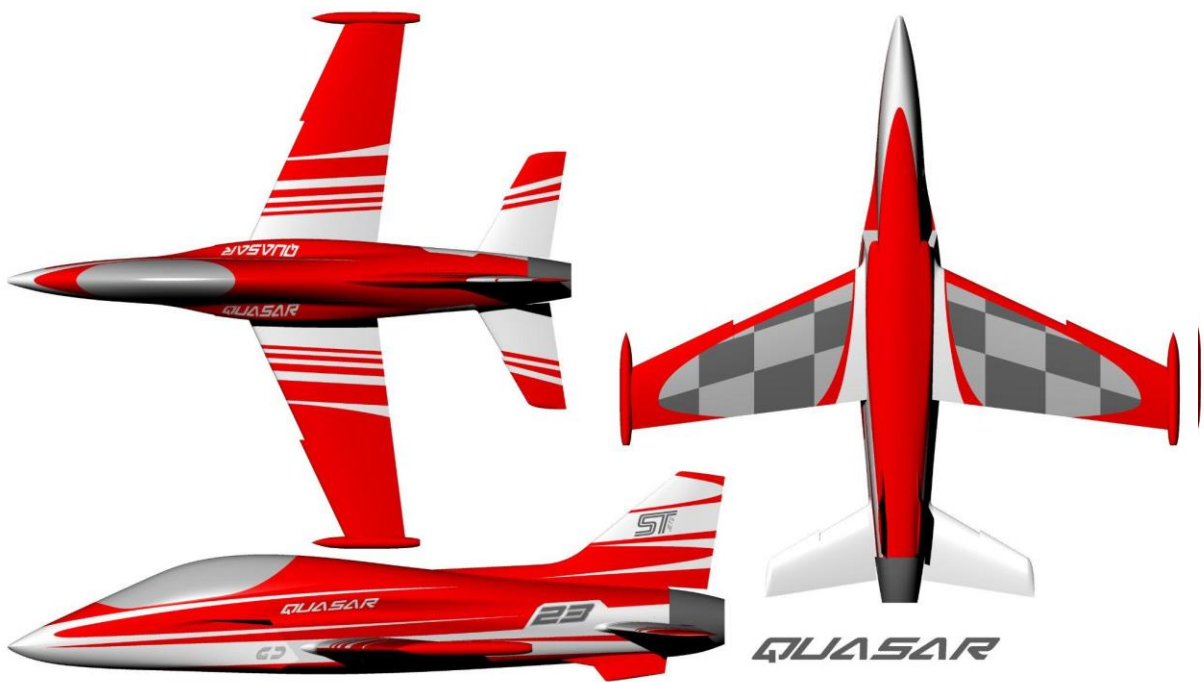




Instruction Manual

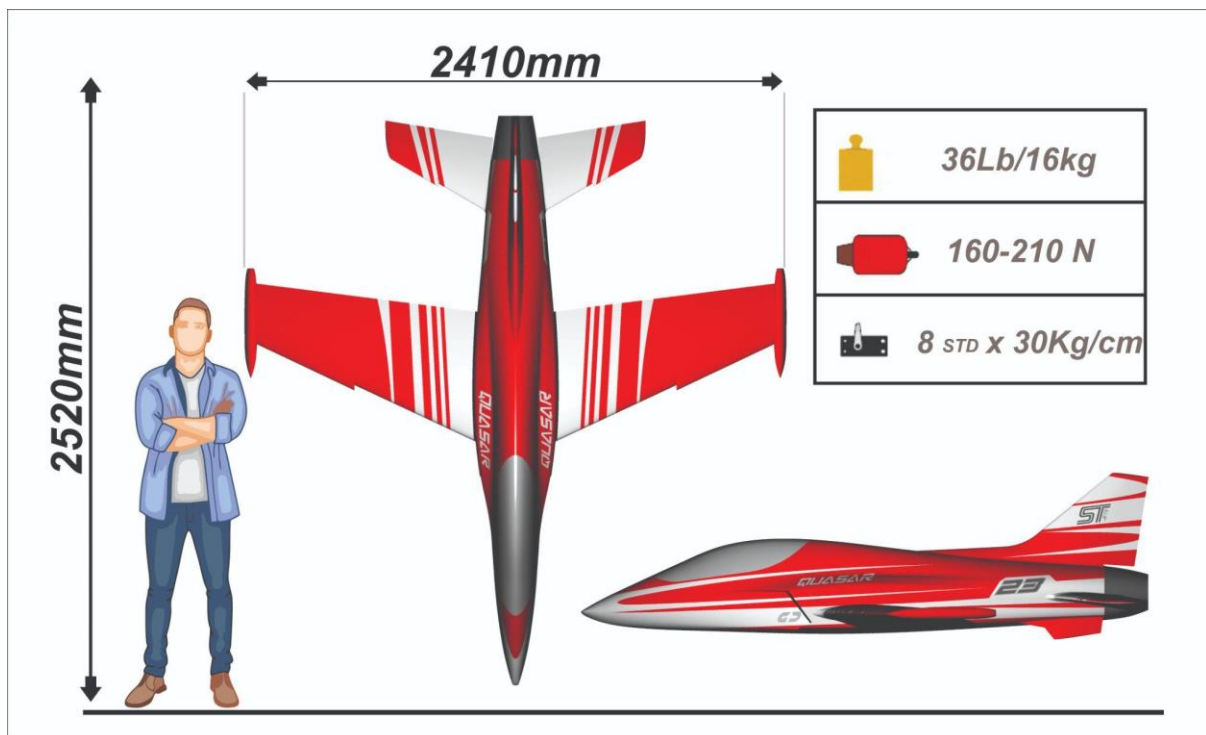
QUASAR





Thank you for choosing QUASAR as your next project. At ST Jets we are proud of it and we want to provide you with the best experience from the assembly, tuning and flight of this latest generation Sport Jet. The Quasar has been designed by Mariano Gostanian (multiple Argentine F3A aerobatics champion and RC designer among others of the ANDEX jet and the KINETIX) we use the best design programs and the latest construction techniques, applying composite materials to obtain a brilliant finished. Due to its characteristics, the Quasar will provide you with a solid, precise, and smooth flight without any surprises, and can be flown by a novice pilot as well as an experienced one, obtaining its full potential. It will allow you precise and controlled landings, passes at low speed with its flaps deployed. By raising the RPM, you will find an airplane capable of flying very fast without requiring great power in the turbine. Its stylized design makes it fast and precise at the same time, without surprises at any time.

Technical Data:





