

FLYINGWINGS LTD

BUZZ LIGHTNING FSK KIT



Thanks for buying the Buzz Lightning fast start kit.

The Buzz Lightning incorporates the finest building materials from the EPP (Expanded Polypropylene) cores, CNC cut from solid block for unrivalled strength and impact resistance. The carbon fibre spar, manufactured in the EU to aerospace standards. The laser cut balsa elevons picked from hard stock are the best quality you can get.

The Buzz Lightning uses an all new wing aerofoil for an amazing performance and glide ability. The increase in wing sweep gives it a very wide speed range without stalling.

As well as these power systems you will require:

- 2 x Micro servos
- 1 x Receiver (full range)
- 1 x Lipo battery (1300-1700mah 3S 11.1v)
- 1 x connectors set
- 1 x Transmitter capable of elevon mixing or mixing module
- 1 x Lipo compatible charger

You will also need:

- Sharp Knife / craft kinife
- CA (super) glue
- Small cross head screwdriver
- Pliers
- Epoxy, UHU Por or hot melt gun

Data:

Centre of gravity:

220-230mm back from nose point

Spares Available:

- APC propeller 5 x 5
- Wingtips set
- Elevon Set
- Pushrod set
- Horn Set

Desired flying weight:

400g - 450g

Flyingwings recommends
that you get insured by the
BMFA.

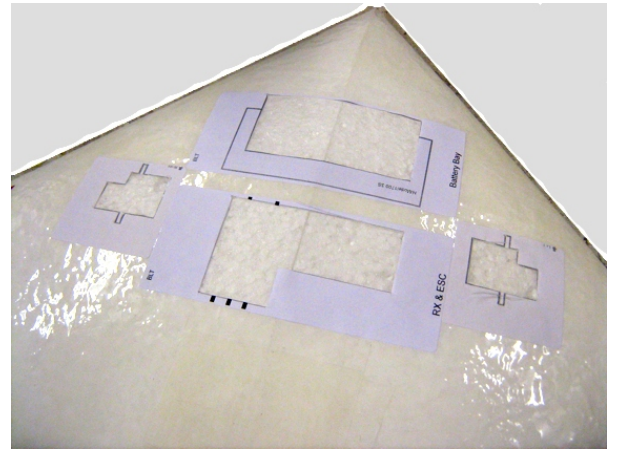
www.bmfa.org

LETS GET BUILDING

Step: 1

Decide which battery you are going to use, cut out the labels to your desired configuration, cut right through to the foam using a very sharp knife. If the shapes do not exactly match your equipment, centre the items on the labels, draw around them and cut out.

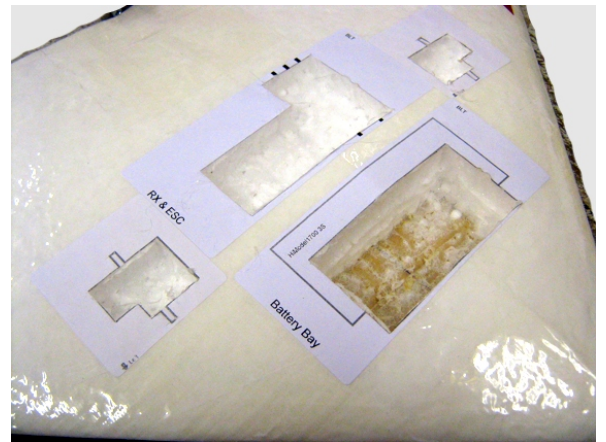
Note, keep the battery & radio sticker for making the hatch in step 4



