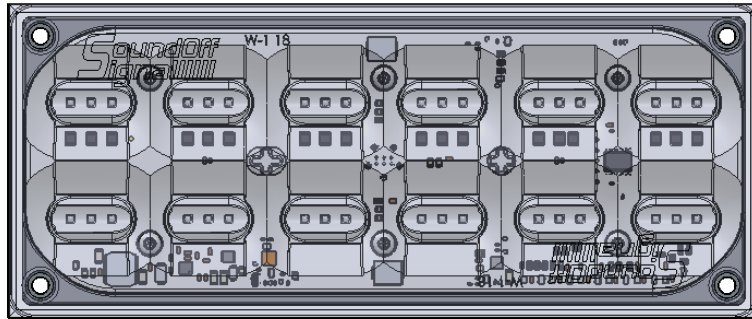




with Clear Duty® Technology

**7x3 WARNING LIGHT**

EMPSC07M(x)-(x) - Quick Mount, Screw Mount, & Stud Mount



**MPOWER® 7X3 WARNING LIGHT  
TECHNICAL SPECIFICATIONS**

Input Voltage:		9-32Vdc		
<b>7X3 WARNING LIGHT CURRENT CONSUMPTION (Amps)</b>				
12.8Vdc		25.6Vdc		
	<b>Peak</b>	<b>Average</b>	<b>Peak</b>	<b>Average</b>
<b>Red</b>	1.43	0.72	0.72	0.36
<b>Amber, Blue, Green or White</b>	1.84	0.92	0.92	0.46

**AFTER POWER IS ON**, touching the WHITE wire to the ground will allow you to change various settings on the module. (refer to page 5.)

**⚠ 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.
- 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.

**⚠ WARNING**  
This product contains high intensity LED devices. To prevent eye damage, DO NOT stare into the light beam at close range.

**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/](http://www.soundoffsignal.com/tech-services/returns/).

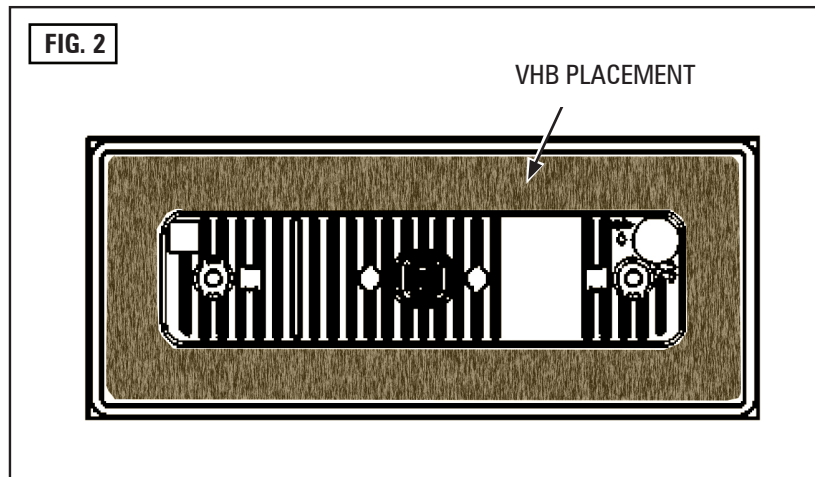
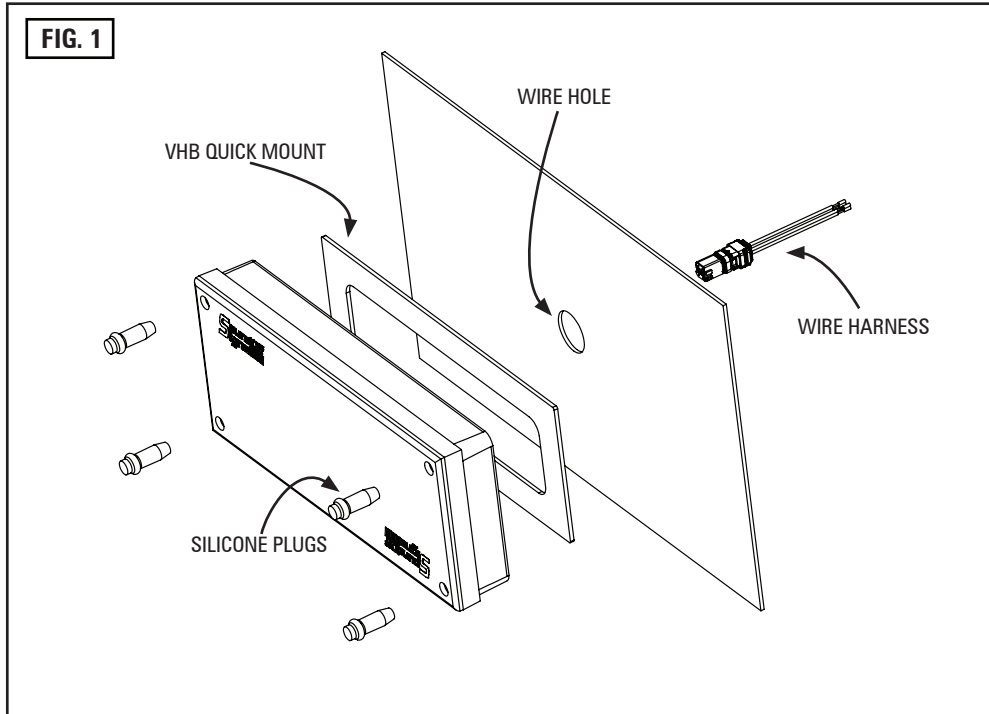
If you have questions regarding this product, contact **Technical Services**, Monday - Friday, 8 a.m. to 5 p.m. ET at 1.800.338.7337 (press #4).

