

INSTRUCTION MANUAL



HELLCAT 'LITTLE NUGGET'

H-Kings 990mm span Plug & Fly sports-scale F6F hot rod!

H-KING

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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.

INTRODUCTION:

The H-King F6F Hellcat "Little Nugget" is the second in the "Reno Aces" mini-series from H-King, they are WW2 fighters dressed to impress at the air races. The F6F Hellcat "Little Nugget" with the included stock 3108-1070KV brushless motor offers a really hot-rod performance straight out of the box, speeds approaching 100mph are possible when using the recommended 2200mAh 4S LiPo. However, if you are an experienced hand and are looking for 100+ mph speeds then there is the optional drop-in fit 3108-1170KV 'Pro' brushless motor. This will give your great-looking Reno Ace a really ballistic performance on the same prop, ESC, and 4S battery. This is only for those that can handle the extra speed and the extra rotational torque on hand-launching.



FEATURES:

- Up to 100mph on 'Stock' motor. 100+ mph speeds with optional 'Pro' motor.
- Reinforced EPO foam construction, lightweight, strong and stiff.
- Plastic skid plates to streamline and protect the airframe.
- Easy and quick assembly in just a few minutes.
- Easy to hand launch, super easy to belly land.
- Super stable at high and low speeds.
- Optional clear or golden canopy included.

SPECIFICATION:

- Wingspan: 990mm (39 inches)
- Length: 800mm (31.5 inches)
- Weight (RTF): 960g (33 oz)
- Motor (Stock): 3108-1070KV
- Motor (Pro): 3108-1160KV (optional)
- ESC: 40A Brushless w/BECI
- Servos: 4 x 9g Digital
- Prop: 8x6

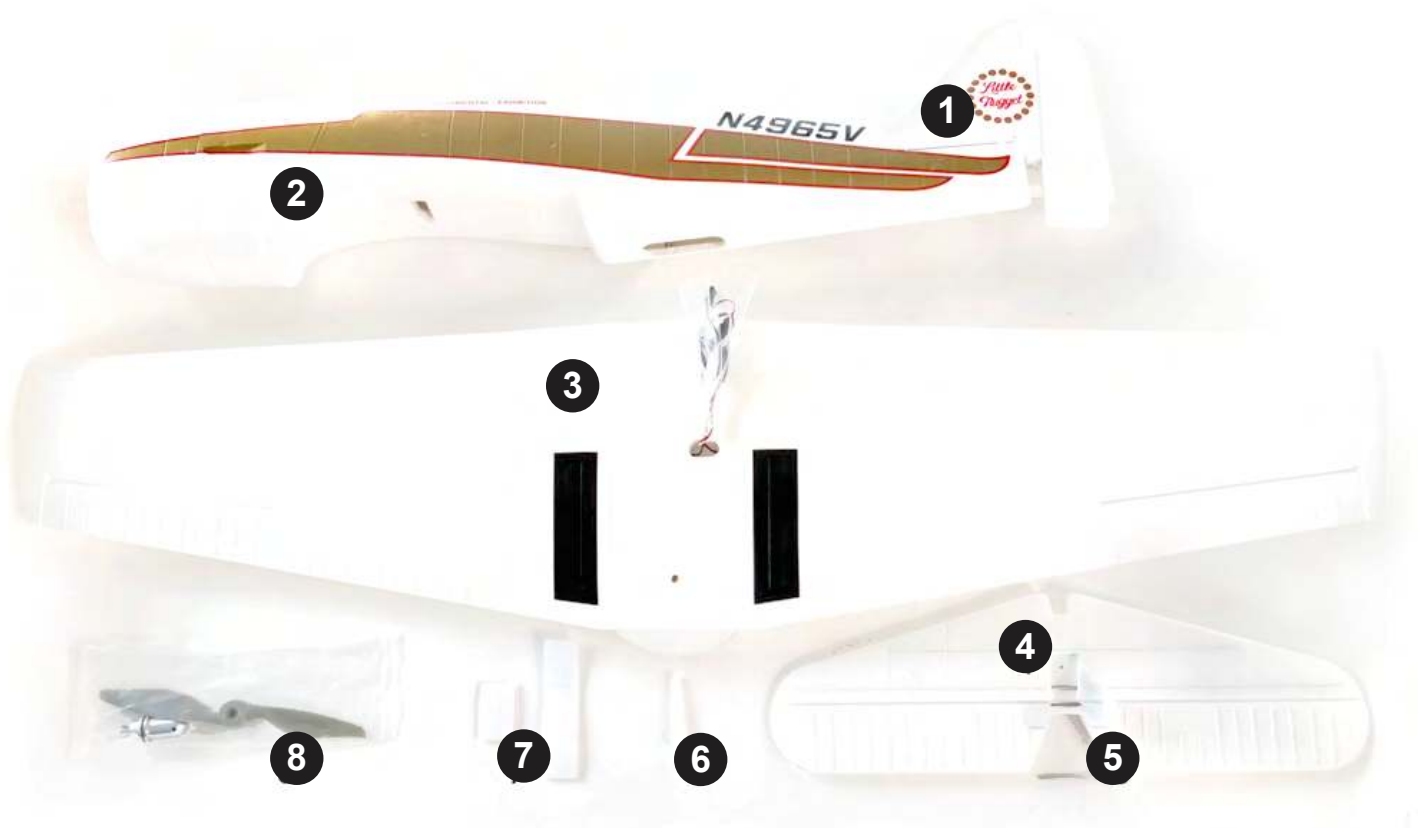
Recommended Battery: 2200mAh 4S 30~60C LiPo

