

MOLEWING S



INSTRUCTIONS

Introduction

Welcome to the 3rd generation of an outrageously flyable wing using EPS moulded foam to give every pilot hours of phenomenal flying.

Kit Features

Suitable for beginners and experts

Quick build, factory moulded and finished wing, speeds assembly.

Tape covering included in kit.

Can be built in 2 versions.

CAUTION!

The MOLE E/S is not a toy. it could potentially cause injury to persons and/or property. You should take care and observe the principles of safety when flying this model. Observe the BMFA safety code at all times.

YOU ASSUME ALL RISK.

Before building, please read the instructions thoroughly and familiarise yourself with the construction sequence.

Wing Preparation

Remove the moulding marks from the edges of the wing surface using fine sandpaper on a block. You can if you wish remove the round moulding marks from the surface of the wing, but try not to mark the surface too much. This is only necessary for cosmetic reasons and will in no way affect the flying quality of the aircraft.

Joining the Wing Panels

Check wing root for fit, if necessary, sand slightly. Apply glue, two part epoxy, to both surfaces and bring them together so that they line up. Hold the joint secure with covering tape and allow to dry (see fig 1).

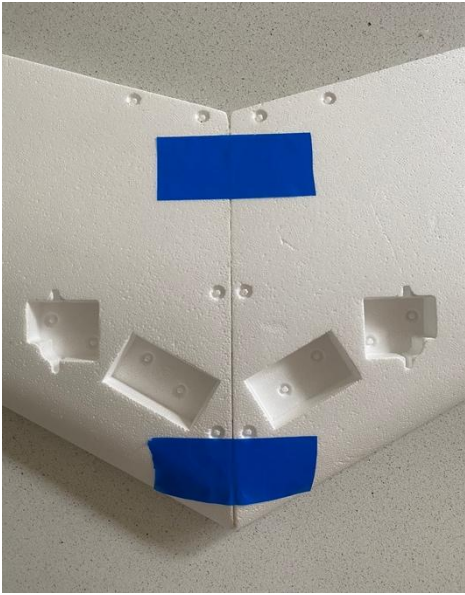


Fig 1

Carbon Fibre Spar

On the underside of the wing measure 20cm from the nose of the wing back towards the trailing edge, mark this point. Centre the spar on the wing at this point, using the spar as a straight edge, mark the wing (see fig 2). Using a blade, cut a slot into the foam from left to right (or right to left) to the same depth of the carbon fibre spar. Using a 15min or 30min Epoxy glue, glue the carbon fibre spar into place, allow to set.



Fig 2



Fig 3

Final Wing Preparation

Lightly sand the wing panels at the glue joints to remove any excess glue taking care not to damage the wing surface. Now remove any traces of dust before starting the tape covering.

Covering

Start by laying a cross of glass weave reinforcing tape on the top and bottom of the wing (see fig 3)

Now lay strips of tape from the tip to the centre of the wing at least 50mm past the centre. Lay one strip of tape at a time, working forward and over lapping by approximately 6mm each time (see fig 4). Cut the tape in line with the leading edge wrapping around approximately 25mm. Now repeat for the other panel and also the underside of the wing.



Fig 4

Finish each wing with a single piece of tape wrapped around the whole length of the leading edge and a single piece of tape wrapped around the centre of the trailing edge extending approximately 150mm out from the centre line.

You will now need to clear the covering from the R/C ready-moulded holes. Cut the covering diagonally across each hole, fold down and stick (see fig 4).

Elevon Assembly

Before fitting elevons it is best to cover them with tape. Make sure that the tip edges are covered as this will prevent dirt entering the flutes.

Note: Care must be taken when separating both the elevons and wing tips from each other.

Position the elevons (widest part near wing tip) against the trailing edge of the wing and hold it in place temporarily with small pieces of glass weave tape placed on the top surface of the wing. (see fig 5) Remember to position the wide end of the elevons approximately 5mm inboard from the tip to clear the tip fin.

Please note, any marks on the elevons and wing tips are caused during the cutting of the corex. This will not impede the covering process.



