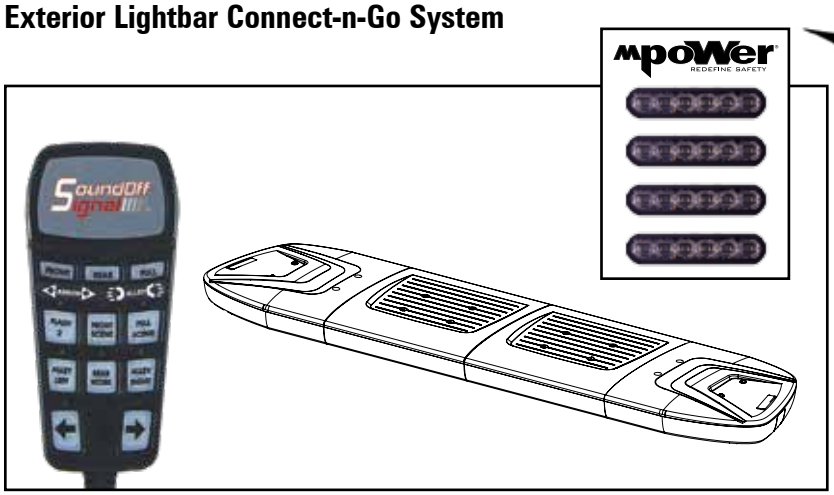
nROADS® FLEET SERIES

Exterior Lightbar Connect-n-Go System

For Quick Install Video please visit:
https://www.soundoffsignal.com/products/nroads-fleet-cng-lightbar/



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 dependant 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.

COMPONENTS/ CONTENTS

Standard Equipment:

1 - nROADS Fleet® LED Lightbar, built to your specifications
1 - Handheld Controller

Other Parts that May Be Included Depending on Your Configuration:

1 - Vehicle Specific Hook Kit w/ Hardware*
2 - Fixed Height Mounting Brackets w/ Hardware
1 - Flat Mount Hardware Kit or
2 - Headache Brackets w/ Hardware

*Kits will vary with each lightbar, depending on vehicle specified on order form.

Compatible Lights with This System (Ordered Separately):

2 or 4 - 4" mpower® Fascia Lights

Unpack Lightbar

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

SoundOff Signal®

1.800.338.7337 / www.soundoffsignal.com

TABLE OF CONTENTS

Important Information:

- 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.

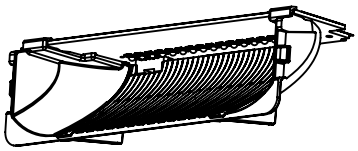
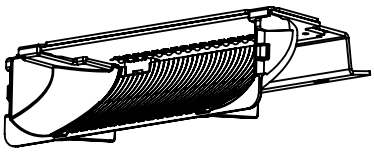
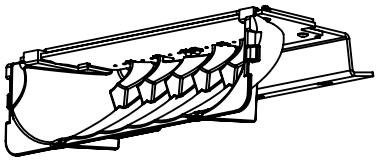
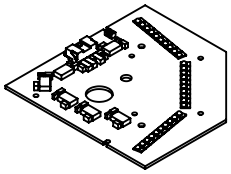
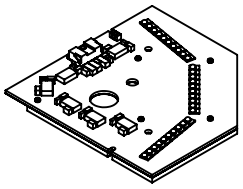
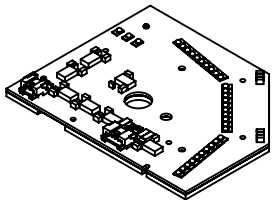
⚠ WARNING

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/sales-support****. If you have questions regarding this product, contact* ***Technical Services****, Monday - Friday, 8 a.m. to 5 p.m. or after hours 5 p.m. to 8 p.m. EST at* ***1.800.338.7337*** *(press #4 to skip the automated message). Questions or comments that do not require immediate attention may be emailed to* ***techservices@soundoffsignal.com.***

MODULE SPECIFICATIONS

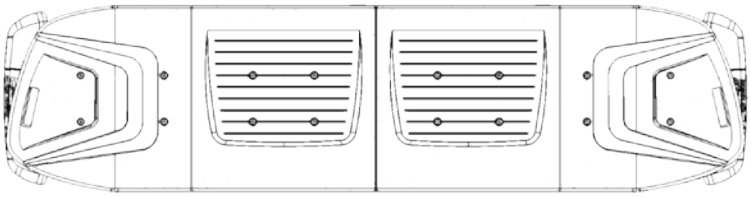
	**6 LED Single & 12 LED Dual Color Inboard Module** INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.2 Amps (Flashing) / 0.4 Amps(Steady On) POWER @ 12.8Vdc: 2.6W (Flashing) / 5.2W (Steady On)
	**9 LED Single & 18 LED Dual Color Inboard Module** INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.3 Amps (Flashing) / 0.6 Amps (Steady On) POWER @ 12.8Vdc: 3.9W (Flashing) / 7.8W (Steady On)
	**6 LED White Takedown Module** INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.2 Amps (Flashing) / 0.4 Amps (Steady On) POWER @ 12.8Vdc: 2.6W (Flashing) / 5.2W (Steady On)
	**9 LED Single & 18 LED Dual Color Corner Module** INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.3 Amps (Flashing) / 0.6 Amps (Steady On) POWER @ 12.8Vdc: 3.9W (Flashing) / 7.8W (Steady On)
	**12 LED Single & 24 LED Dual Color Corner Module** INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.4 Amps (Flashing) / 0.8 Amps (Steady On) POWER @ 12.8Vdc: 5.2W (Flashing) / 10.4W (Steady On)
	**Corner Module with Integrated Alley Light Module** INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.25 Amps (Flashing) / 0.5 Amps (Steady On) POWER @ 12.8Vdc: 3.2W (Flashing) / 6.4W (Steady On)

