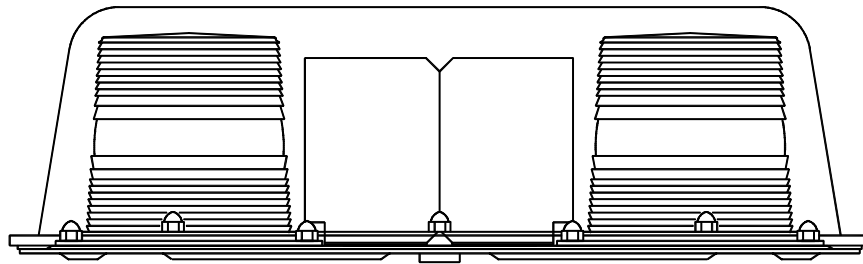

INSTALLATION AND INSTRUCTION MANUAL

9200 HALO Series LED Minibars

featuring the



9200HL Series
(4-LED Heads)

9200H8L Series
(8-LED Heads w/Rotating Patterns)



PROUDLY MADE IN THE USA
An ISO 9001:2008 Certified Company

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

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. Star Headlight & Lantern Co., Inc. assumes no responsibility for the integrity of the installation for this or any of its products.

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Magnet Mounting

If you are mounting the light on the roof of your vehicle, take extreme care to ensure that the magnet is firmly seated on your roof, and that the pull of the magnet is sufficient to secure the light in place. As the composition of the metal in the roofs of different vehicles may vary, as well as the contour, texture and/or condition, Star cannot guarantee the ability of the light to remain in place upon a moving vehicle. It is the sole responsibility of the owner to ensure the warning light is secure.

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.

- **CAUTION:** Please be sure to check that your cigarette plug outlet is properly fused. **Testing the light before this fuse is properly installed will void the warranty on the light.**
- Once the light is secured, route your cord such that it does not interfere with the vision of the driver or the operation of any controls, including, but not limited to, the steering wheel, gear shifter, and/or airbag.
- This light has been factory tested and approved. If the light fails to work when the plug is inserted into the cigarette plug socket, twist the plug a few times to remove any ash or other deposits which might be preventing a good contact from being made. If the problem persists, check for a fuse inside of the plug itself. If present, remove the fuse from the circuit, check to see if it has blown, and clean the lighter socket and contact surfaces. Reconnect the fuse and test the light again.

Permanent Mounting

1. **CAUTION:** All of our DC powered warning lights are polarity sensitive. These lights are polarity protected *only if the appropriate fuse* is used. All wires connected to the positive terminal of the battery should be fused at the battery for their rated load. **Testing the light before this fuse is properly installed will void the warranty on the light.**
2. Remove the dome from your mini-bar. Take care not to damage the gasket. Place the light in the exact position it is to be mounted.
3. Using the base as a template, mark four holes on the mounting surface. Take care to ensure that the base does not move while you are marking each of the four holes.
4. Remove the base and drill a 3/8" hole in the four marked spots.
CAUTION: Take care not to drill through the headliner below.
5. Push the enclosed rubber well nuts through the holes until the bottom side of the wider lip rests on the surface of the vehicle.
6. *For external wiring of your new Star mini-bar skip to Step 8. For internal wiring, proceed as follows:* Remove the headliner from the inside of the vehicle. Draw two diagonal lines between the well nuts in the opposite corners. Mark the location at which they cross. Drill a 3/8" hole in the center marked location. Place the light on the surface of the vehicle, routing the wires through the hole. Align the four other holes with the well nuts, install the screws, and tighten until snug. Skip to Step 8.
7. *For external wiring,* place the light on the mounting surface and align the holes with the well nuts. Install the screws and tighten until snug.
8. Replace the dome on your mini-bar.

Wiring Instructions

CAUTION: All of our DC powered warning lights are polarity sensitive. These lights are polarity protected *only if the appropriate fuse is used*. All wires connected to the positive terminal of the battery should be fused at the battery for their rated load. **Testing the light before this fuse is properly installed will void the warranty on the light.**

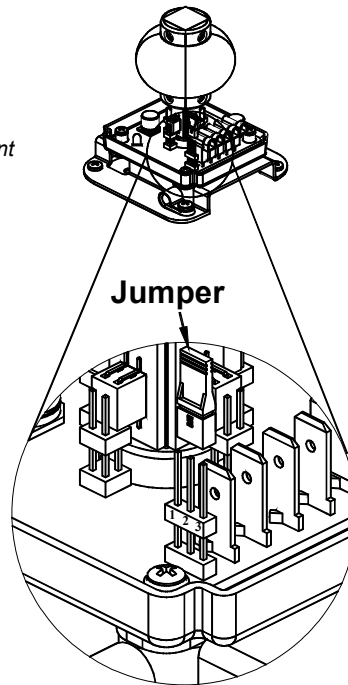
If your light has a cig plug, you can skip this section and continue to Pattern Programming below.

