



Douglas A1 Skyraider Sport Scale Model Aircraft Assembly and Instruction Manual



Warning:

This radio controlled model is not a toy. It requires skill to fly and is not recommended for the novice pilot. It should not be operated by children without the supervision of a suitably experienced adult. Max-Thrust reserves the right to modify the specification of this model at any time.

Safety Precautions

- 1) Do not attempt to repair or modify this aircraft with non-factory parts.
- 2) Never fly this model over roads, railway lines, near to power lines, airports, buildings or any people.
- 3) Do not fly this model in excessively strong winds, in the rain, or thunderstorms.
- 4) Do not fly or launch the model towards people.
- 5) Keep hands and face away from rotating propeller at all times.
- 6) We strongly recommend that all fixings and fasteners used in the construction of this model are checked regularly for integrity. Failure to do so could cause a crash or personal injury.
- 7) We only recommend the use of 2.4GHz radio equipment with this model.

Disclaimer

- 1) This radio controlled model is not a toy. Used incorrectly it is capable of inflicting serious injury to persons or damage to property. The owner/pilot assumes all responsibility for any damage to persons or property resulting from the use of this product.
- 2) The manufacturer and distributor decline all responsibility for any liability arising from use of this product.
- 3) It is very important that you follow all instructions for assembling and setting up of this model. Failure to do so could result in a loss of control and possibly a crash.

Overview

Thank-you for purchasing this MAX-THRUST Douglas A1 Skyraider radio controlled model aircraft.

The A1 Skyraider offers a stunning combination of terrific looks and sensational flight performance. Manufactured from “EPOFLEXY” it is extremely robust, however, in the event of a “less than perfect” arrival, we supply a range of spares to get you flying again in the shortest time. It is capable of a wide range of aerobatic manoeuvres to thrill the experienced pilot, but with reduced control throws it provides a solid and predictable flight performance, perfect for the sports flyer. We are certain you will enjoy your new model, please take the time to read this manual thoroughly and understand its contents completely prior to commencing assembly.

Key Features

Powerful Brushless Motor
80A Brushless ESC
Retracting Undercarriage
Highly Detailed 4 Blade Propeller
Factory Applied Decals
Pre-Installed servos
“Live” Control Surface Hinging
Durable “EPOFLEXY” Construction
Steerable Retractable Tail Wheel

Specification

Wingspan: 1600mm
Length: 1232mm
Flying Weight: 2800g
Motor: 4258 Out-Runner
ESC: 80A
Servos: 4 x 9g - 2 x 17g
Battery: 3350mAh - 5550mAh 4S 14.8V Li-Po (Not Included)

Parts List.

1. Fuselage
2. Wing Panels
3. Horizontal Stabilizer
4. Fin & Rudder
5. Aerial
6. Wing Guns
7. Canopy
8. Main Spar
9. Drop Tank
10. Bombs
11. Retracts and Doors
12. Fixings Pack
13. Propeller
14. Propeller Adaptor
15. "Y" Leads



Tools required to complete

1. Screwdrivers
2. Pliers
3. Modelling Knife
4. Scissors
5. Measure or Ruler

Additional items required to complete

3350mAh - 5550mAh 4S 14.8V Li-Po battery (POWER-TECH 5550mAh 33C 4S 14.8V recommended Part No. PT-B-3355504S)

Charger (Power-Tech C6, B606 or X-Drive 6 recommended)

2.4GHz Transmitter

2.4GHz Receiver

Self-Adhesive Tape

Thread Locking Compound

Recommended Item:

Servo Tester (Power-Tech, Part No. PT-ACC-ST)



Please Note:

“EPOFLEXY” is a very tough and durable material perfect for the manufacture of model aircraft. When using screwed fixings with “EPOFLEXY” components it is important to tighten the screws sufficiently to provide a firm fixing.

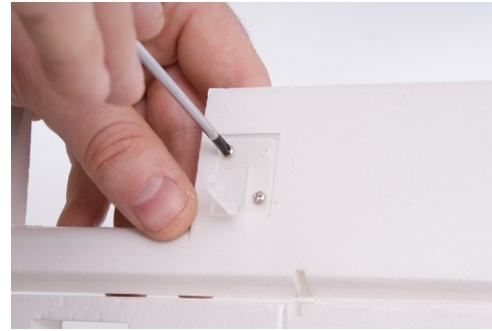
Excess tightening could result in the foam material becoming compressed, possibly damaging or distorting the part. Take care to ensure that all screws are tightened sufficiently to provide a firm fixing, but do-not over tighten. We recommend that all fixings are checked regularly for security and safety purposes.

1. Hinge check

Check that all control surface hinges are firmly secured. If required they can be glued in position using a small quantity of the supplied adhesive.

2. Horizontal Tail Plane

Fix the elevator control horn in the moulded recess as shown using two M2 x 15mm screws, (**image 1**). Make certain that the plastic horn is fitted to the correct side, with the plastic reinforcement plate fixed in the moulded recess on the top side of the elevator.