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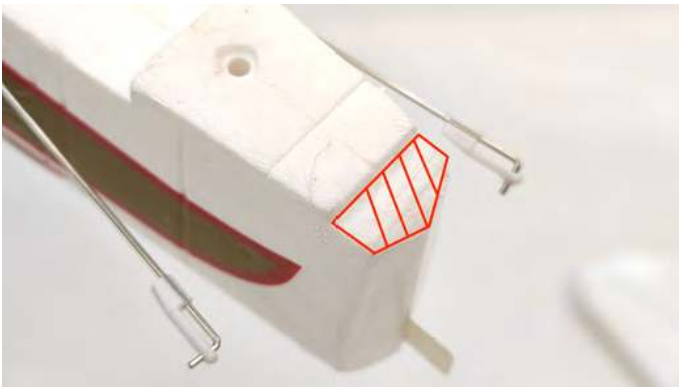
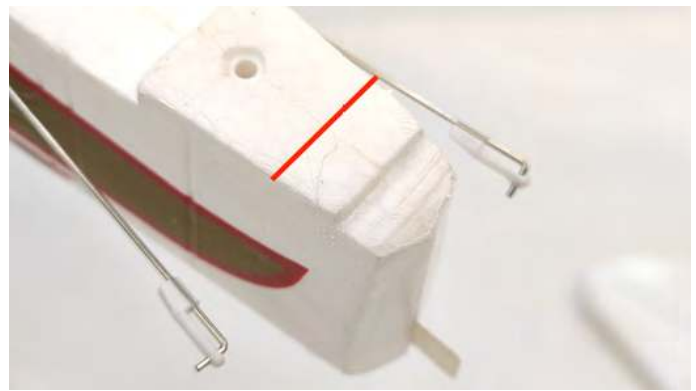


1. Vertical Stabilizer
2. Fuselage
3. Main wing
4. Horizontal stabilizer
5. Machine screw M3 x 40 mm
6. Nylon wing bolt
7. Hook and Loop double sided tape
8. 8 x 6 Prop and prop hub adapter nut

Installation of the vertical and horizontal stabilizers:

Before you install the horizontal stabilizer, dry fit it onto the seating at the rear of the fuselage as shown.

- 1** Press the horizontal stabilizer lightly against the rear of the seating area so as to leave a mark on the foam. Make a 1mm wide groove with a hobby knife in the foam to allow for clearance of the elevator torque rod.
- 2** Then remove 5mm of foam material from the rear of the fuselage as shown by the red lines with a hobby knife.



- 3** Place the horizontal stab onto the seating.



