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- INSTRUCTIONS -

INSTRUCTIONS OF MODEL# PHSTNS-A PHOTON, PHASER, NAVIGATION AND STROBE BOARD FOR STAR TREK ENTERPRISE 1701 & 1701-A 1:350 SCALE FROM POLAR LIGHTS

This control board comes completely assembled and tested. All you need to do is connect the LED's, speakers, momentary switches, 9 volt battery clip and the resistors to the two wire mating connectors. Then, plug in a 9 volt battery (not included) and throw the switch (not included) on. (This board also works on 12 volts DC). Be sure to hot glue on the four corners of the printed circuit to ensure the stability - or use the 4 mounting holes for a 4-40 diameter bolt.

ITEMS YOU WILL NEED:

Soldering Iron
Solder
Cutter
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 a heat gun or flame from a lighter to heat the shrink tubing until it shrinks around the wire connected to one of the led legs.

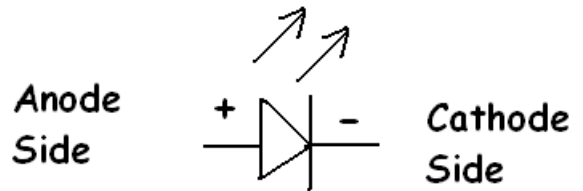
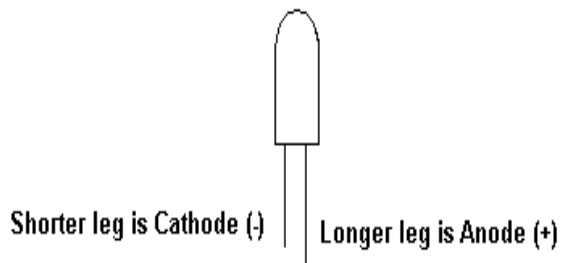
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HOW TO DISTINGUISH AN LED:

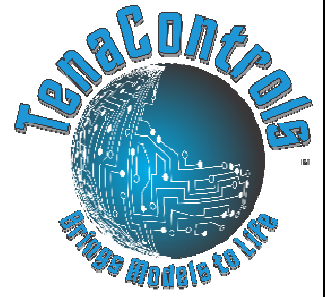


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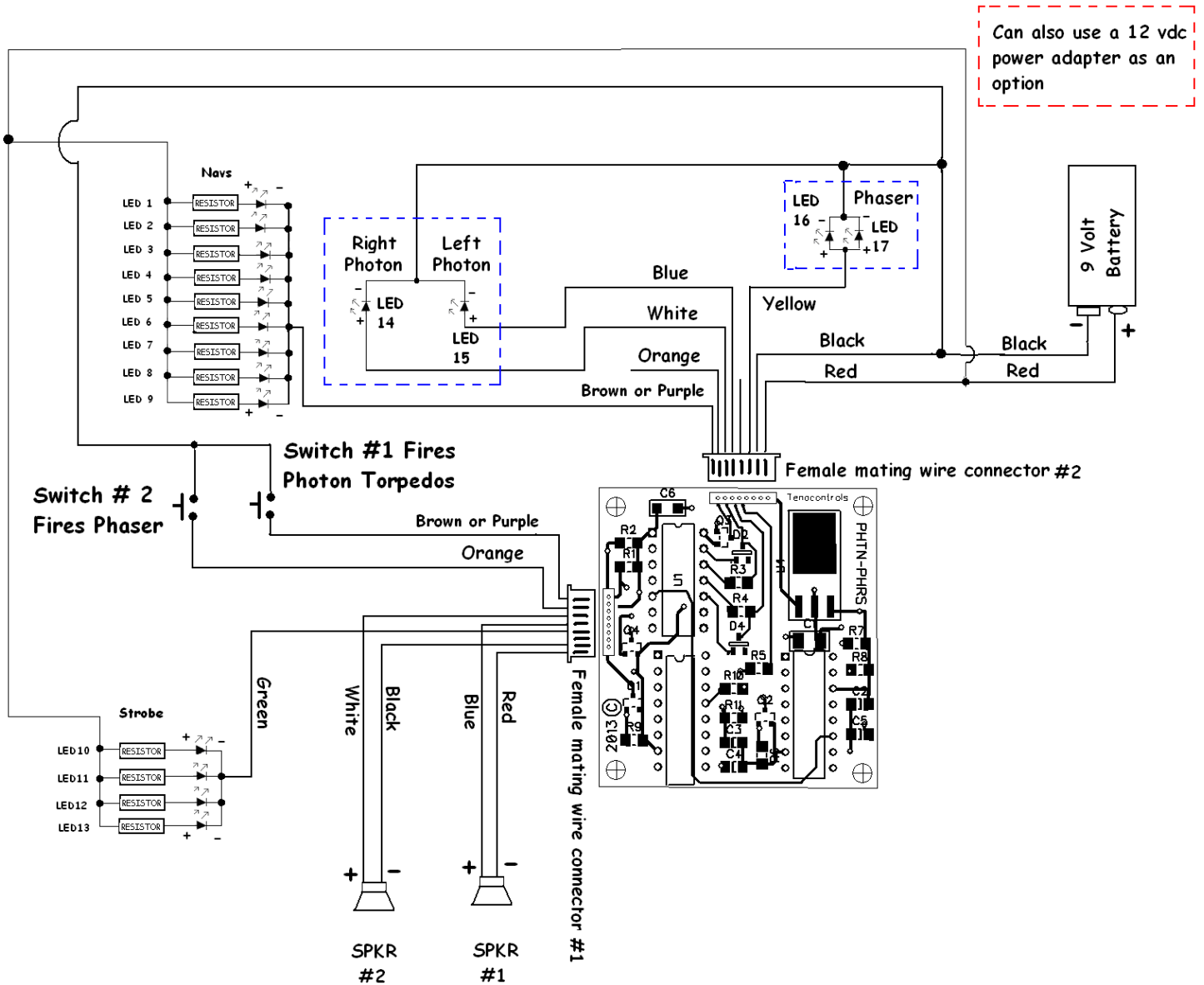
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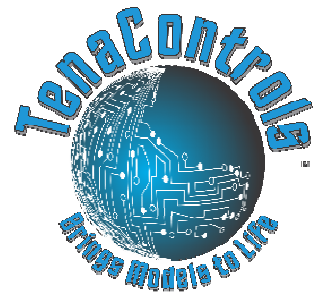


