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## **- WIRING DIAGRAM -**

### **WIRING DIAGRAM FOR THE K'TINGA 1:350 SCALE BATTLE CRUISER WITH FRONT AND REAR TORPEDO NAVIGATION/STROBE/IMPULSE ENGINE AND INTERNAL LIGHTS BOARD TO BE USED WITH THE POLAR LIGHTS LIGHT KIT**

#### **MODEL: KTNGA-BB**

#### **ITEMS YOU WILL NEED:**

Soldering Iron  
Solder  
Cutter  
Wire Stripper

To power up this lighting kit you will need use the 9-volt Dc wall power adapter supplied with this kit.

#### **ITEMS INCLUDED FOR OPTION A:**

One Normally Open Momentary Switch  
One 9-volt DC power adapter  
One Control board  
One Speaker  
Shrink Tubing  
Flat Ribbon Cable  
Wiring Instructions  
The Four Torpedo LED's  
Two Navigation LED's  
Two Strobe LED's  
Two Impulse LED's

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**Important Notice:**  
**Make sure to wire it up as Option A if you're using the Polar Lights light kit along with our board. Option B will used if you're using the complete TenaControls Lighting and Weapons System.**

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**\*\*\*A digital version of this Manual can be requested via email: \*\*\***  
**[sales@tenacontrols.com](mailto:sales@tenacontrols.com)**

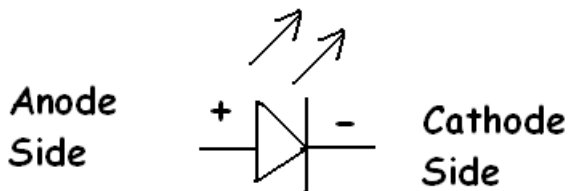
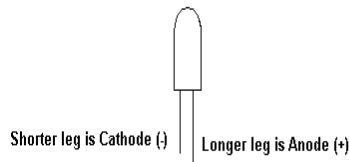
Refer to the Master Wiring Diagram included in this manual for all external connections to the circuit boards. See included pictures as a guide on assembly.

### IMPORTANT!

Please review the below video link, as it will assist you in the wiring of the LED's to their respective locations. Additionally, must use the Polar Lights lighting wiring diagrams. **Please request digital manual to get access to the Instructional video, if you have issues getting to Youtube Video**

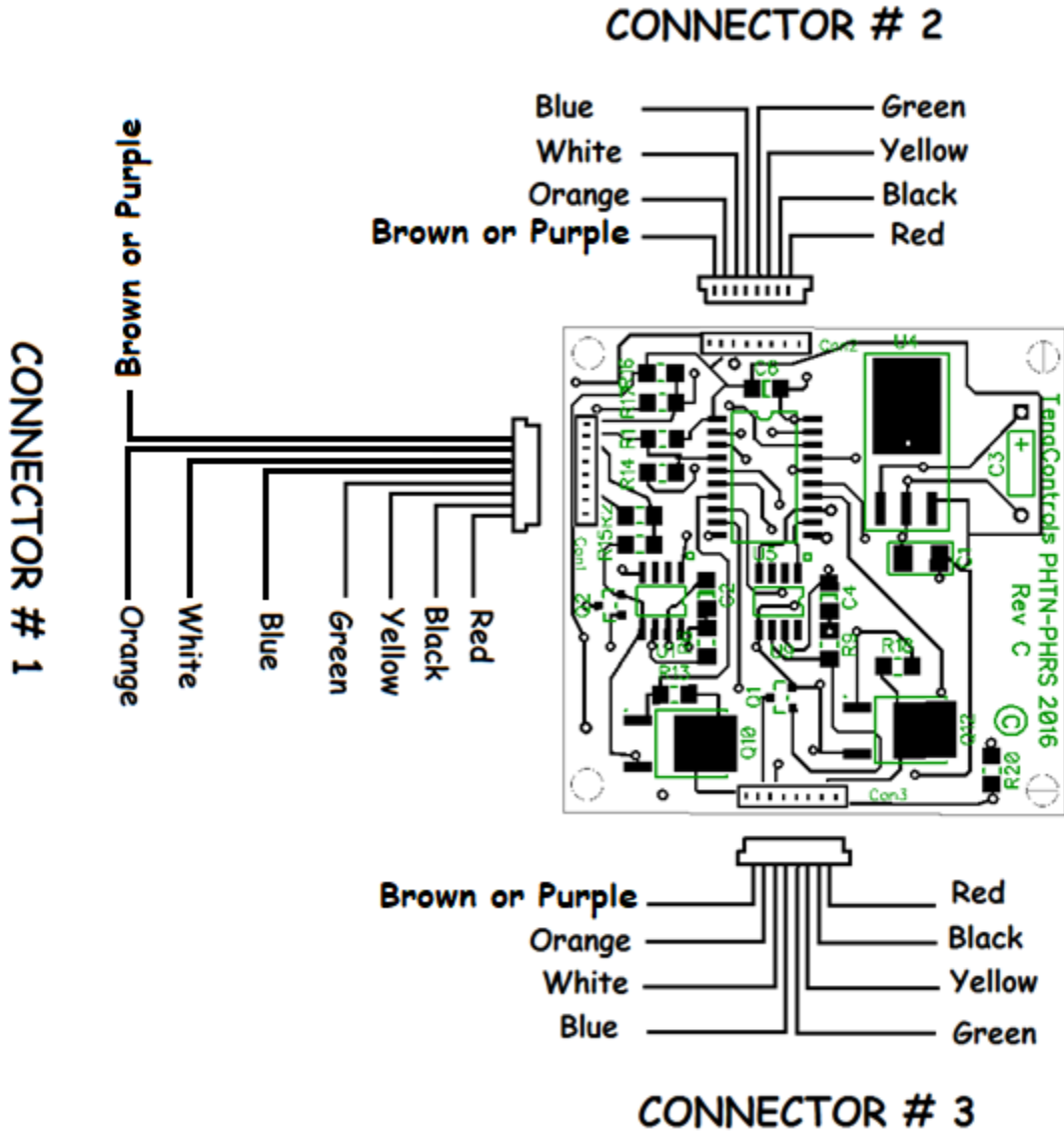
<https://www.youtube.com/watch?v=NeeAIDVUjms&feature=youtu.be>

