



Skynetic

Bison XT STOL

1750mm (68.8") Wingspan - Advanced Model Airplane - Plug and Play (PNP)

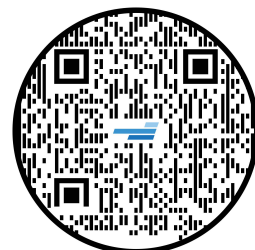
Assembly Guide



MOTIONRC
www.motionrc.com



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Introduction

Developed by and available exclusively at Motion RC, our "Skynetic" brand of foam electric RC Airplanes advances our vision of a global audience discovering the fun of RC Flight. Backed by Motion RC's customer support and a full line of spare parts to keep you flying, join the Skynetic revolution!

The Skynetic Bison XT STOL is one of our most versatile and fun to fly RC airplanes. Its large wingspan, high-wing configuration, and durable metal landing gear capture the essence of a full size Short Take Off and Landing ("STOL") aircraft. The Bison XT's versatile powerplant and two included propeller options handle gentle scale flying up to advanced aerobatics with ease. Slotted flaps and functional leading edge slats enable impressively short takeoffs! Advanced FPV flyers looking for a scale aircraft to fly in "First Person View" will enjoy the Bison's clear molded plastic windows and spacious cabin, which has been arranged to accept common aftermarket Pan-And-Tilt camera mounts.

The Bison XT's large inflatable all-terrain tires are perfect for grass, dirt or pavement. An air pump with standard size nozzle is required to tune your Bison's main wheels' firmness to best suit your preferred landing surface conditions, from sand, to gravel, to grass, to pavement.

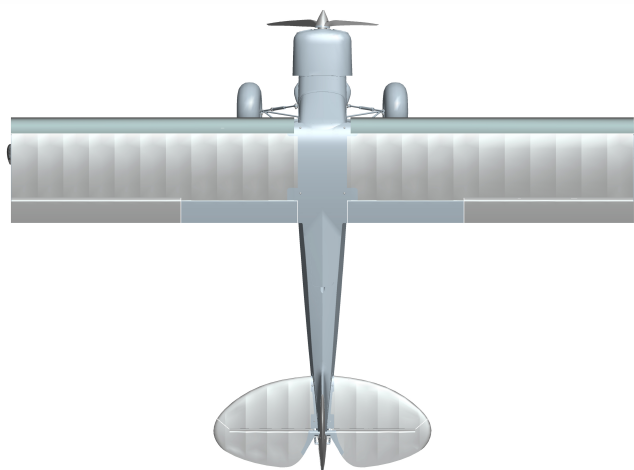
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WARNING:

1. This is not a toy! The Bison XT STOL is intended for RC pilots with intermediate to advanced RC flying experience.
2. Before assembly, please read through the instructions carefully and operate strictly under instructions.
3. Skynetic and its vendors will not be held responsible for any losses caused by user error or incorrect setup/handling.
4. This model is intended for RC pilots at least 16 years of age, with sufficient experience with tail-dragger configurations.
5. Avoid using industrial chemicals on the EPO foam, and avoid direct sunlight exposure, to minimize discoloration.
6. Only fly in areas where RC flying is safe and allowed by law.
7. Avoid flying in wet conditions. Do not land in wet or muddy areas.
8. Position the battery to achieve the initial Centery of Gravity (CG) position of 57mm behind the main wing's leading edge.
9. Only use the recommended flight battery. Check battery condition, health, and state of charge before and after flying.
10. Program the movable slats and flaps for minimum movement, until you are familiar with the model's handling with these features.
11. Use appropriate rubber adhesive when assembling the inflatable main tires. Do not exceed maximum pressure when inflating.
12. Avoid landing without power. As a scale aircraft, the Bison XT STOL is best flown in a scale manner with correct throttle/rudder inputs.

SPECIFICATIONS



1750mm (68.8")

6S Version

Wingspan: 1750mm(68.8")

Length: 1290mm (50.7")

Servo: 17g digital metal gear standard: Left Aileron, Right Aileron, Left Flap, Right Flap

25g Digital Metal Gear standard: Left elevator, Right Elevator

Motor: 5055 420Kv Brushless

Ducted fan: 70mm 12-blade fan

ESC: 80A with 5A BEC (1 pcs)

Weight: 3400g

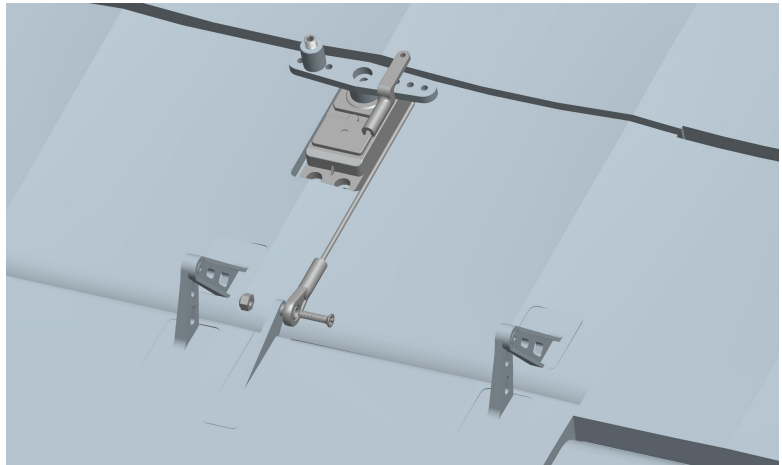
LiPo Battery*: 6S 3300-5000mAh (1 pcs)

