

MONGREL MODELS

Imported by *AUSSIE FLIGHT*



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Assembly instructions for EPO Radio Control (RC) model airplanes.
Please read instructions carefully before assembling any models.

These instructions are for the models listed in the specifications table imported by Aussie Flight.

These instructions are a guide only; all RC airplanes should be assembled and flown by competent adults.

All Local, State and Federal laws must be complied with while using all RC models.

Models can either be built as a powered version or as a PSS version.

Hints and tips taken from customer reviews are shown in **Blue**.

We thank all our customers who have contributed to these instructions, if you have any comments or helpful hints to add please e-mail them to:

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1. General information.
2. Specifications.
3. Wing Assembly.
4. Horizontal stabiliser and Elevator
5. Vertical stabiliser and Rudder.
6. Motor installation.
 - 6.1 Do335 rear engine.
 - 6.2 A10 EDF units.
 - 6.3 F16 EDF unit
7. Final assembly.
8. Balancing.
9. Control throws.
10. Supplementary Information.
 - 10.1 Spare Parts.
 - 10.2 PSS Conversions.

1. General information.

These models are made from EPO foam, this type of foam is relatively resilient and does not fracture like some other types of foam, where glue is used during assembly and repairs make sure glue is chosen that does not melt the foam.

The models require assembly and installation of all electrics, please assemble carefully and choose and install all components to ensure the model operates in a safe way.

Please check and test fit all parts and components before final attachment.

Electric equipment should be chosen that delivers adequate power to fly the model safely.

Choose servos with enough power to operate control surfaces during flight.

It is recommended that chosen electrics are all connected as per how they will be installed in the plane, they can then be checked for operation and servo zero position before installation.

Be careful the motor does not operate by mistake and cause injury or damage, no NOT have a propeller fitted when checking components.

Before applying glue to any parts remove paint, dust, grease, etc from mating surfaces.

For more information on assembling and flying RC model planes please refer to the web site www.rcgroups.com

**THIS IS NOT A TOY.
ONLY EXPERIENCED PEOPLE SHOULD BUILD
AND FLY RC PLANES.**

2. Specifications.

Model	Length mm	Wingspan mm	Weight g	Balance point mm	Control throws mm			*
					Surface	Up	Dwn	
Spitfire	790	870	470g		Ail Rud Elv			1O
Me 109	720	890	470g		Ail Rud Elv			1O
FW 190	890	1010	580g		Ail Rud Elv			1O
F4U Corsair	750	870	450g		Ail Rud Elv			1 CO
P47 Thunder bolt	730	830	470g		Ail Rud Elv			1O
P51 Mustang	680	890	470g		Ail Rud Elv			1O
AT6 Texan	680	900	480g		Ail Rud Elv			1 CO
Zero	720	890	480g		Ail Rud Elv			1 CO
Gee Bee					Ail Rud Elv			1O
Do 335								2O
A10	870	970	610					2D O
F16	1030	840	630					1D O

1= One engine plane. 2= two engine plane.
C= Removable engine cowl. D= Ducted fan. O=EPO foam. S= EPS foam

Actual weight may vary depending on assembly procedure and components installed.

3. Wing Assembly

The wing is supplied with the ailerons already fitted and hinged, please check for correct attachment or any damage.

Make sure Ailerons move freely and are not binding.

Test fit the wing to the fuselage.

Install the servo in the servo tray and screw down.

Connect the push rods to the servo and control horns.

Check the Ailerons align with the wing, adjust the control clevises if required.

Wing done, how easy was that ☺

When wing is finally fitted to fuselage it must be secured by a screw.

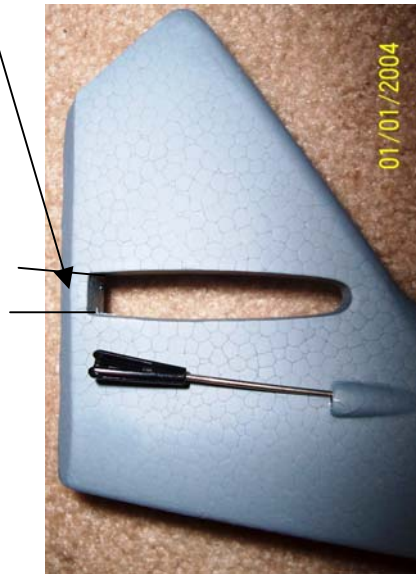
4. HORIZONTAL STABILISER

The horizontal stabiliser is supplied with the elevator already fitted and hinged, please check for correct attachment or any damage.

Make sure elevator moves freely and is not binding.

Fit the control horn to the elevator; make sure it is fitted the correct way.

Test fit the horizontal stabiliser to the fuselage SOME models require a small piece of foam to be cut out at the tail (Me109 shown) so as the Horizontal stabiliser can slide in.



Make sure the horizontal stabiliser and elevator control horn are fitted the correct way so as they align with the correct push rod.

