

FLYINGWINGS LTD

REFLEX EP ASSEMBLY KIT



Before you get started

There are a few decisions to make before assembling this kit.

Lithium Polymer or Nimh/Nicad flight battery ?

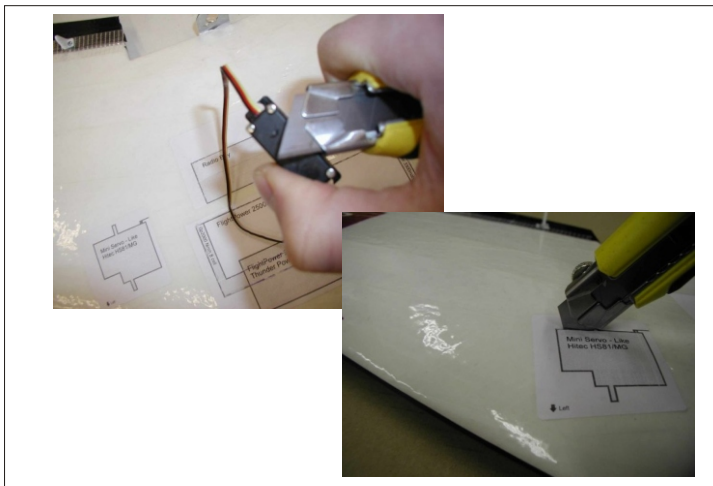
Lithium polymer (Lipo) cells offer greater capacity for weight than Nimh or Nicad cells. If you decide on Lipo cells, then a pack between 1500mah 2S and 2100mah 2S (7.4v) is ideal. The best propeller size to use is a 6x4 electric speed prop.

The template on the Reflex EP shows a selection of batteries, the most important note to take is achieving the “**centre of gravity**” ie the balance point of the model, which is **140mm** back from the nose tip. If you use a very light battery you may need to add some lead ballast in front of the battery.

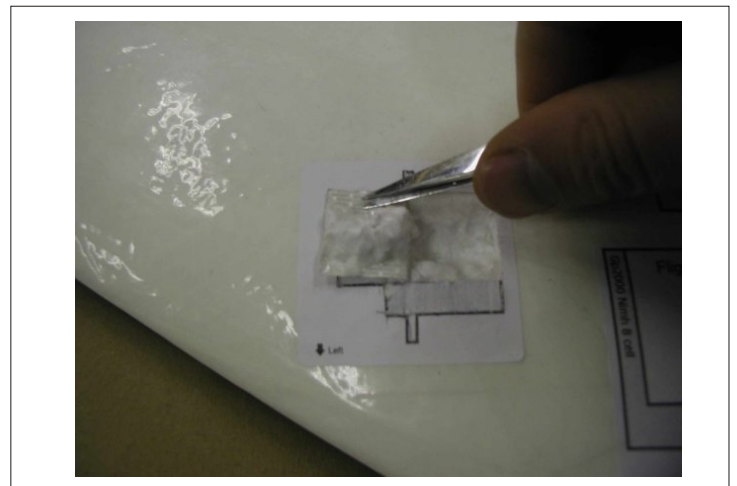
Radio Gear

You will need a transmitter capable of “elevon or delta” mixing, most modern transmitters have this feature. If you don’t, the mixers are available from us. Servos should be “Micro” Size around 9 grams, ie Hitec HS55 or 65 . The receiver should be mini size or micro size like the Hitec HFS05MS . You should use a full range receiver. A receiver battery is not required as the speed controller will power the receiver.

