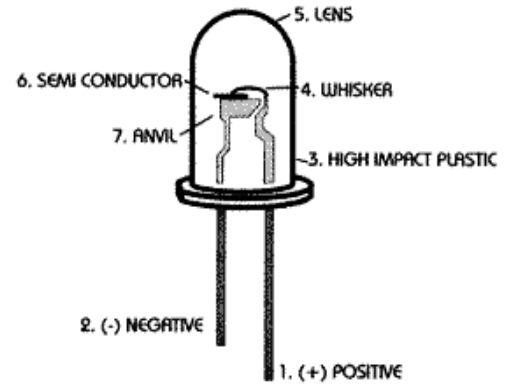


# VooDooFX

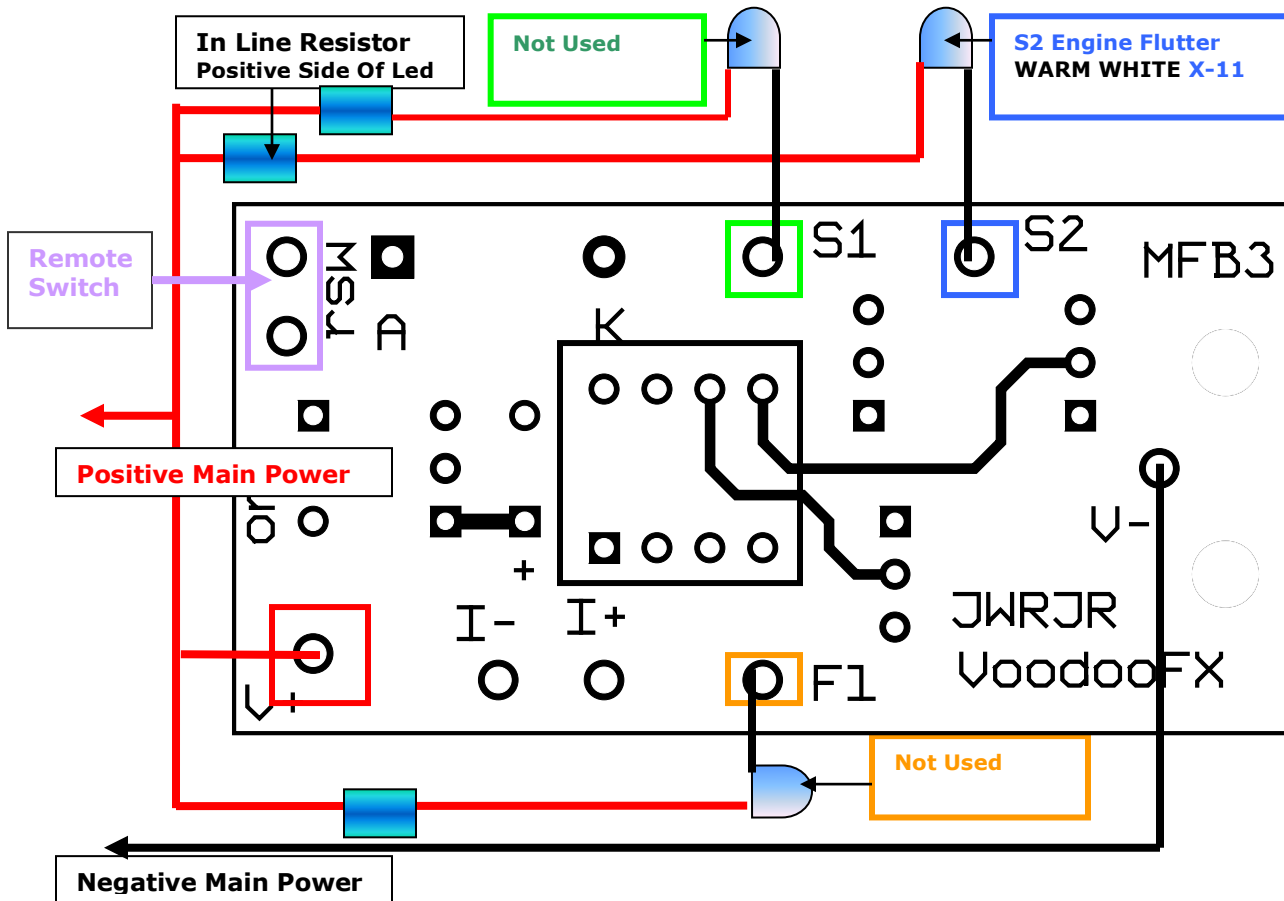
3312 Hoover St, Redwood City, CA 94063  
650-568-3400  
www.voodooFX.com

