

# Star Mini Phantom™

## Interior Undercover Mini LED Light

PATENTS D530,029 and D632,421



**ULB9 Series**  
(Discrete LEDs)



**ULB9S Series**  
(Starburst LEDs)

**IMPORTANT:** Please read all of the following instructions before installing your new light.

**CAUTION:** Please be sure to check that your cigarette plug outlet or hard wire is properly fused with a 5 amp fuse. **Testing the light before this fuse is properly installed will void the warranty on the light.**



**WARNING!**

Care should be taken when positioning any warning light on the roof, dash, or instrument panel of the vehicle, so that the light and/or cord does not interfere with the proper operation of any airbags! Failure to heed this warning may result in serious or fatal injury.



**WARNING!**

This light utilizes high-intensity LED Lamps. **DO NOT** stare directly into the light while it is on, as momentary blindness and/or permanent eye damage may occur.



**WARNING!**

*This light is designed to be mounted on the inside of your vehicle. It is not intended for exterior applications and is not warranted against water damage.*

*It is the sole responsibility of the owner to ensure the warning light is secure. Check your light every time you enter the vehicle to ensure that it is mounted securely. The manufacturer assumes no responsibility for the secure mounting of this light.*



**Star Headlight & Lantern Co., Inc.**

455 Rochester Street Avon, NY 14414 Phone: 585-226-9787 FAX: 888-478-2797

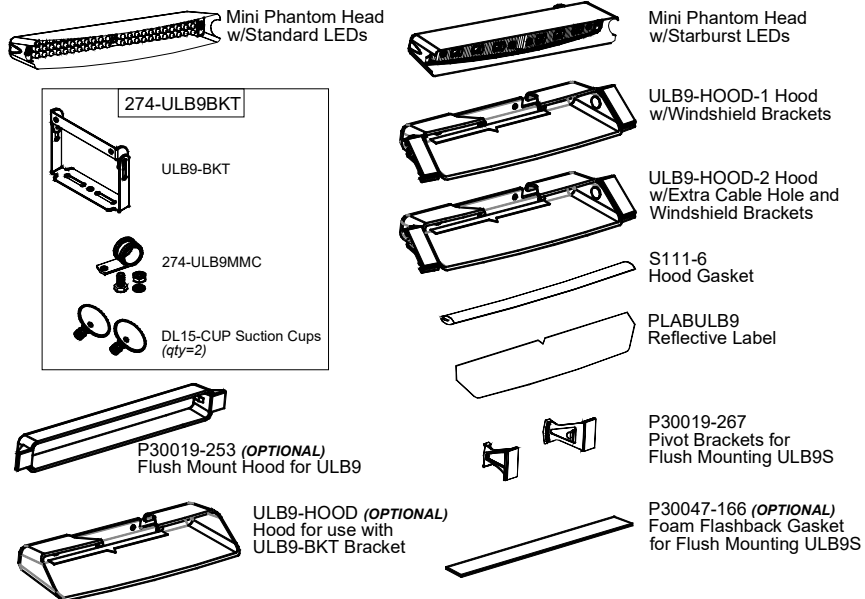


[www.starheadlight.com](http://www.starheadlight.com)

