



Special F-16 Falcon

Vectored Thrust EDF Jet

Item No.:F1101



Manual

- The manual suit for every color shame of Freewing F-16 Falcon.
- The manual only choose one color shame as an example.

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Main Specification:

Wingspan.....	800mm
Length.....	1150mm
Take off Weight.....	900g
Motor.....	Out runner brushless motor(B2839/2750KV)
Brushless ESC.....	45A
Servo.....	9g*7pcs
impeller \$	70mm
Radio required.....	6CH FM radio
Battery required.....	4S 14.8V 2200mAh,20C Li-poly battery

Parts of Product:

Fuselage,main wing set,rudder,elevator,rear landing gear set,transmitter,receiver,battery,charger set,ducted fan, canopy,CD,Stickers.(The pictures as follow)



Read Before Flight:

- 1.Before each flight,please check the aircraft and remote control to see whether they are in good condition.
- 2.R/C aircraft is not a toy! Its operation is quite different from toy rc cars and rc boats.The improper operation or other interference or other factors may cause danger,Before fly,please read the user manual carefully and obey the regulation in order to enjoy a safe and pleasant flight.
- 3.Before flight,make sure that whether there is people who use the same frequency at the distance of 2000 meters.The confirmed method is:Connect the plane's power battery,to see whether the servos have the phenomena of bounce.If that happens,it means there is same frequency operated near by. Please change time or place to fly,or in consultation with other side to fly take turns.
- 4.Please use our company spare part to repair the fault parts.

Safety Precautions:

1. Please do not repair or change any part of plane without our company's approve and authorization, otherwise the customers are responsible for all the harm or damage.
2. Please do not mixed use the old and new batteries, do not mixed use the alkaline battery, rechargeable battery and other kinds of battery. Please make sure to connect the polarity of the batteries properly. Discarded battery should be handed in to the environmental protection departments.
3. Fly field should be wide-open and free of obstacles: do not fly near highways, railways, airport, power lines or Residential areas.
4. Please do not face a people to fly plane, or throw the plane to others, in order to avoid danger.
5. Please do not fly in the strong wind or heavy thunder weather.
6. Please do not get hands or faces close to the working propeller.
7. Do not dispose of empty fuel containers on a fire, that will lead to an explosion.

Statement:

1. This RC aircraft is not a toy, it is for the experienced pilot. Every pilot is responsible for ensuring not to cause damage to other people's personal right and property.
2. Please follow the instruction in the user manual to adjust, install and operate the plane, and make sure not to get hands or heads or body close to the rotating parts. Otherwise it will cause serious damage to the aircraft or harm people.
3. Our company and dealers are not responsible for any economic or law liability for any improper usage or operation of this model plane.
4. Children under the age of 14, should have an adult guide. Not recommend for the children under the age of 16.
5. Never leave the charger in wet conditions.
6. The F-16 is made from EPS and Polythene which are flammable. When it meets the heat, transfiguration can easily happen, so you must keep your F-16 away from heat.
7. Do not attempt to catch the F-16 Falcon while it is flying.
8. Never leave this system unattended around children with battery in the unit, as injury can be caused due to children turning on the transmitter or the plane.
9. During the preparation for the flight, please remember to turn on the transmitter before connecting the battery pack.
10. Close the throttle on the transmitter before connecting battery otherwise the motor may operate. The turning propeller may cause injury.

Safety Instruction of Li-Poly Battery & Charger:

- *Do not put the battery on or near anything that can catch fire when charging.
- *Always charge the battery on non-flammable base, i.e. A metal tray.
- *Do not disassemble or reconstruct the battery.
- *Do not short-circuit the battery.
- *Do not use or leave the battery nearby the fire, stove or heated place.
- *Do not immerse the battery in water or sea water, do not get it wet.
- *Do not charge the battery nearby the fire or under the blazing sunlight.
- *Do not drive a nail into the battery, strike it by hammer or tread on it.
- *Do not impact or throw the battery.

