



HOBBY LOBBY

# Oxalys

The new Oxalys electric, fresh off the drawing board of F3 World Champion Christophe Paysant-Le Roux and New Power, is a great flying profile park flyer version of his famous Oxalys 2-meter competition model. While sharing the beautiful lines and of its larger brethren, the Oxalys park flyer also incorporates excellent 3D flying traits, making it one of the more versatile small models on the market. Having built the Hobby Lobby Reflex (also from New Power) recently, I was intrigued to see the incremental innovation of their latest offering, and was pleasantly surprised by the refinement offered in the Oxalys package. Matched with the new AXI 2217 from Hobby Lobby, I was hopeful to have not only great precision performance, but also screaming verticals and foamy-like 3D punch in a trunk-sized package. I wasn't disappointed.

#### ASSEMBLY

The Oxalys is built from high-grade balsa intermixed with light-ply where needed. Each component is highly engineered with laser-cut precision and interlocking joints. Unlike many profile fuselage models, the Oxalys interlocking fuselage arrived perfectly straight and is remarkably rigid. The wing is a one-piece unit that is permanently glued to the fuselage prior to attaching the ailerons. The one-piece elevator eliminates the trying step of joining the halves with a bent metal rod or carbon tube. The wire landing gear attaches to the fuselage with nylon ties, a method I prefer for its durability—the ties will break before the fuse does—as well as for its versatility of easy removal if operating from grass. On initial inspection, I found the entire airframe to be nearly warp-free but somewhat wrinkled. Be careful tightening the covering, as it is very sensitive to heat. While I was quite cautious, I had several portions of blue covering that released in the motor mount area. The blue covering is definitely the most sensitive to heat, so start with a very low heat, incrementally upping the temperature until you get the response you need.

In all, assembly should take no more than a couple of evenings or a long after-

## Backyard Precision and 3D from the World Champion!

by Scott Stoops



#### SPECS

**PLANE:** Oxalys electric park flyer

**MANUFACTURER:** New Power Modelisme

**DISTRIBUTOR:** Hobby Lobby

**TYPE:** Electric pattern/3D park flyer

**FOR:** Intermediate to advanced pilots

**WINGSPAN:** 36.25 in.

**WING AREA:** 335 sq. in.

**FLYING WEIGHT:** 18.4 oz.

**WING LOADING:** 7.9 oz./sq. ft.

**LENGTH:** 37.5 in.

**RADIO:** Futaba 12Z transmitter, Hitec Electron 6 receiver, (4) Hitec HS-55 servos

**POWER SYSTEM:** AXI 2217/16, Jeti Spin 22-amp brushless ESC, APC 11x7 SF propeller, Polyquest 3S 800mAh Li-Poly battery

**FULL THROTTLE POWER:** 18.2 amps, 182 watts; 9.9 W/oz., 158.3 W/lb.

**TOP RPM:** 6,640

**DURATION:** 10+ minutes aerobatics

**MINIMAL FLYING AREA:** Park or ball field

**PRICE:** \$127.35

**COMPONENTS NEEDED TO COMPLETE:** 150+ watt brushless power system, (4) 6-9 gram servos, 4+ channel radio system

#### SUMMARY

Designed to fit the niche of both precision and 3D, Hobby Lobby's new Oxalys electric park flyer is a great flying model that assembles quickly and precisely so you'll be airborne in no time. Unlike many small electric models, the Oxalys has a very sturdy and rigid built-up profile fuselage with generous side area, making knife-edge maneuvering very solid and predictable. Its thinner wing section and attractive double-taper planform allow both rock-free harrier performance and great tracking for a profile fuselage park flyer.



PHOTOS BY DAVID MIELKE

## AIRBORNE

I prefer to hand-launch the Oxalys, a maneuver made simple by the unlimited vertical performance of the AXI. For those operating from rougher surfaces, consider omitting the wheel pants for durability. If operating solely from longer grass, I'd even consider omitting the wire landing gear altogether. Flying off dirt or short grass is no problem for the wire landing gear. While the gear may bend, the wire landing gear legs quickly bend back straight after those not so great landings. In full-on crashes, I've found the nylon retention zip-ties break, minimizing damage to the fuselage.

The Oxalys feels very light and responsive without being twitchy. I found the ailerons to be very effective, so be cautious dialing in max throws without corresponding exponential. The elevator and rudder are also quite effective, but also feel nicely balanced. I definitely recommend dual rates, one for precision flying and a second maxed out for best 3D performance. On low rates, the Oxalys performed traditional aerobatics much better than expected. Precision maneuvers including point rolls, rolling circles, tight hammerheads, and fast snap rolls are all easy and predictable. Its rigid fuse design really enhances smooth and clean tracking compared to other profile models I've flown. In knife-edge (KE) flight, the Oxalys required only minimal mixing. A 3% rudder-elevator mix for a slight pitch to the gear, and 5% rudder-aileron perfectly canceled out the tendencies for a slight roll



with the rudder. The rudder is powerful enough for 30-foot KE loops, and the KE coupling only increases slightly at very high KE angles of attack. The Oxalys park flyer incorporates the same unique fin/wing on the top of its fuselage as the larger 2-meter design. It is supposed to help clean up the airflow over the rudder, and while I didn't fly it without the fin/wing, the model performs KE maneuvers precisely and predictably.

