

Madman Lighting Delux 8 Instructions

WARNING: This product contains small parts not suitable for children less than 12 years of age. DO NOT SWALLOW! MAY CAUSE CHOKING OR INJURY!

WARNING: Madman Lighting products are shipped in good working condition and are not to be modified or changed by the purchaser. Any change or attempt to repair, change, alter, modify or enhance Madman Lighting products in any way will void any warranty, written or implied.

ESD WARNING: Madman Lighting products contain sensitive electronic components and may be damaged by electrostatic discharge (ESD). Avoid shock, sparks, and static electricity by working on a grounded surface or by using a wrist-grounding strip.

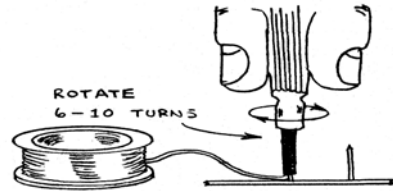
Tools Needed: (not included)

Xacto knife	9V battery	Pin vise
#80 drill bits		Wire wrapping tool. (available at Radio Shack)

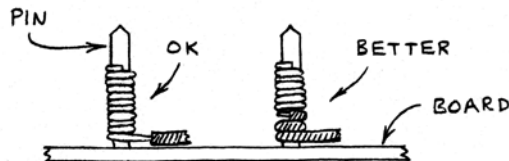
The Madman Lighting Delux 8 is designed to provide the user with a general-purpose lighting solution for models, dioramas, crafts, and any type of hobby where the power of small, brilliant LEDs and fiber optics can be used to add realism and sparkle to a project.

No soldering is required when using the Delux 8. All connections are made with wire wrap wire, which is safer and easier than soldering. It is also easily changed.

Wire wrapping is easy! The wire wrap tool comes with a handy stripper you can use to remove the insulation from the wire. Remove about an inch of insulation, and then insert



the bare end into the guide groove of the wrapping tool. Slip the tool down onto the post and rotate a few turns while letting it gently push itself upwards as the wire wraps around the post. The figure below shows some examples of finished wraps.



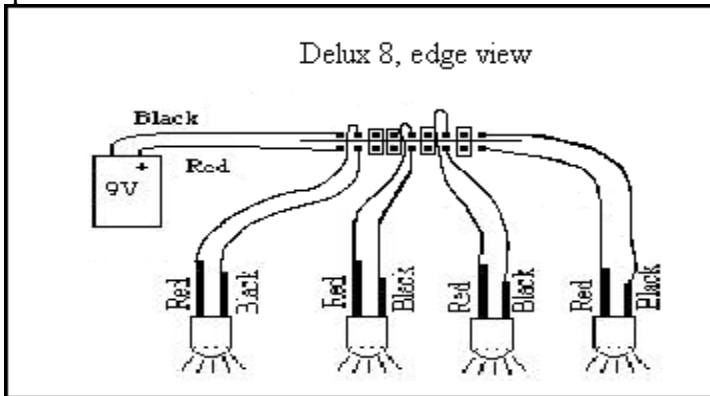
Power wires are provided as part of the kit. One length of twisted red and black wire is available for wiring your Delux 8 to its LEDs and battery.

Black is for the Negative (-) connection, always the SHORT lead on the LEDs.
RED is for the Positive (+) connection, always the LONG lead on LEDs.

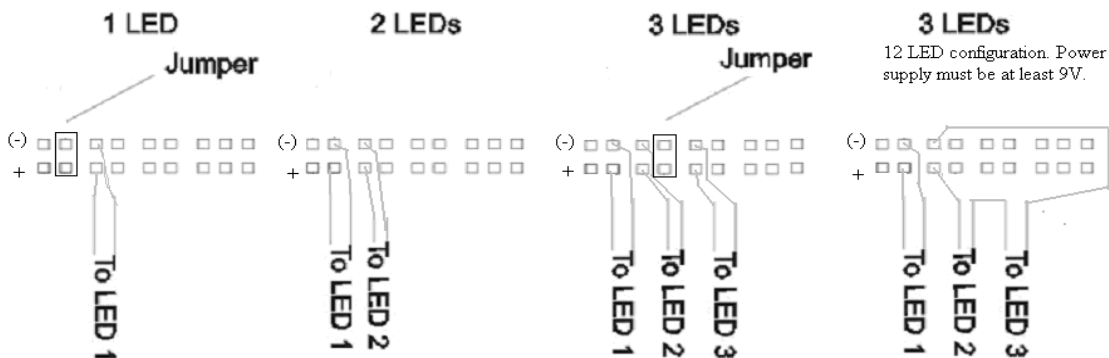
Wiring the Unit

The following picture shows the basic wiring diagram for hooking up a Delux 8 and four LEDs. The other four LEDs are hooked up with the Red and Black wires in the same places but is left off this diagram for clarity.

