

QUICK HELI QUICK FLY

by Tony Yap

Step up to a larger heli without breaking the bank

The Quick Fly is the smallest in a series of new electric RC helicopters from Quick Worldwide. Designed to swing 475mm blades, it's a substantial size increase for those who have experience with mini helicopters.

You will immediately notice that this thing is solid! The rotor head, main frames and tail rotor assembly are all built to take some serious punishment. The tail assembly and the main rotor are used in some of Quick's larger machines, so you can be assured that they won't have any problems handling the loads on the Fly.

There aren't any plastic parts in the rotor head; it's fully machined. Blade grips contain both thrust bearings and radial bearings, which are always a plus in my book. All pivot points are supported by ball bearings to minimize slop and friction and make control inputs silky smooth. When properly set up, it has a total pitch range of ± 10 degrees.

The machined, 1.6mm, carbon-fiber main frames are separated by the machined-aluminum bearing block and aluminum standoffs. It is extremely rigid when assembled. The tail rotor is belt-driven, and it has a fully machined aluminum tail case, a CNC pitch slider and a CNC tail bellcrank. Control is transferred to the tail blades via a carbon-fiber control rod with machined ends.

The Fly is supplied with a painted fiberglass canopy—white with a black windshield. A sheet of colorful decals is included to make the Fly more visible during flight. Quick's 475mm carbon fiber rotor blades measure 475mm from the bolt hole to the tip and have a relatively narrow chord. They are extremely stiff and are capable of any 3D maneuver in the book.

I used the recommended power system: Quick's Quick Power 28/26/10 motor, a Castle Creations Phoenix 60 brushless speed control and a TrueRC 10C 6S 4000mAh LiPo battery. The 12-pole 1050Kv brushless outrunner motor has a built-in cooling fan. It seems to be a perfect match for the Fly. With a 14T pinion and the 6S TrueRC LiPo pack, this power system can drive the rotor head at over 2,300rpm, which provides very snappy flight performance.





SPECS

HELICOPTER: Quick Fly
MANUFACTURER: Quick Worldwide
DISTRIBUTOR: Quick Heli
TYPE: 500 size electric heli
FOR: Intermediate to advanced fliers
FLYING WEIGHT: 5.5 lb.
WEIGHT WITHOUT BATTERY: 4.15 lb.

LENGTH: 42 in.

ROTOR SPAN: 42 in.

ROTOR DISK AREA: 1,385 sq. in.

ROTOR DISK LOADING: 9.15 oz./sq. ft.

RADIO: 5-channel required; flown with JR 9303 transmitter with Spektrum 2.4GHz module, Spektrum AR6200 receiver, 3 JR DS8231 servos on swashplate, JR G7703D gyro/JR 8700 servo for tail rotor

POWER SYSTEM: Quick Ray Power 2826/10 outrunner brushless motor, Castle Creations Phoenix 60A brushless speed control and Castle Creations BEC, TrueRC 10C 6S 4000mAh LiPo battery

HOVER POWER: 17 amps, 374 watts, 4.25 W/oz., 68 W/lb.

MAIN ROTOR HOVER RPM: 1,700

DURATION: 6 - 14 min., depending on flying style and rotor rpm

MINIMUM FLYING AREA: Large park or flying field

PRICE: \$349.99 (Sport model), \$424.99 (Pro model)

COMPONENTS NEEDED TO COMPLETE: Motor, pinion, speed control, 6S 3000 to 4000mAh battery, 4 servos, gyro, and radio capable of CCPM mixing, main rotor blades, landing-gear dampers

SUMMARY

The Fly is a durable helicopter featuring a lot of metal and carbon-fiber parts. It is extremely stable in hover at lower rpm and very capable at higher head speeds that should satisfy most pilots' aerobatic needs. With an experienced modeler to help with the building and setup, it also makes an excellent beginner machine.



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One thing that has always deterred me about larger electric helis is their battery cost. It is easy to spend \$300 on a large pack that may provide only 5 to 6 minutes of flight. The Quick Fly is designed around the TrueRC's 6S 4000mAh LiPo battery, which sells online for \$105. Because of the pack's high capacity and high voltage, the current draw is relatively low, and this allows the use of much cheaper 10C cells and provides flight times that are comparable to those of nitro helis. Because of the relatively low cost, you can buy several packs and keep the time between flights to a minimum.

