Assembly Manual For

Matrix 2.2m

Sport jet

www.pilot-rc.com

Pilot-RC Matrix is an innovative approach to a new sport jet/ 3Djet. Great capabilities had to be combined between sport jet and unbeatable 3D performance. everything aerodynamic we tested and learned from Predator and develop together with one of the best pilot in the world for Matrix performance so we can say this is best ever sport jet with ultimate flying characteristics for precise aerobatics and 3D aerobatics at the same time.. The Matrix all feature and shape of airframe this from one of the best designer Mirco Pecorari from AIRCRAFT STUDIO DESIGN, a little like the charismatic hypercars style.

More information on website
www.pilot-rc.com

INTRODUCTION

Thank you for purchasing our Matrix Sport Jet. we strive to achieve the real Quick Builded and ARF aircraft.

It just requires the least about of assembly of any kit that almost finished in factory. To obtain the perfect performance, both the design and manufacturing have been taken care with the highest quality from any hardware, painting and glue in the construction as well. By optimal weight and reliable construction, you will find this plane is really ideal for sport and 3D aerobatic flying.

So we hope every effort and service we offer will make you feel easy and have a wonderful time in the pleasure of flying.

More information on website

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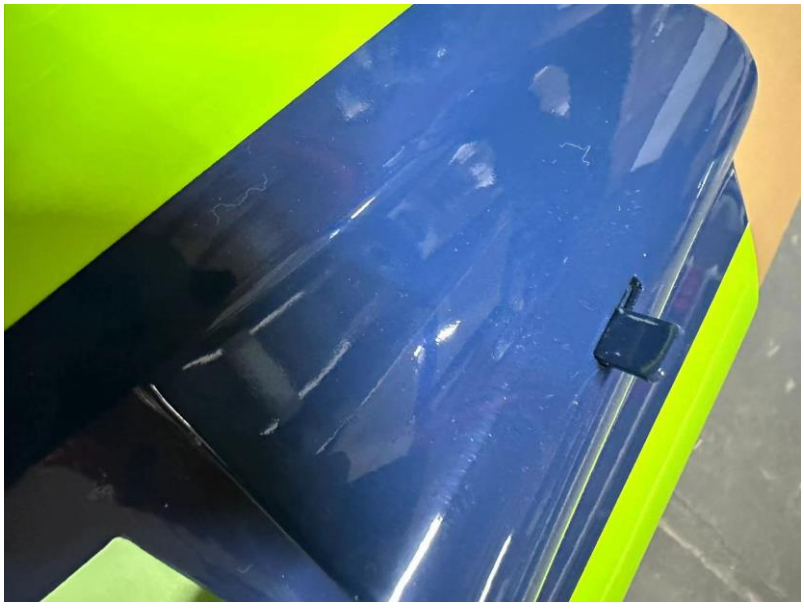
Quick release system Canopy

Just push bottom and you can take off
and put in easily simple work very good



Quick release system Wing

Left photo is unlock

Right photo is lock

WARRANTY

■ All Pilot-RC products are guaranteed against defects for 30 days of receiving your airplane. This warranty is limited to construction or productions defects in both material and workmanship , doesn't cover any component parts damaged by use or modification .

■ The manufacture can't supervise the assembly , operation and maintenance ,and can't ensure your radio system is in good condition. Therefore ,**we are not responsible for any damage occurring during the use of a radio controlled model**. It is impossible to determine for certain whether crash damage was the result of a radio system failure or pilot error even improper installation of our products. Model airplane owner is using it on his own responsibility.

■ Pilot-RC will not be liable for any costs, unless agreed and proved beyond doubt the failure was due to faulty materials or fabrication. Any agreed cost will not exceed the cost of the airframe and not include engine, radio equipment or third party claims.

■ No matter what reason you wish to return this airplane , all shipping cost will be paid by customer.If some parts require replacement from us ,the original parts' return is at costumer' expense.