*4s Capable when using the included 4s propeller

Moving flight surfaces: Elevator, Rudder, Ailerons, Flaps, Slats

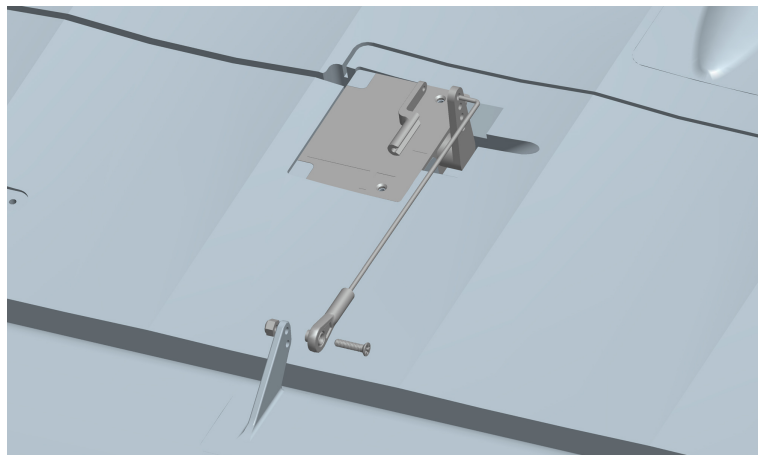
Install Flap/Slat Linkage

1. Assemble the Flap/Slat linkage as shown. The flap control rod is attached to the flap control horn with a ball link and turnbuckle.
2. Install the flap control rod onto the inner hole of the flap/slat servo arm, as shown.
3. Prepare the slat quick link by inserting it into the middle hole, as shown.
4. On subsequent flights, users may experiment with changing the position of these two control rods into the servo arm, which will change the mechanical mix ratio flaps and slats, and change the flight characteristics of the Bison. Adjusting these mechanical mixes, and electronic mixes in the radio, is an advanced function and should only be attempted by skilled pilots wanting to further fine tune the model's handling to their specific preferences.



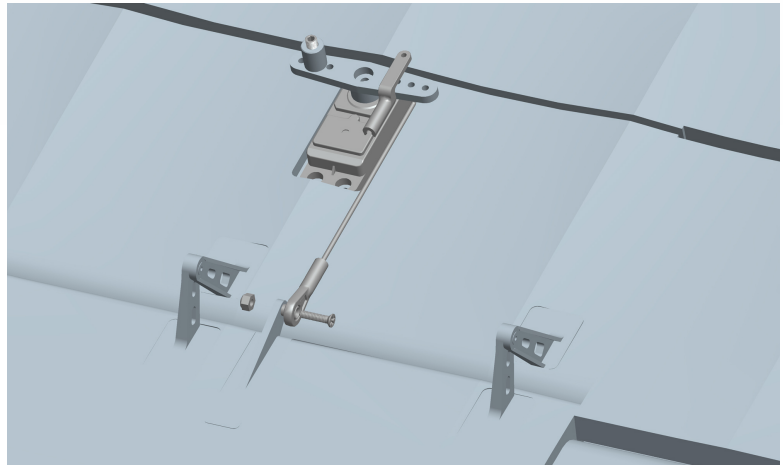
Install Aileron Linkage

1. Assemble the aileron linkage as shown.
2. NOTE: For all ball-link linkages and turnbuckles, avoid contact with glue or threadlocker chemicals.

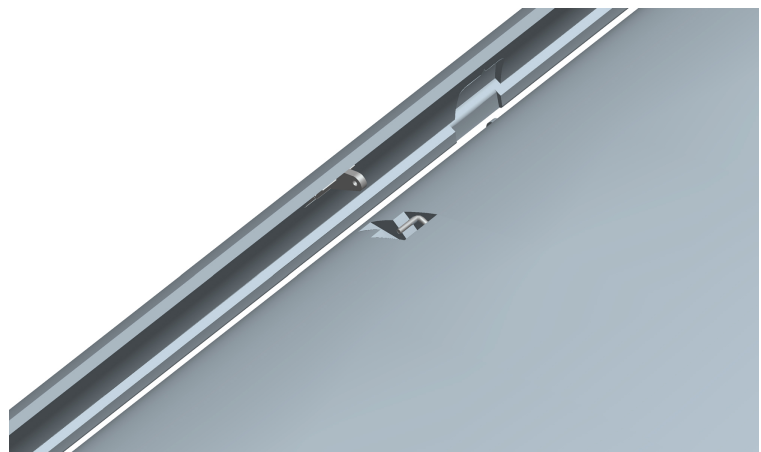
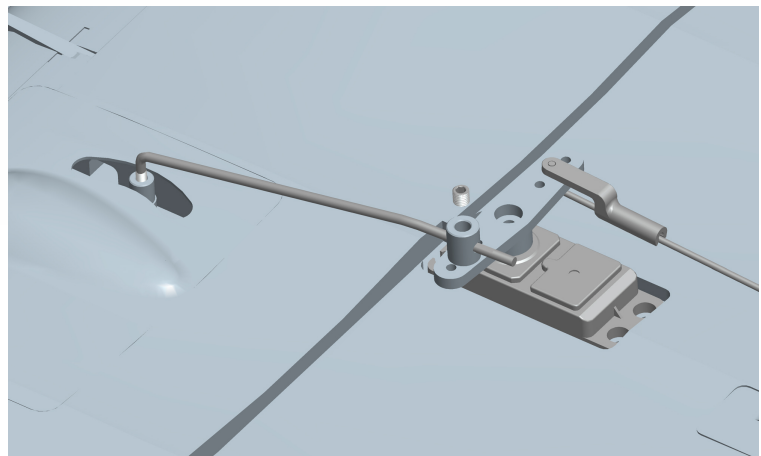