FLASHING = AVERAGE
STEADY ON (100%) = PEAK

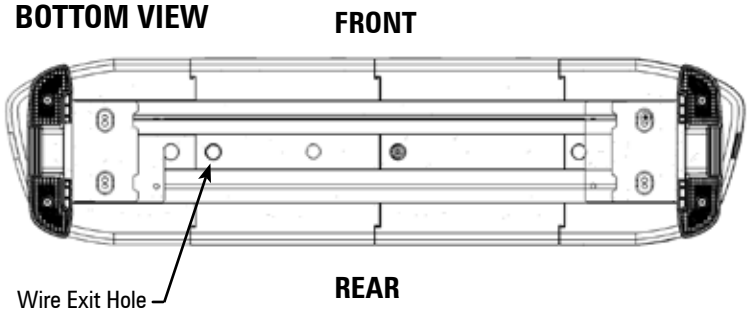
nROADS® FLEET SERIES

Exterior Lightbar Connect-n-Go System

TOP VIEW WITH COVERS ON



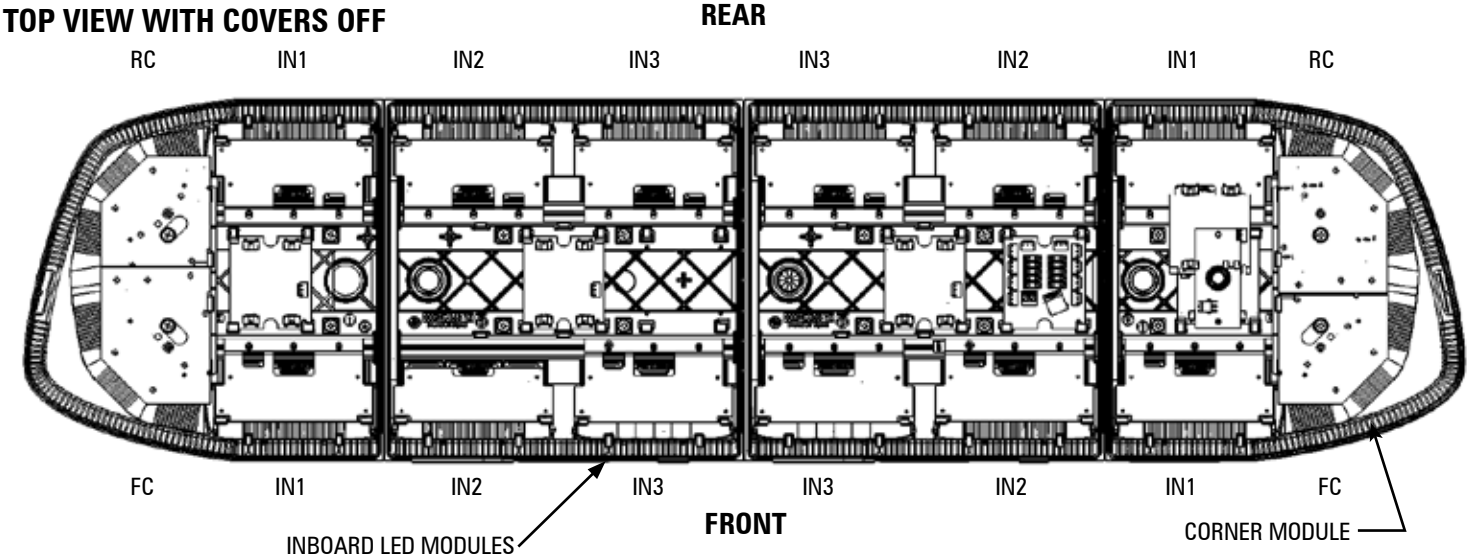
BOTTOM VIEW



TECHNICAL SPECIFICATIONS		
Material:	Aluminum Base, polycarbonate outer lenses, ASA/PC top cover.	
Roof Attachments:	1/4" bolt Stainless A2	
Operating Temperature:	-40º to +65º C	
LENGTH	# OF INBOARDS	DIMENSIONS
36"	4	12"D x 2.5"H Inboard
42"	5	
48"	6	
54"	7	
60"	8	

POWER SPECIFICATIONS				
Input Voltage Range:	10 -16 Vdc			
Light Bar Component	Current Draw (Average = Flashing)		Power Consumption (Watts)	
Standby Current	Ignition ON	Ignition OFF	Ignition ON	Ignition OFF
	0.010 Amps	0.002 Amps	0.13 Watts	0.03 Watts
Reverse Polarity	Protected			
Load Dump	Protected			
Wiring	Power Cable 15ft 12 AWG Wires: (+) RED, (-) BLACK 16 AWG Wire: (Ignition) PINK Data Cable 25ft RJ-45 Type mpower® Harness(es) 15ft 22 AWG			

TOP VIEW WITH COVERS OFF



nROADS® FLEET SERIES

Exterior Lightbar Connect-n-Go System

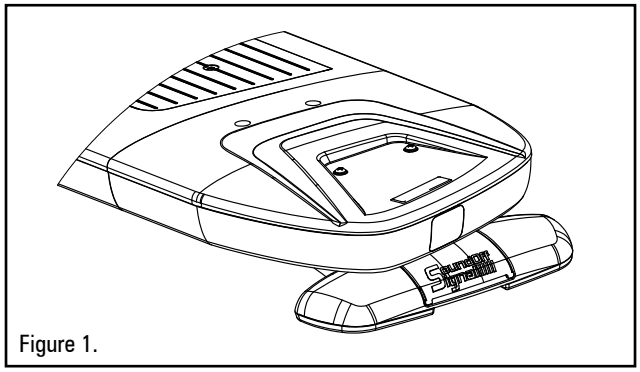


Figure 1.

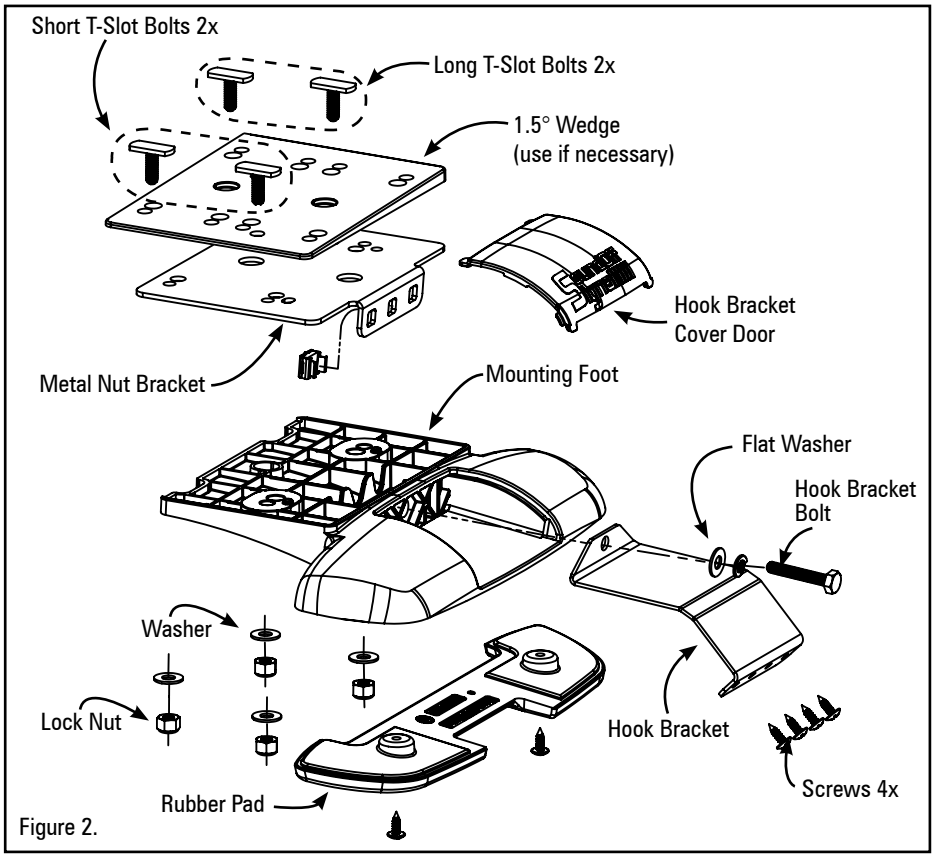


Figure 2.

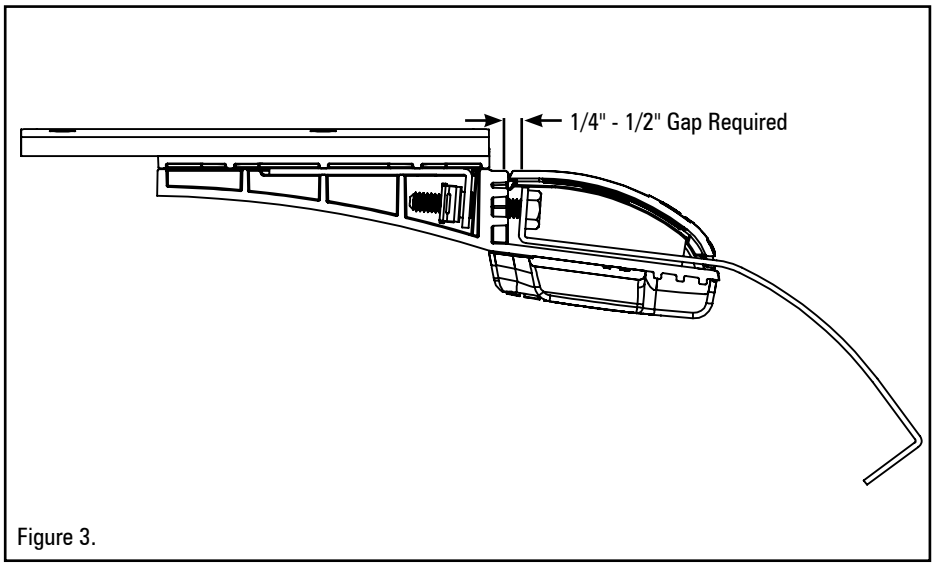


Figure 3.

