Dancing Wings Hobby K0902

Dancing Wings Hobby Micro 3CH 460mm Spacewalker RC Balsawood Plane (K0902) Instruction Manual

Model: K0902 | Brand: Dancing Wings Hobby

1. Introduction

This manual provides detailed instructions for the assembly, setup, operation, and maintenance of your Dancing Wings Hobby Micro 3CH 460mm Spacewalker Balsawood Laser Cut Plane, model K0902. This product is a laser-cut balsawood kit designed for enthusiasts who enjoy building and flying remote-controlled aircraft. The K0902 version includes the airframe kit and a brushless motor.

2. Safety Information

Operating remote-controlled aircraft requires caution. Please read and adhere to the following safety guidelines:

- Always operate the aircraft in open areas, away from people, animals, buildings, and power lines.
- Ensure all components are correctly assembled and secured before each flight.
- Verify battery charge levels for both the aircraft and the transmitter before flying.
- Keep hands and loose clothing away from the propeller when the motor is powered.
- Do not fly in strong winds or adverse weather conditions.
- Adult supervision is recommended for younger operators.
- Store batteries safely and charge them according to manufacturer instructions.

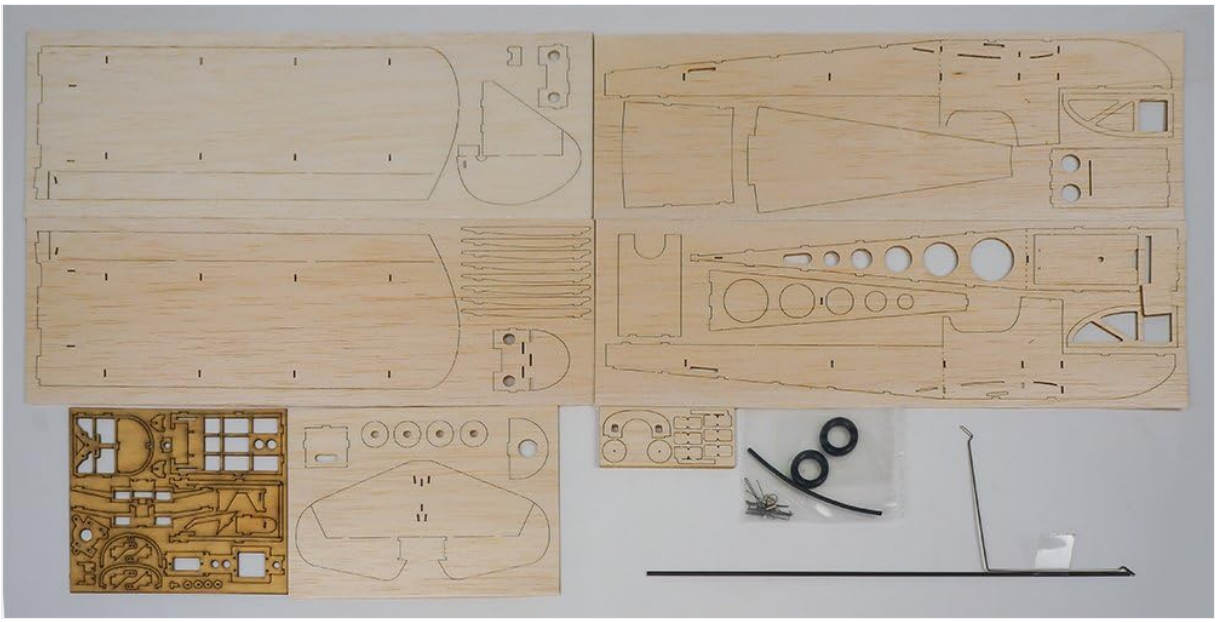
3. Package Contents (K0902 Version)

The K0902 package includes the following components:

- Micro Spacewalker Balsawood Laser Cut Kit (Airframe components)

- Brushless Motor: 1104 3700KV
- Prop Saver (1.5mm)
- Propeller (5030)
- Small hardware and accessories for assembly

Overall view of the Dancing Wings Hobby Micro Spacewalker RC plane kit, showing the assembled aircraft alongside the motor, propeller, and other electronic components included in the K0902 package.



Detailed view of the laser-cut balsawood sheets and various small parts that form the Micro Spacewalker kit, ready for assembly.

Note: Additional components such as ESC, servos, receiver, battery, and transmitter are required for flight

and are not included in the K0902 kit.

