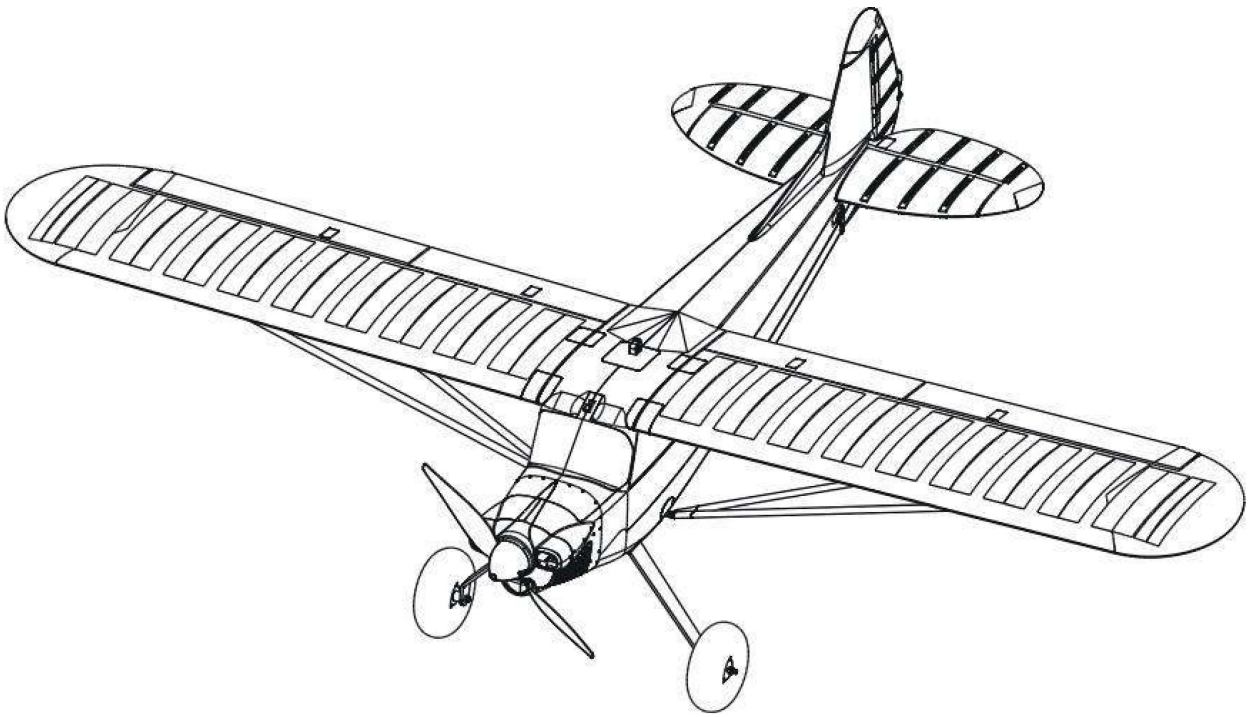
AGE 14+

XCUB 1500mm PNP

Radio Control Model Airplane

Operation Manual



INDEX

Brief Introduction 1
Main Specifications.....1
Main Configuration 1
Products Contents 2
Assembly Processes (Left and Right Wing Strut Assembly) 2
Assembly Processes (Main Wing Installation) 3
Assembly Processes (Landing gear Installation) 3
Assembly Processes (Horizontal Stabilizer Installation) 4
Assembly Processes (Vertical Stabilizer Installation) 4
Assembly Processes (Spinner and propeller Installation) 5
Assembly Processes(Control Horn and Servo Arm Settings) 5
Assembly Processes (Battery Installation) 6
Adjustment Steps (Center of Gravity Settings) 7
Adjustment Steps (Control Direction Testing) 8
Adjustment Steps (Dual Rates and Control Throws) 9
Safety Precaution.....10
Notification for ESC.....10
Trouble shooting.....11
Troubleshooting Guide 12
Flight Time 12
Spare Parts List.....12

Statement

1.Please read this manual carefully and follow the instructions before using this product.
2.This 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 high speeds. Remember that you are responsible for others' safety.
8.Do not attempt to catch the plane when you are flying it.
9.The user bears full responsibility for proper operation and usage with regards to this model. Motion RC is not responsible for any liability or loss due to improper operation.

Brief Introduction

Thank you for choosing the Skynetic Xcub 1500mm PNP remote control model aircraft, and we hope that this aircraft will bring you endless fun.

★ Easy and fast assembly, this airplane has detachable main wings and horizontal tail, which is very easy to transport and maintain.

★ A hook for towing a glider has been designed into the top of the fuselage, which can tow an unpowered glider for sailplane operations.

★ The oversized battery compartment design can support 4S 2200-3300mAh Li-Po battery and other electronic devices.

★ The oversized pneumatic main wheels have the advantages of light weight, good wear resistance, and great shock absorption, which make the airplane to takeoff and landing on both grass and paved runways.

★ Beautiful scale appearance with great power and stability suitable for novice or advanced pilots.

★ Pre-programmed reverse thrust allows for super short landings for unimproved field operations.

Specifications

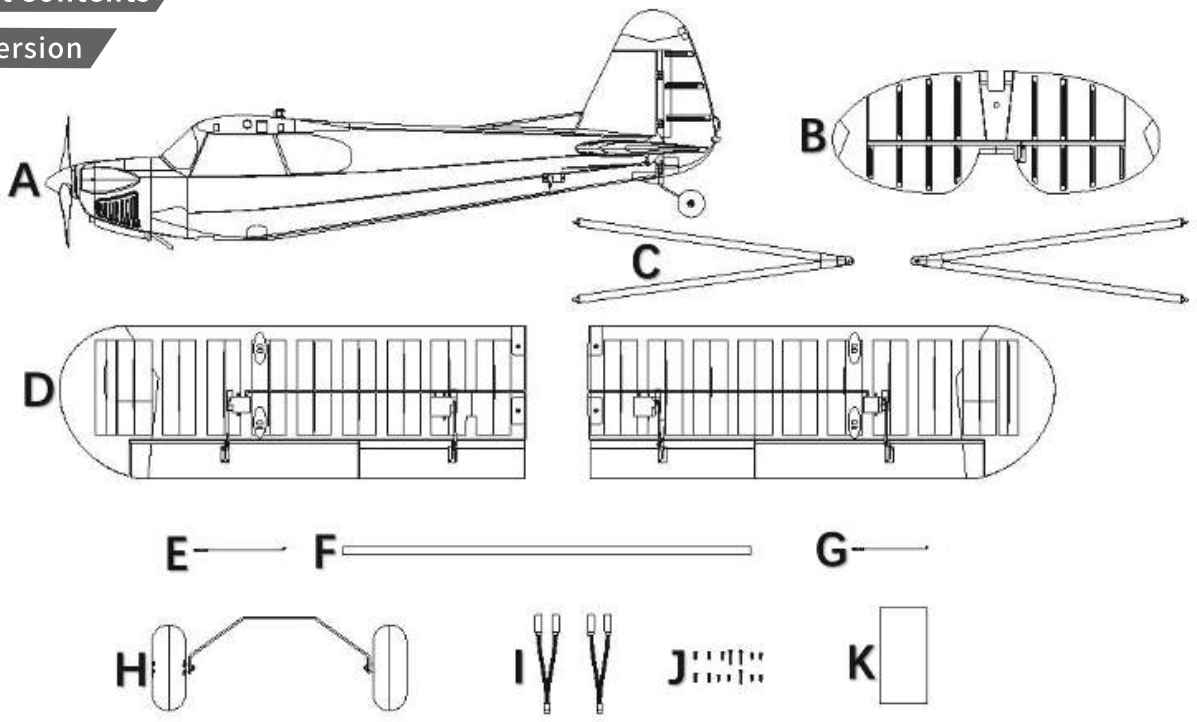
★ Wingspan	1500mm
★ Length	995mm
★ Flight weight	1500g
★ Thrust	≥1500g
★ Flight time	≥8minutes

