Astromech Back Logic Light Kit

http://www.hyperdynelabs.com

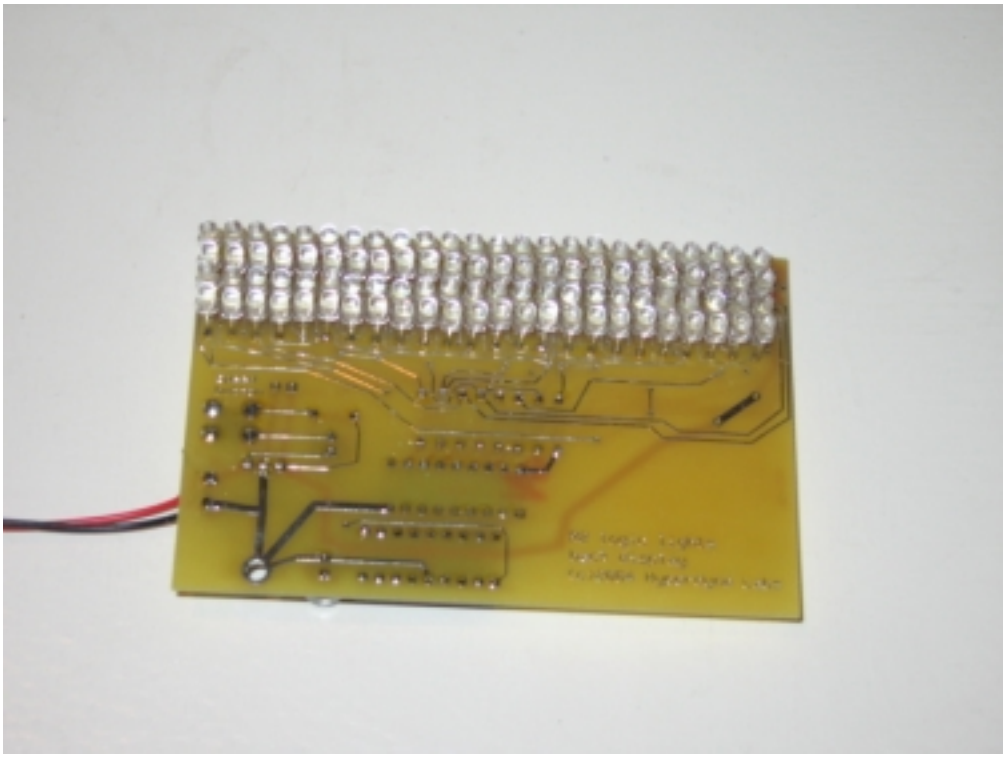
Your logic light kit comes with a mainboard to control all of the back logic lighting for your astromech dome.

If you have purchased the kit without LEDs installed, please go to the end of this document to read how to finish your kit.

LOGIC MAINBOARD

The mainboard has a 9V battery snap connector. Use at least a 9V battery that is fresh. If the battery is weak, the board will act unpredictably. You can use a voltage of 6V-18V on the mainboard, as it has a voltage regulator. Hooking this up to your main battery is fine too. We recommend either using a 6AA battery pack or a larger capacity battery if you are going to run the lights for a long period.

Here is a pic of the back logic light kit with LEDs installed:

