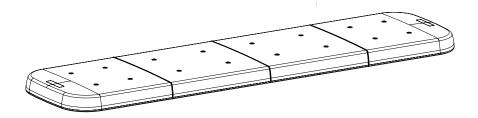


# INSTALLATION INSTRUCTIONS nFUSE® LED EXTERIOR LIGHT BAR







nFUSE® Exterior Light Bar English 0000JL 1122 REV A

### nFUSE<sup>®</sup> Exterior Light Bar



### **IMPORTANT NOTICE TO INSTALLER:**

- Make sure to read and understand all instructions and warnings before proceeding with the installation of this product. Ensure that the manual and any warning cards are delivered to the end user of this equipment. Proper installation of the lightbar requires the installer to have a thorough knowledge of automotive electronics, systems, and procedures.
- Lightbars provide an essential function of an effective visual warning system. The use of the lightbar 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 the lightbar is highly dependent 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 daily that the lightbar is securely fastened to the vehicle and properly functioning before operating vehicle.
- The lightbar 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 the applicable city, state and federal laws and regulations. SoundOff Signal assumes no liability for any loss resulting from the use of this warning device.

### WARNING

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

### **IMPORTANT INFORMATION:**

- To view the full Software Revision History click the 🕐 in the lower left hand corner of the SoundOff Central Lightbar application.
- Warning devices are strictly regulated and governed by Federal, State and Municipal ordinances. These devices shall be used ONLY on approved vehicles. It is the sole responsibility of the user of these devices to ensure compliance.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to your vehicle Owner's Manual for . the location of any air bag deployment zones.
- DO NOT connect this device to a strobe power supply. This product is self-contained and does not require an external power supply.

### WARNING

- Route wires only in locations that are not subjected to potential wear. Make sure to avoid routing wires in the deployment area of your airbag. Refer to your vehicle's owner's manual for airbag deployment zone.
- All customer supplied power wires connecting to the positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of the maximum current and properly fused at the power source with appropriately rated fuse.

### NOTICE:

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- 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. ET at 1.800.338.7337 (press #4).
- Questions or comments that do not require immediate attention may be emailed to techgroup@soundoffsignal.com.



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### nFUSE® Exterior Light Bar

nFUSE® Exterior Light Bar built to your specifications

CONTENTS COMPONENT

0	OPTIONAL MOUNTING HARDWARE*				
1	Vehicle Specific Hook Kit / Hardware				
2	Fixed Height Mounting Brackets w/ Hardware				
3	Flat Mount Hardware Kit				
4	Headache Brackets w/ Hardware				

QTY

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## STANDARD / OPTIONAL EQUIPMENT\*

	•		
COMPONENT	nFUSE Exterior BOB	Universal BOB (LIN)	Universal BOB (CAN)
24 Pin Harness	Х	Х	Х
4 Pin Harness		Х	
5 Pin Harness			Х

\*Components and Mounting Hardware will vary with each Light Bar depending on vehicle specified on order form.

TECHNICAL SPECIFICATIONS				
INPUT VOLTAGE RANGE	10-32Vdc			
OPERATING TEMPERATURE		-40°C to +65°C (-40°F to +149°F)		
ELECTRICAL PROTECTION	REVERSE POLARITY, TR	ANSIENT VOLTAGE, OVER-VOLT THERMAL FOLD-BACK	TAGE, HIGH-TEMPERATURE	
MATERIAL	BASE PLATE: AL	JMINUM ALLOY, POLYCARBON ASA/PC TOP COVER	IATE OUTER LENSES	
OVERALL DIMENSIONS		1.9"H X 12.0"D		
WIRING		AWG Wires, (+) RED, (-) BLACK   AWG Wires, (+) RED, (-) BLACK		
STANDBY CURRENT Amps (Per Module)	IGNITION ON: 0.010 Amps, IGNITION OFF: <0.002 Amps			
STANDBY CURRENT Watts (Per Module)	IGNITION ON: 0.13 Watts, IGNITION OFF: 0.03 Watts			
LENGTH	# OF INBOARDS	MAX CURRENT @ 12.8V	MAX CURRENT @ 25.6V	
36"	8	14 Amps	7 Amps	
42"	10	16 Amps	8 Amps	
48"	12	18 Amps	9 Amps	
54"	14	20 Amps	10 Amps	
60"	16	22 Amps	11 Amps	
72"	20	26 Amps	13 Amps	
CERTIFICATION		APPLICABL	E COLORS	
SAE J845 / J59	SAE J845 / J595 Class 1		RED, AMBER, BLUE, WHITE	
CALIFORNIA TITL	E 13, Class B	RED, AME	BER, BLUE	

#### **Unpack Lightbar**

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- 1. Remove light bar from box and packaging.
- 2. Save packaging for later shipping.
- 3. Check components/contents.
- 4. Please reference these instructions for proper wiring and installation.