Step: 2

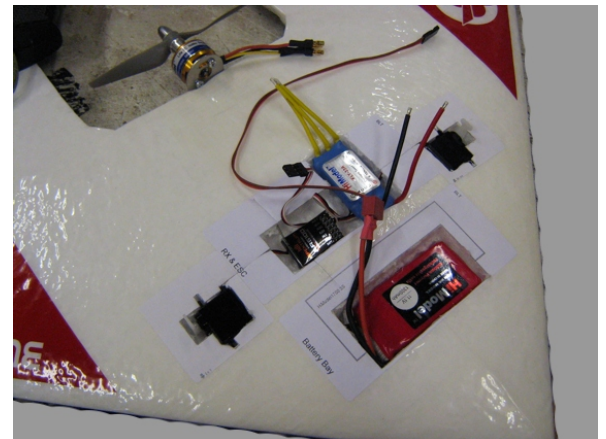
Battery bay: Cut around the battery line, all the way down to the ply plate, dig out all the foam.

Servo & Radio bay: Measure the depth required to insert your equipment, cut to this depth (not to the bottom), cut small amounts out, then keep checking that there's a good snug fit for the servos.



Step: 3

This picture shows, the radio equipment and battery laid into the cutout slots. If the servo holes have been cut closely to the servos dimensions, you should not have to glue the servos in.



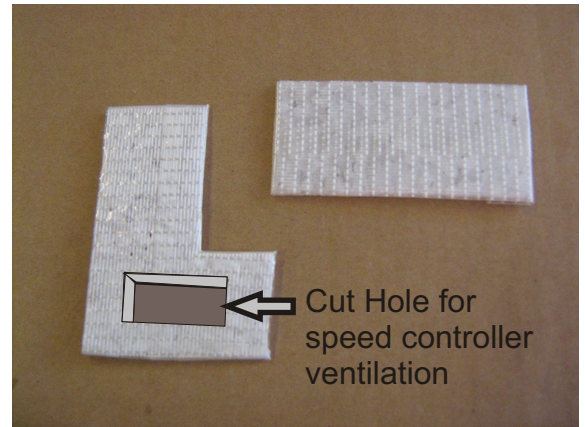
Step: 4

Take the 3mm EPP square provided, place the cut out stickers made in step 1 and use them as a template for cutting out the hatches.



Step: 5

Cover these hatches with the strapping tape (clear 25mm tape) provided.

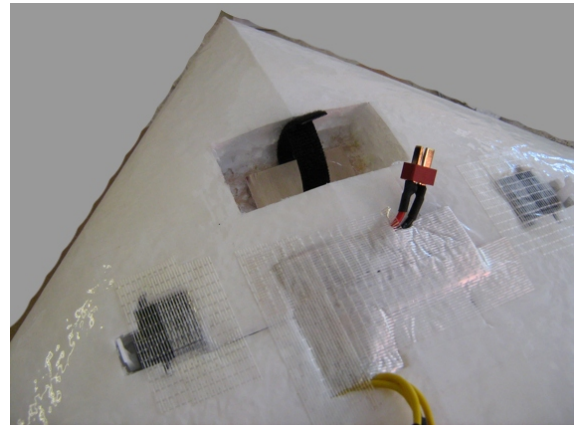


Step: 6

Check all your radio system and motor are working see "Radio Setup" & "Power system installation".

Using the hatches, cover over the radio bay, tape in position and then cover with white 50mm tape provided.

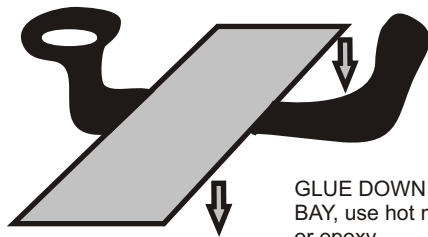
Hinge the front of the battery bay hatch, then cover with white tape. You can use a tab of 25mm strapping tape has a latch.



Step: 7

Installing the velcro strap.

Get the small ply plate, glue the velcro strap to the plate as shown, then glue the plate down to the bottom of the battery bay, trim the velcro strap to suit battery.



