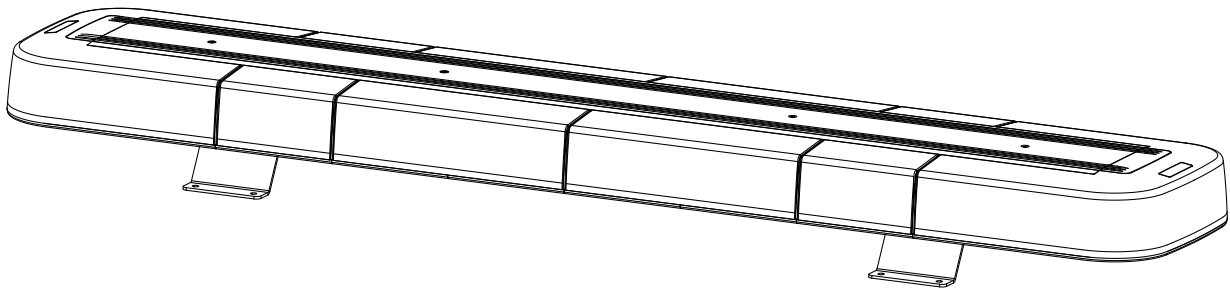


nFUSE[®] xl

INSTALLATION INSTRUCTIONS nFUSE[®] xl LED Lightbar



SoundOff
Signal  [®]

SCAN FOR
NEWEST VERSION




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, wiring, and programming. 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 application.
- 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:

- 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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CONTENTS	
QTY	COMPONENTS
1	nFUSE® xl LED Lightbar (built to your specifications)
1	Cat 5 Splitter Kit

OPTIONAL MOUNT ITEMS	
QTY	COMPONENTS
1	Hook Kit w/ Hardware*
2	Foot Kit w/ Hardware*

*Kits will vary with each Light Bar depending on vehicle specified on order form.

OPTIONAL CONTROL EQUIPMENT		
COMPONENTS	Breakout Box LIN (Standard) Qty.	Breakout Box CAN System Qty.
Universal BOB (LIN)	1	0
Universal BOB (CAN)	0	1
24 Pin Harness	1	1
4 Pin Harness	1	1
5 Pin Harness	0	1

TECHNICAL SPECIFICATIONS			
INPUT VOLTAGE RANGE	10-32Vdc		
OPERATING TEMPERATURE	-40°C to +65°C (-40°F to +149°F)		
ELECTRICAL PROTECTION	Reverse Polarity, Transient Voltage, Over-Voltage, High-Temperature Thermal Fold-back, Load Dump		
WIRING	<p>24" Lightbar Power Cable: 15ft. 10AWG Wires (+) Red, and (-) Black, 22AWG (Data) Green, Green/White 25ft. 10AWG Wires (+) Red, and (-) Black, 22AWG (Data) Green, Green/White Note: Cable with white stripe controls the upper level</p> <p>> 24" Lightbar Power Cable: 15ft. 10AWG Wires (+) Red, Red/White and (-) Black, Black/White 22AWG (Data) Green, Green/White 25ft. 10AWG Wires (+) Red, Red/White and (-) Black, Black/White 22AWG (Data) Green, Green/White Note: Cables with white stripe power/control the upper level</p>		
MATERIAL	Aluminum Base, Polycarbonate Outer Lenses, Aluminum Top Cover.		
STANDBY CURRENT @12.8V(Per Module)	IGNITION ON: 0.24 - 0.63 Amps (dependent on module count) IGNITION OFF: 0.0002 Amps		
STANDBY POWER @12.8V(Per Module)	IGNITION ON: 3.07 - 8.06 Watts (dependent on module count) IGNITION OFF: 0.003 Watts		
OVERALL DIMENSIONS	3.6"H X 12.0"D X Chosen length		
LENGTH	MAX # OF MODULES	MAX CURRENT @ 12.8V	MAX CURRENT @ 25.6V
24"	20	20 Amps	10 Amps
36"	28	28 Amps	14 Amps
42"	32	32 Amps	16 Amps
48"	36	36 Amps	18 Amps
54"	40	40 Amps	20 Amps
60"	44	44 Amps	22 Amps
72"	52	52 Amps	26 Amps
CERTIFICATION		APPLICABLE COLORS	
SAE J845 / J595, Class 1*		RED, AMBER, BLUE, WHITE	
CALIFORNIA TITLE 13, Class B		RED, AMBER, BLUE	

*Depending on the color and program configuration

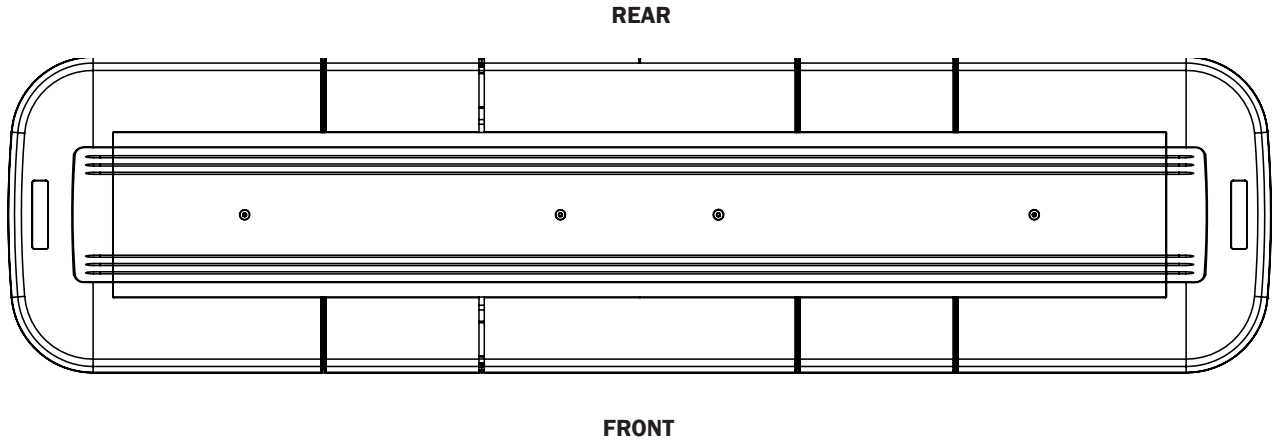
Unpack Lightbar

1. Remove the lightbar from box and packaging.
2. Check components/contents.
3. Please reference these instructions for proper wiring and installation.