ATTENTION

- **You should not regard this plane as toy!**
- To ensure safety,please read the instruction manual thoroughly before assembly .
- Building and operating model plane require diligent practicing and correct guidance. Any neglect,carelessness and missing experience can cause serious bodily harm and property damage.
- Seek the assistant of a experienced person or airplane model clubs in assembly ,operation and maintenance to ensure quick and successful learning
- **Fly only in proven model airfield** that AMA (Academy of Model Areonautics) approved

Pilot-RC has the right to change to this plane ,instruction and limited warranty without notice. If you have any problems and questions ,please contact Pilot –RC

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Address: No.1, Liye Road, South District, Zhongshan city, 528455, Guangdong Province, China

Retract Landing Gear Installation, Matrix Jet come with electric-landing gear and brakes. And other necessary accessories

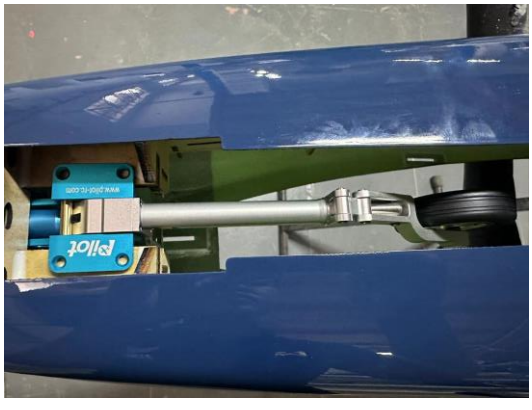
Nose Gear Assembly

1, Install the servo to the nose landing gear.

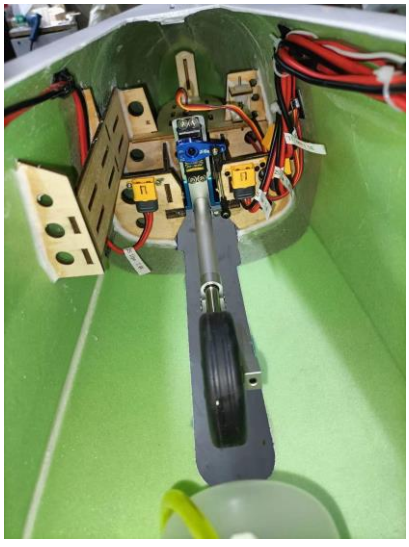
2. Install the servo arm and push rod. Adjust to make the plane can go straight approx. You still can adjust by radio after install it.

3. Place the nose gear to the mounting and adjust to the correct position ; then mark the 4 mounting screws hole.

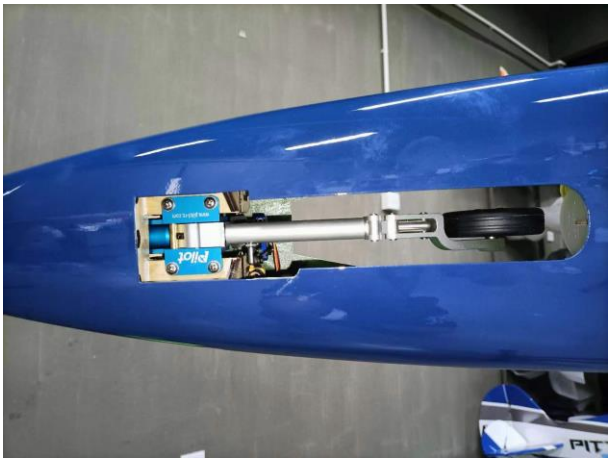
4.Before you drill the mounting screws hole , please check again the nothing get stuck when open and close..



