

# SYNERGY LIGHTBAR

## Installation Manual



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## Basic information

- Available with 6, 12, or 18 High Power LED plug-in modules.
- Built-in Traffic Director.
- Standard Dimmer and Pattern feature.
- Built-in and programmable flash patterns.
- Configurable with IQ Software.
- Programs up loadable via USB.
- **System works with ignition only.**
- Available in standalone and data control option

## Technical specification

- Amperage draw: 6 LED module - 0.65A / 12 LED module - 1.15A / 18 LED module - 1.75A 18 LED.
- Standby Current : 0A
- Operating Temperature: -40°C to +65°C (-40F to +149F).
- 15 conductor 16 feet harness.
- UV treated polycarbonate lens.
- Screw down lens to base.
- Available colors: Amber, Blue, Clear, Red, Green.
- Dual color modules available.
- Meets all applicable SAE Class1 and California Title XIII when properly configured.
- Available sizes: Width - 13", Height - 2", Length - 24" / 36" / 48" / 60" / 72".

## Hardware List

Item number	Description	Qty
413-0005	Washer 5/16 Flat S.S	22
413-0006	Washer 5/16-18 Lock S.S	10
411-0036	Bolt 5/16"-18 X 3/4" Carriage S.S.	8
412-0007	Nut 5/16-18 Hex S.S	8
404-0009	Washer Flat Nylon Black 0.5 Id 1.5 Od 1/8" Th	4
400-0200	Bumper Rubber, Black (Light bar	4
413-0018	Washer 1/4 Flat 18.8 S.S.	4
412-0002	Nut 1/4-20 Hex S.S	4
411-0012	Bolt 1/4-20X3/4" Carriage S.S	4
411-0114	Bolt 5/16-18X4" Hex Fully Threaded S.S	2
401-0094	Screw #8-18 X 5/8" Pan/Phil St.Type A /	10

## Hardware List

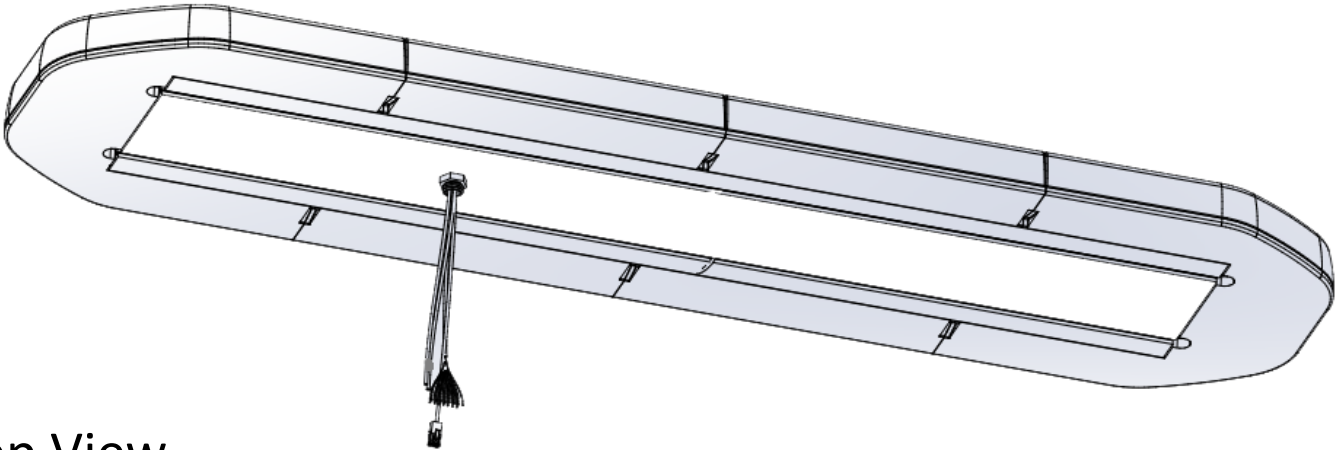
Item number	Description	Qty
924-0054A	Light bar Leg Assembly	2
	Light bar mounting bracket	2

Note: Mounting bracket for light bar is vehicle specific.

