

MAXFORD

Spad XIII
ARF*Fly this WWI fighter
with glow, gas or electric*

One of the most capable fighters of WWI, the SPAD XIII was known for its powerful Hispano-Suiza engine, high performance, strength and firepower. While it challenged novice pilots, in the right hands it was a formidable weapon. Many who flew the SPAD are well remembered today, including America's leading ace of the war, Eddie Rickenbacker.

I first found out about this model at the 2011 WRAM Show when I asked Richard Sang, President of Maxford USA, about the new products he had on the horizon. He mentioned that he was already testing the prototype for a 68-inch SPAD XIII that he planned to introduce for both electric or gas. I love WWI and WWII aircraft and when he sent me pictures of the prototype I knew I had to have one. The idea of going to electric and gas events with the same bird was very appealing so I took advantage of a preorder discount hoping I would get one from the first shipment to fly at the NEAT Fair that fall.

I have put together several Maxford kits. All have been well planned and go together nicely with all parts fitting as they are suppose to. This kit was no exception.

PHOTOS BY WALTER SIDAS

SPECS**PLANE:** SPAD XIII**MANUFACTURER & DISTRIBUTOR:** Maxford USA**TYPE:** WW I fighter**FOR:** Experienced pilots**WINGSPAN:** 68 in.**WING AREA:** 1,400 sq. in. (est.)**WEIGHT:** 15 lbs.**WING LOADING:** 24.7 oz./sq. ft. (est.)**LENGTH:** 53 in.

RADIO: 4 channels required; flown with Futaba 14MZ, Futaba R6008HS receiver, 2 Hitec HS635 servos for ailerons, 2 Hitec HS-605 for elevator, 1 Hitec HS-5625 for rudder. 1 Hitec HS-85 for the throttle with gas engine.

POWER SYSTEM: Electric AXI 5330/18 brushless outrunner, Xoar 18x6 vintage prop, Jeti Advance 90 plus speed control, two 4-cell 5000mAh Turnigy LiPo batteries, 2 6v 2700ma NiMH batteries in parallel for airborne receiver. Gas engine GPI 26 with a APC 16x8 propeller

FULL THROTTLE POWER: 44 amps, 1365 watts, 5.69 w/oz., 91 w/lb.

**TOP RPM:** 6,540

DURATION: 7-8 minutes draws around 50 percent of battery capacity which is scale cruising and varied WWI aerial maneuvers with touch-and-goes.

MINIMAL FLYING AREA: RC club field**PRICE:** \$389

COMPONENTS NEEDED TO COMPLETE: Four channel radio, 4-5 servos, gas/glow or electric motor with suitable accessories, pilot, switches, servo extensions and Y harness

SUMMARY

The Maxford USA SPAD is a nice flying WWI fighter. The basic design makes field assembly a breeze, despite the apparent complexity. Excellent attention to detail is evident with the fully-illustrated, easy-to-follow instruction manual, accessory package, optional manifold for functional exhaust and a large, easy-access area for the fuel tank or electric flight batteries. This is definitely a model worth looking at for any WWI fan.

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AIRBORNE

I've made a habit over the years with my scale birds of asking another pilot to make the first flight. In finished form the SPAD is so pretty that I again followed my own rule and called in the Royal Canadian Air Force. Rolly Siemonsen is a close friend from Kingston, Ontario and I asked

brought it home to my own shop where I went to work on the balance issue. First step was to move the two 2700mAh receiver packs forward on plywood platforms constructed out of light ply. At the same time I set up the GFi 26 engine mount with the optional exhaust manifold which I modified a bit. I had trouble stretching the tubing which comes with the Maxford setup and feared breaking the exhaust pipe so I used tubing I had on hand.

I knew nose weight was needed, so I also added the electronic ignition box well forward, attaching it with Velcro. With this set up I was ready to go with the gas setup. With the electric power system I brought the motor batteries all the way forward and added some stick on weights in the cowl. This gave me a CG three inches from the upper wing leading edge.

