

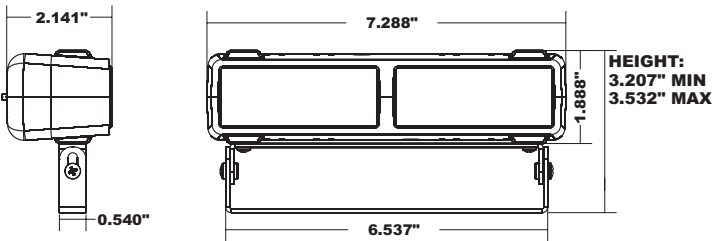
**INTERIOR USE ONLY! THIS PRODUCT IS NOT WATERPROOF!**

**TECHNICAL SPECIFICATIONS**

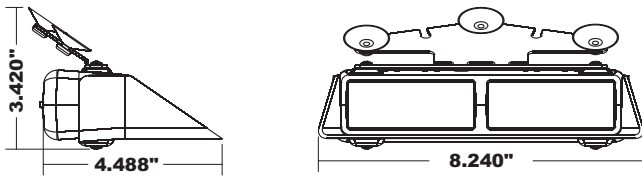
INPUT VOLTAGE ..... 12.8 Vdc (Min 10V, Max 16V)  
 INPUT CURRENT ..... 0.7 Amps Maximum  
 LED ELEMENTS ..... 3 per head.  
 FLASH PATTERNS ..... 8  
 MAXIMUM NUMBER OF  
 SYNCHRONIZED HEADS ..... 20 (Double counts as 2 heads)  
 WARRANTY PERIOD ..... 5 YEARS

**AMECA CERTIFIED TO:  
 SAEJ595, SAEJ845, CA Title 13**

**DIMENSIONS**



**DECK** DECK VERSION INCLUDES THE BALE MOUNT BRACKETS AND HARDWARE

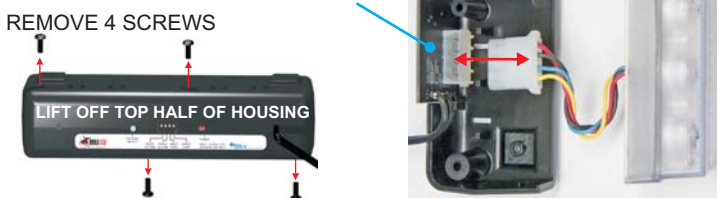


**WIN** WIN VERSION INCLUDES THE WINDOW MOUNT BRACKET AND FLASHBACK SHIELD

**CHANGE LED HEAD POSITIONS**

The position of the led heads can be rearranged as desired.

THE LED HEAD MODULES  
 PLUG INTO THE CIRCUIT BOARD



**MOUNTING**

**DECK** Use the lower bracket as a template to mark the location of the two mounting holes. Mount the lower bracket first (Two #10 x 3/4" screws are provided). Attach the LED head to lower bracket using the two #8 x 1/4" screws provided.

**INTERIOR USE ONLY**

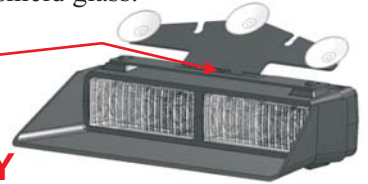


**MOUNTING**

**WIN**

The suction cup bracket can be bent to adjust the angle of the flashback shield to the window. To mount, moisten the suction cups and press firmly against the windshield glass.

BEND HERE TO  
 ADJUST ANGLE



**INTERIOR USE ONLY**

**ELECTRICAL CONNECTIONS**

**CIGARETTE CORD**

The CIGARETTE CORD version comes equipped with a 12 foot cigarette lighter cord. The cigarette lighter plug has a built-in ON/OFF switch with power indicator LED light.



The cigarette lighter plug contains an 8AMP fuse. (TYPE 3AG) To remove the fuse, unscrew the cap at the front of the plug.