#### **Tools Required for Installation**

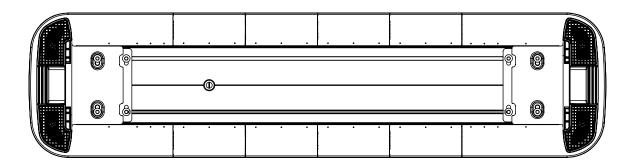
- 7/16" Socket with ratchet
- Phillips Head Screwdriver
- Drill bit #30



REAR

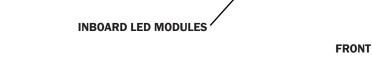
\*48" lightbar pictured

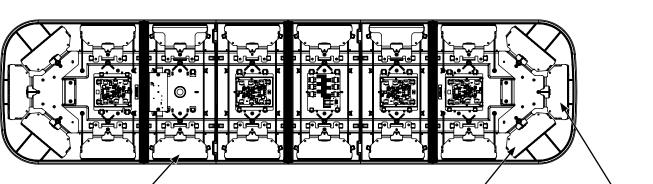
**ALLEY MODULES** 



FRONT

### **BOTTOM VIEW**



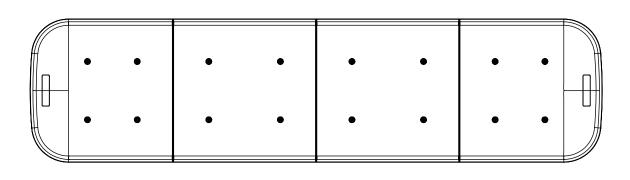


**CORNER MODULES** 

REAR

FRONT

### TOP VIEW WITH COVERS OFF



REAR

### TOP VIEW WITH COVERS ON





### FIXED HEIGHT BRACKETS AND HOOK MOUNTING (PURSUIT)

- 1. Attach the supplied screws to the mounting foot to secure the rubber pad as shown in Figure 3.
- 2. Insert the 2 plastic washers inside holes of the provided hook brackets.
- Keeping the lightbar level to the road, attach mounting feet to the roof of the vehicle using the 4 supplied T-Slot bolts.
- 4. Place lightbar centered on the roof, and hold brackets up to the lightbar. A 1/4" to 1/2" gap should be between the hook bracket and front wall of the mounting foot prior to putting any tension on the hook bracket bolt (See Figure 2). Adjust the mounting foot position to accommodate for this gap.
- 5. Tighten 4 lock nuts to secure mounting foot to lightbar with max torque between 40-60 in/lbs. **DO NOT OVER TIGHTEN!**
- Using the holes in the hook bracket as a template, drill 4 holes in the roof using the appropriate size drill. Secure hook bracket to roof with 4 screws on each side.

WARNING

Route wires only in locations that are not subjected to

potential wear. Make sure to avoid routing wires in the deployment area of your air bag. Refer to your vehicle's

owner's manual for airbag deployment zone.

7. Tighten the hook bracket bolts, torque details below:

Due to different vehicle construction and mounting locations, the torque levels for connecting hooks to the lightbar foot may be different based on the vehicle.

- A. Minimum requirement for torque should be 10 IN/LB, with a maximum level of 45 IN/LB.\*
- B. When installing the bolts connecting the hook to the lightbar foot, monitor both the lightbar and roof of the vehicle.
- C. Tighten to ensure there is no movement of the lightbar or foot by ensuring there is no movement either side to side, or front to rear after the torque has been done.

The lightbar must be securely mounted to the vehicle for safe operation.

\*Deflection of the lightbar and/or the roof of the vehicle may occur when torquing the bolts connecting the hook to the lightbar foot. Any deflection should be kept at a minimum to avoid damage to the lightbar or vehicle.

# NOTE: As always, it is recommended to check the integrity of mounted lightbars on a daily basis to ensure secure attachment to the vehicle for continued safe operation.

- 8. Insert the retainer plates over the 2 bolts on each of the hook kit brackets. Screw in the retainer plate to the hook kit bracket using the 8-32 bolts.
- 9. Install the cover door over the hook bracket bolt to finish the assembly. Place tab of one side into place and then push the second tab into place with a flathead screw driver.

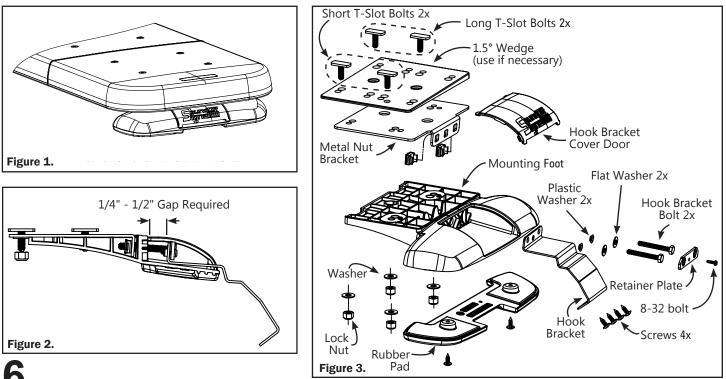
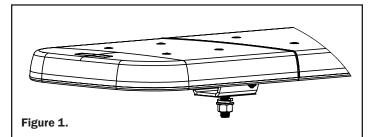


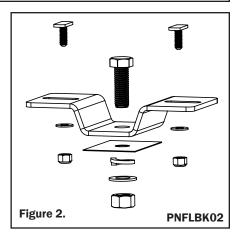
Figure 3.