Install Flap/Slat Linkage

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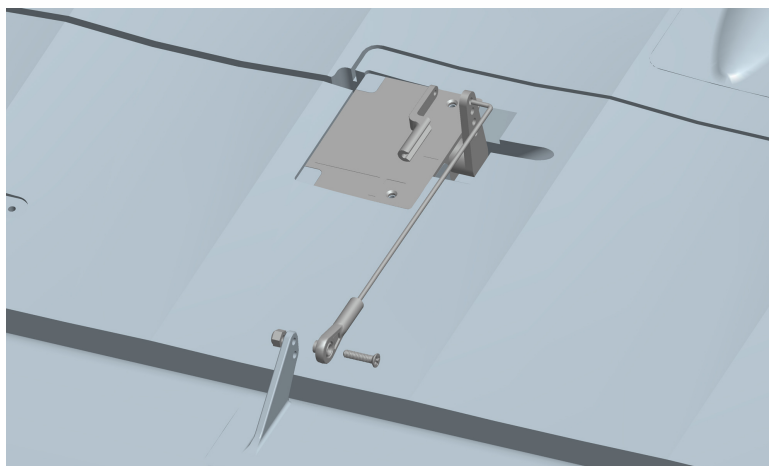
**Install Slat control arm**

1. Install the slat control arm to the concealed turnbuckle as shown in Image 1.
2. Connect the concealed slat horn as shown in Image 2.

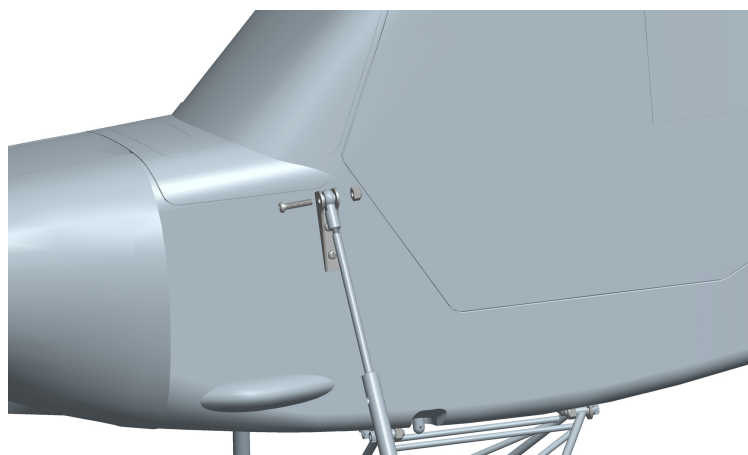
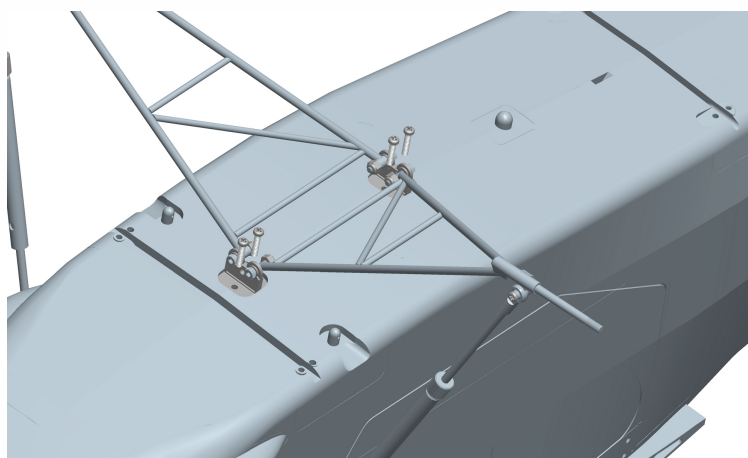


Install Aileron Linkage

1. Assemble the aileron linkage as shown.
2. NOTE: For all ball-link linkages and turnbuckles, avoid contact with glue or threadlocker chemicals.
3. Set the main wings aside and proceed to fuselage assembly steps.

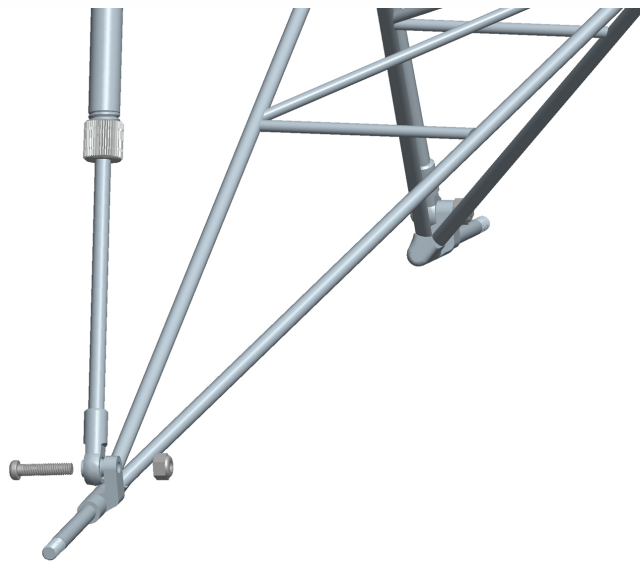
**Install Main Undercarriage**

1. Install the main undercarriage struts by screwing the metal assembly into the plastic fuselage mounts as shown.
2. Connect and fasten the Main Strut's turnbuckle as shown.

