MLToys Lighting Kit Instructions

These instructions will help you install MLToys lights into your ride-on car. The only difference between cars will be how you remove the clear (or red for tails) lenses. We used a Power Wheels F150 Raptor for our demo model. In most cases the lenses will either have a screw holding them in or a tab behind them that snaps into the plastic (the same way foot pedal assemblies are held in). If you can reach your hand behind the light then you don't have to remove the chrome bezels as the LED's install from the front. For vehicles 18-24 volts see the extra instructions and diagram to add the Voltage Reduction Module.

Kit includes:

2 Red LED Lights (clear lenses), 2 White LED Lights (yellow lenses)

2 Power Distribution Blocks (gray with orange tabs)

1 Power Switch

2 Spade Connectors (blue plastic with metal connector at one end)

2 Crimp Connectors (all blue plastic with metal blade in middle)

1 Roll of Wire

INSTRUCTIONAL VIDEOS:

1. **LED MOUNTING -** Remove the battery, then remove the clear lenses for headlights, fog lights, and taillights if any.
2. Drill a 3/8" hole through the center of the lens where you want the LEDs to go. Starting with a smaller bit and working up to 3/8" will ensure that the hole is centered and doesn't tear the plastic. Clean away any residue with a utility knife.
3. The headlight LEDs have a yellowish center. The tail light LED's have a clear center. Remove the nut from the Led. From the front, insert the LED wire through the hole. Then thread the LED all the way in. **BE SURE YOU ARE NOT TWISTING THE WIRES AS YOU INSERT OR YOU WILL SNAP ONE OFF.** Slide the nut up the wires and tighten ¼ turn past hand-tight.
4. Run the wires to the battery compartment of the vehicle. Taillights can be spliced together red-to-red black-to-black and then a single set of wires brought to the battery compartment. Use the extra wire provided in your kit as needed. Do not wrap wires around steering linkage, axle, or steering column.
5. **ON/OFF SWITCH MOUNTING -** Pick a flat place on your dashboard or center console for the Power Switch. Make sure you can access it from behind and that there is nothing else behind the