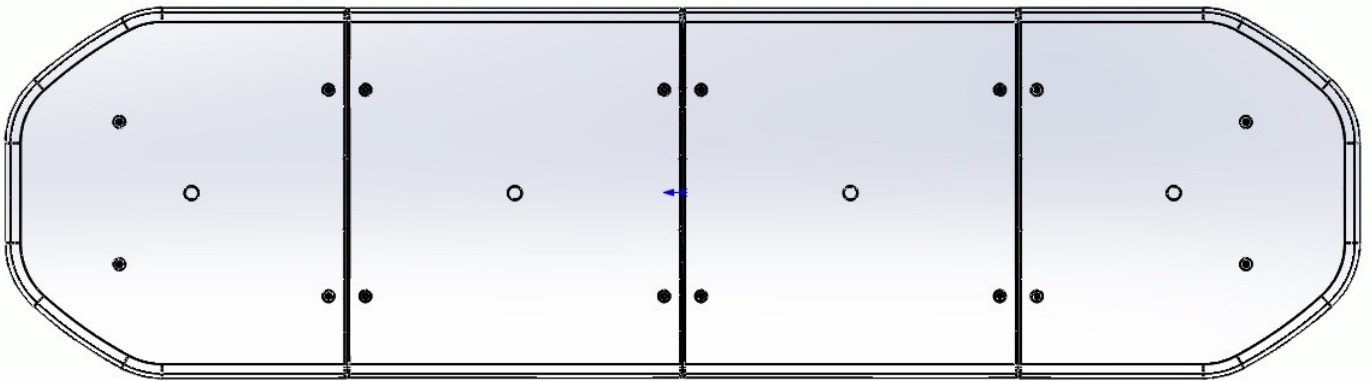
Front View



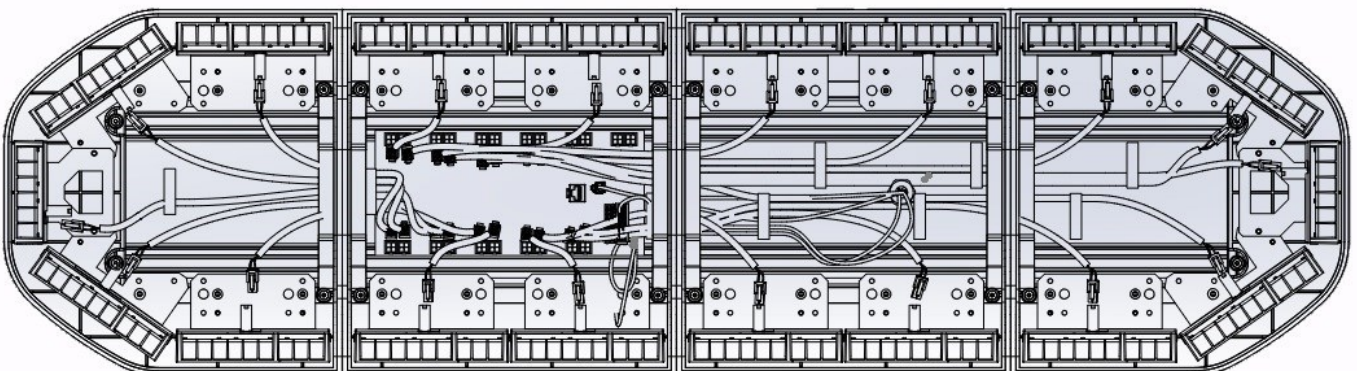
Bottom View



Top View



Top View Without Cover



## General Warning

1. The use of emergency warning devices does not ensure the safety of the operator. The operator is responsible to ensure safe operation of the vehicle regardless of whether the warning device is in operation or not
2. The effectiveness of this or any warning device is highly dependent on proper installation and maintenance. ***Read the manufactures instructions before installing and follow all recommendations.***
3. When in use the operator must ensure that the warning signal is visible and not obstructed by vehicle components (i.e. open trunk lid), people or other obstructions
4. This device is intended for use by authorized personnel only The user is responsibility to ensure that all local, state/provincial and federal laws are being complied with. D&R assumes no liability for any loss resulting from the use of this device.
5. The device must be installed so as not to reduce the output performance of vehicle systems
6. Placement of control switches must be so as to provide convenient reach for the operator without loos-ing eye contact with the road.
7. Emergency warning devices require high electrical voltages and/or currents. Properly connect and ground all circuits. Shorting or improper grounding of this device may caused personal injuring, vehicle damage or both
- 8. All operators should be properly trained in the operation of this device to ensure both their and public safety***

## Installation and Mounting

### Warning

1. Any device used inside a vehicle, may cause severe personal injury if not properly mounted and secured. Objects used in the vehicle may become airborne during a collision or other sudden changes in vehicle speed or direction, such as braking, acceleration or turns.
2. Be sure to mount unit through the steel of the vehicle. Avoid mounting through plastic or other non-structural materials.
3. **POINT OF INSTALLATION MUST NOT INTERFERE WITH DEPLOYMENT OF VEHICLE AIR BAGS.**
4. **D&R Electronics recommends this or any of our products be installed by qualified professionals.**