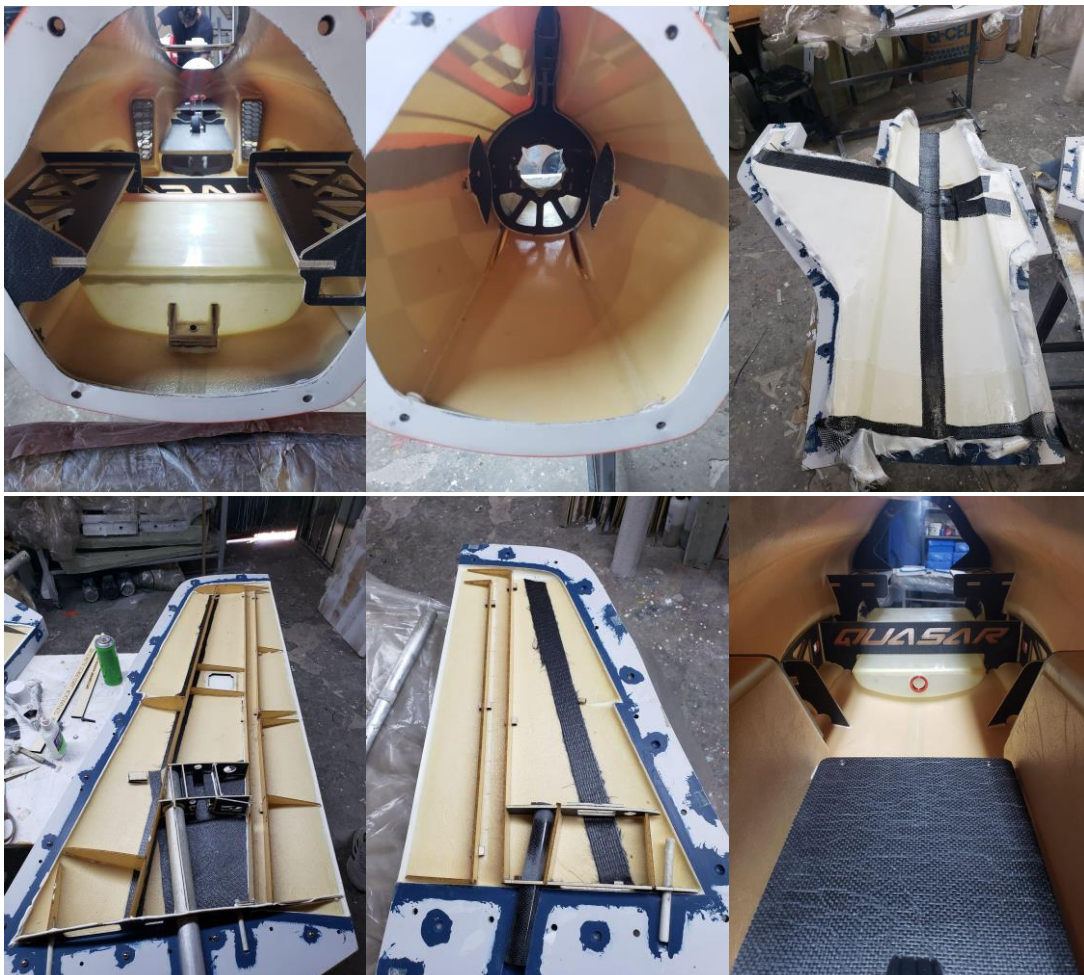
Completely built in composite materials, carbon fiber reinforcements, Airex frames laminated in carbon fiber, robust and lightweight.

Painted out of mold with automotive base and polyurethane finish, matte or glossy.

High level of construction in the factory, all that remains is to install the turbine, retractable landing gear and electronics.

All frames and structures are glued at the factory with high quality Airspace grade Epoxy.

Fuel tank is specially designed to be located in the center of gravity, ensuring that the QUASAR does not suffer alterations during flight due to fuel reduction.





Included with the model:

- All structure pre glue at the factory.
- Two pieces Fuselage for easy installation and transportation.
- All surface horns installed.
- Carbon Wing Spare Tub.
- Elevator tubes in carbon fiber.
- Rudder hinge center for max efficiency.
- Double wall Pipe tub.
- Velcro Wing Covers.
- Hardware (Bolts, ball links, pushrod, etc)
- Canopy Hatch pre-installed.
- Wing Tips tank tubs.
- CG guide.

