

SKYANGEL



Assembly and Operating Manual



Specification

- Length 25-1/5"(640mm)
- Wing Span 25-2/5"(645mm)
- Flying Weight 13 oz.(370g)

R-86

Dear customer,

Congratulations on your choice of a factory-assembled model aircraft from the **SKYANGEL Hummingbird range** and thank you for placing your trust in us.

Very little preparation work is required to get this model ready to fly. To operate your new model safely it is important that you read through all of the instructions and safety information included with your model, before you fly it for the first time.

The illustrations in this manual show the Sabre version of the model with factory applied decals.

The power system

The model is powered by a brushless outrunner motor and ducted fan, both of which are factory-installed on the Ready-To-Fly version.

The motor is connected to the electronic speed controller which is factory calibrated on the Ready-To-Fly version. All that is required is to charge the Li-Po battery, following the safety instructions, and connect battery to the electronic speed controller.

The radio control system

To fly the F-86 you will need a radio control system with at least four channels. 2.4GHz radios systems are recommended, similar to the unit included with our deluxe version.

The servos for the ailerons and the elevators are factory-installed.

The power for the receiver is drawn from the electronic speed controller's integral BEC system.

The electronic speed controller is located inside of the fuselage, in front of the ducted fan.

To check the model's operating systems, first set the control surface servos to neutral, with the transmitter sticks and trims at centre.

When you wish to fly the model, always make sure the transmitter is in the "OFF" position. Move the throttle stick to the "OFF" position as well. Then connect the flight battery to the electronic speed controller.

Switch off in the reverse order: disconnect the battery from the electronic speed controller first, and then switch off the transmitter.

Glued joints, suitable adhesives

Foam safe epoxy is recommended and available from most reputable model retail shops.

Trial-fit all parts "dry" before applying glue.

Follow the recommended curing time suggested by the glue manufacturer. Allow the glue to fully cure (harden) to the point where the joint can be placed under stress.