Questions or comments that do not require immediate attention may be emailed to [techservices@soundoffsignal.com](mailto:techservices@soundoffsignal.com).



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ENHANCING SAFETY THROUGH INNOVATION



## QUICK MOUNT INSTALLATION

1. Drill a 3/4" wire hole.
2. Insert (4) silicone plugs into light to seal screw holes.

**NOTE: Coating the exterior of the plug in 50% isopropyl alcohol, 50% water mix (Hand sanitizer works well) will allow the plug to slip into place easier, and the mixture will evaporate out leaving no residue**

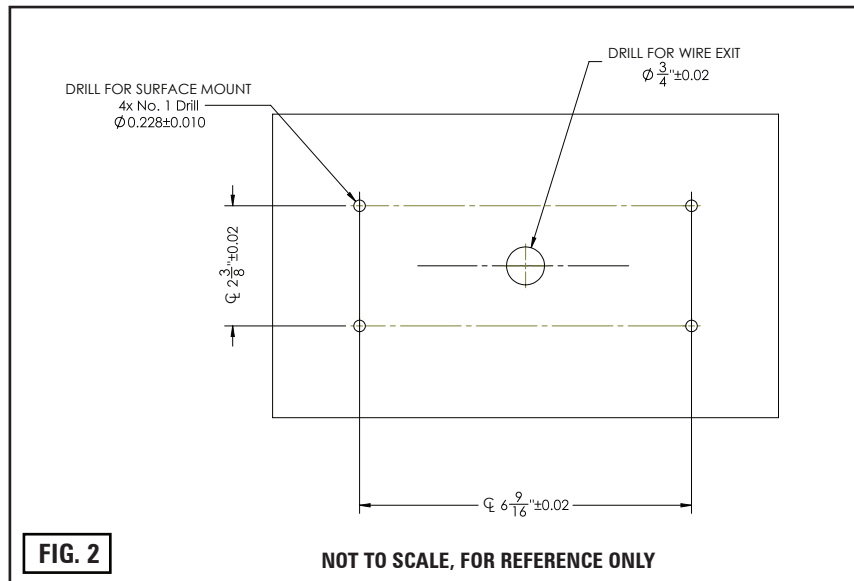
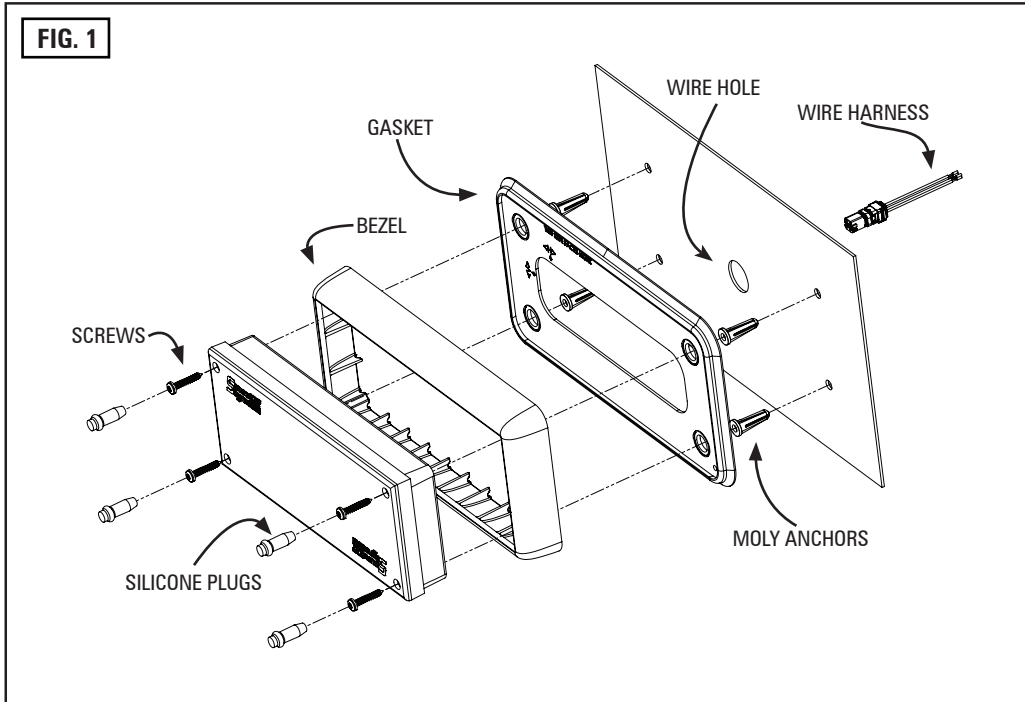
3. Prep the back of the light and vehicle mount surfaces with 50% deionized water, 50% isopropyl alcohol wipe, and allow to dry.
4. Adhere VHB quick mount to the back of the light and press down firmly for 15 seconds on full surface. See Fig. 2
5. Pull the wire harness through the vehicle wire hole and plug into the back of the light.
6. Lightly place the light against vehicle mount surface and check the alignment is satisfactory. Once alignment is correct press firmly against light for 15 seconds to set VHB quick mount.