Main Configuration

★ Radio System	6CH
★ Motor	3720-900KV
★ Battery	2200MAH 14.8V 30C
★ ESC	Hobbywing 40A
★ Servo	9g metal gear servo*3pcs, 9g plastic gear servo*2pcs, 17g plastic gear servo*2pcs

Product Contents

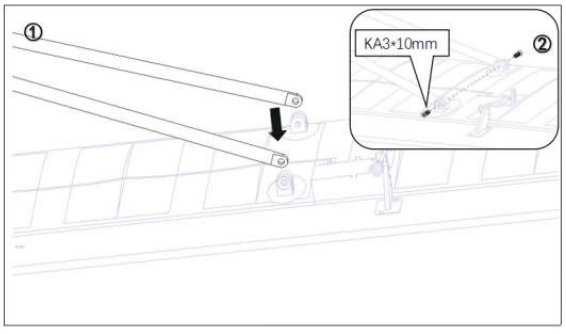
PNP Version



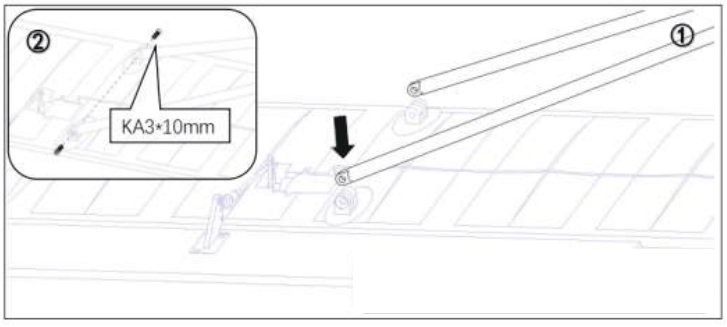
A.Fuselage B.Horizontal stabilizer C.Wing Struts D.Left and Right wings E.Pushrod for elevator (long) F.Wing Tube G.Pushrod for rudder (short) H.Main landing gear set I.Y harness wire J.Screw sets K.Velcro tape

Assembly Process

Left and Right Wing Strut Assembly



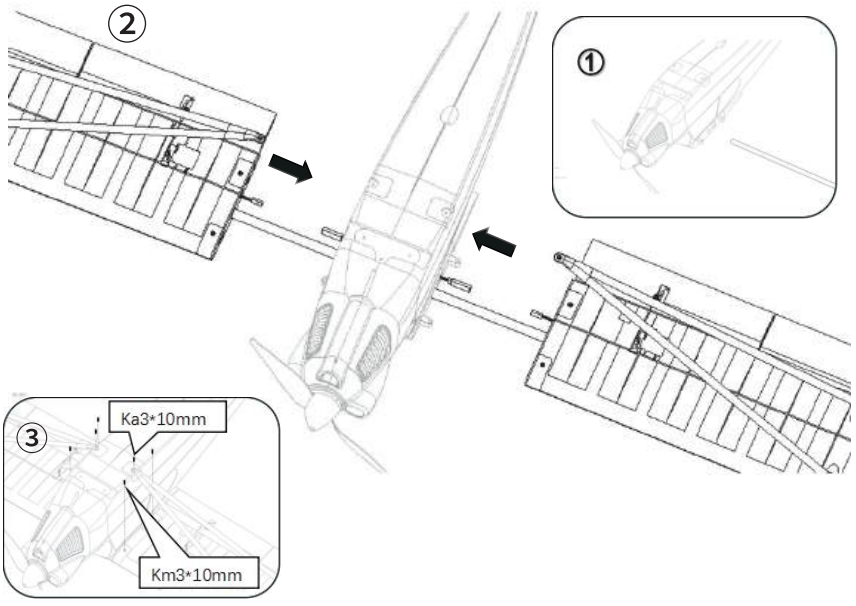
Insert one side of the wing struts into the mounting slots on the left wing and secure the wing strut to the left wing with KA3*10mm screws.



Insert one side of the wing struts into the mounting slots on the right wing and secure the wing strut to the right wing with KA3*10mm screws.