How to distinguish a led:



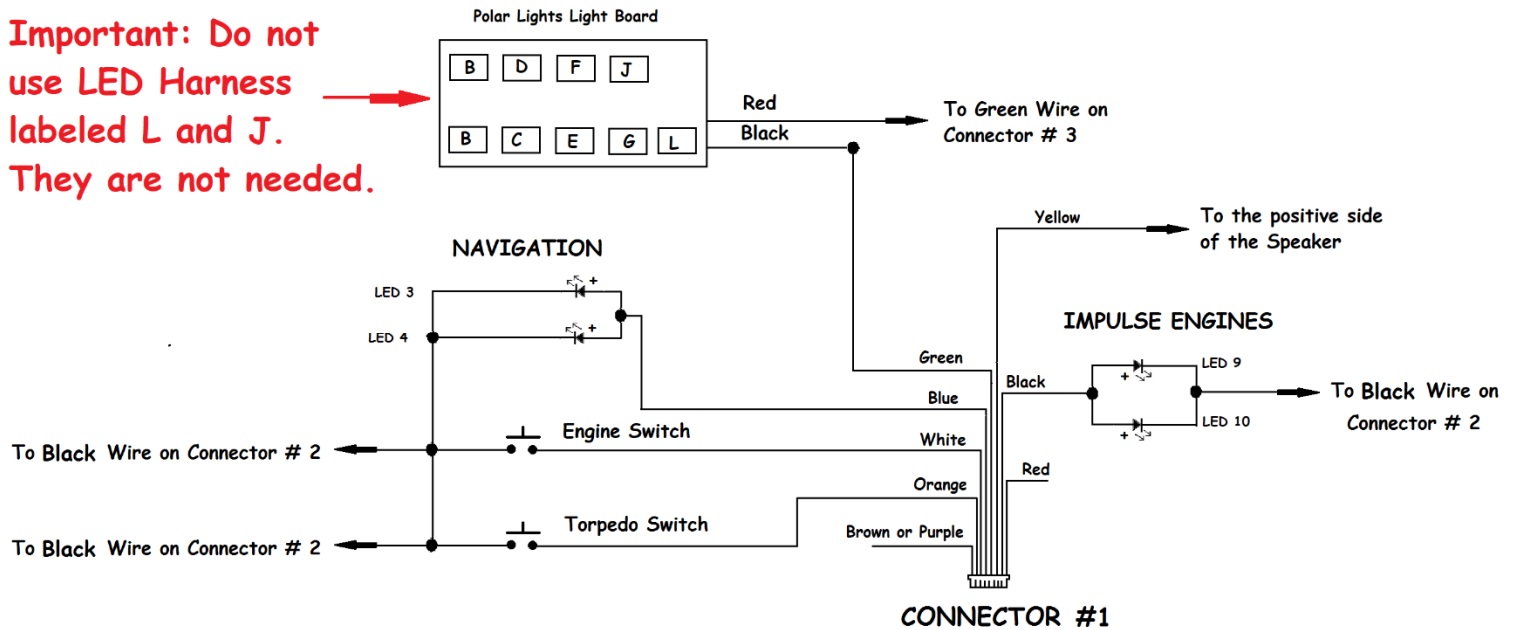
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