

# X-Treme Jets

## F-16C

from xjtc.com

### INSTRUCTION MANUAL

#### Specifications

Type : T.A.V.S  
Scale : 1/6.75th  
Length : 89" ( 2250mm)  
Span : 59" ( 1500mm)  
Weight : 24—27 Lbs ( 11— 13 Kg)  
Engine : 16—22 Lbs(7—10 Kg) trust  
Radio : 9 Channel (6—9servo's)

#### The F-16 Fighting Falcon by Xtreme Jets

Thank you very much for purchasing our Xtremejets ARF F-16 , made with the revolutionary **Total Area Vacuum Sandwich (TAVS)** technology. Please note that the photos in this instruction manual show certain views from the prototypes, so please don't get confused by the different colour schemes!

Before you start building and setting-up your aircraft, please make sure you have read this instruction manual, and understood it. If you have any questions, please don't hesitate to contact us. Below are the contact details:

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## Assembly & Operation Manual

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## **Liability Exclusion and Damages**

You have acquired a kit, which can be assembled into a fully working R/C model when fitted out with suitable accessories, as described in the instruction manual with the kit.

However, as manufacturers, we at Xtremejet are not in a position to influence the way you build and operate your model, and we have no control over the methods you use to install, operate and maintain the radio control system components. For this reason we are obliged to deny all liability for loss, damage or costs which are incurred due to the incompetent or incorrect application and operation of our products, or which are connected with such operation in any way. Unless otherwise prescribed by binding law, the obligation of the Xtremejet company to pay compensation is excluded, regardless of the legal argument employed. This applies to personal injury, death, damage to buildings, loss of turnover and business, interruption of business or other direct and indirect consequent damages. In all circumstances our total liability is limited to the amount which you actually paid for this model.

### **BY OPERATING THIS MODEL YOU ASSUME FULL RESPONSIBILITY FOR YOUR ACTIONS.**

It is important to understand that Xtremejet, is unable to monitor whether you follow the instructions contained in this instruction manual regarding the construction, operation and maintenance of the aircraft, nor whether you install and use the radio control system correctly. For this reason we at Xtremejet are unable to guarantee, or provide, a contractual agreement with any individual or company that the model you have made will function correctly and safely. You, as operator of the model, must rely upon your own expertise and judgement in acquiring and operating this model.



Academy of Model Aeronautics  
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## **Warning !**

This 'jet' aircraft is a high-end product and can create an enormous risk for both pilot and spectators, if not handled with care, and used according to the instructions. Make sure that you operate your F-16 according to the AMA rules, or those laws and regulations governing model flying in the country of use.

The engine, landing gear, servos, linkages and control surfaces have to be attached properly. Please use only the recommended servos and accessories. Make sure that the 'Centre of Gravity' is located in the recommended place. Use the nose heavy end of the CG range for your first flights. A tail heavy plane can be an enormous danger for you and all spectators. Fix any weights, and heavy items like batteries, very securely into the plane. Make sure that the plane is secured properly when you start the engine. Have a helper hold your plane from the nose before you start the engine. Make sure that all spectators are far

behind, or far in front, of the aircraft when running up the engine. Make sure that you range check your R/C system thoroughly before the 1st flight. It is absolutely necessary to range check your complete R/C installation first WITHOUT the engine running. Leave the transmitter antenna retracted, and check the distance you can walk before 'fail-safe' occurs. Then start the engine, run at about half throttle and repeat this range check. Make sure that there is no range reduction before 'fail-safe' occurs. If the range with engine running is less than with the engine off, please DON'T FLY at that time. Make sure that your wing spar tube is not damaged. Check that the anti-rotation dowels for the wings are not loose. Check that the wing, stab, fin and nose retaining bolts are tight. Please don't ignore our warnings, or those provided by other manufacturers. They refer to things and processes which, if ignored, could result in permanent damage or fatal injury. Secure the plane before starting engine.

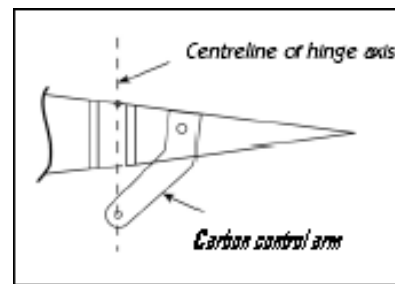
## General information about fully-composite aircraft structure and design

All the parts are produced in negative molds, manufactured using vacuum-bagged sandwich construction technology. All parts are painted in the moulds, either single color or designer color schemes. A new production method, called TAVS (Total Area Vacuum Sandwich), enables us to present this aircraft with incredible built-in strength, while still being lightweight, and for a price that nobody could even consider some years ago. This production process has huge advantages, but a few disadvantages as well. These facts need to be explained in advance for your better understanding.

### The Wings:

Both wing halves are made in negative moulds, and fully vacuum bagged, using only 3 layers of 80gm/2.5 oz. cloth in combination with a very hard 2 mm balsasandwich form a hard and durable outer skin. Because of this TAVS technology very few additional structural parts are needed. The ailerons are already elastic-hinged for you. They are laminated in the wing mould and are attached to the main wing with a special nylon hinge-cloth, sandwiched between the outer skin and the foam. This nylon hinge is 100% safe and durable. You will never have to worry about breaking it, or wearing it out. There is no gap at all on the top wing surface, and there is only a very narrow slot in the bottom surface, where the aileron slides under the main wing skin during down throw. This hinge setup is the cleanest you can ever obtain, but you have to take some care during assembly for proper installation and servo set up.

First, the hinge line is on the top surface of the wing, not in the centre. This is NOT a disadvantage, if you set in about 10% NEGATIVE aileron differential in your transmitter program. This means that the 'down' throw needs to be about 10% more than the up throw to give nice axial rolls. Why? Because the axis of the hinge is not at the centre line of the aileron, so it moves slightly in and out when it travels, and the aileron gets a little "bigger" in surface area when moving up, and "smaller" when moving down. This is why you have to set the negative differential in your transmitter to compensate for the size changing.



