

WHELEN[®]

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Installation Guide: Towman's™ Freedom™ 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

Mounting your Lightbar:

Permanent mounting of this product will require drilling. It is absolutely necessary to make sure that no other vehicle components could be damaged by this process. Check both sides of the mounting surface before starting. If damage is likely, select a different mounting location.

This lightbar mounts with 3 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 lightbars 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 you secure 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.

Operation:

Operation of the function wires in the cables exiting the lightbar is outlined below. Applying +12 volts DC to these wires will activate their function. Refer to the parts illustration for fusing information. Any unused wire should be capped off.

LED CABLE: **GREEN:** Activates the FRONT LED's.
3 conductor **WHITE:** Activates the REAR LED's.

TAKEDOWN/ALLEY:
6 conductor: **WHITE:** Activates (Steady) TAKEDOWNS and WORKLIGHTS
GREEN: Activates the PASSENGER SIDE ALLEY LIGHTS
RED: Activates the DRIVER SIDE ALLEY LIGHTS
BLUE: Activates the TAKEDOWNS in FLASH MODE

BRAKE-TAIL: **WHITE:** Activates the TAIL LIGHTS
4 conductor **GREEN:** Activates the PASSENGER SIDE BRAKE LIGHT
RED: Activates the DRIVER SIDE BRAKE LIGHT

SCANLOCK: **RED:** Scan-Lock™ Flash pattern selection for the FRONT LED's
3 conductor **GREEN:** Scan-Lock™ Flash pattern selection for the REAR LED's

Scan-Lock™ / Flash Pattern Selection:

The RED wire is the Scan-Lock™ wire for FRONT LED's. The GREEN wire is the Scan-Lock™ wire for REAR LED's. LED's must be on for Scan-Lock™ to work.

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

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

TO RESTORE THE FACTORY DEFAULT PATTERN: With power to the lighthouses off, apply +VBAT to the Scan-Lock™ wire. While still applying +VBAT to the "Scan-Lock™" wire, turn power to the lighthouses back on. The factory default pattern should now be displayed.

A Normally Open momentary switch can be used to control Scan-Lock™

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!**

IMPORTANT! It is the responsibility of the installation technician to make sure that the installation and operation of this product will not interfere with or compromise the operation or efficiency of any vehicle equipment! Before returning the vehicle to active service, visually confirm the proper operation of this product, as well as all vehicle components/equipment.

Available Flash Patterns:

1. SignalAlert™ 3 cycles of 1A and 3 cycles of 1S
2. SignalAlert™ 1 Alternates with 2
3. SignalAlert™ 1 & 2 Simultaneous
4. CometFlash® 1 Alternates with 2
5. CometFlash® 1 & 2 Simultaneous

6. CometFlash® 3 cycles of 2A and 3 cycles of 2S
7. DoubleFlash 1 Alternates with 2
8. DoubleFlash 1 & 2 Simultaneous
9. DoubleFlash 3 cycles of 3A and 3 cycles of 3S
10. 10.SingleFlash 1 Alternates with 2
11. SingleFlash 1 & 2 Simultaneous

12. SingleFlash 3 cycles of 4A and 3 cycles of 4S
13. SteadyFlash 1 & 2 Steady / 3 & 4 SingleFlash
14. Steady 1, 2, 3 & 4 Steady
15. Steady: Full power 1 sec., then slow ramp to 40

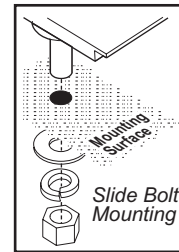
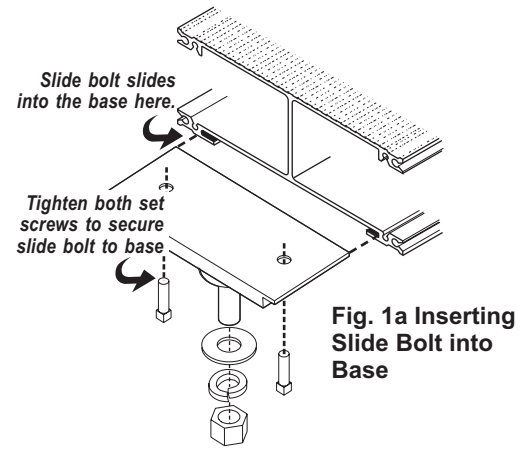