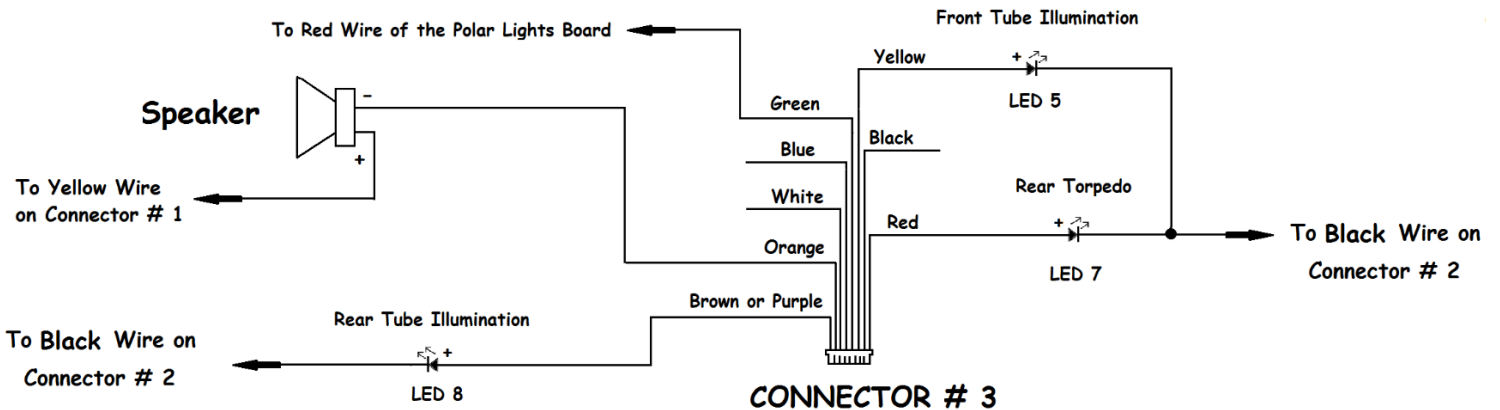
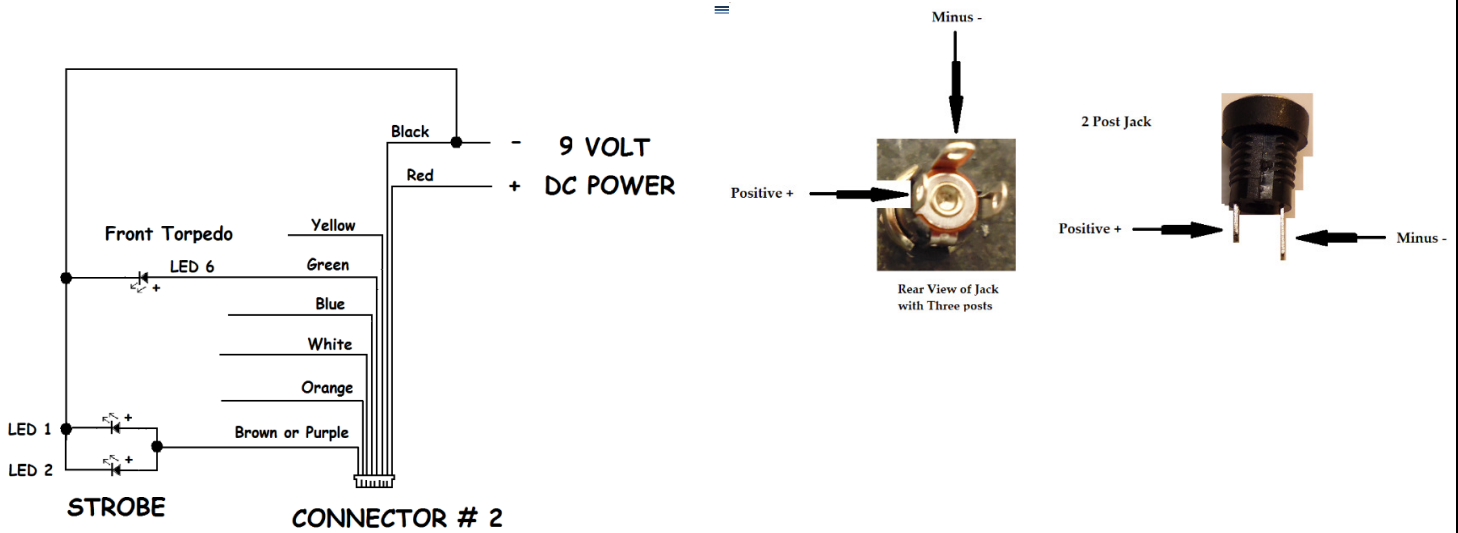
## WIRING FOR OPTION A

