

ASSAULT REAPER500

COLLECTIVE PITCH 3D QUADCOPTER

INSTRUCTION MANUAL



SPECIFICATION:

TYPE: COLLECTIVE PITCH ELECTRIC 3D QUADCOPTER

ROTOR DIAMETER: 118MM

LENGTH: 635 MM

WIDTH: 365 MM

WEIGHT: 986G W/OUT BATTERY

FLYING WEIGHT : 1240G W/BATTERY



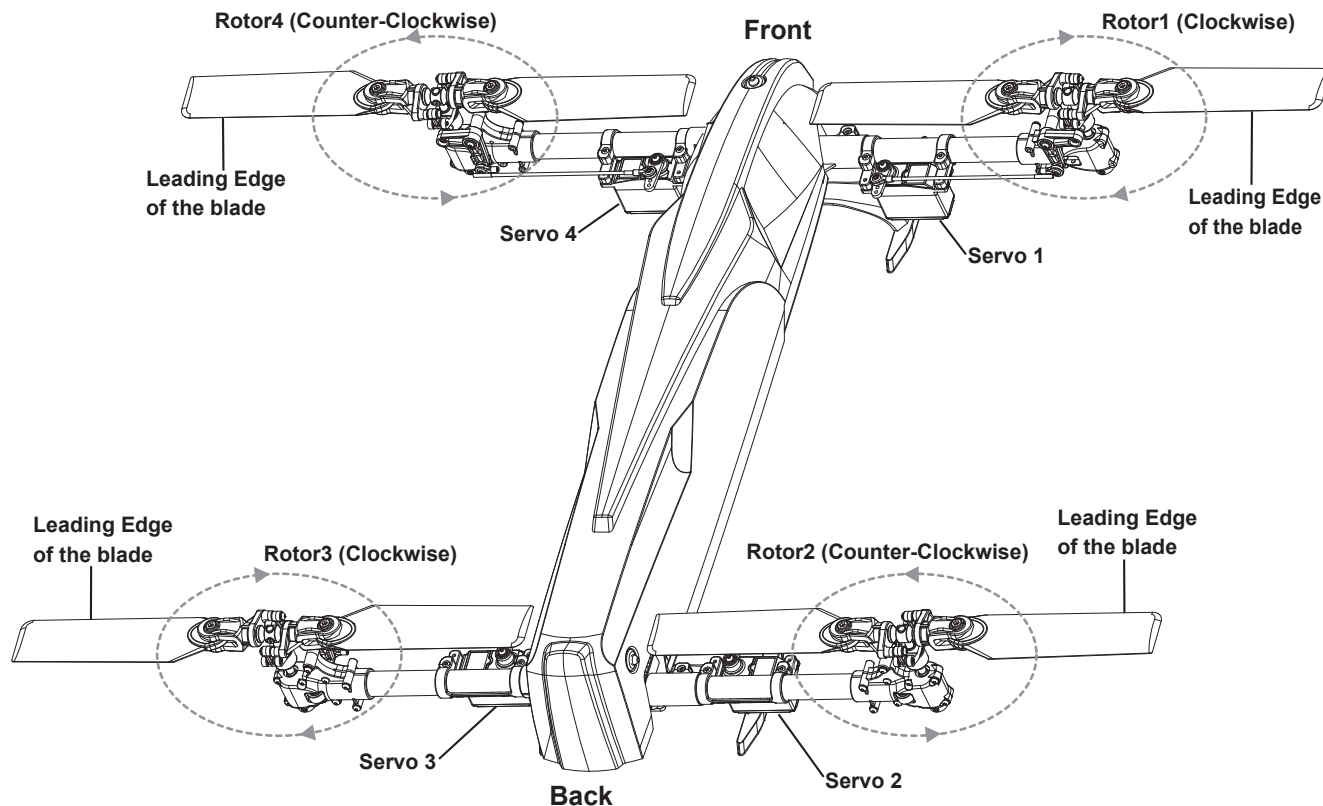
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1.0 Important Information

- (1) The Assault Reaper 500 3D is not a toy, this Multirotor utilizes high-tech components and technologies to provide superior performance in flight. Improper use of this product can result in serious injury or even death. Please read this manual carefully before use and be conscious of your own personal safety and the safety of others when operating this product. HobbyKing / the seller assumes no liability for the operation or use of this product.
- (2) This product is intended for use by experienced pilots aged 14 years or more. Any minors wishing to fly this product must be accompanied by a responsible adult.
- (3) When selecting a flying site for this product please be sure to obtain the relevant permission from the owner before flying. HobbyKing accept no liability for any safety duties or fines rising from operation, usage and misuse after purchase of the product.

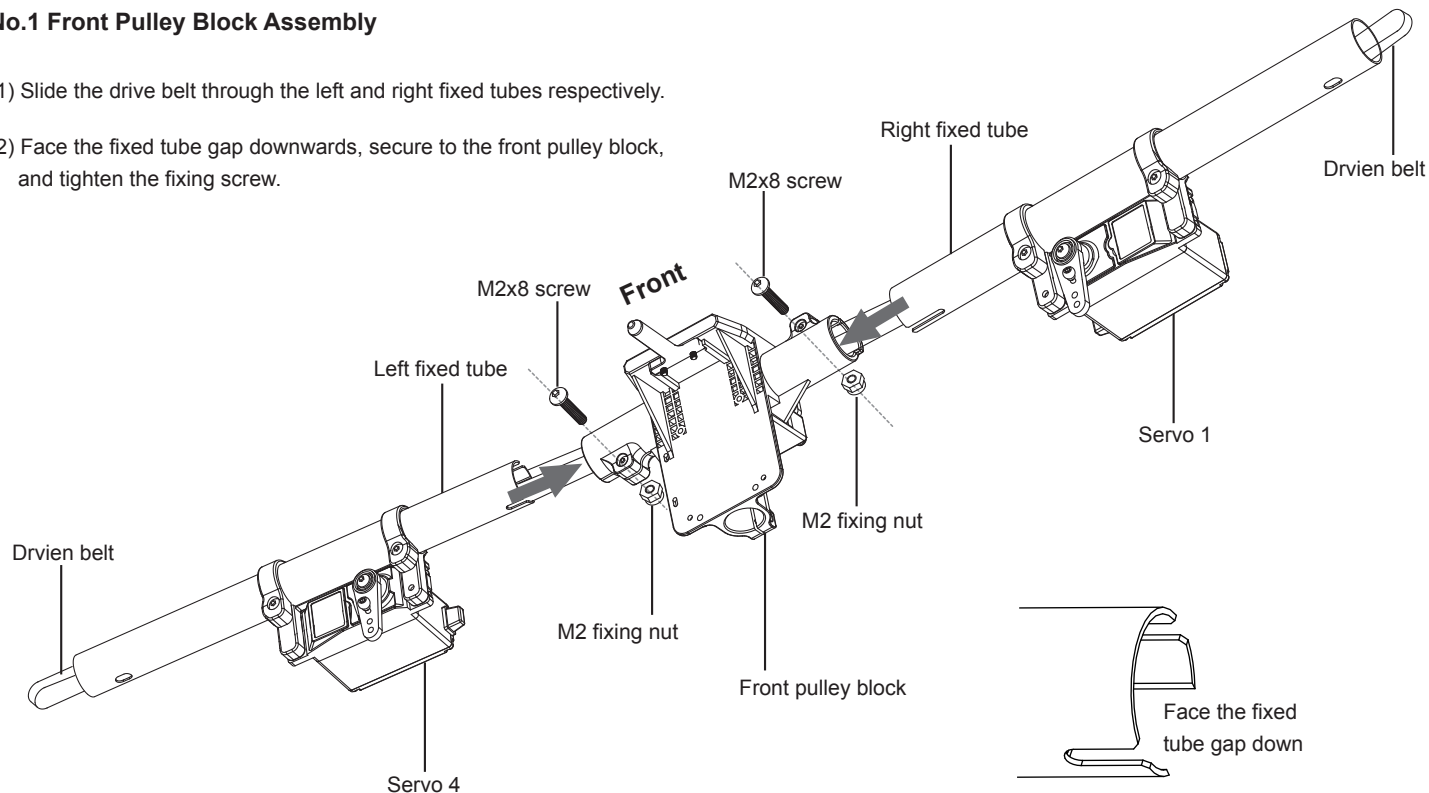
2.0 Assault Reaper 500 3D Set Up Instructions