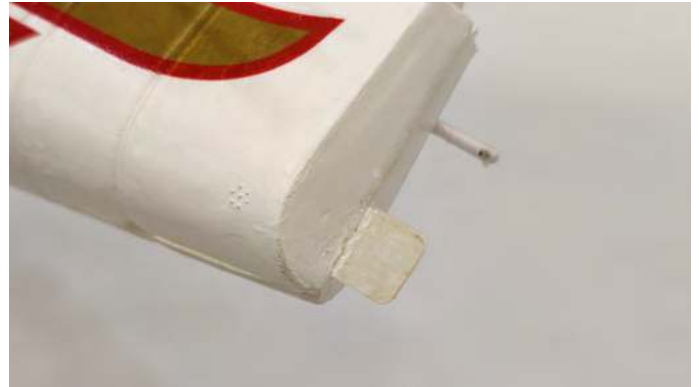
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- 4 Install the vertical stabilizer onto the horizontal stabilizer. As you do this insert the hinge into the pre-cut hinge slot in the rudder as shown.

Note: Take extra care here to avoid breaking the foam hinge on the rudder as you gently slide the bottom hinge into the slot. Secure the complete empennage into place using the supplied 3m x 40mm screw.



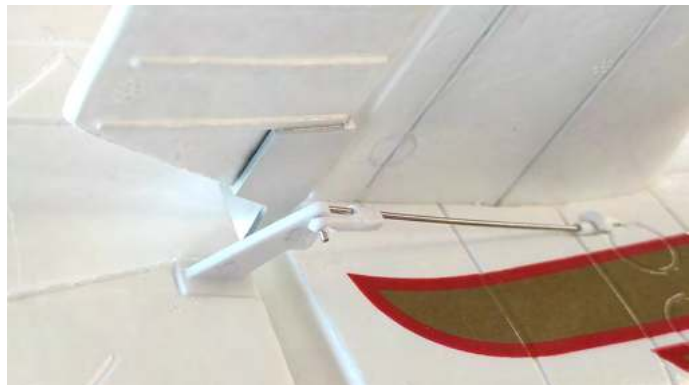
- 5** Apply a drop of foam safe CA glue to the hinge on the rudder, check that the rudder moves freely with no binding as the glue dries.



- 6** Connect the elevator pushrod to the control horn as shown using the supplied quick-keeper.



- 7** Connect the rudder pushrod to the control horn as shown using the supplied quick-keeper.



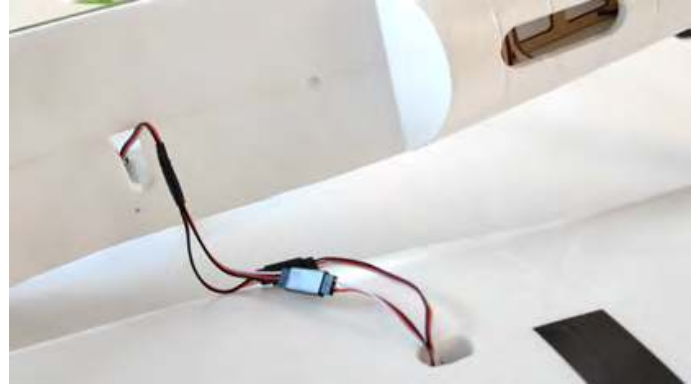
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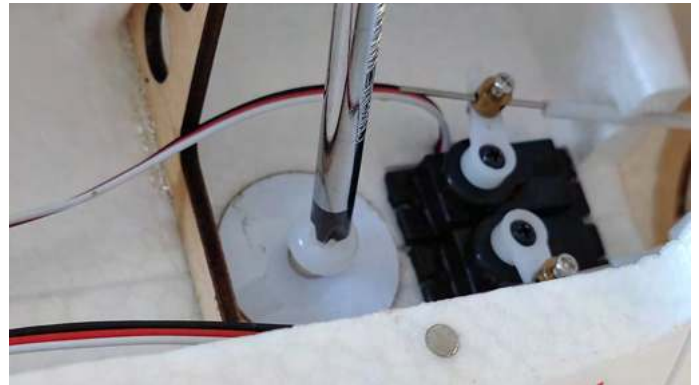


Wing Installation:

- 1 Remove the canopy hatch by pulling the clear plastic tag at the rear. Connect the supplied Y servo lead to the set of aileron servo leads, then feed them through the access hole at the wing seating area as shown.



