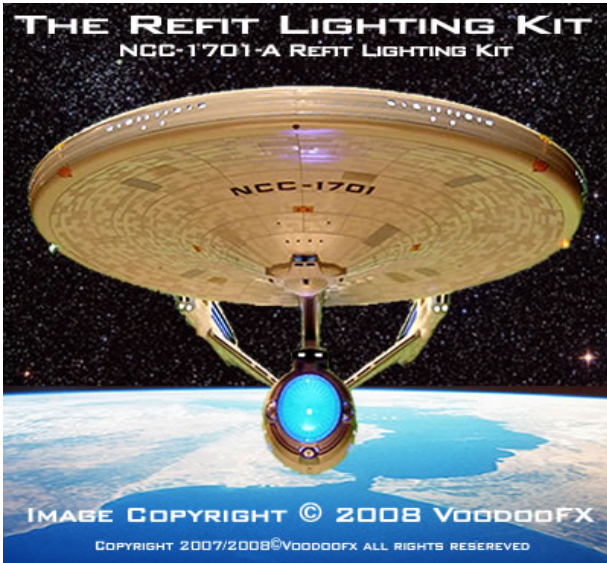


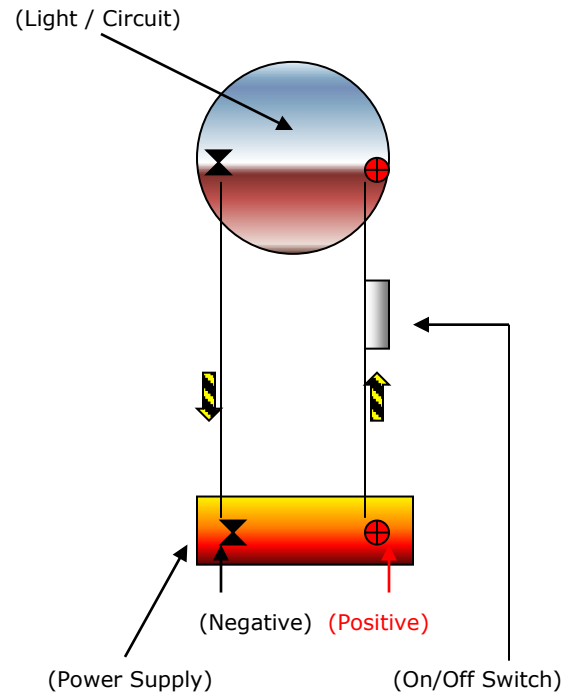
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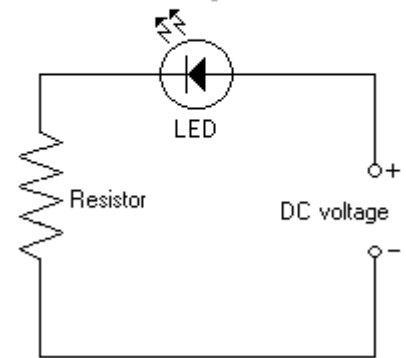
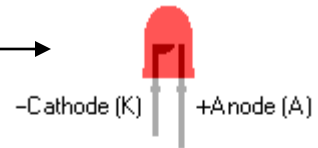
## Enterprise Refit



(General Wiring Diagram)



Led Diagram



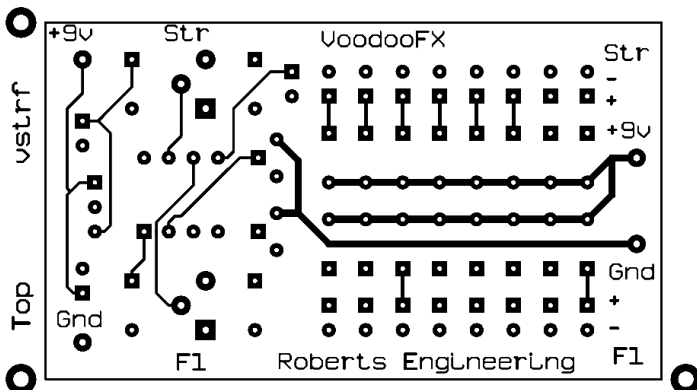
### (Instructions Version 1)

#### General Over View:

- 1- Start by studying the main circuit diagrams A-B.
  - 2- Unpack model kit & dry fit the main body parts together.
  - 3- Locate all locations you would like to light up.
  - 4- Plan out routes for wiring throughout the model.
  - 5- Prepare a location to work on the model kit.
  - 6- Be prepared for a long build.
  - 7- Full instructions on line at [www.voodooofx.com](http://www.voodooofx.com)
- (Note) Please try to have patients"

