

As sent in by Mr D.L. A real case, December 2005

Using the FPM and Tx Analyser from DVA – a case study.

I'd completed an Ultrafly F-16 and was very much looking forward to the test flights – but there seemed to be a problem with the power train. Compared to a direct drive flying wing, fitted with a similar brushless motor, the thrust seemed to be well down, and certainly didn't suggest that jet-like flights were going to happen. The transmitter is a HITEC Prism, with 3 memories for different models, and I had been using 2 of these for the F-16 and wing.

Using the Flight Power Meter from DVA Controls, tests showed that the motor was drawing a maximum of just 80W or so, and trying with different batteries showed that:

2000 mAH LiPo 3S	11.17V	6.8A	75.6W
3000 mAH NiCD 10 cell	11.7V	7.6A	88.9W

My first thought was that the motor might be under-propped, but looking up the specifications for the Ultrafly motor and gearbox showed that the correct prop had been fitted.

Perhaps a problem with the ESC, or a poor electrical connection somewhere? Whilst waiting for the soldering iron to warm up, I thought that I would try the Tx analyser from DVA, and see what that showed – soldering being one of my least favourite jobs.

Checking the pulse width on the throttle channel showed that all seemed fine – until I compared it to the output for the model memory used for the flying wing. This showed that when the Tx was set to fly the wing, I had set 125% of travel on the throttle channel – but the settings for the F-16 were at just 100%. After altering the throttle settings for the F-16 memory – hey presto – full power at last – and this before the soldering iron was ready!

NB:

Would be nice to add the new power readings here, after trying it again with the fpm..