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# ***SKYLINE AIR S***

## INSTALLATION MAINTENANCE & SERVICE MANUAL

SKYLINE AIR S-X6  
V1.0

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## SAFETY PRECAUTIONS

The Manual provides all the necessary information for carrying out correct installation. Be sure to read this Manual thoroughly before proceeding with the installation and/or operation of the product so as to prevent serious injury or damage.

1. Proper installation of the lightbar requires the installer to have a good knowledge of automotive electronics, systems and procedures. Necessary raining is required for operators to ensure safety of emergency personnel and the public.
2. Failure to use specified installation parts and/or hardware will void the product warranty.
3. Make a drilling and wiring plan before installation. Please guarantee no vehicle components or other vital parts could be damaged by the drilling process. 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.
4. The product must be proper grounded in case of any high current arching. Make sure to follow all wiring guidelines provided in the manual to ensure safety and productivity.
5. The vehicle operator should ensure daily that the product is securely fastened to the vehicle and all features work correctly.
6. The use of this or any other warning device does not ensure all drivers can or will observe or react to an emergency warning signal. Never take the right-of-way for granted. It is your responsibility to be sure you can proceed safely before entering an intersection, drive against traffic, respond at a high rate of speed, or walk on or around traffic lanes.
7. The equipment is intended for use by authorized personnel only. The user is responsible for understanding and obeying all laws regarding emergency warning devices. Therefore, the user should check all applicable city, state, and federal laws and regulations.The manufacturer assumes no liability for any loss resulting from the use of this warning device.
8. It is recommended to keep this Manual on hand for future use like relocating or repairing the unit.

## WARRANTY

911 Signal warrants that under normal use the product will be defect-free, with respect to materials and workmanship, for a two-year period from original date of purchase. In the event of a suspected defect, please contact 911 Signal customer support (www.911signal.com) for assistance. At it's option, 911 Signal's obligations will be solely limited to product repair or replacement. Warranty does not apply to cases of damage due to misuse, accident, or normally-expected wear. Due to possible errors in resealing, this product is not warranted against leaking of the waterproof housing or any resulting damage. All warranties implied with respect to merchantability or fitness for a particular use are expressly limited to the warranty duration.

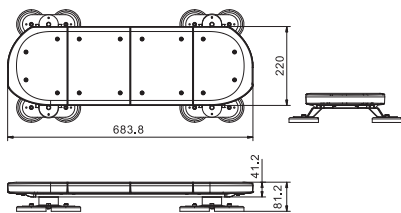
911 Signal disclaims all other warranties or conditions whether expressed or implied.

To the full extent not prohibited by law 911 Signal will in no event be liable for any revenues, profits, or damages, whether indirect, incidental, or punitive and however consequential, arising out of or relating to inability to use the product. This will hold even should 911 Signal be advised as to the possibility of damages, and in no event will 911 Signal's liability exceed the amount customer has paid to purchase the product.

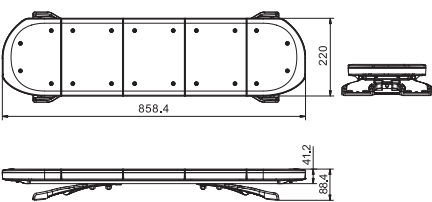
Limitations or exclusions listed above may not apply for particular customers, as certain jurisdictions disallow implied warranty limitations with respect to term validity, or the exclusion or limitation of incidental or consequential damages. This warranty imparts specific legal rights, and perhaps others, depending on jursidiction.