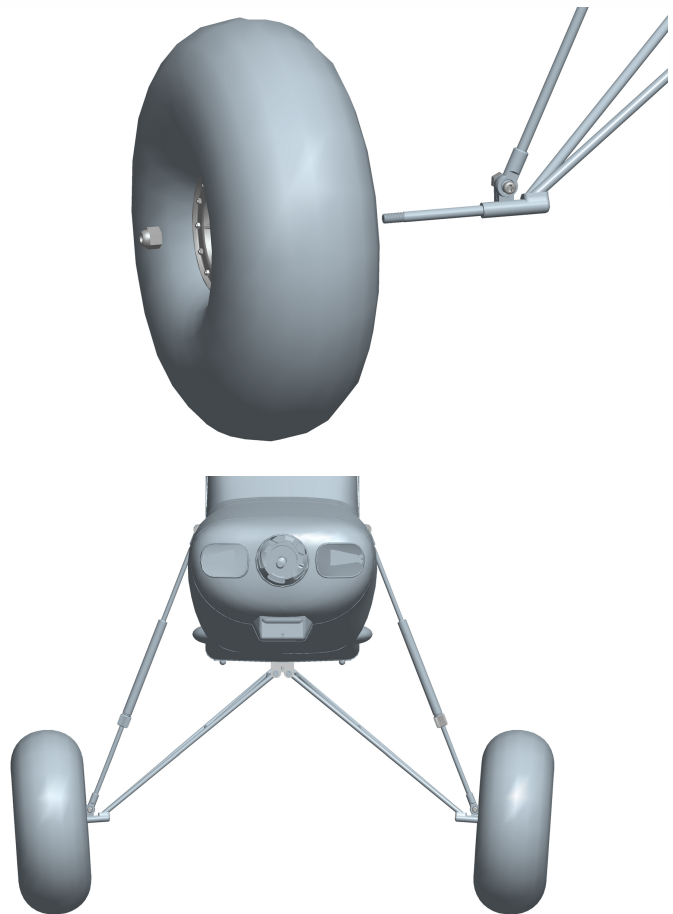


Connect Main Strut to Legs

1. Connect the Main Strut to the leg assembly using the screw and nut as shown.

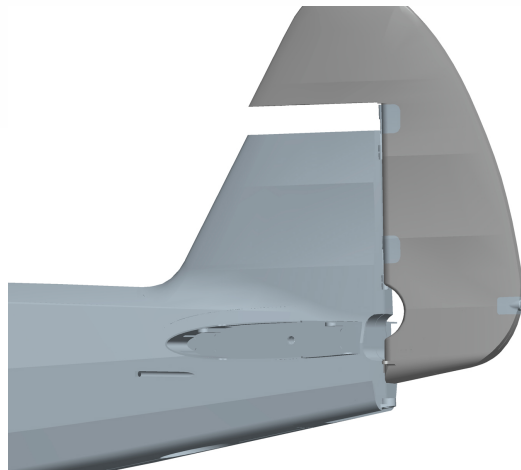
**Install Main Wheels**

1. Assemble the main wheels by wrapping the rubber tires around the plastic wheel hub itself. Use appropriate rubber cement or RC hobby "tire glue" to adhere the side wall edge of the tire to the edge of the hub. Inflate with minimal air to maintain shape, then allow the glue to fully dry.
2. Attach the main wheels and fasten with the included threaded nut.
3. Inflate the tire using a standard 1.5" inflating needle, commonly used to inflate a sports ball.
4. Inflate to a pressure that allows the model to sit comfortably on the ground without the tire walls bulging outward. Pressure can be reduced to allow rolling over gravel or uneven surfaces. Conversely, pressure can be increased to reduce rolling resistance and bouncing when operating on harder surfaces such as pavement.
5. Depending on a pilot's flying field and landing style, adjust the pressure to the point that it provides good stability and suspension, without excessive drag.
6. Excessive drag or rolling resistance may cause the model to tip over when encountering the sudden resistance of a landing surface. If so, increase air pressure.
7. Inspect the tire pressure during pre-flight inspection, and refill as necessary.