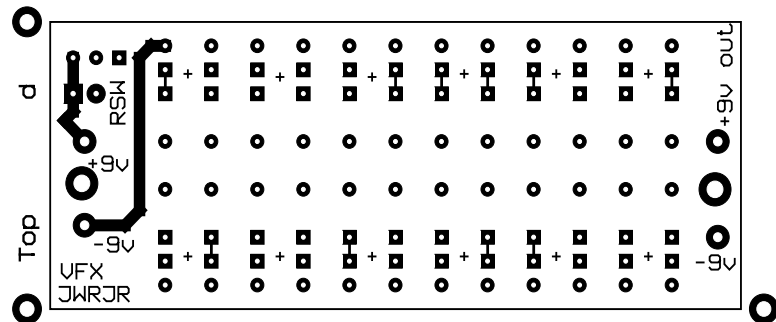
Main Navigation Board X-1 – Diagram A

A

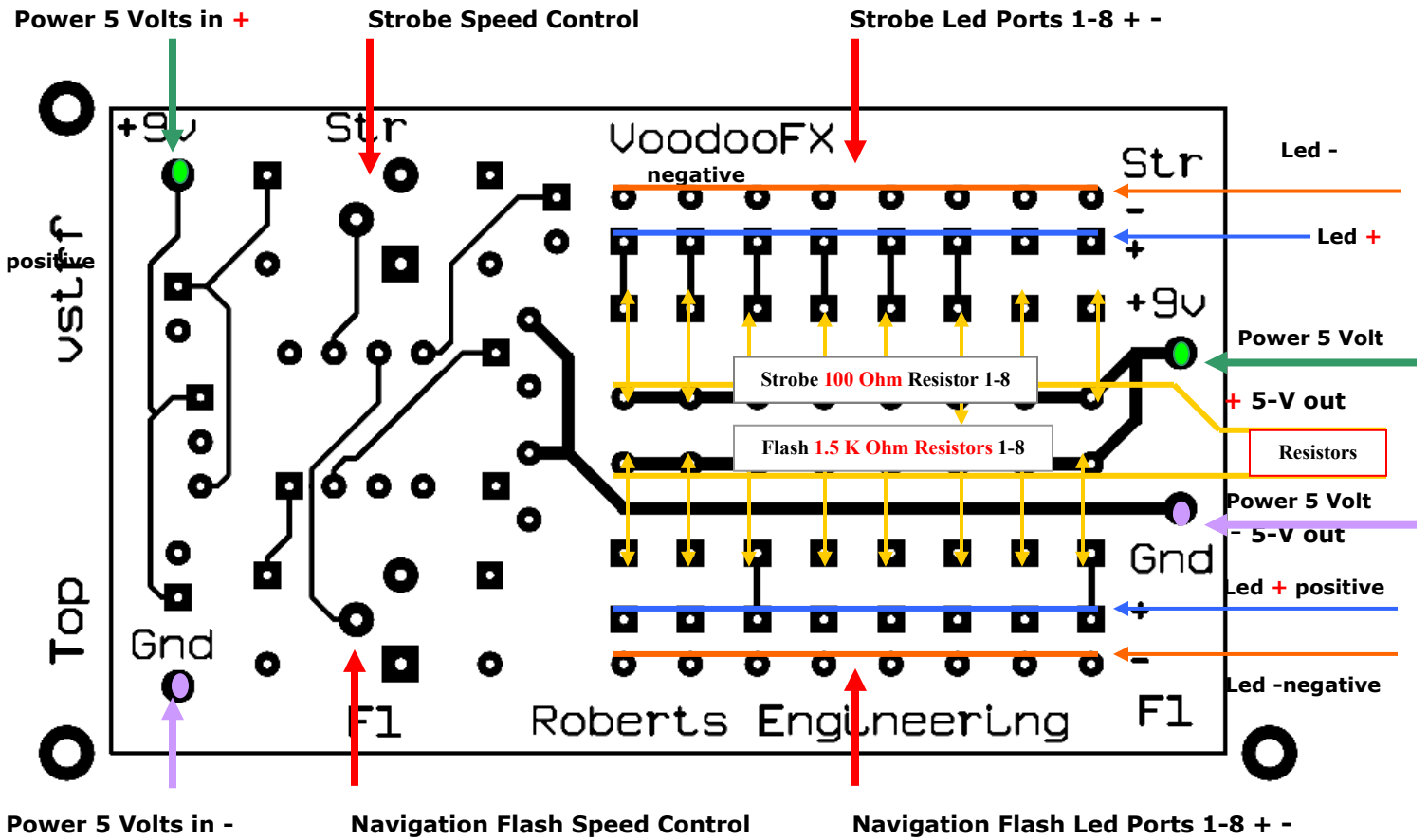


Main Driver Board X-3 – Diagram B

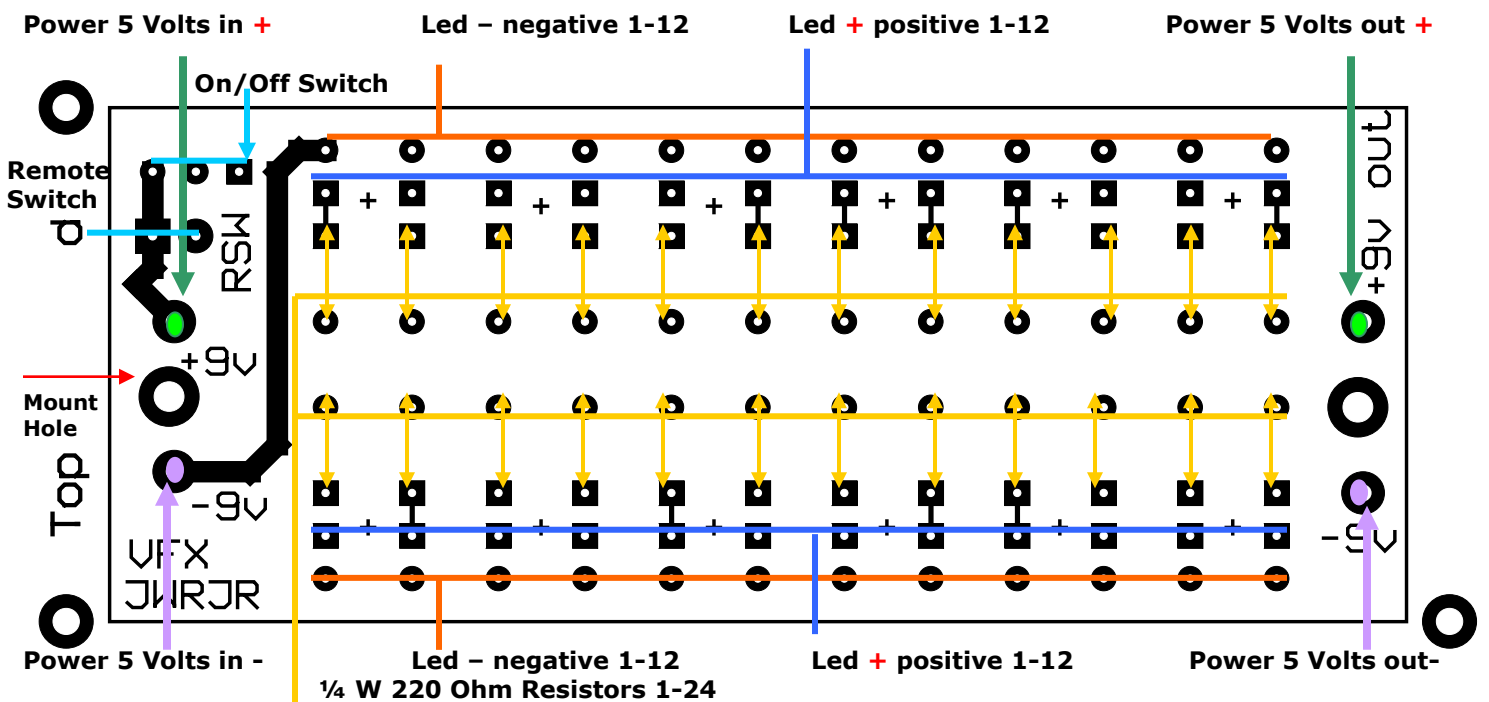
B



**(Main Navigation Board Top Side – Diagram A)**



**(Main Driver Board Top Side – Diagram B)**



## General Circuit Board Instructions:

1- Just a suggestion if you have not built electronics before you could build just one port on both the A-B board and test the circuit before solder the remaining boards. If you have experience with electronics please refer to diagrams A-B. Start by prefabricating the 3 main driver boards with the 24 ¼ w 220 ohm resistors, you will want to use the A straight bend style for the driver boards, solder in place, use reference diagram B as a guide.

2- Next prefabricate the 1 main navigation circuit with 8 ¼ w 1.5k ohm resistor also using the A straight bend style for the navigation/flash side of the circuit board. Use the 8 ¼ w 68 ohm resistor for the strobe side. Double check the position of the resistors before soldering down or dry fit one 1 port so you know your placement is correct.

3- Insert wire and flip board over on back side making sure wire does not pull out. Solder and be careful not to over solder port and create solder run off to other ports or trace lines. Snip off excess wire flush to circuit board bottom.

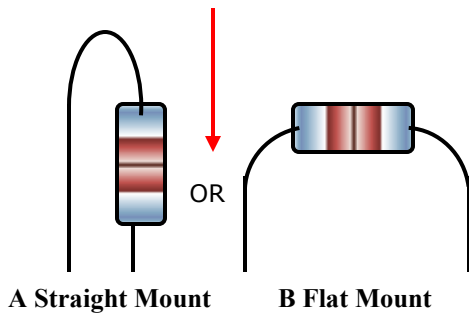
4- Carefully bend resistor leads in a V shape to hold resistor in place while board is flipped over and soldered.

5- After prefabricating the circuit boards hook up a temporary power connection and dry fit a few leds in to the led ports and test the light to make sure they are operating properly.

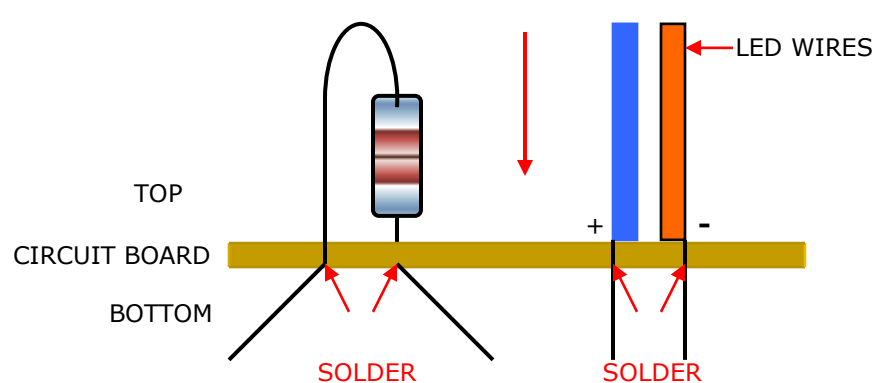
6- Leds are polarized sensitive and will not work if positive & negative are crossed.

7- After testing circuits you are now ready to move forward with the model and fit.

### A & B STYLE PRE BEND RESISTORS LIKE THIS



### SOLDER THROUGH BOARD LIKE THIS



### (How to Make Wired Leds)

1- Separate the two wires. Pick what color will be positive+ and what color will be negative-.

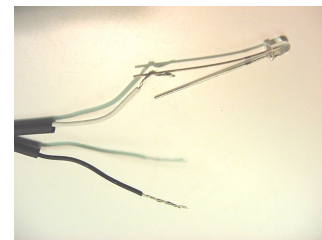
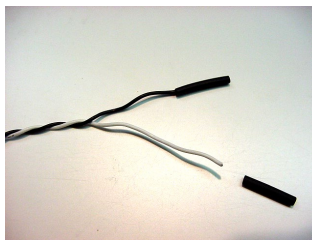
(Example) Lighter color is positive+, darker color is negative-. This will apply to any color, you make the choice.

2- Slide on two pieces of shrink tubing 1/8 - ¼ "long, Slide past area where wire coating will be stripped off.