- *Do not use the battery with conspicuous damage or deformation.
- *Do not make the direct soldering on the battery.
- *Do not reverse charge or over discharge the battery.
- *Do not reverse charge or reverse connect.
- *Do not connect the battery to the ordinary charger socket or car cigarette jack.
- *Do not use the battery for unspecified equipment.
- *Do not touch the leaking battery directly, please wash your skin or clothes with water if they are bedewed by liquid leaking from the battery.
- *Do not mix the Li-Poly battery with other un-chargeable battery.
- *Do not continue charging the battery over the prescribed time.
- *Do not put the battery into the microwave oven or high-pressure container.
- *Do not use the abnormal battery.
- *Do not use or keep the battery under the sunlight.
- *Do not use the battery nearby the place where generates static electricity(over 64V)
- *Do not charge the battery when the environmental temperature is under 0°C or over 45°C.
- *If you find the battery leaking smelling or abnormal, stop using it.
- *Keep the battery away from the children.
- *Use the specified charger and observe charging requirement(under 1A)
- *When using by minors, parents should show them the correct way to charge.

Caution:

- *Never charge the battery at more than 2A.
- *Never discharge the battery at more than 5C and never take the voltage lower than 12V as this will damage the battery.
- *For full flight time to be achieved please cycle the cells through three flights.
- *Never charge the battery on a carpet floor, this can cause a fire.

Attention:

*Please observe all Safety Instructions&CAUTION, any damage or fire due to improper use, we do not take any responsibility.

Assembling step for F-16

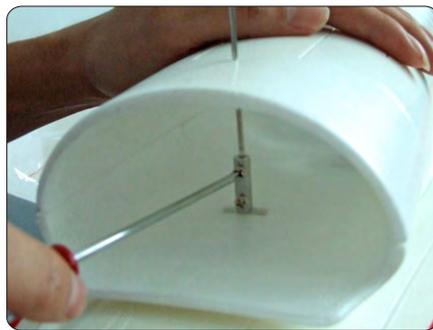
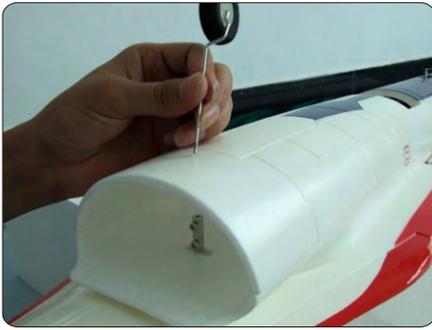
● Mixing Epoxy

When mixing epoxy, make sure to use equal amounts of Part A and Part B. Mix the epoxy thoroughly. You will have about 3 minutes before the epoxy begins to cure after mixing so work quickly. Do not mix epoxy until you fully understand the assembly procedure.



● Retracts Install

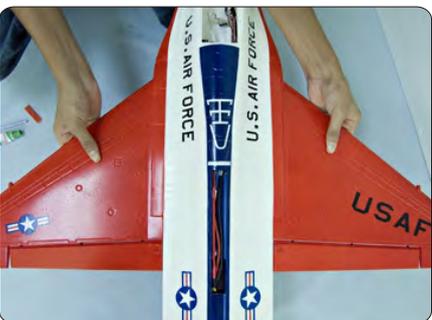
See the follow picture . Install landing gear of the plastic parts to the fuselage.



