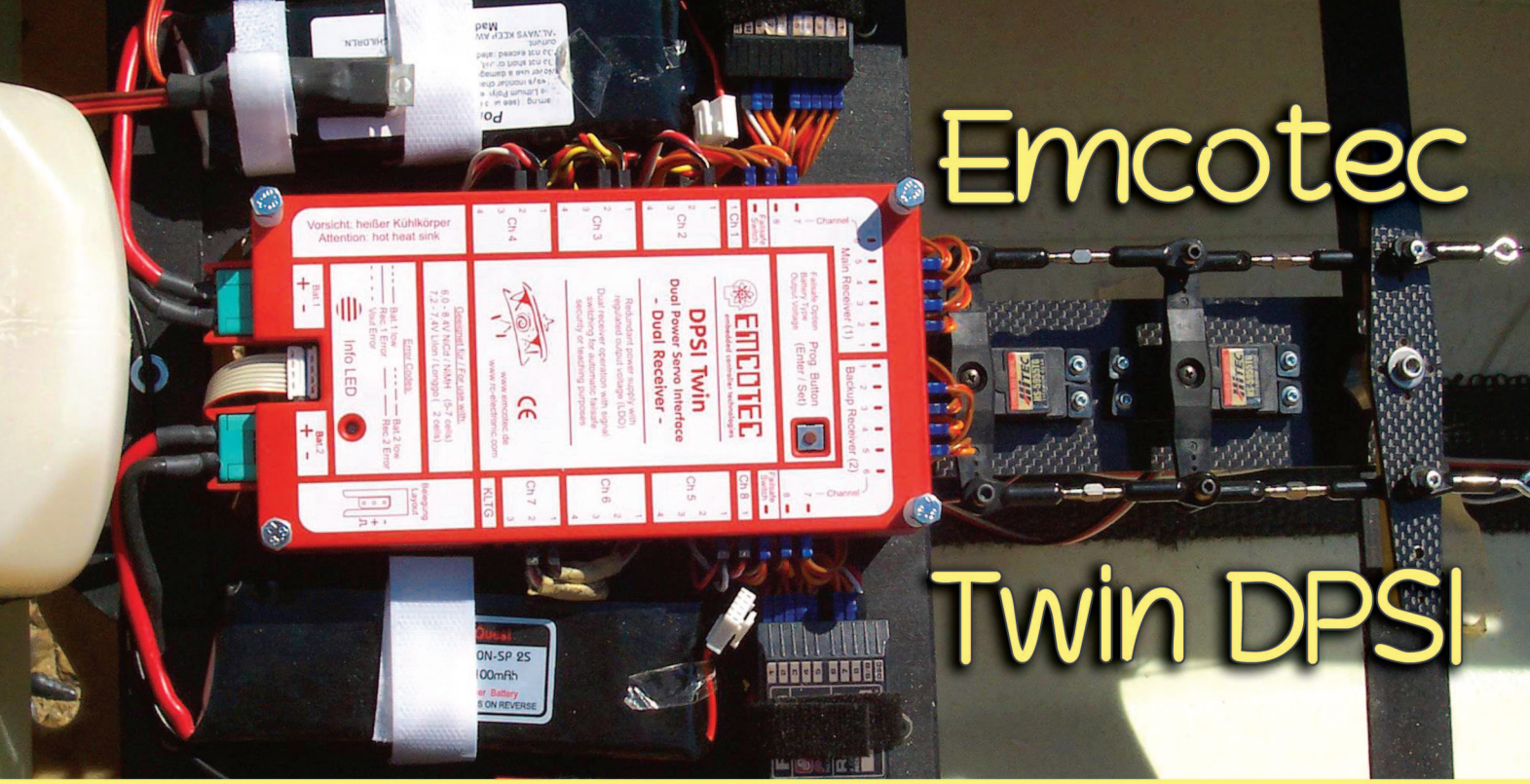

I was in the market for a Power Distribution Unit (PDU) for my new 40% Extra. I have always maintained that I would rather use 2 receivers in all my planes of 100cc and above. I know there are a lot of guys getting away with running one receiver in 40% size models who have never had any trouble, but I have personally saved one of my 33% Extra's when one of the receivers locked out due to my installation needing attention. If I had only one receiver I would have probably lost the model. (Chokes on long extension leads!)

