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Align HD123AT

Align 120 Main Blades User Manual

BRAND: ALIGN
Model: HD123AT

1. PRODUCT OVERVIEW

The Align 120 Main Blades are designed as a replacement set for compatible RC helicopters, specifically engineered for extreme 3D flying. This package includes two complete sets of black main blades, totaling four individual blades. They feature a symmetrical wing shape, providing stable and precise flight characteristics.



Figure 1: Align 120 Main Blades. These blades are black with white accents and the 'ALIGN' logo, designed for high-performance flight.

Each set of blades is lightweight, contributing to the agility of the helicopter. The product also includes main blade decals for customization or identification. The blades are manufactured by Align, a reputable brand in the RC hobby industry.



Figure 2: Retail packaging of Align 120 Main Blades. The packaging clearly displays the model number HD123AT and the UPC 4713413982288, along with branding and product details.

2. SETUP AND INSTALLATION

Proper installation of main blades is crucial for the safe and efficient operation of your RC helicopter. Always refer to your helicopter's specific instruction manual for detailed installation steps, as procedures may vary by model.

2.1. Tools Required

- Appropriate screwdriver (e.g., Phillips or Hex, depending on your helicopter's blade grips)
- Thread-locking compound (optional, but recommended for screws that secure the blades)
- Blade balancing tool (recommended for optimal performance)

2.2. Installation Steps

1. **Safety First:** Ensure the helicopter's power source is disconnected (battery removed) before beginning any work.
2. **Remove Old Blades:** Carefully unscrew and remove the existing main blades from the blade grips. Note the orientation of the old blades.
3. **Inspect Blade Grips:** Check the blade grips for any damage or wear. Replace if necessary.
4. **Install New Blades:** Insert the new Align 120 Main Blades into the blade grips. Ensure they are seated correctly and freely pivot.
5. **Secure Blades:** Apply a small amount of thread-locking compound to the blade retention screws (if recommended by your helicopter's manual) and tighten them securely. Do not overtighten, as this can restrict blade movement or damage the grips. The blades should be able to pivot freely but without excessive play.
6. **Balance Blades (Recommended):** Use a blade balancing tool to ensure both blades in a pair have the same weight and center of gravity. Unbalanced blades can cause severe vibrations and affect flight performance.
7. **Final Check:** Before reconnecting power, manually check that the blades are securely attached, can pivot smoothly, and that there are no obstructions.

3. OPERATING CONSIDERATIONS

These Align 120 Main Blades are designed for high-performance 3D flying. While operating your RC helicopter with these blades, always adhere to the following:

- **Pre-Flight Check:** Always perform a thorough pre-flight inspection before each flight. Check for any cracks, damage, or looseness in the blades.
- **Environmental Conditions:** Avoid flying in strong winds or adverse weather conditions that could compromise control or damage the blades.
- **Safe Flying Area:** Operate your RC helicopter in an open area, away from people, animals, and obstacles.
- **Pilot Skill:** 3D flying requires advanced piloting skills. Ensure you are proficient before attempting complex maneuvers.

4. MAINTENANCE

Regular maintenance extends the lifespan of your Align 120 Main Blades and ensures safe operation.

- **Visual Inspection:** Before and after each flight, visually inspect the blades for any signs of damage, such as cracks, chips, or delamination. Even minor damage can lead to catastrophic failure during flight.
- **Cleanliness:** Keep the blades clean from dirt, dust, and debris. Use a soft, damp cloth for cleaning.
- **Blade Balance:** Periodically re-check the balance of your blades, especially after any hard landings or impacts.
- **Storage:** Store blades in a protective case or sleeve to prevent accidental damage when not in use. Avoid storing them in direct sunlight or extreme temperatures.
- **Replacement:** Replace blades immediately if any damage is detected. Do not attempt to repair damaged blades. Always replace both blades in a pair simultaneously to maintain balance.

5. TROUBLESHOOTING

This section addresses common issues related to main blades.

Problem	Possible Cause	Solution
Excessive Vibration	Unbalanced blades, damaged blades, loose blade grips, bent main shaft.	Balance blades, inspect for damage and replace if necessary, tighten blade grip screws, check and replace main shaft.
Poor Flight Performance / Instability	Damaged blades, incorrect blade tracking, incorrect pitch settings.	Inspect and replace damaged blades, adjust blade tracking, verify and adjust pitch settings according to helicopter manual.
Blades Not Spinning Freely	Overtightened blade retention screws, debris in blade grips.	Loosen screws slightly (ensure still secure), clean blade grips.

Note: For complex issues or if you are unsure, consult with an experienced RC hobbyist or a professional technician.

6. SPECIFICATIONS

- **Product Name:** Align 120 Main Blades
- **Model Number:** HD123AT
- **Shape:** Symmetrical wing
- **Length:** 120mm
- **Weight:** Approximately 5.8g per set (two blades)
- **Color:** Black
- **Includes:** (4) Main Blades, (4) Main blade Decals
- **Product Dimensions:** 7.99 x 2.17 x 0.51 inches
- **Item Weight:** 0.704 ounces
- **Manufacturer:** Align
- **Manufacturer Recommended Age:** 12 years and up
- **ASIN:** B00HNMSVMW
- **UPC:** 4713413982288

7. WARRANTY AND SUPPORT

Specific warranty information for the Align 120 Main Blades is not provided in this manual. For details regarding warranty coverage, returns, or technical support, please contact Align directly or the retailer from whom the product was purchased.

You may visit the official Align website or refer to the contact information provided with your original product packaging for support inquiries.

Align Store Link: Visit the Align Store on Amazon