3- Strip back the protected coating and expose the bare wire, 1/8 - ¼" 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 Model Intro:

Intro:

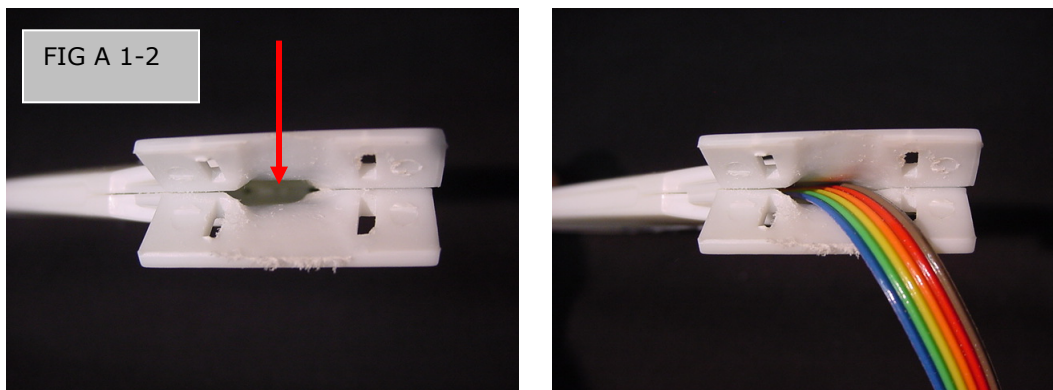
1- Start by dry fitting the model and testing the model for over all fit, this will get you use to where the parts go and give you inspiration for the build, we call this stage the tape up. Try to gather up as much research material as you can find, photos, specs, DVDs, the internet has a lot of info as well. After you get your research papers together make a folder for all the paperwork, this will give a fast reference point and keeps you well organized. Prepare a good size work area to build the model in; as it goes together it gets rather large quite quickly. You will need all the general modeling tools to complete the model project, it might also be a good idea to make a work stand to hold the model in place as it goes through the build stages, you would not want to drop it off the work bench. You will also need general soldering equipment a 25watt soldering iron and rosin core solder will do the job just fine. Always remember work with proper air ventilation and always wear your safety equipment working in and around your model projects. Be prepared for a long build, this is a highly detailed model and takes a lot of hard hours to complete. Try to be patient with the model and walk away from it when you have had enough, take it from me this was no walk in the park!!!

## General Model Instructions Ver1:

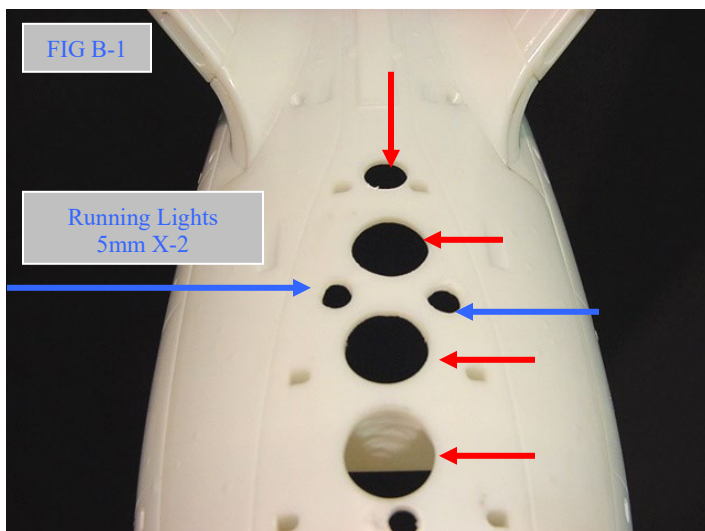
Instructions:

1- Starting with the main parts of the model kit Nacelles, Secondary Hull, Main Dish Top & Bottom. These parts should be washed with mild soapy warm water and rinsed completely. After letting air dry prime all the inside of the model and then paint with a light coat of flat black, after black is set up your ready for a coat of flat white, this will help with any light leak and the white will help increase bounce light. There are a few different ways to build this model but I am going to keep this very basic. You can build almost 75% of the model and pre paint the whole model before wiring the kit.

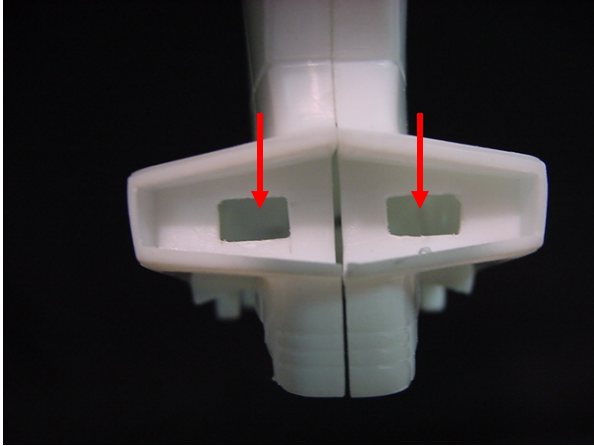
2- You will need to grind out and open up the nacelle struts on the bottom side to make a chase for the wires that will power the nacelles. FIG A 1-2



3- After test fitting the wire for fit, pull the wire out and glue the two half's together, you are now ready for mounting the strut two the secondary hull. After mounting the struts grind out the area along the dorsal neck to make room for all the main trunk wiring, you can open this area all the way if you like, see FIG B-1. There are also two holes that will need to be drilled out, for the dorsal neck use 5mm warm white leds for this area. (FIG B-1)

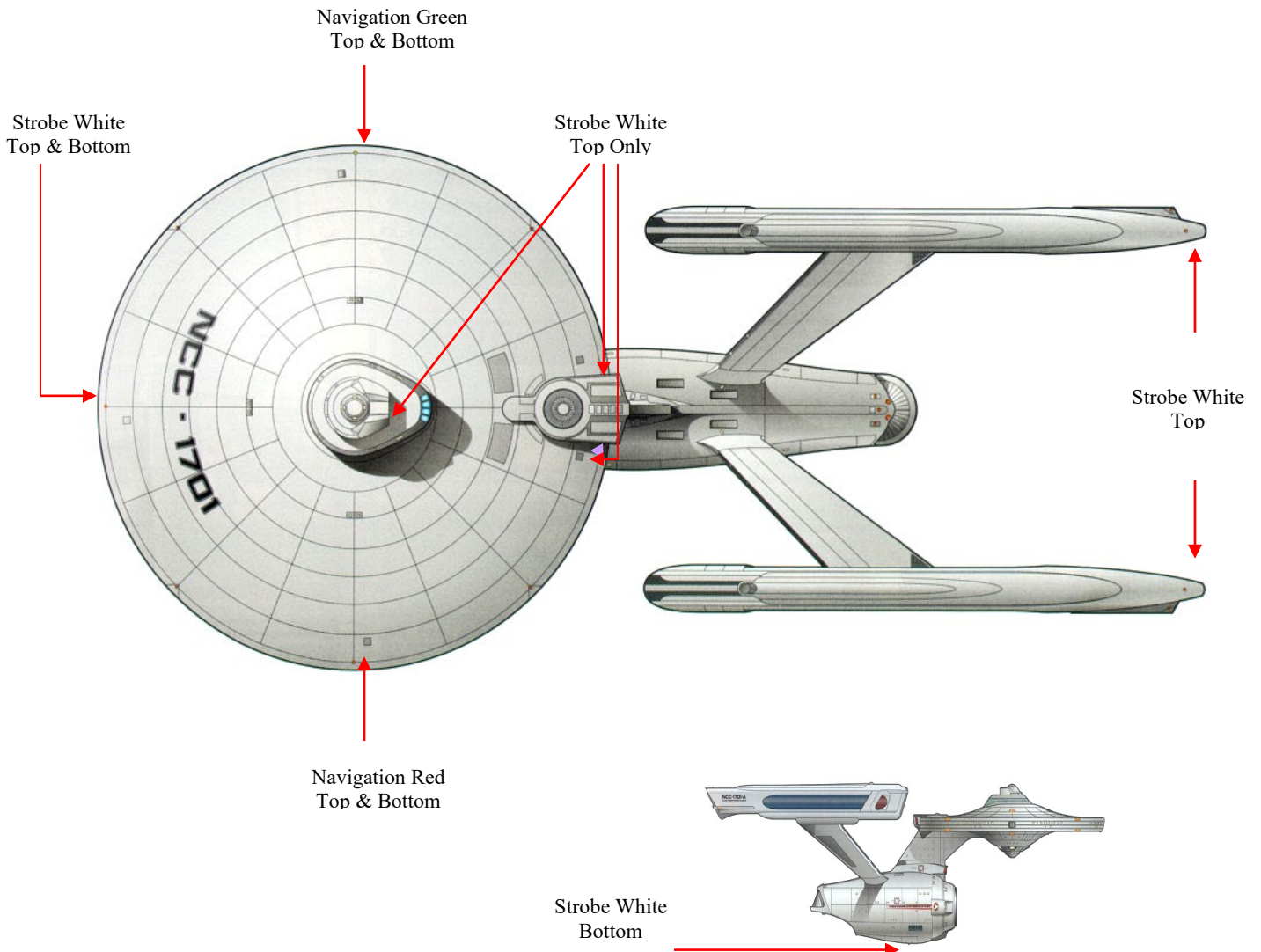


4- Install dorsal neck after you have opened up the area for the wiring. "PHOTON EFFECT" if you are installing the photon effect you will want to cut out the area around the torpedo outlet tubes, see FIG C-1. It is a good idea to prefab your leds and mount them in place before you mount the dorsal neck, if you are not installing the photon effect disregard this step.



