



## HIGH CURRENT EUROPEAN / DOT HEADLIGHT HARNES INSTALLATION MANUAL

Thank you for your purchase of this Levy Racing product. Like all Levy Racing custom made products, this wiring harness is the culmination of years of our experience. This will no doubt make your job easier and more efficient. Unlike other vendors, each Levy Racing wiring harness is built specifically for the application. This means that each harness ordered is case specific. This is how Levy Racing chooses to do business because it works better. This particular harness is a double relay harness designed to carry 45 amps per relay. This will yield a current capability of 45 amps per headlight making the use of high current H-4 halogen bulbs a snap. You will also notice that the circuit protection used in the harness utilizes automatic re-setting circuit breakers rather than fuses. This topology will give "slow blow" circuit protection rather than instantaneous shut off. This will give the driver some warning (the headlights will blink on and off) as the circuit fails so he has more time to react and avoid potential injury if the headlights fail. Also, this wiring harness consists of two completely separate circuits. There is one circuit for low beam and one circuit for high beam. This is done so that if one circuit fails it will not affect the other. The driver can switch to the other circuit and the lights will come back.

All supplied terminals are crimp-on. This is to avoid potential cracking problems with soldering. A good high quality crimping tool is a must to insure the integrity of the crimp. If you don't have one, buy one. Heat shrink is supplied to act as a crimp sealer as well as a wire strain relief. This **MUST** be installed. **Do not forget to slip the heat shrink tubing on the wire BEFORE you crimp the terminal on.** Make sure you use the supplied zip ties and wire fasteners to secure the harness in a clean and tidy fashion away from heat and sharp edges. There is split loom supplied in the kit. Use it to cover the wiring just before you tie it up. This will help the appearance as well as add to the integrity of the install.

### Parts List

✓ 45 amp relay	2
✓ Relay plug	2
✓ Relay harness	2
✓ 12 ga headlight ground wire	2
✓ 30 amp automatic circuit breaker	2
✓ ½" split loom (ft)	20
✓ ¼" split loom (ft)	10
✓ insulated spade	5
✓ 12 ga ground and breaker eye	2
✓ 14 ga ground eye	2
✓ 14 ga butt	2
✓ 12 ga power eye (large)	2
✓ Heat shrink section	11
✓ Small zip tie	20
✓ Large zip tie	10
✓ ½" loop eye	6

- ✓ 1/4" loop eye
- ✓ 3/8" loop eye self tapping screw

6  
12

## Tools

- High Quality Crimp tool
- Wire cutter
- Wire stripper
- 3/8" drill motor
- 3/16 drill bit
- Bic lighter
- 1/4" drive ratchet
- 3/8" 1/4" drive socket

**Before starting the installation please read these instructions thoroughly. Above all work safely. Wear eye protection and never work on heavy equipment alone.**

## Installation

- 1) First, lay out all of the kit parts and check the inventory to make sure every thing is there. Familiarize yourself with all of the parts. If you are doing a first time install on a fresh build then skip step 2. If you are retro fitting the harness to a system that already exists, then go directly to step 2.
- 2) Start by removing the old headlight harness from the car (figure1). Make the cut in the existing harness as close to the dividing point (where the wire is divided for each headlight) as possible. These wires will be cut to length later.

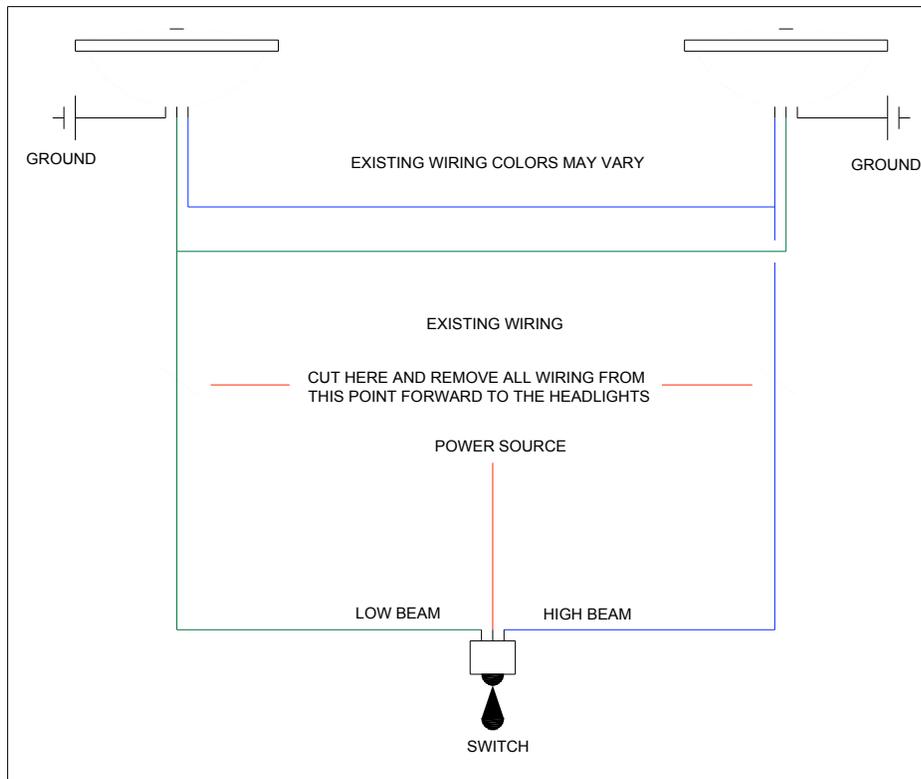


Figure 1.

- 3) Lay the new harness loosely into the engine compartment and through the fender wells to test fit. Make sure that as you mock up the wire runs, you hold the wire loosely against the potential mounting points as you go, making mental notes as to where you can mount the wire fasteners. The wires on the harness are marked as follows.