Kit contents

Fuselage, with motor, electronic speed controller and servo

Clear canopy and cockpit

Main wing panels with ailerons and servo

Left / right tail plane panels with elevators and vertical stabilizer

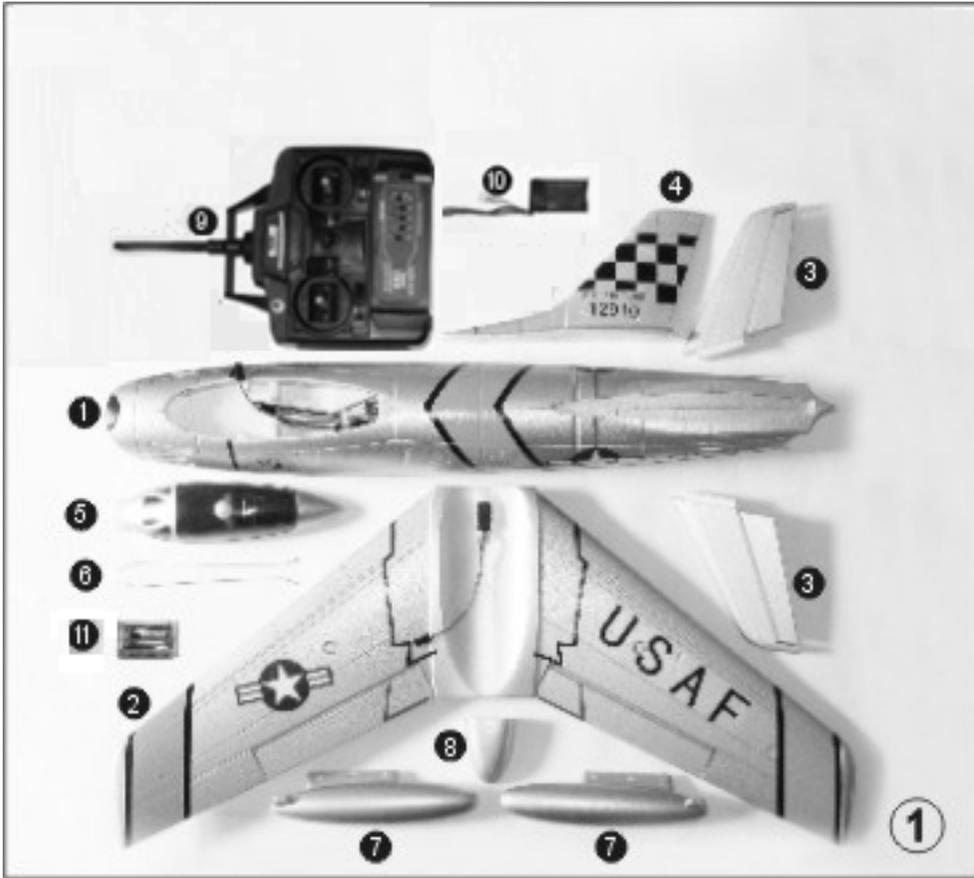
Accessories

1 x Li-Po battery, 3s 950mAh 20C

1 x 20A Brushless ESC (Electronic Speed Controller)

Fig. 1 Open the box and check all the parts.

Parts Illustration



Parts List

NO.	Description
1	Fuselage
2	Wing Set – One Main Wing Panel
3	Tail Set - One Left (and one Right) Horizontal Stabilizer with Elevator
4	Tail Set - One Vertical Stabilizer
5	Cockpit Canopy
6	Push Rods Set
7	Big Missiles
8	Landing Skid
9	Radio Control Transmitter (we highly recommend 2.4 GHz system)
10	950mAh 11.1 Volt 20C Li-Po Battery
11	Balance Charger



Fig. 2 - Glue the horizontal stabilizers to the slots at the rear of the fuselage (glue not included).

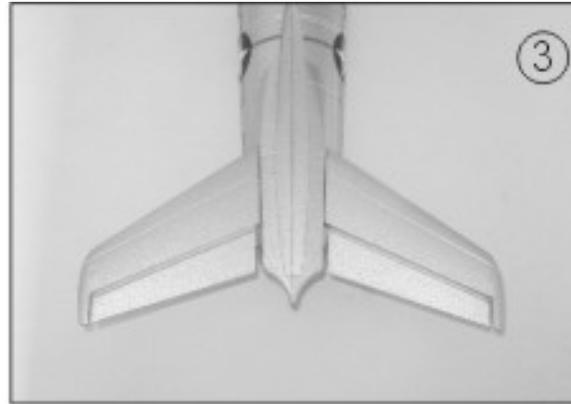


Fig. 3 - Remove any excess glue and hold in position until glue sets. The photo shows the finished view.



Fig. 4 - Connect the push rods to the elevator servo arm and control horn.

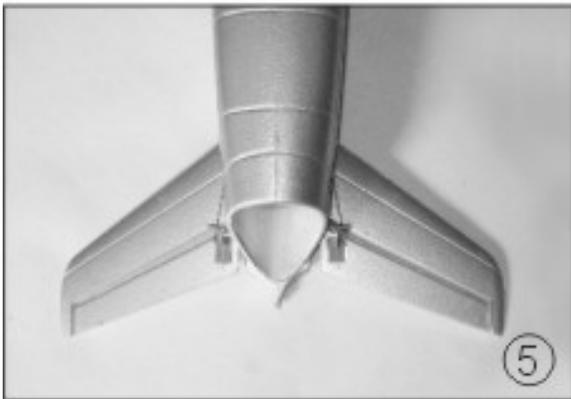


Fig. 5 - Photo shows the finished view after elevator push rods are assembled.



Fig. 6 - Locate the aileron push rods set.

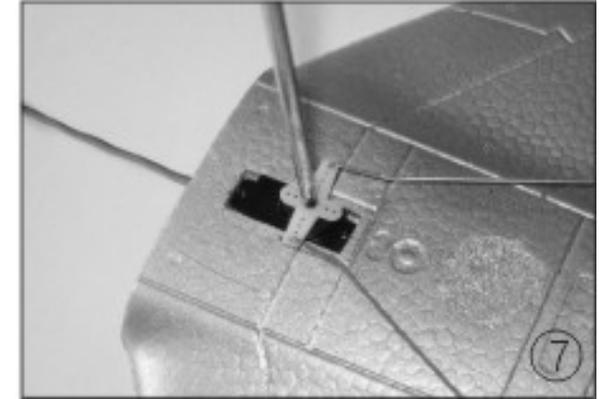


Fig. 7 - Connect the push rods to the aileron servo arm and control horns.

