
- WIRING DIAGRAM -

WIRING DIAGRAM FOR THE K'TINGA 1:350 SCALE BATTLE CRUISER WITH FRONT AND REAR TORPEDO USING PARAGRAFIX P/N: PGX219 REV1 NAVIGATION/STROBE/IMPULSE ENGINE AND INTERNAL LIGHTS BOARD

MODEL: KTNGA-DD 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 C:

One Normally Open Momentary Switch
One 9-volt DC power adapter
One Control board
One Speaker
Shrink Tubing
Flat Ribbon Cable
Wiring Instructions
Eighteen Torpedo LED's
Two Navigation LED's
Two Strobe LED's
Two Impulse LED's
Three LED strips pre-wired
Thirteen Ship Illumination LED's

TenaControls LLC

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***A digital version of this Manual can be requested via email: ***
sales@tenacontrols.com

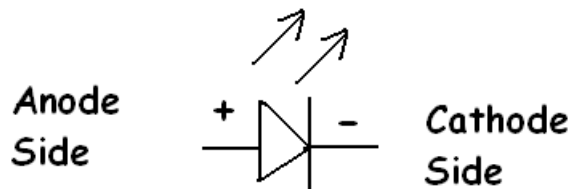
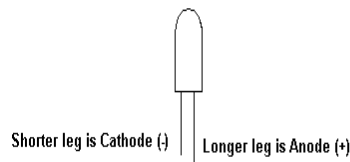
Refer to the Master Wiring Diagram included in this manual for all external connections to the circuit boards. See included pictures as a guide on assembly.

IMPORTANT!

Please review the below video link, as it will assist you in the wiring of the LED's to their respective locations. Additionally, TenaControls has pre-wired the enclosed LED's Strips for your convenience. **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=ItObT6u8Bz4&feature=youtu.be>

How to distinguish a led:

