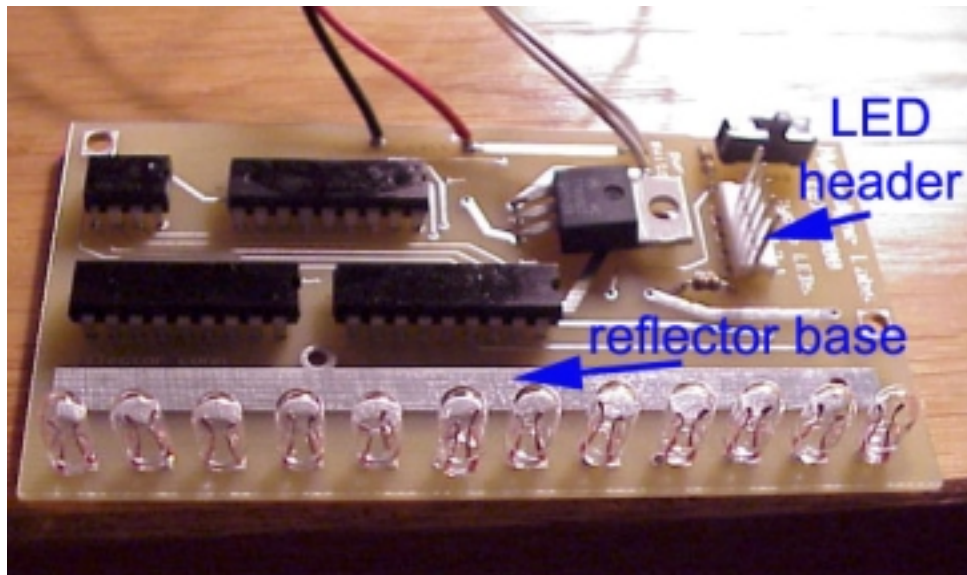


Ghostbusters Proton Pack: Power Cell and Cyclotron Light Board

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LIGHT BOARD KIT

Here is a picture of the proton pack light board kit. This board controls both the 13 power cell lamp sequencing as well as the 4 cyclotron LEDs. The cyclotron LEDs are connected to the board header and some wire is run to the cyclotron area.

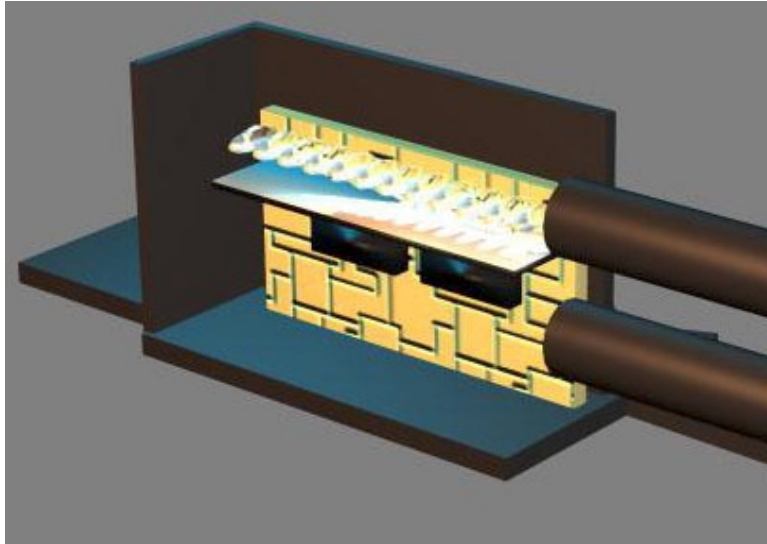


The 2 switch wires coming off the board are connected up to the master on/off power switch. This allows you to keep the batteries connected, but you can turn the unit on and off by just using the switch.

The 5-pin header on the board is for connecting the cyclotron LEDs. The power cell lamps are already installed and ready to go. The small onboard switch controls the sequencing speed of the power cell lamps ONLY.