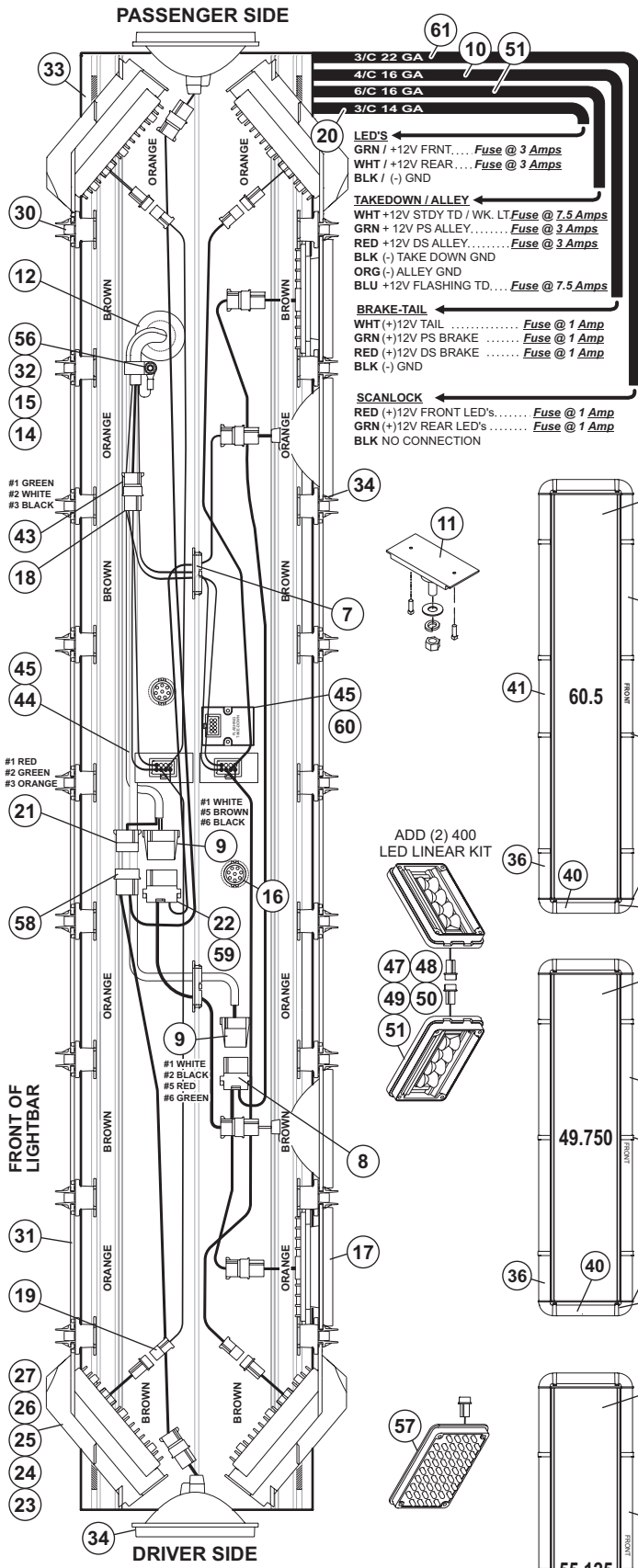
Fig. 1 / Slide Bolt Mount:

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



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



3/C 22 GA
4/C 16 GA
6/C 16 GA
3/C 14 GA

LED'S
 GRN +12V FRNT... Fuse @ 3 Amps
 WHT +12V REAR... Fuse @ 3 Amps
 BLK (-) GND

TAKEDOWN / ALLEY
 WHT +12V STDY TD / WK. LT Fuse @ 7.5 Amps
 GRN + 12V PS ALLEY... Fuse @ 3 Amps
 RED +12V DS ALLEY... Fuse @ 3 Amps
 BLK (-) TAKE DOWN GND
 ORG (-) ALLEY GND
 BLU +12V FLASHING TD... Fuse @ 7.5 Amps

BRAKE-TAIL
 WHT (+12V TAIL... Fuse @ 1 Amp
 GRN (+12V PS BRAKE... Fuse @ 1 Amp
 RED (+12V DS BRAKE... Fuse @ 1 Amp
 BLK (-) GND

