

VoodooFx

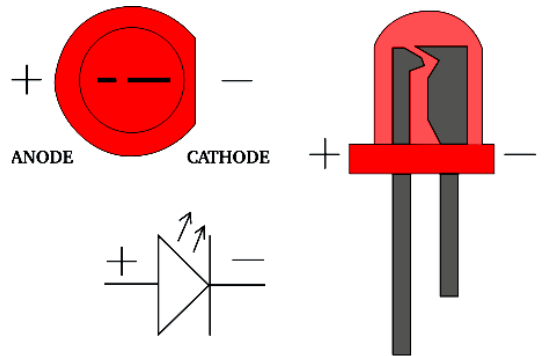
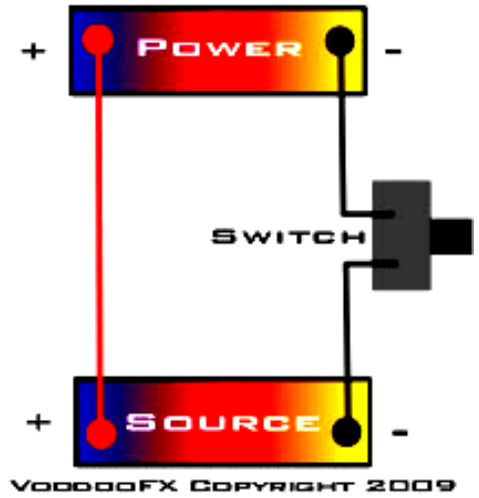
3312 Hoover St. Redwood City, CA 94063
 www.voodooofx.com
 650-568-3400

(VCB9-1)



(VCB9-1)

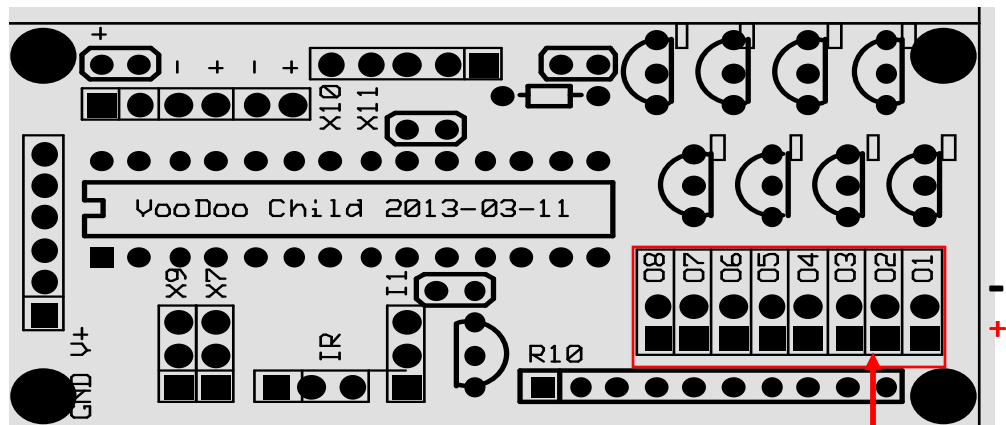
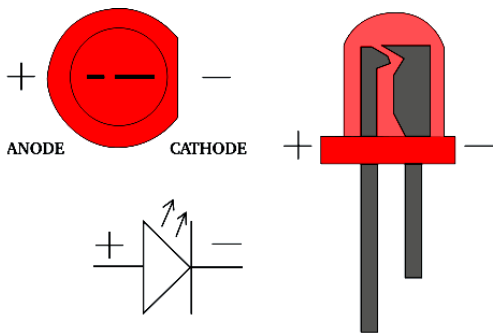
SWITCH DIAGRAM 1-A



LIGHTING OUTPUT PORTS 01-08 (Voodoo Child Circuit Board)
 START 0.00 seconds (Power on effects start)

END 0.00 second End (Endless/Loop)

(Chest Box)	(Main Chest Button)	(Upper Brain Blink)	(Lower Button Effect Ports 01-02-03)
08	07	06	05
04	03	02	01

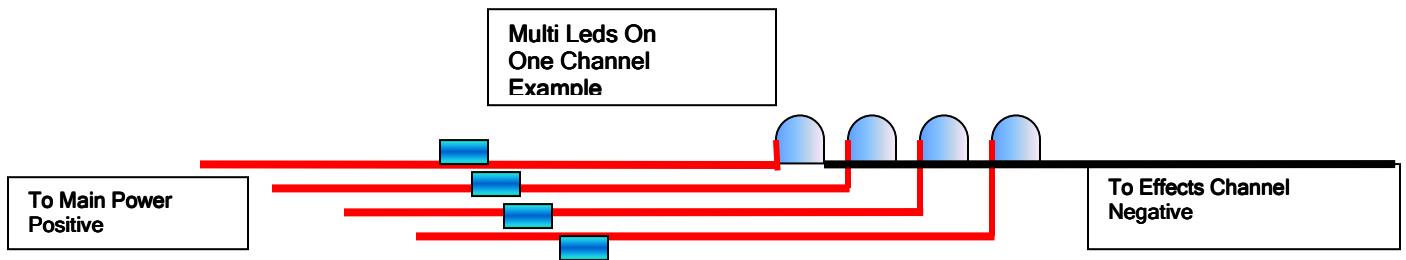


Lighting outputs can be used in two ways.

A Mode: 1 Led per port (DEFAULT) "Square Pad" is positive; "Circle Pad" is negative.

B Mode: Multi Leds per port, using "Positive inline resistor method". Negative or circle pad is used only for effect.

LEDS are polarity sensitive; make sure your leds are hooked up properly.

