



Fast and fun
electric jet
flying for all!

by Mike Lee



With the advent of powerful and lightweight electric motor systems and batteries, it was inevitable that high-performance electric-powered jets were going to be designed and manufactured for the masses. The masses among us have some money to spend on our toys, but not the “deep pockets” type of money normally required for high performance. Enter the Twister from Multiplex. Here we have an electric jet that looks great, goes together fast, has very good performance, and uses very common lithium battery packs that most sport electric pilots probably already have in their arsenal. That’s a great recipe for jet-power fun on an average man’s budget. Let’s light the candle and take a ride.

HITEC/MULTIPLEX USA

Twist



SPECS

PLANE: Multiplex Twister electric-ducted fan-jet ARF

MANUFACTURER: Multiplex Modellsport GmbH & Co.

DISTRIBUTOR: Hitec/Multiplex USA

TYPE: Sport scale electric-ducted fan ARF

FOR: Advanced pilots looking for a fun sport jet that performs

WINGSPAN: 33.5 in.

WING AREA: 403 sq. in.

WEIGHT: 32.5 oz. (3S 2100mAh)

WING LOADING: 11.6 oz./sq. ft.

LENGTH: 46 in.

RADIO: 3 channels required, flown with a Hitec Electron 6 Rx, (2) each Hitec HS-55 servos, (1) Hitec HS-85 servo and a Castle Creations Thunderbird 54 speed controller.

POWER SYSTEM: Himax 2825-3600 brushless motor, Castle Creations Thunderbird 54 controller, 3S/2100mAh to 3S/4200 Li-Poly battery

FULL THROTTLE POWER: 29 amps, 321 watts, 9.85 W/oz., 158 W/lb.

TOP RPM: 23,500

DURATION: 7 minutes, 3S 2100mAh; 12 to 14 minutes 3S 4200mAh

MINIMAL FLYING AREA: Club field

PRICE: \$189, including fan and motor unit.

COMPONENTS NEEDED TO COMPLETE: Radio, servo wire extensions, batteries and ESC.



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SUMMARY

Here is a sport ducted fan-jet that is fun, easy to fly, packs plenty of punch and looks right in the air. The assembly work is fast and easy and the airframe is robust enough to take daily abuse. This is just what the sport pilot has wanted for a long time.

PHOTOS BY MIKE SKUBE AND MIKE LEE

TIPS FOR SUCCESS

There is not much to assemble with the Twister, as the airframe components are all nicely packed in a large, foam shipping cradle within the box. Nothing was damaged, and the kit includes the fan unit with motor already installed, plus a 12-page assembly manual. Multiplex also includes a full hardware kit.

Because this model is made from Elapor foam, you can use standard adhesives. In fact, regular CA is recommended. You can also use a wide variety of paints on the surface, if desired, without ill effect.

The fuselage consists of two halves with each section made up of two distinct parts. Use a slow-setting CA without kicker to allow time to get the alignment correct. Note that there are a few items that get installed in the fuselage halves before the halves are joined, such as the elevator servo wires and tail ballast, so be careful at this point. Once the fuselage halves are joined, it gets much easier.

We now look at the wings. These are permanently glued to the fuselage. There is a graphite tube used for the wing spar, and this will carry the stress of the wings. It is inserted through the fuselage and then the wings mate to the tube with adhesive. We used epoxy to allow time for a proper joint and alignment. Note that you will need more than five or six minutes to perform this task, as you must also connect and tuck the aileron wires away when the wing is mounted to the fuselage.

The instructions are a bit lacking in some areas, as some things are not fully explained. Note that the ailerons are not to be fully cut away from the wing trailing edge and then hinged. They are cut along the sides and then the native Elapor foam along the leading edge of the aileron is the hinge material. The same applies to the elevator, but it is not explained in the instructions. Completing the basic airframe is attaching the tail feathers to the fuselage.

Now we get to the power unit of the model. You are provided with a 69mm fan unit with a Himax 2825-3600 brushless motor already installed and ready to go. The instructions call for the fan to be installed in the fan hatch cover, and the assembly mated to the fuselage. I found it easier to install the fan into the fuselage first and then mate the hatch cover. The instructions then say to "apply adhesive tape all around the ducted fan hatch to produce an airtight seal." What they also mean to say is that this the only thing holding the ducted fan in place on the fuselage, so do make sure that you truly secure the hatch in place, or you might end up with the fan outside of the plane at the wrong time. By



The Apex battery fits under the canopy with plenty of room to spare. Be sure to mount the receiver behind the battery, just in case.