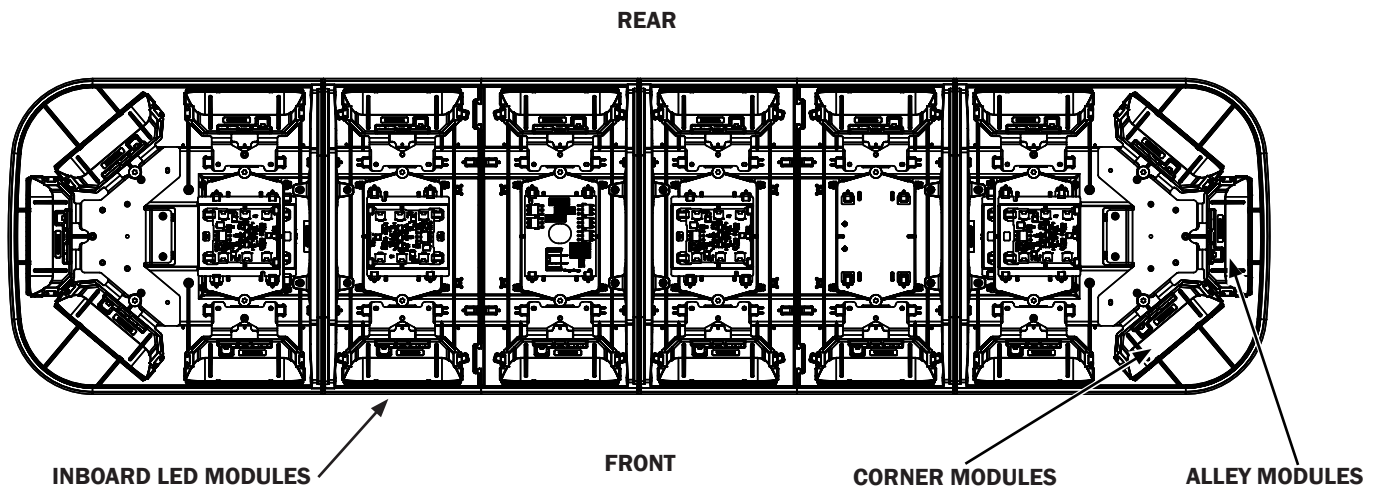
Tools Required for Installation

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

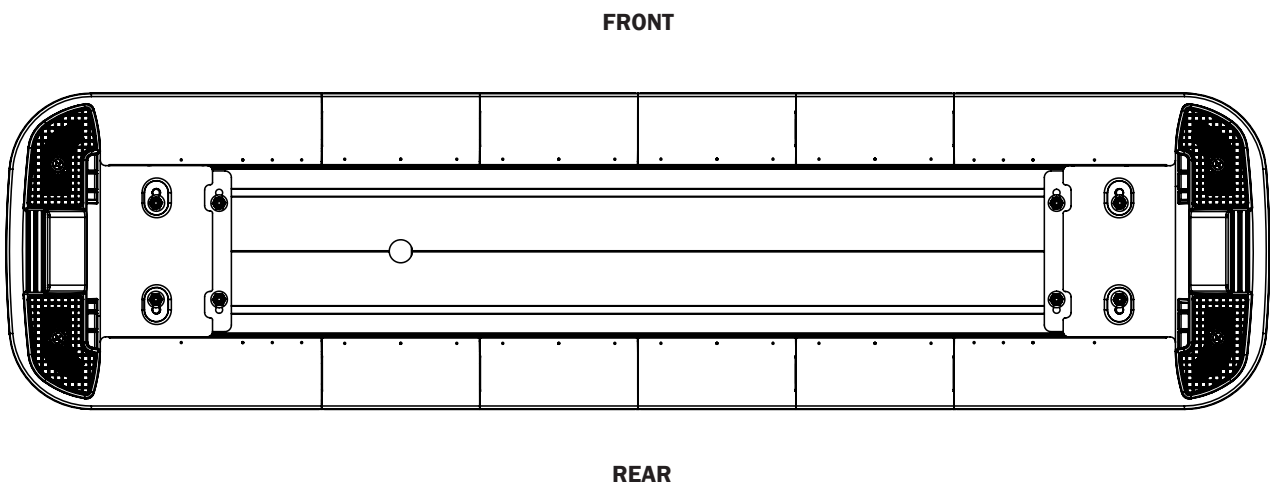
TOP VIEW WITH COVERS ON



TOP VIEW WITH COVERS OFF



BOTTOM VIEW



*48" lightbar pictured

FIXED HEIGHT BRACKETS AND HOOK MOUNTING (PURSUIT)

1. Attach the supplied screws to the mounting foot to secure the rubber pad (shown in **Fig. 2**).
2. Keeping the lightbar level to the road, attach mounting feet to the roof of the vehicle using the 4 supplied T-Slot bolts.
3. 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 (shown in **Fig. 3**). Adjust the mounting foot position to accommodate for this gap.
4. Tighten 4 lock nuts to secure mounting foot to lightbar with max torque between 40-60in/lbs. **DO NOT OVER-TIGHTEN!**
5. Using the holes in the hook bracket as a template, drill 4 holes into the door jamb (where b-pillar meets roof panel) using the appropriate size drill. Secure hook bracket to the door jamb with 4 screws on each side (Aluminum Rivets for Aluminum bodied vehicles).

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.

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

- 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, pay attention to both the lightbar and roof of the vehicle. 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.
- C. Tighten to ensure there is little to 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.

7. 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.

8. 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.

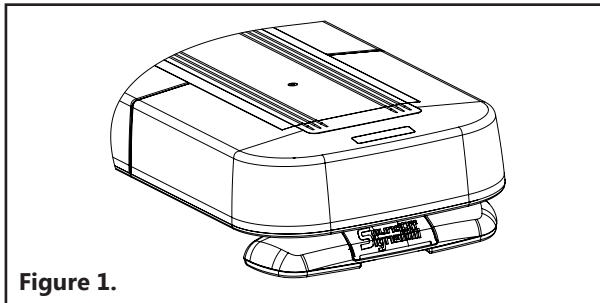


Figure 1.

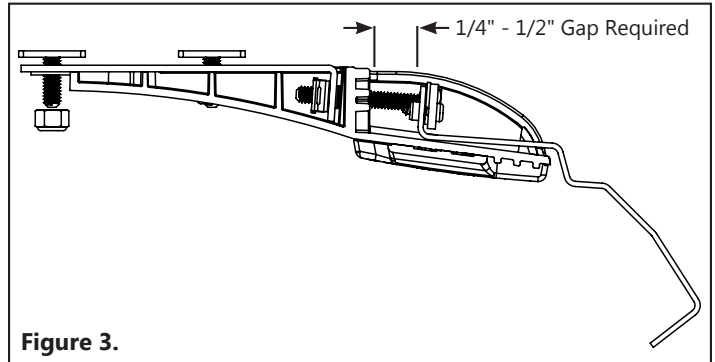


Figure 3.

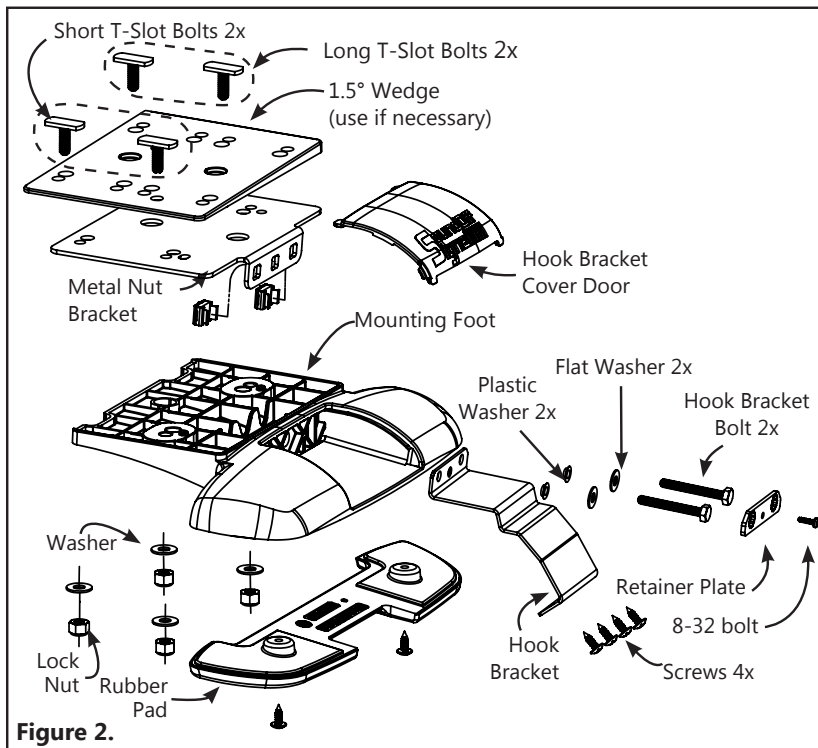


Figure 2.