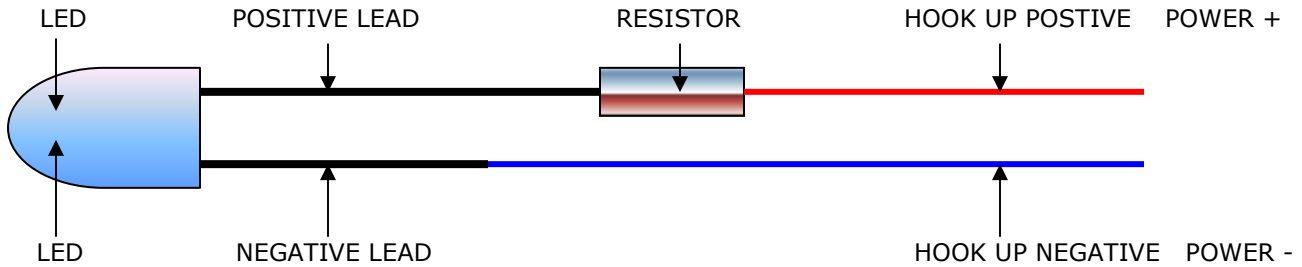


Hi Output Multi Function Operation Instructions Ver 1:

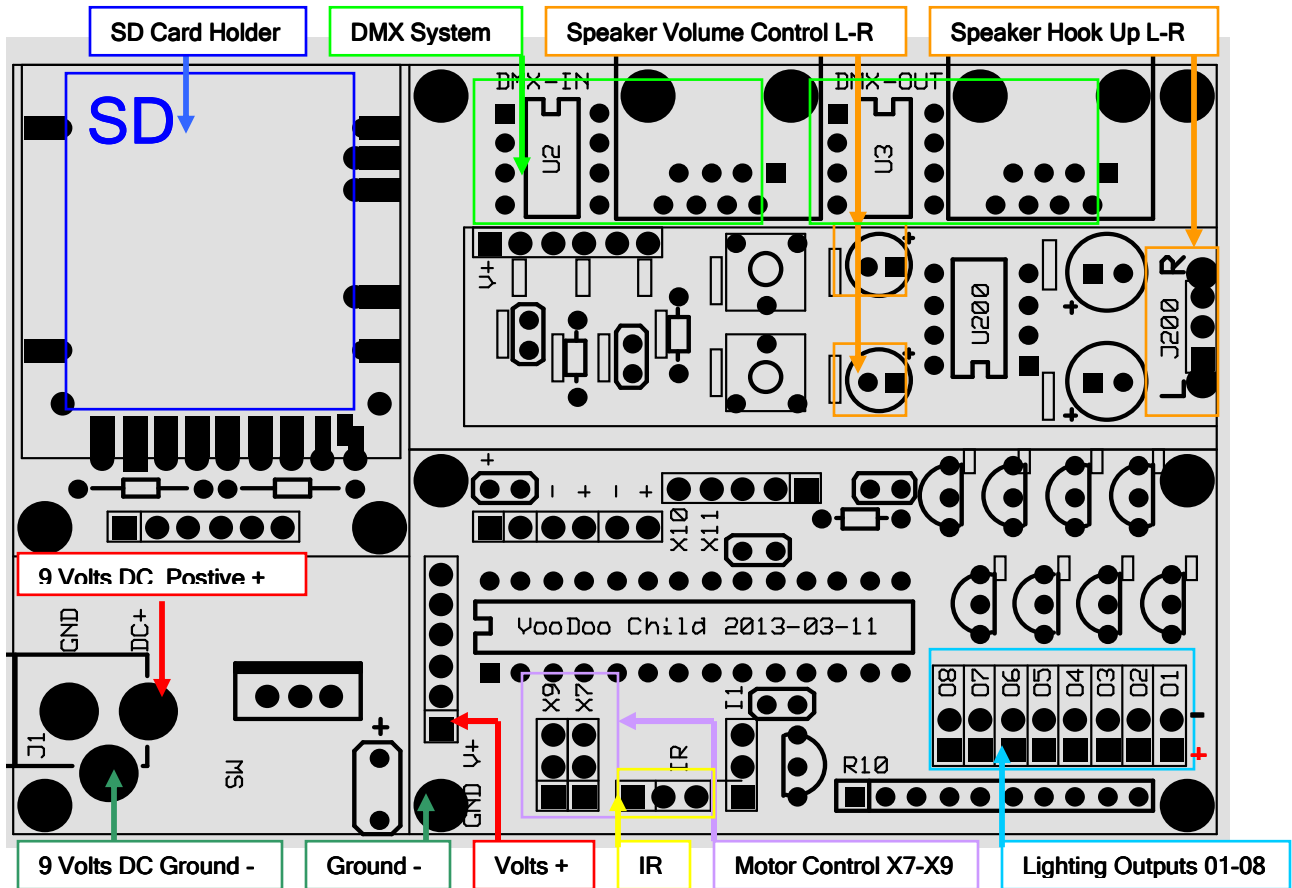
The hi output B mode circuit board is designed around eight hi output channels. Each channel output needs an individual in line resistors to protect each led used, there is a wide range of resistors that can be used: **SAMPLE 220 Ohms gives a very bright effect for the led. SAMPLE 1-K or 1.5-K Ohms will give a dim or soft effect for the led.** The circuit board works off negative signal switching so multi leds can be ganged together off one negative channel up to 15 leds per channel. Do not exceed the 15 leds per channel limit.

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.



(Voodoochild Circuit Board Diagram 1.0)



(General Information)

First start by figuring out what areas you would like to light and study the circuit board diagrams. Since there are many different ways to place the lighting you will need to pick and choose the areas that work the best for you. In any area that you are trying to light, you should be aware of a few basic guidelines to follow. 1-Pick Placement Area 2- Pre Test Lighting Effect 3- Light Block Where Needed. You will need a few tools to hook up the electronics, low watt 25-30 watt soldering iron with a pin needle tip, .032 rosin core solder, small wire strippers, small side cutters, lighter, hot glue, metal tape, wire ties. If using this for a model or prop pick the location for the power source and on/off switch, figure out what area or zones you will be lighting, pre build 1 led and pick the effects port you want, test the light effect in the zone. You might need to use diffusion material to flatten the affect; this helps take away any hot spots from the leds. If you want to add more on lighting you can go direct to the power source and use in line resistor technique, look at the diagram. After finding that perfect spot for the led you will need to mount it in place, Hot Glue in small amounts makes a great bond to most surfaces, a small hand made type bracket or holder is also another sound mounting system. After all the leds are in their locations test the circuit for operation, make any adjustment at this time, mount circuit board and power source in a accessible area that can be serviced. In all areas where you place electronic parts it is a good practice to not close off areas permanently. Clean up any loose wiring and run the electronics, if the model or prop is not being used for extended periods of time, remove batteries or unplug power source.

