Thunder Tiger

mini Titan E325 SE

MANUAL



≫ 3D PERFORMANCE

Thunder Tiger

mini Titan E325 SE

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INTRODUCTION

The E325 SE comes complete with all metal CNC rotor head and tail rotor push pull linkage. One piece battery tray that is light and makes assembly quick and easy. For improved tail rotor control metal tail drive gears and pulleys have all been combined to make this E325 the pinnacle of micro electric helicopters. E325 SE combines form and function, making it the best choice of all out micro electric 3D fun!

NOTICE

1. R/C models are not toys. This product is a high-precision flying machine. Possibilities of unexpected crashes may occur due to electronic interference, incorrect operation, or poor mechanical maintenance. Although it is a small-sized helicopter, the rotor blades rotate at high speeds, which may cause serious damage, injury, or death if the model hits people or property. Therefore, extreme caution must be exercised during operation.
2. Thunder Tiger ensures parts packaged in this product is of the highest quality. However, after assembly and usage, parts damaged due to wear or misuse will not be replaced under any circumstances. If you have any questions regarding its operation and repair, Thunder Tigers service agents are able to provide free technical guidance.
3. This product is only recommended for users ages 16 and up. Because flying a R/C helicopter is difficult, beginners must receive guidance and supervision from experienced pilots to minimize unexpected danger. Practice in spacious areas, far away from obstacles such as buildings, trees, electrical towers, or crowds.
4. To decrease the cost of repair and maintenance for beginners, it is recommended to fly the helicopter with a practice rack and to learn basic flying skills with a computer R/C flying simulator. (Crashes in simulators are free to repair!)

AMA INFORMATION

Operating a model helicopter requires a high degree of responsibility and skill. If you are a newcomer to the hobby, it is best to seek help and guidance from accomplished model helicopter pilots. This will greatly speed up the learning process and have you flying successfully in a reasonable amount of time. We also would strongly urge you to join the Academy of Model Aeronautics. The AMA is a non-profit organization that provides its members with a liability insurance plan as well as monthly magazine entitled Model Aviation. All AMA charter aircraft clubs require all pilots to hold a current AMA sporting license prior to operation of their models at club fields. For further information, contact the AMA at:

Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, IN 47302
(317) 287-1256

FLIGHT SAFETY CHECKLIST

1.Make sure that the transmitter battery is fully charged before flying.
2.Make sure all control surfaces are operated properly before flying.
3.Do a range check of the radio before the first flight. The electronic equipment must operate properly at a range of at least 15 meters (50 ft) even with the transmitter antenna collapsed.
4.Make sure there are no other pilots using the same radio frequency with yours and that there are no other radio interference on your frequency.
5.Be sure to turn on the transmitter first with the throttle stick in the idle position. Plug the battery into the ESC last.
6.The main rotor and the tail rotor spin at very high RPM. Make sure nothing can come in contact with the rotor blades during flight.
7.Always maintain a safe distance from the helicopter during flight.
8.Never fly the helicopter in the rain or in excessive wind conditions.
9.Always operate and fly the helicopter in a safe and responsible manner.
10.Never fly the helicopter over other pilots, spectators, cars or anything that could result in injury or property damage.

POST FLIGHT INSPECTION

1.Inspect the model thoroughly to insure no parts have come loose or become damaged during the flight and landing. Replace damaged parts and tighten loose screws before flying again.
2.Clean the helicopter body.
3.Lubricate all moving parts to ensure smooth operation for the next flying.
4.Replace any worn ball links and damaged bearings.
5.Store the model in a cool, dry place. Avoid putting it under direct sunlight or near a source of heat.

Following these simple rules will allow you to enjoy the thrill of model helicopter flying for many years.

CAUTION

When the model has crashed, inspect the flybar, rotor shaft and the blade spindle to make sure they are not bent. If any item is damaged, it must be replaced with a new part to ensure safe operation. Do not glue any broken or damaged plastic parts. Do not repair broken rotor blades. It is very important to inspect the motor, speed control and the battery.

Always inspect the following items:

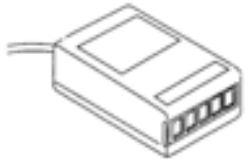
Gears, Ball links, Link rods, Bearings, Main shaft, Flybar, Spindle, Tail boom and support, Fins, Tail rotor shaft, Belt, Main blades, Tail blades, the Motor, the Speed control and the Battery.

OTHER ITEMS REQUIRED

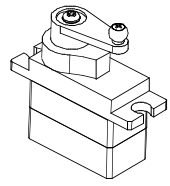
■RADIO SET



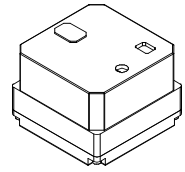
Transmitter
(helicopter type only,
6 or more channels)



Receiver



Servos
(Control Surface x3,
Rudder Servo x1)



Gyro

■POWER SYSTEM



Li-Po Battery



Speed Control



Brushless Motor



Battery Charger

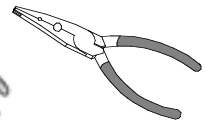
■TOOLS REQUIRED FOR ASSEMBLY



Screw Driver



Needle Nose Pliers



Ball Link Pliers



Diagonal Pliers



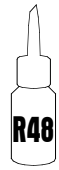
Scissors



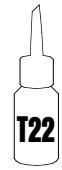
Hobby Knife



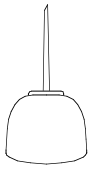
CA Glue



Anaerobics Retainer



Threadlocking Adhesive



Grease



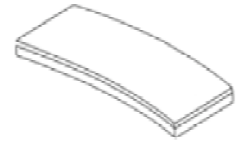
Hex Wrench



Epoxy Glue

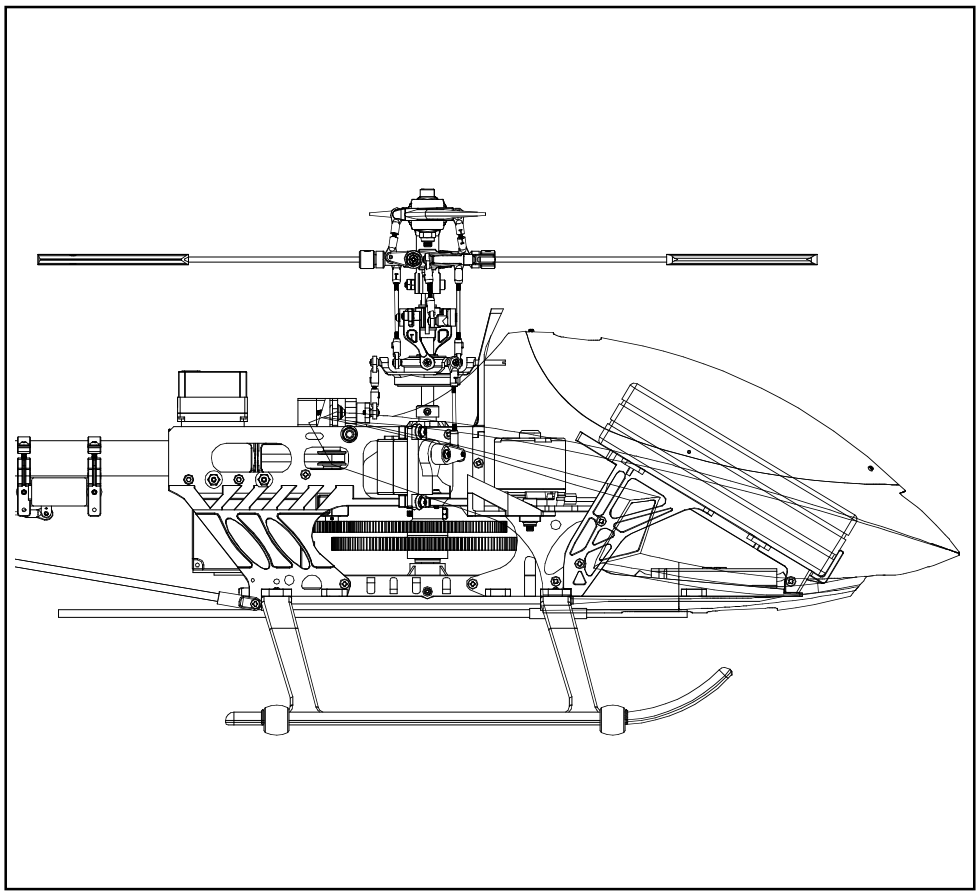


Rubber Band



Double Side Tap

ASSEMBLING SECTION



The parts in the E325 SE kit are packed according to the assembly steps. The part number and quantity are always shown in the square box on each page. Do not open all the bags at once. Open only the bag that is needed for the current assembly step.

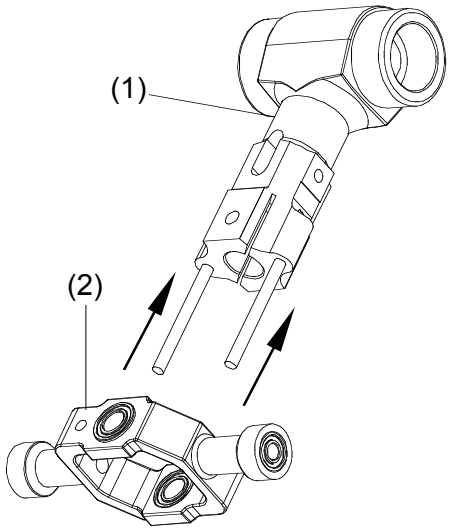
Bag A

Main Rotor-1

No.	Description	Q'ty
1	Metal Main Rotor Hub	1
2	Metal Seesaw Hub	1

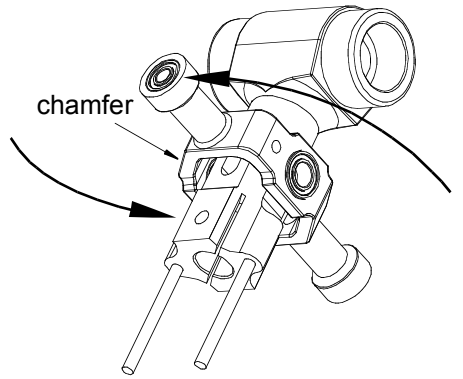
No.	Description	Q'ty
3	Collar, d2xD3x2.7	2
4	Shoulder Screw, M2x6	2

1.Slide in the Metal Seesaw Hub to the Main Rotor Hub.
2.Mind the direction of the Metal Seesaw Hub.



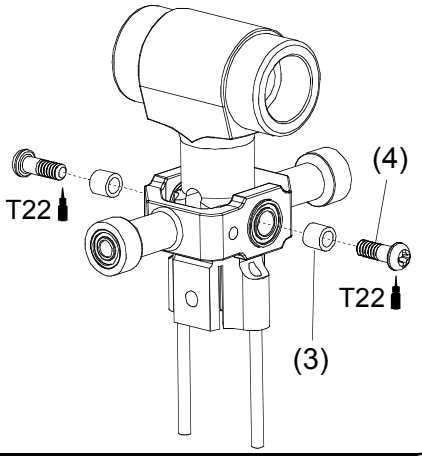
Step 2

1.Turn the Metal Seesaw Hub 90 degree.
2.Mind the direction of the chamfer.



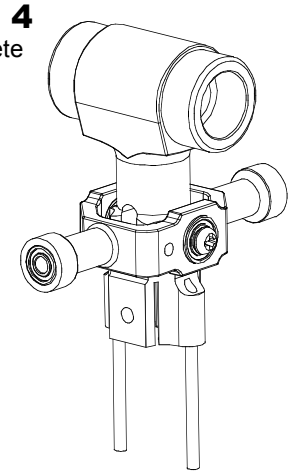
Step 3

Fit the Collar into the bearings, tighten the screws and make sure that the Metal Seesaw Hub can be rotated freely without excessive play.



Step 4

Complete



Note

T22 → THREADLOCKING

CA → CA GLUE

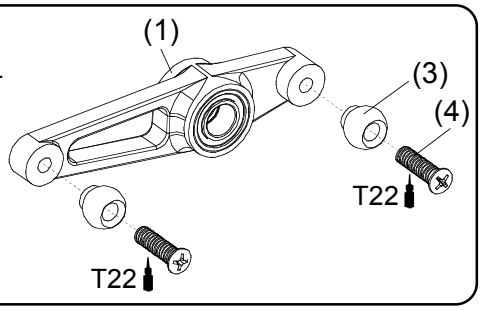
Main Rotor-2

No.	Description	Q'ty
1	Metal Mixing Lever	2
2	Collar, d3xD6x5.6	2
3	Linkage Ball, ø3.8	4

No.	Description	Q'ty
4	Countersunk Screw, M1.6x6	4
5	Flat Washer, d2xD3.7x0.5	2
6	Shouldered Screw, M2x9	2

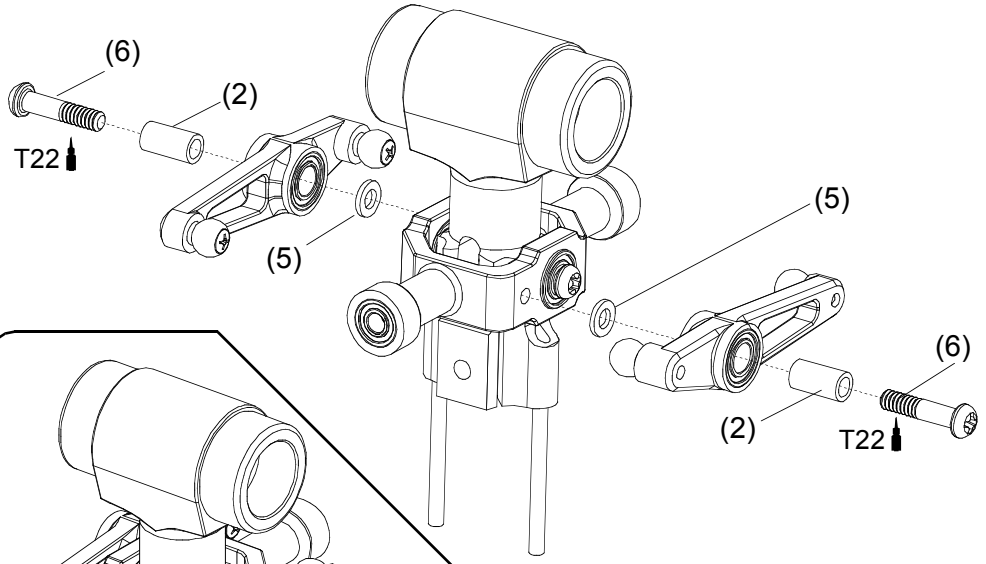
Step 1

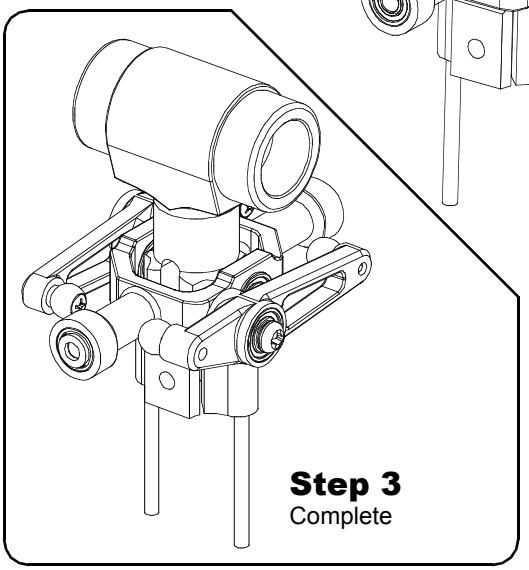
Secure the Linkage Balls to the Mixing Lever.



Step 2

1.Secure the Metal Mixing Lever to the Metal Seesaw Hub.
2.Make sure that the Metal Mixing Lever can be rotated freely.





Step 3

Complete

Bag B

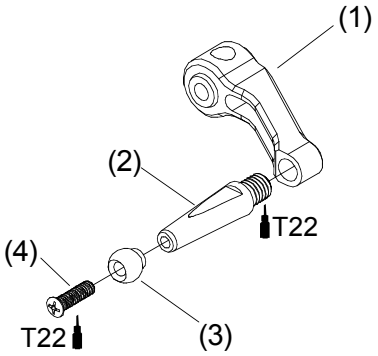
Main Rotor-3

No.	Description	Q'ty
1	Metal Flybar Control Arm	2
2	Metal Flybar Control Post	2
3	Linkage Ball, ø3.8	2
4	Countersunk Screw, M1.6x6	2

No.	Description	Q'ty
5	SUS Flybar Rod	1
6	Set Screw, M3x3	2
7	Paddle(Standard)	2
8	Paddle(3D)	2

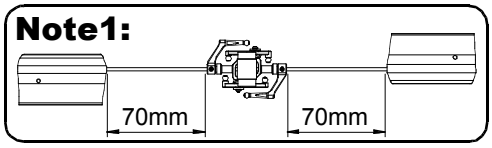
Step 1

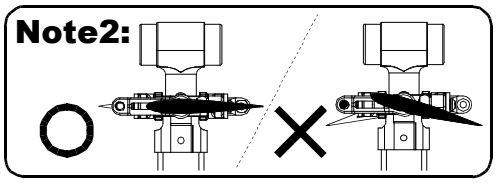
1.Secure the Linkage Ball to the Metal Flybar Control Post.
2.Assemble the Metal Flybar Control Post and the Metal Flybar Control Arm.



Step 2

1.Slide the Flybar through the Metal Seesaw Hub, then fit the Metal Flybar Control Arm onto the Flybar.
2.Make sure the Flybar has equal protruding of each side and that the Metal Flybar Control Arms are parallel with each other, then secure the Metal Flybar Control and the Flybar by the Set Screws.





Step 3

1.Secure the Paddles to the Flybar.
2.Make sure that the distance from the Flybar Control Arm to the Paddle are the same in each side.
3.Make sure that the Paddles and the Flybar Control Arm are paralleled. Add some CA glue between the Paddles and the Flybar after the Paddles are set.
4.There are two kinds of Paddles come with the kit, white Paddles are more stable while the green Paddles are suitable for 3D aerobatics.

Main Rotor-4

No.	Description	Q'ty
1	Linkage Ball, ø3.8	2
2	Countersunk Screw, M1.6x6	2
3	Metal Rotor Grip	2
4	Feathering Shaft	1

No.	Description	Q'ty
5	Flap Damper	2
6	Collar, ø4xø7	2
7	Flat Washer, d2.6	2
8	Socket Screw, M2.6x8	2

Step 1

1.Secure the Linkage Balls to the Main Rotor Pitch Housing.
2.Insert the Flap Damper in the Main Rotor Hub.
3.Add some Silicon Oil or Vaseline to insert the Feathering Shaft through the Flap Damper.
4.Assemble the Metal Main Rotor Housing onto the Spindle as the drawing, be sure to use Loctite on the M2.6x8 Socket Screws(No.8).
5.The radial and thrust bearings are pre-installed by TT factory. The following drawings are for your reference.