PLITSTR46 REV. L 6/20/16

## Parts

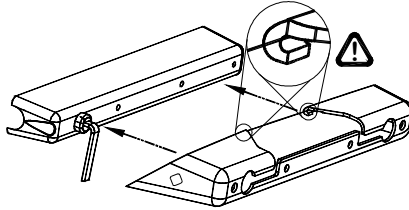
<b>ULB9-**:</b>	1	Standard Mini Phantom Head with Cig Plug
	1	274-ULB9BKT Mounting Kit
<b>ULB9S-**:</b>	1	Starburst Mini Phantom Head with Cig Plug
	1	ULB9-HOOD-1 Flashback Hood with Windshield Brackets
	1	S111-6 Hood Gasket
	1	PLABULB9 Reflective Hood Label
	2	P30019-267 Pivoting Flush Mount Brackets
<b>ULB9-1-**:</b>	1	Standard Mini Phantom Head with Hardwire
	1	274-ULB9BKT Mounting Kit
<b>ULB9S-1-**:</b>	1	Starburst Mini Phantom Head with Hardwire
	1	ULB9-HOOD-1 Flashback Hood with Windshield Brackets
	1	S111-6 Hood Gasket
	1	PLABULB9 Reflective Hood Label
	2	P30019-267 Pivoting Flush Mount Brackets
<b>RLKULB9-1-**:</b>	2	Standard Mini Phantom Head with Hardwire
	2	274-ULB9BKT Mounting Kit
<b>RLKULB9S-1-**:</b>	2	Starburst Mini Phantom Head with Hardwire
	2	ULB9-HOOD-1 Flashback Hood with Windshield Brackets
	2	S111-6 Hood Gasket
	2	PLABULB9 Reflective Hood Label
	4	P30019-267 Pivoting Flush Mount Brackets
<b>FLKULB9-**:</b>	2	Pre-Connected Standard Mini Phantom Heads with Cig Plug
	2	274-ULB9BKT Mounting Kit
<b>FLKULB9S-**:</b>	2	Pre-Connected Starburst Mini Phantom Heads with Cig Plug
	1	ULB9-HOOD-1 Flashback Hood with Windshield Brackets
	1	ULB9-HOOD-2 Flashback Hood with Windshield Brackets
	2	S111-6 Hood Gasket
	2	PLABULB9 Reflective Hood Label
	4	P30019-267 Pivoting Flush Mount Brackets



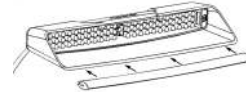
## ULB9S Mounting

### Front Windshield Adhesive Mount

1. The hood can be installed such that the cord can exit either side.  
Route the cord through the appropriate slot and slide the hood onto the back of the light until the hooks on the hood "latch" onto the light.



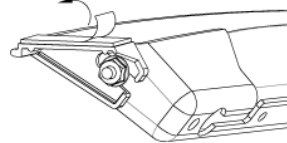
2. If desired, install the rubber gasket along the edge of the hood to help reduce vibration against the window, as well as to allow for minor adjustments to the curvature of the window.



3. Hold the light up to your windshield to test fit the best location for the light, typically high on the windshield touching the headliner.



**DO NOT MOUNT ON DEFROSTER LINES!!**



4. Clean and dry windshield. (clean with alcohol if necessary)
5. Remove the tape liner from both brackets on the light.
6. Place light in the chosen location pressing firmly on the brackets ensuring maximum contact and adhesion.
7. With the brackets in place and secure, loosen both nuts only enough to slide the light snugly against the windshield and then retighten.

**CAUTION:** Take extreme caution not to over tighten the nuts!!! Over tightening of the nuts can strip the holes and result in a faulty mount.

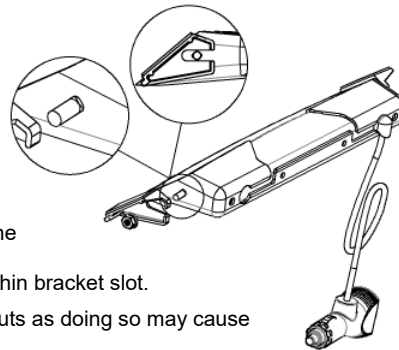


Because it takes about 72 hours or 3 days for the adhesive to reach full bonding potential, check the light often during this period to ensure the tape maintains full contact with the bracket and glass.

### Light Replacement

If you need to replace your light for any reason, you can leave the brackets affixed to the window and remove the light from them.

1. Loosen both nuts only enough to slide the light out of the slots in the brackets. The brackets will remain attached to the windshield.
2. Install new light by sliding it back into place in the bracket slots.  
Note - insure square head of carriage bolt is within bracket slot.
3. Tighten both nuts. Note - Do not over tighten nuts as doing so may cause the carriage bolt head to spin in the hood.



### Bracket Removal

Over time the bracket adhesive bond becomes stronger. If the procedure below doesn't work it may be necessary to use alcohol or WD40 to soften the adhesive in combination with the steps below.