### **HEADACHE RACK MOUNTING (PNFLBK02)**

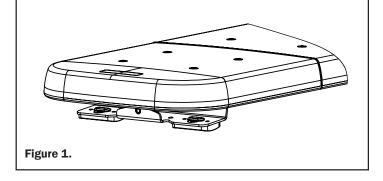
- 1. Place the T-Slot bolts in the extrusion slots on the underside of the lightbar.
- 2. Insert the <sup>1</sup>/<sub>2</sub>" hex head bolt into the center hole of the bracket.
- 3. Place the bracket on the T-Slot bolts and loosely secure with flat washers and nylon locking nuts.
- 4. Measure and drill appropriate sized holes on the desired mounting surface, spaced evenly for securing the lightbar.
- 5. Place the plastic spacer over each mounting hole.
- Place lightbar and bracket assembly into the holes and install the flat washer, lock washer and hex nut on the <sup>1</sup>/<sub>2</sub>"hex bolt, tighten to compress lock washer. (Torque may vary depending on the mounting surface.)
- 7. Complete the installation by tightening the ¼-20 lock nuts to 40-60 in-lbs, DO NOT OVER TIGHTEN.
- 8. Follow the appropriate lightbar Owner's Manual for additional instructions and installation.

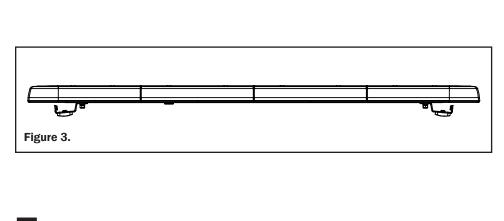


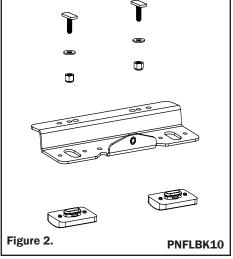


### PERMANENT MOUNTING (PNFLBK10)

- 1. Place the T-Slot bolts in the extrusion slots on the underside of the lightbar.
- Insert the ½" hex head bolt into the center hole of the bracket.
- 3. Place the bracket on the T-Slot bolts and loosely secure with flat washers and nylon locking nuts.
- 4. Measure and drill appropriate sized holes on the desired mounting surface, spaced evenly for securing the lightbar.
- 5. Place the plastic spacer over each mounting hole.
- Place lightbar and bracket assembly into the holes and install the flat washer, lock washer and hex nut on the ½"hex bolt, tighten to compress lock washer. (Torque may vary depending on the mounting surface.)
- 7. Complete the installation by tightening the ¼-20 lock nuts to 40-60 in-lbs, DO NOT OVER TIGHTEN.
- 8. Follow the appropriate lightbar Owner's Manual for additional instructions and installation.

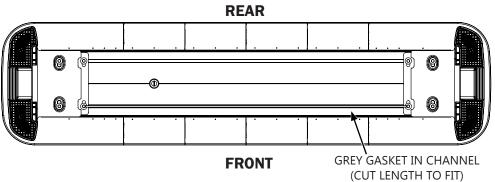








### **GASKET MOUNTING INSTRUCTIONS**



### **GASKET MOUNTING INSTRUCTIONS**

Install the Grey gasket in the front slot of the lightbar as shown above

### **FUNCTION DESCRIPTIONS**

**Mode Select:** The mpower Exterior Lightbar is equipped with 8 selectable pattern configuration modes. The default input wire configuration allows for 6 modes and an additional 2 modes may be configured with the PC Application using any available input wires. Default is Mode 1 where the Mode select input is floating. Mode 2 is in use when the input is activated. This feature allows up to 8 completely different sets of patterns to be programmed into the Light-bar's non-volatile memory. Once programming configuration is complete, the Mode can be changed "on-the-fly" by an activation switch which applies voltage to the Mode input wire(s).

**Cruise Mode:** Allows the user to program any light group(s) to "Glow" when this feature is activated. The LED intensity is selectable between 1 and 10% duty cycle. For dual / tri color bars, the color for each light group is selectable.

**Takedown Mode:** Allows the user to program any Light Head Group(s) to turn on steady when this feature is activated to provide steady ON takedown lighting.

**Directional Arrow Built-in:** The directional controller is built-in with 11 arrow patterns for each of the 3 modes (left arrow, right arrow, and center out arrow) and the color is selectable for dual / tri color bars

Steady On Mode: Accessible with PC App only and allows the user to program any light module to turn on steady at 100% duty cycle.

**Stop / Tail / Turn Mode:** Allows the user to program any Light Head Group(s) to operate in 2 levels of intensity for tail and stop/turn functions.

Low Power Mode: Operates lighting at reduced intensity. Selectable between 20 and 90% duty cycle.

