# INSTRUCTION MANUAL



# FG-1 CORSAIR 'LUCKY GALLON' RENO ACES

H-KING 990 MM SPAN PLUG AND FLY SPORTS-SCALE BENT WING HOT ROD!

H-KING

## FG-1 CORSAIR 'LUCKY GALLON'

H-Kings 990mm span Plug & Fly sports-scale bent wing hot rod



#### **INTRODUCTION:**

The H-King FG-1 Corsair "Lucky Gallon" is the third in the "Reno Aces" mini-series from H-King, they are WW2 fighters dressed to impress at the air races. The FG-1 Corsair "Lucky Gallon" with the included stock 3108-1070KV brushless motor offers a really hot-rod performance straight out of the box, speeds approaching100mph 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 handlaunching.



#### **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 guick 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 silver canopy included.

#### **SPECIFICATIONS:**

- Wingspan: 990mm (39 inches)
- Length: 785mm (31 inches)
- Weight (RTF): 960g (33 oz)
- Motor (Stock): 3108-1070KV
- Motor (Pro): 3108-1160KV (optional)
- ESC: 40A Brushless w/BEC
- Servos: 4 x 9g Digital
- Prop: 8x6

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



### ⚠ 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.

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#### **CONTENTS:**

- 1. Fuselage
- 2. Main wing
- 3. Horizontal stabilizer
- 4.8 x 6 Prop
- 5. Prop hub adapter nut
- 6. Hook and Loop double sided tape
- 7. Nylon wing bolt
- 8. Machine screw M3 x 40 mm
- 9. 1 x clear canopy, 1 x silver canopy



#### **INSTALLATION OF THE HORIZONTAL STABILIZER:**



**1.** Identify the horizontal stabilizer and the M3x40mm fixing screw.



2. Slide the horizontal stabilizer onto the seating at the rear of the fuselage. Ensure the control horn is underneath and the assembly is pushed as far forward as it will go.



**3.** Insert the M3x40mm into the hole in the underneath of the fuselage and screw it into the fixing hole of the horizontal stabilizer.



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



#### **INSTALLATION OF THE CANOPY:**



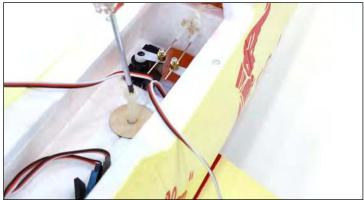
**5.** Remove the canopy hatch by pulling the clear plastic tag at the rear.



6. Connect the supplied servo Y lead to the set of aileron servo leads. Then feed them through the access hole in the wing seating area as shown.



7. Slide the locating pegs at the front of the wing into the corresponding holes in the fuselage. Then seat the wing snuggly onto the fuselage wing seat.



**8.** Secure the wing to the fuselage using the supplied nylon wing mounting bolt.

Note: Ensure the assembly is secure, but do not over-tighten the mounting bolt.



#### **INSTALLATION OF THE CANOPY:**



9. We have supplied 2 different canopies for you so that you can choose which one to use according to your own personal preference. One is clear and on the other the clear part has been painted silver.



**10.** Apply some foam safe glue to the canopy of your choice and glue it to the canopy hatch as shown.

#### **INSTALLATION OF YOUR RECEIVER:**



**11.** Use the supplied hook and loop self-adhesive tape to secure your chosen receiver inside the radio compartment.

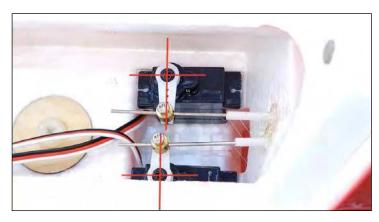


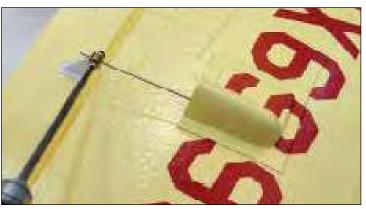
**12.** We recommend that at this point you now set-up your radio and the servo throws. See further on in this manual for the recommended control throws.

#### **WARNING:**

DO NOT INSTALL THE PROPELLER ONTO YOUR PLANE UNTIL THE RADIO SET-UP 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.







- **13.** Switch on your TX, then connect your flight battery to the ESC power cable with the XT60 connector.
- **14.** Elevator control surfaces setup:

First set the servo trimmer on your TX radio to the center position so that the servo arm is perpendicular to the servo case as shown above. Then loosen the stopper screw and ensure that the elevator control surface is perfectly level. Apply a drop of thread lock glue to the thread of the stopper screw and hand tighten whilst holding the elevator perfectly level.

- **15.** 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.
- **16.** Repeat this process for all the other control surfaces.

#### NOTE:

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

#### **INSTALLATION OF THE PROPELLER ASSEMBLY:**



**17.** Get ready the supplied 8x6 prop, prop adapter, and domed spinner nut.





**18.** Slide the propeller adapter onto the motor shaft, then the propeller and then screw on the spinner nut.



19. Insert a 2mm Allen Key or 2mm Tommy Bar through the hole in the spinner nut. Hand tighten the spinner nut until the prop and the adapter are locked securely onto the motor shaft.