I started to do some research into the different PDU's available and what they had to offer. I discovered that all the major PDU's are of excellent quality and it depends on your own personal taste as to what you want to use. As I said, I wanted a PDU that would give me some redundancy with the use of two receivers and after much talking and emailing with Precision Aerobatics (PA) I decided that I would give the Emcotec Twin a try in my 40% Extra.

I want to point out that I am no guru in electronics so I can only give you the specifications that are listed by Emcotec. What I can tell you is some of the pros and cons to using the Emcotec Twin.

What do you get for your money? The Emcotec Twin Unit comes with 18 extension leads to connect your 2 receivers to the units. There are 16 leads (8 per receiver) for the channels you will use to fly and 2 leads for the fail safe switching. You get instructions that you need to read carefully…..(as I later found out all the answers are in the manual if you read it front to back!) and a pin style switch that is the same size as a JR external charge type switch.

To power the Emcotec Twin I am using 2 x 7.4v 3100mAh Lipo batteries. You can use Nicad or NiMh batteries if you wanted but in this days and age why would you? The other nice thing about the unit is that it uses both batteries at the same time and doesn't switch between them.

What does the Emcotec Twin Unit do? The unit takes 8 channels from your receiver and distributes them to up to 25 servos. It is still only 8 channels out but it splits most of the outputs up into multiples. It is almost like running 'Y' leads but all the servos receive constant current though their own extension leads.

It also has built in noise reduction so there is no need to use ferrite chokes on long extension leads. It has selectable servo voltage between 5 - 6 V with a peak current draw of 70amps! Best of all, the unit switches between 2 receivers in the event of one receiver going into fail safe.

You might ask, "But if one receiver goes into fail safe, doesn't the other receiver?" Well…not necessarily. The idea behind running 2 receivers is so you can run the aerials in different direction in/on your plane. I chose to run 1 aerial inside the fuselage and the other 90 degrees to it by using a whip antenna. The unit uses the master receiver and only switches to the second receiver if the first receiver goes into fail safe. This switching is done though a dedicated fail safe channel that you need to set up on your transmitter.

Turning the unit on is easy and I really like the pin style switch. You simply remove the pin from one side of the switch (black) and put it in the other side (red). There is an LED that glows to let you know you have power. When switched on the unit then beeps 4 times, in my case, indicating that I am using Lipo batteries. The pin is then replaced in the black side of the switch to turn the unit off. If the pin falls out after the unit has been turned on, the unit stays on. The switch basically activates the unit.

The Emcotec Twin is also programmable through an optional USB style cable on your PC. This allows you to set the output voltage and select whether you want the unit to be in fail safe or trainer mode, more on this later. The unit also data logs and will also let you know if one of the receivers went into fail safe. There is an option onboard display (DSPI ICE) that will indicate the above too. If you don't wish to buy or use the optional interface or onboard display, the unit is programmable with the use of a button on the unit. Additionally, the LED on the switch with flash and the unit beeps if it has gone into fail safe.

The switching between receivers can also be used in another way. You can use 2 completely different receivers on different channels made by different manufacturers and switch between them. The idea behind it is to allow the pilot to activate the switching to the 2nd receiver by means of a switch on their transmitter allowing a student to take over the controls, just like a buddy lead.

As I said previously, I like the idea of having two receivers. Before I had the Emcotec I set the model up so that half the plane flies on

one receiver and the other half flies on the second receiver and in the event of one going into fail safe or a battery switch failing, I have a fighting chance of getting the model home in one piece. But with the Emcotec Twin, you have total control of the whole plane if one receiver goes into fail safe.

I did have some questions and concerns about the unit. I emailed Precision Aerobatics and within 24 hours I received an email back from Emcotec with the answers. Both Precision Aerobatics and Emcotec were very helpful. As a side note, the answers to my questions were in the manual……D'oh!

Pros and Cons

Nothing in life is perfect, but the Emcotec Twin does offer some features that may make life easier. I think the 'pros' for the unit are:

- Pin switch that fails in the on position
- Dual Lipo battery capable
- Voltage selection
- Data logging and down loadable
- Use of twin receivers
- Programmable
- Easy to use

Cons: • The only thing that I can think of is that the unit is the single source of failure

If you are building or upgrading a large scale model that uses up to 25 servos and you are considering a unit that offers dual receiver, battery and switch redundancy the Emcotec Twin might just fit your needs. I have been extremely happy with the Emcotec Twin and the service from Precision Aerobatics.

Jump on the PA website at www.precision-aerobatics.com and download the manual for more information on the Emcotec Twin.

Happy Flying - Anthony