

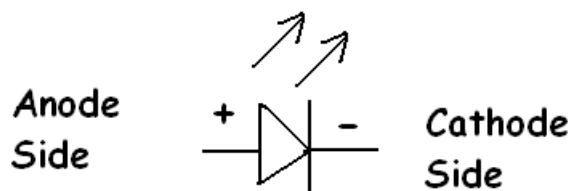
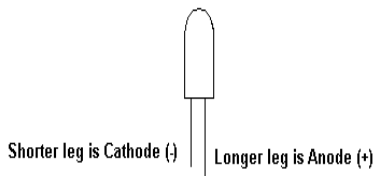
## Instructions of Model# Combo-RR. This board has Photons, Navigation, Strobe, and Impulse Engines for the Star Trek Reliant NCC-1864 1:1000 Scale

This control board is completely assembled and tested. The only thing you need to do is connect the led's, speakers, momentary switches, main power, and the resistors to the three wire mating connectors. This board works on 9 to 12 volts DC. Hot glue on the corners of the printed circuit works well for locking into place. Or use the 4 mounting holes for a 4-40 diameter bolt.

Items you will need: Soldering Iron, solder, cutter and wire stripper.

**\*\*Note:** When using the shrink tubing, you need to only slide the shrink tubing over one leg of the led to keep it from shorting against the other leg. Then use heat gun or flame from lighter to heat the shrink tubing until it shrinks around the wire connected to one of the led legs.

How to distinguish a led:

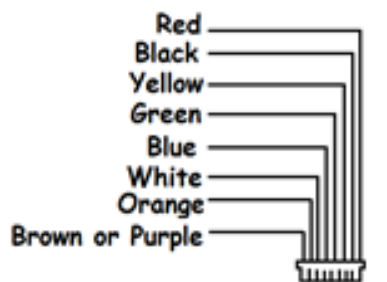


As a guide we have made an Instructional video for your review. Use the below link. **You will notice the old board in the video.**

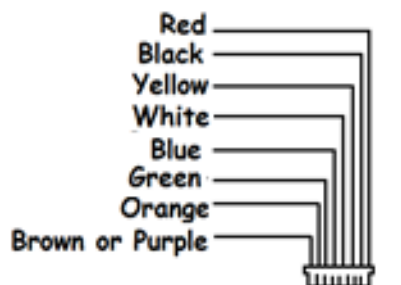
[www.youtube.com/watch?v=UID3XrOEMCw&feature=youtu.be](http://www.youtube.com/watch?v=UID3XrOEMCw&feature=youtu.be)

**IMPORTANT.** Different cable companies have swapped the Green and White wires location on the JST Connector. Below are two pictures showing the wires and their locations. When you get your board, you will need to look and see which connector type you received. Very important to wire the outputs and inputs based on their positions on the connector. Wire it up based on the connector of Company A or Company B. Sorry for this inconvenience, although this is out of our control.

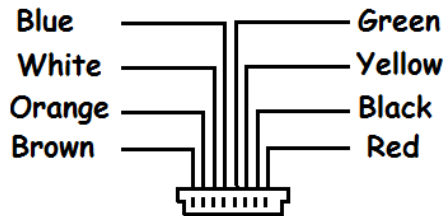
## Position and Wire colors from Company A



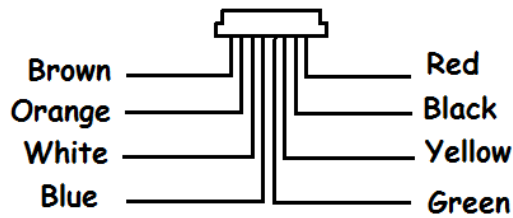
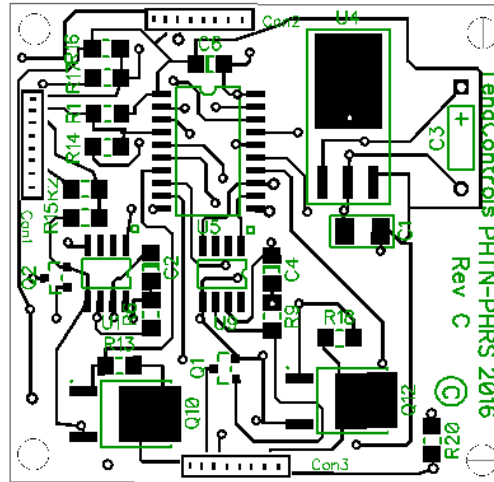
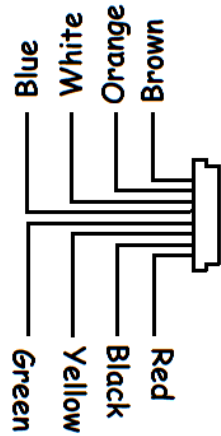
## Position and Wire colors from Company B



