

TOP
RC HOBBY

AGE 14+

ASW28

Radio Control Model Airplane

Operation Manual



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Statement:

- 1.Please read this manual carefully and follow the instructions before you use this product;
- 2.Your airplane is not a toy, and is only suitable for experienced fliers or under the guidance of an experienced pilot.
- 3.Not recommended for children under 14 years old.
- 4.Please adjust this plane according to the instructions and make sure that fingers and other parts of your body are out of the way of rotating parts of the plane, or it may cause damage to the plane or injury to your body.
- 5.Do not fly in a thunderstorm, strong winds or bad weather.
- 6.Never fly your plane where there are power lines overhead, automobiles, near an airdrome, railway or highway.
- 7.Never fly your plane where there are crowds of people .Give yourself plenty of room for flying, as the plane can fly at a high speed. Remember that you are responsible for others safety.
- 8.Do not attempt to catch the plane when you are flying it.
- 9.The user should bear full responsibility of proper operation and usage with regards to this model. We, Top RC together with any distributor of ours will not be responsible for any liability or loss due to improper operation.

Brief Introduction

★ Thank you for choosing the TOP RC Hobby "ASW28" remote control model aircraft, and we hope that this aircraft will bring you endless fun.

- ★ The canopy adopts a new push latch design preventing the canopy from ejection in the air.
- ★ High strength fuselage and wing structure with pre-installed carbon rods and stainless tubes.
- ★ With metal connectors embedded within the wing to keep the functional wing-dihedral. Plug-in connector with quick assembly.
- ★ The wing spar joiner adopts the high strength CNC aluminum with threads, ensures the wing strength without bending during flight and landing.
- ★ Adopts the new ball links control horns design with zero free play.
- ★ Three vents in the nose and a big vent under the bottom of the fuselage, allowing for motor and ESC's cooling.

- ★ Efficient folded propeller and Functional Flaps.
- ★ Configured with hobbywing's 40A ESC, 6pcs 9g metal gear servos and powerful 3542-850KV motor, which allows you to complete manoeuvres such as inverted flight, rolls and high-speed diving.
- ★ With scale winglets like the real aircraft, which can be detached quickly. Pilots can enjoy two different flight experiences with or without the winglets.
- ★ Large battery compartment, suitable for 14.8V 2200-3300mAh batteries.
- ★ With servo box design, allowing pilots to maintain the servos easily. With servo and linkage cover protector, protecting the servos from damage while landing.
- ★ No glue necessary for the whole aircraft, easy to assemble with only 4pcs screws for the main wings and 2pcs screws for the horizontal stabilizer.
- ★ 3pcs fiber hinges included in the rudder, preventing damage during the landing.

Main Specifications

- ★ Wingspan: 2020mm (wingtips included)
2000mm (wingtips excluded)
- ★ Full length: 1165mm
- ★ Flight weight: 1800g
- ★ Thrust: $\geq 2200g$
- ★ Flight time: 10-15 minutes

Main configuration

- ★ Remote control: 6CH+ / RTF version
- ★ Motor: 3542 -KV850
- ★ Battery 2200MAH 14.8V 20C/RTF version
- ★ ESC 40A
- ★ Servo 9G metal gear x 6pcs
- ★ Propeller: 11*6

Product Contents



RTF version

Fuselage, main wing, horizontal wing, battery, charger, wing spar joiner, remote controller, accessory bag.

PNP version

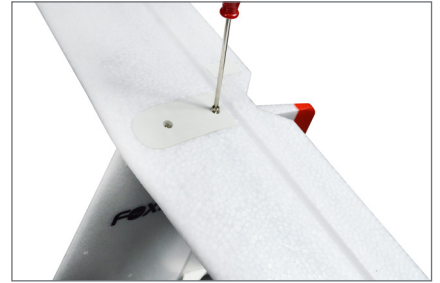
Exclude remote controller, receiver, charger, battery, the rest is the same as the RTF version

KIT version

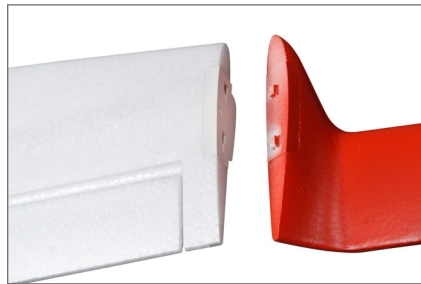
Without any electronic equipment

Assembly process

1. Take out the fuselage, horizontal wing, and accessory bag. Then connect the servo plug on the horizontal wings to servo cable socket in the vertical fin of the fuselage. Fix it with two screws M3*17MM.