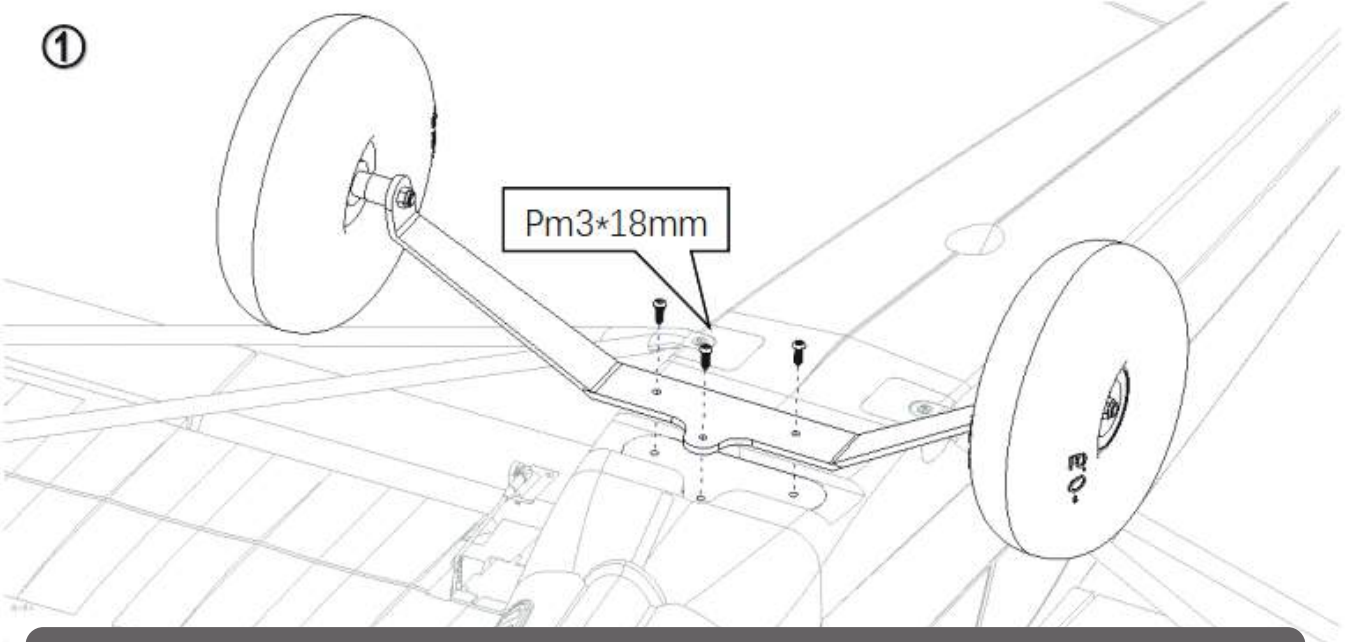
Assembly Process

Main wing Installation



1.Insert the main wing tube into the reserved hole of the fuselage.
2.Slide the left and right wings onto the wing tube, rotate the wing struts into position in preparation for mounting the wing, connect the servo wire plug of the wing to wire plug of the fuselage. Please make sure that the cables from the main wing are plugged into the correct extension wire in the fuselage.
3.Secure the wing into place using the included KM3*10mm screws. Secure the wing struts into place with included KA3*10mm screws. Disassemble in reverse order.

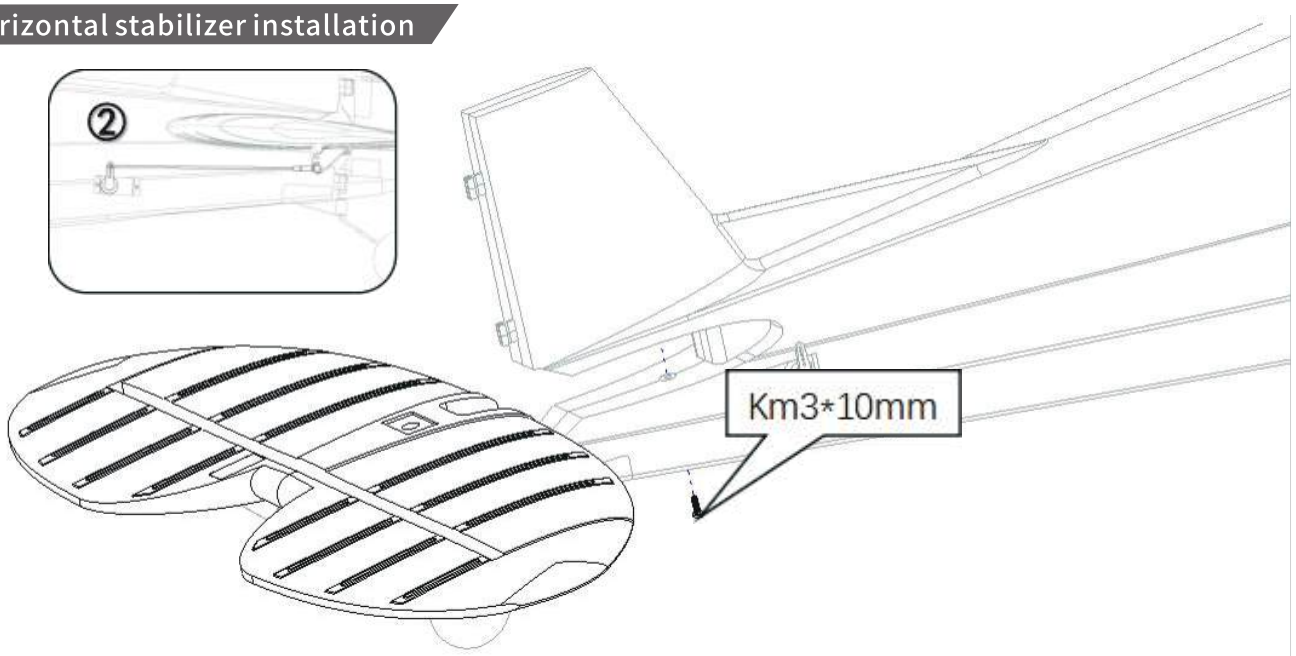
Landing gear Installation



1.By using the 3pcs PM3*18 screws, secure the main landing gear into the mount slot on the bottom of the fuselage.If needed, pump up the wheels with an air pump and the supplied needle.