The Delux 8 drives LEDs in vertically arranged pairs, this diagram shows the lower half of each pair in use, jumpers are needed on the upper pairs to complete the assembly but are omitted for clarity here. Anytime you wish to use just one LED in a vertical pair, place a jumper on the other set of posts to complete the circuit. If you are not using a pair at all, please leave off any jumpers.



The diagram below shows a close-up view of the posts for connecting LEDs. LEDs should be hooked to the Delux-8 in pairs, with shorting jumpers used on the unused jumper posts.



Connecting the Fibers

Connecting fibers to LEDs is easy!

Liberate the fibers from their sheath with a sharp Xacto knife, gently slicing through the sheath along most of its length. Leave a short section of sheath about an inch long to keep the fibers together neatly.

Next, drill a #80 (0.0135") hole for each spot of light you want on the model. Thread one fiber for each hole, and glue it on the back side with a little super glue, applied with a pin.

Bring the fibers together on the inside and hold them together with a little tape. After all the fibers for a given area are in place and taped together, cut them flush so they all end together.

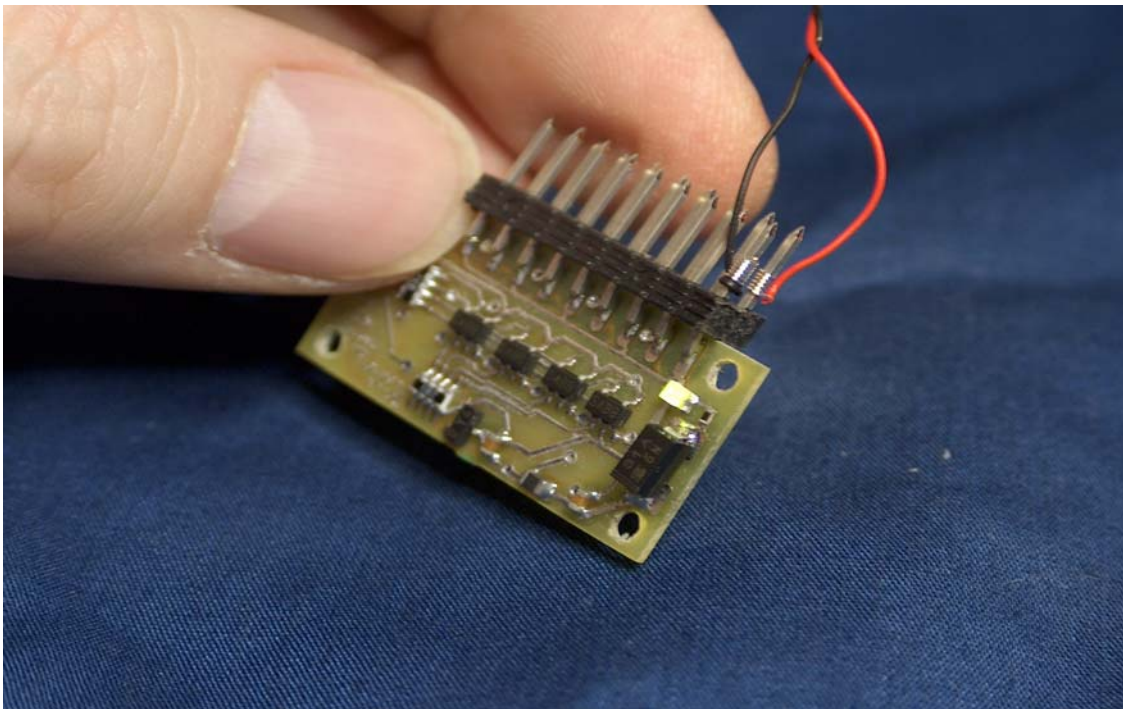
Now use a short length of heat shrink tubing to join the fiber bundle to the LED, as shown below.