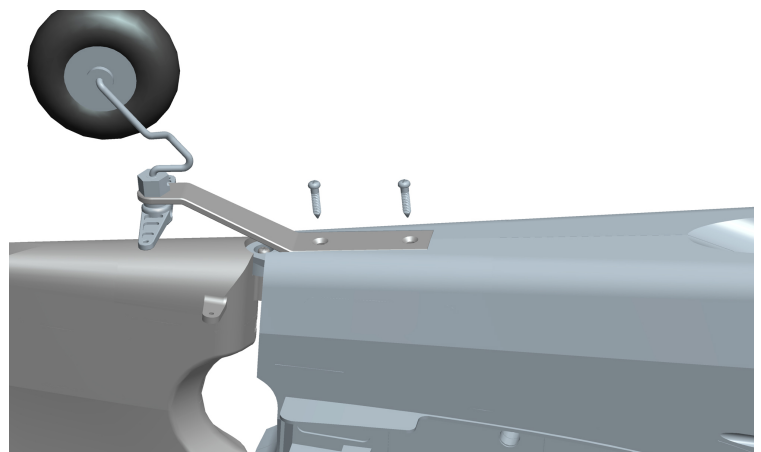
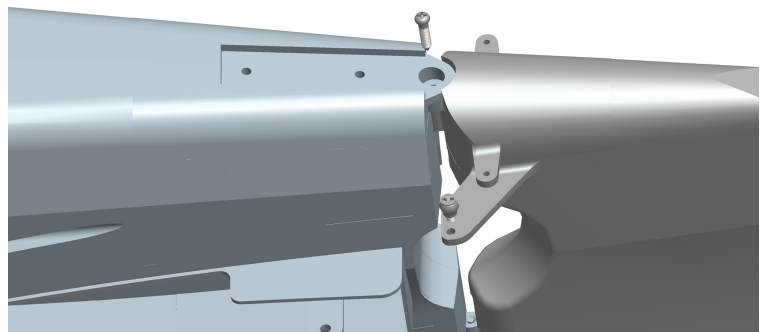
Install Rudder

1. Slide the rudder only the pre-installed hinge attachment points.
2. Connect the wire for the rudder's tail LED light.



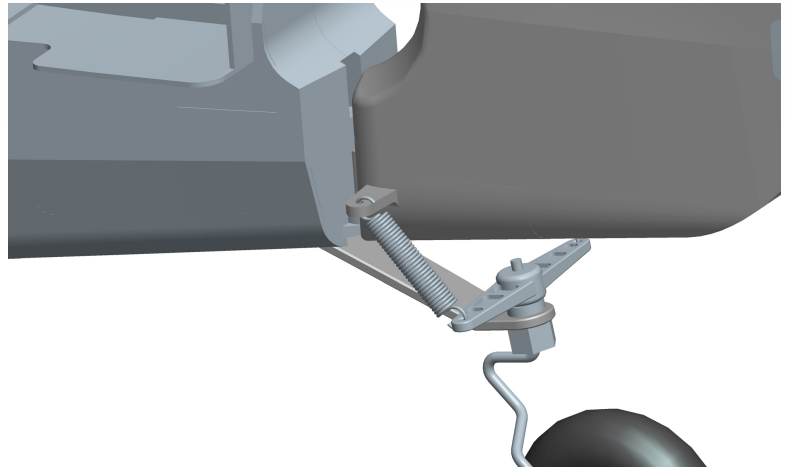
Install Tail Wheel

1. Secure the rudder with the screw as shown in Image 1.
2. Install the tail wheel assembly as shown in Image 2.



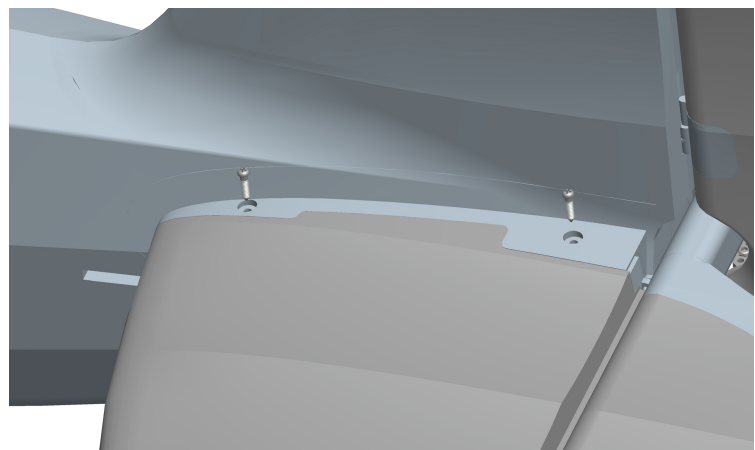
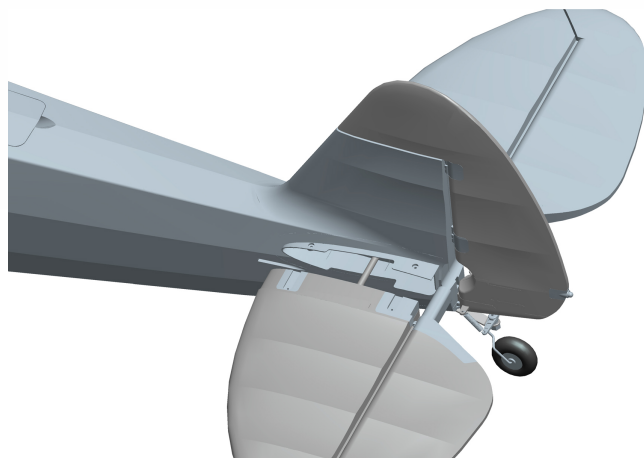
Install Steering Springs

1. Install the steering springs onto both sides of the tailwheel steering arm as shown.
2. Adjust the position of the steering springs to suit your preference for steering throw.
3. Typical STOL aircraft allow for lots of "play" or "looseness" in the tail wheel. This limits the effectiveness of the tail wheel at slow speed, but also reduces the influence that hitting an odd object may have on the aircraft's direction.
4. Generally, a tighter connection is ideal for harder, smoother landing surfaces, while a loose connection is advantageous when operating on gravel, riverbeds, or other unprepared surfaces.