3.0 Assault Reaper 500 3D Assembly

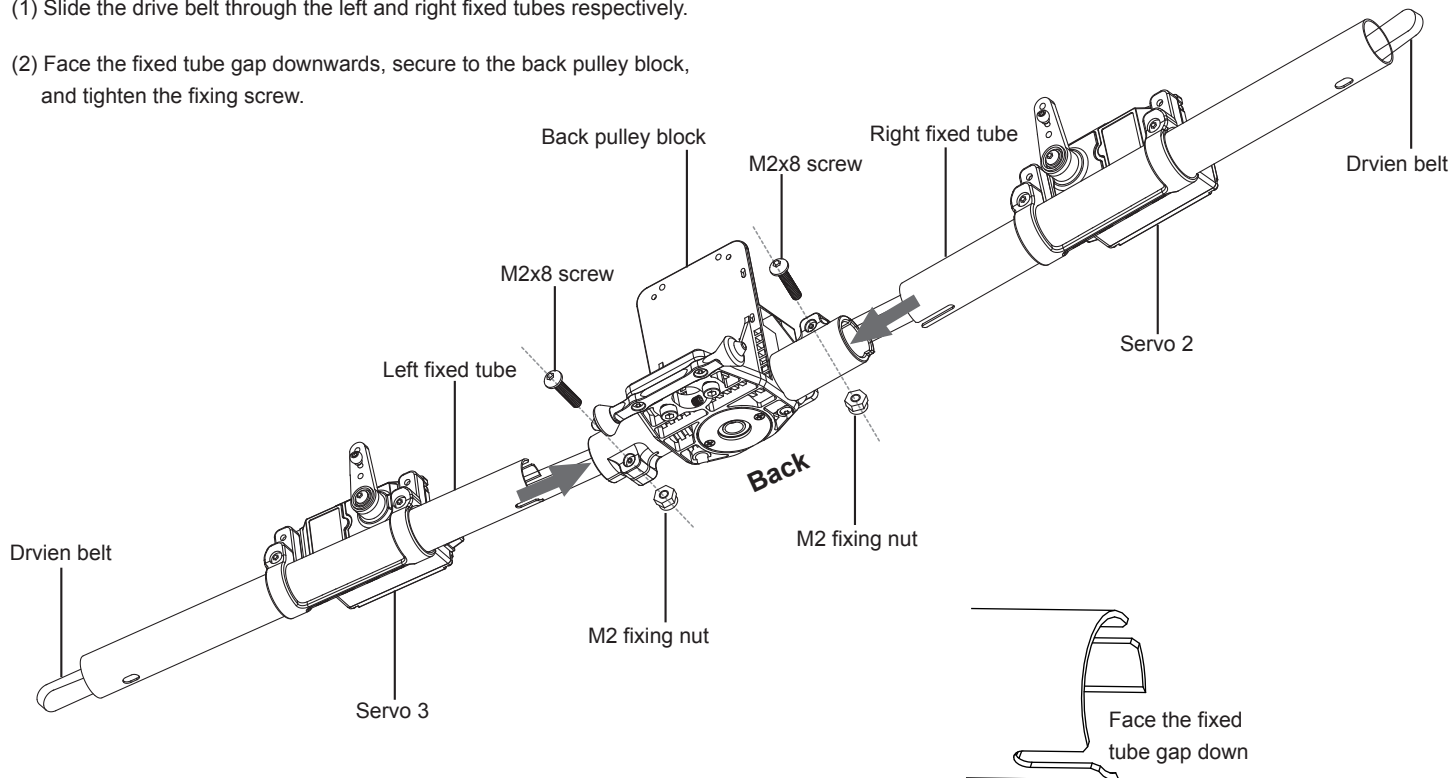
No.1 Front Pulley Block Assembly

- (1) Slide the drive belt through the left and right fixed tubes respectively.
- (2) Face the fixed tube gap downwards, secure to the front pulley block, and tighten the fixing screw.



No.2 Back Pulley Block Assembly

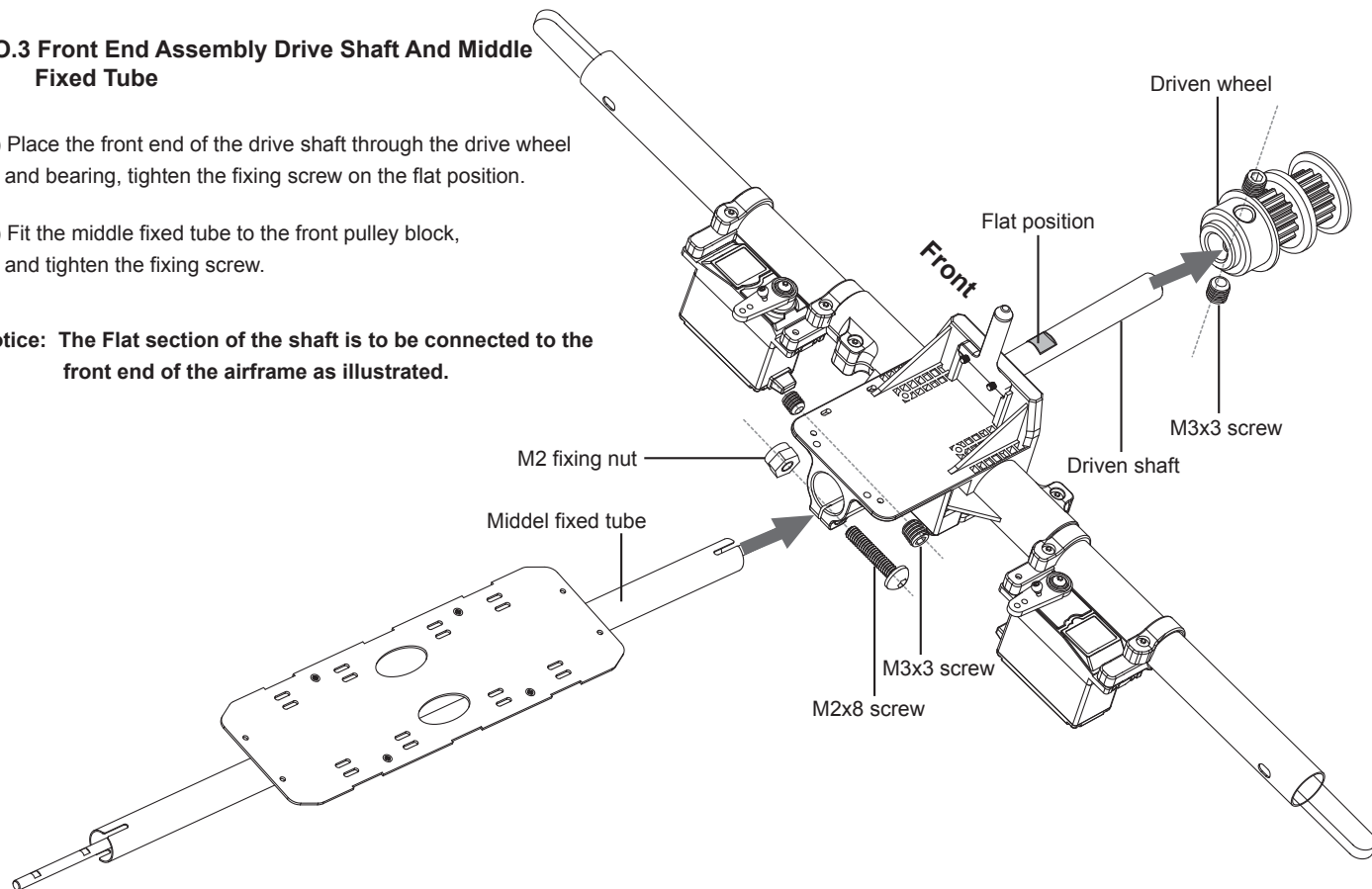
- (1) Slide the drive belt through the left and right fixed tubes respectively.
- (2) Face the fixed tube gap downwards, secure to the back pulley block, and tighten the fixing screw.



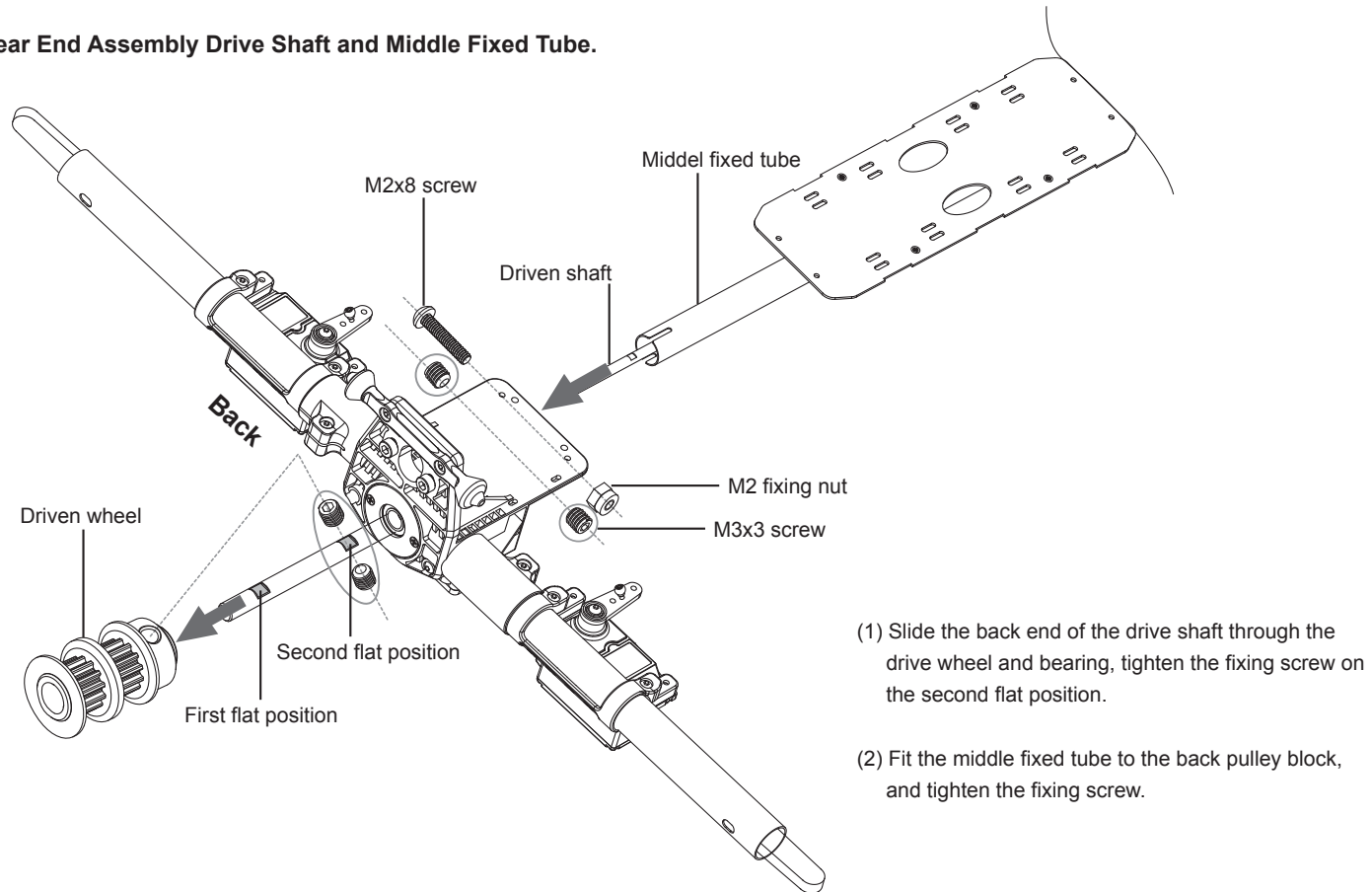
NO.3 Front End Assembly Drive Shaft And Middle Fixed Tube