There are 2 available speeds for the power cell lamps that have been calibrated to the movie to be as accurate as possible! The reflector base allows you to connect a mirror or other reflective material that will make the lamps appear brighter, like they do with headlights. You can solder, screw, or glue a reflector to the marked area. Make sure the reflector does not touch the lamps!

Here is an illustration of using a reflector with the lamps. The board is shown inside the power cell box:



POWER SUPPLY

A sufficient power supply is 9V. So, you can use 6 AA batteries, 6 C cell or D cell batteries. You can even use a 7.2V RC car battery if you like. You must use a minimum of 6V on the board in order for it to operate. One 9V battery will work but will not last long. A 9V lithium battery will last 3x longer than alkalines. If you are going to use 9V batteries, use 2 of them. You can find other battery holders with a 9V snap connector already on them at Radio Shack or your local electronics shop. A 6AA battery holder is included in this package, which should give you several hours of use!

A rule of thumb: the bigger the batteries, the longer they will last. If your board starts acting funny, or quits sequencing, check to make sure the batteries are good. Dead or old batteries will cause the board to act unpredictably. Make sure you check the battery polarity before hooking them up!

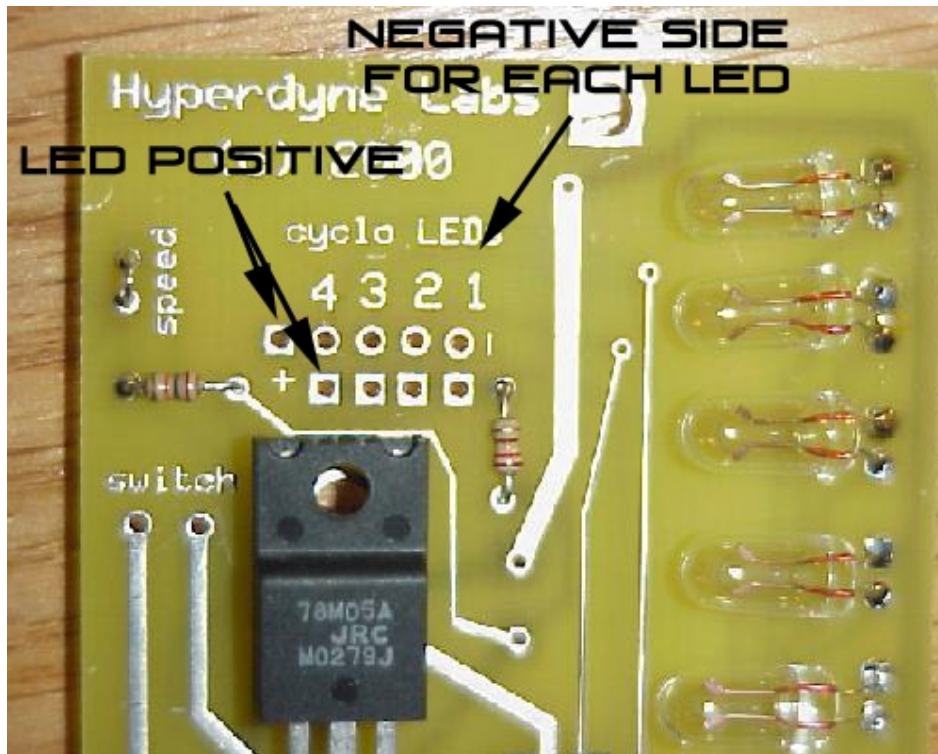
NOTE: Make sure you place the board in an area where it has sufficient room and the lamps are not touching plastic, wires, etc. This board does consume a lot of current, so keep that in mind. The lamps will get hot after prolonged use. It is your responsibility to make sure you use the board in a safe manner. If the board does heat up, try mounting a small computer fan nearby to cool it off.

