

WHELEN[®]

ENGINEERING COMPANY INC.

Route 145, Winthrop Road,

Chester, Connecticut 06412

Phone: (860) 526-9504

Fax: (860) 526-4078

Internet: www.whelen.com

Sales e-mail: autosale@whelen.com

Canadian Sales e-mail: autocan@whelen.com

Customer Service e-mail: custserv@whelen.com

Installation Guide UPS158 Strobe Power Supply

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 product is mounted with 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.**
- **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!**

Notice! This UPS158 strobe power supply, like all Whelen components, can be installed in many different types of vehicles. The guidelines for the installation of this product are written so that no matter what vehicle is being used, the installation and operation of the UPS158 will be simple and straight forward.

Selecting a mounting location...

The most common choice for a mounting area would be a trunk or similar compartment. However, due to the wide variety of vehicles onto which the UPS158 could be installed, this is not always possible. The following guidelines will help the installer select an acceptable alternative:

- **The UPS158 should be mounted on a metal surface to aid heat dissipation. Be sure that this surface is not one that either generates or is exposed to excessive heat during normal operation of the vehicle.**
- **Do not select a location where the UPS158 will be exposed to potential damage from any unsecured or loose equipment in the vehicle.**
- **Be sure the area selected will not allow the UPS158 to be exposed to water!**
- **When routing the UPS158's wires, it is important to choose a path that will keep these wires away from excessive heat and from any vehicle equipment that could compromise the integrity of the wires (ex. trunk lids, door jams, etc.).**
- **When the best mounting location has been determined, securely fasten the UPS158 to its mounting surface using the supplied hardware.**

WARNING: The Strobe Light Power Supply is a high voltage device. Do not touch or remove tube assembly in strobe light head assemblies while in operation. Wait 10 minutes after disconnecting the unit from its power source before starting work or troubleshooting on power supply or system.

Caution: As it will be necessary to drill holes into the mounting surface, 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!

1. Position the UPS158 in its proposed mounting location to ensure that it fits properly. With the UPS158 in place, insert an awl or other suitable tool into the mounting screw area of the power supply and scribe the areas that are to be drilled.
2. Remove the UPS158 from its mounting area and, using a drill bit sized for a #10 sheet metal screw, drill a hole in each of the areas scribed in the previous step.
3. Return the UPS158 to its mounting location and using the supplied #10 sheet metal screws, mount the UPS158 onto its mounting surface.

Wiring your UPS158...

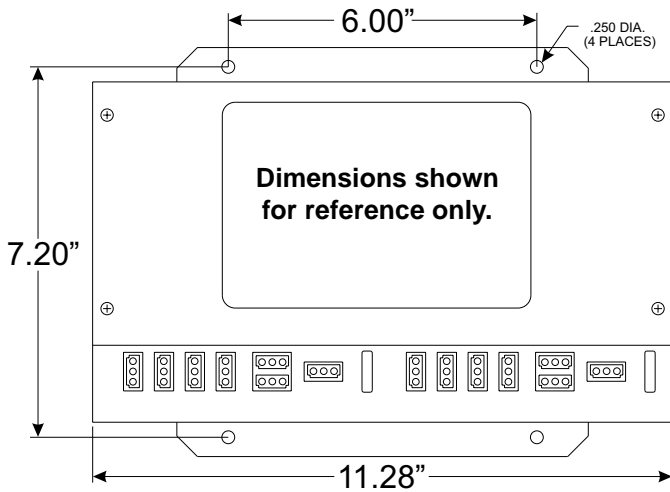
1. Locate the two, 3 position **Power Connectors** included with your UPS158 and plug them into the port indicated in Fig. 1. Splice the two RED wires together and extend to the the vehicle battery.

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 the load!

2. Connect the extended wire to a fuse block (customer supplied) and then to the POSITIVE terminal on the battery.

NOTE! Although a 30 amp fuse (customer supplied) is required to be used in the fuse block, do not install the fuse until all of the wire connections are completed.

3. Splice the two BLACK wires together and extend to the vehicle battery. Connect the extended wire to the factory chassis ground adjacent to the battery.
4. Refer to Fig. 2 for wiring information for the **Control Connectors** and for the **Pattern Selection Connectors**.
5. As indicated in Fig. 2, there is a provision in the **Power Connectors** for a wire (VIOLET) to activate Hi Power/Low Power strobe operation. If this feature is desired, locate the VIOLET wires included with your power supply and, with the **Power Connectors** disconnected from the power supply, insert the pinned end of the VIOLET wires into position 3 of each of the **Power Connectors**. Refer to Fig. 2 for wiring information.