- (1) Place the front end of the drive shaft through the drive wheel and bearing, tighten the fixing screw on the flat position.
- (2) Fit the middle fixed tube to the front pulley block, and tighten the fixing screw.

Notice: The Flat section of the shaft is to be connected to the front end of the airframe as illustrated.

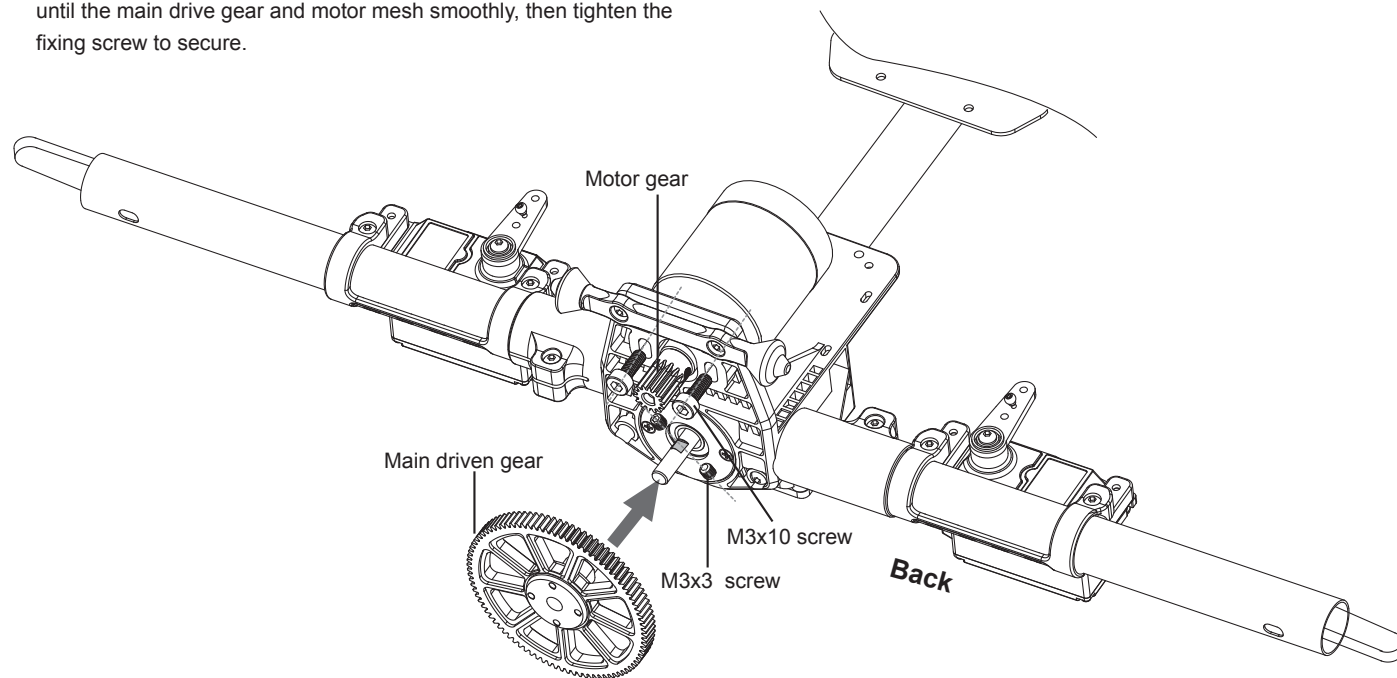


NO.4 Rear End Assembly Drive Shaft and Middle Fixed Tube.



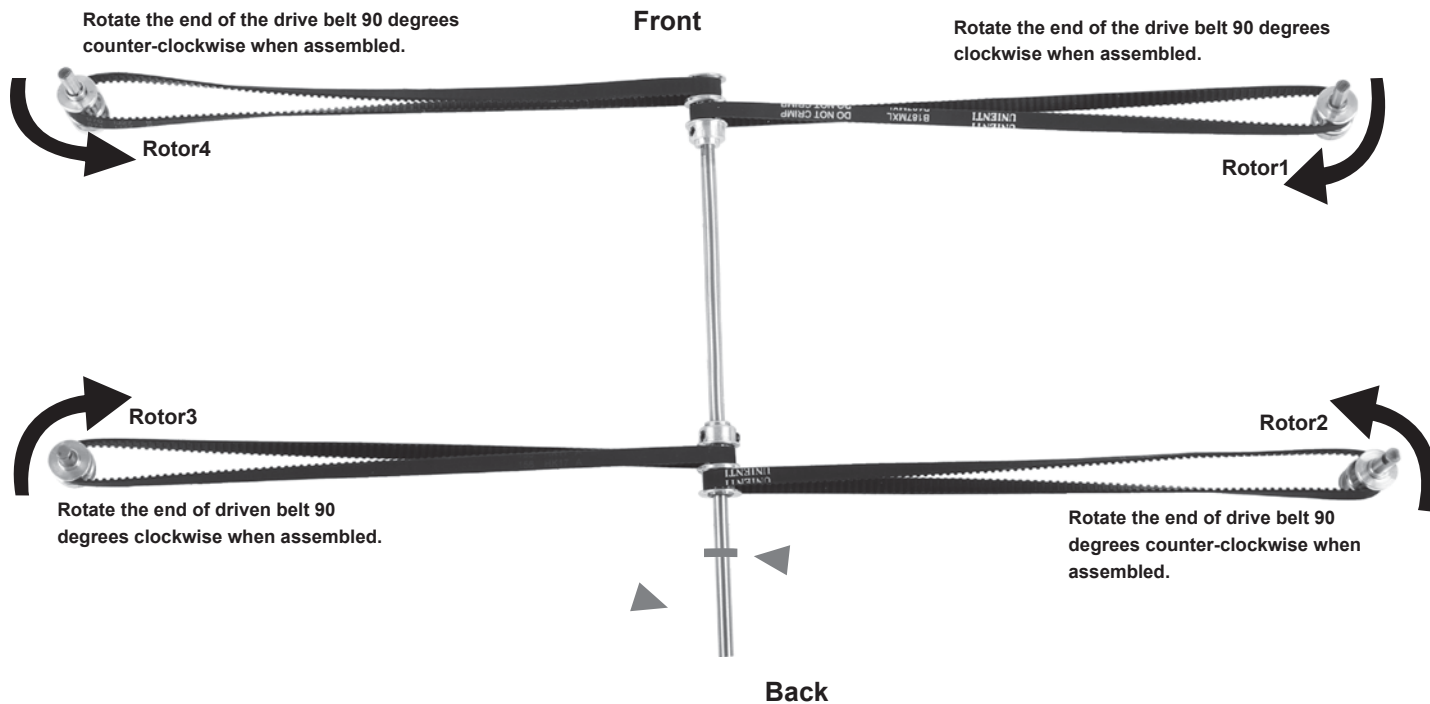
NO.5 Main Drive Gear and Brushless Motor Assembly.

- (1) Fit the main drive gear onto the drive shaft, and tighten the fixing screw on the flat position.
- (2) Fit the brushless motor to the back pulley block, move it up and down until the main drive gear and motor mesh smoothly, then tighten the fixing screw to secure.