(Instructions Ver 1.0)

First start by reviewing the circuit board diagram; study the information regarding the Voodoochild language. The B9 has a few areas that need to be addressed, best to dry fit and pre build the kit so you have an idea what will need to be removed to wire the model for lights. Most of the lower tread area can be pre fit and built, you will need to drill out the upper leg sections and upper base support skirt. The lower tread & leg assembly can be pre painted and partially built, this will give you a working idea to start base construction. The lower tub will also need 4-6 holes drilled out this will allow wires to freely pass between leg and upper tub section. The upper neck ring gear, dome and brain case will also need drill out for wires to the main brain box, take you time with all the upper parts especially the clear parts, they are very delicate and will chip and crack easily. After you have made enough room to wire you model top to bottom your ready for the next stage.

The next step is to make some kind of box to help contain the 4 separate lighting effects in the main chest face area. I used some 060 styrene and scratch built a box to fit inside the lower button area and the 10 panel on lights just above it. You must separate the zones very tightly in order to prevent cross travel of the light, light blocking and test fitting many times will get a perfect fit on the box. The upper large buttons I used two short stubs of 7/32 plastic tubing and glued them to the inside of the main chest face, this help the light from seeping. Make sure that you light block the tubing with black out to paint to prevent light leak. Take a rest and get ready for the next project.

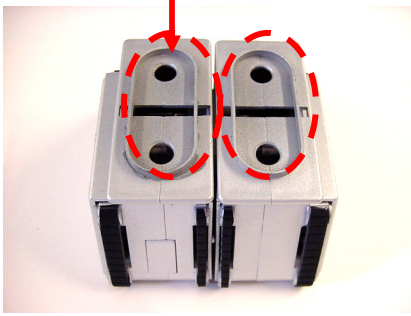
Upper brain box, you will need to pre build, paint and assemble the whole upper section as you go. First locate the triangle half parts, You can pre build and assemble the bottom and three side parts but leave the top part loose and not glued. I used two 3.0mm leds in the main brain box, you might be able to add more leds depending on how much room you have made. Each 3 mm led will need a little corner cut off high and low around the base or flange of the led, this will give you enough room to close the top; it's a very tight fit and try your best to jam it all in the box. After you have mounted the leds in the brain box very carefully & start building all the head parts, you can leave off the clear upper dome until the end of the build. Fish wire through the neck section and ring gear housing, test leds with an led test to make sure they work, **never test a led with a battery direct, you will burn the led up.** Set aside the pre built head section for install at a later time.

OK your almost there; the chest talk box light is next on the list. Find the talk box backing plate; it holds the clear part in place against the upper tub section. You will need to remove the bulk of the backing plate leaving a small rim all around the plate, this will still support the clear part but now allow light to pass through the part freely. Test fit the part until it's a perfect fit; there is a small piece of diffusion material you will need to cut to fit the lens shape. Again you will need to scratch build a small light box to mount the led and help improve the lighting effect in the talk box. Another option is using a small piece of red strip leds mounted in the back of the light box, if you use this option you will need to power the light from output 08 using the B Mode for high output hook up. Test talk box area for light leaks and hot spots before mounting any parts permanent.

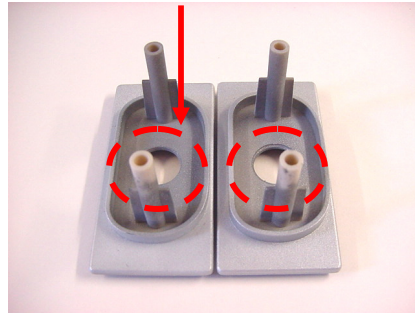
Final assembly, start by working the main tub & chest area together, making sure to run your wire leads long out the end tread sections for hook up to the circuit board. The main chest area & chest light boxes can be fit in place, this is the last time you will have to check for light leaks or fine tune the led placement, this is also a good time to send a few extra wires for main power or on lights, hook up any sold on lights and test for operation, there is one for the main 10 square button light panel and one for the main power switch located in the lower have center tub, It yellow. Use 1.5 k ohm resistor inline with main power, this effect looks better dim lit. **I cannot stress this enough, test, test & test again before closing up any areas!** Before you mount the main body tub section to the lower half of the tread section, retrieve the pre built and tested brain & upper neck ring gear section. Mount it to the main body section making sure you have enough wire length to reach through the bottom of the lower tread, and long enough to hook up to the circuit board in the base. Stand the model up right with all the wires hanging out the bottom of the model, hard mount the model to your base leaving two access ports under the tread area, this is were you will send all the wires through and make the connections to the circuit board. Flip the model and base on its side exposing the bottom of the base, make sure to properly support the model. You will mount the circuit board, speaker, on /off switch and main power hook up in the base. A 9-volt DC battery can power the circuit board but the amplifier will draw the battery out quickly, we recommend that you use a regulated DC 9-Volt 1K mA power supply to insure proper operation.

(B9 Images)

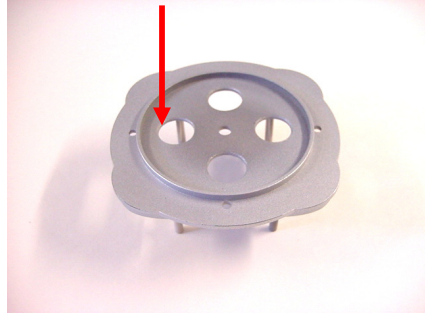
Drill out here



Drill out here (Upper tread riser)



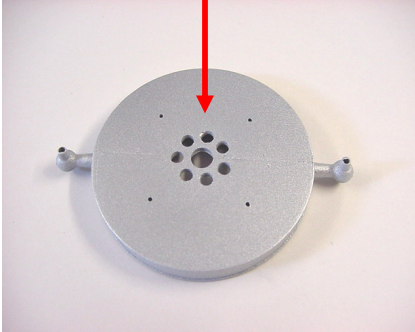
Drill out 4 holes (Lower Tub Support)



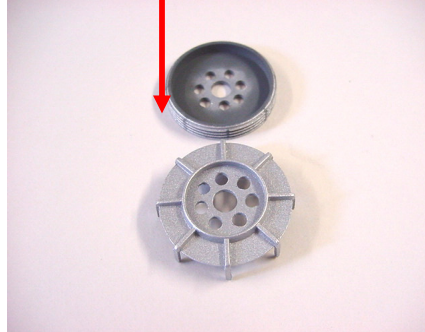
Drill out 4 holes to match (Base Support)



