

OMP HOBBY[®]

Global Professional RC Model Brand



Installation Manual

Bushmaster 65" Balsa Airplane

OMPHobby 65" Bushmaster Balsa Airplane



OMPHobby Bushmaster 65 Inch aircraft, this aircraft faithfully replicates the true designs of the real-life aircraft. The head of the aircraft is reinforced with composite splints, the fuselage uses carbon fiber beams, an easy-to-install Horizontal Stabilizer Elevator, and an integrated Elevator. There are also pontoon installation positions, and aluminum alloy Wing Struts. The aircraft is made of high-quality materials such as balsa wood, composite material, aluminum alloy, carbon fiber, and covering film. It is light, strong, and exquisitely beautiful.

OMPHobby Bushmaster 65” Balsa Airplane

Wingspan 1660mm	Full Length 1300mm	Wing Area 34.2dm ²
Weight 2.3-2.6KG	Wing Load 67.25-76g/dm ²	Angle of right thrust on the motor 2.5°
ESC 60-80A	Propeller EOLO 14x7E	Angle of Attack 0.5°
Motor Sunnysky 3520	Battery 6S 2200-3300mah 4S 2600-4000mah	Angle of down thrust on the motor 0°
Servo Micro servo 5KG.cm(23x12mm)*6pcs		



Bushmaster 65" Balsa Airplane

➤ Package contents (ARF version)



Fuselage	Cowl	Left & Right Wings	Horizontal Tail	Rudder	Spinner
Main Landing Gear	Cowl Hardware	Wing Hardware	Elevator Hardware	Rudder Hardware	Fastening Strap
Wheels	Tail wheel landing gear Hardware	Wing Tube	Extra Hardware	Landing Gear Hardware	Wing Support Rods
Wing fence & Ventral Fin	Screws	Decal Sticker	60 core Extension cord		

Recommended Power Systems:

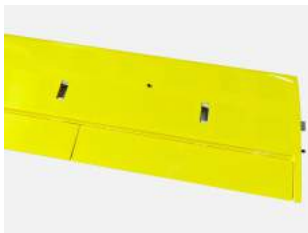
Propeller: EOLO 14x7"	Motor: SUNNYSKY 3520/3525 520~560KV	ESC: SUNNYSKY 60A/80A	Servos: OMPHOBBY 041MGx6(6kg+)	Battery: EOLO 6S 2200~3300mAh
				

Wings Assembly

1. Take out wings hardware



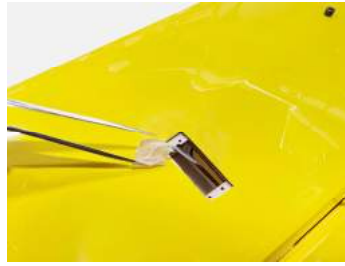
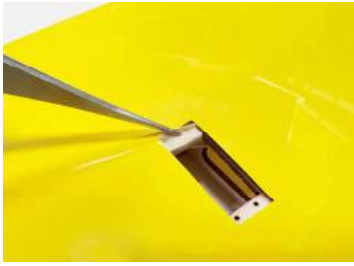
2. Carefully locate the slots which has been made on aileron and flap, lightly cut through the covering but not into the balsa sheeting; Insert 2mm inner hexagon screwdriver into the slots to make sure the glue inflow into the slots to secure the control arms.



3. Use sand paper to roughen the root of control arms. Try to insert it into the mounting slot to adjust the position at first, then take it out, apply glue to the slot and the root of the control arm insert it into the slot to secure it.



4. Pull out the white polyester thread from the servo holes with tweezers, tie up with the servo connector.



5. Find the other head of white polyester thread from wing side, pull it until servo is placed in servo hole.



6. Use 1.5mm internal hexagon screwdriver to tighten the M2 × 6 inner hexagon self-tapping screws to secure the servos.

Tip: Flap servo cord needs 450mm, Aileron servo cord needs 200mm



7. Secure servo arms and control arms with ball head pull rod (After the glue is dried), put the cup head hexagonal screw, gasket, ball head on servo arm, secure it with iron pliers, adjust the ball head pull rods to proper length.
8. Secure screw, washer, ball head to control arm, check the degrees between servo arms and control arms.