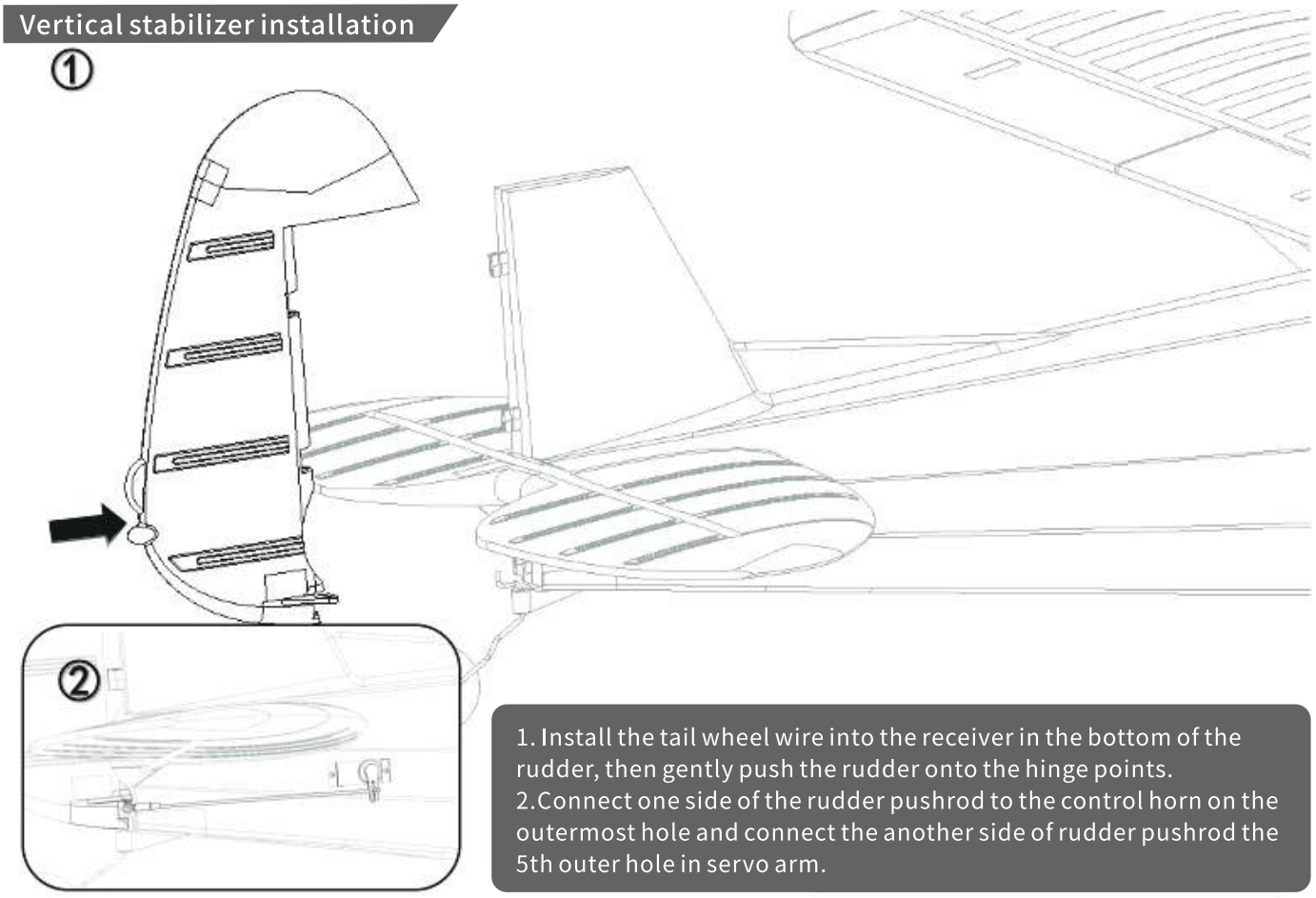
Assembly Process

Horizontal stabilizer installation



1.Install the horizontal stabilizer into the slot at the rear of the aircraft as shown, and secure the horizontal stabilizer with the 1pc KM3*10m screw.
2.Connect one side of the elevator pushrod to the control horn on the outermost hole and connect another side of the elevator pushrod to the 5th outer hole in servo arm.

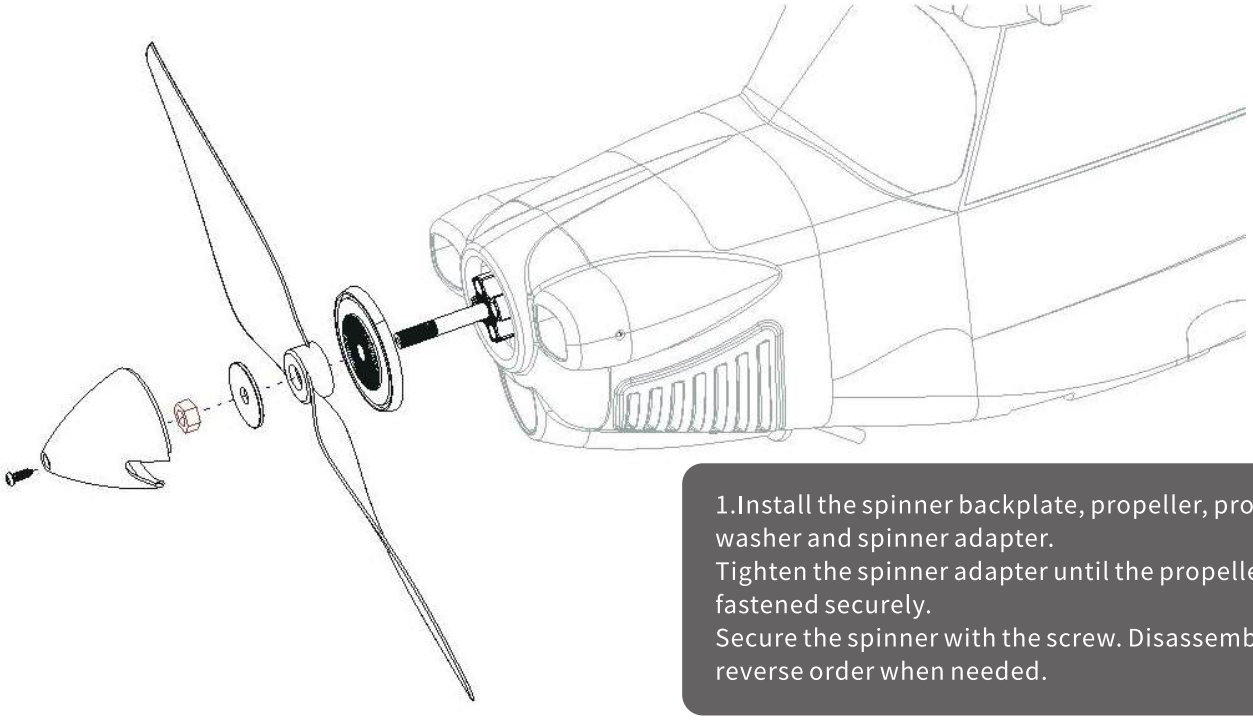
Vertical stabilizer installation



1. Install the tail wheel wire into the receiver in the bottom of the rudder, then gently push the rudder onto the hinge points.
2.Connect one side of the rudder pushrod to the control horn on the outermost hole and connect the another side of rudder pushrod the 5th outer hole in servo arm.

Assembly Process

Spinner and Propeller installation



1.Install the spinner backplate, propeller, prop washer and spinner adapter.
Tighten the spinner adapter until the propeller is fastened securely.
Secure the spinner with the screw. Disassemble in reverse order when needed.

Control Horn and Servo Arm Settings

Make sure that all servos are in their central position and adjust the pushrods to the indicated positions.
The factory settings for the control horns and servo arms are shown in the table.
It is recommended using the factory setting to fly this aircraft before making changes.