1. Remove the light head as described under *Light Replacement*.
2. Using razor blade scraper, carefully scrape the adhesive tape off the window gently prying the bracket away from the window until it is removed.

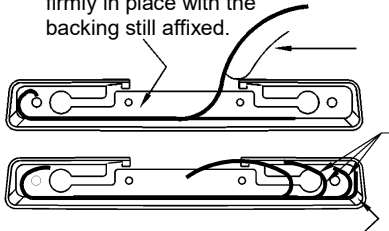
(ULB9S Mounting CONT'D)

### Optional Reflective Hood Label Installation

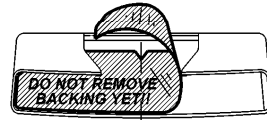


**Practice installing label BEFORE removing backing.**

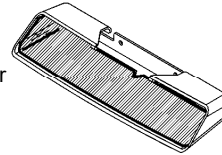
1. Align the notch in the label with the center of the hood taking care that the front edge of the label lines up with the front edge of the hood.
2. Hold one half of the label firmly in place with the backing still affixed.



3. Slowly start to peel the backing off of the other half of the label from the center out.
4. Gradually peel the backing off of the rest of that half of the label carefully rolling it into place along the hood.

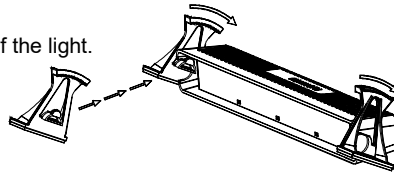
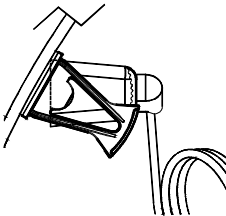


5. Using your finger or other cylindrical object, carefully "roll" the label through the corner ensuring that no air bubbles form. If your hood has bolt heads inside, smooth the label or cut it as needed.
6. Repeat the process to affix the other half of the label to the hood.



### Flush Window Adhesive Mount

1. Snap one pivot bracket onto each side of the light.



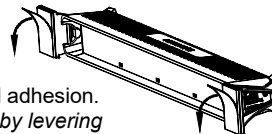
2. Select a location for your light and hold the light up to the window adjusting the pivots such that the light is approximately level.



**DO NOT MOUNT ON DEFROSTER LINES!!**

3. **Thoroughly** clean and dry the window.

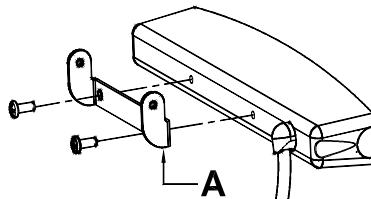
4. Remove the backing from the double sticky tape on the light and place the light in the chosen location pressing **VERY LIGHTLY** on just the brackets. Check the light from the front and back to verify placement. If placed correctly, press firmly on the brackets ensuring maximum contact and adhesion. *Note - if a placement mistake is made, quickly remove light by levering off the brackets with a flat blade screwdriver.*



**Because it takes about 72 hours or 3 days for the adhesive to reach full bonding potential, check the light often during this period to ensure the tape maintains full contact with the bracket and glass.**

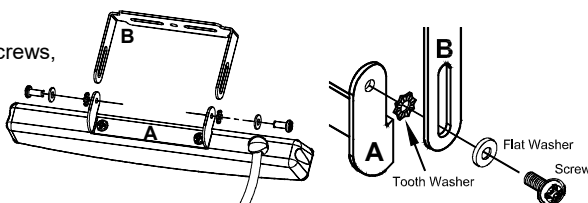
## ULB9 Bracket Mounting (Deck, Mirror, or Suction Cup)

1. Decide which side you want the cord to exit the light and determine which way you will need to mount the ULB9-BKT to your light.
2. Attach Part A of the mounting bracket, facing the direction you have selected, to the light by using two of the Philips head screws.