HEADACHE RACK MOUNTING (PNFLBK02)

1. Place the T-Slot bolts in the extrusion slots on the underside of the lightbar.
2. 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.
6. 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 on the T-Slot bolts to 40-60 in-lbs, DO NOT OVER TIGHTEN.
8. Follow the appropriate lightbar Owner's Manual for additional instructions and installation.

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.

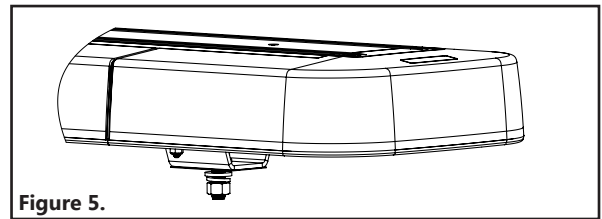


Figure 5.

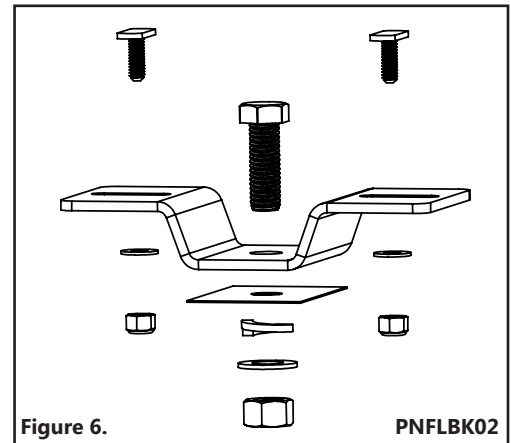


Figure 6.

PNFLBK02

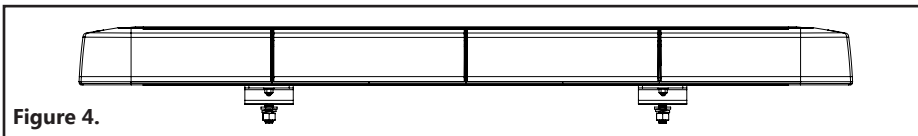


Figure 4.

PERMANENT MOUNTING (PNFLBK10)

1. Place the T-Slot bolts in the extrusion slots on the underside of the lightbar.
2. Place the bracket on the T-Slot bolts, evenly space the brackets on the lightbar and tighten the ¼-20 lock nuts on the T-Slot bolts to 40-60 in-lbs, DO NOT OVER TIGHTEN.
3. Install the two rubber bumpers on the bracket, rotate to lock into position.
4. Mark the two inner holes on each bracket to drill into the mounting surface.
5. Fasten the hardware between the lightbar and mounting surface.
6. Follow the appropriate lightbar Owner's Manual for additional instructions and installation.

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.

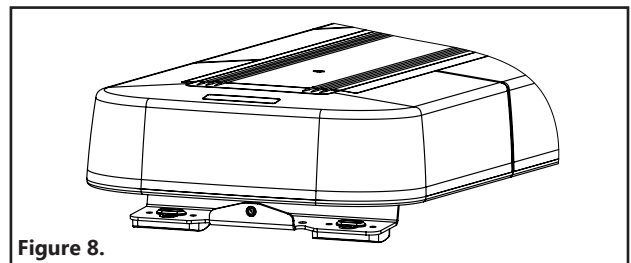


Figure 8.

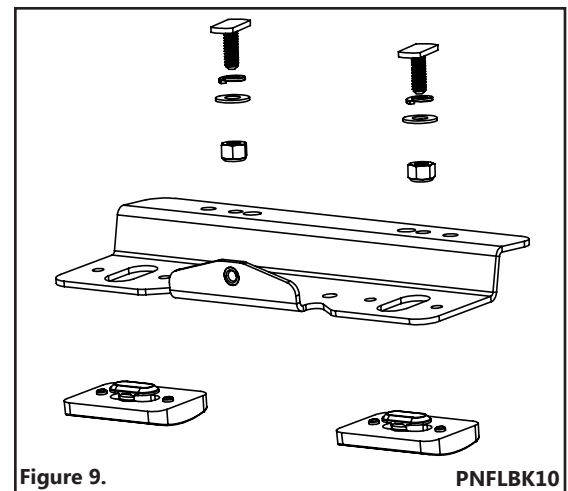


Figure 9.

PNFLBK10

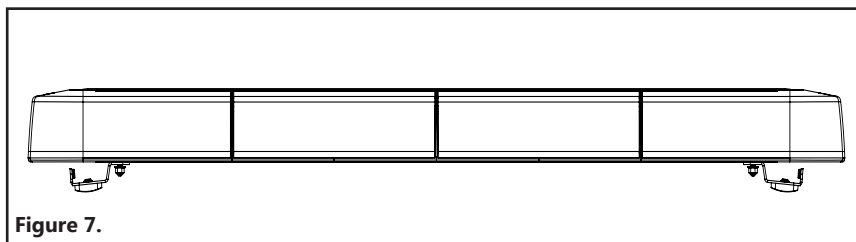
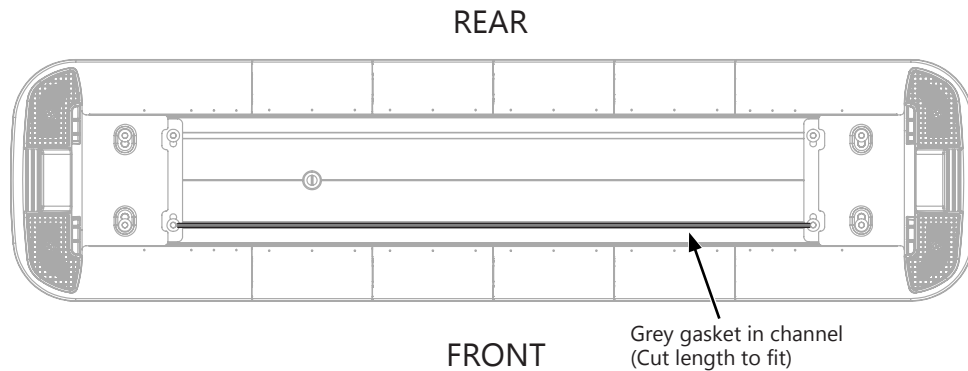


Figure 7.

GASKET MOUNTING INSTRUCTIONS



Install the gray 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. (Please refer to page 13 for more info)

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 Cables:

1. Route lightbar power cables as close to vehicles power source (battery) as possible.
2. Install a maximum of 30Amp Fuses (customer supplied) on the Lightbar Power Cables. One to the end of the RED wire and one to the end of the RED/WHITE wire.
 - a. Remove the fuses before connecting any wires to the battery.
 - b. DO NOT USE CIRCUIT BREAKER OR FUSIBLE LINK.
3. Connect the other ends of the Fuses 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 and BLACK/WHITE wires to the factory chassis ground right next to the battery.

Control (Data) Cables:

1. Route Lightbar LIN Data wires 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 10.

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

Initial Power up Test:

1. Connect the red, red/white, black, and black/white wires from the lightbar to the respective red and black wires of the 4-pin Breakout Box Harness as shown on page 10.
2. Connect Green wire from lightbar to green (LIN 1) and Green/White from the lightbar to Green/White (LIN 2) of the 4-pin Breakout Box Harness as shown on page 10.
3. Apply power to pink/white ignition wire on breakout box. See table 1 on page 11.
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.