**NOTE: Bezel will not work with the Quick Mount option.**

## QUICK MOUNT PART NUMBERS

- EMPSC07M0-(x) - Single Color Warning Light, Quick Mount
- EMPSC07M1-(x) - Dual Color Warning Light, Quick Mount
- EMPSC07M2-(x) - Split Color Warning Light, Quick Mount
- EMPSC07M3-(x) - Tricolor Warning Light, Quick Mount

with Clear Duty® Technology



## SCREW MOUNT INSTALLATION

1. Drill (4) 0.228 (#1 Drill) holes to mount light. Drill 3/4" wire hole. See Fig. 2
2. Insert the moly anchors into the 4 drilled holes. Fully seat to mounting surface.
3. Align the gasket to the mounting surface.

**NOTE: Horizontal and vertical orientations indicated on gasket for proper seal.**

4. Place the bezel over gasket.
5. Pull the wire harness through the opening and plug into the back of the light.
6. Place the light into bezel, press firmly to make sure bezel and gasket are tight against mounting surface.
7. Secure the light to mounting surface using (4) supplied screws.

**NOTE: Tighten until gasket is compressed. DO NOT over tighten and strip moly anchors.**

8. Insert (4) silicone plugs into light to seal screw holes.

**NOTE: Coating the exterior of the plug in 50% isopropyl alcohol, 50% water mix (Hand sanitizer works well) will allow the plug to slip into place easier, and the mixture will evaporate out leaving no residue**