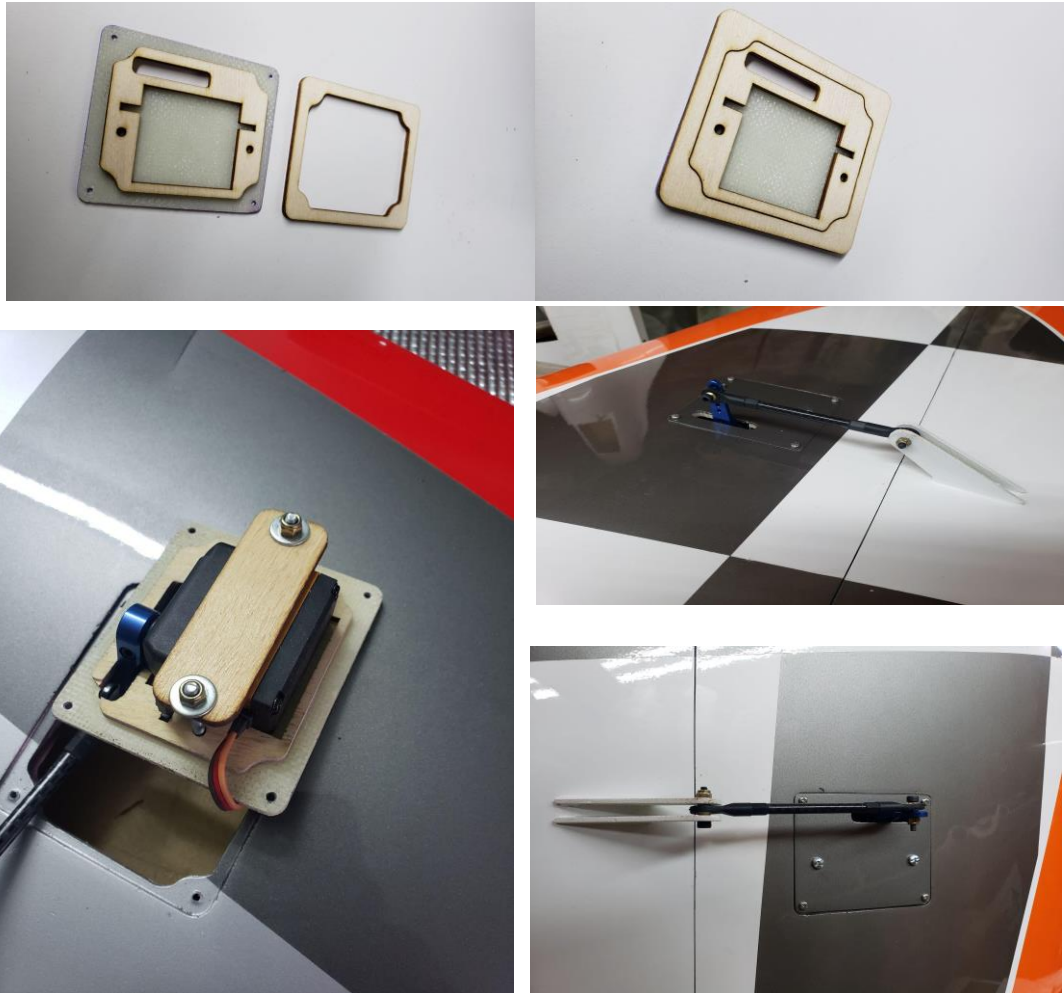
Require to complete the model (not included):

- Fuel tank (available for order a 4,75 L)
- Air trap (UAT)
- ELECTRONIC RETRACT SYSTEM (RECOMMENDED Electron ER-40 w/gs-200 controller)
- TURBINE ENGINE 160-210 NEWTON
- 2 x 1 ¼" servo arms (elevator)
- 1 x 1 ½" servo arm (rudder)
- 2 x 1¼" servo arms (ailerons)
- 2 x 1" servo arms (flaps)
- 1 x ¾" servo arm (steering)
- 3 x extensions 1050 mm (elevator rudder fuselage front)
- 2 x extensions 550 mm (elevator rudder fuselage back)
- 1 x extension 800 mm (fuselage back)
- 2 x extensions 700 mm (Fuselage flaps)
- 2 x extensions 700 mm (fuselage ailerons)
- 4 x extensions 2 poles 700 mm (fuselage retracts and brakes)
- 1 x extension 350mm (nose wheel)
- 2 x extensions 650 mm (ailerons wings)
- 2 x extensions 350 mm (flaps wings)
- 8 x servos 30 Kg standard size servo



Wing Installation

Aileron Servo

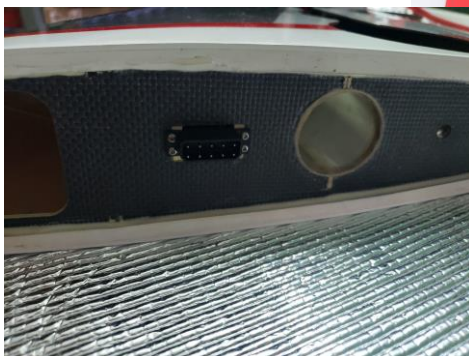


Inside the wing bag you will find the wood servo mount pictured above. Verify that the servo fits the mount tightly and adjust it if needed. Not all servos have the same dimensions. The outer portion of the supplied mount is used as a guide to help align the mount itself. The exterior dimensions are aligned with the aileron servo hatch. Mark the location of the inner portion that contains the servo and glue with medium CA.