5. Carefully arrange the nose gear retract wire lead and the steering wire as well ...

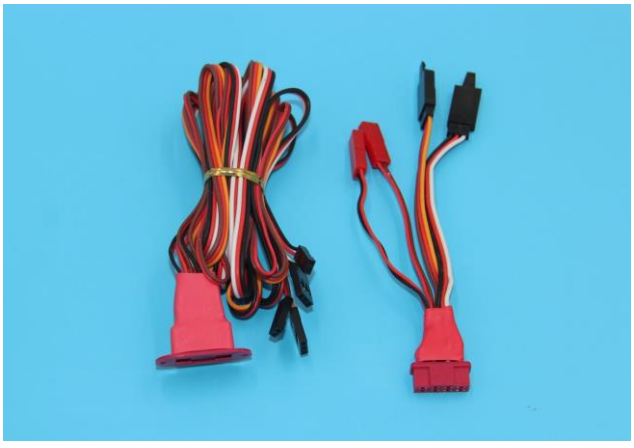


6. Install the nose retract gear to the fuselage.

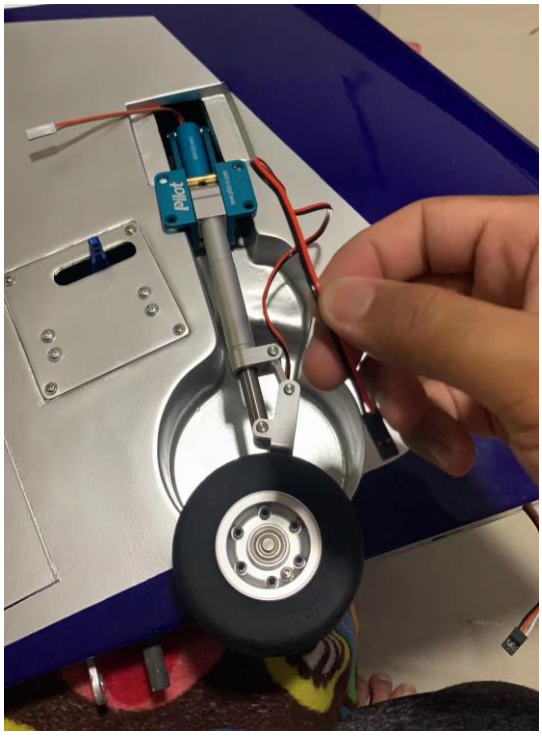


7. You can use the gear control box to operate the landing gear open or close **without** your radio TX.

8.Recomand to use this 4 in 1 MPX style connector from Pilot-RC . Is an Option parts.



9. Connect all servo / landing gear /brakes wire .

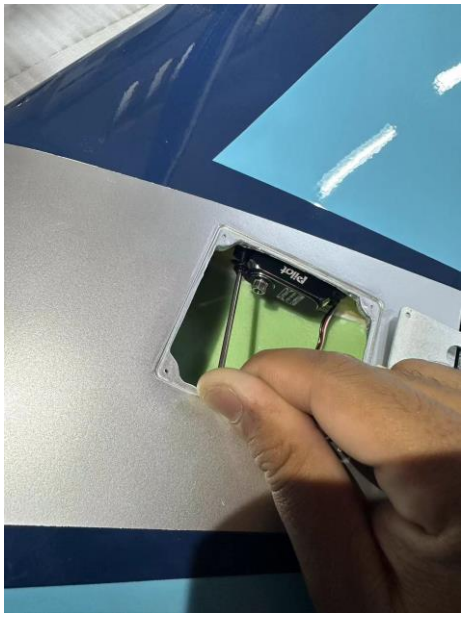


10. The multi connector 4 in 1 out from the opening hole in the fuselage

Wing servo/flaps Assembly

11. Take out the aileron / flaps plating from the wing.

12.Put servo to the hole precut slot inside the wing.



13. Carefully adjust the servo arm position , should be at the center of the open slot.

14. After servo and servo arm installed ..

15. Aileron servo / Flaps servo done installed .

16. Picture below show the installed landing gear and the aileron/flap servo

.