**DIRECT WIRED**

**RED:** Connect to +12V through an ON/OFF switch. The use of a fuse located close to the voltage source is recommended. Size the fuse according to the number of heads used in the system. 18AWG or larger wire is recommended.

**BLACK:** Connect to - GROUND vehicle chassis. 18AWG or larger wire is recommended.

**BLUE:** Flash pattern SYNC and SELECTION wire. If you wish to have all the LED heads synchronize their flash timings and patterns with each other then all the BLUE wires must be connected together. (20 Heads Maximum, Double counts as 2 heads.) You may also connect the BULL DECK and WIN heads to any other BULL LED<sup>TM</sup> head. They will all synchronize with each other.

*Continued on other side...*

## ELECTRICAL CONNECTIONS

**BLUE:** continued...

The BLUE wire is also used to select the flash pattern. Touch the BLUE wire to +12V to select the next pattern in the FLASH PATTERN TABLE. The BLUE wire can also be run to a momentary push-button located on the dashboard to allow the flash pattern to be changed when desired.

After wiring a synchronized system where all BLUE wires are connected together, if some of the heads are running a different flash pattern than the rest, touch any BLUE wire to +12V (or press pattern select pushbutton) while turning the power switch ON. This will set all heads to Flash Pattern #2 (Double Flash). Then select the desired flash pattern by momentarily touching any BLUE wire to +12V (or pressing flash pattern pushbutton).

Note: The Blue wire should **never** be connected to - GROUND or the heads will not synchronize properly.

## OPERATION

### PATTERN SELECT

When the pattern select button on the back of the unit is pressed it will advance the flash pattern to the next one in the list. If multiple heads are connected together, pressing the pushbutton on the back of any one of the heads will change the flash pattern of ALL heads.

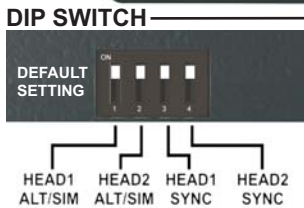
Press and HOLD this pushbutton while turning the power ON to reset the flash pattern to #2.

### FLASH PATTERN LIST

#	Pattern:	Frequency:	Flash Rate:
1	Quad Flash	1.25 Hz	75 Quad Flashes Per Minute
2	Double Flash	1.25 Hz	75 Double Flashes Per Minute
3	Triple Flash	1.53 Hz	92.3 Triple Flashes Per Minute
4	DeciBlast	1.42 Hz	85.5 Deci Flashes Per Minute
5	Single Flash	1.25 Hz	75 Single Flashes Per Minute
6	Mega Flash	1.90 Hz	114 Single Flashes Per Minute
7	Triple+Burst	1.37 Hz	82.5 Triple+Burst Flashes Per Minute
8	Steady On	0 Hz	Steady On

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## OPERATION

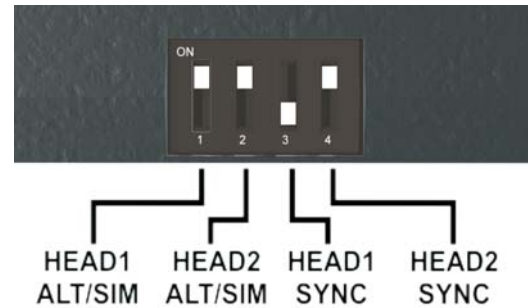


Dip switches 3 & 4 connect or disconnect the heads from the sync system (BLUE wire). This allows a different flash pattern to run on either of the heads. Turn switch ON to connect head to sync system. Turn OFF to disconnect.