Control horn and servo arm locations for Ailerons
Aileron pushrod in 3rd outer hole in control horn and 5th outer hole in servo arm

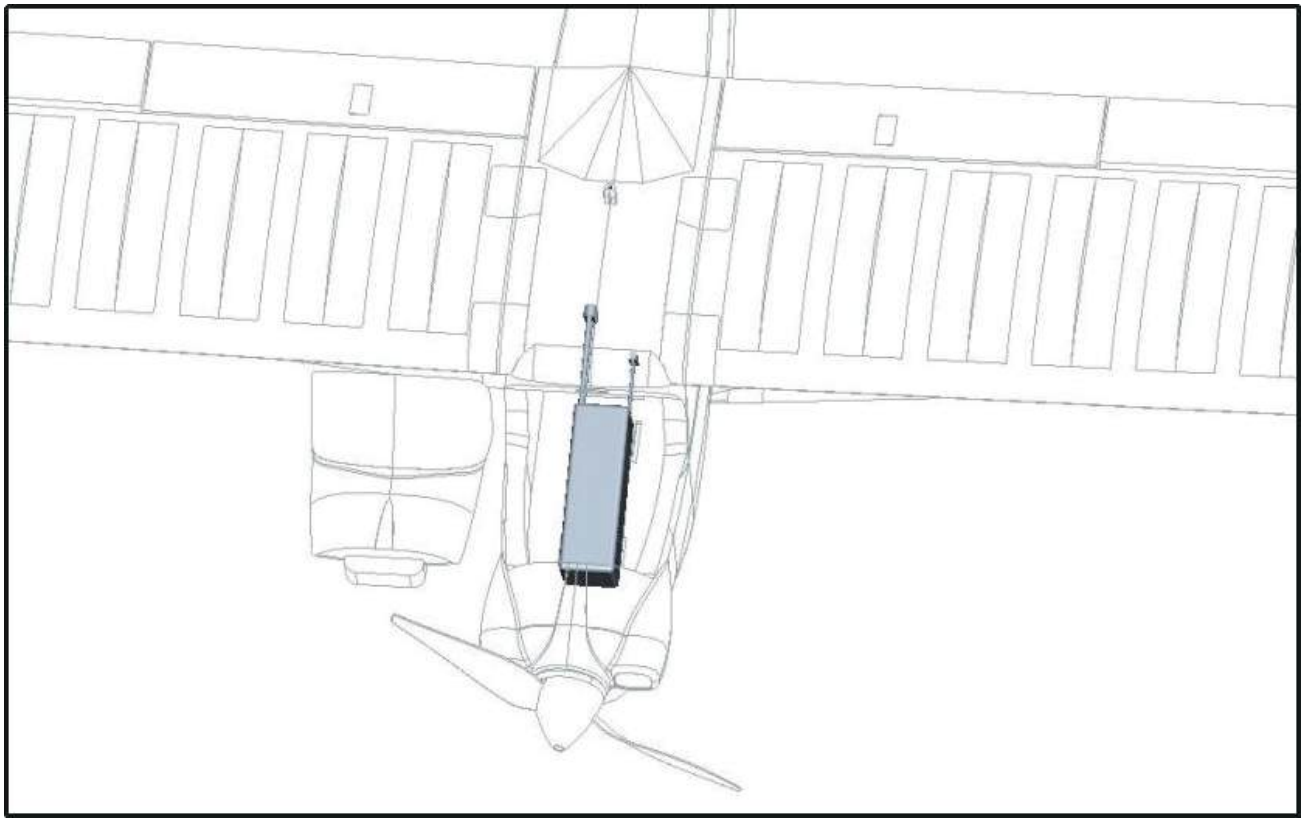
Control horn and servo arm locations for Elevator
Elevator pushrod in 3rd outer hole in control horn and 5th outer hole in servo arm

Control horn and servo arm locations for Flaps
Flap pushrod in 3rd outer hole in control horn and 5th outer hole in servo arm

Control horn and servo arm locations for Rudder
Rudder pushrod in 3rd outer hole in control horn and 5th outer hole in servo arm

Assembly Process

Battery Installation



1.Remove the battery hatch and open battery straps in the battery tray.

2.Insert battery into the battery compartment and use straps to secure the battery.

3.Make sure that the throttle and throttle trim are set to the lowest settings.

Please power on the transmitter first, then connect the battery plug to the ESC plug.

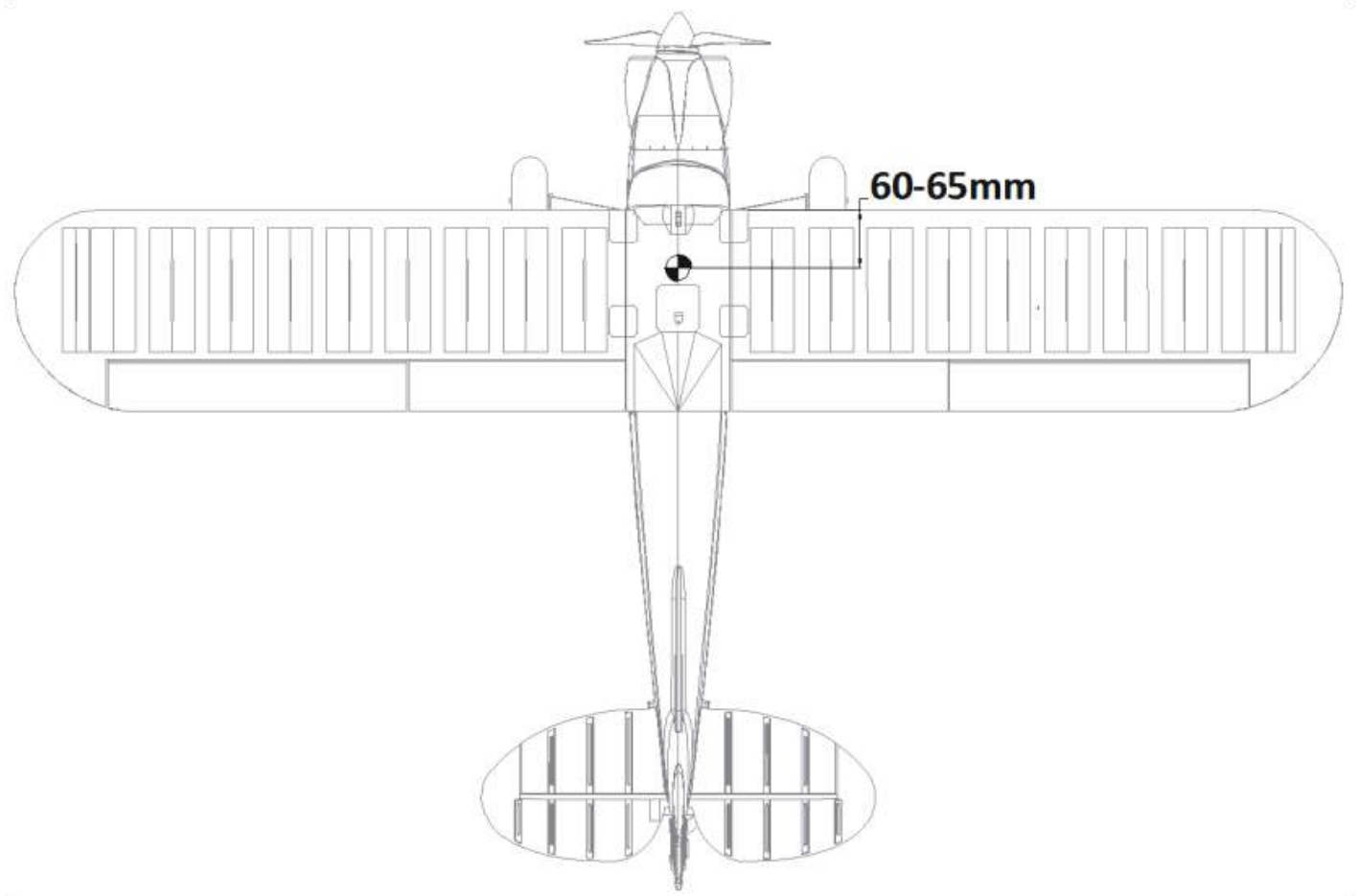
4.The battery weights are different from different battery factories, so it's necessary to set the center of gravity (CG) by moving the battery forward or backward to attain the recommended location.