NOTE: THE POWER CABLE FOR THE 24" LIGHTBAR WILL ONLY HAVE A RED AND A BLACK WIRE. THERE WILL BE NO RED/WHITE OR BLACK/WHITE WIRES IN THE HARNESS.

IMPORTANT

WHEN PASSING CABLES THROUGH FIREWALL OR OTHER SHEET METAL, INSERT GROMMET TO PROTECT THE CABLE



WARNING

ROUTE WIRES ONLY IN LOCATIONS THAT ARE NOT SUBJECT 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 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 120% OF THE MAXIMUM CURRENT AND PROPERLY FUSED AT THE POWER SOURCE WITH APPROPRIATELY RATED FUSE.

ELECTRICAL INSTALLATION (CONT.)

FLASH PATTERNS

*fpm=Flashes per Minute

**fps=Flashes per Second

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
SC1	Random 1	Yes	No	No	#1	Variable	-	-
SN2	Random 2	No	No	No	#1	Variable	-	-
SC3	Quint	Yes	No	No	#1	Alternating	70	1.2
SC4	Quad 2	Yes	No	No	#1	Variable	-	-
SC5	Q-Switch	Yes	No	No	#1	Variable	-	-
SC6	Double	Yes	No	No	#1	Alternating	115	1.9
SC7	Power Pulse	Yes	No	No	#1	Alternating	180	3
SC8	Road Runner	Yes	No	Yes	#1	Alternating	115	1.9
SC9	Slow Runner	Yes	No	Yes	#1	Alternating	70	1.2
SN10	Warp	No	No	No	#1	Alternating	350	5.8
SN11	Inter-Cycle	No	No	No	#1	Alternating	-	-
SN12	Warp 1-2-3	No	No	No	#1	Alternating	-	-
SC13	E-Single	Yes	Yes	No	#1	Alternating	125	2.1
SC14	E-Double	Yes	Yes	No	#1	Alternating	125	2.1
SC15	E-Triple	Yes	Yes	No	#1	Alternating	125	2.1
SC16	E-Single Sim	Yes	Yes	No	#1	Simultaneous	125	2.1
SC17	E-Double Sim	Yes	Yes	No	#1	Simultaneous	125	2.1
SN18	Super Slow Runner	No	No	No	#1	Alternating	55	0.9
SC19	Quint Simultaneous	Yes	No	No	#1	Simultaneous	70	1.2
SC20	Road Runner Simultaneous	Yes	No	No	#1	Simultaneous	114	1.9
SC21	Quint Pass/Steady Driver	Yes	No	No	#1	-	70	1.2
SC22	Road Runner Pass/Steady Driver	Yes	No	No	#1	-	114	1.9
SC23	Quint 2	Yes	No	No	#1	-	70	1.2
SN24	Warp 2	No	No	No	#1	-	350	5.8
SN25	Inter-Cycle 2	No	No	No	#1	-	-	-
SN26	Flicker Brake	No	No	No	#1	-	-	-
SN27	Flicker Cruise	No	No	No	#1	-	-	-
SN28	Steady	No	No	No	#1	-	-	-
SN29	Manifesto	No	No	No	#1	-	-	-
SN30	Power Evert	No	No	No	#1	-	-	-
SN31	Dazzle	No	No	No	#1	-	-	-
SN32	Quiver	No	No	No	#1	-	-	-

NOTE: Takedown light patterns are limited to pattern #1 – 25

ELECTRICAL INSTALLATION (CONT.)

FLASH PATTERNS CONT.

*fpm=Flashes per Minute

**fps=Flashes per Second

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
SN33	Power Sway	No	No	No	#1	-	-	-
SN34	Evert	No	No	No	#1	-	-	-
SN35	Alternating Rapid Flash	No	No	No	#1	-	-	-
SN36	Swift Impact	No	No	No	#1	-	-	-
SN37	Tango	No	No	No	#1	-	-	-
SN38	Tremble	No	No	No	#1	-	-	-
SN39	Shake	No	No	No	#1	-	-	-
SN40	Evolver	No	No	No	#1	Simultaneous	-	-
SN41	Corner Sweep	No	No	No	#1	-	-	-
SN42	Corner Sweep Slow	No	No	No	#1	-	-	-
SN43	Full/Sweep	No	No	No	#1	-	-	-
SN44	Full/Sweep Slow	No	No	No	#1	-	-	-
SN45	Center Sweep	No	No	No	#1	-	-	-
SN46	Center Sweep Slow	No	No	No	#1	-	-	-
SN47	Orbit	No	No	No	#1	-	-	-
SN48	Orbit Slow	No	No	No	#1	-	-	-
SN49	Double Orbit	No	No	No	#1	-	-	-
SN50	Slow Double Orbit	No	No	No	#1	-	-	-
SN51	Retrograde Orbit	No	No	No	#1	-	-	-
SN52	Slow Retrograde Orbit	No	No	No	#1	-	-	-
SN53	Progressive Alternate	No	No	No	#1	-	-	-
SN54	Recurrent	No	No	No	#1	Simultaneous	-	-
SN55	E-Scroll	No	Yes	No	#1	Alternating	-	-
SN56	ECE-Single - Aura	No	No	No	#1	Alternating	-	-
SN57	ECE-Single - Aura II	No	No	No	#1	Alternating	-	-
DC1	Random Dual #1	Yes	No	No	#1/2	Variable	-	-
DN2	Random Dual #2	No	No	No	#1/2	Variable	-	-
DC3	Quint Dual	Yes	No	No	#1/2	Alternating	70	1.2
DC4	Quad 2 Dual	Yes	No	No	#1/2	Variable	-	-
DC5	Q-Switch Dual	Yes	No	No	#1/2	Variable	-	-
DC6	Double Dual	Yes	No	No	#1/2	Alternating	115	1.9
DC7	Power Pulse Dual	Yes	No	No	#1/2	Alternating	180	3
DC8	Road Runner Dual	Yes	No	Yes	#1/2	Alternating	115	1.9
DC9	Slow Runner Dual	Yes	No	Yes	#1/2	Alternating	70	1.2
DN10	Warp Dual	No	No	No	#1/2	Alternating	350	5.8
DN11	Inter-Cycle Dual	No	No	No	#1/2	Alternating	-	-
DN12	Warp 1-2-3 Dual	No	No	No	#1/2	Alternating	-	-
DN13	Pattern #1 Dual	No	No	No	#1/2	Variable	-	-
DN14	Pattern #2 Dual	No	No	No	#1/2	Variable	-	-

ELECTRICAL INSTALLATION (CONT.)