Switch Operation Table

Pattern Control

Pattern 1&2 Disabled	Comet Flash Pattern
Pattern 1 Enabled	Double Flash Pattern
Pattern 2 Enabled	Single Flash Pattern
Pattern 1&2 Enabled	Action Flash Pattern

Outlet Control

Enable 1A & 4A	Outlets 1A & 4A Active
Enable 2A & 3A	Outlets 2A & 3A Active
Enable 1B & 4B	Outlets 1B & 4B Active
Enable 2B & 3B	Outlets 2B & 3B Active

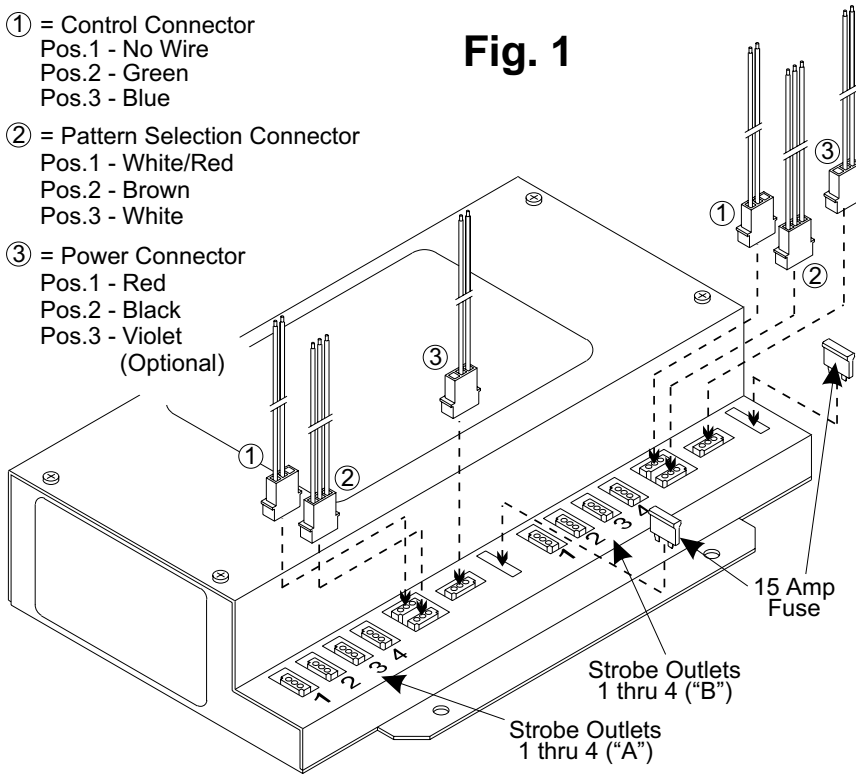
OUTLETS 1A/1B & 4A/4B = FLASH ALTERNATELY
 OUTLETS 2A/2B & 3A/3B = FLASH ALTERNATELY
 OUTLETS 1A/1B & 3A/3B = FLASH SIMULTANEOUSLY
 OUTLETS 2A/2B & 4A/4B = FLASH SIMULTANEOUSLY

- ① = Control Connector
 Pos.1 - No Wire
 Pos.2 - Green
 Pos.3 - Blue

- ② = Pattern Selection Connector
 Pos.1 - White/Red
 Pos.2 - Brown
 Pos.3 - White

- ③ = Power Connector
 Pos.1 - Red
 Pos.2 - Black
 Pos.3 - Violet
 (Optional)

Fig. 1



NOTE! The WHITE/RED wire in the Pattern Selection Connector provides positive voltage designed to be used to supply power to your switches. This wire is internally protected to 250 ma. If a short circuit occurs, the circuit will interrupt current flow until the short has been removed.

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

Latching Mode:

By applying +voltage to the Violet wire for less than 1 sec., the power supply is "latched" into low power operation. The unit must be turned off and then back on to restore normal, Hi power operation. A momentary switch is desired for this style.

Level Mode:

Applying +voltage to the Violet wire for more than 1 sec. holds the power supply in low power mode until that voltage is removed. A toggle switch is desired for this style.

UPS158 SPECIFICATIONS:

INPUT VOLTAGE	-	13.5 VDC (26.5 VDC) ± 20%
INPUT CURRENT @ 40 Watts	-	4 AMPS (2 Lamps)
INPUT CURRENT @ 75 Watts	-	7 AMPS (4 Lamps)
INPUT CURRENT @ 115 Watts	-	11 AMPS (6 Lamps)
INPUT CURRENT @ 150 Watts	-	14 AMPS (8 Lamps)
OUTPUT POWER @ 2 LAMPS	-	40 Watts
OUTPUT POWER @ 4 LAMPS	-	75 Watts
OUTPUT POWER @ 6 LAMPS	-	115 Watts
OUTPUT POWER @ 8 LAMPS	-	150 Watts
V Ctrl (Power Connectors A & B)	-	13.5 VDC (26.5 VDC) ± 20%
I Ctrl	-	100 ma (MAX)
V Output Ctrl	-	13.5 VDC (26.5 VDC) ± 20%
I Output Ctrl	-	20 ma (MAX)
V Pattern Ctrl	-	13.5 VDC (26.5 VDC) ± 20%
I Pattern Ctrl	-	5 (MAX)
COMET FLASH®	-	
FLASHRATE (Per Lamp)	-	75 CFPM @ 80 ms
DOUBLE FLASH	-	
FLASHRATE (Per Lamp)	-	120 DFPM @ 80 ms
SINGLE FLASH	-	
FLASHRATE (Per Lamp)	-	220 SFPM
ACTION FLASH	-	3 CYCLES COMET FLASH
	-	6 CYCLES SINGLE FLASH

Fig. 2