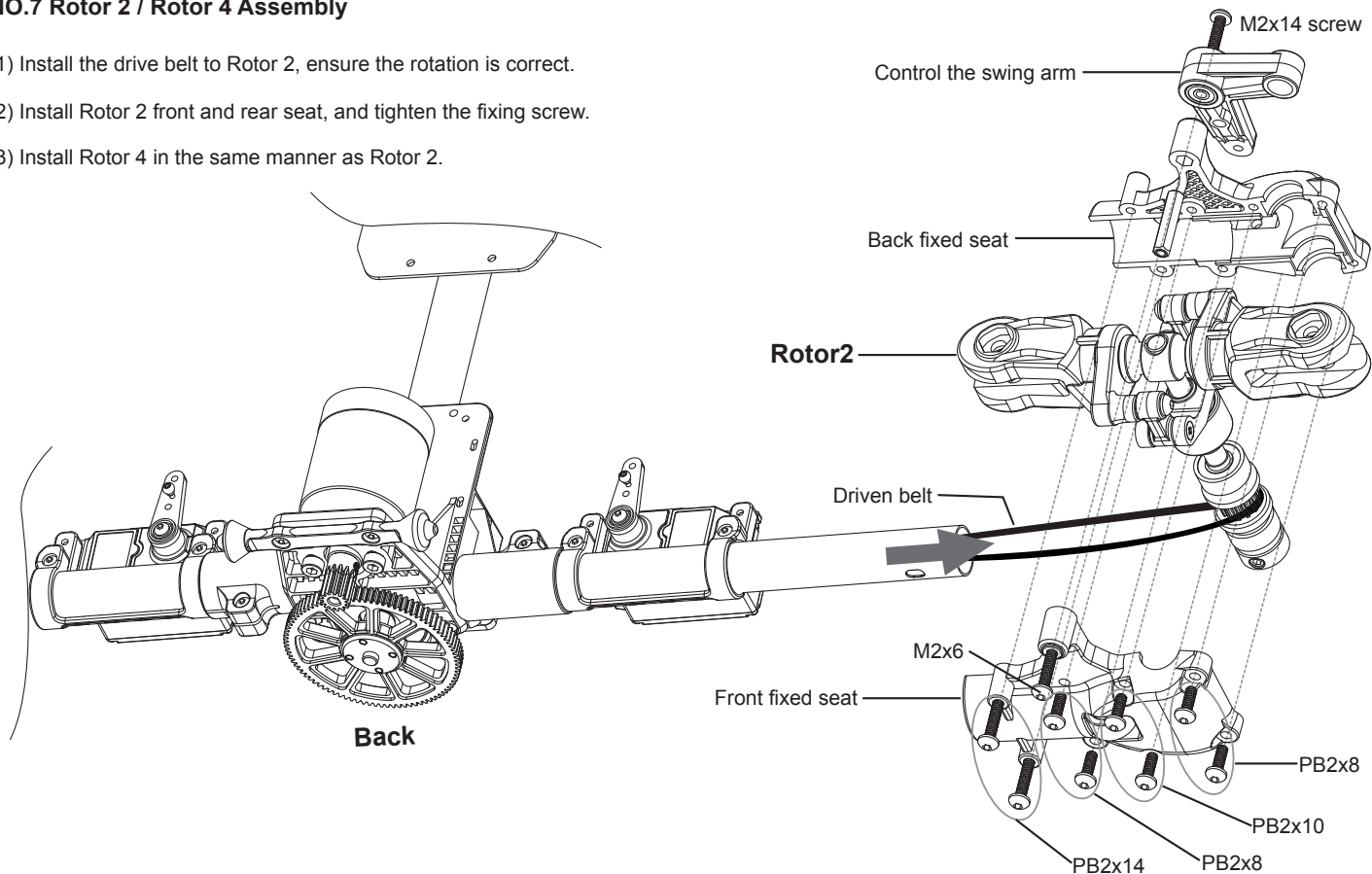
NO.6 Instructions For Drive Belt Assembly

- (1) The arrows represent the rotation direction.
- (2) When assembling the drive belt try to keep it tight to avoid vibration in operation.



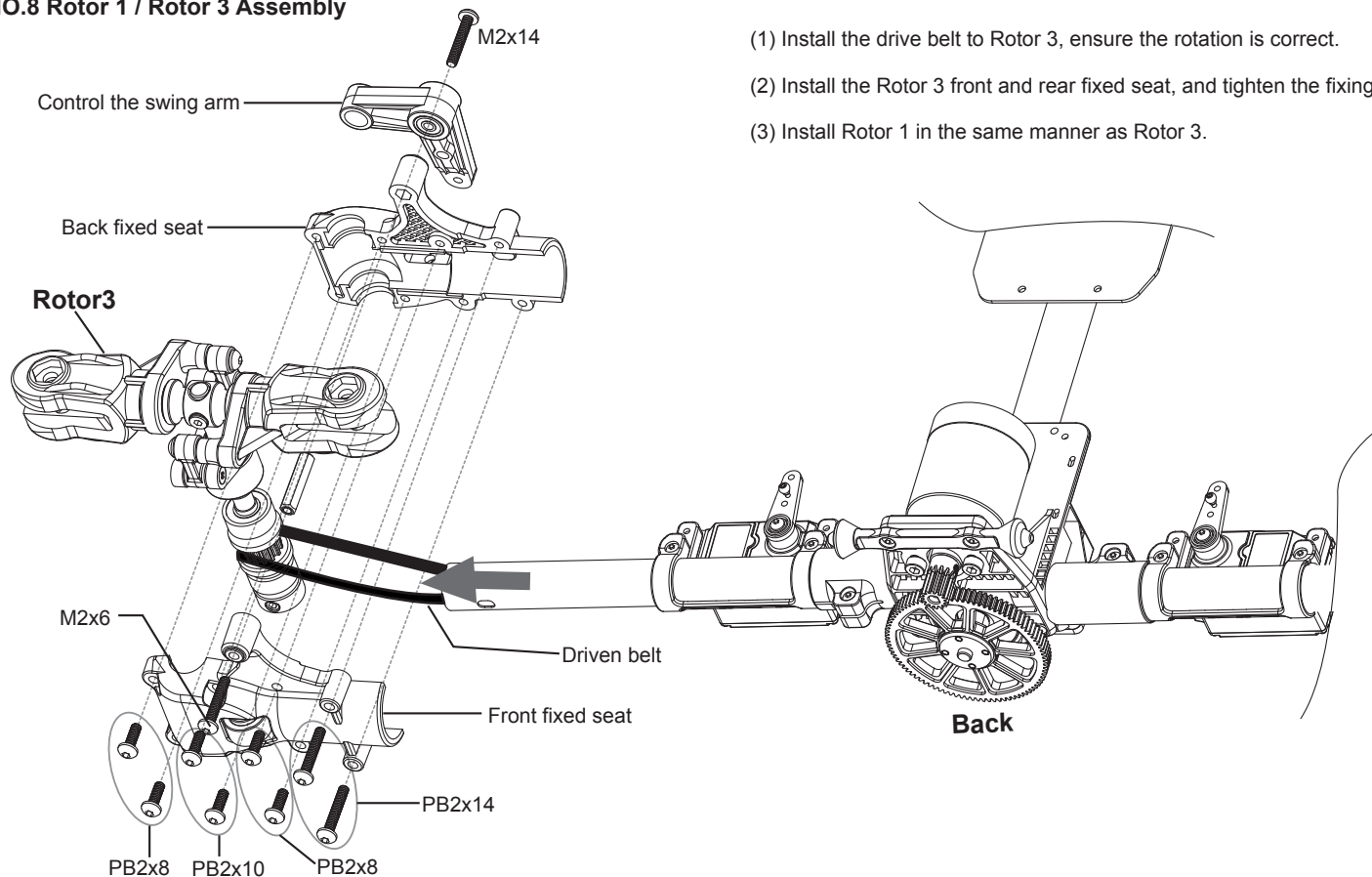
NO.7 Rotor 2 / Rotor 4 Assembly

- (1) Install the drive belt to Rotor 2, ensure the rotation is correct.
- (2) Install Rotor 2 front and rear seat, and tighten the fixing screw.
- (3) Install Rotor 4 in the same manner as Rotor 2.