Fig 5

Ensure that the elevons are free to move at least 15mm in each direction.

Using covering tape to form the hinge, run a strip of tape approximately 15mm from the back edge of the wing, from the wing tip to the center of the wing and attach the elevon (see fig 6.). Ensure that the elevon can move freely in BOTH directions.



Fig 6

Swing the elevon to the top of the wing and lay flat and using the covering tape, complete the hinge with another full-length strip on the bottom as shown in fig 7



Fig 7

Radio Installation

The ready moulded holes are made to suit standard sized R/C. Smaller and lighter components may be used but extra nose weight will be needed to compensate.

Before installing the servos plug the whole radio system together. Switch on and centre trims. Position the servos in the servo wells with the arms extending vertically. The servos should be a good push-fit into the wells.

Fit the battery into the pre-formed moulded hole. Hold the battery in place with double-sided tape.

Note: The battery compartment may need to be adjusted to suit your choice of battery.

The battery can be plugged in or out of the receiver to switch on and off, or if you prefer to use a switch, make sure that it is recessed below the wing surface to avoid accidental operation.

Cut slots in the wing no more than 5mm deep to conceal all wiring.

Install the receiver as per your radio manufacturers recommendations.

Your R/C installation should now appear as in fig 8



Fig 8

With tape over-cover all the R/C installation including the servo wires leaving a small space for the servo horns and the on/off function

Control Linkage Installation

Position elevon control horn so that the pushrod from the servo will run parallel to the airflow.

The control horn should be fitted near the front of the elevon so that the holes are directly above the hinge line.

The pushrod clevis is fitted into the third hole from the centre of the servo horn. The other end of the pushrod is fitted to the elevon horn using a Z bend or swing keeper.

The final pushrod installation should now look like fig 9



Fig 9

Radio Setup

Switch on radio and centralise the trims.

Set the elevon neutral by laying a straight edge under the wing at the trailing edge (see fig 10) The elevons should appear to have a few degrees of reflex (up elevator).



Fig 10

Move the transmitter aileron stick from centre to full left (not up or down). The elevon throw should be 10mm (measured 25mm from the tip). Now repeat moving TX stick to full right and check again for 10mm control movement.

When moving the elevator stick full up to full down, the throw should also be 10mm in each direction.

Wing Tips

Before attaching the wing tips, cut the tapered end to match the leading edge shape, attach the wing tip to the end of the wing using the pre-formed slot by passing a piece of tape through the slot from the top of the wing and wrap it around to the bottom of the wing.

Add two more pieces of tape to secure the fin in place. Make sure that the elevon will not bind as it moves.
(fig 12)

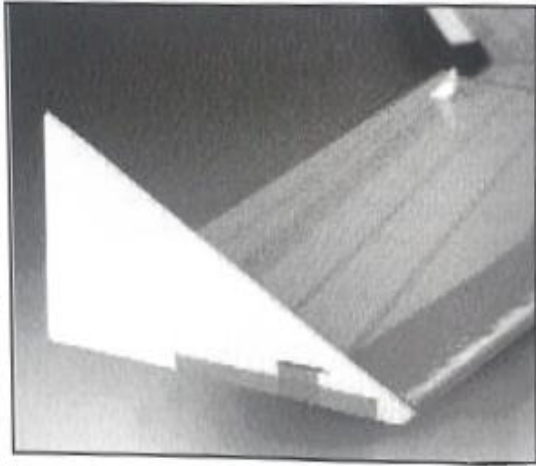


Fig 12

Centre of Gravity

Balancing of the aircraft to achieve the correct centre of gravity is very important.

The C of G should be (20cm) back from the tip of the nose.

To achieve the C of G, lead weight may be added by cutting a further slot in front of the receiver, remember to tape over to secure the lead in place.

Decal

Apply decal to a clean and dust free covering, making sure when removing the transfer tape that the letters adhere to the finished wing.

Launching

Hold the nose of the Molewing S with your palm up over your head and your thumb wrapped over the top edge of the wing. Take a few steps forward and give a good strong throw into the wind, you may need to add a small amount of up elevator to make the model climb away.

Happy Flying

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