10% is a good starting point, and you will find out the exact setting during the first flights, doing fast vertical rolls and watching the fuselage rolling in a perfect axial line. You can set it perfectly, this is guaranteed. The bottom hinge slot needs some explanation, too. The cut line is exactly in the correct position so that the aileron slides under the wing skin smoothly. If the cut was a few mm forward or back, it wouldn't work properly. So, make sure that the lip is not damaged, and that the aileron slides under this lip perfectly. It will NOT lock at any time, as long as the lip is not damaged. If damage occurs to the lip, you can cut off 2-3 mm, but you should NEVER need to cut off more than this. Make sure that the carbon control horns are glued into the ailerons properly. The holes in the horns for the ball-links (or quick-links) need to be exactly perpendicular to the hinge axis line, and in this manual we show you a simple way to ensure that the horns in both control surfaces will be identical, making it easy to set up your R/C for accurate flying maneuvers.

### The fuselage:

The fuselage is also made in negative moulds. All the load-bearing internal parts and bulkheads are now glued in using jigs and templates during the mould and assembly stages in the factory, to ensure accurate location and reduce the assembly time for you.

### Take Care:

Composite sandwich parts are extremely strong, but fragile at the same time. Always keep in mind that these airplanes are designed for minimum weight and maximum strength in flight. Please take care of it, especially when it is being transported, to make sure that none of the critical parts and linkages are damaged. Always handle your airplane with great care, especially on the ground and during transport, so you will have many hours of pleasure with it. **Take extra care when picking up your F16. The wings do not have structure near the L/E. So if you squeeze the wing too hard, it may crack and delaminate.**

## Tools and Adhesives

### Tools etc:

This is a fairly quick and easy plane to build, for a jet model, not requiring difficult techniques or special equipment, but even the building of Skymaster aircraft requires some suitable tools! You will probably have all these tools in your workshop anyway, but if not, they are available in all good hobby shops, or hardware stores like "Home Depot" or similar.

1. Sharp knife (X-Acto or similar)
2. Allen key set (**metric**) 2.5mm, 3mm & 5mm
3. Sharp scissors, curved type for canopy
4. Pliers (various types)
5. Wrenches (**metric**)
6. Slotted and Phillips screwdrivers (various sizes)
7. Drills of various sizes
8. Battery drill and Dremel tool (or similar) with cutting discs, sanding tools and mills
9. Sandpaper (various grits), and/or Permagrit sanding tools (high quality - recommended)
10. Carpet, bubble wrap or soft cloth to cover your work bench (most important !)
11. Car wax polish (clear)
12. Paper masking tape
13. Denaturised alcohol, Acetone, or similar (for cleaning joints before gluing)

### Adhesives:

Not all types of glues are suited to working with composite parts.

Here is a selection of what we normally use, and what we can truly recommend. Please don't use inferior quality glues - you will end up with an inferior quality plane, that is not so strong or safe. Jet models require good gluing techniques, due to the higher flying speeds, and hence higher loads on many of the joints. We highly recommend that you use a slow cured epoxy for gluing highly stressed joints, like the hinges and control horns, into position and the most commonly used is 'Aeropoxy' (Bob Violett Models, USA). The self-mixing nozzles make it easy to apply exactly the required amount, in exactly the right place, and it will not run or flow onto places where you don't want it! It takes about 1 - 2 hours to start to harden so it also gives plenty of time for accurate assembly. Finally it gives a superb bond on all fibreglass and wood surfaces. Of course there are many similar glues available, and you can use your favorite type.



1. CA glue 'Thin' and 'Thick' types. We recommend ZAP, as this is a very high quality.
2. ZAP-O or Plasti-ZAP, odourless (for gluing the clear canopy)
3. 30 minute epoxy (stressed joints must be glued with 30 min and NOT 5 min epoxy).
4. Aeropoxy/Loctite Hysol 3462 or equivalent (optional, but highly recommended)
5. Epoxy laminating resin (12 - 24 hr cure) with hardener.
6. Milled glass fibre, for adding to slow epoxy for stronger joints.
7. Micro-balloons, for adding to epoxy for lightweight filling.
8. Thread-locking compound (Loctite, or equivalent)

At Xtremejets we try our best to offer you a high quality kit, with outstanding value-for money, and as complete as possible. However, if you feel that some additional or different hardware should be included, please feel free to let us know.



## HEALTH

Use a mask (available at auto paint stores) to protect from inhaling the glass or carbon fiber dust. Use this mask whenever you are sanding or cutting fiberglass or carbon fiber materials. Use a charcoal filter paint mask (available at auto paint supply stores) when spraying any primer or paint. Spray out of doors or in a properly vented spray booth. Use safety glasses any time rotary tools, such as Dremel cut-off disc or Perma-Grit cutters, are being used.

## GENERAL ASSEMBLY TECHNIQUES

We recommend to wax the model before assembling. This will help protect the finish from an epoxy finger print. Wax will not help for CA glues! Extra glue, extra paint, extra resin will add up to a heavy model. Plan before you glue! The glass cloth side of parts to glue, should be sanded with #80 grit paper for best glue adhesion.

Support the fuselage on foam pads.

Xtremejets makes every attempt to insure that the parts fit. However, due to manufacturing tolerances, some parts may fit a little tight. Always trial fit parts and adjust if needed.

Only use high quality adhesives such as the ZAP products from Pacer Technology.

For extremely high stress areas we recommend “Aeropoxy.” It is the strongest and best gripping adhesive we have found.

If fuel or grease are on the surface, first clean with acetone or thinners.

Clean off all excess glue—excess glue is excess weight.

Always check the outside skin of the model to look for any glue residue and remove it with Acetone before it cures. “Aeropoxy” is tough to remove once it has thoroughly cured.

## **Radio equipment**

**Failure to use the recommended servos, output arms, extensions, and hardware may result in a loss of control!**

Throughout this manual we make use of various types of servos and radio equipment! We have used JR equipment during the installation process. If you make use of another manufacturer, please use equipment with similar specifications!

The F16 will require extension leads! Please use high quality extension leads. Make use of ceramic non ferrite cores if leads exceeds 1 meter.

The trend nowadays is to use dual battery management systems and dual RX equipment. With the introduction of 2.4 GHz even quad RX systems are considered as normal for a jet model.

Always center and install the correct output arms while on the bench, once the servo is in the aircraft access to the servo arm screw is sometimes limited.

Do not save any money when buying radio equipment. The price of servo's are far from the price of replacing the entire model.