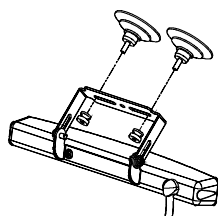
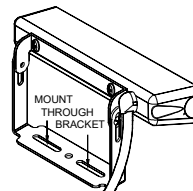


**CAUTION: Take extreme caution not to over tighten the screws!!! Over tightening of the screws can strip the holes and result in a faulty mount.**

3. Use two Philips head screws, two flat washers, and two tooth washers to attach Part B of the mounting bracket to Part A.



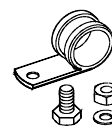
4. If you are mounting the light directly to the rear deck, dash, or other suitable surface, you may use appropriate fasteners (not supplied) to attach the bracket to your mounting surface and skip to step 9.



5. If you are utilizing the suction cup mount, attach the suction cups to the mounting bracket. Then mount the light in the desired location and skip to step 9.

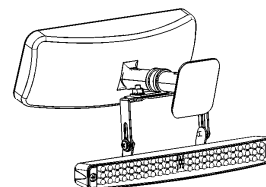
**CAUTION: Take extreme caution not to over tighten the suction cups!!! Over tightening of the screws can strip the holes or puncture the inside of the cup resulting in a faulty mount.**

6. If you are using the Mirror Mounting Clamp to mount your light to your rear view mirror, it is the sole responsibility of the installer to ensure that the rear view mirror mount can support the light you are installing.



7. Place the clamp around the mirror stem.

8. Attach the clamp to the bracket with the washer, nut and bolt, securing your light to the rear view mirror.



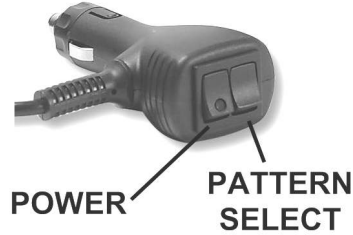
9. Once the light is secured, route your cord such that it does not interfere with the vision of the driver or the operation of the steering wheel, gear shifter, and/or any airbags.

## ULB9 and ULB9S Connections and Operation

### ULB9/9S (cig plug version only)

The **ULB9** (cig plug version) can be left plugged into the cig plug outlet in your vehicle. It can be turned on and off using the lighted power switch on the cord.

The **pattern select switch** is used to preset the desired pattern. You can cycle through the different patterns by briefly pressing the pattern select switch and releasing it. The ULB9 has 35 patterns to choose from. After the final pattern is reached, the patterns will cycle through again.



**PLEASE NOTE: THIS IS A DIFFERENT PATTERN LIST THAN THE ULB9-1 (HARDWIRED).**

### ULB9/9S Patterns

- |   |  |
|---|--|
| <ol style="list-style-type: none"> <li>1. Slow Warn</li> <li>2. Alt. Doubleflash, Flicker</li> <li>3. All Double, Alt. Pre-Pop Triple, Slow Warn</li> <li>4. Alternating Doubleflash, Non-Synch</li> <li>5. Alt. Triple, Alt. Pre-Pop Triple, Flicker *</li> <li>6. Alt. Quad, Flicker, Alt. Double, Flicker</li> <li>7. Alt. Pre-Pop Quint, Alt. Quint, Flicker</li> <li>8. All Tripleflash</li> <li>9. Alt. Quadflash w/Post Pop</li> <li>10. All Quadflash w/Post Pop</li> <li>11. Alt. Quintflash</li> <li>12. One Side Steady/Other Side Singleflash †</li> <li>13. Alt. Pre-Pop Quintflash</li> <li>14. All Flicker</li> <li>15. Alt. PSU Flicker</li> <li>16. One Side Steady/Other Side Short-Long †</li> <li>17. One Side Rapid Fire, Other Side Pop</li> <li>18. Comet 1</li> </ol> | <ol style="list-style-type: none"> <li>19. Alt Long Singleflash (Medium Warn)</li> <li>20. Alt. Short - Alt. Long</li> <li>21. Flip-Flop</li> <li>22. Slow Warn, Super Fast Warn</li> <li>23. All Doubleflash, Alt. Doubleflash</li> <li>24. All Double, Alt. Double, Flicker</li> <li>25. Fast Warn</li> <li>26. Superfast Warn</li> <li>27. Warn Fade</li> <li>28. Pre-Pop Warn</li> <li>29. All Singleflash</li> <li>30. Alt. Tripleflash</li> <li>31. All Quintflash</li> <li>32. One Side Pop, Other Side Rapid Fire</li> <li>33. Comet 2</li> <li>34. Delta Omega</li> <li>35. Cycle All Patterns</li> </ol> |
|---|--|