● Wing Install

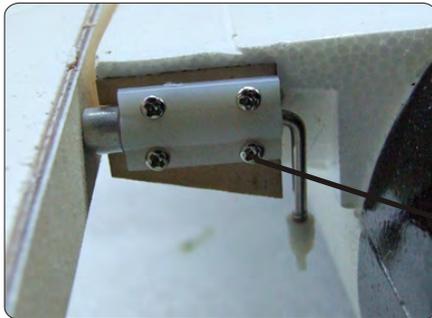
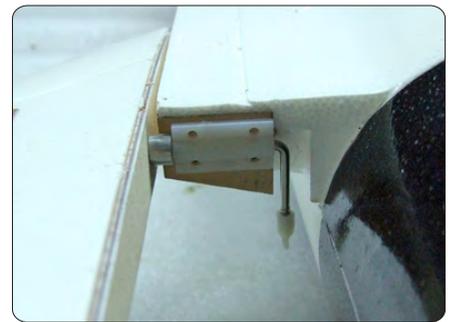
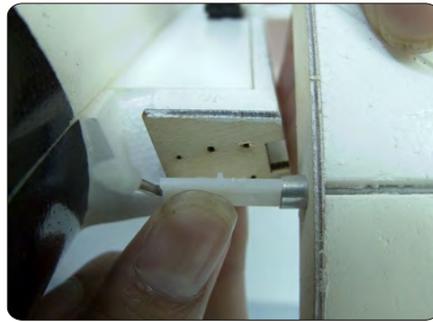
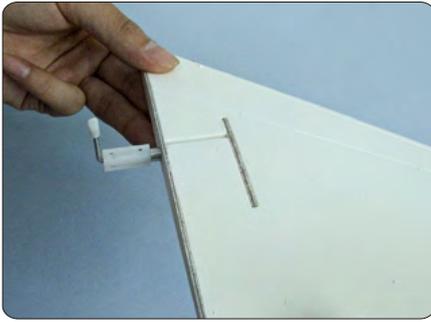
Apply a thin layer of epoxy to the wing root and fuselage to glue the wings to the fuselage. Press the wing tightly against fuselage, attach the wing panels. Make sure each panel is tight to the side of the fuselage.

Gluing the defensive radar pod follows the same as gluing the wings. Make sure it is aligned with the enter line of the fuselage vertically and horizontally.



● Elevator Install

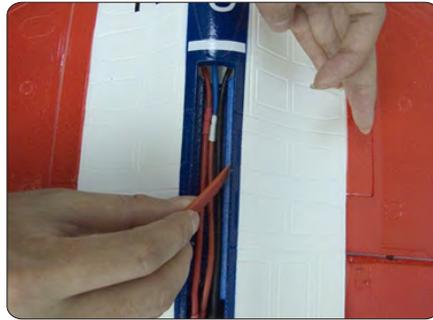
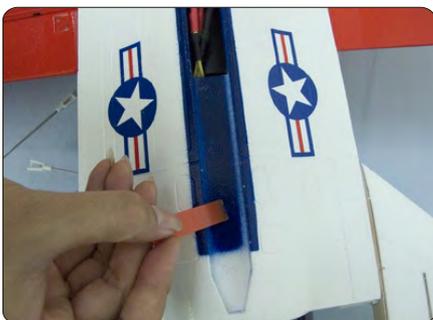
Install follows the below parts and instruction of picture.



PA2.0*8mm

● Rudder Install

Gluing the rudders follows the same procedure as gluing the wings. Make sure to align each part equally on each side of the fuselage



● Nose Cone Install

Use epoxy to glue the nose cone to the fuselage. Make sure the nose cone fits tight on the fuselage.



● Else Install

If you don't like the auxiliary air intake, you could stick the foam piece (its in the spareparts bag) into the auxiliary air intake.. We don't suggest you do, since it maybe reduce about 20-30G thrust