I met up with my close friend and *Fly RC* Chief Test Pilot Dave Baron on a sunny 50 degree day at our local club field. Dave checked the CG and set the control surface throws at 12 degrees for the ailerons and 18 on the elevator for the initial flight tests. He tested ground handling and then we topped off the batteries.

Dave's initial take off was much as I have experienced with other Maxford kits. The SPAD lifted off in a very scale fashion, climbing out straight ahead and smoothly, with a little tail wag characteristic of WWI planes. It was a beautiful sight in the late afternoon. Dave went through the performance envelope of a WWI fighter and included several touch-and-goes. This setup has ample power for any maneuver of this era. The stall was very predictable and straightforward. Scale speed cruising was between 1/2 and 3/4 throttle. Landing was a breeze, and Dave brought it in with a little power to give a smooth glide and 3-point touchdown. The SPAD handled the extra weight easily.



him to do the maiden flight prior to the NEAT Fair so we could enjoy flying it during this great annual event. The initial flight was exciting to say the least. The CG was checked, and while all agreed that it was slightly tail heavy, we didn't think it was a deal breaker. I set the controls for more than the suggested throws, with expo to compensate unexpected tendencies. Well, the only correct decision above was to enlist Rolly's thumbs for the first flight. The combination of slight tail heavy bias and too much control would have re-kitted the beautiful SPAD on the first flight if it weren't for Rolly's superb flying skills.

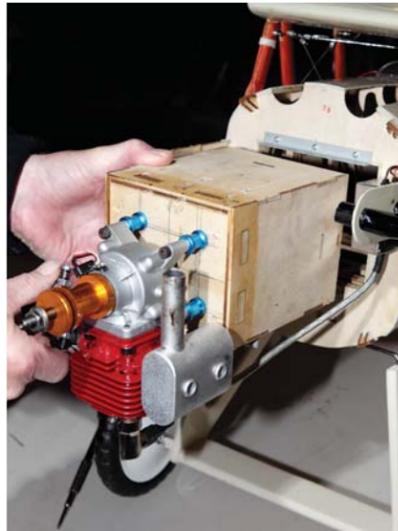
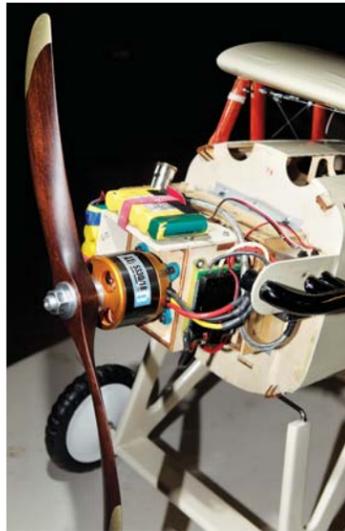
Fighting the stability issue, he brought it down in a beautiful controlled landing. Instead of making any rushed decisions at the event, I

TIPS FOR SUCCESS

I started assembly with the installation of the aileron servos. Not paying attention I did both wings at the same time rather than one wing at a time. Yes, you guessed it. There are right and left ailerons and I got them reversed.

The cabane struts are numbered, however with my kit the numbers were smudged. The front cabanes are easily recognized by their wrapping so only the second and third had to be sorted out. The instructions show the interplane strut supports are predrilled. With this kit they were not as described. While initially frustrating, in the long run I think it is better if the modeler drills these upon assembly so that all the cabanes align perfectly. The kit is well thought out with close tolerances so it can be assembled dry to get every part lined up. I glued in the strut supports before drilling not recognizing they were not predrilled. It would be easier if drilling is done during the dry assembly. It can be done either way if the builder has a long extension bit.

When mounting the cowl I needed to



AXI 5330/18 bolted to supplied electric mount. Also of note are the two 2700mAh 6V receiver packs on light ply platforms, the Jeti ADVANCE 90 plus speed control and electronic ignition box for the gas engine hidden behind the exhaust stacks. Swapping power modules is as easy as undoing a few screws and inserting the other setup. Here I am installing the gas engine. You can easily see the spark plug lead to the ignition box.

remove some of the rear lower fiberglass with a Dremel tool to allow enough prop clearance for the electric setup. The body of the AXI motor is quite large and without a custom prop extension it isn't possible to completely hide the motor. The 26cc gas engine recommended for the model fits with no modification as the prop shaft extends much longer from the cylinder head.