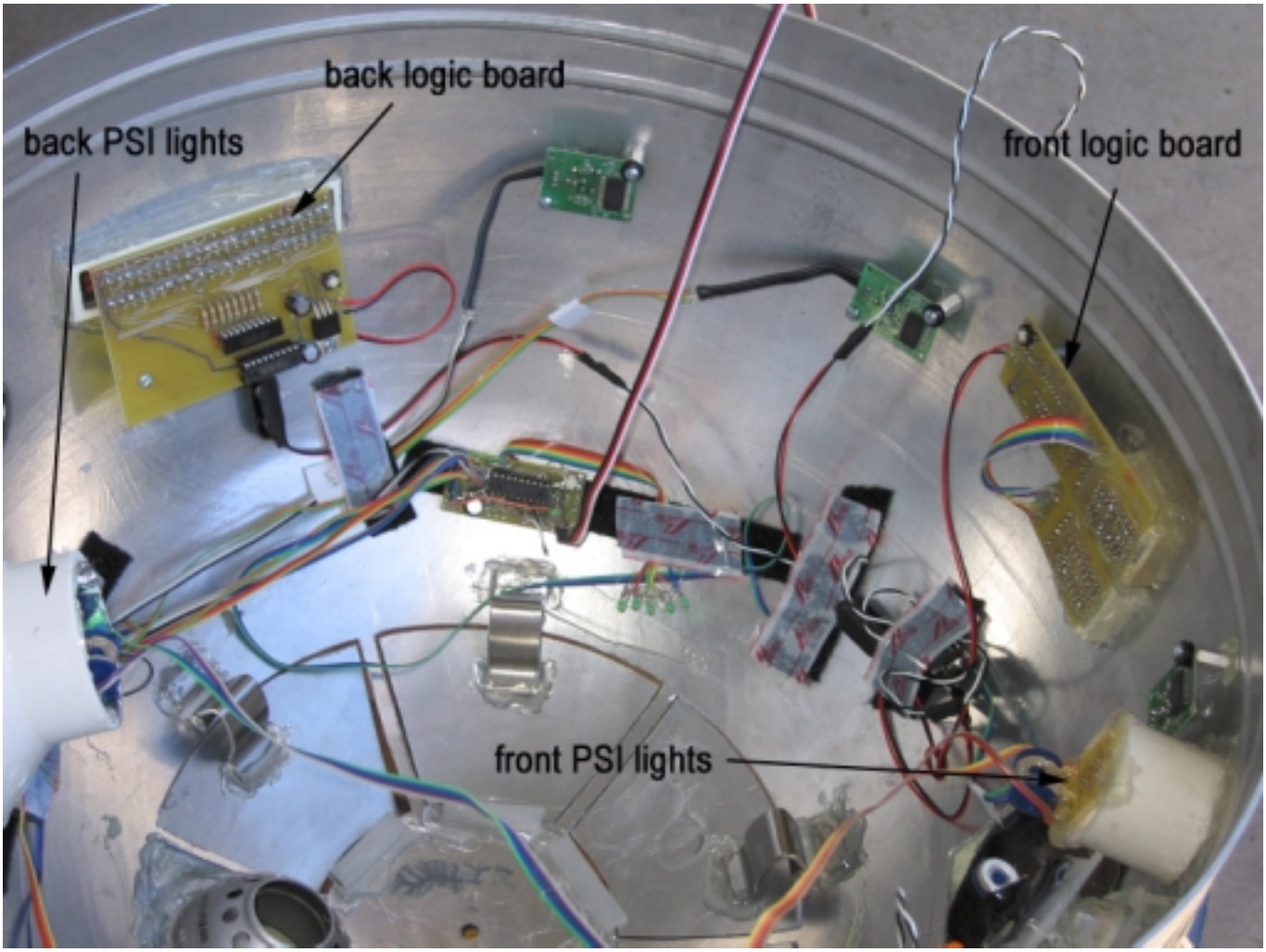


NOTICE: There is no warranty on kits!! It is your responsibility to install the board. Kits cannot be returned! This kit can consume alot of current. Be careful if you plan to use a battery source that is capable of delivering alot of current. Contact a professional if you need assistance. Hyperdyne Labs assumes no responsibility for the misuse of this kit.

