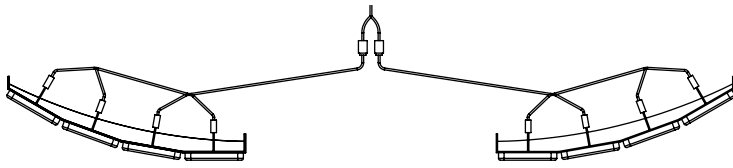




Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights



Components/Contents

Standard Equipment:

- 1 - 15ft Vehicle Harness
 - 1 - Breakout Box
 - 1 - 24 Pin Harness
 - 2 - mpower® Populated Brackets, Built to Your Specifications*
 - 1 - Mounting Hardware Kit
- *Kits will vary with each lightbar depending on vehicle specified on order form.

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.*
- *Refer to bracket mounting instruction, included.

⚠ WARNING

- HIGH CURRENT interconnects must be properly terminated. Poor crimp quality can cause heat build-up and fire. Follow crimp connector manufacturer instructions.
- DO NOT install this product or route any wires in the Air Bag Deployment Zone. Refer to vehicle Owner’s Manual for deployment zones.
- Do NOT use system to disconnect headlights, brake lights or other safety equipment.
- Unit may become hot to touch during normal operation.
- Failure to properly install connectors, fuses or wiring may cause vehicle failure or fire.
- Installation must only be performed by trained technician. Installer must determine vehicle wiring configuration and proper integration of system.
- Use proper wire gauge. All power wires connecting to positive (+) or negative (-) battery terminal or local chassis ground (-) must be sized to supply at least 125% of max. current and properly fused at power source.
- Install protective grommets when routing wire through firewall or metal.



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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.*

SUPERIOR CUSTOMER RELATIONSHIPS. SMARTLY DESIGNED LIGHTING & ELECTRONIC SOLUTIONS.

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Important Information:

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

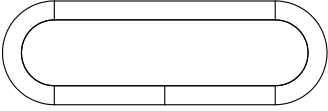
⚠ WARNING

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



Arrow w/ 3 inch 3-Wire Lights
 Arrow w/ 4 inch 3-Wire Lights

MODULE, TECHNICAL, & POWER SPECIFICATIONS

	<p>4": 6 & 8 LED Single Color, 12 LED Dual & 18 LED Tri Color Inboard Module</p> <p>INPUT VOLTAGE RANGE: 10-16Vdc CURRENT DRAW: 0.36 Amps @ 12.8 Vdc (Flashing Red) 0.62 Amps @ 12.8 Vdc (Peak Red) 0.60 Amps @ 12.8 Vdc (Flashing Amb, Blue, Green, White) 0.90 Amps @ 12.8 Vdc (Peak Amb, Blue, Green, White) WATTAGE: 4.6W (Red) 7.7W (Amb, Blue, Green, White)</p>
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FLASHING = AVERAGE
 STEADY ON (100%) = PEAK

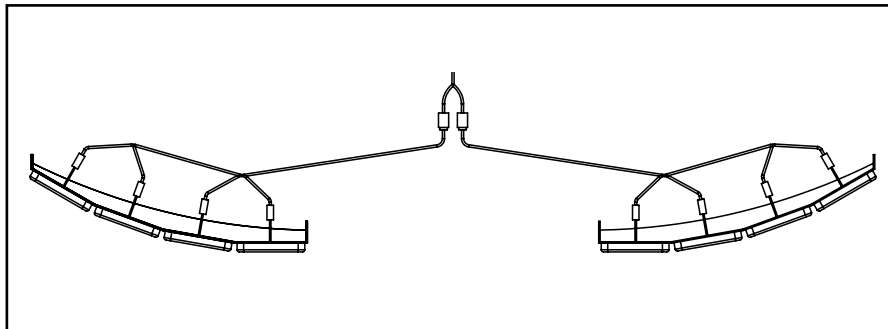
TECHNICAL SPECIFICATIONS	
Material:	Brackets Galvannedled Steel: LED Modules: Dow Corning Silicone
Operating Temperature:	-40° to +65° C

POWER SPECIFICATIONS				
Input Voltage Range:	10 -32 Vdc			
Light Bar Component	Current Draw (Average = Flashing)		Power Consumption (Watts)	
Standby Current	Ignition ON	Ignition OFF	Ignition ON	Ignition OFF
	0.200 Amps	<8.5 mA	2.560 Watts	0.108 Watts
Reverse Polarity	Protected			
Load Dump	Protected			
Wiring	Power Cable 15ft, 18 AWG Wires, (+) Red, (-) Black Data Cable 18AWG Green			



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

MECHANICAL INSTALLATION



INSTALLATION INSTRUCTIONS:

1. Follow the specific instructions provided by the vehicle manufacturer or mounting instructions provided by SoundOff Signal for the vehicle specific bracket.
2. Find a good location to drill a hole to pass the 15" Y-harness into the vehicle. If the vehicle manufacture has specific instructions please follow them for proper installation.
3. Secure wires from the bracket and the Y-harness. The wires are shipped without constraints of zip-ties or wire ties, you may tuck and fasten the wires as desired to secure them in your installation. **DO NOT** cut and splice wires.
4. Connect the ends of the bracket harness to the Y-Harness, as shown on the left. The harness plugs are not specific. You may use either weatherproof connector.
5. Connect the RED, BLACK, and GREEN wires as outlined in the electrical section of the installation instructions.
6. Re-Assemble the spoiler to manufacturer's recommendations.