Ajustment Steps

Center of Gravity Setting

Correct CG is critical for a successful flight, please refer to the below diagram to set the CG of the aircraft.

The CG can be adjusted by moving the battery forwards or backwards.If you are unable attain to the correct CG by moving the battery position,then you can also use some other matierals to balance the CG of the aircraft to the correct position.

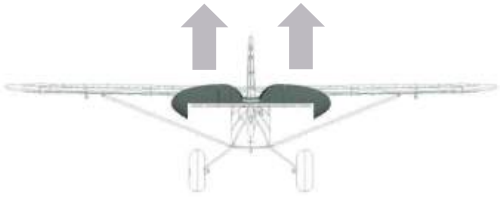
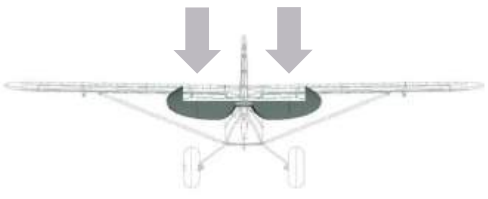
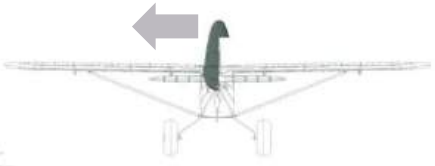
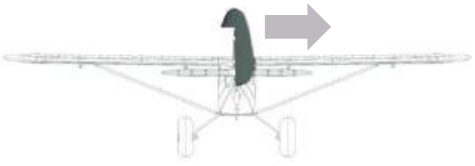
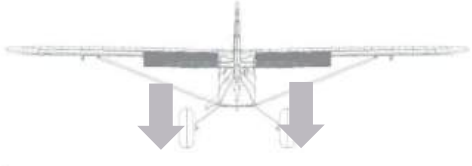


Adjustment Steps

Control Direction Testing

Before flying this airplane, please use one fully charged battery to test to make sure that all the control surfaces respond correctly to your transmitter by referring to the diagram below in direction and orientation.If a surface is operating opposite to the direction shown,the surface direction should be reversed in the transmitter settings.

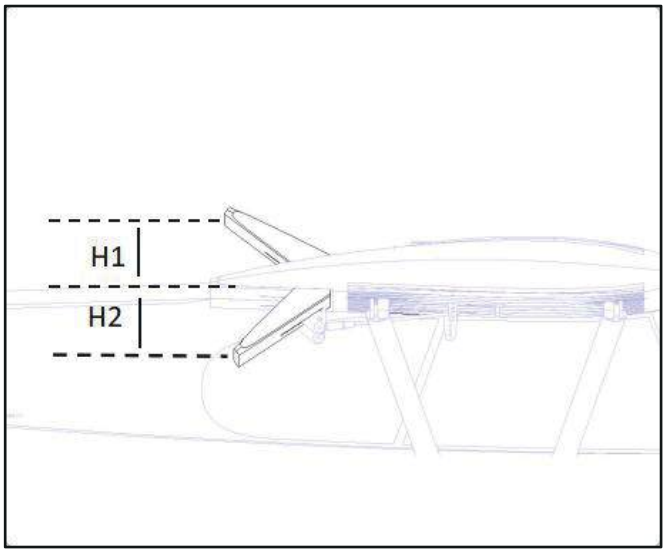
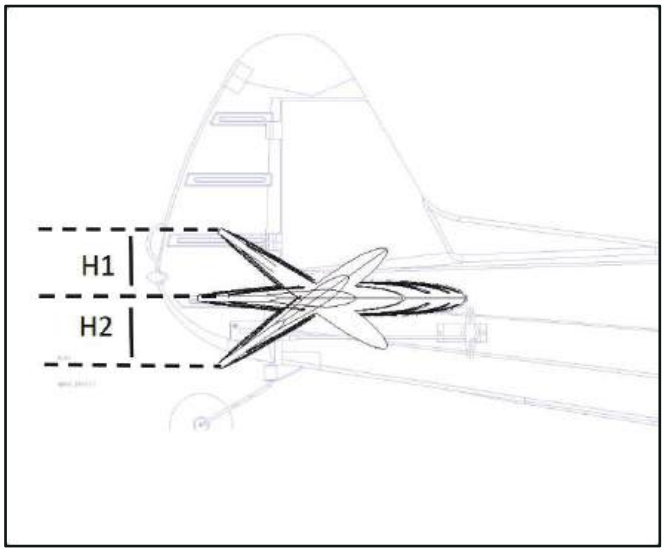
Notice: To secure your safety and avoid any accident if the motor is activated , please make sure to disassemble the propeller before testing the control surfaces.