SCANLOCK
 RED (+12V FRONT LED'S... Fuse @ 1 Amp
 GRN (+12V REAR LED'S... Fuse @ 1 Amp
 BLK NO CONNECTION

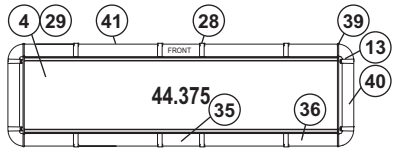
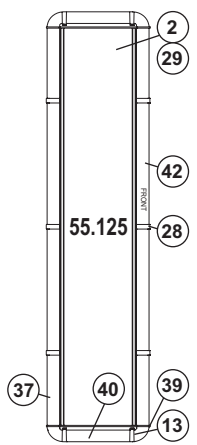
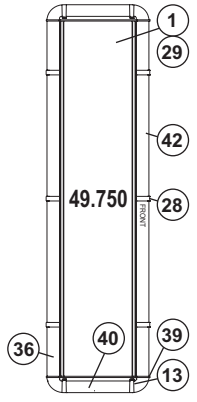
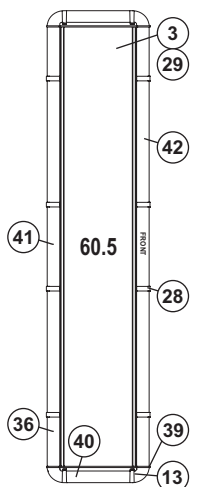
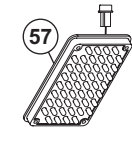
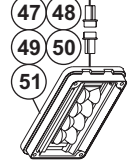
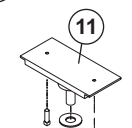
#1 GREEN
 #2 WHITE
 #3 BLACK

