

# OMP HOBBY

## CHALLENGER



OMP Hobby 49" Challenger is a sport RC model airplane built in the traditional way: balsa and film cover. The airplane features light yet strong structure, low wing load, and abundant power, making the airplane easy to fly and capable of a lot of advanced aerobatics, such as all P3A and a few 3D maneuvers. This airplane performs very well in either low or high speed, with great authenticity and precision in response to radio stick movements, ideal for pilots who graduated from trainer airplanes to the next level of skills.

The optional 49" Challenger receiver ready version is an almost completed kit in factory. Motor, ESC, servos, Ailerons, elevator, are all installed. Landing gear is preassembled. Propeller is included in the kit. It takes no more than an hour to put the kit together and ready for the sky.

### Specifications and Parts Recommendations

Wingspan 49 in (1250mm)	Length 39.6 in (1006mm)	CG: 62mm from the leading edge of main wings
Wing Area: 28dm <sup>2</sup> or 434 in <sup>2</sup> (3.01 ft <sup>2</sup> )	Wing Loading: 41.8g/dm <sup>2</sup> or 13.7oz/ft <sup>2</sup>	Flying Weight: 1170g or 41.3oz
Motor: Sunnysky X2820 1100KV Outrunner	ESC: SunnySky 40A with 5V 3A BEC	Battery: 3S 11.1V LiPo, 2200mAh (optional)
Propeller: SunnySky Eolo 12x6.5" electric propeller	Servos: 4 of 17g OMPHOBBY metal gear digital servos.	Flight time: 5~10 minutes

[www.OMP Hobby.com](http://www.OMP Hobby.com)

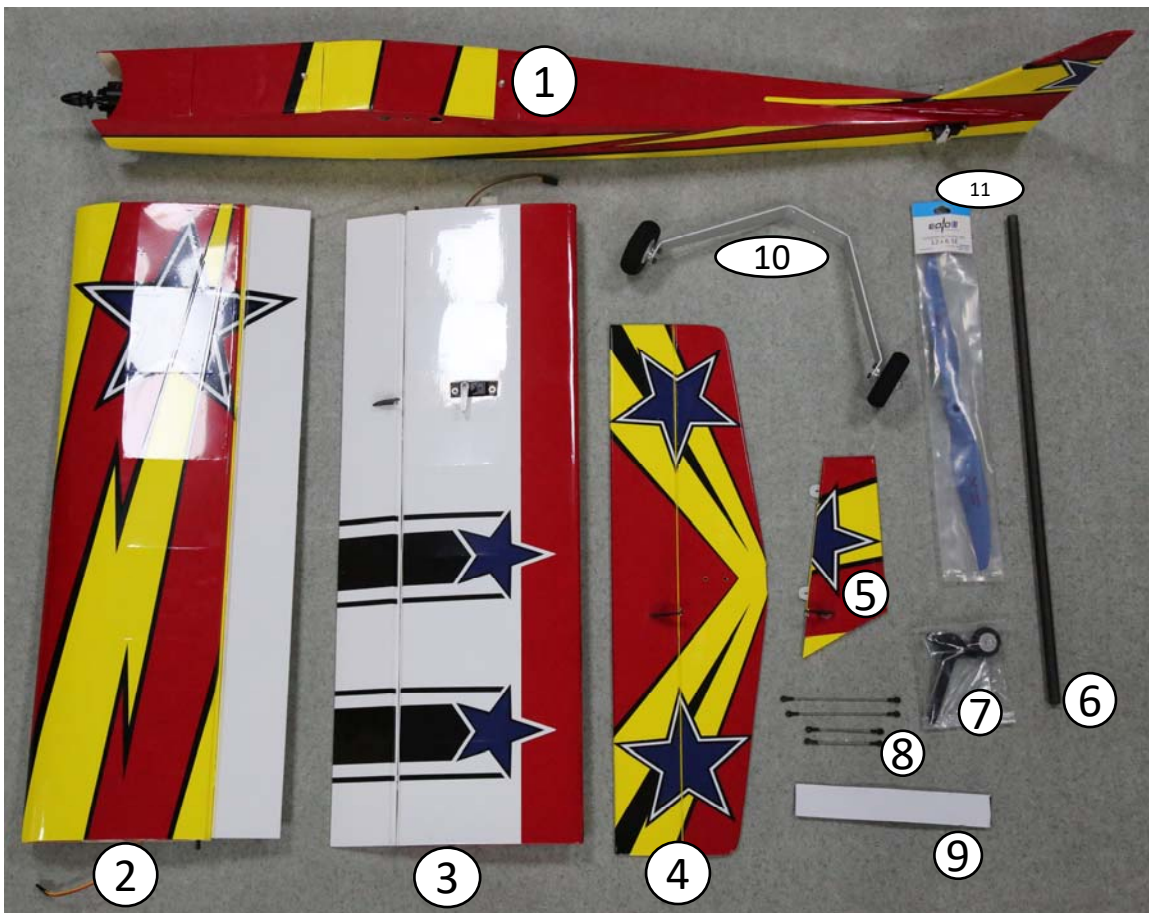
[www.OhioModelProducts.com](http://www.OhioModelProducts.com)