## CONNECTOR # 2



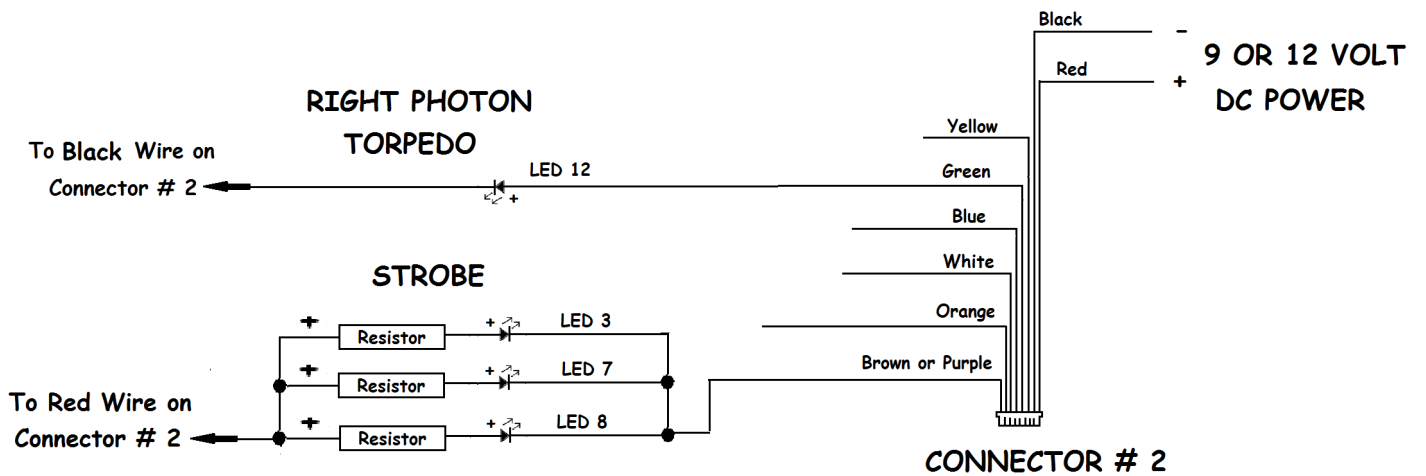
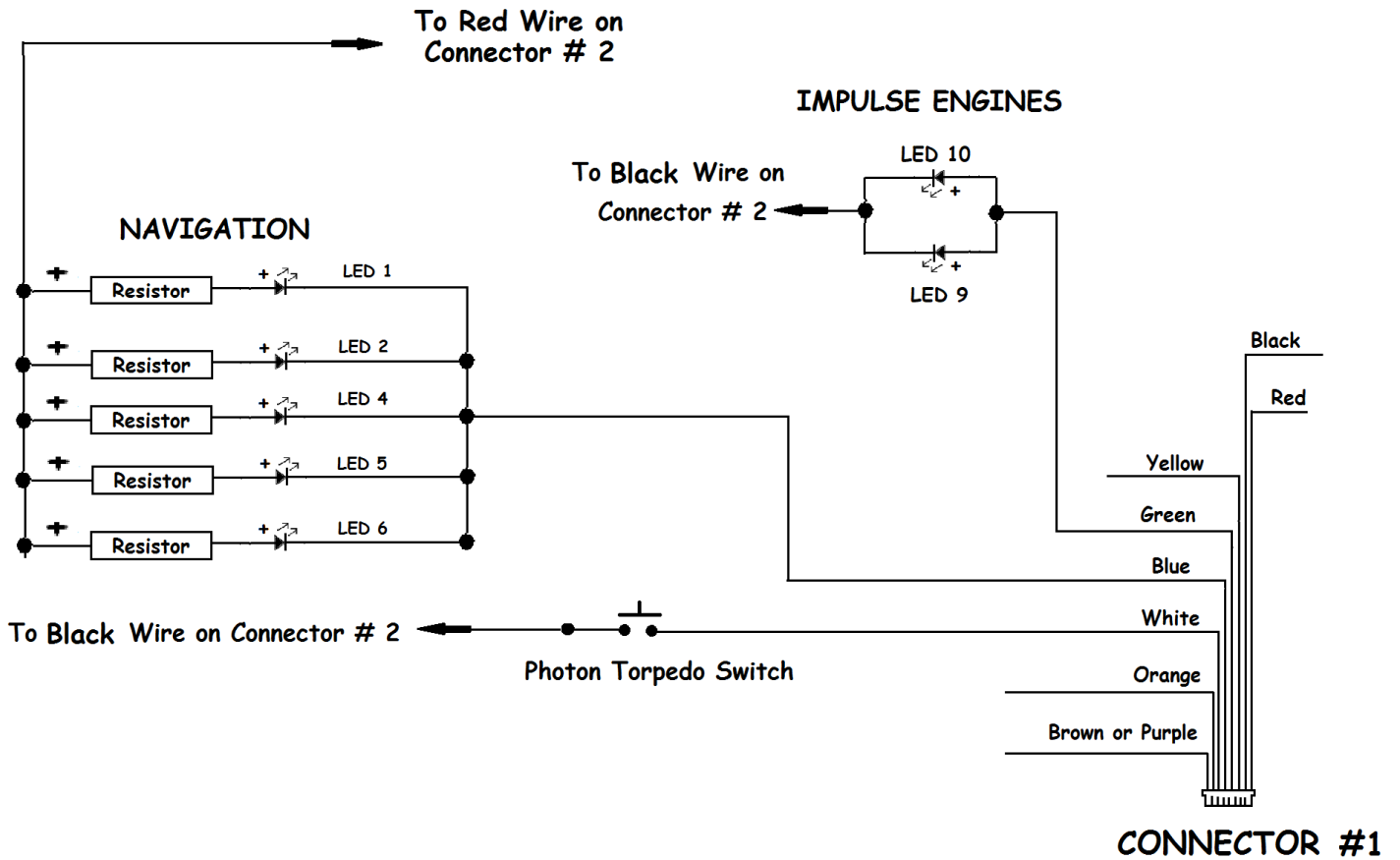
## CONNECTOR # 1

