OPERATING YOUR MODEL SAFELY

Operate the helicopter in spacious areas with no people nearby.

**Warning:** Do NOT operate the helicopter in the following places and situations (or else you risk severe accidents):

- in places where children gather or people pass through
- in residential areas and parks
- indoors and in limited space
- in windy weather or when there is any rain, snow, fog or other precipitation

If you do not observe these instructions you may be held reliable for personal injury or property damage! Always check the R/C system prior to operating your helicopter. When the R/C system batteries get weaker, the operational range of the R/C system decreases. Note that you may lose control of your model when operating it under such conditions.

Keep in mind that other people around you might also be operating a R/C model.

Never use a frequency which someone else is using at the same time. Radio signals will be mixed and you will lose control of your model.

If the model shows irregular behavior, bring the model to a halt immediately. Turn off all power switches and disconnect the batteries. Investigate the reason and fix the problem. Do not operate the model again as long as the problem is not solved, as this may lead to further trouble and unforeseen accidents.

**Warning:** In order to prevent accidents and personal injury, be sure to observe the following:

Before flying the helicopter, ensure that all screws are tightened. A single loose screw may cause a major accident. Replace all broken or defective parts with new ones, as damaged parts lead to crashes.

Never approach a spinning rotor. Keep at least 10 meters/yards away from a spinning rotor blades. Do not touch the motor immediately after use. It may be hot enough to cause burns.

Perform all necessary maintenance.

PRIOR TO ADJUSTING AND OPERATING YOUR MODEL, OBSERVE THE FOLLOWING

**Warning:** Operate the helicopter only outdoors and out of people’s reach as the main rotor operates at high rpm!

! **Warning:** While adjusting, stand at least 10 meters/yards away from the helicopter!

Novice R/C helicopter pilots should always seek advice from experienced pilots to obtain hints with assembly and for pre-flight adjustments. Note that a badly assembled or insufficiently adjusted helicopter is a safety hazard.

In the beginning, novice R/C helicopter pilots should always be assisted by an experienced pilot and never fly alone!
Notes:
- Put Blue Loctite into the Nuts
- Tighten till snug but not overly tight which would cause the pulleys to not spin freely

**Vertical Plate**
- Longer Carbon after Tab goes towards bottom

**Rear Plate**
- Long Carbon after Tab goes towards rear

*Insert Tail Belt Tensioner Assembly with the M3 Nuts towards the Bottom*
1.3 Front Frame Assembly

| Bag 1 | 8 x M3x6 | 8 x M3x8 | 2 x M3x6 | 3 x 57 | 1 x 61 |

1.4 Tail Boom Mounts

Ensure Boom Mounts are mounted with the Clamping Tabs to the left. Insert M2.5x10mm Bolt before installing in frame.

BLUE LOCTITE EVERYTHING
2 Motor Assembly

3 Engine/ Landing Gear Mounting

Slide the Engine Assembly in from the bottom at an angle.

Stock Engine Spacer

Note - You Must Block the Crankshaft from twisting with a crank locking tool when tightening the engine nut to the fan mount

Ex - Synergy Crank Locking Tool
Part Number - CLT-001

BLUE LOCTITE EVERYTHING

Fan Shroud WILL take additional modification - See Page 14 prior to install
Step 1: Thread Pinion to Clutch Bell. Use Loctite.

1mm Shim

2 x M3x6

M2,5x6

8 x M3x8

2 x M3x6

1 x M4x4

2 x M2,5x6

8 x 1mm

Optional RPM Sensor and magnets not included

Align flat spot with the setscrew.

Thread nut on snugly, but do not overtighten to point bearings have resistance.

Spin CCW against engine compression when tightening bolts.

Note: When tightening the 8 x Clutch Stack Mounting Bolts, you must spin the start shaft counter clockwise against engine compression in order to lock the one way bearing in the clutch to take out slop which will properly align the clutch stack.
5 Tail Rotor

1. Apply grease on bearing and open side out
2. Apply Loctite only in the threaded section inside the tail rotor hub!
3. Glue ball bearings using 5min. Epoxy

Bag 5
- 6x8x0,5 (2x)
- 5x8x3,7 (2x)
- M3x8 (5x)
- M3x16 (2x)
- M2,5x6 (1x)
- M3x35 (5x)
- Kugel/ball/Rotule Ø4,8x2 (1x)
- M3x14 (1x)
- M2x8 (1x)
- 3x5x0,5 (2x)
- 3x8x3,7 (2x)
- 3x7x3 (2x)
- 3x13x4 (2x)
- 3x27 (2x)

Apply grease on bearing and open side out.
Apply Loctite only in the threaded section inside the tail rotor hub!
Glue ball bearings using 5min. Epoxy.
Attach the ball links so that the engraved number is on the outer surface pointing towards you.
6 Tail Boom Assembly

Bag 6

- 1 x 61
- 2 x 3x5x6
- 2 x M3
- 1 x M3x90

Tighten tooth belt:
Pull tail rotor backwards and tighten screws

Push in tail boom until flush with front of front boom mount

Use red Loctite on the right nut to affix it to the threaded rod, then use it to slide through the frame and screw to the opposing Nylock Nut while holding it with pliers.
7 Servo Arm Setup

Attach the ball links so that the engraved number is on the outer surface pointing towards you.

Slide Tail pulley onto shaft, then put pin through the hole and pull the shaft/pin up into the Tail Pulley. Then clamp in place by tightening the main shaft collar down. BEFORE MOUNTING SERVOS

8 Main Bearing Block Assembly

First mount Bearing Block Support Plate, then slide Main Shaft through the Bearing Blocks to align everything before mounting servos.

BLUE LOCTITE EVERYTHING
Slide Main Gear in from side, then raise 3rd bearing block to engage the bottom of the one way bearing. Loosely tighten the bolts until the bearing block assembly is in place, then tighten.

Use 2-3 washers for each side to adjust the canopy back.
Please supply silicon oil or grease on o-rings and spindle shaft!

Apply grease to bearing. Mount open side of the cage to the outside.

Center the spindle shaft exactly!

After mounting, the blade holders will move a little bit tightly at first.

Please supply silicon oil or grease on o-rings and spindle shaft!

Apply grease to bearing. Mount open side of the cage to the outside.

Center the spindle shaft exactly!

After mounting, the blade holders will move a little bit tightly at first.
11 Throttle/Tail Servo Mounting

12 Fuel Tank Mounting

- It is required to glue the fuel tank edge grommet to the frame with super glue to avoid premature wearing.

To Mount Vent Fitting, before installing the main nipple and grommet thread a piece of wire through the vent fitting and string it through the main opening and through the vent opening. Then slide the vent nipple up and secure with the nut on the outside.

- Wire Length from Front of frame to Vbar Neo in rear = 17.5” - 18” (445mm - 460mm)
- Use extensions, or customize wires to this length for, Throttle Servo, Power Input Cables, Remote Glow (Optional), Back Up Guard (Optional).

Large RX Pack Recomended for proper CG. Example = OptiPower 2s 5000mah

Backup Guard (Optional)

RX Pack mounted on its side
Remote Glow Driver (Optional)
14 Exhaust Box Mounting

Bag 9
1x M2x10
1x M2

M2x10 + M2

15 Fan Shroud Modification

Depends on engine/muffler choice

Required to fit in frame properly

Likely needed for easier glow plug access

4mm

For convenient ground wire access when using Remote Glow

Needed when using OS Velocity Stack on Carburator

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Overview V-Bar Head

18 Overview V-Bar Head

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