PRODUCT SPECIFICATIONS

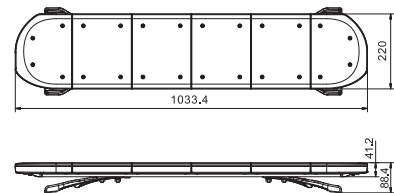
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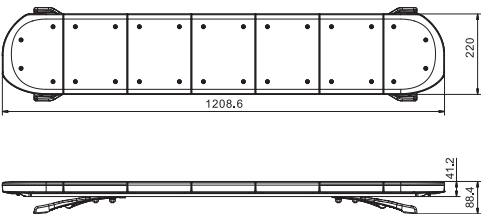
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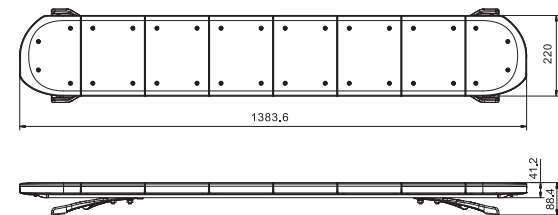
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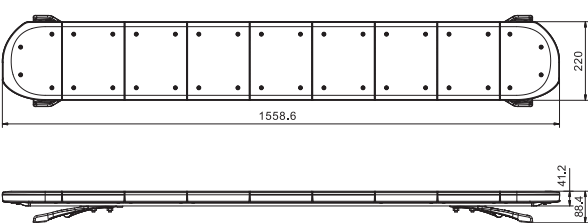
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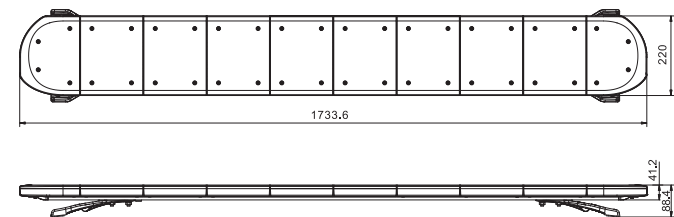
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61"



68"



WIRING DIAGRAMS

POWER CONNECTION

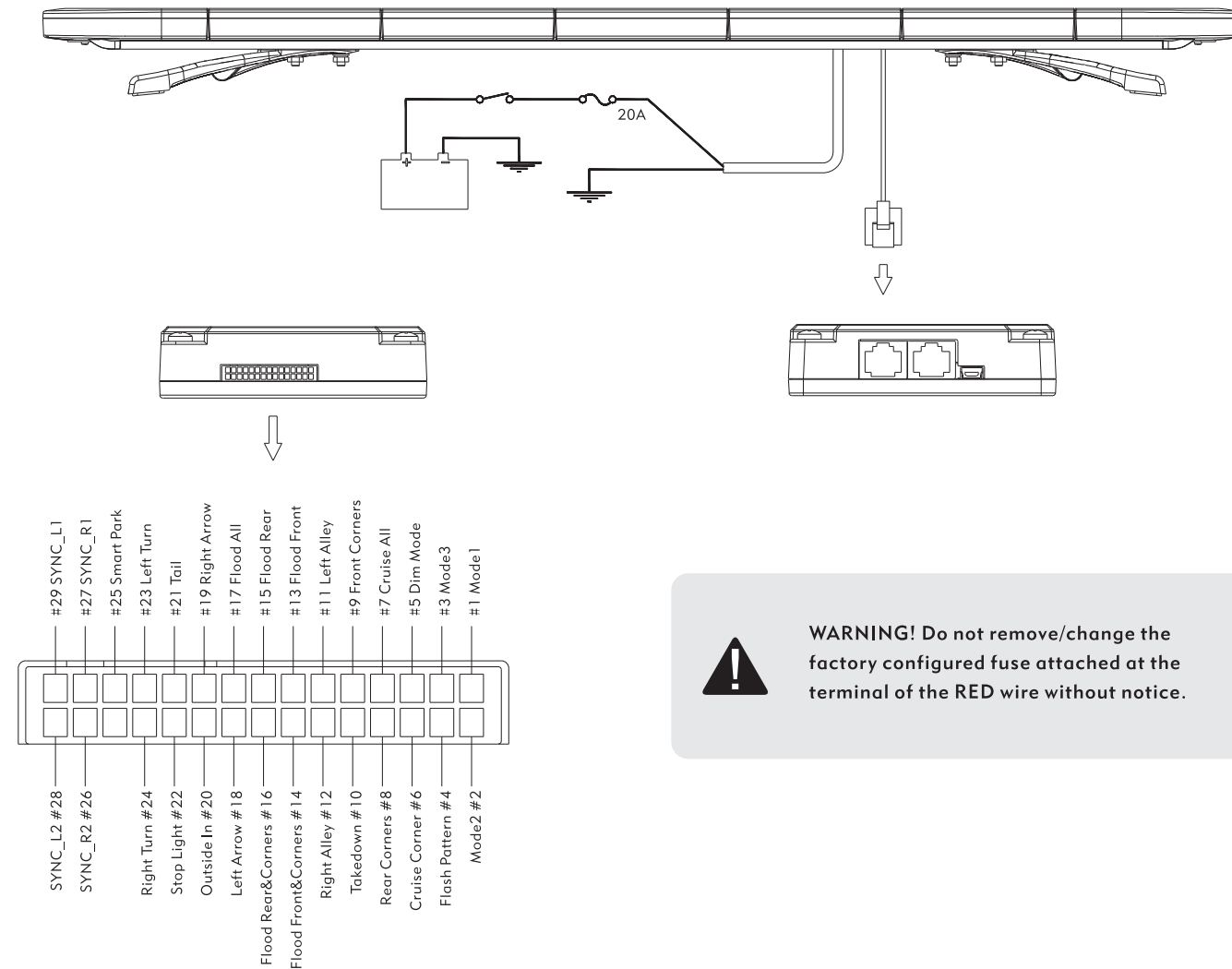
Wire Color	Function	Description
Red	Positive	Extend to vehicle's positive battery post
Black	Ground	Extend to vehicle's negative battery post

