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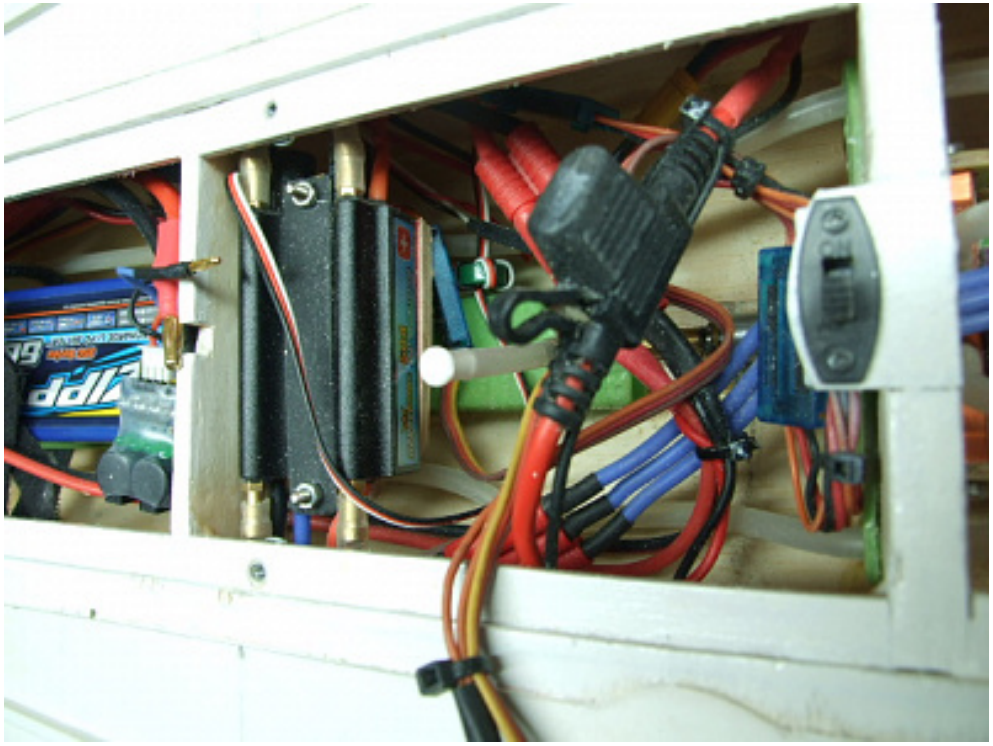
70' WWII MGB

by marlina2



6th Feb 2021

70' WWII MGB

This project came out of boredom in the first lockdown last year. I was going through some old paperwork and found the May 1980 Model Boats magazine which include a full-size plan of 70' MGB by Graham Parkinson along with detailed construction notes. A first I was simply curious and read the article thinking that it was fairly easy and simple build. Then tidying up my workshop I started thinking that maybe I had enough left-over balsa and other bits to build this MGB. (boy was I wrong) I duly ordered the required balsa wood from SELEC not knowing that there was worldwide shortage caused by the pandemic and China buying up all the balsa it can for its wind turbine blades. The drawings for the keel and bulkheads are re drawn with AutoCAD, printed out full size, cut out and stuck to the balsa with spray glue then cut out with the band saw. I found the most daunting to be cutting the keel to take the prop shaft as this has to be at the correct angle as well as being in the right place. Plus it dissects the keel which makes it much weaker. To overcome this, I designed and 3D printed a bush that not only held the two halves of the keel together it also holds the pro shaft at the correct angle. All this was epoxied in place and it fits snugly at the bottom of hull between bulkheads The rest of the hull was constructed as the article described until it came to finishing. I used the described method of pouring in fiber glass resin to waterproof the inside. The article says that he used tissue paper and sanding sealer to finish the outside of the hull, a method I had never used so I thought I would try it. The finish was very acceptable and quite easy to achieve but it became apparent that it would not be hard wearing enough and dented easily. I have used epoxy before for the hull but found it to messy, difficult to apply and didn't get uniformity across the entire hull, so was put off using this method again. However I have recently come across a product used by 3D printers to finish their work straight off the printer without the need for sanding. XTC-3D is a two-part epoxy coating that mixes easily, is put on with a foam brush and dries to a self levelled uniform thickness. Working time is around 30mins with a drying time of 4 hours. It can be applied to most surface's, it is transparent had has very smooth high gloss finish that takes paints well. It is quite expensive but compares with most epoxy systems available apart from the coverage which is much superior, a small amount (50ml mixed 2:1) covered the hull with 2 coats with no wastage. I made a further deviation from the original design, it called for the deck and cabin to covered with 1mm ply. Instead I used 1mm plasticard purely to give a better paint finish. (with less work) I had decided early on that I wanted to give my model more detail but not a true scale model based on any particular vessel, just a general representation of the MGB class from WW II. The use of a 3D printer has been a god send in this build producing many bespoke parts not readily available particularly with the gun turrets. 1:24 scale are available to buy complete but in 1:32 scale. The author of the article had used Airfix 1:35 8th army figures for his Vickers .5 heavy machineguns and scratch built a 20mm Oerlikon gun. The Oerlikon gun wasn't really a problem as I found one in the correct scale from Battlecrafts. The machine guns came from Gas Patch Models Greece. These are resin cast and come in a pack of 4 beautifully made with superb detail (far too much for my needs) I also intend to use Italeri 1:35 Vosper figures for crew. The mast is a little too high but as this contains the receiver arial I think I can live with it. From the start my intention was to go fast electric since my 2 other boats are tugs (one a paddle tug) so single prop 2 blade 30mm, direct drive from a Turnigy XK2845 3650Kv In runner motor with water cooled mount, 50 amp water cooled ESC with 4 amp BEC powered by a hardcase 6000 mAh 2S2P 2cell 7.4v 35C Lipo battery The radio is a Futuba 2 channel-FHSS-2.4Ghz. There is also a water pump for the cooling system that has its own speed controller which is uni-directional. An unintentional by product of this system is that the water pump never shuts down completely, so with the throttle stick in neutral it pulses giving little squirts of water out of the outlet as real boats do when they are ticking over On bench testing the total current draw is 7 amps so based on these figures at 35% efficiency run time should be 18 min at full throttle. If I can get 15mins + at full throttle I'LL be happy but I don't think I will need full throttle with a no load prop RPM 0f 27010. It is still a work in progress although it is coming along fast, I hope that it all works ok. I will keep you posted.

Model Boats Website!

7th Feb 2021

70' WWII MGB pics

I thought I had posted these already