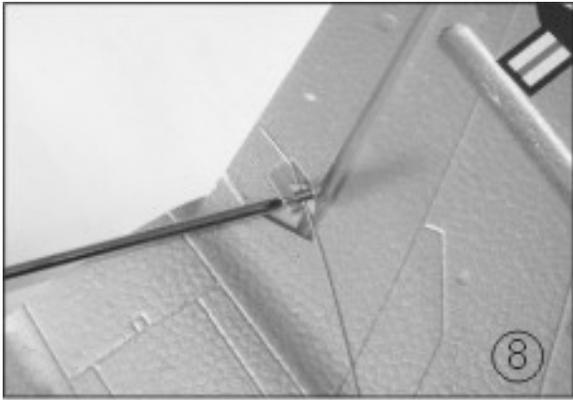


Fig. 8 - Tighten the push rods on the aileron EZ connectors.



Fig. 9 - Photo shows the finished view after aileron servo and pushrods are assembled.



Fig. 10 - Insert the aileron servo wire into the fuselage.

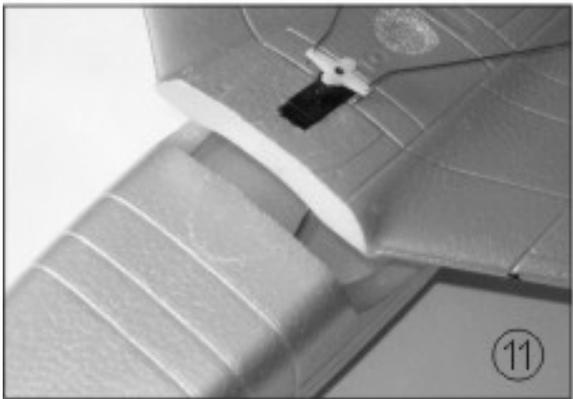


Fig. 11 - Glue to the wing panel to the fuselage (glue not included).

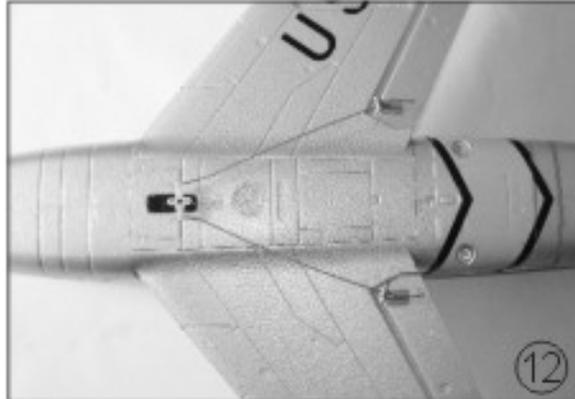


Fig. 12 - Photo shows the finished view after wing panel assembled.

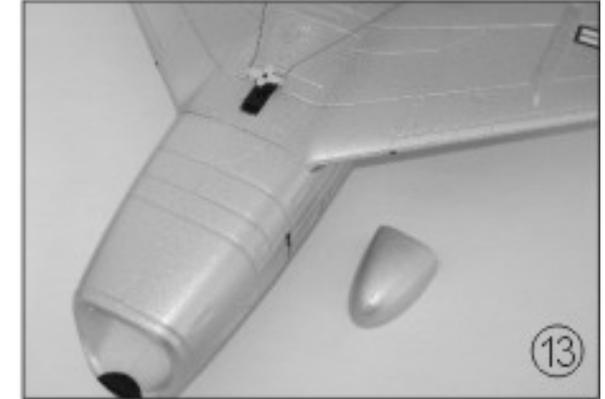


Fig. 13 - Locate the landing skid.

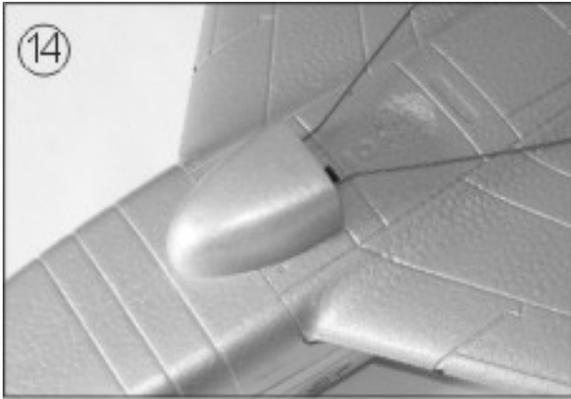


Fig. 14 - Glue the landing skid to the fuselage along the slot and make sure the servo is completely under the cover.



