PMP Autumn Newsletter 2015

Welcome

Welcome to our Autumn Newsletter being written whilst the weather is still being kind! So far this summer is following the path of last year's summer which makes a pleasant change from those of a few years back. We attended the Woodspring Wings show this year, the first for seven years. We had a very pleasant weekend although Sunday got spoilt by the weather. We treated it as a meet and greet weekend so only took a bucket of Oracover (Profilm), resurrected our help yourself accessories rack, a couple of boxes of heavily discounted Dx6is and our Mk2 kits with the prototype models on display. My brother kindly provided the accommodation as we had disposed of our caravan a while back and neighbour loaned us a marquee. As a package the weekend was a lot of work but the pleasure we got meeting a lot of old friends more than compensated for the work involved. Hopefully all being well we will do the same again next year. The show was a lot smaller than when we last attended with a very marked reduced number of trade stands.

Shindig

Our latest kit is the electric powered Shindig. As you can see from the pictures it is reminiscent models that were around in the late fifties early sixties so no apologies if it is Super sixtyish. It is a mixture of old and new re the construction techniques employed. Although quite aerobatic it is not a 'hare around the sky' model. The kit is very complete and designed for modellers who enjoy building, after all you do not buy a thousand piece jigsaw and expect to finish it in one evening!

Hobbico & Tactic Servos

Tactic servos are distributed by Hobbico and new to the UK market. Hobbico have been around for a long time have but have only expanded into the UK recently. Our experience in introducing new product brands has been fraught. Modellers, once they have become familiar with a particular brand tend to stick with it and are reluctant to switch brands. We have found this to be the case with servos when we tried to introduce the Overlander branded HD Power servos. Although cheaper the quality was on a par with Hitec but they did not sell. We still have some in stock several years later! The Tactic servos and Monocote (iron polyester film) we have decided to stock seem to be going in the same direction, hence the mention. Have a look at them both particularly the TSX40 and TSX45 servos. Higher spec. than the Hitec HS625/45MG at 2/3 the price and of similar quality.

EU Legistration Re Spektrum and DSM2

As mentioned in our previous newsletter the EU has banned future production of equipment using the Spektrum DSM2 technology. This does not affect DSM2 technology already in use but it does mean that if you replace your current transmitter with a DSMX only Tx you will not be able use your DSM2

Rxs. This could also apply if you upgrade your current Tx with the latest firmware so check with Horizon before you do. We listed whether the sets we have in stock are DSMX only or DSM2/X. Whilst on the Spektrum subject we still have good stocks of the DX6i at the ridiculous price of £69.95 for Tx Rx and £59.95 for Tx only.

Accidents!

We have been advised of another accident with an electric model where the failsafe was not set on the motor. Fortunately there were no injuries this time only a bent model so when binding / paring the Tx and Rx make sure the throttle control is in the low throttle position. Check it out by standing behind the model holding it firmly, running the motor at low RPM and switching the Tx off. If a glider, enlist a helper to hold the model. Also be prepared to switch the Tx back quickly should it go to full throttle.

A second accident relayed to us concerns noise checking a model. One of our friends was noise checking his large petrol powered model stood in front of it at the requisite distance. The prop flew off and hit him a rather delicate place. Which, unfortunately, resulted in a very serious injury, a stay in hospital and a number of operations. It would appear that the steel bolts holding the propeller sheared. The moral of the story is only use good quality aircraft rated screws and check them regularly. Also, when noise testing in front of the model, mount the noise meter on a tripod and stand behind the model.

Graupner MZ18 /MZ24 Transmitters

We had an incident recently when the side rotary sliders were damaged on an MZ18 transmitter. The customer was very upset with us and demanded a replacement. The set was sent back to LogicRC for inspection. Screwdriver marks where found along the join seem of the case where a screwdriver was used to prise the case apart. In doing so the rotary sliders were both damaged. The reason for this is they were not in the correct position for the case back to be removed. Normally there is no reason to take the case back except if you want to fit stronger springs on the sticks which are available as spares. The stick Mode and spring tensions can be changed / adjusted from the back of the Tx. Fortunately the Tx was easily repaired and soon back in the hands of the customer.

Transmitter Frame Rates

A few weeks ago local customer bought a couple of HS65+MG servos from us. He brought them back the following day complaining they were jittery when used with a Futaba 10C Tx on the FHSS system but not on the same Tx using the old FASST system. After spending some time checking and changing servos, switching between systems, we came to the conclusion that it was the Tx frame rate that was causing the problem on the HS65+ servos. There was no problem with other makes of servos we stock or other servos in the Hitec range.

