

FLYINGWINGS LTD

BUZZ II ELECTRIC FLYING WING



Thanks for buying the Buzz 2 builders kit.

Unlike all the other wings, the Buzz 2 uses the highest quality high density EPP made in Europe to aerospace standards.

The Buzz 2 can be assembled in a very short time and requires little in the way of traditional modelling skills.

The Buzz 2 can be used for Fun, Trick and combat flying, the integral strength gives it unrivalled crash resistance.

There is a power system for this model, see the website for details.

As well as this power system you will require:

- 2 x micro servos
- 1 x Receiver (full range)
- 1 x Lipo battery (1300-1500mah 3S 11.1v)
- 1 x connectors set
- 1 x Transmitter capable of elevon mixing or mixing module
- 1 x Lipo compatible charger

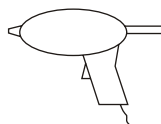
Spares Available:

- APC propeller 6 x 4
- Wingtips set
- Elevon Set
- Pushrod set
- Horn Set
- Motor mount set

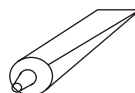
CRITICAL DATA

CENTRE OF GRAVITY
170-180mm BACK FROM THE NOSE
POINT

TARGET FLYING WEIGHT
295-350 GRAMS



HOT GLUE GUN



UHU POR



CA GLUE

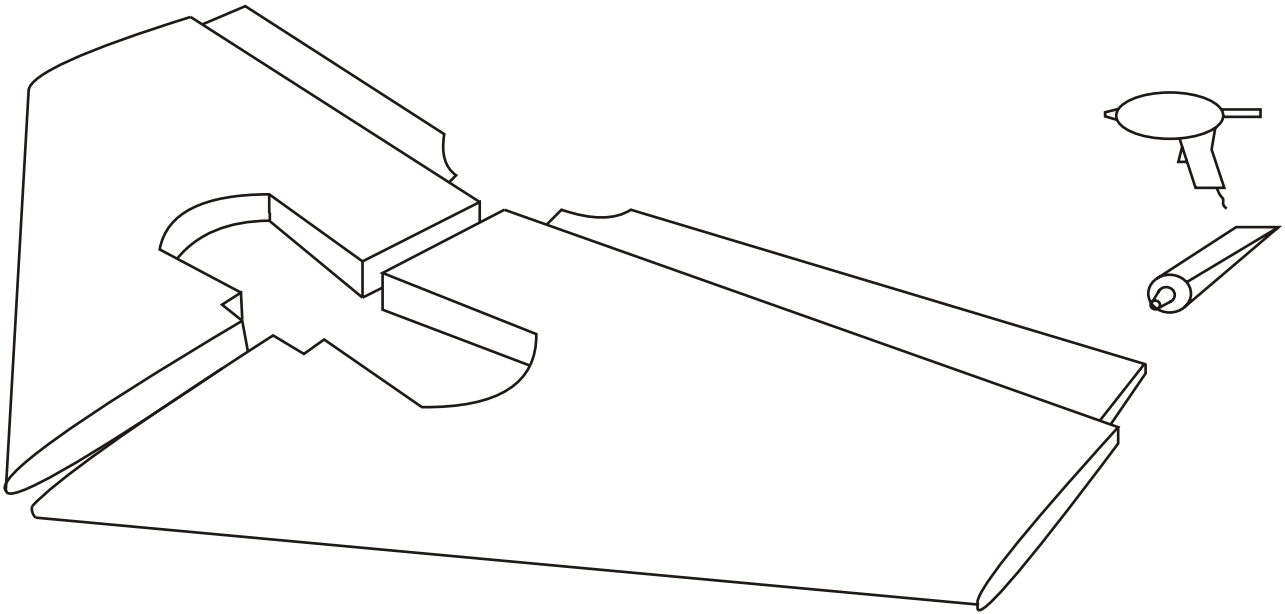
Flyingwings recommends
that you get insured by the
BMFA.