FUNCTION CONFIGURATION

Wire #	Function	Polarity	Description
1	Mode1	+VBAT	Warning Mode1, single flash- color 1 (overrides mode3)
2	Mode2	+VBAT	Warning Mode2, dual flash (overrides Mode1 &3)
3	Mode3	+VBAT	Warning Mode3, single flash- color 2
4	Flash Pattern	+VBAT	Cycles through flash patterns
5	Dim Mode	+VBAT	Dimming the lightbar(Traffic Arrow, Takedown, alley lights and flood lights not affected)
6	Cruise Corner	+VBAT	Corner Modules(50% brightness)
7	Cruise All	+VBAT	All Modules (50% brightness); flash once every 3 seconds
8	Rear Corners	+VBAT	Activates rear-facing flashing modules & corners(Available when warning mode 1/2/3 is activated)
9	Front Corners	+VBAT	Activates front-facing flashing modules & corners (Available when warning mode 1/2/3 is activated)
10	Takedown	+VBAT	Override flashing
11	Left Alley	+VBAT	Activates left alley lights; Steady burn(overrides flashing)
12	Right Alley	+VBAT	Activates right alley lights; Steady burn(overrides flashing)
13	Flood Front	+VBAT	Activates the flood mode of front facing modules
14	Flood Front&Corners	+VBAT	Activates the flood mode of front facing modules & corners
15	Flood Rear	+VBAT	Activates the flood mode of rear facing modules
16	Flood Rear&Corners	+VBAT	Activates the flood mode of rear facing modules & corners
17	Flood All	+VBAT	Activates all flood modules
18	Left Arrow	+VBAT	Overrides flashing
19	Right Arrow	+VBAT	Overrides flashing
20	Outside In	+VBAT	Overrides flashing
21	Tail	+VBAT	Steady burn (20% brightness)
22	Stop Light	+VBAT	Overrides Tail lights
23	Left Turn	+VBAT	Overrides Stop & Tail lights
24	Right Turn	+VBAT	Overrides Stop & Tail lights
25	Smart Park	+VBAT	The warning mode 1/2 dims to 50% brightness with 60fpm single flash
26	SYNC_R2		Connect to the white wire of the right lighthouse for sync
27	SYNC_R1		Connect to the brown wire of the right lighthouse for sync
28	SYNC_L2		Connect to the white wire of the left lighthouse for sync
29	SYNC_L1		Connect to the brown wire of the left lighthouse for sync

NOTE: All the function wires are marked with black number on the white background

## WIRING FUNCTIONS



### • POWER CABLE WIRING

1. Extend the **RED** wire to the +VBAT.
2. Properly connect the **BLACK** wire to the ground.
3. Connect the Functional Wires to your controller or switching unit depending on the functions needed for application. Applying +VBAT to any functional Wire will activate its function.

### • WARNING LIGHTS

1. Apply the +VBAT to **#1, #2 or #3** wire to activate Mode1, Mode2, or Mode 3
2. With desired warning mode 1/2/3 connected to VBAT, apply the +VBAT to **#8** wire to activate Rear Corners
3. With desired warning mode 1/2/3 connected to VBAT, apply the +VBAT to **#9** wire to activate Front Corners

### • FLASH PATTERNS

1. Connect the +VBAT to **#1, #2 or #3** wire to activate Mode1, Mode2, or Mode 3
2. To advance the flash pattern by applying **#4** wire to a +VBAT momentary switch or tap the **#4** wire to +VBAT for 1 second.
3. Flash pattern will be reset when **#4** wire is connected to +VBAT for more than 5 seconds.

### • ALLEY LIGHTS

1. Applying +VBAT to the **#11** wire will activate the Left Alley.
2. Applying +VBAT to the **#12** wire will activate the Right Alley.
3. Alley Lights override warning modes.