Components/Contents:

- 1 - Lights fastened to brackets, as ordered*
- 1 - Mounting hardware, specific to the vehicle application
- 1 - 15' Y-Harness with weatherproof connectors

*The lights are positioned and programmed to work in the supplied configuration.



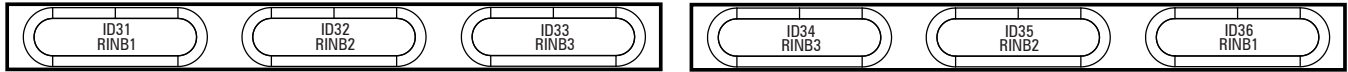
Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

LIGHT MODULE LOCATION

REAR DRIVER'S SIDE

REAR PASSENGER'S SIDE

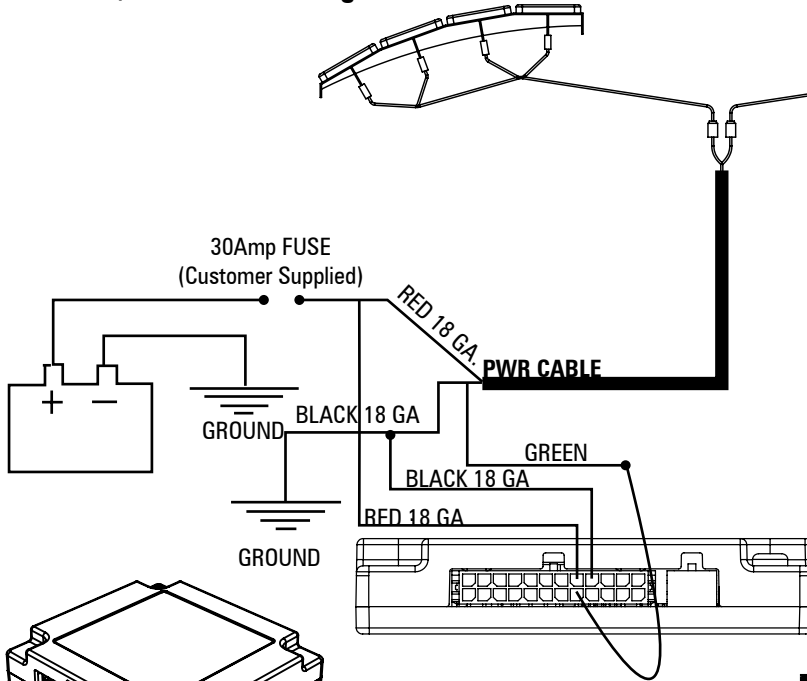
6 MOD



8 MOD



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

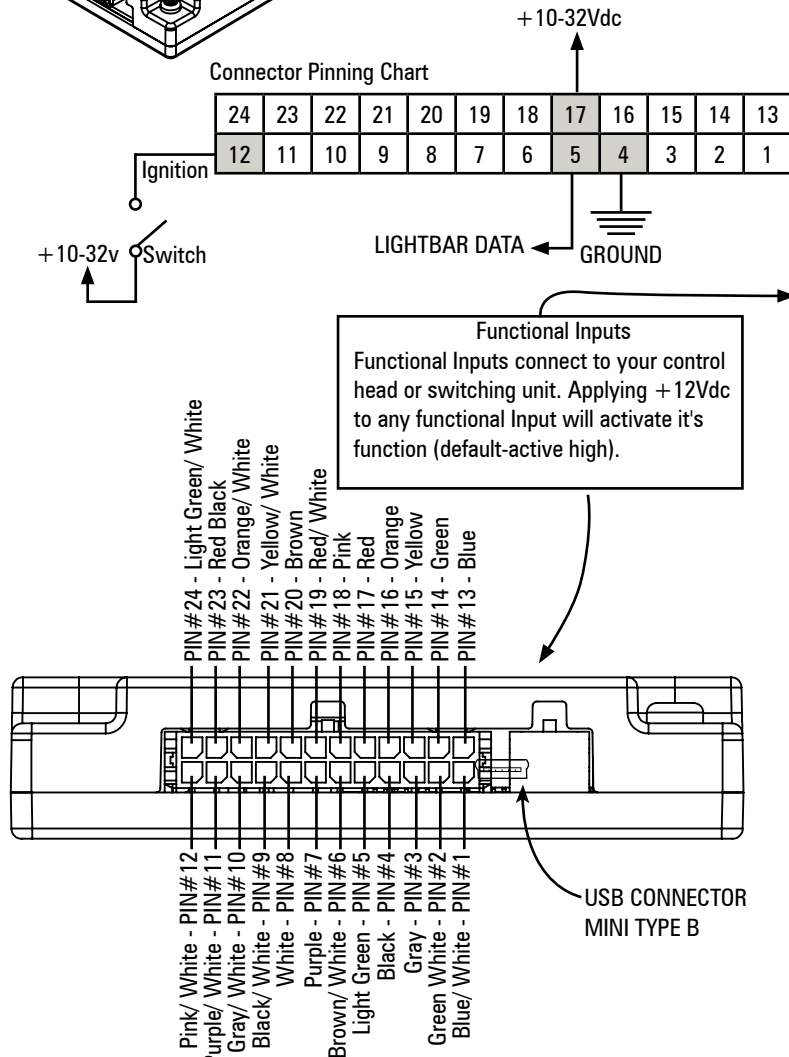


BREAKOUT BOX HOOKUP:

- Refer to Table 1 for Breakout Box input wire default functions
- Make sure the 24-pin connector is snapped in securely.
- Follow the label for the wire color to connect to a 12Vdc source, which turns on that given light or lights.
- Make sure your wire connections are secured and isolated from any other wire.