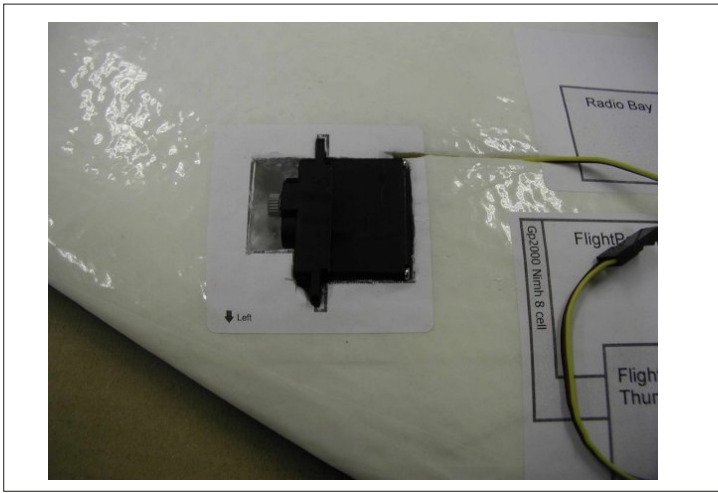
You should check that the radio set up is done outside of model before installation, see last page.



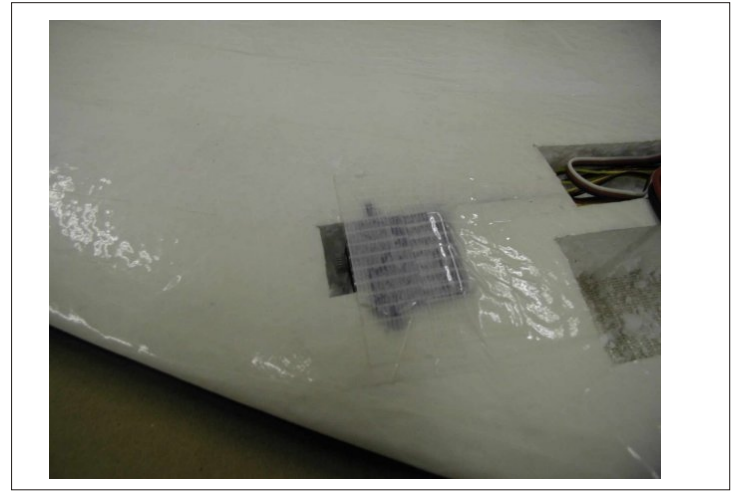
Step1: Measure the depth of you servos with you knife and cut round the template, if your servos don't match exactly, draw around them centrally on the template.



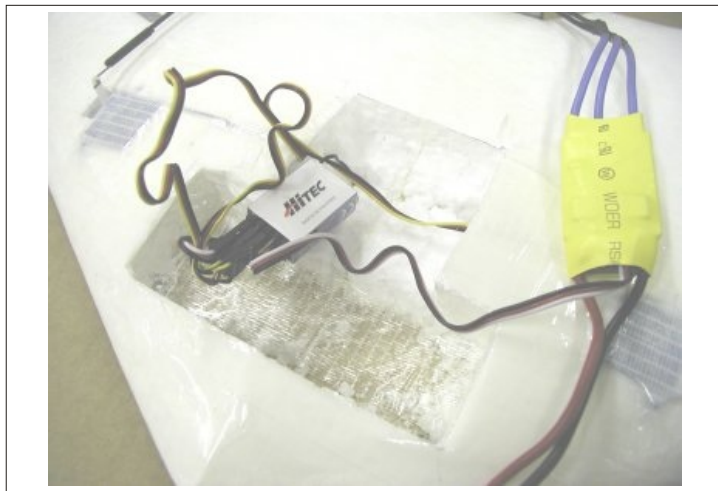
Step 2: Prise out the foam bit by bit, checking with the servo for a nice tight fit. The servo should lie flush with the top surface of the wing.



