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Dancing Wings Hobby MC1106-3800KV

Dancing Wings Hobby MC1106-3800KV Micro Brushless Motor Instruction Manual

Model: MC1106-3800KV

1. Introduction

This manual provides essential instructions for the safe and effective use of your Dancing Wings Hobby MC1106-3800KV Micro Brushless Motor. Please read this manual thoroughly before installation and operation to ensure optimal performance and longevity of your product. This motor is designed for micro indoor fixed-wing aircraft and F3P models.

2. Product Overview

The MC1106-3800KV is a 1S 3.7V micro brushless motor, suitable for various micro RC aircraft applications. It is often supplied as part of a power combo, which may include an Electronic Speed Controller (ESC), propeller, prop saver, and mini receiver, depending on the specific kit version.

Kit Contents (MC1106A / MC1106-3800KV 1pcs)

- MC1106-3800KV Micro Brushless Motor
- Mounting hardware (screws, motor mount)
- Propeller adapter / Prop saver

Other versions (e.g., C1106-P1, C1106-P2, C1106-P3, C1106-P3142, C1106-P3144, C1106-P3145, C1106-P3146, C1106-P3147) include additional components such as multiple motors, 5A 1S ESC, 5030 propeller, 2.0g servos, and various mini receivers (S-HFSS, DSMX/2, FRSKY-D16, FLYSKY, FRSKY-D8).



Image 1: MC1106-3800KV Micro Brushless Motor with mounting screws and prop saver.



Image 2: The MC1106-3800KV motor and accessories as packaged in its retail box.

3. Safety Information

Operating RC motors involves potential risks. Adhere to the following safety guidelines:

- **Rotating Parts:** Keep fingers, loose clothing, and other objects clear of the propeller and motor during operation. Rotating propellers can cause severe injury.
- **Electrical Hazards:** Ensure all electrical connections are secure and insulated. Avoid short circuits. Use appropriate battery and ESC for the motor's specifications.
- **Battery Safety:** Use only compatible 1S 3.7V LiPo batteries. Follow battery manufacturer's instructions for charging, discharging, and storage.
- **Age Recommendation:** This product is recommended for users aged 18 years and up due to the technical nature and potential hazards.
- **Ventilation:** Ensure adequate airflow around the motor and ESC to prevent overheating.

4. Setup and Installation

Proper installation is crucial for motor performance and safety.