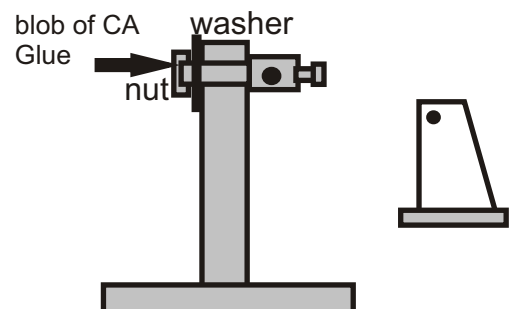
GLUE DOWN IN BATTERY BAY, use hot melt glue, uhu por or epoxy



Step: 8

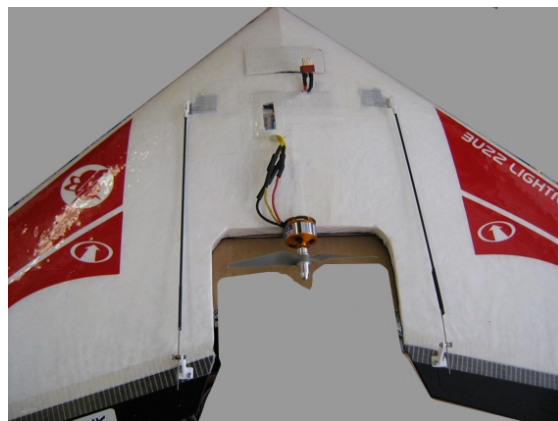
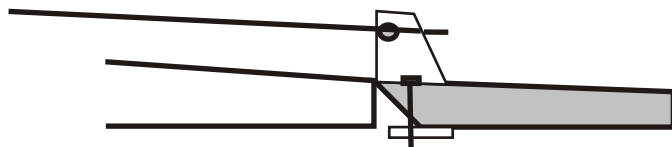
Installation of servo adaptors:

Open up the top hole on each white plastic 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: 9

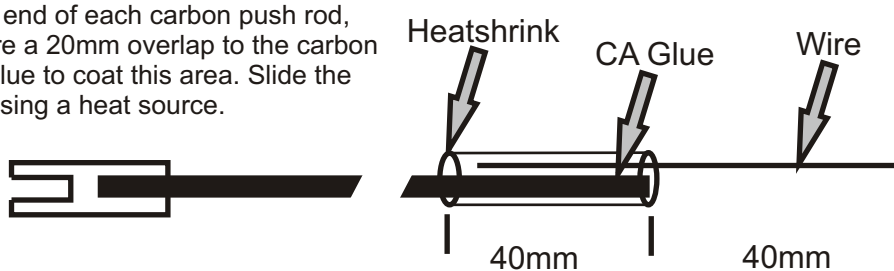
Use a ruler to line up the horn position, this should be in line with the servo horn and parallel to the centre line of the wing. The top hole in the horn should line up with the hinge line



Step: 10

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.

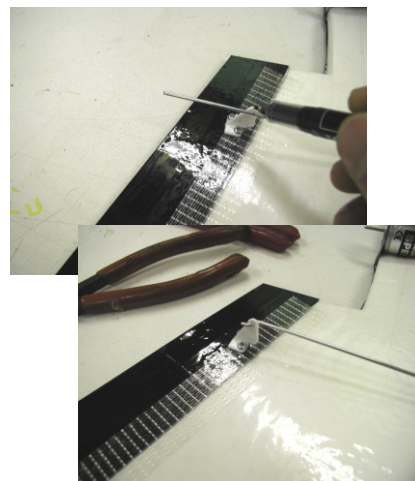


Step: 11

Use a ruler to mark the positions of the horn, put the screws into the horns so that the point of the screws stick through by approx 1mm. Push the horn onto the elevon in the correct place and screw down. Align the horn bottom plate up with the screws and re-tighten, do not over tighten, just enough to grip the elevon firmly.

Switch on the radio system, neutralise all trims, check the horn is as vertical as it will allow. Lay the model flat, the edge of the elevon should be raised up 8mm from the surface. This is the neutral position.