www.bmfa.org

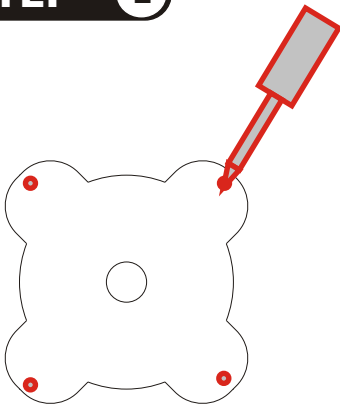
LETS GET BUILDING

STEP 1

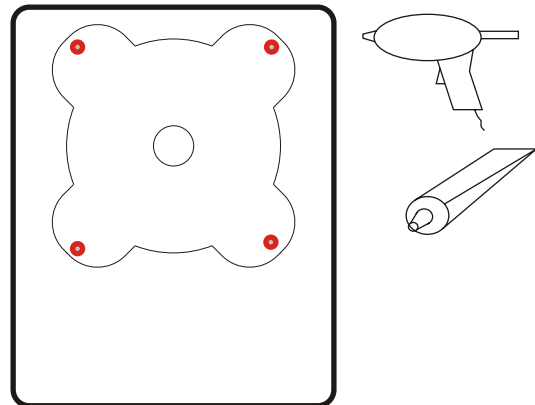
Join the two wing halves together with hot glue or plenty of UHU por. If using UHU por, coat each edge with plenty of glue, leave apart for 10-15 minutes, then align and join.



STEP 2



