ZIPP KIT BUILD LOG

This is a build log of the Springer class tug (Tugster) manufactured by Zipp Manufacturing (Zippkits.com). The price is $29 for the basic kit and $24 for the basic hardware set. A motor can also be purchased and I would strongly recommend a different drive coupling system. The reason for writing about this kit is to motivate and encourage boat modeling for those who have limited resources, who are first time modelers and those with a lack of confidence in their abilities.

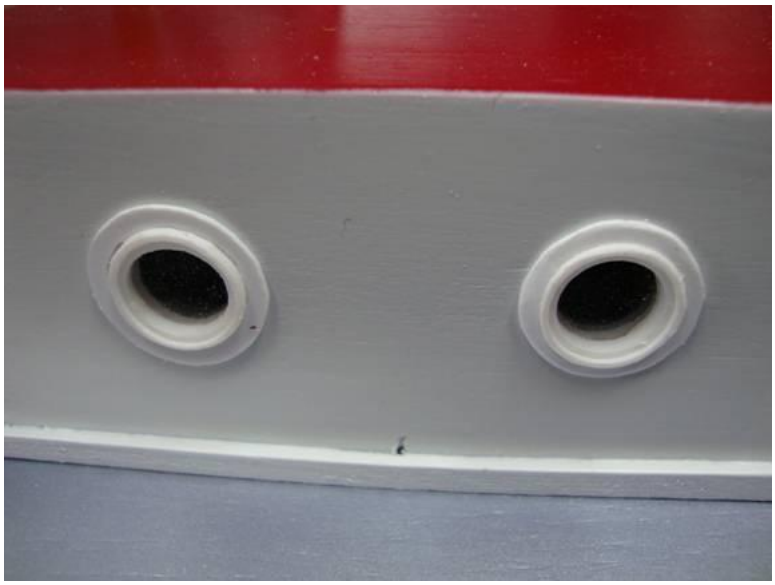
This kit is truly a beginner kit manufactured with laser cut 1/8 inch plywood parts which fit perfectly. The instruction book can be viewed on the website and is quite explicit with pictures of all phases of construction. A complete list of tools and supplies is listed at the beginning of the manual.

The early stages of the hull construction **Figure 1**

The early stages of the hull construction **Figure 2**

The superstructure **Figure 3**

Tightbond 3 glue was used for all the wooden parts taking care to achieve squareness, thus assuring perfect fitting of the parts. The bottoms were drilled, nailed and glued. When the glue dried, the nails were removed and the divots filled with Squadron putty. The skeg was glued and screwed with 4-0 stainless screws. The shaft log was epoxied and secured with bondo. See figures 1 and 2 above. The cabin was modified to include a rear section with round port holes. The port hole windows were made of styrene tubing for the frames and clear plastic for the windows themselves, cut with a punch.



Port Hole Windows **Figure 4**

Windows in the main cabin sere cut from clear polycarbonate plastic and attached with Goop glue. When all the wiring was in place and all parts painted, the roof was secured with 2-0 stainless screws in order to obtain access if ever necessary.

Roof Detail **Figure 5**

The cabins were also screwed down as well as glued with Goop glue hoping to obtain a watertight bond.

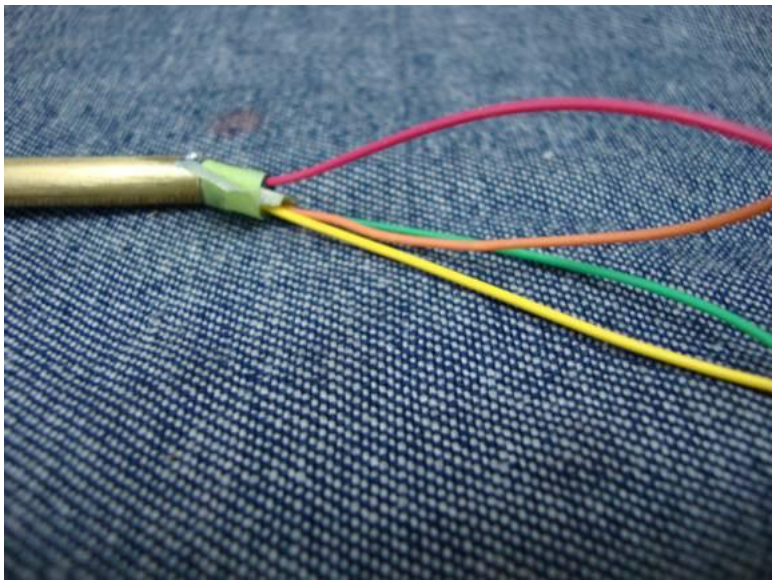
The stack was carved from a block of Alaskan cedar with styrene tubing for the exhaust extension. This was screwed to the cabin roof once all surfaces were sanded, primed and painted.