**REMEMBER: The best equipment is only as good as the weakest link. Ask yourself if this servo or link or lead etc is worthy of my trust to protect my very large investment...**

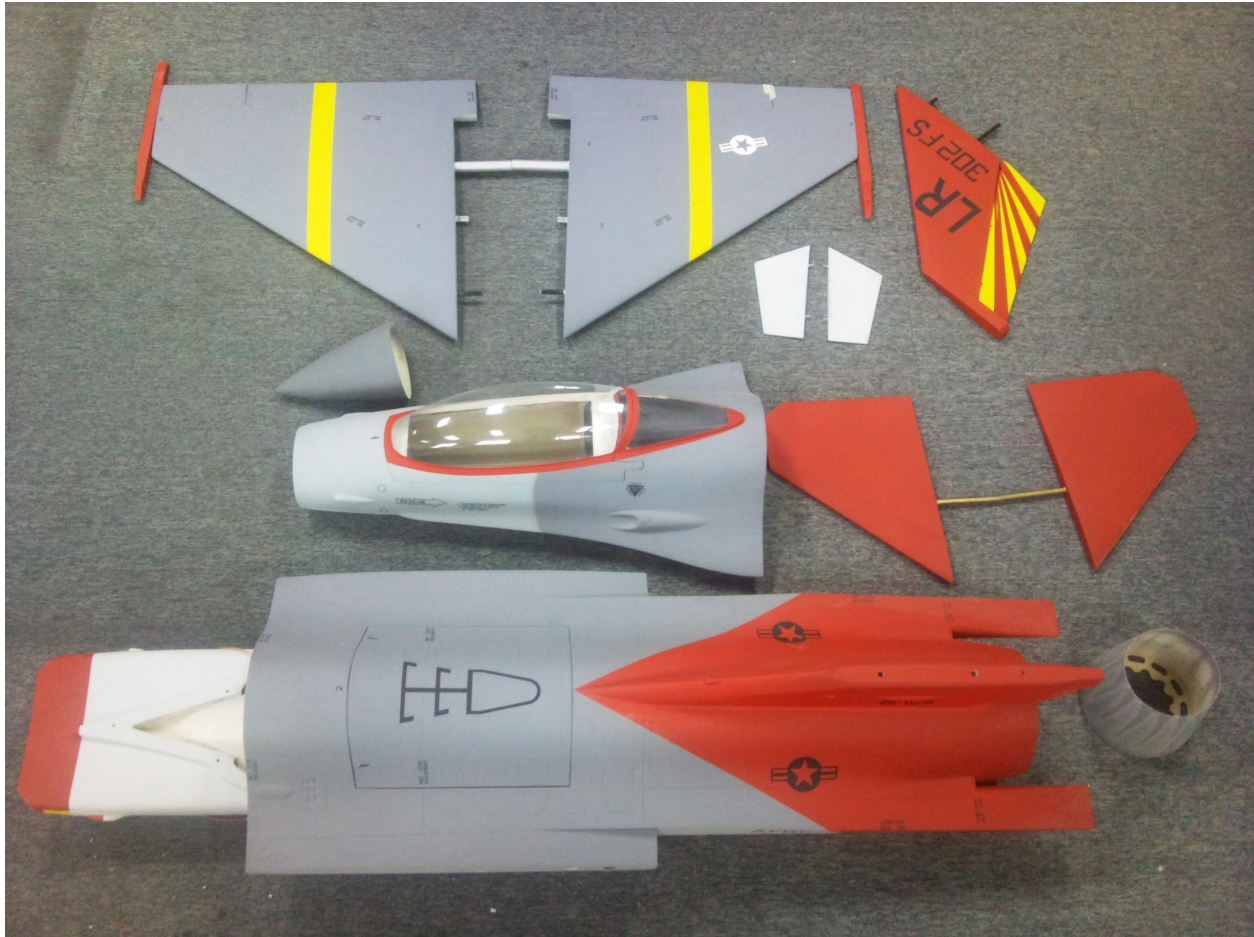
## **Accessories**

1. 2 DS8911 servo's for the elevator.
2. 1 DS8911 for rudder.
3. 2 DS8511 servo's for ailerons
4. 1 JR8511 steering servo.
5. 3 JR577servos for Landing Gear, Door and Brake valves or check next line.
6. 1 Airpower EV5U valve + 1 x EV2U valve for landing gear + doors + brakes
7. 1 EV2U valve for opening canopy
8. Powerbox Royal with build in matchbox function.
9. Pneumatic support set for landing gear
10. Turbine motor, with thrust range between 7kg and 10kg, with accessories.
11. Fuel tubing, Hopper tank (or BVM UAT), festo fittings, fuel filters, fuel tube etc.
12. Cable ties in various lengths.

***Did you understand everything in this manual completely?  
Then, and only then, let's start assembling your F-16 f not, please read it again  
before you start the assembly.***