Align the alloy motor back plate, mark the screw positions and indent with a bradawl or sharp point.



Glue the wooden plate to the back of the EPP motor mount as shown

STEP 3

Glue in the motor mount as shown, with plenty of glue

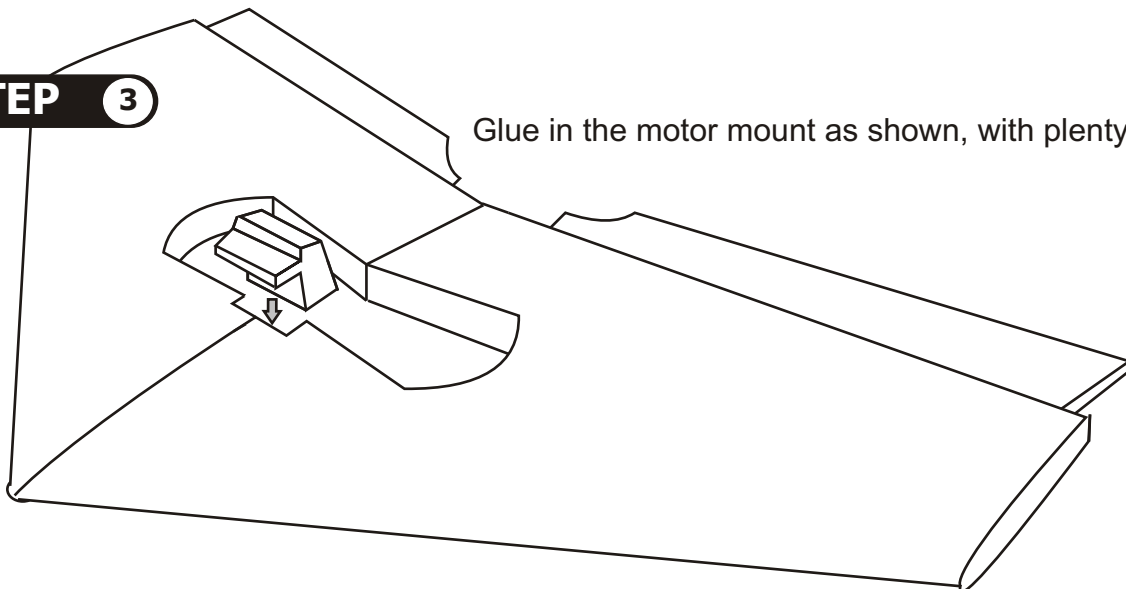
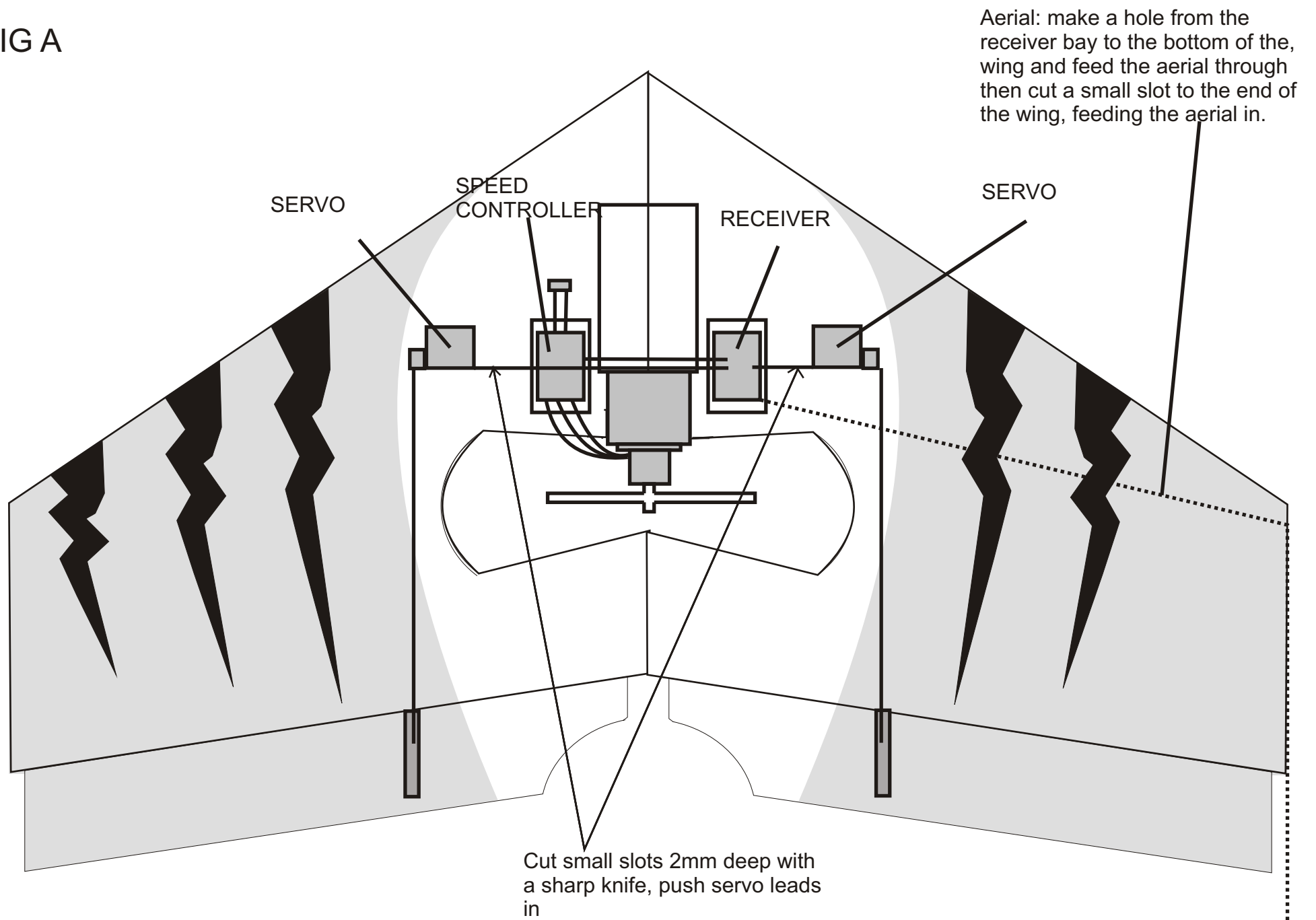