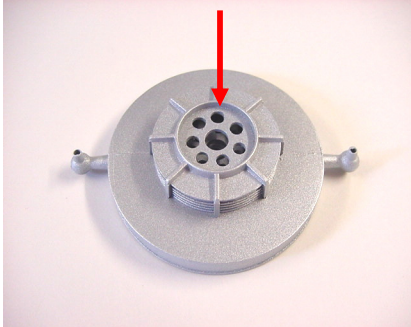
Drill out small holes (Upper Neck Support)



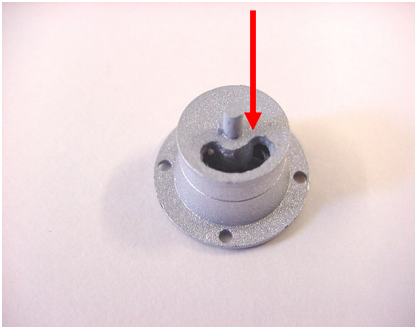
Drill out to match (Upper Neck Support)



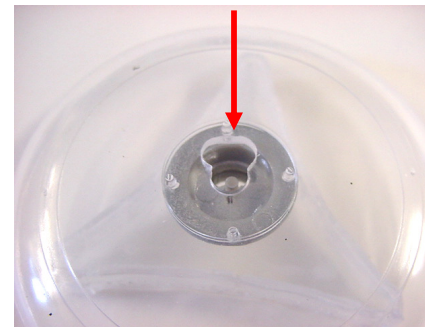
Finished (Upper Neck Support)



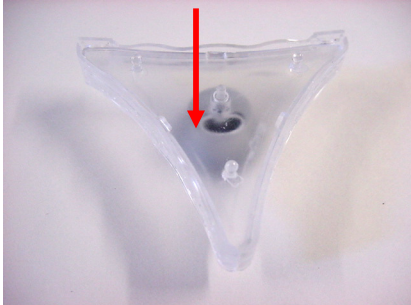
Notch Cut (Upper Dome Raiser)



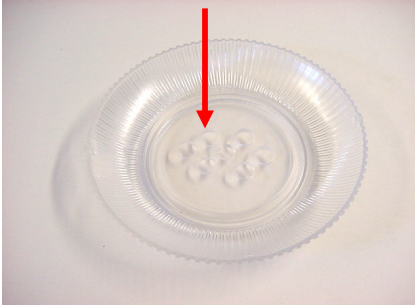
Drill out notch to match (Upper Dome Riser)



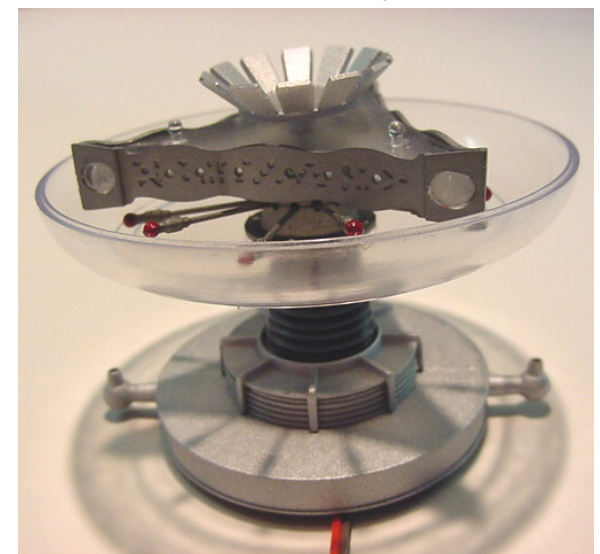
Drill notch to match (Upper Brain Box)



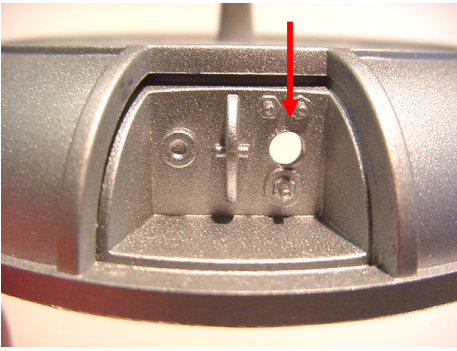
Drill out a grouping (Upper Ring Gear)



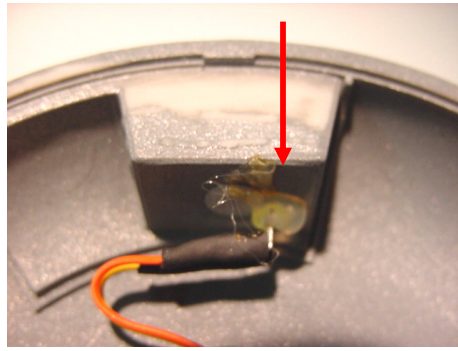
Finished & Tested Upper Assembly



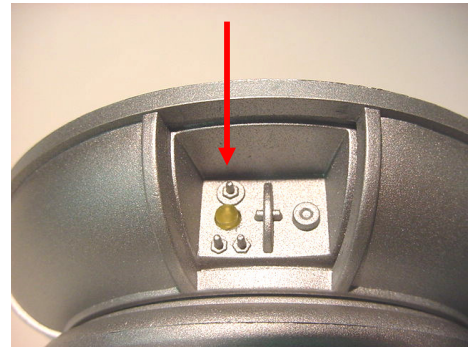
Be extremely careful drilling out the clear parts, most were done by hand.



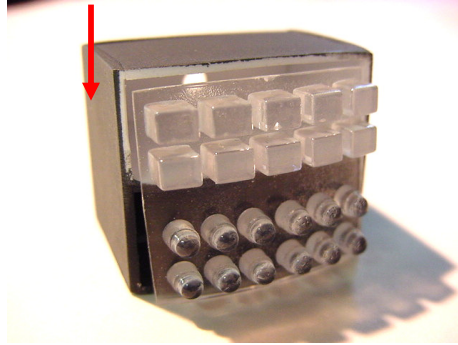
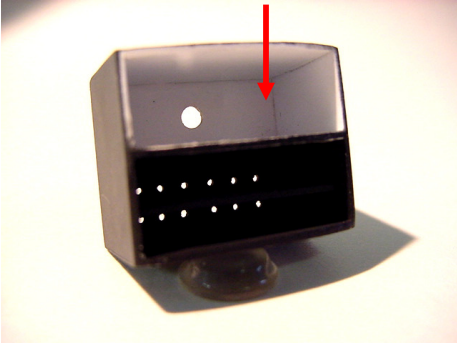
Scratch build light box