FIXED HEIGHT BRACKETS AND HOOK MOUNTING (NON-PURSUIT)

1. Keeping the lightbar level with the road, attach mounting feet to the roof of the vehicle using the supplied T-bolts. If the vehicle is pursuit rated, there will be 8 supplied T-bolts. For non-pursuit rated vehicles, there will be 4 supplied T-bolts. If the light bar needs to be leveled, a 1.5° wedge has been provided.

2. 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 3.) Adjust the mounting foot position to accomodate for this gap.

3. Tighten 2 lock nuts to secure mounting foot to lightbar with max torque between 80-90in/lbs. DO NOT OVERTIGHTEN!

4. Using 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. Tighten hook bracket bolts with max torque 40-50in/lbs.

5. 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 light bar 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 light bar 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.

6. 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 flat-head screw driver.

⚠ 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.

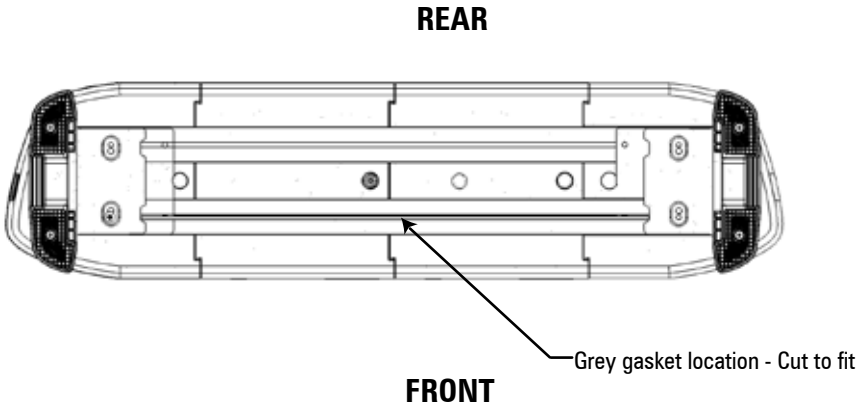


Fig. 1

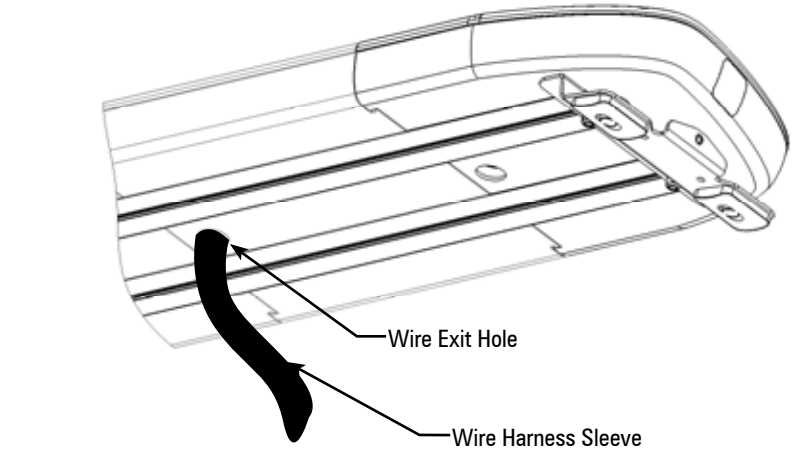


Fig. 2

GASKET MOUNTING INSTALLATION

1. Install the Grey gasket in the front slot of the lightbar, as shown in Fig 1.

WIRE SLEEVE INSTALLATION

1. Unspool all harnesses coming out of the lightbar.
2. Feed all harnesses through the sleeve until the sleeve is positioned at the exit hole under the lightbar.
3. Continue sliding the sleeve through the rubber gasket until it hits a hard stop (should be an additional 1-2 inches.)
4. Use the included zip tie to clamp around the end of the sleeve opposite the lightbar, as shown in Fig 2.

ELECTRICAL INSTALLATION

Featured Highlights & Terminology:

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

Scene Light 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.

⚠ 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.

Power Cable:
1. Route lightbar power cables as close to vehicles power source (battery) as possible.
2. Install a maximum of 15Amp Fuse (customer supplied) to the end of the RED wire of the light bar 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.
5. Connect PINK wire to switched source of voltage (i.e. ignition.)

Control (Data) Cable:
1. Route lightbar control cable to the location where the handheld controller harness with supplied coupler will be.

Note: Coupler is not weatherproof and must be mounted inside the vehicle.

Initial Power up Test:
1. Connect RJ-45 power/ data plug to the handheld controller plug, using the supplied coupler.
2. Apply power to PINK ignition wire.

DIP Switch Settings on Controller Board* (Front):
1. Worklight Color (OFF = Color 1, ON = Color 2)
2. Arrow Color (OFF = Color 1, ON = Color 2)
3. Corner Color Swap (OFF = Normal, ON = Swap colors 1 and 2)

*Please reference Page 15 for controller board location

Note: DIP Switch 3 is used if "W/A" modules are used in inboard worklight positions.

ELECTRICAL INSTALLATION (CONT.)

Initial Setup of mpower® Fascia Lights (2 Front and 2 Rear):
The Connect-n-Go mpower® modules will automatically sync with the nROADS® Fleet Lightbar. To ensure the mpower® modules are synced properly based upon where they are mounted, perform the following steps:

1. Ensure the lightbar is powered properly and no buttons are activated on the handheld.
2. Connect the first mpower® module (mounted on the Rear Driver side of the vehicle) to one of the mating connector harnesses coming out of the lightbar.
3. Activate a button on the handheld, deactivate the button, and then wait for the system to recognize the newly plugged in module (about 15 seconds.) The module will flash its ID when it has paired with the lightbar.
4. Connect the next module and repeat steps 2 - 3 (in the order shown below) for each module until all modules have been paired, where the mpower® module with:
   a. ID #1 is in the Rear Driver position.
   b. ID #2 is in the Rear Passenger position.
   c. ID #3 is in the Front Driver position.
   d. ID #4 is in the Front Passenger position.
5. If an mpower® module is not acting as desired, refer to Program 6, 7, 8, or 9 on Pages 10, 11 for reprogramming steps.

Initial Setup of mpower® Fascia Lights (2 Rear):
The Connect-n-Go mpower® modules will automatically sync with the nROADS® Fleet Lightbar. To ensure the mpower® modules are synced properly based upon where they are mounted, perform the following steps:

1. Ensure the lightbar is powered properly and no buttons are activated on the handheld.
2. Connect the first mpower® module (mounted on the Rear Driver side of the vehicle) to one of the mating connector harnesses coming out of the lightbar.
3. Activate a button on the handheld, deactivate the button, and then wait for the system to recognize the newly plugged in module (about 15 seconds.) The module will flash its ID (1) when it has paired with the lightbar.
4. Connect the second mpower® module (mounted on the Rear Passenger side of the vehicle) to the remaining mating connector harness coming out of the lightbar.
5. Activate a button on the handheld, deactivate the button, and then wait for the system to recognize the newly plugged in module (about 15 seconds.) The module will flash its ID (2) when it has paired with the lightbar.
6. If an mpower® module is not acting as desired, refer to Program 6, 7, or 8 on Page 10 for reprogramming steps.

Initial Setup of mpower® Fascia Lights (2 Front):
The Connect-n-Go mpower® modules will automatically sync with the nROADS® Fleet Lightbar. To ensure the mpower® modules are synced properly based upon where they are mounted, perform the following steps:

1. Ensure the lightbar is powered properly and no buttons are activated on the handheld.
2. Connect the first mpower® module (mounted on the Front Driver side of the vehicle) to one of the mating connector harnesses coming out of the lightbar.
3. Activate a button on the handheld, deactivate the button, and then waiting for the system to recognize the newly plugged in module (about 15 seconds.) The module will flash its ID (3) when it has paired with the lightbar.
4. Connect the second mpower® module (mounted on the Front Passenger side of the vehicle) to the remaining mating connector harness coming out of the lightbar.
5. Activate a button on the handheld, deactivate the button, and then waiting for the system to recognize the newly plugged in module (about 15 seconds.) The module will flash its ID (4) when it has paired with the lightbar.
6. If an mpower® module is not acting as desired, refer to Program 6, 7, or 8 on Page 10 for reprogramming steps.