From a 3D perspective, you'll want the maximum elevator control throws possible for tightest maneuvering. Initially, I didn't have a full 45 degrees of throw on the elevator and found myself wanting for more. After a quick re-rig of the elevator hinges and geometry, 45 degrees of throw allows reasonably tight waterfall and walls, and plenty of authority for perfectly flat spins, both upright and inverted. Harriers are basically rock-free, with the bank changes driven by rudder usage. When steering the harrier, you'll need to hold opposite aileron to keep the wings level, but there is no repetitive rock cycle upright or inverted. The AXI 2217 is a perfect match for the model, allowing plenty of performance for wild 3D flight and precision alike. I've flown the Oxalys with both slow flyer and electric propellers, and prefer the APC 11x7 slow flyer prop for best stability in hover. I did reduce my aileron throws slightly from max to make the roll rate more manageable during rolling harriers.

noon. Assembly steps include attaching the wings and tail to the fuselage, hinging the flight controls with CA hinges, and installing the power and radio systems. I used both thin and medium Zap CA with great success.

### FINISHING TOUCHES

Like most profile models, the Oxalys' radio equipment mounts externally. The servo holes are the perfect size to accept Hitec HS-55 servos. For years, the HS-55 has led the industry in not only performance, but also affordability. I have literally dozens of HS-55s, and I've had only great performance using them in similar-size models. Each servo is placed within reach of the receiver, eliminating the added complexity and cost of additional servo extensions. Check the tips section for more on rigging the tail pushrods. Finally, I mounted my trusty Electron 6 receiver with Velcro pads in the stock receiver pocket, and secured the excess servo wire with nylon ties tucked away next to the receiver.

The Oxalys is designed to accept a wide variety of brushless outrunner motors. While it would be possible to adapt the firewall to a geared inrunner, I prefer the stock outrunner for both durability and simplicity. I chose the new AXI 2217 to power the Oxalys, which has been a great match for the airframe. The AXI mounts onto the airframe using an included plywood/balsa disc firewall and the stock firewall "cross" style back mount. I attached the motor with heavy-duty wood screws, hardening the holes with thin CA. The mount has proven to be quite robust and

accepts a wide variety of motor lengths. I mounted the Jeti Spin 22-amp controller on the side of the fuselage with Velcro pads and secured the excess wires with nylon ties. I prefer this to shortening the wire for adaptability to future airframes.

The battery mounts in a pre-cut slot in the fuselage. Hobby Lobby recommends a ThunderPower 3S 1320mAh pack, which happens to be too thick for the stock mounting location. Rather than cut the slot wider, I chose to use the slightly thinner, lower capacity Poly-Quest 3S 800mAh Li-Poly pack from the Reflex that fits perfectly in the battery slot. Long story short, you'll need to trim the battery slot to fit the 1320. I've had great performance from the Poly-Quest pack, and while I'm pushing it slightly past spec at full throttle, I've seen no detrimental effects on the pack. I chose to secure the battery with Velcro and a thin Velcro strap for security. With the battery located so close to the CG, balance changes will require moving the ESC and receiver. Fortunately, using the recommended power system the CG is spot on, requiring only the lightest touch of down elevator while inverted.

### TIPS FOR SUCCESS

First, the stock control rod assembly uses small plywood guides glued into the fuselage sides that act to secure the elevator and rudder control rods, preventing flexing along their run to the tail. I found the guides added a significant amount of friction to the control system, causing slower servo response and inconsistent control surface centering. To correct this, I reamed the

guide holes out slightly, which reduced the friction in the control system.

For best 3D performance, you'll want the maximum elevator throw available. I've found the best technique to achieve this is to leave a slight gap of 1-2mm between the elevator and horizontal stabilizer. This gap allows maximum throw, and you can easily seal the gap with small strips of clear tape.

Finally, the Oxalys' clear covering can make orientation challenging. I would highly recommend adding distinguishing markings to the bottom of the wing and tail to help differentiate between top and bottom.

### CONCLUSION

In all, the Oxalys is predictable enough to be a second aileron model, but also offers unlimited 3D and great precision performance. Its high level of prefabrication makes final assembly straightforward and easy for even the least experienced builder. For me, the Oxalys is a great training aid for both precision and 3D, and fits nicely in the back seat of my truck for those quick trips to the park. With Christophe Paysant-Le Roux's signature on the model, I should have expected nothing less. 🌀

### Links

**Futaba**, distributed exclusively by Great Planes Model Distributors, [www.futaba-rc.com](http://www.futaba-rc.com), (800) 682-8948

**Hobby Lobby International, Inc.**, [www.hobby-lobby.com](http://www.hobby-lobby.com) (615) 373-1444

For more information, please see our source guide on pg. 177.

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