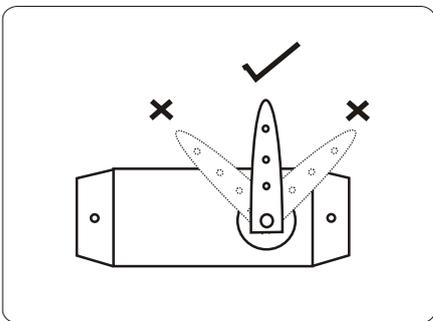


Linkage Install

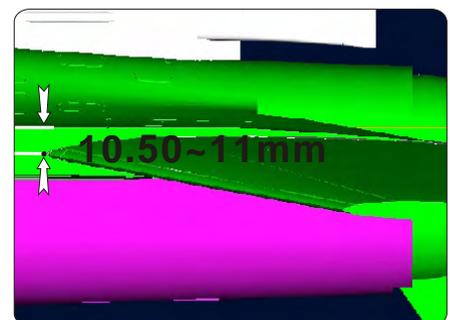
Plug the leads for the servos into your receiver. Each lead is marked to the correct position on the receiver.



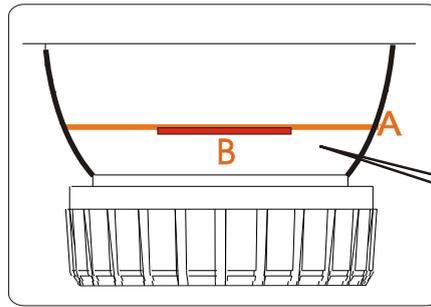
Before installing the linkages to the control surfaces and vectored nozzles you will need to center the servos. Use the sub-trim feature of your radio system to center each servo.



Connect the linkages to the stabilizers and ailerons. Adjust the clevises so the control surfaces are aligned with the fixed surfaces.



Each vectored thrust nozzle has a reference line so it can be centered. Connect the linkage and check this reference line. If it does not align, adjust the clevis until it does.



Scale mark " B " overlapped with nozzle edge " A " , its in neutral condition.

Programming Your Radio

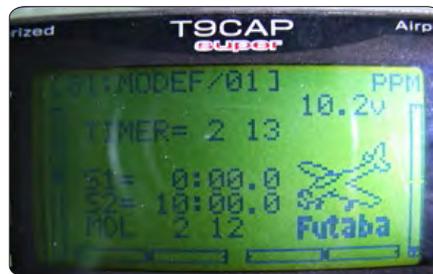
We have included instructions to program a Futaba™ T9CAP radio. Following these instructions will provide both elevator and vectored thrust for your specil F-16 Falcon. Different radios may require different settings than shown.

Set the following functions under the input select screen.

Step I

Before the Step, Make sure to set the Flaperon, V-tail and Delta to OFF.

1. Enter into setup main menu.



2. Choose **PROG MIX I**

3. Enter into advance program interface

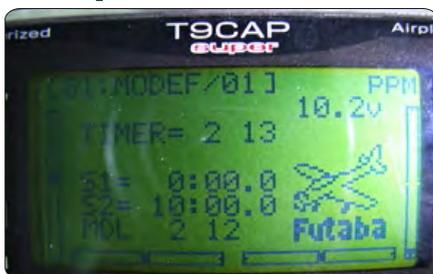
4. Mix 7 (**AUX1**) to 2 (**ELEV**), set up switch well



Step II

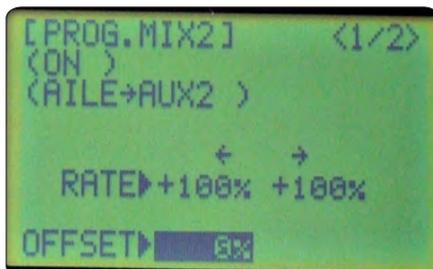
1. Enter into setup main menu.

2. Choose **PROG MIX 2**



3. Enter into advance program interface

4. Mix 7 (**AUX2**) to 4 (**RUDD**), set up switch well



Checking the Mixing

Use the following diagrams to check the mixing of the control surfaces in relationship to the vectored thrust.

● Elevator Operation

When the **Mix** switch is activated, the vectored thrust nozzles will move in unison with the elevators. When the elevators are centered, the vectored thrust nozzles will be centered.