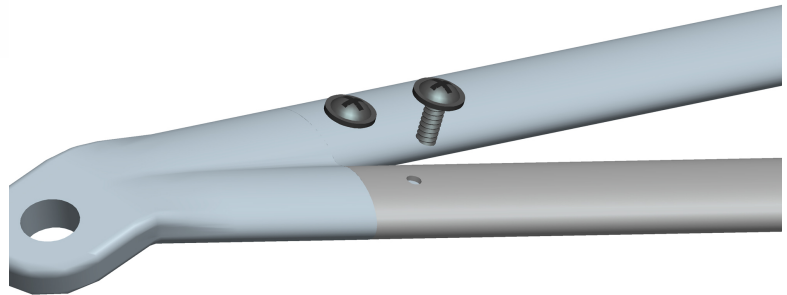
Install Horizontal Stabilizer

1. Slide the horizontal stabilizer onto the fuselage, using the included carbon spar to align the surfaces.
2. Fasten the stabilizer to the fuselage's plastic mount using the included screws as shown. Do not overtighten or strip the screws.

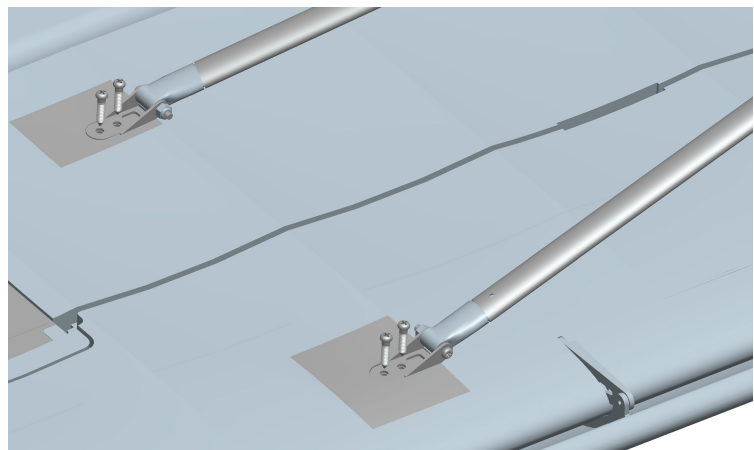
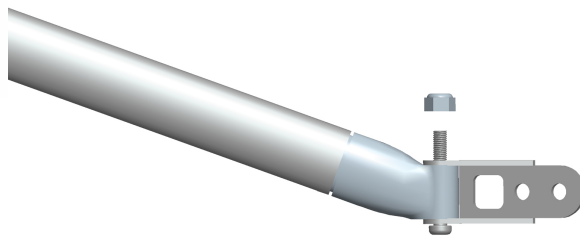


Prepare Wing Strut

1. Attach the wing strut arms to the mount. Use the correct screws as shown.
2. This mount will connect to the underside of the fuselage.

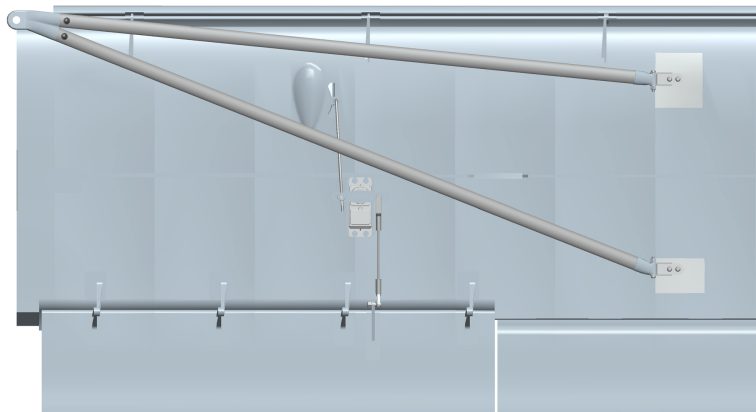
**Install Wing Strut Hardware**

1. On the wing-side of the Wing Strut assembly, prepare the hardware as shown.
2. Orient the nuts facing inward toward each other as shown in Image 1.
3. Screw down the Wing Strut mounts to the pre-installed mounts in the main wing as shown in Image 2.