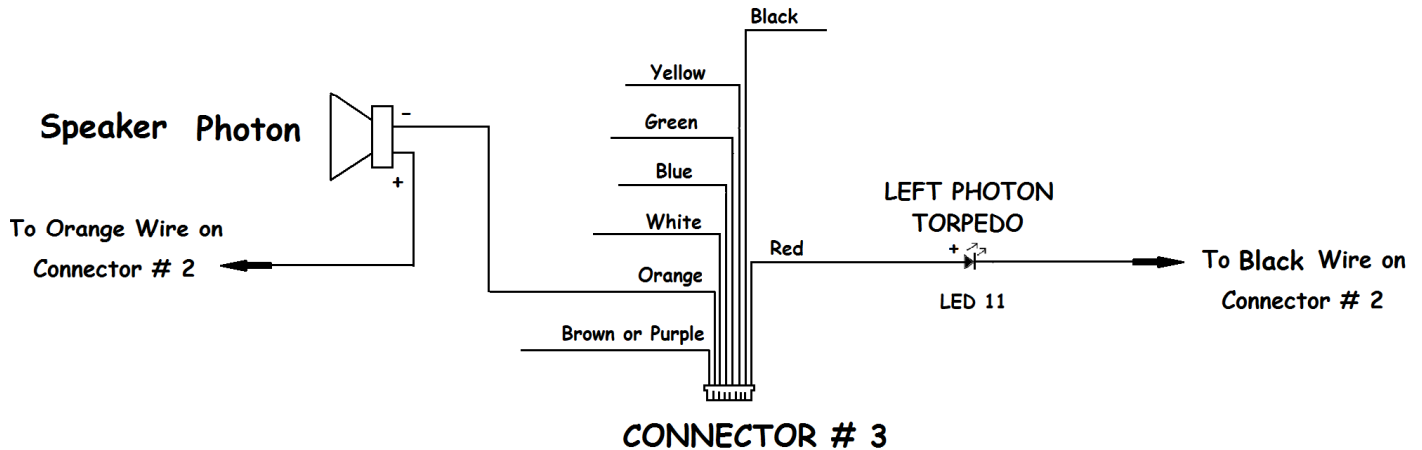


## CONNECTOR # 3

# TenaControls LLC

Milford, MA 01757 U.S.A.  
[www.TenaControls.com](http://www.TenaControls.com)





## Strobe Side

1. **Three White led's, LED3, LED7 and LED8.** the Three Cathodes (-) of the Strobe led's connect to Brown or Purple wire on mating connector #2. Then connect the Anodes (+) of LED3, LED7 and LED8, to one end of their respective resistor and the other end of resistor will terminate to Red wire on mating connector #2. **See above diagram.**

## Navigation Side

2. **Three White led's, LED1, LED4 and LED5.** All the Three Cathodes (-) of the Navigation led's, LED1, LED4 and LED5 connect to Blue wire on mating connector #1. Then connect the Anodes (+) of LED1, LED4 and LED5, to one end of their respective resistor and the other end of resistor will terminate to Red wire on mating connector #2. **See above diagram.**
3. **One Green LED2.** The Cathode (-) of the Navigation led, LED2 connect to Blue wire on mating connector #1. Then connect the Anode (+) of LED2, to one end of the resistor and the other end of resistor will terminate to Red wire on mating connector #2. **See above diagram.**

