

WHELEN[®]

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Installation Guide: Freedom™ Towman's Edge® HC Series Lightbar

Safety First

This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained herein that could prevent serious injury or damage.

- Proper installation of this product requires the installer to have a good understanding of automotive electronics, systems and procedures.
- If mounting this product requires drilling holes, the installer **MUST** be sure that no vehicle components or other vital parts could be damaged by the drilling process. Check both sides of the mounting surface before drilling begins. Also de-burr any holes and remove any metal shards or remnants. Install grommets into all wire passage holes.
- If this manual states that this product may be mounted with suction cups, magnets, tape or Velcro®, clean the mounting surface with a 50/50 mix of isopropyl alcohol and water and dry thoroughly.
- Do not install this product or route any wires in the deployment area of your air bag. Equipment mounted or located in the air bag deployment area will damage or reduce the effectiveness of the air bag, or become a projectile that could cause serious personal injury or death. Refer to your vehicle owner's manual for the air bag deployment area. The User/Installer assumes full responsibility to determine proper mounting location, based on providing ultimate safety to all passengers inside the vehicle.
- For this product to operate at optimum efficiency, a good electrical connection to chassis ground must be made. The recommended procedure requires the product ground wire to be connected directly to the **NEGATIVE (-)** battery post.
- If this product uses a remote device to activate or control this product, make sure that this control is located in an area that allows both the vehicle and the control to be operated safely in any driving condition.
- Do not attempt to activate or control this device in a hazardous driving situation.
- This product contains either strobe light(s), halogen light(s), high-intensity LEDs or a combination of these lights. Do not stare directly into these lights. Momentary blindness and/or eye damage could result.
- Use only soap and water to clean the outer lens. Use of other chemicals could result in premature lens cracking (crazing) and discoloration. Lenses in this condition have significantly reduced effectiveness and should be replaced immediately. Inspect and operate this product regularly to confirm its proper operation and mounting condition. Do not use a pressure washer to clean this product.
- It is recommended that these instructions be stored in a safe place and referred to when performing maintenance and/or reinstallation of this product.
- **FAILURE TO FOLLOW THESE SAFETY PRECAUTIONS AND INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PRODUCT OR VEHICLE AND/OR SERIOUS INJURY TO YOU AND YOUR PASSENGERS!**

For warranty information regarding this product, visit www.whelen.com/warranty

IMPORTANT! The lightbar should be located a minimum of 16" from any radio antennas!

Mounting your Lightbar:

This lightbar mounts with 3 bolts, affixed to mounting plates that slide into the track on the bottom of the lightbar base. The slide bolt assembly slides into your lightbars base and mounts onto the vehicle. When you secure the slide bolts to the lightbar base, be sure the outside bolts are spaced far enough apart and near enough to the ends of the vehicle roof.

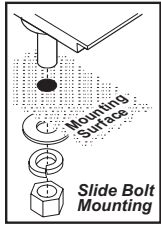
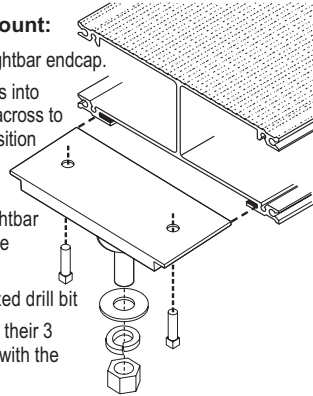


Fig. 1 / Bolt Mount:

1. Remove one lightbar endcap.
2. Insert slide bolts into base, slide them across to their mounting position and secure with set screws.
3. Position the lightbar onto the vehicle and mark the 3 bolt hole locations on the mounting surface.
4. Drill 3 holes with an appropriately sized drill bit
5. Replace end cap and insert bolts into their 3 mounting holes and secure the lightbar with the supplied mounting hardware.