4. Specifications

Feature	Specification
Wingspan	460mm
Length	380mm
Flying Weight	30~35g
Brushless Motor (Included)	1104 3700KV
Propeller (Included)	5030
Suggested ESC (Not Included)	5A / 1S
Suggested Servos (Not Included)	1.7g * 3pcs
Suggested Receiver (Not Included)	≥3 CH
Suggested Battery (Not Included)	1S 150-250mAh LiPo
Assembly Difficulty	Normal (Little challenge)

5. Assembly Instructions

The Micro Spacewalker is a laser-cut balsawood kit requiring careful assembly. Follow these steps for construction:

5.1 Airframe Construction

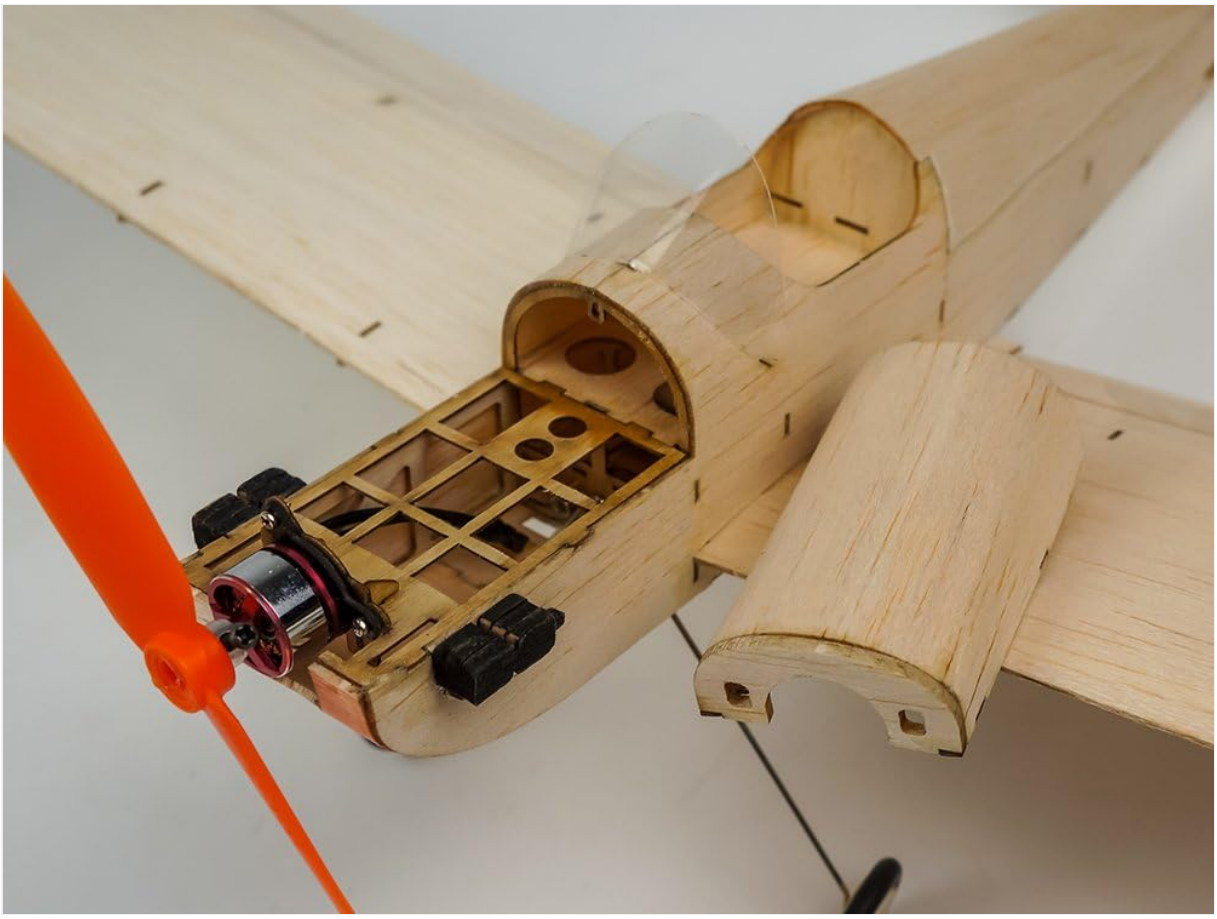
1. **Prepare Parts:** Carefully remove all laser-cut balsawood parts from their sheets. Identify each component according to the provided diagrams (if any are included with the physical kit).
2. **Fuselage Assembly:** Begin by assembling the fuselage sections. Use wood glue (not included) to join the interlocking balsa pieces. Ensure proper alignment and allow sufficient drying time.
3. **Wing Assembly:** Construct the main wing and tail sections. Pay close attention to the dihedral (upward angle) of the wing if specified in the kit's diagrams.
4. **Control Surfaces:** Attach the ailerons, elevator, and rudder to their respective wing and tail sections using hinges (typically included in the kit or purchased separately). Ensure free movement.
5. **Landing Gear:** Assemble and attach the wire landing gear to the designated points on the fuselage. Secure the wheels.