The belly hatch allows access to the EDF unit and the Castle Creations speed control. I found it easier to mount the fan and the ESC to the fuselage before sealing the hatch cover.

the way, I used a Castle Creations Thunderbird 54 electronic speed controller, which is a perfect fit to the hatch cover. I really like these ESCs for their reliability, ease of use and versatility.

Completing the assembly work is the installation of the wing servos and receiver with main battery. The cockpit area is simply huge for anything radio and battery-wise. If you cannot fit the gear in there, you have a serious problem. The cockpit canopy is held in place with Multiplex's famous plastic clasps that work very well and are trouble free. This means you can simply set the rear of the canopy in position and snap down the front for a secure fit. Rounding off the kit, you get a big assortment of decals for decoration, even allowing for some military type schemes. At this point, it's decorate, check out and fly!

CONCLUSION

The Twister really is a great sporting electric jet. Assembly time is minimal and the average modeler will need only a couple of easy evenings to get it from box to flight line. The performance level is quite satisfying with plenty of speed and maneuverability to boot. I can see this model being painted like a modern combat jet, with camouflage and subdued markings all over. If you want a jet jockey rush without paying a small fortune, then you must take a look at the Multiplex Twister. This is a fun flying jet! 🚀

Links

Castle Creations, www.castlecreations.com, (785) 883-4519

Maxx Products International, Inc., www.maxxprod.com, (847) 438-2233

Multiplex, www.multiplexusa.com, (858) 748-6948

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

**AIRBORNE**

We tested the Twister using two different Li-Poly packs, just to see how she would handle the difference in weight. Our first flight was done using an Apex 3S 2100mAh battery pack mounted up in the forward nose of the model to achieve the proper balance. The Twister came in at 32.5 ounces ready to fly with this pack. With a full range check with and without power applied, the Twister was ready and so we gave her a hand-launch toss. No problem at all, as she left the launch hand cleanly and immediately. This impressed us already, and we only needed a couple of clicks of down elevator to have her flying hands off.

On the wing, the Twister is quite solid feeling, lacking any tipsy habits. It performed smoothly, handling more like a hot sport model than anything else. For the most part, we flew on 50% to 75% power, as that was all she needed to keep her zinging along. In fact, we got her down to about 30% power and ended up flying her in close in a tight circle to help with getting our photos. Throughout it all, the Twister responded crisply, and without complaint. There is one condition that can fool you with the Twister. You can easily get her to fly too slowly, yet she will still feel like you have no problems. At this point, the Twister will attempt what used to be known as "the Saber Dance." The plane will point nose up and stall fairly rapidly, dancing on the tail cone. Luckily, there is plenty of power on tap, and if you hit the throttle, the plane will come out of it. We got caught on this once. Yes, just once.

The roll rate is surprisingly fast, producing about 1.5 rolls per second, but the elevator rate is quite pleasant and progressive, all with stock control throws. There is no rudder control, so a yaw test was out. But you can do a pretty respectable four-point roll with the speed she carries at full power if you pitch up slightly before you start the roll. Inverted flight is good, requiring some negative pitch, but nothing excessive on the sticks. All basic maneuvers like rolling and looping are easily accomplished from level flight. The fun stuff to do is screaming high speed passes down low to the deck. It just looks cool every time.

Landing the Twister is pretty tame, as the plane slows nicely. Again, beware of getting too slow by keeping the nose slightly down and coming in with a bit of speed. The plane seems to slow up well once it comes to level, making a nice landing easily done. You should fly from grass, if possible, as hard surfaces will scrape the Elapor foam away from the unprotected bottom.

We also flew the Twister using a larger 3S 4200mAh pack, mounted about halfway back in the cockpit to maintain balance. This raised the overall weight by another 5.5 ounces. On launch, the plane took about two seconds to get on step, requiring you to hold a bit of up elevator. Once the plane got going, it was actually even more solid flying than before. With this much battery on board, you can do some continuous screaming across the field at full throttle for quite a while. The Twister doesn't seem to mind the weight and we were even happier with this flight. You've gotta get one of these!