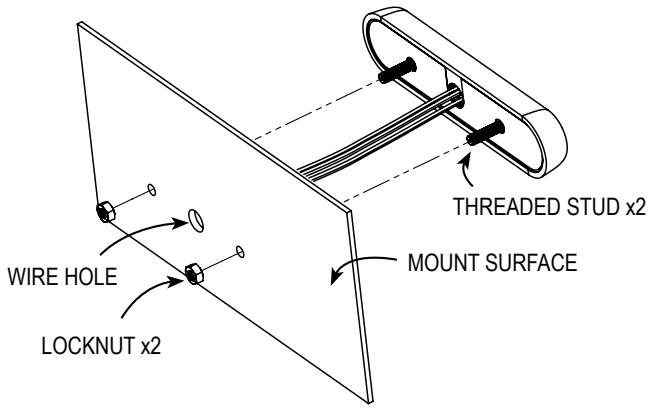
mpower® REDEFINE SAFETY

FASCIA LIGHTS - 4"*

SOLD SEPARATELY

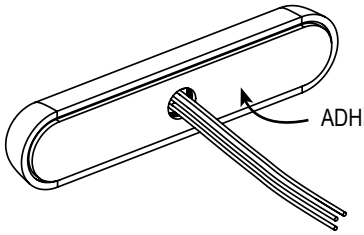
*Not compatible with mpower® Fascia mounting options and accessories

FIGURE 1



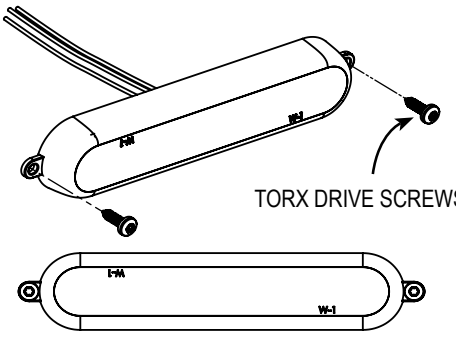
STUD MOUNT - THREADED (SHOWN)

FIGURE 2



QUICK MOUNT

FIGURE 3



SCREW MOUNT

INSTALLATION:

Stud Mount (Figure 1)

1. Pre-Drill per stud mount pattern indicated on page 9, per the supplied mounting template.
2. Clean the surface as required.
3. Deburr hole as required.
4. Feed wire through the drilled wire hole and make mating plug connection.
5. Install light, inserting 2 studs into the 2 drilled holes.
6. Install 2 lock nuts onto studs behind mount surface. Hand tighten only until mount surface and light are flush.

Quick Mount (Figure 2)

1. Pre-Drill per quick mount pattern indicated on page 9 (wire hole only.)
2. Deburr hole as required.
3. Clean surface with supplied alcohol wipe.
4. Feed wire through the drilled wire hole and make mating plug connection.
5. Remove adhesive backer and align light into desired position. Apply to surface and hold firmly for 30 seconds. ***CAUTION! APPLY UNIFORM PRESSURE ACROSS FULL FACE OF LIGHT.***

Screw Mount (Figure 3)

1. Pre-Drill per screw mount pattern indicated on page 9.
2. Deburr and clean the surface as required.
3. Feed wire through the drilled wire hole and make mating plug connection.
4. Install light with 2x Torx drive screws and hand tighten only until mount surface and light are flush.

TECHNICAL SPECIFICATIONS

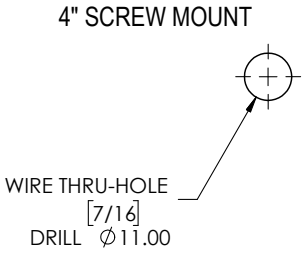
Dimensions (From Mounting Surface)	
4" Screw Mount:	4.52"L x 0.92"H x 0.42"D
4" Stud, Threaded Mount:	4.04"L x 0.92"H x 0.42"D
4" Quick Mount:	4.04"L x 0.92"H x 0.42"D

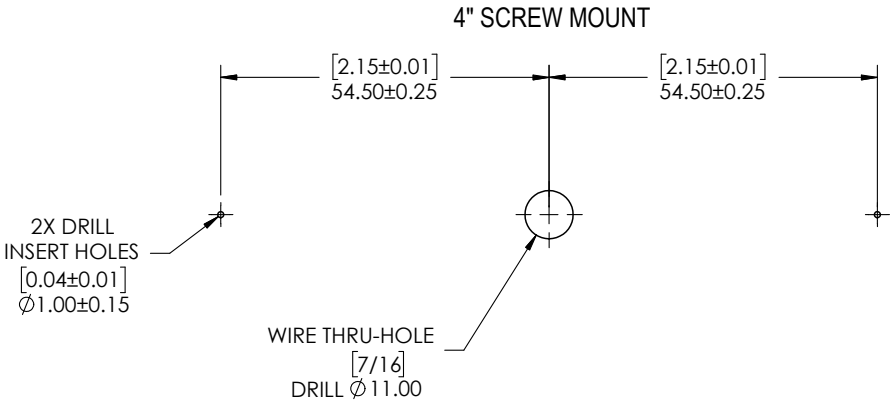
	4" CURRENT CONSUMPTION (Amps) 12.8Vdc	
	Peak	**Average**
Red	0.62	0.36
Amber, Blue, Green or White	0.90	0.60

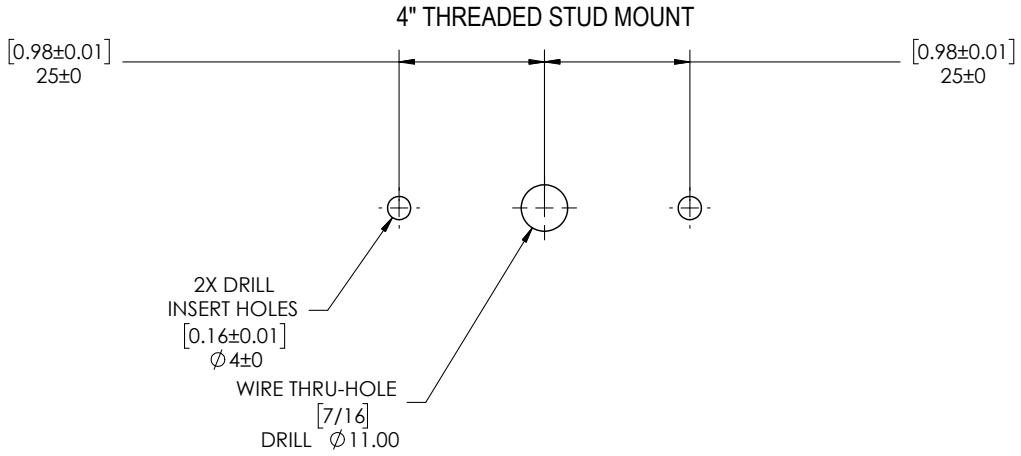
Please refer to Page 17 for replacement module part numbers*

*For colors not listed, the module has a configured part number.

FASCIA LIGHTS - 4” TEMPLATE







IMPORTANT NOTE:
Due to variations in the printing process and environmental factors, the sizes shown may not be accurate. If this document is used as a cutting template, it is the installers responsibility to confirm the accuracy of the dimensions shown and adjust accordingly.

FLASH PATTERNS & CONFIGURATIONS

Program 1 - Flash Patterns 1:

1. Press and hold buttons 1 and 2 for 5 seconds.
2. The arrow left and arrow right indicators will flash and system will transition to warning flash mode 1 to indicate system is in this programming mode.
3. Press the arrow left and right buttons to decrement or advance the patterns. The pattern index will be reflected on the buttons in BCD (see table on Page 12.) The buttons can also be pressed to enter a pattern number directly.
4. Press the FRONT button to exit programming mode, REAR to decrement to the previous program mode, or FULL to advance to next programming mode.