Once this step is completed, drill the holes for the M3 x 30mm bolts using a 3mm drill bit, (not included in the kit). Secure the servo using the wood plate and supplied hardware as shown in the pictures above. Use a 1 ¼ " servo arm. Assemble the push rod for the Aileron utilizing the carbon fiber rod between the ball links. Verify the length and sand the ends if any adjustments need to be made to reduce the length of the rod until the correct length is found.

Flap Servo



Assemble the flap servo with a 1" arm and install the ball link to the arm of the servo. If this step is not performed now, it will be difficult to do so later. Mount the flap servo using the four Allen screws. Assemble the pushrod for the flap, utilizing the carbon fiber rod between the ball links.

Verify the length and sand the ends if any adjustments need to be made to reduce the length of the rod until the correct length is found.



Assembling the landing gear

Set the landing gear in the retracted position. For the strut, you will need to adjust the offset in the Electron retract using the set screw. Once the position is set, secure the set screw using the manufacturer's instructions. Run the wire harness for the brakes and gear together with the Aileron flap, as shown in the pictures. You can install the landing gear with your preferred method. Either using self-tapping wood screws (5mm) or with bolts and blind nuts. If you are using blind nuts, you will have to drill the holes with a 5mm drill bit to then put the blind nuts on the lower side. The Electron retract combo for the QUASAR does not include the bolt and blind nuts for this.





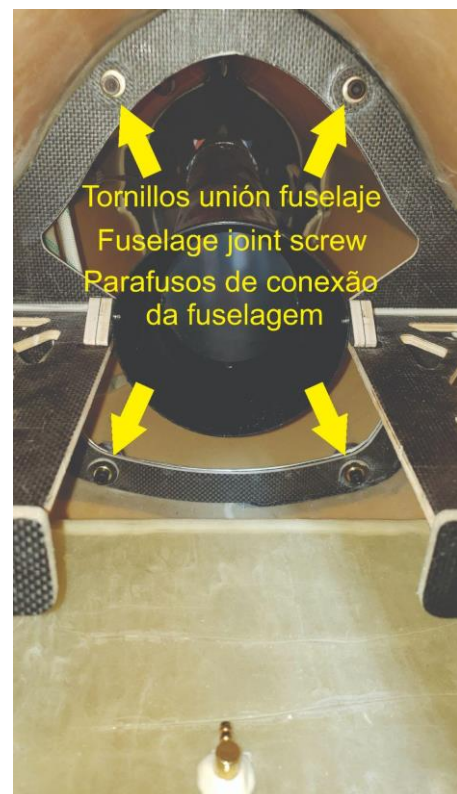
Fuselage (Rear)

Pass the elevator and rudder extensions (not included) through the guides, as shown in the photo. We recommend covering the cables with a high-temperature protector (not included).

You will notice that there are two length measurements for elevator extensions, this is because having the connection tab on one side of the fuselage requires that one of the extensions be longer than the other.

Glue the guides with CA to the fuselage.

Screw the rear part of the fuselage to the front part using four M6 Allen screws with washers.





Rudder installation

Install the 550mm long servo extension
Install the servo in the slot provided for the servo inside the rudder using a self-tapping screw or the hardware provided by the servo manufacturer. Use the 1 ½" servo arm for this surface. Assemble the rudder push rod, using the carbon fiber rod between the ball links. Verify the length and sand the ends if any adjustments need to be made to reduce the length of the rod until they get the correct length.