Wire Function Defaults

Wire Pin #	Wire Color	Wire Function
1	Blue/White	Not Configured
2	Green/White	Rear Inboard 1 & 2
3	Gray	Mode 2 Select
4	Black	Ground
5	Light Green	LIN Data
6	Brown/White	Takedown Flash
7	Purple	Low Power 1
8	White	Pattern Select / Tail
9	Black/White	Left STT
10	Gray/White	Arrow - Right
11	Purple/White	Arrow - Left
12	Pink/White	Ignition Input
13	Blue	Not Configured
14	Green	Not Configured
15	Yellow	Not Configured
16	Orange	Not Configured
17	Red	+ Battery Constant
18	Pink	Scene 1
19	Red/White	Cruise
20	Brown	Takedown
21	Yellow/White	Rear Inboard 3, 4
22	Orange/White	Not Configured
23	Red/Black	Right STT
24	(Speed Sense 1) Light Green/White (Speed Sense 2) Light Green/White	Not Configured



NOTE:

Configuring TDs, Scene, Cruise, and warning modules using wire-tap configuration method (when **NOT** using software to configure) will be limited to the rear modules assigned to each wire.



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

ELECTRICAL INSTALLATION

Featured Highlights & Terminology:

Mode Select: The lightbar is equipped with 4 selectable pattern configuration modes. The default input wire configuration allows for 2 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 activated. This feature allows up to 4 completely different sets of patterns to be programmed into the lightbar'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 selected modules 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 selected modules 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 selected modules 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 selected modules 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.

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.

Power Cable:

1. Route lightbar power cables as close to vehicles power source (battery) as possible.
2. Install a maximum of 10 Amp Fuse (customer supplied) to the end of the RED wire of the Lightbar Power Cable.
 - a. Remove the fuse before connecting any wires to the POSITIVE (+) terminal of the battery.
3. DO NOT USE CIRCUIT BREAKER OR FUSIBLE LINK.
 - a. Do NOT use any more than 2ft of wire between the power source 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 or other ground location capable of handling high current.

Control (Data) Cable:

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

Ignition Wire:

1. Connect the Pink/White wire to a switched power source.

Initial Power up Test: Breakout Box needs Power (+12V to PIN 17) & Ground (PIN 4) in order to operate:

1. Insert Fuse(s) into Fuse Holder(s).
2. Observe the GREEN Data Link indicator LED on the Breakout Box; the LED will turn ON.
3. The Red indicator LED on the breakout box will be steady ON whenever any of the input wires are active.

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 when the ignition input is activated on the breakout box.



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

ELECTRICAL INSTALLATION (CONTINUED)

NOTE: For settings below, Switch #2 does not need to be moved to the up position after each configuration. The switch can remain in the down position until the lightbar is completely configured and then moved to the Up position to store all the settings.

Cruise Mode Configuration:

- a. Set Switch #2 on Breakout box to down position (Switch #1 must be in Up position.)
- b. Determine which module inputs are needed for cruise mode.
- c. Apply voltage to the Cruise Mode activation wire.
- d. Apply voltage to the light group wire(s) required (i.e. Front Corner, Front Inboard 1, etc.)
- e. Momentarily apply voltage to the pattern select wire to change the color between Off, Color 1, Color 2, and Color 3.

NOTE: If configuring a single color or dual color module, make sure the chosen color is configured for Off and not a color which does not exist on the module. The lightbar will flash color #1 of all modules configured for cruise mode. If a module flashes every 2 seconds and is not intended to be on when Cruise mode is activated, repeat steps 'd' and 'e' until module no longer flashes.

- f. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode.

Takedown and Work-light Configuration:

- a. Set Switch #2 on Breakout box to down (Switch #1 must be in Up position.)
- b. Determine which module inputs are needed for Takedowns or Work-lights.
- c. Apply voltage to the Takedown activation wire.
- d. Apply voltage to the light group wire(s) required (i.e. Front Inboard 1, Rear Inboard 2, etc.).
- e. Momentarily apply voltage to the pattern select wire to change the color between Off, Color 1, Color 2, and Color 3.

NOTE: If configuring a single color or dual color module, make sure the chosen color is configured for Off and not a color which does not exist on the module. The lightbar will flash color #1 of all modules configured for takedown. If a module flashes every 2 seconds and is not intended to be on when takedown is activated, repeat steps 'd' and 'e' until module no longer flashes.

- f. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode.

Scene light Configuration:

- a. Set Switch #2 on Breakout box to down (Switch #1 must be in Up position.)
- b. Determine which module inputs are needed for Scene Lighting.
- c. Apply voltage to the Scene light activation wire.
- d. Apply voltage to the light group wire(s) required (i.e. Front Inboard 1, Rear Inboard 2, etc.)
- e. Momentarily apply voltage to the pattern select wire to change the color between Off, Color 1, Color 2, and Color 3.

NOTE: If configuring a single color or dual color module, make sure the chosen color is configured for Off and not a color which does not exist on the module. The light-bar will flash color #1 of all modules configured for scene light. If a module flashes every 2 seconds and is not intended to be on when scene light function is activated, repeat steps 'd' and 'e' until module no longer flashes.

- f. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode.

Stop / Turn / Tail (STT) Light Configuration:

- a. Set Switch #2 on Breakout box to down position (Switch #1 must be in Up position.)
- b. Determine which module inputs are needed for Stop / Turn / Tail Lights.
- c. Apply voltage to the Left Turn or Right Turn activation wires.
- d. Apply voltage to the light group wire(s) required (i.e. Rear Inboard 1, Rear Inboard 2, etc.).
- e. Momentarily apply voltage to the pattern select wire to change the color between Off, Color 1, Color 2, and Color 3.