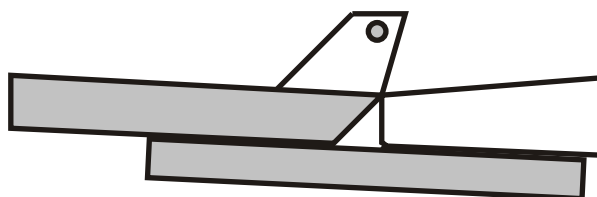
Insert the wire part of the pushrod into the adaptor, loosen the screw if necessary.



Step: 12

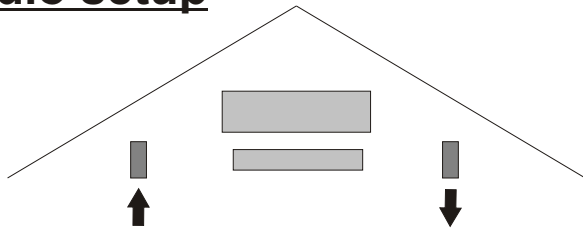
Set the elevons to neutral position as shown.

Tighten the screws with a screwdriver, then grip the horn tightly and further tighten the screw with pliers, so that they are very tight, always check that they are very firm.

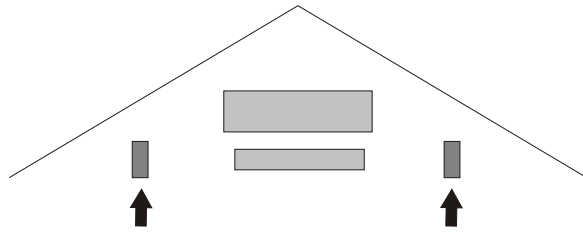
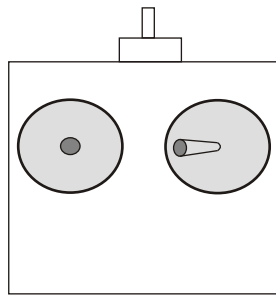


Use a ruler to set neutral position

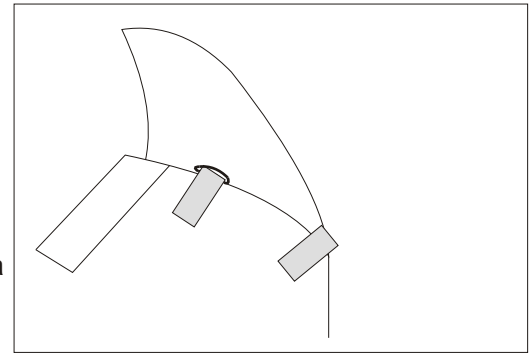
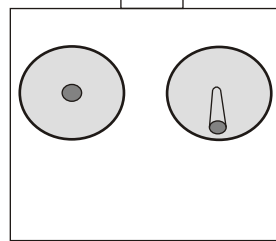
Radio setup



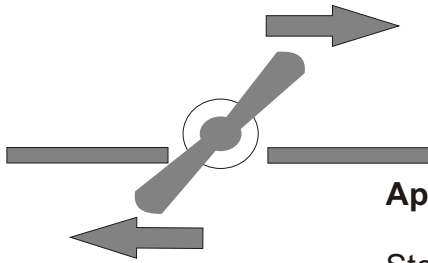
Left Aileron: right servo travels back, left travels forward & vice versa



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.

Applying the vinyl graphics: Last job to be done

Step1: Carefully peel the white paper away from the backing paper (the sticky paper that resembles masking tape) leaving the vinyl graphic on the backing paper. If any part refuses to stick to the backing paper, press it down between your fingers until it does.

Step2: Align the backing paper with vinyl onto the model where you wish to apply it, rub it down firmly and peel back the backing paper to reveal the graphic

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 Lightning is capable of flying in most winds from zero to gale force. 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.