LOGIC BOARD INSTALLATION

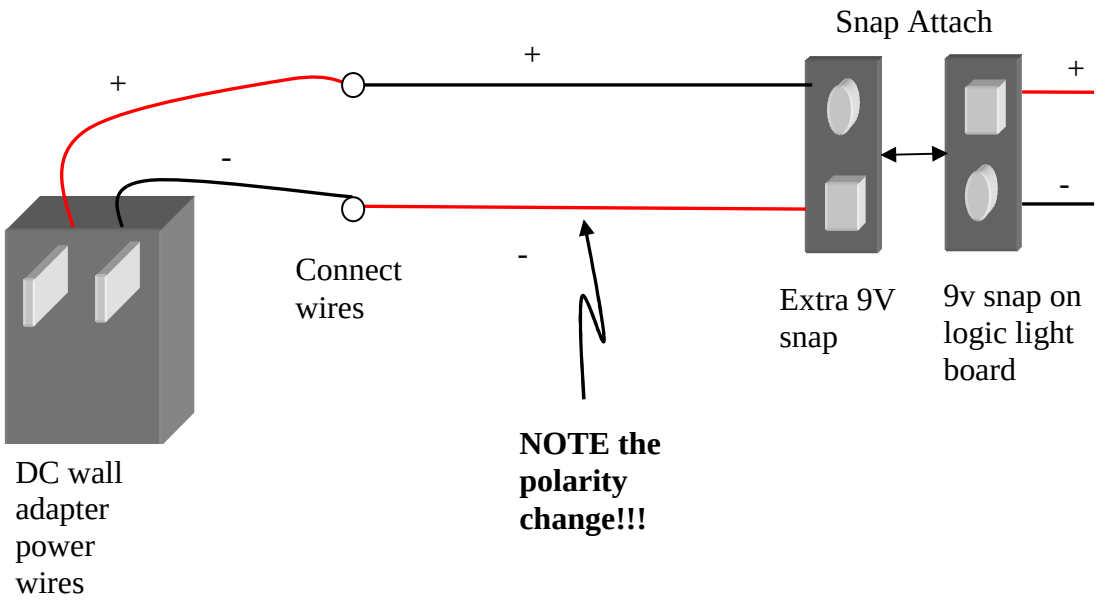
The boards were made to fit a standard resin type logic box. You can simply slide the LED array inside your logic box and then hot glue or secure the boards in place.

Here is a pic of the logic boards installed inside a dome:



