

WHELEN[®]

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Installation Guide: Towman's™ Liberty™ LED 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 a minimum of 16" from any radio antennas!

Mounting your Lightbar:

This lightbar mounts with 4 bolts affixed to mounting plates that slide into the track on the bottom of the lightbar base. Figures 1 and 1a show how the slide bolt assembly slides into your lightbar's base and mounts onto the vehicle. Use an appropriately sized drill bit sized for a 1/2" - #13 X 2" bolt, to drill the mounting holes. When securing the slide bolts to the bottom of the lightbar base, be sure the outside bolts are spaced far enough apart and near enough to the ends of the vehicle roof.

Lightbar Cables:

This lightbar uses a 3-conductor cable for LEDs, a 6 conductor cable for HALOGEN and a 4-conductor cable for BRAKE/TAIL lights. Extend the 3- and 6-conductor cables towards your switch panel. The instructions included with your switches will provide switch wiring information. The 4-conductor cable connects to your brake light. There are also 2 wires for Scan-Lock™ (flash pattern selection).

Refer to the parts illustration on the next page for wire designations and fusing.

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!

Scan-Lock™

In the Scan-Lock™ cable the RED wire controls the front LEDs and the GREEN wire controls the rear LEDs. The LEDs must be on for flash pattern selection.

TO CHANGE PATTERNS: Apply +12 volts to the Scan-Lock™ wire for less than 1 second and release to cycle forward to the next available pattern. Apply +12 volts to the the Scan-Lock™ wire for more than 1 second and release to cycle back to the previous pattern.

TO CHANGE THE DEFAULT PATTERN: When the desired pattern is displayed, allow it to run for more than 5 seconds. The lighthouse will now display this pattern when initially activated.

TO RESTORE THE FACTORY DEFAULT PATTERN: Apply +12 volts to the Scan-Lock™ wire. With Scan-Lock™ activated, turn power to the lighthouse on. The factory default pattern will now be displayed.

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

A normally open momentary switch can be used to control Scan-Lock operation.

Available Flash Patterns:

- 1C: SignalAlert™ 3 cycles of 1A and 3 cycles of 1S
- 1A: SignalAlert™ 1 Alternates with 2
- 1S: SignalAlert™ 1 & 2 Simultaneous
- 2A: CometFlash® 1 Alternates with 2
- 2S: CometFlash® 1 & 2 Simultaneous

- 2C: CometFlash® 3 cycles of 2A and 3 cycles of 2S
- 3A: DoubleFlash 1 Alternates with 2
- 3S: DoubleFlash 1 & 2 Simultaneous
- 3C: DoubleFlash 3 cycles of 3A and 3 cycles of 3S
- 4A: SingleFlash 1 Alternates with 2
- 4S: SingleFlash 1 & 2 Simultaneous

- 4C: SingleFlash 3 cycles of 4A and 3 cycles of 4S
- 5: SteadyFlash 1 & 2 Steady / 3 & 4 SingleFlash / SIM
- 6: Steady 1, 2, 3 & 4 Steady
- Steady: Full power 1 second, then slow ramp to 40

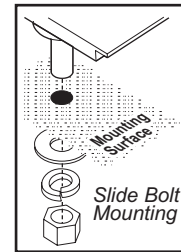
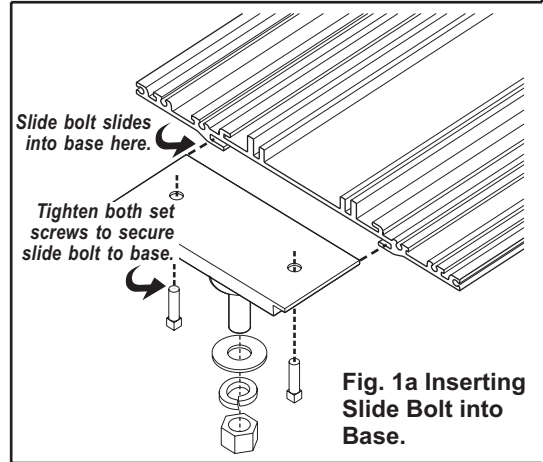


Fig. 1 - Slide Bolt Mount:

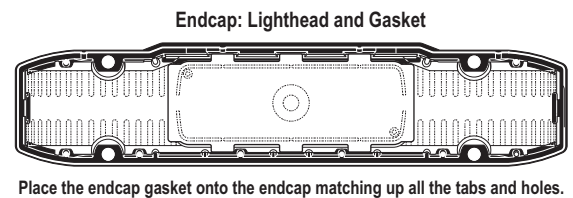
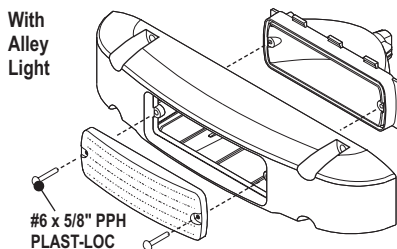
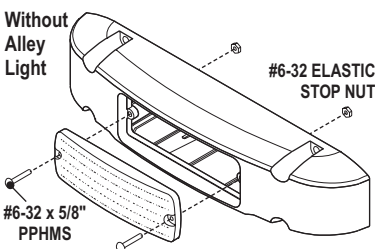
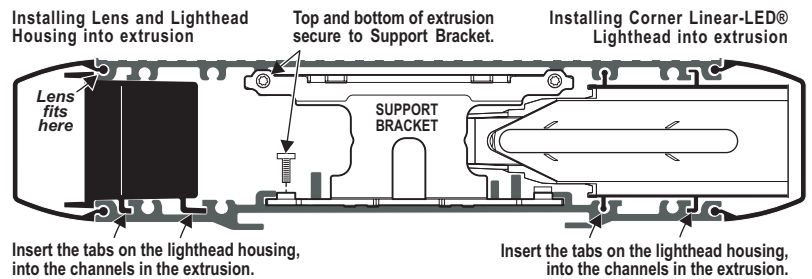
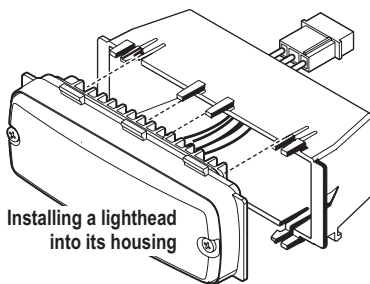
1. Remove one lightbar endcap.
2. Insert slide bolts into base, slide them across to their mounting position and secure with set screws.
3. Position the lightbar onto the vehicle and mark the four bolt hole locations on the mounting surface.

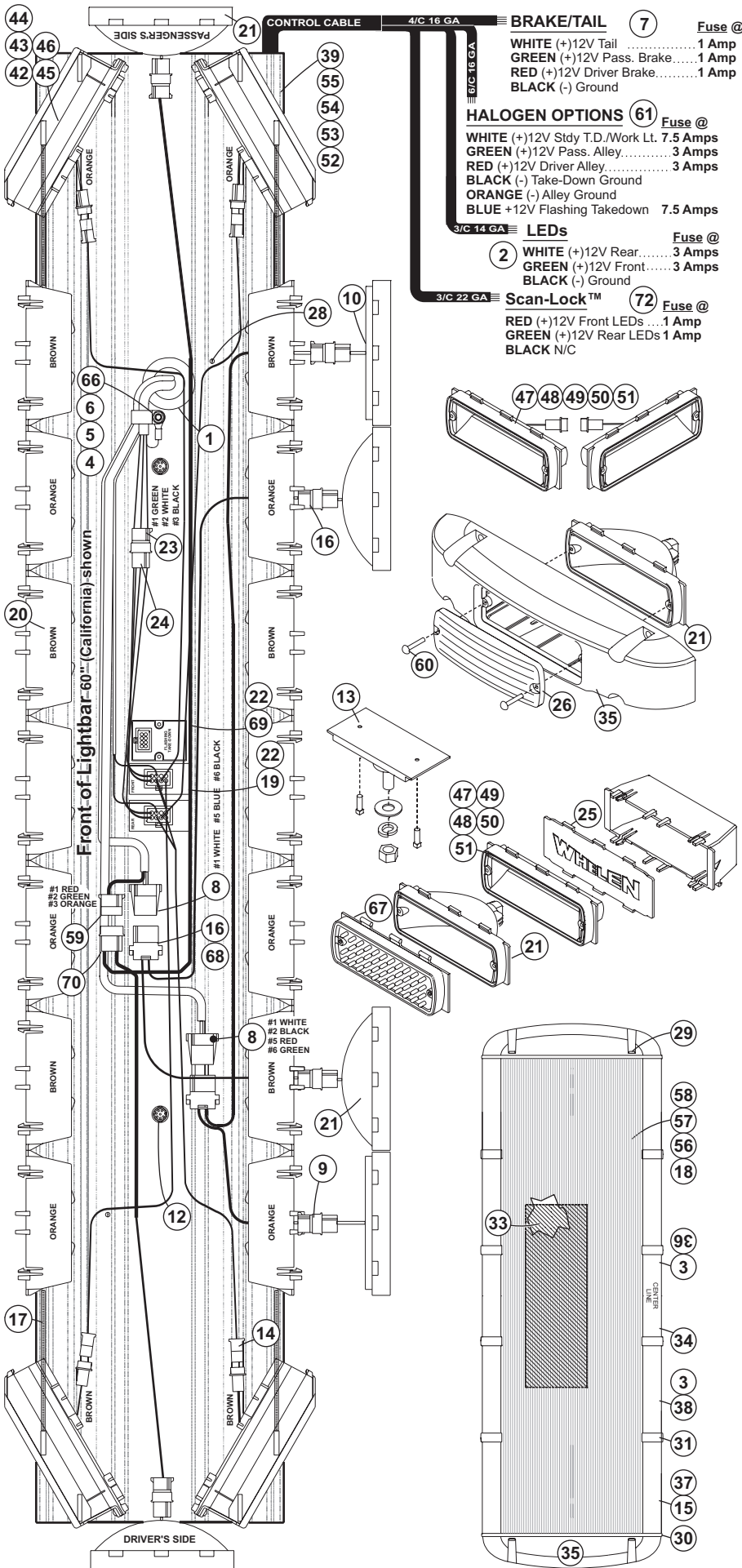
4. Drill the four holes with an appropriately sized drill bit.
5. Replace end cap and insert bolts into their 4 mounting holes and secure the lightbar with supplied hardware.



