ASSAULT 700

FLYBARLESS 3D HELICOPTER

INSTRUCTION MANUAL

Please read this manual carefully before operating this helicopter.

⚠ WARNING:

R/C models, including the Assault 700 helicopter are not toys! RC models consist of various high-tech electronic components designed to provide superior performance. Potential damage and injury may occur if operated improperly. The model is not suitable for children under the age of 14years. We recommend that you seek the assistance of an experienced pilot when flying for the first time. It is mandatory to follow the instructions and read all warnings before flying. Please ensure you are conscious of the safety of yourself and others around you when you operate any R/C model products.

Thanks for purchasing the Assault 700 DFC flybarless helicopter kit. To ensure your safety, please read the whole instruction manual carefully before any assembly and use. Please keep the manual for future repair and adjustment reference.

The Assault 700 DFC is a high performance, high precision machine. It's not a toy and is not for beginners. This kit is designed for use by experienced R/C helicopter hobbyists. 700 size helicopters are very large and spin carbon fiber rotor blades at high speed (2000+RPM). Misuse can cause severe injury or even death. Please seek the help of an experienced R/C helicopter pilot for advice on setup and operation if you have never owned/operated a helicopter of this size. Be sure to read and understand the safety precautions and warnings section at the end of this user manual.

Specification:
Type: Collective Pitch Electric 3D Heli
Main Rotor Diameter: 1560mm
Tail Rotor Diameter: 280mm
Length: 1345mm
Pinion Gear: 13T
Minimum Age Recommendation: 14 years
Experience Level: Advanced
Flying Environment: Outdoor
Recommended Battery: 12S 4500~5000mAh lipoly

Included Items:
Assault 700 DFC Flybarless Helicopter Kit (no electronics)
Tail blades
13T pinion gear
Battery straps
All necessary hardware

Required Items:
Standard size metal gear servo (cyclic control) x 3
Standard size high-speed servo (tail control)
700 size 480~560KV brushless outrunner heli motor
120A HV (12S) brushless ESC
Flybarless system
690~710mm main blades
Voltage regulator/UBEC
1800~2200mAh receiver battery
12S (6S x 2) 4500~5000mAh lipoly battery
6ch or more radio system (transmitter and receiver)

⚠ WARNING:
1. Always keep the model in sight and under control.
2. Always turn on throttle hold if the model is out of control and/or crashes.
3. Always use fully charged batteries.
4. Always keep transmitter powered on while model is powered.
5. Never operate model with damaged wiring.
6. Never touch moving parts.
7. Always remove batteries before disassembly.
8. Always keep moving parts clean and dry.
9. Always let parts cool after use before touching.
10. Always remove batteries after use.

Consult local laws and ordinances before choosing a location to fly your aircraft.

Select a large, open area away from people and objects.
Your first flights should be outdoors in low-wind conditions. Always stay at least 45 feet (15 meters) away from the helicopter when it is flying.

⚠ CAUTION Please take a few minutes to familiarize yourself with the Assault 700 primary controls before attempting your first flight.
The Assault 700 FBL is a very responsive and capable helicopter. We recommend getting help from an experienced pilot and installing training gear if you are new to 3D or collective pitch helicopters.

While attempting to establish a low-level hover, you can also check to see if any trim adjustments are required to help keep the Assault 700 from constantly drifting in various directions. If you find the aircraft constantly drifts without any directional control input, land the model before making any adjustments to the trim settings.
- If the helicopter drifts forward or backward, adjust the elevator trim.
- If the helicopter drifts to the left or right, adjust the aileron trim.

⚠ CAUTION Always fly the helicopter with your back to the sun and the wind to prevent loss of flight control.
Continue making trim adjustments until the helicopter hovers at a low altitude with very little drifting and directional control input. If the 700 FBL is your first helicopter model, seek help from an experienced pilot to trim the model for you before making your first flight.
When the helicopter is in stunt mode:
- The rotor head speed is constant.
- The main rotor will increase negative pitch as the throttle/collective stick is moved from the middle stick position to the low stick position. Negative pitch allows the helicopter to fly upside down and perform aerobatics.