5.2 Electronics Installation

6. **Motor Installation:** Mount the included 1104 3700KV brushless motor to the front firewall of the fuselage using the provided screws and motor mount. Ensure the motor is securely fastened.
7. **ESC Installation:** Connect your chosen 5A 1S Electronic Speed Controller (ESC) to the motor. Secure the ESC within the fuselage, ensuring adequate airflow for cooling.
8. **Servo Installation:** Install three 1.7g servos (not included) into their designated positions for the ailerons, elevator, and rudder. Connect the pushrods to the control horns on the control surfaces and the servo arms. Adjust pushrod length for neutral control surfaces.
9. **Receiver Installation:** Connect your chosen 3-channel receiver (not included) to the ESC and

servos. Secure the receiver within the fuselage, ensuring antennas are positioned for optimal signal reception.

10. **Propeller Attachment:** Attach the 5030 propeller to the motor shaft using the 1.5mm prop saver. Ensure the propeller is balanced and facing the correct direction for thrust.



Close-up view of the fuselage interior, illustrating the installation of the brushless motor and the clear canopy. This image highlights the structural details and component placement.

Frontal view of the assembled Micro Spacewalker, showcasing the orange propeller, landing gear, and the overall compact design of the aircraft.

6. Setup

6.1 Transmitter and Receiver Binding

Refer to your specific transmitter and receiver manual for instructions on how to bind them. This process establishes a wireless connection between your transmitter and the aircraft's receiver.

6.2 Control Surface Checks

1. With the aircraft powered on and bound to the transmitter, verify that all control surfaces (ailerons, elevator, rudder) move correctly in response to your transmitter inputs.
2. Ensure that the control surfaces are centered when the transmitter sticks are at neutral. Adjust pushrod lengths or servo sub-trims on your transmitter if necessary.
3. Check for adequate control surface throw. The Spacewalker is a micro aircraft, so excessive throws may lead to twitchy flight. Start with moderate throws and adjust to your preference.

6.3 Center of Gravity (CG)

Proper CG is critical for stable flight. The recommended CG location is typically specified in the kit's diagrams. Adjust the battery position within the fuselage to achieve the correct balance. A slightly nose-heavy aircraft is generally more stable than a tail-heavy one.

7. Operating Instructions

7.1 Pre-Flight Checks

- Confirm all control surfaces move freely and correctly.

- Check battery voltage on both the aircraft and transmitter.
- Ensure the propeller is securely attached and free from damage.
- Verify the flight area is clear of obstacles and people.

7.2 Take-off

For hand launching, hold the aircraft firmly, apply about 70-80% throttle, and gently push it forward into the wind. For ground take-off, slowly advance the throttle while maintaining directional control with the rudder, then apply full throttle for lift-off.

7.3 Flight

The Micro Spacewalker is a 3-channel aircraft, typically controlling throttle, rudder (yaw), and elevator (pitch). Some setups may use ailerons for roll control. Practice gentle inputs initially. Maintain a safe altitude and distance from yourself and others.

7.4 Landing

Approach the landing area into the wind. Reduce throttle gradually and use the elevator to control descent rate. Aim for a gentle touchdown on the landing gear. Cut throttle completely upon contact with the ground.

8. Maintenance

- **Inspect After Each Flight:** Check for any damage to the balsawood airframe, propeller, landing gear, and control surfaces. Repair any damage promptly.
- **Cleanliness:** Keep the aircraft clean from dirt, grass, and debris.
- **Battery Care:** Store LiPo batteries at a storage voltage (around 3.8V per cell) if not used for extended periods. Do not overcharge or over-discharge batteries.
- **Component Check:** Periodically check all screws and connections for tightness. Ensure servos operate smoothly.

9. Troubleshooting

Problem	Possible Cause	Solution
Aircraft does not respond to transmitter.	Not bound, low battery, receiver/transmitter off.	Ensure binding is complete. Check and charge batteries. Power on all components.
Motor not spinning.	ESC not armed, motor/ESC connection loose, damaged motor/ESC.	Ensure throttle is at zero when connecting battery. Check all wiring. Inspect components for damage.
Aircraft flies erratically or is unstable.	Incorrect CG, control surfaces not neutral, damaged airframe.	Adjust CG. Verify control surface trim. Inspect for structural damage.
Short flight time.	Battery undercharged, old battery, inefficient flying.	Ensure battery is fully charged. Consider a new battery. Practice smoother flight.

10. Warranty and Support

For specific warranty information or technical support, please refer to the documentation provided with your purchase or contact Dancing Wings Hobby directly through their official channels. Keep your proof of purchase for any warranty claims.