TIPS FOR SUCCESS

As much as I like this heli, the instruction manual needs improvement. Certain sections are not clear, and some missed steps completely. That said, I will mention some of the ones that needed clarification.

The landing gear struts haven't been drilled at the factory, and it is up to the builder to drill the holes to mount it on the main frames and secure the skids. Prior to assembling the battery tray, use one of the battery-tray plates as a template to mark holes on the skids. I used an $1/8$ -inch drill bit to make the holes to attach it to the frames and a $3/32$ bit to make the holes for the setscrews that secure the skids.

In its stock form, the tail fin and tail rotor sit about 1 inch lower than the landing gear. Be sure to buy the optional landing-gear dampers and install them above the rear strut to prevent the tail rotor from hitting the ground. In my opinion, these should be included with the kit.

The front tail transmission assembly comes assembled. When mounted in the slots on the carbon side frames, the gear mesh was too loose, even with the assembly pushed as far as it would go. Using my Dremel tool



with a small file tip, I increased the length of the slots in the frames about 1mm farther forward to allow a proper gear mesh.

The front gear strut blocked the canopy from reaching its mounting standoffs. I used my Dremel tool and carefully notched the canopy to clear the strut. Go slowly, and check the fit often to achieve the best results.

AIRBORNE

I was eager to try out the Fly and made the first test hops in my backyard. Taking it into a 2-foot hover, the Fly was rock-solid. Even in my small backyard, I felt totally comfortable, as it took only minor inputs to keep it stationary. With my pitch curves set to provide ± 10 degrees of pitch and my normal throttle curve at 0-36-78, I measured 1,700rpm on the rotor head using an Eagle Tree flight recorder and rpm sensor. This is an excellent rpm for basic hovering all the way up to a moderate speed forward flight. At higher forward speeds, the Fly tends to pitch up abruptly as the retreating blade loses lift. This can be avoided by reducing the forward airspeed or by increasing the rotor rpm. At this rpm, the average current draw was 17 amps, which should provide about 12 minutes of flight before you need to land and recharge.

My backyard is a bit too small for aerobatics, so subsequent flights were at my normal club field. Here's where I really enjoyed the Fly. I flicked my flight-mode switch into idle-up 1, which keeps the same ± 10 degrees of pitch but increases the throttle curve to 85-70-85. This increased the rotor speed to roughly 2,100rpm. There is definitely more authority with the increased rpm, and the heli maintains its stability. The tendency to pitch up in forward flight is still there, but it's less pronounced.

Loops and rolls aren't a problem at this speed, but it does require a little more collective than some of my other helis because of its weight. Tail authority with the JR770 3D gyro and 8700 servo was awesome. Pushing the rudder stick all the way to the limit caused the Fly to spin like a top.



When I let the stick go back to center, the tail stopped immediately. After some moderate 3D flying, the average current draw was 32A, which should allow about 7 minutes of flight. Peak current was measured at 60 amps—right at the maximum limit of the TrueRC battery's rating.

After a full 3D flight, the motor, speed control and battery were all warm but not hot. Given its low cost, I was very impressed by the battery's performance. Pure power freaks may want a higher C pack, but the TrueRC pack is a fantastic value and will allow most people to get into flying a larger heli without breaking the bank on batteries.

CONCLUSION

The Quick Heli Fly is a good step up for those who have learned on smaller electrics and are looking to move on. That the Quick Fly performs so well with the low cost TrueRC packs really sweetens the deal. With carbon-fiber frames, a metal head and tail and a fiberglass canopy, the design is virtually bulletproof. All this metal does increase weight, so it takes a little longer to react to quick collective changes. Its strengths are hovering and cruising, but in the right hands, it is capable of mild 3D. My biggest complaint would be about the manual, but most people who have worked on other helicopters should be able to figure it all out, and they will be rewarded with an excellent helicopter that includes all the fancy metal and carbon parts right out of the box. ●

Links

Castle Creations, www.castlecreations.com, (785) 883-4519

Eagle Tree Systems, www.eagletreesystems.com, (425) 614-0450

JR, distributed exclusively by Horizon Hobby Distributors, www.jrradios.com, (877) 504-0233

Spektrum, distributed by Horizon Hobby, www.spektrumrc.com, (800) 338-4639

True RC, www.truerc.com, (773) 203-8695

Quick Heli, www.quickheli.com, (610) 282 4811

For more information, please see our source guide on page 161.