**Scene Lighting Mode:** Allows the user to program any Light Head Group(s) to turn on steady when this feature is activated to provide additional scene lighting. The activation of this input also activates the Takedown function

**Speed Sense Input:** The breakout box has a speed sense input that is capable of sensing vehicle speed when connected to the Vehicle Speed Sense (VSS) trigger wire which is supplied in the police upfitter wire harness for some vehicles. This feature is configured using the PC configuration software utility.

Auto Dimming: Operates lightbar at reduced intensity when ambient light is low.

**Matrix Input:** Matrix inputs are virtual inputs which can be triggered based on combinations of up to four physical wires or siren input signals. This feature also allows the installer to invert the state of inputs, latch momentary inputs and adjust trigger timing through on and off delay timer settings. This feature is configured using the PC configuration software utility.



### **ELECTRICAL INSTALLATION**

#### Power Cable:

- 1. Route lightbar power cables as close to vehicles power source (battery) as possible.
- 2. Install a maximum of 30Amp Fuse (customer supplied) to the end of the RED wire of the Lightbar Power Cable.
  - a. Remove the fuse before connecting any wires to the battery.
- b. DO NOT USE CIRCUIT BREAKER OR FUSIBLE LINK.
- 3. Connect the other end of the Fuse to the POSITIVE (+) terminal of the battery.
  - a. Do NOT use any more than 2ft of wire between the battery terminal and the fuse and ensure the wire is protected and secured from being cut into; this is non-fused wire.
- 4. Connect the BLACK wire to the factory chassis ground right next to the battery.

#### Control (Data) Cable:

- 1. Route Lightbar Control Cable to the location where all controlling equipment will be, i.e. switch box, center console area.
- 2. Locate the Breakout Box in the same area to connect jumpers from the switching equipment to the breakout box.
- 3. Refer to breakout box hookup table on page 9.

NOTE: Breakout Box must be mounted inside vehicle where it will not get wet.

#### **Initial Power up Test:**

- 1. Connect the red and the black wire from lightbar to red and black wire of the 4-pin Breakout Box Harness as shown on page 16
- 2. Connect Green wire from lightbar to green LIN 1 of the 4-pin Breakout Box Harness as shown on page 16.
- 3. Apply power to pink/white ignition wire on breakout box. See table 1 on page 16.
- 4. Observe the GREEN Data Link indicator LED on the Breakout Box; the Green LED will be ON showing power is connected.
- 5. The Red indicator LED on the breakout box will be steady ON whenever any of the input wires are active or data is received from a siren.

#### Low Power (Standby) Mode (reduced standby current)

If there is no input to the breakout box the lightbar will go into a "standby" mode. The standby mode is a low power mode that is used to extend the life of your battery. The lightbar will awaken from the standby mode if any input is activated on the breakout box.

IMPORTANT

WHEN PASSING CABLES THROUGH FIREWALL OR OTHER SHEETMETAL, INSERT GROMMET TO PROTECT THE CABLE!



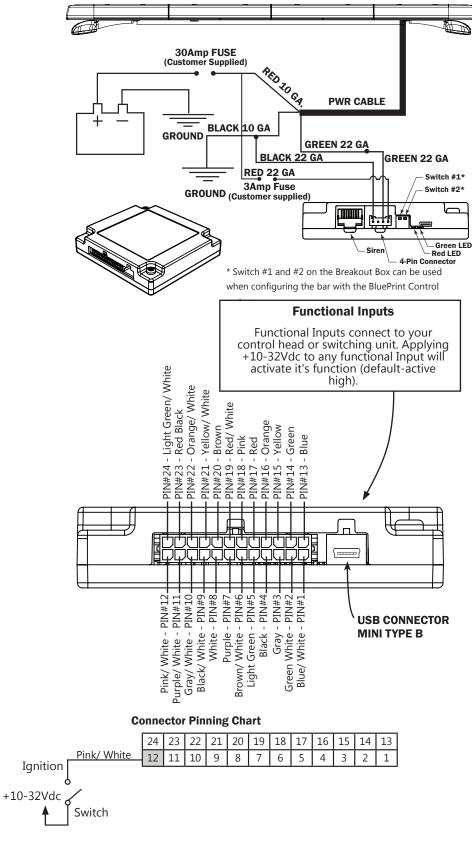
Route wires only in locations that are not subjected to potential wear. Make sure to avoid routing wires in the deployment area of your air bag. Refer to your vehicle's owner's manual for airbag deployment zone.

### WARNING

ALL CUSTOMER SUPPLIED POWER WIRES CONNECTING TO THE POSITIVE (+) OR NEGATIVE (-) BATTERY TERMINAL OR LOCAL CHASIS GROUND (-) MUST BE SIZED TO SUPPLY AT LEAST 125% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPIATELY RATED FUSE.