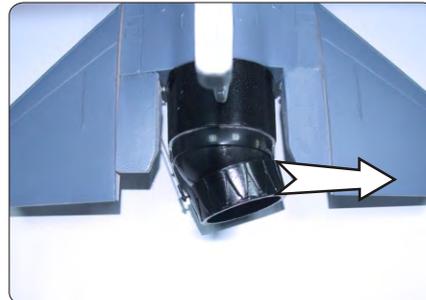
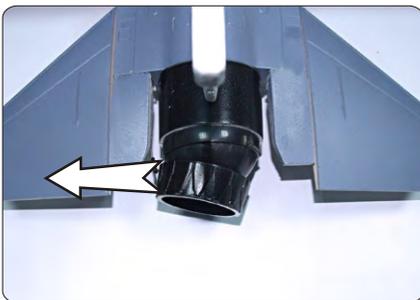
When down elevator is given, the vectored thrust nozzles will move downward.

When up elevator is given, the vectored thrust nozzles will move upward.



When Left Rudder is given, the vectored thrust nozzles will move Left.

When Right Rudder is given, the vectored thrust nozzles will move Right.



When the **Mix** switch is Deactivated the elevators will function normally but the vectored thrust nozzles will not move.

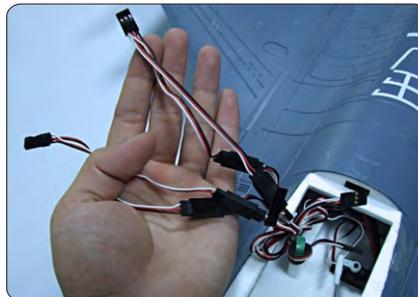
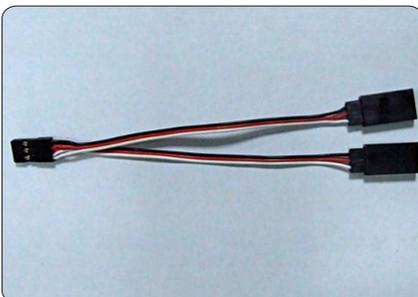
NOTE: Vectored thrust to Elevator mixing should be deactivated during take off and landing of the model.

5CH Radio settings

According to the different quantity of channel in transmitter, in our newest F-16 with 360 degree vector control, we provide two extension wire to reduce the channel. The wire is shown in the photo below.

Use this two extension wire, could reduce the channels of vector control.

In here we use the 5CH radio with switch of landing as the sample.



Use the one extension wire to connect the **Vector 1, Elev** unite to the **ELEV**, the **ELEV** could control the **UP** and **Down** of Elevator and Vector at the same time.

Use the other extension wire to connect the **Vector 2, RUD** unite to the **RUDD**, the **RUDD** could control the **Left** and **Right** of the nose landing and Vector at the same time.

