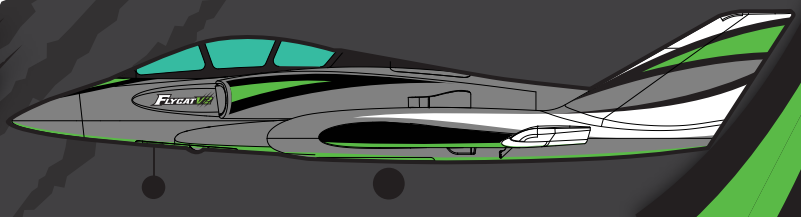
H·KING

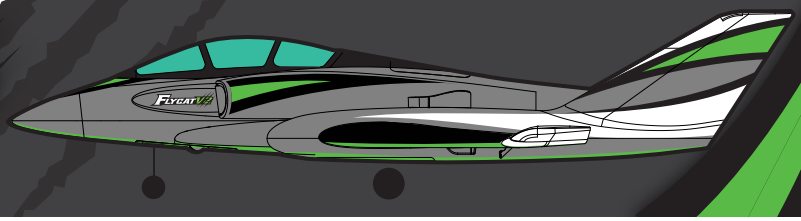
FLYCAT V2

INSTRUCTION MANUAL

1042mm EDF JET with pre-installed 70mm Fan, Motor, ESC, Servos, and Retracts.



MANUAL CONTENTS



INTRODUCTION

After the success of the original Flycat, a basic aileron, elevator, and throttle-only model with no retracts, it was decided to follow this with a new V2 version. The Flycat V2 has been updated with a new 12-blade 70mm fan unit driven by a powerful 2860-2100KV inrunner motor, dual rudders for added control and agility, a set of pre-installed electronic retracts, and a brand new high-viz color scheme. It retains from the V1 its stunning, streamlined looks and impeccable flying characteristics.

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The Flycat V2 is supplied as a "Plug-N-Fly" model and comes complete with fan unit, brushless motor, an Aerostar 80amp ESC with reverse, six 9g high speed servos, and electronic retracts. All these items are pre-installed at the factory as are the new colorful decals, so the time from starting the build to having it ready to fly is minimal. All you will require is a 5ch or greater (if you want to use the reverse function) transmitter, receiver, and a 6S 30~60C 3000~4000mah LiPo battery with a suitable charger.

Specs:

Wingspan: 1042mm
Fuselage Length: 1115mm
EDF: 70mm 12 blade unit
Motor: 2860/2100Kv brushless
ESC: 80amp Aerostar RVS G2 w/reverse
Servos: 6 x 9g high speed (metal-geared for the nosewheel)
Retracts: 3 x electronic w/steerable nosewheel
AUW: 2000~2100g
Battery: 6S 30~60C 3000~4000mAh LiPo (not supplied)
Radio: 5 channels or more (not supplied)

Warning on the use of LiPo batteries and their chargers.

WARNING! FIRE HAZARD!

NEVER USE CHARGER UNSUPERVISED!

- Batteries pose a SEVERE risk of fire if not properly handled.
- Read Entire operation manual before using charger.
- This unit may emit heat during use.
- Only operate this device in a cool ventilated area away from flammable objects.
- Failure to observe safety procedures may cause damages to property or injury.

Warnings and Safety notes

- Keep the charger away from children and pets at all times.
- Never leave the charger unsupervised when charging or discharging. If you leave, disconnect the battery to prevent any unexpected dangers or damage.
- Ensure the charger program and settings match the battery pack otherwise the battery will be damaged and a dangerious situation may arise, especially for Lithium batteries, which may cause a fire.
- Do not mix batteries of different types, different capacities or from different manufacturers.
- Do not disassemble the charger.
- Do not place the charger or any battery on flammable surface or near a combustible material while in use.
- Do not Charge or discharge on a carpet, cluttered workbench, paper,plastic,vinyl, leather or wood, inside an R/C model or inside a full sized automobile.
- Never block the air intake holes and never use in a refrigerated or high temperature environment. If used in such an environment, the internal temperature protection may result in abnormal charging/discharging that could be dangerous.
- Do not allow water, moisture, metal wires or other conductive material into the charger. Never charge or discharge any battery having evidence of leaking, expansion/swelling. Damaged outer cover or case, color-change or distortion.
- Do not try to charge "non-rechargeable" dry cells.
- Do not exceed the bettery manufacturer's suggested maximum charge rates
- Carefully follow the battery pack manufacturer's recommendations and safety advice.