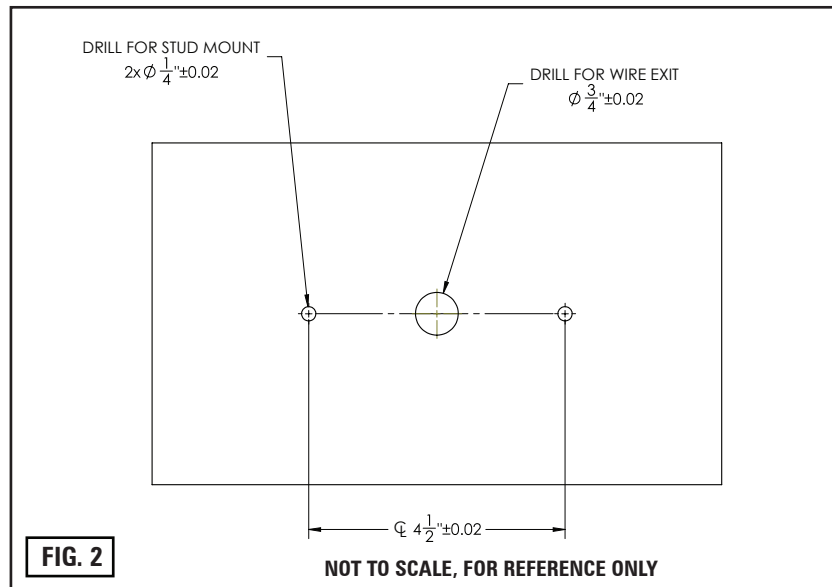
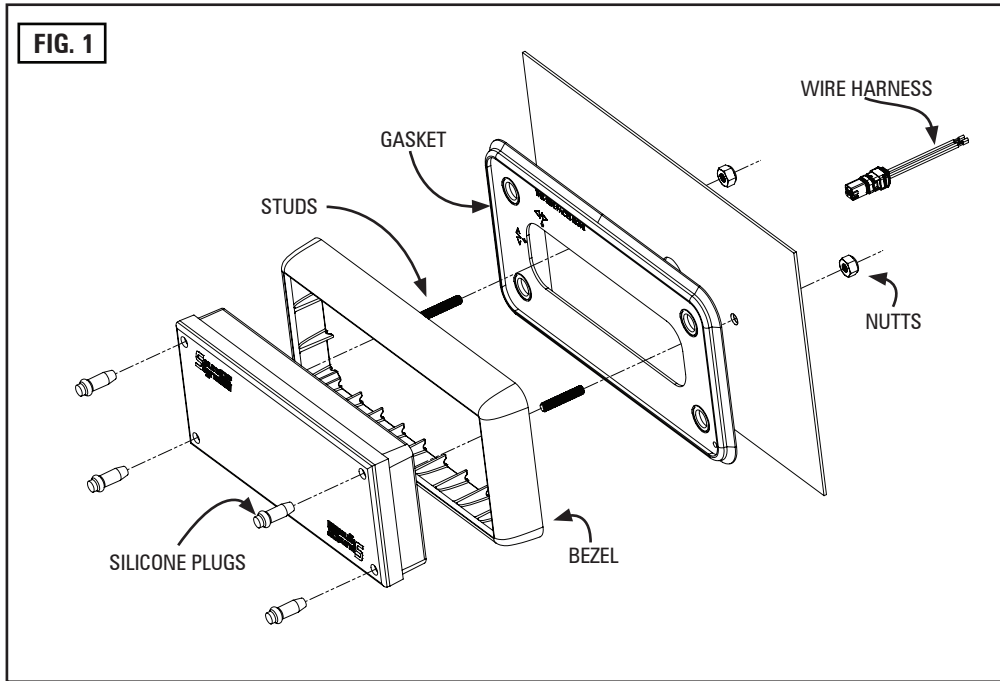


**DO NOT USE POWER TOOLS TO TIGHTEN**

## SCREW MOUNT PART NUMBERS

- EMPSC07M8-(x) - Single Color Warning Light, Screw Mount
- EMPSC07M9-(x) - Dual Color Warning Light, Screw Mount
- EMPSC07MA-(x) - Split Color Warning Light, Screw Mount
- EMPSC07MB-(x) - Tricolor Warning Light, Screw Mount

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## STUD MOUNT INSTALLATION

1. Drill (2) 1/4" holes to mount light. Drill 3/4" wire hole. See Fig. 2
2. Insert (4) silicone plugs into light to seal screw holes.

**NOTE: Coating the exterior of the plug in 50% isopropyl alcohol, 50% water mix (Hand sanitizer works well) will allow the plug to slip into place easier, and the mixture will evaporate out leaving no residue**

3. Thread studs into the back of light.
4. Align the gasket to the mounting surface.

**NOTE: Horizontal and vertical orientations indicated on gasket for proper seal.**

5. Place the bezel over gasket.
6. Place the light into bezel, press firmly to make sure bezel and gasket are tight against mounting surface.
7. Secure the light to mounting surface using (2) supplied nuts.