Stack **Figure 6**

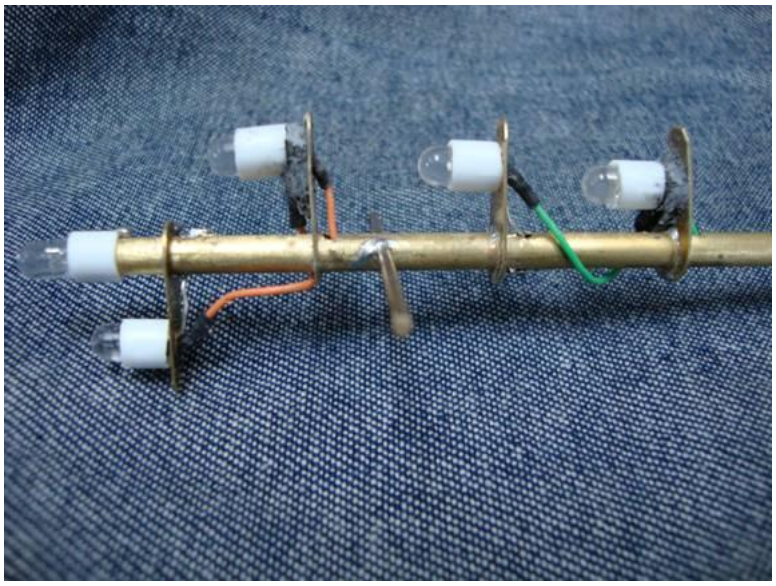
Another addition to the regular build was the introduction of a lighting system. To avoid an umbilical connection, D connectors were employed.

D Connector **Figure 7**

The mast was constructed of brass and the LED lights were placed in short segments of ¼ inch styrene tubing and secured with epoxy putty. A positive wire was soldered to the brass mast and the negative wires were run down inside the mast.



Mast Detail **Figure 8**



Mast Detail **Figure 9**

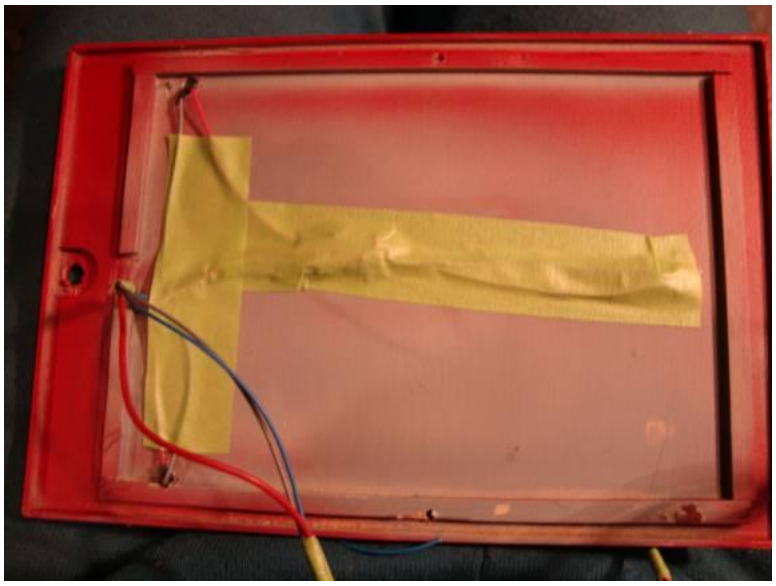
The spotlight was constructed using telescoping styrene tubing and brass tubing and flat brass stock which was formed and soldered to the tubing.