**NOTE:** To configure the patterns of CRUISE ALL MODE, TRAFFIC ARROW and TAKE DOWN, make sure only one desired function wire is connected to the +VBAT, and then tap the **#4** wire (flash pattern wire) to +VBAT for 1 second.

### • TRAFFIC ARROW

1. Apply +VBAT to the **#18** wire will activate the Left Arrow.
2. Apply +VBAT to the **#19** wire will activate the Right Arrow.
3. Apply +VBAT to the **#20** wire will activate the Outside-in Arrow.
4. Centre out mode is activated by connecting both **#18 & #19** wires to +VBAT.
5. With the desired traffic arrow wire connecting to +VBAT, advance the pattern for each mode by tapping the **#4** wire to +VBAT for 1 second.



**NOTE:** Arrow function overrides all warning modes on all rear-facing modules (not including corners).

### • DIM MODE

Activate Dim Mode by applying **#5** wire to +VBAT to operate lighting at reduced intensity of 50% brightness. Traffic Arrow, Takedown, alley lights and flood lights are not affected.

### • FLOOD MODE

Apply desired Flood Mode wire to +VBAT for activation of each of 5 modes. Flood modes override flashing.

1. Activate Flood Front by applying **#13** wire to +VBAT.
2. Activate Flood Front&Corners by applying **#14** wire to +VBAT.
3. Activate Flood Rear by applying **#15** wire to +VBAT.
4. Activate Flood Rear&Corners by applying **#16** wire to +VBAT.
5. Activate Flood All by applying **#17** wire to +VBAT.

### • CRUISE MODE

1. Activate the Cruise Corner mode by applying **#6** wire to +VBAT.
2. Activate the Cruise All mode by applying **#7** wire to +VBAT.
3. With **#7** wire connecting to +VBAT, apply **#4** to +VBAT for 1 second to advance the pattern of the Cruise All mode.

### • TAKEDOWN

1. Apply +VBAT to the **#10** wire to activate the factory configured takedown function.
2. To advance the takedown pattern by tapping the **#4** wire to +VBAT for 1 second.

### • STOP / TAIL / TURN

If lightbar is built with stop/tail/turn modules as specified at time of order, separate control wires are included to control stop, tail, left turn and right turn. STT overrides flashing

1. Activate Tail Light by applying **#21** wire to +VBAT.
2. Activate Stop Light by applying **#22** wire to +VBAT.
3. Activate Left Turn by applying **#23** wire to +VBAT.
4. Activate Right Turn by applying **#24** wire to +VBAT.

### • SMART PARK

Activate Smart Park by applying **#25** wire to +VBAT to operate lighting at reduced intensity of 50% brightness with 60 fpm single flash.



**NOTE:** Smart Park can only be activated when Warning Mode1 or Warning Mode2 is on.

FLASH PATTERNS

CRUISE PATTERNS

#	NAME
1	Steady
2	California/Single
3	California/Quint

ARROW PATTERNS

#	NAME
1	Forward/Back
2	Hop
3	Padding
4	Pursuit
5	Combo

FLASH PATTERNS

#	NAME	FPM	#	NAME	FPM
1	Single R65 L/R	125	31	Single ALL	60
2	Double R65 L/R		32	Single L/R	
3	Triple R65 L/R		33	Single Split1	
4	Single R65 ALL		34	Single In/Out	
5	Double R65 ALL		35	Single Combo	
6	Single ALL	75	36	Single ALL	90
7	Single L/R		37	Single L/R	
8	Single Split1		38	Single Split1	
9	Single In/Out		39	Single In/Out	
10	Single Combo		40	Single Combo	
11	Double ALL		41	Single ALL	120
12	Double L/R		42	Single L/R	
13	Double Split1		43	Single Split1	
14	Double In/Out		44	Single In/Out	
15	Double Combo		45	Single Combo	
16	Quad ALL		46	Single ALL	240
17	Quad L/R		47	Single L/R	
18	Quad Split1		48	Single Split1	
19	Quad In/Out		49	Single In/Out	
20	Quad Combo		50	Single Combo	
21	Quint ALL		51	Single-Quad ALL	75
22	Quint L/R		52	Single-Quad L/R	
23	Quint Split1		53	Single-Quad Split1	
24	Quint In/Out		54	Single-Quad In/Out	
25	Quint Combo		55	Long-Short ALL	75
26	HandFull ALL		56	Long-Short L/R	
27	HandFull L/R		57	Long-Short Split1	
28	HandFull Split1		58	Long-Short In/Out	
29	HandFull In/Out		59	Accelerator ALL	
30	HandFull Combo		60	Accelerator L/R	
			61	Accelerator Split1	
			62	Accelerator In/Out	