4.1 Motor Mounting

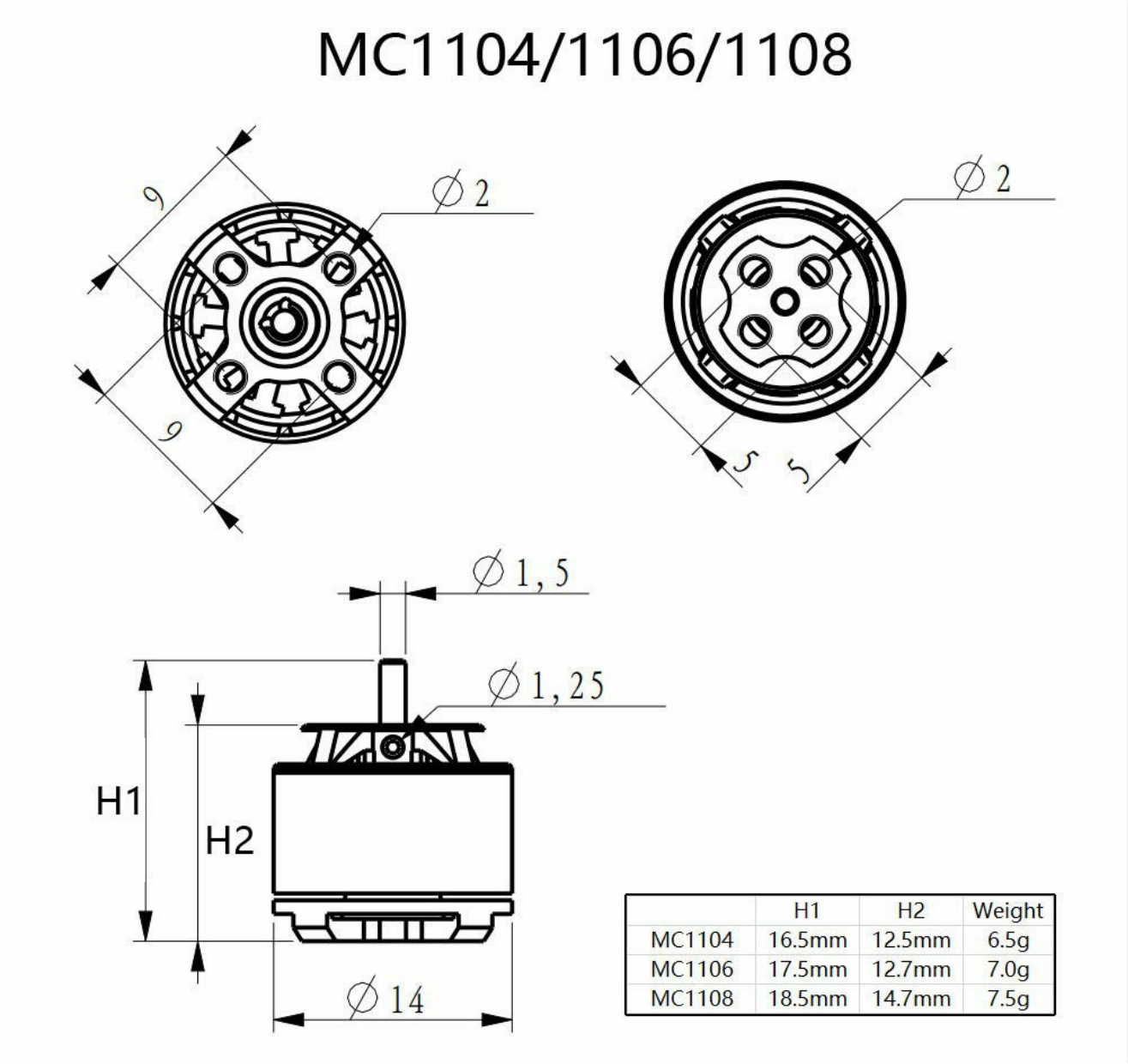
Mount the MC1106-3800KV motor securely to your aircraft's motor mount using the provided screws. Ensure the motor is aligned correctly and that the screws do not interfere with the motor's internal windings.

4.2 Electrical Connections

Connect the motor's three wires to the corresponding wires on your 1S ESC. The order of connection may affect the motor's rotation direction. If the motor spins in the wrong direction, swap any two of the three motor wires.

4.3 Propeller Installation

Attach the propeller to the motor shaft using the prop saver. Ensure the propeller is balanced and securely fastened. An unbalanced propeller can cause excessive vibration, leading to reduced performance and potential damage.



	H1	H2	Weight
MC1104	16.5mm	12.5mm	6.5g
MC1106	17.5mm	12.7mm	7.0g
MC1108	18.5mm	14.7mm	7.5g

Image 3: Dimensional drawing for MC1104, MC1106, and MC1108 motors, showing key measurements for mounting and integration.

5. Operating Instructions

The MC1106-3800KV motor operates on a 1S (3.7V) power supply. Ensure your ESC is properly calibrated with your radio transmitter before operating the motor.

5.1 Initial Power-Up

Connect the battery to the ESC. The ESC will typically emit a series of beeps indicating successful initialization. Slowly advance the throttle on your transmitter to test motor rotation. If the motor does not spin or spins erratically, refer to the troubleshooting section.

5.2 Propeller Selection and Performance

The choice of propeller significantly impacts motor performance. Refer to the performance table below for recommended propeller sizes and expected thrust/current draw at various voltages. Always monitor motor and ESC temperatures during initial flights.