**NOTE: Tighten until gasket is compressed. DO NOT over tighten and strip casting threads.**

8. Pull the wire harness through the opening and plug into the back of the light.



**DO NOT USE POWER TOOLS TO TIGHTEN**

## STUD MOUNT PART NUMBERS

- EMPSC07MH-(x) - Single Color Warning Light, Stud Mount
- EMPSC07MJ-(x) - Dual Color Warning Light, Stud Mount
- EMPSC07MK-(x) - Split Color Warning Light, Stud Mount
- EMPSC07ML-(x) - Tricolor Warning Light, Stud Mount

## WIRING AND TABLE INFORMATION

### OVER-VOLTAGE PROTECTION

When an over-voltage condition is detected, the module will flash an over-voltage warning pattern of 50mS ON/950mS OFF to alert of the over-voltage condition and protect the electronics from damage due to heat/voltage.

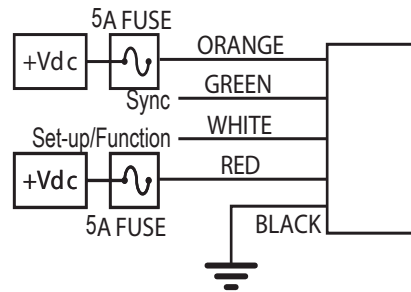
### THERMAL COMPENSATION PROTECTION

The LED module is designed to provide maximum power output while providing protection to the electronic components by reducing the output power at extreme temperatures.

### SYNC 2

Synchronizing the flashing of multiple light modules is accomplished by connecting the Green wires of different light modules together. Up to 24 light modules can be connected for synchronized flashing. All light module flash patterns must be set to the same flash pattern # to ensure proper operation. Refer to the Sequence Type section in Set-Up Table (page 8) to setup light modules to flash in alternate or simultaneous flash pattern. NOTE: Will NOT work with non-Sync 2 products such as Ghost, LED3, and 4 wire Intersector. WILL WORK with Sync 2 products nFORCE Secondary Lights, nFORCE FIT and 5 wire Intersector Lights.

FLASH PATTERNS			
PATTERN #	SINGLE COLOR	DUAL COLOR	TRI-COLOR
1		QUINT	
2		WARP	
3		INTER-CYCLE	
4		DOUBLE	
5		QUAD	
6		POWER PULSE	
7		ROAD RUNNER	
8		Q-SWITCH	
9		STEADY-BURN / ROADRUNNER (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: ROADRUNNER)	
10		STEADY-BURN DRIVER TITLE 13 QUAD (SEQUENCE TYPE 1: STEADY BURN, SEQUENCE TYPE 2: TITLE 13 QUAD)	
11		QUAD 2	
12		DOUBLE 2	
13		RANDOM 1	
14		RANDOM 2	



WIRE HOOK-UP TABLE	
WIRE COLOR:	FUNCTION:
RED	Power (Primary)
BLACK	Ground
GREEN**	Sync2 *
WHITE to GROUND	Setup Wire (See pg. 8*)
WHITE to POWER	Function Wire
ORANGE	Power (Secondary)

\*\* To sync multiple mPower lights, connect the Green wire from each light together.

\* Will NOT work w/ other sync products such as Ghost, LED3, & 4 wire Intersector w/external flasher.

\*Will Work with Sync 2 products nFORCE Secondary Lights, nFORCE FIT and 5 wire Intersector Lights.

## WIRING AND TABLE INFORMATION (CONT.)

### FUNCTION TABLES

The functional operation of the LED module can be changed while applying the +V to the Red wire with the Black wire connected to ground. When the light is flashing, momentarily connect the White wire to ground for >4S and <5S (light will go steady high, steady low, off, steady high, steady low) then release. The function table will now advance to the next table (table 1 to table 2, table 2 to table 3, table 3 to table 4, or table 4 to table 1. In the case that the custom table is programmed, the order is 1 to 2, 2 to 3, 3 to 4, or 4 to 7 (custom), and 7 to 1.) Repeat above process until required function table is active.