Fig. 15 - Glue the vertical stabilizer as shown in the photo (glue not included).



Fig. 16 - Connect the electronic speed controller and servos to the receiver. Refer to the radio instructions for the correct channel sockets and servo lead polarity.



Fig. 17 - Locate the battery and canopy. Charge the battery according to the safety instructions before installing.



Fig. 18 - Photo shows battery leads connected to the electronic speed controller.



Fig. 19 - Insert the battery into the front of the fuselage.



Fig. 20 - The canopy is held in place by magnets and can be lifted off.

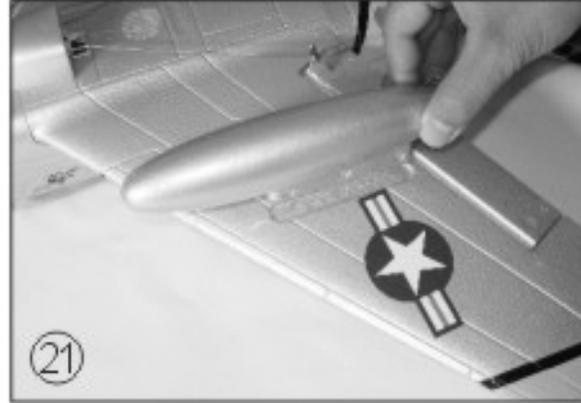


Fig. 21 - Glue the missiles into the slots and make sure there is no excess glue. Hold in position until the glue sets.



Fig. 22 - Photo shows the finished view after missiles are assembled.



Fig. 23 - Congratulations, you have completed the assembly process. We hope you enjoy flying your new model!

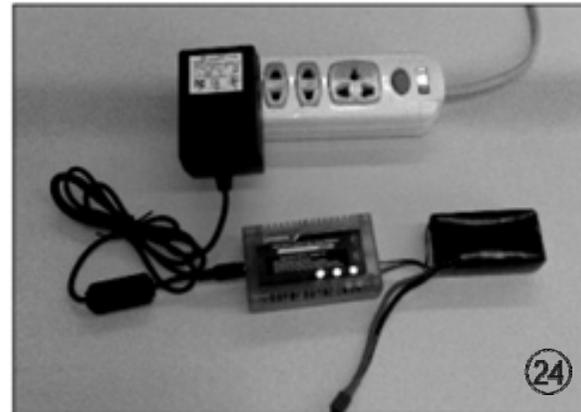


Fig. 24 - Charge the flight battery; connect the Equalizer lead using an adapter lead matching your charger (adapter lead not included)

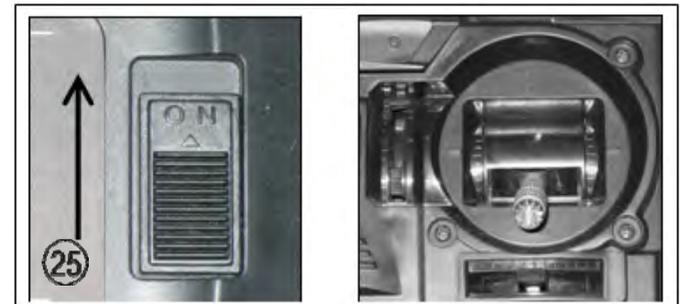


Fig. 25 - Switch the transmitter on, and move the throttle stick to the "Motor OFF" position. (Diagram MODE 1 right throttle control stick)