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Using a light grade abrasive paper, lightly abrade the painted mating surfaces where the horizontal tail plane joins the fuselage. This provides a good key for the adhesive. (**image 2**). Glue the horizontal tail plane in position using the supplied adhesive, (**image 3**). Secure in position using the two M3 x 40mm screws, (**image 4**). Use the adhesive sparingly towards the edges of the parts to be glued and immediately wipe any excess from the joint.



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3. Vertical Fin & Rudder

Fix the plastic rudder control horn in the moulded recess using two M2 x 30mm screws, (**image 5**). Make certain that the plastic horn is fitted to the correct side, with the reinforcement plate fixed in position on the opposite side of the rudder.

Using a light grade abrasive paper, lightly abrade the painted mating surfaces of the rudder and horizontal tail plane to provide a good key for the adhesive, (**image 6**).



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6

Apply adhesive sparingly to the mating surface of the horizontal tail plane and push the fin assembly into position. Remove any excess adhesive immediately. Secure in place using the two M3 x 40mm screws via the fixing holes positioned underneath the fuselage, (**image 7**).



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4. Fuselage Control Rods

Centre the elevator and rudder servos. Connect the elevator and rudder plastic links to their control horns. Make certain that the control surfaces are in their neutral positions and that the plastic links are “snapped” closed, (**image 8**). Any minor adjustments to the neutral positions of the control surfaces can be made by rotating the plastic link on the threaded portion of the control rod.

5. Wing Assembly

The main retract units will need fitting, these are handed as they twist during the retract and lowering process.

The wheels should be located on the outside edge of the oleos when the retracts are lowered. This can be tested with the units powered up, or with a Power-Tech Servo Tester.



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THE RETRACTS SHOULD NEVER BE FORCED

Connect the electronic retract unit to the extension lead located in the retract bay, then ensuring that the servo lead is tucked neatly inside the wing panel, the retract unit can be sunken into the wing. (**image 9**)

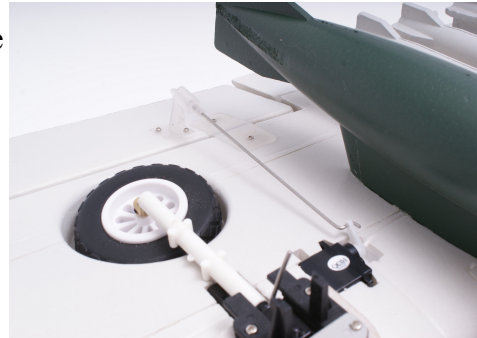
Locate the twist plate on to the retract unit, the four holes should line up with the holes in the retract base. Two M3 x 20mm screws can be screwed into the trailing edge of the retract unit and twist plate. The retract cover can be lined up with the leading edge of the retract cover and secured using two more M3 x 20mm screws. (**image 10**)



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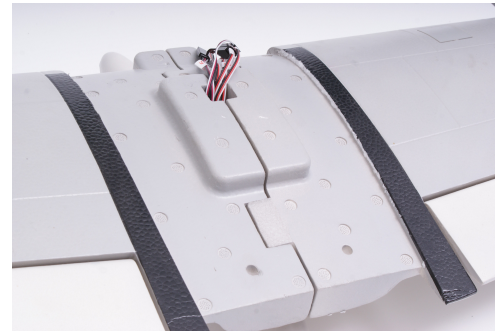
You may wish to connect the retract door to the leg so the door will close when the leg retracts, this can be done with a small length of wire tied through hole in the door and the hole halfway up the oleo itself.

Starting with the left hand wing panel, fix the aileron control horn and its backing plate in position using the four M2 x 15mm screws. The flap control horn is secured in position using four M2 x 25 mm screws. Check the operation of the wing servos and ensure they are correctly centred. Locate the aileron and flap control rods and connect them to their respective servos, (**image 11**).



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Note: The Z-bend of the control rod is located on the outermost hole on the servo horn. Connect the plastic control links to the corresponding horns on the control surfaces, ensuring that the control surfaces are in their neutral positions and that the plastic links are “snapped” closed. Any minor adjustments can be made by rotating the plastic link on the threaded portion of the control rod.



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Locate the wooden wing spar and dry-fit the two wing halves to ensure a good fit. Make certain that all of the servo leads are routed correctly and there are no gaps at the root of the panels, (**image 12**).

Note: Due to the moulding process, a very small amount of trimming may be required to obtain a perfect fit.

For ease of transportation and storage, it is possible to fly your A1 Skyraider without using adhesive to join the wing panels. However, we always recommend that they are glued together as this provides a huge amount of additional strength to the model.



