

WHELEN[®]

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Installation Guide Val-U-Bar™ Lightbar Model: VB450

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

Refer to the Lightbar mounting guide included with your lightbar

Routing your Lightbar Cable(s)

1. To protect the headliner from damage caused by drilling the cable access hole through the vehicle roof, allow a 5" to 7" distance between roof and headliner by lowering the headliner before drilling.
2. Using a 1" hole saw, drill the cable access hole.

NOTE: There may be a roof support member that spans the distance between the driver's and passenger's side. DO NOT DRILL THROUGH THIS MEMBER! Adjust the location until the hole can be drilled without contacting this support member.

3. Use a round file to smooth and de-burr the edges of the hole.
4. Insert a 1" grommet (user supplied) into the cable access hole.
5. Insert the cable(s) through the cable access hole into the vehicle. Use RTV silicone to weatherproof the access hole after the cable(s) are pulled completely into the vehicle.
6. Route the cable(s) down through the B-pillar. The cable(s) must make a 90° turn to enter the B-pillar. Although routing the cable in this manner may be difficult, this has been determined to be the best procedure. It is up to the installation technicians discretion whether to route the cable(s) as recommended or use an alternative route. Pull the full length of the cable(s) out of the hole at the base of the B-pillar (Fig. 1) and route towards your switch panel. Refer to the instructions included with your switches for switch wiring information.

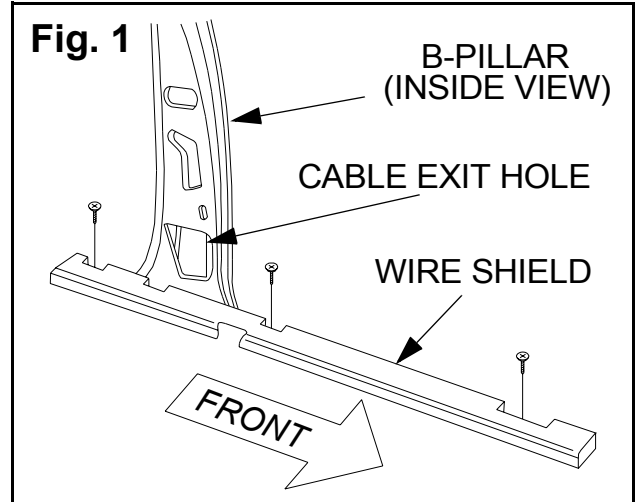
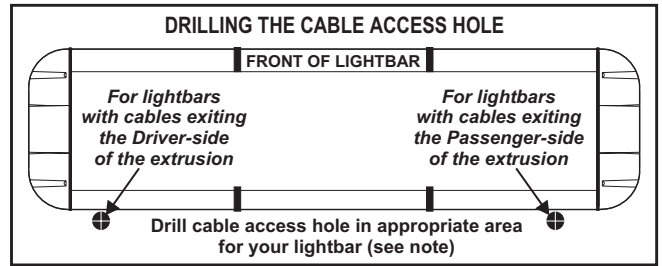
NOTE: The outer surfaces of this product may be cleaned with mild soap and water. Use of any other chemicals may void product warranty. Do not use a pressure washer.

Wiring:

Failure to connect your light bar correctly may result in permanent damage. When purchasing the necessary switches, fuses and additional wire, be sure they match the recommended electrical rating in this manual. Disconnect vehicle battery before beginning any installation.

IMPORTANT! All User-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 wire the fuse more than 2 feet from the battery.

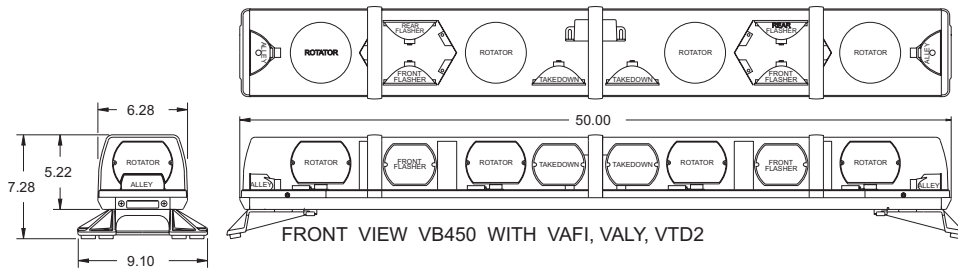
1. All user-supplied wire must be minimum 10 Gauge (stranded conductor).
2. User-Supplied switches is to be 25 amp DC Continuous (or greater).
3. Pre-wire the switch and the fuse before making any connections to power.
4. There should not be more than 2 feet of wire between the fuse and the battery.



