

**SPECS****PLANE:** Katana MD**MANUFACTURER:** Precision Aerobatics**DISTRIBUTOR:** Atlanta Hobby**TYPE:** 3D aerobat**FOR:** Intermediate to advanced pilots**WINGSPAN:** 46 in.**WING AREA:** 500 sq. in.**WEIGHT:** 38 oz.**WING LOADING:** 11 oz./sq. ft.**LENGTH:** 45 in.**RADIO:** 5 channels required; flown with a JR 9303 transmitter, 9-channel receiver, (4) Hitec HS-65 servos**POWER SYSTEM:** Torque 2818-900 388 watt brushless motor, 12x6e APC prop, 35-amp Airboss speed control, 3S 3700mAh Li-Poly battery**FULL THROTTLE POWER:** 36 amps, 392 watts; 10.31 W/oz., 165 W/lb. TOP RPM: 8,600**DURATION:** 12 minutes of aggressive flying**MINIMAL FLYING AREA:** Large ball field**PRICE:** \$319 for complete package (less servos)**COMPONENTS NEEDED TO COMPLETE:** Servos and radio**SUMMARY**

Welcome "Fiber Fusion!" Precision Aerobatics has created a wonderful hybrid aircraft that is truly a best of breed ARF. The process of combining carbon fiber with balsa has raised the bar for others. The result is a lightweight, rigid and nimble aerobat that can out-fly most pilots' thumbs.

PRECISION  
AEROBATICS

## KATANA MD

Low-cost,  
high-performance  
hybrid

by Tyler Renkert

PHOTOS BY WALTER SIDAS AND THAYER SYME

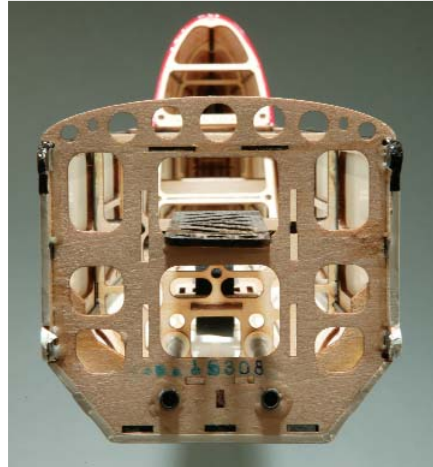


I had read the hype on the websites and in hobby magazines but I never thought I would get a chance to review the new Katana MD. I received the complete kit from Atlanta Hobby that included a Torque brushless motor, an Airboss speed-control and APC 12x6e propeller.

I am a big fan of carbon fiber and have used it on many of my ships to augment the construction or aid in the repair of an unlucky winner of the lowest to the ground contest. When the Katana's airframe and surfaces come out of the box you are drawn to the carbon fiber pieces that are literally everywhere you can imagine: pushrods; wing tube; firewall locker; leading edge; reinforced cowling; CNC-machined battery tray; CNC-machined control horns; wing and fuselage sleeve/spar; CNC-machined pull-

pull servo tray; reinforcement in the wing servo bays; landing gear with wheel axles; CNC-machined double pull-pull servo arm; CNC-machined double rudder control horn; pre-installed elevator trailing edge reinforcement; and anti-rotation wing pins.

Tail feathers are installed in a few minutes with medium CA; a quick hinging of the rudder and elevator with CA hinges and you're set. The wings are pre-hinged with some pretty cool pinned hinges, something I had never seen on a bird of this stature. The deflection is extreme at almost 60 degrees, which is all surfaces! The folks from Precision Aerobatics provide a deflection gauge to aid in setting up the extreme throws. There is even hinge tape included so you can seal the gap for the rudder and elevator to keep air from seeping through and robbing the pilot of a true



Composite laminate bulkhead shows carbon fiber exterior wall and end of longitudinal carbon tubes at bottom.



Looking down into the fuselage, note the longitudinal carbon fiber elements and carbon fiber battery tray and rudder servo bay.

## AIRBORNE

So let's get to it! We ran the motor up with our watt meter to make sure we had enough electrons to attack the air. The Katana does not have much of a ground roll so I guess she taxied OK; it was more of a carrier launch with all this power and the lightweight airframe. The ship was an instant pleaser as it climbed out effortlessly and leveled out several hundred feet in front of me. It has great visual cues, so there was not a question on her attitude at any time. I had the CG set to the recommended 100mm, which is pretty solid for any attitude; not too aggressive, not too docile.

Flying straight and level across the field at low power is amazing; it flies so slowly it was hard to find stall speed. The ship yearns to be wrung out with those huge surfaces. Coming across the field again I chopped the power and pulled back on the elevator; the ship responded instantly as it performed a "wall" maneuver as I applied a little power to go immediately into a torque rolling hover with half power. Once we did a few rolls we went vertical to about 400 feet to perform a few hammerhead turns followed by some axial four-point rolls.

Impression: a very light, strong performer that flies as if she were much larger. The large wing area and short coupling creates a strong performer in any attitude. The ship loves to fly in knife edge; hands down one of the best I have ever flown. KE loops are actually fairly easy with this ship. This 3D ship performs any maneuver with authority.