# CHALLENGER

Two color schemes available



Package contents (receiver ready version)



1. Fuselage
2. Left half wing
3. Right half wing
4. Horizontal stabilizer
5. Rudder
6. Tube
7. Tail wheel
8. Link rods
9. Adhesive Velcro
10. Landing gear
11. Propeller

The following descriptions apply to the receiver ready version only.  
Not all parts and assembly works are available in the ARF version.



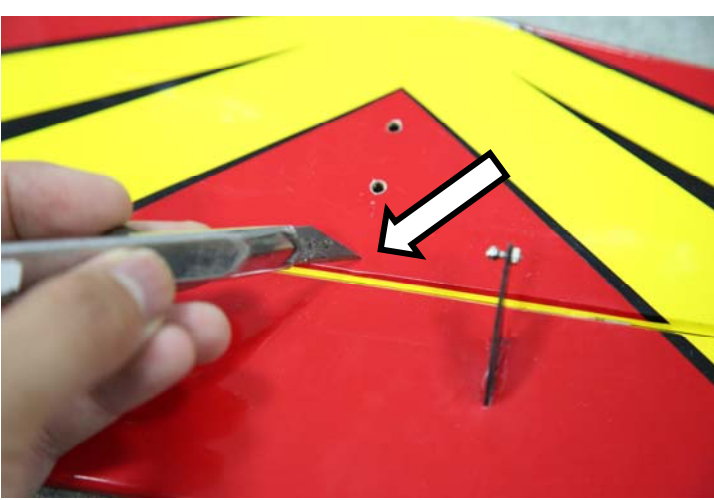
- \*Main landing gear has been assembled in factory.
- \*All ball tie rods are preassembled.
- \*All servo horns have already been installed.
- \*All ball joints have been installed.
- \*Hinge slots are cut in factory.



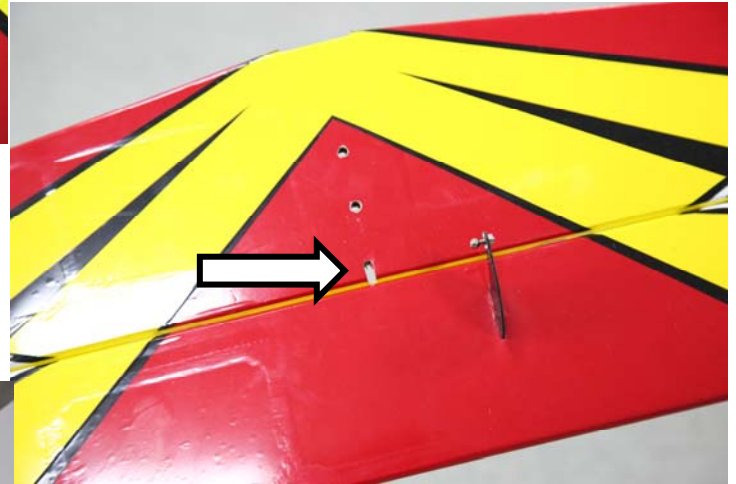
- \*Servo leads taped for easy access.
- \*ESC, motor, and servos are installed in factory.



## Installation of Horizontal Stabilizer



Cut off a small piece of cover film to expose the hole used for holding the steel of tail wheel.



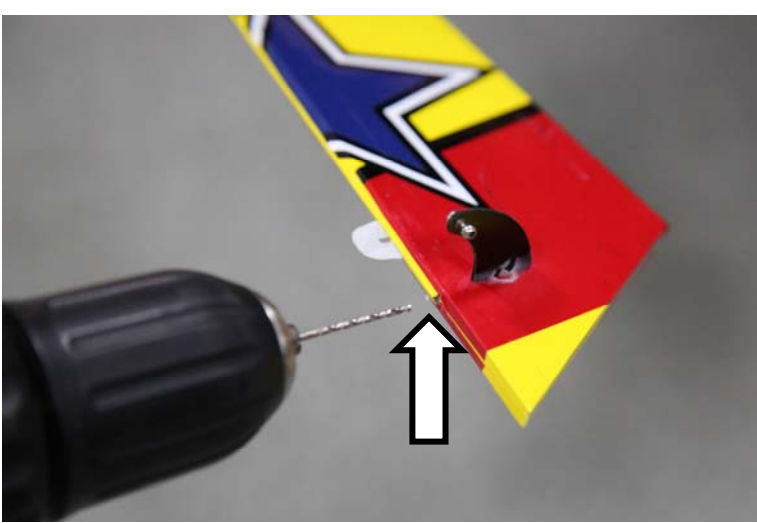
Attach tail horizontal stabilizer to the fuselage.