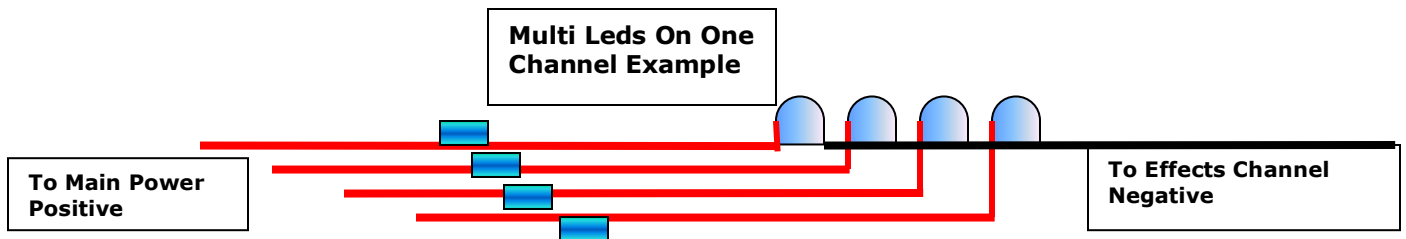
## General Led Diagram



(RCBRLK-1)

## Hi Output Multi-Function Board Diagram:



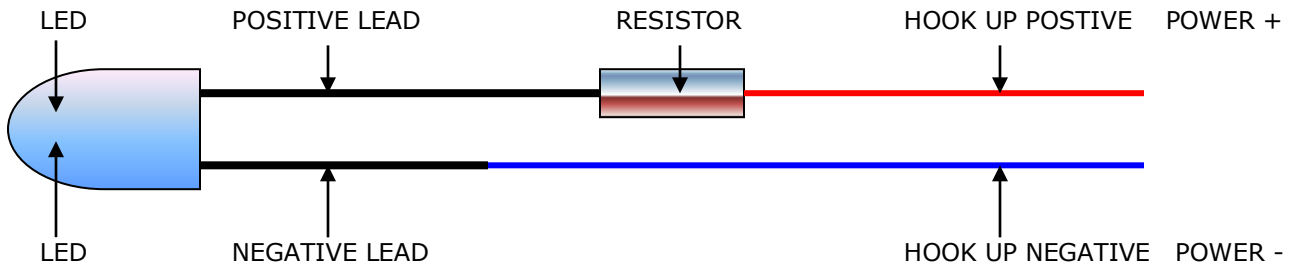


**Hi Output Multi Function Operation Instructions Ver 1:**

The hi output multi function circuit board is designed around three hi out put channels. Each channel output needs an individual inline resistors to protect each led used, there is a wide range of resistors that can be used: **SAMPLE 220 Ohms gives a very bright effect for the led. SAMPLe 1-K or 1.5-K Ohms will give a dim or soft effect for the led.** The circuit board works of negative signal switching so multi leds can be ganged together off one negative channel up to 20 leds per channel. Circuit board does require its own power to run the chip, **Positive to main power 5-12 volts forward, Negative to main power 5-12 volts forward**

**General Instructions For Inline Resistor Hook Up:**

Here is the hook up diagram for high output circuit board or direct power hook up. Each separate led will need a resistor in order to prevent overdriving the led, if not protected with a resistor the led will burn out under direct power hook up. Solder all wire connections properly; please study the hook up diagram below and repeat the process for each used led.