### **ELECTRICAL INSTALLATION CONTINUED**





### CONTROL HARNESS / BREAK OUT BOX (BOB)

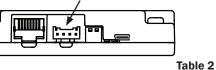
						<u></u>	Table 1
			Mods affected	Color (→: If the color is not populated, it would be the next color listed)	Flash	CERT chosen	
Wire						SAE/None	ECE
Pin #	Wire Color	Wire Function				Pattern	
1	BLU/WHT	Cruise 1	Inboard 1, Corners & Alleys (Front and Rear)	Color 1, not White	-	-	-
2	GRN/WHT	Warning	Entire Bar (Rear)	Color 1	Mode 2	Slow Runner	ECE Single
3	GRY	STT - Rear Turn - Left	Inboard 2 (pair)	Amber→Red→nothing	-	-	-
4	BLK	STT - Rear Turn - Right	Inboard 2 (pair)	Amber→Red→nothing	-	-	-
5	LTGRN	STT - Tail	Inboard 2 (pair)	Red→nothing	-	-	-
6	BRN/WHT	Disable	Left Side Endcap	-	-	-	-
7	PUR	Disable	Right Side Endcap	-	-	-	-
8	WHT	Unassigned	-	-	-	-	-
9	BLK/WHT	Low Power 1	all	-	-	-	-
10	GRY/WHT	Left Arrow	Inboards (Rear)	Amber→Color 1	-	-	-
11	PUR/WHT	Right Arrow	Inboards (Rear)	Amber→Color 1	-	-	-
12	PNK/WHT	IGNITION	-	-	-	-	-
13	BLU	Warning	Entire Bar (Front and Rear)	Color 1	Mode 1	Flicker Cruise	ECE Single
14	GRN	Warning	Entire Bar (Front)	Color 1	Mode 2	Slow Runner	ECE Single
15	YEL	Warning	Entire Bar (Front and Rear)	Color 1	Mode 3	Quint	ECE Single
16	ORG	Warning	Entire Bar (Front and Rear)	Color 1	Mode 4	Intercycle	ECE Single
17	RED	Warning	Entire Bar (Front and Rear)	Color 1	Mode 5	Warp	ECE Single
18	PNK	Warning with Cruise 1 behind	Entire Bar (Front and Rear)	Color 1	Mode 6	Super Slow Runner	ECE Single
19	RED/WHT	Flashing	Takedown	White→nothing	-	-	-
20	BRN	Scene	Left Alley and Left Alley Scene	White→nothing	-	-	-
21	YEL/WHT	Scene	Right Alley and Right Alley Scene	White→nothing	-	-	-
22	ORG/WHT	Takedown	Selected at Bar Creation	White	-	-	-
23	RED/BLK	Scene 1	Selected at Bar Creation	White	-	-	-
24	LTGRN/WHT	VSS Input for Speed 1 and 2	-	-	-	-	-

#### BREAKOUT BOX INSTRUCTIONS: (LIN COMMUNICATION)

a) Securely snap in the 4-pin and 24-pin connectors b)Install a 3Amp Fuse (customer supplied) to the end of the Red

- wire of the 4-pin connector harness.
- c) Hook up power, ground, and LIN to the corresponding wire on the 4-pin connector harness. (Table 2)
- d) Refer to Table 1 for the input wire's default function
- e) Follow the label for the wire color to connect to a +10-32Vdc source, which turns on that given light or lights
- f) Make sure your wire connections are secured and isolated from any other wire

#### **4-PIN CONNECTOR HARNESS**



Wire Pin	Color	Function
1	Black	Ground
2	Green/White	LIN 2 - not used with this lightbar
3	Green	LIN 1 - NXT Lightbar Operation
4	Red	Power

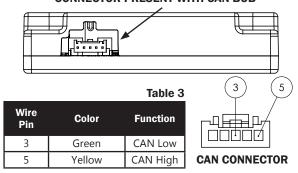
TO CHANGE WIRE FUNCTIONS FOR CUSTOM APPLICATIONS PLEASE SCAN QR CODE FOR LINK FOR SOUNDOFF CENTRAL LIGHTBAR SOFTWARE GUIDES.

#### CAN BREAKOUT BOX INSTRUCTIONS: (CAN COMMUNICATION)

a) Securely snap in the 4-pin, 5-pin and 24-pin connectors

- b) Refer to Table 1 for the input wire default functions and to Table 2 for the CAN wire functions
- c) Install a 3Amp Fuse (customer supplied) to the end of the Red wire of the 4-pin connector harness. (Table 3)
- d) Hook up power, ground, and LIN to the corresponding wire on the 4-pin connector harness.
- e) Follow the label for the wire color to connect to a 10-32 Vdc source, which turns on that given light or lights
- f) Make sure your wire connections are secured and isolated from any other wire
- g) If extending the 5-pin connector harness, a shielding wire running the length of the entire harness may be necessary

#### CONNECTOR PRESENT WITH CAN BOB

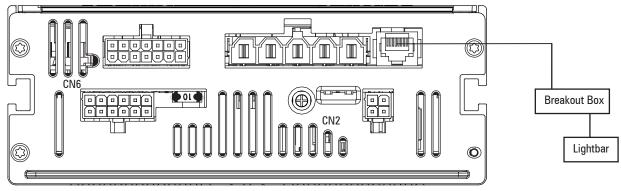




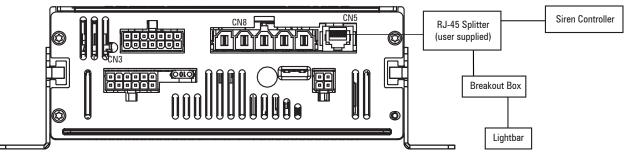
### **CONNECTION OF LIGHTBAR BREAKOUT BOX TO SOUNDOFF SIGNAL SIREN:**

Note: Requires PC configuration app to map siren control switches to lightbar functions. Plug 1 end of RJ-45 cable to available jack on siren amplifier.