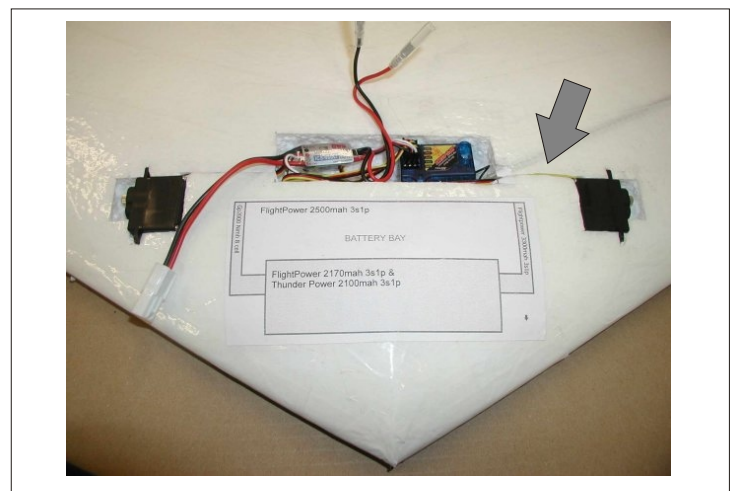
Step 3: Use some foam safe CA or hot glue to tack the servo down, only a small amount is needed.



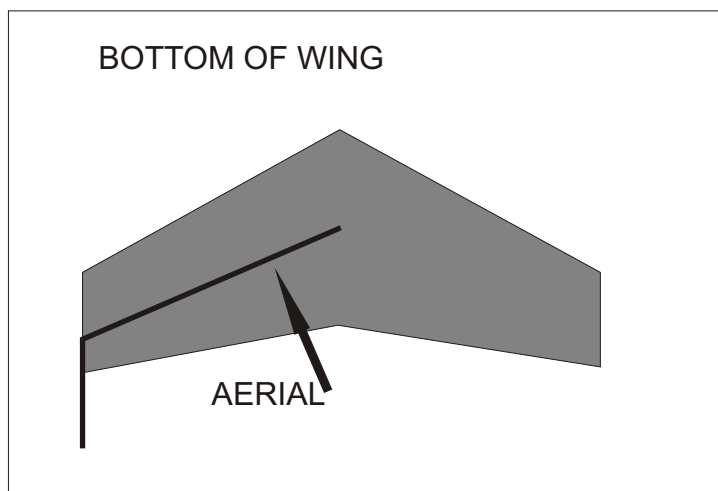
Step 4: Cut some pieces of strapping tape to hold down the servo, and cover with white tape



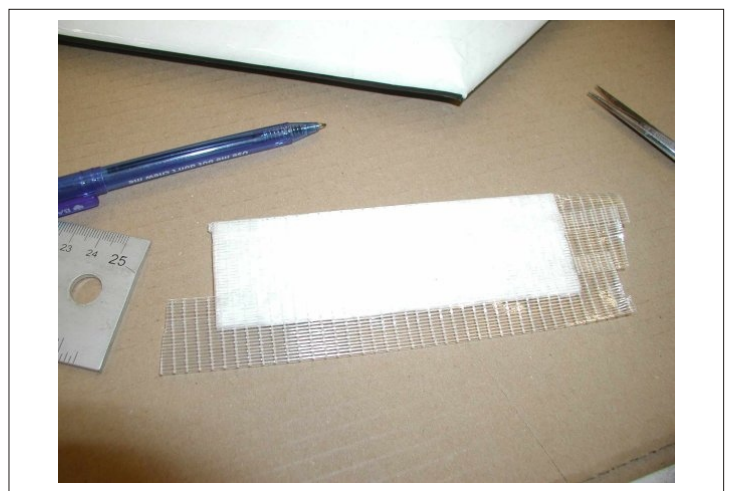
Step 5: Cut out the battery compartment and radio bay using the same technique as the servo.



Step 6: Cut a slot to feed the servo leads into the radio bay.



Step 7: Pierce a hole in the bottom of the radio bay, feed the receiver aerial through, tape in place along the length of the wing.