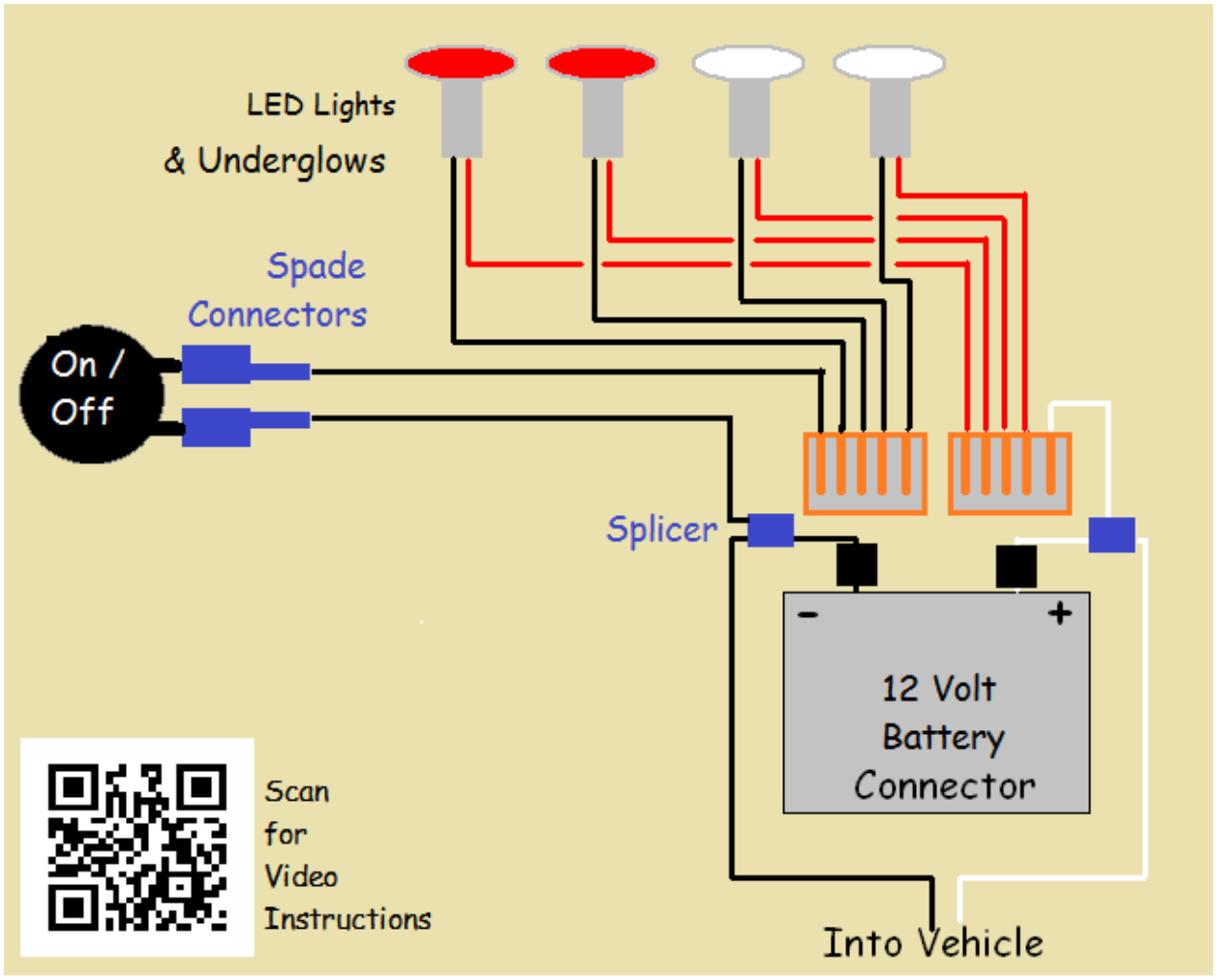
dash blocking its placement. On Power Wheels vehicles the fake keyhole makes an excellent place for the Power Switch.