FLASH PATTERNS

*fpm=Flashes per Minute

**fps=Flashes per Second

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
DN15	Impact Dual	No	No	No	#1/2	Variable	-	-
DN16	Explosion Dual	No	No	No	#1/2	Variable	-	-
DC17	Quint Simultaneous Dual	Yes	No	No	#1/2	Simultaneous	70	1.2
DC18	Road Runner Sim. Dual	Yes	No	No	#1/2	Simultaneous	114	1.9
DC19	Quint 2 Dual	Yes	No	No	#1/2	-	70	1.2
DN20	Warp 2 Dual	No	No	No	#1/2	-	350	5.8
DN21	Inter-Cycle 2 Dual	No	No	No	#1/2	-	-	-
DN22	Super Slow Runner Dual	No	No	No	#1/2	-	-	-
DN23	Flicker Cruise Dual	No	No	No	#1/2	-	-	-
DN24	Manifesto Dual	No	No	No	#1/2	-	-	-
DN25	Power Evert Dual	No	No	No	#1/2	-	-	-
DN26	Dazzle Dual	No	No	No	#1/2	-	-	-
DN27	Quiver Dual	No	No	No	#1/2	-	-	-
DN28	Power Sway Dual	No	No	No	#1/2	-	-	-
DN29	Evert Dual	No	No	No	#1/2	-	-	-
DN30	Alternating Rapid Flash Dual	No	No	No	#1/2	-	-	-
DN31	Swift Impact Dual	No	No	No	#1/2	-	-	-
DN32	Tango Dual	No	No	No	#1/2	-	-	-
DN33	Tremble Dual	No	No	No	#1/2	-	-	-
DN34	Shake Dual	No	No	No	#1/2	-	-	-
DN35	Evolver Dual	No	No	No	#1/2	Simultaneous	-	-
DN36	Corner Sweep Dual	No	No	No	#1/2	-	-	-
DN37	Corner Sweep Slow Dual	No	No	No	#1/2	-	-	-
DN38	Full/Sweep Dual	No	No	No	#1/2	-	-	-
DN39	Full/Sweep Slow Dual	No	No	No	#1/2	-	-	-
DN40	Center Sweep Dual	No	No	No	#1/2	-	-	-
DN41	Center Sweep Slow Dual	No	No	No	#1/2	-	-	-
DN42	Orbit Dual	No	No	No	#1/2	-	-	-
DN43	Orbit Slow Dual	No	No	No	#1/2	-	-	-
DN44	Double Orbit Dual	No	No	No	#1/2	-	-	-
DN45	Slow Double Orbit Dual	No	No	No	#1/2	-	-	-
DN46	Retrograde Orbit Dual	No	No	No	#1/2	-	-	-
DN47	Slow Retrograde Orbit Dual	No	No	No	#1/2	-	-	-
DN48	Progressive Alternate Dual	No	No	No	#1/2	-	-	-
DN49	Recurrent Dual		No	No	#1/2	Simultaneous	-	-
DN50	E-Scroll Dual	No	Yes	No	#1/2	Alternating	-	-
DN51	Road Runner Dual - Aura	No	No	No	#1/2	Alternating	-	-
DN52	Road Runner Dual - Aura II	No	No	No	#1/2	Alternating	-	-
DN53	Slow Runner Dual - Aura	No	No	No	#1/2	Alternating	-	-

ELECTRICAL INSTALLATION (CONT.)

FLASH PATTERNS CONT.

*fpm=Flashes per Minute

**fps=Flashes per Second

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
DN54	Slow Runner Dual - Aura II	No	No	No	#1/2	Alternating	-	-
DN55	Super Slow Runner Dual - Aura	No	No	No	#1/2	Alternating	-	-
DN56	Super Slow Runner Dual - Aura II	No	No	No	#1/2	Alternating	-	-
DN57	Corner Sweep Slow Dual - Aura	No	No	No	#1/2	-	-	-
DN58	Full Sweep Slow Dual - Aura	No	No	No	#1/2	-	-	-
DN59	Center Sweep Slow Dual - Aura	No	No	No	#1/2	-	-	-
DN60	Orbit Slow Dual - Aura	No	No	No	#1/2	-	-	-
DN61	Double Orbit Slow Dual - Aura	No	No	No	#1/2	-	-	-
DN62	Retrograde Orbit Slow Dual - Aura	No	No	No	#1/2	-	-	-
DN63	Flicker Cruise alternate Dual - Aura	No	No	No	#1/2	-	-	-
TN1	Pattern 1 Tri	No	No	No	#1/2/3	Alternating	-	-
TN2	Random Tri	No	No	No	#1/2/3	Alternating	-	-
TC3	Quint Tri	Yes	No	No	#1/2/3	Alternating	70	1.2
TC4	Quad 2 Tri	Yes	No	No	#1/2/3	Alternating	-	-
TN5	Pattern 2 Tri	No	No	No	#1/2/3	-	-	-
TC6	Double Tri	Yes	No	No	#1/2/3	Alternating	115	1.9
TC7	Power Pulse Tri	Yes	No	No	#1/2/3	Alternating	180	3
TC8	Road Runner Tri	Yes	No	Yes	#1/2/3	Alternating	115	1.9
TC9	Slow Runner Tri	Yes	No	Yes	#1/2/3	Alternating	70	1.2
TN10	Warp Tri	No	No	No	#1/2/3	Alternating	350	5.8
TN11	Inter-Cycle Tri	No	No	No	#1/2/3	Alternating	-	-
TN12	Warp 1-2-3 Tri	No	No	No	#1/2/3	Alternating	-	-
TN13	Super Slow Runner Tri	No	No	No	#1/2/3	Alternating	55	0.9
TC14	Quint Simultaneous Tri	Yes	No	No	#1/2/3	Simultaneous	70	1.2
TC15	Road Runner Sim. Tri	Yes	No	No	#1/2/3	Simultaneous	114	1.9
TC16	Quint 2 Tri	Yes	No	No	#1/2/3	Alternating	70	1.2
TN17	Warp 2 Tri	No	No	No	#1/2/3	Alternating	350	5.8
TN18	Inter-Cycle 2 Tri	No	No	No	#1/2/3	Alternating	-	-
TN19	Pattern 3 Tri	No	No	No	#1/2/3	-	-	-
TN20	Flicker Cruise Tri	No	No	No	#1/2/3	-	-	-
TN21	Manifesto Tri	No	No	No	#1/2/3	-	-	-
TN22	Power Evert Tri	No	No	No	#1/2/3	-	-	-
TN23	Dazzle Tri	No	No	No	#1/2/3	-	-	-
TN24	Quiver Tri	No	No	No	#1/2/3	-	-	-
TN25	Power Sway Tri	No	No	No	#1/2/3	-	-	-
TN26	Evert Tri	No	No	No	#1/2/3	-	-	-
TN27	Alternating Rapid Flash Tri	No	No	No	#1/2/3	-	-	-
TN28	Swift Impact Tri	No	No	No	#1/2/3	-	-	-
TN29	Tango Tri	No	No	No	#1/2/3	-	-	-

ELECTRICAL INSTALLATION (CONT.)

FLASH PATTERNS CONT.