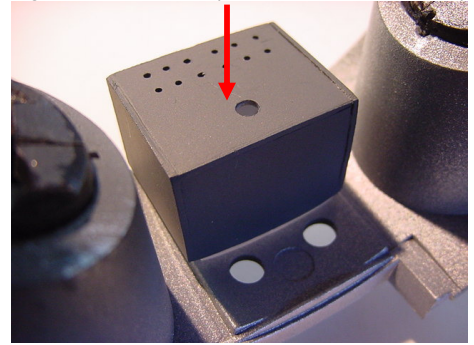
Light box lens pre fit



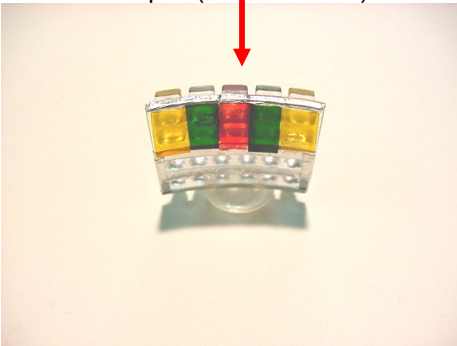
Light box mounted (Tub Center Chest Part)



Clear panel mounted (Button Section)

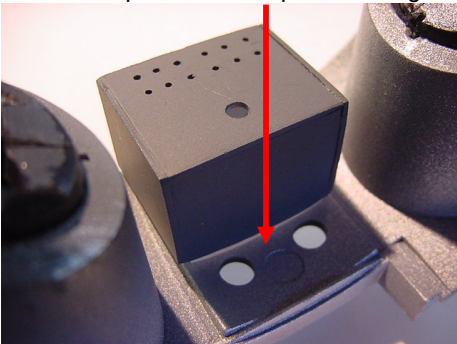


Painted clear part (Button Section)