⚠ WARNING:

Read this instruction manual fully so as to become completely familiar with the features of the product before operating. Failure to operate this product correctly could result in damage to the product, personal property and cause serious injury. This is a sophisticated hobby product and is NOT a toy. It must always be operated with caution, common sense and some basic mechanical ability. This manual provides instructions on the assembly, safe operation and maintenance of this hobby product. It is highly recommended that you read and follow fully the instructions and warnings stated in this manual including safety, assembly, set-up and flying guidelines in order to operate this product correctly and avoid damage or serious injury.

SAFETY PRECAUTIONS:

As the user of this product you and you alone are responsible for operating it in a manner that does not endanger yourself and others around you or result in damage to the product or property of others. This product is operated via a radio controlled system that in some cases can be subject to interference from sources outside of your control. Interference may result in a momentary loss of control so it is always recommended that this product be used in a suitable open outdoors space.

- This is a radio controlled flying model and as such must always be flown with caution, this is NOT a toy.
- Always exercise great caution when using the recommended battery to power this product. For full safety notes and operating procedures please read the information provided by your battery supplier.
- Take great care when connecting/disconnecting the battery. Once again see your battery suppliers information for the full safety procedures.
- Never power up the model in a confined space and always keep the propeller clear of obstructions, clothing and parts of your body.
- This product is not a toy, children must be accompanied by an adult at all times when operating this product.
- Only fly this model in an open area away from crowds, people, buildings, trees, power lines, roads, airports and other obstructions.
- Always put safety first when operating this model and consider the warnings stated above.
- The supplier/manufacturer accepts no responsibility for damage or injury caused through the use of this product. A reminder that it is not suitable for children under the age of 14. THIS IS NOT A TOY.

FLYCAT V2 CONTENTS:

1. Fuselage
2. Wings
3. Tailbooms
4. Horizontal stabilizer
5. Accessories

GENERAL ASSEMBLY

Please note: Before you glue together any parts that have paint on the joints, rough them up first with sandpaper to achieve a better bond.

1. Using a slow cure CA or a similar apply the glue to the area of the fuselage where one of the plywood wing retaining tongues is located.

2. Glue into place the plywood tongue as shown.

3. Repeat this process with the other 3 plywood tongues.

4. Glue into place the 4 foam in-fills on top of the plywood tongues.

5. This picture shows all 4 foam in-fills in place.

6. Apply slow setting CA or a similar glue into the recess on the fuselage side of the tail boom that does not have the cut-out in the vertical stabilizer.

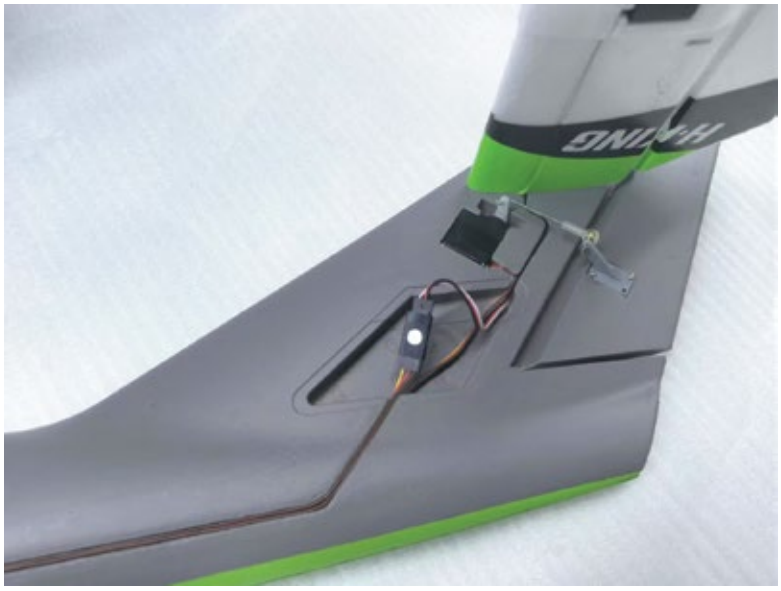
7. Slide the tail boom over the wing root of the fuselage as shown and glue into place.