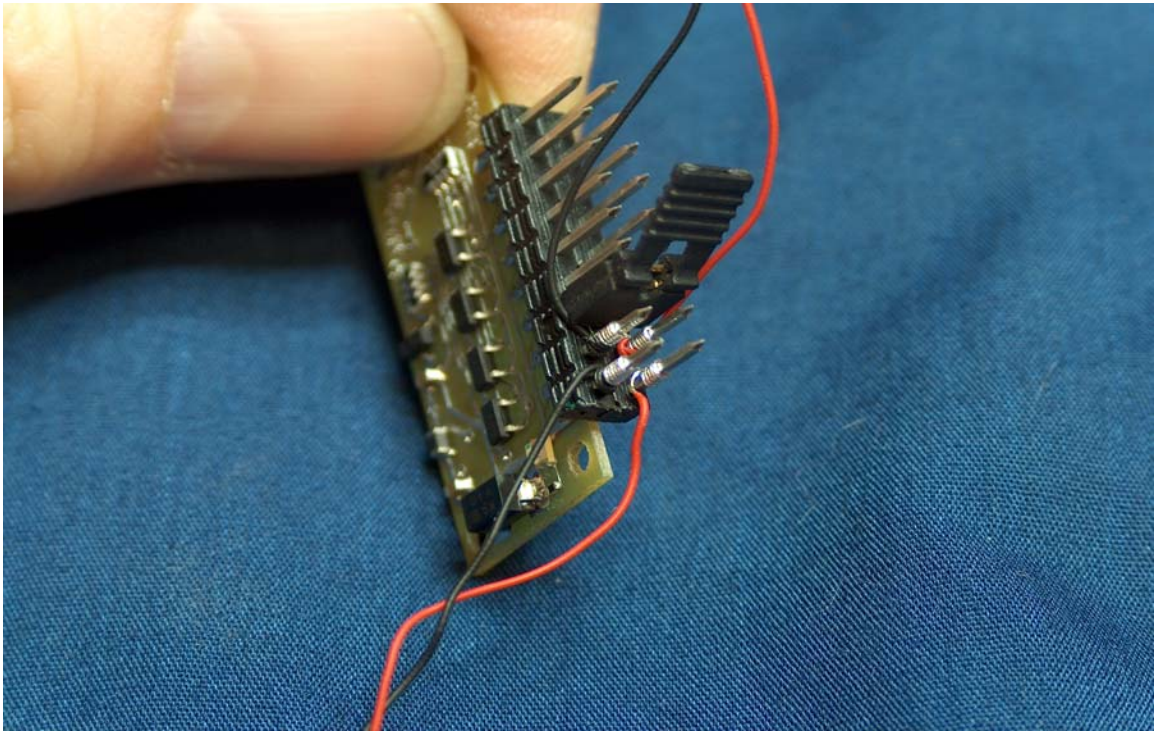
Working with Heatshrink Tubing

Heatshrink tubing is provided with the kit to join the LEDs to the fibers. Heatshrink is easy to work with; it only requires a modest amount of heat to cause it to shrink to about half its original diameter. Avoid flame, as it will cause the plastic optical fibers to warp or even melt. Use a low wattage soldering iron, hair dryer on medium setting or other modest source of heat to gently heat the tube and cause it to contract.