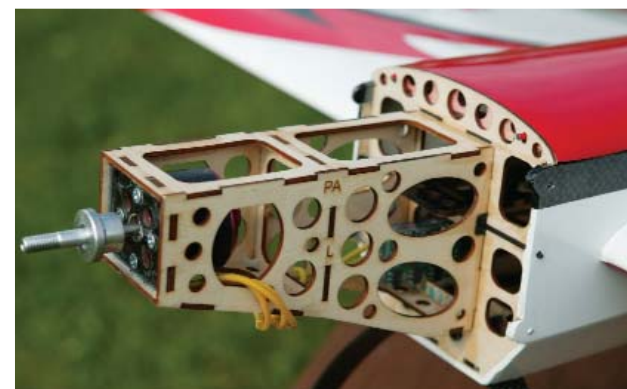
Landings are simple as the stall speed is so low you can just chop the power and fly right to the ground with virtually zero ground roll.



extreme flight. The motor mount is a work of art; a lightweight ply construction with many lightening holes, a carbon fiber sheet that doubles with the ply for the firewall, and a unique anchoring system that utilizes carbon fiber rods to lock it to the nose of the fuselage—very cool. Precision Aerobatics even provided hook and loop tape to hold the receiver in place.

Mounting the Torque motor is effortless. There are two plastic air scoops that mount under the cowl to help bring in cool air for temperature relief on the speed control and battery. The canopy is built-up balsa (pre-built, no glue!) with magnets pre-installed to hold her to the fuselage. When it's open, you have full access to any part inside for truly easy battery installation or wing mounting.

The Katana MD is well constructed and builds in one night if you are quick. Once she is built and you are setting up the radio it becomes very evident that it is going to be a lot of fun to fly; the control surfaces are so



Small diameter carbon fiber rod running horizontally keys in the aft motor box structure.

extreme you have to look twice to make sure they are still connected. The landing gear is nice and tall so prop clearance is perfect. I chose to fly her without the included wheel pants since the guy who mows our grass flies a lot more than he mows, so it would be tough to safely traverse with them on. They can be added or removed in about a minute, so no issue there.

The supplied carbon fiber pull-pull rudder horn screws right to the horn of your existing servo. The ship comes with all the gear to set up a rock-solid rudder with pull-pull. All the other surfaces have carbon fiber arms to handle the servo load at very little weight cost.

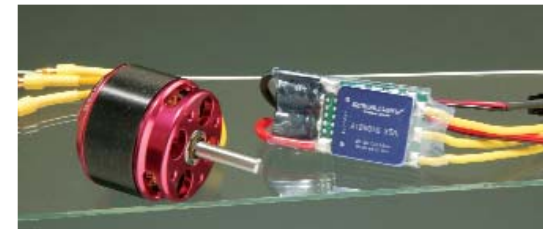
**TIPS FOR SUCCESS**

I received this bird with the recommended motor and speed control; a perfect fit. Please stay with this setup as it is rock solid and has plenty of power. I found the ease of installation of these components makes it worth the effort and you have happy thumbs when you have a happy plane.

The ship has plenty of cool carbon fiber additions but it is not indestructible. I found the CNC-cut wood to be very dry and not as flexible as other balsa. Please be



**Control surfaces deflect so far, with such large throws, you would not believe they are even connected.**



**Torque 2818-900 388-watt brushless motor and 35A Airboss speed control were provided by Atlanta Hobby—what a power system.**

careful when you are assembling because things will not flex the way other ARFs do. I do not see this as a negative, just as cautionary because the performance you get from the lightweight airframe and the rigidity of the carbon fiber give you benefits beyond traditional constructions.

**CONCLUSION**

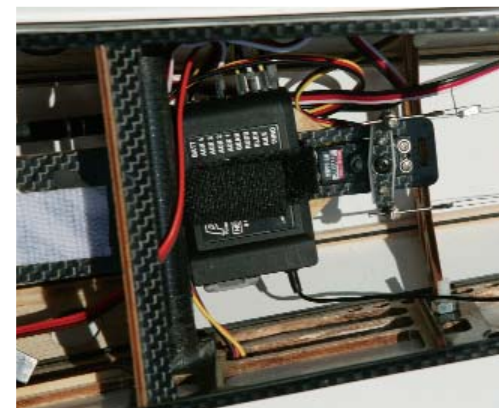
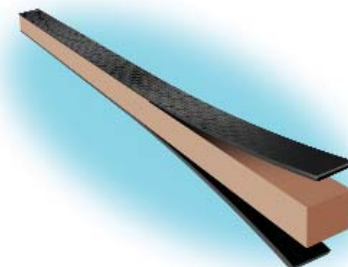
This is truly a cool construction that changes the way we will look at ARF ships. The carbon fiber gives this ship an edge in two categories: weight and rigidity. Most light ships sacrifice performance due to the lightweight design that does not maintain its integrity in high performance maneuvers; this is not the case here. I recommend this cool ARF at a very affordable price to anyone with some light aerobatic experience all the way up to the most extreme pilots. This ship will out fly most thumbs. 🌟

**Links**

**Atlanta Hobby,**  
www.atlantahobby.com,  
(678) 513-4450

**Precision Aerobatics,**  
www.precisionaerobatics.com

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



**Top illustration: carbon fiber laminates have far greater strength than either the wood spar or carbon components alone; bottom: pull-pull rudder system.**