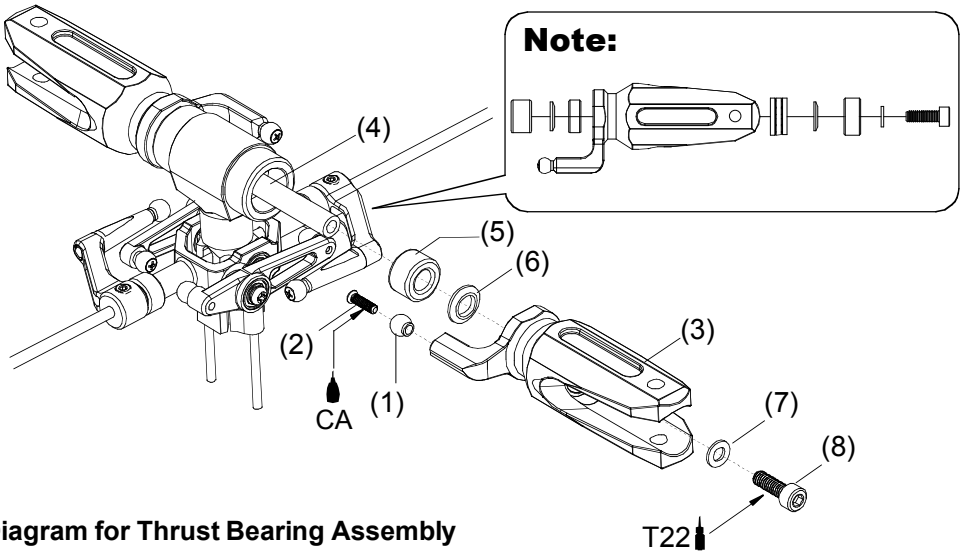
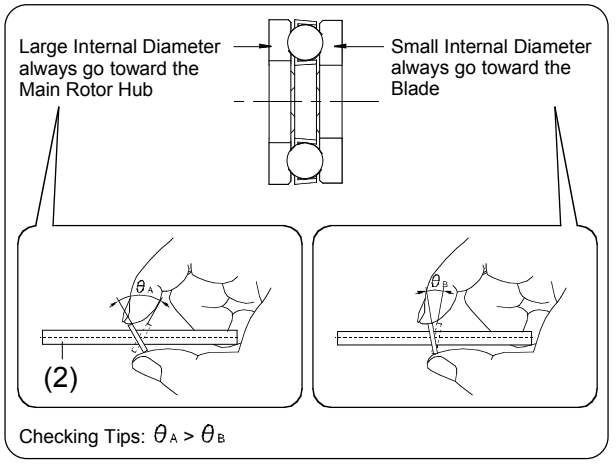
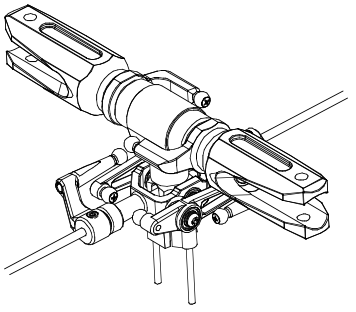


Diagram for Thrust Bearing Assembly



Step 2

Complete



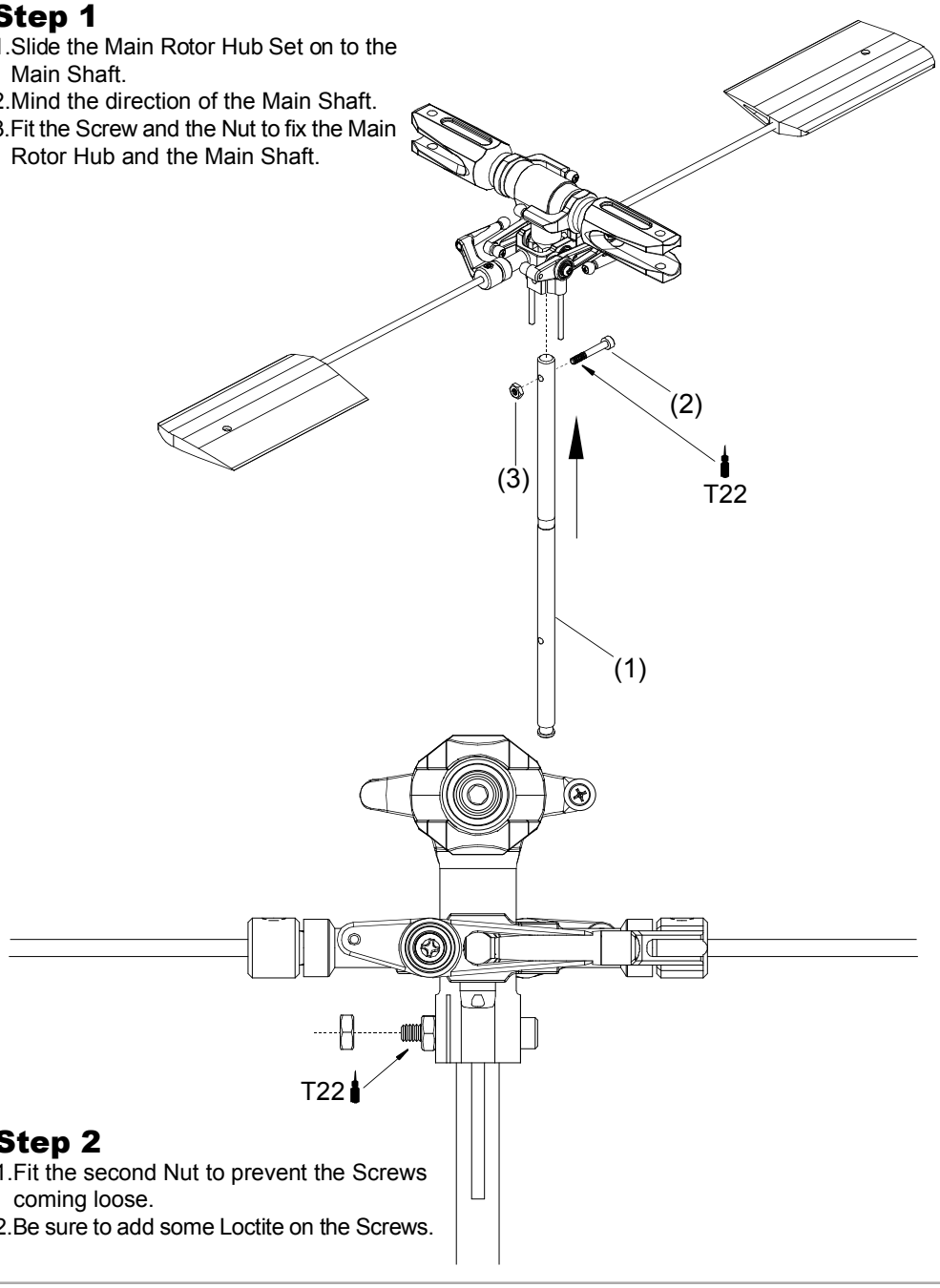
Bag B

Main Rotor-5

No.	Description	Q'ty
1	Hardened Main Shaft	1
2	Socket Screw, M2x14	1
3	Nut, M2	2

Step 1

1.Slide the Main Rotor Hub Set on to the Main Shaft.
2.Mind the direction of the Main Shaft.
3.Fit the Screw and the Nut to fix the Main Rotor Hub and the Main Shaft.



Step 2

1.Fit the second Nut to prevent the Screws coming loose.
2.Be sure to add some Loctite on the Screws.

Main Rotor-6

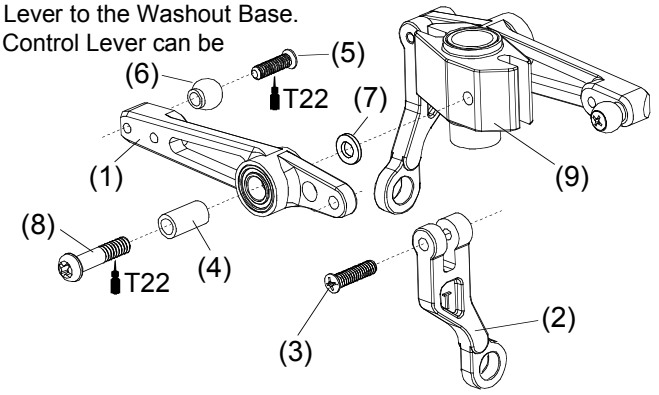
Bag C

No.	Description	Q'ty
1	Metal Flybar Control Lever	2
2	Washout Linkage	2
3	Countersunk Screw, M1.7x7	2
4	Collar, d2xD3x5.6	2
5	Countersunk Screw, M1.6x6	2
6	Linkage Ball, ø3.8	2

No.	Description	Q'ty
7	Flat Washer, d2xD3.7x0.5	2
8	Shoulder Screw, M2x9	2
9	Metal Washout Base	1
10	Metal Swashplate	1
11	Main Shaft Lock Ring	1
12	Set Screw, M3x3	1

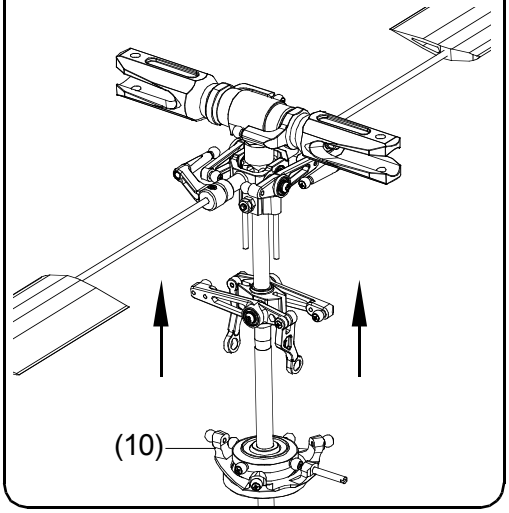
Step 1

1.Secure the Washout Linkage to the Metal Flybar Control Lever and make sure that the Washout Linkage can be rotated freely.
2.Secure the Linkage Balls to the Metal Flybar Control Lever. The inner hole is for beginner, and the outer hole is for 3D flying.
3.Secure the Metal Flybar Control Lever to the Washout Base.
4.Make sure that the Metal Flybar Control Lever can be rotated freely.



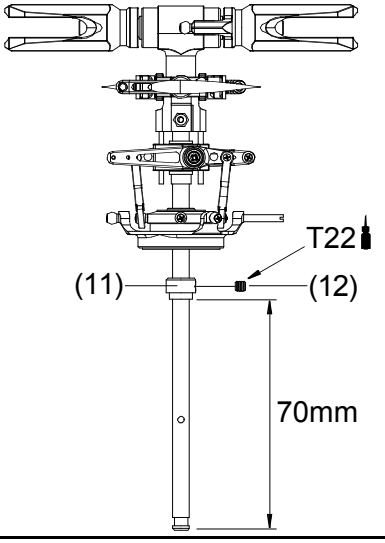
Step 2

1.Slide in the Metal Washout Assembly and make sure the pins of the Metal Main Rotor Hub can go through the holes of the Metal Washout Base.
2.Then slide in the Metal Swashplate and attach the Washout Linkage to the inner Linkage Balls of the Metal Swashplate.



Step 3

1.Slide the Main Shaft Lock Ring and fix it with a Set Screw.
2.Mind the distance from the end of the Hardened Main Shaft to the Lock Ring is about 70mm.



Bag D

Linkage Rod Installation

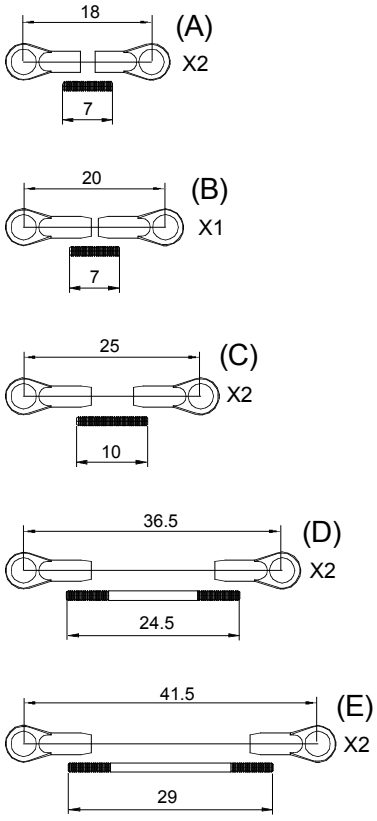
No.	Material No.	Description	Qty
1	BK0932	Ball Link 3.8x10mm	4
2	BK1063	Llinkage Rod 1.3x7mm	3
3	BK0922	Ball Link 3.8x12mm	14

No.	Material No.	Description	Qty
4	BK1064	Llinkage Rod 1.3x10mm	2
5	BK1066	Llinkage Rod 1.3x24.5mm	2
6	BK1065	Llinkage Rod 1.3x29mm	2

Step 1

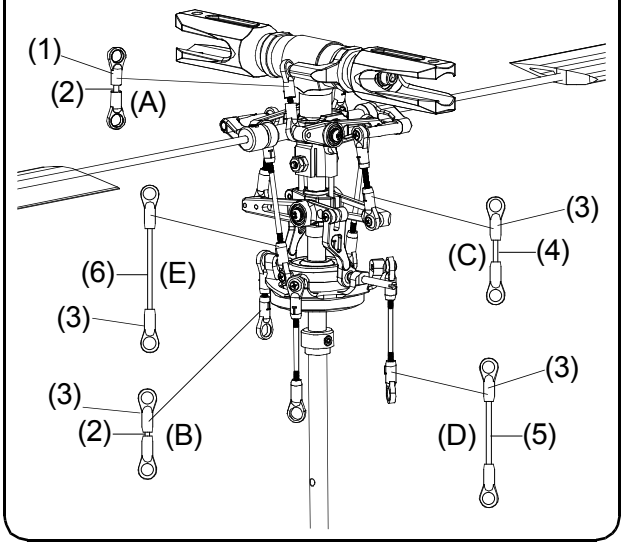
1.Assemble the Linkage Rods and the Ball Links.
2.The length is measured from the center of the Ball Links to the other.
3.You can use the following 1:1 drawing to measure the length of the rods.

Scale 1:1

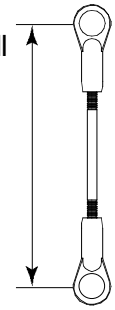


Step 2

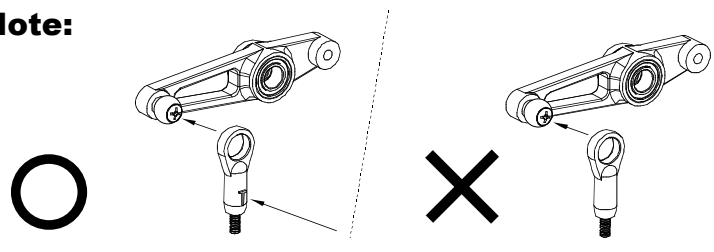
1.Attach the rods to the main rotor system.
2.Please refer to the NOTE that the T mark on the Ball Link should face out.



Lengths are measured from ball link center to ball link center.



Note:



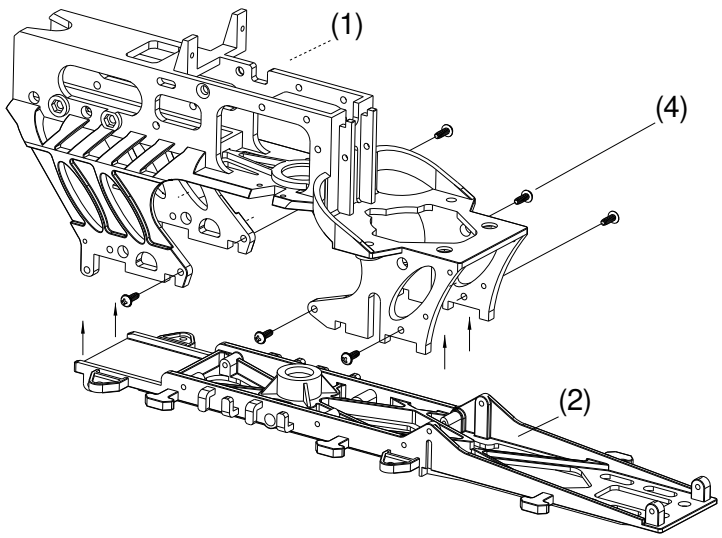
Main Frame Assembly-1

No.	Description	Q'ty
1	Main Frame	1
2	Base Plate	1

No.	Description	Q'ty
3	Landing Skid(Black)	1
4	Tapping Screw(w/washer), M2x6	10

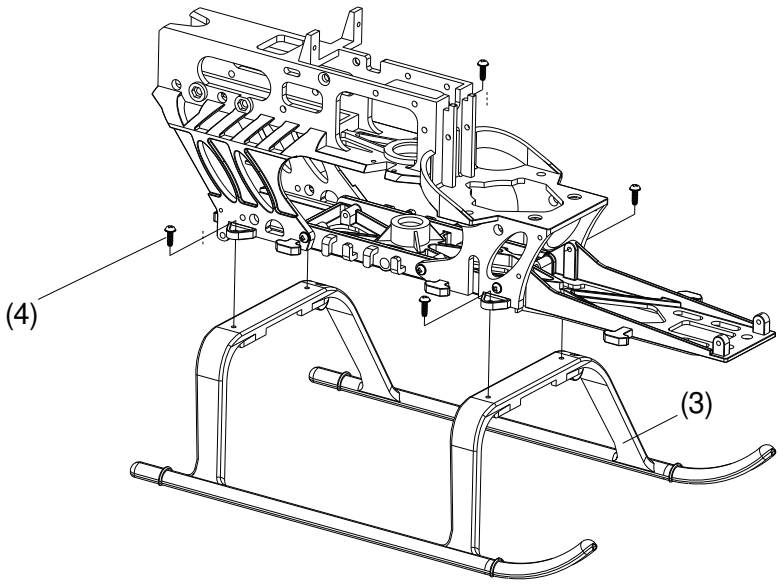
Step 1

Assemble the Main Frame and the Base Plate with 6 self-tapping screws.



Step 2

Attach the Landing Skid to the Base Plate with 4 self-tapping screws.

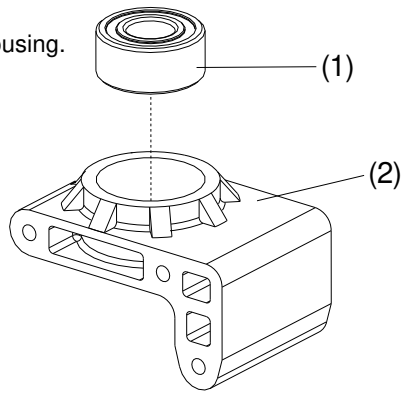


Main Frame Assembly-2

No.	Description	Q'ty
1	Bearing, d5xD11x5	1
2	Upper BRG Housing	1
3	Tapping Screw(w/washer), M2x10	4

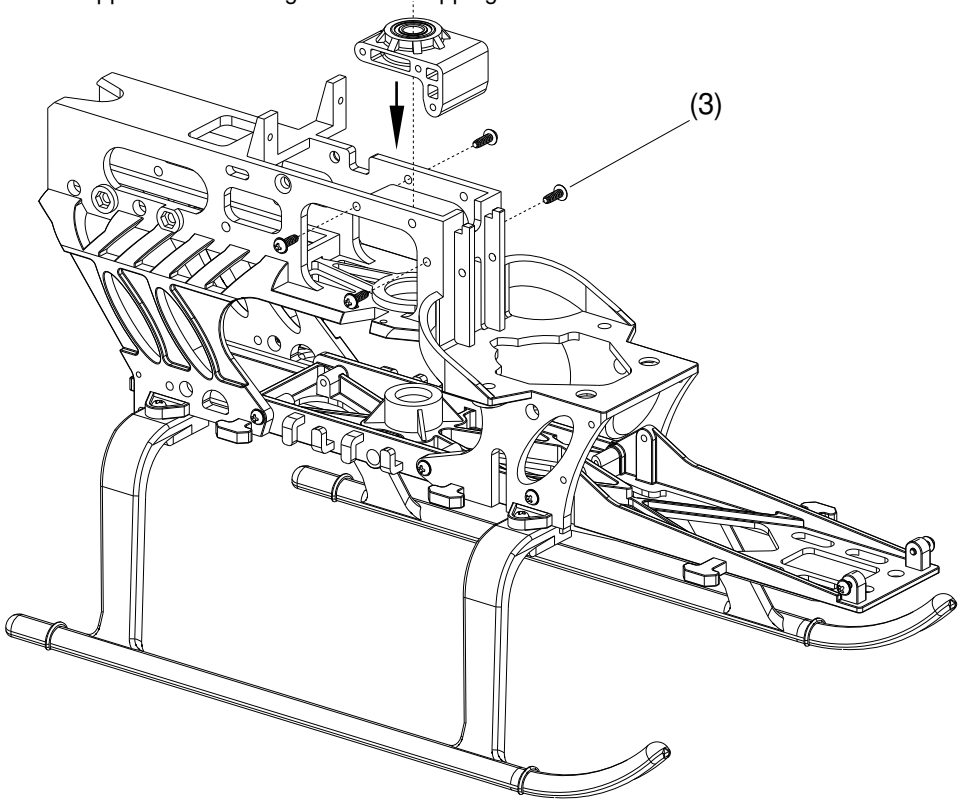
Step 1

Fit the Bearing into the Upper BRG Housing.



Step 2

1.Slide the Upper BRG Housing into the Main Frame.
2.Fix the Upper BRG Housing with 4 self-tapping screws.