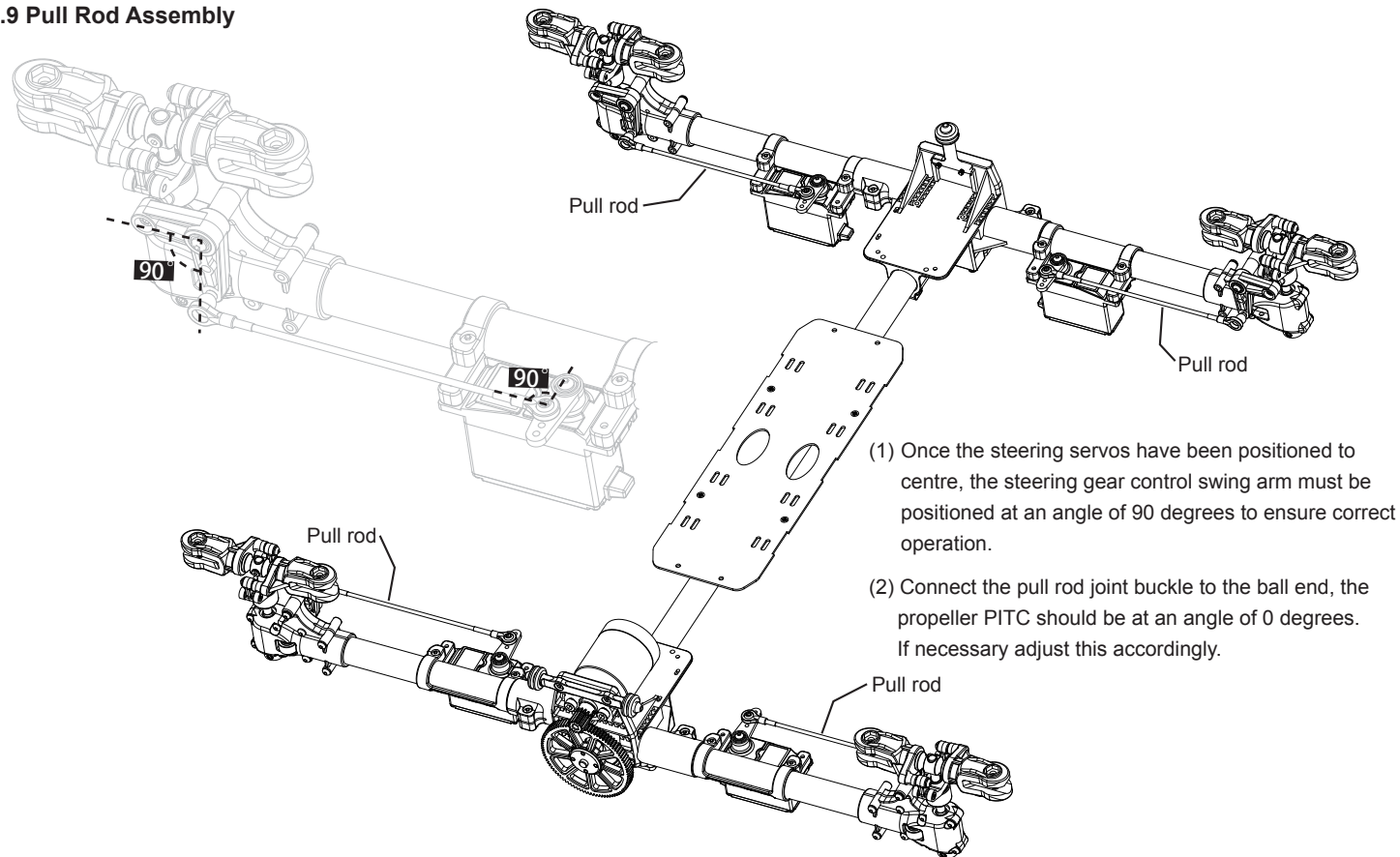


NO.8 Rotor 1 / Rotor 3 Assembly

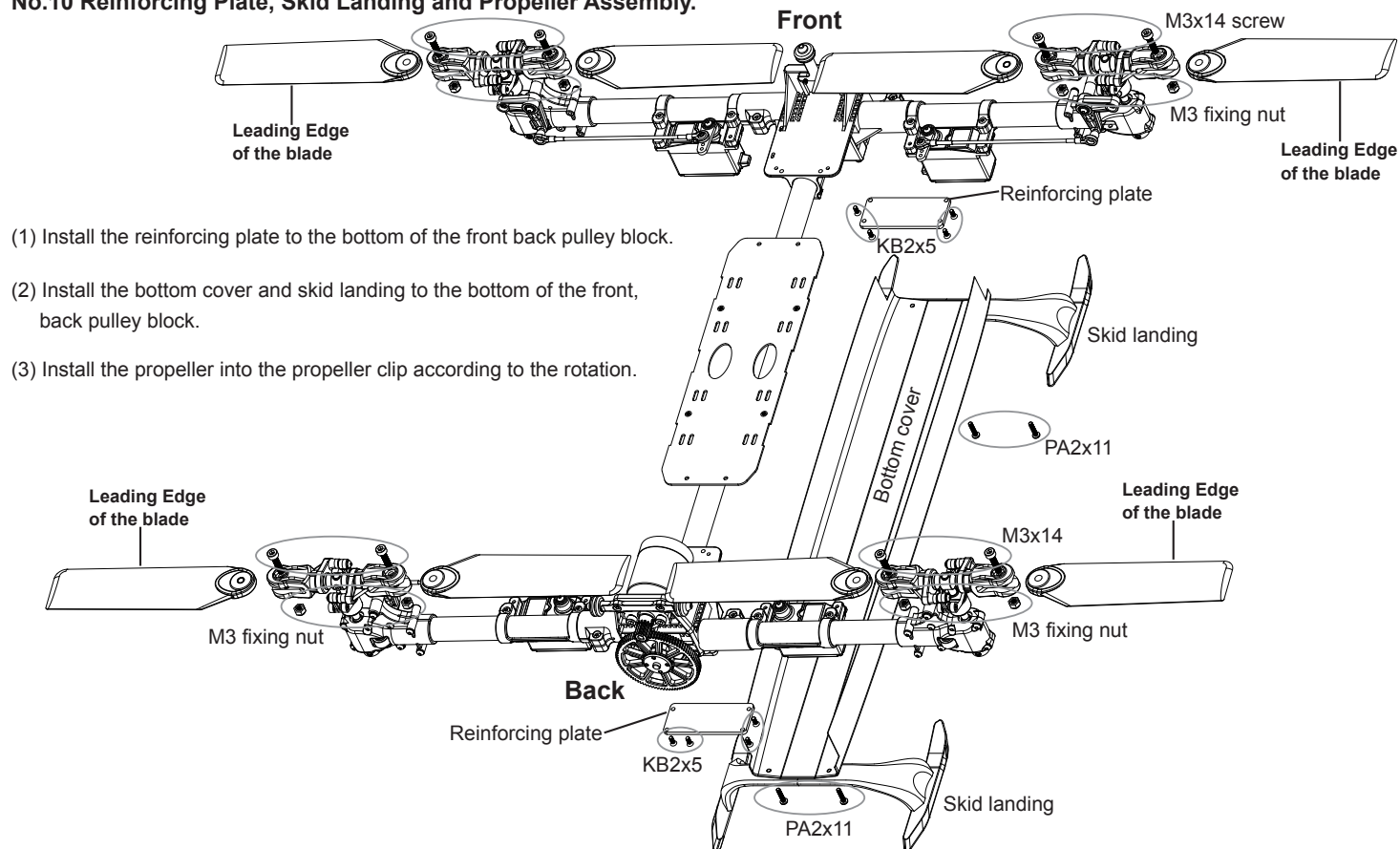
- (1) Install the drive belt to Rotor 3, ensure the rotation is correct.
- (2) Install the Rotor 3 front and rear fixed seat, and tighten the fixing screw.
- (3) Install Rotor 1 in the same manner as Rotor 3.



No.9 Pull Rod Assembly

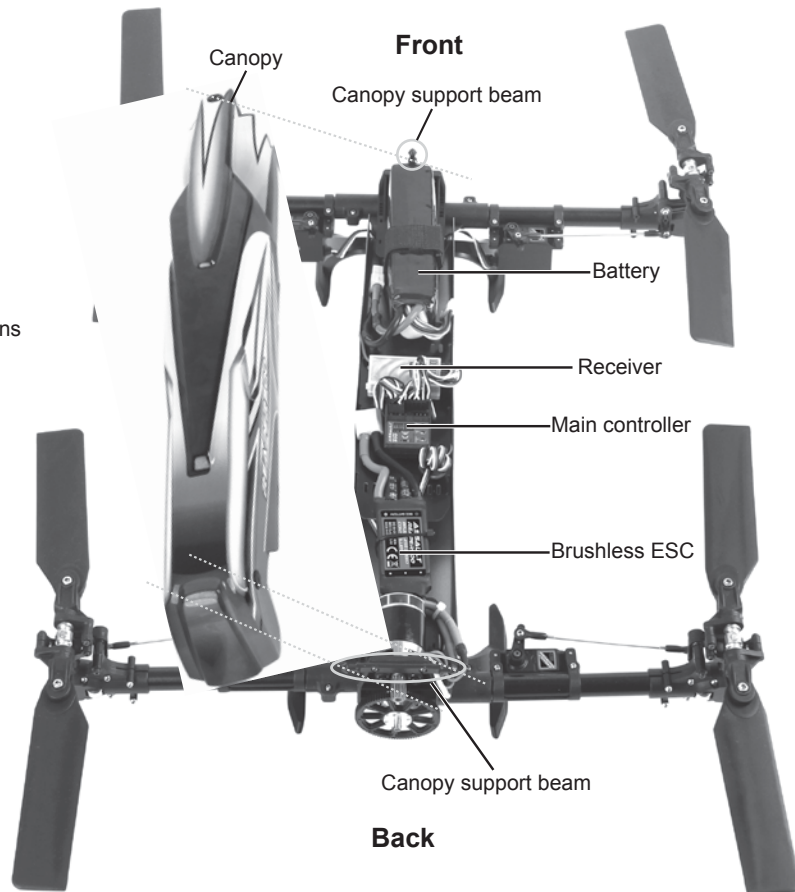


No.10 Reinforcing Plate, Skid Landing and Propeller Assembly.