- 2 Install the wing onto the wing seating and secure in place with the supplied nylon wing mounting bolt.



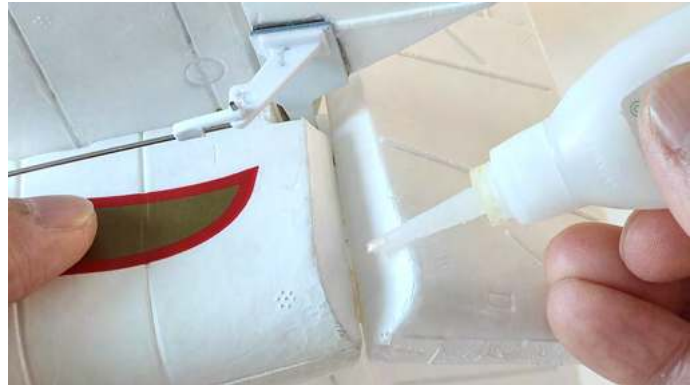
Canopy Installation:

- 1 We have supplied 2 different style canopies for you so that you can choose which one to use according to your own personal preferences. Apply some foam safe glue to the canopy and glue it onto the canopy hatch as shown.



Radio installation:

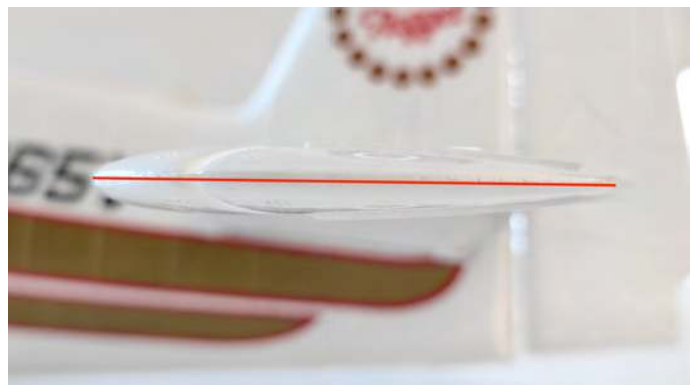
- 1 Use the supplied hook and loop self-adhesive tape to secure your chosen receiver to the inside of the radio compartment. We recommend that you now setup your radio and the servo throws etc.



WARNING:

DO NOT INSTALL THE PROPELLER ONTO YOUR PLANE UNTIL THE RADIO SETUP HAS BEEN COMPLETED. ALSO, ALWAYS TURN YOUR TX ON FIRST AND ENSURE THAT THE THROTTLE STICK IS IN THE LOW POSITION BEFORE PLUGGING IN YOUR FLIGHT BATTERY TO THE ESC. THEN WHEN YOU HAVE FINISHED FLYING OR SETTING UP ALWAYS UNPLUG THE FLIGHT BATTERY FIRST BEFORE SWITCHING OFF YOUR TX.

- 2 Switch on your TX, then connect your flight battery to the ESC power cable with the XT60 connector.
- 3 Elevator control surfaces setup: First set the servo trimmer on your TX radio to the center position. Then loosen the stopper screw and ensure the servo horn is perpendicular to the pushrod as shown. Secondly, ensure that the elevator control surface is perfectly level. Apply a drop of Loctite glue to the thread of the stopper screw and hand tighten.
- 4 Finally, move the elevator control stick on your TX to check that it moves freely with no binding. Once you are happy with this then set the end points to the recommended throws below.
- 5 Repeat this process for all the other control surfaces.



NOTE:

For binding your radio, and for setting up the servo reverse, subtrims, and end point adjustments, etc, please consult your R/C instruction manual.

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Propeller installation:

- 1 Slide the propeller adapter onto the motor shaft, then the propeller and then screw on the spinner nut.
- 2 Insert a 2mm Allen Key or 2mm Tommy Bar through the hole in the spinner nut.
- 3 Hand tighten the spinner nut until the prop and the adapter are locked securely onto the motor shaft.