*EXAMPLE: If the light is using Function Table 2 with the Orange wire to power, which steady burns color 2, and you then apply the White wire to ground, to change the Function Table to number 3, this would cause the light to start flashing dual low power.*

FUNCTION TABLE 1					
WIRE			LIGHT		
RED	ORANGE	WHITE	SINGLE	DUAL	TRI
+9-32V			FLASH	FLASH DUAL	FLASH TRI
	+9-32V		CRUISE	STEADY COLOR 2	STEADY COLOR 3
+9-32V	+9-32V		FLASH	STEADY COLOR 2	STEADY COLOR 3
		+9-32V	NO OP	NO OP	NO OP
+9-32V		+9-32V	LOW PWR FLASH	FLASH COLOR 1	FLASH COLOR 1
	+9-32V	+9-32V	CRUISE	FLASH COLOR 2	FLASH COLOR 2
+9-32V	+9-32V	+9-32V	LOW PWR FLASH	FLASH DUAL	FLASH COLOR 3

FUNCTION TABLE 2					
WIRE			LIGHT		
RED	ORANGE	WHITE	SINGLE	DUAL	TRI
+9-32V			FLASH	FLASH COLOR 1	FLASH DUAL
	+9-32V		STEADY COLOR 1	STEADY COLOR 2	STEADY COLOR 3
+9-32V	+9-32V		STEADY COLOR 1	STEADY COLOR 2	STEADY COLOR 3
		+9-32V	STEADY COLOR 1	STEADY COLOR 2	STEADY COLOR 3
+9-32V		+9-32V	CRUISE	FLASH DUAL	FLASH TRI
	+9-32V	+9-32V	STEADY COLOR 1	STEADY COLOR 2	STEADY COLOR 3
+9-32V	+9-32V	+9-32V	STEADY COLOR 1	STEADY COLOR 2	STEADY COLOR 3

FUNCTION TABLE 3					
WIRE			LIGHT		
RED	ORANGE	WHITE	SINGLE	DUAL	TRI
+9-32V			FLASH	FLASH DUAL	FLASH TRI
	+9-32V		LOW PWR FLASH	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
+9-32V	+9-32V		LOW PWR FLASH	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
		+9-32V	NO OP	NO OP	NO OP
+9-32V		+9-32V	LOW PWR FLASH	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
	+9-32V	+9-32V	LOW PWR FLASH	FLASH DUAL LOW PWR	FLASH TRI LOW PWR
+9-32V	+9-32V	+9-32V	LOW PWR FLASH	FLASH DUAL LOW PWR	FLASH TRI LOW PWR

FUNCTION TABLE 4					
WIRE			LIGHT		
RED	ORANGE	WHITE	SINGLE	DUAL	TRI
+9-32V					FLASH TRI
	+9-32V				FLASH COLOR 1 & COLOR 2
+9-32V	+9-32V				FLASH COLOR 1 & COLOR 3
		+9-32V			NO OP
+9-32V		+9-32V			FLASH COLOR 2 & COLOR 3
	+9-32V	+9-32V			STEADY COLOR 3
+9-32V	+9-32V	+9-32V			FLASH TRI LOW PWR

### AFTER SELECTION

The light will "wink" to indicate which of the new tables is selected.  
Custom table will "wink" 7 times.



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## WIRING AND TABLE INFORMATION (CONT.)

**REMOTE MODE: FOR USE WITH bluePRINT® SYSTEM ONLY**

Connecting the Green wire to ground before applying power to the Red or Orange wires will place the LED module into remote mode and the light output color will be directly controlled by the input wires as shown below.

For Cruise mode or Low Power control of the LED module, the signal to the control wires must be 100 +/- 2Hz using the duty cycle inputs listed below to produce the light output.