## Kit Contents

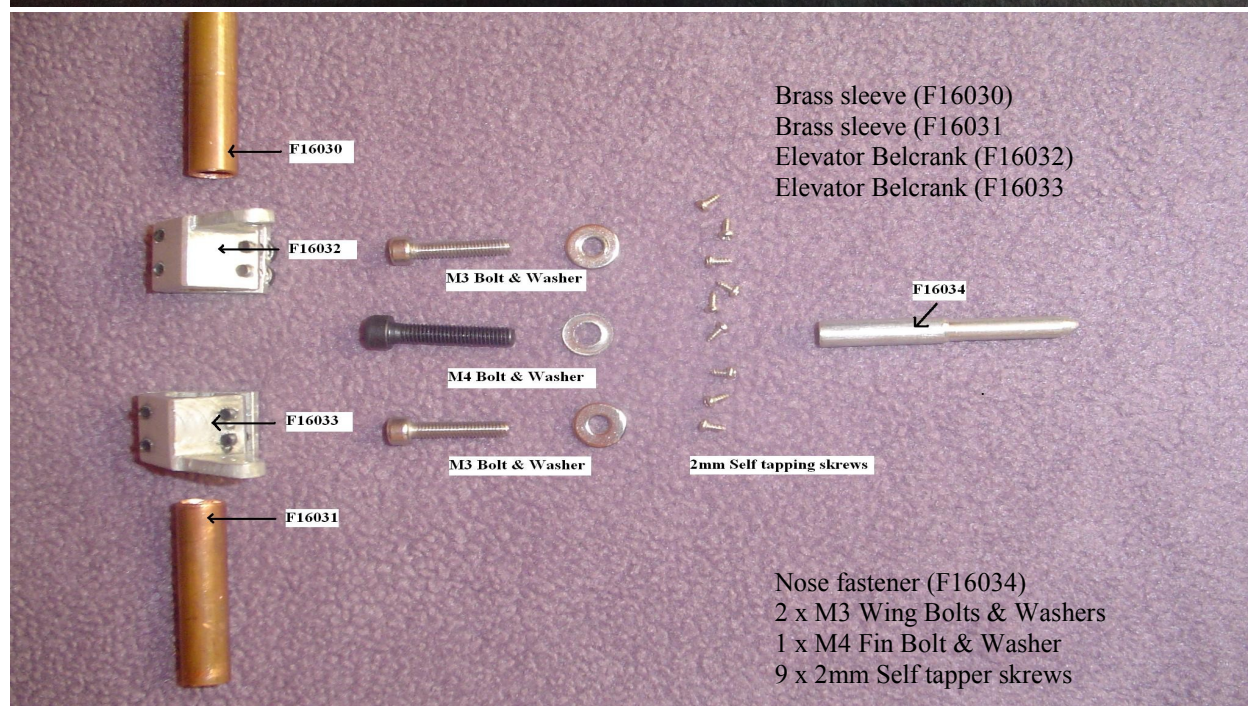
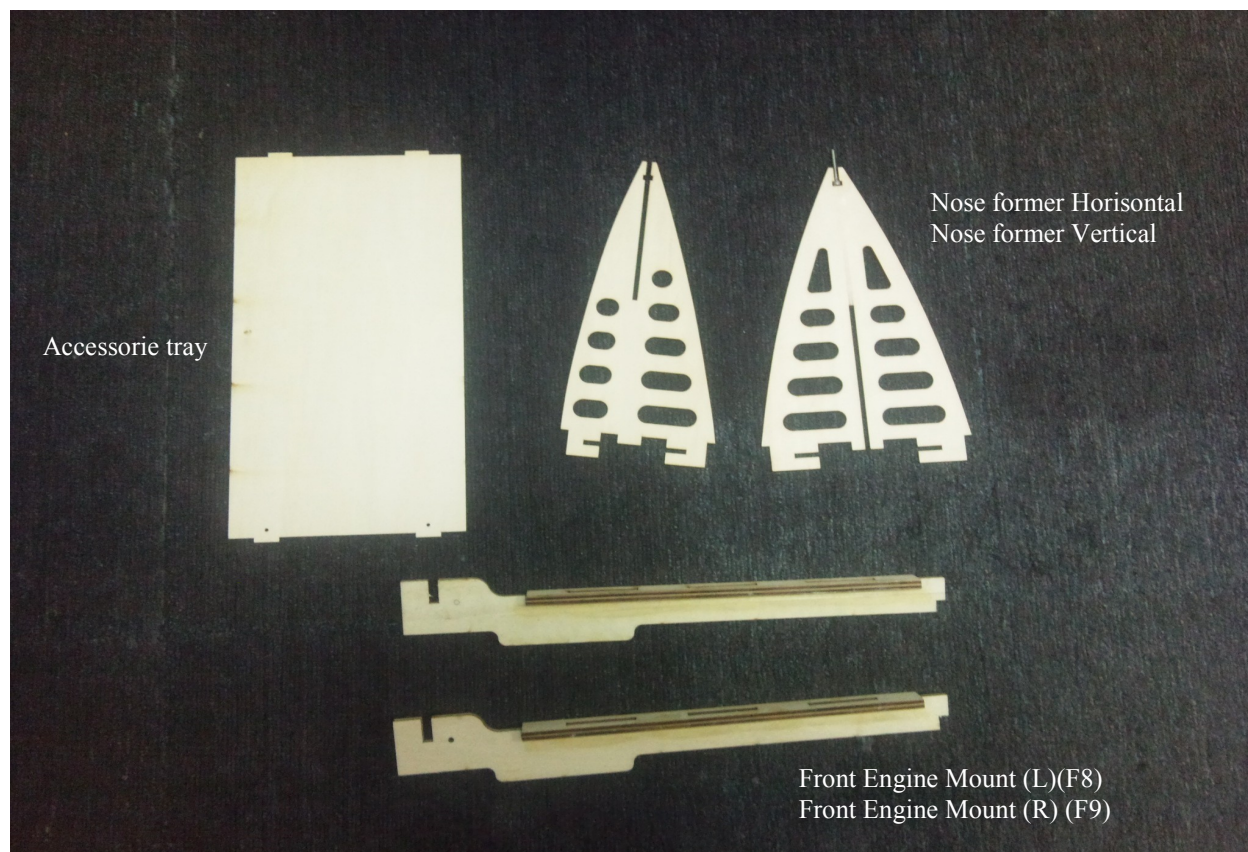


### Composite Parts:

1. Fuselage + Hatch (F160001)
2. Nose (F16002)
3. Canopy & Frame (F16003)
4. Nose Cone (F16004)
5. Tail Cone (F16005)
6. Fin (F16006)
7. Rudder (F16007)
8. Right Wing incl Aileron (F16008)
9. Left Wing incl Aileron (F16009)
10. Right Elevator (F16010)
11. Left Elevator (F16011)
12. Inlet Duct (F16012)
13. Right Missile Rail (F16013)
14. Left Missile Rail (F16014)
15. Ventral Fin (F16021)
16. Ventral Fin (F16022)



## Kit Contents



## Optional Parts available to complete your F16



### **F16 Accessory pack:**

Includes rudder belcrank



### **Skymaster air kit**

Includes 5 x assorted color air tubing , filler valves , control valves and fittings.

### **Custom F16 fuel cells:**

2 x 1L fuel tanks.  
2 x Fuel tank accessory pack.