Program 2 - Flash Patterns 2:

1. Press and hold buttons 1 and 3 for 5 seconds.
2. The arrow left and alley left indicators will flash and system will transition to warning flash mode 2 to indicate system is in this programming mode.
3. Press the arrow left and right buttons to decrement or advance the patterns. The pattern index will be reflected on the buttons in BCD (see table on Page 12.) The buttons can also be pressed to enter a pattern number directly.
4. Press the FRONT button to exit programming mode, REAR to decrement to the previous program mode, or FULL to advance to next programming mode.

Program 3 – Arrow Patterns:

1. Press and hold buttons 1 and 4 for 5 seconds.
2. The arrow left and alley right indicators will flash and system will transition to arrow left mode to indicate system is in this programming mode.
3. Press the arrow left and right buttons to decrement or advance the patterns. The pattern index will be reflected on the buttons in BCD (see table on Page 12.) The buttons can also be pressed to enter a pattern number directly.
4. Press the FRONT button to exit programming mode, REAR to decrement to the previous program mode or FULL to advance to next programming mode.

Program 4 – Bar Length

1. Press and hold buttons 1 and 5 for 5 seconds.
2. The arrow right and alley left indicators will flash to indicate system is in this programming mode.
3. The current bar length is represented by the position of the red indicator. The bar length is changed by pressing the corresponding button on the chart to the right.
4. Press the FRONT button to exit programming mode, REAR to decrement to the previous program mode, or FULL to advance to next programming mode.

Button 1 – Flash 2	36"
Button 2 – Front Scene	42"
Button 3 – Full Scene	48"
Button 4 – Alley Left	54"
Button 5 – Rear Work	60"

Program 5 – Bar Flash Colors and Worklight Mode:

1. Press and hold buttons 1 and 6 for 5 seconds.
2. The arrow right and alley right indicators will flash and system will transition to warning mode 1 with worklights modes to indicate system is in this programming mode.
3. Press button 7 to assign these settings to flash pattern 1. Press button 8 to assign settings to flash pattern 2.
4. The flash pattern colors are selected by buttons 1 and 2, where button 1 will enable color 1, button 2 will enable color 2. Dual color flash mode is activated when both button 1 and button 2 are selected.
5. The worklight mode is selected with button 4 and 5. Button 4 will enable partial worklight mode and button 5 will enable full worklight mode.
6. Button 6 determines if the worklight modules will flash when bar is configured for partial worklight mode. On = flash, off = don't flash the worklight color.
7. Press the front button to exit programming mode, rear to decrement to the previous program mode or full to advance to next programming mode.

Program 6 – mpower® Fascia Worklight Color Selection:

1. Press and hold buttons 2 and 3 for 5 seconds.
2. The alley left and alley right indicators will flash and system will transition to scene mode to indicate system is in this programming mode.
3. The worklight color for the front mpower® lights is determined by buttons 1, 2 and 3, where button 1 enables color 1, button 2 enables color 2, and button 3 enables color 3.
4. The worklight color for the rear mpower® lights is determined by buttons 4, 5 and 6, where button 4 enables color 1, button 5 enables color 2, and button 6 enables color 3.
5. Press the front button to exit programming mode, rear to decrement to the previous program mode or full to advance to next programming mode.

HANDHELD BUTTON ASSIGNMENT (PROGRAMMING MODE)

Button	Function
Front	Exit Programming Mode
Rear	Return to Previous Programming Mode
Full	Advance to Next Programming Mode
Flash 2*	Button 1
Front Scene	Button 2
Full Scene	Button 3
Alley Left	Button 4
Rear Work	Button 5
Alley Right	Button 6
Arrow Left	Button 7
Arrow Right	Button 8

*Flash must already be active

FLASH PATTERNS & CONFIGURATIONS (CONT.)

Program 7 – mpower® Fascia Flash Front Colors Selection:

1. Press and hold buttons 2 and 4 for 5 seconds.
2. The arrow left, arrow right, and alley left indicators will flash and system will transition to warning mode to indicate system is in this programming mode.
3. Press button 7 to assign settings to flash pattern 1. Press button 8 to assign settings to flash pattern 2.
4. The front aux light flash pattern colors are selected by buttons 1, 2 and 3, where button 1 will enable color 1, button 2 will enable color 2, and button 3 will enable color 3. Dual color flash mode is activated when two aux buttons are selected.

   Note: Cannot flash tri-color.

5. Color swap of dual color patterns is enabled with button 4 for the front mpower® lights. This will swap the color flash phase with respect to the lightbar.
6. Press the front button to exit programming mode, rear to decrement to the previous program mode or full to advance to next programming mode.

Program 8 – mpower® Fascia Flash Rear Colors Selection:

1. Press and hold buttons 2 and 5 for 5 seconds.
2. The arrow right, alley left and alley right indicators will flash and system will transition to warning mode to indicate system is in this programming mode.
3. Press button 7 to assign settings to flash pattern 1. Press button 8 to assign settings to flash pattern 2.
4. The rear aux light flash pattern colors are selected by buttons 1, 2 and 3, where button 1 will enable color 1, button 2 will enable color 2, and button 3 will enable color 3. Dual color flash mode is activated when two aux buttons are selected.
5. Color swap of dual color patterns is enabled with button 4 for the rear mpower® lights. This will swap the color flash phase with respect to the lightbar.
6. Press the front button to exit programming mode, rear to decrement to the previous program mode or full to advance to next programming mode.

Program 9 – mpower® Position Selection:

1. Press and hold buttons 2 and 6 for 5 seconds.
2. All lights will turn off, except one of the mpower® lights will turn on steady for color 1. Buttons 1, 3, 4, and 6 will either blink or turn on solid. The solid LED represents the current position of the active module, where button 1 = Driver Front, button 3 = Passenger Front, button 4 = Driver Rear, and button 6 = Passenger Rear.
3. Press the right arrow button to advance which mpower® module is lit (the left arrow will go backwards.)
4. Select the corresponding button to assign the lit light to a position. If that position already had a light assigned, that light will swap positions of the currently lit light. For example: The mpower® module in the passenger rear is lit and button 1 is solid; the light was assigned improperly. Pressing button 4 will assign the light module to the Driver Rear; the light that was in the Driver Rear position is now assigned to Driver Front.
5. If desired, press button 2 or 5 to set the lit module to be unassigned. Now, buttons 1, 3, 4, and 6 will all flash to indicate that the active light is not assigned to any of the positions. When in operating mode, an unassigned module will not flash.
6. Press the front button to exit this mode.
7. Verify placement by activating the front and then rear buttons and observing the lights.

Factory Reset:

1. Press and hold buttons 1, 2, and 3 for 5 seconds.
2. The arrow left, arrow right, alley left, and alley right red indicators will flash.
3. Press the FRONT button within 2 seconds of the alley / arrow indicators flashing to reset settings.