Black	Ground
Red	Power (+12-24VDC)
Purple	High/Low Control (Ground for Low)
Green	Pattern Select (Touch and Release to Ground)
White	Synchronization (see page 5)

1. The black wire is the ground lead and should be connected to a good chassis ground.
2. The purple wire is used for High/Low power selection. Leave it disconnected for constant high power. Connect it to Ground for constant low power. Connect it to Ground through a switch for High/Low select.
3. Connect the red wire to the positive side of your power source (+12-24VDC) through a switch and a 5 Amp fuse. *Be sure to check your light for proper voltage.*

Pattern Programming

1. Setting the flash pattern of your light can be performed in several ways, depending upon which version of the light you have:
 - An internal jumper (*both the hard wired/permanent mount version, and the cig plug/mag mount version*) - see diagram to right
 - The green wire (*hard wired versions only*)
 - The Pattern Select switch (*cig plug versions only, see below*)



(Pattern Programming Cont'd)

2. If you are installing a permanent mount version and you will NOT be synchronizing two lights together, cut the white wire short and tape it off so that it does not come into contact with anything.
3. After the black and red wires are connected (permanent mount versions) or the cig plug is inserted into a live receptacle (vacuum-magnet mount versions) you may set the flash pattern. The green wire (hard wire versions only), Pattern Select Switch (cig plug versions only), or internal jumper will be used to preset the desired flash pattern.
4. These lights have 12 patterns to select from (Refer to pattern list on next page).
5. The flash pattern for these lights is preset at the factory. The 9200HL are set for Pattern #6 (Quadflash) and the 9200H8L are set for Pattern 4 (CCW Rotation 1). You can cycle through the other patterns by briefly touching the green wire to ground for approximately 1 second and releasing it. Touch and release the green wire to ground until you find the desired pattern. The Pattern Select Switch or internal jumper can also be used to change the pattern in the same fashion as the green wire. Remove the jumper from pins 2&3. Then touch and release it to pins 1&2 to scroll through the patterns as described previously. Once you have selected the pattern you desire, return the jumper to pins 2&3.

Note: Referring to drawing on the previous page: Jumper pins 1&2 to change pattern. Jumper pins 2&3 for storage.

6. After the pattern has been set, tape, or place a wirenut over the end of the green wire to prevent it from coming into contact with ground again (permanent mount) or return the jumper to pins 2&3. The light will "remember" the pattern when switched off and that pattern will be displayed the next time the light is switched on.
7. **SHORTCUTS:** There are a number of "shortcuts" available to make the programming of your light easier:

Review the chart below for a list of how long you need to touch the green wire to ground (or hold the jumper on pins 1 and 2) to go to the desired pattern.

<u>Length of Hold</u>	<u>Unit Blinks</u>	<u>9200HL Jumps To</u>	<u>9200H8L Jumps To</u>
1 second	Does Not	Next Pattern	Next Pattern
3 seconds	1 time	Pattern 1	Pattern 4
6 seconds	2 times	Pattern 6	Pattern 6
12 seconds	3 times	Steady Burn	Steady Burn

Pattern List

Flash Pattern #	Pattern Type	Pattern Description	CPS	Pattern Defaults
1	K	Flicker †	1	3Sec <i>(Non-Rotating Only)</i>
2	L	Fast Doubleflash	3.3	
3	M	Tripleflash	2.5	
4	N	PSU Flicker <i>(Non-Rotating Models)</i>	0.7	3Sec <i>(Rotating Only)</i>
	A5	CCW Rotation 1 <i>(Rotating Models)</i> †	1.3	
5	O	PSU Random <i>(Non-Rotating Models)</i>	0.6	
	A6	CCW Rotation 2 <i>(Rotating Models)</i>	2.7	
6	F	Quadflash †‡	1	6Sec
7	G	Quadflash w/Post-Pop †‡	1	
8	H	Singleflash †‡	1	
9	I	Doubleflash †‡	1	
10	J	Variable AKA Delta-Omega	0.3	
11	C	Post pop 1.4CPS	1.4	
12	E	Random 0.4CPS	0.4	
NA		Steady	NA	18Sec

† - **Approved patterns for SAE J845**

‡ - **California Title 13**

To set the light to one of the **Pattern Defaults**, hold green wire to GND for the appropriate time as stated in pattern list.