5- Preparing the lower half of the dish, start by drilling out the Navigation and Strobe light locations as desired, its also not a bad time to start with the upper half dish at the same time and drill out for the these locations too, see FIG D 1-2 "Drill out for 3mm led sizing".

**FIG D 1-2**

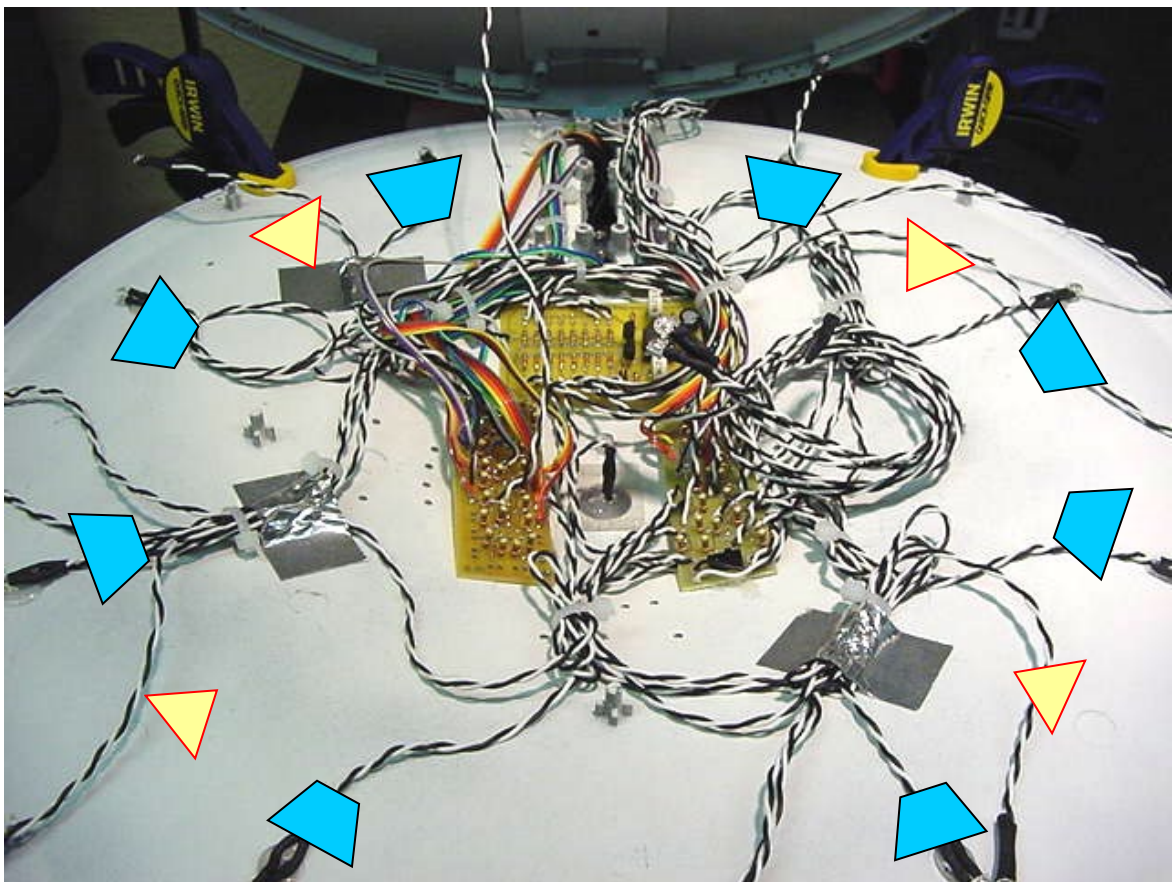
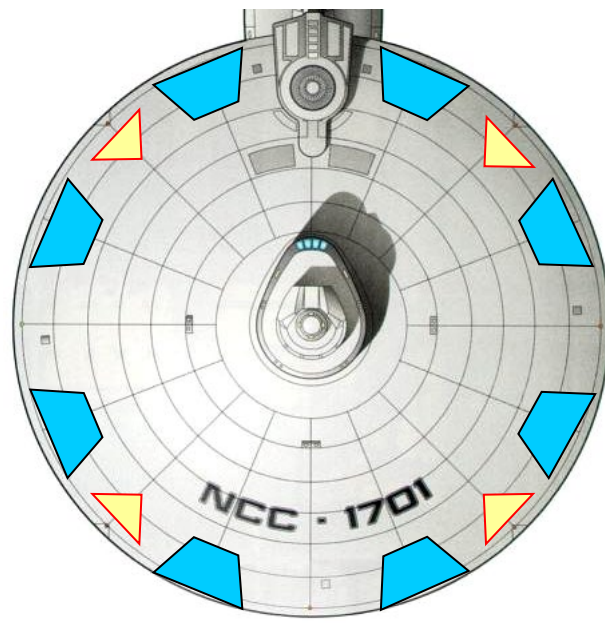


6- The upper dish will require some modification for the main dish window parts. Locate the window areas you would like to light up; there are 8 white main outer window locations along with the 4 yellow thrusters. The best way is to mark all the window parts with the location where you want the light to penetrate the outer window. Trim these parts and mount them to the upper half of the dish, all the leds will be mounted to the lower dish and shine out to the window locations. **FIG E-1 FIG F-1**

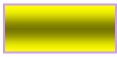
White Window    Yellow Thrusters



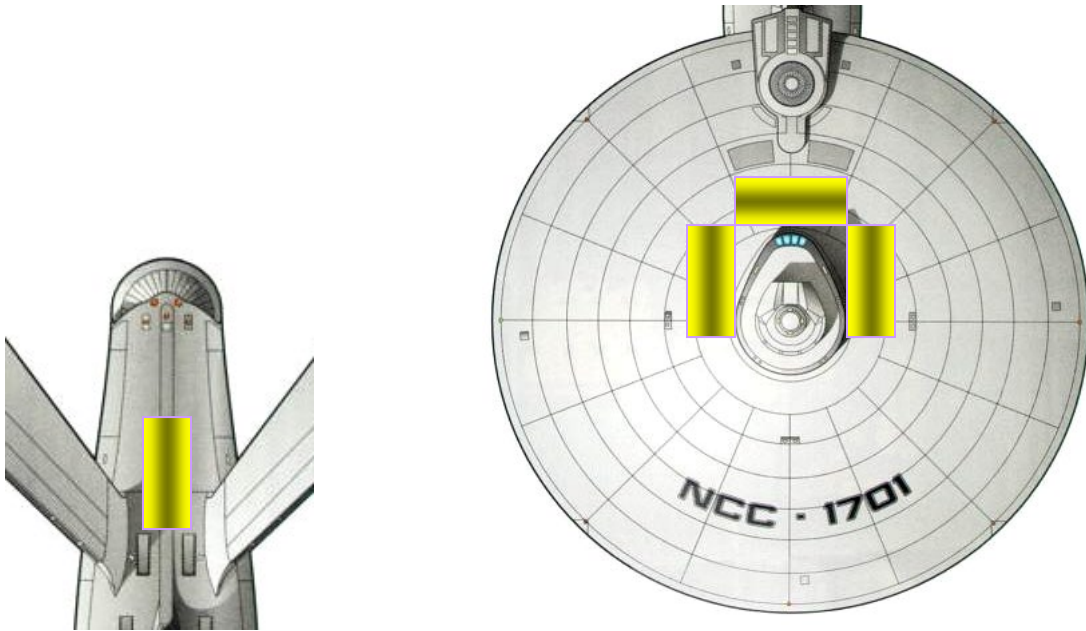
**FIG E-1**



7- Main circuit board locations for lower dish & secondary hull lighting. See fig E-1