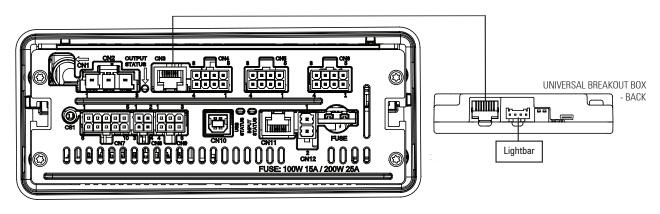
#### ETSA481CSR or ETSA482CSR



#### ETSA481RSP, ETSA482RSP, ETSA461HPP, ETSA462HPP



#### ETSA5100/5200





### **SIREN FUNCTIONS**

				"Color	Flash	CERT chosen	
#	Button	Function	Mada official d	(if the color is not populated, it would be the next color listed)"		SAE/NONE	ECE
#	Button	Function	Mods affected			Pattern	
S1	Pushbutton 1	Left Arrow	Inboards	Amber→Color 1	-	-	-
S2	Pushbutton 2	Scene	Left Alley and Left Alley Scene	White→nothing	-	-	-
S3	Pushbutton 3	Scene	Right Alley and Right Alley Scene	White→nothing	-	-	-
S4	Pushbutton 4	Takedown	Selected at Bar Creation	White	-	-	-
S5	Pushbutton 5	Cruise 1	Inboard 1, Corners & Alleys (Front and Rear)	Color 1	-	-	-
S6	Pushbutton 6	Low Power 1	Entire Bar	-	-	-	-
S7	Pushbutton 7	Scene 1	Selected at Bar Creation	White	-	-	-
S8	Pushbutton 8	-		No	-	-	-
S9	Single Button Arrow	Right Arrow	Inboards	Amber→Color 1	-	-	-
S10	Slide Switch 1	Warning	Entire bar (Rear)	Color 1	Mode 2	Slow Runner	ECE Single
S11	Slide Switch 2	Warning	Entire Bar (Front and Rear)	Color 1	Mode 3	Quint	ECE Single
S12	Slide Switch 3	Warning	Entire Bar (Front and Rear)	Color 1	Mode 4	Intercycle	ECE Single

### PHOTO SENSOR

The photo sensor continuously monitors ambient light conditions and will control functions configured for operation with the photo sensor input. By default, the photo sensor will set all light modules into low power mode when dark ambient light levels below 50 lux are detected for more than 5 seconds. When ambient light levels exceed 300 lux for 5 seconds, the low power mode will clear/turn off and the lightbar will revert back to full intensity.

The photo sensor is subject to ambient light conditions of the specific environment for the vehicle and needs to be thoroughly tested by the installer to ensure proper light levels and delay are selected to provide the most effective operation in different lighting conditions.

The photo sensor detects ambient light levels, so parking the vehicle under a bright street light during night-time use may (CLEAR) turn off the photo sensor input. Likewise, driving though a dark tunnel during daytime use may (SET) the photo sensor input. Ensure the operator of the vehicle is aware of such possible

conditions and provide additional controls to the breakout box to allow the operator the ability to manually over-ride the functions when required.

The photo sensor is located in the middle of the AutoDim / Mod ID module.

Changing the ambient light SET/CLEAR levels may be modified by updating the setting in the 'Photo Sensor' tab in the PC Application.

The photo sensor controls may be updated by using the PC App. Refer to the PC App instructions for more detail.



### **nFUSE® LIGHT BAR TROUBLESHOOTING**

### **Normal Operation**

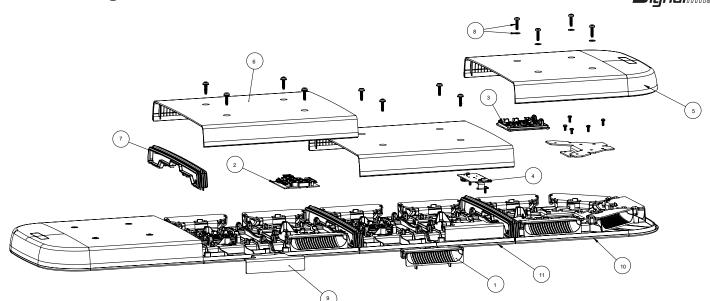
Under Normal operation with ignition input powered, the breakout box will have the Green LED ON and the Red LED light will be ON whenever an input is active and both switches are in the UP (off) position.