To increment through pattern list, momentarily connect Green wire to GND and release.



Synchronization of Multiple Lights

(Permanent Mount Versions Only)

You can synchronize up to six total **S-LINK SYSTEM** approved lights.

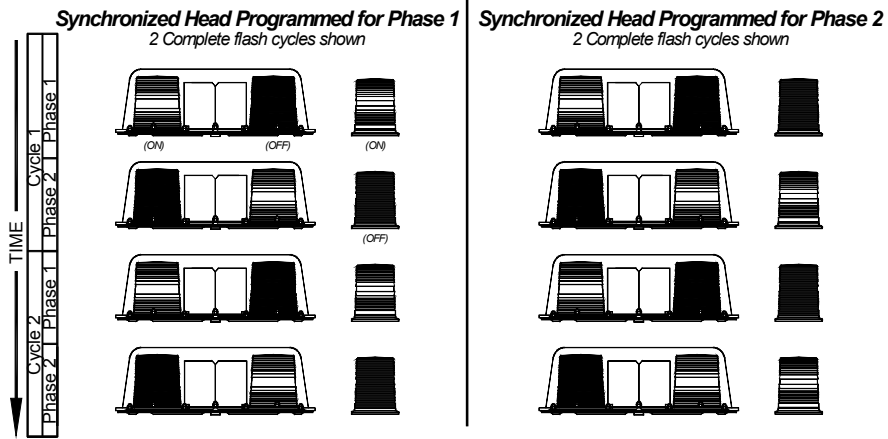


If you will be synchronizing two or more units together, leave the white wires disconnected until programming for each has been completed. Connect the white wires from the units together **ONLY AFTER PROGRAMMING** them all for the same **Pattern Type** (Phase MAY differ).

If you will be synchronizing your light with any of our **S-LINK SYSTEM** products, please note the following:

- All units that are to be synchronized MUST have the same **Pattern Type**.
- To check pattern compatibility with other “S-Link” products, review the **Pattern List** for each product, noting the **Pattern Type**. Certain patterns are compatible with some lights, but not compatible with others.
- Although the programmable **Flash Patterns** can vary between our different lights, Pattern Types F, G, H, I, & J are fully compatible patterns with ALL of our other “S-Link” products.

Please Note: Most of our **S-LINK SYSTEM** compatible products have patterns that can be programmed for Phase 1 or Phase 2. The 9200 HALO minibars have only one Phase in which the pattern selected alternates between the two halves of the minibar. When synchronizing any other **S-LINK SYSTEM** light (excluding 9200 HALO), the Phase of the additional light being synchronized will determine which half of the minibar the additional light flashes in conjunction with.



(Synchronizing Cont'd)

1. Review the **Pattern List** for each synchronized product, noting the **Pattern Type** for each product.
2. Select a **Pattern Type** that is compatible with all of the lights/flashers you will be synchronizing.
3. Program each light according to the instructions enclosed with each. **For lights that have patterns with a Phase:** All lights programmed for the same Phase will flash ON and OFF at the same time (flash simultaneously). Lights that are programmed for different phases will flash opposite one another (alternate).
4. **After** you have the correct patterns programmed for **ALL** of the lights you wish to synchronize, **turn all of the lights off** and connect the white wires from all units together.
5. Power all of the lights up **at the exact same time** to verify they are flashing in the desired pattern. **Power MUST be applied to all synchronized lights simultaneously. Excessive switch bounce or attempting to power the units up independently will result in erratic operation.**

High/Low Power Settings

There are 3 modes these lights can be set to work in:

- **Constant High Power**
- **Constant Low Power**
- **Manually Switched High/Low Power**

High Power Only: Cut the Purple wire short and tape it off

Low Power Only: Connect the Purple wire to Ground

High/Low Switching: Connect the Purple wire to Ground through a switch

Low Voltage Detection (Units with 8-LED Heads Only)

The units with 8-LED heads have low input voltage detection. With this feature the beacon senses the input voltage and flashes a fast pattern (approximately 16 cycles per second) to indicate to the user that the battery voltage is low (less than 10V). Once the input voltage returns to normal (greater than 12V) the unit will return to the normal flashing.

Service

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 your distributor 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.

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 contact our Customer Service Department to obtain a Returned Materials Authorization number (RMA #) before you ship the product back.

Please write the RMA # clearly on the package near the mailing label.



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