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> Gemfan 1170 Reinforced Glass Fiber Nylon Propellers Instruction Manual

Gemfan 1170

Gemfan 1170 Reinforced Glass Fiber Nylon Propellers Instruction Manual

Model: 1170 | Brand: Gemfan

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1. INTRODUCTION

The Gemfan 1170 Reinforced Glass Fiber Nylon Propellers are designed for high-performance FPV and Macroquad drones, specifically 11-inch Cinelifter FPV drones. These 3-blade propellers are engineered for durability and efficient thrust, making them suitable for demanding flight conditions and heavy-load applications.

Key features include a narrow surface and high pitch design, optimized for strength and durability. When paired with compatible 32 series brushless motors, they can provide over 5kg of thrust, ensuring flexible flight characteristics for high-load drone setups.

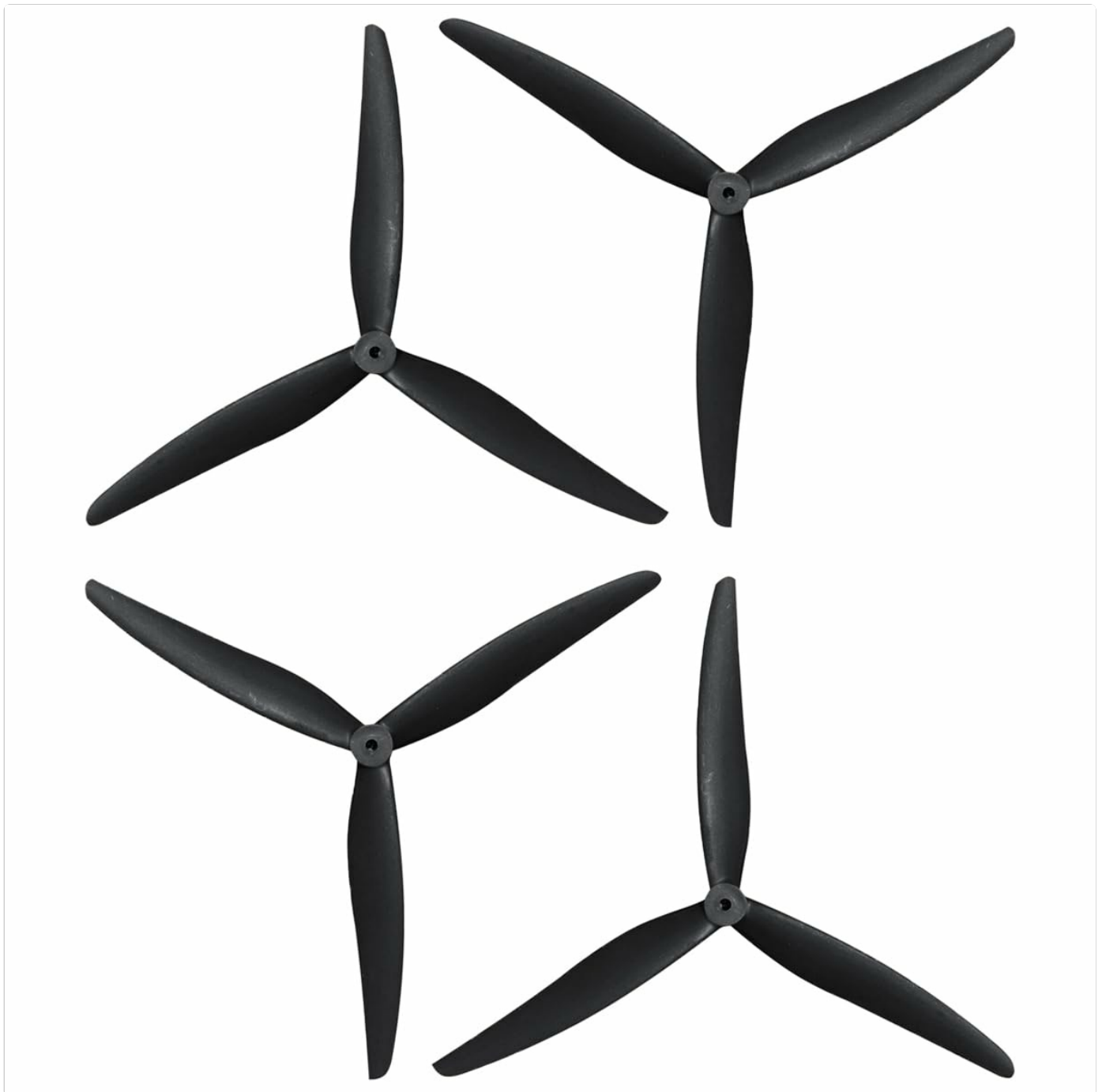


Image 1.1: A single Gemfan 1170 3-blade propeller, black in color, designed for drone applications.

2. SAFETY INFORMATION

Important: Please read all instructions carefully before operating your drone with these propellers. Failure to follow safety guidelines can result in injury or damage to equipment.

- Always exercise caution and protect your hands and eyes when handling and operating propellers. Propellers can cause severe injury.
- Ensure propellers are securely mounted to the motor shafts before flight. Loose propellers can detach during operation.
- Inspect propellers for any signs of damage (cracks, bends, nicks) before each flight. Do not use damaged propellers.
- Keep clear of rotating propellers. Never attempt to stop a rotating propeller with your hand or any object.
- Operate drones in open areas, away from people, animals, and obstacles.
- The propellers are designed with uniform strength distribution to minimize the risk of breaking or exploding from the hub. However, proper installation and handling are crucial for maintaining this safety feature.

3. WHAT'S INCLUDED

Each package of Gemfan 1170 Reinforced Glass Fiber Nylon Propellers includes:

- 4 x Gemfan 1170 Reinforced Glass Fiber Nylon Propellers (2 CW - Clockwise, 2 CCW - Counter-Clockwise)



Image 3.1: Gemfan 1170 propellers shown in their sealed retail packaging.



Image 3.2: A Gemfan 1170 propeller partially visible through its transparent packaging.

4. SETUP AND INSTALLATION

Proper installation of propellers is critical for safe and efficient drone operation. These propellers are designed for motors with a 5mm center hole inner diameter and are recommended for 32 series brushless motors.

4.1 Identifying Propeller Rotation (CW/CCW)

Propellers are typically marked for their rotation direction (Clockwise - CW or Counter-Clockwise - CCW). It is essential to install the correct propeller on the corresponding motor to ensure stable flight.

- **CW (Clockwise) Propellers:** These are typically installed on motors that spin clockwise.
- **CCW (Counter-Clockwise) Propellers:** These are typically installed on motors that spin counter-clockwise.



Image 4.1: Two Gemfan 1170 propellers, illustrating the difference between CW and CCW types for correct motor pairing.

4.2 Installation Steps

1. **Power Off:** Ensure your drone's power is completely disconnected before handling motors or propellers.
2. **Identify Motor Rotation:** Determine the intended rotation direction for each motor on your drone frame. This is crucial for stable flight.
3. **Match Propeller:** Select the appropriate CW or CCW propeller for each motor.
4. **Mount Propeller:** Place the propeller onto the motor shaft, ensuring the center hole (5mm inner diameter) aligns correctly.
5. **Secure Propeller:** Use the provided propeller nuts or screws to firmly secure the propeller to the motor. Do not overtighten, but ensure there is no play.
6. **Verify:** Double-check that all propellers are correctly oriented and securely fastened before connecting power.

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Video 4.1: This video demonstrates the DYS X3115 Brushless Freestyle FPV Drone Quadcopter Motor, which is a type of motor compatible with these propellers. It provides visual context for motor types used with these propellers.