NOTE: If configuring a single color or dual color module, make sure the chosen color is configured for Off and not a color which does not exist on the module. The light-bar will flash color #1 of all modules configured for STT function. If a module flashes every 2 seconds and is not intended to be on when an STT function is activated, repeat steps 'd' and 'e' until module no longer flashes.

- f. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode when scene light function is activated, repeat steps 'd' and 'e' until module no longer flashes.



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

ELECTRICAL INSTALLATION (CONTINUED)

Arrow Color Configuration:

- a. Set Switch #2 on Breakout box to down position (Switch #1 must be in Up position.)
- b. Determine which module inputs are needed for Arrow function.
- c. Apply voltage to the Left Arrow or Right Arrow activation wires.
- d. Apply voltage to the light group wire(s) required (i.e. Rear Inboard 1, Rear Inboard 2, etc.)
- e. Momentarily apply voltage to the pattern select wire to change the color between Off, Color 1, Color 2, and Color 3.

NOTE: If configuring a single color or dual color module, make sure the chosen color is configured for Off and not a color which does not exist on the module. The lightbar will flash color #1 of all modules configured for Arrow function. If a module flashes every 2 seconds and is not intended to be on when an Arrow function is activated, repeat steps 'd' and 'e' until module no longer flashes.

- f. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode.

Arrow Flash Pattern Configuration:

- a. Set Switch #2 on Breakout box to down position (Switch #1 must be in Up position).
- b. Apply voltage to the Left Arrow activation wire to set Left Arrow pattern, apply voltage to Right Arrow activation wire to set Right Arrow pattern, apply voltage to Left Arrow and Right Arrow activation wires to set Center out Arrow pattern.
- c. Momentarily apply voltage to the pattern select wire to change the arrow flash pattern.
- d. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode.

IMPORTANT

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

⚠ 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.



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

FLASH PATTERNS

Warning Flash Pattern Configuration:

- a. Set Switch #2 on Breakout box to down position (Switch #1 must be in Up position.)
- b. Apply voltage to the activation wire of the function which requires pattern to be changed (i.e. Front Corner, Takedown, etc.)
- c. Apply voltage to the Mode activation wire to configure mode 2 flash patterns, leave Mode activation wire floating to configure mode 1 flash patterns.
- d. Momentarily apply voltage to the pattern select wire to change the warning flash pattern.
- e. Set Switch #2 on Breakout box to up position to save settings and return lightbar to normal operating mode.

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
SC1	Random Single #1	Yes	No	No	#1	Variable	-	-
SN2	Random Single #2	No	No	No	#1	Variable	-	-
SC3	Quint	Yes	No	No	#1	Alternating	70	1.2
SN4	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	3.0
SC8	Road Runner	Yes	Yes	No	#1	Alternating	115	1.9
SN9	Slow Runner	Yes	No	No	#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 Simultaneous	Yes	Yes	No	#1	Simultaneous	125	2.1
SC17	E-Double Simultaneous	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 Passenger/Steady Driver	Yes	No	No	#1	-	70	1.2
SC22	Road Runner Passenger/Steady Driver	Yes	No	No	#1	-	114	1.9
SC23	Quint 2	Yes	No	No	#1	-	70	1.2
SC24	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	No	No	No	No
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
DN4	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	3.0
DC8	Road Runner Dual	Yes	No	No	#1/2	Alternating	115	1.9
DC9	Slow Runner Dual	Yes	No	No	#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	-	-

Note:
Takedown patterns are limited to patterns 1-22

*fpm=Flashes per Minute

**fps=Flashes per Second



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

FLASH PATTERNS (CONTINUED)

#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
DN14	Pattern #2 Dual	No	No	No	#1/2	Variable	-	-
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 Simultaneous 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	-	-	-
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
TN4	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	3.0
TC8	Road Runner Tri	Yes	No	No	#1/2/3	Alternating	115	1.9
TC9	Slow Runner Tri	Yes	No	No	#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 Simultaneous 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
TC17	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	-	-	-