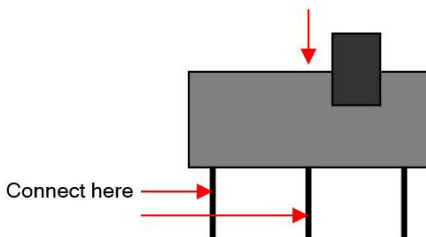


**(How to Make a Wired Led)**

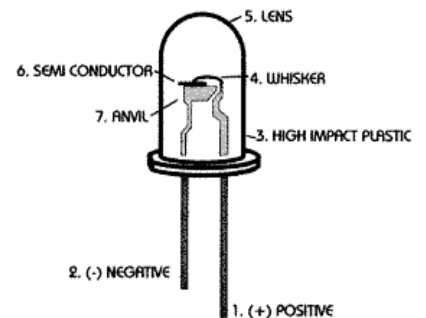
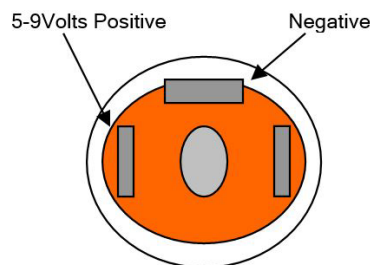
- 1- Separate the two wires. Pick what color will be positive+ and what color will be negative-.
- (Example) Lighter color is positive+, darker color is negative-. This will apply to any color, you make the choice.
- 2- Slide on two pieces of shrink tubing 1/8 - 1/4 "long, Slide past area where wire coating will be stripped off.
- 3- Strip back the protected coating and expose the bare wire, 1/8 - 1/4" is about enough to wrap around the led leads. Twist bare wire together until it is a tight, stray wire or fray will get in your way later, the tighter the better.
- 4- Wrap wire around led leads and slide forward to led base. Solder and cut off excess leads.
- 5- Slide shrink tubing over soldered wire and led, heat shrink tubing to finish process.



(General On /Off Switch Diagram)



(DC Power Port Hook Up Diagram)



## LIGHTING KIT INSTRUCTIONS VER 1:

Unpacking the electronic parts kit, read all documentation & study diagrams.

It is also good practice to have your own research material prepared before starting the lighting process.

Start by reviewing all the model kit parts, get a general idea of how the model will come together. We will break down the model into three categories: **on lighting – effects lighting – motor control**. The main body comes in an upper & lower body halves. When setting up for the electronics, you will need to build the lighting into the main body as a pseudo separate lighting system. The final result will be fewer wire connections as possible between the two main body parts & the rear engine assembly. Pre build, paint & mount leds as you move through the model construction, testing lighting as you go.

### (ON LIGHTING)

All the leds will use the in-line resistor set up, refer to diagrams above. When using this configuration, you have the choice of resistor to choose from to give different output levels for each led. Using the 220-Ohm resistor will give the brightest output within a safe operating range. Using the 1.5 K Ohm resistor will produce a dimmer output, giving you a much softer effect.

#### INTERIOR COCKPIT:

The interior cockpit area consists of an array 3X3 of leds surrounding the backside of the cockpit clear wall panels. Tape off the backside of clear cockpit, apply decals as directed to face side. Light block where need. Pre-built & paint where necessary.

**Cockpit leds used:** X-6 W 4.7mm small bookend style leds. Use 220-ohm resistors.

#### PASSENGER HALLWAY:

The passenger area consists of four leds equally spaced down the left & right sides of the hallway. The leds will need to be mounted pointing facing up wards towards the window top. Light block where need. Pre-built & paint whenever possible.

**Passenger leds used:** X-4 W 4.7mm small bookend style leds. Use 220-ohm resistors.

#### MID BODY:

The mid body consists of four leds left & right sides looking forward. The leds are mounted in the mid portion of the mid body winglet. Study reference photos for exact position. Pre-built & paint whenever possible.

**Mid body leds used:** X-4 W 3.0mm red leds. Use 1.5K-ohm resistors.

#### GUN TURRET:

The gun turret consists of two leds upper & lower. The leds are mounted in the bottom flat section of the gun. This is an optional lighting area, builder discretion. Pre-built & paint whenever possible.