# Synergy Lightbar Mechanical Installation

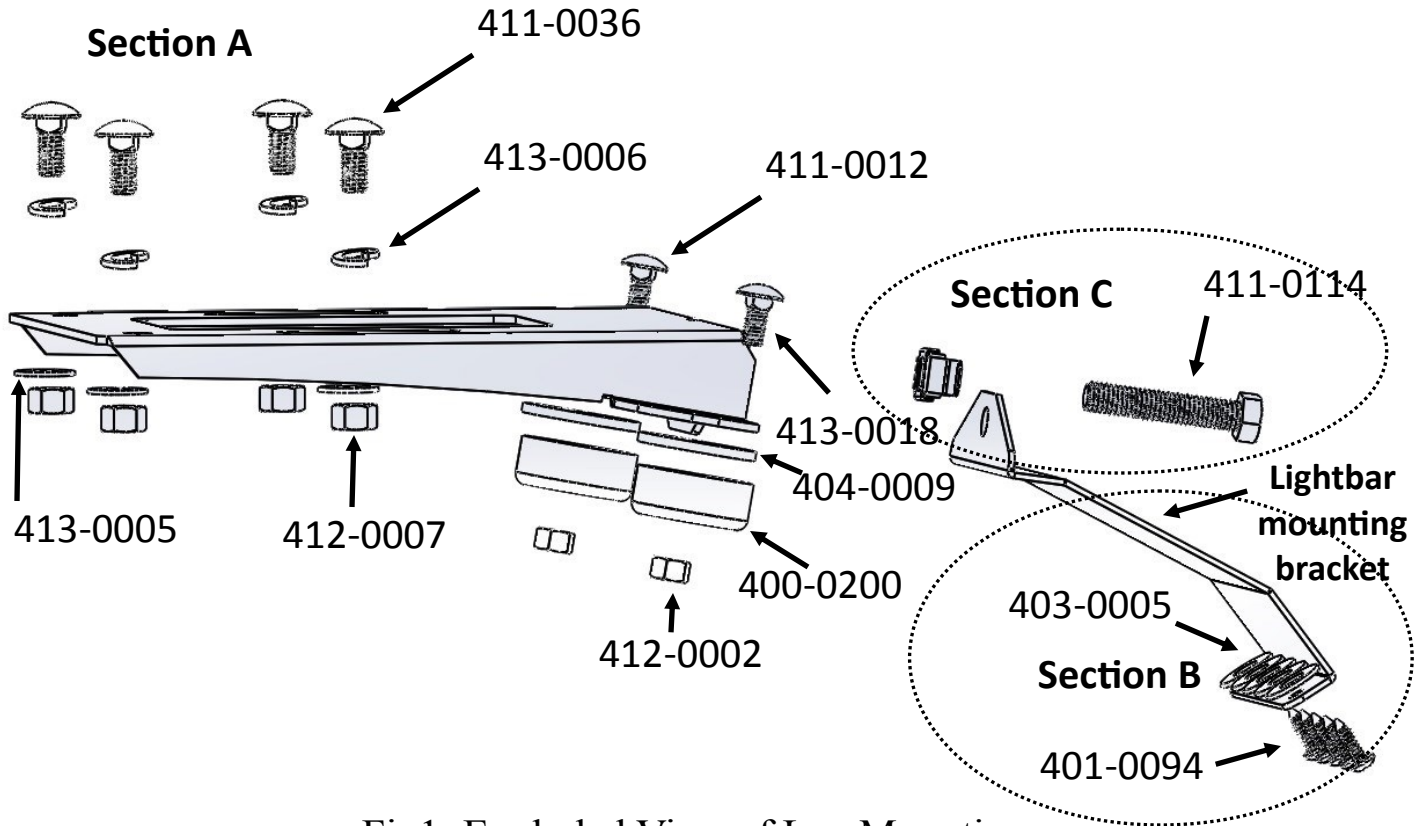


Fig1: Exploded View of Leg Mounting

Mechanical installation of lightbar mounting bracket is divided in 4 sections as shown in fig1.: A,B and C.

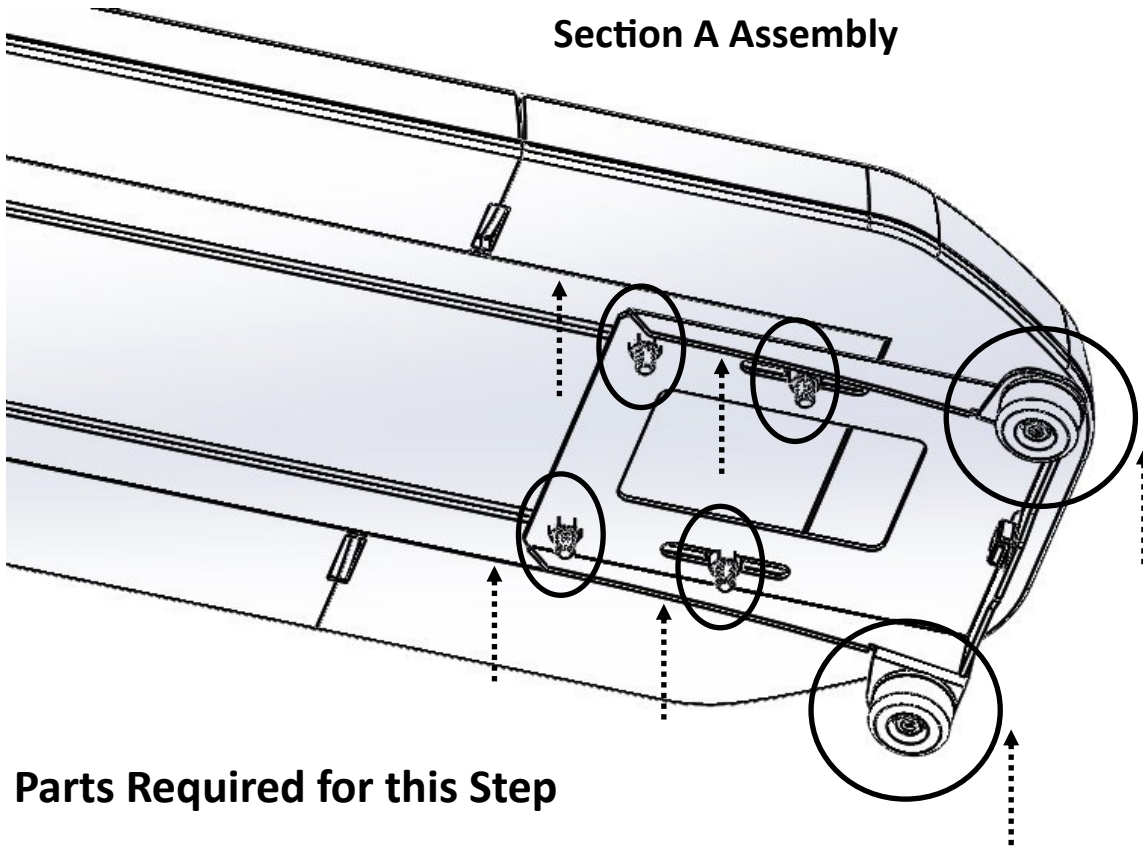
Section A assembly is mounting lightbar and Bumper Rubber on the bracket.

Section B is mounting lightbar bracket on the car sides.