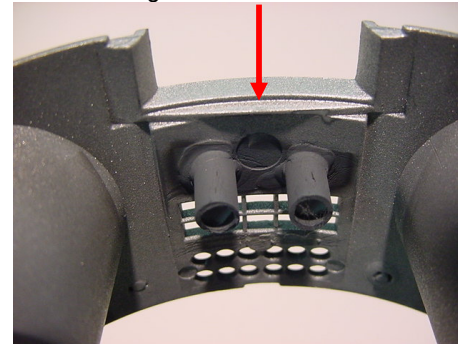


Finished button Panel

Cut 2 short pieces of 7/32 plastic tubing



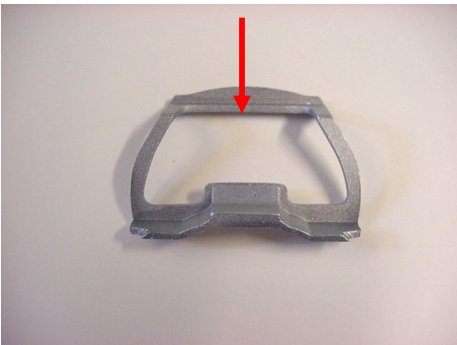
Mount tubing on main button area



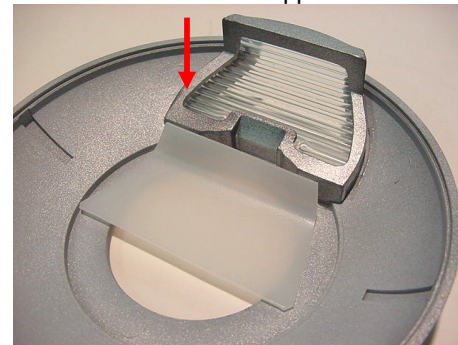
Test button lights



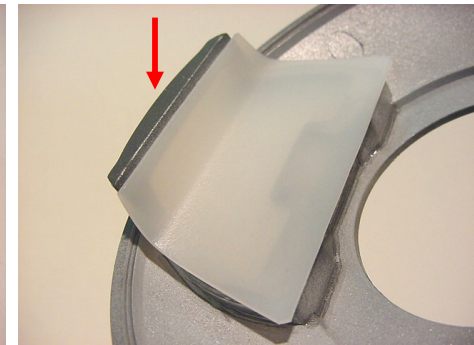
Cut out chest talk box frame



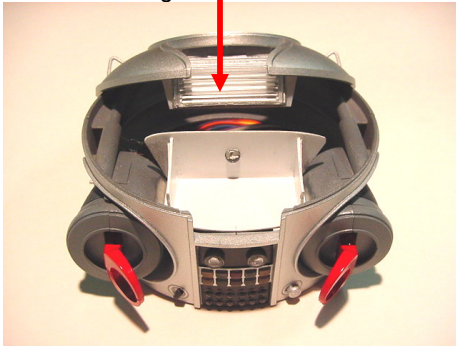
Mount frame & clear to upper tub



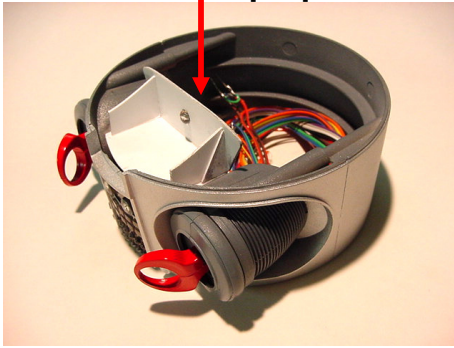
Cut to fit diffusion material



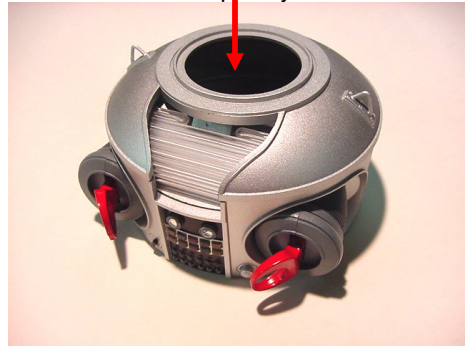
Scratch build light box for talk box



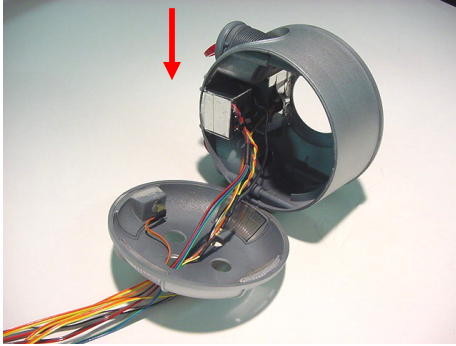
1 Red Led channel 08 [8VU] for audio



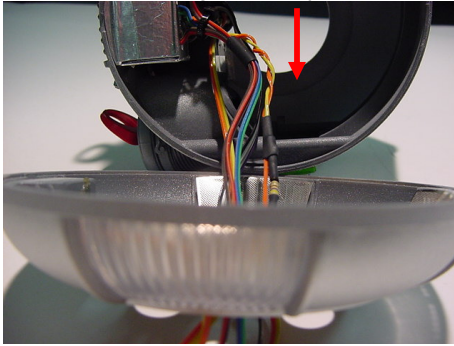
Finished & tested up body



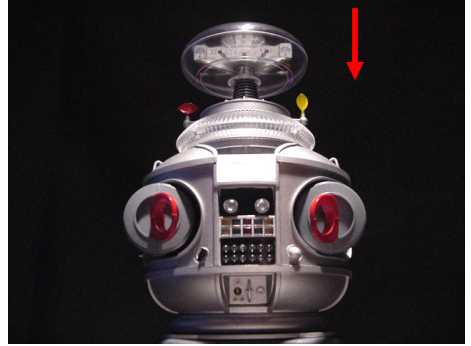
Final assembly fitting wires through model