Fuselage (Front)

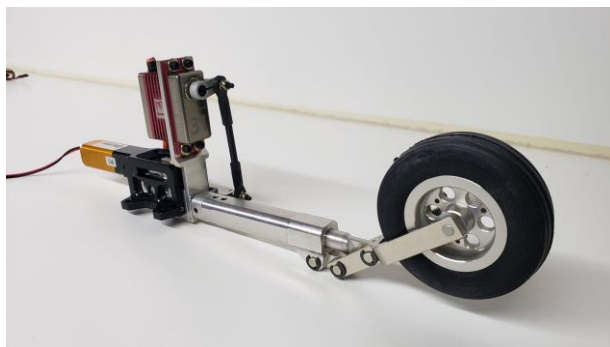
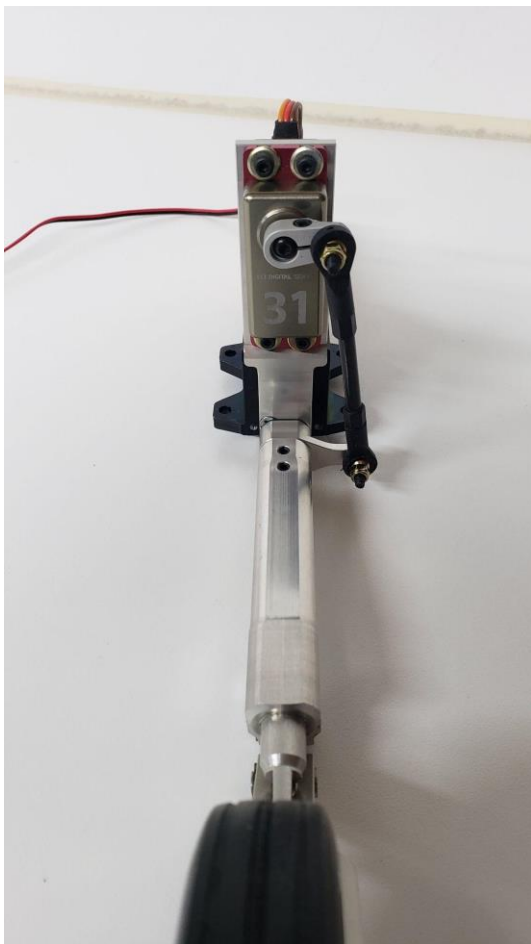
It is time to start on the front side of the fuselage.

The first step is to assemble the nose gear.

For this, we should begin by assembling the front mechanism and strut, tightening the strut bolts, and applying a drop of Loctite 242 (blue) Thread locker

so it does not become loose over time.

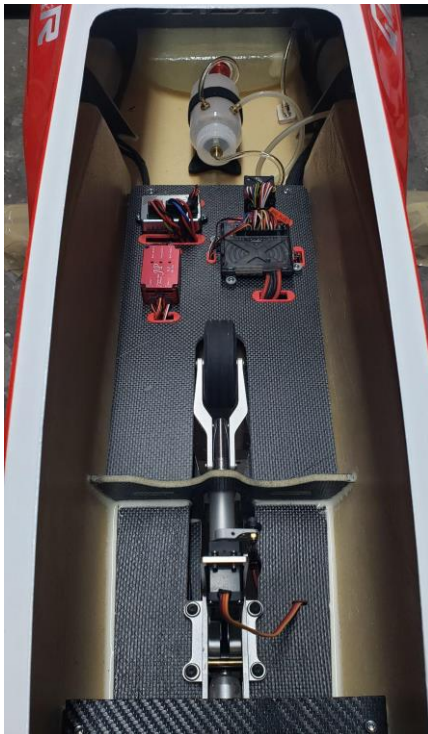
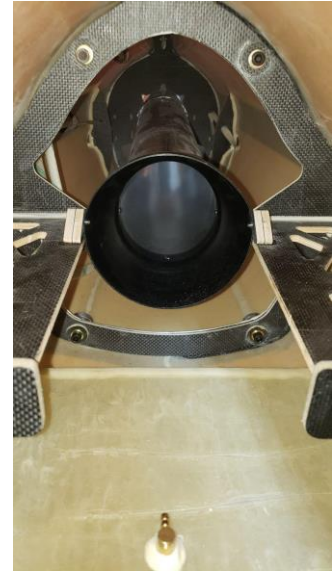
Mount the servo onto the servo plate, as shown in the pictures. The length of the servo arm should be 20mm. Assemble the nose wheel push rod, using the carbon fiber rod between the ball links. Verify the length and sand the ends if any adjustments need to be made to reduce the length of the rod until they get the correct length.





