

WHELEN[®]

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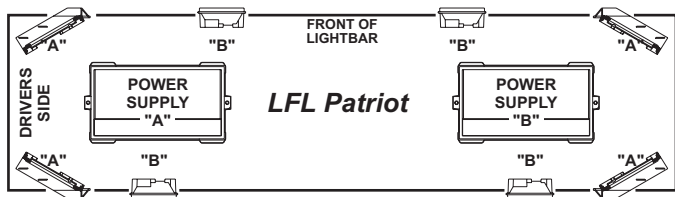
Installation Guide: Strobe to LED conversion kit for LFL Patriot & ULTRA lightbars

Safety First

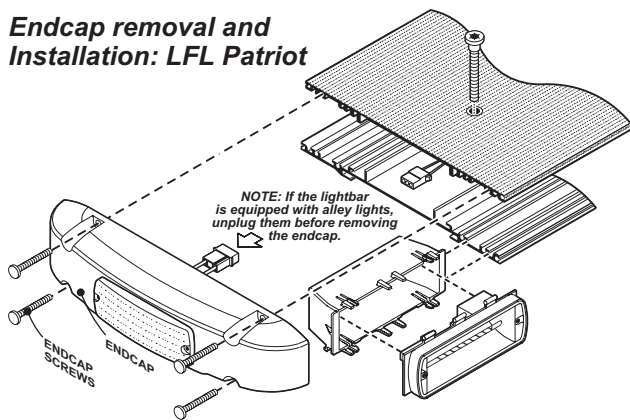
This document provides all the necessary information to allow your Whelen product to be properly and safely installed. Before beginning the installation and/or operation of your new product, the installation technician and operator must read this manual completely. Important information is contained 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 owners 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!**

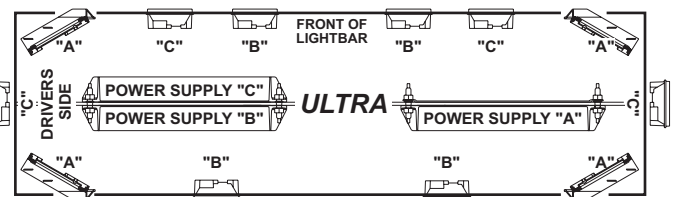
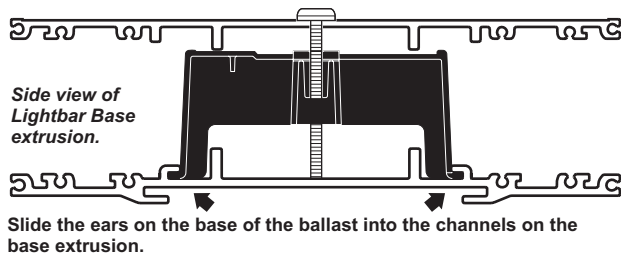
For warranty information regarding this product, visit www.whelen.com/warranty



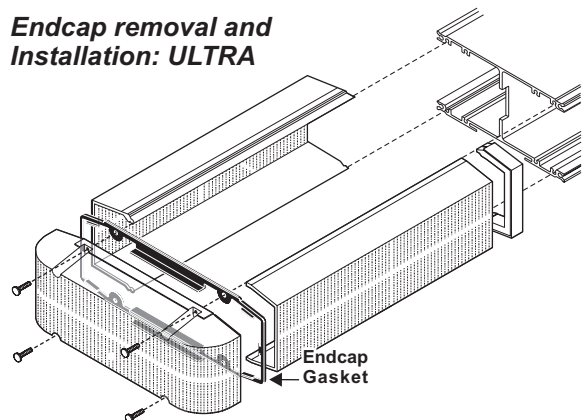
Endcap removal and Installation: LFL Patriot