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Remove the panels from the spar and lightly abrade the mating surfaces of the wing roots to ensure a good key for the adhesive. Apply adhesive to one half of the spar and slide into position on the corresponding wing panel. Then apply adhesive to the root section of that wing panel and the remaining exposed section of the spar (**image 13**). Slide the remaining wing panel onto the spar ensuring that the servo leads are routed correctly and not interfering with the fit.

if you wish to fit the optional guns and bombs (included) do so now using the supplied adhesive, (**image 14**).



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Note: The centre drop tank is held in position with pre-installed magnetic catches.

Position the wing onto the fuselage and fix in place with the two M3 x 50mm screws, (**image 15**). Make certain that all control wires are kept inside the fuselage and do not foul the wing seat area.



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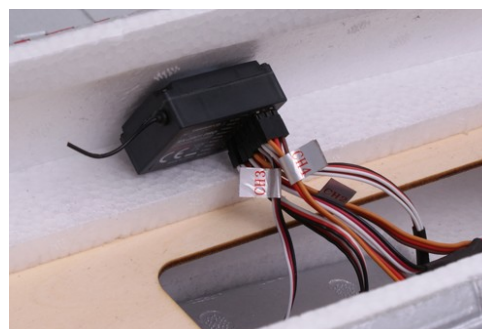
Connect aileron (marked CH1) and flap (marked CH6) control leads to the corresponding “Y” lead connectors. The retracting undercarriage main and tail wheel control leads connect to the “Y” connector with 3 female sockets. (marked CH5)

6. Receiver installation.

Note: We only recommend the use of 2.4GHz radio equipment with this model and make the following recommendations for receiver location and mounting. These must be followed in conjunction with the instructions supplied by your receiver manufacturer.

Connect the aileron (marked CH1), retracting gear (marked CH5) and flap (marked CH6) “Y” leads to corresponding outputs on your receiver. Locate the leads from the ESC, the lead marked **3** is the throttle control and should be connected to the corresponding output on your receiver. Please double check that all plugs are connected to the correct outputs on your receiver and that all leads are routed in a neat and tidy manner.

Mount the receiver inside the fuselage as shown, (**image 16**) using your choice of double sided self-adhesive or “Velcro” tape. The ESC should be fixed inside the fuselage securely where it will not foul any moving parts.



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7. Final Assembly

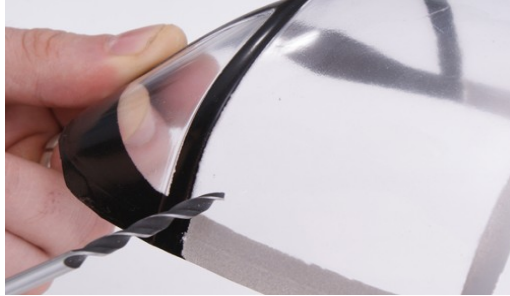
Test all servo connections, and make sure that all control surfaces are operating correctly. Once you are happy that everything is working, it may be easier to manoeuvre the model with the wing removed.



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Fit the aluminium propeller adaptor to the motor using the 4 x M2.5 x 10mm cap head screws. It is very important that these fixings are tightened securely. Slide the propeller onto the shaft, making sure it is slotted over the keyed prop adaptor. Next fit the spinner washer and secure in position with the securing bolt (**image 17**). For optimum performance, some pilots may wish to balance the propeller. It is very important that the propeller bolt is secure.

If you wish to install a pilot figure, do so now. We recommend that you drill two small holes as shown in the clear canopy to allow any heat to disperse, (**image 18**). The canopy cover may require some trimming to obtain a perfect fit. This should be tested and trimmed if necessary before the canopy is assembled. Carefully apply adhesive to the foam section of the canopy assembly. Use the adhesive sparingly and position the clear canopy in place on the moulding, (**image 19**). Allow to dry thoroughly before attempting to fit the assembly onto the fuselage.



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The canopy is held in position with pre-installed magnetic catches. Do not attempt to fly the model without the canopy secured in position.

8. Battery Installation

Your flight battery, (not included) needs to be firmly secured in the battery compartment to prevent it from moving in flight, (**image 20**). The model includes one battery positioning strap, however the battery will require an additional method of fixing to provide adequate security. Because most experienced pilots will have a preferred method of battery retention, this has not been included with the model. We recommend the use of additional straps combined with self-adhesive “Velcro” tape.



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9. Final Checks

Double check that all fixings and fasteners used on the model are secure, including snap links, servos screws, wheel retaining screws etc. Check that all control surfaces are moving in the correct direction in relation to control inputs from your transmitter.

We recommend the following control throws for initial flights, however these can be adjusted to suit your personal preference after flight testing has been completed.

Elevator:	20mm	deflection each way.
Ailerons:	15mm	deflection each way.
Rudder:	20mm	deflection each way.
Flaps:	45°	deflection maximum.

The centre of gravity of your A1 Skyraider is **105mm** back from the furthest forward point of the wing. Using the recommended 5550mAh flight battery, this centre of gravity should be easily achieved. If you choose to use a lighter battery it will be necessary to add additional ballast to the model in order to achieve the correct centre of gravity.