**Gun Turret leds used:** X-2 WW 3.0mm white leds. Use 1.5K-ohm resistors.

### (EFFECTS LIGHTING)

In the kit there is an effects circuit board, this will control the double strobe & engine pulse feature. The circuit is based on a high output channel function, what this means is you will need to add an inline resistor for each led, please refer to the diagram above. It is best to wire the resistor to the led on the positive side of the led lead & return all positive back to main positive side of power. The negative wire side will be hooked up to the effects board marked **(S2)**. The circuit board itself will also need power, connect the positive & negative board wires to the main power hook up.

#### ENGINE EFFECT:

The engine flutter effect consists of eleven leds used in the back engine pod. The leds are controlled by a circuit board to make the lighting feature. Pre-built & paint whenever possible.

**Gun Turret leds used:** 11 WW 5.0mm white leds. Use 1.5K-ohm resistors.

#### EFFECTS CHANNEL:

**S2=**Engine effect - negative wire (WARM WHITE THRUSTER FLUTTER)

### (MOTOR CONTROL)

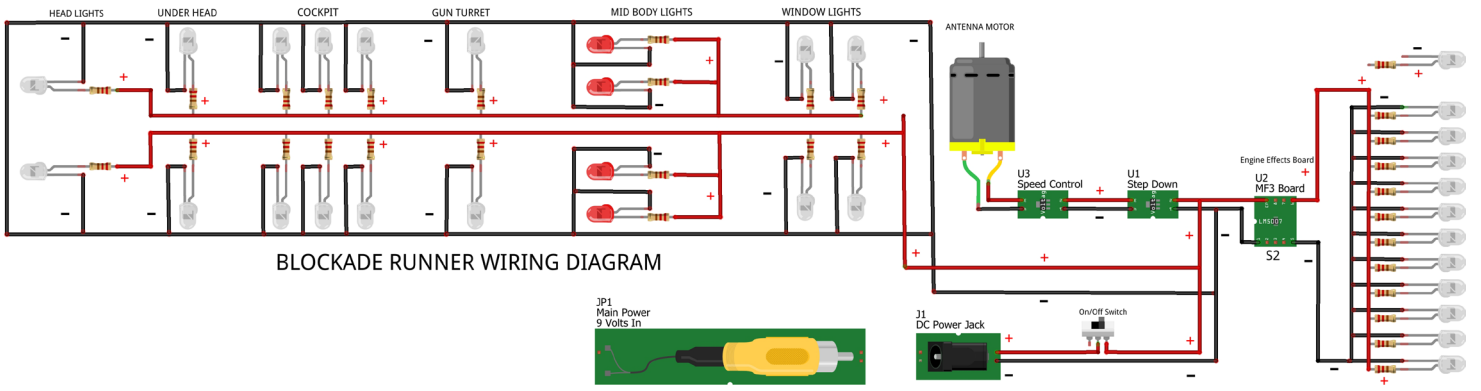
In the kit there is a DC motor, step down board & speed control. These three components make up the parts to create spinning feature. The motor can run CW or CC depending on the power hook up. The step-down circuit provides the proper amount of current to the speed control & motor. **NOTE** the side with the red connector on goes direct to the 9-volt direct power supply line, the other side goes to the speed control. **NOTE** red wire is **positive** & the **black** wire is negative or ground, **do not get these crossed**. Crossing the positive & negative will damage the speed control & the step-down circuit. Never hook up direct to 110-VAC power, use only the transformer that came with the kit.

#### ANTENNA EFFECT:

The antenna effect. The spinning motor moves the antenna around in a circle giving the effect of motion. The speed control helps regulate a faster or slower movement cycle. The step down protects the speed control & motor.