MOUNTING

HOOK BRACKET MOUNTING

Hook bracket needs to be ordered seperately

- Carefully remove the lightbar and mounting kits, and place them on a flat surface, examine the unit and components before installation.
- Slide the hex bolt through the hook bracket hole. See figure 1.
- Using the socket wrench to loosely secure the hook bracket to the foot bracket with the hex bolt. Repeat on the other side of the lightbar so both sides have the hook brackets loosely secured.
- Place the lightbar with hook brackets centered on the roof and level with the vehicle. Adjust the hook bracket until it is up right and in exact position.
- Secure and tighten the bracket on each side of the vehicle until the lightbar is firmly mounted. Ensure that the vehicle’s door will close without any interference.
- Using the two pilot holes at the end of the hook bracket as a template, drill 2 holes in the roof using the appropriate size drill and secure the bracket to the vehicle with tapping screws on each side. See figure 2.

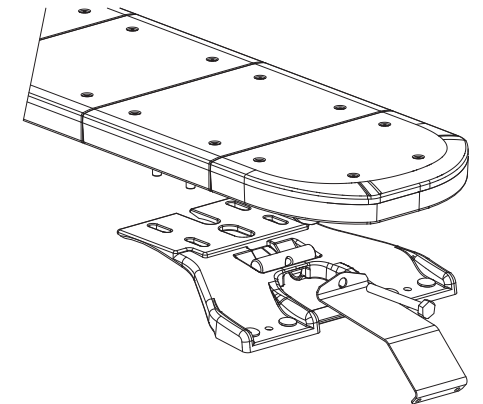


Figure1

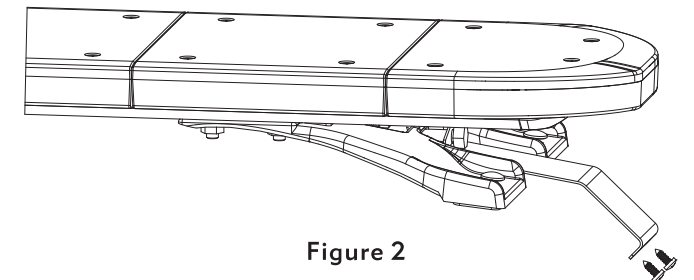


Figure 2

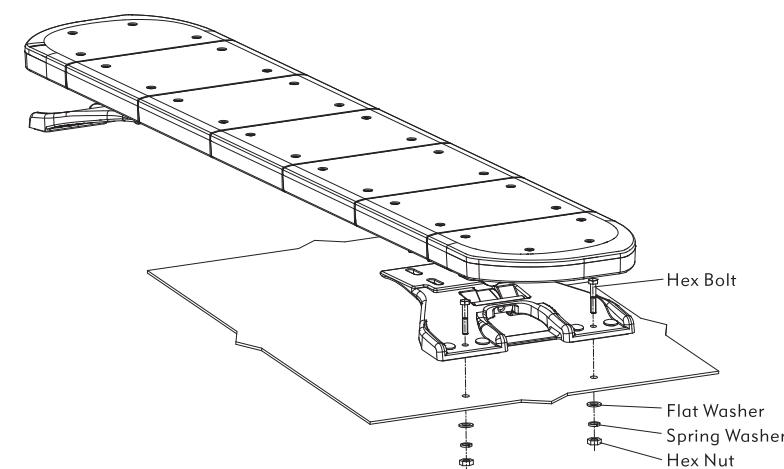
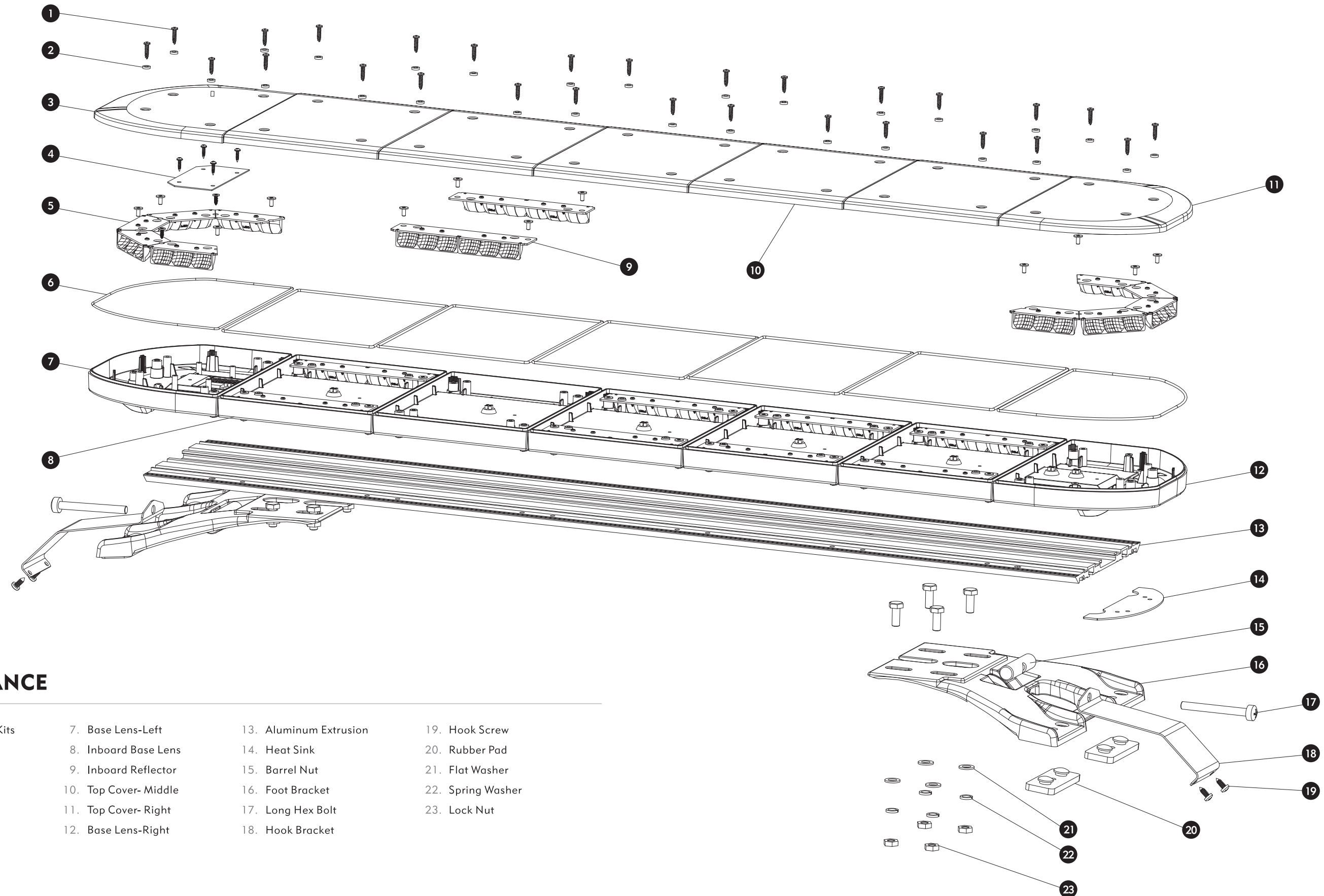


Figure 3

PERMANENT MOUNTING