### **Skymaster F16 pushrod set**



### **F16 air tanks**



### **F16 tail pipe**





## **Section 1:** **Joining the two fuselages.**

### **Items Required:**

1. Rear fuselage
2. Front fuselage
3. Phillips skrew driver
4. Allen metric set
5. 6 x M5 Cap screws with 5 washers
6. Loctite

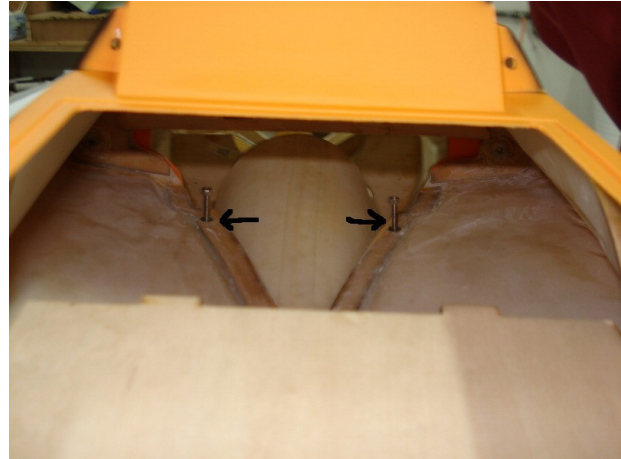
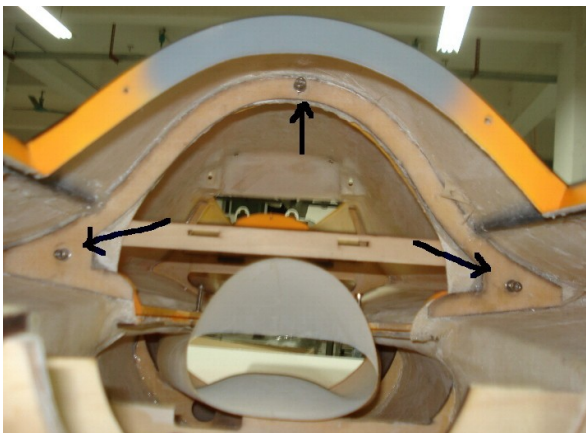
This section may be completed at a later stage! It all depends if you have enough space to work on complete fuselage. If you have purchased a painted model, please use protective padding to protect paint.

**Step 1.** Carefully remove the two fuselages from its protective plastic. .

**Step 2.** Check for perfect fit.

**Step 3.** Remove the UAT tray by unscrewing the Phillips screws.

**Step 4.** Slide the front section on top of the inlet duct.



**Step 5.** Start with 3 top cap screws. Make sure holes align. Do not tighten 3 cap screws at this stage.

**Step 6.** Insert the back 2 cap screws. This may be difficult for some, but patience is always good.

**Step 7.** The last 1 fits on the front of the triangle.

**Step 8.** Now that all 6 are turning freely, tighten them all. Make sure fuselage align while tighten (Loctite all bolts)

This complete this section.

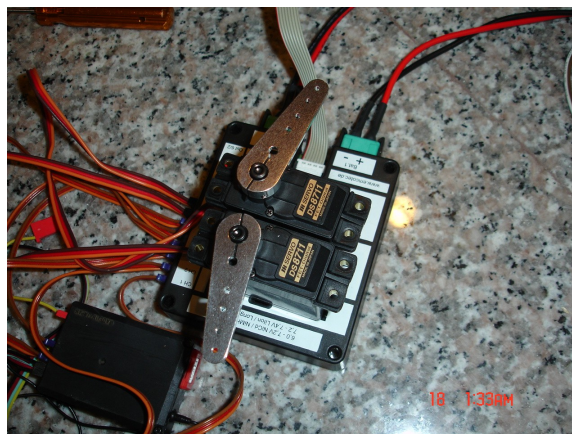
## Section 2: Assembling the elevators

### Items Required:

1. Elevator L & R including bearings
2. Metal servo horns (2)
3. Titanium push rod assembly (2)
4. JR DS8911 servo (2) (15Kg minimum)
5. Powerbox and radio equipment
6. 1mm drill
7. Hobby knife w/#11 blade
8. Skrew driver
9. Straight edge & Ruler
10. Lubrication oil

We recommend to set up the two elevators as elevators. Some experienced pilots may opt for an elevon set up. Please follow your own experience in doing so. We have tested both and both work just fine. This manual will how ever continue for elevator set up and conventional ailerons in wing.

**It is very important to use correct servo's and push-rod assembly!** A minimum torque of 15Kg per elevator is needed. The new JR8911 is just what you need. If you can not find such servo's, then 2 x 8511 servo's Servo's must be syncd by means of JR matchbox! It is **very important** that **no slop** is present in the elevator configuration. Any slop will be converted to flutter. Flutter will destroy the elevator and make the model uncontrollable. The ailerons are actively hinged to wing. This method is very strong and durable and will last the life of the model. Take advantage of this incredible technology and see how quickly you can complete wings!



- Step 6.** Locate the 2 elevator servo's. Install servo's in powerbox system to electronically centre the servo's. Check for correct operation.
- Step 7.** Mount metal servo horn to servo and secure titanium ball bearing rod to servo horn. Check that bolt holding pushrod to servo horn is secure and use a locknut or loctite.
- Step 8.** Drill holes for servo and mount servo by means of 4 skrews.
- Step 9.** Secure other end to elevator horn. Use same method as on servo horn. **Make sure that pushrod form a 90 degree angle with both horns! Make sure no mechanical slop is present!**
- Step 10.** Repeat steps 1—9 for other elevator. This complete this section.

NB: Make sure both pushrods are of equal length and that installation is a mirror image of each other!

This completes this section!



- Step 1.** Carefully remove the elevators from its protective plastic.
- Step 2.** Insert plastic washer over elevator rod.
- Step 3.** Lubricate the shaft with some thin machine oil.
- Step 4.** Insert the shaft into the elevator bearings.
- Step 5.** Fit plastic washer between elevator horn and bearing. Make sure no lateral play is present and secure horn with 4 cap skrews. (use loctite)



### Section 3:

#### Assembling rudder and fin

##### Items Required:

1. Fuselage
2. Fin & Rudder with hinges
3. JR DS8911 servo
4. Pushrod assembly
5. M5 bolt
6. Hobby knife w/#11 blade
7. Skrew driver
8. Metric Allen key set
9. Loctite

We use JR 8911 for rudder. It is *very important* that **no slop** is present in rudder assembly. The rudder and fin is very big. Any slop will be converted to flutter. Flutter will destroy the fin and make the model uncontrollable. Make sure to centre the servo before installation. JR heavy duty horns are perfect for the job. Metal horns may also be used for an even stronger fit.

NOTE : If you like the conventional method with servo in fin and pushrods on outside, please modify by yourself. For high speed and powerful turbines we recommend pushrods on the outside.