ARROW PATTERNS

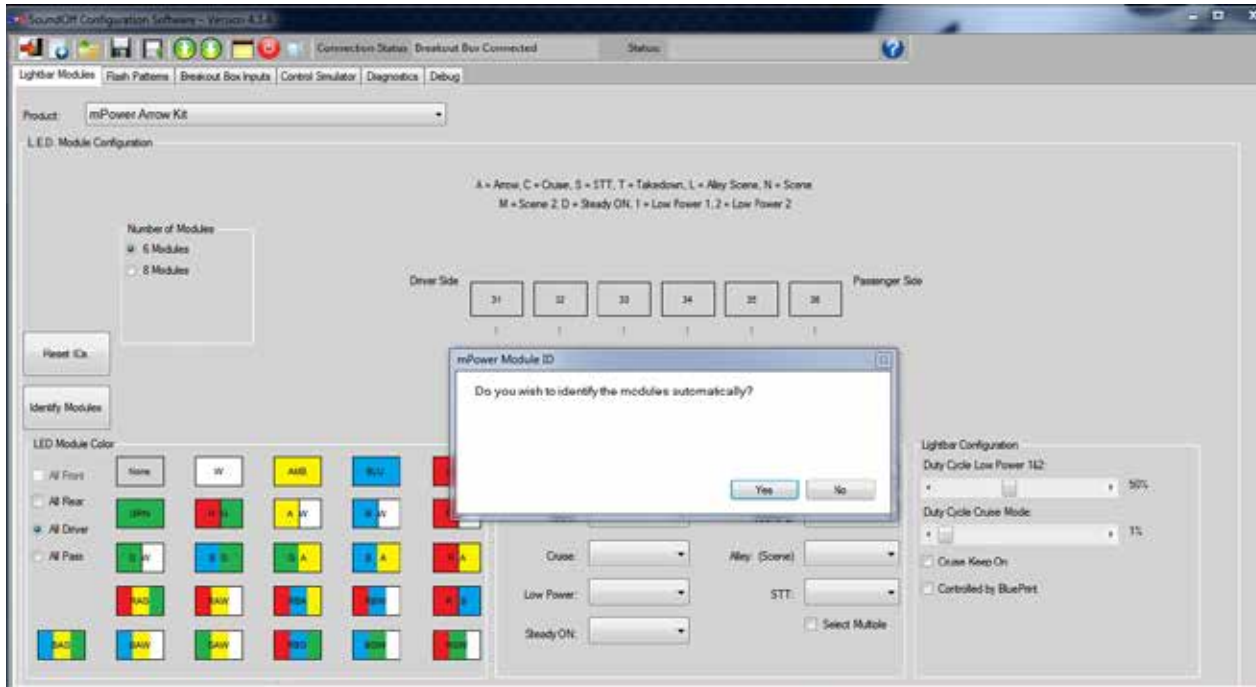
#	Name	SAE Compliant Timing	ECE Compliant Timing	California Title 13 Compliant Timing	Color	Sequence	fpm	fps
1	Single Fast	No	No	No	-	-	-	-
2	Single Slow	No	No	No	-	-	-	-
3	Chaser Fast	No	No	No	-	-	-	-
4	Chaser Slow	No	No	No	-	-	-	-
5	Fill Fast	No	No	No	-	-	-	-
6	Fill Slow	No	No	No	-	-	-	-
7	Grow/Shrink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



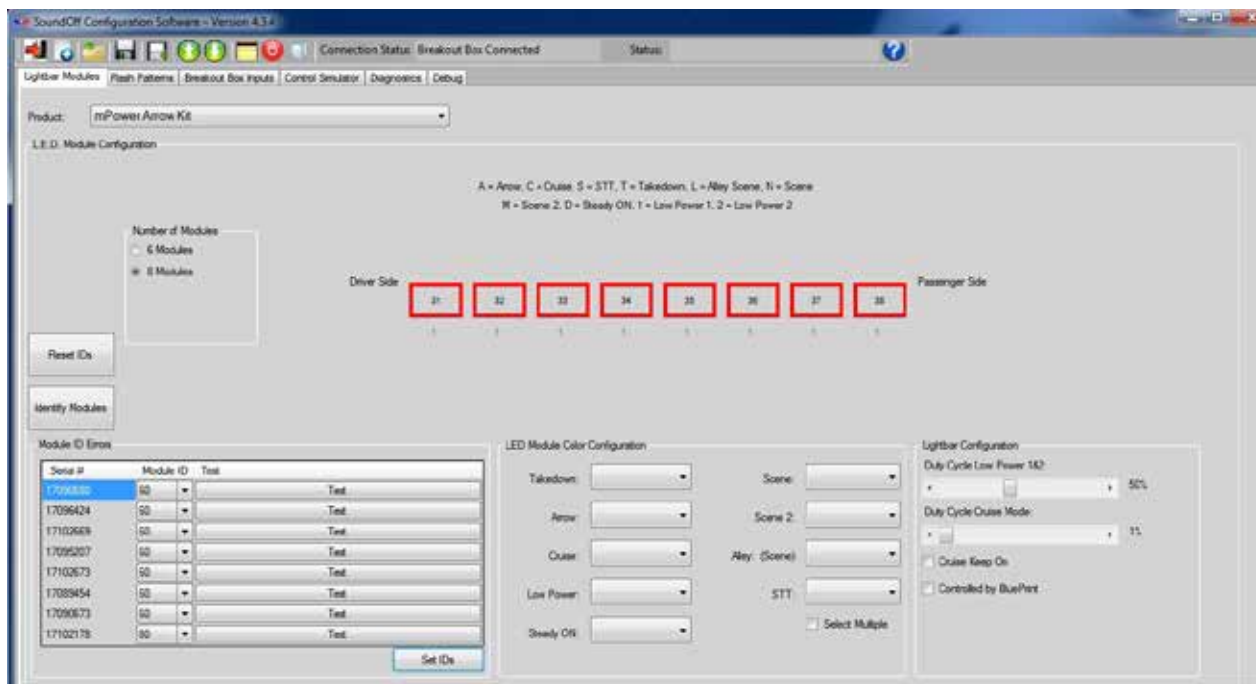
Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

LIGHTBAR CONFIGURATION SOFTWARE: SETTING MODULE ID'S

1. Ensure you have the nFORCE Lightbar Configuration Utility software downloaded on to your computer. If you do not have the software, it can be downloaded at <https://www.soundoffsignal.com/resources/software/>
2. Make sure the lightbar is wired and connected properly.
3. Plug the breakout box into the PC.
4. Start the application.:
 - a. The application will ask to identify the modules. Click Yes.



- b. The application will search for any missing or misconfigured modules. If there are any errors the modules in error will highlight with a red border as shown below.
- c. When the identification process is complete a list of modules with errors will be displayed with the current wrong module ID.





Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

LIGHTBAR CONFIGURATION SOFTWARE: SETTING MODULE ID's (CONTINUED)

d. For each module in the Module ID Errors list, click the "Test" button to light the module on your lightbar.