\* = Default Pattern

† = California Title 13 Approved w/Red Steady/Blue Flashing

*Note: For the FLKULB9 series, the pattern alternates between the two heads, rather than back and forth on each head.*

### ULB9/9S Programming Shortcuts

Press and hold the *Pattern Select Switch* for the length of time that corresponds to the pattern you would like to jump to. When the LEDs flash the corresponding number of times shown in the chart below, release the switch and the light will be in the selected pattern.

Length of Hold	Unit Blinks	Jumps to	Description
3 seconds	1 time	Pattern 1	Slow Warn
6 seconds	2 times	Pattern 5	Alt. Triple, Alt. Pre-Pop Triple, Flicker
9 seconds	3 times	N/A	Swaps Steady Burn Side for Patt. 12 & 16

These lights have been factory tested and approved. If the light fails to work when the plug is inserted into the cigarette plug, check the following

- Check the ON/OFF rocker switch on the cig plug to be sure it is in the ON position.
- Twist the plug a few times to remove any ash or other deposits which might be preventing a good contact from being made.
- Remove the fuse from the vehicle fuse box and check to see if it has blown.
- Remove the fuse from the cig plug on the light (if present) and check to see if it has blown.
- Clean the lighter socket and contact surfaces.

# ULB9-1 and ULB9S-1 Wiring and Operation

(hardwired version only)

The **ULB9-1** (hard wire) should be wired through a 5 amp fuse (not supplied) and a 12VDC switch (not supplied) capable of handling at least 5 amps. Connect the wires as follows:


**Black** - Good Chassis Ground

**Red** - Power (+12 VDC)

**White** - Synchro: AFTER PROGRAMMING, Connect the white wires from the two lights together to synchronize them together.

**Green** - Pattern Select: Touch and release to Ground to scroll through the patterns. The light will cycle back to the first pattern after pattern #24.

## SYNCHRONIZATION

You can synchronize up to six lights with  compatibility.

**DO NOT CONNECT WHITE WIRES UNTIL PROGRAMMING HAS BEEN COMPLETED FOR ALL LIGHTS!!**

1. Power up the first unit and select a Phase 1 pattern. Touch and release the green wire to ground to change patterns.

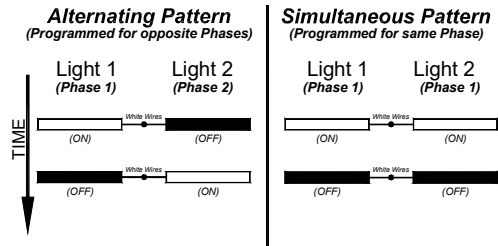
2. Program the second light with the same **Pattern Type**.


Lights with the SAME phase flash together (simultaneous).

Lights with DIFFERENT phases flash opposite one another (alternate).

3. After programming all lights, tie off the green wires and connect the white wires together.

4. Test lights by applying power to all of them at the same time.



Phase 1 Flash Pattern	Phase 2 Flash Pattern	Pattern Type	 Pattern Description	Shortcut
1	13	K	Flicker	← Pattern 1 (Phase 1): 3 sec or 1 flash
2	14	L	Fast Doubleflash	
3	15	M	Tripleflash	
4	16	N	PSU Flicker	← Pattern 13 (Phase 2): 9 sec or 3 flashes
5	17	O	PSU Random	← Pattern 6 (Phase 1): 6 Sec or 2 flash
6	18	F	Quadflash †	
7	19	G	Quadflash w/Post-Pop †	
8	20	H	Singleflash †	
9	21	I	Doubleflash †	← Pattern 18 (Phase 2): 12 sec or 4 flashes
10	22	J	Variable AKA Delta-Omega	← Pattern 18 (Phase 2): 12 sec or 4 flashes
11	23	C	Post Pop	
12	24	E	Random	
NA			Steady	18Sec