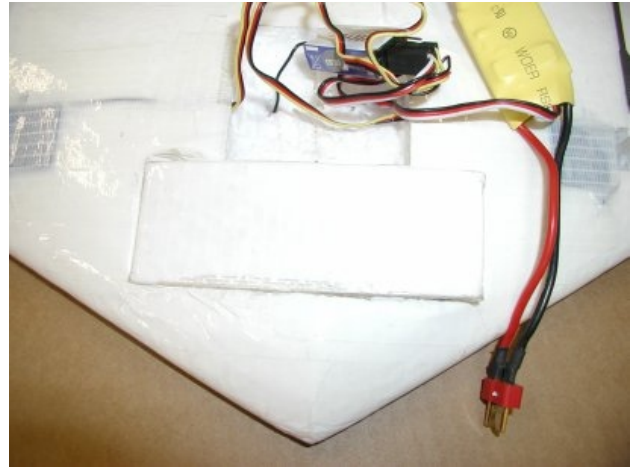
Step 8: Make 2 hatches from the piece of EPP foam supplied to cover the radio bay and the battery compartment. Cover each one in strapping tape and then white tape.



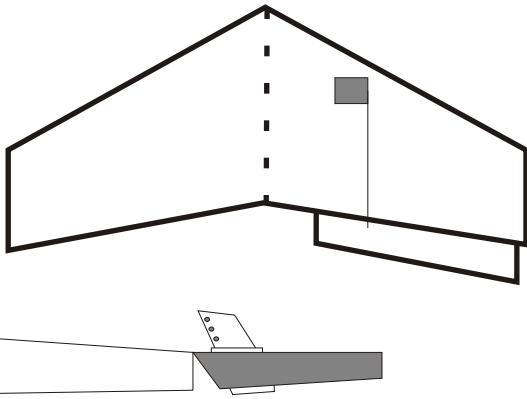
Glue plate down



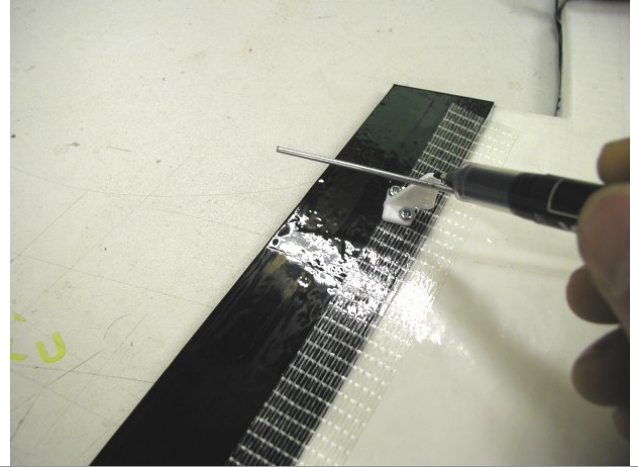
Step 9: Glue in the battery retaining plate with the velcro tie trapped beneath, check for fit before glueing. Use epoxy or hot melt glue.



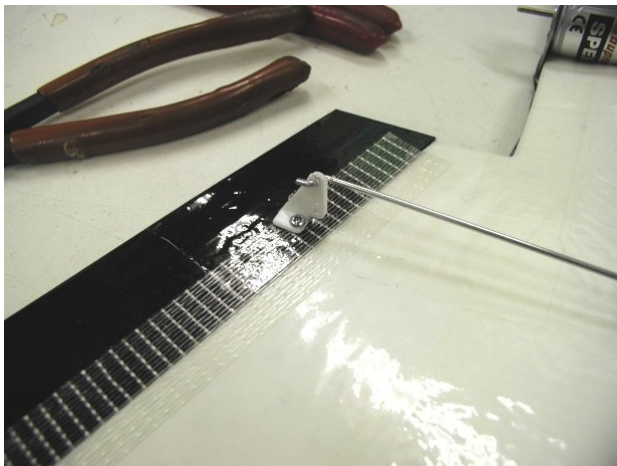
Step 10: Tape the radio hatch in place, with the battery bay you create a hinge with strapping tape.



Step 11: Measure the positions for the horns and screw in place as shown, push rods should be parallel to the centre line of the wing, shown dotted.