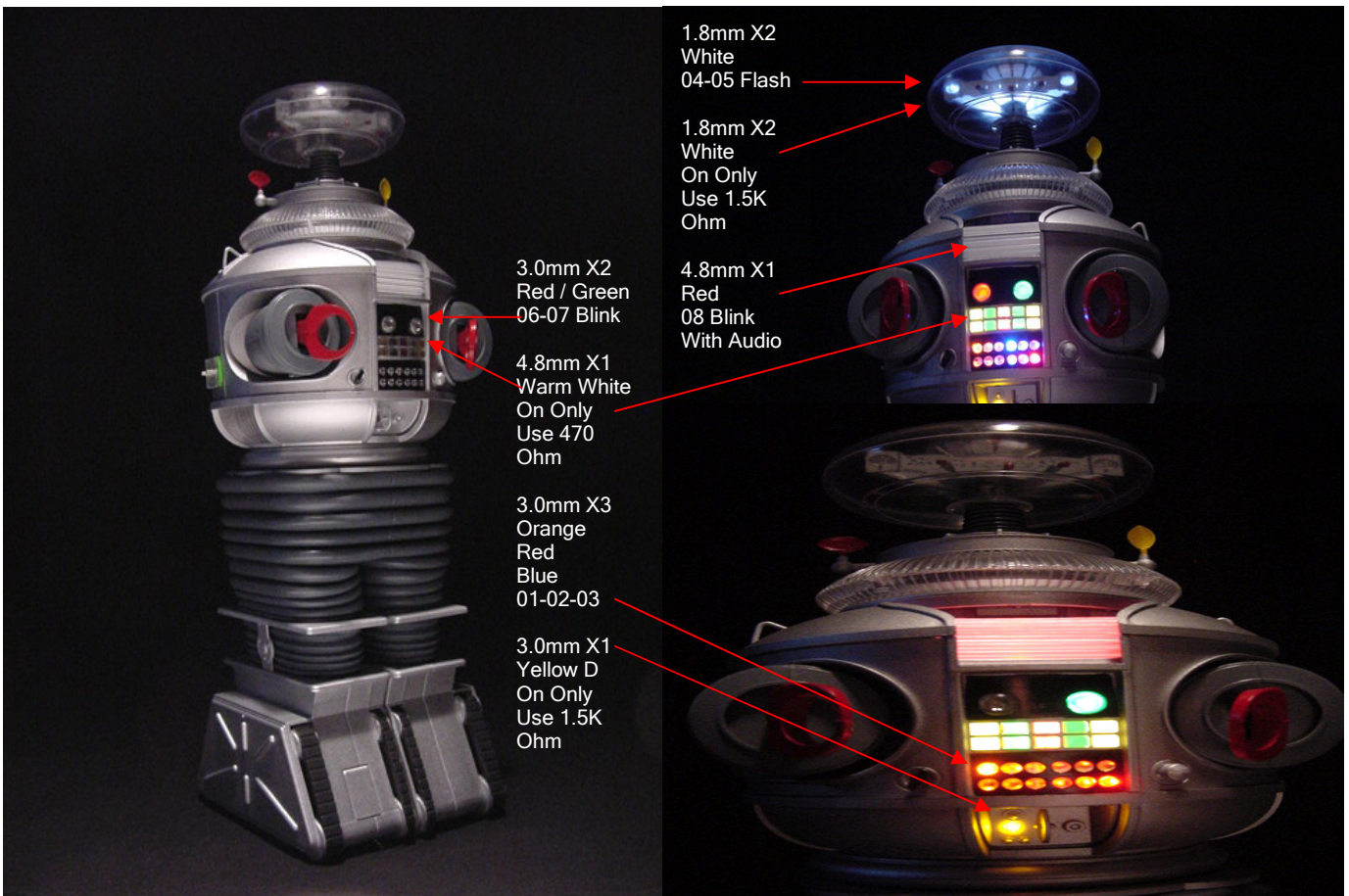
Fit the wires through carefully



Top & main body fit and ready for final fit



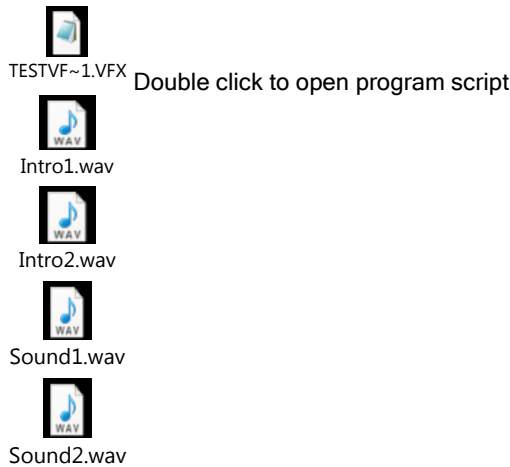
Finished & Tested



The Voodoochild circuit board has many features & functions but for this project we wont go to far into details. The circuit board has three main functions, Lighting, Sound, Motor Control, all the programming is stored on the SD Card, and these program files can be modified or customized to clients needs, in a nut shell you can develop your own program for any custom project using the Voodoochild circuit board. The lighting outputs are marked on the circuit board diagram 01 - 08 each channel is set up to run 1 led per channel, if you want to run multi leds per channel you will need to use a inline resistor and the negative side of the lighting outputs, a max of 15 leds per one channel. Sound player has two channels (Play & Effect) all the sound files need to be in a WAV format at 22050 (HZ) sample rate. The files can be renamed in any manner but short and easy will keep it straight; also all wav files must be the same WAV format at 22050 (HZ). All the sound files live on the front directory of the SD card, the one file marked VFX is where all the programming script is located, and the sound file name must match the front directory of the wav file. If you need a sound editor download a free one at www.audacity.sourceforge.net If you want to change sound files just remove the test files on the front directory of the SD card & VFX files marked Play or Effect and replace it with your own files. Please download the Voodoochild language files for details regarding features & functions.

(EAMPLE OF SD CARD & VFX FLIES)
SDCARD FRONT DIRECTORY

The files should look like this on the front of the card:



SD CARD VFX FILES (AUDIO 1-2)

The files should look like this in the vfx file.

<pre>[8VU] Led Channel 08 Flashes LED Audio Play (AUDIO 1)</pre>	<pre>[9LED] Channel 09 Audio Effect (AUDIO 2)</pre>
<pre>[8VU] 0% Intro1 0% Intro2 :loop Play Wait Play 0% 71 9-2.2 Play Sound1 Wait Play 0% 5 3-2.2 Play Sound2 Wait Play 0% 5 2-2.5 Play Wait Play 0% 1.5-2.2 Play Sound3 Wait Play 0% 1.7-2.3 Play Wait Play 0% .7-1.2 Play Wait Play 0% 1.9-2.8 Play Sound4 Wait Play 0% 1.1-2.7 Play Wait Play 0% 1.9-2.5 Play Wait Play 0% 1.9-1.2 goto :loop</pre>	<pre>[9LED] Effect Intro1 Wait Effect 0% .10 Effect Intro2 Wait Effect 0% .1 :loop Effect Wait Effect 0% 1-3.8 Effect Wait Effect 0% 1 Wait Effect Effect Wait Effect 0% 2-3.7 Effect Wait Effect 0% 2-3.5 Effect Wait Effect 0% 2-3.7 Effect Intro3 Wait Effect 0% 2-3.8 goto :loop</pre>

(Audio File Format)
Wave PCM Signed16 bit, 22050 Hz, 352 Kbps, Mono
Both "PLAY & EFFECT" audio files must be the same format.

[8VU] = Channel 08 (AUDIO1)
The 8VU channel can be linked up with any Wav sound file using the PLAY command followed by time of sound sequence.

```
PLAY Sound1
Wait Play
0% 5 3-2.2
```

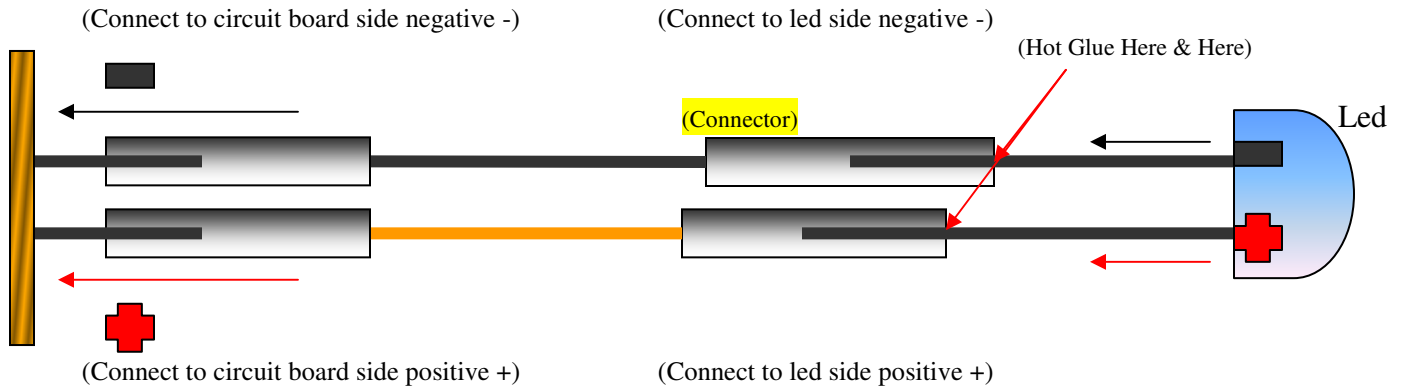
[9LED] = Channel 09 (AUDIO2)
The 9LED channel is used to with any Wav sound file using the EFFECT command followed time of sound sequence. This is best used for background theme or secondary sound player.

```
[9LED]
Effect Intro1
Wait Effect
0% .10
Effect Intro2
Wait Effect
0% .1
```

The best way to change the audio files is to make a library of sounds that you want to use, making sure they are in the right format and all the same. Copy & paste them on the front of the SD Card, open up the vfx look for [8VU] on the script line delete the word Sound1 & replace it with "Your Sound" make sure there is a space between PLAY space "Your Sound". The spelling must match in both locations! Its also important to save the file after you have made changes, if you do not save the file the information will be lost, you may also want to copy and paste everything on the SD Card into a new folder for safe keeping. If you mess the CD card up download the files at www.voodooafx.com