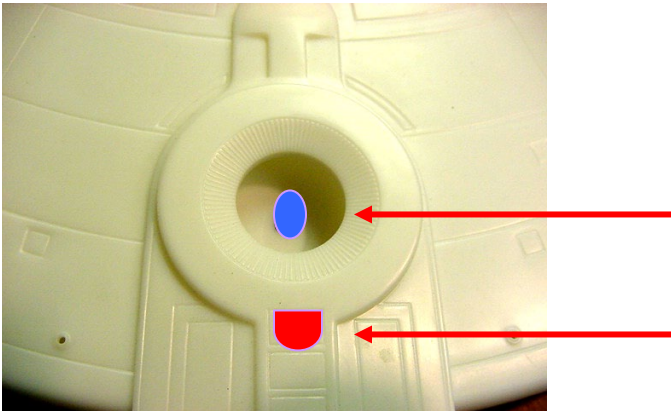
Circuit Board



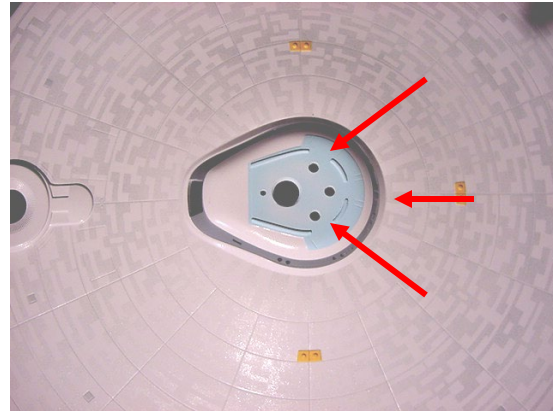
8- Main impulse engine area and inner core cooler. This will use two leds one red flat top and one blue flat top. The blue flat top will look straight up at the dome and be mounted to the lower dish, the red flat top is best mounted to the top of the main upper dish looking towards the clear engine part, you will need to use a piece of diffusion material to even out the red light. See G-1

9- The main bridge will use the three holes already drilled in the model. Use the 5mm white leds to light the main bridge; you will need to open the main center hole to fit the strobe wires through. See photo G-2.

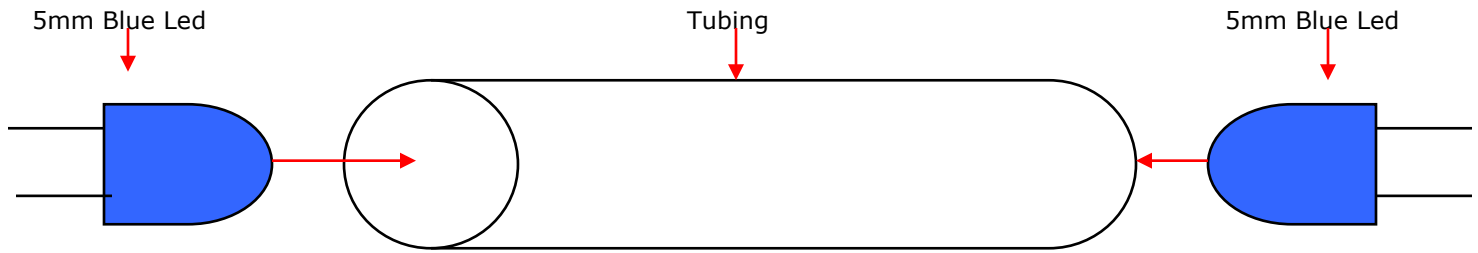
G-1



G-2



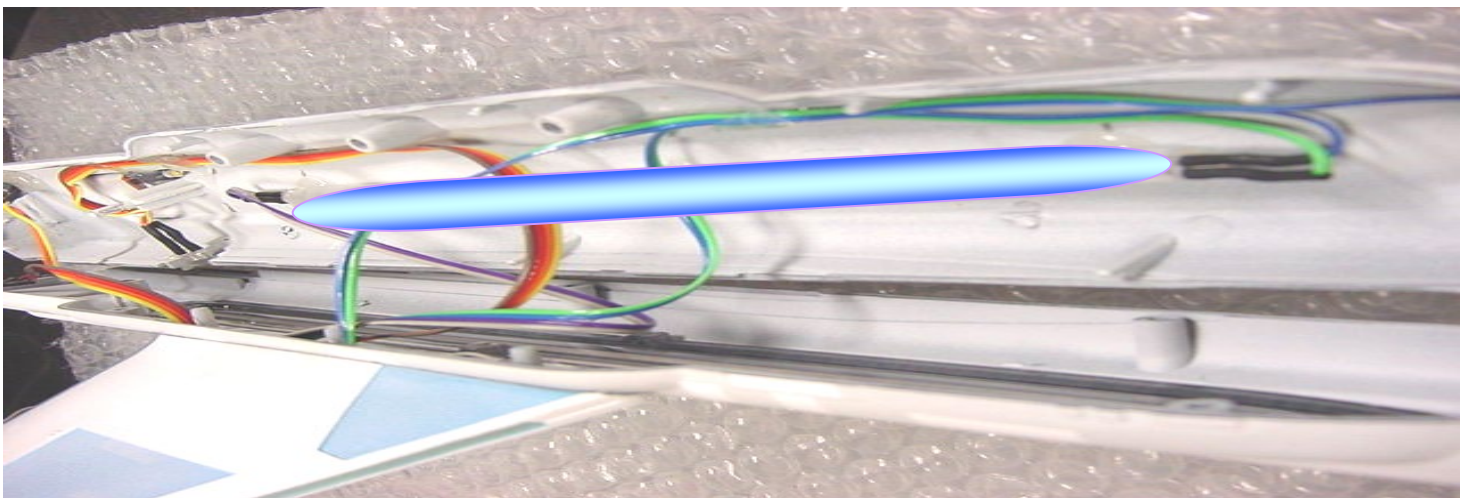
10- Prefabricate tube lamps. Locate precut tubing. You will need to make up 4 blue 5mm leds for the nacelles, insert 5mm leds into the ends of the tubing. Mount with a very small amount of hot glue and test lights.



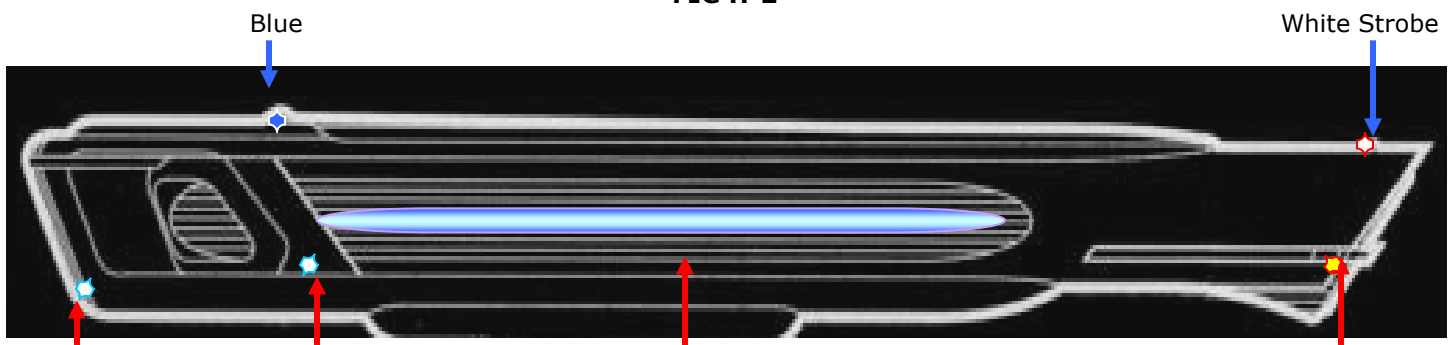
11- Building the nacelle. Start by drilling out and pre fitting navigation & strobe leds. You will need to cut the insert part that fits in back half of nacelle. Cut out the inside lower half of the nacelle support gusset to allow room for upper strobe lights. This is a very tight fitting area please take you time with the lighting & pre fitting. Mount leds on one half of nacelle tube making sure not to pinch any wiring, you will need to cut back mounting tabs on clear parts where tube lights will sit inside. If you don't trim the tabs back the nacelle tube will not meet the other half of the nacelle tube. Mount light tube on center of clear part and test close the nacelle tube and check proper fit.