Servicing your Lightbar

Use the illustrations shown if you need to gain access to the lightbar to service or replace parts.





QTY	QTY	QTY	QTY	ITEM	PART NUMBER	DESCRIPTION
			*		01-0684338-	Liberty™ Lightbar 60"
			*		01-0684338-	Liberty™ Lightbar 54"
	*				01-0684338-	Liberty™ Lightbar 48"
*					01-0684338-	Liberty™ Lightbar 43"
1	1	1	1	1	21-11245004-1	GROMMET, 1.562"
1	1	1	1	2	46-0743228-00	CABLE, 3/C 14GA 17'
4	-	-	2	3	68-1963333C03	LENS, 10.500 LG. (CLR)
1	1	1	1	4	13-104111-063	#10-24 WIZ NUT
1	1	1	1	5	26-0115663-10	CABLE CLAMP, 5/8"
5	5	5	5	6	14-0023347-00	SCREW, 10-24 x 1.25" TX PHD
A/R	A/R	A/R	A/R	7	02-0241912-01	CABLE, 4/C 16GA 20"
A/R	A/R	A/R	A/R	8	39-0406324-04	HOUS., 6 POS. SCKT. CMNL
A/R	A/R	A/R	A/R	9	46-0941911-00	HARNESS, BRKE/TAIL LT
A/R	A/R	A/R	A/R	10	02-0383558BR3	500 BITT MAX
2	2	2	2	11	02-036B855-00	S. ASY, END SPRT. BRCKT
2	2	2	2	12	21-7263998-00	PLUG, VENT (3/4")
A/R	A/R	A/R	A/R	13	02-038132309S	SUB ASY, SLIDE BOLT
2	2	2	2	14	46-0764240-00	HARNESS, LED 8 OUTPT
4	4	-	4	15	68-1983819-30	LENS, 5.687" LG. (CLR)
A/R	A/R	A/R	A/R	16	46-0764440-01	HARNESS, T.D. - WK LTS
-	-	4	4	17	07-243170-000	SPACER, CORNER
-	-	-	1	18	11-26B607-054	TOP, EXTRUDED (54.78")
2	2	2	2	19	01-0269936-01	FLASHER, 2 CHANNEL
10	12	12	16	20	11-483564-000	HOUS., LT. HEAD (SNAP)
A/R	A/R	A/R	A/R	21	02-0383577-03	S.-ASY., 500 HALO. 3POS.
2	2	2	2	22	66-0420982-00	TAPE, DOUBLE SIDED
1	1	1	1	23	39-0403023-04	HOUS., 3 POS SOC CMNL
1	1	1	1	24	46-0743227-00	HARNESS, INPUT POWER
10	12	12	16	25	09-1363542-000	PANEL, FILLER (500)
2	2	2	2	26	68-1963237-30	LENS, 500 SER., OP. (CLR)
4	4	4	4	27	20-0042765-00	SPACER, CORN. RETENT.
2	2	2	2	28	14-104216-06J	#10-24 X 3/8 PPH SCREW
8	8	8	8	29	14-104286-16JB	#10-24 X 1-1/4" TX. PHD. SHD.
2	2	2	2	30	38-0283572-00	GASKET, ENDCAP
8	6	6	8	31	02-0342791-30	LENS DIVIDER (CLEAR)
1	1	1	1	33	38-0142783-00	INSULATOR, FOAM PAD
1	1	1	1	34	10-0322935-00	LABEL, "FRONT" Lt. BAR
2	2	2	2	35	68-1183566-3S	LENS/ ENDCAP / CLR w/SEAL