- Carefully remove the lightbar and mounting kits and place them on a flat surface, examine the unit and components before installation.
- Place the lightbar onto the vehicle roof in its exact mounting location and mark the location of the mounting holes onto the surface of the roof using the feet bracket as templates.
- Remove the lightbar and drill the 4 mounting holes
- Install the lightbar using the supplied Hex Bolt, Flat Washer, Spring Washer and Hex Nut . See figure 3.





## MAINTENANCE

- |                         |                       |                        |                   |
|-------------------------|-----------------------|------------------------|-------------------|
| 1. Top Cover Screw Kits | 7. Base Lens-Left     | 13. Aluminum Extrusion | 19. Hook Screw    |
| 2. Seal Washer          | 8. Inboard Base Lens  | 14. Heat Sink          | 20. Rubber Pad    |
| 3. Top Cover-Left       | 9. Inboard Reflector  | 15. Barrel Nut         | 21. Flat Washer   |
| 4. PCB                  | 10. Top Cover- Middle | 16. Foot Bracket       | 22. Spring Washer |
| 5. Corner Reflector     | 11. Top Cover- Right  | 17. Long Hex Bolt      | 23. Lock Nut      |
| 6. Seal Ring            | 12. Base Lens-Right   | 18. Hook Bracket       |                   |