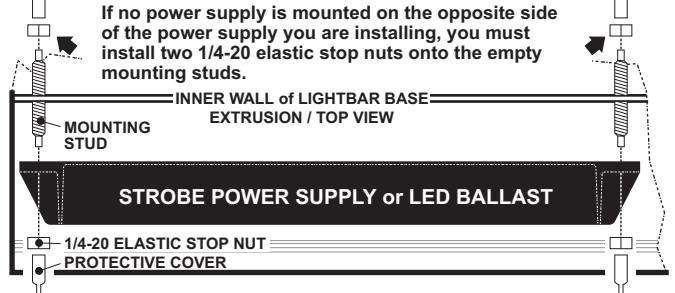
Power supply / Ballast mounting / LFL Patriot



Endcap removal and Installation: ULTRA



Power supply / Ballast mounting ULTRA



IMPORTANT: The LED ballast for both the ULTRA and PATRIOT follows the basic function of the existing strobe power supplies. Some functions however, will not be possible. For proper performance, the ballast should be used in ALTERNATING MODE ONLY. This may require a change to your SC control head. SC modes such as SIMULTANEOUS, IN-OUT and RANDOM will cause errors and are not recommended. These ballasts are unique and should be treated as such. When changing patterns, the ballast needs to first detect the active pattern coming from the I.O. card and then sync up with it. This may take one or two cycles and some minor flash glitches may be seen in the pattern during this process. ACTION SCAN may display some minor flash glitches since the patterns change often.

WARNING! The strobe power supply is a high voltage device. Do not remove the strobe tubes or dismantle the strobe lighthoods in the system while the unit is in operation. Wait 10 minutes after turning off power Before starting any work or trouble shooting on the system.

Be sure power is off and the main fuse is removed. The diagrams above show which strobe power supplies control which strobe lighthoods to identify which power supply controls the lighthoods you wish to change.

LFL Patriot:

1. Remove the endcaps (T25 torx head) and unplug the alley lights if present. Also unplug and remove the corner lighthoods. Remove the 4 top extrusion torx screws (T20 torx head) and remove the top extrusion. (Slide the lenses out and place them on your work area in the order you removed them for easy re-installation.)
2. Unplug and remove the strobe power supply you wish to replace.
3. Plug the ballast interconnect harness into the ballast you are installing and install the ballast with the connectors on the ballast facing inward (the opposite way the power supply connectors faced). You may have to cut one or more ty-wraps from the main harness to allow you to turn the ballast around.

Note: You must also turn the other strobe power supply around so its connectors face inward to make room for the extra wiring.

4. Plug the other end of the ballast's interconnect harness into the lightbar ports you removed the power supply harness from (The connectors will match the ones you removed).

WARNING! Use ty-wraps to hold the harness in its new position and make sure all wires are positioned out of the way of other components, so they will not get crushed during reassembly.

5. Unplug and remove the lighthoods you are replacing. Plug the LED retrofit adapters onto the LED lighthoods you are installing then install the LED lighthoods in the spots you removed the strobe lighthoods from. Reassemble and test the lightbar.

ULTRA:

1. Remove the endcaps (T25 torx head) and unplug the alley lights if present.
2. Slide as many lenses and lighthoods out of the lightbar as is necessary to access the power supply you wish to replace. Place them on your work area in the order that you removed them for easy re-installation.
3. Unplug and remove the strobe power supply you wish to replace.
4. Plug the ballast interconnect harness into the ballast you are installing and install the ballast. Unlike the LFL, the ballast for the ULTRA will install in the same position as the power supply you removed (with connectors facing the outside of the lightbar).
5. Plug the other end of the ballast's interconnect harness into the lightbar ports you removed the power supply harness from (The connectors will match the ones you removed).
6. Unplug and remove the lighthoods you are replacing. Plug the LED retrofit adapters onto the LED lighthoods you are installing then install the LED lighthoods in the spots you removed the strobe lighthoods from. Reassemble and test the lightbar.

WARNING! Position all wires out of the way of other components, so they will not get crushed or pinched during reassembly.