FIG A



SERVO

SPEED CONTROLLER

RECEIVER

SERVO

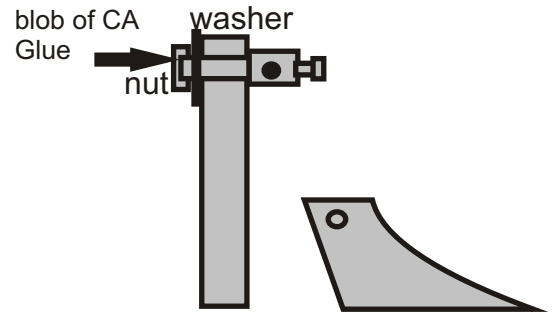
Cut small slots 2mm deep with a sharp knife, push servo leads in

Aerial: make a hole from the receiver bay to the bottom of the, wing and feed the aerial through then cut a small slot to the end of the wing, feeding the aerial in.

STEP 4

Installation of servo adaptors:

Open up the top hole on each ply horn so that the threaded part of the metal servo adaptors are snug but can turn in the horn. Put the washer and nut on (not easy when you have fingers like sausages!). Tighten the nut so the adaptor is firm but can still turn. A blob of CA glue on the end of the nut will stop it from coming loose.



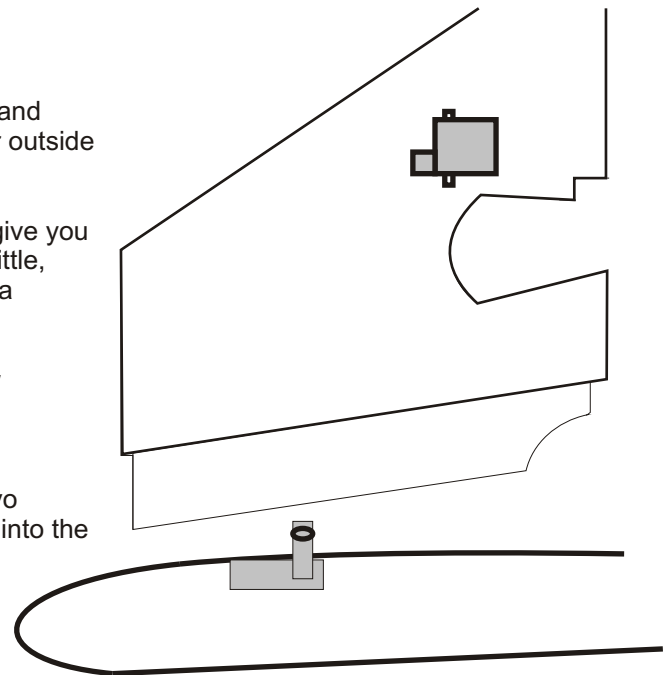
STEP 5

Radio Installation:

Set up your servos as shown in the Radio Setup section and double check everything is working in the correct manner outside of the model before installing it into the model.

Two pre-cut holes have been made into the wing, these give you a guide to fit your servos. All micro servos vary in size a little, so you may have to cut around the servo to sit them into a snug fitting hole, take your time with this.

1. Place your servo over the hole, draw around it to show where more foam needs to be removed.
2. cut carefully around, the line draw and prize out the foam, keep checking for fit with servo.
3. Cut a line around 2mm deep (no deeper) from the servo cable wire output to the receiver location, push the cable into the slot.

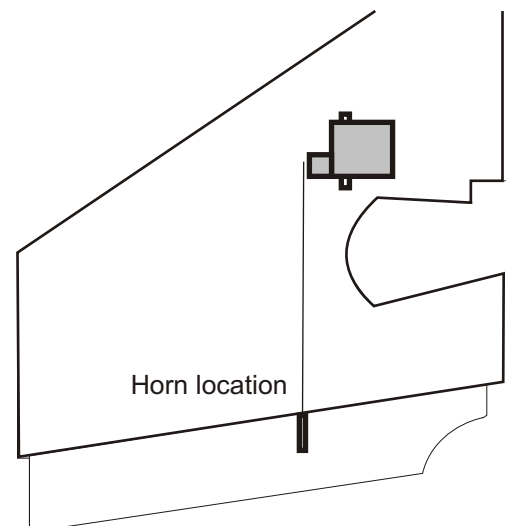
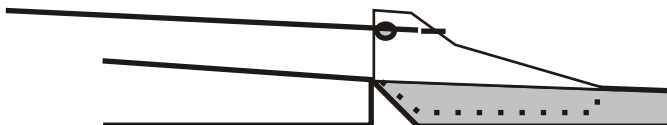


STEP 6

Attaching the elevon horn.

The push rod should run parallel to the centre line of the wing.

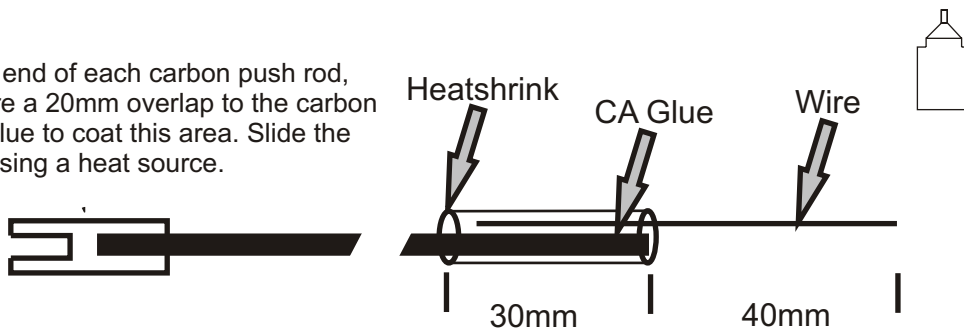
Using a ruler draw a line on the elevon where the horn should be situated. Press one of the horns into the foam to leave an impression, cut this with a knife so that the horn sits in the elevon around half depth, glue in with plenty of CA glue.