**Step 7.** Trial fit rudder. Make sure rudder moves freely. If happy with fit, glue hinges to rudder.

(make sure no glue comes in contact with hinge pins and base of belcrank)

**Step 8.** (NOTE: After glue has dried, checked movement of rudder for perfect operation) *Once the turbine is installed it will be difficult to do any adjustments to belcrank! Make sure of correct operation.*

This complete this section!



**Step 1.** Remove fin and rudder from protective plastic.

**Step 2.** Find rudder pushrod set. Insert rod into base of fin.

**Step 3.** Secure rudder horn to fin belcrank. Use loctite.

**Step 4.** Secure JR 8911 servo to servo mount by means of 4 skrews. Make sure servo is mechanically and electronically centred

**Step 5.** Find rudder pushrods and secure to rudder horn and servo horn. Make sure all angles are 90 degrees. No mechanical slop must be present.

**Step 6.** Insert fin with carbon shafts into clamps. Fasten clamps. Make sure rudder belcrank moves freely.



## **Section 4:** **Assembling Landing Gear & Gear** **Doors**

### **Items Required: (if not factory fit)**

1. Fuselage
2. L/G set
3. Gear doors
4. Off set hinges (9)
5. Gear door cylinder brackets (3)
6. Door cylinders (3 x 30mm)
7. Air kit and sequencers
8. Drill
9. 5 minute epoxy

We will describe the model with gear and doors factory installed. We highly recommend this version. It will save you plenty of time and frustrations.

Make sure gear and doors work correctly when you unpack the kit. Check for damage.

**Step 1.** Remove the nose unit.

**Step 2.** Fit the 8511 servo to the servo plate located next to the nose gear unit.

**Step 3.** Fit pushrod to nose unit and refit unit.

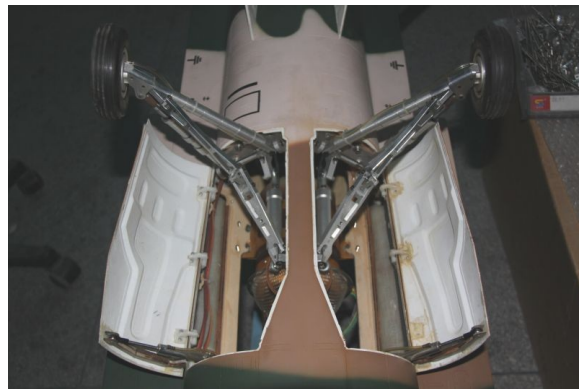
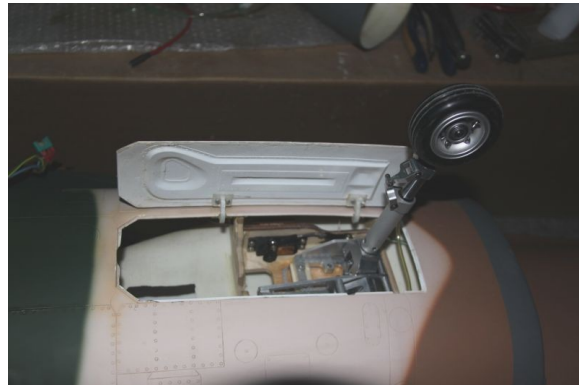
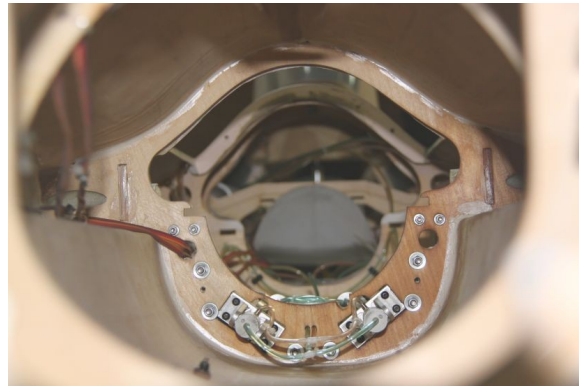
**Step 4.** Secure steering pushrod to nose leg unit. Retract the nose gear and check free operation.

**Step 5.** Check all bolts on landing gear units. Secure with locktite.

**Step 6.** All airlines will be factory fitted and routed.

**Step 7.** Check operation of retract units and gear doors.

This complete this section!





## Section 5: Assembling wings and missile rails

### Items Required:

- |                     |                 |
|---------------------|-----------------|
| 1. Fuselage         | 2. Wings (L&R)  |
| 3. JR8911 servo (2) | 4. Pushrod set  |
| 5. Missile rails    | 6. Epoxy        |
| 7. Drill set        | 8. Masking tape |

Make use of live hinging for easy and fast installation. Kevlar are used for hinging and will give endless good operation.

Make sure servo and pushrod installation are done correctly! No mechanical slop may be present.

The two servo's in the wing must be a mirror image of each other. All pushrods must be of equal length.

The two servo's will work together as ailerons.

**Step 1.** Remove wings from protective plastic and inspect ailerons for good operation.

**Step 2.** Trim aileron root for at least 30mm up and down movement.

**Step 3.** Fit wing to fuselage to check correct operation of aileron. If not, trim aileron.

**Step 4.** Secure servo to wing! Use 1pr alluminium L-brackets. (*make sure servo was mechanically and electronically centred!*)

**Step 5.** Draw a line perpendicular across hinge line and mark location for aileron horn. Mill hole and epoxy horn in position.

**Step 6.** Attach pushrod to servo and aileron horn.

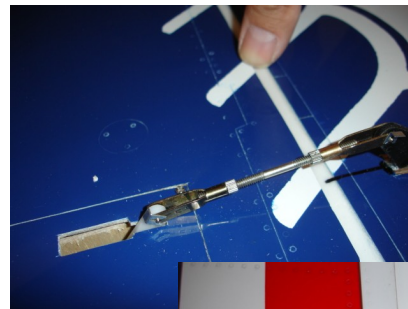
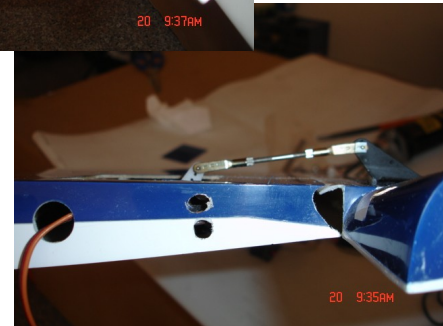
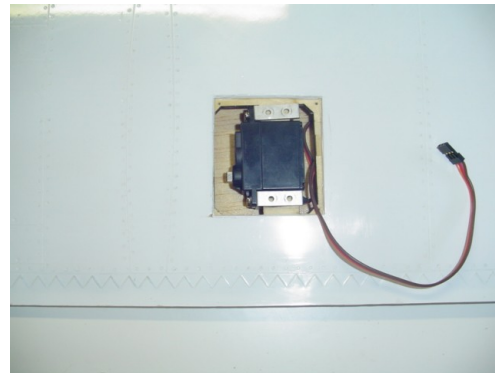
**Step 7.** Check operation of aileron.