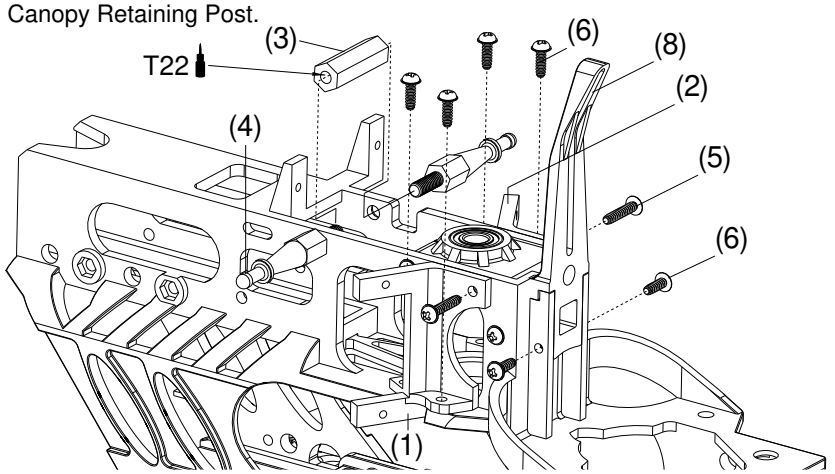
Main Frame Assembly-3

No.	Description	Q'ty
1	Servo Tray(Right)	1
2	Servo Tray(Left)	1
3	Metal Frame Spacer	1
4	Metal Canopy Retaining Post	2

No.	Description	Q'ty
5	Tapping Screw(w/washer), M2x10	4
6	Tapping Screw(w/washer), M2x6	10
7	Battery Tray	1
8	Phasing Control Track	1

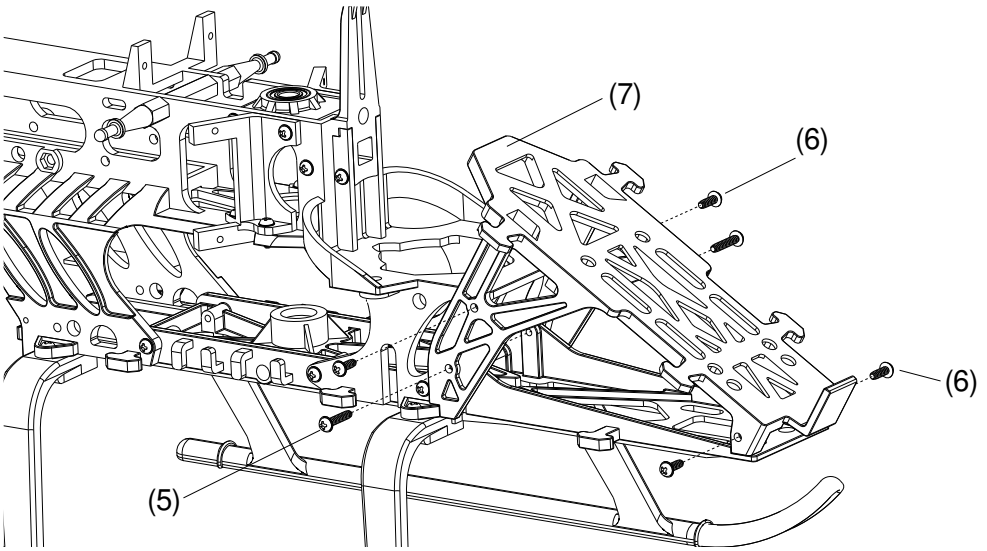
Step 1

1.Secure the Servo Tray to the Main Frame.
2.Slide the Phasing Control Track onto the Main Frame and fix it with 2 Tapping Screw.
3.Insert the Metal Frame Spacer between the Main Frame and secure it with the Metal Canopy Retaining Post.



Step 2

Attach the Battery Tray to the Main Frame and secure it with 6 Tapping Screw.

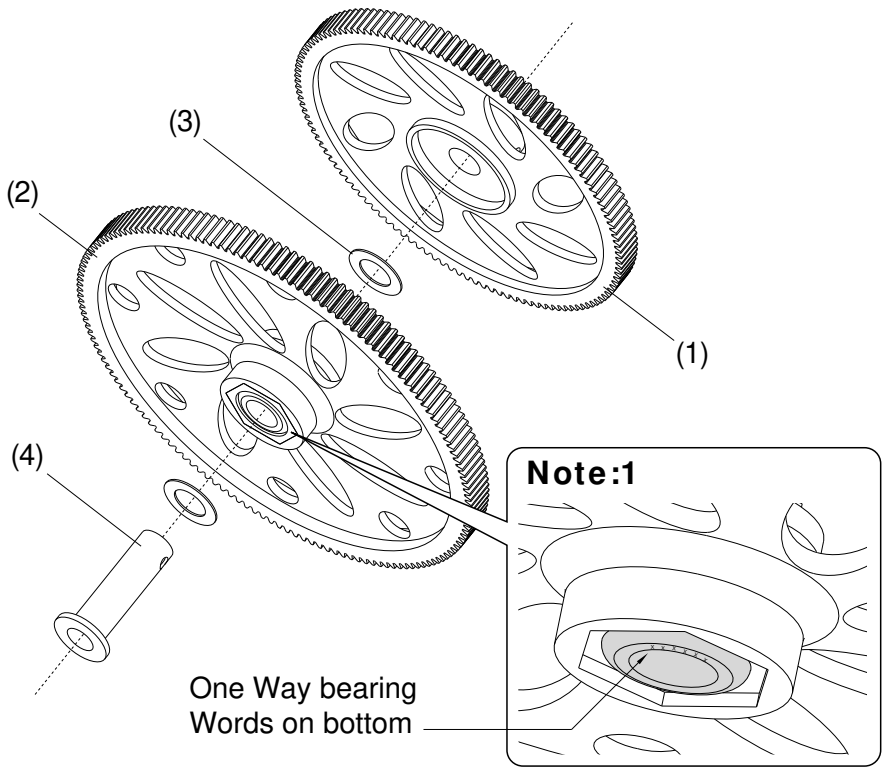


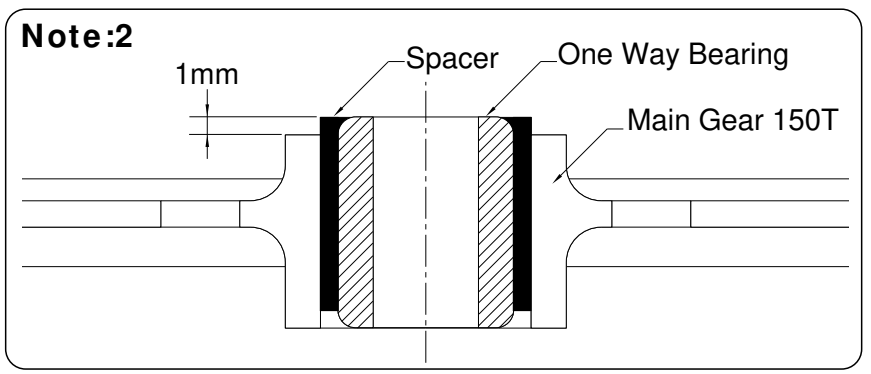
Bag G

Main Frame Assembly-4

No.	Description	Q'ty
1	Autorotation Tail Drive Gear	1
2	Main Gear (W/Bearing)	1
3	Flat Washer d6xD10x0.3	2
4	One Way Bearing Shaft	1

1.The One Way Bearing and the Spacer are pre-assembled.
2.Assemble the Main Gear and the Autorotation Tail Drive Gear with the One Way Bearing Shaft.

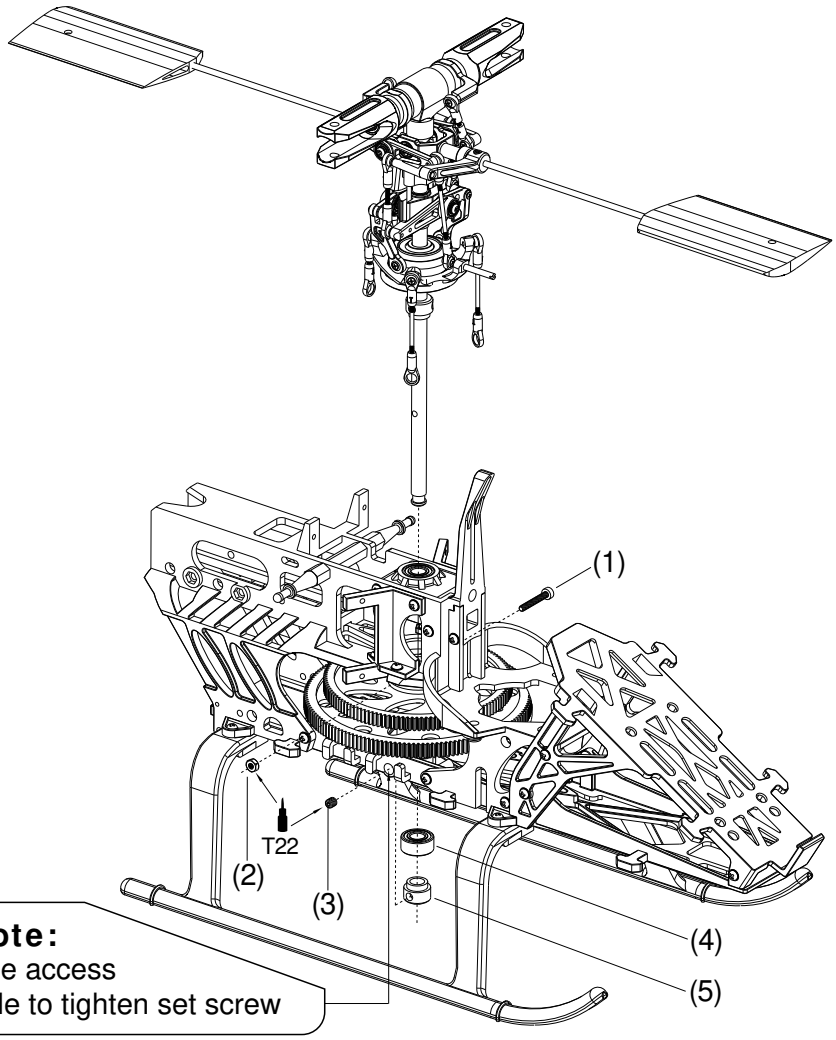




Main Frame Assembly-5

No.	Description	Q'ty
1	Socket Screw M2x14	1
2	M2 Nut	1
3	Set Screw	1
4	Bearing d5xD11x5	1
5	Main Shaft Lock Ring	1

1.Install the Bearing into the Base Plate.
2.Slide the Main Gear Assembly into the Main Frame.
3.Slide the Main Shaft through the Upper BRG Housing, the Main Gear Assembly and the Lower Bearing.
4.Line up the holes of the Autorotation Tail Drive Gear, the One Way Bearing Shaft and the Main Shaft. Insert the Socket Screw and fix it with a M2 Nut. Do not forget to add some Loctite and do not over tighten the screw.
5.Push the Main Rotor Hub downward slightly and put on the Main Shaft Lock Ring under the Base Plate. Secure the Main Shaft Lock Ring with a Set Screw through the hole beside the Base Plate. Make sure there is no play of the Main Shaft.



Bag H

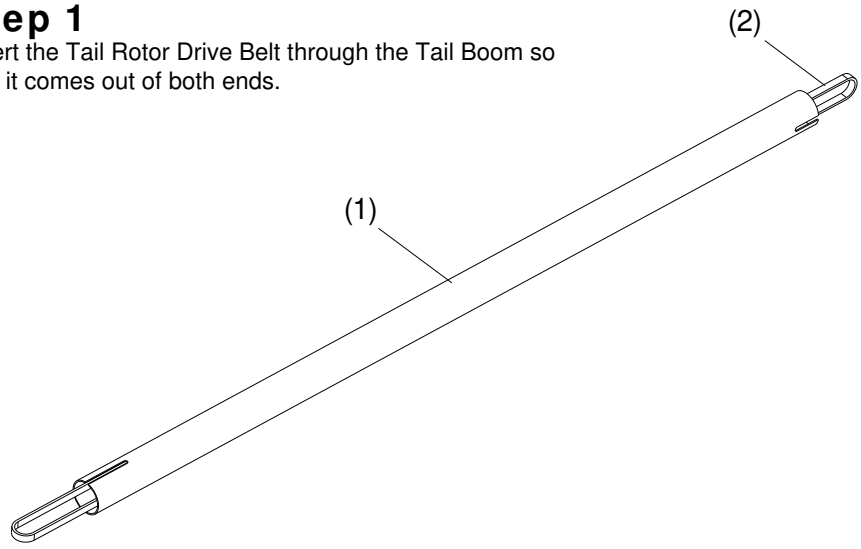
Tail Unit Assembly-1

No.	Description	Q'ty
1	Carbon Tail Boom	1
2	Belt MXL-3tx413T	1
3	Tail Unit Housing	1
4	Tail Unit Housing Cover	1

No.	Description	Q'ty
5	Tail Rotor Shaft Set	1
6	Bearing d3xD8x4t	2
7	Tapping Screw(W/Washer) M2x10	4

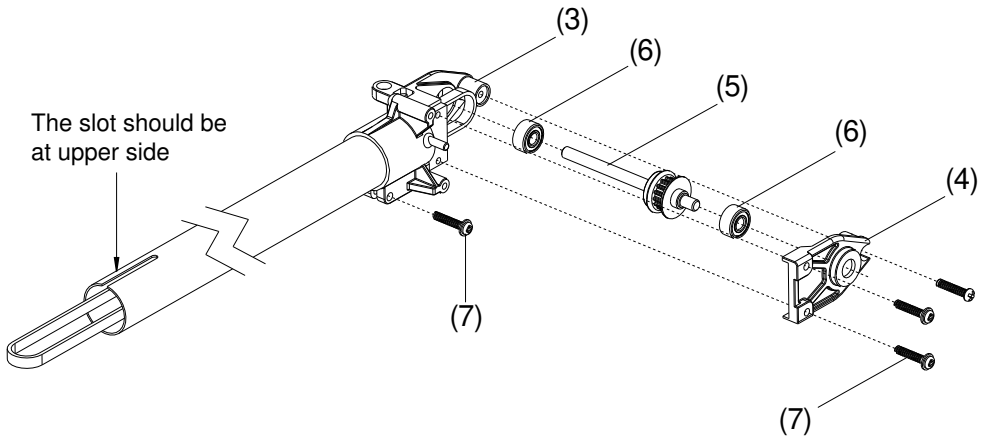
Step 1

Insert the Tail Rotor Drive Belt through the Tail Boom so that it comes out of both ends.



Step 2

1.Install the Bearing into the Tail Unit Housing.
2.Slide the Tail Unit Housing onto the Tail Boom and secure it with a self-tapping screw.
3.Slide the Tail Rotor Shaft Set into the Tail Unit Housing and place the Tail Rotor Drive Belt over the Pulley.
4.Install the Tail Unit Housing Cover as shown.



Tail Unit Assembly-2

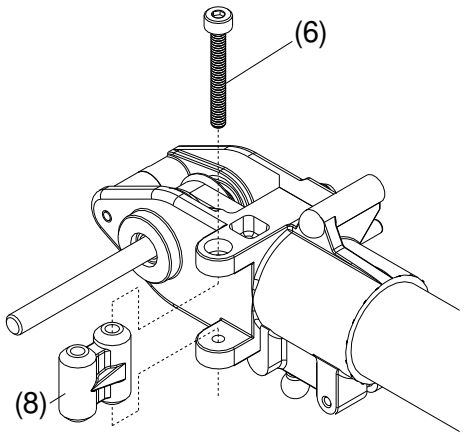
No.	Description	Q'ty
1	Metal Tail Pitch Control Lever-1	1
2	Metal Tail Pitch Control Lever-2	1
3	Linkage Ball	1
4	Countersunk Screw, M1.6x6	1
5	Flat Washer, d2xD3.7x0.5	3

No.	Description	Q'ty
6	Countersunk Screw, M2x6	1
7	Metal Tail Pitch Control Set	1
8	Double Joint Lever	1
9	Socket Screw, M2x16	2

Step 1

1.Secure the Double Joint Lever to the Tail Unit Housing.

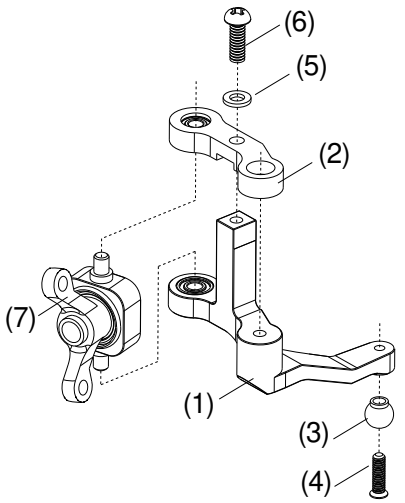
2.Do not over tighten the M2x16 Socket Screw so that the lever can be rotated freely.



Step 2

1.Secure the Linkage Ball to the Metal Tail Pitch Control Lever-1.

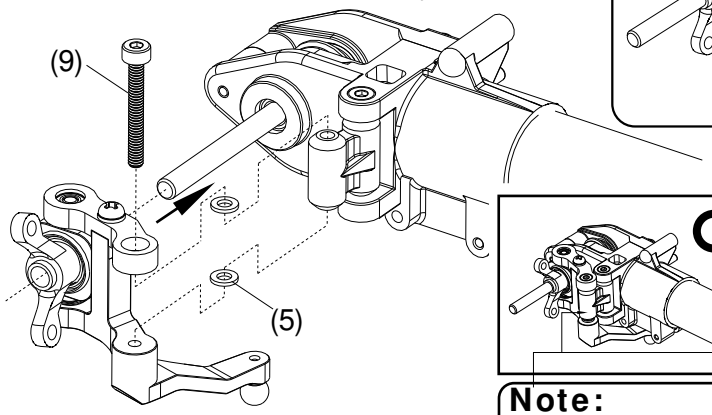
2.Assemble the Metal Tail Pitch Control Levers and the Metal Tail Pitch Control Set.



Step 3

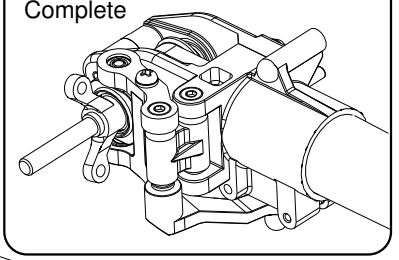
1.Slide the Metal Tail Pitch Control Assembly onto the tail shaft, insert 2 Flat Washers between the levers and the joint, then fix it with a M2x16 Socket Screw.

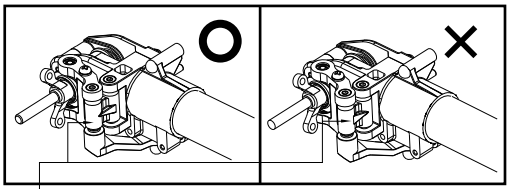
2.Do not over tighten the M2x16 Socket Screw so that the lever can be rotated freely.



Step 4

Complete





Note:

Mind the direction of the double joint lever.

Tail Unit Assembly-3

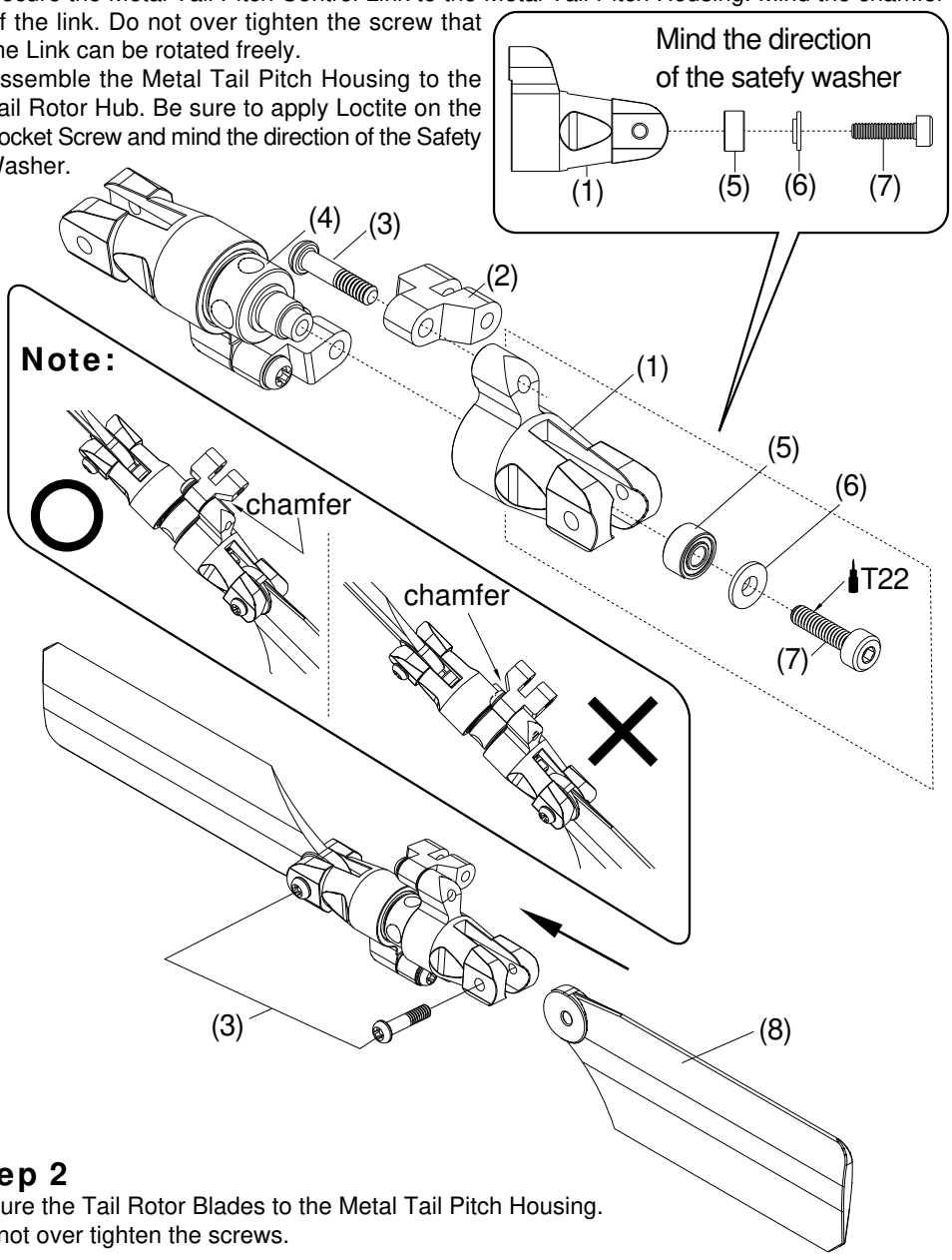
No.	Description	Q'ty
1	Metal Tail Pitch Housing	2
2	Metal Tail Pitch Link	2
3	Shouldered Screw, M2x9	4
4	Tail Rotor Hub	1

No.	Description	Q'ty
5	Bearing, d2xD5x2.5	2
6	Safety Washer	2
7	Socket Screw, M2x8	2
8	Tail Rotor Blade	2

Step 1

1.Secure the Metal Tail Pitch Control Link to the Metal Tail Pitch Housing. Mind the chamfer of the link. Do not over tighten the screw that the Link can be rotated freely.