17. Just one connector for aileron/flaps/landing gear/ brakes.

Rudder Servo Assembly

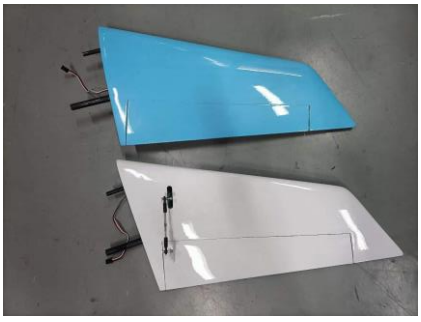
1. Put servo in the hole precut slot of vertical fin and screw in

2. This is how the rudder servo put in slot and install servo arm to be correct center position

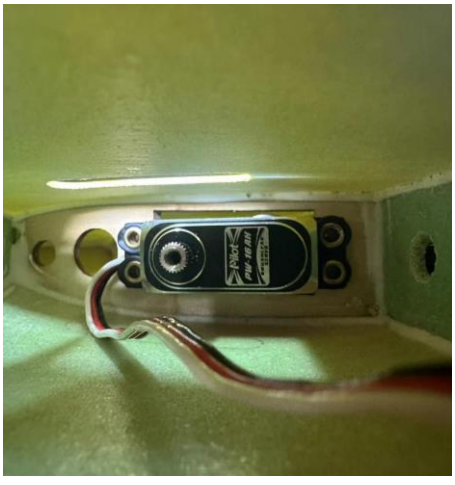
3. Install linkage of rudder

Elevator Servo Assembly

1. Next is the elevators



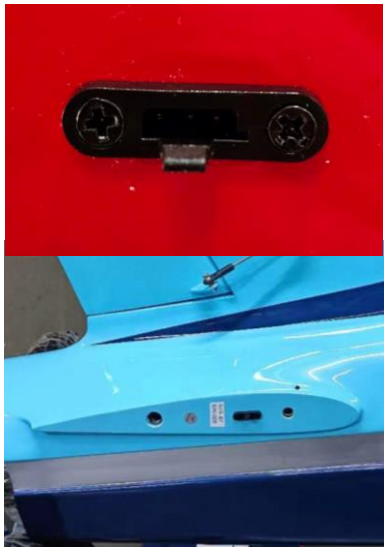
2. Put in the servo to the precut slot in the elevator..



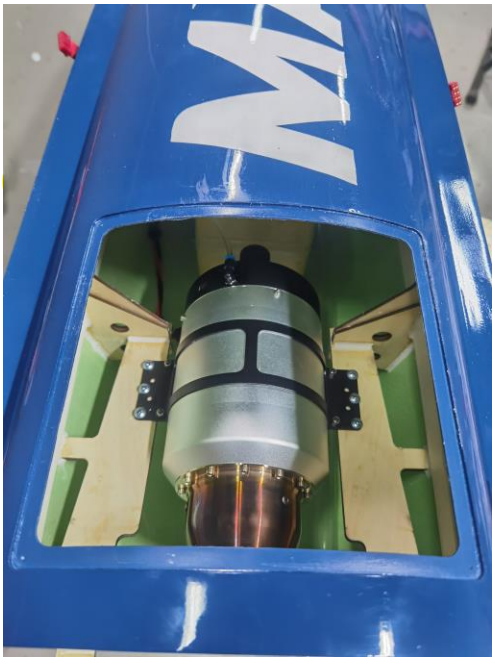
3. Lingkages setup.

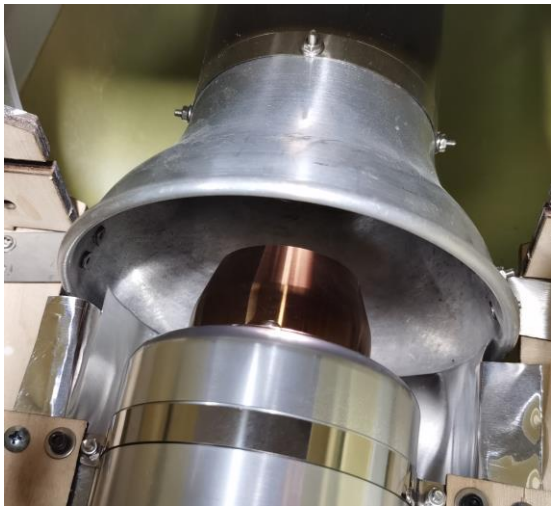
4. You may shorthen the servo wireas show in the pic.