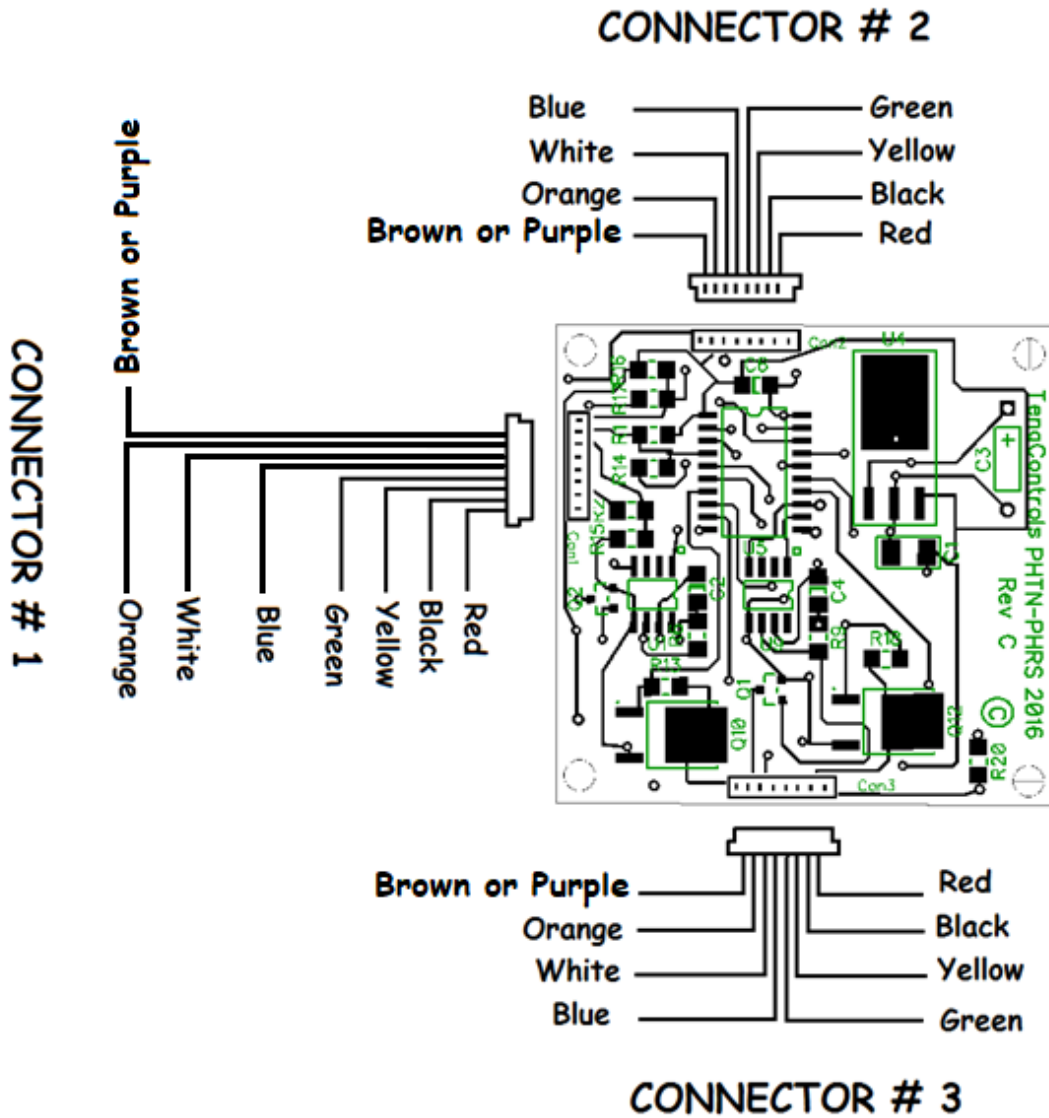


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