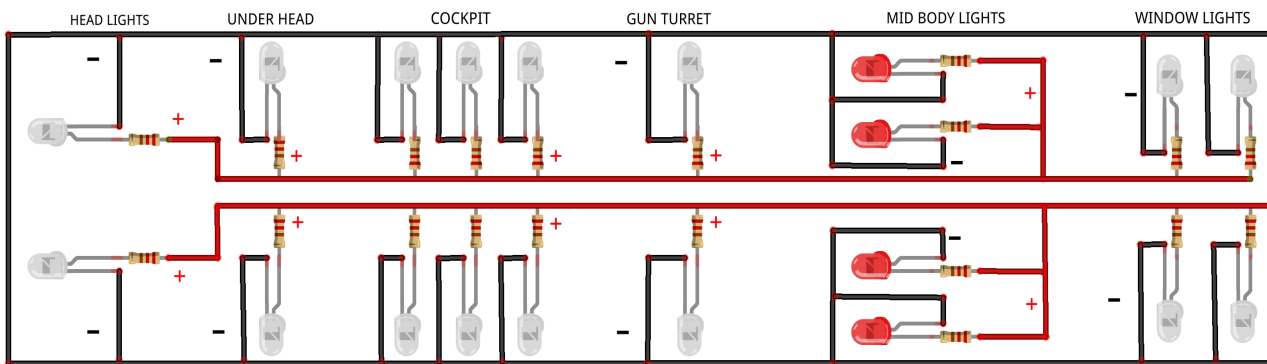
**Motor parts used:** 1-DC micro gear motor, 1-Step down circuit, 1-Speed control.

Please go to [www.voodoofox.com/blog](http://www.voodoofox.com/blog) for more info.

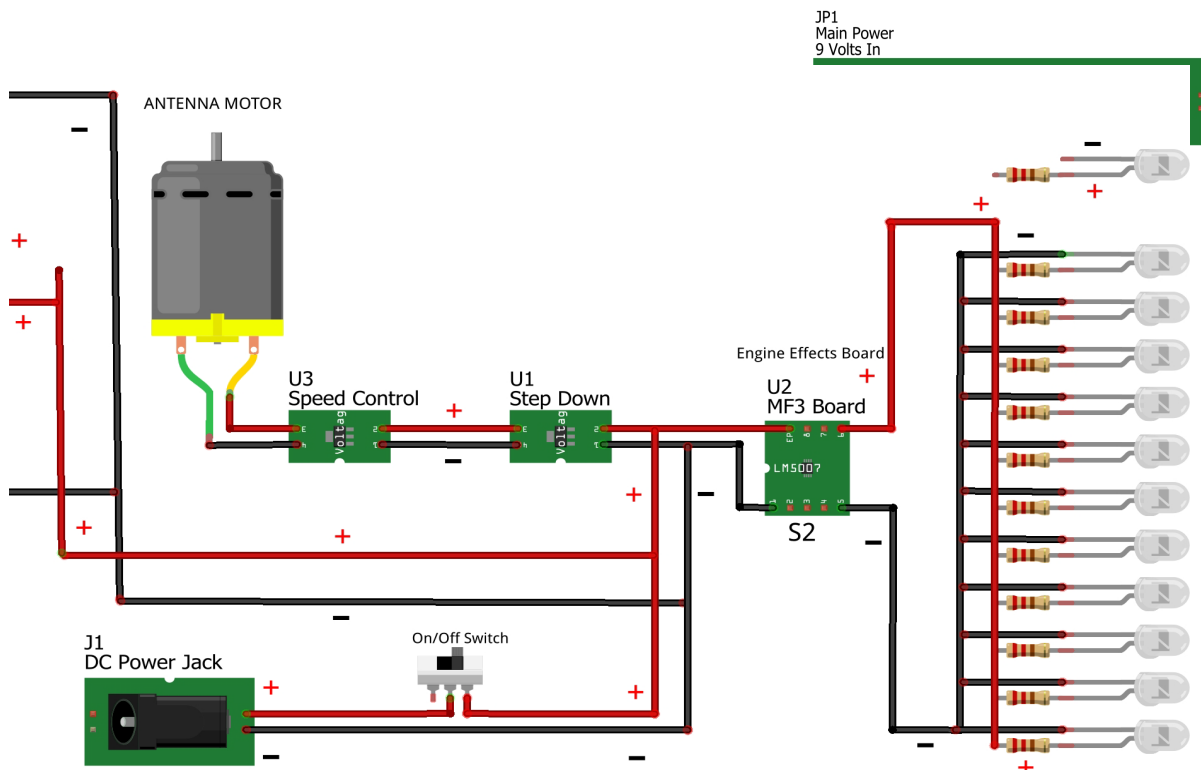


BLOCKADE RUNNER WIRING DIAGRAM

fritzing



BLOCKADE RUNNER WIRING DIAGRAM



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