One interesting feature of this model is the exhaust manifold kit that makes the scale stacks functional. These stacks are

pretty long though and our model engines can shake quite a bit. To help with the durability of the exhaust stack attachment I put a self tapping screw backed up with a small piece of light ply from the inside of the fuselage into the farthest back port.

The wing panels are attached with aluminum dihedral braces and removed for transport. I chose to put blind nuts where the bottom wing attaches at the wing root. The flying wires are not functional but look great. For a more scale look I added Du-Bro

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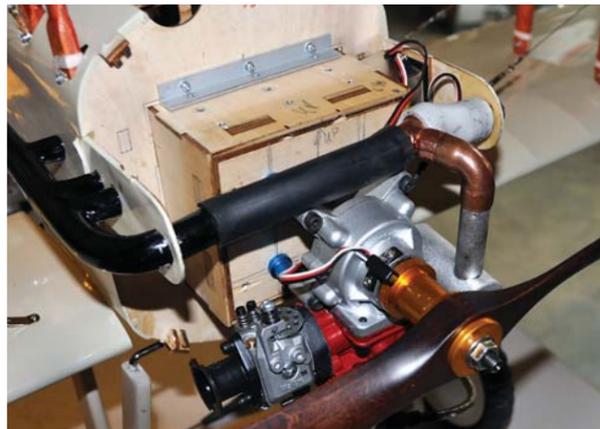
MAXFORD SPAD XIII ARF

turnbuckles. This also makes it easier to keep the rigging tight. The anti roll wires between the cabane struts are simply elastic material from our local craft store.

The scale Lewis machine guns look great. I adjusted their cocking levers to fit in the molded channel in the cowl to help mounting. The guns are mounted with self taping screws that come up through the underside of the channel and into the support brackets. Mark the locations carefully before drilling the 1/16 holes through the channel.

If I were building the kit again the first thing I would do is put on the decals. They are very nicely done out of printed pre-cut Mylar. Their large size creates a challenge though. It is tough to get them in place on the irregular surfaces without wrinkles. I tried using all the tricks I know, but waiting until the model was complete and in the final detailing stages ultimately frustrated me.

An appealing feature of the kit is the engine mounting box. An electric mounting box is included in the kit and with little extra work this kit can be set up for electric or gas power. The conversion only requires moving the box in or out to compensate for the choice of power between the GF 26i and electric. Be sure to check the glue joint on the firewall of the mounting box. Once I set up and mounted the two power systems for the first time, I can switch back and forth between the power plants in 10 minutes or so.



My complete engine installation shows the header from plumbing parts and high temp tubing for scale exhaust. Look for a flight report of the gas power setup in a future issue of *Fly RC* as soon as it has been in the air.

CONCLUSION

I am looking forward to flying the gas version when the weather warms up. I have chosen to use two separate cowls for gas and electric. The cowl is so nice I didn't want to cut up the electric version for a gas cylinder head. There is plenty of room in the tank compartment and with the exhaust manifold making the twin exhausts functional the SPAD is crying for a smoke system which is on the menu. The SPAD XIII is a definite must for WWI buffs. The Maxford people are great to work with, answering questions immediately. ☺

Links

APC Propellers, distributed by Landing Products, www.apcprop.com, (530) 661-0399

AXI Motors, distributed exclusively by Hobby Lobby International, Inc., www.hobby-lobby.com, (866) 512-1444

DU-BRO, www.dubro.com, (800) 848-9411

Futaba, distributed exclusively by Great Planes Model Distributors, www.futaba-rc.com, (800) 682-8948

Hitec USA, www.hitecrd.com, (858) 748-6948

Maxford USA, www.maxfordusa.com, (866) 706-8288

Xoar Propellers are sold by Bob's Hobby Center, www.bobshobbycenter.com, (407) 277-1248

For more information, please see our source guide on page 113.



The Hitec servos are accessible through the large cockpit opening. Note the magnet, used to secure a cover plate in place.