GENERAL TROUBLESHOOTING			
Before further troubleshooting steps, start here:	<ul> <li>Check power source to the Lightbar and breakout box (10AWG red and 22AWG red wires).</li> <li>Check the ground source to the lightbar and breakout box (10AWG black and 22AWG black wires).</li> <li>Check ignition source to the lightbar and breakout box (pink/white wire).</li> <li>Check any splice and butt connections for proper crimp integrity.</li> <li>Check connectors for positive engagement.</li> </ul>		
NO OPERATION			
The green LED is not illuminated	<ul> <li>Check Power (Pin #4) and Ground (Pin #1) on the 4-pin connector.</li> <li>If not connected to a 400 Series Siren or bluePRINT Controller, check Ignition (pin #12 on the 24-pin connector.</li> <li>Check the fuses in the lightbar power distribution unit.</li> </ul>		
The red LED is not illuminated while inputs are active	<ul> <li>Verify there is proper voltage on the input wire. Many inputs are positive or negative selectable (through SoundOff Central Lightbar).</li> <li>Check lightbar program configuration using SoundOff Central Lightbar. Verify any active inputs are mapped to activate lightbar functions.</li> <li>Verify the DIP switches on the BOB are both in the up (off) position.</li> </ul>		
Green and red LEDs are illuminated prop- erly	<ul> <li>Verify the lightbar data wires on the 4-pin connector (pin #3) is correctly connected to the Lightbar data wire.</li> <li>Verify the data wire circuit (from the breakout box into the lightbar) is not damaged or shorted to power or ground.</li> </ul>		
NO LIGHT OPERATION IN ONE LIGHTBAR QUADRANT			
Breakout box LED's operating correctly	Remove top cover and follow 4 non-working modules to fuse location. If fuse is blown, check for shorts in cabling and LED module. Replace any damaged cables or modules and replace fuse. If fuse blows again, replace defective power distribution assembly.		
No Steady Red LED on breakout box	• Check 24-pin connector at breakout box (ensure it is snapped in correctly), check ap- propriate input to breakout box for output lights which should be on.		
NO TAKEDOWNS LIGHTS			
Breakout box LED's operating correctly;	• Verify configuration and make sure light modules are configured for takedown function.		
No steady Red LED on breakout box;	• Check 24-pin connector at breakout box (insure it is snapped in correctly), check appropriate input to breakout box for output lights which should be on.		
NO OR INCORRECT WARNING LIGHTS			
	<ul> <li>Verify the configuration for proper lightbar operation.</li> <li>Verify the lightbar data wires on the 4-pin connector (pin #3) is correctly connected to the Lightbar data wire.</li> <li>Verify light module ID/positions.</li> </ul>		
INCORRECT OR NO ARROW OPERATION			
Breakout box LED's operating correctly	Verify configuration and make sure light modules are configured for arrow function.		
No steady Red LED on breakout box	• Check 24-pin connector at breakout box (ensure it is snapped into position correctly), check appropriate input to breakout box for output lights which should be on.		



FOR MORE HELP WITH SOFTWARE PROGRAMMING, MODULE ID SETTING AND REPLACEMENT PLEASE SCAN QR CODE FOR SOUNDOFF CENTRAL LIGHTBAR GUIDES.

### SoundOff Jignal IIIII.



### **REPLACEMENT PARTS & ACCESSORIES**

ITEM #	PART#	DESCRIPTION	
	PUVBBJ00	BREAKOUT BOX - STANDARD LIN COMMUNICATION	
	PUVBBJC1	BREAKOUT BOX - CAN COMMUNICATION	
	PUVBBHNCN1	CAN BREAKOUT BOX 5-PIN HARNESS	
	PUVBBHNPW1	BREAKOUT BOX 4-PIN HARNESS	
	PEPL9BBHN(x)	BREAKOUT BOX 24-PIN HARNESS	
1	PNULBLSS206(x)	6 LED SINGLE COLOR MODULE (SAE)	
1	PNULBLSD212(x)	12 LED DUAL COLOR MODULE (SAE)	
2	PNULBDST1	DISTRIBUTION BOARD	
3	PNULBDRV1	DRIVER BOARD	
4	PNULBDAD1	MOD ID/AUTO DIM DRIVER BOARD	
	PNULBHNPW(x)	POWER HARNESS	
5	PNULBTDEC(x)	ENDCAP (COLOR)	
	PNULBTDMS(x)	INNER DOME 6" (COLOR)	
6	PNULBTDML(x)	INNER DOME 12" (COLOR)	
7	PNULBTDVD1	DIVIDER	
8	PNULBTCSKT1	SINGLE DOME REPLACEMENT HARDWARE KIT	
9	PNULBSN0000	BLANK MODULE BRACKET	
10	PNULBBEC1	END BASE	
11	PNULBBC06	INBOARD BASE	
	PNULBGABS	NFUSE BASE GASKET SHORT (10')	
	PNULBGABL	NFUSE BASE GASKET LONG (14')	
	PNFLBK01	FIXED HEIGHT PERMANENT MOUNT (EA)	
	PNFLBK02	HEADACHE RACK MOUNT (EA)	
	PNFLBK06	STANDARD FIXED HEIGHT MOUNT w/ THIN PAD (EA)	
	PNFLBK08	STANDARD FIXED HEIGHT MOUNT w/ THICK PAD (EA)	
	PNFLBK09	XtraFit UNIVERSAL MOUNT (EA)	
	PNFLBK10	EXTRA LOW FIXED HEIGHT MOUNT (EA)	
	PNFLBK11	CLASSIC FIXED HEIGHT MOUNT (EA)	
	PNFLBK12	STANDARD FIXED HEIGHT MOUNT w/THICK, THIN, AND CURVED PAD (EA)	
	PNFLBK13	5" HEADACHE RACK MOUNT (EA)	
	PNFLBKXT	FIXED HEIGHT EXTENSION PLATE (EA)	
	PNFLBF(xx)	HOOK BRACKET KITS	