Tx frame rate is the time between the Tx sending out one packet of control information and sending out the next. Ever since we have had full proportional radios this frame rate has been 50Hz / 20mSec, this however is no longer the case. The Futaba 10C Tx in FHSS mode has a frame rate of 13mSec. With some Txs this is as low as 7mSec. The Futaba FASST system operates on the old 20mSec frame rate. I contacted J Perkins, the UK Hitec distributor and discussed the problem with them. At the time they were not aware of the problem but did let on that the amplifier in the HS65 had recently been changed. Servos with the new amplifier have + sign added to model number. They said they would contact the manufacturer and discuss the problem with them but so far Hitec have not got back to us.

UBECs

Whilst on the subject of electrics we had a problem recently with three out of four servos failing at various times on a customer's model. These servos were a very well known brand. Their reliability is such that out of the hundreds we sell every year we only get one or two a year back so getting three from the same customer all fitted in the same model aroused suspicion and warranted further investigation. After a couple of emails we learnt the power source for the RC equipment was a LiPo via a UBEC. UBECs are switched mode voltage regulators and in simple terms operate in a similar manor to a workshop compressor in that they switch on and off between low and high voltage. Unfortunately this switching action generates high frequency voltage spikes which are, at a minimum, the battery supply voltage and depending on the associated circuitry could be significantly higher and capable of damaging the servo amplifier. In the past we used to fit toroidal chokes to the BEC / UBEC leads of ESCs to eliminate the electrical noise generated by the motor / ESC. Since the changeover from 35Mhz to 2.4Ghz most modellers and manufacturers have stopped fitting these chokes as the frequency of the noise is no longer considered a problem. The 'spikes' however are still there and as part of risk management need to be addressed. The customer in this case had fitted a toroidal choke so the UBEC was eliminated as a probable cause. However we do recommend that you fit chokes to the Rx power supply lead to minimise this risk.

To fit a toroidal choke carefully remove the housing from the UBEC Rx lead and wind the lead around the choke. It should be possible to wind four turns around the choke. The effectiveness of the choke is the square of the number of turns i.e. 2 turns equals 4 units whilst 4 equals 16 units.

To finish, there is no suggestion that the UBEC was responsible for the failures in this case but three failures in the same model with servos that have an enviable reputation for reliability did warrant further investigation.

Brushless Motors

There has been a supply problem with brushless motors lately from both our suppliers. The original manufacturer closed down and it has taken while to find a replacement. One of our suppliers has found a solution but the other is,

we understand, still searching which is a bit annoying as they have the motors best suited to the models we are producing. For 3 cell packs we like to use a 12-1300Kv motor in the Wallaby and Shindig and 9x6 props which give plenty of ground clearance. Whilst with the 1050Kv motors there is no difference in performance we need to use 10x6 prop resulting a slightly less ground clearance and more chance of the prop getting broken on a less than perfect landing. We could use a 4 cell pack and a smaller prop but this would mean moving away from the very popular and economically priced 2200mA 3S LiPo which we design our models around.

Vac Forming

This was covered in a previous newsletter and a couple of readers have sent us moulds to vac form the parts for them. As mentioned in the previous newsletter we make our moulds using balsa block and harden the surface with superglue. Sometimes it is necessary to glue blocks together to obtain the required size block. This can be a problem if the glue used reacts to heat as was the case with the last mould supplied by a customer who used PVA. Try as I might with numerous coats of cyno I could not completely get rid of the glue join line on the formed parts. We recommend you use superglue to glue the blocks together. Moulds produced using our technique are good for short production runs but for longer production runs the mould needs to be made of a more temperature stable material. There is an excellent article on thermo forming in August Q&EFI by Vaughn Entwistle of Sarik Vacform that is well worth reading.

Whats New

Over the last few months we have added a number of new items to our inventory. The Ripmax Hi Energy range of LiPos we stock is slowly being added to with a bit of difficultly as they are always in short supply! There are a couple of electrical accessories such a 4.8v and 6v 5amp voltage regulators with 7.5 – 25v input voltage. A selection of glass epoxy servo tiller arms for those applications that require servo arm extenders such as closed loop systems on large models. Another item we have recently added to our inventory is Monokote. A product modellers of long standing will remember. Like Oracover it is an iron polyester covering. The rolls are 60mm wider than Oracover but only 1800mm long. Not only is it £4.00 cheaper than Oracover but customers who have used it have praised it.

Devon Glider Days

The Dartmoor Slope Soaring Club in conjunction with other local clubs hold six Devon Glider Days during the course of the year at their local ‘flat’ field site on Little Haldon. All glider guiders are welcome. There is usually at least one tug in attendance for aerotowing. Little Haldon is a beautiful site with panoramic views across Dartmoor with very few obstructions! The flying dates can be found on the DSSC website at www.dartmoorsoarers.co.uk

Signing Off

Once again thank for taking the time to read our newsletter and supporting PMP. Also topics discussed are the result of conversations with customers over the last few months.

Happy landings

Stan & Sheila

STOP PRESS: BULK Purchase of Spektrum DX6i sets. Check out special prices.
http://www.phoenixmp.com/acatalog/Spektrum_Sets___Transmitters.html

Horns

Shindig Basic

Shindig


Shindig