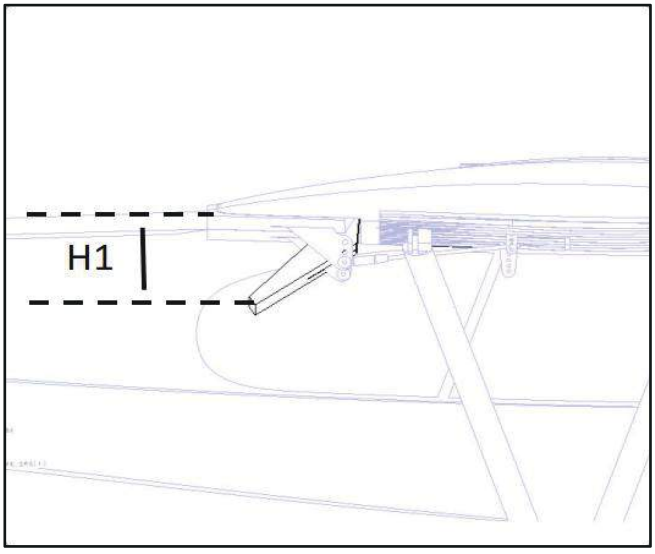
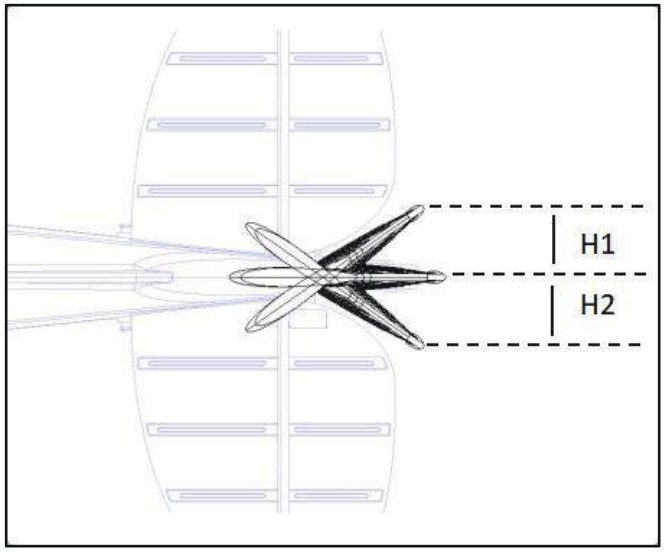
Push the Aileron joystick left	Push the Aileron joystick right
	
Pull the elevator joystick downward	Push the elevator joystick upward
	
Push the Rudder joystick left	Push the rudder joystick right
	
Move the flaps downward	
	

Adjustment Steps

Dual Rates and Control Throws

Per our testing, we suggest setting dual rates and control throws to the below values given to achieve a successful flight.
The aircraft will be controlled less sensitive at low rates than the high rates.
The first flight is recommended to be flown using high rates, after flying you may choose to adjust the values for the desired control response.

Aileron Control Throws	Elevator Control Throws
	

Flap Control Throws	Rudder Control Throws
	

Adjustment Steps

		High Rate	Low Rate
Dual Rates*	Aileron	▲ = 20 ▼ = 20	▲ = 15 ▼ = 15
	Elevator	▲ = 22 ▼ = 22	▲ = 17 ▼ = 17
	Rudder	▶ = 23 ◀ = 23	▶ = 18 ◀ = 18
Flap Travel	Half ▼= 15		Full ▼ = 40
Flap/Down-Elevator Compensation	7mm		11mm
Exponential		**High Rate**	**Low Rate**
	Aileron	20%	10%
	Elevator	20%	10%
	Rudder	25%	20%

Safety Precaution

1.If you have a simulator,we suggest practicing on the simulator before you fly this aircraft. Perfect practice makes perfect.

2.Please maintain a safe altitude(50meters)and avoide full throttle flight until the model is trimmed and you are familiar with the performance of the aircraft.

3.This aircraft is for experienced pilots. Understanding how to control this aircraft carefully will reduce the possibility of the crash of the aircraft.

4.Allow sufficient altitude whenever performing any type of aerobatic maneuvers. Hard, tight turns increase the load on the aircraft and may cause it to stall unexpectedly which could result in the loss the aircraft.

5.When taking off or landing the aircraft,the aircraft should always be directed into the wind.

6.Do not fly the aircraft over your head or behind you,always fly the aircraft in front of you at a safe distance.

Notification for ESC

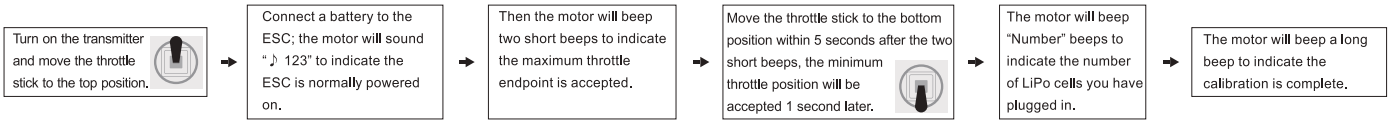
1.Do not change the ESC settings. The included ESC has been programmed to the ideal settings for the motor.

2. Before you connect the battery, please make sure the throttle and trim are in the lowest position. If the throttle and trim are not in the lowest position by mistake after connecting the battery, you can disconnect the battery, move the throttle joystick to the lowest position, then reconnect the battery.

3.The ESC of the aircraft is in a good cooling location at default settings, please don't move the position.

4.The ESC should be connected to the motor correctly, otherwise the motor will operate in reverse.

ESC/Radio Calibration



Trouble shooting

Problem	Possible Cause	Solution
Aircraft will not respond to the throttle but responds to other controls.	-ESC is not armed. -Throttle channel is reversed.	-Lower throttle stick and throttle trim to lowest settings. -Reverse throttle channel on transmitter.
Extra propeller noise or extra vibration.	-Damaged spinner, propeller motor or motor mount. -Loose propeller and spinner parts -Propellor installed backwards.	-Replace damaged parts. -Tighten parts for propeller adapter, propeller and spinner. -Remove and install propeller correctly.
Reduced flight time or aircraft underpowered.	-Flight battery charge is low. -propeller installed backward -Flight battery damaged.	-Completely recharge flight battery. -Replace flight battery and follow flight battery instructions.
Control surface doe snot move, or is slow to respond to control inputs.	-Control surface, control horn,linkage or servo damage. -Wire damaged or connections loose.	-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 adiust controls for aircraft and transmitter.
-Motor loses power -Motor power pulses then motor loses power.	-Damage to motor, or battery. -Loss of power to aircraft. -ESC uses default soft LowVoltage Cutoff(LvC).	-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.	-Check connection from ESC to receiver. -Check servos for damage. -Check linkages for binding.