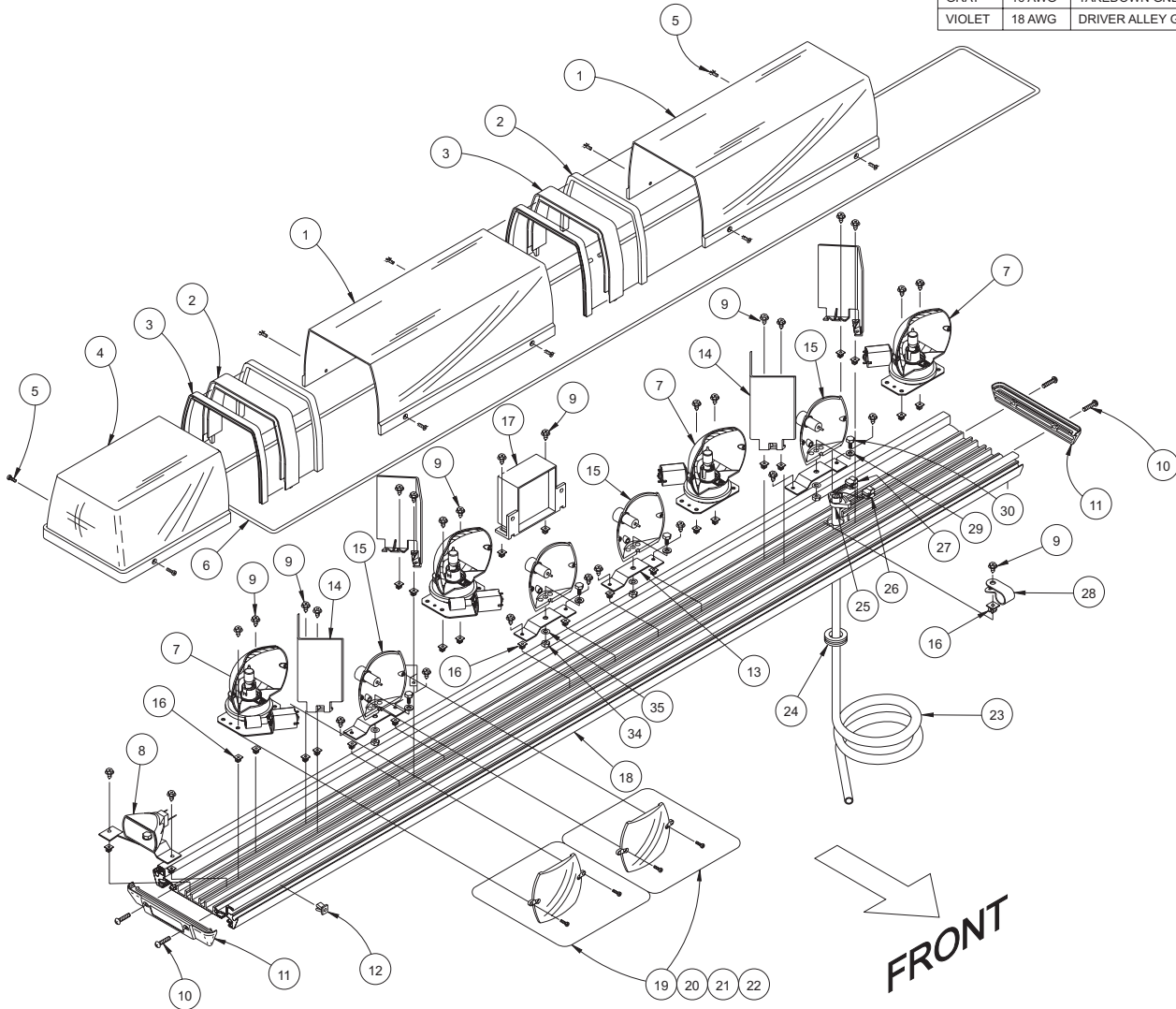
Specifications:

- INPUT VOLTAGE 10-16VDC
- INPUT CURRENT
 - Rotators **20 AMPS**
 - Optional Front Flashers **Add 2.5 AMPS**
 - Optional Rear Flashers **Add 2.5 AMPS**
 - Optional Takedowns **Add 5 AMPS**
 - Optional Left Alley **Add 2.5 AMPS**
 - Optional Right Alley **Add 2.5 AMPS**
- FUSE See Chart
- ROTATION SPEED (@ 12.8 VDC) 150 R.P.M.
- OPERATING TEMPERATURE -30°C to +60°C
- HUMIDITY RANGE 0% to 100%
- WEIGHT 18 Lbs.