Spotlight Construction **Figure 10**

Spotlight construction **Figure 11**

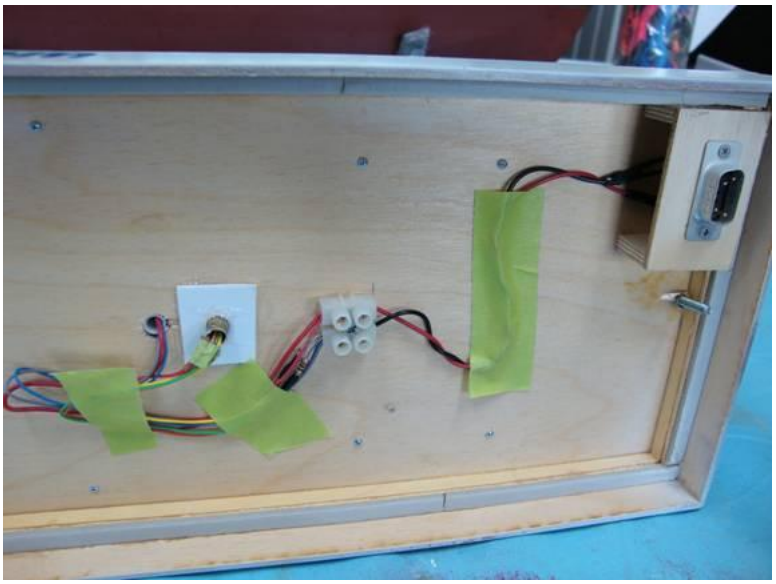
The wiring for the running lights and spot light were run through a ¼ inch styrene tube glued to the back side of the cabin.

Wiring Detail inside Cabin **Figure 12**



Wiring Detail inside Cabin **Figure 13**

The wires from the mast and cabin were separated to positive and negative. The negatives were appropriately resistored and combined.



Wiring Detail **Figure 14**

Bitts were made from 5/16 inch beech dowel and 3/64 inch brass rod. The bottoms were drilled to accept #4 stainless screws. They were then painted with flat black lacquer. However, they were not secured to the deck until after the deck was sanded primed and painted.

Deck Detail **Figure 15**

Deck Detail **Figure 16**

Deck Detail **Figure 17**

After the hull was painted, the deck was glued and screwed to the hull sides with 2-0 stainless screws, the heads of which were countersunk and then covered with squadron putty and painted.

The hub of the prop was drilled, threaded and secured to the shaft with a 4-40 grub screw. Initially, the shaft and motor were secured as per the instructions. The very first time the model was reversed, the shaft pulled free. So, a Dumas dog bone system was installed.

Dumas Dog Bone **Figure 18**

A collar had to be installed on the shaft near the shaft log to keep the dog bone in place.

Another modification was the installation of a method to secure the superstructure to the deck. Blocks of wood were glued to either end of the deck, drilled and fitted with blind nuts. Knobs from epoxy glue bottles were filled with bondo into which 4-0 stainless bolts were placed. See figures 19 and 20.

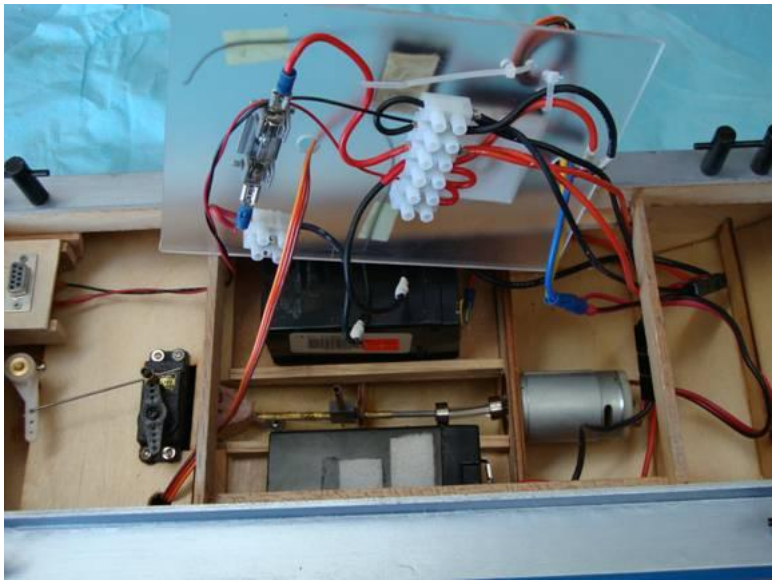
Knobs with Blind Nuts **Figure 19**

Knobs with Blind Nuts **Figure 20**

Instead of using the supplied skeg plate, I made one from a strip of brass, countersinking the screw holes.