Install the T-shaped plate to the tail and secure it with screws.

## Installation of Elevator and Tail Wheel

Drill a hole in the rudder that will hold the steel wire of tail wheel.



Insert the steel wire of tail wheel through the hole in horizontal stabilizer.



Align steel wire and hinges and put vertical stabilizer and rudder together.



Secure hinges with thin CA glue.



# Landing Gear Installation



The mounting screws of landing gear are installed on the fuselage to prevent missing parts.

Take out the screws from the bottom of fuselage with 2.5mm Alan screwdriver.

Align the landing gear to the hole locations and tighten the three screws. Application of threadlocker is highly recommended.



## Installation of Servo Link Rods

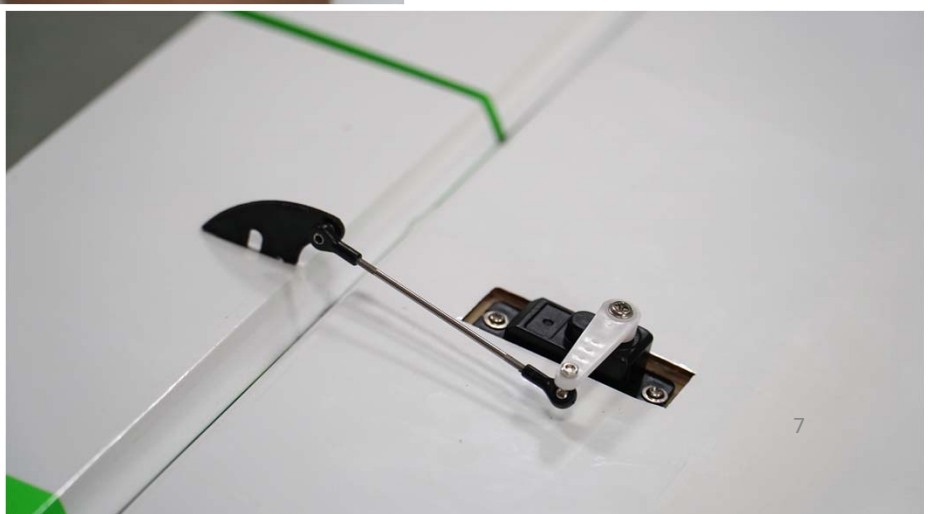


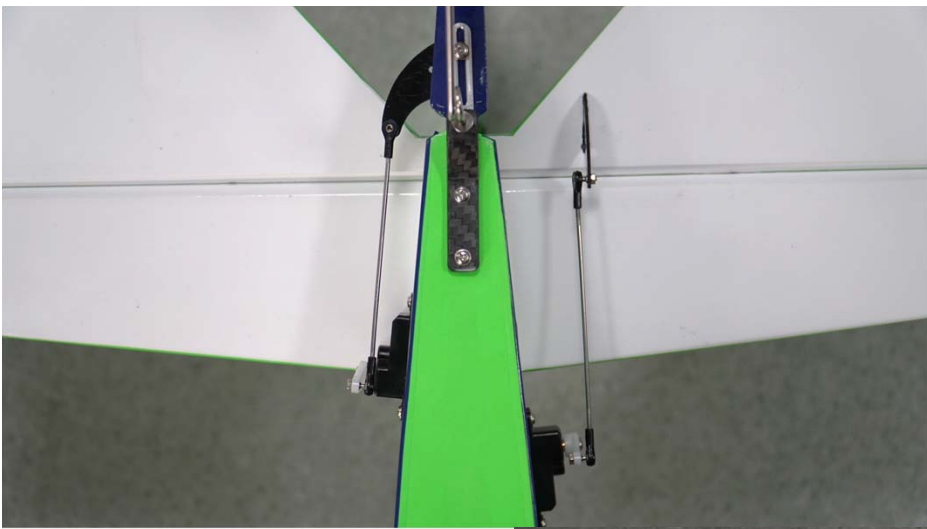
1. Servo horns are installed at center position in factory. Hook servos to a receiver to check center point if necessary.
2. Level the control surfaces, and set rudder arms at 90 degree positions.