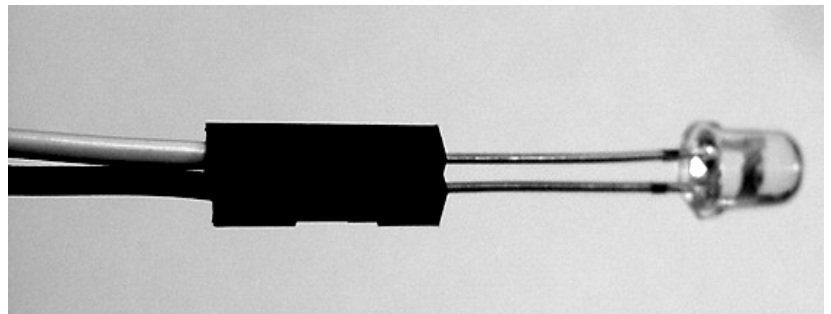
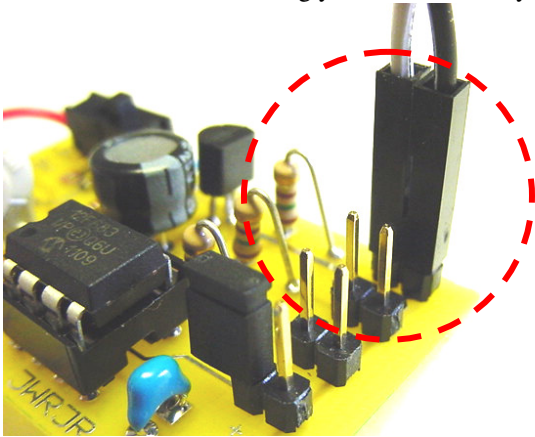
(Using a hi quality 8 ohm speaker will improve your sound performance)

(NO SOLDER REQUIRED)

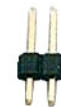


Directions Ver.1

Using the plug & play system is very easy to use. First locate the two straight pins out for the lighting effect on the circuit board; they will be standing up right and usually in a group. Next determine the positive & negative sides of the pins; this will be where you will slide the rainbow wire connector to the circuit board. Take a pair of the wire connector and carefully slide it into the receptor, keep in mind the color combo you have selected and transfer it the led end of the connector. **If the led will not light; re insert the led in the opposite direction and retest light, this usually fix a reverse polarity problem.** After the led is has been test for operation you can shorten the led leads buy cutting the down to a desired size. All leds can be switched out for different style, size or color at any time. After all modification have been performed re test all lighting connections for proper operation, use a small amount of hot glue to secure the led to the connector. When making your installation try to mount down the connector firmly to a solid mount.

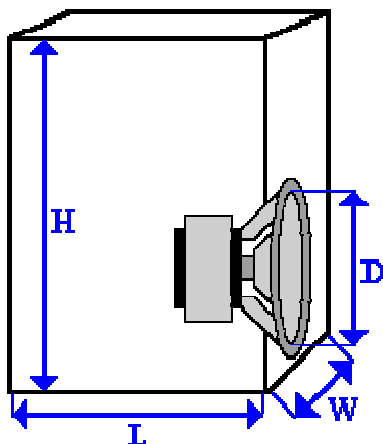


(Use straight pin jumper to extend wires if needed)

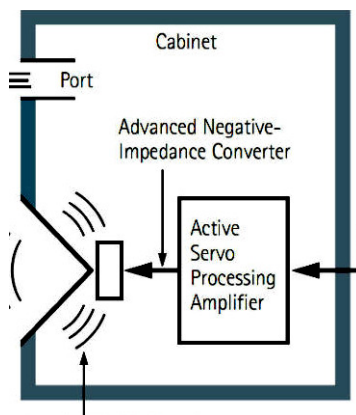


Other Ways To Improve Sound Quality:

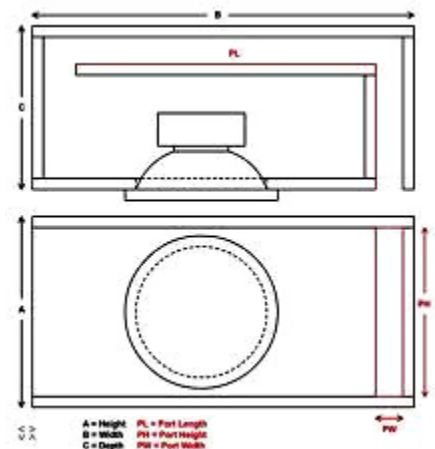
Sealed Box System



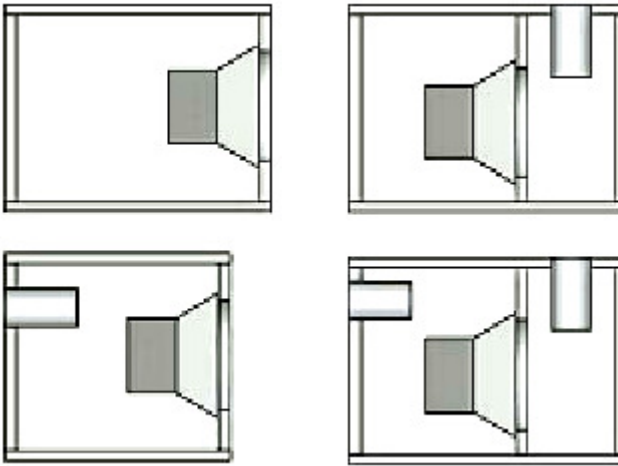
Open Box System



Open Box Baffle System



1-4 show different ways to make an enclosure box.



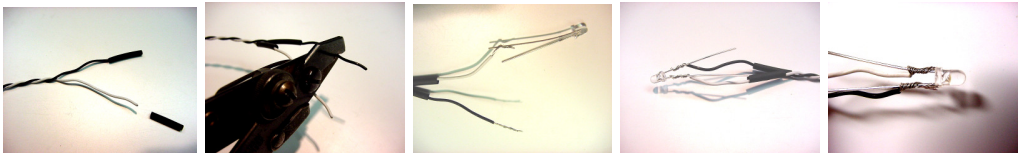
(Using a hi quality 8 ohm speaker will improve your sound performance)

(Final Closing Notes)

There are many ways to light a model and we encourage the builder's to do the project to their specifications. This project like all projects takes time, patience and compassion for the work. Please take your time and slowdown through out the process, you will do a better job and be happier with the finished job.

(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.



Please Do Not Contact Distributor

If you are having problems call VoodooFX.
Phone 650-568-3400 M/F 8-5 pm P.S.T
Email fxshop@yahoo.com

VoodooFX is not responsible for improper installation.
There are no refunds on electrical parts or components.
All sales are final. Batteries not included.

WARNING: To guard against injury, basic safety precautions should be observed, including the following:

1. Read and follow ALL safety warnings, instructions and notices.
2. Do not use equipment for other than its intended purpose.
3. Do not alter design or construction.
4. **DANGER:** To prevent the risk of severe or fatal electrical shock. Always disconnect power before performing any maintenance.
5. Do not operate if power cord or plug is damaged.
6. Electrical power supplied MUST match power requirements listed.
7. **CAUTION:** Do not operate without proper electrical ground.

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