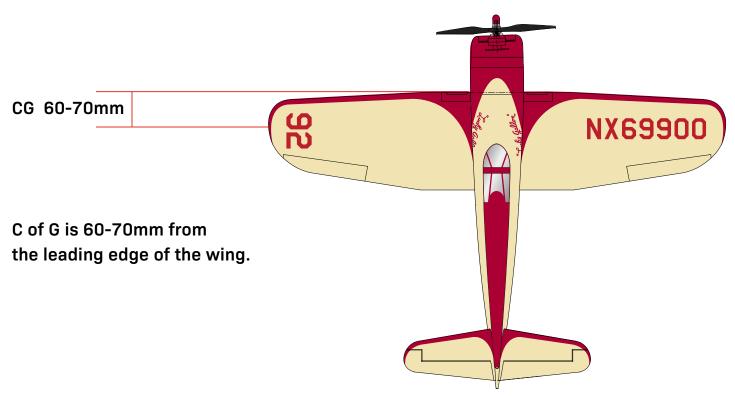
# YOUR H-KING FG-1 CORSAIR "LUCKY GALLON" IS NOW COMPLETE.



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#### C OF G POSITION:

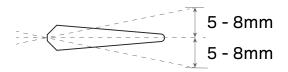


#### NOTE:

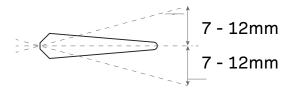
It is very important that you ensure your FG-1 Corsair balances within these parameters. For initial flights we recommend you fly with the C of G nearer the 60mm mark, this will make the model a little more docile. Once you are used to the flying characteristics of the FG-1 Corsair "Lucky Gallon", if you wish you can then move it towards the rearward mark.

#### **SUGGESTED CONTROL THROWS:**

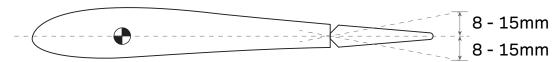
#### Elevator: 5mm low, 8mm high



#### Rudder: 7mm low, 12mm high



#### Aileron: 8mm low, 15mm high







Congratulations you have now fully assembled and set-up your H-King FG-1 "Lucky Gallon" and are ready for your first 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 C of G.
- 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.

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#### **LAUNCHING:**

- 1. The FG-1 Corsair "Lucky Gallon" 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 Corsair 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.

#### **FLYING:**

In flight the FG-1 Corsair "Lucky Gallon" is well behaved and stable throughout the speed range. With the low rate settings as outlined in this manual the Reno Aces FG-1 Corsair "Lucky Gallon" is smooth to control and at full speed carves effortlessly through the air in turns and graceful maneuvers. In the high rate setting the FG-1 Corsair "Lucky Gallon" 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 FG-1 Corsair "Lucky Gallon" to remain stable even at the slowest of speeds and plastic skid plates at all the major contact points, belly landing your FG-1 Corsair "Lucky Gallon" 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 FG-1 Corsair "Lucky Gallon" is a breeze to land and basically effortless too if you keep in mind the above steps.





#### IMPORTANT THINGS TO REMEMBER WHEN FLYING:

- 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.
- 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 FG-1 Corsair.
- 4. Explore the slow speed flight, it is just as much fun going slow as it is fast.
- 5. The FG-1 Corsair "Lucky Gallon" has a great glide 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> <li>The battery is not full charged</li> <li>The battery of the transmitter is low on power.</li> <li>Something is disconnected in the plane</li> </ol>	<ol> <li>Charge the battery</li> <li>Replace the battery in the transmitter.</li> <li>Check motor, ESC connections.</li> </ol>
Motor runs backwards	1. Motor/ESC connection error	Swap around any 2 of the 3 ESC/motor wire connections
Servos not operating properly	The servo leads are connected to the Rx incorrectly.      The servo is damaged.	Make sure the servo leads are connected properly.      Replace servo.
Difficult to trim	<ol> <li>Control surfaces not centered.</li> <li>CoG is not in the correct position.</li> </ol>	<ol> <li>Adjust the trims on the transmitter.</li> <li>Re-positioning the battery is suggested.</li> </ol>



#### **REPLACEMENT PARTS:**



**Motor Cowl** SKU: 9898000040-0



Fuselage Set w/Decals SKU: 9898000038-0



Hatch Cover w/Canopies SKU: 9898000041-0



Horizontal Stabilizer SKU: 9898000039-0



Propeller Adapter w/Domed Spinner Nut SKU: 9898000042-0



Wing Set w/Decals SKU: 9898000037-0



**8x6 Propeller** SKU: 9898000052-0

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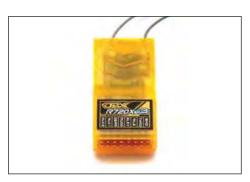
#### **RECOMMENDED ACCESSORIES:**



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

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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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