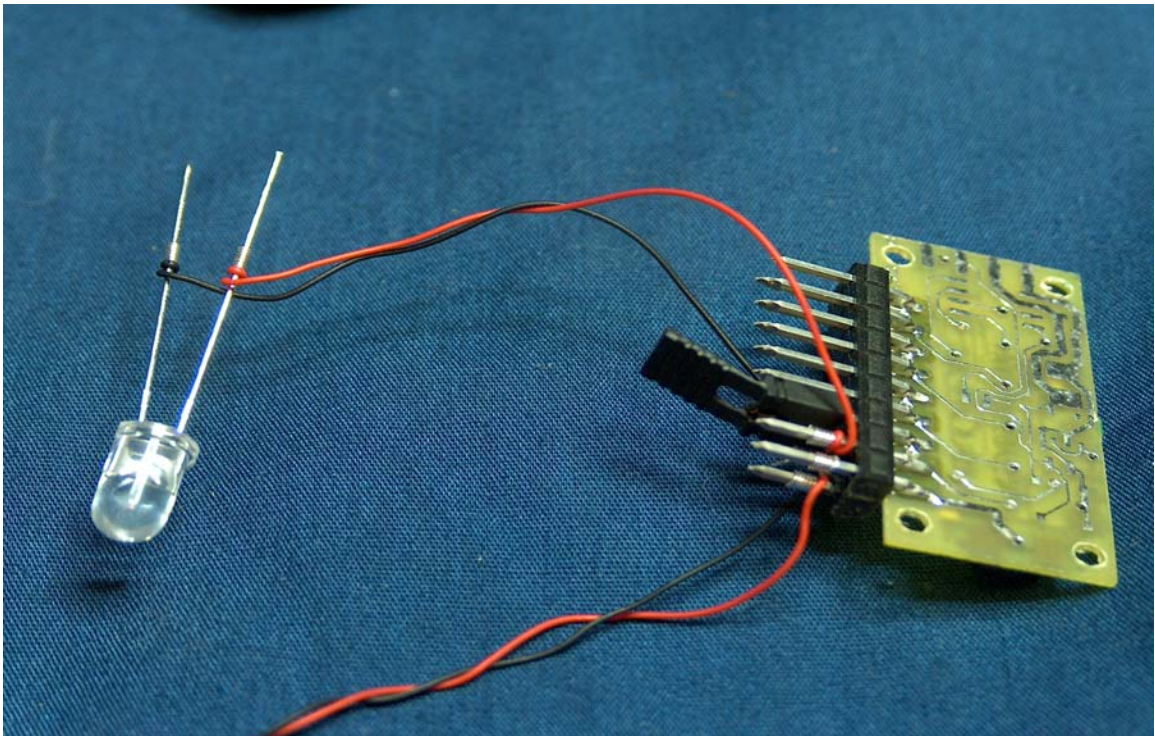
Hookup Photo Gallery, Detailed Photos of Hooking up LEDs and Power



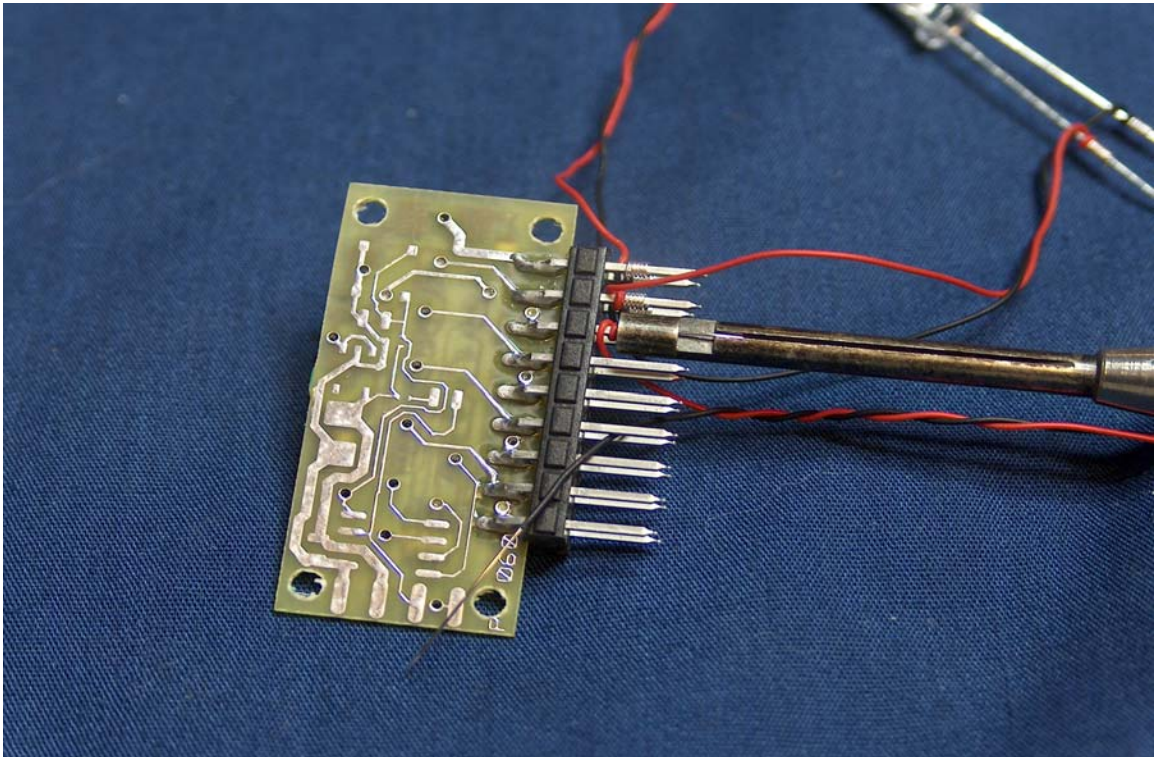
Power and Ground hookups, Red wire is battery positive (+) , Black is battery negative (-), ie ground