mpower® 7x3 LED Light Remote Mode Functionality							
Red Wire	Orange Wire	Single Color		Dual Color		Tri Color	
		Color Swap=OFF	Color Swap=ON	Color Swap=OFF	Color Swap=ON	Color Swap=OFF	Color Swap=ON
Cruise	-	Cruise Color 1		Cruise Color 1	Cruise Color 2	Cruise Color 1	Cruise Color 2
-	Cruise			Cruise Color 2	Cruise Color 1	Cruise Color 2	Cruise Color 1
Cruise	Cruise			Cruise Color 2	Cruise Color 1	Cruise Color 3	Cruise Color 3
Flash	-	Flash Color 1		Flash Color 1	Flash Color 2	Flash Color 1	Flash Color 2
-	Flash			Flash Color 2	Flash Color 1	Flash Color 2	Flash Color 1
Flash	Flash			Flash Color 2	Flash Color 1	Flash Color 3	Flash Color 3
Steady ON	-	Steady ON Color 1		Steady ON Color 1	Steady ON Color 2	Steady ON Color 1	Steady ON Color 2
-	Steady ON			Steady ON Color 2	Steady ON Color 1	Steady ON Color 2	Steady ON Color 1
Steady ON	Steady ON			Steady ON Color 2	Steady ON Color 1	Steady ON Color 3	Steady ON Color 3
Cruise	Flash			Flash Color 2/Cruise Color 1 during OFF cycle of Flash	Flash Color 1/Cruise Color 2 during OFF cycle of Flash		
Cruise	Steady ON			Steady ON Color 2	Steady ON Color 1		
Flash	Steady ON			Steady ON Color 2	Steady ON Color 1		

Cruise Mode Duty Cycle (@ 100Hz)	
Input	Light Output
40%	OFF
50%	5%
60%	10%

Low Power Flash D.C. (@ 100Hz)	
Input	Light Output
70%	30%
80%	40%
90%	50%



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## WIRING AND TABLE INFORMATION (CONT.)

### COLOR SWAP

This function is only valid for dual and tri-color warning light modules and can only be changed when the light module is in a flashing mode (disabled for single color modules and when light module is operating in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >2S and <3S (light will go steady high, steady low, off) then release. The light module will switch between Color Swap OFF and Color Swap ON. When Color Swap is OFF, the 1st color will flash 1st on a dual/tri color pattern. When Color Swap is ON, the 2nd color will flash 1st on a dual/tri color pattern.

### SIMULTANEOUS/ALTERNATE

This function can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions) and only has an effect when at least 2 LED modules have the green sync wire connected together. When the light is flashing, momentarily connect the white wire to ground for >3S and <4S (light will go steady high, steady low, off, steady high) then release. The light module will switch between Simultaneous and Alternate each time this sequence is done. To have light modules flash simultaneously, both light modules need to be set to the same sequence type (Set-Up Table). To have light modules flash alternately, the light modules need to be set to different sequence types (Set-Up Table).

### ADVANCE PATTERN

Flash pattern can only be changed when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >250mS and <1S (light will go steady high) then release. The flash pattern will advance to the next pattern. If the light module was at the last pattern, the pattern will reset to the 1st pattern.

### BACKUP PATTERN

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >1S and <2S (light will go steady high, steady low) then release. The flash pattern will backup to the previous pattern. If the light module was at the first pattern, the pattern will change to the last pattern on the list.

### PATTERN RESET

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >5S and <6S (light will go steady high, steady low, off, steady high, steady low, off) then release. The flash pattern will reset to the 1st pattern in the list.

### FACTORY RESET

This function is only valid when the LED module is in a flashing mode (disabled in cruise or steady ON functions). When the light is flashing, momentarily connect the white wire to ground for >6S and <7S (light will go steady high, steady low, off, steady high, steady low, off, steady high) then release. The LED module will reset to: pattern=1, Function Table=1, Color Swap=OFF, Simultaneous.