2. Take out the wing and wingtips, and attach the wingtips to the mounting slots at both ends of the main wings. (This assembly step is optional)



3. Take out the installed fuselage, wings (including wingtips), wing spar joiners and accessory bag, screw the wing spar joiners onto the mounting hole of the fuselage, attach the main wings to the wing spar joiner of the fuselage. Fix the main wings with 4 screws M4*10MM.



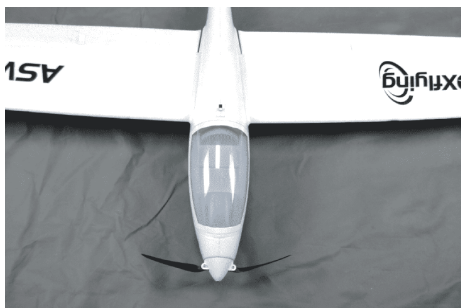
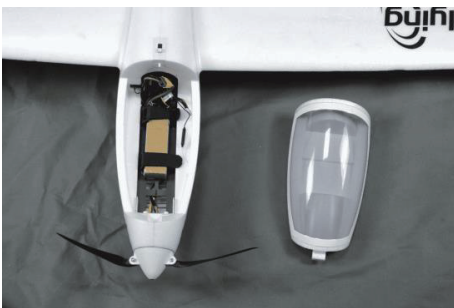
4. ASW28 assembly is completed.



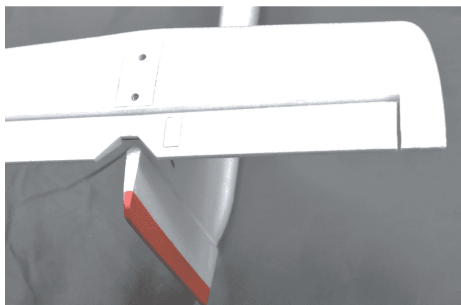
1. Turn on the transmitter, and make sure that the throttle is setting at the lowest position, and the other channels of the joystick are at the neutral position



2. Before operation, make sure the battery is fully charged. Use straps to secure the battery to the battery compartment, connect the battery to the ESC plug, refit the canopy.