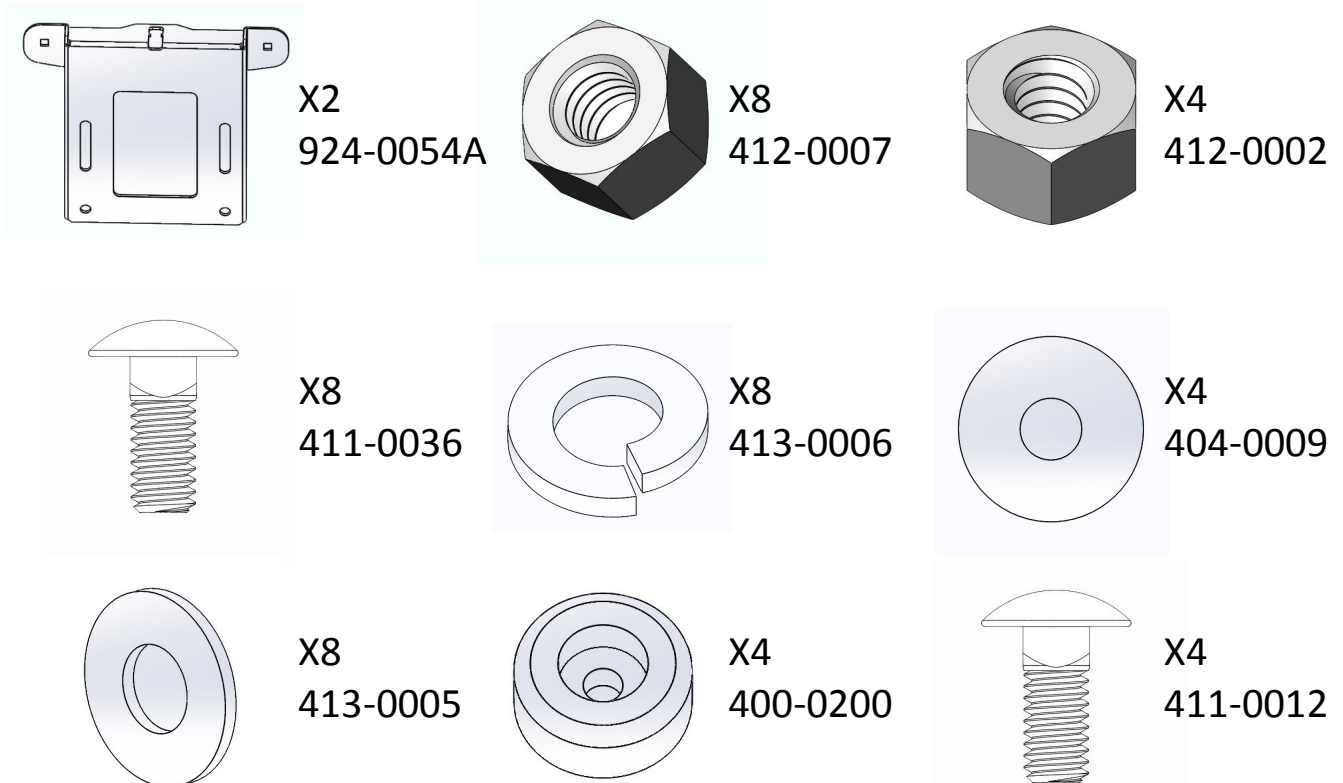
Section C is connecting light bar leg assembly to Lightbar mounting bracket with 5/16-18X4" hex fully threaded S.S bolt.

# Step 1

Secure the leg assembly of Light bar to the lightbar with supplied hardware as shown in figure 1.