Control cable:

The 12-conductor cable exiting the lightbar will control your LEDs. Connect the BLACK wire to ground and activate the LED functions by applying positive voltage to the control wires. Extend this cable towards your switch panel. The instructions included with your switches will provide the necessary switch wiring information.

Freedom™ Towman's Edge® Lightbar				
Wire Size	Color	Function	Fuse @	
14 AWG	RED	Outer Corner LEDs	7.5 Amps	
14 AWG	RED-WHITE	Inboard LEDs	7.5 Amps	
14 AWG	RED-BLACK	Not Used	N/C	
8 AWG	BLACK	Ground	N/C	
← DRAIN (SHIELD) WIRE				
16 AWG	WHITE	Right Brake Light	3 Amps	
16 AWG	YELLOW	Left Brake Light	3 Amps	
16 AWG	VIOLET	Low Intensity	1 Amp	
16 AWG	WHITE-BLACK	Work Lights	10 Amps	
16 AWG	WHITE-BROWN	Rear Flasher	5 Amps	
16 AWG	WHITE-RED	Front Flasher	5 Amps	
16 AWG	WHITE-BLUE	Scan-Lock™	1 Amp	
16 AWG	WHITE-ORANGE	Taillights	3 Amps	

WARNING! All Customer supplied wires that connect to the positive terminal of the battery must be sized to supply at least 125% of the maximum operating current and FUSED at the battery to carry that load. DO NOT USE CIRCUIT BREAKERS WITH THIS PRODUCT!

Operation:

Hi/Low Power (VIOLET):

The type of switch used is dependant on how the operator wishes the Hi/ Low feature to function:

Latching Mode: By applying +12 VDC voltage to the VIOLET wire for less than 1 second, the lightbar is "latched" into low power operation. The unit must be turned off and then back on to restore normal, high power operation (a momentary switch is preferred).

Level Mode: Applying +12 VDC voltage to the VIOLET wire for more than 1 second holds the lightbar in low power mode until voltage is removed (a toggle switch is preferred).

Scan-Lock™ (WHITE/BLUE):

TO CYCLE FORWARD THROUGH ALL PATTERNS: With all other functions off, activate the desired function. Apply +12VDC to the Scan-Lock wire for less than 1 second and release.

TO CHOOSE A PATTERN: Allowing a pattern to run for more than 5 seconds will make it the default pattern.

TO RESET TO THE FACTORY DEFAULT PATTERN: With all functions off, while applying +12VDC to the Scan-Lock wire turn on the desired function.