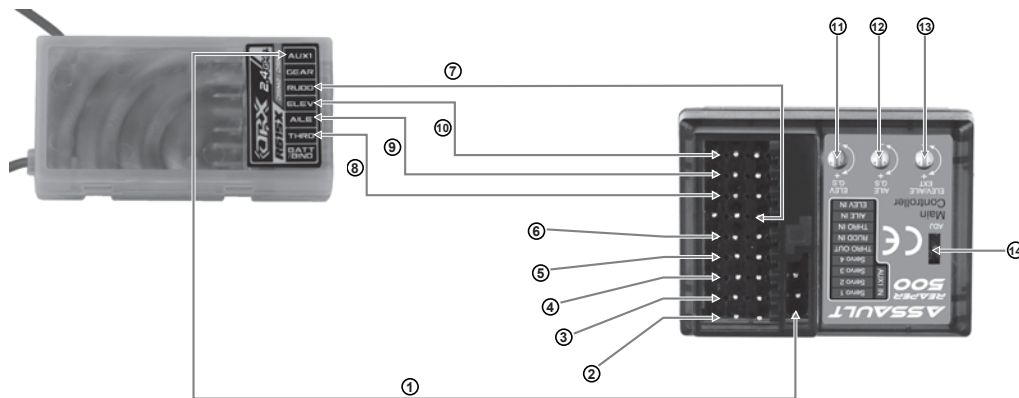


**No.11 ESC, Main Controller, Receiver, Battery,
Canopy Assembly**

- (1) Install the ESC to the backend of the mount plate.
- (2) Install the main controller to the mount plate.
- (3) Install the receiver to the mount plate.
- (4) Install the battery to the mount plate.
- (5) For wiring diagrams please refer to 4.0: main controller port instructions and 5.0: ESC instructions.
- (6) Fix the canopy to the support beam.

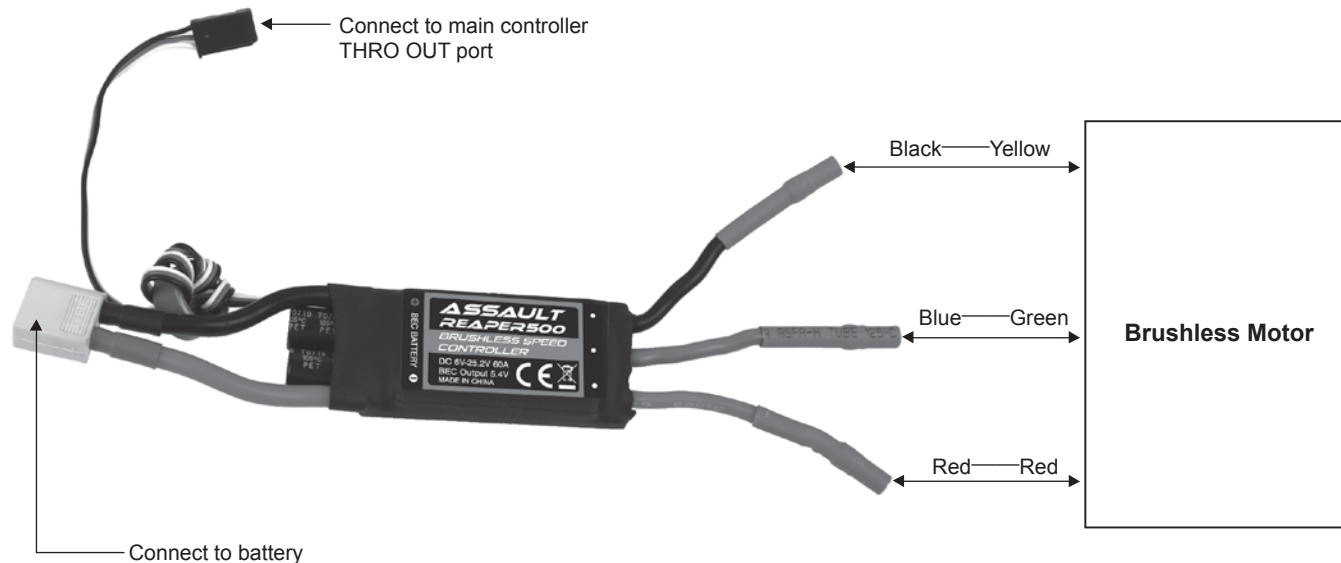


4.0 Main Controller Set Up Guidelines



①	AUX1 IN: connect to receiver AUX1 port	②	Servo 1: connect to servo 1
③	Servo 2: connect to servo 2	④	Servo 3: connect to servo 3
⑤	Servo 4: connect to servo 4	⑥	THRO OUT: connect to ESC
⑦	RUDD IN: connect to receiver RUDD port	⑧	THRO IN: connect to receiver THRO port
⑨	AILE IN: connect to receiver AILE port	⑩	ELEV IN: connect to receiver ELEV port
⑪	ELEV G.S: Lift (front and back) gyroscope sensitivity adjustment knob, to increase by clockwise (+), Will increase the front and back balance effect of the fuselage (fuselage steady is the best); reverse to reduce the balance effect.		
⑫	AILE G.S: Aileron (left and right) gyroscope sensitivity adjustment knob, to increase by clockwise (+), Will increase the left and right balance effect of the fuselage (fuselage steady is the best); reverse to reduce the balance effect.		
⑬	ELEV/AILE EXT: Lift (front and back)/Aileron (left and right) Servo stroke ATV adjustment knob, to increase by clockwise (+), servo became more sensitive; reverse is more slow.		
⑭	Setting mode switch: WK is flight mode; ADJ is debug mode, can not fly in this mode.		

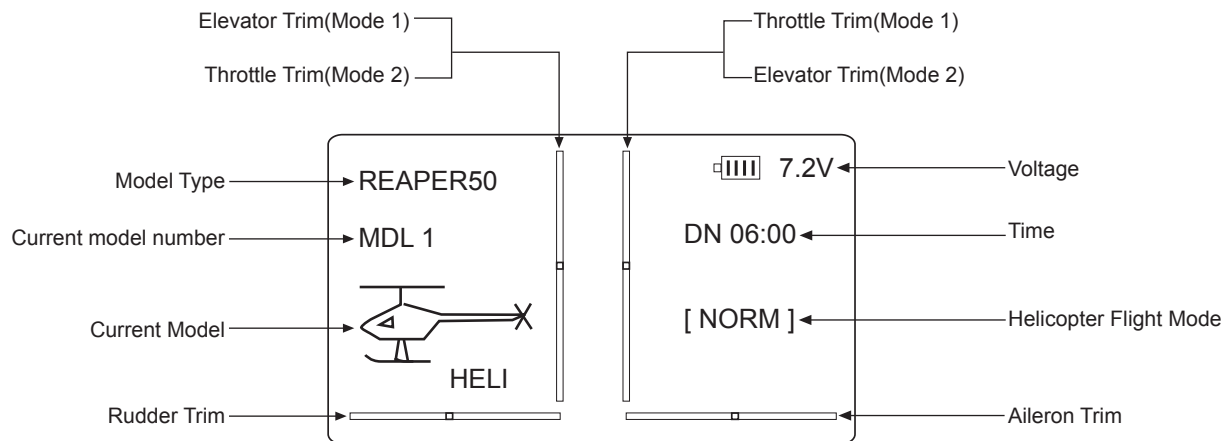
5.0 Brushless Speed Controller Set up



Attention: The brushless motor should rotate in a clockwise direction, if not, exchange any two the motor connection wires to obtain the correct rotation.

6.0 T-SIX Transmitter Settings

6.1 Initial INFO Screen



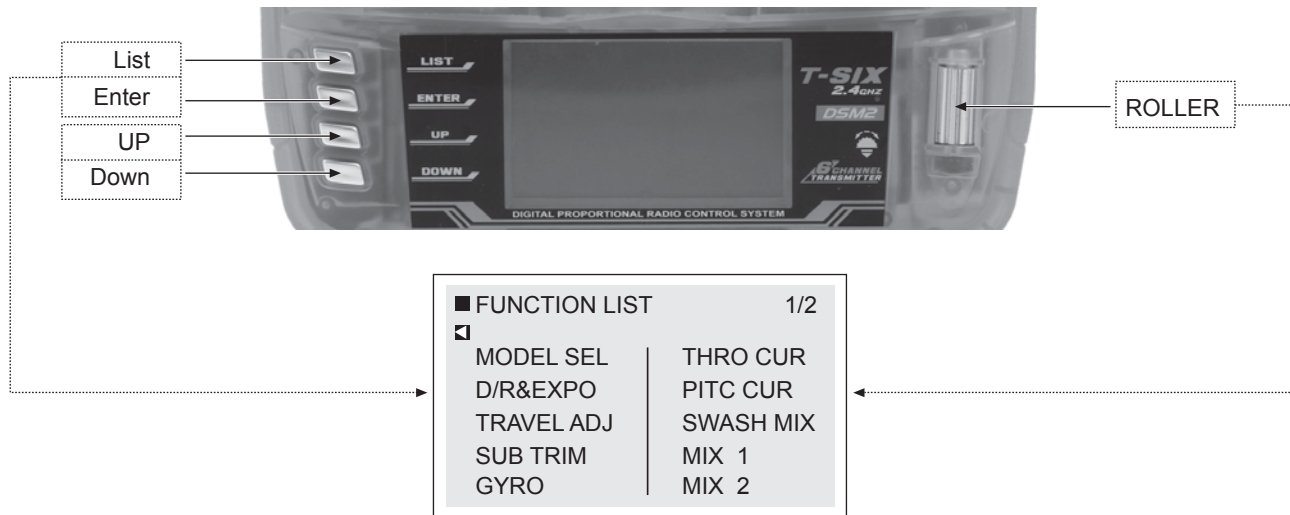
The INFO screen is displayed when the power is switched on. The screen has a two-page menu and rotating the ROLLER to the right moves forward to the Function list screen, when you wish to return to the Initial INFO Screen from the Function list screen, rotating the ROLLER to the left returns to the previous screen.