**Step 8.** Cut hole in servo cover and secure cover.

**Step 9.** Secure missile rail by means of cap screw.

**Step 10.** Repeat for other wing!

This complete this section!



## **Section 6:** **Assembling the ventral fins and nose cone.**

### **Items Required:**

- |                    |                     |
|--------------------|---------------------|
| 1. Fuselage        | 2. Ventral fins (2) |
| 3. Nose cone       | 4. Nose formers (2) |
| 5. Slow cure epoxy | 6. Masking tape     |
| 7. Clamps.         |                     |



**Step 6.** Slide nose cone over formers. Make sure no glue touches nose cone. Make sure of fit and tape in this position till glue has cured.

**Step 7.** Locate metal pin and fasten nose cone.

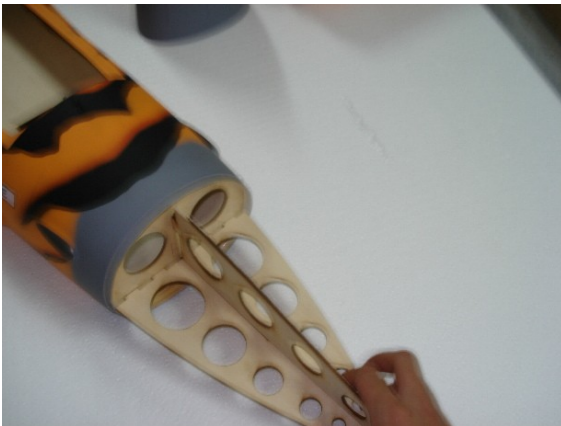
**Step 8.** Drill small holes where nose cone over lap fuselage and secure by 6 x 1mm self tappers.

This complete this section!

**Step 1.** Locate ventral fins and nose cone!

**Step 2.** Draw a line in line with main oleos to back of fuselage. The ventral fins are in line with oleo!

**Step 3.** Roughen location of fins and glue to fuselage. The angle must be the same as oleos! The longer side must be in front!



**Step 4.** Locate two nose formers.

**Step 5.** Apply glue to formers and attached to fuselage.

## Section 7: Assembling Fuel Tanks

### Items Required:

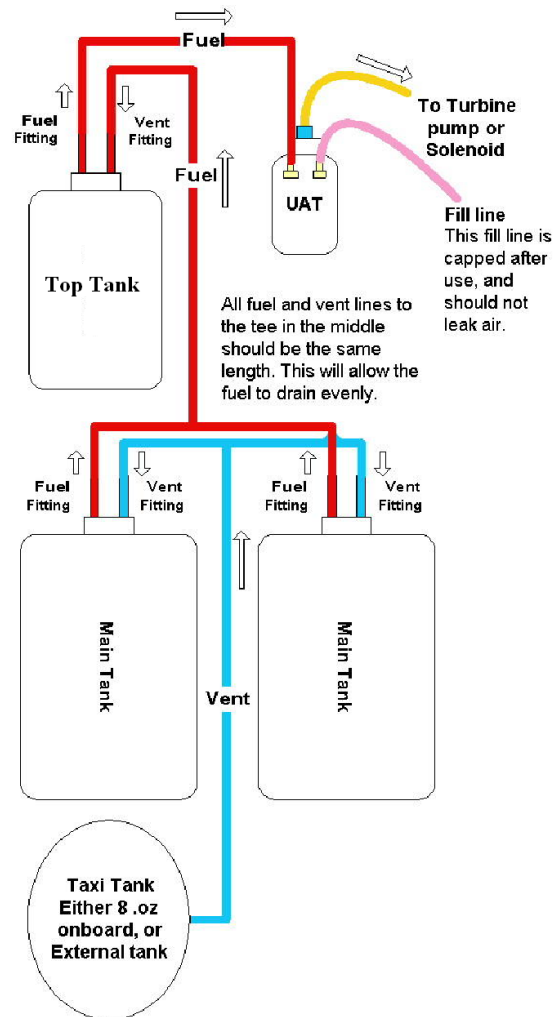
1. Fuselage
2. Main tanks (2)
3. Top tank (1)
4. Tank accessories (3)
5. UAT (not supplied)
6. Tygon tubing
7. Festo T-fittings
8. Silicon

The fuel system is very important. Rinse tanks to get rid of all debris. All fittings must be very secure. Any leaks will cause bubbles in fuel line and subsequent flame out. The copper pipes were cut by pipe cutter. The ends will be closed slightly. Use a sharp object like a reamer to open up the diameter of pipe. Make sure all off cuts are removed. Sharp edges can cut tubing. Make sure edges are not sharp. Pressure test all tanks!



- Step 1.** Plumb tanks by means of 2 copper pipes. Make sure clunk are right at the back and move freely inside.
- Step 2.** Mark tanks for inlet and outlet. (Note: You will be surprised how easy we forget this.)
- Step 3.** Insert main tanks into fuselage. It can only go in one way. Make sure up is up and down is down. Use silicon to secure tanks.
- Step 4.** Insert top tank on top of main tanks.
- Step 5.** See picture. Use silicon to secure tanks in place.
- Step 6.** Secure all pipes with cable ties or clips
- Step 7.** Secure hopper feeder to UAT.
- Step 8.** Fill and drain tanks to check for air bubbles.

This complete this section!