3. Adjust the link rod length by turning the ball joints to appropriate positions.

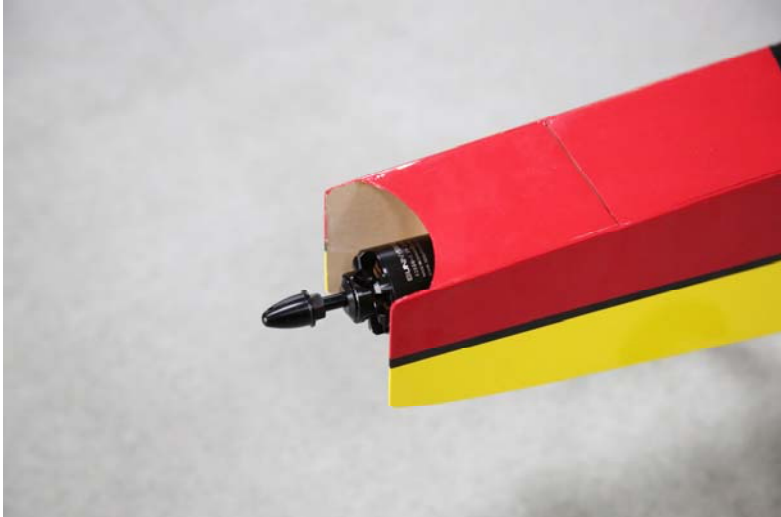
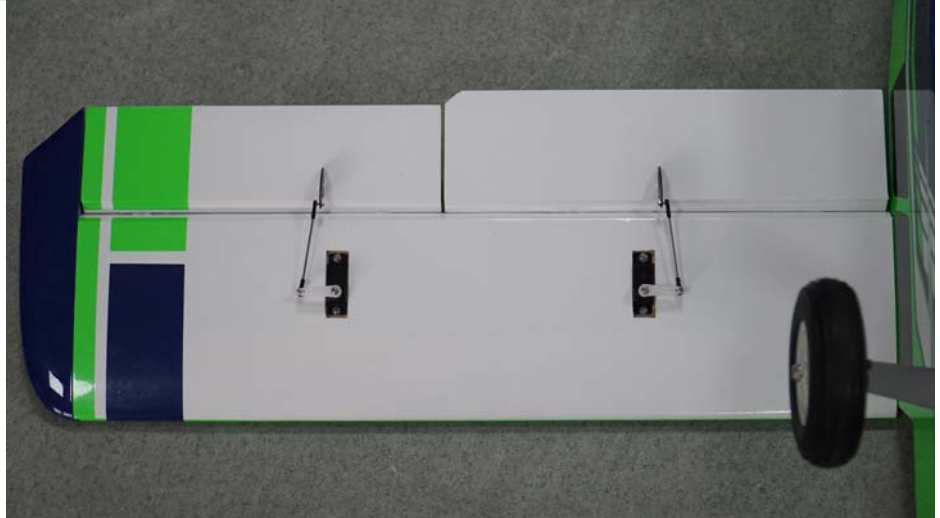
4. Push the ball joint head to the ball head by using pliers or hand.



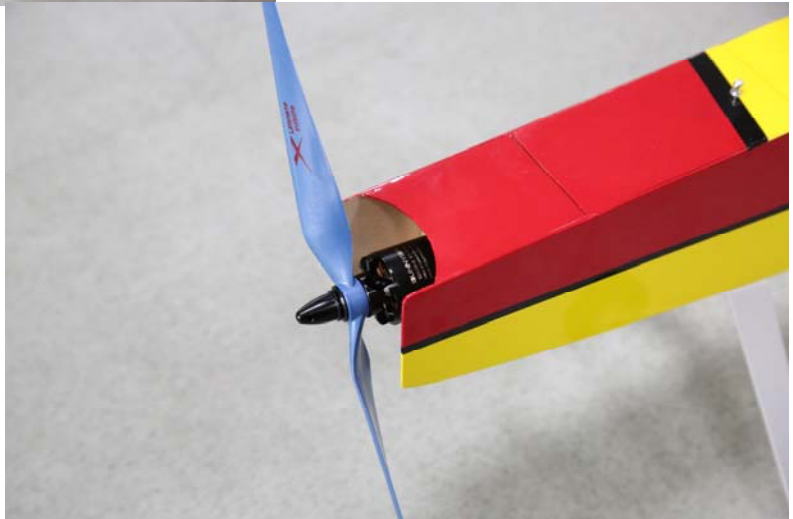


## Installation of Servo Link Rods (continued)

5. Electrify the servos to make sure all the control surfaces are installed in the center positions.



## Installation of Propeller





# Recommended Settings of Dual Rates and Exponentials of Control Surfaces

	Low rate	Low rate exp	High rate	High rate exp
Ailerons	60	40%	100	40%
Elevator	50	30%	100	30%
Rudder	60	30%	100	30%
Flaps	80	~	100	~



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Website: [www.OMPHOBBY.com](http://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](http://www.modelaircraft.org/files/100.pdf)