BATTERY HOOKUP/WALL OUTLET HOOKUP

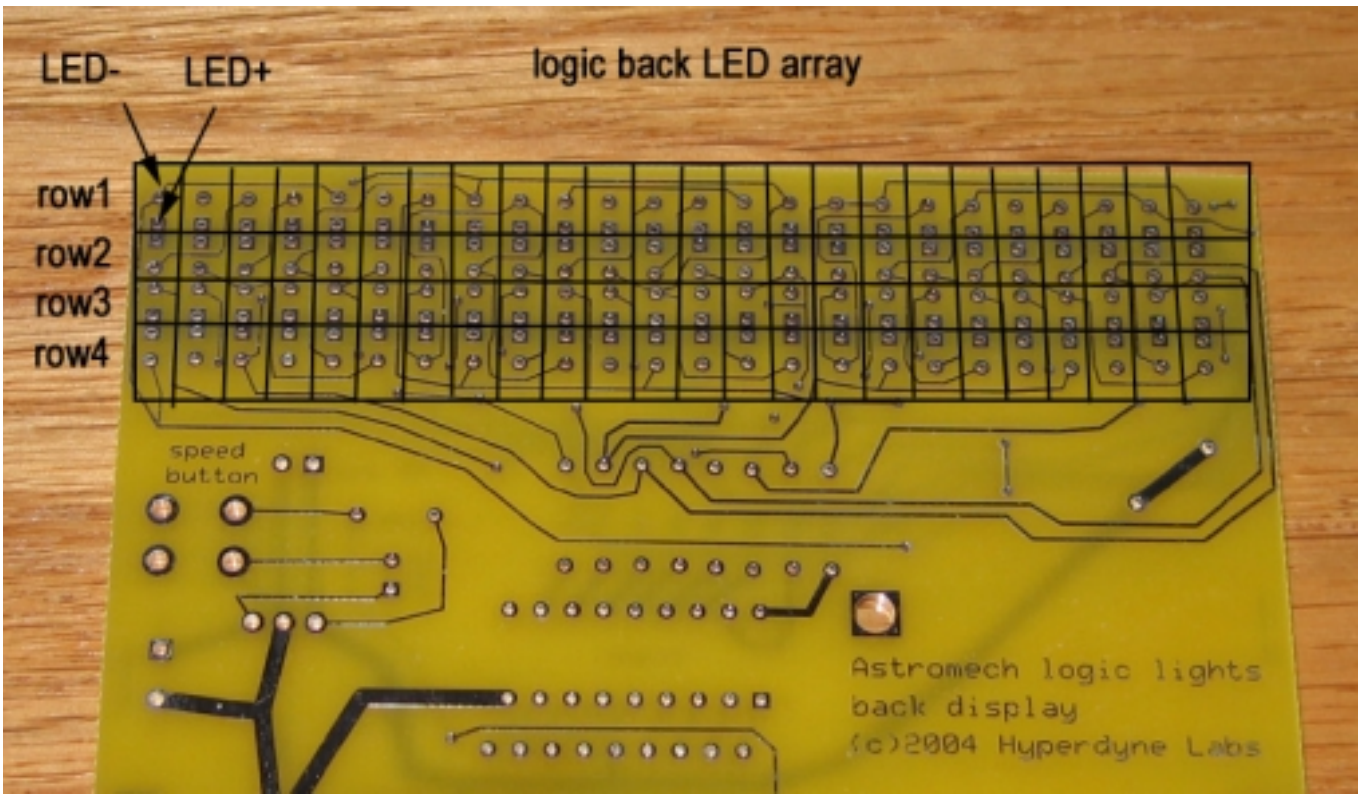
If you are going to use an AC wall adapter or a non-standard 9V battery connector, you can wire in the battery/adaptor to the included snap connector. Below is a diagram for wiring for an AC "wall wart" adapter to your logic board. Note that when you use an extra 9V snap the polarity of the wires changes.



INSTALLING YOUR OWN LOGIC LEDS

If you purchased our kit without the logic LEDs installed, you will have to solder your own 3mm LEDs to the board. You will need 96 total LEDs for the board. Make sure you are using LEDs with the same forward voltage, as different types/colors of LEDs may not light up correctly if you mix them. White 3mm LEDs work the best since you can color them accordingly or use a diffusing gel.

Here is a pic of the array layout:



Step 1:

Turn the mainboard over to the side shown above and populate “row1” with white LEDs. Also note LED polarity. The + side of each LED goes into the square holes, and the – side of each LED goes into the round hole.

Now solder the legs of each LED and clip the excess leads.

Step 2:

Populate the next “row2” with 3mm white LEDs. Solder the – lead legs first on the same side of the board, then turn the board over and clip the excess leads. Next solder the + legs from the bottom side of the board (this will give you enough room to reach each pad).

Step 3:

Populate the next “row3” with 3mm white LEDs. Solder the + lead legs first, then turn the board over and clip the excess leads. Next solder the – legs from the bottom side of the board.

Step 4:

Populate the next “row4” with 3mm white LEDs. Solder the - lead legs first, then turn the board over and clip the excess leads. Next solder the + legs from the bottom side of the board.

DIFFUSING THE LOGIC LEDS

You can also use a diffusing gel in front of the LEDs to get a more accurate effect. Below is a pic of a mylar-backed colored gel cut out to fit in some resin logic boxes.

Installing the LEDs behind the gel gives a very nice fading effect that mimics the fiber-optic look. These gels can be found on the R2 builders group. Below is a pic of the back logic display board mounted behind a colored gel.

CHANGING THE SPEED OF THE LOGIC LED FADING

The onboard pushbutton will cycle through 4 different fading speeds for the LED array. Pressing the button once will change the speed. Pressing 4 times will cycle through all the speeds. The board should remember the last speed you entered when powering the board down and back up.