Position the retractable mechanism as shown in the pictures. This ensures that it will stay in the right place and there is no interference at the time of extension and retraction of the landing gear. Now, it is time to mount the mechanism. For this, we recommend drilling a hole with a 4mm drill bit, screwing one of the M4 screws provided in the Electron combo, then drilling another hole and screwing another one of the M4 screws. The mechanism is now aligned.

Repeat the same technique with the rest of the position holes. Remove the mechanism and enlarge the holes with a 5mm drill bit. This is necessary in order for the blind nuts (provided in the Electron combo) to be able to enter. Mount the blind nuts using some glue and then screw the mechanism into its final position after the glue dries.



We provide an electronic tray where you can install the electronics (Receivers, ECU, Landing Gear Control, Gyro, and batteries). This tray is made of Airex/plywood laminated with carbon fiber. Check your radio manufacturer recommendations for the setup of the receivers to avoid any radio signal interference.

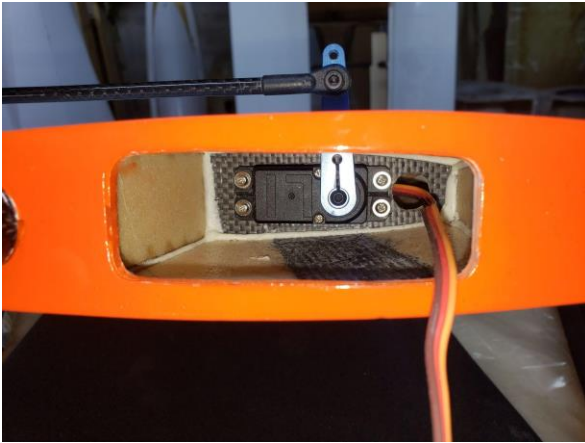
Install the connection for the Elevator and Rudder.

Front the square hole in the fuselage pass the Aileron, Flaps and Elevators extensions, we recommend to use a 10 pin connector for easy connection.

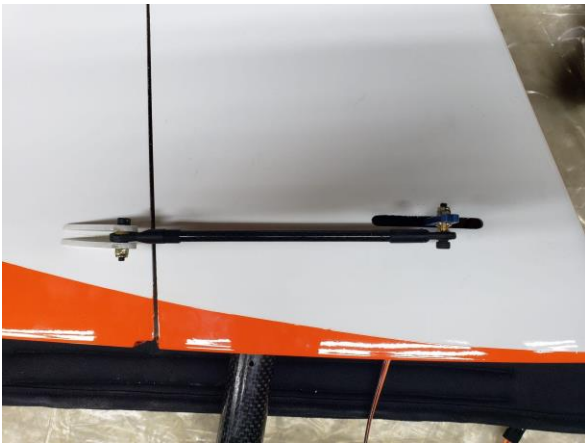
Install the Pipe with two wood screws and verify that the pipe is perfectly center and aligned with the turbine exhaust (follow also the turbine manufacture recommendation for pipe installation and measurements)



Stabs (elevators) Installation



Install the servo in the slot provided for the servo inside the stab using a self-tapping screw or the hardware provided by the servo manufacturer. Use the 1 ¼" servo arm for this surface. Assemble the elevator push rod, using the carbon fiber rod between the ball links. Verify the length and sand the ends if any adjustments need to be made to reduce the length of the rod until they get the correct length. Repeat this process for the other elevator.





ADJUSTMENT PRE-MAIDEN FLIGHT

After the installation process it is important to double check everything.

The QUASAR has been tested with up to 21 kg. of thrust, this power being sufficient for optimal flight. We do NOT recommend using turbines with greater thrust. If you do, it will be necessary to use a different exhaust pipe.

We provide a template to check the CG balance.

It is located 20 mm behind the wing tube.

The landing gear should be extended and the UAT full of fuel.

Travel Adjustment:

Elevator up & down 25mm measured at the root. Expo 20%

Aileron up & down 14 mm measured at the wing tip. Expo 20%

Rudder right & left 60 mm measured at the rudder bottom. Expo 25%

Flaps take-off 30mm measured at the wing root. Flaps Landing 100mm measured at the wing root.

From ST jets we wish you the best experience on the first flight and all after.