4. **One Red LED6.** The Cathode (-) of the Navigation led, LED6 connect to Blue wire on mating connector #1. Then connect the Anode (+) of LED6, to one end of the resistor and the other end of resistor will terminate to Red wire on mating connector #2. **See above diagram.**

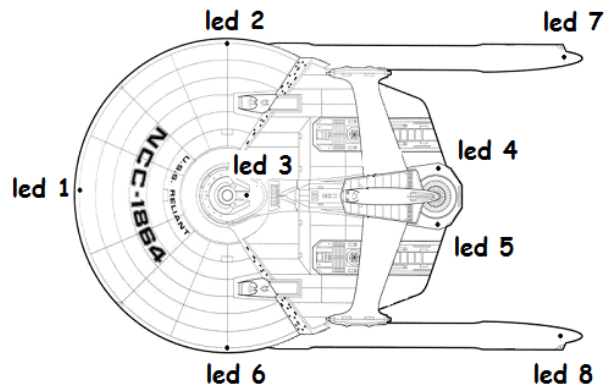
## Photon Torpedo

5. **Two Red led's, LED11-LED12.** The Two Cathodes (-) of the Photon Torpedo led's, LED11-LED12 connect to Black wire on mating connector #2. Then connect the Anode (+) of LED11 to the Red wire on mating connector #3. **See above diagram.** Then connect the Anode (+) of LED12 to the Green wire on mating connector #2. See above diagram. Now connect Minus of speaker to the Orange wire on mating connector #3, connect Positive of speaker to the Orange wire on mating connector #2. **See above diagram.** Then connect momentary Photon Torpedo Momentary Switch to the White wire on mating connector #1 and the other side to the Black wire on mating connector #2. **See above diagram.** Pressing Photon Torpedo Momentary Switch will activate the Photon Torpedo firing sequence.
6. **Putting the speaker in a case or tube is a must to get the proper sound requirement.**

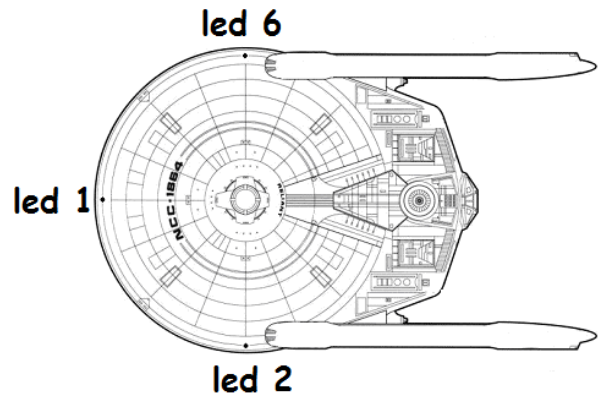
## Impulse Engines

7. **Two Red led's, LED9-LED10** The Two Cathodes (-) of the Impulse Engine led's, LED9-LED10 connect to Black wire on mating connector #2. Then connect the Anodes (+) of LED9-LED10 to the Green wire on mating connector #1. **See above diagram.**

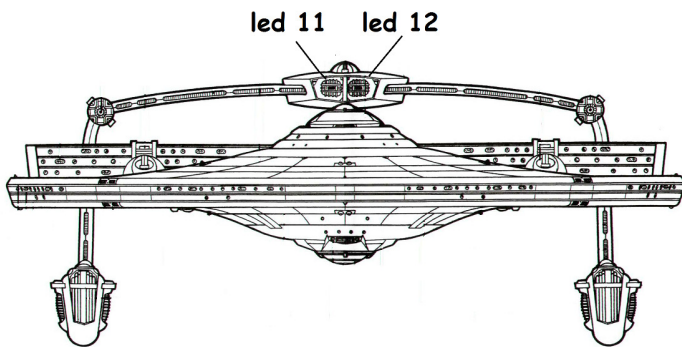
Top View of LED Locations



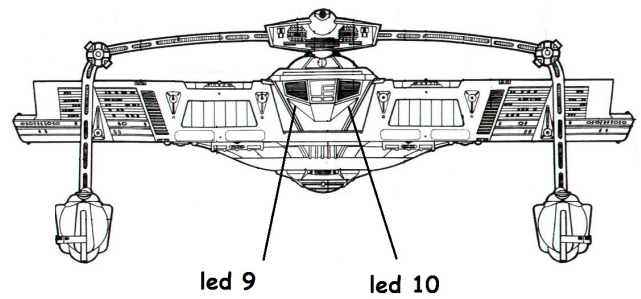
Bottom View of LED Locations



Front View of LED Locations



Rear View of LED Locations



# TenaControls LLC

Milford, MA 01757 U.S.A.  
[www.TenaControls.com](http://www.TenaControls.com)



## Warranty

TenaControls LLC warrants that the control boards sold meet TenaControls LLC 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.