**Important: Do not use LED Harness labeled L and J. They are not needed.**



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## - INSTRUCTIONS -

### Optional Strobe

1. **Two White 3mm led's, LED1-LED2.** The Two Cathodes (-) of the Strobe led's, LED1-LED2 connect to Black wire on mating connector #2. Then connect the Anodes (+) of LED1-LED2, to Brown or Purple wire on mating connector #2. **See above diagram.**

### Navigation

2. **Two Red 3mm led's, LED3-LED4.** The Two Cathodes (-) of the Navigation led's, LED3-LED4 connect to Black wire on mating connector #2. Then connect the Anodes (+) of LED3-LED4, to Blue wire on mating connector #1. **See above diagram.**

### Front Torpedo

3. **One Orange, One Amber/Orange led's, LED5-LED6.** The Two Cathodes (-) of the Torpedo and Tube Illumination led's, LED5-LED6 connect to Black wire on mating connector #2. Then connect the Anode (+) of 3mm **Amber/Orange Flat Top LED5**, (Tube Illumination) to the Yellow wire on mating connector #3. Then connect the Anode (+) of 3mm **Orange Round Top LED6**, (Torpedo) to the Green wire on mating connector #2. **See above diagram.**

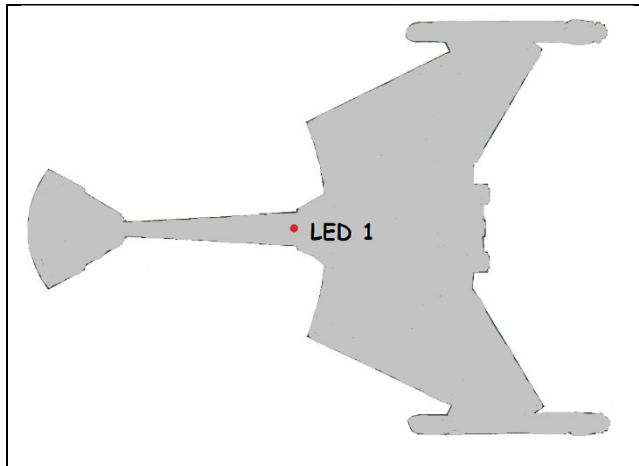
### Rear Torpedo

4. **One Red, One Amber/Orange led's, LED7-LED8.** The Two Cathodes (-) of the Torpedo and Tube Illumination led's, LED7-LED8 connect to Black wire on mating connector #2. Then connect the Anode (+) of 3mm **Red Flat Top LED7**, (Torpedo) to the Red wire on mating connector #3. Then connect the Anode (+) of 3mm **Amber/Orange Flat Top LED8**, (Tube Illumination) to the Brown or Purple wire on mating connector #3. **See above diagram.**
5. Now connect SPKR to the Yellow wire on mating connector #1 and the Orange wire on mating connector #3. Connect momentary Switch. One side to the Black wire on mating connector #2 and the other side to the Orange wire on mating connector #1. **See above diagram.**
6. Press Switch once to activate the Three Front Torpedo Blasts. Press Switch twice to activate the Single Rear Torpedo Blast.