STEP 7

Push rod assembly:

Glue the plastic clevises onto the end of each carbon push rod, with CA glue. Attach the piano wire a 20mm overlap to the carbon rod. Use a generous blob of CA glue to coat this area. Slide the heatshrink tube over and shrink using a heat source.



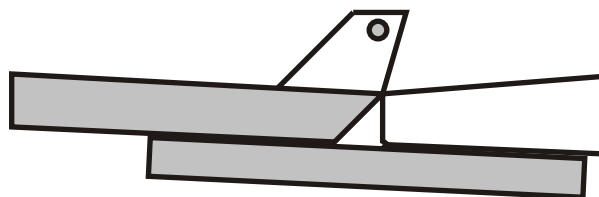
STEP 8

Installing the horns & pushrods.

SWITCH ON YOUR RADIO AND CANCEL ALL SUB TRIM
SET TRIMS TO NEUTRAL

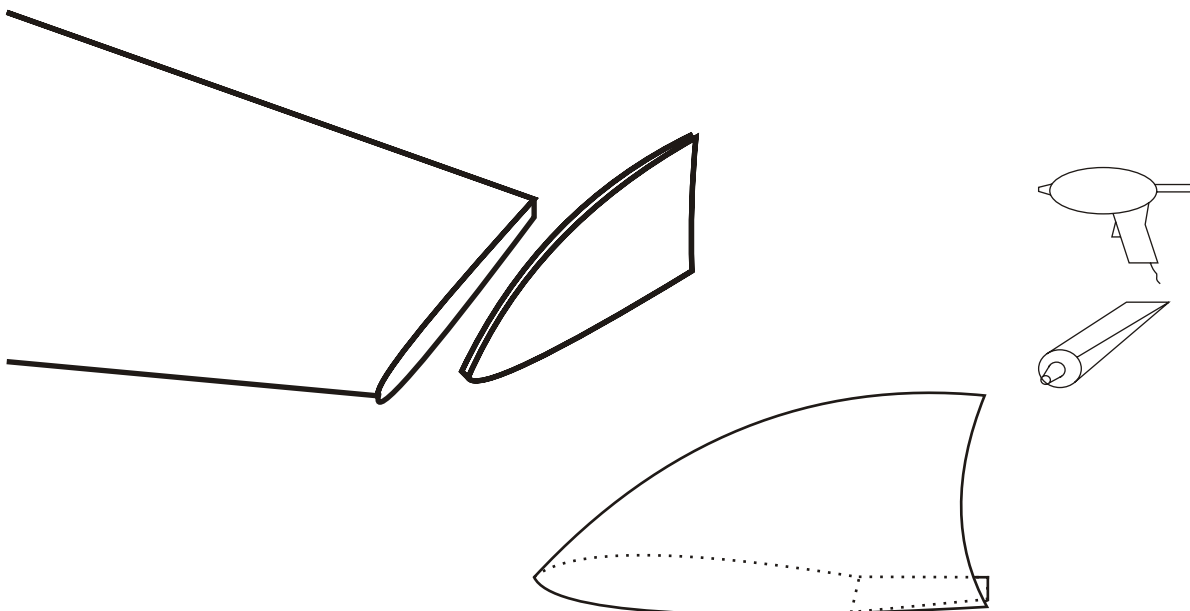
Screw the screws into the horns so that the points of the screws are just proud, Line up the horns as shown in FIG 5C, press down the horns, then screw them right down, get the bottom part of the horn, align screws and screw down until the horns grip the elevon, but not too tight.