5. The other side of the servo connector use connector bracket come with the kit to fix at the side of the fuselage

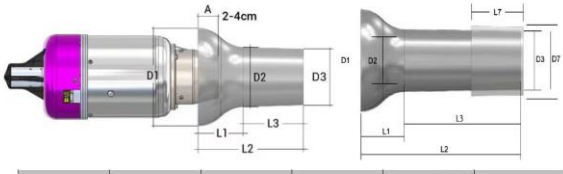


6. open backplate to put Turbine inside and mark hole to correct position tip of exhaust should be inside tail pipe bowl about 2-3cm



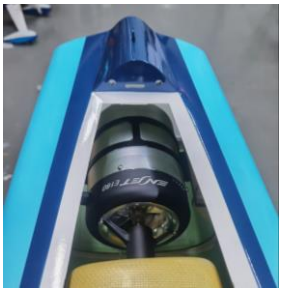


可参考的喷管尺寸：



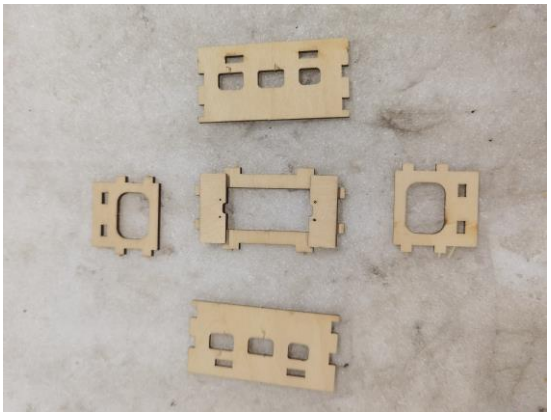
推力	A (mm)	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)
0-40N	20	70	45	45	35
40-60N	20	117	65	60/65	60
60-160N	25	140	85	80/85	75
160-300N	40	140	100	95/100	75
我们建议使用双壁型尾喷管，L2 总长度不超过 50cm，通常情况下 D7 比 D3 大 7-12mm。					

