

Phoenix Model Products

New Year Newsletter – January 2013

Another year is coming to an end. What a year! The Queens Diamond Jubilee, Euro 2012, double Olympics, the Country's economic woes and of course a small amount of rain to curtail our flying activities. Lots of positives and a few woes. Despite negative sales growth the year has been a positive one for PMP with the re-launching of our CNC cut 'wood' kits (Pzazz Carrera and Cariba), the Newsletter and the addition of the AeroNaut range of electric folding props to our inventory.

First On Last Off

Nothing to do with the working environment but the sequence of switching the transmitter and receiver on and off with particular reference to electric models. Since discussing the topic in an earlier newsletter we have heard of a number of similar incidents. Fortunately none so serious as the one discussed, even so it is worth reiterating the message. The transmitter must always be switched on first, after checking the throttle is in the low throttle position, and only switched off AFTER the receiver / flight pack has been switched off or disconnected. However, during the building phase care must be taken when installing the electrics and setting up the model. We recommend the control surfaces are set up using an external receiver battery without the motor electrics (motor plus ESC) being connected. We also recommend that the throttle fail-safe is also set at the same time using a servo in the throttle channel to check that it is functioning correctly. When the time comes to connect up the power train it is advisable to check throttle / motor operation minus the propeller. If motor the motor sits there and does nothing or runs in reverse then the most probable cause, assuming the motor and ESC are serviceable, is either a bad connection in the three wires connecting the motor to the ESC or they are in the wrong order. Check there is good contact in the bullet connectors between the ESC and the motor. If the motor is running in reverse swap any 2 motor connections. Lastly, always remember to stand behind a rotating prop and take note of what is in front and behind the model that could be easily blown away or sucked into the propeller!

Receiver Aerial Positioning

On 35Mhz we never worried too much about the positioning of the receiver aerial in our models except that it was not curled up! We did however encounter interference problems with carbon fuselages and electric power trains. The situation however is different with the positioning of 2.4Ghz Rx aeriels. The transmitted signal on 2.4Ghz is line of sight and is easily blocked by obstacles in its path. This includes fellow modellers standing front of the transmitter being used controlling a model in flight. It is all about the presentation of the receiver aerial(s) to the Tx so please follow the instructions for your receiver. We suggest the Rx aeriels are kept as far away as possible in the model from solid lumps such as flight packs and motors that are likely to block the Tx signal. If your telemetry system has the facility to send back transmitted signal strength use this to optimise your Rx aerial(s) position by doing 360 degree turns at varying distances and noting the TX signal reading.

Small LiPo Battery Charging

A useful tip for charging small LiPo batteries. One of our customers was experiencing problems with his single cell LiPos. Despite charging the cells as per the instructions his

flight times were virtually none existent (recommended charge rate was 1.4C on a 12C battery!). Research on the forums suggested he charge the batteries at 0.6C. This he did and the result was normal flight times. Small batteries with low 'C' ratings have a high internal resistance. This results in a higher terminal voltage on a constant current charge. This fools the charger into thinking the battery is fully charged so the charger terminates the charge (LiPo chargers cutoff when cell voltage reaches 4.2v).

Soldering Tips

Occasionally customers seek our advice on a modelling problem. One regularly discussed is soldering. Changes in the material used for the manufacture of metal cable adapters etc. and new health and safety regulations concerning the use of lead are often the cause of the problem. Certain nickel alloys are difficult to solder, particularly if using lead free solder so here are a few tips. Firstly in addition to the reasons given above there are other possible causes for a poor solder joint. One is dirt / grease contamination another is lack of heat i.e. using too small a soldering problems plus poor technique. Possible solutions are:

1. Use a lead alloy solder. It is still available!
2. Use an 'active' flux such as FRY Power Flux available from plumbers merchants.
3. Ensure the joint to be made is scrupulously clean and free from grease.
4. Use a larger wattage soldering iron or larger solder iron bit.
5. Freshly clean and 'tin' the soldering iron tip, leaving a small puddle of solder on the tip to aid heat transfer.

When soldering Deans connectors we recommend that they are soldered as an assembled pair, using pliers and rubber band hold them in place whilst the joint is made to avoid the heat distorting the plug. When soldering plugs to Flight Packs great care must be taken to avoid them shorting out. With gold connectors solder the female half of the plug first and shroud with heatshrink before soldering the male connection.

A New Year Wish List

This is not a wish list for Christmas just a couple of items I would like manufacturers / distributors to address and make our modelling lives' easier!

1. Whilst we seem to have standardisation on the position of mounting holes for generic brushless motors the ARTF kit manufacturers seem intent on ploughing a different furrow. I just wish they would plough the same furrow! A cynic amongst us would say that it is so we buy the more expensive recommended motor from the kit importer which, in our experience, does not happen very often.
2. That a 'Pick & Mix' system like AeroNaut's is more widely used for in the supply of folding props. There are four items that make up a folding prop assembly, a collet, a blade yoke, prop blades and spinner all available in multiple sizes. A well known UK distributor has just introduced an excellent range of carbon folding props but they are only available as complete assemblies. There are 19 variations. If all the components were sold separately there would 15 inventory items and 160 different combinations of collet, yoke, blade and spinner. Its not rocket science!
3. That brushless motor manufacturers would be more up front with the specification of their motors and recommended prop sizes for varying battery voltages / LiPo cell count.
4. All RC equipment manufacturers incorporate model match (Rxs are bound to model memory as well as Tx) in their systems. It is such an important safety

factor it is almost unbelievable that only one manufacturer (Spektrum) has taken the trouble to do it!

Has Anyone Got One?

I have a 6in Hobbies ruler which I bought as a teenager when a gallon of petrol was 3s 9d. When I misplace it I turn the workshop upside until I find it again. The reason it is so precious is that the smallest graduation is 1/16in and is invaluable when setting the fence on my bandsaws. More modern rulers at the lower end of the scale have such thin lines and small graduations are they are virtually unusable so if anyone out there has one of these rulers they would like to pass on to me for a small fee I would be very grateful.



Stan's Kits

The Toledo kits at the time of writing are 99% complete, just waiting for 6swg brass tube for the wing retaining dowels. Test flying is complete for both the Toledo and Mk2 Stage 2 which is next on the kitting list. In an attempt to get better flying piccies we flew both models around with full landing flap selected to slow them down. We still have a bit to learn about model aerial photography!



Toledo



Stage 2



Dartmoor Slope Soaring Club

The DSSC, of which I am a founding member, have asked me to publicise the Club's open flying events for 2013. So if you happen to be in the area when they are being held

please feel free to drop in for a chat or fly. BMFA insurance required. The club website is www.dartmoorsoarers.co.uk.

Sales Pitch

Well it would not be a business newsletter without a sales pitch, would it. Please check out our site www.phoenixmp.com and take a look at the massive range of products new stock at very competitive prices and don't forget the kits!.

At Last

Once again thank you for your perseverance if you have got this far. Sorry if the wish list seemed like a bit of a moan but like you I am a modeller at heart and sometimes wish manufacturers / distributors took a more flexible approach when designing / marketing their products

All that remains is for Sheila and I to wish you all a very merry Christmas and a happy and prosperous New Year and thank you for your support.

Happy Landings

Stan & Sheila