Number of Modules
 6 Modules
 8 Modules

Driver Side 31 32
1 1

Reset IDs

Identify Modules

Module ID Errors

Serial #	Module ID	Test
17096424	60	Test
17095207	60	Test
17102673	60	Test
17090673	60	Test
17090680	60	Test
17102669	60	Test
17102178	60	Test
17089454	60	Test

Set IDs

Compare the module's location on your lightbar to module lineup in the Configuration Software. Change the Module ID in the Module ID Errors list to make it match the location in the module lineup.

Number of Modules
 6 Modules
 8 Modules

Driver Side 31 32
1 1

Reset IDs

Identify Modules

Module ID Errors

Serial #	Module ID	Test
17096424	31	Test
17095207	60	Test
17102673	60	Test
17090673	60	Test
17090680	60	Test
17102669	60	Test
17102178	60	Test
17089454	60	Test

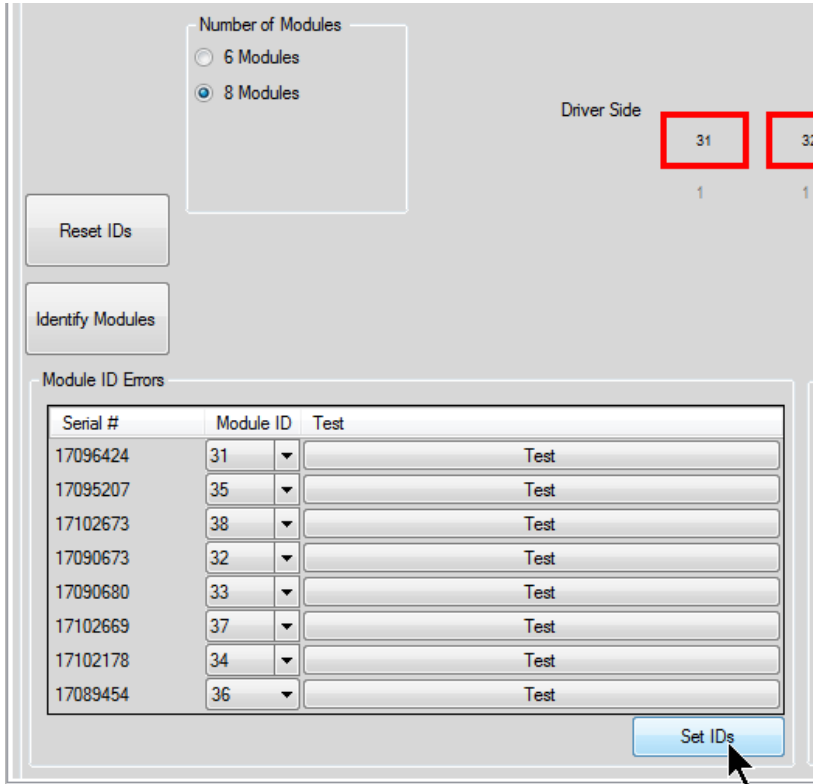
Set IDs



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

LIGHTBAR CONFIGURATION SOFTWARE: SETTING MODULE ID's (CONTINUED)

Once all the modules have the correct IDs click "Set IDs."



- e. The application will go through the process of setting the desired module IDs and go through the process of identifying them again.
- f. Once the module IDs are all identified properly, they will display without the Module ID errors listed.
- g. Hit the Download button (the green circle with the downward facing arrow.) This will download your color configuration.



NOTE: If changes need to be made to the configuration, make the changes then click the Upload button (the green circle with the upward facing arrow.)



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

MODULE REPLACEMENT & SETTING MODULE IDs

Modules Replacement:

1. Disconnect main power.
2. Locate module and remove mounting nuts.
3. Disconnect module power cable from harness.
4. Route wire from new light through hole and connect to harness.
5. Replace module and secure with previous mounting method.
6. Restore power to bar and test new module to ensure functionality.
7. Configure the ID of the replacement module through the PC app.*

*The ID can be manually set using the wire interface as outlined in section below.

Wire Held Time	Module LED Feedback	Device ID Response
<1 second	Off	Blink current ID
>1 and < 2 seconds	70%	Advance ID by 1
>2 and < 3 seconds	30%	Decrement ID by 1
>3 and < 4 seconds	Off	Advance ID by 10
>4 seconds	70%	No change, feature is locked out until power is cycled

The module displays the module ID by flashing the LEDs. The user can determine the module ID number by watching the LEDs and counting the number of bright long winks (50ms on @70% intensity) vs dim short winks (20ms on @ 5% intensity). Each long wink represents 10 module ID counts and each short wink represents 1 module ID count. In the case of dual and tri color lights, color 1 will flash for the bright long winks and color 2 for the short dim winks. In the case of single color lights all winks will be of the same color.

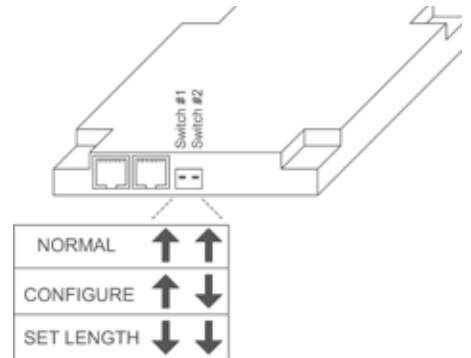
Below is a representation of the module ID wink sequence for an R/B/A module with an ID of 24:



Setting Lightbar Length: (Length comes preset from factory)

**** NOTE: Entering this configuration mode, will reset the light-bar to factory defaults**

- Set Switch #1 and Switch #2 on Breakout box to down position
- Momentarily apply voltage to pattern select wire to change the length of the light-bar configuration
 - 6 MOD Red LED ON, Green LED Flashes 1 Time
 - 8 MOD Red LED ON, Green LED Flashes 2 Times
 - Repeat step 'b' until correct lightbar length is selected
 - Set Switch #1 and Switch #2 on Breakout box to Up position to store lightbar length



NOTE: For settings above, Switch #2 does not need to be moved to the up position after each configuration. The switch can remain in the down position until the lightbar is completely configured and then moved to the Up position to store all the settings.