The function list screen allows you to display all of the information from the sensor attached to the receiver as well as the timer and key model information.

- (1) Voltage: When the transmitter voltage drops below 4.3 volts, "Warning Low Battery" will flash along with an alarm sound. If you are flying when this occurs, land immediately.
- (2) Timer: Timer function allows you to program a Count Down timer or Stop Watch (count up timer) to display on the main screen.
- (3) Model Type: model type programs the selected model memory to function in Helicopter or Airplane programming. You should program the model type first when setting up a new model.

- (4) Trim set up: The trim set up function allows servo movement adjustment.
- (5) Model display: you can see the selected model directly after your model type has been selected.

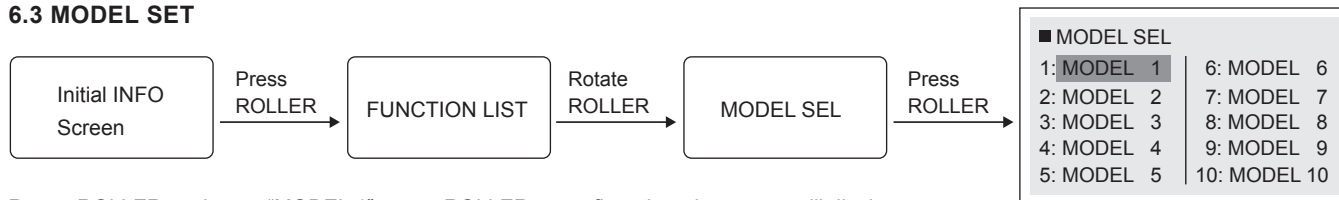
6.2 Names and Functions of the Input Key



The T-SIX utilizes a roller that can be rotated or pressed along with four buttons, LIST, ENTER, UP and DOWN that are used to access and program the functions.

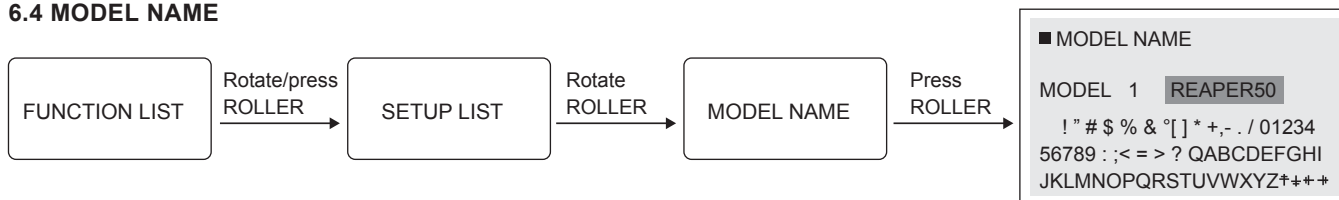
- (1) LIST Key: when this key is pressed the screen changes to the Function Listing screen.
- (2) ENTER Key: If this key is pressed when the INFO screen is being displayed, the screen will change to the My list screen. This can be used for moving to each of the other functions.
- (3) Up Key: if this key is pressed the select cursor will move up to your desired menu or list.
- (4) DOWN Key: if this key is pressed the select cursor will move down to your desired menu or list.
- (5) ROLLER: Press the ROLLER to access screens or functions. Or rotate the ROLLER to adjust values or to select options.
- (6) Select Cursor: move the select cursor, then press the ROLLER and the screen will back to previous Menu.

6.3 MODEL SET



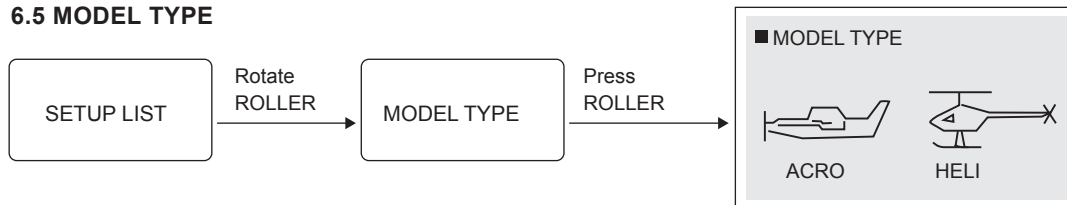
Rotate ROLLER to choose "MODEL 1", press ROLLER to confirm, then the screen will display "DOWNLOAD..." and the transmitter will "beep" 3 times, this denotes that the choice is successful and it will return to the function menu automatically.

6.4 MODEL NAME



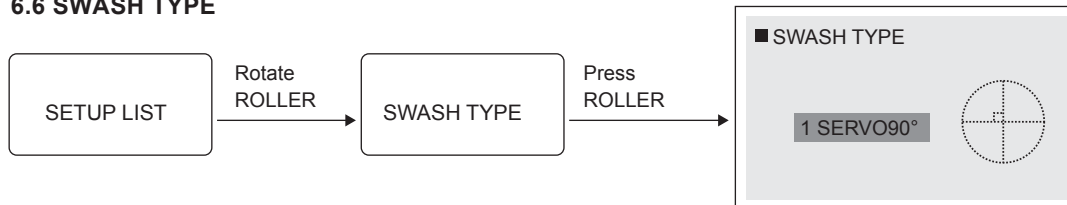
Rotate ROLLER to choose and change the settings and press the ROLLER to confirm. When finished, Press the ROLLER to return to the FUNCTION LIST menu.

6.5 MODEL TYPE



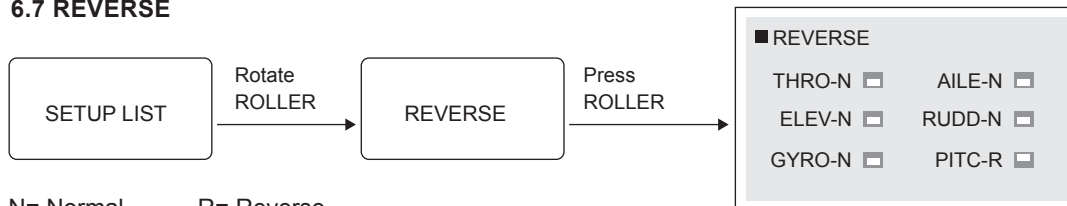
Rotate ROLLER to choose HELI, press ROLLER to confirm. When finished, press ROLLER to return to SETUP LIST menu.

6.6 SWASH TYPE



Rotate and press ROLLER to choose "1 SERVO90°", press ROLLER to confirm. When finished, press ROLLER to return to SETUP LIST menu.

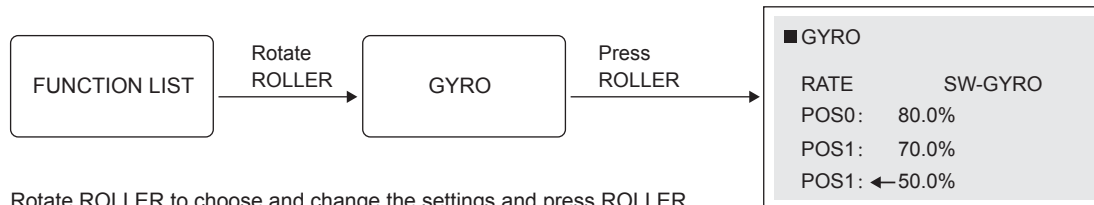
6.7 REVERSE



N= Normal R= Reverse

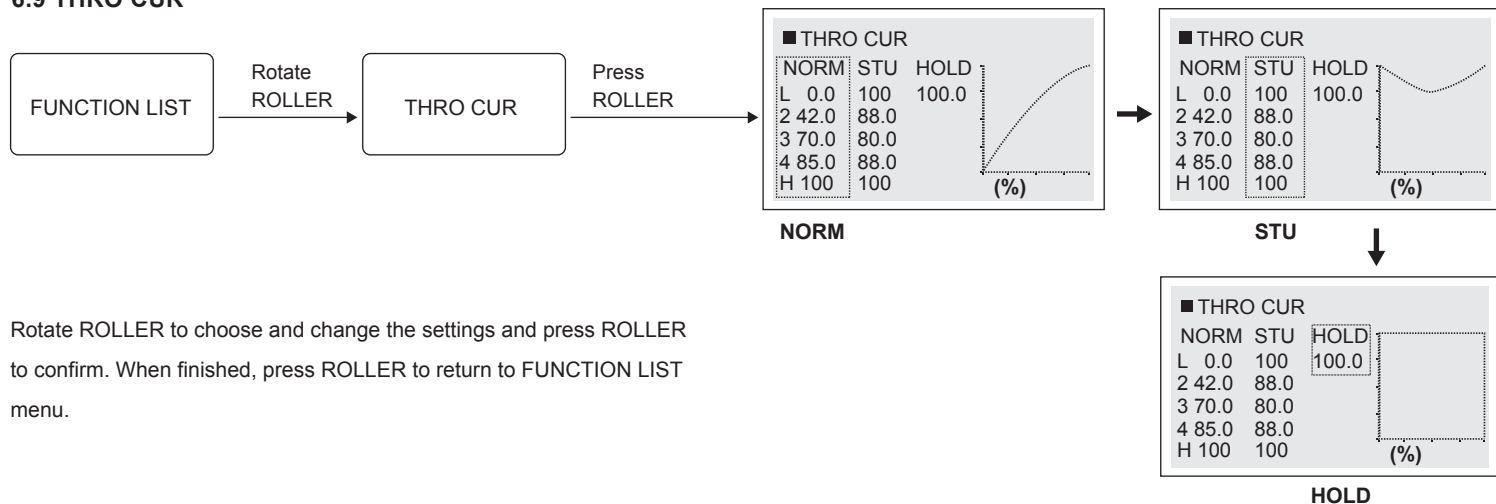
THRO, ELEV, GYRO, AILE, RUDD: choose the normal. PITC: choose the reversion. When finished, press ROLLER to return to FUNCTION LIST menu.