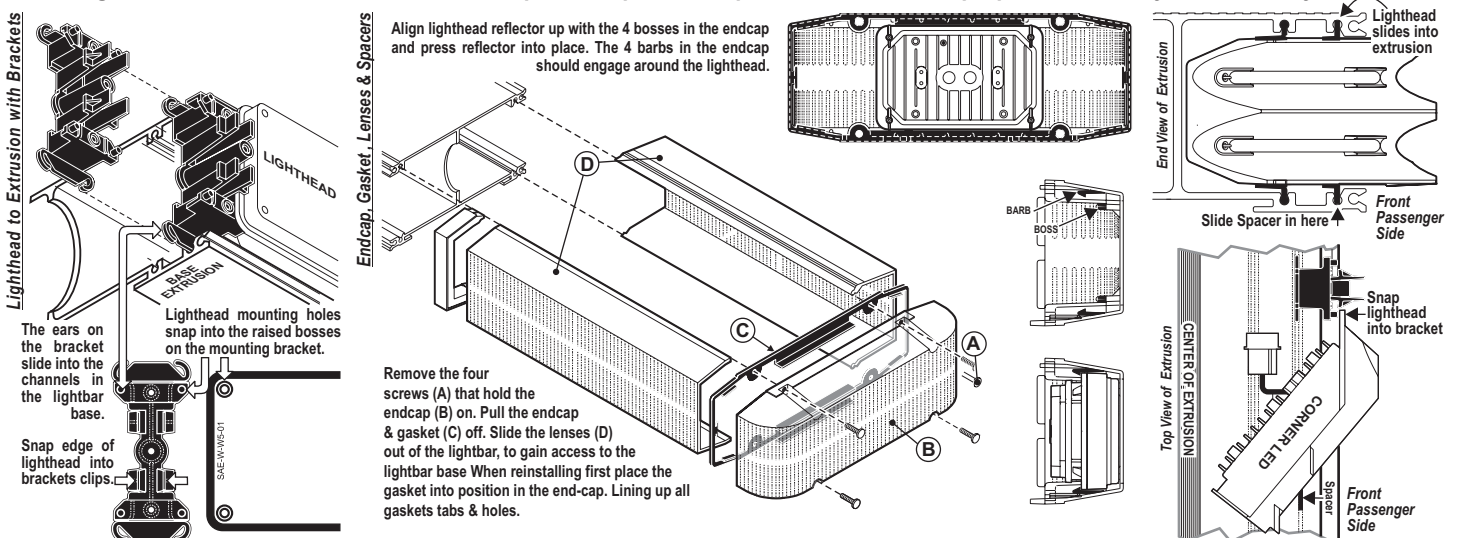
Available Flash Patterns: CometFlash® 150 Alternating > CometFlash® 150 Simultaneous > CometFlash® 150 California > DoubleFlash 240 Alt. > DoubleFlash 240 Sim. > DoubleFlash 120 Alt. > DoubleFlash 120 Sim. > SingleFlash 375 Alt. > SingleFlash 375 Sim. > SingleFlash 150 Alt. > SingleFlash 150 Sim. > SingleFlash 75 Alt. > SingleFlash 75 Sim. > SignalAlert™ 150 Alt. > SignalAlert™ 150 Sim. > ActionFlash™ Alt. > ActionFlash™ Alt.-Sim. > ActionFlash™ Sim. > ModuFlash™ Alt. > ModuFlash™ Sim. > ActionScan™