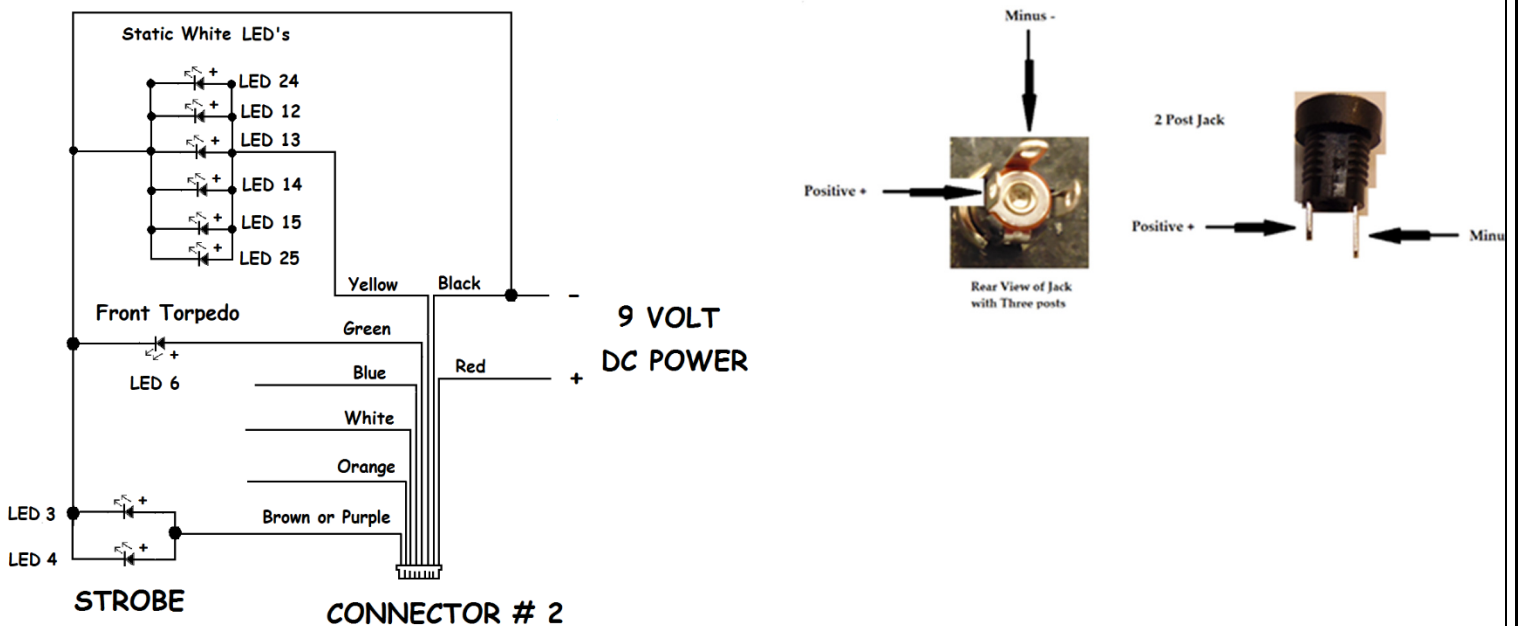
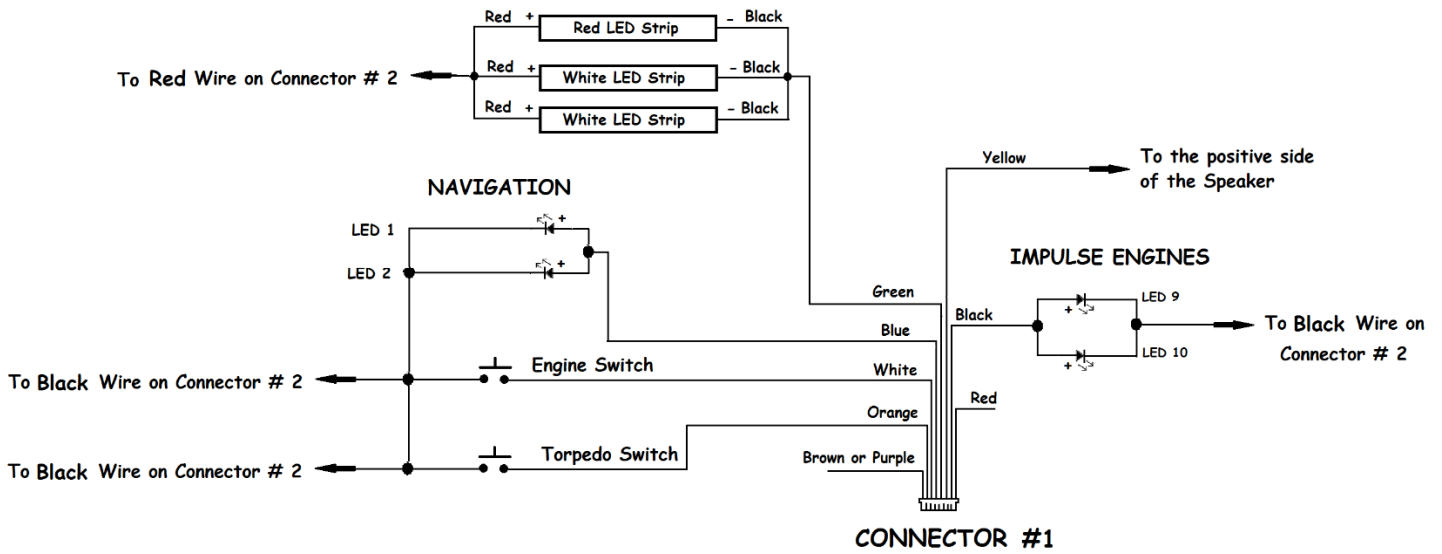