2.Assemble the Metal Tail Pitch Housing to the Tail Rotor Hub. Be sure to apply Loctite on the Socket Screw and mind the direction of the Safety Washer.



Step 2

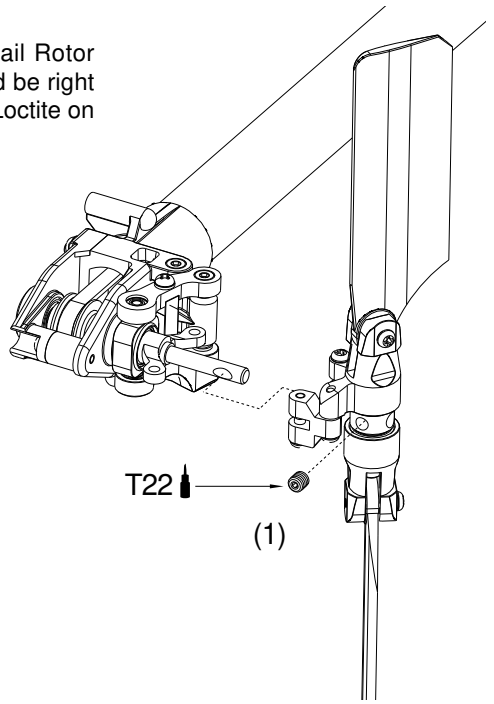
Secure the Tail Rotor Blades to the Metal Tail Pitch Housing.
Do not over tighten the screws.

Tail Unit Assembly-4

No.	Description	Q'ty
1	Set Screw, M3x3	1
2	Shouldered Screw, M2x9	2

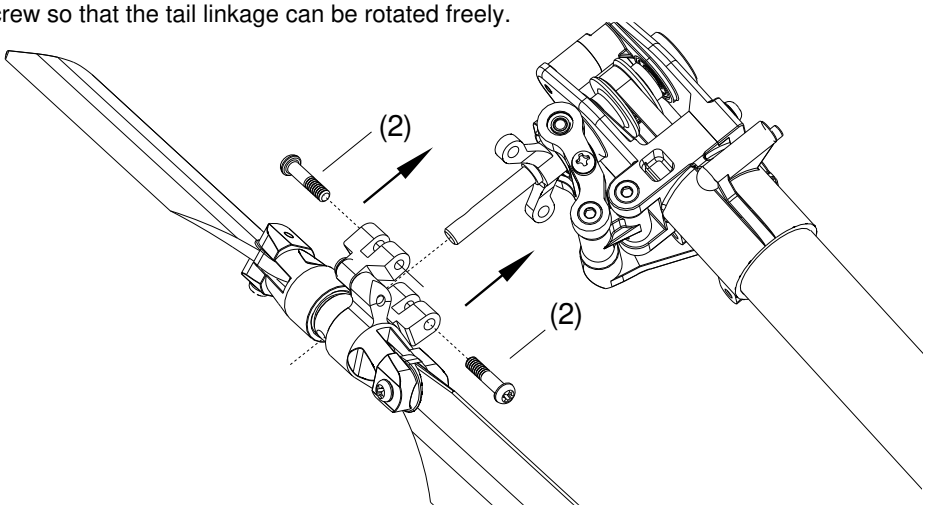
Step 1

Secure the Tail Rotor Hub Set onto the Tail Rotor Shaft. Make sure that the Set Screw should be right on the dot of the shaft. Do not forget apply Loctite on the Set Screw.



Step 2

Fit the Tail Pitch Control Link to the Tail Pitch Control Set. Do not over tighten the Shoudered Screw so that the tail linkage can be rotated freely.

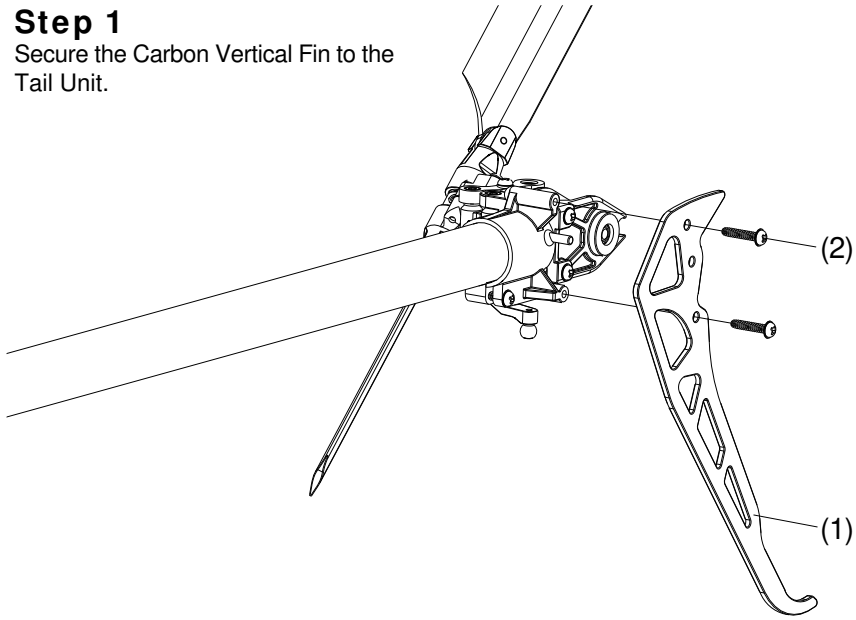


Tail Unit Assembly-5

No.	Description	Q'ty
1	Carbon Vertical Fin	1
2	Tapping Screw(w/washer), M2x10	1

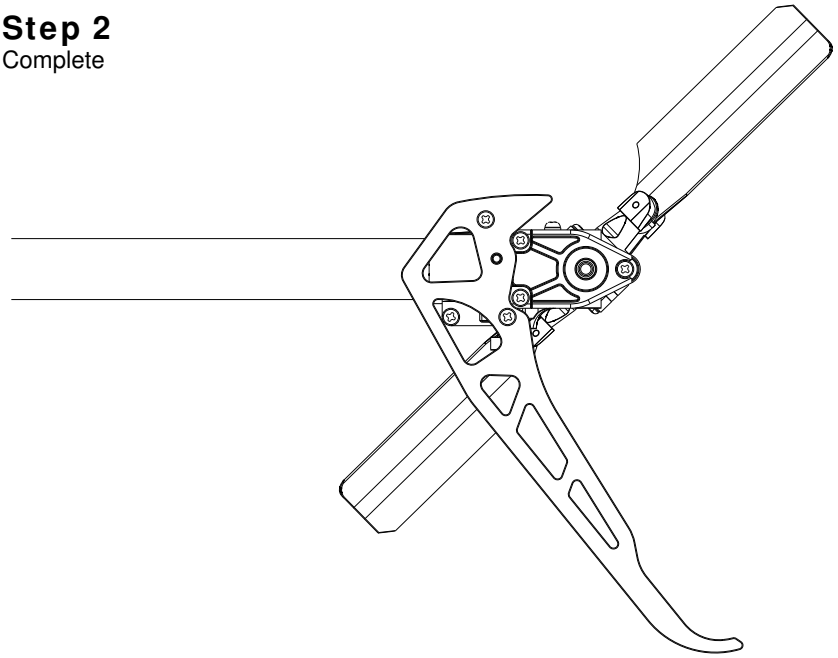
Step 1

Secure the Carbon Vertical Fin to the Tail Unit.



Step 2

Complete

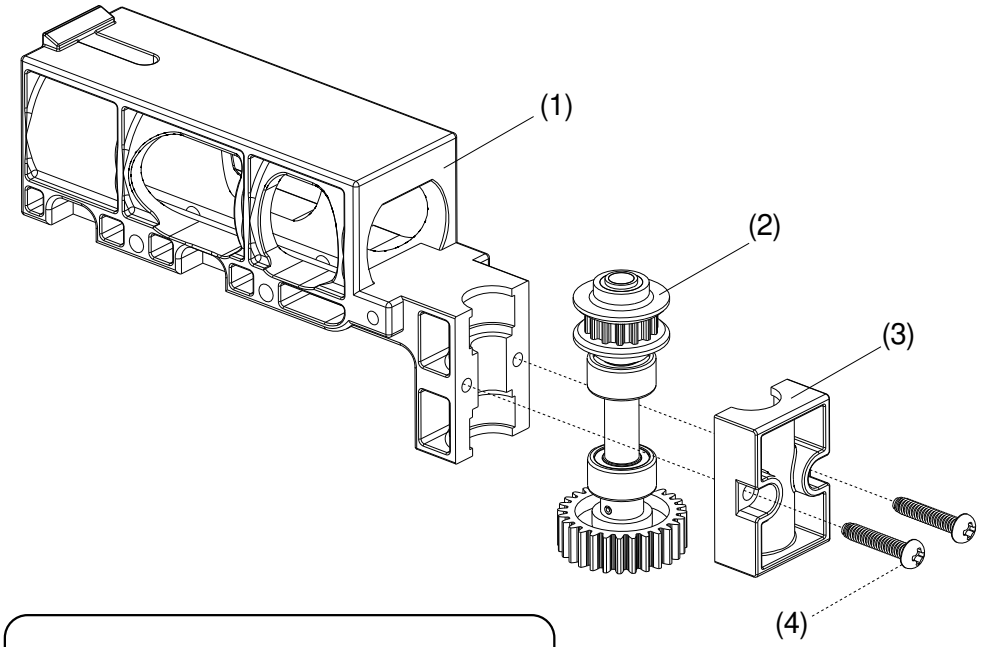


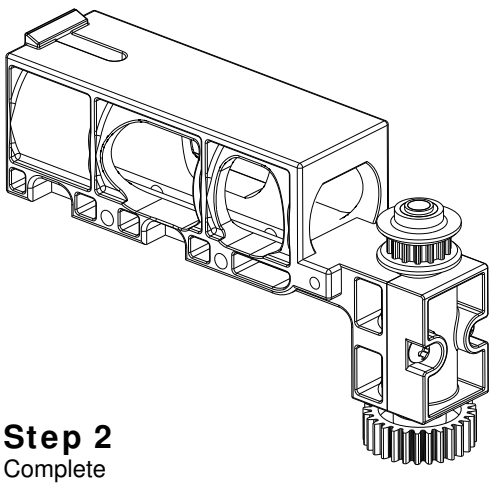
Tail Boom Bracket Set-1

No.	Description	Q'ty
1	Tail Boom Bracket	1
2	Metal Tail Drive Gear Set	1
3	Tail Boom Bracket Cover	1
4	Tapping Screw, M2x10	2

Step 1

1.Fit the Metal Tail Drive Gear Set to the Tail Boom Bracket.
2.Secure the Tail Boom Bracket Cover to the Tail Boom Bracket.





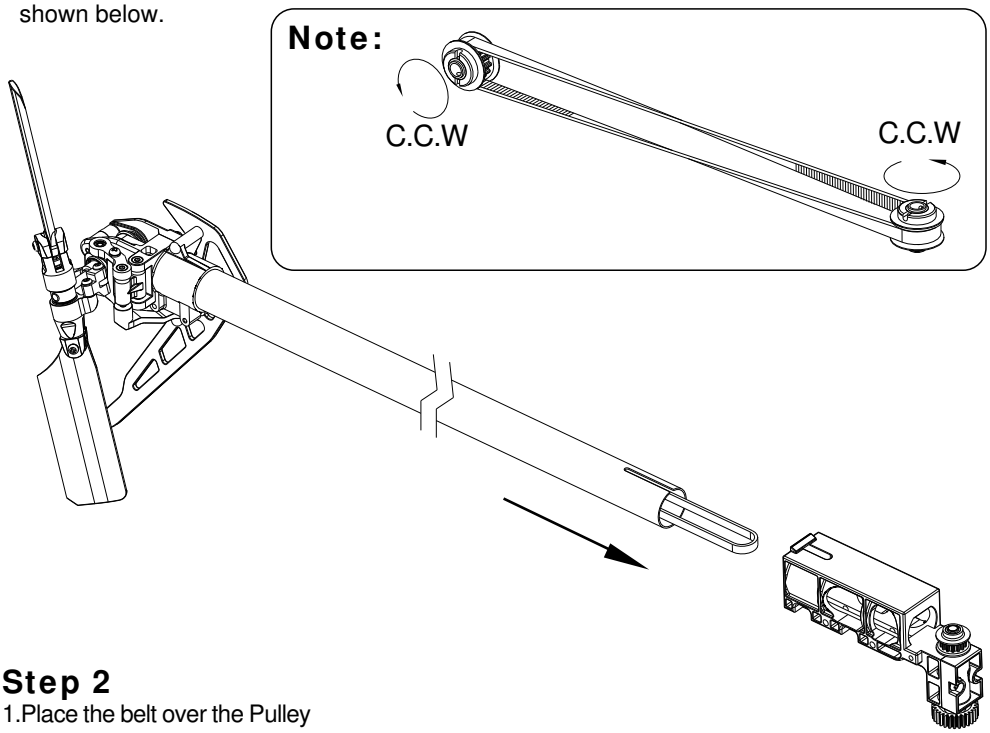
Step 2
Complete

Tail Boom Bracket Set-2

No.	Description	Q'ty
1	Socket Screw, M2x12	2
2	Nut, M2	2

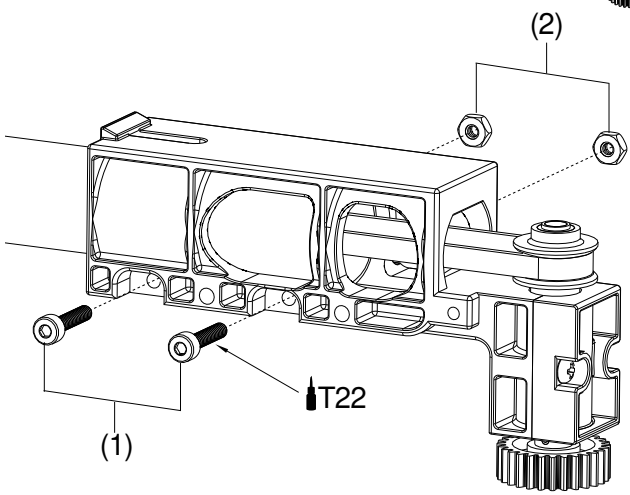
Step 1

1.Pull the belt through the Tail Boom Bracket and keep the belt correctly aligned.
2.Push the Tail Boom into the Tail Boom Bracket and the Tail Drive Belt must be rotated as shown below.



Step 2

1.Place the belt over the Pulley and gently pull back the Tail Boom until the tension of the belt allows no more than 5mm of free play.
2.Fix the Tail Boom in the bracket with the Socket Screws and M2 nuts. Do not forget to apply Loctite on the screws.

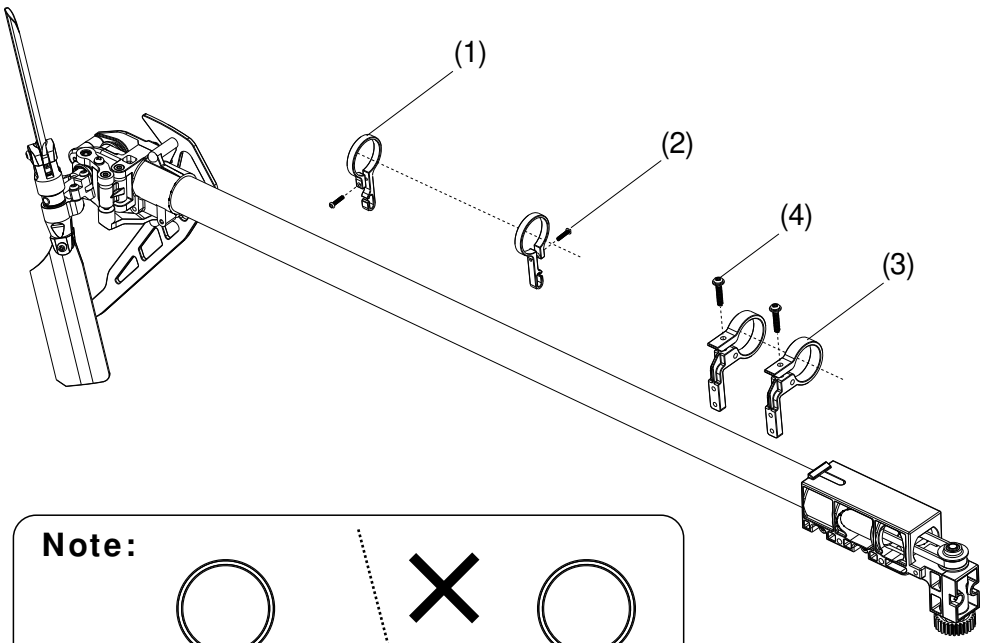


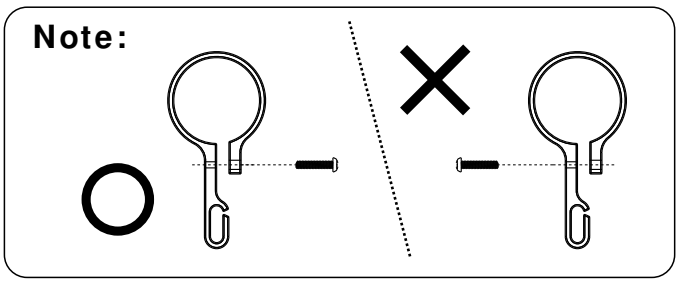
Tail Boom Bracket Set-3

No.	Description	Q'ty
1	Rod Guide	2
2	Tapping Screw M1.2x6	2
3	Tail Servo Tray	2
4	Tapping Screw(W/Washer) M2x10	2

Step 1

1.Install the Rod Guides and the Tail Servo Tray.
2.Secure the self-tapping screws but not tighten them at this moment so that you can adjust later.



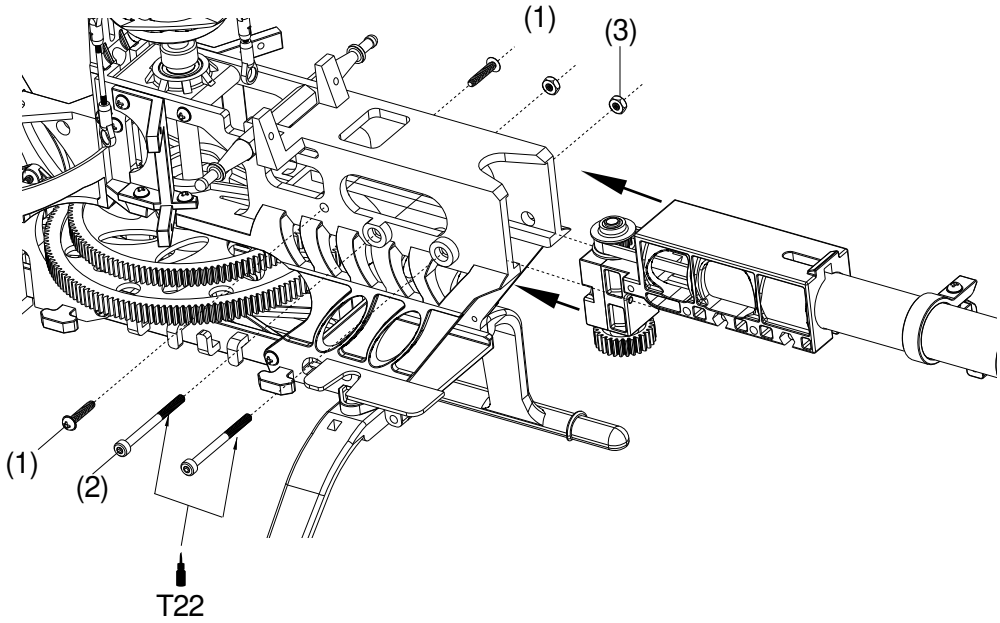


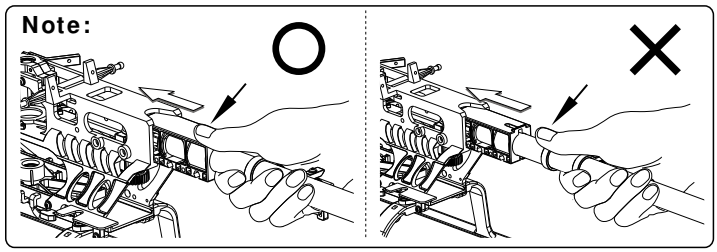
Tail Boom Bracket Set-4

No.	Description	Q'ty
1	Tapping Screw(w/washer), M2x10	2
2	Socket Screw, M2x25	2
3	Nut, M2	2

Step 1

1.Slide the Tail Boom Set into the Main Frame.
2.Push it on the bracket instead of pushing the Tail Boom.
3.Secure the Tail Boom Set and do not forget to add Loctite on the screws.