WIRING DIAGRAM



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STROBE SIDE

*REFERENCE THE WIRING DIAGRAM ON PAGE 3

1. Four White LED's: LED10-LED13.

All the Four Cathodes (-) of the Strobe LED's, LED10-LED13 connect to Green wire on mating connector #1.

Then, connect the Anodes (+) of LED10-LED13, to one end of their respective resistor and the other end of resistor will terminate to Red wire on mating connector #2.

NAVIGATION SIDE

*REFERENCE THE WIRING DIAGRAM ON PAGE 3

2. Five White LED's: LED5-LED9

All the Five Cathodes (-) of the Navigation LED's, LED5-LED9 connect to Brown or Purple wire on mating connector #2.

Then, connect the Anodes (+) of LED5-LED9, to one end of their respective resistor and the other end of resistor will terminate to Red wire on mating connector #2..

3. Two Green LED's: LED3-LED4

The Two Cathodes (-) of the Navigation LED's, LED3-LED4 connect to Brown or Purple wire on mating connector #2.

Then, connect the Anodes (+) of LED3-LED4, to one end of their respective resistor and the other end of resistor will terminate to Red wire on mating connector #2.

4. Two Red LED's: LED1-LED2

The Two Cathodes (-) of the Navigation LED's, LED1-LED2 connect to Brown or Purple wire on mating connector #2.

Then, connect the Anode (+) of LED1-LED2, to one end of their respective resistor and the other end of resistor will terminate to Red wire on mating connector #2.

5. Then place the Strobe and Navigation leds in the locations shown on the LED Locations drawings shown below.

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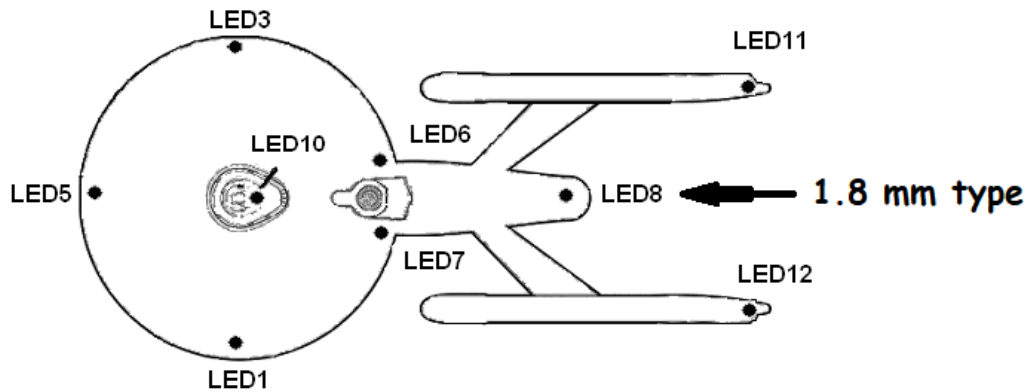