Change between stunt and idle up modes in a hover with the throttle near the middle stick position.
The helicopter may go up or down when you change between modes due to the difference in the throttle and pitch curves.

Post-Flight Inspections and Maintenance

Ball Links	Make sure the plastic ball link holds the control ball, but is not tight (binding) on the ball. When a link is too loose on the ball, it can separate from the ball during flight and cause a crash. Replace worn ball links before they fail.
Cleaning	Make sure battery is not connected before cleaning. Remove dust and debris with a soft brush or a dry lint free cloth.
Bearings	Replace bearings when they become notchy (sticky in places when turning) or draggy.
Wiring	Make sure wiring does not block moving parts. Replace damaged wiring and loose connectors.
Fasteners	Make sure there are no loose screws, other fasteners or connectors. Do not over tighten metal screws in plastic parts. Tighten screw so parts are mated together, then turn screw only 1/8th of a turn more.
Rotors	Make sure there is no damage to rotor blades and other parts which move at high speed. Damage to these parts includes cracks, burrs, chips or scratches. Replace damaged parts before flying.

⚠ WARNING

Read the ENTIRE instruction manual to become familiar with the features of the product before operating. Failure to operate the product correctly can result in damage to the product, personal property and cause serious injury.
This is a sophisticated hobby product. It must be operated with caution and common sense and requires some basic mechanical ability. Failure to operate this Product in a safe and responsible manner could result in injury or damage to the product or other property.
This product is not intended for use by children without direct adult supervision.This manual contains instructions for safety, operation and maintenance. It is essential to read and follow all the instructions and warnings in the manual, prior to assembly, setup or use, in order to operate correctly and avoid damage or serious injury.

Additional Safety Precautions and Warnings

Age Recommendation: Not for children under 14 years. This is not a toy.
Always keep a safe distance in all directions around your model to avoid collisions or injury. This model is controlled by a radio signal subject to interference from many sources outside your control. Interference can cause momentary loss of control.
Always operate your model in open spaces away from full-size vehicles, traffic and people.
Always carefully follow the directions and warnings for this and any optional support equipment (chargers, rechargeable battery packs, etc.).
Always keep all chemicals, small parts and anything electrical out of the reach of children.
Always avoid water exposure to all equipment not specifically designed and protected for this purpose. Moisture causes damage to electronics.
Never place any portion of the model in your mouth as it could cause serious injury or even death.
Never operate your model with low transmitter batteries.

Battery ⚠ WARNING:
1. Never leave charging Batteries unattended.
2. Always charge Batteries away from flammable materials
3. Never charge Batteries outside safe temperature range.
4. Never charge Batteries outside recommended levels.
5. Never charge damaged Batteries.

Store Batteries safely

The Battery Charger included with your aircraft is designed to safely charge the Li-Po battery.