Electric System-1

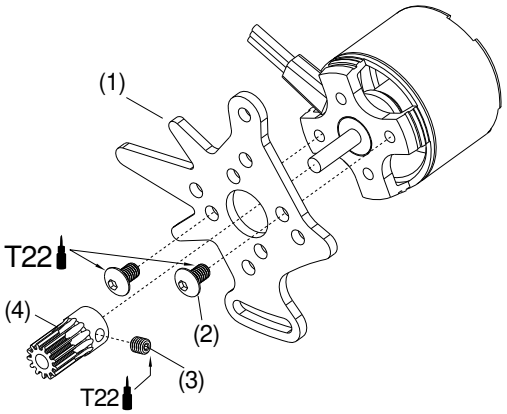
No.	Description	Q'ty
1	Motor Mount	1
2	Socket Screw, M3x5	2
3	Set Screw, M3x3	1

No.	Description	Q'ty
4	Drive Gear, 13T	1
5	Socket Screw, M3x10	2
6	Nylon Nut, M3	2

Step 1

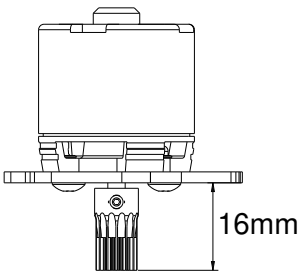
1.Mount the motor to the Motor Mount.

2.Secure the Drive Gear to the motor shaft. Note that the distance from the end of the Drive Gear to the Motor Mount should be around 16mm as shown.



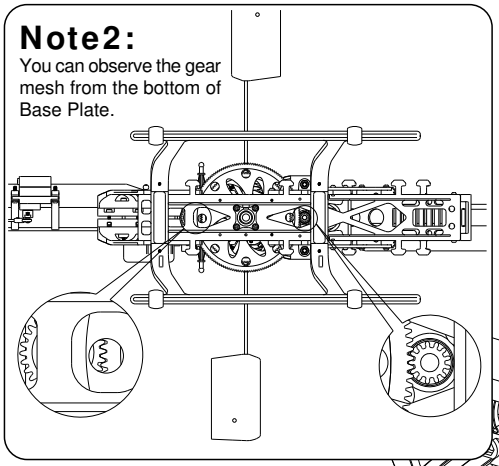
Note1:

The OBL29/37-10H Brushless Motor and 13T pinion are recommendced for mini Titan E325 with ACE POWER 3S1P Li-Po battery.



Note2:

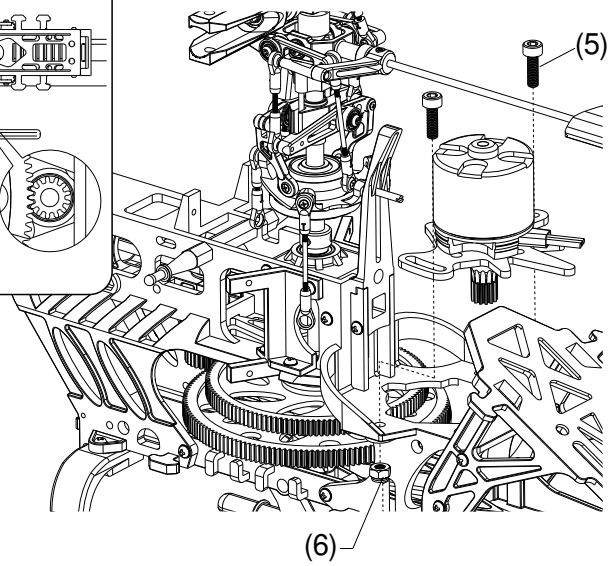
You can observe the gear mesh from the bottom of Base Plate.



Step 2

1.Attach the motor and the Motor Mount to the Main Frame.

2.Adjust the gear mesh and secure the Motor Mount on the chassis.

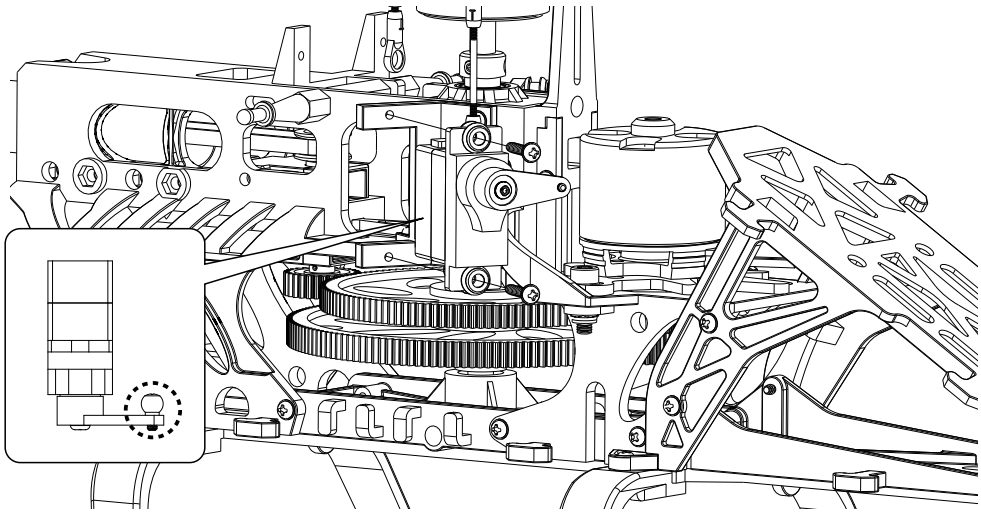


Electric System-2

No.	Description	Q'ty
1	Linkage Ball, ø3.8	3
2	Countersunk Screw, M1.6x6	3

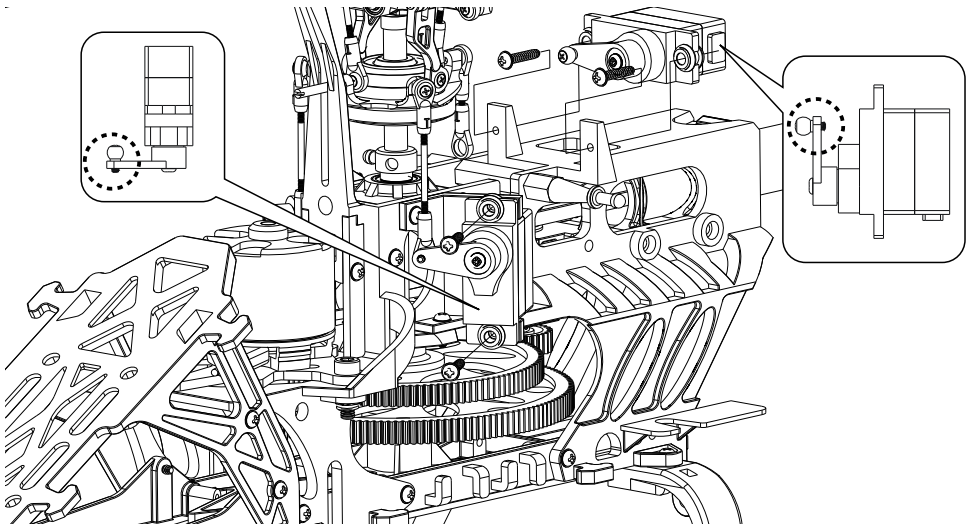
Step 1

1.Remove the servo wheel prior to attaching the Linkage Ball.
2.Mount the Linkage Ball at 12.5mm from the center of the servo arm.
3.Secure the servo to the right Servo Tray and attach the rod to the servo arm.



Step 2

1.Remove all the servo wheels prior to attaching the Linkage Balls.
2.Mount the Linkage Balls at 12.5mm from the center of the servo arms.
3.Secure the servos to the left and to the back, attach the rods to the servo arms.



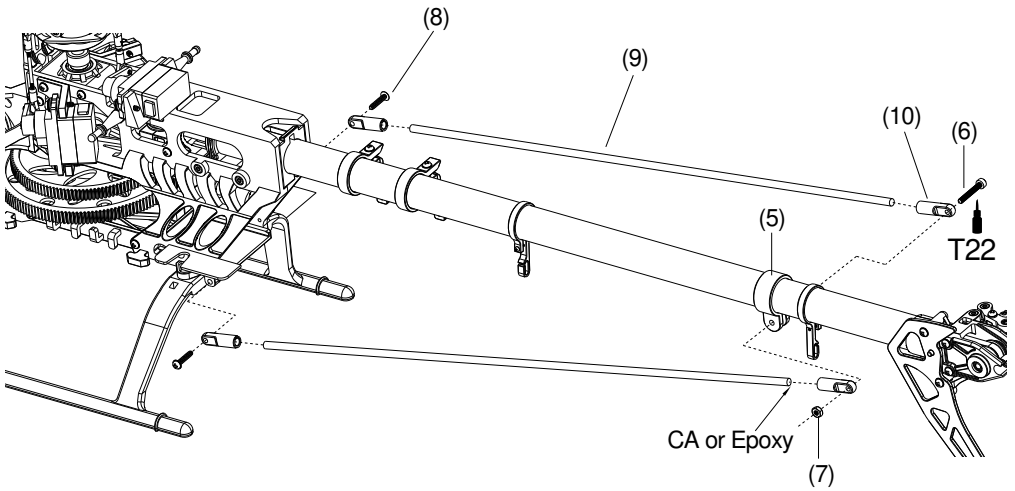
Electric System-3

No.	Description	Q'ty
1	Tail Linkage Rod	1
2	Ball Link, ø3.8x12	2
3	Linkage Ball, ø3.8	1
4	Countersunk Screw, M1.6x6	1
5	Bracket	1

No.	Description	Q'ty
6	Socket Screw, M2x14	1
7	Nut, M2	1
8	Tapping Screw(w/washer), M2x10	2
9	Carbon Rod, D3x255mm	2
10	Tail Support Rod End	4

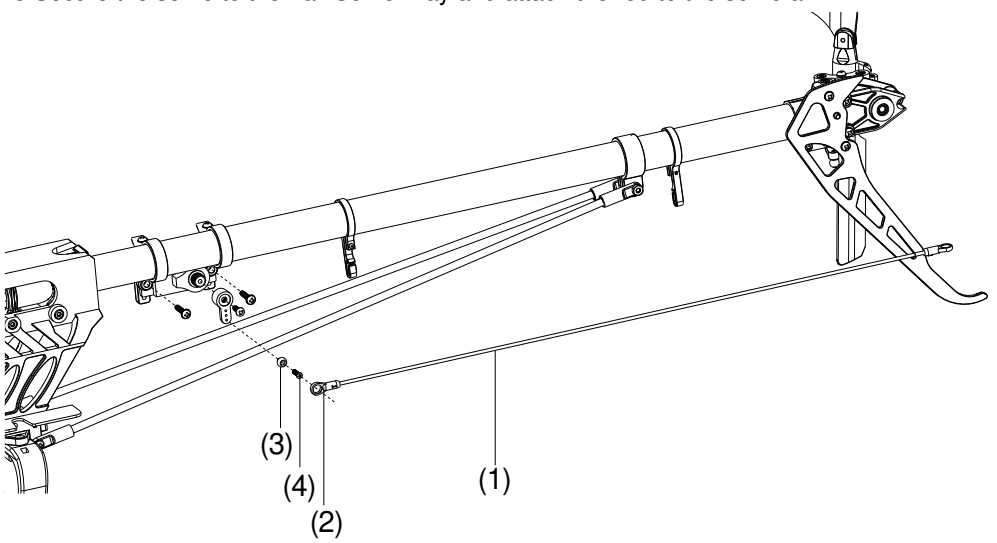
Step 1

1.Apply CA or Epoxy when assembling the Tail Support Rod End.
2.Install the Tail Support Bracket and fit the Tail Support Rod.



Step 2

1.Remove the tail servo wheel prior to attaching the Linkage Ball.
2.For the rudder servo, mount the Linkage Ball at 10.5mm from the center of the servo arm as beginning. Please refer to the manual of your gyro to choose the length of the arm.
3.Secure the servo to the Tail Servo Tray and attach the rod to the servo arm.

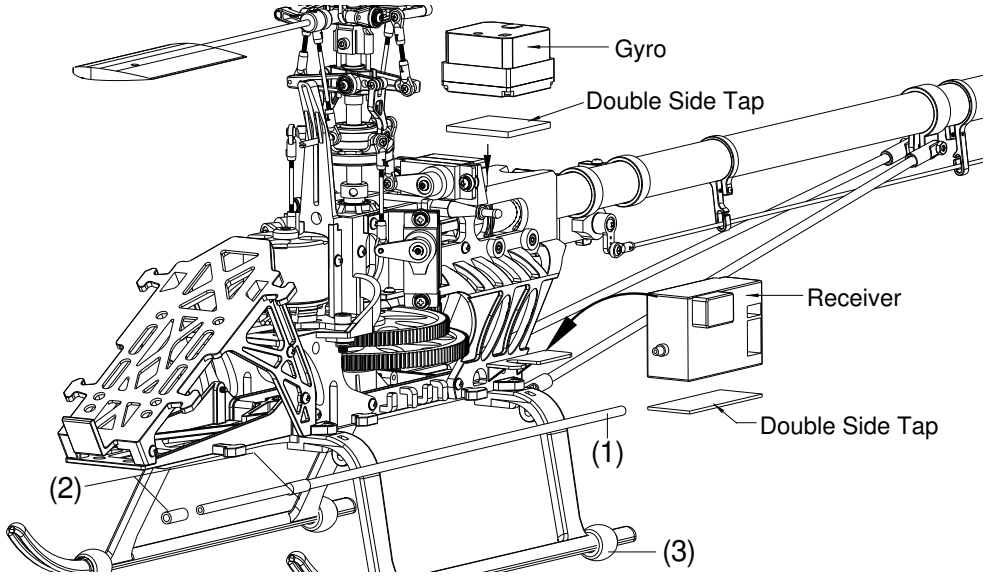


Electric System-4

No.	Description	Q'ty
1	Antenna Tube	1
2	Rubber Tube, 10mm	2
3	Landing Skid Damper	4

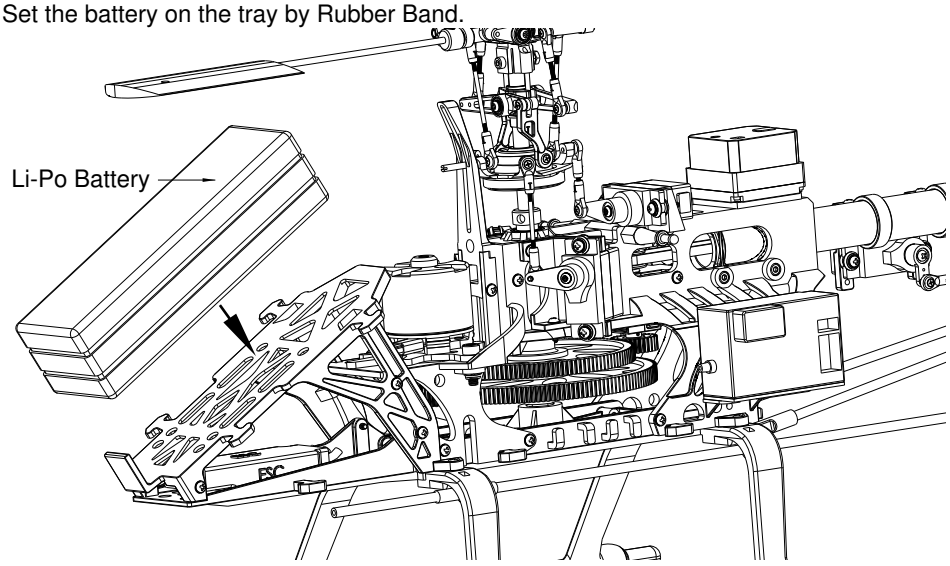
Step 1

1.Attach the receiver, gyro to the Main Frame by Double Side Tap.
2.Insert the Antenna Tube and fix it by the Rubber Tube.



Step 2

Set the battery on the tray by Rubber Band.

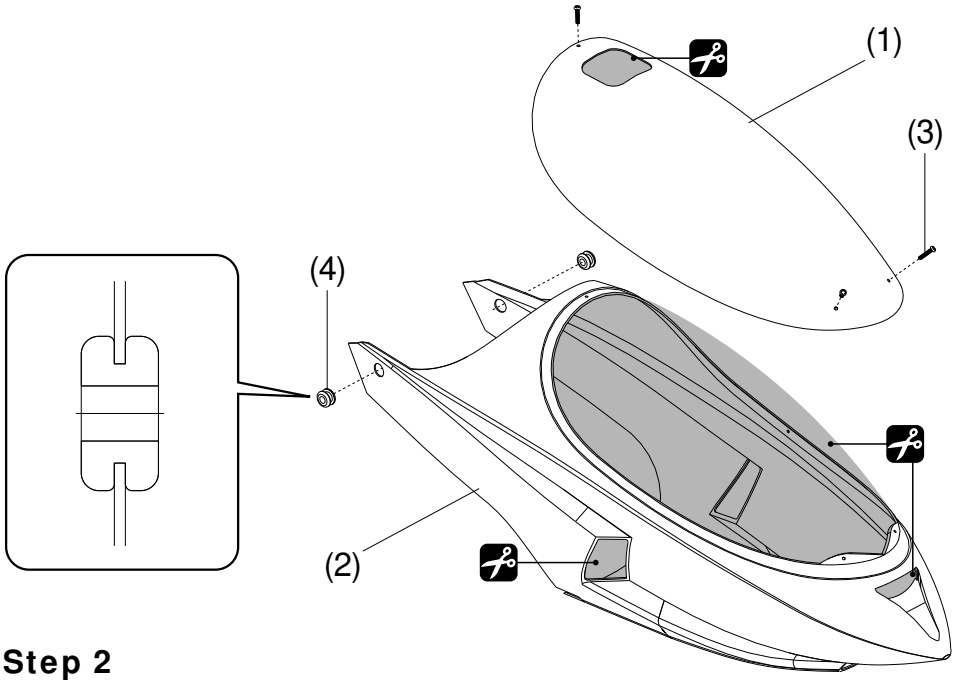


Canopy Assembly

No.	Description	Q'ty
1	Canopy	1
2	Body	1
3	Tapping Screw M1.2x3	3
4	Rubber Grommet	2

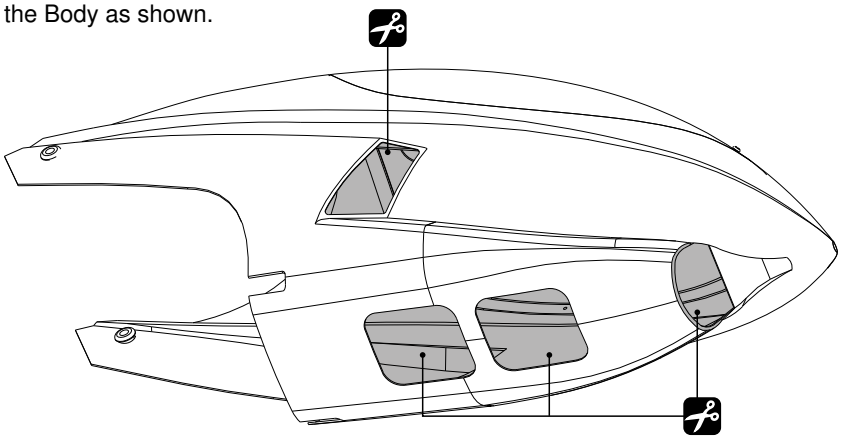
Step 1

1.Cut off the unnecessary part from the body and the canopy.
2.Attach the canopy to the body by 3 self-tapping screws.
3.Insert the Rubber Grommet to the body as shown.