#1 RED
 #2 GREEN
 #3 ORANGE

#1 WHITE
 #2 BLACK
 #5 RED
 #6 GREEN

FRONT OF LIGHTBAR

DRIVER SIDE



QTY	QTY	QTY	QTY	QTY	QTY	ITEM	PART NUMBER	DESCRIPTION
				*			01-0684339-	Towman's Freedom™ 50"
				*			01-0684339-	Towman's Freedom™ 55"
			*				01-0684339-	Towman's Freedom™ 60"
			*				01-0684339-	Towman's Freedom™ 44"
			*				01-0684339-	Towman's Freedom™ 66"
*							01-0684339-	Towman's Freedom™ 72"
-	-	-	-	-	1	1	11-363141-000	BASE EXTRUSION (45.75")
-	-	-	-	-	1	2	11-363142-000	BASE EXTRUSION (51.125")
-	-	-	-	1	-	3	11-363143-000	BASE EXTRUSION (56.50")
-	-	-	-	-	1	4	11-363390-000	BASE EXTRUSION (40.375")
-	1	-	-	-	-	5	11-363653-061	BASE EXTRUSION (61.875")
1	-	-	-	-	-	6	11-363653-067	BASE EXTRUSION (67.25")
2	2	2	2	2	2	7	21-242401-000	BUSHING, 1-5/8"
A/R	A/R	A/R	A/R	A/R	A/R	8	46-0941911-00	HARNES, BRAKE/TAI LIGHT
A/R	A/R	A/R	A/R	A/R	A/R	9	39-0406324-04	HOUSING, 6 POS SOCKET CMNL
A/R	A/R	A/R	A/R	A/R	A/R	10	02-0241912-01	CABLE, 4/C 16 GA 20'
A/R	A/R	A/R	A/R	A/R	A/R	11	02-038132309S	SUB ASSY, SLIDE BOLT
1	1	1	1	1	1	12	21-11245004-1	GROMMET, 1.562"
8	8	8	8	8	8	13	14-104286-16JB	#10-24 x 1-1/4" TX. PHD. SCREW W/SHLDR
1	1	1	1	1	1	14	13-104111-063	NUT, #10-24 WHIZ
1	1	1	1	1	1	15	26-0115037-08	CABLE CLAMP, 1/2"
2	2	2	2	2	2	16	21-7263998-00	VENT
A/R	A/R	A/R	A/R	A/R	A/R	17	02-038345835C	LED BRAKE/TAI LIGHT 400
1	1	1	1	1	1	18	46-0743227-00	HARNES, INPUT POWER
2	2	2	2	2	2	19	46-0764240-00	HARNES, LED 8 OUTPUT
1	1	1	1	1	1	20	46-0743228-00	CABLE, 3/C 14GA 17'
A/R	A/R	A/R	A/R	A/R	A/R	21	39-0404023-04	HOUSING, 4 POS SOCKET CMNL
A/R	A/R	A/R	A/R	A/R	A/R	22	46-0764440-01	HARNES, TAKE DOWN/WORK LT
A/R	A/R	A/R	A/R	A/R	A/R	23	01-026B807-10	CORNER REFLECTOR LED AMBER
A/R	A/R	A/R	A/R	A/R	A/R	24	01-026B807-20	CORNER REFLECTOR LED BLUE
A/R	A/R	A/R	A/R	A/R	A/R	25	01-026B807-30	CORNER REFLECTOR LED WHITE
A/R	A/R	A/R	A/R	A/R	A/R	26	01-026B807-40	CORNER REFLECTOR LED GREEN
A/R	A/R	A/R	A/R	A/R	A/R	27	01-026B807-50	CORNER REFLECTOR LED RED
8	8	8	8	6	6	28	02-0341448-30	LENS DIVIDER ASSY. (CLEAR)
20	20	12	18	18	14	30	07-263103-000	MOUNTING BRACKET
18	18	10	14	12	12	31	09-1363158-00	FILLER PANEL / "400" SERIES
1	1	1	1	1	1	32	14-104216-160	#10-24 x 1 PPHMS
4	4	4	4	4	4	33	20-0042765-00	SPACER / CORNER LIGHTHEAD
A/R	A/R	A/R	A/R	A/R	A/R	34	02-0363189-00	REFLECTOR ASSY, 400 HALOGEN
-	-	2	-	-	-	35	68-1983816-30	LENS / 5.00" CLEAR
-	4	4	4	-	4	36	68-1983817-30	LENS / 6.562" CLEAR
4	-	-	-	4	-	37	68-1984104-30	LENS / 9.25" CLEAR
4	-	-	-	4	-	38	07-242815-000	BRACKET / SPACER not shown
2	2	2	2	2	2	39	38-0283381-00	GASKET / ENDCAP
2	2	2	2	2	2	40	68-1183369-30	ENDCAP / CLEAR not shown
-	-	4	2	-	-	41	68-1183491C02	LENS / 10.375" CLEAR
6	6	-	4	4	4	42	68-1984105-30	LENS / 15.75" CLEAR
1	1	1	1	1	1	43	39-0403023-04	HOUSING / 3 POS SOCKET CMNL
2	2	2	2	2	2	44	01-0269936-01	FLASHER / 2 CHANNEL
2	2	2	2	2	2	45	66-0420982-00	TAPE / DOUBLE SIDED
A/R	A/R	A/R	A/R	A/R	A/R	46	01-026B569212	400 LINEAR TIR LED / AMBER
A/R	A/R	A/R	A/R	A/R	A/R	47	01-026B569222	400 LINEAR TIR LED / BLUE
A/R	A/R	A/R	A/R	A/R	A/R	48	01-026B569232	400 LINEAR TIR LED / WHITE
A/R	A/R	A/R	A/R	A/R	A/R	49	01-026B569242	400 LINEAR TIR LED / GREEN
A/R	A/R	A/R	A/R	A/R	A/R	50	01-026B569252	400 LINEAR TIR LED / RED
A/R	A/R	A/R	A/R	A/R	A/R	51	46-0710479-01	CABLE 6/C 16 GA 20'
A/R	A/R	A/R	A/R	A/R	A/R	52	39-0412014-14	HSNG. / 12 POS PIN CMNL not shown
A/R	A/R	A/R	A/R	A/R	A/R	53	46-0741346-17	CABLE, 9/C COMPOSITE 17'
A/R	A/R	A/R	A/R	A/R	A/R	54	46-0743106-00	HARNES, T/A
A/R	A/R	A/R	A/R	A/R	A/R	55	01-0683850-00	CONTROL HEAD LED not shown
A/R	A/R	A/R	A/R	A/R	A/R	56	26-0115037-11	CABLE CLAMP 11/16"
A/R	A/R	A/R	A/R	A/R	A/R	57	02-038345821A	400 LED STEADY MAX - AMB
A/R	A/R	A/R	A/R	A/R	A/R	58	46-0764440-00	HARNES / ALLEY LIGHT
A/R	A/R	A/R	A/R	A/R	A/R	59	46-0764440-02	HARNES / FLASHING TAKE-DOWN
A/R	A/R	A/R	A/R	A/R	A/R	60	01-0269699-00	FLASHER / TAKE-DOWNS
1	1	1	1	1	1	61	46-0743443-00	CABLE ASSEMBLY / SCANLOCK