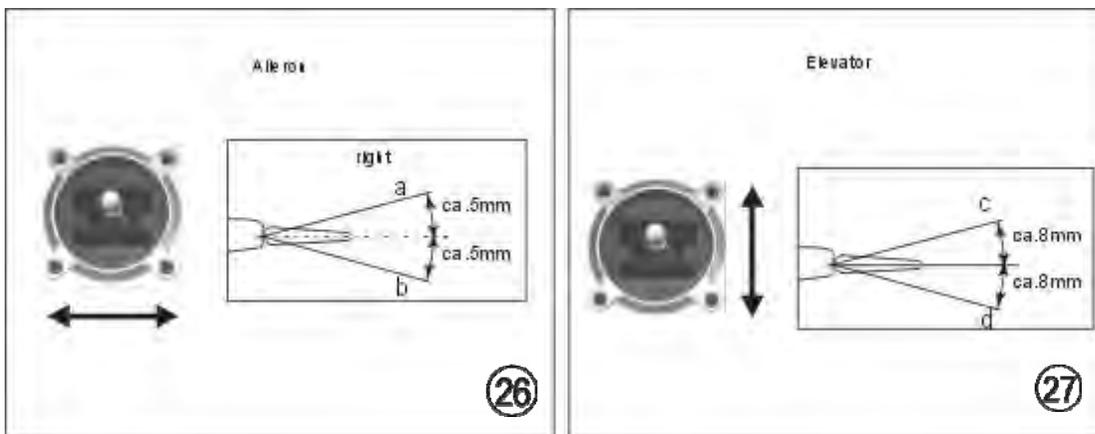


Fig. 26 and 27 - Checking Ailerons and Elevators

- Check that the control surfaces respond to the appropriate movements of the transmitter sticks. If not, swap over the connectors at the receiver.
- Check the neutral position of the control surfaces; you may need to screw the clevises in or out to correct any discrepancy.
- Stand behind the model.
- Check the direction of rotation of the servos:
- Move the aileron stick to the right (a), and the right aileron (a) must rise up, the left aileron (b) fall down.
- Pull the elevator stick back towards you (c), and the trailing edge of both elevators should rise (c).
- If either function works in the wrong way, correct it using your transmitter's servo reverse facility for that channel.

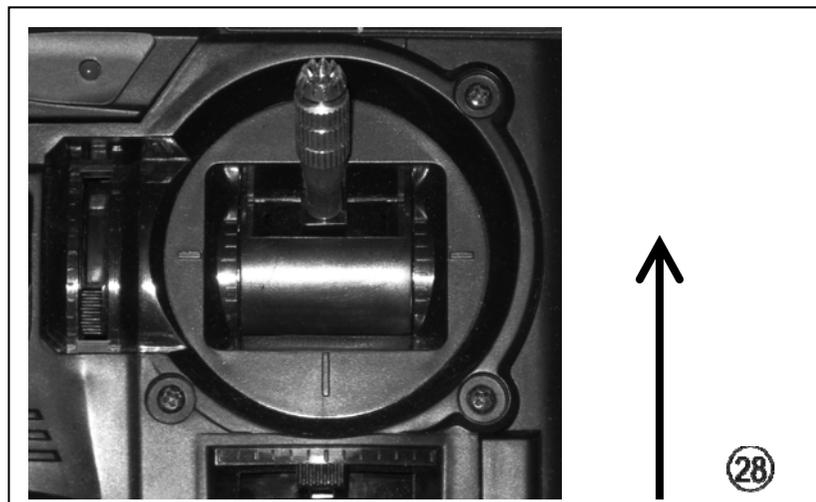


Fig. 28 - Checking the power system

- Hold the model securely.
- Remove any loose objects such as cloths, tools, etc from the area in front of the model, as they could easily be sucked into the ducted fan.
- Open the throttle (stick forward): the motor should now run, and you should feel a strong air flow rushing out from the tail end of the model.
- Move the throttle stick back to the "Motor OFF" position.
- Disconnect the battery from the electronic speed controller and then switch the transmitter off.