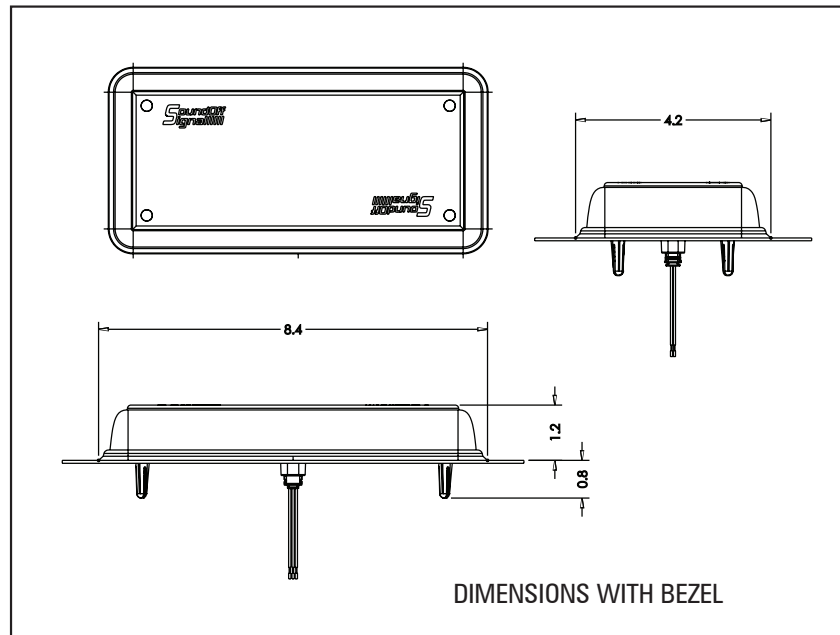
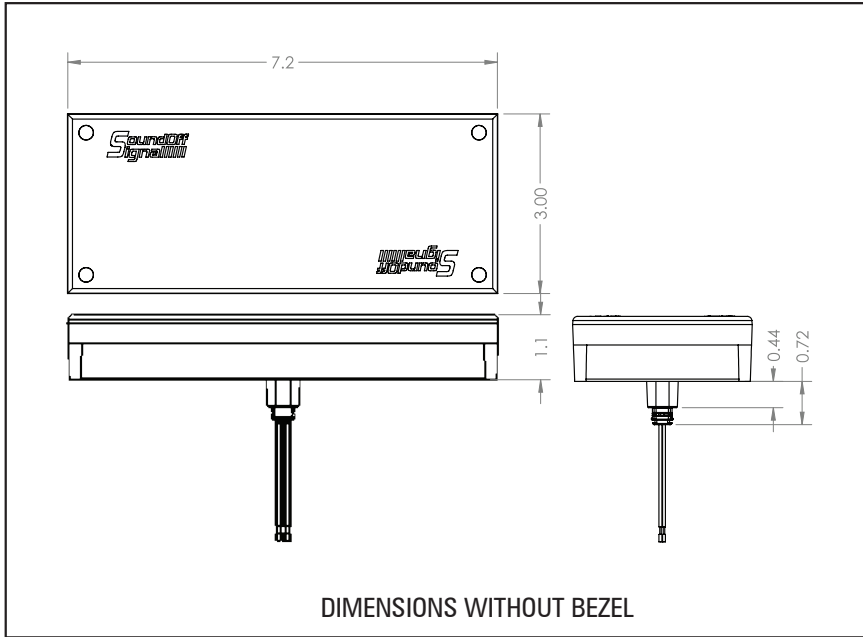
SETUP TABLE			
SECONDS		USER INTERFACE	
FROM	TO	VISUAL FEEDBACK	ACTION TAKEN
0	1	STEADY-HIGH (60%)	FORWARD ONE PATTERN
1	2	STEADY-LOW (30%)	BACKWARD ONE PATTERN
2	3	OFF	COLOR SWAP (OFF OR ON )
3	4	STEADY - HIGH (60%)	SEQUENCE TYPE: SIMULTANEOUS OR ALTERNATE
4	5	STEADY - LOW (30%)	SEE FUNCTION TABLE
5	6	OFF	RESET TO PATTERN 1
6	7	STEADY-HIGH (60%)	FACTORY RESET (PATTERN 1, COLOR SWAP: OFF, SIMULTANEOUS) SEPARATE COLOR CONTROL: OFF
<b>If held longer than 7 seconds, the light will go back to flashing the current pattern and no action will be taken.</b>			



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## BEZEL INFORMATION

### MPOWER® 7X3 DIMENSIONS

Overall Dimensions:	4.52"L x 0.92"H x 0.42"D
Overall Dimensions with Bezel*:	4.52"L x 0.92"H x 0.42"D

\*Single Bezels compatible with Stud & Screw Mount versions  
Triple and Quad Bezels compatible with Screw Mount versions only

### BEZEL PART NUMBERS

PMP8BZL04(xx)\*\* - Bezel, includes Gasket

PMP8HK01-(XX)\*\*\* - Hardware Kit

\*\*1st (x) Refers to the Single, Triple, Quad Selection

- 1 = Single Bezel
- 3 = Triple Bezel
- 4 = Quad Bezel

2nd (x) Refers to the Color of Bezel

- B = Black
- C = Chrome
- 4 = Quad Bezel

\*\*\*(XX) Refers to type of Hardware Kit

- BZ = Triple & Quad Bezel
- QM = for Quick Mount Application
- SM = for Screw Mount Application
- ST = for Stud Mount Application