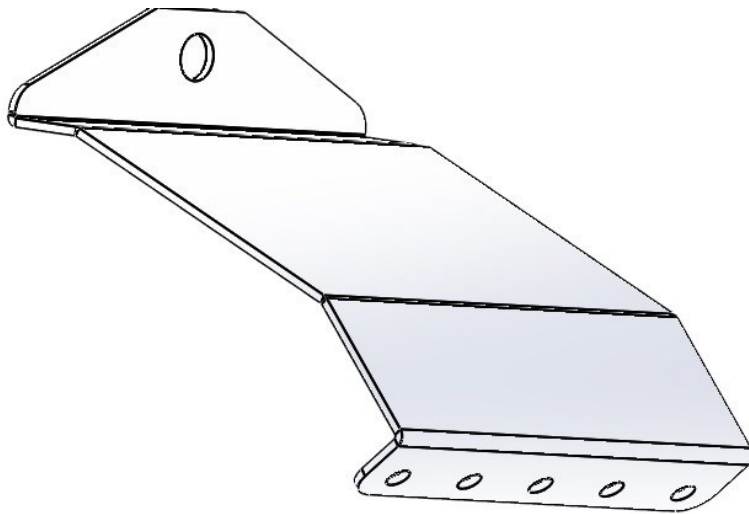
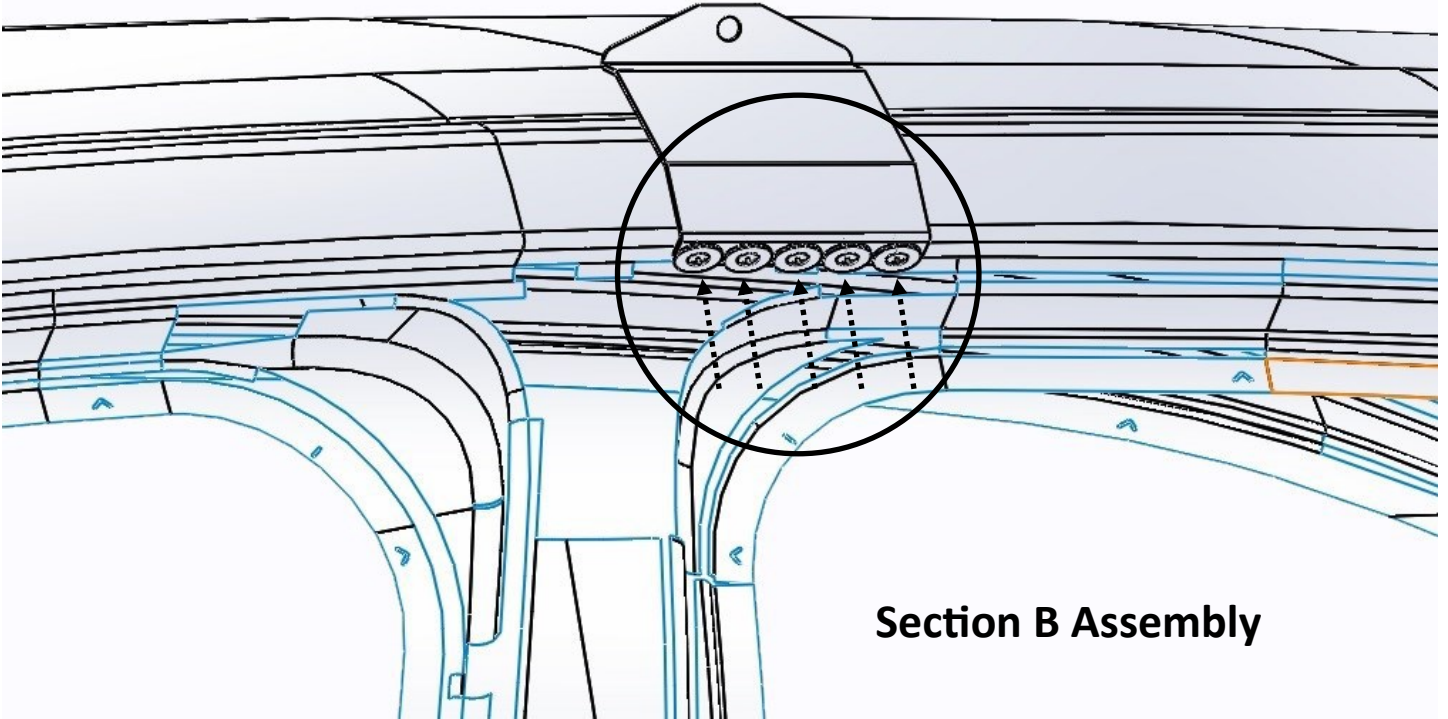


## Parts Required for this Step

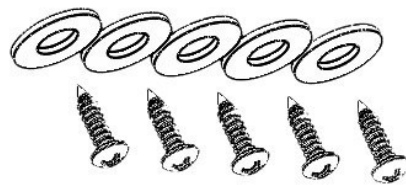


## Step 2

Arrange light bar mounting bracket at desired location. Mark 5 drillings points on both