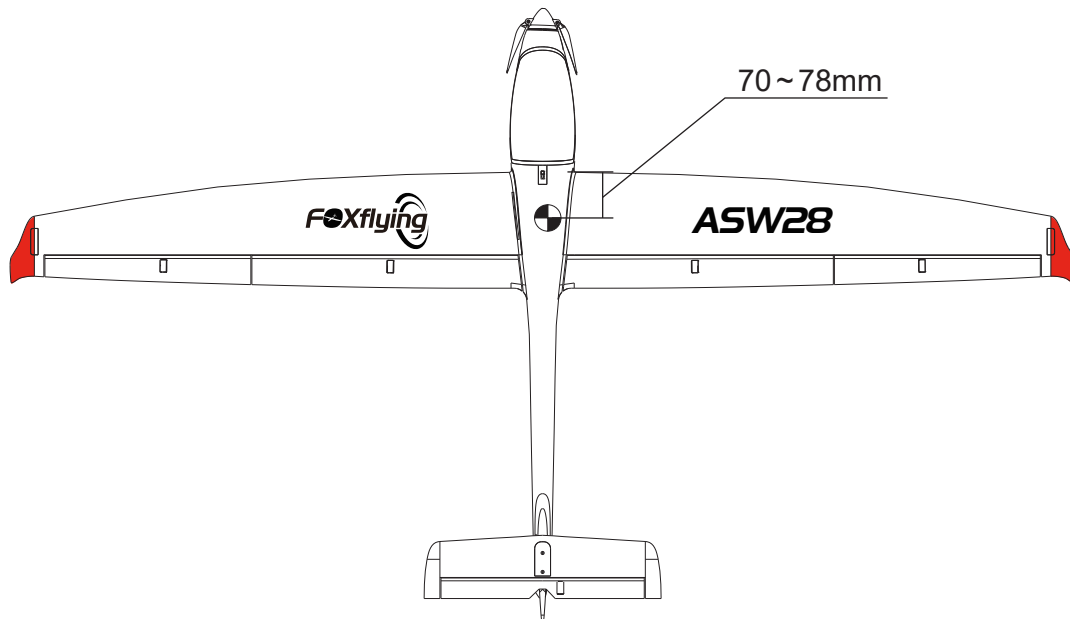


3. Before flying, please check whether each surface is level with the wing surface, and make sure the rocker arm, the ball link and push wires are not loose. Hold the fuselage with your hand and slowly push the throttle stick to ensure that the motor is running smoothly.



Adjustment steps

4. Check the position of the center of gravity (CG) as shown in the diagram is 70-78mm back from the leading edge of the wing at the fuselage. Correct CG is very essential for successful flight.



5. ASW28 is completed and ready to fly.



Safety precautions

- 1.If you have a simulator, we suggest that you can practice your skill on the simulator before you fly this model, which will bring some help for you.
- 2.Please climb the plane above 50 meters with half throttle when you fly it for your first time, then you will be familiar with the performance of this plane.
- 3.The turn radius should not be too tight, or it will stall and it will increase the possibility of crash.
- 4.When taking off or landing the plane, you should do this into the wind.
- 5.Do not fly the model over your head or behind you, you should fly the model in front of you until you gain more experience.

Charging method and cautions

RTF version

Li-Po battery(balance changer) specifications

Specifications:

Input voltage: DC 10V~15V

Output voltage:2S-4S Li-Po battery

Charging current: 1.0A

Indicator state:

Green: Charge complete or no battery

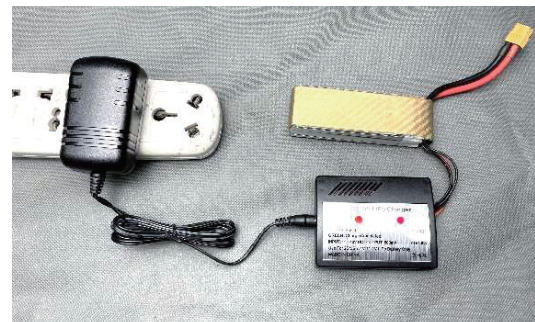
Red: Charging

The batteries are inspected separately. When the voltage reaches 4.20V, the charging process stops.



Operating

1. AC Adapter should be connected if charging at home: connect the adapter to home power socket, then plug the adapter' DC end to charger. The LED will turn green indicating it is ready for charging.
2. Connect the battery to charger per its interface mark. The LED becomes red, which means charging is on the way.
3. When LED flashing, the charger will enter the stage of drip current charging. The LED turns green when fully charged , and the battery can be used at any time.



Notice

1. While charging is in process, please do not make it leave flammable materials.
2. Except Li poly battery, this charger is not allowed for other kinds of battery.
3. While charging, please keep it out of the reach of Children.
4. When this charger is in use, please do not go away and leave it unwatched, if any abnormality occurs (such as the power indicator is off, the temperature of the battery rise rapidly, etc.) stop charging immediately.
5. Please do not use power with output voltage higher than 15V.
6. Please do not disassemble the charger or its accessories.
7. When the battery is not cool down, please do not charge it. Let the battery return to normal temperature before charging it.