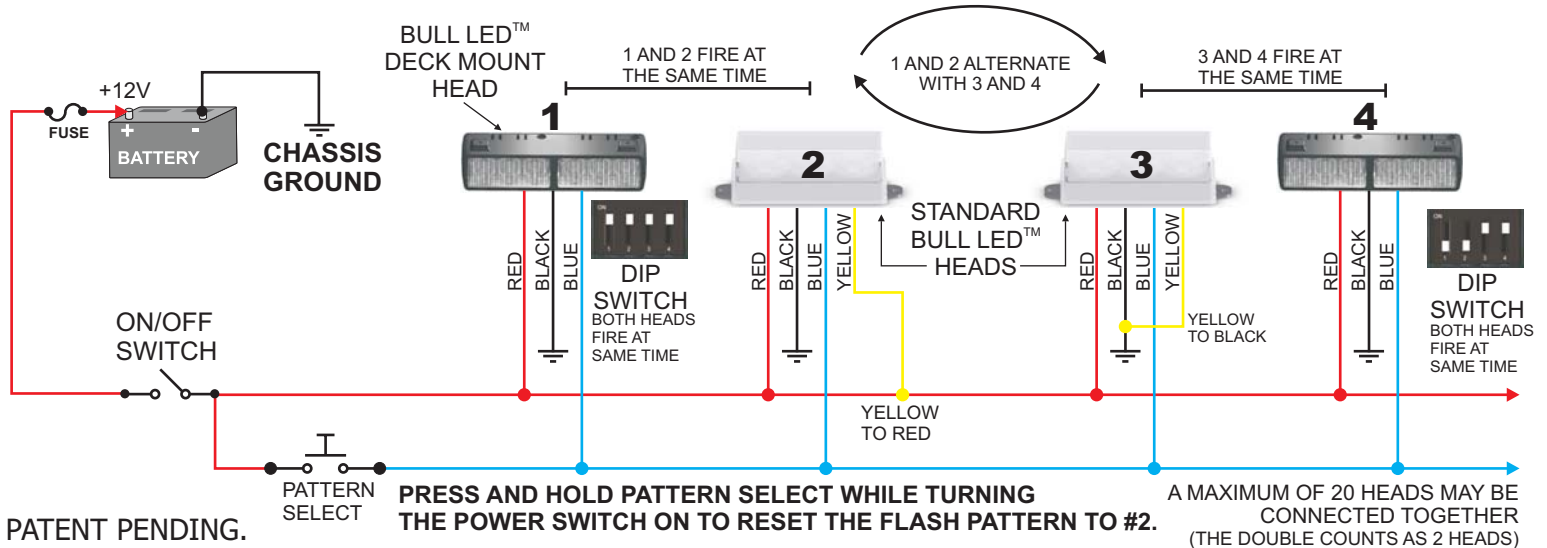
Dip switches 1 & 2 select which heads alternate or flash simultaneous. All heads with switches ON flash at the same time and alternate with all heads that have switches OFF. When connecting multiple direct wired versions this allows any combination of alternating-simultaneous flashing.

### CALIFORNIA MODE:

To run one RED head in steady on for California mode, press PATTERN SELECT button until STEADY ON mode is selected. Turn DIP SWITCH 3 or 4 OFF depending on which side the RED head is located. Then press PATTERN SELECT button to select the desired flash pattern for the other head. The RED head will remain in STEADY ON mode.



## WIRING EXAMPLE - DIRECT WIRED VERSION



## TROUBLESHOOTING

### HEAD NOT FLASHING:

Check the RED and BLACK wires for a reversed connection. (Reverse connection will **not** damage the unit). Check RED and BLACK wires for either a bad splice or a corroded ground connection. Check for a bad fuse in cigarette plug.

### HEADS NOT SYNCHRONIZING:

Check for a short circuit on the BLUE wire to either +12V or GROUND. Check for non-functional heads in the system. If any one of the heads has a bad GROUND

connection it can cause the sync signal to become corrupted. If any one of the heads has it's RED and BLACK wires reverse connected it will corrupt the sync signal.

### FLASH PATTERN CHANGING:

If the flash pattern changes on it's own there may be an intermittent short between the BLUE wire and +12V. If any one of the heads in the system has an intermittent GROUND connection it can cause the flash pattern to change.