6.8 GYRO



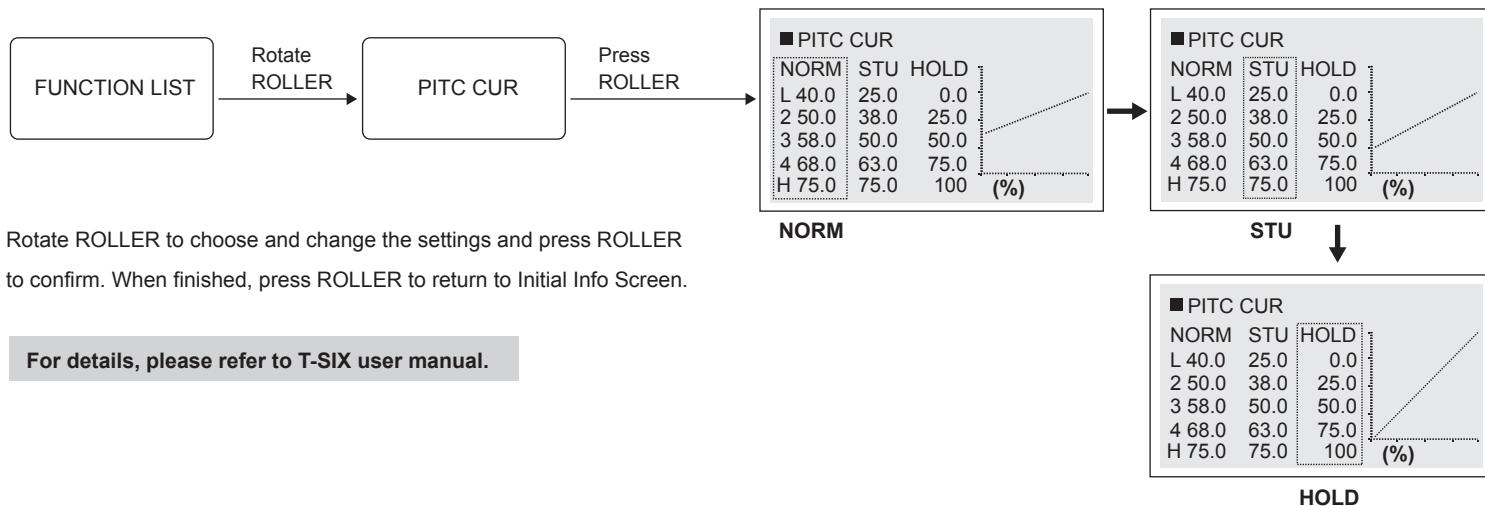
Rotate ROLLER to choose and change the settings and press ROLLER to confirm. When finished, press ROLLER to return to FUNCTION LIST menu.

6.9 THRO CUR



Rotate ROLLER to choose and change the settings and press ROLLER to confirm. When finished, press ROLLER to return to FUNCTION LIST menu.

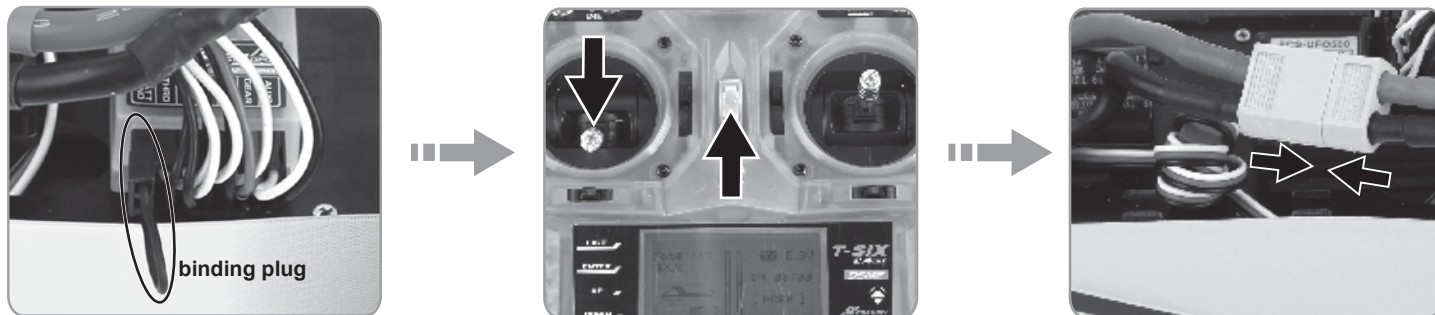
6.10 PITC CUR



Rotate ROLLER to choose and change the settings and press ROLLER to confirm. When finished, press ROLLER to return to Initial Info Screen.

For details, please refer to T-SIX user manual.

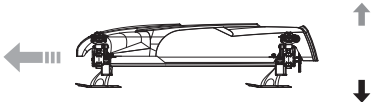
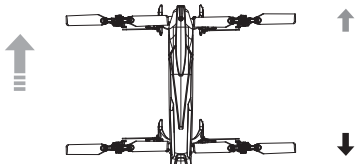
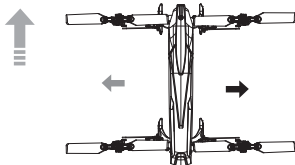
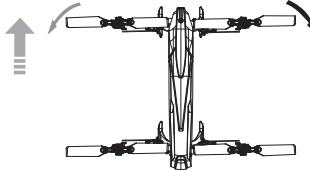
7.0 Binding the Transmitter and Receiver



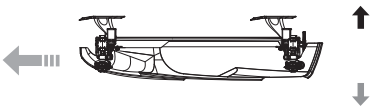
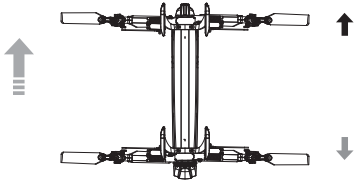
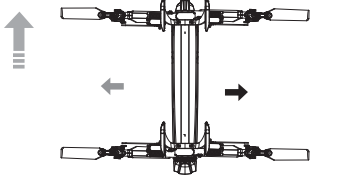
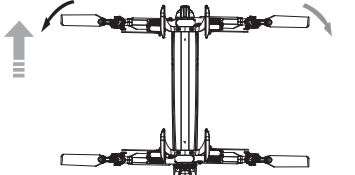
- (1) Insert the bind plug in the BATT/ BIND slot on the receiver.
- (2) Move the throttle sticker to the LOW/OFF position. Then power on the radio.
- (3) Connect the flight battery to the receiver, the LED will flash quickly.
- (4) When the LED becomes a solid continuous light binding is complete.
- (5) Always remove the bind plug from the receiver once bound.

Attention: If the receiver's LED flashes slowly whilst binding, disconnect the flight battery and wait for 60 seconds then power on the transmitter and repeat the process again.

8.0 Normal flight

Aircraft(← is the nose direction)	Mode 1	Mode 2
Up / down 		
Forward / backward 		
Left-leaning / right-leaning 		
Head direction is horizontal level 		

9.0 Acrobatic flight

Aircraft(← is the nose direction)	Mode 1	Mode 2
Up / down 		
Forward / backward 		
Left-leaning / right-leaning 		
Head direction is horizontal level 		

Rotor blade (Green) REAPER500-Z-01	Rotor blade (Black) REAPER500-Z-02	Blade grip REAPER500-Z-03	Pitch slider sleeve (clockwise) REAPER500-Z-04	Pitch slider sleeve (counter-clockwise) REAPER500-Z-05	Mount (clockwise) REAPER500-Z-06	Mount (counter-clockwise) REAPER500-Z-07
Front pulley mount REAPER500-Z-08	Rear pulley mount REAPER500-Z-09	Rotor shaft REAPER500-Z-10	Lock sleeve REAPER500-Z-11	Drive shaft REAPER500-Z-12	Push rod REAPER500-Z-13	Rotor pulley REAPER500-Z-14
Drive pulley REAPER500-Z-15	Motor pulley (14T) REAPER500-Z-16	Main drive pulley REAPER500-Z-17	Drive belt REAPER500-Z-18	Frame boom A REAPER500-Z-19	Frame boom B REAPER500-Z-20	Front bearing plate REAPER500-Z-21
Rear bearing plate REAPER500-Z-22	Landing gear REAPER500-Z-23	Servo mount REAPER500-Z-24	Radio tray REAPER500-Z-25	Canopy mount REAPER500-Z-26	Canopy set REAPER500-Z-27	Velcro strap REAPER500-Z-28
Screw set REAPER500-Z-29	Digital servo REAPER500-Z-30	Brushless motor REAPER500-Z-31	Brushless ESC REAPER500-Z-32	Flight control system REAPER500-Z-33	Cable REAPER500-Z-34	Inner thread stud REAPER500-Z-35

ASSAULT REAPER500