

**SPECS****PLANE:** Cybird P1**MANUFACTURER:** Ornithopter Zone**DISTRIBUTOR:** Ornithopter Zone Store**TYPE:** Electric ornithopter ARF**FOR:** Intermediate pilots**WINGSPAN:** 29 in.**WEIGHT:** 7 oz.**LENGTH:** 11 in.**RADIO:** 2-channel required; flown w/Spektrum DX7 transmitter, Spektrum AR6100E receiver, 1 included servo**POWER SYSTEM:** Speed 370 motor, Castle Creations Pixie 20A speed control, Thunder Power 2S 720mAh LiPo battery**FULL-THROTTLE POWER:** 5.6 amps, 38 watts; 5.44 W/oz., 87 W/lb.**DURATION:** 5 min.**MINIMAL FLYING AREA:** Ballfield**PRICE:** \$89.99**COMPONENTS NEEDED TO COMPLETE:**

2-channel transmitter, receiver, 7A or greater brushed motor ESC, 2S 700-1300mAh LiPo battery

**SUMMARY**

The concept of an object flying by flapping wings is fascinating. The Cybird P1 not only accomplishes this, but it is quite controllable. It also allows you to have a fully functional, radio-controlled ornithopter for well under \$100.

## Flap your wings & fly with this electric bird

by John Tracey

**AIRBORNE**

The Cybird is controlled by 2 channels—one for the throttle and one for the tail (rudder). The throttle controls the rate of climb. The faster the wings flap, the higher the rate of climb. To descend, simply cut back on the throttle a little and the Cybird will settle back down on the ground. The Cybird will glide, but it is tricky to cut the throttle while the wings are at their maximum span. In all eventualities, be sure to throttle back completely before you reach the ground to prevent your little Cybird from beating itself to death.

Launching the Cybird is easy. Just throttle up and give it a little toss into the air. It does not need much forward speed because its lift is created by the wings' flapping, and its forward motion is created by a slight deflection of the wings (similar to a scuba diver with flippers on). I found the Cybird's maneuverability most impressive. It turns very well in a controllable manner. (My earlier ornithopter sometimes would not turn or would not stop turning.) The Cybird is extremely predictable in turns; it is easy to launch it and fly it back into your hand without its ever touching the ground.

The Cybird will fly in a light breeze, but it is most controllable when it's absolutely calm. I fly mine with a 2S 720mAh battery and get 8-minute-plus flights. It will handle cells of up to 1300mAh. Do not attempt to run a 3S battery in it, or the little 370 brushed motor may not last long.



My first experience with ornithopters came at the 2001 NEAT Fair in Shinnonghly, NY, when I saw the noon-time demos. I found the technology fascinating, and I worked one into my budget a few months later. This ornithopter flew well but was inherently difficult to steer. No matter when I flew it, I always drew a crowd and myriad questions. Because of its steering difficulties, I flew it mostly for demonstrations and rarely for the pure fun of it.

Inevitably, advances were made with time, and I recently heard others say that the new Cybird flies well. The price was definitely right, so I decided it was time to flap wings again, and I picked up the Cybird P1 for review.

The Cybird P1 comes with a printed manual and a CD. To be honest, I found the paper manual almost completely useless, as I am not fluent in Japanese. The CD, however, has great videos showing how the Cybird is flown. There is not a lot of information on the CD about assembly, but it isn't really needed. What's left to do is so simple

that it speaks for itself. To complete the assembly, you need only to solder your ESC to the motor, install the receiver and battery and attach the wing and tail. The wing is attached with two ball-lock joints at the trailing edge and with two slip-on quick clips at the leading edge. The entire "assembly" can be completed in less than 30 minutes.

The Cybird's body frame parts are mostly hard plastic. The wing and tail are constructed of carbon fiber and painted, rip-stop nylon. If you happen to break something, all of the parts are available at the Ornithopter Zone's website. The durable skin is a thin pliable foam that is attached to the frame with small plastic pins. Precut decals give the Cybird a robot look.

**ORNITHOPTER ZONE**

# Cybird P1

**TIPS FOR SUCCESS**

This unique little flyer is well designed and easy to build.

Here are a few points that will help you to fully enjoy your Cybird.

First, drill out the tail piece so that it will sit flat on the servo horn. This will make it less likely to crack in a major crash.

The Cybird comes with a switch installed. If you choose to use the switch, be sure to wire it between the battery and the speed control. If you wire it between the motor and the speed control, you risk draining your LiPo beyond the point of no return.

Because a lot of hard plastic is used in the Cybird's construction, I do not recommend that you fly it in cold weather. As the temperatures dip, the plastic parts become more susceptible to breaking. I flew mine recently on one of our cold New England October mornings, and the mount cracked where the leading wing edge rods are attached to the frame. I was pleased to see that an extra bracket is included in the kit!

If you do not want to use the robot-look decals on the Cybird's skin, you can color it with your choice of markers instead.

**CONCLUSION**

This is a great little flyer that's well worth the price. The conversations you'll find yourself getting into are alone worth its cost. The wings are designed to pop off for storage, so it takes up hardly any space; it's a true suitcase flyer. The innovation of this unique flying mechanism would impress Leonardo himself. 🐦

**Links**

**Ornithopter Zone**, [www.ornithopter.org](http://www.ornithopter.org), (585) 482-3481  
**Spektrum**, distributed by Horizon Hobby, [www.spektrumrc.com](http://www.spektrumrc.com), (800) 338-4639

For more information, please see our source guide on page 129.

PHOTOS BY WALTER SIDAS