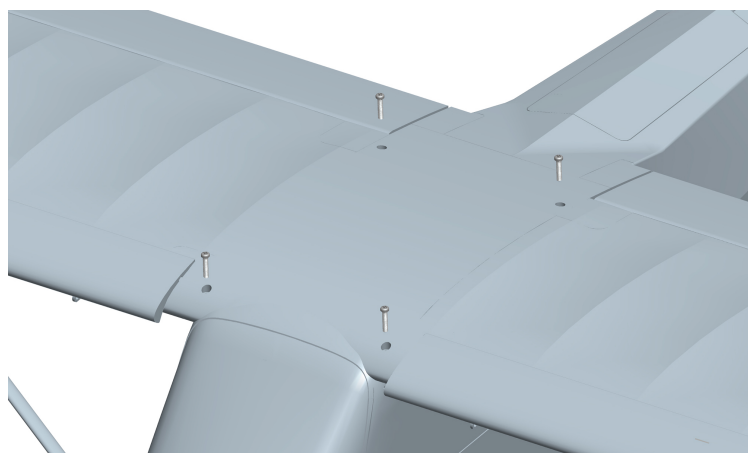
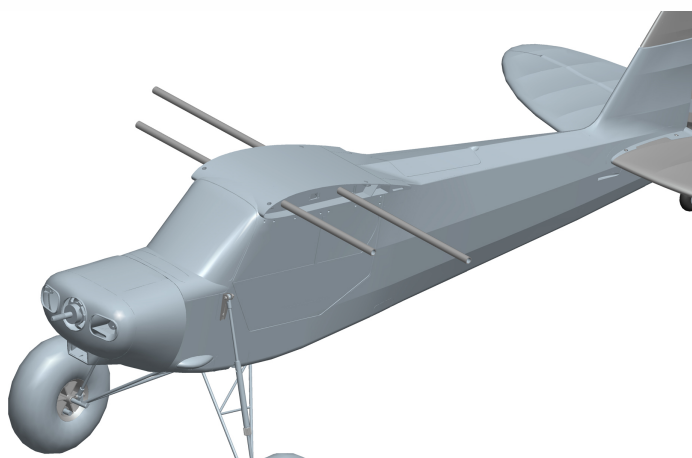
Inspect Wing Strut

1. Refer to this image to ensure the wing strut is assembled and installed correctly.



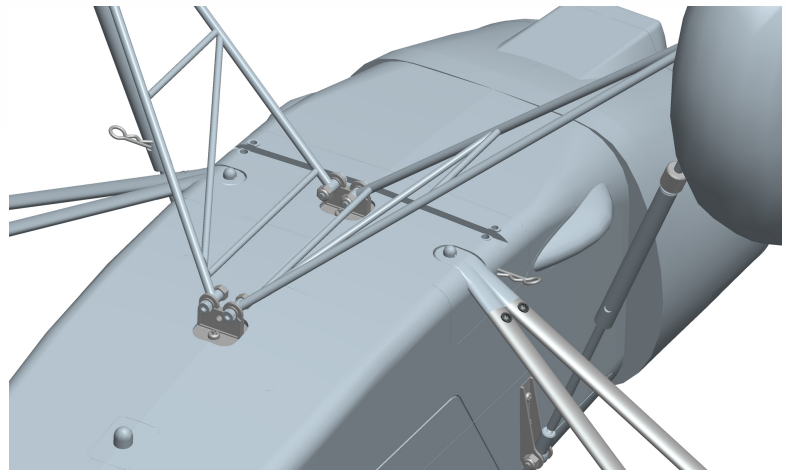
Install Main Wing

1. Insert the main wing spars, orienting them as shown. Note the different lengths of spar. The longer spar is placed aft, while the shorter spar is placed forward.
2. Connect the wire connector carefully, ensuring the connection is straight and secure.
3. Fasten the main wing using the included screws as shown.



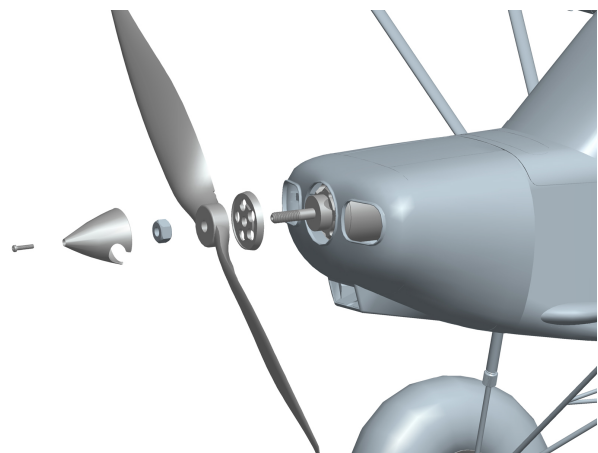
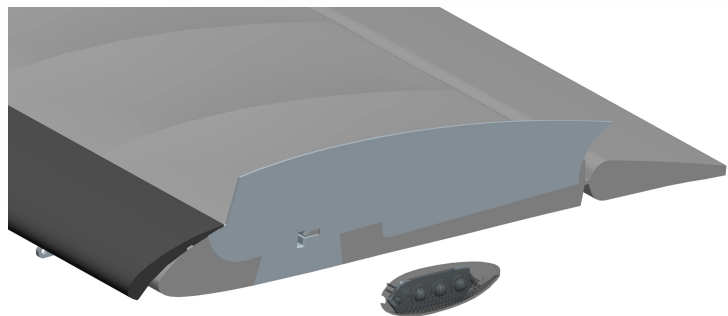
Main Strut to Fuselage

1. Slide the Main Strut's mounting hole over the pre-installed mounting post located on the underside of the fuselage as shown in Image 1.
2. Insert the included clip as shown in Image 1, to securely fasten the main strut to the mounting post.
3. To rapidly disassemble the model's main wing, remove these clips, and unscrew the main wing from the top of the aircraft as shown in the previous step.
4. The Bison XT STOL features as "wire-free" main wing connection, so users do not need to manually connect/disconnect any wires when connecting/disconnecting the main wing assembly.