Screw the clevises onto the pushrods halfway, attach the clevis to the servo horn, Set the elevon position slightly upwards as shown, mark the pushrod with a felt tip and make your z-bend at this point. Note the horn holes may need to be enlarged slightly,

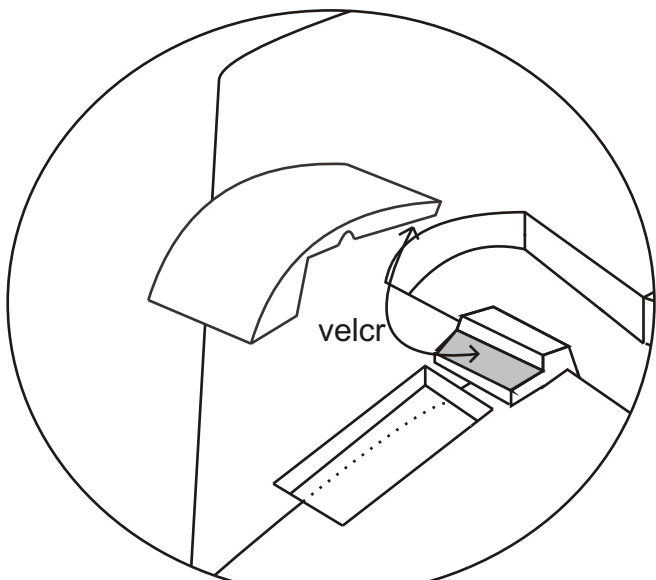


Use a ruler to set neutral position

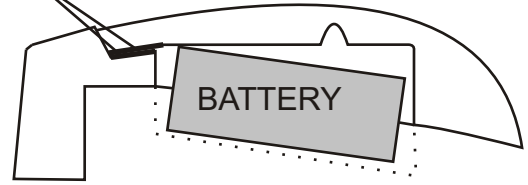
Attach wing tips with glue



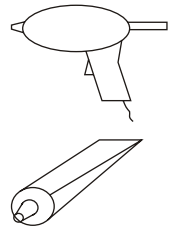
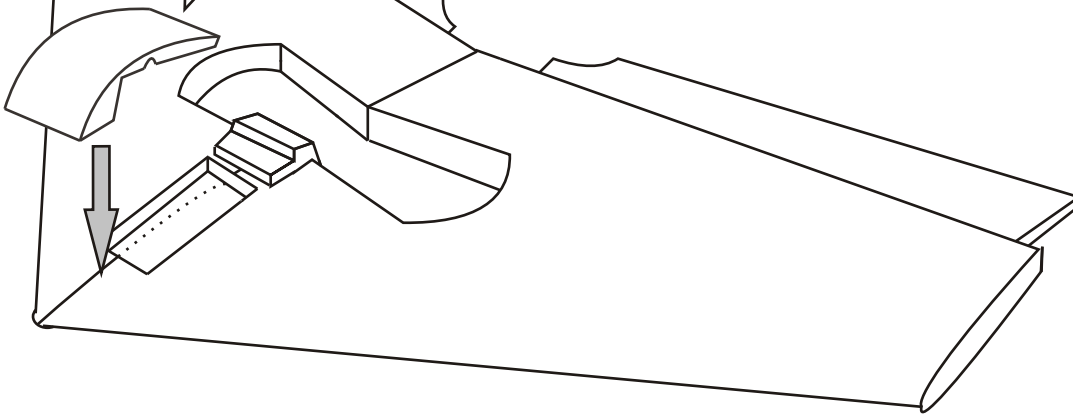
STEP 9



