTTON #8	SPKR A	SPKR B
OFF	OFF	OFF	WAIL 1	WAIL 1
OFF	OFF	ON	WAIL 2	WAIL 2
OFF	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

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