sides, and make a pilot hole of 5/8" on both sides. Align holes with bracket and secure mounting bracket with supplied hardware.



**X 2**  
vehicles specific



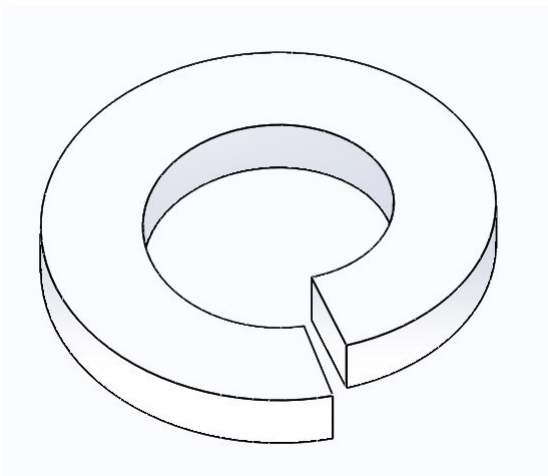
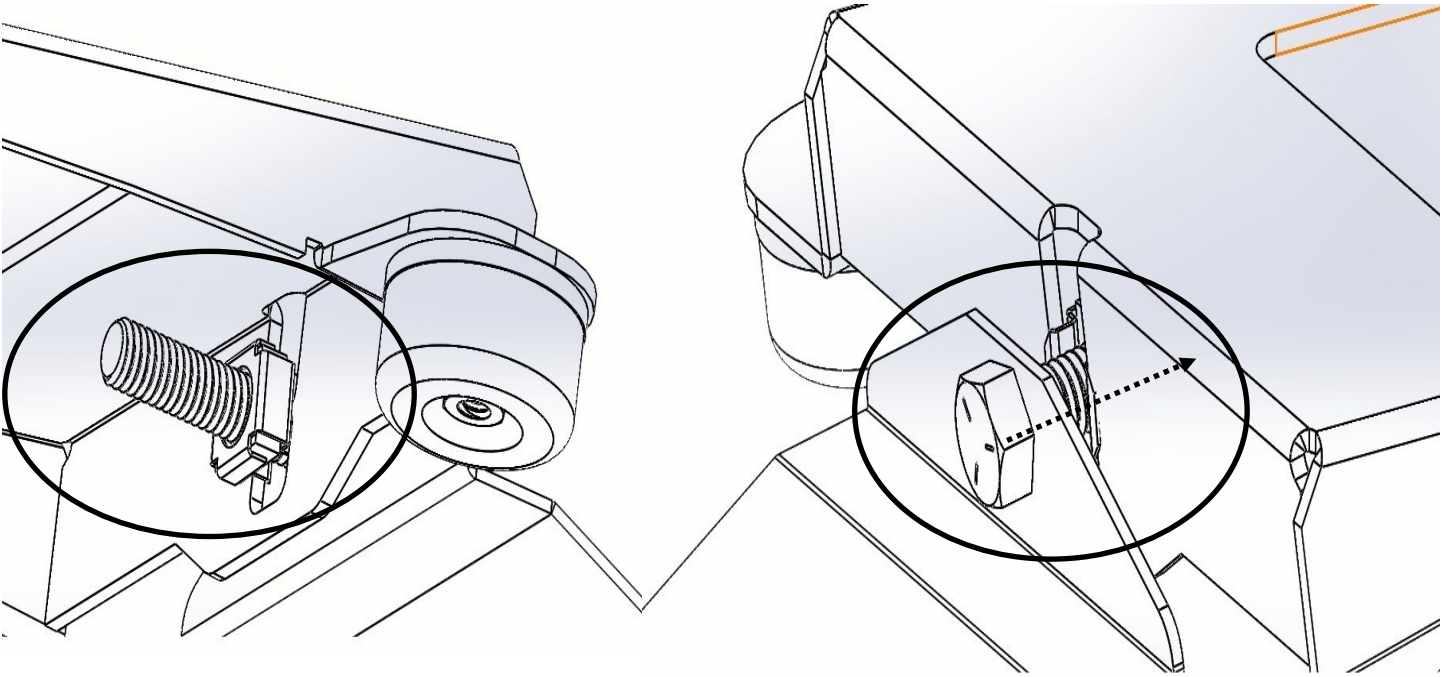
**X 10**  
413-0005