Step 12: Lay the model flat, the edge of the elevon should be raised up 8mm from the surface. This is the neutral position.



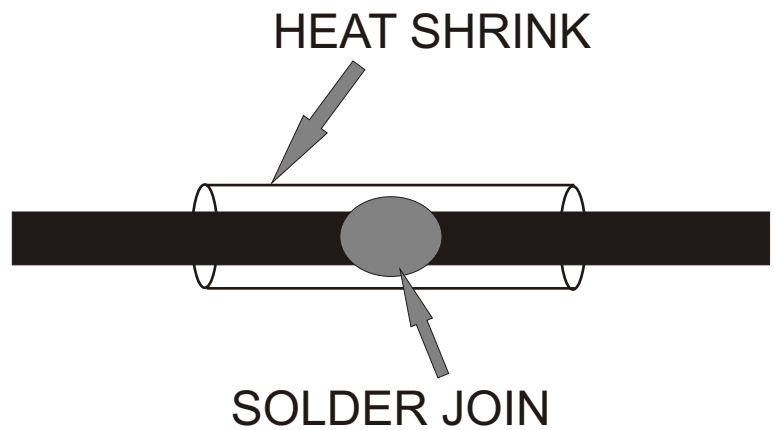
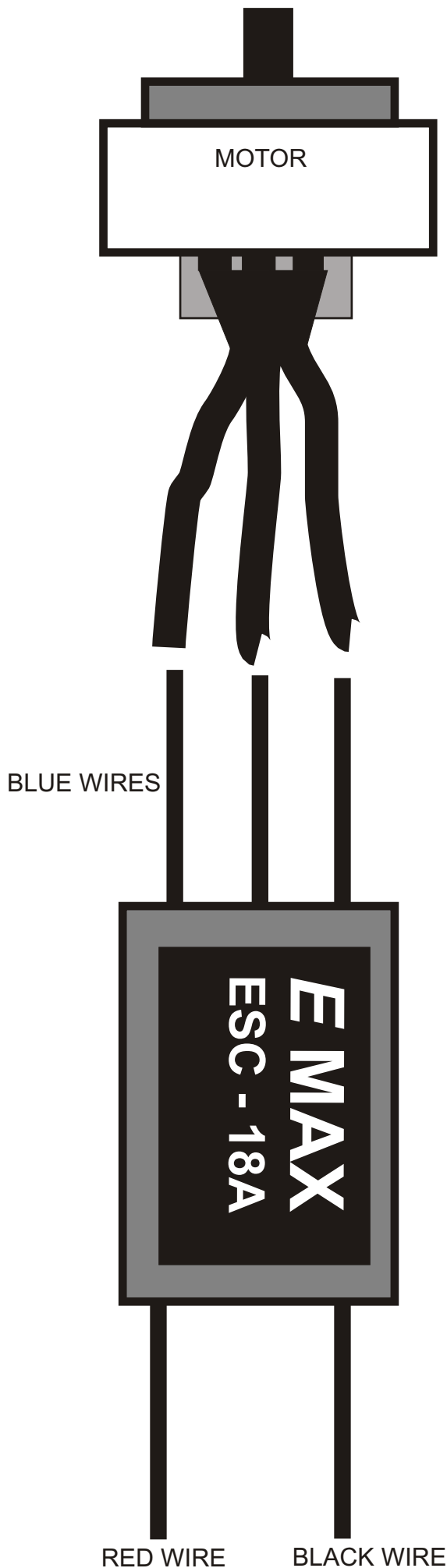
Step 13: Switch on the radio and model, clip on the clevis and mark the rod to the hole in the elevon horn. Create a z-bend with pliers. Take off clevis attach z-bend and re-attach clevis, adjust accordingly.

SPEED CONTROLLER TO MOTOR WIRING (FOR PUSHER).

