

**Version 06 Appendix A**  
**970L Scorpion / Black Widow LED LIGHTBAR**

**FACTORY SET FLASH PATTERNS**

**Progressive Slide Switch application:**

**Mode 1:** +12 Vdc **ORANGE** Control Wire Activated

Front Warning Lamps: Off  
Rear Warning Lamps: Combination - Scroll Flash  
Side Warning Lamps: Off

**Mode 2:** +12 Vdc **ORANGE & BLUE** Control Wires Activated

Front Warning Lamps: Combination - Scroll Flash  
Rear Warning Lamps: Off  
Side Warning Lamps: Alternating Left / Right, Front Side Lamps Only - Scroll Flash

**Mode 3:** +12 Vdc **ORANGE, BLUE & WHITE/BLACK** Control Wires Activated

Front Warning Lamps: Combination - Scroll Flash  
Rear Warning Lamps: Combination - Scroll Flash  
Side Warning Lamps: Alternating Front / Rear, Both Sides Concurrently - Scroll Flash

***Takedowns and Alleys Flashing***

**Independent Switch application:**

**Mode 1:** same as Mode 1 above

**Mode 2:** same as Mode 2 above

**Mode 3:** same as Mode 3 above

**Mode 4:** +12 Vdc **BLUE** Control Wire Activated  
same as Mode 2

**Mode 5:** +12 Vdc **WHITE/BLACK** Control Wire Activated  
same as Mode 3

**Mode 6:** +12 Vdc **ORANGE & WHITE/BLACK** Control Wires Activated  
same as Mode 3

**Mode 7:** +12 Vdc **BLUE & WHITE/BLACK** Control Wires Activated  
same as Mode 3

**Traffic Directional Modes:**

+12 Vdc **BRN/WHT** Control Wire Activated  
Rear Warning Lamps: LEFT ARROW FULL WIDTH FILL - Single Flash

+12 Vdc **RED/WHT** Control Wire Activated  
Rear Warning Lamps: RIGHT ARROW FULL WIDTH FILL - Single Flash

+12 Vdc **BRN/WHT & RED/WHT** Control Wires Activated  
Rear Warning Lamps: CENTER OUT FULL WIDTH FILL - Single Flash

**NOTE:** Traffic Directional Mode activation overrides any currently activated Rear Warning Modes. Traffic Direction Mode activation does not override any currently activated Front or Side Warning Modes.

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**CONTROL & POWER WIRES**

Red	+12 Vdc Power	
Black	GROUND	
Orange	Mode 1 Control	
Orange & Blue	Mode 2 Control	
Orange & Blue & White/Black	Mode 3 Control	
Blue	Mode 4 Control	
White/Black	Mode 5 Control	
Orange & White/Black	Mode 6 Control	
Blue & White/Black	Mode 7 Control	
Green	LED Low Intensity	
Brown	Takedowns (if Takedown & Alley available)	and/or Front White Override (if Dual Color available)
White	Cruise	
Red	CA Steady	
Gray	Driver Alley (if Takedown & Alley available)	and/or Driver Side White Override (if Dual Color available)
Yellow	Passenger Alley (if Takedown & Alley available)	and/or Passenger Side White Override (if Dual Color available)
Red/White	Right Arrow Traffic Directional	
Brown/White	Left Arrow Traffic Directional	
Red/White & Brown/White	Center-Out Traffic Directional	
Violet	not used	
Tan	Not Used	
Red/Yellow	Not Used	
Red/Black	Not Used	
Red/Green	Not Used	
White/Blue	Not Used	
Pink	Not Used	
Pink & White/Blue	Not Used	

**Mode Activation: All control wires, except Green and Violet, are +12 VDC activated. The Green (LED Low Intensity) is GROUND activated. The Violet (Not Used) is configurable for +12 VDC or GROUND activation.**

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**FRONT WARNING LAMP PATTERNS:**

- 1) OFF
- 2) COMBINATION (PATTERN 5, 4, 3, 4, REPEAT)
- 3) INBOARD / OUTBOARD
- 4) LEFT / RIGHT
- 5) ALTERNATING
- 6) RANDOM
- 7) SINGLE OUTBOARDS ONLY
- 8) DUAL OUTBOARDS ONLY
- 9) SINGLE FLASHER
- 10) SINGLE INBOARDS ONLY
- 11) DUAL INBOARDS ONLY
- 12) SWEEP
- 13) FLICKER (STEADY BURN if Single Flash Rate also selected)

**Note:** All patterns can be programmed to operate with or without flashing TAKEDOWNS.

**REAR WARNING LAMP PATTERNS:**

- 1) OFF
- 2) COMBINATION (PATTERNS 5, 4, 3, 4, REPEAT)
- 3) INBOARD / OUTBOARD
- 4) LEFT / RIGHT
- 5) ALTERNATING
- 6) RANDOM
- 7) SINGLE OUTBOARDS ONLY
- 8) DUAL OUTBOARDS ONLY
- 9) SINGLE INBOARDS ONLY
- 10) DUAL INBOARDS ONLY
- 11) TRIPLE INBOARDS ONLY
- 12) SWEEP
- 13) FLICKER (STEADY BURN if Single Flash Rate also selected)

**SIDE WARNING LAMP PATTERNS:**

- 1) OFF
- 2) ALTERNATING LEFT / RIGHT, REAR SIDE LAMPS ONLY
- 3) ALTERNATING LEFT / RIGHT, FRONT SIDE LAMPS ONLY
- 4) ALTERNATING FRONT / REAR, BOTH SIDES CONCURRENTLY
- 5) ALTERNATING LEFT / RIGHT, FRONT & REAR LAMPS CONCURRENTLY
- 6) FLICKER (STEADY BURN if Single Flash Rate also selected)

**Note:** All patterns can be programmed to operate with or without flashing ALLEY lamps.

**WARNING FLASH RATES:**

- |                 |                                |
|-----------------|--------------------------------|
| 1) SINGLE FLASH | 74 FPM                         |
| 2) DOUBLE FLASH | 110 FPM                        |
| 3) NEOBE® FLASH | 64 FPM                         |
| 4) SCROLL FLASH | (4 Seconds at each Flash Rate) |

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**REAR TRAFFIC DIRECTION LAMP PATTERNS:**

- 1) FULL WIDTH FILL ARROW (Default)
- 2) FULL WIDTH TRAIL ARROW
- 3) REDUCED WIDTH FILL ARROW (SINGLE OUTBOARDS OFF)
- 4) REDUCED WIDTH TRAIL ARROW (SINGLE OUTBOARDS OFF)
- 5) REDUCED WIDTH FILL ARROW (SINGLE ALTERNATING OUTBOARDS)
- 6) REDUCED WIDTH TRAIL ARROW (SINGLE ALTERNATING OUTBOARDS)
- 7) REDUCED WIDTH FILL ARROW (SINGLE SIMULTANEOUS OUTBOARDS)
- 8) REDUCED WIDTH TRAIL ARROW (SINGLE SIMULTANEOUS OUTBOARDS)

**TRAFFIC DIRECTION FLASH RATES:**

- 1) SINGLE FLASH 192 FPM
- 2) DOUBLE FLASH 250 FPM
- 3) NEOBE® FLASH 192 FPM
- 4) SCROLL FLASH (2 Cycles of the Pattern at each Flash Rate)

**NOTE:** Each section of the lightbar can operate at different flash rates in the same mode **and/or** the lightbar can operate at different flash rates in each mode.