

Emcotec

DSPI RV Mini 5

by Anthony De Marco

I had the opportunity to review the Emcotec Twin from Precision Aerobatics and having made the change to a power distribution unit in my 40% IMAC planes I thought it was time to look for a smaller unit that would be easy to use, easy to install and give me a higher current rating than the regulators I had been using in my 100cc planes.

Using a power distribution unit eliminates my need to use 2 regulators, 2 switches and the use of Ferrite chokes on long leads to avoid RF noise. ...I mean, the dual regs worked well, but it was very messy. Another consideration for using a single power distribution unit is the price. To buy 2 regulators and switches isn't far off the price of a single unit. Additional the unit takes the load off the receiver.

As I said above, I have used the Emcotec Twin and really like it so I thought I would give the Emcotec DSPI RV Mini 5 a try. The Emcotec Mini 5 is an ideal power distribution unit for 50 - 100cc models where you require the most performance out of your servos without too much additional weight, cost and you only want to use one receiver.

The "DPSI RV Mini" is used as a redundant power supply and distribution for receivers and servos. Redundancy is achieved by means of two connected storage batteries. If one battery fails, the second battery ensures reliable operation. In most cases, both storage batteries are discharged simultaneously. In addition, the current of each individual battery is cut in half (for batteries connected in "parallel"), meaning that even cells with a lower level of maximum admissible current can be used.

The Emcotec Mini 5 is a dual power distribution unit with regulated adjustable voltage

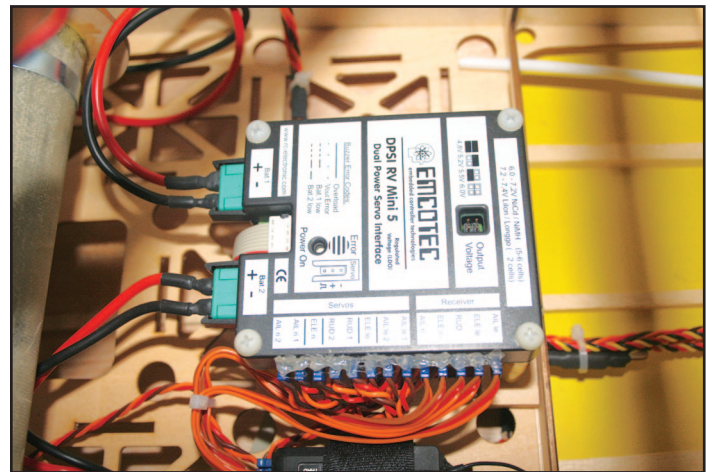
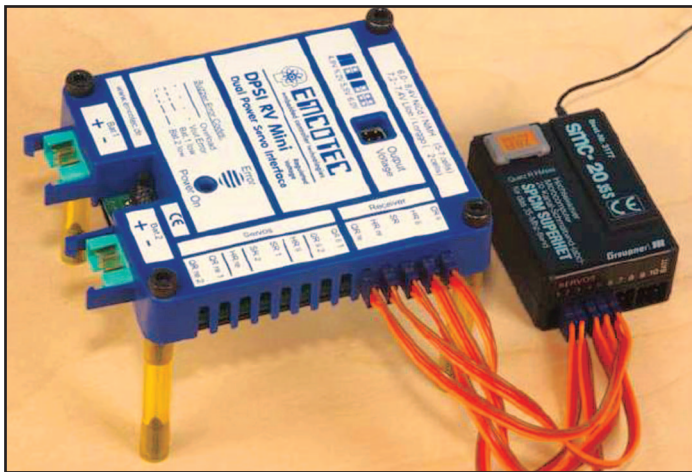
for up to 8 servos with the use of 5 receiver channels. The Mini 5 only supplies the heavily impacted multiple servos areas like rudders, aileron and elevator while the remaining func-

tions (engine, extendable landing gear, flaps etc.) are supplied directly from the receiver.

The unit has RF interference suppression, servo pulse amplification and intelligent volt-

The "DPSI RV Mini" in Bullet Points

- Double power supply with controlled voltage for receiver AND servos
- Output voltage adjustable in 4 stages from 4.8 V to 6.0 V (per jumper)
- Compliance with all manufacturer specifications for RC receivers
- Continually constant servo-actuating power from constant power supply
- Lilon/LiPo cells can be used as well as 5, 6 and 7-cell NiCd / NiMH batteries
- Electronic, fail-safe On/Off switch with additional connection option for external LED voltage displays
- Short circuit-proof servo pulse amplification in power-saving APP technology (Advanced Push Pull)
- HFIB (High Frequency Interference Blocking), blocking of injected high frequency interference from long servo-cables (separate for each servo)
- Capable of bearing up to 14 A peak current
- 5 receiver channels with current distribution to 8 servo connections
- IVM (Intelligent Voltage Monitoring) - intelligent voltage monitoring with acoustic status indicator for four different types of batteries (programmable)
- Cable-free system, i.e. all inlets are pluggable and therefore replaceable at any time
- Special grounding concept for trouble-free operation and maximum safety
- A housing of high-quality plastic injection molding with integrated holding clamps for the battery connector plugs and reverse connector protection of the servo-plugs
- Large-surface cooling elements for deflecting heat loss
- Each system 100% inspected and provided with a unique serial number
- Developed and produced in Germany



age monitoring with optically and acoustically fault indication. It has selectable servo voltage between 5 - 6 V and a peak current draw of 14 amps.

The unit comes with leads to connect your receiver to the unit, a pin switch to turn it on and MPI plugs to solder to your batteries. To power the unit I am using 2 x Precision Aerobatics 7.4v 2200 Mah Lipo batteries but you can use NiCad or NiMh batteries if you wish.

The dimensions of the unit are 99mm x 77mm x 15.8mm and it weighs 105g. You'll be surprised how the unit gets lost in a 100cc plane J.

Precision Aerobatics offers a unique mounting kit which makes installation a breeze.

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 a 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.

Because the distribution voltage is switched on electronically (the switch does not activate any current, but rather only the switch-on signal), no losses, contact errors or transition resistance occur. This internal electronic switch is fail-safe. Thus, a switched-on unit remains switched on even if, for example, the pin falls out or the On/Off switch is separated or interrupted.

I mounted the Emcotec Mini 5 in the centre of my Precision Aerobatics Extra 330L with a single Futaba DP149 receiver close by. The

throttle and ignition kill unit are both plugged directly into the receiver with the Elevator, Rudder and Ailerons connected through the Emcotec Mini 5.

To my surprise, I did find that the Emcotec Mini 5 changed the way my Precision Aerobatics Extra 330 felt in the air. The Emcotec Mini 5 gives me more power to the servos making all the surfaces more responsive which in turn gave me more confidence in the model.

I am very impressed with the little unit. It is a clean installation in my model and it is easy to use. If you want to upgrade your batteries to Lipos or add a power distribution unit to your model to give your servos a cleaner constant power, have a look at the Emcotec range that Precision Aerobatics has to offer.