<b>HL</b>	<b>To the headlights</b>
<b>GRND</b>	<b>To ground</b>
<b>BAT</b>	<b>To power source</b>
<b>TRIG</b>	<b>To high/low switch or the existing wire</b>

The relays can be mounted next to each other. The only real concern when mounting them is to pick a location that is away from as much heat as possible and have enough wire to reach the headlights, the power source (battery, starter solenoid or back of the alternator) and the original high and low beam wires or switch. A good fit is to mount them in a convenient location on the driver's side of the engine compartment. Other potential locations are the radiator core support, front X-member or front fender well tin work. Once the relay location is selected, drill the holes and mount the relays.

- 4) Following the schematic in figure 2 and cutting the harness wires to length as you go,

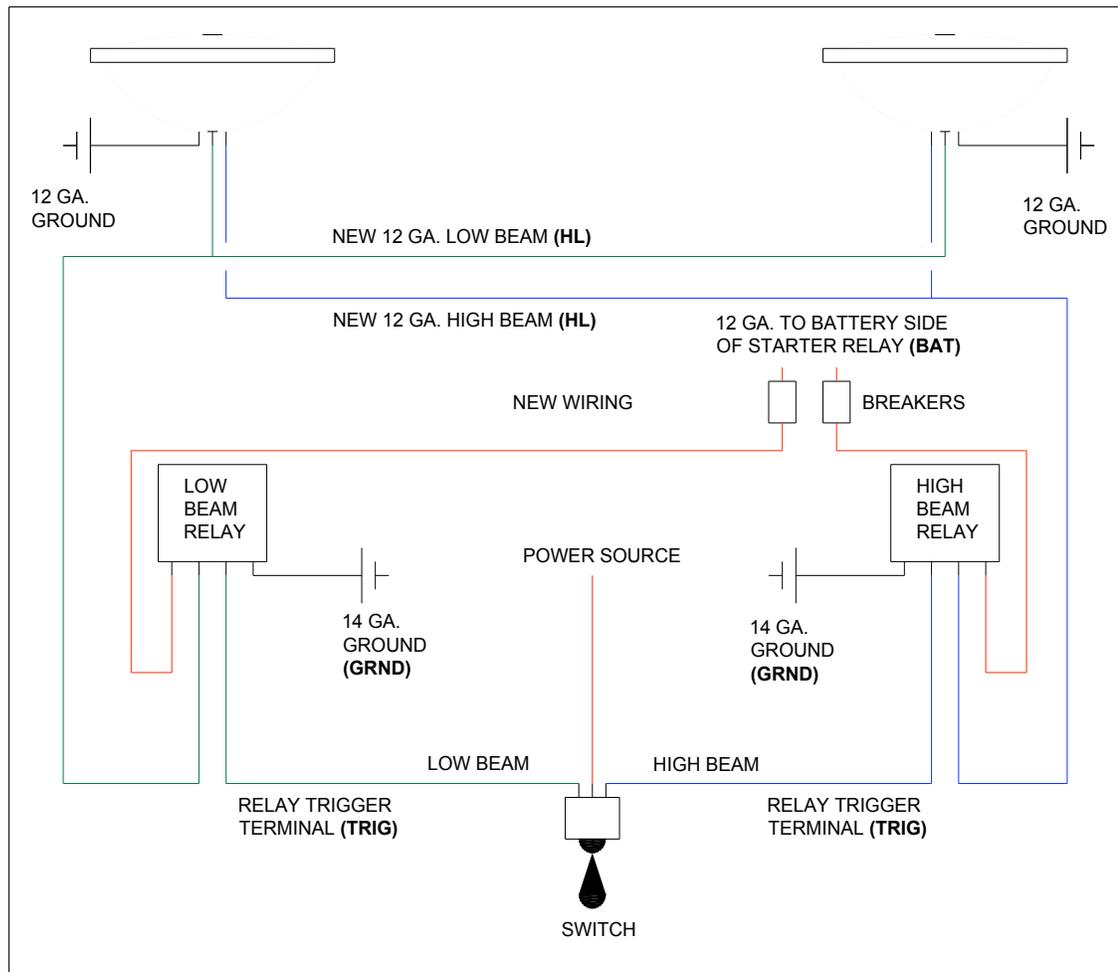


Figure 2.

wire the harness as follows. Place the supplied breakers as close to the power source as possible. Cut enough of the 12 ga. wire off of the **BAT** terminal to make the run from the breaker to the power source. This will be used later to make the final connection. Secure

the remaining **BAT** wires on the harness to the breakers with the supplied crimp on ends and heat shrink tubing. Next, make a good ground connection between the chassis and the **GRND** wires on the harness. This will be done with the supplied small eye terminals and heat shrink. Use the supplied butt connectors to connect the trigger **TRIG** wires to the existing high/low beam switch wires or connect them to the high/low beam switch it self. If you are connecting to the existing wires that you cut in step 2, you can cut them to length now. Connect the **HL** wires to the appropriate circuit on the headlight it self. Make the connections with the supplied insulated spade connectors. If the high and low circuits on the head lights are not known, they can easily be checked with a battery and jumper wires. Use the supplied black 12 ga ground wires and terminals to connect the ground circuit on the headlight to the chassis. Finally, using the wires you cut off the **BAT** wires previously, complete the circuit by connecting the breakers to the power source.

- 5) Using the supplied slit loom, zip ties and wire fasteners, secure all wire runs as needed.
- 6) Test the circuit by turning the headlights on and switching between high and low beam. You should hear an audible click in each relay as you switch them.

The installation of your new lighting harness is now complete.

If you experience any problems or have issues with the kit itself you can get tech assistance by calling 480-446-8442. Ask for Matthew.