Apply glue to the mating surfaces and fit horizontal stabiliser making sure it is aligned correctly with the fuselage and parallel to the main wing.

Set aside assembly and allow to dry.

Install the servo in the servo tray and screw down.

Connect the push rods to the servo and control horn.

Check the elevator aligns with the horizontal stabiliser, adjust the control clevis if required.

5. Vertical stabiliser and Rudder.

Most models have the vertical stabiliser molded as part of the fuselage and only require the rudder to be fitted. The rudder is supplied pre hinged, please check for correct attachment or any damage.

Some models have the rudder pre installed for these models you only need to do parts marked ^.

^Fit the control horn to the rudder; make sure it is fitted the correct way.

Test fit the rudder to the vertical stabiliser; most models come with the hinge mating slots pre cut.

^Make sure the rudder control horn are fitted the correct way so as it aligns with the correct push rod.

^Make sure the rudder will mover freely and is not binding.

Apply glue to the hinge surfaces and/or hinge slots and fit rudder making sure it is aligned correctly and the rudder will mover freely and will not bind when the glue is dry.

Set aside assembly and allow to dry.

^Install the servo in the servo tray and screw down.

^Connect the push rods to the servo and control horn.

^Check the rudder aligns with the vertical stabiliser, adjust the control clevises if required.

6. Motor installation.

The motor mount is a 'standard' stick type mount; you need to choose what type of motor you are using as this affects the installation of the stick further on in the instructions.

Most of the models have the engine cowl molded as part of the fuselage, if you intend to do a firewall mount this would be easier with one of the models that has a removable engine cowl*.

For some reason only known to the manufacturer sometimes the motor mounting stick comes pre glued in the model and some times it doesn't, I guess if yours is already installed you can skip a couple of the next steps ☺

Mount the motor to the stick as it will be installed in the engine bay.

Slide the stick in to the mating square hole on the firewall as far as possible BUT leave enough of the motor shaft sticking past the engine cowl for fitment of the propeller and spinner.

Following hint is taken from the Spitfire review at www.mongrelgear.com.au

Before gluing the stick in place, you will need to make a choice on what sort of motor you are going to run either an out-runner, or a gearbox arrangement. Once you cut and glue the stick, it will be very difficult to change because one requires a different length stick to the other. As you can see from the pics, you can opt for either arrangement.

I chose to use a brushless out-runner, and so measured the stick, cut accordingly and glued it into place with 5 minute epoxy. I used a little hot glue to secure the ESC up the front in the cowl and pushed the motor onto the stick. Now this is where you need a good eye. You will need to push a hole though the fuselage in order to get a screw into the mount. You could epoxy the mount onto the stick, but in doing so, you are locking your motor in for life. I chose to pop a small hole in the top of the fuse big enough for a small screw, and screwed the mount to the stick.



On single engine propeller* planes you will need about 2 degrees right and 2 degrees down thrust, the D0335 does not need any thrust angle.

When you are happy with the location of the stick/motor remove them and apply glue to mating surfaces of the stick and the model, do NOT get any glue on the engine mount.

On the models with removable cowls* it may be easier to have them removed for the next stage.



Insert the stick back in to the firewall hole making sure there is plenty of glue on the mating surfaces.

Set aside assembly and allow to dry.

If you ever need to remove the motor from the stick mount on models that have a fully molded engine cowl you may need to make a small hole to access the retaining screw.

7. Final assembly.

The wheels are normally pre-fitted to the wire LG simply slide the LG in to there slot and secure.

The clear canopy normally attaches to the top of the removable battery cover; the canopy can be secured with some squares of thin double-sided tape or Velcro.

The main wing is held in by small plastic tabs at the front and a screw at the back, make sure it is attached to the fuselage correctly before flying.

The removable part of the fuselage (normally under the canopy) that gives access to the battery and receiver (RX) area is retained by a molded tab at the front and a magnet at the rear. Make sure that it is installed correctly before flying.

8. Balancing.

All models are balanced an approximately 25% on the mean average cord (MAC). To balance the model it must be fitted with all the electronics, battery and assembled as if it were going to fly, the battery should be secured in the battery area by Velcro or some other method that stops it moving during flight

The balance point for each model is listed in the specifications, these are measured from the wing leading edge at the wing root.

To achieve the correct balance you can move the battery forward or backward. If you can not achieve the correct balance this way you may need to add a small amount of weight to the nose or tail of the plane.

9. Control throws.

The suggested control throws are listed in the specifications, they can be set by either moving the push rod in or out on the control horns and/or adjusting the throws through the settings on your transmitter (TX) or a combination of the 2.

As these planes can be very responsive to control input it may be a good idea to set some expo if your TX has this function.

10. Supplementary Information

10.1

A range of spare parts is available for MONGREL MODELS; please see the websites for details.

These models are not hard to assemble however they should only be assembled and flown by experienced modelers, if you are at all in doubt about anything please seek experienced help

We hope you enjoy flying your MONGREL MODELS RC airplane, please make sure it is assembled correctly and all components are in good working order before flying.

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