Trouble shooting guide

Strict ground inspections should be done before each flight, to help avoid flight accidents.

1.Check if the screws of the whole aircraft are installed in place or not, the servo arms and control horns are connected reliably or not and the wings fixing are locked or not.

2.Install the battery and adjust the aircraft CG to the recommended position in the instructions.

3.Make sure the batteries are fully charged in a reliable working condition.

4.Gently push the throttle to check if the propeller is rotating correctly or not.

5.After all checks completed, you can start the flight. The maiden flight for beginners needs the assistance of experienced enthusiasts to avoid flight accidents due to improper operation.

Flight time

The recommended flight time is based on the recommended battery. The flight test should be completed by experienced RC pilots on a breezy day.This flight time is related to battery parameters and aircraft weight, flight conditions and flight methods. Different conditions may result in different flight times.

It is recommended that the 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 the insufficient power.

Spare parts list

BT-1069-100	Bay-Tec 1500mm Xcub Blue Fuselage
BT-1069-101	Bay-Tec 1500mm Xcub Blue Main Wings
BT-1069-102	Bay-Tec 1500mm Xcub Blue Canopy
BT-1069-103	Bay-Tec 1500mm Xcub Blue Cowl
BT-1069-104	Bay-Tec 1500mm Xcub Blue Horizontal Stabilizer
BT-1069-105	Bay-Tec 1500mm Xcub Blue Vertical Stabilizer
BT-1069-106	Bay-Tec 1500mm Xcub Blue Spinner
BT-1069-107	Bay-Tec 1500mm Xcub Blue Propeller
BT-1069-108	Bay-Tec 1500mm Xcub Blue Wing Spar
BT-1069-109	Bay-Tec 1500mm Xcub Blue Prop Adapter
BT-1069-110	Bay-Tec 1500mm Xcub Blue Wing Struts

BT-1069-111	Bay-Tec 1500mm Xcub Blue Wheel Set
BT-1069-112	Bay-Tec 1500mm Xcub Blue Main landing gear W/O Wheels
BT-1069-113	Bay-Tec 1500mm Xcub Blue Pushrod Set
BT-1069-114	Bay-Tec 1500mm Xcub Blue Serew Set
BT-1069-115	Bay-Tec 1500mm Xcub Blue 9g Servo Plastic Gear 550MM Lead (Aileron)
BT-1069-116	Bay-Tec 1500mm Xcub Blue 9g Servo Metal Gear 600MM Lead (Elevator/Rudder)
BT-1069-117	Bay-Tec 1500mm Xcub Blue 9g Servo Metal Gear250MM Lead (tow release)
BT-1069-118	Bay-Tec 1500mm Xcub Blue 17g Plastic Gear 300M M Lead
BT-1069-119	Bay-Tec 1500mm Xcub Blue 40A Brushless ESC Xt60
BT-1069-110	Bay-Tec 1500mm Xcub Blue 3720-900KV Brushless Motor w/Mount

SICHERHEITSHINWEISE

Dies ist kein Spielzeug
Nicht für Kinder unter 14 Jahren.

WARNUNG: Lesen Sie die gesamte Montageanleitung, um sich vor dem Betrieb mit den Produktfunktionen und Sicherheitshinweisen vertraut zu machen.
Als Benutzer dieses Produkts sind ausschließlich Sie für einen Betrieb verantwortlich, der weder Sie selbst noch andere gefährdet, bzw. der weder das Produkt noch Eigentum anderer beschädigt.

Halten Sie stets einen Sicherheitsabstand in alle Richtungen zu Ihrem Modell ein, um Kollisionen und Verletzungen zu vermeiden. Dieses Modell wird über ein Funksignal gesteuert. Funksignale können von außerhalb gestört werden, ohne dass Sie darauf Einfluss nehmen können. Störungen können zu einem vorübergehenden Verlust der Steuerungskontrolle führen.
Betreiben Sie Ihr Modell stets auf offenen Geländen - weit ab von Autos, Verkehr und Menschen.
Befolgen Sie die Anweisungen und Warnungen für dieses Produkt und jedwedes optionales Zubehörteil (Ladegeräte, wieder aufladbare Akkus etc.) stets sorgfältig.
Halten Sie sämtliche Chemikalien, Kleinteile und elektrische Komponenten stets außer Reichweite von Kindern.
Betreiben Sie Ihr Modell niemals mit schwachen Sender Batterien.
Behalten Sie das Modell stets im Blick und unter Kontrolle.
Verwenden Sie nur vollständig aufgeladene Akkus.
Behalten Sie den Sender stets eingeschaltet, wenn das Modell eingeschaltet ist.
Entfernen Sie stets den Akku, bevor Sie das Modell auseinandernehmen.
Halten Sie bewegliche Teile stets sauber.
Halten Sie die Teile stets trocken.
Lassen Sie die Teile stets auskühlen, bevor Sie sie berühren.
Entfernen Sie nach Gebrauch stets den Akku.
Stellen Sie immer sicher, dass der Failsafe vor dem Flug ordnungsgemäß eingestellt ist.
Betreiben Sie das Modell niemals mit beschädigter Verkabelung.
Berühren Sie niemals sich bewegende Teile.

HINWEISE ZUM UMWELTSCHUTZ

Dieses Produkt darf nicht mit anderem Abfall entsorgt werden. Stattdessen obliegt es dem Benutzer, das Altgerät an einer designierten Recycling-Sammelstelle für elektrische und elektronische Geräte abzugeben. Die getrennte Sammlung und Wiederverwertung Ihres Altgeräts zum Zeitpunkt der Entsorgung hilft Rohstoffe zu sparen und sicherzustellen, dass bei seinem Recycling die menschliche Gesundheit und die Umwelt geschützt werden. Weitere Informationen, wo Sie Ihr Altgerät zum Recycling abgeben können, erhalten Sie bei Ihrer lokalen Kommunalverwaltung, Ihrem Haushaltsabfall Entsorgungsdienst oder bei der Verkaufsstelle Ihres Produkts.

XCUB 1500mm PNP

Radio Control Model Airplane

Bay-Tec Modelltechnik
Schüttelgrabenring 3
71332 Waiblingen
Tel. 07151/5002192
info@bay-tec.de
WEEE-Rg.Nr. DE 95775155

AGE 14+

Made in China