Esky HoneyBee King 3

by erkrystof - Wednesday, July 29, 2009

http://www.hoverandsmile.com/esky-honeybee-king-3/

Ahhh, Christmas comes a little early this year, right smack dab in the middle of summer. My latest entry into advancing my collection and my flight is the Esky Honey Bee King 3. Looking at the packaging, contents, and some inital hovering and adjustments.

7.3.2011 Edit - You know, looking back on some of these older articles... This one is a heli I need to fly again, I miss it, and man.... what a friggin glorified unboxing article and not much more. Too much fluff, but I was just starting. :)

It's a beautiful looking box:

HoneyBee King 3 Box

Of course, the heli isn't too bad either:

HoneyBee King 3

First off, call it whatever you want… Esky, ESKY, E Sky, E-SKY, E-Sky, Eee Sk Eye (For those still hooked on phonics)… The King 3 is definitely a nice looking bird. Bigger than my Blade CPP2, but smaller than my Blade 400, it's a nice size for me to fly indoors as well as out (with *small* tolerance for winds).

The HoneyBee King 3 components are upgraded versions of the King 2, and the remaining items are, generally speaking, compatible. The two things I was really looking for in getting this bird was the brushless motor and belt driven tail.

Here's what it comes with (reference: X-Heli.com)

Product Description:

1. 120 degree ECCPM control system
2. Completely assembled and tested at the factory, ready to fly out box!
3. New High-tech 6-channel RC system
4. High performance Heading Lock gyro is Capable of sport flying and 3D aerobatics

5. Digital Sub-Micro servos and Micro Heading Lock gyro offer precise and powerful control
6. Stainless steel flybar, main shaft and tail shaft
7. 400 brushless motor, 25A brushless ESC and 3S 11.1V 1500mAh 20C Li-Po battery deliver incredible power and performance.
8. The new 2.4G remote control system adopts Advanced Spread Spectrum technology and digital FSK (Frequency Shift Key) coding technology. This combined with four digital servos, ensures rapid response, precise control and nimbler movement.
9. Hold Rotation System and Auto Rotation System
10. Tail Belt Drive System
11. High Inertial Main Blade
12. High Efficiency Tail Blade
13. Rear Tail Servo Stan

Specification:

1. Main blade diameter: 600mm
2. Tail blade diameter: 130mm
3. Length: 550mm
4. Height: 200mm
5. Weight: About 390g
6. Motor gear: 10 teeth
7. Main driven gear: 110 teeth
8. Driven gear ratio: 14:1:4.44

Package included :

1. 1 x ESky Honey Bee King 3 Helicopter Body, All Electronics Installed, Ready-to-Fly
2. 1 × 3800KV Brushless Motor (EK5-0005) NEW!
3. 1 × 25A Brushless speed controller (EK1-0350) NEW!
4. 1 x ESky professional Headlock Gyro (EK2-0704B) NEW!
5. 4 × 7.5g Digital Servo (EK2-0508)
6. 1 x ESky 6-channels 2.4Ghz Transmitter (ET6I) NEW!
7. 1 x ESky 6-channels 2.4Ghz CCPM Receiver (EK2-0424) NEW!
8. 1 x ESky 1500mAh 20C Li-Po Battery (EK1-0183)
9. 1 × 7.4V & 11.2V Li-Polymer Battery Charger (EK2-0851)
10. 1 × 110V AC Switching Adapter

The bird I've flown the most is my Blade CPP2. It's direct drive tail is an obvious upgrade from the Blade CP's tail (where the tail motor connects to a gear which drives the tail blades). However, a belt driven tail means one less motor to have to worry about and burn through.

As the belt driven tail means that the tail speed is constant, an additional servo is required to change the pitch of the tail blades. In non belt driven tail systems, no servo is required, as the speed of the motor is used to control the rudder.

I ordered this specific bird from miracle-mart.com for around 170 dollars. Looking at the site now, it's

rocking around 155 dollars, but that's the way it goes. After shipping, it was still beating other sites I searched through, so personally it was a great deal.

There are of course numerous versions, 72 mhz, 2.4, red, blue, yellow, etc. I chose blue because I already have enough red, and 2.4 ghz because I didn't want to worry about crystals.

The bird itself was almost ready to rock out of the box. Pre-flight checks of servos and belt tightness (based on manual suggestions) showed that everything was in working order. Blades were balanced. The Gyro, however, was the only piece that gave me some trouble.

At first I saw the tail servo was the only servo to twitch during the pre-flight test:

I wasn't sure what to think of it. Thanks to the always helpful helicopter gurus that hang around RC Universe, I received some helpful diagnostic advice.

By removing the Gyro from the circuit (unplug the gyro and remote gain from channels 4 and 5, unplug the tail servo from the gyro, and plug the tail servo into channel 4, then retest), I was able to show the tail servo was just fine, completely smooth movement.

So, is it the Gyro? Seems that way. Hooking it all back up and I still had a twitch. I was thinking I may need to adjust the pots on the Gyro itself, so to see where they were set compared to the minimum locations, I took a flat head screwdriver, turned both pots all the way to the left until they stopped, then back to the original position.

Now, the Gyro is back to the way it was out of the box. I hooked it back up and tried it, and lo and behold… no more twitch. All I really did was turn the pots all the way down then back to where they were.

Sticky Pot, perhaps? I've had no twitches since then, so I'm happy, but I'll still be keeping an eye on the Gyro and rudder servo.

This is good proof that it pays to check that servos are moving properly, blades are balanced, and all the general pre-flight checks before you just speed up and go. If I hadn't done that and decided to burn it hard up into the air, this article would be titled 'How to clean up bits and pieces of an Esky Honey Bee King 3'.

Initial hover tests showed that the gain on the gyro needed to be remotely tweaked on the transmitter, as I was getting some slight tail wagging. Turning the knob down a little bit solved that.

Since I was able to take the helicopter to the indoor flying area (read: indoor soccer field) today, it proved a great time to check out the bird without bags and boxes in my apartment getting in the way. *Mom, if you're watching, I swear I'll clean.*

Tweaking the gain just a little more proved to be a more stable tail, but I still need to tweak the Gyro a bit more, as I can't trim out the tail rotation. It wants to slightly move to the left or right based on transmitter trim – meaning there isn't a rudder trim setting on the transmitter I can use that keeps it completely straight forward. However, it is still easily flown.

So, to get that perfect hover in terms of rudder, I'll need to tweak the Gyro some more. I expected some sort of tweaking, as many have said to me, it **says** 'Ready To Fly'… but it's never **truly** 'Ready to Fly'.

Here's the first hover and maiden flight. All in all I can feel it's more powerful than the Blade CPP2. Once I get more comfortable with flying helicopters, I am very much looking forward to opening her up and seeing what she can do. You can tell by the video I'm still at the hover and forward-reverse flight stage in my radio controlled helicopter career.

I like this puppy so far, yes sir!

Comments? (0)

Tags for this article:esky, esky hk3, helis

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