Elevator Assembly

1. Take out Elevator Hardware



2. Carefully locate the slot which has been made on horizontal tail, lightly cut through the covering but not into the balsa sheeting; Insert 2mm inner hexagon screwdriver into the slot to make sure the glue inflow into the slot to secure the control arms.



3. Use sand paper to roughen the root of control arms. Try to insert it into the mounting slot to adjust the position at first, then take it out, apply glue to the slot and the root of the control arm, insert it into the slot to secure it.



4. Insert elevator into the fuselage from the opposite direction and its reverse side as in Figure:



5. Turn the elevator over after it inserted into the fuselage, then insert the horizontal tail into fuselage, the horizontal tail slot must be fully inserted into the fuselage slot.



6. Use 502 gluing the gap all around the horizontal tail.



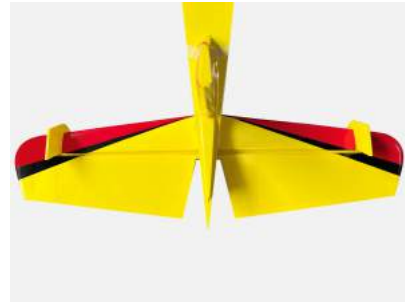
7. Install the Wing fences as in Figure, make sure the wing fences are perpendicular to the horizontal tail.



8. Insert the elevator hinges into the horizontal tail hinge slots, make sure the gap on the left and right sides is the same.



9. Between the horizontal tai and elevator leave a 0.5mm gap and apply glue to the hinges.



10. After the glue is dried, install elevator servo, assemble the servo arm and control arm with ball head pull rod, secure the cup head hexagonal screw, gasket, ball head to the servo arm, secure it with iron pliers, adjust the ball head pull rods to proper length.

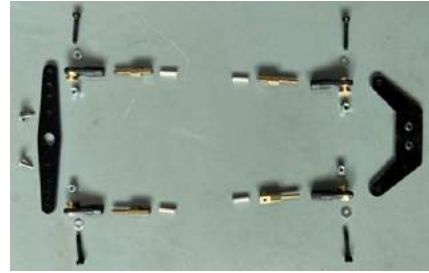
11. Secure screw, washer, ball head to control arm.

12. The mounting locations of elevator servo and Ball head pull rod as in Figure.



Rudder Assembly

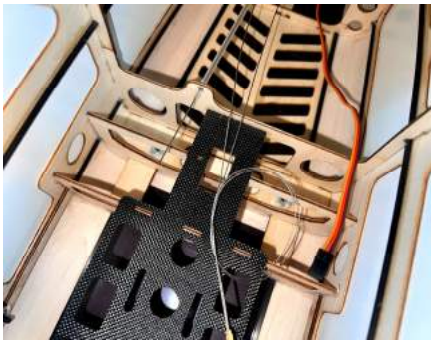
1. Take out Rudder Hardware



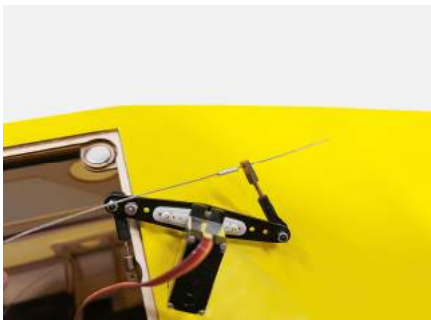
2. Secure the servo arm extended gasket to servo arms with T2 × 6 self-tapping screws, then install the ball head screws, metal regulators and steel wires connecting rods as in Figure.