**X 10**  
401-0094

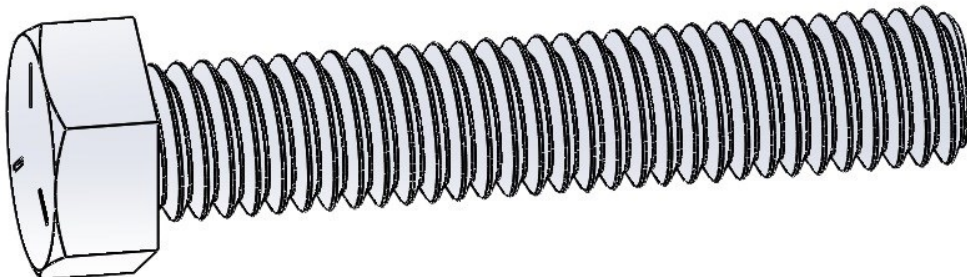


### Step 3

Connect lightbar leg assembly to lightbar mounting bracket with supplied 5/16-18X4" hex fully threaded S.S bolt.



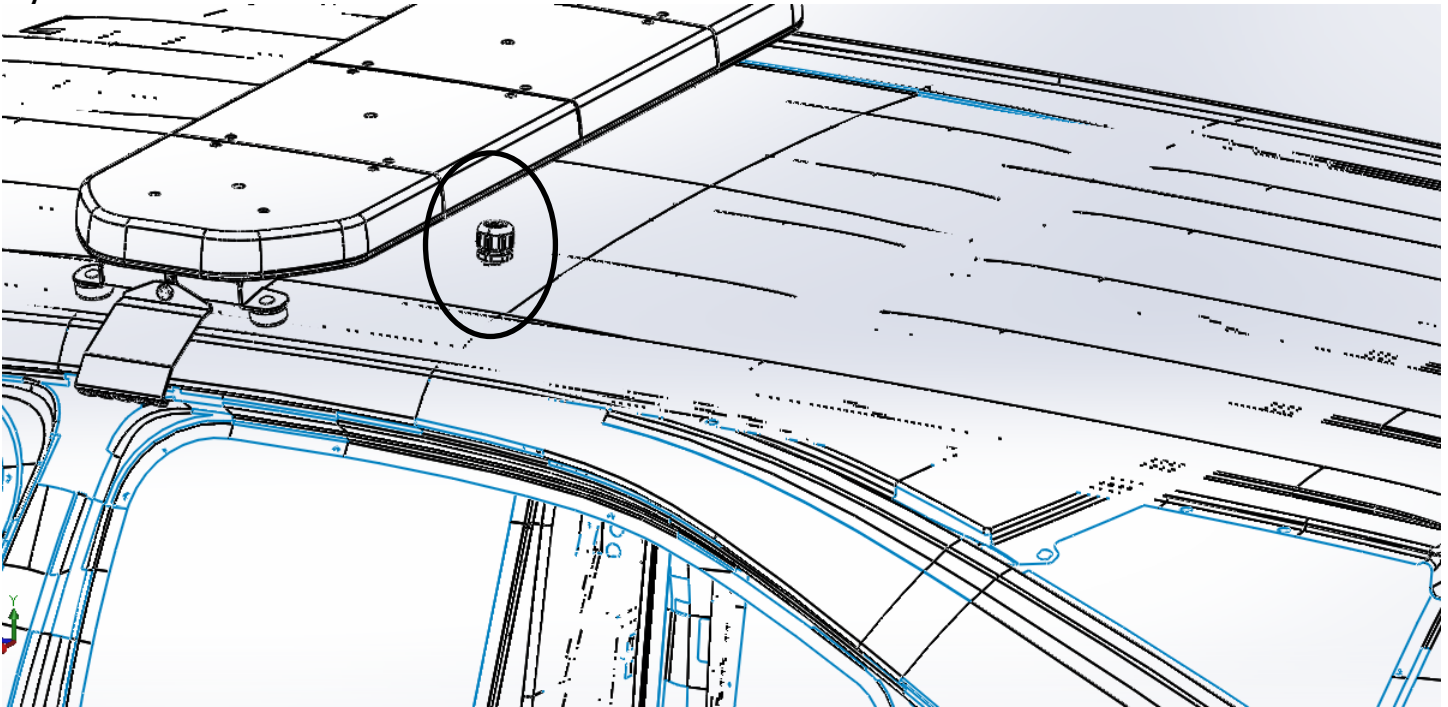
**X2**  
413-0006



**X2**  
411-0114

## Step 4

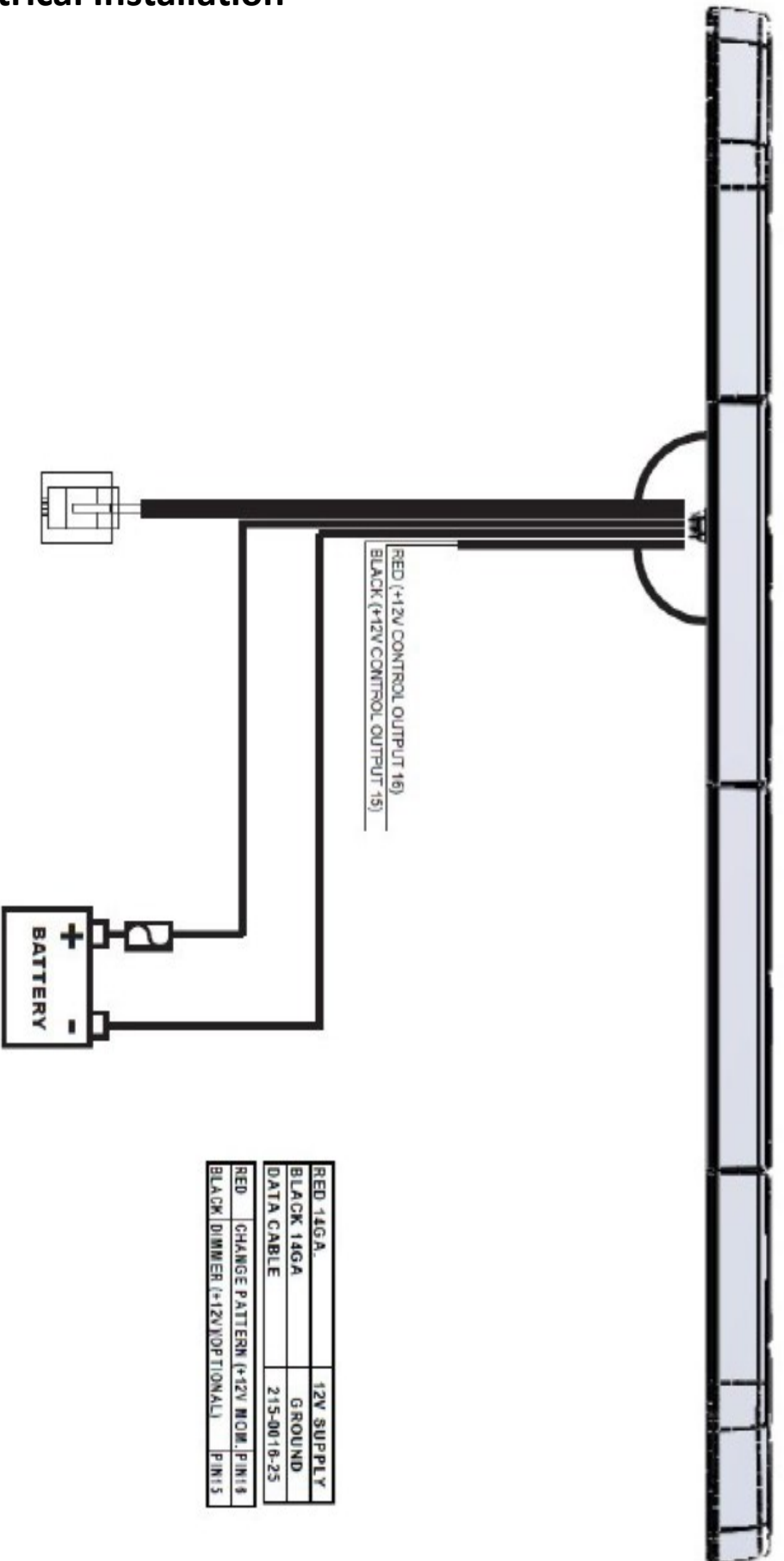
Decide on a desired and appropriate location and make a drill hole of 7/8" and mount 1/2" water tight grommet. It is recommended that the grommet is sealed with silicone. Route cable beneath roof cover towards the triggering switch or IQ system.



### Note:

1. Do not route cable in air bag deployment area.
2. Before drilling into the roof of the vehicle make sure no existing wiring is located beneath the point of drilling, and that point of drilling is not located on a structural part of the vehicle.