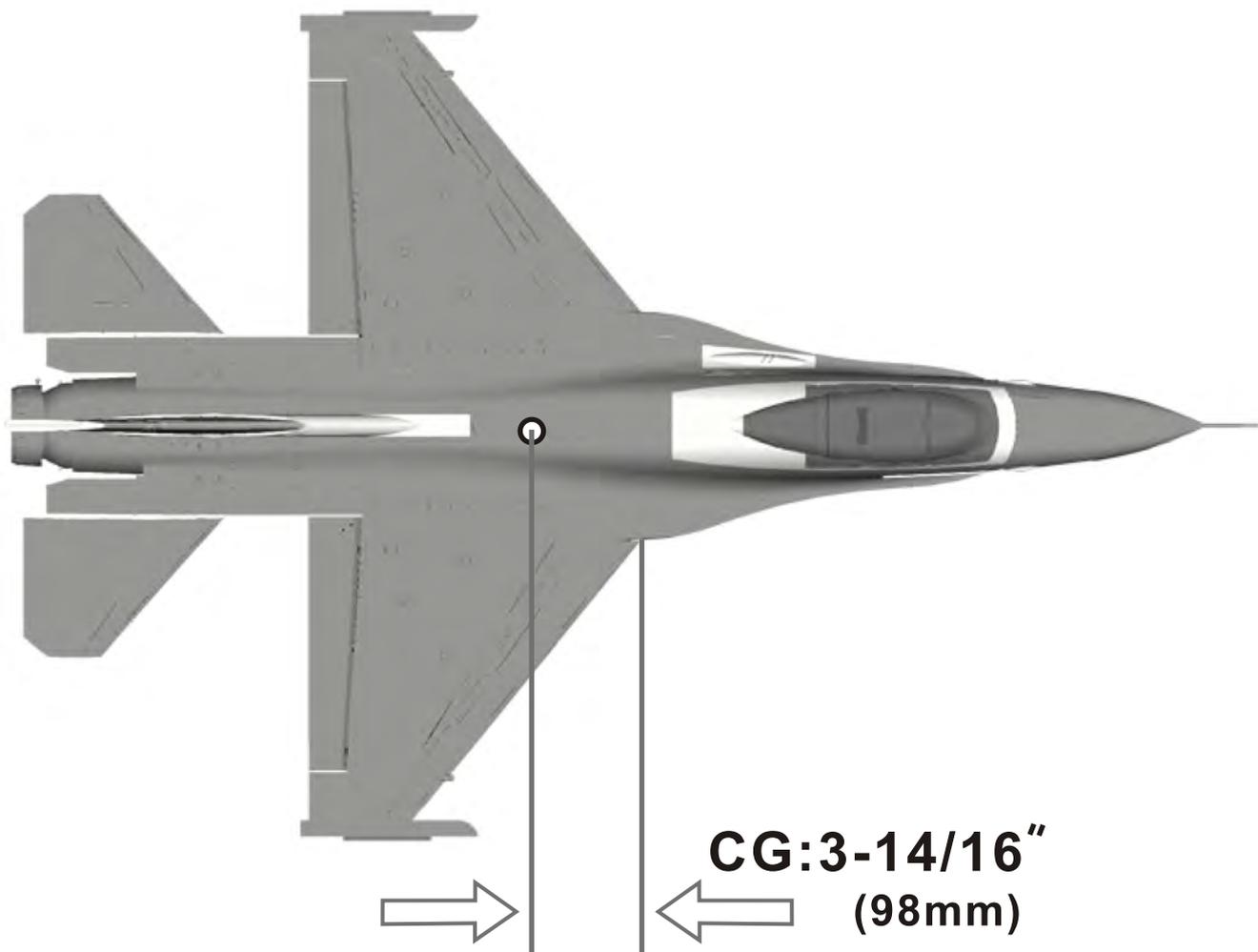
Warning

Under this situation, when glide on the ground, you should try the best to take off in one time and Rudder should be slightest, since the vector move left or right, the jet will swing violently and overturn it.

In addition, under this model in the above, in order to ensure flight safety, since of the vector, please be careful to use the elevator and rudder.

Center of Gravity

If you use our recommended equipment you will not need to adjust the balance of your model. If your equipment does not match our suggestions, or you change the airframe, you will need to balance your model. The balance point of the F-16 Falcon is as shown in the drawing.



● **Replacement Parts**



Main Wing set
Product No.: F110103



Fuselage
Product No.: F110104



Tail Wing set
Product No.:F110102



Fuselage
Product No.:F110204



Main Wing set
Product No.:F110203



Tail Wing set
Product No.:F110202



Out runner Motor(B2839)
Product No.:F90139



4S 14.8V 3000mAh 20C
Product No.:3025



70mm Fan
Product No.:F90210B



ESC (45A)
Product No.:55054



Pilots
Product No.:F90213



360° Thrust Vector Nozzles
Product No.:F90212

F-16 Falcon



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