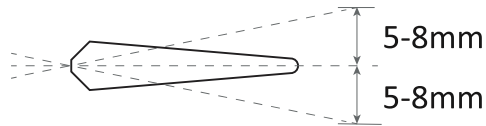


Complete

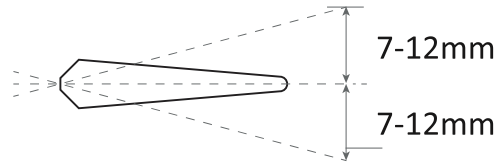


Control set-up and CG:

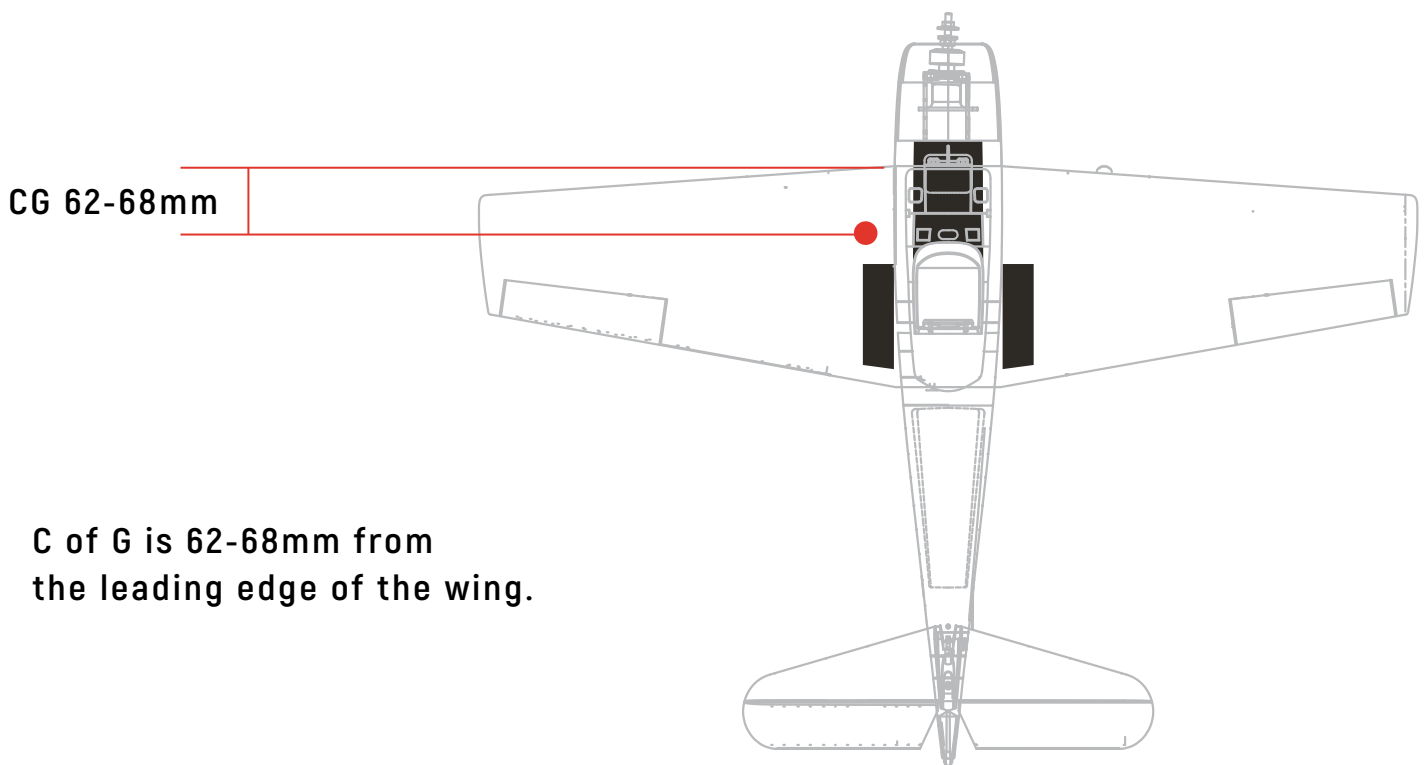
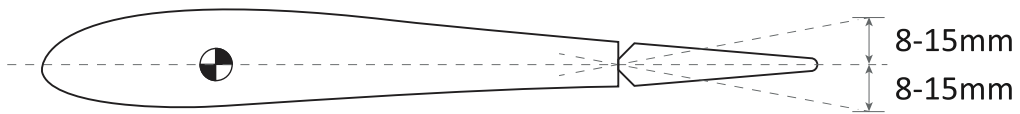
Elevator: low 5mm, high 8mm



Rudder: low 7mm, high 12mm



Aileron: low 8mm, high 15mm



C of G is 62-68mm from the leading edge of the wing.