8. Please ensure the aileron servo connector is pulled through the wing root.

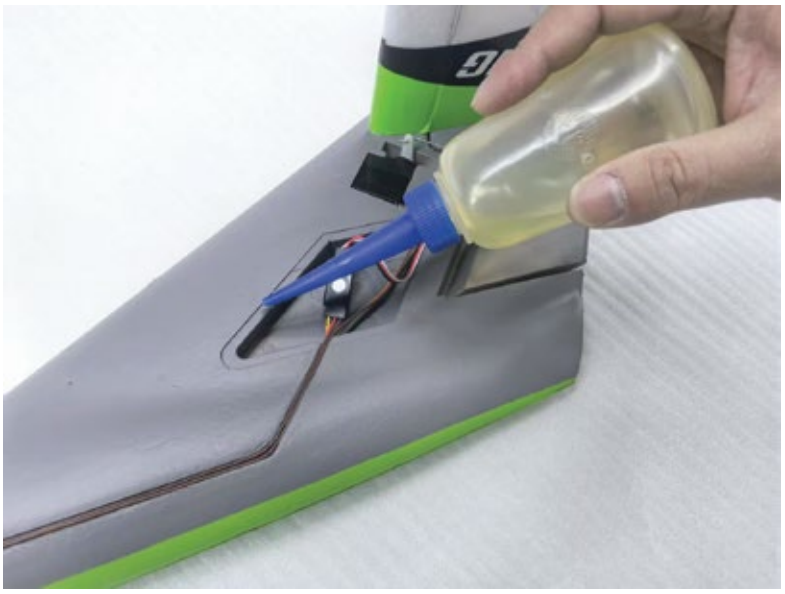
9. The elevator & rudder servo extension leads are already installed in the tailboom. Connect these to the leads in the fuselage slot and press into place, secure with either a drop of glue, or some colored tape.

10. Apply some slow cure CA into the slot for the horizontal stabilizer to be glued into.

11. **Fit the horizontal stabilizer into the slot in the vertical stabilizer and allow the glue to set. Please ensure the assembly stays square as the glue sets.**



12. **Feed the elevator servo lead into the slot in the vertical stabilizer and connect in to the socket in the cut-out as shown.**



13. Apply CA glue to the recess in the cut-out and glue into place the triangular cover supplied.

14. At this point, follow the steps of gluing in place the first tailboom and glue into place the second one, including gluing in the horizontal stabilizer. Do not forget to feed the aileron servo lead out of the wing root in the fuselage and to connect the rudder servo extension lead into the socket in the fuselage wing root.

15. Connect the aileron servo lead together for one of the wings.

16. Slide the wing spar into the pre-installed tube in the fuselage wing root.

17. Then slide the entire wing into the wing root until it is fully seated and the holes line up with those in the plywood tongues.