Velcro

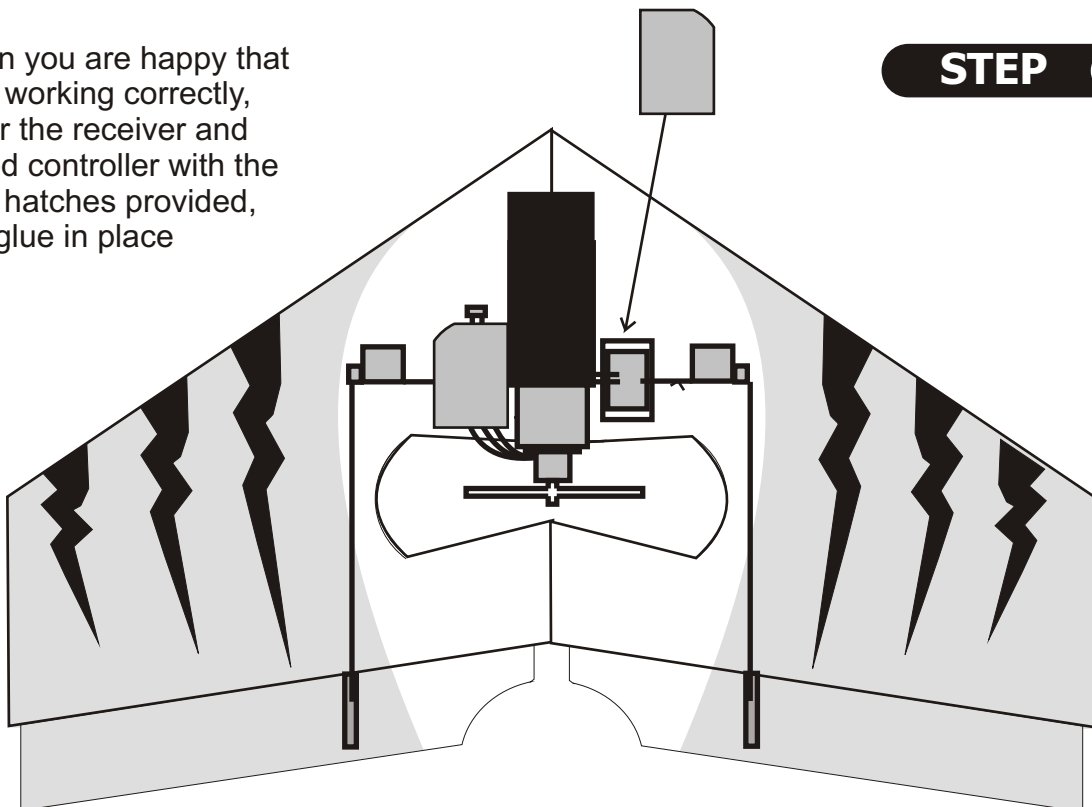


Glue in the motor mount as shown, with plenty of glue



When you are happy that all is working correctly, cover the receiver and speed controller with the EPP hatches provided, and glue in place

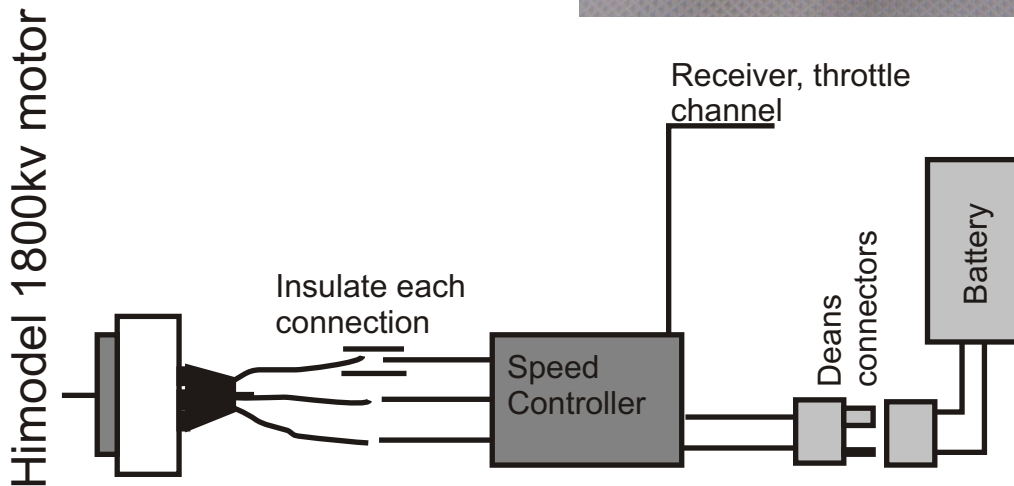
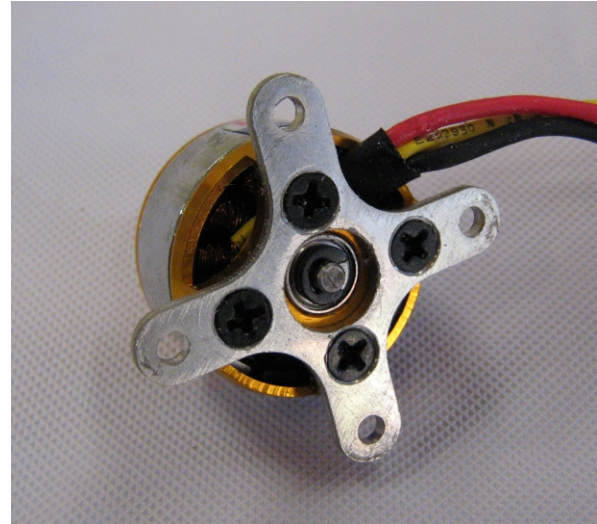
STEP 10



RAVEN POWER SYSTEM SETUP

Motor assembly and wiring

Screw the metal cross motor mount to the back of the motor, if the holes do not align, turn the mount through 90 degrees.