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Congratulations you have now fully assembled your H-King Hellcat 'Little Nugget' and are ready for flight. However it is recommended you read and follow the advice and tips given in the following pages before you fly this model.



Pre-Flight Checks:

1. Always check wings and control surfaces for alignment and damage. Check all connections to the control surfaces, check all screws and glue joints.
2. Check the propeller for any damage. If damage is found, replace it with a new one .
3. Ensure the battery is installed in the right location for the correct CG.
4. Always turn your transmitter on before powering up your RC plane.
5. Periodically perform a range check with your transmitter. Make sure your plane is secure to prevent damage to people and property.
6. Check that the plane responds properly to control inputs and that the direction of travel is correct.
7. Visually re-check all your control surfaces, airframe, screws and motor mount are in working order.
8. Check the voltage of your transmitter and flight battery to ensure they are fully charged before flying.

Launching:

1. The Hellcat 'Little Nugget' should always be launched with an under arm launch. Hold the model from the top of the fuselage at the approximate location of the CG. This is the best way to hold the Hellcat for launching.
2. Holding the model firmly with one hand and the radio in your other, raise the throttle to around 65-70% (your chin is good for doing this), and in a swinging motion, from your side, launch the model up with some force holding a bit of right aileron and up elevator in as you do, and release once you come to the end your swing at the point at which it has the most energy.
3. Once the model has left your hand continue to hold in some up elevator and right aileron until you can bring your hand back down from the position of release to place it back on the throttle. Once on the throttle increase to full power for a rapid and clean climb out.

Note: If this is your first hand launch model it is recommended you ask an experienced model flyer to launch for you, at least for the maiden. Or if you prefer, you can always ask a fellow club mate to always launch the model.

Flight:

In flight the Hellcat "Little Nugget" is well behaved and stable throughout the speed range. With the low rate settings as outlined in this manual the Reno Aces Hellcat "Little Nugget" is smooth to control and at full speed carves effortlessly through the air in turns and graceful maneuvers. In the high rate setting the Hellcat "Little Nugget" is transferred from a scale racer to a aerobatic hotrod capable of snap rolls, knife edges, flat spins and more.

Landing:

With its thick wing section allowing the Hellcat "Little Nugget" to remain stable even at the slowest of speeds and plastic skid plates at all the major contact points, belly landing your Hellcat "Little Nugget" is both easy and worry free if you follow these basic steps below.

1. Start your final approach into the landing WITH throttle. The spinning prop will not only continue to provide airflow (and thus control authority) over your control surfaces, but also actually help to slow the model down when the low end of the throttle is used on approach.
2. As you approach the ground keep the model level and when about 20cm from the ground begin to ease in a little more elevator to begin the flare process (the process of raising the nose to reduce the forward speed of the airframe and touch down with the nose slightly raised) whilst at the same time reducing throttle further.
3. Now that you've entered the flare and as the model gets lower to the ground, cut the motor completely. This will reduce the risk of damage to the prop and stress on the motor.

The Hellcat "Little Nugget" is in fact a breeze to land and basically effortless too if you keep in mind the above steps.



Flying Tips:

1. Always remember to launch holding a little right aileron (to counter the rotational torque of the motor/prop) and up elevator (to maintain a positive attitude of the nose) when launching the Hellcat "Little Nugget".
2. A balanced prop will always result in a more efficient power system and reduced stress on the airframe. Always balance the supplied prop and check it after every landing for damage.
3. Use a high C rated battery pack for optimal performance from the power system supplied with the Hellcat "Little Nugget".
4. Explore the slow speed flight of your model. The Hellcat "Little Nugget" is just as much fun going slow as it is fast.
5. The Hellcat "Little Nugget" has a great glider rate, so be sure to bleed off speed on your approach if flying from a small field.
6. Carry a spare prop in your Tx case, you never want to be without a spare prop when flying a belly lander.
7. If you are a more experienced pilot buy the optional 'Pro' motor and enjoy speeds of well over 100mph!