HANDHELD BUTTON ASSIGNMENT (PROGRAMMING MODE)	
Button	**Function**
Front	Exit Programming Mode
Rear	Return to Previous Programming Mode
Full	Advance to Next Programming Mode
Flash 2*	Button 1
Front Scene	Button 2
Full Scene	Button 3
Alley Left	Button 4
Rear Work	Button 5
Alley Right	Button 6
Arrow Left	Button 7
Arrow Right	Button 8

*Flash must already be active

FLASH PATTERNS

FLASH PATTERN INDEX GUIDE (BCD)

#	Button(s)
1	1
2	2
3	1,2
4	3
5	1,3
6	2,3
7	1,2,3
8	4
9	1,4
10	2,4
11	1,2,4

FLASH PATTERNS: WARNING PATTERNS

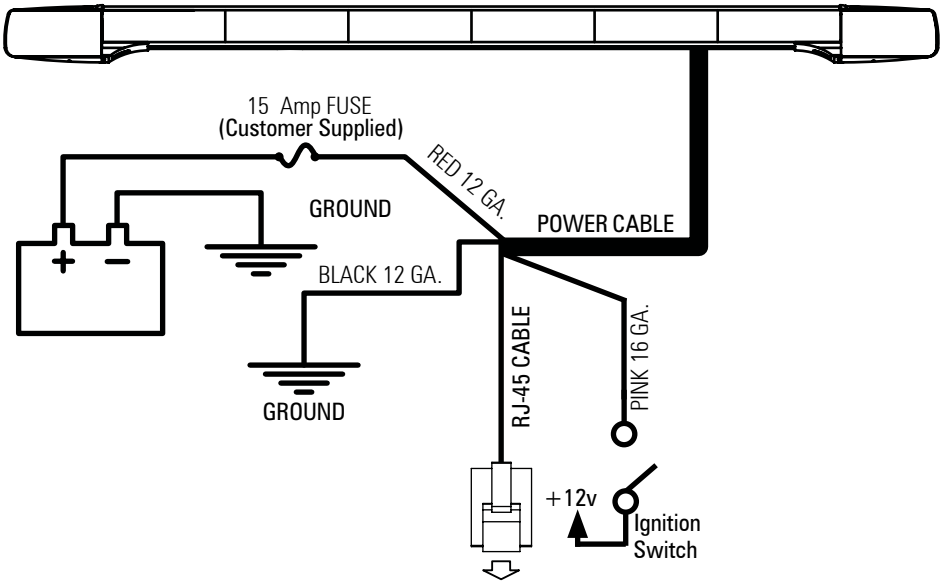
#	Name	SAE Compliant Timing	California Title 13 Compliant Timing	Sequence	fpm*	fps**
1	Random #1	Yes	No	Variable		
2	Quint	Yes	No	Alternating	70	1.2
3	Quad 2	Yes	No	Variable		
4	Q-Switch	Yes	No	Variable		
5	Double	Yes	No	Alternating	115	1.9
6	Power Pulse	Yes	No	Alternating	180	3
7	Road Runner	Yes	Yes	Alternating	115	1.9
8	Slow Runner	Yes	No	Alternating	70	1.2
9	Quint Simultaneous	Yes	No	Simultaneous	70	1.2
10	Road Runner Simultaneous	Yes	No	Simultaneous	114	1.9

*fpm=Flashes per Minute
**fps=Flashes per Second

FLASH PATTERNS: ARROW PATTERNS

#	Name	SAE Compliant Timing	California Title 13 Compliant Timing
1	Single Fast	No	No
2	Single Slow	No	No
3	Chaser Fast	No	No
4	Chaser Slow	No	No
5	Fill Fast	No	No
6	Fill Slow	No	No
7	Grow/Shrink	No	No
8	Warning w/Arrow	No	No
9	Warning w/Arrow Fill	No	No
10	Arrow Random 1	No	No
11	Arrow Random 2	No	No

HANDHELD WIRING & BUTTON ASSIGNMENT



HANDHELD BUTTON ASSIGNMENT		
Button	**Function**	**Operation**
FRONT	Warning Front (Flash 1)*	Latched
REAR	Warning Rear (Flash 1)**	Latched
FULL	Warning Full (Flash 1)***	Latched
Button 1	Flash 2****	Latched
Button 2	Front Scene	Latched
Button 3	Full Scene	Latched
Button 4	Alley Left	Latched
Button 5	Worklight Rear	Latched
Button 6	Alley Right	Latched
Button 7	Arrow Left	Latched
Button 8	Arrow Right	Latched
Button 7 + Button 8	Arrow Center	Latched
Button 1 + Button 3	Enter mode to change pattern	Latched
Button 7 During Programming Mode Only	Pattern Advance	Momentary
Button 8 During Programming Mode Only	Pattern Backwards	Momentary

*Exits programming mode
** Returns to previous programming mode
*** Advances to next programming mode
****Any warning mode must be activated in order for Flash 2 to take effect

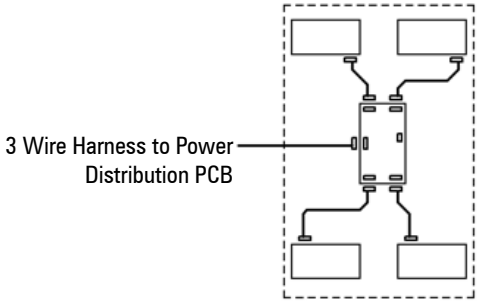
LIGHT MODULE REPLACEMENT & WIRE HARNESS LOCATIONS

REPLACEMENT OF INBOARD AND CORNER MODULES:

1. Disconnect main power.
2. Remove top cover by removing screws.
3. Locate module. If it has a bracket, remove the screw (if no bracket skip this step.)
4. Push down on black tab to un-clip the module.
5. Remove connector from rear of module by carefully pulling connector body from back of module.
6. Push module connector into replacement module ensuring locking latch is seated properly or connector is fully seated.
7. Replace screw if the module has a bracket (if no bracket skip this step).
8. Restore power to bar and test new module to ensure functionality.
9. Replace top cover of bar with screws removed in step 2.