See **FIG H-1-3**

**FIG H-1**



**FIG H-2**



White X2

White Diffused

Blue Tube Light

Yellow

**FIG H-3**

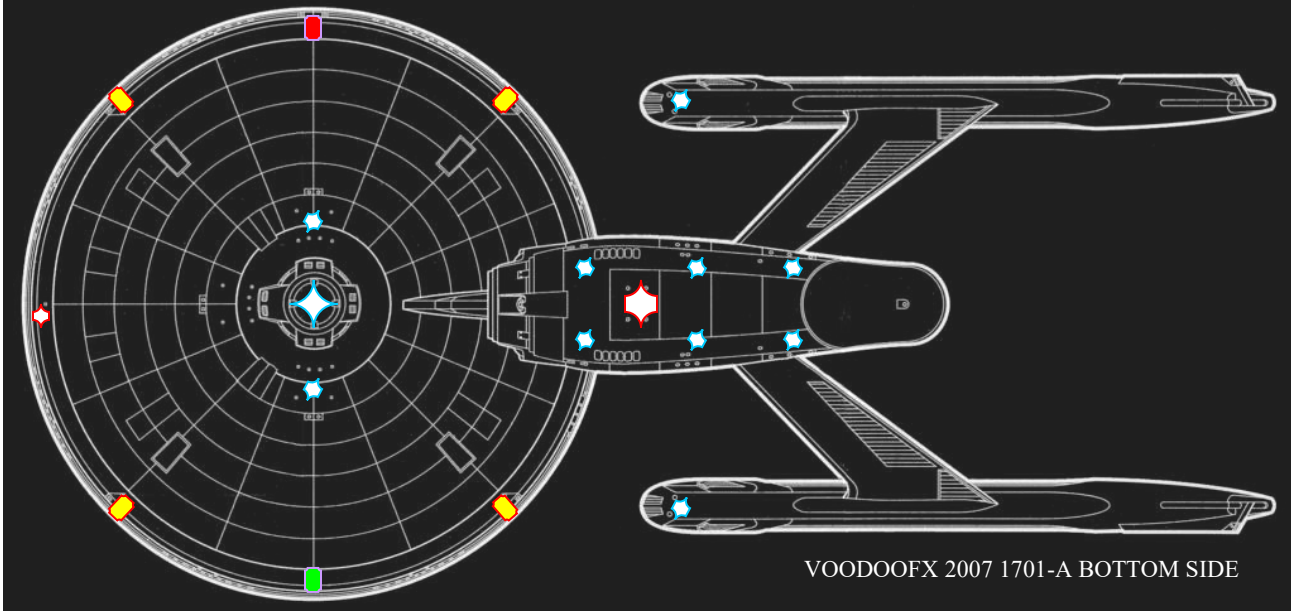
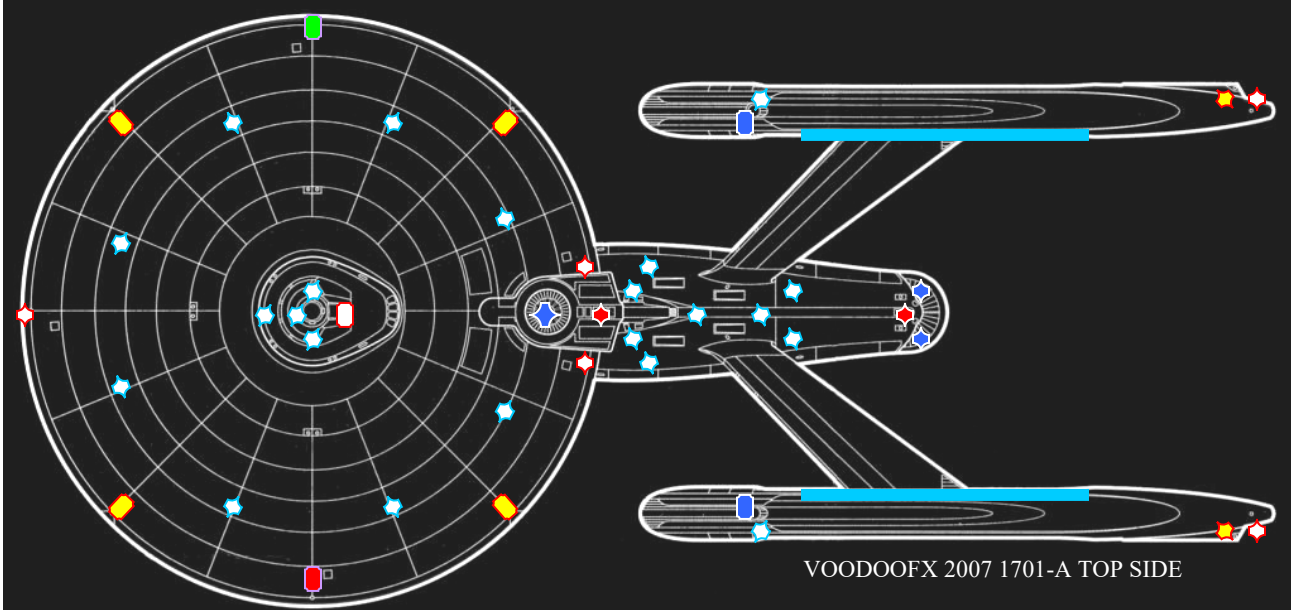
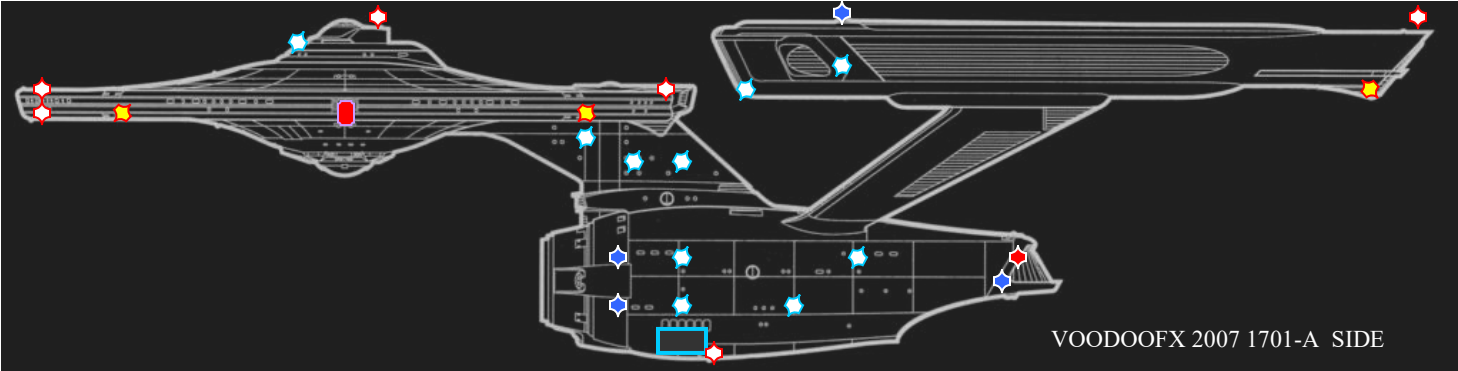