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TOP VIEW OF LED LOCATIONS

LED1-LED2 ARE RED NAV LED'S, LED3-LED4
ARE GREEN NAV LED'S, LED5-LED9 ARE WHITE
NAV LED'S

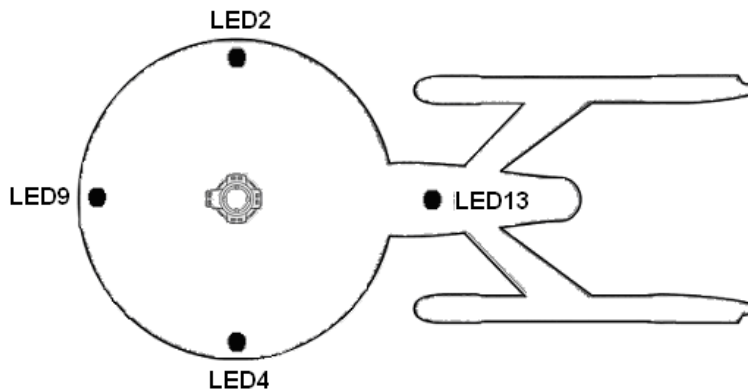
LED10-LED13 ARE WHITE STROBE LED'S



BOTTOM VIEW OF LED LOCATIONS

LED1-LED2 ARE RED NAV LED'S, LED3-LED4
ARE GREEN NAV LED'S, LED5-LED9 ARE WHITE
NAV LED'S

LED10-LED13 ARE WHITE STROBE LED'S



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PHOTON TORPEDO

***REFERENCE THE WIRING DIAGRAM ON PAGE 3**

6. Two Red LED's: LED14-LED15.

The Two Cathodes (-) of the Photon Torpedo LED's, LED14-LED15 connect to Black wire on mating connector #2.

Then, connect the Anode (+) of LED14 to the White wire on mating connector #2.

Now, connect the Anode (+) of LED15 to the Blue wire on mating connector #2.

Next, connect SPKR #1 to the Red and Blue wires on mating connector #1.

Connect the momentary Switch #1. One side to the Black wire on mating connector #2 and the other side to the Brown or Purple wire on mating connector #1. Pressing Switch #1 will activate the Photon Torpedo firing sequence.

Note: Putting the speaker in a case or tube is a must to get the proper sound requirement.

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PHASER

*REFERENCE THE WIRING DIAGRAM ON PAGE 3

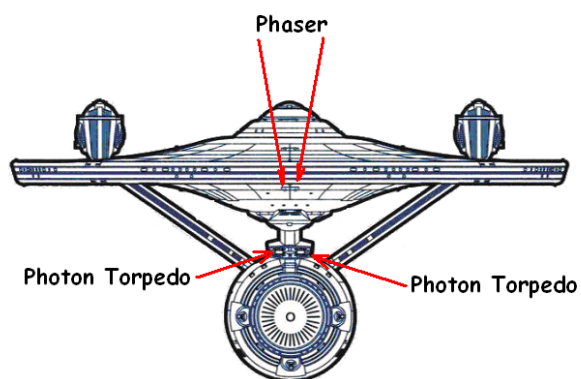
7. Two White LED's: LED16-LED17

The Two Cathodes (-) of the Phaser LED's, LED16-LED17 connect to Black wire on mating connector #2. Then connect the Two Anodes (+) of LED16-LED17 to the Yellow wire on mating connector #2.

Now, connect SPKR #2 to the White and Black wires on mating connector #1.

Then, connect momentary Switch #2. One side to the Black wire on mating connector #2 and the other side to the Orange wire on mating connector #1. Pressing Switch #2 will activate the Phaser firing sequence.

Place the Photon Torpedo and Phaser LED's in the locations on the LED locations drawings shown below.

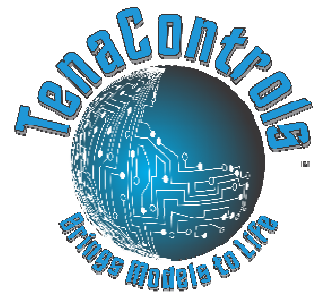


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Warranty

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.