Always do the motor setup with no propeller attached for safety.

In some cases the motor will not react to sudden throttle opening or stutters, this is resolved when the propeller is attached.

Trouble shooting:

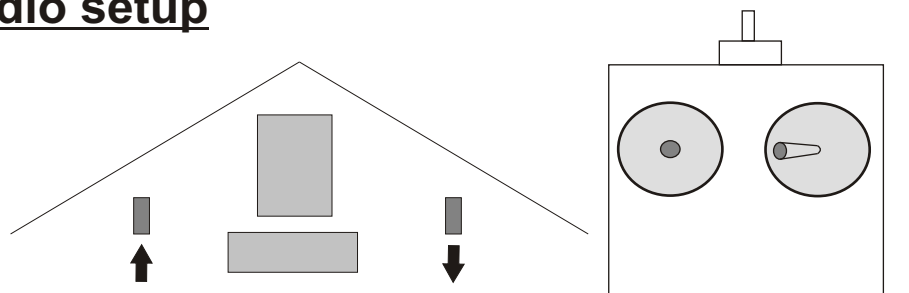
The motor will not start

- > Always switch on the transmitter, set throttle to zero, then switch on model and wait for start up sequence (beeps)
- > Incorrect wiring, check battery to speed controller and controller to motor polarities
- > Check servos are working, if not, there is a problem with the battery to speed controller connection or a crystal problem. check with a separate battery.

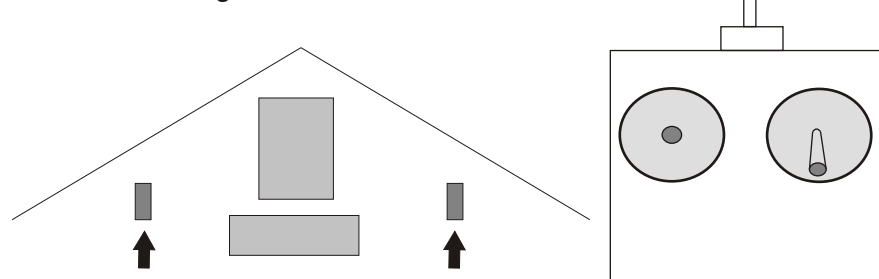
Motor runs the wrong way

- > As with all brushless motors there is 3 wires, left, middle & right. The middle connects to the middle of the speed controller, the two out wires, left & right can connect either way and will dictate the direction the motor spins.

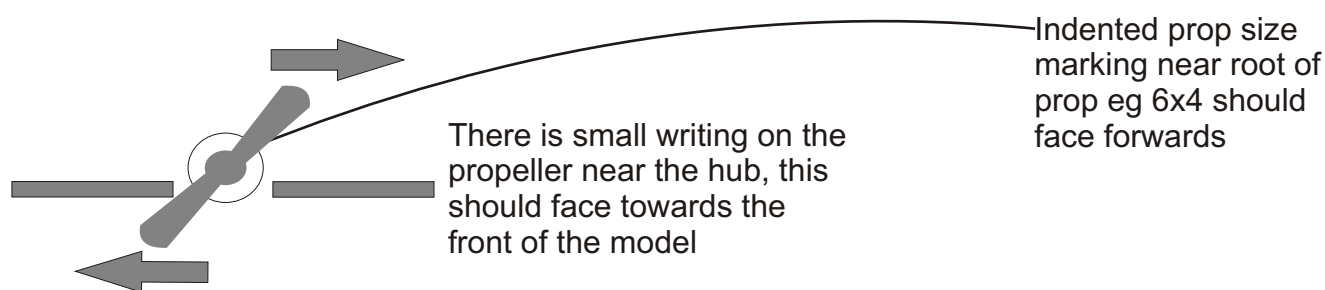
Radio setup



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



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



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

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 Buzz 2 is capable of flying in most winds. 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 by gripping the front of the wing about mid way, apply about half throttle, swing the model slightly upwards into wind.

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 Buzz 2 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.

Try high alpha approaches, this is where you are holding full up elevator at low speed into wind, maintaining the height on the throttle.

Help Line 01908 615163

Email help_sales@flyingwings.co.uk