*fpm=Flashes per Minute

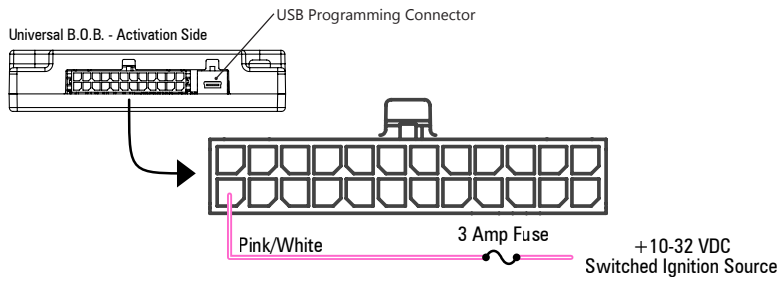
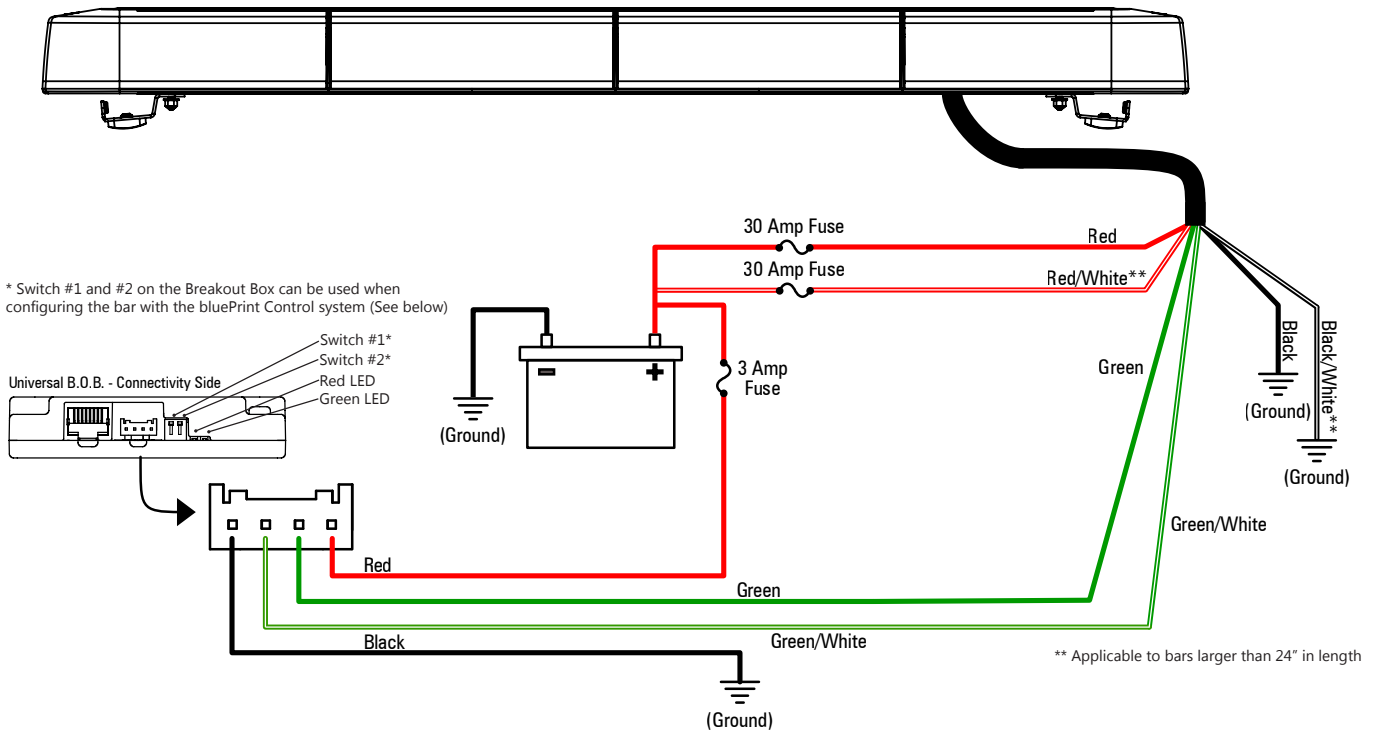
**fps=Flashes per Second

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
TN30	Tremble Tri	No	No	No	#1/2/3	-	-	-
TN31	Shake Tri	No	No	No	#1/2/3	-	-	-
TN32	Evolver Tri	No	No	No	#1/2/3	Simultaneous	-	-
TN33	Corner Sweep Tri	No	No	No	#1/2/3	-	-	-
TN34	Corner Sweep Slow Tri	No	No	No	#1/2/3	-	-	-
TN35	Full/Sweep Tri	No	No	No	#1/2/3	-	-	-
TN36	Full/Sweep Slow Tri	No	No	No	#1/2/3	-	-	-
TN37	Center Sweep Tri	No	No	No	#1/2/3	-	-	-
TN38	Center Sweep Slow Tri	No	No	No	#1/2/3	-	-	-
TN39	Orbit Tri	No	No	No	#1/2/3	-	-	-
TN40	Orbit Slow Tri	No	No	No	#1/2/3	-	-	-
TN41	Double Orbit Tri	No	No	No	#1/2/3	-	-	-
TN42	Double Orbit Slow Tri	No	No	No	#1/2/3	-	-	-
TN43	Retrograde Orbit Tri	No	No	No	#1/2/3	-	-	-
TN44	Retrograde Orbit Slow Tri	No	No	No	#1/2/3	-	-	-
TN45	Progressive Alternate Tri	No	No	No	#1/2/3	-	-	-
TN46	Recurrent Tri	No	No	No	#1/2/3	Simultaneous	-	-
TN47	E-Scroll Tri	No	Yes	No	#1/2/3	Alternating	-	-
TN48	Road Runner Tri - Aura	No	No	No	#1/2/3	Alternating	-	-
TN49	Road Runner Tri - Aura II	No	No	No	#1/2/3	Alternating	-	-
TN50	Slow Runner Tri - Aura	No	No	No	#1/2/3	Alternating	-	-
TN51	Slow Runner Tri - Aura II	No	No	No	#1/2/3	Alternating	-	-
TN52	Super Slow Runner Tri - Aura	No	No	No	#1/2/3	Alternating	-	-
TN53	Super Slow Runner Tri - Aura II	No	No	No	#1/2/3	Alternating	-	-
TN54	Corner Sweep Slow Tri - Aura	No	No	No	#1/2/3	-	-	-
TN55	Full Sweep Slow Tri - Aura	No	No	No	#1/2/3	-	-	-
TN56	Center Sweep Slow Tri - Aura	No	No	No	#1/2/3	-	-	-
TN57	Orbit Slow Tri - Aura	No	No	No	#1/2/3	-	-	-
TN58	Double Orbit Slow Tri - Aura	No	No	No	#1/2/3	-	-	-
TN59	Retrograde Orbit Slow Tri - Aura	No	No	No	#1/2/3	-	-	-

ELECTRICAL INSTALLATION (CONT.)

ARROW PATTERNS

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
1	Single Fast	No	No	No	#1	-	-	-
2	Single Slow	No	No	No	#1	-	-	-
3	Chaser Fast	No	No	No	#1	-	-	-
4	Chaser Slow	No	No	No	#1	-	-	-
5	Fill Fast	No	No	No	#1	-	-	-
6	Fill Slow	No	No	No	#1	-	-	-
7	Grow/Shrink	No	No	No	#1	-	-	-
8	Warning w/Arrow	No	No	No	#1	-	-	-
9	Warning w/Arrow Fill	No	No	No	#1	-	-	-
10	Arrow Random 1	No	No	No	#1	-	-	-
11	Arrow Random 2	No	No	No	#1	-	-	-
12	Grow/Shrink 2	No	No	No	#1	-	-	-
13	Single Slow - Aura III	No	No	No	#1	-	-	-
14	Fill Slow - Aura III	No	No	No	#1	-	-	-



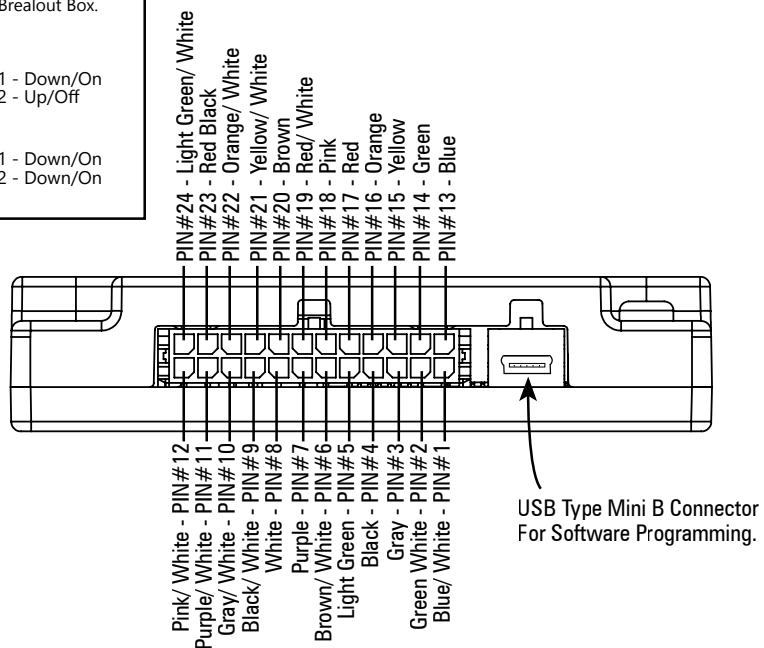
Universal Breakout Box Setting I.D.