3. Find two steel wires in the fuselage, pay attention to cross-install the steel wires as in Figure



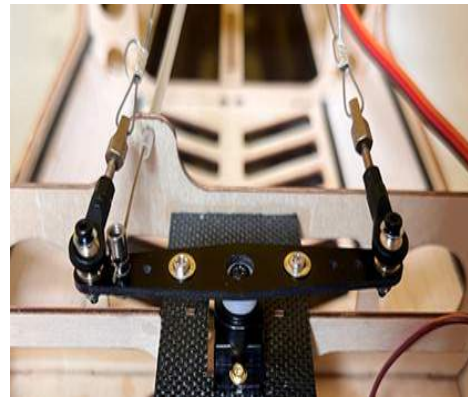
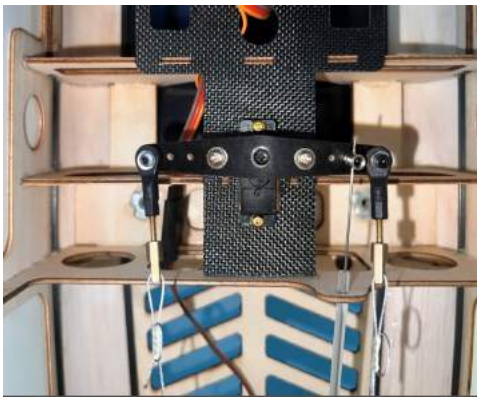
4. Thread the steel wires into the connecting rods and install it as in Figure



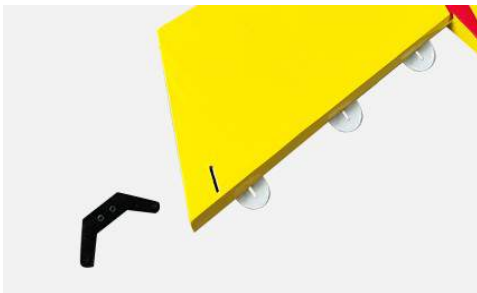
5. Use diagonal pliers to compress the copper sleeve tightly as in Figure



6. Install rudder servo as in Figure, thread the tail wheel control steel wire into the metal regulators, secure rudder servo with screws to the plate, use a 1.5mm inner hexagon screwdriver tighten the metal regulator



7. Insert the rudder control arm into the rudder as in Figure, adjust it to ensure the left and right sides are consistent.



8. Apply glue to the control arm, insert the rudder hinges into the vertical tail hinge slots, make sure the gap is about 0.5mm



9. Align the rudder pattern to vertical tail pattern, then apply glue to the hinges for both sides.



10. The installation of the rudder control arm and ball head screws as in Figure



11. Find the rudder steel wire at the root of the vertical tail, tear off the tape, thread the steel wire into the connecting rods and fasten it the same way as before, use diagonal pliers to compress the copper sleeve tightly as in Figure, cut off the extra steel wire.



12. Use a 4mm open wrench to adjust the tightness and level, make sure the wires are tightened and two sides are symmetric.



Main wheel assembly

1. Take out the Main wheels and landing gear hardware



2. Put two M3 x 6mm black cup head hexagon screws into the landing gear, then apply thread locking Adhesive-Low Strength to the screws, tighten wheel axle with the screws as in Figure



3. Install main wheels, secure wheels with gaskets and screws. (Apply thread locking Adhesive-Low Strength to the screws then tighten it)



4. Unscrew the M3 x 12mm black cup head hexagon screws from the landing gear plate with a 2.5mm screwdriver, then put it into the landing gear, apply thread locking Adhesive-Low Strength to the screws, tighten the screws to secure the landing gear.

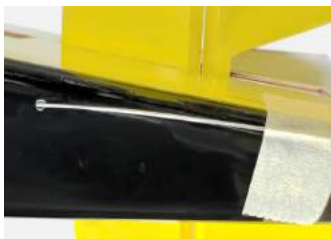


Tail wheel assembly

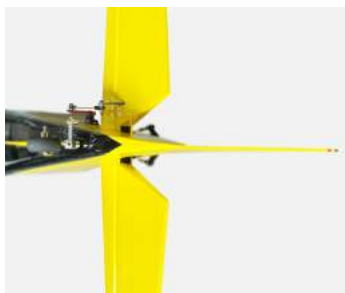
1. Take out tail wheel landing gear hardware



2. Find the securing holes on the tail wheel installation plate, use a utility knife make a mark.
3. Put the metal regulator into the aluminum steering part as in Figure, apply thread locking adhesive-Low Strength to the top of regulator, then screw on the locknut, take note that do not screw the lock nut too tight, ensure that it can rotate smoothly. To have a better effect, can put a little grease into the gap between regulator and lock nut.