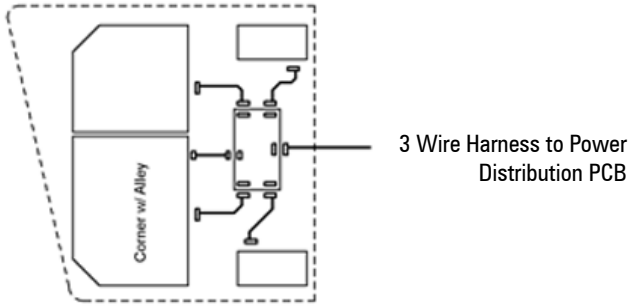
LIGHT MODULE WIRE HARNESS LOCATIONS

12" Inboard Tub
Front



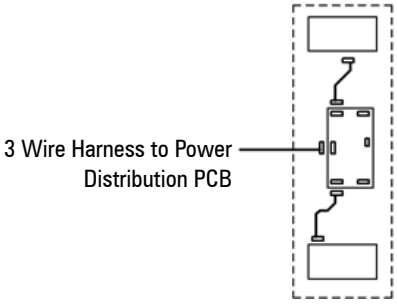
Rear

Driver Side End Tub
Front



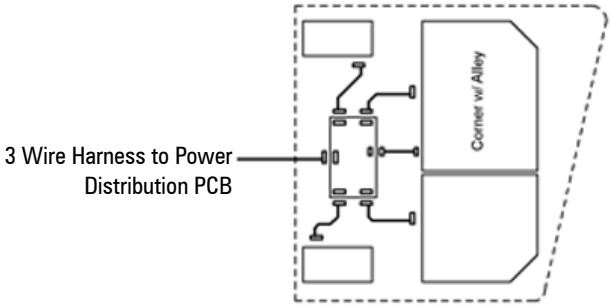
Rear

6" Inboard Tub
Front



Rear

Passenger Side End Tub
Front

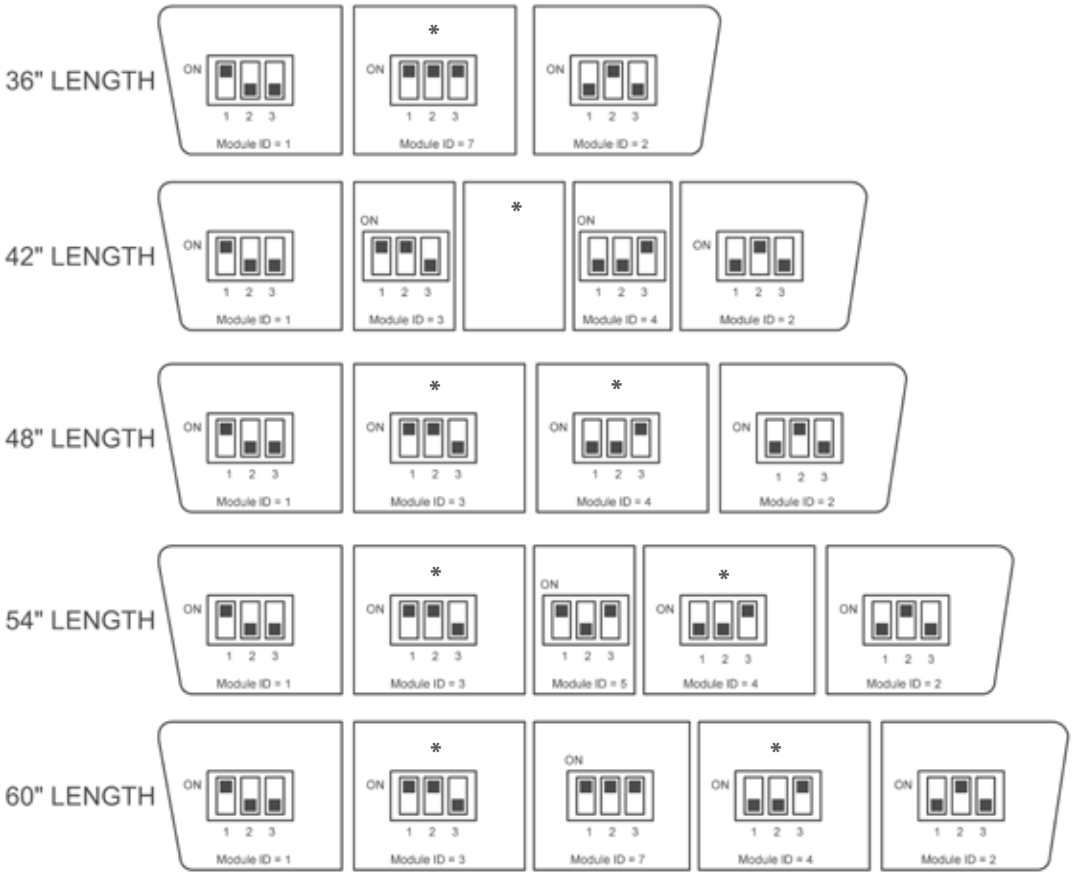


Rear

DRIVER MODULE REPLACEMENT

Driver Module Replacement:

1. Verify power has been removed from light bar before attempting service.
2. Remove top cover.
3. Unplug 3 pin power/ data connector and LED module connectors from driver module assembly, noting location.
4. Remove driver module.
5. Snap new driver module assembly into housing.
6. Plug light modules into closest connector available and connect power and input wires.
7. Set DIP switches.
8. Apply power to lightbar and activate input wire(s) to verify proper operation.
9. Replace top cover with new SOS factory screws to maintain warranty seal.



*Controller Board Location, location will match wire side exit

(Refer to Page 6 for DIP Switch Settings)

MPOWER® MODULE REPLACEMENT

The Connect-n-Go mpower® replacement module will automatically sync with the nROADS® Fleet Lightbar. The system will recognize when a module has been removed, see that a new module has been added, and assign the "missing" mod ID to the new light. To replace a module, perform the following steps:

1. Disconnect and remove the module to be replaced.
2. Connect the replacement module to the same lightbar harness that was previously used.
3. Turn on the lightbar by activating any button on the hand held controller, then deactivate the button, and wait for the system to recognize the newly plugged in module (about 15 seconds.)
4. The module will flash its ID when it has paired with the lightbar:
   a. ID #1 is in the Rear Driver position.
   b. ID #2 is in the Rear Passenger position.
   c. ID #3 is in the Front Driver position.
   d. ID #4 is in the Front Passenger position.
5. Finish mounting the replacement module.
6. If an mpower® module is not acting as desired, refer to Program 6, 7, 8, or 9 on Pages 10, 11 for reprogramming steps.

CONNECT-N-GO SYSTEM TROUBLESHOOTING

NORMAL OPERATION
Under Normal Operation with light bar turned ON, the handheld controller will be backlit.

NO OPERATION

Controller backlight is green;	Check input power and ground to lightbar, check data cable for damage and/or opens.
	Check Ignition Input wire and verify a minimum of 10.0 Volts is present on the wire.
	Defective power distribution assembly – replace.

NO or INCORRECT INBOARDS or CORNERS LIGHTS (WARNING)

Controller backlight is green;	Check DIP switches on driver modules in light bar. Verify they are all set correctly.

NO TAKEDOWNS LIGHTS

Controller backlight is green;	Verify configuration and make sure light modules are configured for takedown function.

NO LIGHT OPERATION IN ONLY 1 TUB

Controller backlight is green;	Remove top cover of tub in which lights are not functioning. Verify DIP switch is set correctly.
	Check LED on driver module PCB is flashing when power is applied to any input wire on breakout box. If there is no LED illumination check for voltage across RED and BLACK power input wires to driver module. If voltage is present, replace driver module. If voltage is not present, locate the power distribution PCB (possibly in different tub) and verify fuse is not blown open. If fuse is blown, check for shorts in cabling replace any damaged cables and replace fuse. If fuse blows again, replace defective driver module assembly.

INCORRECT OR NO ARROW OPERATION

Controller backlight is green;	Verify configuration and make sure light modules are configured for arrow function.
	Verify lightbar length is properly set.

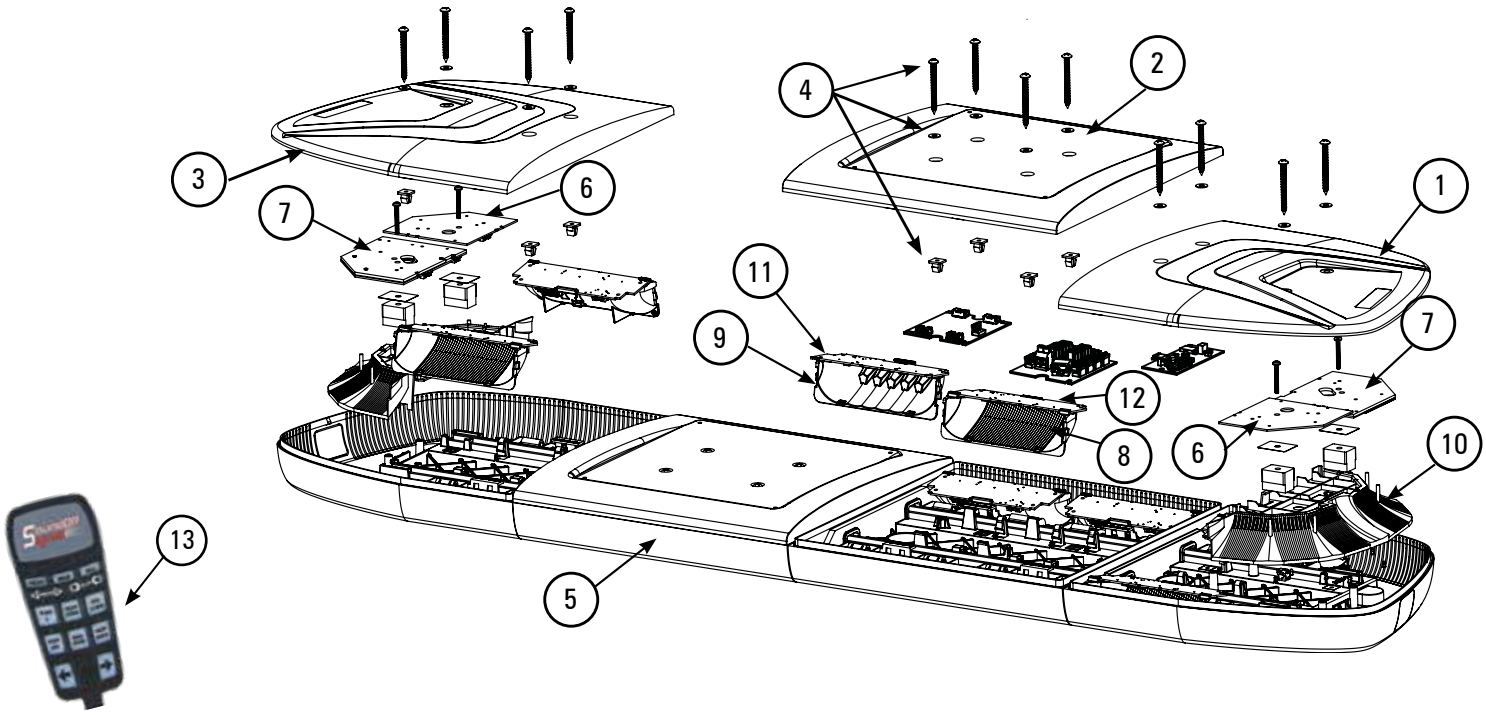
Note: Entering factory reset mode will reset lightbar to factory settings.