### WARRANTY & RETURN GOODS PROCEDURE

#### **CLEANING & CARE OF YOUR LIGHTBAR:**

Keeping the lenses clean and scratch free will optimize the performance of the lightbar. The exterior of the lightbar including lenses should be cleaned with mild soapy water and a soft cotton cloth to remove dirt, grime and insects. Never use window cleaners or harsh chemicals on the lenses; this may cause failure of the lenses or reduce clarity resulting in the reduction of light output.

#### **MOUNTING INTEGRITY:**

A review of bolt/hardware/mounting bracket integrity should be performed at the beginning and end of each shift.

#### WARNING MESSAGES - PLEASE READ:

**WARNING** - DRILLING ANY HOLES INTO THE LIGHTBAR IS NOT RECOMMENDED! THE RISK OF DAMAGING INTERNAL COMPONENTS AND THE RESULTING FAILURE OF THE LIGHTBAR WILL VOID ANY WARRANTY OF THIS PRODUCT.

**WARNING** - CARE MUST BE TAKEN WHEN DRILLING THROUGH THE ROOF OF THE VEHICLE NOT TO DRILL INTO ANY EXISTING WIRING AND NOT TO DRILL THROUGH THE HEADLINER OR SUPPORT MEMBERS OF THE VEHICLE. CHECK BOTH SIDES OF THE MOUNTING SERVICE PRIOR TO DRILLING. DE-BURR ANY HOLES AND REMOVE ANY METAL SHARDS OR REMNANTS. INSTALL GROMMETS INTO ALL WIRE PASSAGE HOLES.

**WARNING** - ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECTED TO POTENTIAL WEAR. MAKE SURE TO AVOID ROUTING WIRES IN THE DEPLOYMENT AREA OF YOUR AIR BAG. REFER TO YOUR VEHICLE OWNER'S MANUAL FOR AIR BAG DEPLOYMENT ZONES.

**WARNING** - ALL CUSTOMER SUPPLIED POWER WIRES CONNECTING TO THE POSITIVE (+) OR NEGATIVE (-) BATTERY TERMINAL OR LOCAL CHASSIS GROUND (-) MUST BE SIZED TO SUPPLY AT LEAST 125% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPRIATELY RATED FUSE.

**IMPORTANT:** When passing cables through fire wall or other sheet metal, insert grommet to protect the cable!

#### WARRANTY RETURN PROCESS:



Please scan QR code or visit https://soundoffsignal.com/support-page/returns/.

Alternatively contact your SoundOff Signal Sales Representative, Customer Services staff or our Technical Department (800.338.7337) for a RMA #, Return Merchandise Authorization Number.

The following information is required for issuance of the RMA #:

- Reason for returning the product\*
- Address where replacement product is to be shipped\*
- Telephone number where you may be reached\*
- SoundOff Signal invoice number on which product was purchased\*\*
- SoundOff Signal part number and serial number\*\*
- E-mail address where RMA # should be e-mailed\*\*
- Fax number where RMA # should be faxed\*\*

\* RMA # will not be given without this information. \*\* If available, please provide this information.

SoundOff Signal will NOT accept returns without an RMA #. Each RMA # is good for only one (1) return and will expire (30) days after the date it was issued. Products must be shipped back to SoundOff Signal and the RMA # clearly marked on the outside of the package near the shipping label. Please use the following address on your shipping label:

SoundOff Signal ATTN: RMA # / Technical Services 3900 Central Parkway Hudsonville, MI 49426

#### WARRANTY EXCLUSIONS:

Shipping & Handling, labor and service fees are non-refundable. SoundOff Signal is not liable for any damage due to installation or personal injury as a result of using SoundOff Signal product.

#### WARRANTY FORFEITURE:

Warranty will not be granted if the Warranty Return Policy & Procedure rules are not strictly followed. Physical damage resulting from customer abuse will void warranty. Warranty will also be voided if any SoundOff Signal and/or manufacturer serial tags, product stickers, seals, or the like, are removed, altered or tampered with. Returned product that is damaged by shipping via the RMA # procedure is not the responsibility of SoundOff Signal.

Document effective date on cover and below supersedes previously dated policies and statements.

There are no other warranties, expressed or implied, including, but not limited to, any implied merchantability or fitness for a particular use. SoundOff Signal reserves the right to modify this warranty statement at any time; or to discontinue, modify, or upgrade any products of its manufacture with design improvements without prior notice.