7. You can use a fire proof tubing to keep the wire all isolate from heat .

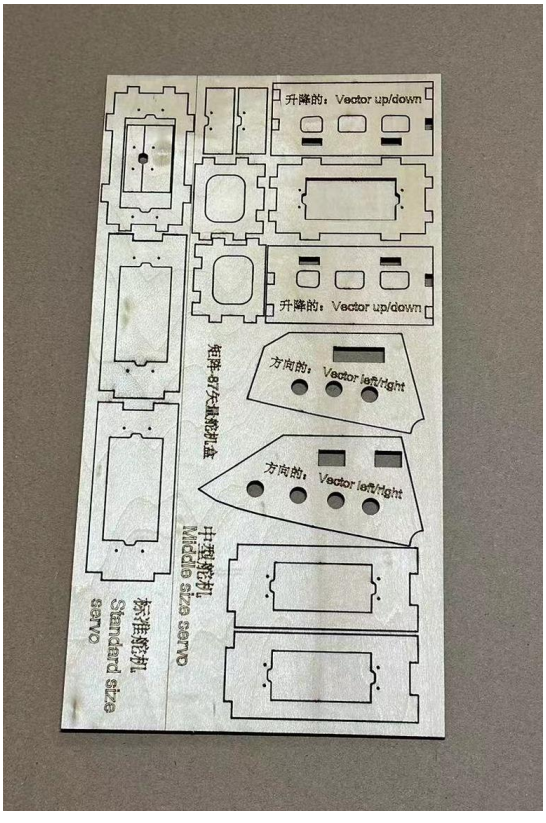


Vector thrust Installation

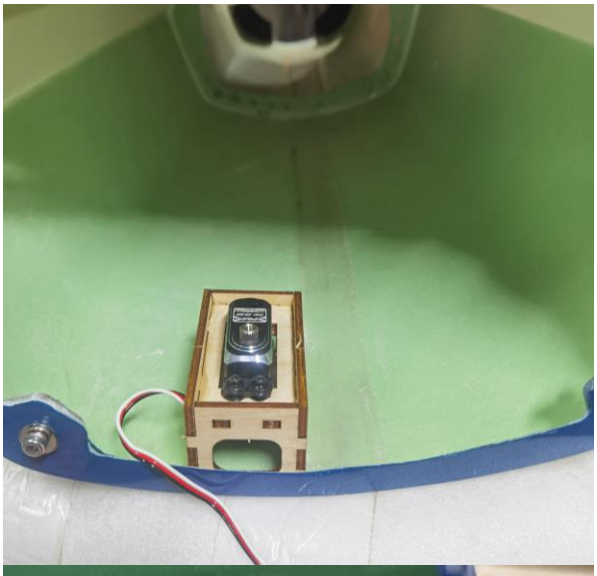
1. assembly servo mount by CA glue for VT



2. We offer wood for standard servo and middle servo



2. install servo mount by Epoxy for VT to back of fueslage

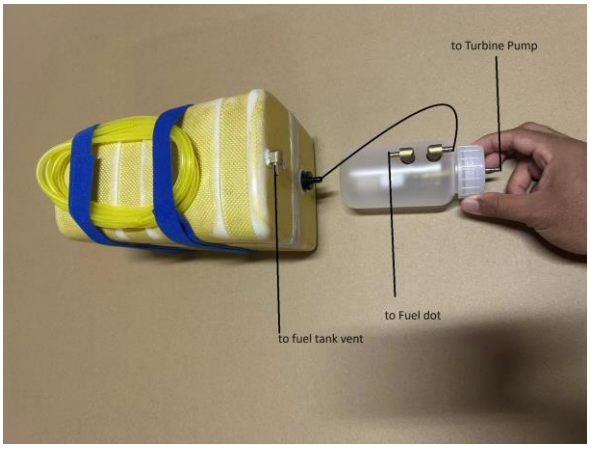


3. install servo arm and linkage

Fuel tank installation

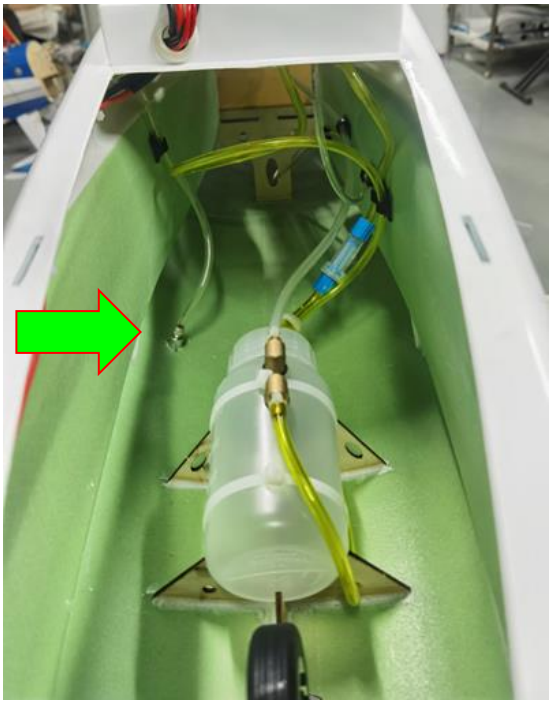
1. Matrix jet come with high quality kelva fuel tank

2.This photo show structure how to install Fuel Tank



3.Installation UAT in the front of fuel tank

1. The over flow vent installation



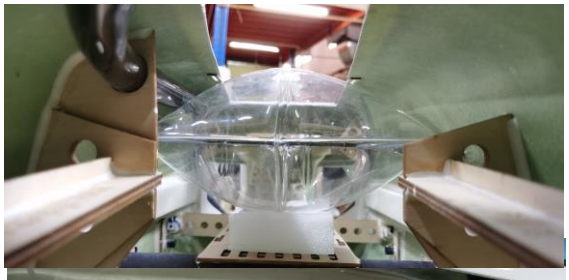
2. Bottom view of the over flow vent, you can connect a taxi tank if you wish to.