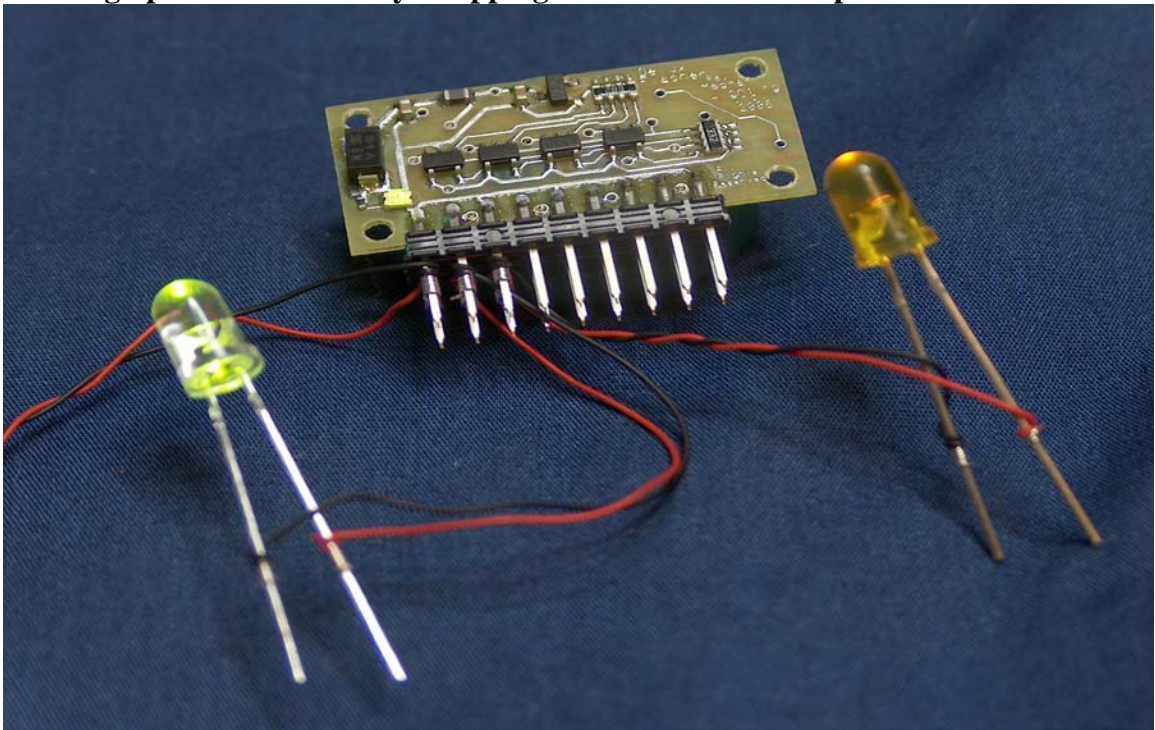
Hookup for one LED, showing the jumper and red and black wires for power and the LED.