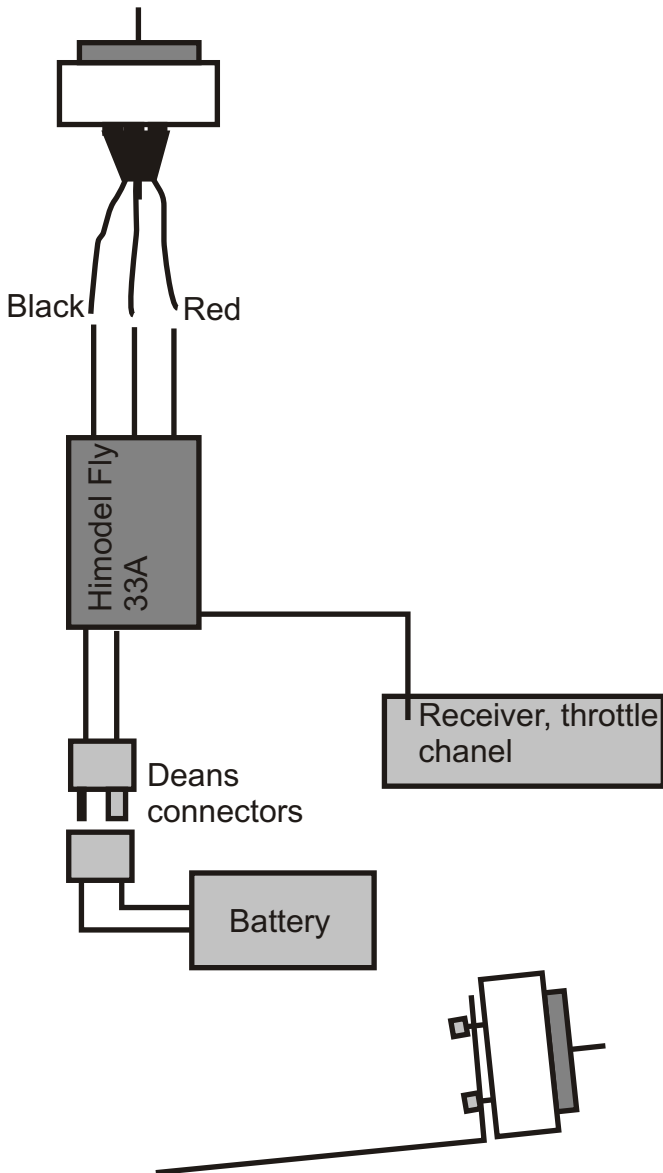
The Buzz Lightning will glide for some time, so plan you landing, by reducing height some distance from the landing site and glide it in with a little throttle if required.

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

Power system installation

Himodel 2600kv motor



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.

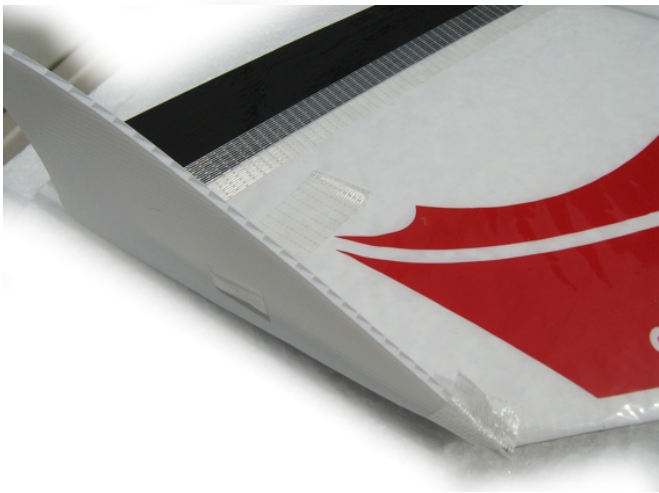
Trouble shooting:

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.



DESIGNED AND MANUFACTURED IN
THE UK BY FLYINGWINGS LTD