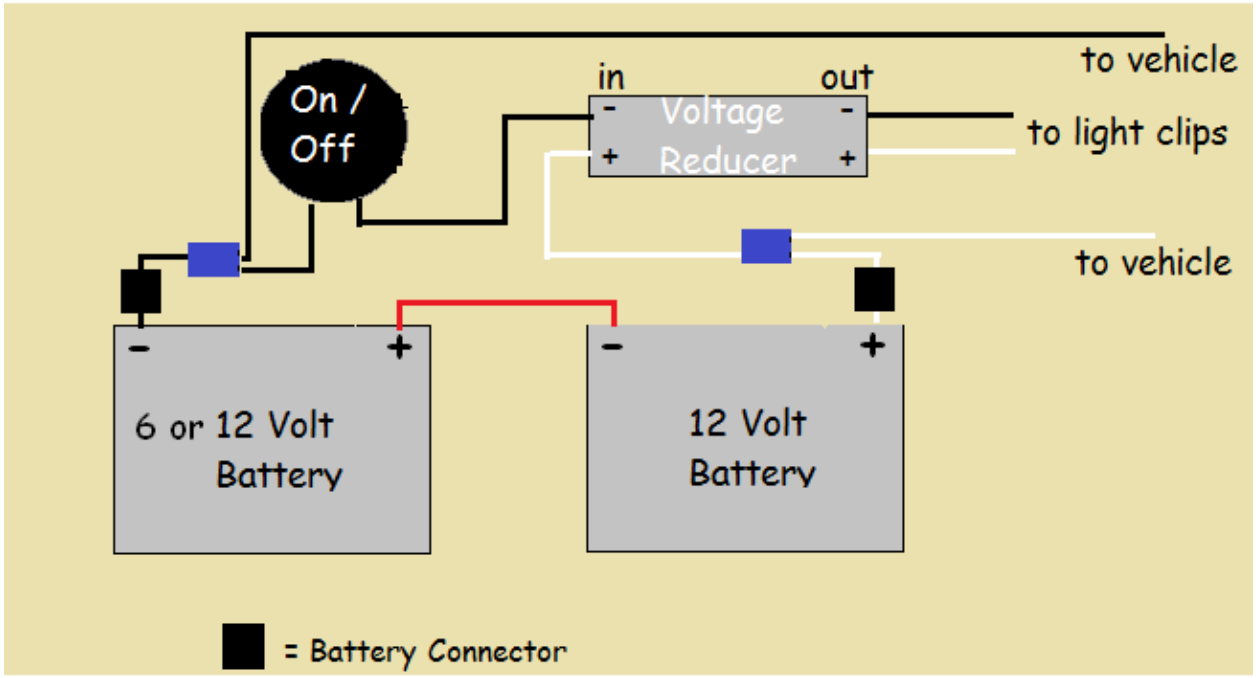
6. Start with a small drill bit and work your way to your largest bit to make a hole for the Power Switch. If you don't have a large enough drill bit you can finish the job with a utility knife.
7. Determine the path that the Power Switch wires will run to the battery compartment. In most cars you can either drill a ¼" hole through the firewall or run the wires alongside the battery lead.
8. Run red & black wire from the battery compartment through the back of the Power Switch hole. Attach the 2 spade connectors to the wires. Attach spades to the Power Switch (color doesn't matter). Put the switch into the dash. Gently pull any excess wire back to the battery compartment. Do not cut the extra wire yet.
9. **Power Distribution Clips and Final Wiring -** Select a place in the battery compartment where the Power Distribution Clips (and Voltage Reduction Module for 18v & 24v vehicles) will go. The best place is close to where the battery leads enter the battery compartment.
10. You can tape or glue wires to the underside of the car (clean the area tape is being applied to first), or get fancy and pickup wire retainers from a hardware store. Drill ¼" holes in the battery compartment if needed to gain access for the wires.
11. Insert the negative (black) battery cable wire into the side of a blue wire splicer that allows it to pass through. Insert one of the Power Switch wires into the remaining space in the splicer. Use pliers to press the METAL portion of the splicer through the wires. Close the blue cover.
12. Connect the other wire that comes from the Power Switch to a Power Distribution Clip.* This will be the negative Power Distribution Clip. All wires going into Power Distribution clips need about 3/8" of insulation stripped from the ends. *If using Voltage Reduction Module insert here. See diagram.
13. Insert the positive (white) battery lead into the side of a blue wire splicer that allows it to pass through. Insert a short piece of wire into the wire splicer to go to Power Distribution Clip.* Use pliers to press the METAL portion of the splicer through the wires. Close the blue cover. *If using Voltage Reduction Module insert here. See diagram.
14. Connect the other end of the white wire provided in your kit to a Power Distribution Clip. This will be the Positive Power Distribution Clip. All wires going into Power Distribution clips need about 3/8" of insulation stripped from the ends.
15. Attach all of your negative (black) LED wires to the Negative Power Distribution Clip. You can put multiple leads into 1 hole if you have a lot of lights.
16. Attach all of your positive (red) LED wires to the Positive Power Distribution Clip.
17. Plug in the battery. Test the lights and the vehicle. Then wrap all of the LED wires together tightly with electric tape or wire loom from the Power Distribution Clip to where they exit the battery compartment.

If you add on any of our additional lights, underglow lights, or knight rider lights you can connect them to the Power Distribution Clips the same as the original lights.

If you have our Electronic Speed Control just connect your power leads to the 12v Output on it.

If you have any installation questions please email us at www.mltoys.com@gmail.com. We also like to see your completed work and can showcase it on our website if you'd like.


LED Lights
& Underglows
Spade
Connectors
On /
Off
Splicer
12 Volt
Battery
Connector
Scan
for
Video
Instructions
Into Vehicle


to vehicle
in
out
On /
Off
Voltage
Reducer
to light clips
to vehicle
6 or 12 Volt
Battery
12 Volt
Battery
= Battery Connector

Installation with MLToys Electronic Speed Control