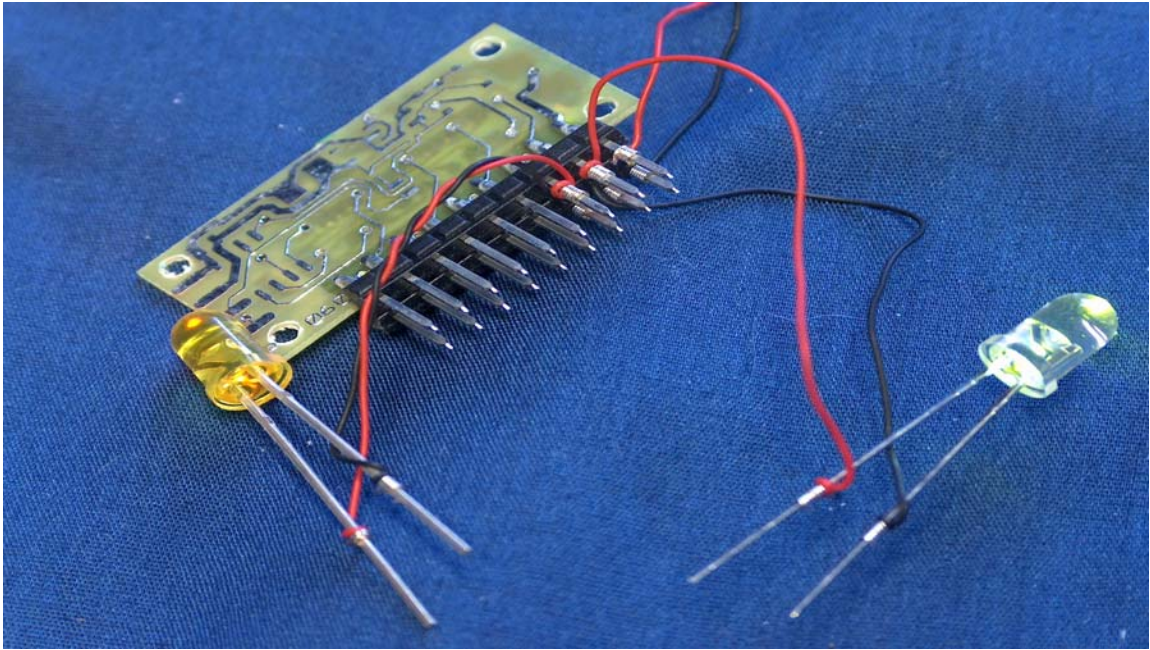
One LED hooked to the Delux-8.



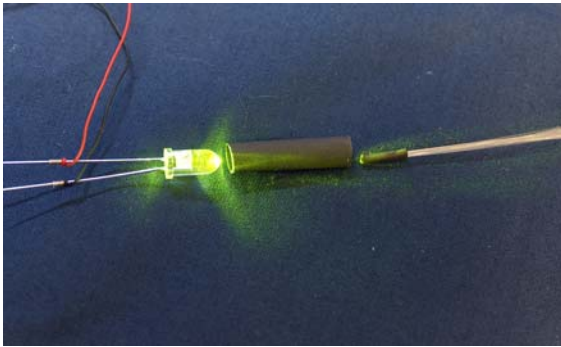
Hooking up a Second LED by wrapping the wire around the posts.



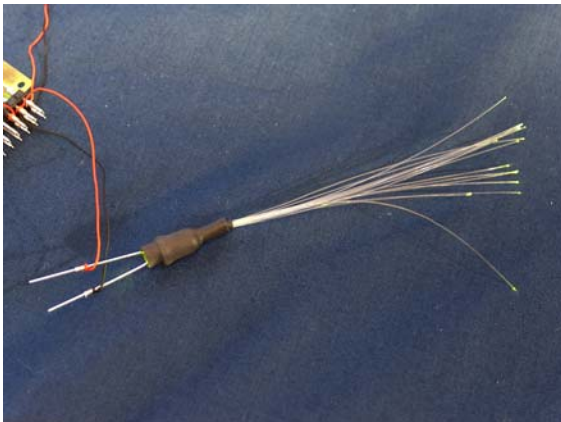
Two LEDs hooked up, Lights ON!



Two LEDs hooked up, Lights ON!



LED, and heatshrink tube, and fibers, ready to join.



Fibers joined to LED with heatshrink tubing.