2	-	-	2	36	68-1983818-30	LENS, 5.062" LG. (CLR)
-	-	4	-	37	68-1963333C08	LENS, 8.375" LG. (CLR)
-	4	4	4	38	68-1983567-30	LENS, 15.800" LG. (CLR)
1	1	1	1	39	10-0522960-00	LABEL, MODEL-SER. NO.
4	4	4	4	40	14-062216-100	#6-32 x 5/8" PPHMS
4	4	4	4	41	13-062120-052	#6-32 ELASTIC STOP NUT
A/R	A/R	A/R	A/R	42	01-026B625910	CNR 9 LED AMB (Liberty™)
A/R	A/R	A/R	A/R	43	01-026B625920	CNR 9 LED BLU (Liberty™)
A/R	A/R	A/R	A/R	44	01-026B625930	CNR 9 LED WHT (Liberty™)
A/R	A/R	A/R	A/R	45	01-026B625950	CNR 9 LED RED (Liberty™)
A/R	A/R	A/R	A/R	46	01-026B625940	CNR 9 LED GRN (Liberty™)
A/R	A/R	A/R	A/R	47	01-026B827410	500 SERIES 4 LED, AMBER
A/R	A/R	A/R	A/R	48	01-026B827420	500 SERIES 4 LED, BLUE
A/R	A/R	A/R	A/R	49	01-026B827430	500 SERIES 4 LED, WHITE
A/R	A/R	A/R	A/R	50	01-026B827440	500 SERIES 4 LED, GREEN
A/R	A/R	A/R	A/R	51	01-026B827450	500 SERIES 4 LED, RED
-	-	-	1	52	11-363312-054	BASE, EXTRUDED (54.78")
-	-	-	1	53	11-363312-049	BASE, EXTRUDED (49.39")
-	1	-	-	54	11-363312-044	BASE, EXTRUDED (44.00")
1	-	-	-	55	11-363312-038	BASE, EXTRUDED (38.61")
-	-	-	1	56	11-26B607-049	TOP, EXTRUDED (49.39")
-	1	-	-	57	11-26B607-044	TOP, EXTRUDED (44.00")
1	-	-	-	58	11-26B607-038	TOP, EXTRUDED (38.61")
A/R	A/R	A/R	A/R	59	39-0404023-04	HOUS., 4 POS. SKT-CMNL
A/R	A/R	A/R	A/R	60	15-065410-100	#6 X 5/8" PPH PLAS-LOC
A/R	A/R	A/R	A/R	61	46-0710479-01	CABLE, 6/C 16 GA 20'
A/R	A/R	A/R	A/R	62	39-0412014-14	12 POS PIN HOUS. CMNL
A/R	A/R	A/R	A/R	63	46-0741346-17	CABLE, 9/C COM. 17'
A/R	A/R	A/R	A/R	64	46-0743106-00	HARNESS, T/A
A/R	A/R	A/R	A/R	65	01-0683850-00	ASSY, CTRL HEAD LED
A/R	A/R	A/R	A/R	66	26-0115037-11	CABLE CLAMP, 11/16
A/R	A/R	A/R	A/R	67	02-036326521A	500 LED STDY MAX AMB
A/R	A/R	A/R	A/R	68	46-0764440-02	HARNESS, FLASH. T.D.
A/R	A/R	A/R	A/R	69	01-0269699-00	FLASHER, TAKE-DOWNS
A/R	A/R	A/R	A/R	70	46-0764440-00	HARNESS, ALLEY LIGHT
A/R	A/R	A/R	A/R	71	10-0323206-00	LABEL, NASCAR LOGO
A/R	A/R	A/R	A/R	72	46-0743443-00	CABLE ASY, Scan-Lock™