Fuel Bag installation

1. Fuel Bag come with wood and 4 pcs carbon tube

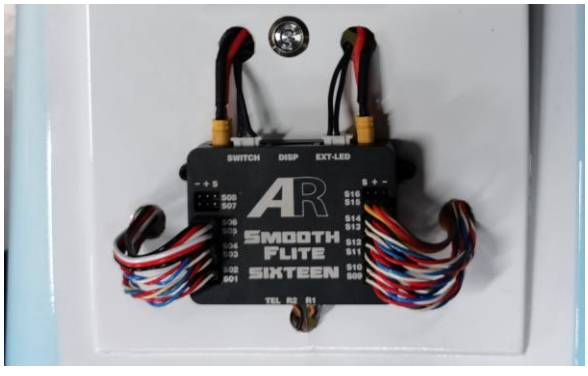
2.Put piece of to fuselage and put fuel bag inside to make correct position

3.Also need to fill in fuel or air to be like full air of the bag to mark position of front piece of wood and drill hole on back of firewall to put carbon tube and make sure it is not touch to any thing

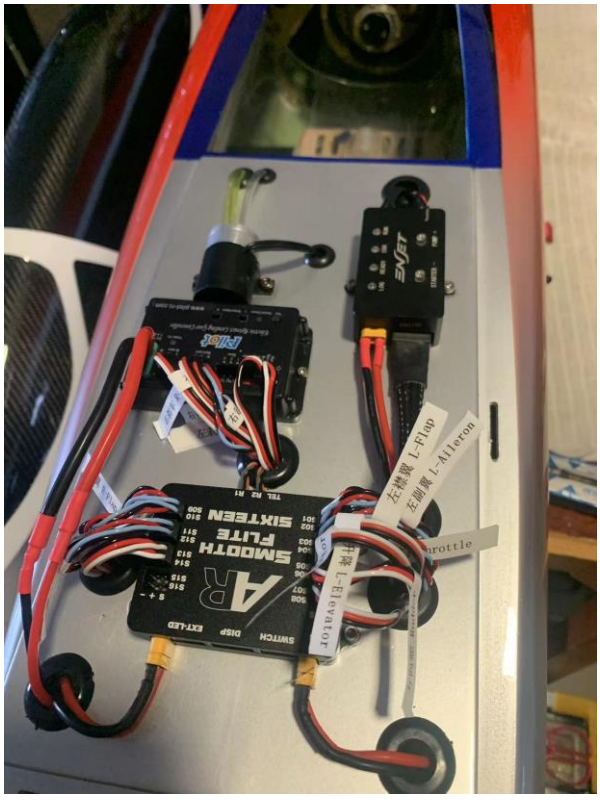


4 .test the fuel bag will not move forward and back with full fuel. . fill air or fuel out and glue it