*Only used with bluePRINT applications with more than 1 Universal Breakout Box.

	ID 1	1 - Up/Off 2 - Up/Off		ID 3	1 - Down/On 2 - Up/Off
	ID 2	1 - Up/Off 2 - Down/On		ID 4	1 - Down/On 2 - Down/On

Functional Inputs

Functional Inputs connect to your control head or switching unit. Applying +10-32Vdc to any functional Input will activate it's function (default-active high).



CONTROL HARNESS

Table 1

WIRE FUNCTION DEFAULTS

NOTE: Applies to both levels of the lightbar

Wire Pin #	Wire Color	Wire Function	Mods affected	Color (→: If the color is not populated, it would be the next color listed)	Flash	CERT chosen	
						SAE/None	ECE
						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)

- Securely snap in the 4-pin and 24-pin connectors
- Install a 3AMP Fuse (customer supplied) to the end of the Red wire of the 4-pin connector harness.
- Hook up power, ground, and LIN to the corresponding wire on the 4-pin connector harness. (Table 2)
- Connect the pink/white wire, on the 24-pin connector, to a fused ignition source (3Amp) if not using a SOS 400 Series siren, or any bluePRINT Controller.
- Refer to Table 1 for the input wire's default function
- Follow the label for the wire color to connect to a +10-32Vdc source, which turns on that given light or lights
- Make sure your wire connections are secured and isolated from any other wire.

4-PIN CONNECTOR HARNESS

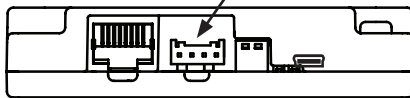


Table 2

Wire Pin	Color	Function
1	Black	Ground
2	Green/White	LIN 2 - Top layer Data
3	Green	LIN 1 - Bottom layer Data
4	Red	Power

CAN BREAKOUT BOX INSTRUCTIONS: (CAN COMMUNICATION)

- Securely snap in the 4-pin, 5-pin and 24-pin connectors
- Refer to Table 1 for the input wire default functions and to Table 3 for the CAN wire functions
- Install a 3AMP Fuse (customer supplied) to the end of the Red wire of the 4-pin connector harness.
- Hook up power, ground, and LIN to the corresponding wire on the 4-pin connector harness. (Table 2)
- Connect the pink/white wire, on the 24-pin connector, to a fused ignition source (3a) if not using a SOS 400 Series siren, or any bluePRINT Controller
- Follow the label for the wire color to connect to a 10-32 Vdc source, which turns on that given light or lights
- Make sure your wire connections are secured and isolated from any other wire
- 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

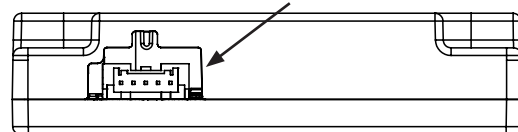
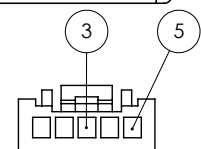


Table 3

Wire Pin	Color	Function
3	Green	CAN Low
5	Yellow	CAN High



CAN CONNECTOR

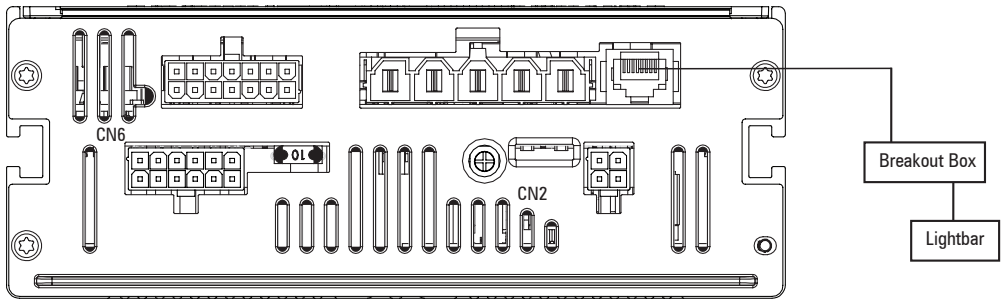


TO CHANGE WIRE FUNCTIONS FOR CUSTOM APPLICATIONS PLEASE SCAN QR CODE FOR LINK FOR SOUNDOFF CENTRAL LIGHTBAR SOFTWARE GUIDES.

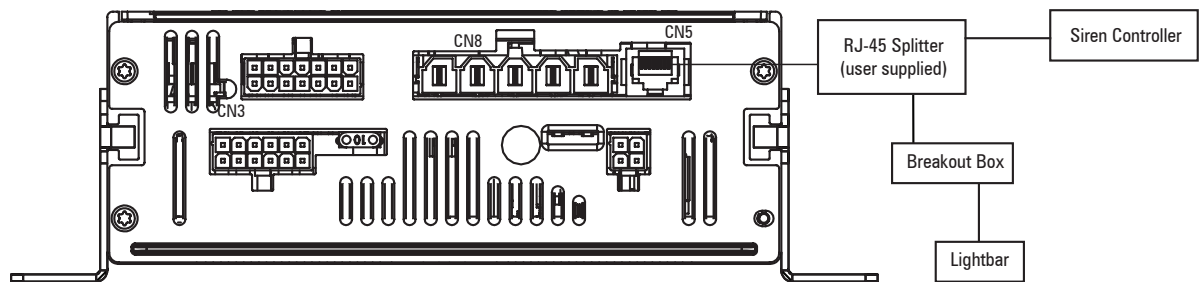
CONNECTION OF LIGHTBAR BREAKOUT BOX TO SOUNDOFF SIGNAL SIREN:

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.

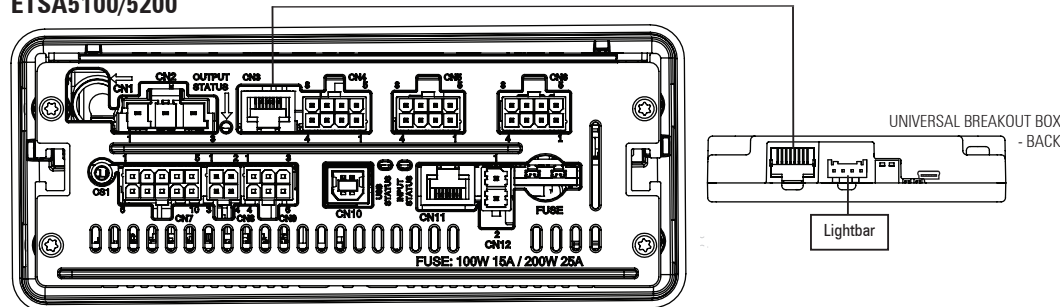
ETSA481CSR or ETSA482CSR



ETSA481RSP, ETSA482RSP, ETSA461HPP, ETSA462HPP



ETSA5100/5200



SoundOff Central® Software Universal Breakout Box ID Settings

When using more than one lightbar universal breakout box (UBOB) with SoundOff Central Software, set the ID number for each UBOB using the dip switches and then configure the light bars accordingly in the Software.