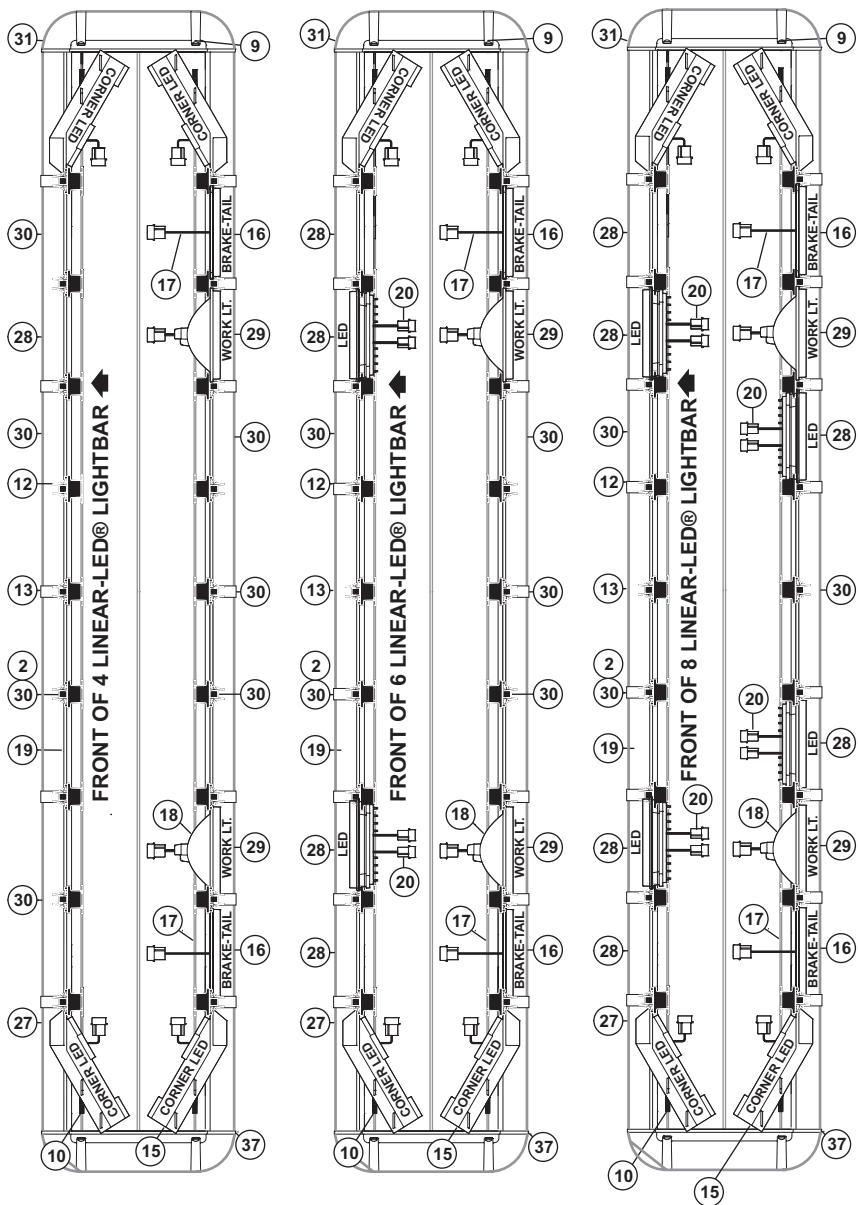
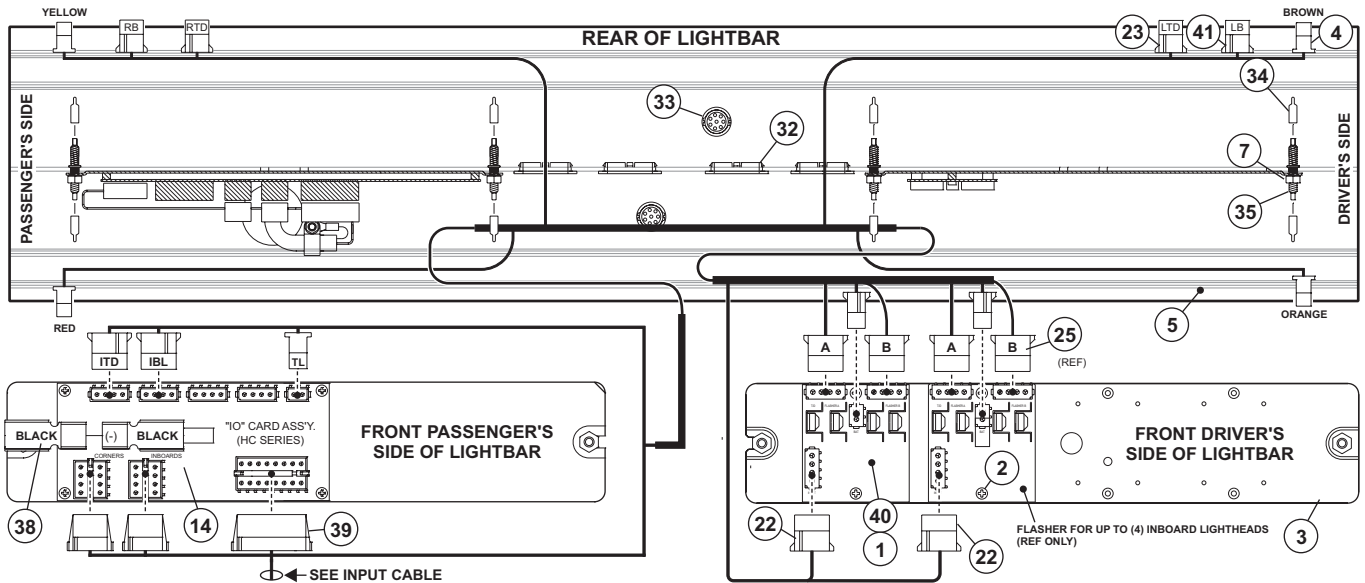
Scan-Lock can be connected to a customer supplied SPST switch.