Color	Gage	Function	Connect to...
RED	14 AWG	Rotators	+12VDC/Fuse @ 25 Amps
RED/BLK	14 AWG	Rotators	+12VDC/Fuse @ 25 Amps
BLK	14 AWG	Rotators	Chassis Ground
WHT/BLK	14 AWG	Rotators	Chassis Ground
ORN	16 AWG	N/C	N/C
GRN	18 AWG	Passenger Alley*	+12VDC/Fuse @ 5 Amps
BRN	18 AWG	Passenger Alley	Chassis Ground
BLU	18 AWG	Driver Alley*	+12VDC/Fuse @ 5 Amps
VIO	18 AWG	Driver Alley	Chassis Ground
YEL	16 AWG	Take-Down*	+12VDC/Fuse @ 10 Amps
GRY	16 AWG	Take-Down	Chassis Ground
WHT	18 AWG	N/C	N/C
WHT	16 AWG	Flasher*	+12VDC/Fuse @ 10 Amps
BLK	16 AWG	Flasher	Chassis Ground



14 CONDUCTOR CABLE		
COLOR	GAUGE	DESIGNATION
RED	14 AWG	ROTATORS +12V
BLACK	14 AWG	ROTATORS GND.
WHITE/BLACK	14 AWG	ROTATORS GND.
RED/BLACK	14 AWG	ROTATORS +12V
ORANGE	16 AWG	FLASHER CONTROL
GREEN	18 AWG	PASSENGER ALLEY
BLUE	18 AWG	DRIVER ALLEY
YELLOW	16 AWG	TAKEDOWN +12V
BROWN	18 AWG	PASSENGER ALLEY GND.
WHITE	18 AWG	N/C
BLACK	16 AWG	FLASHER GND.
WHITE	16 AWG	FLASHER +12V
GRAY	16 AWG	TAKEDOWN GND.
VIOLET	18 AWG	DRIVER ALLEY GND.



QTY.	ITEM	PART NUMBER	DESCRIPTION
2	1	68-3182182-30	DOMe, FILLER PANEL (CLEAR)
6	2	38-0541816-00	GASKET, DIVIDER
3	3	54-261744-000	DIVIDER, LENS
2	4	68-3162245-30	DOMe, END PIECE (CLEAR)
12	5	N/A	#8 X 1/2" PPHSMS
1	6	38-0541780-00	GASKET, .25 CORD (9.33')
4	7	02-0363276-02	ASSY, ROTATING REFL. 150-12-50H
A/R	8	02-0242048-00	ALLEY LIGHT SUB ASSEMBLY
31	9	15-081416-066	SCREW, #8 x 3/8" PHEXWASHD SS TYPE B
4	10	N/A	#10-24 X 1" TORX HEAD
2	11	11-282151-000	ENDCAP, COVER
12	12	21-17060704-3	#8 FASTEX GROMMET
A/R	13	07-222068-000	MOUNTING BRACKET
4	14	68-5962342-01	MIRROR "V" TYPE
A/R	15	02-0341697-00	REFLECTOR SUB-ASS'Y. 12V/27W
31	16	N/A	SCREW GROMMET #6 FASTEX
A/R	17	01-0267975-00	VALUE FLASHER
1	18	11-362205-000	EXTRUSION, MACHINED
A/R	19	01-0441781-A0	KIT, AMBER LENS FILTER (DEEFDISH)

QTY.	ITEM	PART NUMBER	DESCRIPTION
A/R	20	01-0441781-B0	KIT, BLUE LENS FILTER (DEEFDISH)
A/R	21	01-0441781-G0	KIT, GREEN LENS FILTER (DEEFDISH)
A/R	22	01-0441781-R0	KIT, RED LENS FILTER (DEEFDISH)
A/R	23	46-9640825150	CABLE, 14/C (15' LG.)
A/R	24	21-11202404-0	.625 I.D. GROMMET
A/R	25	26-0121053-02	CABLE CLAMP, 1/2"
1	26	39-0408323-04	AMP 8 SOCKET CONNECTOR HOUSING
1	27	39-0409322-04	AMP 9 SOCKET CONNECTOR HOUSING
1	28	26-0115037-04	1/4" CABLE CLAMP
1	29	N/A	WASHER, FLAT 1/4" NOM
1	30	14-130436-080	BOLT, HEX HEAD 1/4"-20UNC x 1/2" LG.
A/R	31	02-0262219-01	HARNESS, ROTATORS (NOT SHOWN)
2	32	02-0262220-00	HARNESS, ACCESSORY (NOT SHOWN)
1	33	02-0262226-00	DUAL TAKEDOWN SUB-ASS'Y. (NOT SHOWN)
1	34	N/A	1/4-20 X 1/2 HEX NUT SST
1	35	N/A	1/4" INT'L TOOTH LOCKWASHER