1. Select Lightbars Tab on the main SETUP Page.

2. Under Lightbars tab, select the EXTERNAL tab to see UBOB list. The number after the UBOB is the ID needed.

3. Hover cursor over the ? to open up Universal Breakout Box ID Information.

SIREN FUNCTIONS

NOTE: Applies to both levels of the lightbar

#	Button	Function	Mods affected	"Color (if the color is not populated, it would be the next color listed)"	Flash	CERT chosen	
						SAE/NONE	ECE
						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	-	-	-	-	-	-
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 through 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.
- 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.

NOTE: The photo sensor in the nFUSE lightbar is sensitive to colored domes and, in some cases, can falsely activate the low-power function due to incoming light being filtered. nFUSE xl lightbars specifically configured with red-colored lids on the leftmost side of the lightbar have the photo sensor software disabled by default before shipment from SoundOff Signal.

This and other low-power settings can be overridden/reprogrammed by the user (via programming in SoundOff Central), but actual results will vary.

nFUSE® XL TROUBLESHOOTING

Normal Operation

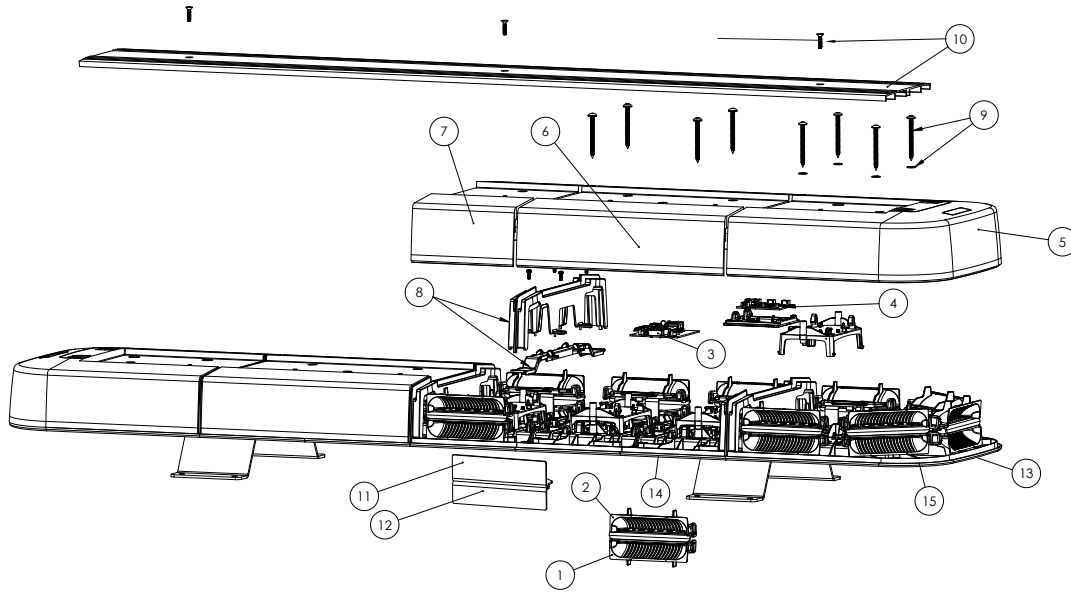
Under regular operation, the breakout box will have both the green and red LEDs illuminated whenever a specific input is active – and both switches are in the up (off) position. Additionally, the green LED will be illuminated whenever the system is functional, but no input is present. In cases where the lightbar is not running, or the breakout box is not illuminated as described above – please consult the table below:

GENERAL TROUBLESHOOTING	
Before further troubleshooting steps, start here:	<ul style="list-style-type: none"> • Check power source to the lightbar and breakout box (red and red/white wires). • Check the ground source to the lightbar and breakout box (black and black/white wires). • Check ignition source to the lightbar and breakout box (pink/white wire). • Check any splice and butt connections for proper crimp integrity. • Check connectors for positive engagement.
NO OPERATION	
The green LED is not illuminated	<ul style="list-style-type: none"> • Check Power (Pin #4) and Ground (Pin #1) on the 4-pin connector. • If not connected to a 400 Series Siren or bluePRINT Controller, check Ignition (pin #12) on the 24-pin connector.
The red LED is not illuminated while inputs are active	<ul style="list-style-type: none"> • Verify there is proper voltage on the input wire. Many inputs are positive or negative selectable (through SoundOff Central Lightbar). • Check lightbar program configuration using SoundOff Central Lightbar. Verify any active inputs are mapped to activate lightbar functions. • Verify the DIP switches on the BOB are both in the up (off) position.
Green and red LEDs are illuminated properly	<ul style="list-style-type: none"> • Verify the lightbar data wires on the 4-pin connector (pins #2 and #3) are correctly connected to the matching lightbar data wires. The green data wire is for the lower half of the lightbar, and the green/white data wire is for the upper half of the lightbar. • Verify the data wire circuit (from the breakout box into the lightbar) is not damaged or shorted to power or ground.
INCORRECT WARNING LIGHTS	
	<ul style="list-style-type: none"> • Verify the configuration for proper lightbar operation. • Verify the lightbar data wires on the 4-pin connector (pins #2 and #3) are correctly connected to the matching lightbar data wires. The green data wire is for the lower half of the lightbar, and the green/white data wire is for the upper half of the lightbar. • Verify light module ID/positions.
NO LIGHT OPERATION IN ONE OR MORE MODULES	
Single Module	<ul style="list-style-type: none"> • Remove the top cover and follow the non-working module harness to its driver board. • Verify connections at the module and the control board.
Multiple Modules	<ul style="list-style-type: none"> • Follow the single module step for all non-operation modules • Next, follow the main harness from the driver board to the fuse distribution board. Check integrity of the harness, connections, and verify fuses. • If the fuses and power harness check out OK, disconnect each module’s harness from the driver board one at a time (and reconnect after). While disconnecting, if the other modules turn back on, verify the disconnected module for a fault or failure.



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

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) [Lower Level]
1	PNULBLSD212(x)	12 LED DUAL COLOR MODULE (SAE) [Lower Level]
2	PNULBLTS206(x)	6 LED SINGLE COLOR MODULE (SAE) [Upper Level]
2	PNULBLTD212(x)	12 LED DUAL COLOR MODULE (SAE) [Upper Level]
3	PNULBDST1	DISTRIBUTION BOARD
4	PNULBDRV1	DRIVER BOARD (>24" LIGHTBAR)
4	PNULBDRV2	DRIVER BOARD (24" LIGHTBAR)
	PNULBDAD2	MOD ID/AUTO DIM DRIVER BOARD
	PNULBHNPW(x)	POWER HARNESS
	PNULBHNS1	24" LB JUMPER POWER HARNESS
5	PNULBTDEC2(x)	ENDCAP (COLOR)
6	PNULBTDML2(x)	INNER DOME 12" (COLOR)
7	PNULBTDMS2(x)	INNER DOME 6" (COLOR)
8	PNULBDVD2	DIVIDER (INCLUDES BOTTOM & TOP COMPONENTS)
9	PNULBTCSKT2	SINGLE DOME REPLACEMENT HARDWARE KIT
10	PNULBTX(XX)S	COVER PLATE WITH HARDWARE
	PNULBLSPPREW	PREEMPTION MODULE
11	PNULBLTN0000	BLANK MODULE BRACKET (UPPER LEVEL)
12	PNULBLSN0000	BLANK MODULE BRACKET (LOWER LEVEL)
13	PNULBBEC1	END BASE
14	PNULBBC06	INBOARD BASE
15	PNULBGABS	NFUSE BASE GASKET SHORT (10')
15	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)
	PNFLBK10	EXTRA LOW FIXED HEIGHT MOUNT (EA)
	PNFLBK11	CLASSIC FIXED HEIGHT MOUNT (EA)

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 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.