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

mpower® TROUBLESHOOTING

NORMAL OPERATION

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

NO OPERATION

No Green LED flashing on Breakout box;

Check input power and ground to lightbar and breakout box

Check Ignition Input wire and verify a minimum of 10.0 Volts is present on the wire

Check the fuses in the lightbar power distribution unit.

NO or INCORRECT WARNING LIGHTS

Breakout box LED's operating correctly;

Check IDs on LED modules in lightbar. Verify they are all set correctly.

No steady Red LED on breakout box;

Check 24-pin connector at breakout box (insure it is snapped in correctly), check appropriate input to breakout box for output lights which should be on. Verify voltage is present at the wire input to the breakout box for the function being tested

NO TAKEDOWNS LIGHTS

Breakout box LED's operating correctly;

Verify configuration and make sure light modules are configured for takedown function

No steady Red LED on breakout box;

Check 24-pin connector at breakout box (insure it is snapped in correctly), check appropriate input to breakout box for output lights which should be on

INCORRECT OR NO ARROW OPERATION

Breakout box LED's operating correctly;

Verify configuration and make sure light modules are configured for arrow function.

No Steady Red LED on breakout box;

Check 24-pin connector at breakout box (ensure it is snapped in correctly), check appropriate input to breakout box for output lights which should be on.

No Steady Red LED on breakout box;

Check 24-pin connector at breakout box (ensure it is snapped in correctly), check appropriate input to breakout box for output lights which should be on.

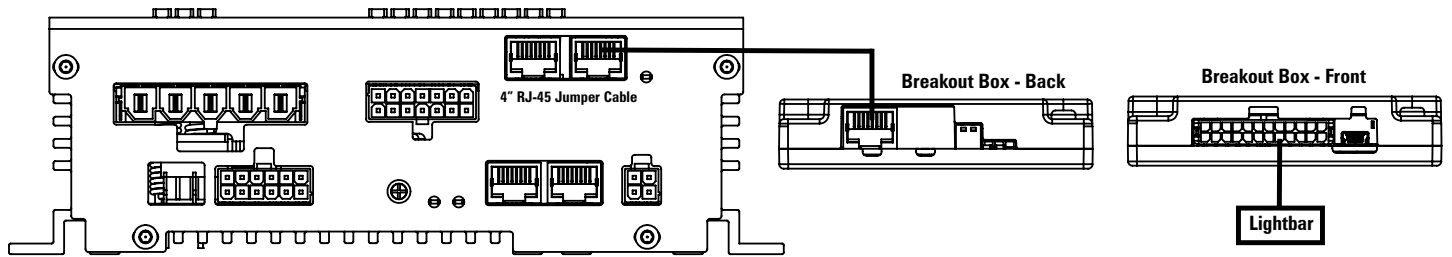
Arrow w/ 3 inch 3-Wire Lights
 Arrow w/ 4 inch 3-Wire Lights

CONNECTION OF LIGHTBAR BREAKOUT BOX TO SOUNDOFF SIGNAL SIREN:

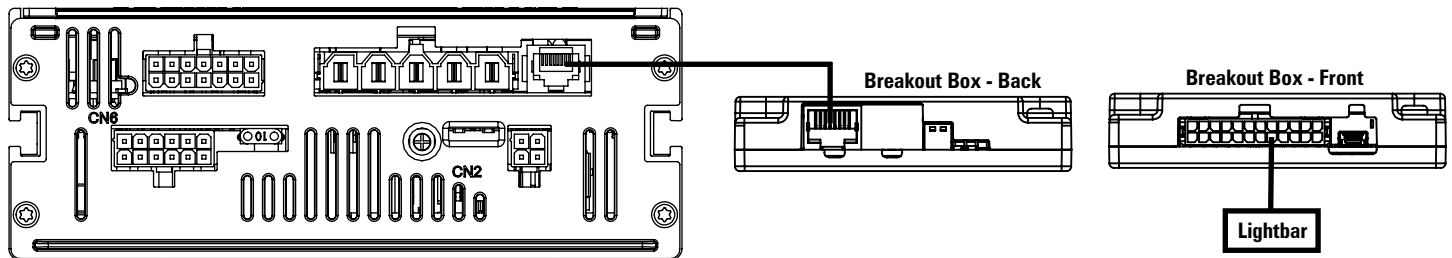
Note: Requires PC configuration app to map siren control switches to lightbar functions.

Plug 1 end of RJ-45 cable to available jack on siren amplifier.