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PROBLEM SOLVING:

Phenomenon	Typical error	Problem solving
Motor does not run	<ol style="list-style-type: none">1. The battery is not full charged2. The battery of the transmitter is low on power.3. Something is disconnected in the plane	<ol style="list-style-type: none">1. Charge the battery2. Replace the battery in the transmitter.3. Check motor, ESC connections.
Motor runs backwards	<ol style="list-style-type: none">1. Motor/ESC connection error	<ol style="list-style-type: none">1. Swap around any 2 of the 3 ESC/motor wire connections
Servos not operating properly	<ol style="list-style-type: none">1. The servo leads are connected to the Rx incorrectly.2. The servo is damaged.	<ol style="list-style-type: none">1. Make sure the servo leads are connected properly.2. Replace servo.
Difficult to trim	<ol style="list-style-type: none">1. Control surfaces not centered.2. CoG is not in the correct position.	<ol style="list-style-type: none">1. Adjust the trims on the transmitter.2. Re-position the battery suggested.

SPARE PARTS:

Cowl w/Decals
SKU: 9898000033-0



Fuselage Set w/Decals
SKU: 9898000031-0



Hatch Cover w/Canopies
SKU: 9898000035-0



Horizontal Stabilizer
SKU: 9898000032-0



**Propeller Adapter
(Collet Type) 4MM**
SKU: GON-D4T6



Vertical Stabilizer
SKU: 9898000047-0



Wing Set w/Decals
SKU: 9898000030-0



8x6 Propeller
SKU: 9898000052-0

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RECOMMENDED ACCESSORIES:



**OrangeRx Tx10i Mode 2
EU Version**
SKU: 9171001399-0



**Turnigy 9X 9Ch Transmitter
w/ Module & iA8 Receiver**
SKU: 9114000070-0



**OrangeRx R720X V3 7Ch
2.4GHz DSMX**
SKU: 9171001395-0



**OrangeRx RSF08SB Futaba
S-FHSS/FHSS-2**
SKU: 9295000020-0



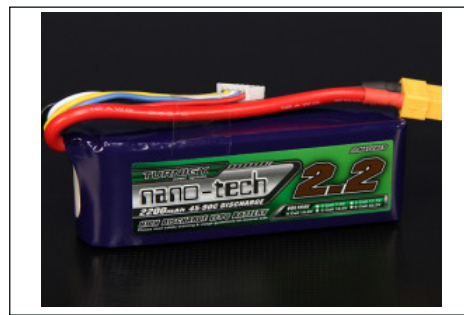
**Turnigy Graphene Panther
2200mAh 4S 75C Battery
Pack** SKU: 9067000372-0



**Turnigy Graphene 2200mAh 4S
45C Lipo Pack W/XT60**
SKU: 9067000136-0



**ZIPPY Compact 2200mAh 4s
60c Lipo Pack**
SKU: 067000030-0



**Turnigy Nano-Tech 2200mAh 4S
45~90C Lipo Pack**
SKU: N2200.4S.45



**Rhino 2200mAh 4S 50C Lipo
Battery Pack W/XT60**
SKU: 9952000026-0

RECOMMENDED PARTS:

**Turnigy Accucel-6 80W
10A 1~6S Balancer/Charger**
SKU: 9052000155-0



**Turnigy Accucell S60 AC
Charger**
SKU: 9052000138-1



**Foam-Cure EPP and EPO Foam
Glue 4 oz.**
SKU: 9117000006-0



UHU POR Glue
SKU: 9934000001-0



**HobbyKing Super Glue CA
(50g / 1.7oz) Medium** SKU:
HC-50-175C



**HobbyKing Super Glue CA
(50g / 1.7oz) Thick**
SKU: HC-50-1100C

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