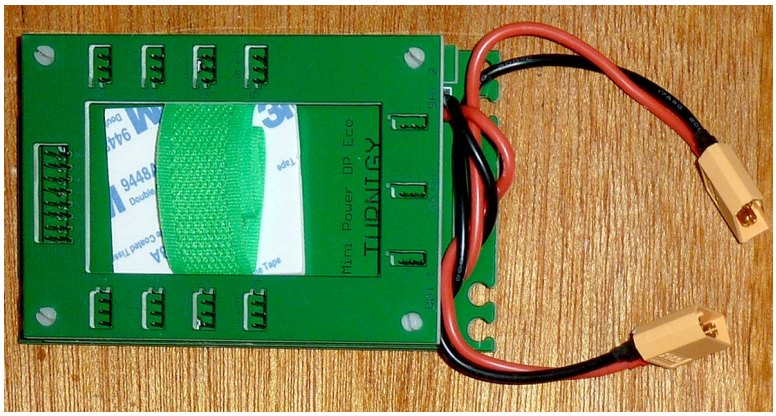
Servo power distribution boxes

Digital servos use more power. A high torque one, say starting at about 15kgcm, can use 2.5A and of course the more powerful and high-speed coreless ones use even more. A receiver will not be able to supply that much current and will either break or give weird signals. The solution is to use a power distribution box, like this one from Hobby King for £25, weighing 80g. It is also sold as a badged product by UK dealers such as 4Max for a slightly higher price. The receiver is strapped (or velcro'd) into the middle. The servo signal outputs from the receiver plug into the pins in a row at the top (left side in the picture). The servos plug into the holes down each side. There are two sets of pins for each channel, so two servos can be plugged in, thus avoiding Y-leads. The box passes on the signals but supplies the servo current itself, direct from the receiver batteries.



One or two receiver batteries are connected either through the XT60 connectors for 2S lipos or, if 4.8V or 6V NiMHs, plugged straight into the board. Take care though. The lowest price boxes do not have a BEC to reduce the battery voltages, so you could well blow up your receiver and servos if you use lipos and leave a power connection to the receiver.

The box shown above can manage eight channels. At a much higher price you can buy boxes that handle many more. The supplied switch need not be used as the box defaults to on, but if used it plugs into the middle socket. If you want an LED battery charge display you can plug one into an unused servo output.

The only downside that I can see, apart from the weight and cost, is that these boxes cannot be used where you want to have a single wire into a wing holding a FrSky S.BUS converter or other S.BUS servos. However you could feed an S.BUS signal into one or more input sockets and plug the wire to the S.BUS into one or more sockets so removing one of the potential overload dangers when using S.BUS with powerful servos.