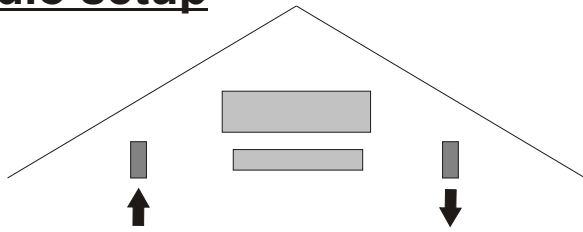
EMAX CF2805 & EMAX 18a esc

If you wish to change the direction of the motor, swap the two outer cable around.

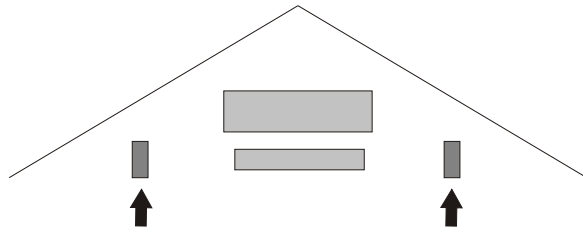
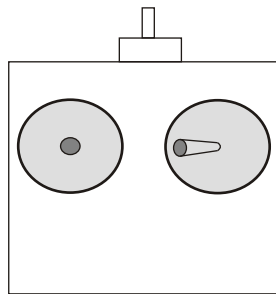
The speed controller requires no programming to work with 2 or 3 cell Lipo batteries



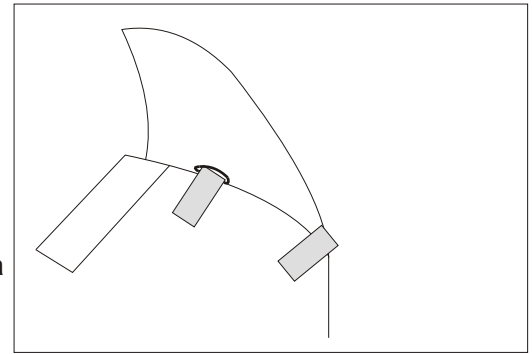
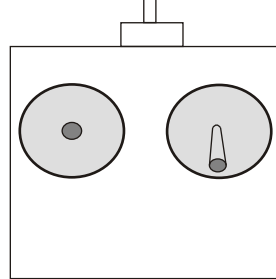
Radio setup



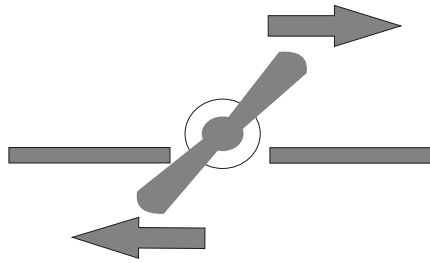
Left Aileron: right servo travels back, left travels forward & vice versa



Up Elevator: right servo travels back, left travels back & vice versa



Attach Wingtips with filament tape, thread 5" of filament tape through the pre-cut slots and tape to top and bottom of wing tip. Secure the front with another piece.



Viewing the model from the rear, the motor should run clockwise with propeller put on backwards.

Flying the Reflex

Recommended control throws measured at trailing edge of elevon.
Up/Down +/- 10mm, Left/Right +/- 10mm

Important : When setting control throws, note that all 4 settings (up,down,left,right) are the same whatever value. Ie all 75% or all 65%

The Reflex is capable of flying in most winds from zero to galeforce. Pick a day with light winds to start. You may want to start by some test throws without power, to test trim. We recommend launching the model into wind without power and then applying power. Contact with the propeller can cause serious injury.

Shut the throttle on, or before landing, the speed controller may be damaged if the motor is on when the model is on the ground.

The Reflex will glide for some time, so plan you landing, by reducing height some distance from the landing site and glide it in with a little throttle if required.

For launching, hold the nose with your fingers below and your thumb around the top of the nose, A good firm (not hard) launch over head into wind.

Help Line 01908 615163
Email help_sales@flyingwings.co.uk

Flyingwings recommends
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BMFA.

www.bmfa.org