Safety Instruction of Li-Po/Ni-MH battery

1. Do not disassemble or reconstruct the battery.
2. Do not short-circuit the battery.
3. Do not use or leave the battery near the fire, stove or heated place (more than 80°C).
4. Do not immerse the battery in water or sea water, do not get it wet.
5. Do not charge the battery under the blazing sunlight.
6. Do not drive a nail into the battery, strike it by hammer or tread it.
7. Do not impact or toss the battery.
8. Do not use the battery with conspicuous damage or deformation.
9. Do not charge a warm battery. Allow it to cool completely before attempting to charge.
10. Do not reverse charge or over discharge the battery.
11. Do not connect the battery to the ordinary charger socket or car cigarette jack.
12. Do not use the battery for unspecified equipment.
13. Do not touch the leaking battery directly, please wash your skin or clothes with water if they are in contact with liquid leaking from the battery.
14. Do not mix the Li-Poly battery with other un-chargable battery in using.
15. Do not continue charging the battery over the prescribed time.
16. Do not put the battery into the microwave oven or high-pressure container.
17. Do not use the abnormal battery.
18. Do not use or keep the battery under the sunlight.
19. Do not use the battery nearby the place where generates static electricity (over 64V).
20. Do not charge the battery when the environmental temperature is under 0°C or over 45°C.
21. If you find the battery leaking, smelling or abnormal, stop using it.
22. When the battery is charging, please do not leave it near the flammable materials!
23. Keep the battery away from the children.
24. Use the specified charger and observe charging requirement (under 1A).
25. When using by minors, parents should show them to the correct instruction and provide supervision.

Trouble shooting

Problem	Possible Cause	Solution
Aircraft will not respond to the throttle but responds to other controls.	<ul style="list-style-type: none"> -ESC is not armed. -Throttle channel is reversed. 	<ul style="list-style-type: none"> -Lower throttle stick and throttle trim to lowest settings. -Reverse throttle channel on transmitter.
Extra propeller noise or extra vibration.	<ul style="list-style-type: none"> -Damaged spinner, propeller, motor or motor mount. -Loose propeller and spinner parts. -Propellor installed backwards. 	<ul style="list-style-type: none"> -Replace damaged parts. -Tighten parts for propeller adapter, propeller and spinner. -Remove and install propeller correctly.
Reduced flight time or aircraft underpowered.	<ul style="list-style-type: none"> -Flight battery charge is low. -propeller installed backward. -Flight battery damaged. 	<ul style="list-style-type: none"> -Completely recharge flight battery. -Replace flight battery and follow flight battery instructions.
Control surface does not move, or is slow to respond to control inputs.	<ul style="list-style-type: none"> -Control surface, control horn, linkage or servo damage. -Wire damaged or connections loose. 	<ul style="list-style-type: none"> -Replace or repair damaged parts and adjust controls. -Do a check of connections for loose wiring.
Controls reversed.	Channels are reversed in the transmitter.	Do the control direction test and adjust controls for aircraft and transmitter.
<ul style="list-style-type: none"> -Motor loses power -Motor power pulses then motor loses power. 	<ul style="list-style-type: none"> -Damage to motor, or battery. -Loss of power to aircraft. -ESC uses default soft Low Voltage Cutoff(LVC). 	<ul style="list-style-type: none"> -Do a check of batteries, transmitter, receiver, ESC, motor and wiring for damage(replace as needed). -Land aircraft immediately and recharge flight battery.
LED on receiver flashes slowly.	Power loss to receiver.	<ul style="list-style-type: none"> -Check connection from ESC to receiver. -Check servos for damage. -Check linkages for binding.

Trouble shooting guide

Strict ground inspections must be done before each flight, which can effectively avoid flight accidents.

1. Check if the screws of the whole airplane are installed in place or not, the servo arms and horns are connected reliable or not and wing fixing are locked or not.
2. Install the battery and adjust the aircraft's center of gravity to the recommended position in the manual.
3. Make sure power battery, remote control transmitter battery, etc. are fully charged and in a reliable working condition.
4. Always ensure the transmitter is turned on with the throttle joystick at its lowest position before connecting the battery in the model. After connecting the model battery, check control surfaces are in neutral position or not, the direction is in correct operation or not.
5. Gently push the throttle to check if the propeller is turning correctly or not.
6. After all checks are completed, the flight can be started. The first flight for beginners needs the assistance of experienced enthusiasts to avoid flight accidents due to improper operation.

