

EXCLUSIVE!

PRECISION AEROBATICS ADDICTION X

The ultimate in 3D
performance

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I admit it—I'm an RC airplane junkie. If it has wings, I want to fly it. You could say I had a flying addiction, especially when it came to giant-scale aerobats. But as my experience has grown and my abilities improved, I've realized that the new generation of electric-powered aerobatic planes has really opened up the hobby to me, and I started to improve my in-close, close-to-ground 3D aerobatic skills.

When I first became aware of the great-flying airplanes offered by Precision Aerobatics (PA), I saw there was a lot of exciting aerobatic fun on tap. Once I got a hold of the Addiction X, I quickly discovered it isn't your average aerobatic plane. Where your typical aerobatic plane has certain stability and slow-speed performance tradeoffs to achieve upper-end performance, the Addiction X proved to be a different kind of animal. It's a very sturdy featherweight model that's easy to fly. It's very stable, but also totally capable of performing precision 3D maneuvers. The first time I flew it, I knew a lot of time and design effort had gone into its construction.

Its super-lightweight design translates into a pilot-friendly, (low) wing loading, and an awesome power-to-weight ratio,

so important to performing 3D aerobatics. Set up with high rates, the Addiction X responds immediately to your stick inputs. On low rates, it's a pussycat and would make a great first 3D choice because of its stability.

UNIQUE FEATURES

This model is not just a larger version of the original 40-inch Addiction. It's all new and it has some great aerodynamic features. The Addiction X has a 50-inch wingspan and because of its unique FiberFusion and interlocking laser-cut construction, it weighs in at just over 42 ounces and that's with a big wing area of 744 square inches—do the math! It's just over 8 ounces per square foot, so it's no wonder this airplane performs as well as it does.

Also included in the kit is a great supply of quality hardware, reinforced fiberglass cowl and wheel pants, carbon-fiber (CF) landing gear, a CF wing tube, CF control horns and CF pushrods. If you can't already tell, Precision Aerobatics is very conscious of weight. They also offer a packet of CF servo arms and vortex generators and air-flow fences that can be purchased separately. I have included them for this review.

Each of the control surfaces use CA

SPECIFICATIONS

Model: Addiction X

Manufacturer/distributor: Precision Aerobatics (precisionaerobatics.com)

Type: 3D aerobatics

Wingspan: 50 in.

Wing area: 744 sq. in.

Weight: 42.3 oz.

Wing loading: 8.2 oz./sq. ft.

Length: 52.4 in.

Radio req'd: 4 channels (rudder, throttle, aileron, elevator)

Flight duration: 5 to 8 min.

Price: \$225

HIGHLIGHTS

-  Strong construction
-  Incredible flight performance
-  Quick and easy assembly
-  Awesome looks

hinges and everything comes preslotted for you. You do need to open up each of slot a bit with a sharp no. 11 hobby knife to reveal the opening. After you install your servos (I used Hitec 82MG servos), you'll have to glue the pushrods into the control arm linkage and servo arm ball links. Turn on your radio gear and center all your servos and control surfaces before gluing the pushrod in place. Once the



IN THE AIR

Wow! Have you ever wondered what it would be like to have control of something that has truly unlimited performance? I'm talking about a "sick" power-to-weight ratio and a wing loading that belongs in the glider and sailplane category. All-out extreme performance but with an airframe that's as easy to fly as an aileron trainer—that's what the Addiction X is all about!

The Addiction X can literally operate off of a four-foot square card table. Full power yields a three-foot takeoff roll. The Addiction X can operate nicely off short grass and its ground handling is easy due to the steerable tailwheel and large control surfaces. As soon as the Addiction X is airborne, it didn't take very long to get comfortable with its response. I do recommend using low rates for both takeoffs and landings. I chose to use the greater elevator deflection of 15 degrees as recommended in the manual. This provided more than adequate throw for all of the traditional IMAC type of aerobatics.

3D mode only requires the flick of aileron and elevator rate switches. The recommended expo of 70% is a good starting point, but I chose to dial the expo down to 50% for a little better feel closer to center sticks. The Addiction X made me look like a better pilot than I really am. 3D maneuvers like hovering are easy to do with the Addiction X. The large control surfaces are very effective with nothing other than propwash.

The vortex generators are effective in keeping airflow focused over the outer ends of the ailerons, keeping roll control extremely effective even at extremely low airspeeds.

GENERAL FLIGHT PERFORMANCE

Stability: This is the most stable aerobatic plane I've ever flown. The Addiction X required no adjustment of equipment to produce the best CG placement and not having to add weight to balance the plane makes for a lighter, wing loading. A win-win all around.

Tracking: The Addiction wasn't on the ground long enough to require any right rudder to keep its takeoff roll straight. With power kicked in for a rocket-like climb out, there's only a little amount of right rudder needed to counter torque. Unlike other 3D planes I've flown, the Addiction X is surprisingly precise and tracks extremely well, even in windy conditions.