Step 2

Cut the Body as shown.

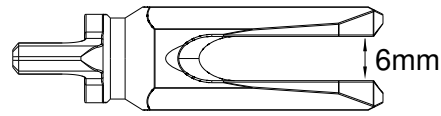


In order to increase the cooling efficiency of motor and ESC, the vent of the Canopy and the Body are already cut by TT factory.

Main Rotor Blade Assembly

No.	Description	Q'ty
1	Wood / Carbon Main Blade	2
2	Rotor Spacer	2
3	Socket Screw, M3x20	2
4	Nylon Nut, M3	2
5	Upper Blade Grip	2
6	Lower Blade Grip	2
7	Countersunk Screw M1.6x6	2

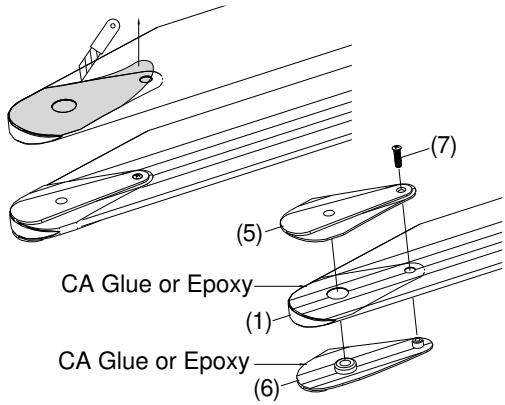
Note:

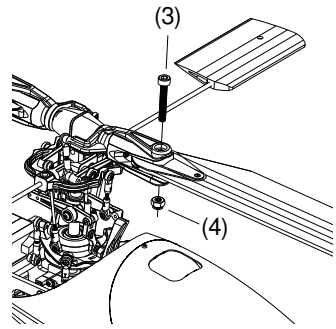


For Wood Blades:

Step 1

1.For safety concern, be sure to modify the main blades as following.
2.Mark around the blade grips with a felt tip marker.
3.Remove the blade grips and cut the covering gently around 1mm inside of the mark. Be careful not to hurt the blades.
4.Sand the inside of the grips lightly for better adhesion. Apply CA or Epoxy to blades in area as shown.
5.Attach blade grips and tighten the screws.
6.Wipe off the excess CA or Epoxy.





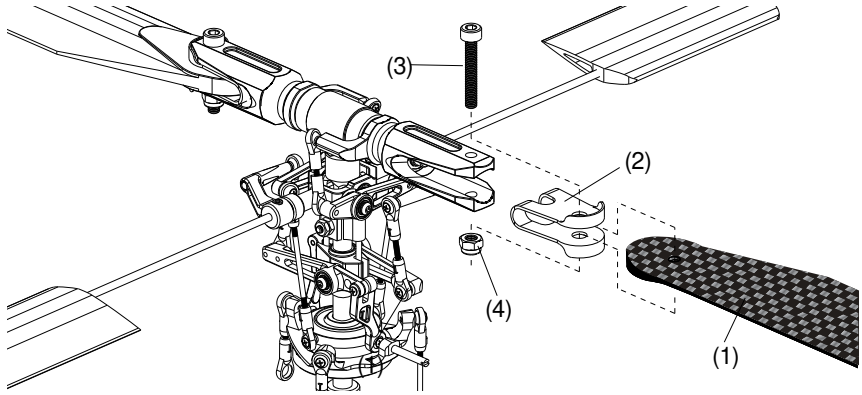
Step 2

1.Secure the blades to the Main Rotor Pitch Housing.
2.It is suggested to balance the blades.

For Carbon Blades:

Step 1

1.Insert the Rotor Spacer into the Metal Main Rotor Pitch Housing.
2.Secure the Carbon Main Blades to the grips. Please dont over tighten the screws.



INTRODUCTION OF E-CCPM CONTROL SYSTEM

The E-CCPM(Electric Cyclic/Collective Pitch Mixing) system offers the users a control system that can accomplish the same control as traditional M-CCPM(Mechanical Cyclic/Collective Pitch Mixing) system, but with simple machinery. The 120°E-CCPM system utilizes 3 servos for the main control of aileron, elevator and collective pitch. The 3 servos work independently from each other of M-CCPM system, but they work as a team to achieve the same control of the E-CCPM system. For example, if a collective input is given, all of the 3 servos work together to move the swashplate up and down. If an aileron input is given, 2 servos work at the same time to make the swashplate inclined. With servos working together during any given command, the torque is maximized. In addition, E-CCPM system execute the given control inputs with less complex mechanical mixing systems and require less control rods and parts.

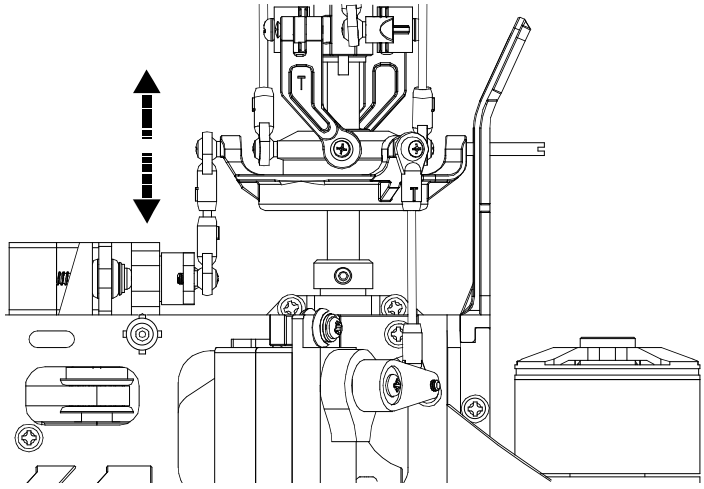
In today's modern computer radio system, the E-CCPM system is established in the program. Since the 120°E-CCPM function are pre-programmed, there is no more complicated mixing/setup than the M-CCPM system. For the radio type and brand, please choose which has the 120°E-CCPM function. Please note that it is not possible to use a non-E-CCPM radio system for E-CCPM operation without any other electronic mixer.

MOVEMENT OF 120° ECCPM SYSTEM

The given inputs are executed by the team work of the 3 servos through the mixing program of the radio or the electronic mixer. The following are the examples showing how the movement be carried out.

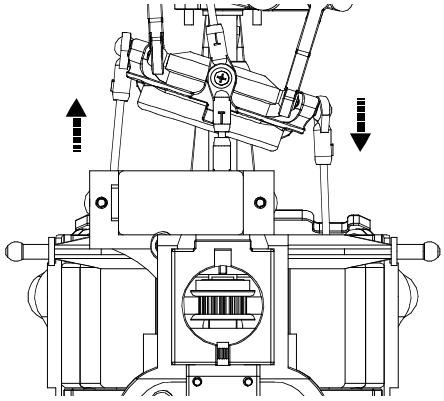
COLLECTIVE PITCH

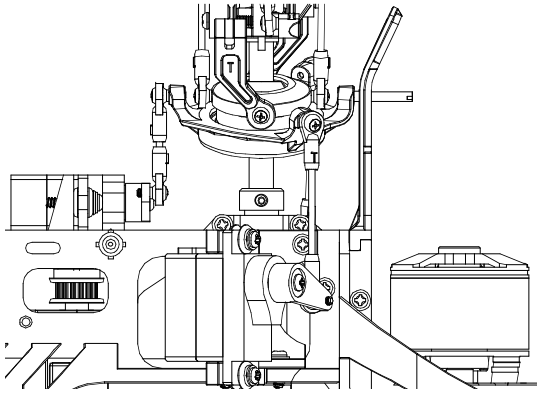
When a collective pitch command is given, all of the 3 servos move toward the same direction with same speed and same travel distance. This movement is to raise or lower the swashplate and keep the swashplate level. Thus, the required collective pitch can be reached without cyclic input.



AILERON

Aileron is controlled by the 2 servos in the front. When an aileron command is given, one servo will pull the swashplate downward and the other will push the swashplate upward so that the roll command is executed. They move contrary with same speed and travel distance, and the third servo in the back remains still at this moment.

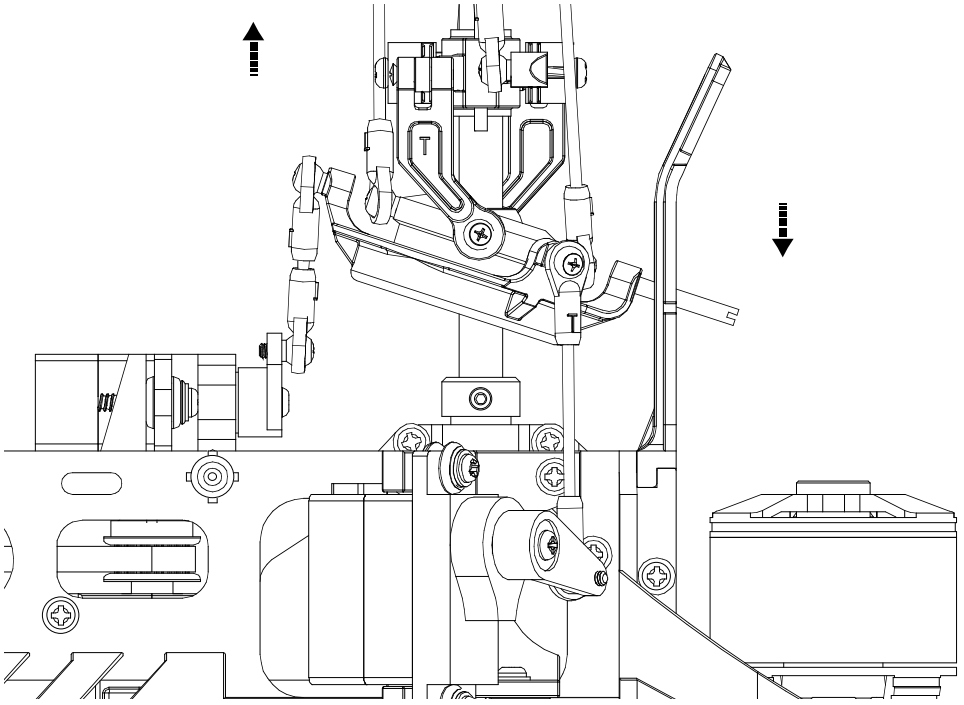




MOVEMENT OF 120° ECCPM SYSTEM

ELEVATOR

The elevator is controlled by all of the 3 servos. When an elevator command is given, the 2 servos in the front move in the same direction and the third one move contrary. For example, when a down elevator command is given, the 2 front servos pull the swashplate downward and the third one push the swashplate upward so that the down elevator command is executed. The 3 servos pull/push the swashplate at the same time to accomplish the given command.

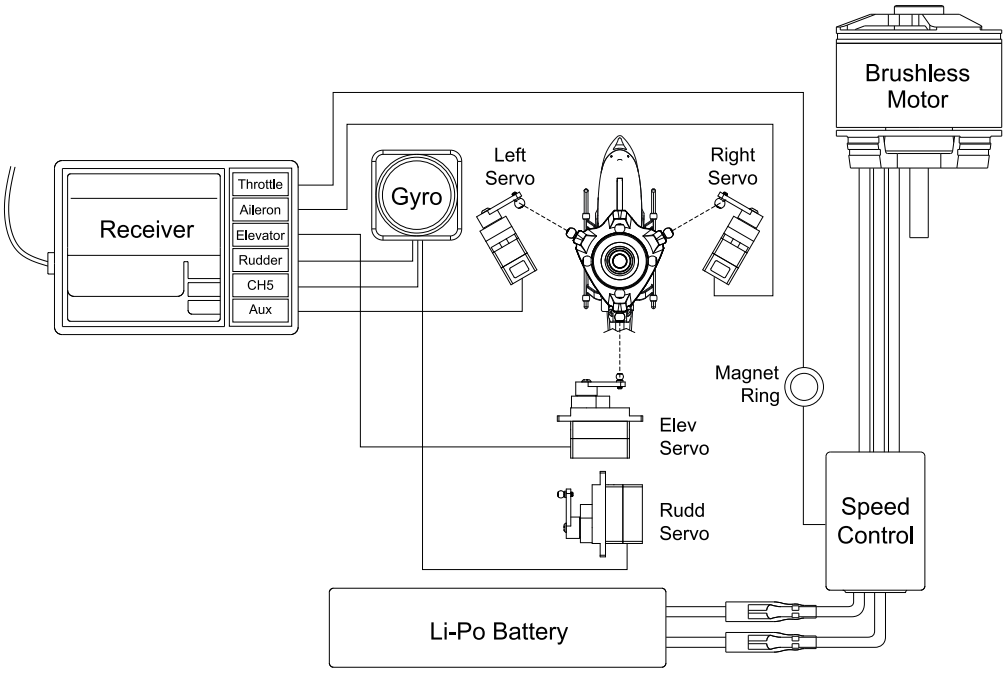


SERVO CONNECTING

E-CCPM system requires 3 channel for aileron, elevator and an AUX(for pitch). But people may get confused because the 3 channels are not referred to any independent movement. They are operated together to carry out the rolling, flipping and collective controlling. As a result, the following connecting manner is recommended.

1. The rear servo located in back of the swashplate MUST be plugged into the elevator channel.
2. Suppose the servo in the right side is plugged into the aileron channel.
3. The left servo is plugged into the AUX channel.

The following chart is the E-CCPM connecting for your reference. Please also consult your radio instruction manual.



BASIC CONCEPT OF ADJUSTMENT

Because people may be confused with the operating manner of the E-CCPM system, we want to explain the basic concept of how to center and trim the servo while adjusting the full travel distance.
First of all, we have to make it clear about what do you want to adjust. Do you want to adjust the servo itself or the control surface? For example, if you want to adjust the servo which is plugged into the aileron channel itself, only the servo will be adjusted. But if you want to adjust the aileron "rolling" surface, the two servos plugged into aileron and AUX channels will be adjusted. Making clear of this basic concept will simplify the process of adjustment.
Furthermore, you have to realize the function of “Reverse”, “Sub Trim”, “Trim”, “Travel Adjustment”, “D/R & EXP” and “Swash Mixing” of the transmitter. There are different names for those functions between different brands of the radio, but their definitions are basically the same. The following table shows the functions which those items refer to:

Items		Adjust the Servo Itself	Adjust the Control Movement
Reverse		*	
Sub Trim		*	
Travel Adjustment		*	
Trim			*
D/R & EXP			*
Swash Mixing	± Aileron		*
	± Elevator		*
	± Pitch		*

Therefore, if you want to adjust servos themselves, please use the “Reverse”. “Sub Trim”, and “Travel Adjustment”. If you want to adjust the control surface, please use the “Trim”, “D/R & EXP” and “Swash Mixing”.
For example, it is necessary to do minor centering adjustments to achieve the desired servo arm position with the “Sub Trim” function. Under this circumstance, you have to adjust the servo itself, not the control surface.

Before starting, make sure the following preparation is done.
1. Set all trims, knobs, and switches to the neutral and zero position.
2. Reset the radio to its factory preset position.
3. Choose the 120*E-CCPM swashplate control mode.

Reversing/Swash Mixing

The moving direction of servos has to be confirmed. You can attach the servo arms to the servos temporarily so that it makes it easier to see the servos moving direction. While giving a positive collective pitch, all of the 3 servos are supposed to be moving in the same direction to descend the swashplate. If the 3 servos are moving in the same direction but to raise the swashplate, you have to use the "swash mixing" function to make it descend. If any of the servos is moving contrary, you have to adjust the one by "reverse" function. Since the moving manner above is determined, the "reverse" function of Aile/Elev/AUX is done.

Next, you have to check the control surface. While giving a cyclic pitch control, the swashplate has to be tilted toward the correct direction. If not, you have to adjust it by "swash mixing" function. For example, if a down elevator command is given, the swashplate is supposed to be tilted forward. If the swashplate is tilted rearward, you have to change the +/- of the elevator control surface by "swash mixing" function. So as the aileron control surface.

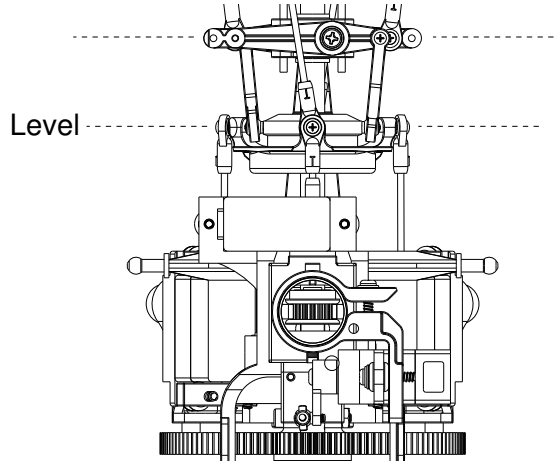
To sum up, the "reverse" function is to adjust the servo itself, and the +/- of the "swash mixing" function is to adjust the control surface.

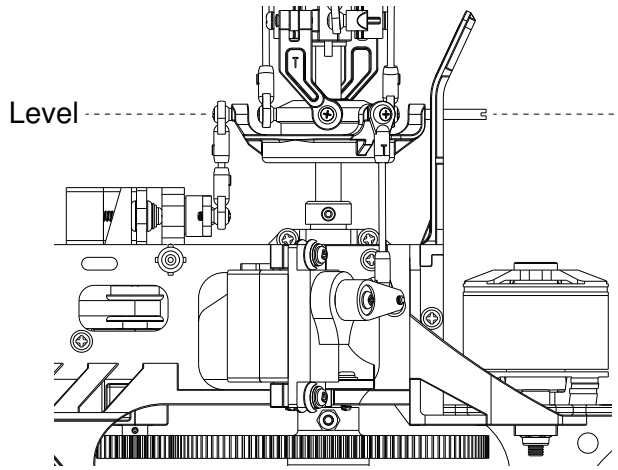
Servo Arms

After the moving direction of the servos is determined, please center the collective control stick. With the collective control stick is centered, install the servo arms of the 3 servos. They are supposed to be level. If the servo arms tilt with a small degree, use the "sub trim" function to adjust it independently. Thus the procedure of centering is complete.

Level the Swashplate

After centering the servos, setting the length of the control linkages and attaching them to the link balls, it is important to check the swashplate that it is level. Turn on the transmitter and the receiver, do not connect the Motor at this moment, and center the collective pitch stick. Make sure all the trims and knobs are centered and the pitch curve should be 0% at low end and 100% at high end at present. The servo arms should be level. While the collective pitch stick is centered and the servo arms are level, the swashplate is supposed to be level. First, check the swashplate from the rear of the model to insure if it's level from left to right. If the swashplate is not level as compared to the frame of the model, adjust either the left or right servo control rods. Next, check the swashplate from a side of the model to insure if it's level from head to rear. If the swashplate is not level, adjust the control rod of the servo in the back.





COLLECTIVE TO CYCLIC MIXING ADJUSTMENT

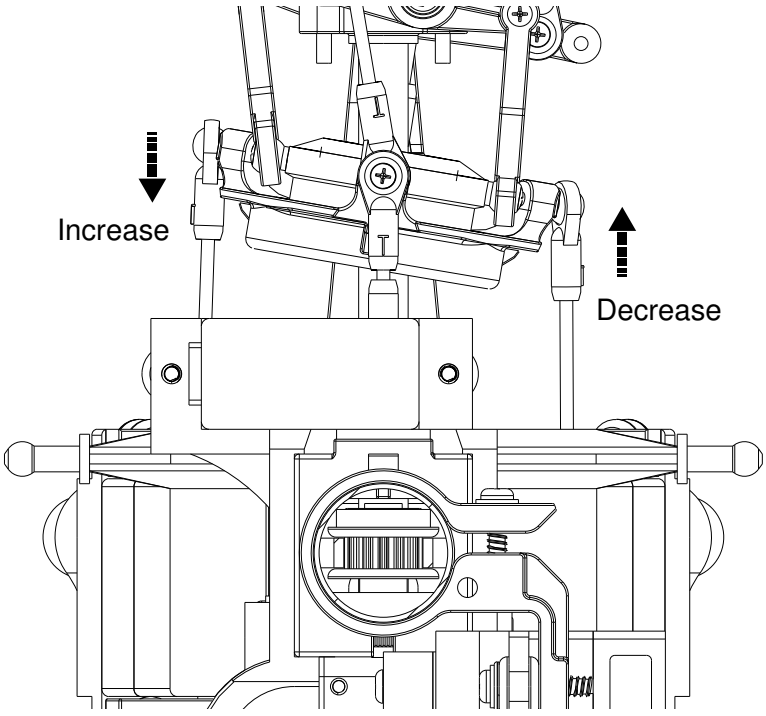
It always happens that the travel of each servo varies slightly. If so, the swashplate would be tilted when giving a full collective pitch command. These variations can be corrected by altering the travel value of each servo slightly by using the “Travel Adjustment” function.