# DATA CONTROLLED LIGHTBAR WIRING DIAGRAM

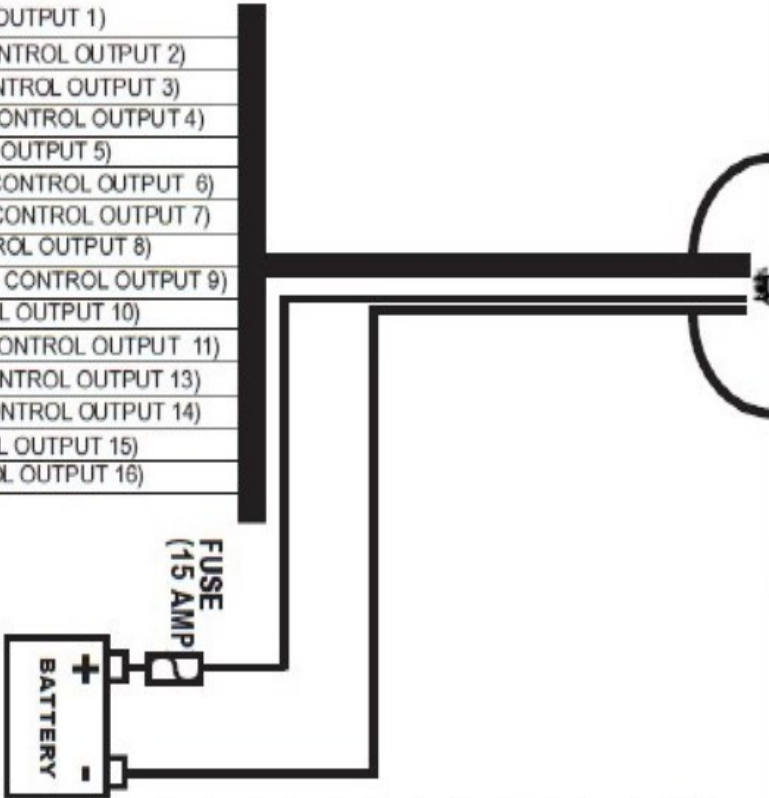


NOTE: 1. Connect RJ45 cable to any D&R IQ/Ellite system.  
2. Connect open wires to any switch / triggering device/ IQ system.

# STANDALONE LIGHTBAR WIRING DIAGRAM



- RED (+12V CONTROL OUTPUT 1)
- RED/WHITE (+12V CONTROL OUTPUT 2)
- RED/BLACK (+12V CONTROL OUTPUT 3)
- WHITE/BLACK (+12V CONTROL OUTPUT 4)
- BLUE (+12V CONTROL OUTPUT 5)
- GREEN/WHITE (+12V CONTROL OUTPUT 6)
- GREEN/BLACK (+12V CONTROL OUTPUT 7)
- ORANGE (+12V CONTROL OUTPUT 8)
- ORANGE/BLACK (+12V CONTROL OUTPUT 9)
- BLACK (+12V CONTROL OUTPUT 10)
- BLACK/WHITE (+12V CONTROL OUTPUT 11)
- BLUE/WHITE (+12V CONTROL OUTPUT 13)
- BLUE/BLACK (+12V CONTROL OUTPUT 14)
- WHITE (+12V CONTROL OUTPUT 15)
- GREEN (+12V CONTROL OUTPUT 16)



Pin:	Color:	Description:	Priority:
1	Red	REAR FLASH DUAL COLOR	3
2	Red/White	FRONT FLASH DUAL COLOR	3
3	Red/Black	REAR FLASH SINGLE COLOR	2
4	White/Black	FRONT FLASH SINGLE COLOR	2
5	Blue	CRUISE LIGHTS	1
6	Green/White	LEFT ALLEY	5
7	Green/Black	RIGHT ALLEY	5
8	Orange	TAKE DOWN F3+F4	5
9	Orange/Black	ALLEYS FLASH	4
10	Black	TD FLASH F3+F4	4
11	Black/White	FRONT FLOOD	6
12	N/A	N/A	N/A
13	Blue/White	LEFT ARROW	4
14	Blue/Black	RIGHT ARROW	4
15	White	DWIMER	N/A
16	Green	PATTERN CHANGE	N/A

RED 14GA.	12V SUPPLY
BLACK 14GA	GROUND

**NOTE:** 1. All function mention in figure may not be use in lightbar. In that case check above table for priority and functions.  
 2. Connect open wires to any switch or triggering device.

## Warranty

D & R Electronics warrants its new products to be free from defects in material and workmanship, under normal use and service, for a period of one year on parts replacement, and one year on labor. This warranty applies only to original purchasers acquiring the product directly from D&R Electronics, or its authorized dealers. Warranty will not be recognized without proof of purchase or bill of sale. This warranty is not transferable. The warranty begins on the date of delivery to the first user/purchaser. This warranty shall not apply to products which must be repaired due to normal wear and tear, negligence, improper installation, abuse, misuse, or which have been altered or modified at a facility other than D & R Electronics, or its authorized depot center. Units proved to be defective within the warranty period, based on an examination by D&R Electronics, will be replaced or repaired at D & R Electronics' option. This warranty does not cover travel expenses or labor charges for removal or installation. Lamps, flash tubes, batteries or other items considered consumables are not covered under warranty. This warranty is in lieu of all other express warranties. D&R Electronics makes no other warranties, expressed or implied, than the express warranties contained herein.

## Product Return Policy

In order to provide you with faster service, product returns for repair or replacement, must have a **Return Goods Authorization Number (RGA number)**. Please contact our company to obtain a RGA number before you return the product to D & R ELECTRONICS. Write the RGA number clearly on the package. Be sure you use sufficient packing materials to avoid damage to the product being returned while in transit.

D & R ELECTRONICS assumes no responsibility or liability for expenses incurred for the removal and/or the installation of products requiring service and/or repair. Repairing or replacing product is at the discretion of D & R ELECTRONICS.

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