Aerobatics: The Addiction X is a 3D animal! It performs harriers exceptionally well (upright and inverted) and again, it makes you look like a pro. Spins are easy and can be exceptionally flat using only rudder. This means that you can easily perform spins at any height. Knife-edge passes require about 1/3 throttle and there's almost no coupling issues at all. Loops can be as tight as you want and when I tried knife-edge loop, the Addiction X had more than enough rudder to make it look easy. Inverted flight is also a no-brainer and you'll find it well behaved in any and all attitudes.

Glide and stall performance: With such a light wing loading, how can the Addiction X be anything other than exceptional? On low rates, stalls had to be forced to get them to really break. It

GEAR USED

Radio: Spektrum DX8 (spektrumrc.com), transmitter, 4 Hitec 82MG servos (hitecrcd.com), Spektrum 6100E receiver (spektrumrc.com)

Motor: PA Thrust 40

Speed Control: Quantum Pro 45 (with Switching BEC) LiPo

Prop: VOX T-40X wood prop (voxprops.com)

CONTROL THROWS

Elevator: ± 1 in., 35% expo (low); ± 3 1/8 in., 70% expo (high); ± 4 1/8 in. 70% expo (3D)

Aileron: ± 1 in., 30% expo (low); ± 4 in., 70% expo (high); ± 4 3/4 in. 70% expo (3D)

Rudder: ± 3 in., 35% expo (low); ± 4 3/4 in., 70% expo (high); ± 4 3/4 in. 70% expo (3D)

can accelerate rapidly from any stalled attitude and this is great for transiting between maneuvers. As far as landings go, add slight headwind, kick in high rates and hold a bit of power and you do harrier landings with little to no effort at all.

PILOT DEBRIEFING

Although not intended for the beginner, the new Addiction X from Precision Aerobatics can be thoroughly enjoyed by almost everyone who has mastered the basics of RC flight. In less than five hours, this easy-to-build, awesome airplane can do everything—from basic aerobatics to the most extreme and high-performance 3D. You'll quickly become an addict too, I promise!

PILOT REPORT

PRECISION AEROBATICS ADDICTION X



The Addiction X's FiberFusion construction method is exclusive to Precision Aerobatics airplanes. It combines carbon fiber, balsa and ply to produce a lighter, stronger and more rigid aircraft.



The hardware includes German-made ball links and CNC-machined clevises.

epoxy has set, you don't have any way to make mechanical trim adjustments. Again, this arrangement saves weight.

Installation of the horizontal stabilizer and elevator requires you to remove a small balsa wedge from the tail in order to slide the pieces into place. Both pieces must be passed through the slot before gluing the supplied wedge back in place. I used 30-minute epoxy to allow some work time. Be sure to reinstall the wedge and measure from the wingtips to the tail



The Addiction X came with these wing-mounted, carbon-fiber vortex generators

to ensure everything is square before the glue sets. The recommended position for the rudder servo is in the servo tray under the motor box. This setup saves tail weight and provides the best CG location. Control throw setup is easy with the included laser-cut angle gauge.

The motor box is installed and fitted to the fuselage with a CF rod and pins. Don't force the fit. Take the time to sand any high spots for a perfect fit. Once satisfied, apply a thin coat of epoxy around each of the pins and all joints where the box meets the fuselage. Be sure to install the air scoops before attaching the cowl. If you follow the instructions and install the rudder servo in the motor box, the CG should balance right at the recommended location. Mine was right on without any modification or shifting of the battery.

CONCLUSION

Precision Aerobatics has done extensive research to produce the perfect airframe/powerplant combination for the ultimate in 3D performance. They call it the Integrated Performance Airframe-Drive

SETTING UP FLAPERONS

Using the new Spektrum DX8 transmitter, setting up the Addiction X to use flaperon is a simple matter.

Wing type

1. Press in the Roller Selector switch and turn on the transmitter and enter the "System Menu."
2. Scroll down to the "Wing Type" menu.
3. Select "Flaperon." (Graphic display shows the wing type clearly.)
4. Select "List" and then select "Main" to return to the "Main Display Screen."

Servo adjustment

5. Press the Roller Selector switch to enter the "Function" Menu.
6. Scroll to "Servo Setup" then enter the "Travel" Menu.
7. Select the "Right" aileron, then scroll to the travel percentage and be sure both left and right ailerons are set to 100% travel.
8. Scroll to "List" to exit the menu and then scroll down to D/R and Expo.
9. Adjust the dual rates and expo to match the degrees and percentages recommended in the instructions. Use the laser-cut plywood servo travel template included with the Addiction X, then adjust the travel percentages to match the template.



This control throw gauge is included in the kit.

Systems, or iPAs. Their flight-test program establishes the optimum motor/prop combination for a particular airframe to obtain the highest possible performance. This research really pays off with the Addiction X. ✈