MC/XMC1106 3800KV								
Weight:6.5g			Test ESC: E-Power 1S5A 2S10A			Max power:6A/65W		
Prop Size	Volts(V)	Amps(A)	Watts(W)	RPM	Thrust (g)	Thrust (oz)	Efficiency (g/W)	Remark
GWS4025	3.7	1.9	7.0	10200	49	1.74	6.97	Suggested Voltage 7.4V
	4.2	2.1	8.8	10800	54	1.91	6.12	
	7.4	4.7	34.8	16620	137	4.86	3.94	
	8.4	5.3	44.5	17200	148	5.25	3.32	
GWS5030	3.7	2.4	8.9	8700	72	2.55	8.11	Suggested Voltage 3.7V
	4.2	2.7	11.3	9420	81	2.87	7.14	
GWS6030	3.7	2.8	10.4	7140	75	2.66	7.24	Startup restrict
	4.2	3.3	13.9	7740	88	3.12	6.35	
AEO MP3020 (Prop for Drones/Multirotors)	3.7	0.8	3.0	12840	24	0.85	8.11	Used for Drones/Multirotors
	4.2	1.0	4.2	14160	29	1.03	6.90	
	7.4	2.2	16.3	25440	79	2.80	4.85	
	8.4	2.6	21.8	28000	95	3.37	4.35	
	11.1	3.8	42.2	30540	158	5.60	3.75	
	12.6	4.5	56.7	32700	186	6.60	3.28	
AEO MP3D 3030 (Prop for Drones/Multirotors)	7.4	2.9	21.5	20280	64	2.27	2.98	Used for 3D Drones/Multirotors
	8.4	3.5	29.4	22320	83	2.94	2.82	
	11.1	4.9	54.4	26700	118	4.18	2.17	
	12.6	5.6	70.6	28800	132	4.68	1.87	

Image 4: Performance data for the MC1106-3800KV motor with various propeller types and voltages.

6. Maintenance

Regular maintenance helps ensure the longevity and reliability of your motor.

- **Cleaning:** Keep the motor free from dust, dirt, and debris. Use compressed air or a soft brush to clean the motor's exterior.
- **Inspections:** Periodically check all wiring and connections for signs of wear, fraying, or corrosion. Ensure the motor mount screws are tight.
- **Bearings:** While brushless motors are generally low maintenance, listen for any unusual noises from the bearings. If excessive noise or resistance is detected, the bearings may need replacement.
- **Propeller:** Inspect the propeller for cracks, chips, or damage before each flight. Replace damaged propellers immediately.

7. Troubleshooting

If you encounter issues with your MC1106-3800KV motor, consider the following:

- **Motor Not Spinning:**
  - Check battery charge level.
  - Verify all electrical connections between motor, ESC, and receiver.
  - Ensure ESC is armed and calibrated with the transmitter.

- Inspect motor wires for breaks or shorts.

- **Motor Spins in Wrong Direction:**
  - Swap any two of the three motor wires connected to the ESC.
- **Low Power or Overheating:**
  - Check propeller size and pitch; ensure it matches the motor's specifications (refer to Image 4).
  - Ensure battery is fully charged and capable of delivering sufficient current.
  - Verify ESC is rated for the motor's current draw.
  - Check for obstructions or binding in the motor or propeller.
- **Excessive Vibration:**
  - Balance the propeller.
  - Check for bent motor shaft or damaged bearings.
  - Ensure motor is securely mounted.

8. Specifications

Feature	Specification
Model	MC1106-3800KV
Voltage	1S 3.7V
KV Rating	3800KV
Material	Metal
Item Weight	Approximately 7.0g (MC1106)
Manufacturer	AEO RC
UPC	755340292003

9. Warranty and Support

For warranty information or technical support regarding your Dancing Wings Hobby MC1106-3800KV Micro Brushless Motor, please contact the seller or manufacturer directly. Retain your proof of purchase for any warranty claims.

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