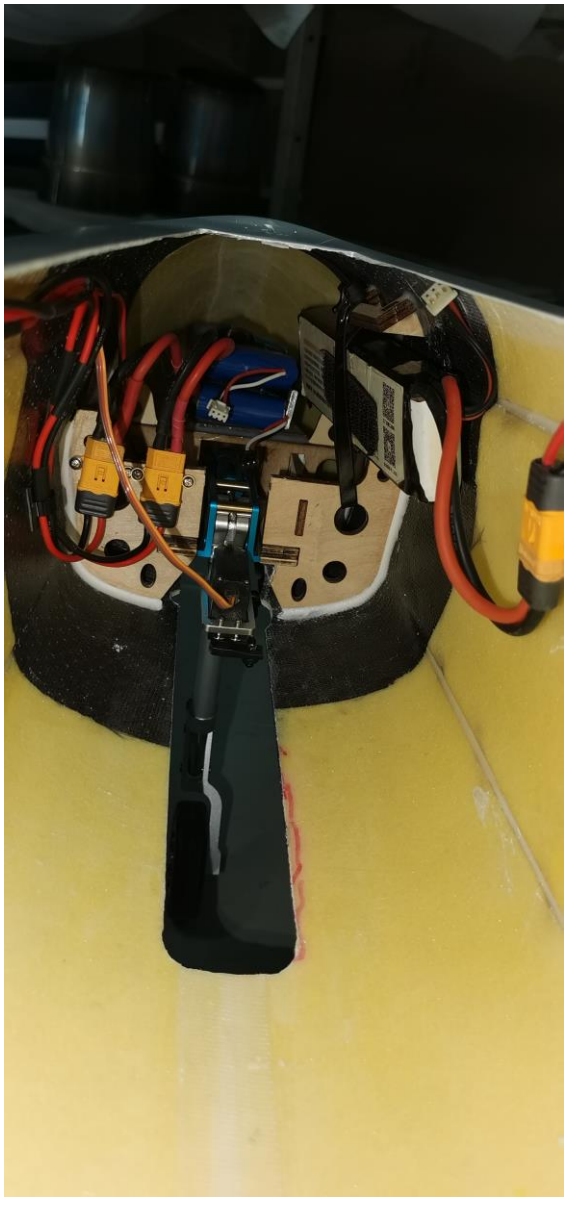
1. Electric landing gear / brake control box placement.

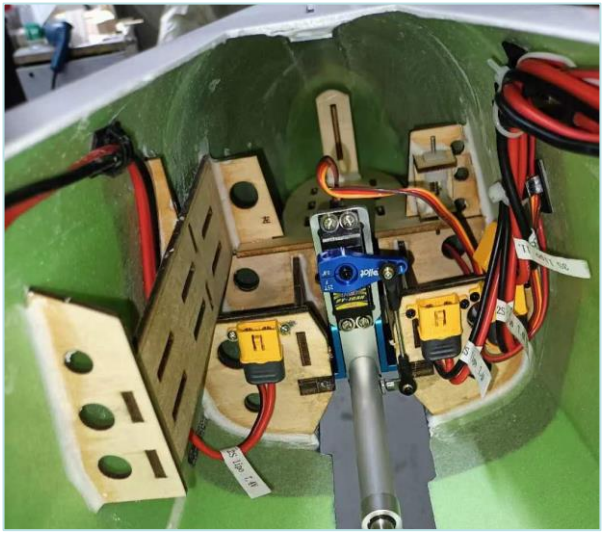


2. Receiver / Power System ,Receiver installation and placement



1. Battery placement. On top of the nose gear.





2. Remember to lock battery wood plate before flight

Cheking CG

1. The Matrix jet comes with CG measuring tools ,very handy to check CG.

Aileron: 18mm, Rudder: 50mm, Elevator: 26mm. Flap: 25mm for take off and 95mm for landing. The CG is 253mm back from the leading edge of the wing at the fuselage Measured with empty main tank, full UAT, landing gear down

Flight Preperation

- Make sure you have the right model programmed into your transmitter
- Check the direction of each surface not and also right before you take off .
- Remember nothing wrong on the ground ever improves in the air
- Check the air plane with the engine running and do a range check with
- your body between you and the plane at 150 feet.
- Check your battery voltage after each flight in case one servo is draining your battery
- Recheck all screws ,horns and linkages for slop after your maiden fight and check for damage if you made a bad landing you first time
- Have an experienced pilot fly it for you the first time if you have any doubts in your mind about the maiden flight
- Take a break after you first flight and let the adrenaline burned off by bragging to your fellow members how good it flies
- Fly low and at a medium speed on your first few flight
- Listen to your engine run and have an observer with you to remember what you talked about during the flight or if you get into trouble . Always balance your props, vibration is a killer.
- Remember nose heavy airplanes fly all the time, tail heavy airplanes fly only once. Be on the CG!
- Flying two mistakes: high in the beginning and not close to people, planes or runways. Being a center of the runway hog does not endear you to many modelers.