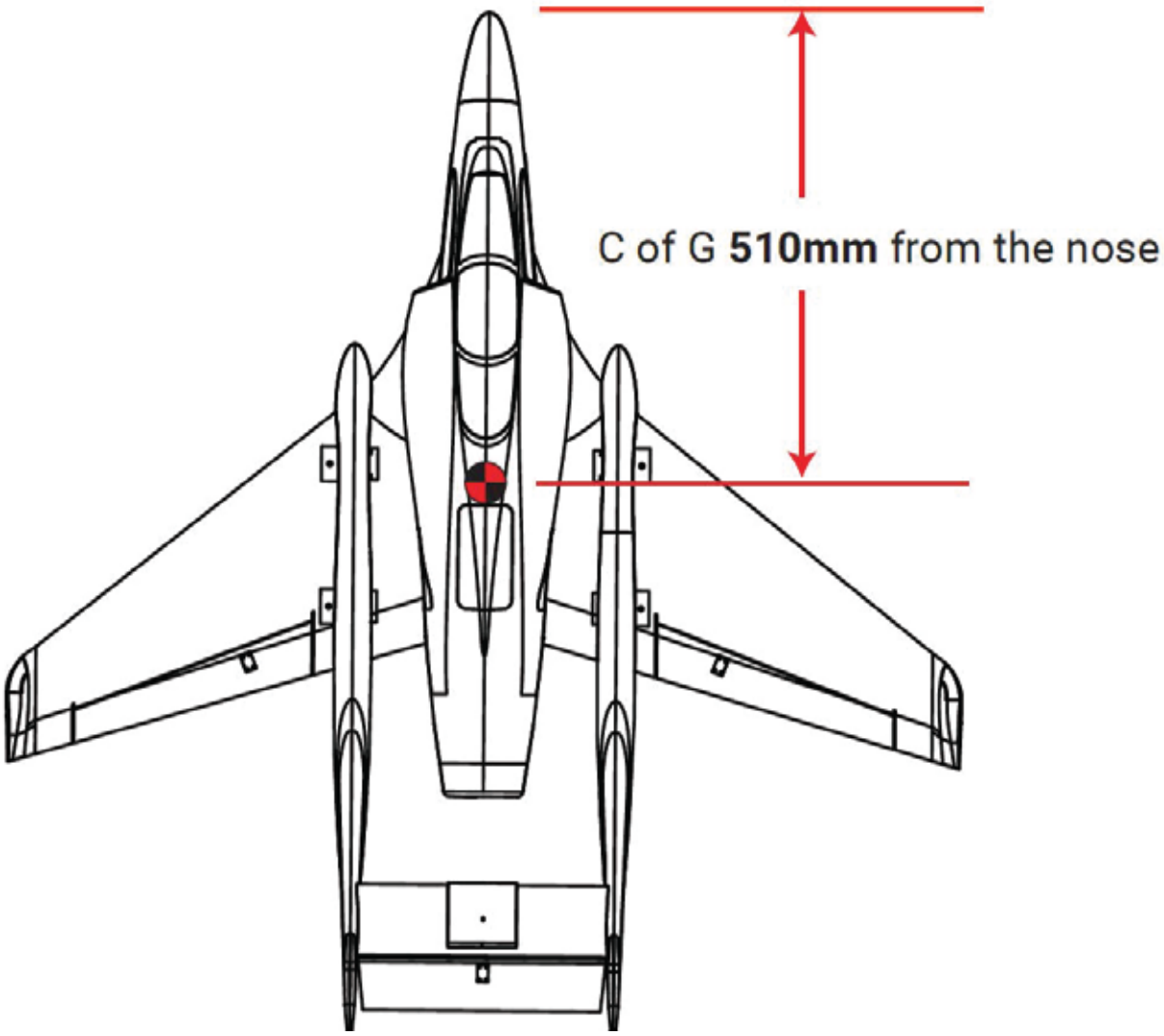
18. Screw the supplied PK screws through the plastic wing fixings and into the plywood tongues.

19. Repeat this entire process to fit the other wing.

20. Install your chosen receiver in the recess at the rear of the battery compartment, and then install your 6S battery as shown.

C of G Position:

C of G should be 510mm ± 5mm from the nose of the Flycat V2.