† - SAE J595 and California Title 13 approved patterns

**Pattern Shortcuts:** Hold Green wire to ground for indicated time.

**Split Mode Phases:** One side flashes in Phase 1, the other side flashes in Phase 2

**Steady Burn:** Not in pattern cycle. Only accessible through shortcut. Hold Green wire to ground for 18 seconds (light will flash 6 times).

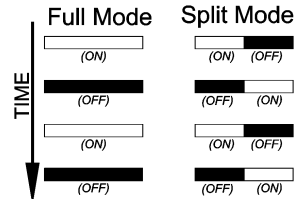
**FOR SYNCHRONIZATION BOTH LIGHTS MUST BE SET FOR THE SAME PATTERN TYPE!**

## FULL/SPLIT MODES

By default, the lights are programmed for the two halves of the light alternate with one another (Split Mode). If you would like to change this setting to Full Mode, proceed below:

- Connect **Black** to Ground.
- Connect **Red and White** to power.
- Hold the green wire to Ground and release it when the light flashes 4 times. (~12 seconds).
- After an additional second, release the white wire.

This procedure will toggle the Full/Split mode.



### LED FIVE YEAR LIMITED WARRANTY

The manufacturer warrants this LED light against factory defects in material and workmanship for five years after the date of purchase. The owner will be responsible for returning to the Service Center any defective item(s) with the transportation costs prepaid. The manufacturer will, without charge, repair or replace *at its option*, products, or part(s), which its inspection determines to be defective. Repaired or replacement item(s) will be returned to the purchaser with transportation costs prepaid from the service point. A copy of the purchaser's receipt must be returned with the defective item(s) in order to qualify for the warranty coverage. Exclusions from this warranty include, but are not limited to, domes, and/or the finish. This warranty shall not apply to any light, which has been altered, such that in the manufacturer's judgment, the performance or reliability has been affected, or if any damage has resulted from abnormal use or service.

There are no warranties expressed or implied (including any warranty of merchantability or fitness), which extend this warranty period. **The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages, including costs of any labor, are not covered.** The manufacturer reserves the right to change the design of the product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights. You might also have additional rights that may vary from state to state. Some states do not allow limitations on how long an implied warranty lasts. Some states do not allow the exclusion or limitation of incidental or consequential damages. Therefore, the above limitation(s) or exclusion(s) may not apply to you.

If you have any questions concerning this or any other product, please contact our **Customer Service Department** at (585) 226-9787.

If a product must be returned for any reason, please call the Customer Service number listed above and ask for the Repair Department to obtain a Returned Material Authorization number (RMA #) before you ship the product back. Please write the RMA # clearly on the package near the mailing label.

These lights use state-of-the-art Light Emitting Diode (LED) technology. These warning lights are comprised of ultra-high intensity LEDs that are controlled by a solid state flasher unit to efficiently produce light output with lifetimes up to 100,000 hours. Under normal circumstances, you will not need to replace any LEDs in this light. If any of the LED's in your light do fail, please contact Star Headlight for arrangements to have them repaired. The flasher unit and heads CANNOT be serviced in the field and any attempt to do so will void the warranty.



**Please Note:** These instructions are provided as a general guideline only. Specific mounting, wiring, and/or weather-sealing may be necessary and are the sole responsibility of the installer. Signal Vehicle Products assumes no responsibility for the integrity of the installation for this or any of its products.

### NOTICE

Due to continuous product improvements, we must reserve the right to change any specifications and information, contained in this manual at any time without notice. Star Headlight & Lantern Co., Inc. makes no warranty of any kind with regard to this manual, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. Signal Vehicle Products, Inc. shall not be liable for errors contained herein or for incidental or consequential damages in connection with the furnishing, performance, or use of this manual.