# General Lighting Location Diagram

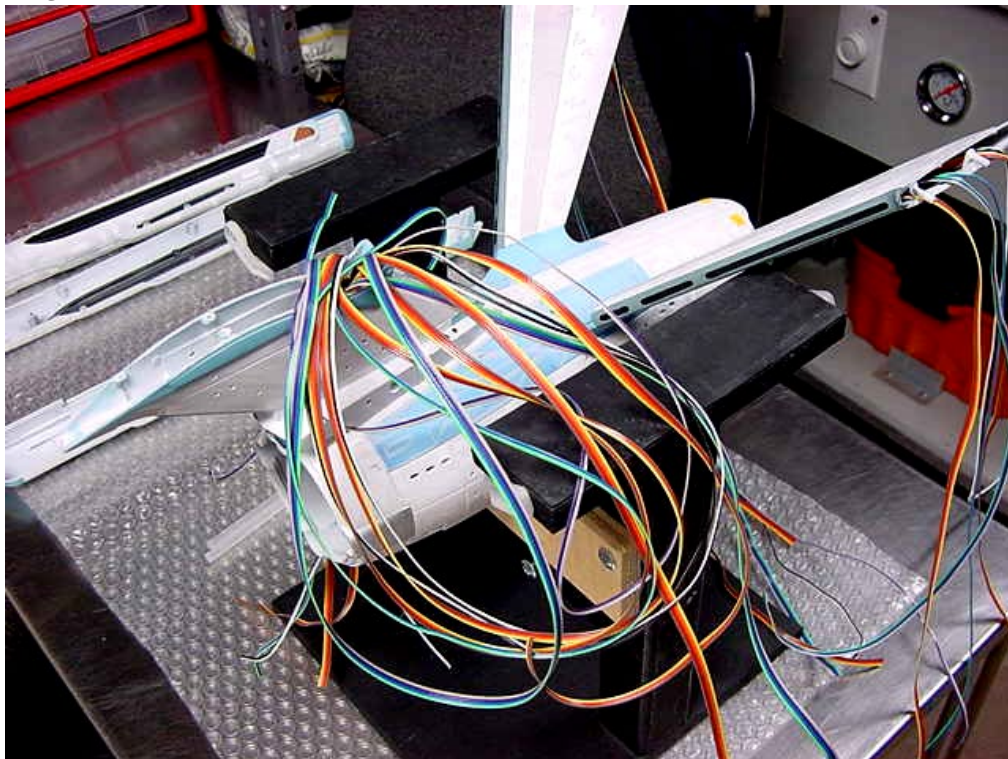
## Legend:

- Strobe
- White on light
- Nav Red
- Nav Green
- Yellow
- Blue
- Red
- Blue Gel



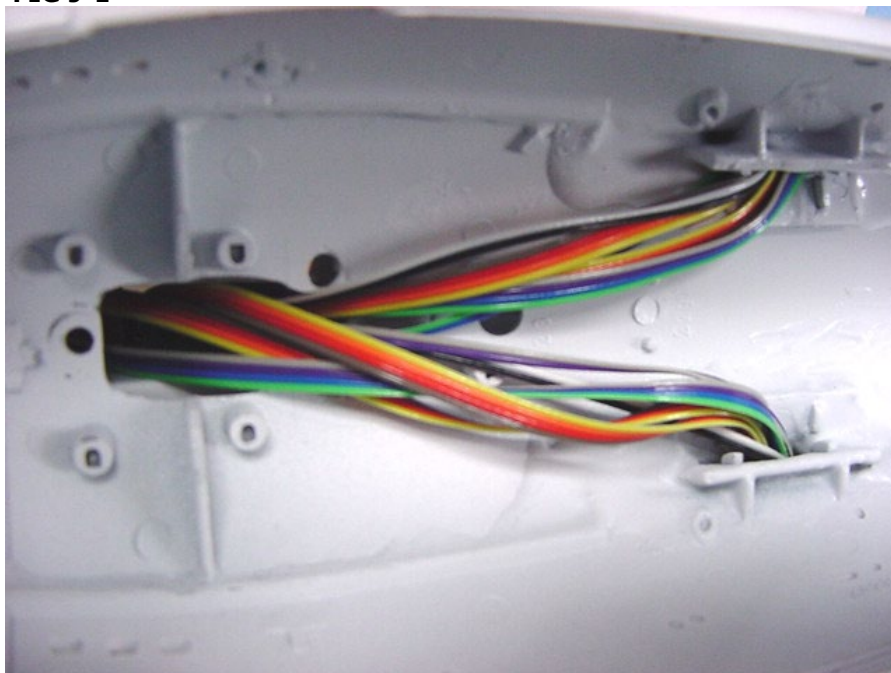
12- Now that you have went over most of the locations your ready to start fitting the pre painted model with wire and leds. The most important wire routing is up the nacelles and through the secondary hull. Start by running the 16 wires up and down through the nacelles, leave plenty of slack on both ends, you will need to run the bulk of ribbon wire back up to the lower dish. See **FIG I-1**

**FIG I-1**



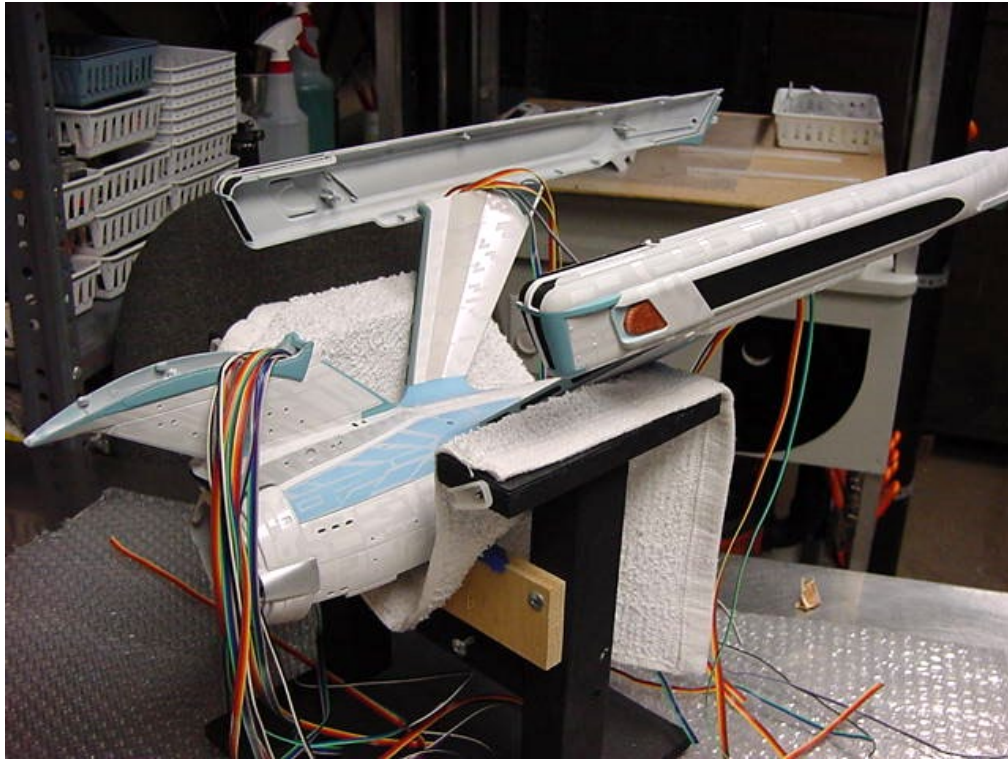
13- Once you have cleaned up the bulk of the wiring, route the wires tightly against the top half of the secondary hull, this will help keep the wiring out of the way of the build and not interfere with the lighting. See **FIG J-1**

**FIG J-1**



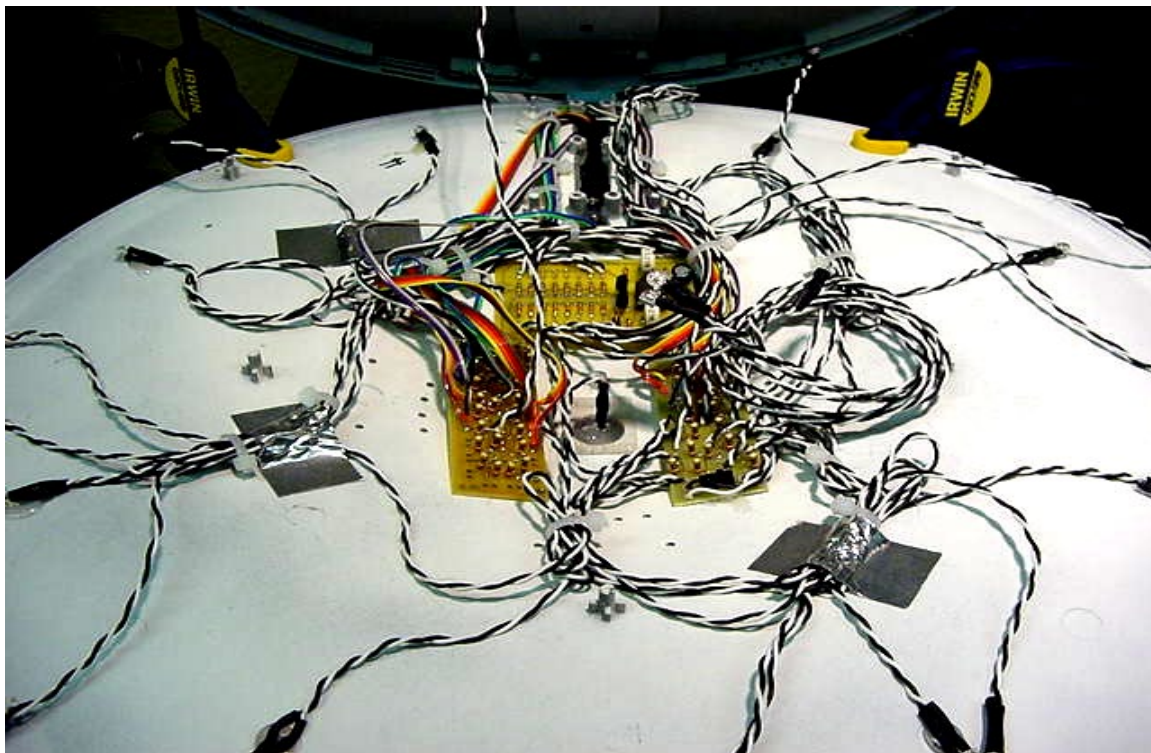
14- The nacelles are now ready to be wired with leds and mounted in place. Mount the leds on the outer half of the nacelle; this will help for fitting the nacelle half's together when they are ready to be sealed up. After you have all the parts mounted and leds in place it's a good time to check all your leds that they working before sealing the nacelle, pull loose wire into nacelle strut and fit nacelle half's together. Mount nacelle after tested and re check leds one last time. See **FIG K-1**