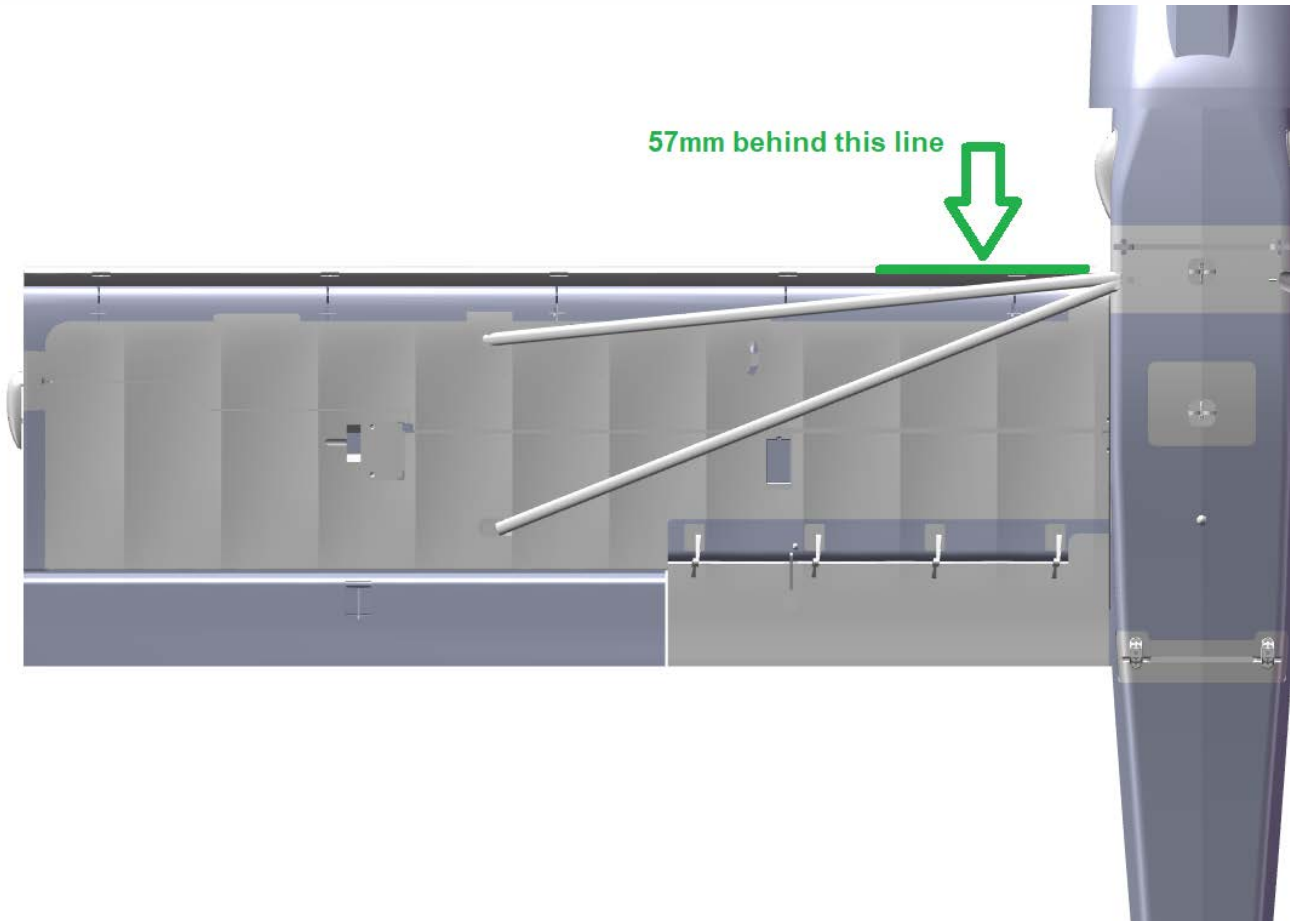
Complete Assembly

1. Install the included wingtip LED module, if desired.
2. If the connection is loose, slightly bend the metal pins away from each other, to create more tension within the mounting socket. Alternatively, users may use thin double-stick tape or a semi-permanent adhesive like canopy glue.
3. Finally, after completing an electronics setup and programming a Throttle Cut in your radio transmitter's settings, assemble the propeller as shown.
4. NOTE: Two propellers are included in the box. These are intended for 4s and 6s use. Only the propeller is required to be changed, when changing the flight battery from 4s to 6s. Do not attempt to fly the 6s propeller with a 4s battery.



CG and Throws

The recommended initial balance point to achieve the model's Center of Gravity ("CG") is 57mm aft of the leading edge of the main wing. Position your flight battery to achieve a balance at this CG point, while the aircraft is upright (not inverted).



Control Throws

According to our testing experience, use the following parameters to set Aileron/Elevator Rate percentage, when using the servo horn positions described during the Assembly Steps of this manual. Program your preferred Exponential % in your radio transmitter.

We recommend between 20%-30% Expo. We recommend using High Rate for the first flight, and switching to Low Rate if you desire a lower sensitivity. On successive flights, adjust the Rates and Expo to suit your preference.

	Aileron (~20% Exponential)	Elevator (~20% Exponential)	Rudder (~20% Exponential)	Flaps
Low Rate	Rate : 80%	Rate : 80%	Rate : 80%	10-15 degrees
High Rate	Rate : 100%	Rate : 125%	Rate : 100%	20-30 degrees

Contact us

For any assistance regarding your Skynetic Bison XT STOL model aircraft, please visit Motion RC at www.MotionRC.com and www.MotionRC.eu.

Visit the product page [HERE](#)

Visit the Hobby Squawk discussion thread [HERE](#)