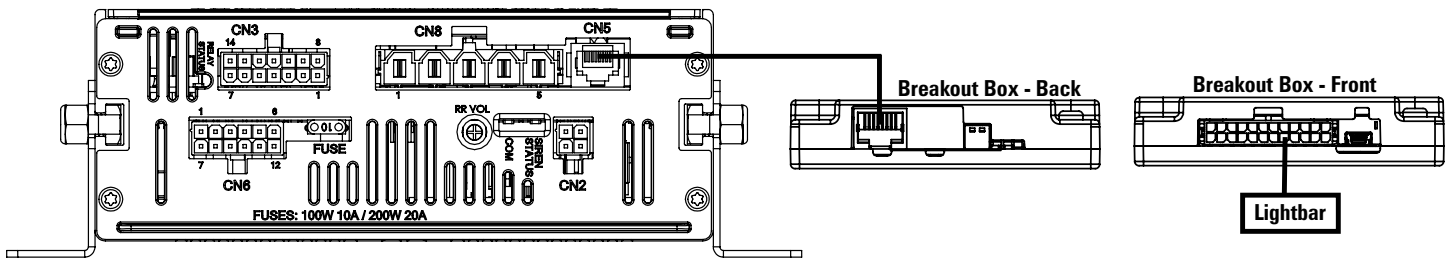
ETSA380R, ETSA485HR



ETSA481CSR, ETSA482CSR

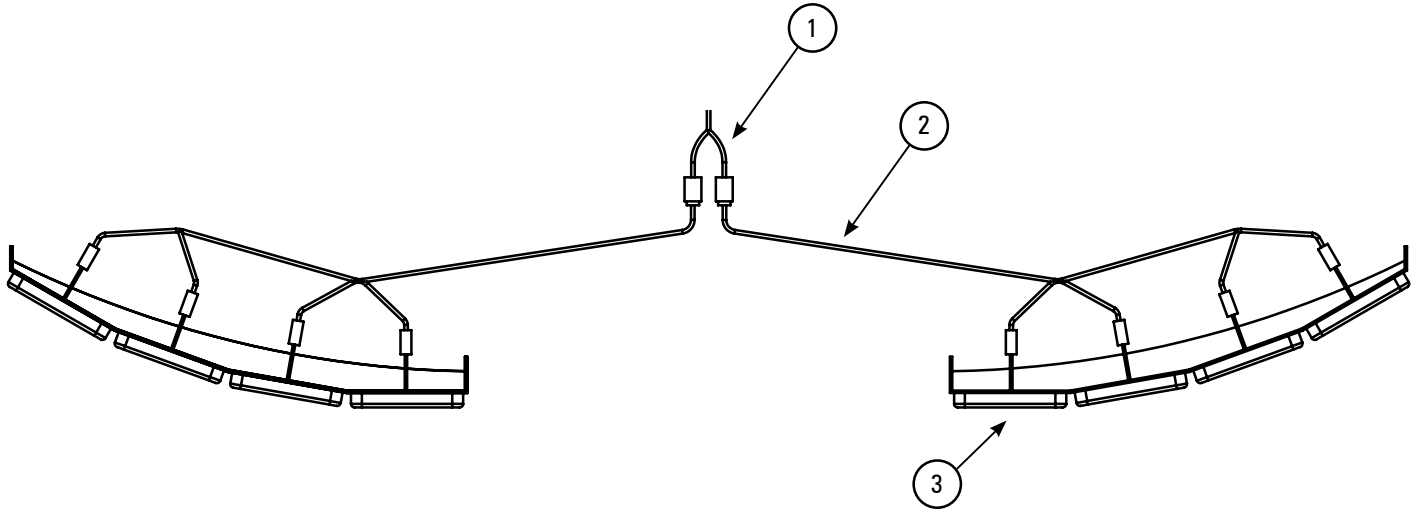


ETSA481RSP, ETSA482RSP, ETSA461HPP, ETSA462HPP





Arrow w/ 3 inch 3-Wire Lights
 Arrow w/ 4 inch 3-Wire Lights



REPLACEMENT PARTS & ACCESSORIES

ITEM #	PART#	DESCRIPTION
1	PMPAKHNPW1	VEHICLE POWER HARNESS
2	PMPAKHNDS1	DISTRIBUTION HARNESS
	PMPAKJ00	BREAKOUT BOX
	PEPL9BBHNS	12" BREAKOUT BOX HARNESS
	PEPL9BBHNL	36" BREAKOUT BOX HARNESS
	PEPL9BBHNXL	120" BREAKOUT BOX HARNESS
	EMPAKKT01	MPOWER® ARROW KIT with 12" BREAKOUT BOX HARNESS
	EMPAKKT02	MPOWER® ARROW KIT with 36" BREAKOUT BOX HARNESS
3	EMPSCG1SLS(x)(xxx)	MPOWER FASCIA 3" STUD MOUNT
3	EMPSCG1SMS(x)(xxx)	MPOWER FASCIA 3" SCREW MOUNT
3	EMPSCG1QMS(x)(xxx)	MPOWER FASCIA 3" QUICK MOUNT
3	EMPSCG2STS(x)(xxx)	MPOWER FASCIA 4" STUD MOUNT
3	EMPSCG2SMS(x)(xxx)	MPOWER FASCIA 4" SCREW MOUNT
3	EMPSCG2QMS(x)(xxx)	MPOWER FASCIA 4" QUICK MOUNT
3	EMPSCG4STS(x)(xxx)	MPOWER FASCIA 4" HD SCREW MOUNT
3	EMPSCG4QMS(x)(xxx)	MPOWER FASCIA 4" HD QUICK MOUNT
	PMP2RSBTH3	3-MOD SPOILER BRACKET (TAHOE)
	PMP2RSBTH4	4-MOD SPOLER BRACKET (TAHOE)



Arrow w/ 3 inch 3-Wire Lights
Arrow w/ 4 inch 3-Wire Lights

WARRANTY & RETURN GOODS PROCEDURE

CLEANING & CARE OF YOUR LIGHTBAR:

Keeping the lenses clean will optimize the performance of the lightbar. The special silicone lenses should be cleaned regularly to remove dirt, grime and insects, with a mild soapy water using a soft cloth or brush. DO NOT use high pressure spray directly on the light bar as it can damage the lenses.

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.