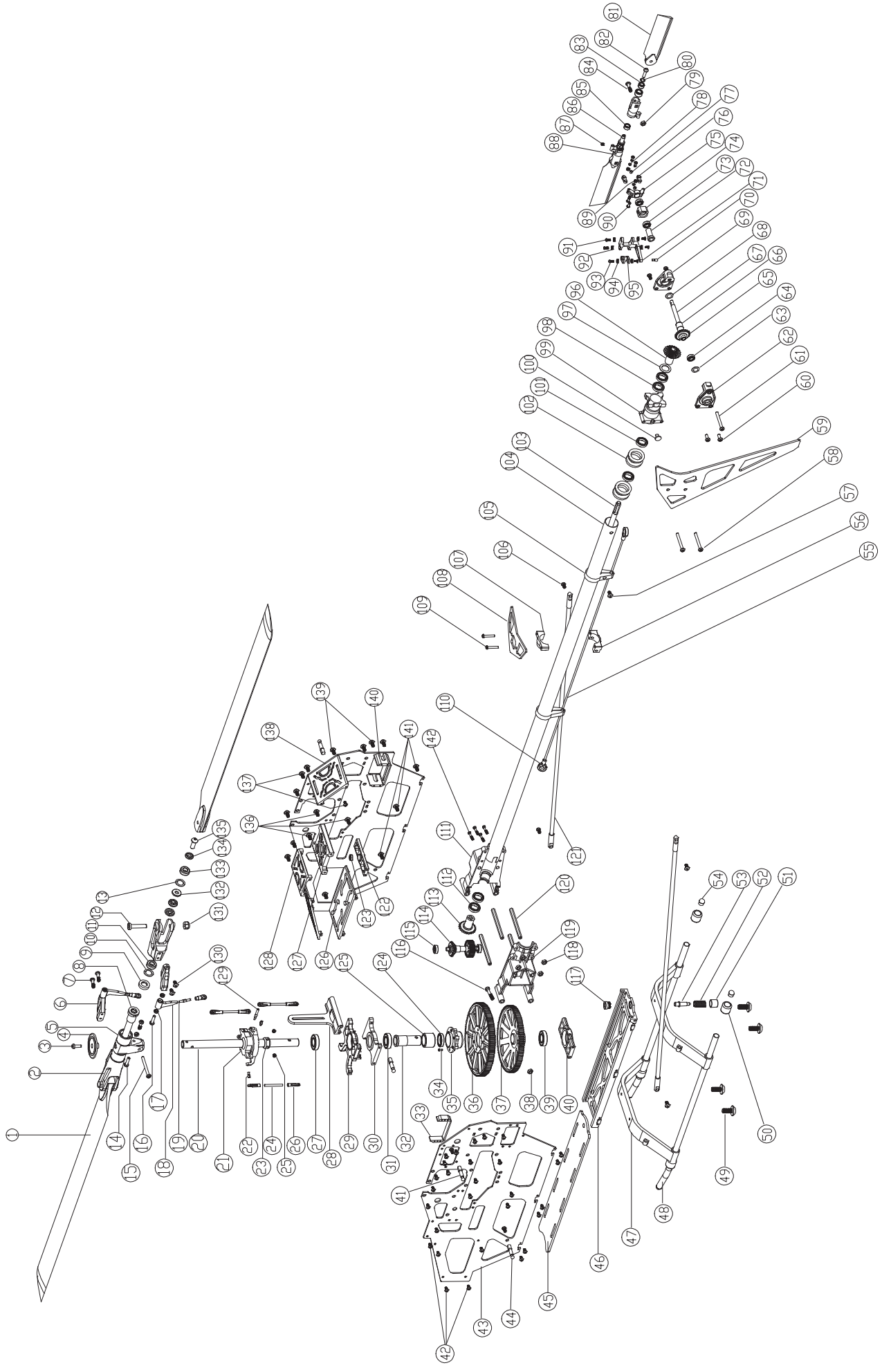
⚠ CAUTION All instructions and warnings must be followed exactly.Mishandling of Li-Po batteries can result in a fire, personal injury, and/ or property damage.

- By handling, charging or using the included Li-Po battery you assume all risks associated with lithium batteries.
- If at any time the battery begins to balloon or swell, discontinue use immediately.
- If charging or discharging, discontinue and disconnect. Continuing to use, charge or discharge a battery that is ballooning or swelling can result in fire.
- Always store the battery at room temperature in a dry area for best results.
- Always transport or temporarily store the battery in a temperature range of 40–120o F. Do not store battery or model in a car or direct sunlight. If stored in a hot car, the battery can be damaged or even catch fire.
- NEVER USE A Ni-Cd OR Ni-MH CHARGER. Failure to charge the battery with a compatible charger may cause fire resulting in personal injury and/or property damage.
- Never discharge Li-Po cells to below 3V under load.
- Never cover warning labels with hook and loop strips.