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WIRING FOR OPTION C

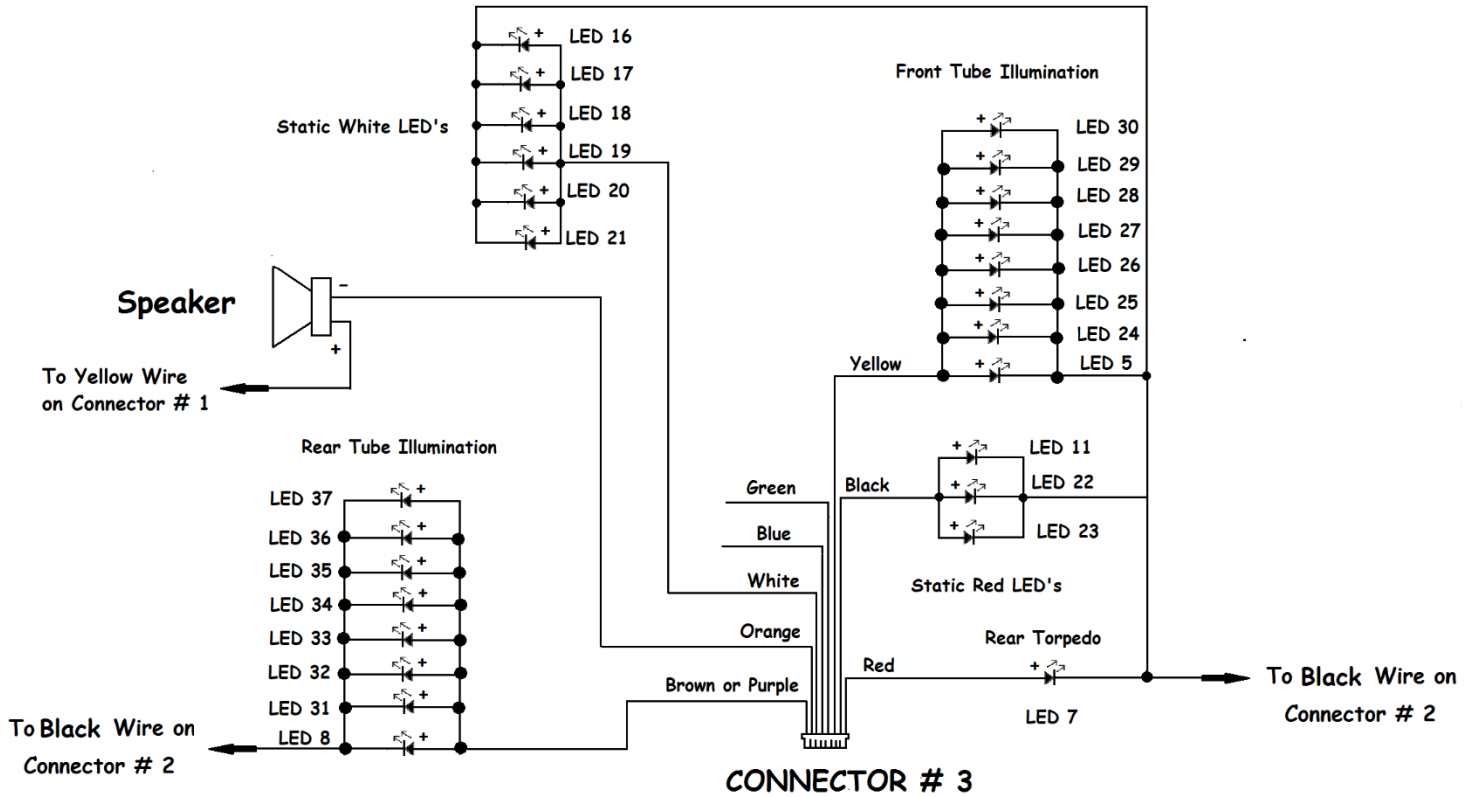


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- INSTRUCTIONS -

Optional Strobe

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

Navigation

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

Front Torpedo

3. **One Orange Torpedo LED, LED 6. Eight Orange Tube Illumination LEDs, LED6, LED24, LED25, LED26, LED27, LED28, LED29, LED30.** The Nine Cathodes (-) of the Torpedo and Tube Illumination LED's, connect to Black wire on mating connector #2. Then connect the Anodes (+) of the Eight 1.8mm **Orange** Tube Illumination LEDs to the Yellow wire on mating connector #3. Then connect the Anode (+) of 1.8mm **Orange LED6**, (Torpedo) to the Green wire on mating connector #2. **See above diagram.**

Rear Torpedo

4. **One Red Torpedo LED, LED7. Eight Orange led's, Tube Illumination LEDs, LED8, LED31, LED32, LED33, LED34, LED35, LED36, LED37.** The Nine Cathodes (-) of the Torpedo and Tube Illumination LEDs, connect to Black wire on mating connector #2. Then connect the Anodes (+) of the Eight 1.8mm **Orange** Tube Illumination LEDs to the Brown or Purple wire on mating connector #3. Then connect the Anode (+) of 1.8mm **Red LED7**, (Torpedo) to the Red 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.

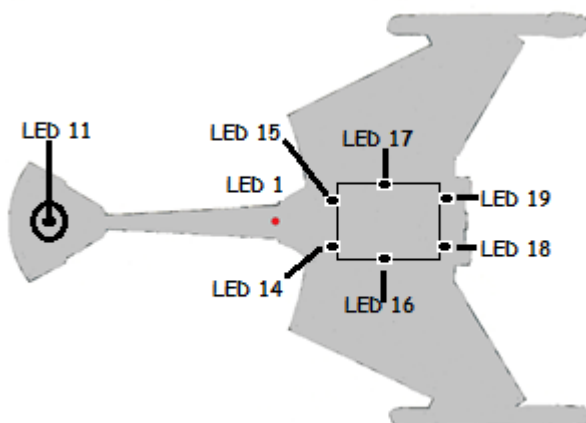
Impulse Engines

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.