**FIG K-1**



15- You're now ready to mount the lower dish on the dorsal neck and fit the bulk window lighting and navigation lights. After securing the lower dish start laying out your locations for the lights in the main dish area. Refer to general lighting diagram and **FIG E-1** and **FIG L-1**

**FIG L-1**

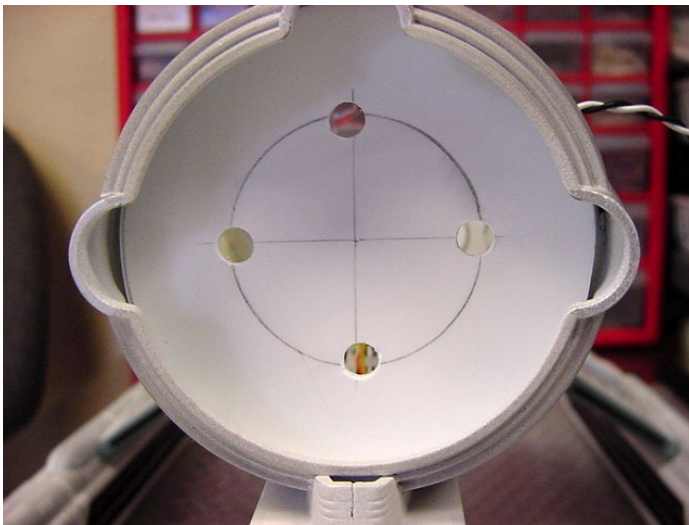


16- Test all areas on the main dish and adjust any of your lights at this stage, test upper dish and be careful not to pinch any wires when test fitting. You can add a clear diffused plastic material to improve look of window area before closing up. It is a good rule of thumb to not fully seal the dish til the end of the project, just tack glue it lightly or tape up the dish and glue at the end of the project, once the dish is sealed that's it.

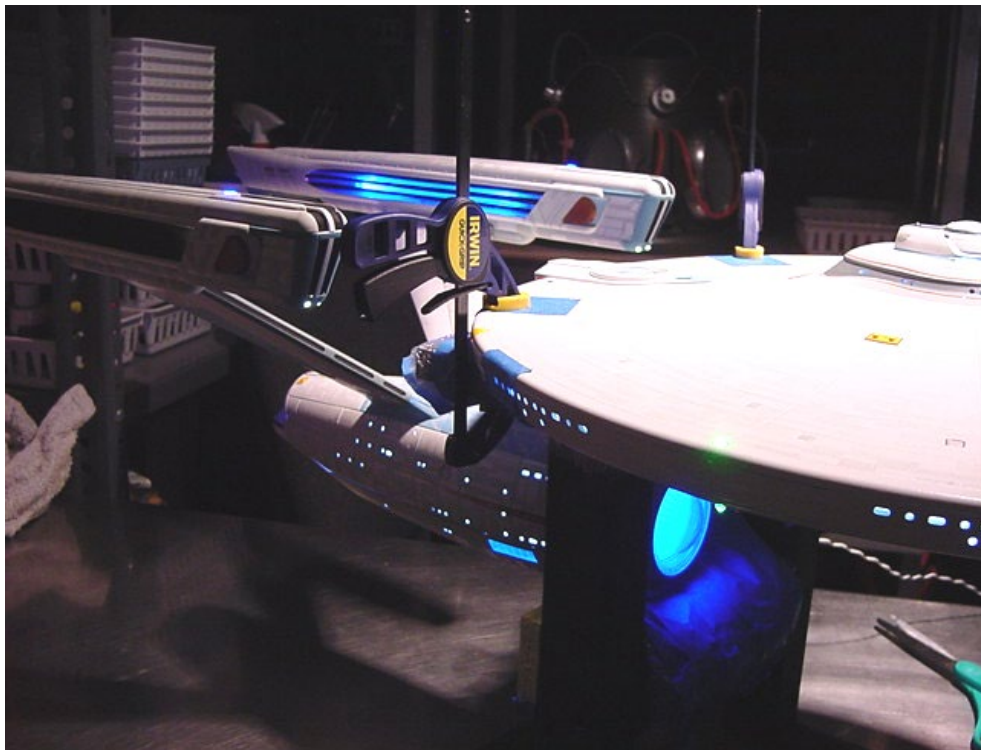


17- The deflector dish and lower hull areas are the final stages of installing the lighting kit. The deflector dish has 4 blue leds that light up the back side of the deflector dish dome, only a paint the side you see that faces the clear dome cap. Do not paint the inside half of the dome, you want the light show through the back side. You will need to scratch build a circle rib to hold the 4 blue leds and shield the blue light. You might need to repaint the ring area after it installed to block light leak around the ring. See **FIG M-1**

**FIG M-1**



18- Mount all lighting locations in the secondary hull and test the whole model for a 5 minute. Clean up any loose wires and retest for a 15 minute test run. If it has made it through these tests and is running strong, it can now be tightened up and ready for mounting in the model. If you don't understand something on the instructions please call us for information regarding the electronics 650-508-9411.





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#### Danger & Hazard Warning

When sanding wear approved respirator protection.  
Avoid skin and eye contact.  
Work in area with adequate ventilation.  
Wear safety glasses at all times.  
Wear approved safety equipment.  
Always adhere to all safety and product warning labels.  
Adult supervision recommended.

#### General Prep

- 1 - Sand down any high spots.
- 2 - Fill in any low spots.
- 3 - Sand entire surface for adhesion.
- 4 - Wash with mild dish soap & warm water.
- 5 - Rinse off entire surface with fresh water.
- 6 - Air dry or dry with clean cloth.
- 7 - Prime full surface with quality prime.
- 8 - Let primer dry 24-48 hours minimum.
- 9 - Paint to according colors and or preference.

#### Please Do Not Contact Distributor

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

Voodooofx is not responsible for improper installation.  
There are no refunds on electrical parts or components. **All custom lighting kits are nonrefundable.**  
Prices are subject to change at any time.  
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.

#### GENERAL LED HANDLING PRECAUTIONS:

**CAUTION:** The LED can cause permanent damage to eyes at close range.  
You should never look directly at the light source of the LED.

**CAUTION:** LEDs are static sensitive devices. Wear grounding wrist strap.  
When attaching leads, the leads should be at a point at least 3mm from  
The base of the LEDs. Avoid damage to LEDs by not soldering more than  
3 seconds with a 700\* iron. Do not use LEDs without a current limit resistor.  
The forward voltage rating is typical and can vary from part to part. LEDs  
may work fine connected to a battery of proper voltage, other LEDs will be  
over driven and destroyed! Always use a resistor in line with LEDs.

**CAUTION:** This kit contains small parts which may be hazardous to  
children under 12 years. Adult supervision is required.

**Disclaimer Warranty** the materials products are provided "as is" without warranties of any kind either expressed or implied.

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If your use of the product results in the need for servicing, repair or correction of equipment or data, you assume any costs thereof.

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