Meaning of Special Language

The following terms are used throughout the product literature to indicate various levels of potential harm when operating this product:

NOTICE:	Procedures, which if not properly followed, create a possibility of physical property damage AND a little or no possibility of injury.
⚠ CAUTION	Procedures, which if not properly followed, create the probability of physical property damage AND a possibility of serious injury.
⚠ WARNING	Procedures, which if not properly followed, create the probability of property damage, collateral damage, and serious injury OR create a high probability of superficial injury



1	main blade
2	main blade grip
3	M3x10
4	head button
5	main rotor head
6	rod tray
7	HM3X8
8	o-ring damper A
9	o-ring damper B
10	Ø10xØ14.5x1.5washer
11	bearingØ10xØ19x5
12	M5X32
13	Ø10xØ19x1washer
14	HM4X10
15	HM4X25
16	HM3X25
17	bearingØ3xØ7x3
18	DFC control arm
19	rod connector
20	main shaft
21	swash plate
22	ball A
23	main lock
24	linkage rod
25	M4
26	ball link A
27	bearingØ12xØ24x6
28	anti-rotation bracket
29	bearing block (upper)
30	bearing block (lower)
31	bearingØ12xØ24x6
32	main shaft cover
33	servo tray(front)
34	TM3X6
35	one way bearing holder
36	main gear

37	tail drive gear
38	M4
39	bearingØ12xØ24x6
40	main shaft holder(back)
41	canopy mount (upper)
42	TM2. 5X6
43	bottom frame
44	canopy mount (lower)
45	CF battery tray
46	base plate
47	landing skid
48	skid pipe
49	TM3X10
50	skid nut
51	CF battery tray nut
52	spring
53	CF battery tray mast
54	skid plug
55	link
56	horizontal fin band
57	HM3*8
58	HM3x22
59	vertical tail fin
60	HM3X8
61	HM3X22
62	tail unit housing
63	Ø6xØ8x0.3washer
64	bearingØ6xØ12x4
65	umbrella gear
66	Ø6xØ12x9.5
67	tail shaft
68	Ø6xØ8x0.3washer
69	tail unit housing
70	ball A
71	L shape tail pitch lever
72	tail pitch control arm copper case

73	bearingØ8xØ12x3.5
74	tail pitch control slider
75	tail pitch control arm
76	tail pitch link
77	Ø2xØ4x3
78	Ø2xØ3.5x1.2washer
79	M3
80	Ø3xØ7x0.8washer
81	tail blade
82	HM3X8
83	bearingØ5xØ10x4
84	HM3X18
85	bearingØ6xØ10x3
86	tail blade hub
87	M4
88	tail blade grip
89	bearingØ2xØ5x2.5
90	HM2X8
91	TM2X5
92	bearingØ2xØ5x2.5
93	TM2.5X5
94	bearingØ2.5xØ6x2.5
95	connecting base
96	long umbrella gear
97	washerØ13xØ14x0.6
98	bearingØ12xØ18x4
99	tail holder
100	tail boom holder pin
101	bearingØ8xØ14x4
102	torque tube washer
103	torque tube
104	tail boom
105	tail linkage rod tray
106	HM4X10
107	horizontal fin band
108	horizontal tail fin

109	HM3X20
110	ball link B
111	tail boom block
112	bearingØ12xØ18x4
113	long umbrella gear
114	tail umbrella gear
115	bearingØ5xØ13x4
116	HM4X25
117	CF battery tray lock nut
118	M3
119	tail boom block
120	tail boom holder support
121	tail support rod
122	motor mount (back)
123	bearingØ6xØ12x4
124	bearingØ15xØ21x4
125	bearingØ16xØ22x16
126	metal electronic parts tray
127	motor mount
128	gyro holder
129	ball
130	HM3X8
131	M5
132	thrust bearing Ø10xØ18x5.5mm
133	bearing Ø10x19x5
134	Ø6xØ13x5.5washer
135	TM6X16
136	TM3X8
137	TM3X6
138	frame support plate
139	TM2.5X6
140	tail servo tray
141	TM3X6
142	HM3X14

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Made in China