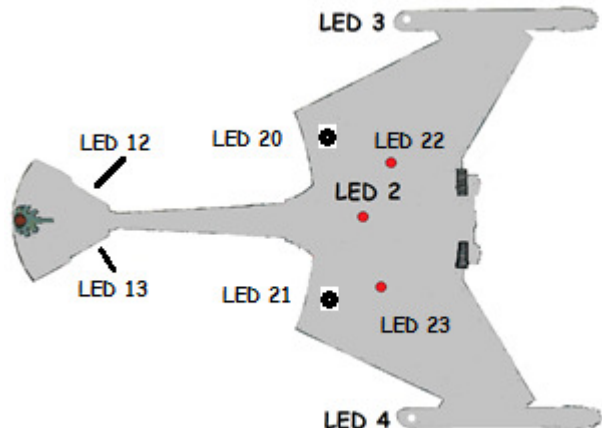
Static Lights

9. **Two Red Flat Top 3mm led's, LED22-LED23.** The Two Cathodes (-) of the Front Windows led's, LED22-LED23 connect to Black wire on mating connector #2. Then connect the Anodes (+) of the Front Windows led's, LED22-LED23 to Black wire on mating connector #3. These are shining towards **the front**. **See above diagram.**
10. **One Red 5mm led, LED11.** The Cathode (-) of the Top Dome LED11 connect to Black wire on mating connector #2. Then connect the Anode (+) of the Top Dome led, LED11 to Black wire on mating connector #3. **See above diagram.**
11. **Six White 3mm led's, LED16-LED21.** The Six Cathodes (-) of the various Illumination led's, LED16-LED21 connect to Black wire on mating connector #2. Then connect the Anodes (+) of the various Illumination led's, LED16-LED21 to White wire on mating connector #3. LED 20 and LED 21 are the **underwing** illumination LED's shining towards **the rear**. **See above diagram.**
12. **Six White 3mm led's, LED12-LED15 and LED 24-25.** The Six Cathodes (-) of the various Illumination led's, LED12-LED15 and LED 24-25 connect to Black wire on mating connector #2. Then connect the Anodes (+) of the various Illumination led's, LED12-LED15 and LED 24-25 to Yellow wire on mating connector #2. **See above diagram.**

Top View of LED locations

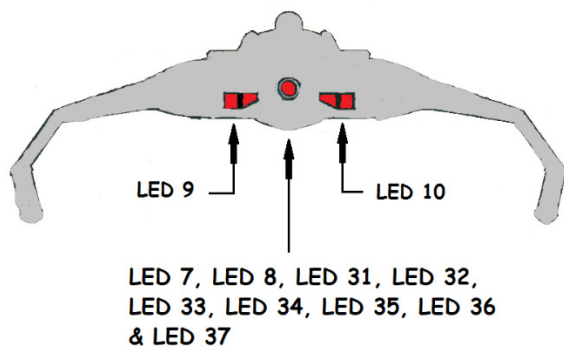


Bottom View of LED locations

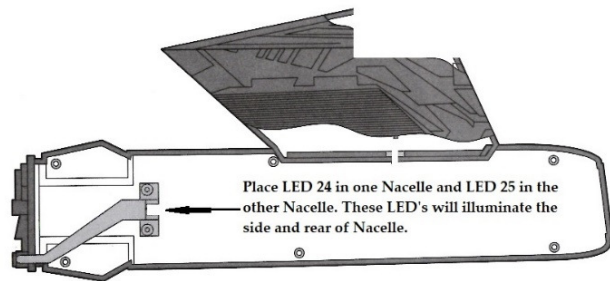
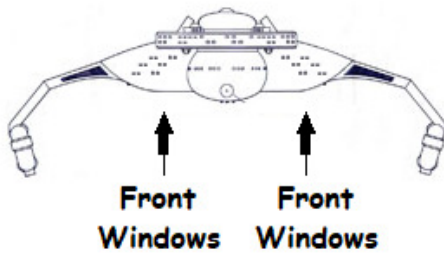
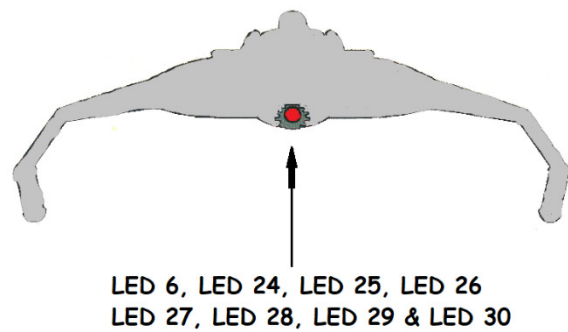




Rear View of LED locations



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.