5. OPERATION GUIDELINES

The Gemfan 1170 propellers are designed for optimal performance on 11-inch Cinelifter FPV drones and Macroquad

drones. Adhere to the following guidelines for best results and safety:

- **Pre-Flight Check:** Always perform a thorough pre-flight inspection, ensuring propellers are free from damage and securely attached.
- **Environmental Conditions:** Avoid flying in strong winds or adverse weather conditions that could compromise drone stability or propeller integrity.
- **Payload Management:** While these propellers are designed for high-load drones, always operate within the recommended weight limits of your drone frame and motors to prevent excessive strain.
- **Smooth Control Inputs:** For Cinelifter applications, smooth and controlled flight inputs will maximize stability and video quality, and reduce stress on the propellers.
- **Post-Flight Inspection:** After each flight, inspect propellers for any signs of wear or damage.

6. MAINTENANCE AND CARE

To ensure the longevity and optimal performance of your Gemfan 1170 propellers, follow these maintenance recommendations:

- **Regular Inspection:** Before and after every flight, carefully inspect each propeller blade for any cracks, chips, bends, or other deformities. Even minor damage can lead to imbalance and flight instability.
- **Cleaning:** If propellers become dirty, gently clean them with a soft, damp cloth. Avoid harsh chemicals that could degrade the glass fiber nylon material.
- **Storage:** Store propellers in a protective case or bag to prevent accidental damage when not in use. Avoid storing them under heavy objects or in direct sunlight for extended periods.
- **Replacement:** Replace any propeller that shows signs of damage immediately. Do not attempt to repair damaged propellers, as this can compromise their structural integrity and safety.
- **Balance Check:** Periodically check propeller balance. An unbalanced propeller can cause vibrations, reduce flight efficiency, and put undue stress on motors and the drone frame.

7. TROUBLESHOOTING

This section addresses common issues you might encounter with your propellers.

Problem	Possible Cause	Solution
Drone vibrates excessively during flight.	Damaged or unbalanced propeller, loose propeller, incorrect propeller installation.	Inspect all propellers for damage and replace if necessary. Ensure propellers are securely fastened and correctly oriented (CW/CCW). Check propeller balance.
Drone drifts or is unstable.	Incorrect CW/CCW propeller placement, damaged propeller, motor issue.	Verify that CW and CCW propellers are installed on the correct motors. Inspect propellers for damage. Check motor functionality.
Reduced thrust or poor flight performance.	Damaged propellers, incorrect propeller pitch/size for motor, motor underperforming.	Replace damaged propellers. Ensure propellers are compatible with your motor (e.g., 32 series motors recommended for 1170 props). Check motor health.
Propeller detaches during flight.	Propeller not securely fastened, incorrect mounting hardware, hub damage.	Ensure propeller nuts/screws are tightened sufficiently (but not overtightened). Use appropriate mounting hardware. Inspect propeller hub for damage.

8. SPECIFICATIONS

Detailed specifications for the Gemfan 1170 Reinforced Glass Fiber Nylon Propellers:

- **Brand:** Gemfan
- **Type:** 1170-3
- **Blades:** 3
- **Material:** Reinforced Glass Fiber Nylon
- **Pitch:** 7 inches
- **Diameter:** 11 inches (279.4mm)
- **Center Hole Inner Diameter:** 5mm
- **Weight:** 27.7g per propeller
- **Hub Thickness:** 9mm
- **Max Prop Width:** 24mm
- **Recommended Motor:** 32 series brushless motors (e.g., 3220)
- **Application:** 11-inch Cinelifter FPV drones, Macroquad drones

9. WARRANTY AND SUPPORT

For warranty information or technical support regarding your Gemfan 1170 propellers, please refer to the official Gemfan website or contact your retailer. Specific warranty terms may vary by region and retailer.

Manufacturer: Gemfan

For further assistance, visit the [Gemfan Store on Amazon](#).

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