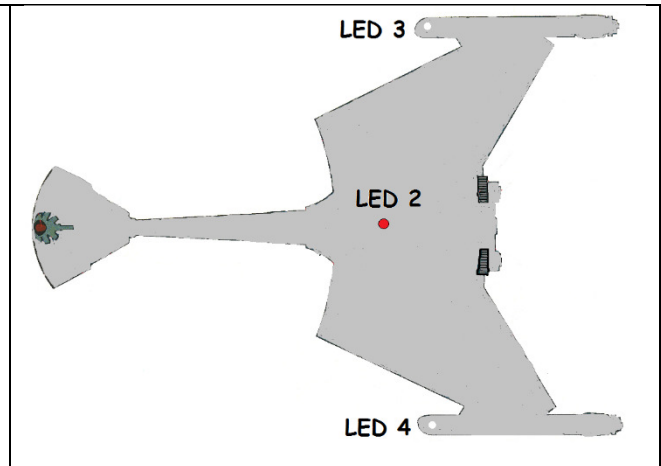
## Impulse Engines

7. **Two Red 5mm led's, LED9-LED10.** The Two Cathodes (-) of the Impulse Engines led's, LED9-LED10 connect to Black wire on mating connector #2. Then connect the Anodes (+) of the Impulse Engines led's, LED9-LED10 to Black wire on mating connector #1. **See above diagram.**
8. Press the Engine switch to turn On the engine effect. Press again to turn Engines full On. Press again to ramp the Engines Off.

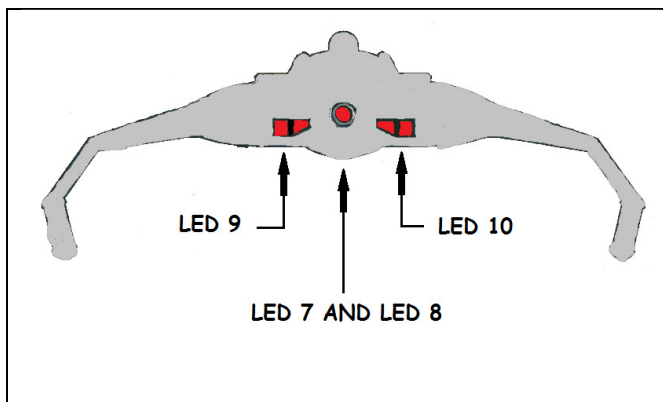
### Top View of LED locations



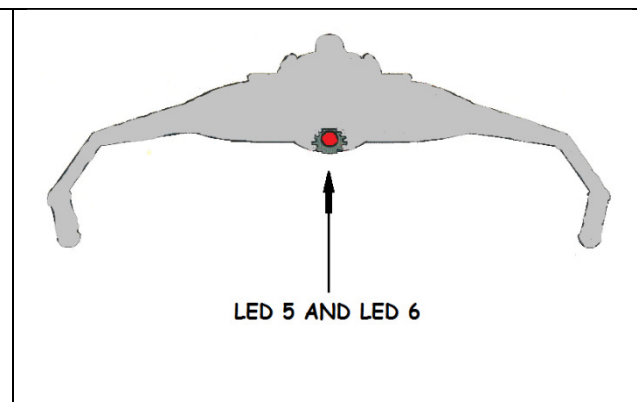
### Bottom View of LED locations



### Rear View of LED locations



### Front View of LED locations



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## Warranty

TenaControls LLC warrants that the control boards sold meet TenaControls specifications and are adequately contained, packaged and labeled and conform to the promises and affirmations of fact made on the container and label. THE FOREGOING WARRANTIES ARE EXCLUSIVE, AND ARE IN LIEU OF ALL OTHER WARRANTIES (WHETHER WRITTEN, ORAL OR IMPLIED) INCLUDING WARRANTY OR MERCHANTABILITY IN OTHER RESPECTS THAN EXPRESSLY SET FORTH ABOVE AND WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

In the event that there is a breach of express warranty by the manufacturer made in connection with the purchase of this product, if any, the sole remedy of any buyer shall be to return the product along with original sales receipt, at **buyer's expense** for repair (or replacement of the product if repair is impossible) to the manufacturer's facility in the Commonwealth of Massachusetts, located at 22 Hancock Street, Milford, MA 01757. Some states do not allow the exclusion or limitation of any incidental or consequential damages, so the above limitation may not apply to you. Nothing herein contained shall be construed to be a waiver by the manufacturer of any of the obligations imposed upon said buyer under the laws of the Commonwealth of Massachusetts except as herein specifically stated.

This warranty is enforceable only by the buyer of the product or a person in the buyer's immediate family. This warranty is enforceable for a period of **FIVE YEARS** from the date of purchase. Some states do not allow limitations on how long an implied warranty lasts, so the above warranty may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

### Warranty Void if:

- A) Product is altered in any way.
- B) Used for other than its intended use.
- C) Buyer mishandling.