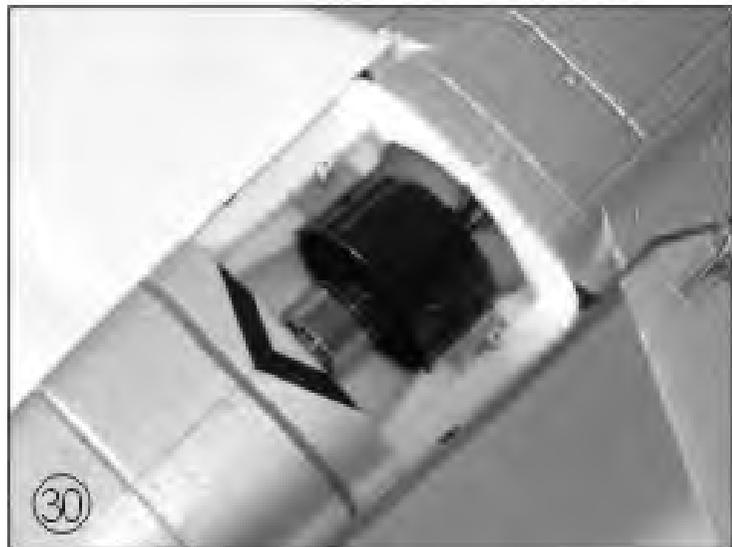
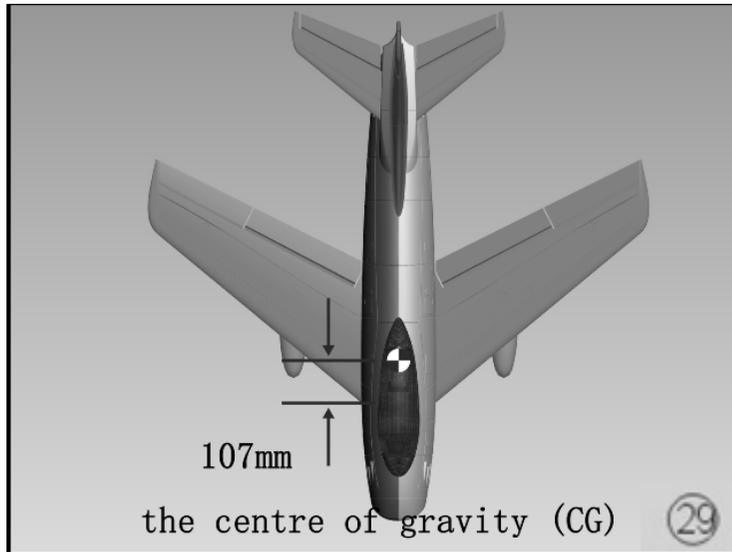


Fig. 29 - Checking the model's balance

- Place the flight battery in its compartment, without connecting.
- Mark the Centre of Gravity (CG) on both sides of the fuselage; the position is shown in the photo.
- Support the model at the marked points and allow it to hang freely. When correctly balanced the airplane will remain horizontal, with the nose slightly down.
- If necessary, adjust the position of the flight battery to achieve the correct CG.
- Mark the battery location in the fuselage, so that you can be sure of positioning it correctly after recharging.
- Pack scrap pieces of foam around the battery in its final position, otherwise there is a danger of it shifting in flight and altering the model's balance.
- Charge the flight battery and the model is ready for flight.

Fig. 30 - Access to the ducted fan unit and electronic speed controller

- The ducted fan unit is accessible from underneath, if you need to carry out maintenance work or repairs.
- Ensure that the wire colors match correctly.

Test Flying - Notes on flying the airplane

Please read the sections entitled “Routine pre-flight checks” and “Flying the model” in the Safety Notes before attempting to fly the F-86 Jet for the first time.



- For the first flight you should wait for a relatively calm day with no more than a gentle breeze.
- A good flying site is a large, flat, open field; well away from trees, fences,

- high-tension overhead cables and other potentially dangerous obstacles.
- Carry out a complete check of the working systems.
- We recommend that you ask an experienced modeler to help you initially; to give the model a fairly powerful hand-launch.
- The model must be launched directly into any existing wind.
- Switch the motor on, and launch the airplane strongly into the wind, with the fuselage and wings level.
- Allow the F-86 Jet to fly straight and level initially; don't try to turn it when it is close to the ground.
- Adjust the trims if necessary so that the model settles into a steady climb.
- Check the model's response to control commands from the transmitter. You may need to increase or reduce the control surface travels once the model is back on the ground.
- Take the airplane up to a safe height and check its stalling speed.
- Keep the speed well up on the landing approach to avoid stalling.
- If you had to move the trims during the flight, correct the mechanical linkages before flying again. This allows you to re-centre the trims, so that full trim travel is available for subsequent flights.
- We reserve the right to introduce technical modifications and suggest that you check our website for updates.



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