Pitch to Aileron Mixing

Place the collective stick to the full positive pitch position. Check the swashplate from the rear of the model to insure if it’s level from left to right. If the swashplate is not level as compared to the frame of the model, adjust either the servos by using the “Travel Adjustment” function.

For example, the swashplate has been tilted to the right side while giving full positive collective pitch. It indicates that the left servo’s travel is less than the right servo’s travel. You can either increase the travel of left servo or decrease the travel of right servo. Check the swashplate again to insure that it’s level.

It is necessary to repeat the procedure while giving full negative collective pitch. Check if the swashplate is level and adjust the servos as needed while the full negative collective pitch is given.



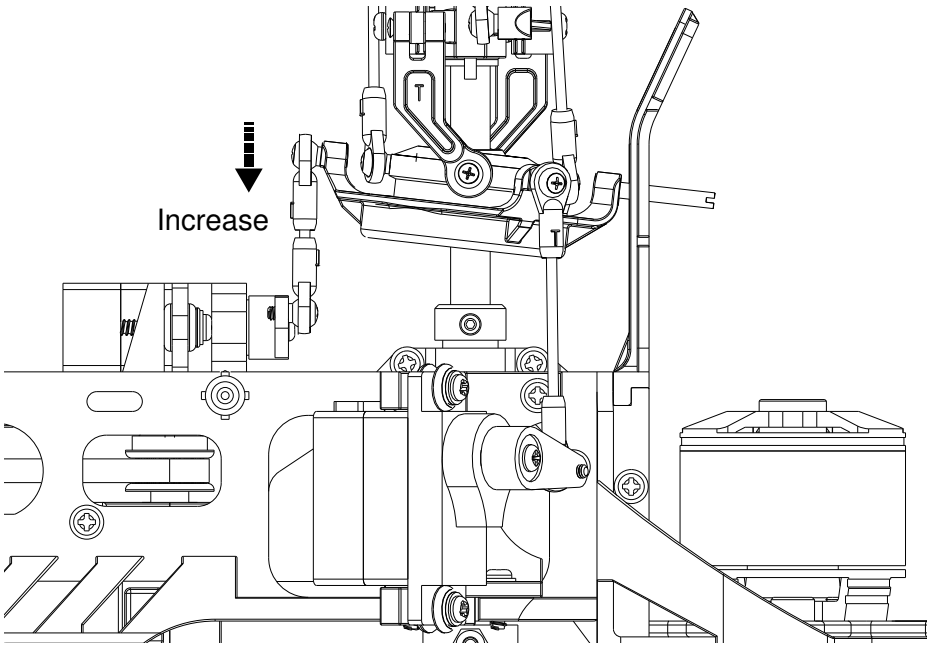
COLLECTIVE TO CYCLIC MIXING ADJUSTMENT

Pitch to Elevator Mixing

Through the previous step, we've got rid of the pitch to aileron mixing. It is as important to vanish the pitch to elevator mixing. Place the collective stick to the full positive pitch position. Check the swashplate from a side of the model to insure if it's level from head to rear. If the swashplate is not level, adjust the elevator servo by using the "Travel Adjustment" function.

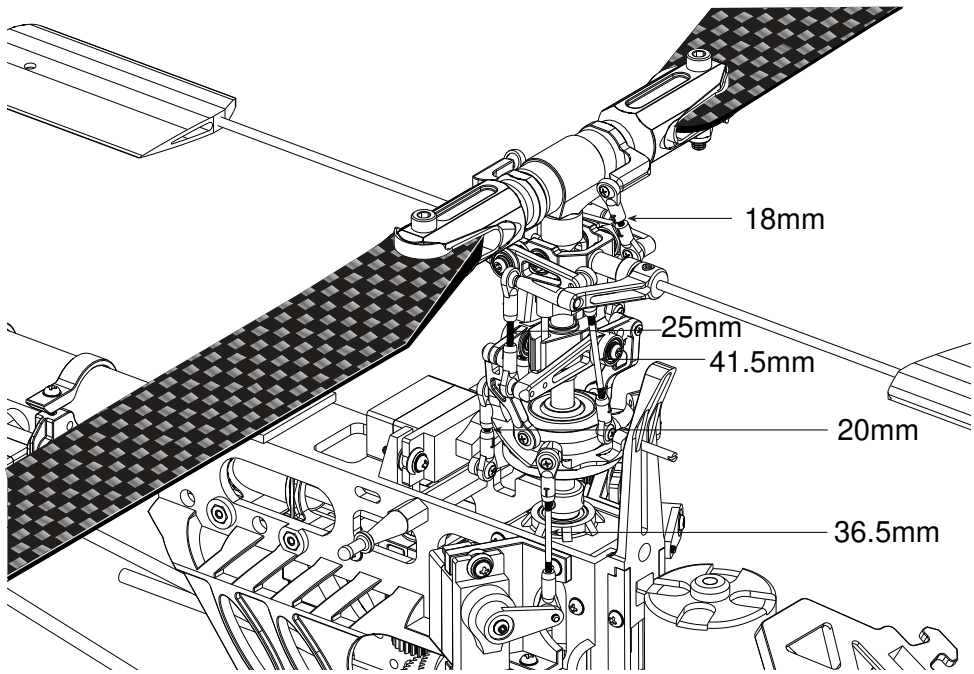
For example, the swashplate has been tilted forward while giving full positive collective pitch. It indicates that the elevator servo's travel is less than the rest two's travel. Please increase the travel of elevator servo. Check the swashplate again to insure that it's level.

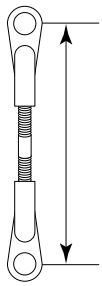
It is necessary to repeat the procedure while giving full negative collective pitch. Check if the swashplate is level and adjust the elevator servo as needed while the full negative collective pitch is given.



SETTING UP OF LINKAGE

The lengths of the linkage rods are recommended as the following:





Lengths are measured from ball link center to ball link center.

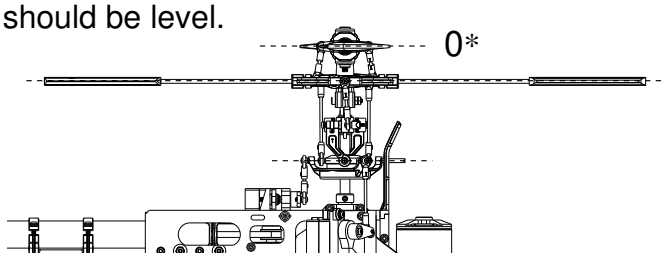
The pushrod length above is suitable for beginner and 3D flying. You can use those lengths as the starting setting, and adjust the lengths for your flying style. The lengths of the pushrods are measured from the center of the linkage ball to the center of another.

SETTING UP MAIN ROTOR COLLECTIVE PITCH ANGLE

Since you have been setting the lengths of the pushrod as mentioned, the linkage should be centered well as described below.

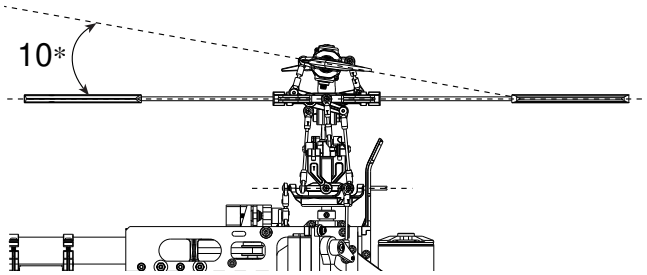
Centering

1. The levers should be as the drawing below while centering the collective pitch stick.
2. Parallel the flybar, the main blades should be at 0 degree and the swashplate should be level.



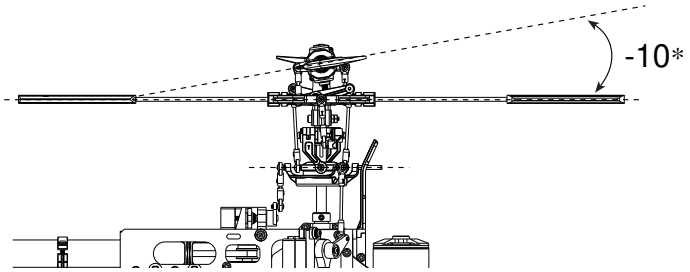
Maximizing

1. Place the collective stick at high end.
2. The main blades should be at 10 degree and the swashplate should be level.



Minimizing

1. Place the collective stick at low end.
2. The main blades should be at 10 degree and the swashplate should be level.



NOTE:

1. The steps above define the limits of the collective pitch setting.
2. The setting of the maximum collective pitch depends on your personal flying skill and style. Too much collective pitch could overload the ESC, motor and the battery. And it will reduce the flying time also.

SETTING UP DATA FOR YOUR REFERENCE

The following is the setting up data of pitch curve and throttle curve for your reference only. Please ask experienced pilot to help you if you have never done this before.

Beginner

Throttle Curve

	1	2	3	4	5
Normal	0	45	65	85	100

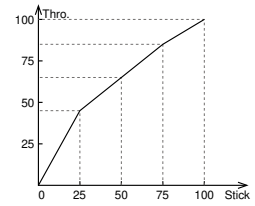
Pitch Curve

	1	2	3	4	5
Normal	40	-	75	-	100

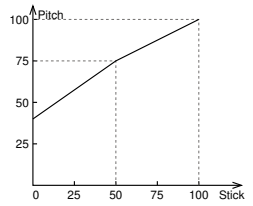
Pitch Angle

	1	2	3	4	5
Normal	-2*	-	+5*	-	+10*

Throttle Curve



Pitch Curve



Aerobatic Flying

Throttle Curve

	1	2	3	4	5
Normal	0	45	65	85	100
Idle 1	80	-	70	-	100
Idle 2	100	-	80	-	100

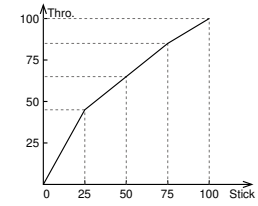
Pitch Curve

	1	2	3	4	5
Normal	30	-	75	-	100
Idle 1	20	-	75	-	95
Idle 2	5	-	-	-	95
Hold	0	-	-	-	100

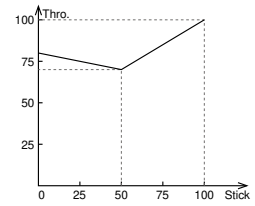
Pitch Angle

	1	2	3	4	5
Normal	-4*	-	+5*	-	+10*
Idle 1	-6*	-	+5*	-	+9*
Idle 2	-9*	-	-	-	+9*
Hold	-10*	-	-	-	+10*

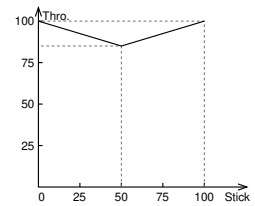
Throttle Curve



• Normal

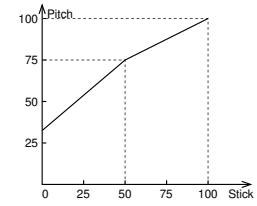


• Idle-up 1

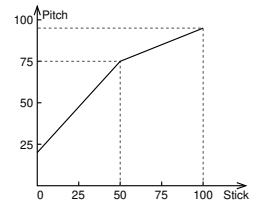


• Idle-up 2

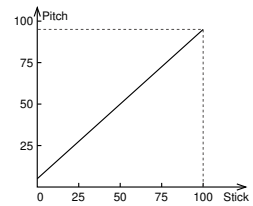
Pitch Curve



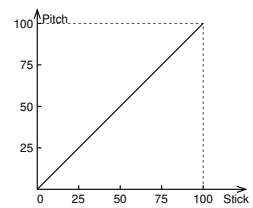
• Normal



• Idle-up 1



• Idle-up 2



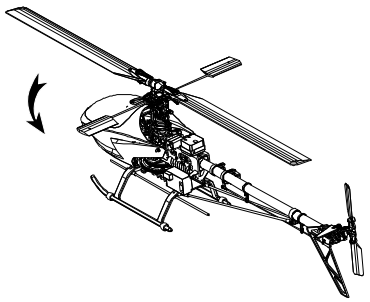
• Hold

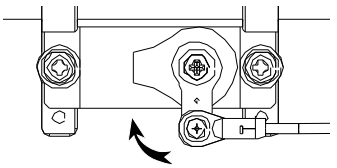
TAIL CONTROL AND GYRO SETUP

It is recommended to use a Heading Hold Gyro. With a Heading Hold Gyro, you may not use the trim and the revolution mixing function of tail control.

First, choose the length of the tail servo arm referring to the manual of the Gyro. You may try 10.5mm as the starting setting. Then mount the servo arm for the moment and check the movement of the tail servo:

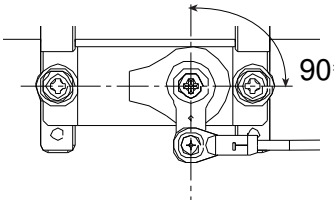
1. While giving the right rudder control, the servo arm should move forward.
2. Rotate the helicopter with your hand counterclockwise, the servo arm should move forward.

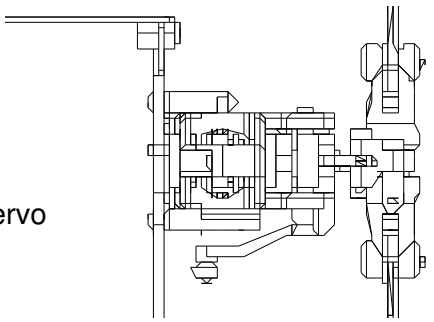




After making sure of moving direction of tail servo, you have to mount the servo arm in the correct position. Please reset the receiver power and do not move the helicopter. While the tail control stick and trim are centered, mount the servo arm vertically. Next, two points may be your concern:

1. The traveling limit of the tail servo may not go beyond the mechanical movement.
2. The tail servo horn should be vertical while the tail rotor are at 0 pitch or with a little offset to the right.(Referring to the photo below)





Note

1. To find the traveling limit, you have to adjust the Gyro referring to its manual.
2. To adjust the pirouetting speed of the helicopter, please use the ”Travel Adjustment” or the ”D/R & EXP” function.

USING OF LI-PO BATTERY

The mini Titan E325 SE is an electric RC helicopter. It is strongly recommended to use Lithium Polymer Battery. Please refer to the following information and precaution:

1. Do use a charger that is designed for Li-Poly batteries only.
2. Do not overcharge the battery over the maximum voltage of 4.2V/per cell.
3. Do not discharge the battery below the minimum voltage of 3.0V/per cell.
4. Do not charge the battery unattended.
5. Do not charge the battery in a flammable circumstance.
6. If you want to store the battery for a long time, store them at 3.8V/per cell.

Please understand the information and precaution above and that you agree to accept the full responsibility of using the battery and any injury caused by the battery. Thunder Tiger and its duly authorized distributors assume no liability for damage that could occur by the improper using of the battery.

TROUBLE SHOOTING

Helicopters

Q: What would you check when the helicopter shakes during flying?

A: a. Are the main blades out of track?
b. Are the paddles out of track?
c. Are the main blades well balanced?
d. Are the paddles well mounted at the same distance from the rotor shaft?
e. Is the spindle or the flybar bent?
f. Is the main shaft bent?
g. Is the main rotor hub damaged?
h. Is the motor well installed and is the shaft of the motor bent?
i. Is the tail rotor shaft bent?
j. Is the tail rotor hub damaged?
k. Do all the ball bearings work well?

Q: What would you do if there comes out a lot of noise from the helicopter during flying?

A: a. Please check the gear mesh between the main gear and the motor pinion. If there is too much gear mesh, it would generate a lot of gear noise during flying.
b. If the tail drive belt is too loose, it will bring about some noise and may cause the failure of tail control.
c. Check the linkages and control system of main rotor and tail rotor to make sure every linkage is working correctly and not colliding with something else.
d. Check if the motor is running out of balance.

Motor, Battery and Speed Controller

Q: How to choose the motor and the pinion?

A: It depends on the battery and the motor. The following is the formula of how to calculate the wanted head speed.

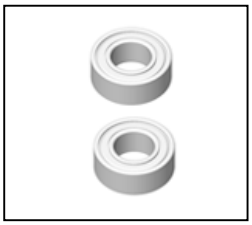
Motor RPM = Motor KV x Volt(3.7V) x Series x constant (0.8)
Head Speed = Motor RPM / Gear Ratio
Gear Ratio = 150T / Motor Pinion

Example:
We choose TT OBL 29/37-10H optional brushless motor.
If using a 3S(11.1V) Li-Po battery, the motor rpm should be
3700KV x 3.7V x 3S x 0.8=32856 rpm
And we expect to have the head speed of 2800~3000 rpm
32856 / Gear Ratio=2900
Gear Ratio=11.33

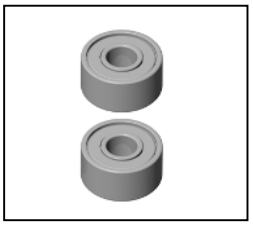
The pinion would be
150T/11.33=13.24
So we choose 13T as the motor pinion.

Q: Which motor and speed control is recommended?
A: The TT OBL29/37-10H optional brushless motor(No.2382) and the ACE BLC-40(No.8041-H) speed control are recommended.

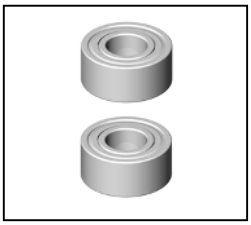
E325 SE SPARE PARTS



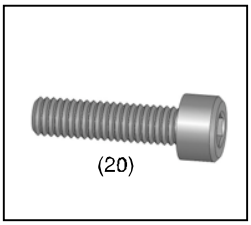
PV0048
BALL BEARING, d4xD8xW3(2)



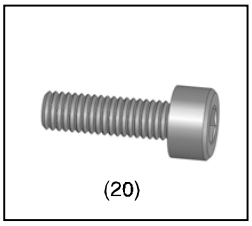
PV0049
BALL BEARING, d3xD8xW4(2)



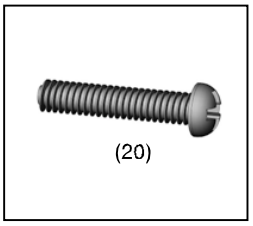
PV0059
BALL BEARING, d5xD11xW5(2)



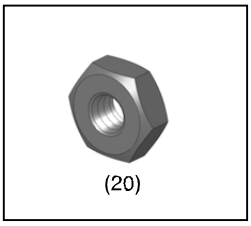
PV0211
SOCKET SCREW(20), M2.6x10



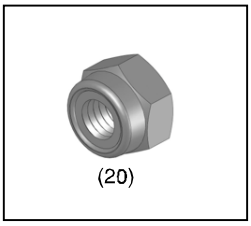
PV0212
SOCKET SCREW(20), M3x10



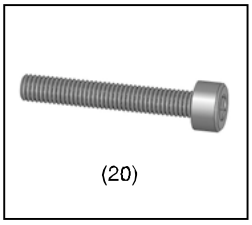
PV0229
BT P. TAP SCREW, M2x10



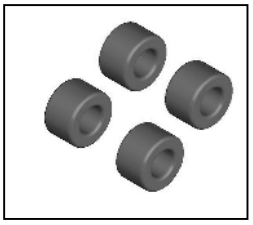
PV0234
NUT(20), M2



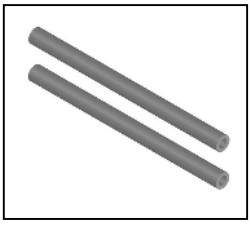
PV0236
LOCK NUT(20), M3



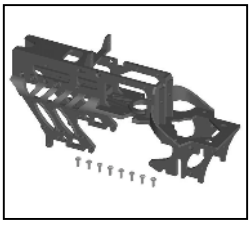
PV0257
SOCKET SCREW(20), M3x20



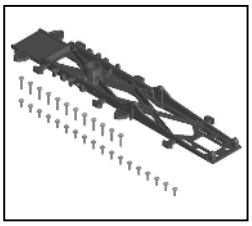
PV0706
FLAP DAMPER(70°)



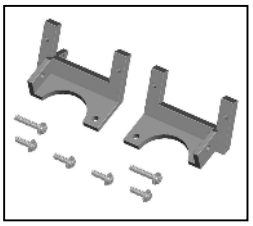
PV0707
FEATHERING SHAFT(2)