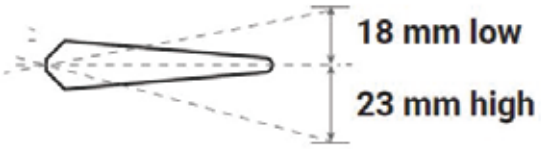


Adjust the position of the battery to achieve the correct balance

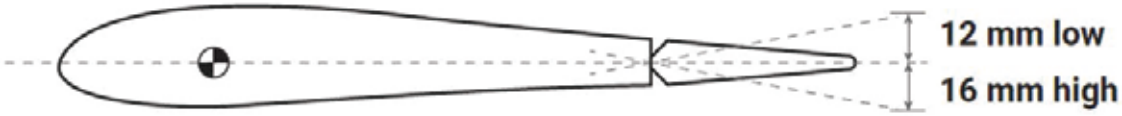
CONTROL THROWS LOW-HIGH

Elevator: 22mm low/ 30mm high (Expo 30%)

Rudder: 18mm low/ 23mm high (Expo 30%)



Aileron: 12mm low/ 16mm high (Expo 30%)



Your Flycat V2 should now be finished and ready to fly.

SETTING THE ESC

The Flycat V2 is fitted with the Aerostar 80A RVS G2 instant reversing electronic speed controller. Setting the reverse on the ESC would be ideal if you are flying from a hard surface to shorten the landing run.

1. It is important that you manually calibrate the throttle range when using the ESC for the first time, this should always be done with the propeller removed. Move the throttle stick to the full throttle position and switch on the transmitter (ensure the end points are set to 100%, and the throttle trim is in the middle). Connect your battery pack to the ESC and wait for 2 seconds, your motor will now give 2 quick beeps (Beep-Beep), as soon as you hear these beeps, lower your throttle to the fully closed position, the ESC is now calibrated and ready for use.

2. When you switch on your transmitter each time to fly, you need to make sure the throttle stick is in the low/off position, then when you connect the flight battery the motor will emit a series of beeps. When using a 6S pack, 6 beeps with the same tune means the ESC has detected the 6 cells of the battery. The motor is now armed and will start when the throttle is opened.

3. The motor and ESC come pre-connected, and the motor rotation should be correctly set. If for any reason the motor is rotating in the wrong direction, simply swap over any two of the three motor to ESC wires to change the direction of rotation.

4. By default your RVS 80amp should have RVS set to 'on'. If however, you have installed the yellow RVS single lead from the ESC to a spare channel on your receiver that is controlled by a 2-way switch on your radio, and you find that the RVS is not functioning, it is recommended to double check the settings of the ESC.To do this, move your throttle stick to the full throttle position and switch on the transmitter, then connect your battery pack to the ESC. Wait for 2 seconds, the motor will then emit a fast 2 beep tone (Beep-Beep). Wait for another 3 seconds and the motor will emit a special fast multi-beep tone (Da-Da-Da-Dum) which means it has now entered programming mode. After entering program mode wait for 2 short beeps, then close the throttle immediately. Once this is done you will hear a sequence of tones in a loop that corresponds to the values set, when you hear the 2 short beeps again move the throttle stick back to the open position once more. The motor will now emit a special "123" tone which indicates the value (RVS) is set to on.

5. The full instruction manual is available on the product page for the Aerostar G2 RVS ESC's on our site, this shows you in detail how to programme all the ESC RVS settings via your transmitter using the beep sequences.

FLYING TIPS

Before you fly please check your controls and make sure you double check the following.

Left aileron, the left aileron should go up, right aileron, the right aileron should go up, back stick and the elevator should go up, forward stick the elevator should go down, left rudder, rudders go left, right rudder, ruuders go right. Double check that the model balances on the C of G correctly, it should balance at the 510mm ± 5mm mark in a slight nose down attitude (do this with the model inverted and the wheels retracted). Now you're ready to for your first flight, please make sure you do a range check of your radio equipment first.

The H-King Flycat V2 unlike the original which was a hand launched RC airplane now has wheels for taking off from the ground. So line the model up into wind on your take-off area, check once again that the controls are working correctly. Then smoothly open the throttle whilst holding a small amount of up elevator and keep the model straight using the steerable nosewheel/rudders. Once it has reached flying speed it should lift-off smoothly by itself, if not, increase the up elevator slightly until it leaves the ground. Being a ducted fan you do not get the prop wash as you do with a propeller driven plane so you do require airspeed before you initiate a climb, so keep the climb shallow to start with until the airspeed builds.