Skeg Plate **Figure 21**

In order to keep the electronics as high as possible, a frame was made to accommodate a 1,8 inch sheet of carbonate plastic to which the ESC and receiver were attached. A waterproof on off switch was placed on the port side of the deck making it unnecessary to remove the superstructure in order to turn the electrical system on or off.

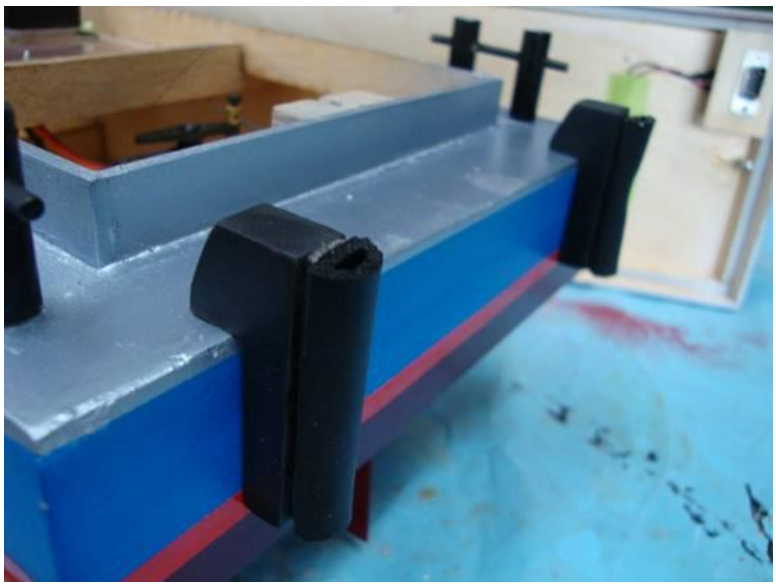


Carbonate Plastic Sheet **Figure 22**

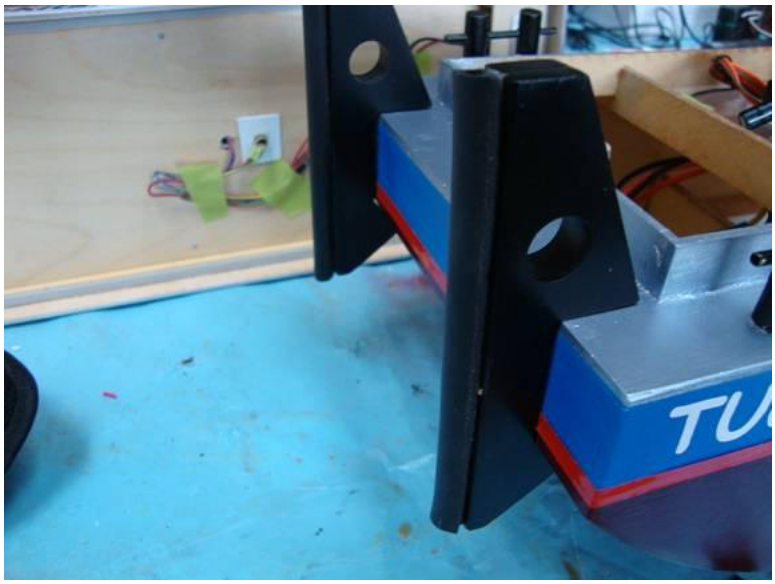
Waterproof Switch Figure 23

Bottom with Rubber Strips **Figure 24**

In order to protect the bottom paint, strips of rubber were glued to the edges and skeg. See figure 24. Pusher knees were screwed to the hull with 4-0 stainless screws, 2 in each, to prevent twisting. D shaped rubber strips were glued to the outer surfaces



Pusher Knee Details **Figure 25**



Pusher Knee Details **Figure 26**

In summary, the model itself was a simple build and lent itself to considerable embellishments, all of which were elective. The basic model is a simple build which can be constructed in a very short time frame.

Completed Model **Figure 27**

Completed Model **Figure 28**