CYCLOTRON LED CONNECTIONS

These paragraphs show you how to connect up the cyclotron LEDs to the board and run them to the cyclo area. Please read in full!

New method:

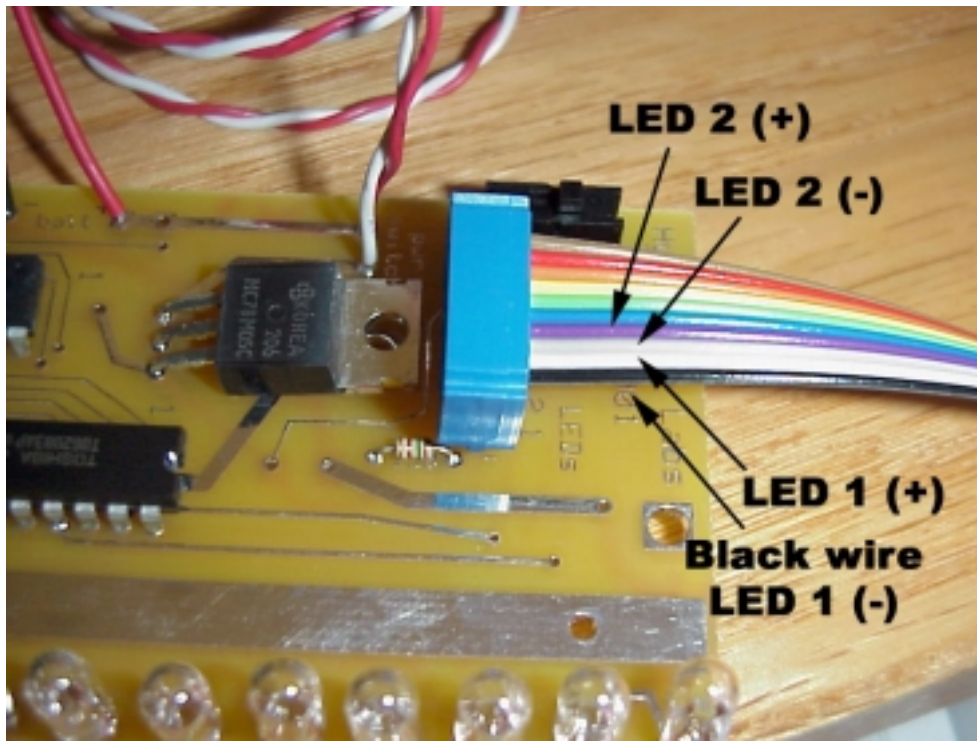
The new boards ship with a cable assembly to make LED connections much easier. There are holes on the board to run 2 wires for each LED, a negative and positive. Here is a picture showing all of the LED board pads:



The assembled boards have a header already installed on the board where the LED connections go. You hook up the included cable so you can easily run the wires down to the cyclotron area. When you plug in the cable, each pair of 2 wires are used to connect up each LED.

Here is a picture of the cable connected up to the LED header pins.

Note the LED polarity → 



The first black wire is the (-) lead for LED1, the next white wire is the (+) lead for LED1. The next pair or colored wires are for LED2, the next for LED3, and finally for the 4th LED. Note, the last 2 wires are unused.

Use an exacto knife to *carefully* splice the individual wires on the other end of the cable assembly. Take each pair of wires and hook up (or solder) each respective LED to the wires (**note the longer lead on the LED is the positive leg**).

Continue this for all 4 LEDs. You can use an exacto knife to splice apart the wire assembly so you have enough separated wire to run each LED to its cyclotron mounting space. Just be careful as the wire is small gauge and delicate.

Turn on the board and make sure the LEDs are sequencing. If they are, you are done!!

When finished, power on the circuit and watch it go!

You can see more pics at <http://www.hyperdynelabs.com/gb.html>

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

Hyperdyne Labs assumes no responsibility for the misuse of this kit.