MPOWER® MODULES

mpower® modules aren't flashing or lighting up for work light;	Verify mpower® modules are plugged into the controller board and verify the configuration to make sure that modules are set to flash and/ or work light.
mpower® modules aren't flashing the right color/ work light is wrong color;	Verify configuration. Ensure modules are set to flash and/ or work light one, or both colors. Also, verify the right colors are selected.
Rear mpower® modules aren't flashing in sync with rear of bar/ front mpower® modules aren't flashing in sync with front of bar;	Verify configuration and make sure modules are set to flash. Verify mpower® modules have the right ID's using Program 8.
Rear mpower® modules are flashing with front of bar/ front mpower® modules are flashing with rear of bar;	Verify configuration and make sure modules are set to flash. Verify mpower® modules have the right ID's using Program 8.
Rear mpower® modules light up for front work light/ front mpower® modules light up for rear work light;	Verify configuration and make sure modules are set to flash. Verify mpower® modules have the right ID's using Program 8.

nROADS® FLEET SERIES

Exterior Lightbar Connect-n-Go System



REPLACEMENT PARTS & ACCESSORIES*

ITEM #	PART#	DESCRIPTION
	PNFLBK00	STANDARD FIXED HEIGHT MOUNT - THIN PAD
	PNFLBF00	FIXED HEIGHT PERMANENT MOUNT HOOK KIT
	PNFLBK02	HEADACHE RACK MOUNT
	PETLF00	FIXED HEIGHT PERMANENT MOUNT KIT
	PNFLBK01	FIXED HEIGHT PERMANENT MOUNT
	PNFLBK04	STANDARD FIX HEIGHT MOUNT - 48" TAHOE
	PNFLBK05	STANDARD FIX HEIGHT MOUNT - 54" TAHOE
	PNFLBK06	FIXED HEIGHT PURSUIT MOUNT THIN PAD
	PNFLBK07	FIXED HEIGHT PURSUIT MNT THK PAD W/EXT
	PNFLBK08	FIXED HEIGHT PURSUIT MNT THK PAD NO EXT
	PNFLBK09	XTRA FIT HOOK KIT
	PNFLBF(xx)	HOOK BRACKETS
	PNFLBWGKT1	WEDGE KIT
	PNFLBHPKT1	HOLE PLUG KIT
	PNFLBFTCV1	STANDARD FIXED HEIGHT FOOT CAP
4	PNFLBTCSKT1	TOP COVER SCREW KIT
	PNFLBWMKT1	WIRE MANAGEMENT KIT
1	PRMLBTTDRL(xx)	TOP COVER - DRIVER SIDE
2	PRMLBTTLGL(xx)	TOP COVER - LARGE MIDDLE
3	PRMLBTTPSL(xx)	TOP COVER - PASSENGER SIDE
	PRMLBTTSML(xx)	TOP COVER - SMALL MIDDLE
5	PNFLBTB(xx)LC	BOTTOM LENSES - CLEAR LEXAN
9	PNFLBRFTD1	TD/WL REFLECTOR
8	PNFLBRFL845	INBOARD REFLECTOR
10	PNFLBRFC845-(x)	CORNER REFLECTOR

ITEM #	PART#	DESCRIPTION
12	PRMLBLS106(x)	SINGLE COLOR 6 LED INBOARD MODULES
12	PRMLBLS109(x)	SINGLE COLOR 9 LED INBOARD MODULES
12	PRMLBLD112(xx)	DUAL COLOR 12 LED INBOARD MODULES
12	PRMLBLD118(xx)	DUAL COLOR 18 LED INBOARD MODULES
11	PRMLBHS106W	6 LED TAKEDOWN/WORKLIGHT
6	PRMLBCSS109(x)	SINGLE COLOR 9 LED CORNER AD MODULES
6	PRMLBCSS112(x)	SINGLE COLOR 12 LED CORNER AD MODULES
7	PRMLBLS109(x)-W	SINGLE COLOR 9 LED CORNER BC MODULE W/ALLEY
7	PRMLBCLS112(x)-W	SINGLE COLOR 12 LED CORNER BC MODULE W/ALLEY
7	PRMLBCLS109(x)-Z	SINGLE COLOR 9 LED CORNER BC MODULE - NO ALLEY
7	PRMLBCLS112(x)-Z	SINGLE COLOR 12 LED CORNER BC MODULE - NO ALLEY
6	PRMLBCSD118(xx)	DUAL COLOR 18 LED CORNER AD MODULES
6	PRMLBCSD124(xx)	DUAL COLOR 18 LED CORNER AD MODULES
7	PRMLBCLD118(xx)-W	DUAL COLOR 18 LED CORNER BC MODULE W/ALLEY
7	PRMLBCLD124(xx)-W	DUAL COLOR 24 LED CORNER BC MODULE W/ALLEY
7	PRMLBCLD118(xx)-Z	DUAL COLOR 18 LED CORNER BC MODULE - NO ALLEY
7	PRMLBCLD124(xx)-Z	DUAL COLOR 24 LED CORNER BC MODULE - NO ALLEY
13	PCPNRCNG1	NROADS CONNECT-N-GO CONTROL PANEL
	PSRN4RC1	RJ45 COUPLER

*PARTS LIST CONTINUED ON NEXT PAGE

REPLACEMENT PARTS & ACCESSORIES*** (CONT.)

PRMLBHNPW2	CONNECT-N-GO 16' POWER/IGNITION HARNESS
PRMLBHNXT1	CONNECT-N-GO 10' AUXILIARY EXTENSION HARNESS
PRMLBHNPT3	CONNECT-N-GO 16' AUXILIARY HARNESS with JWPF CONNECTOR
PRMLBDRV2	nROADS® CONNECT-N-GO POWER DISTRIBUTION BOARD
EMPSCG2QMS2(x)*	mpower® 4" FASCIA LIGHT W/ QUICK MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 6 LED, SINGLE COLOR
EMPSCG2QMS3(x)*	mpower® 4" FASCIA LIGHT W/ QUICK MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 8 LED, SINGLE COLOR
EMPSCG2QMS4(y)**	mpower® 4" FASCIA LIGHT W/ QUICK MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 12 LED, DUAL COLOR
EMPSCG2STS2(x)*	mpower® 4" FASCIA LIGHT W/ STUD MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 6 LED, SINGLE COLOR
EMPSCG2STS3(x)*	mpower® 4" FASCIA LIGHT W/ STUD MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 8 LED, SINGLE COLOR
EMPSCG2STS4(y)**	mpower® 4" FASCIA LIGHT W/ STUD MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 12 LED, DUAL COLOR
EMPSCG2SMS2(x)*	mpower® 4" FASCIA LIGHT W/ SCREW MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 6 LED, SINGLE COLOR
EMPSCG2SMS3(x)*	mpower® 4" FASCIA LIGHT W/ SCREW MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 8 LED, SINGLE COLOR
EMPSCG2SMS4(y)**	mpower® 4" FASCIA LIGHT W/ SCREW MOUNT, FOR USE WITH CONNECT-N-GO, SAE CLASS 1 & CA TITLE 13, 9-32VDC, BLACK HOUSING, 12 LED, DUAL COLOR

*(x) is defined as: A (Amber), B (Blue), R (Red), or W (White)
**(y) is defined as: D (Red/White), E (Blue/White), F (Amber/ White), or J (Red/Blue)
***For colors not listed, the module has a configured part number.

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.