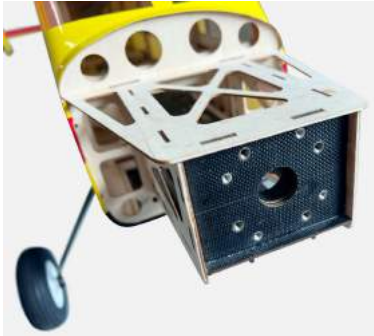


4. Find the tail wheel control steel wire, thread it into the regulator, ensure the rudder and tail wheel are aligned in a straight line; use a 1.5mm inner hexagon screwdriver to tighten the locking screw of the regulator to lock the steel wire.

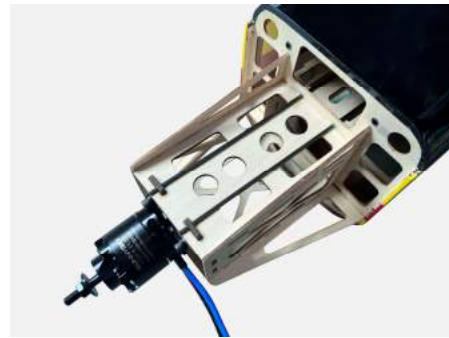


➤ Motor Installation

1. There two types of mounting holes on the head plate of fuselage, can be selected according to motor specifications.
2. Put the screws into motor mounts and put aluminum columns to the other side of the screws.



3. Apply glue to the screws and install motor to motor holder, please pay attention that the motor cable should be to the left or right direction.



➤ ESC Installation

1. Attach the connected ESC to ESC holder with double-sided tape and Secure with cable ties.
2. Tie the wires of ESC and motor with fastening strap.

Please take note that the battery elimination circuit of ESC could be 5V, 6V, 7.4V ,because some customers' receiver equipment does not support high voltage, so the factory default set is 6V, if you receiver support high voltage (2s,8.4V), then we suggest that you set the bec to 7.4v, so that servo power will be more strong and the speed will be more fast. The switch is on the back of ESC (no sticker side) .



➤ Propeller, Spinner, Cowl Installation

1. Find the four screw fixing holes in the fuselage, stick masking tapes to mark the holes, tear open the front part of masking tapes.



2. Take out Cowl, Spinner and cowl hardware



3. Install cowl to fuselage (please take note that motor must be in the center position), then put the suitable gasket to the motor, install the aluminum spinner back-plate, propeller (the side which have words face upward), screw gasket and propeller spinner adapter in succession.



4. Secure the spinner with screws, please pay attention that spinner must be located in the centre position of the cowl, and spinner edge is parallel to the cowl, gap is about 2mm.



5. After determining the gap, stick the masking tapes to the canopy, use a drill or a utility knife to bore a hole according to the marked fixing holes.



6. Use a small size of Phillips screwdriver to tighten the T2x8mm self-tapping screws along with washers to the cowl, tear off the masking tapes when a half part of the screws be twisted into the cowl, then continue to tighten the screws.



7. Install the wing fences as in Figure, apply glue to fix it



8. Install the ventral fin as in Figure, apply glue to fix it



Recommended Settings of Dual Rates and Exponentials of Control Throws

	Low rates(deg)	Low rates (exp)	High rates(deg)	High rates (exp)
Aileron	15	30%	38	45%
Elevator	15	30%	45	45%
Rudder	15	30%	48	50%



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For customer support outside of the USA, please contact OMPHobby in China.
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Website: www.omphobby.com

Disclaimer and Safety

- This product is not a toy. It is not recommended for children under age 14.
- Fly the airplane by abiding by local laws and rules.
- Fly the airplane in a designated location, and always maintain visual contact of the aircraft.
- Avoid flying directly over unprotected people, moving vehicles, and occupied structures.
- Read the safe code of AMA before flight. The guideline can be downloaded from the following link: www.modelaircraft.org/files/100.pdf