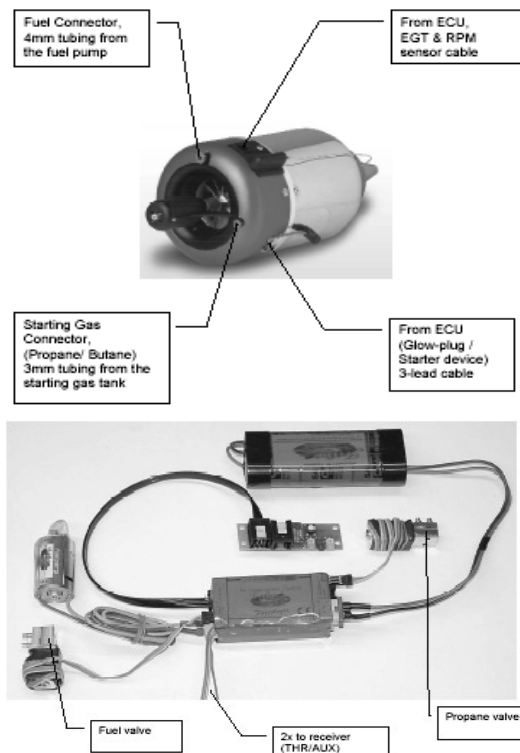
## **Section 8:**

### **Turbine, Tail pipe & Tail cone installation**

#### **Items Required:**

- |                           |                         |
|---------------------------|-------------------------|
| 1. Fuselage               | 8. Skrew driver         |
| 2. Turbine                | 9. Masking tape         |
| 3. Turbine accessories    | 10. Ruler               |
| 4. Tail pipe              | 11. Marker              |
| 5. Wires                  | 12. Cable ties          |
| 6. Festo fittings & pipes | 13. TX Battery          |
| 7. Self tappers (4)       | 14. Tail cone + Skrewws |

The F16 have successfully flown on a Jetcat P-80 and Artes Cheetah and Kingtech K80 . Any one will give you great satisfaction. Follow the instructions supplied with turbine for ease of installation.



**Step 1.** Insert tail pipe and mark locations for mounting lugs. Use scrap ply wood to use as mounting rail. When happy with fit secure with self tappers. (Note the gap between turbine tail cone and pipe. Normally about 25mm)



**Step 2.** Trial fit turbine. When happy with fit, mark locations for 4 mounting bolts.

**Step 3.** Drill pilot holes and secure turbine to rail.

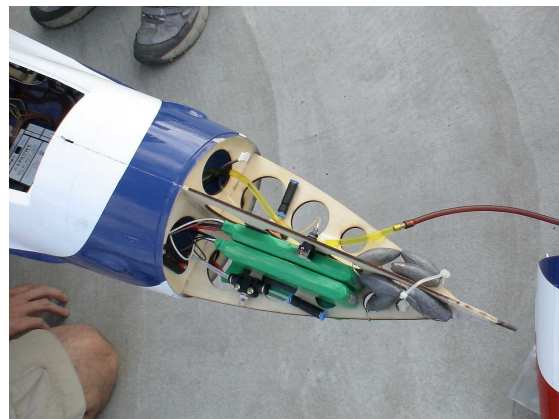
**Step 4.** Run all wires neatly in harness. Secure with cable ties. (Note: A neat installation will minimize stray inductance causing interference.

**Step 5.** Make sure ECU wired and servo wires do not run next to each other. Use opposite sides of fuselage.

**Step 6.** Hook up all festo pipes. Secure all pipes with cable ties. Make sure filters are easy accessible.

**Step 7.** Secure tail cone with self tappers as supplied.

**Step 8.** Mount ECU batteries and RX batteries in nose cone. If Lipo batteries are used, some lead weight will be needed for correct CG!!!



This complete this section!

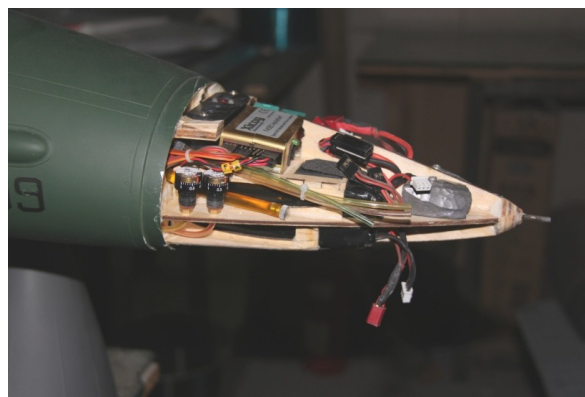
## **Section 9:**

### **Accessory tray installation**

#### **Items Required:**

- |                      |                                        |
|----------------------|----------------------------------------|
| 1. Fuselage          | 9. Rx on/off switch                    |
| 2. Retract valve     | 10. Receiver                           |
| 3. Brake valves      | 11. Whip antenna                       |
| 4. Door valve        | 12. Ext leads                          |
| 5. Sequencers        | 13. Powerbox or similar power supplies |
| 6. Filler valves (2) | 14. Cable ties                         |
| 7. Air tanks (3)     | 15. Nicad / Lipo batteries             |
| 8. JR Matchbox       | 16. Marker & Ruler                     |

The installation of the accessory tray is a personal thing. Many have vast experience and for them it will not be a



problem.

The lay out depends on what accessories you will be using. Some will use electronic valves and other will use 1 way and 2 way mechanical valves with servo's.

I have chosen Jetronic valves because of reliability. The use of a Gyro on rudder and steering is a good option.

A 9Ch receiver is minimum requirement for installation. Rudder (1) Steering (1) Elevator (2) Ailerons (2) Brake(1) Retracts(1) Throttle(1)

Program the flight modes. Eg. Mode 1 for take off : Higher rates and less expo with steering servo mixed to rudder for the take off roll. Then select Mode to for general flying. Lower rates and higer expo. With gear retracted disconnect steering servo from rudder etc...

Mode 3 for landing... etc...

Use the manual supplied with radio to program your personal data.

Make sure good quality extension leads are used. Secure male and female plugs with safety clips or cable ties.

Run all servo wires well away from turbine wires.

## Section 10: Throws and CG



<b><u>Elevator :</u></b>	50mm—55mm 30% expo. If this is your first all flying stab jet, be ready to give a lot of elevator in turns.
<b><u>Aileron:</u></b>	15mm 19mm 30% expo. The ailerons are very active even in slow speed.
<b><u>Rudder:</u></b>	20 expo 30%.
<b><u>CG :</u></b>	180mm—`190mm

*We hope you enjoy your F16! Please do regular checks and maintenance for longer enjoyment!*