PV0714
MAIN FRAME



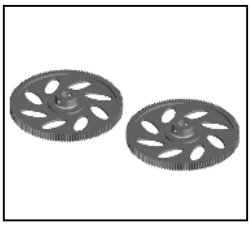
PV0715
BASE PLATE



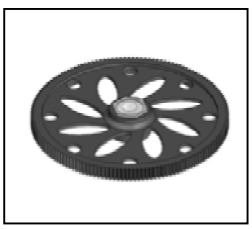
PV0718
SERVO TRAY



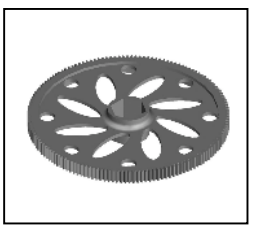
PV0721
PHASE CONTROL TRACK



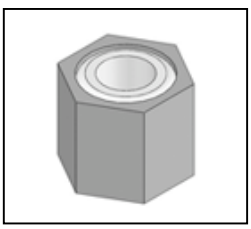
PV0722
AUTO-R TAIL DRIVE GEAR



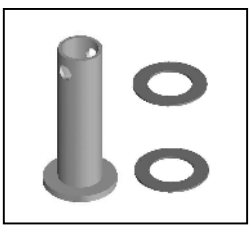
PV0723
MAIN GEAR (W/BEARING)



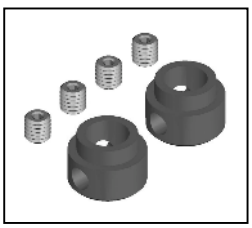
PV0724
MAIN GEAR ONLY 50T



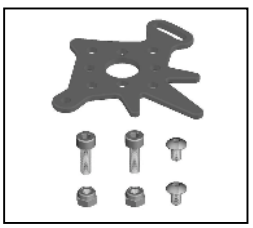
PV0725
M.G. HEX DRIVE HUB



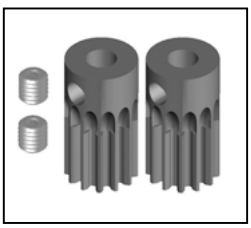
PV0726
ONE WAY SHAFT



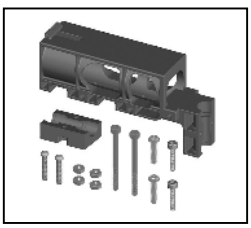
PV0727
M. SHAFT LOCK RING(2)



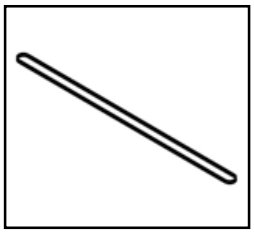
PV0728
MOTOR MOUNT



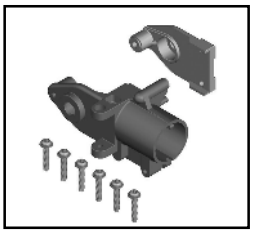
PV0729
PINION 13T



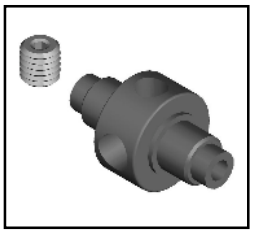
PV0732
TAIL BOOM BRACKET



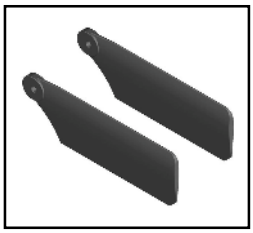
PV0735
TAIL DRIVE BELT, MXL413T



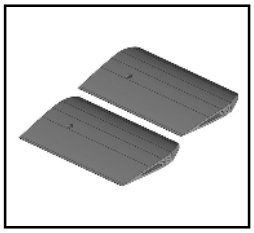
PV0736
TAIL UNIT CASE SET



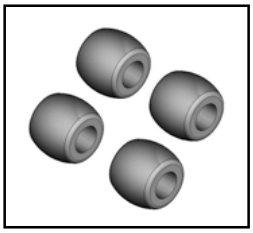
PV0741
TAIL ROTOR HUB



PV0742
TAIL ROTOR



PV0744
FLYBAR PADDLE



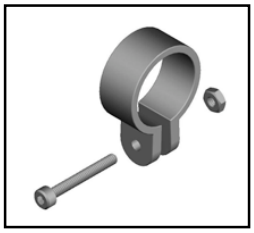
PV0746
SKID DAMPER



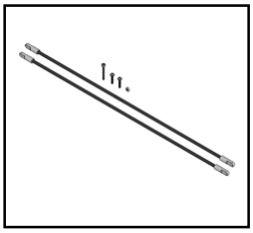
PV0747
TAIL SERVO TRAY



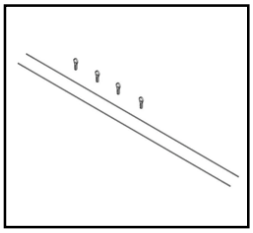
PV0748
DOUBLE JOINT LEVER



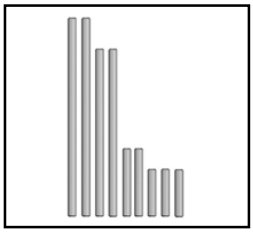
PV0751
TAIL SUPPORT BRACKET



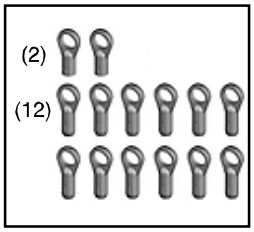
PV0752
TAIL SUPPORT



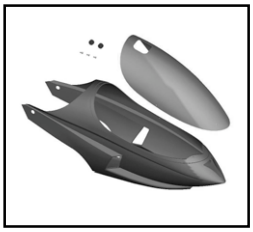
PV0753
TAIL LINKAGE ROD



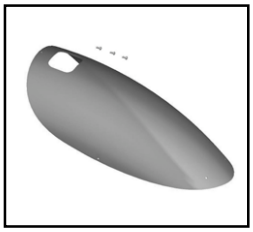
PV0754
LINKAGE ROD SET



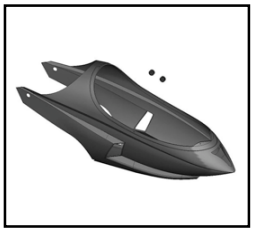
PV0755
BALL LINK, 3.8



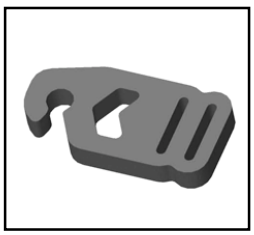
PV0756
BODY SET



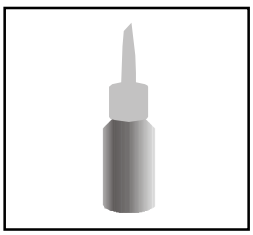
PV0757
CANOPY



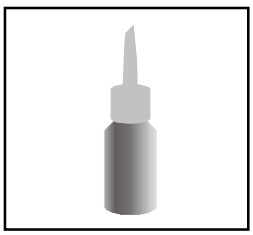
PV0758
BODY ONLY



PV0759
BLADE HOLDER



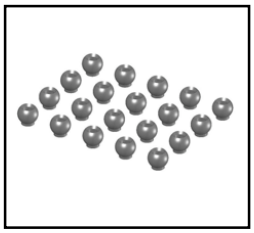
PV0760
ANAEROBICS RETAINER, R48



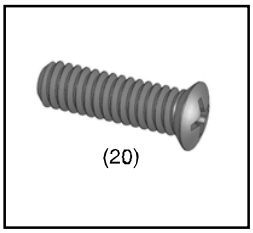
PV0761
THREADLOCKING, T22



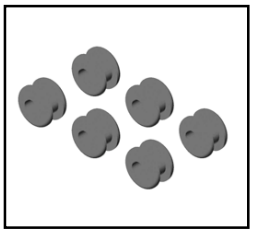
PV0762
TAIL ROD GUIDE



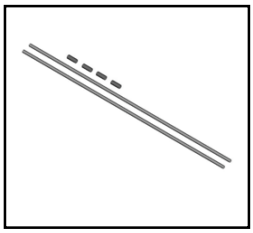
PV0763
LINKAGE BALL ø3.8(20)



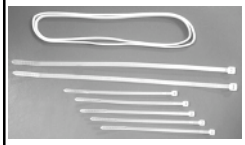
PV0764
COUNTER SCREW, M1.6x6(20)



PV0765
BODY MOUNT RUBBER



PV0767
ANTENNA TUBE SET



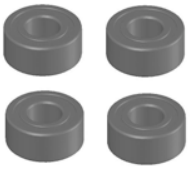
PV0768
RUBBER BAND AND NYLON STRAP SET



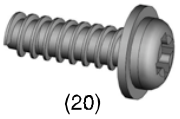
PV0769
THRUST BEARING(2), d4xD9x4



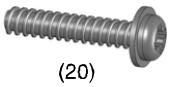
PV0770
BEARING(10), d2xD5x2.5t



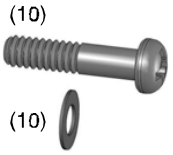
PV0771
BEARING(4), d4xD9x4t



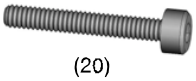
PV0772
TAPPING SCREW (W/WASHER), M2x6



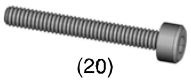
PV0773
TAPPING SCREW (W/WASHER), M2x10



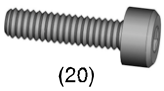
PV0774
SHOULDERED SCREW, M2x9



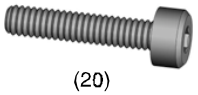
PV0775
SOCKET SCREW(20), M2x14



PV0776
SOCKET SCREW(20), M2x16



PV0777
SOCKET SCREW(20), M2x8



PV0778
SOCKET SCREW(20), M2x10



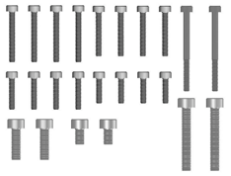
PV0779
SOCKET SCREW(20), M2x25



PV0780
SET SCREW(20),M3x3



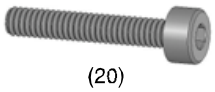
PV0781
SCREW BAG



PV0782
SOCKET SCREW BAG



PV0783
SOCKET SCREW(20),M2.6x8



PV0784
SOCKET SCREW(20), M2x12



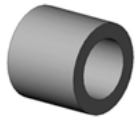
PV0785
SOCKET SCREW(20), M2x14



PV0786
SHOULDERED SCREW(20), M2x6



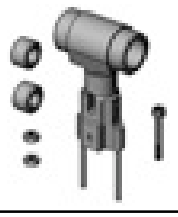
PV0787
FLAT WASHER(20), d2xD3.7x0.5t



PV0788
COLLAR(10), d2xD3x2.5t



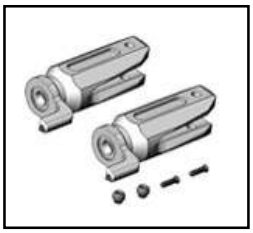
PV0789
COLLAR(10), d2xD3x5.6t



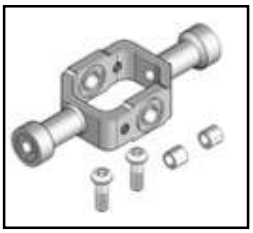
PV0801
METAL M. ROTOR HUB



PV0802
HARDENED MAIN SHAFT



PV0803
METAL ROTOR GRIP



PV0804
METAL SEESAW HUB



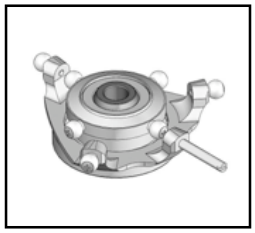
PV0805
METAL MIXING LEVER



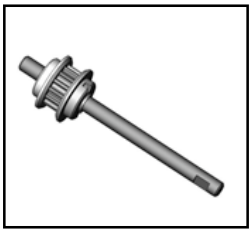
PV0807
M. FLYBAR C. LEVER



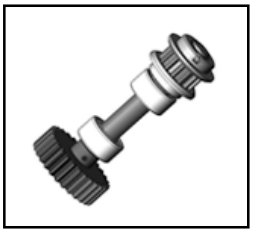
PV0808
METAL WASHOUT BASE



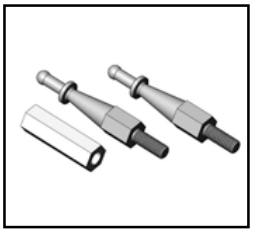
PV0809
METAL SWASHPLATE



PV0814
METAL PULLEY



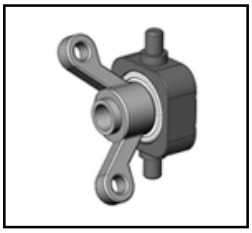
PV0815
M. T. DRIVE PINION



PV0816
M.BODY POST



PV0818
M. T.PITCH LEVER



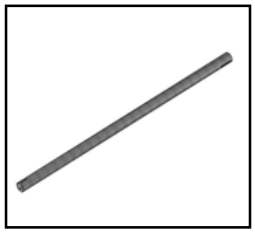
PV0820
M. TAIL P. Control Set



PV0821
M. T. PITCH LINK



PV0823
M. TAIL P. HOUSING



PV0825
CARBON TAIL BOOM



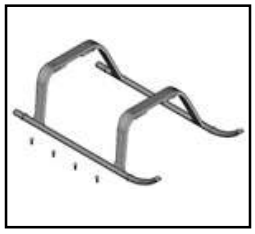
PV0829
ROTOR SPACER(FOR 5mm BLADE ROOT)



PV0837
3D FLYBAR PADDLE



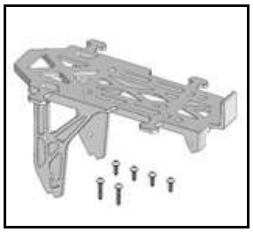
PV0838
M. FLYBAR C. ARM



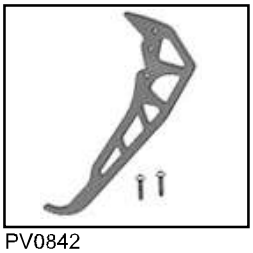
PV0839
LANDING SKID(BLACK)



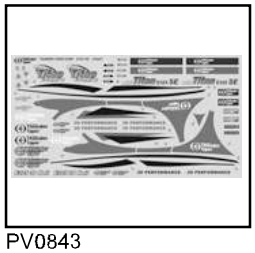
PV0840
ONE PIECE UPPER BRG HOUSING



PV0841
ONE PIECE BATTERY TRAY



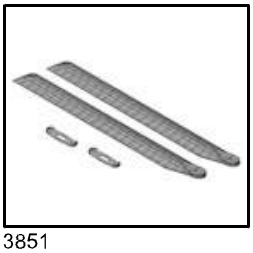
PV0842
3D CARBON TAIL FIN



PV0843
DECAL, E325 SE

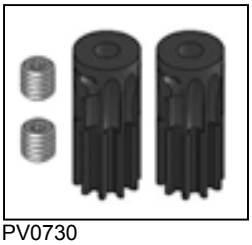


PV0844
SUS FLYBAR ROD(SE)

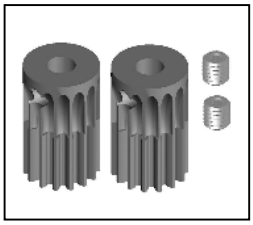


3851
CARBON ROTOR BLADE,325mm

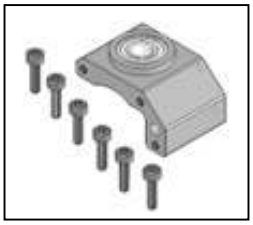
E325 SE OPTIONAL PARTS



PV0730
PINION 10T(2)(FOR 2.3mm SHAFT)



PV0731
PINION 15T



PV0810
METAL BRG BLOCK



PV0811
METAL SERVO TRAY



PV0819
M. D. JOINT LEVER



PV0828
SETTING WEIGHT



PV0830
PINION 11T (d2.3)



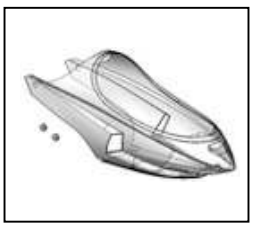
PV0831
PINION11 (d3.17)



PV0832
PINION12T

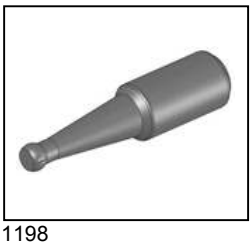


PV0833
PINION14T

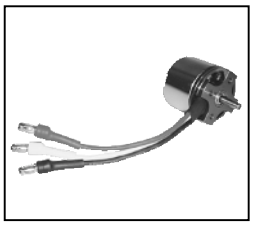


PV0836
BODY (PELLUCID)

E325 SE ACCESSORIES



1198
BALL LINK REAMER (3.8mm)



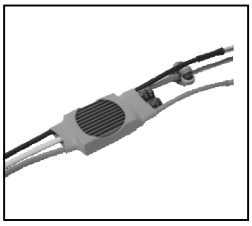
2382
BL. MOTOR, OBL 29/37-10H



2532
LI-PO BATTERY E-CHARGER, ELC4



2808
LI-PO BATT,3S1P/2200mAh/20C



8041-H
SPEED CONTROL, BLC-40



8117
ACE MICRO SERVO , C1016



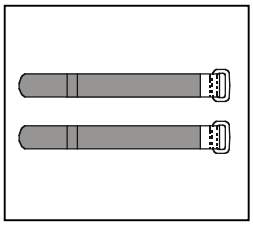
8131
ACE MICRO SERVO , C0915



AQ0836
GOLD CONNECTORS(3.5mm)

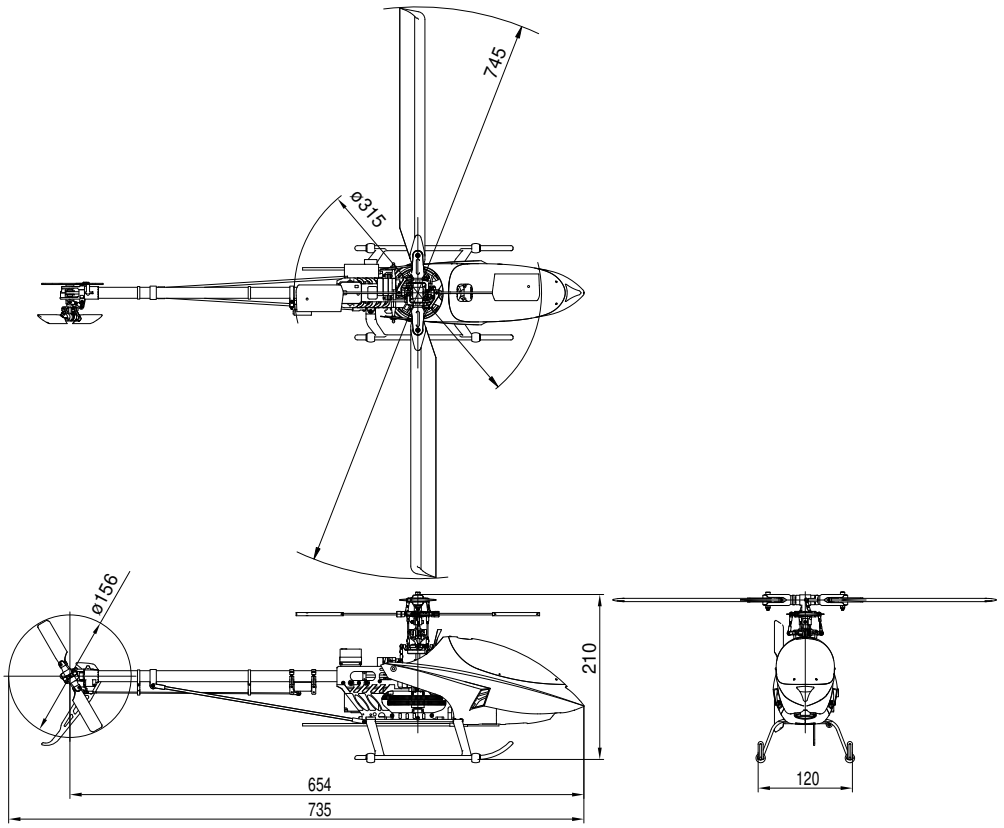


AQ0837
GOLD CONNECTORS(4mm)



PV0835
VELCRO

SPECIFICATION



Fuselage length: 654 mm (25.74 in)
Fuselage width: 120mm (4.72 in)
Total height: 210mm (8.3 in)
Main rotor dia.: 728mm (28.66 in) / Max.748mm (29.45 in)
Tail rotor dia.: 156mm (6.14 in)
Gear ratios: 1 : 10 : 4.4
1 : 11.5 : 4.4
1: 15 : 4.4
Full equipped weight: 870g(30.6 oz)

FEATURES

1.Full metal rotor head
2.Metal tail drive gear set
3.Metal canopy retaining post
4.Metal pulley set
5.Metal tail rotor hub and grips
6.Metal tail push pull linkage
7.Carbon tail boom and 3D vertical fin
8.One piece battery tray and black landing skid
9.New decal



Thunder Tiger

THUNDER TIGER CORPORATION

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