About flight time

The recommended flight time by the manufacturer is using the battery that we recommend, and the flight test is completed by experienced pilots on a breeze day. This flight time is related to battery parameters, aircraft weight, flight conditions and flight methods. Different conditions may result in different flight times.

It is recommended that enthusiasts use the "timing function" of the remote control during flight. It is suggested that the initial flight time be set to 4 minutes of powered flight.

When there is a countdown alarm, please land the aircraft and measure the battery voltage. At the end of the battery discharge period, it is not recommended to fly the aircraft into the leeward zone (the far down wind direction) to prevent the aircraft from being unable to return safely due to insufficient power.

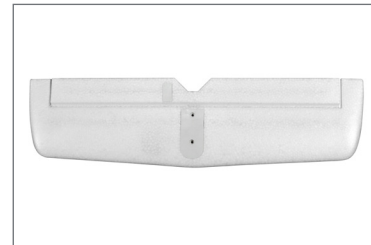
Spare part for ASW28



TOP09901
Fuselage



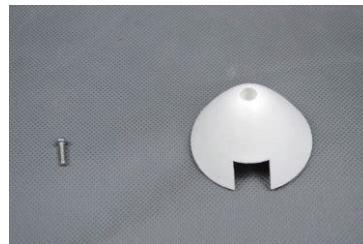
TOP09902
Main wings



TOP09904
Horizontal wings



TOP09903
Canopy

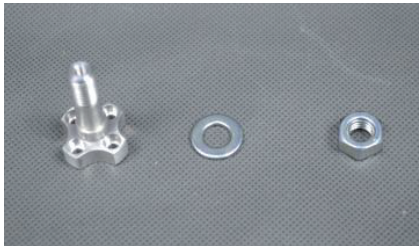


TOP09906
Spinner

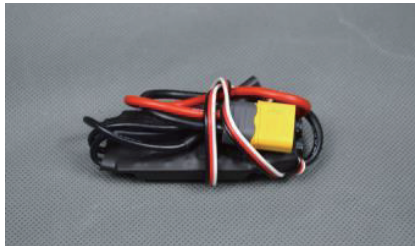


TOP09907
Propeller

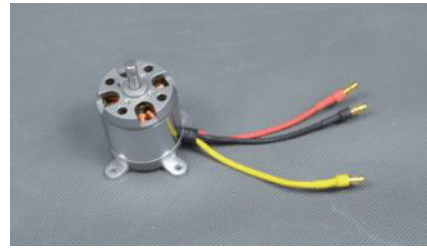
Spare part for ASW28



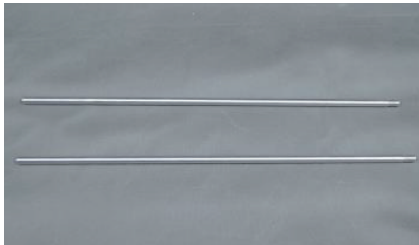
TOP09912
Adapter for propeller



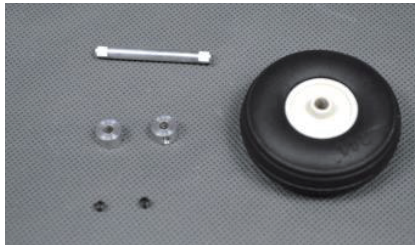
TOP09919
40A ESC (XT60 Plug)



TOP09913
Brushless Motor 3542-850KV



TOP09909
Wing Connecting Rod



TOP09910
Main wheel



TOP09905
Wing Tips



TOP09908
Screws set



TOP09911
Wing plug



TOP09914: Elevator Servo
9g Metal gear (wire length: 80mm)

TOP09915: Left Flap Servo
9g Metal gear (wire length: 210mm)

TOP09916: Right Flap Servo
9g Metal gear (wire length: 300mm)

TOP09917: Rudder Servo
9g Metal gear (wire length: 150mm)

TOP09918: Aileron Servo
9g Metal gear (wire length: 650mm)

ASW28

Radio Control Model Airplane

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AGE 14+



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