Once airborne and safely in the climb retract the landing gear and carry on to a safe altitude to adjust your trim to get the Flycat V2 flying straight and level on about ¾ throttle. If your plane is not flying correctly land and adjust your radio or the linkages where necessary. Once you have your Flycat V2 flying well it will perform as if it is on rails, it's fast, smooth and manoeuvrable. You will be able to fly all the usual jet like aerobatics with ease and it looks really great in the sky. When it comes to landing line up your plane with the landing area and lower the landing gear. Using your elevator to control pitch and speed, throttle to control descent, ailerons to keep the wings level, and the rudders to steer, simply glide the Flycat V2 home to a smooth, nicely held off landing. As it's name, it's a real pussycat and will float into land very easily due to it's low stalling speed.

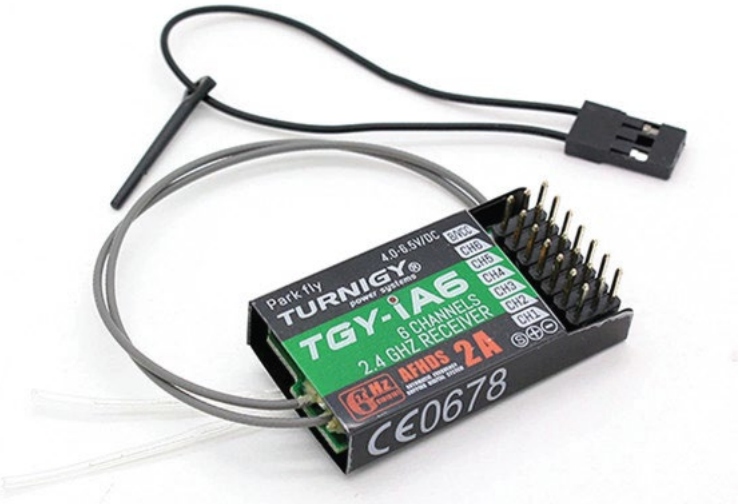
Your maiden and the sweating is now over, recharge your batteries and really have fun with more flights of your Flycat V2, your fellow flyers when they see it go will all want one. We hope you like the amazing Flycat V2 from H-King.

RECOMMENDED ACCESSORIES

Turnigy/FrSky TWIN X14 ACCESS 2.4GHz Transmitter (Orange)
SKU: 9236720209

Turnigy TGY-i6 Mode 2 AFHDS Transmitter and 6CH Receiver
SKU: 9114000020-0

FrSky TW R8 Dual 2.4GHz 8ch TW Protocol SBUS/FBUS/S.Port Receiver
SKU: 9236720012



Turnigy iA6 Receiver 6CH 2.4G AFHDS 2A Receiver
SKU: 9114000008-0
Recommended Accessories

RECOMMENDED ACCESSORIES

Turnigy Heavy Duty 4000mAh 6S 60C Lipo Battery Pack w/XT90
SKU: 9067000386-0

Turnigy Graphene Panther 5000mAh 6S 75C Battery Pack
SKU: 9067000375-0

Turnigy Heavy Duty 3300mAh 6S 60C LiPo Pack w/XT-90
SKU: 9067000242-0

Turnigy Graphene 4000mAh 6S 45C LiPo Pack w/XT90
SKU: 9067000146-0

Turnigy Nano-Tech Plus 3000mAh 6S 70C Lipo Pack w/XT90
SKU: 9210000266-0

Turnigy 4500mAh 6S 30C Lipo Pack w/XT-90
SKU: 9067000272-0

RECOMMENDED ACCESSORIES

ToolkitRC M6DAC Dual 1~6S 15A 350W AC/DC Balance Charger/Discharger
UK Plug SKU: 9989320005
US Plug SKU: 9989320079

HOTA H6 Pro AC/DC 200W AC/700W DC 1~6S Smart Charger
US Plug SKU: 9466000020-2

HOTA P6 2 x 300W 1~6S Dual Smart Charger/Discharger (DC Only)
SKU: 9466000021-0

SKYRC IMAX B6 V2 60W 6A 1~6S DC Charger/Discharger
SKU: 9052000152-0

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