IMPORTANT! Before returning this vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.

IMPORTANT WARNING!
CAUTION! DO NOT LOOK DIRECTLY AT THESE LEDS WHILE THEY ARE ON. MOMENTARY BLINDNESS AND/OR EYE DAMAGE COULD RESULT!

The lightbar owner should be familiar with component replacement procedures to assure proper disassembly and assembly.





QTY	ITEM	PART NUMBER	DESCRIPTION
*		01-0683945-00	FREEDOM TOWMAN'S™ "HC" 4 LED 60.5"
1	1	02-0169672-00	LED FLASHER
2	2	14-062216-041	#6-32 X 1/4 PHMS SMS
1	3	11-384027-000	BASEPLATE / LIGHTHEAD DRIVER
1	4	46-0764074-00	HARNSS / CORNER 50" "HC" FREEDOM
1	5	11-363143-000	BASE / EXTRUDED 56.50"
1	6	13-104111-063	NUT / #10-24 WHIZ
4	7	13-130111-072	NUT / 1/4-20 ELASTIC STOP
1	8	14-104216-160	SCREW / 10-24 X 1 PPHMS
8	9	14-104286-16JB	SCREW / 10-24 X 1.25" TORX SHOULDER
4	10	20-0042765-00	SPACER / CORNER
1	11	21-11245004-1	GROMMET / 1.562" MOLDED
18	12	07-263103-000	BRACKET / LIGHTHEAD MTG
12	13	02-0341448-00	LENS DIVIDER ASSEMBLY
1	14	01-0268888-01	I/O BOARD
4	15	01-026B807-10	CORNER LED / AMBER
2	16	68-1983816-50	LENS / RED OPTIC 5.00"
2	17	02-038345835C	LED ASSEMBLY / 400 SERIES BTT
2	18	02-0363189-00	HALOGEN ASSEMBLY / 400 SERIES 27H
12	19	09-1363158-00	PANEL / 400 SERIES
A/R	20	01-0286361211	LINEAR-LED® 400 (SPLIT) AMB/AMB
REF	21	46-0784070-02	HARNSS / INPUT INTERIM
1	22	46-0783688-04	HARNSS / WORK LIGHT / TAKE DOWN
1	23	46-0784070-01	HARNSS / OUTPUT INTERIM
REF	24	02-038132309S	SUB ASSY / SLIDE BOLT
REF	25	68-1983817-10	LENS / AMBER OPTIC 6.562"
3	26	68-1983816-10	LENS / AMBER OPTIC 5.00"
4	27	68-1983816-30	LENS / CLEAR OPTIC 5.00"
REF	28	68-1183491A02	LENS SECTION 10.375" / AMBER
2	29	68-1183369-10	ENDCAP / LENS / AMBER
6	30	21-242401-000	BUSHING / PLASTIC 1-5/8"
2	31	21-77002404-0	PLUG / VENT 3/4"
4	32	22-0416982-000	CAP / PROTECTIVE
4	33	22-0542701-000	STUD 1/4-20"
8	34	26-0115037-08	CABLE CLAMP 1/2"
4	35	38-0283381-000	GASKET / ENDCAP
1	36	39-0001007-000	HOUSING / 1 POS. BLACK
2	37	39-0416323-04	HOUSING / 16 POSITION SOCKET
1	38	46-0742744-17	CABLE ASSEMBLY 12/C 17
1	39	46-0742956-000	HARNSS / BRAKE-TAIL
1	40	08-0617078-000	RUBBER BUMPER

