

MAXFORD USA

Albatros D.III

by Ryan White

Amazing scale details in an electric park-flyer package

The Albatros D.III first flew over Europe in December 1916 during WWI and quickly gave the German Army air superiority over the British. In fact, the airplane's combination of firepower and maneuverability in the hands of pilots like Manfred von Richthofen, the "Red Baron," are credited with Germany's aerial success in "Bloody April" of 1917—a month in which the British lost 217 aircraft compared with Germany's loss of 66. The only notable drawback of the full-scale design was that the spar of the lower wing was too far aft, causing the wing to twist and sometimes fail during extended dives. The plane continued to be manufactured and employed until the end of the War, and pilots were simply told to "dive with care." Luckily, this is about the only characteristic of the full-scale plane that Maxford USA *didn't* replicate with their smaller version! All

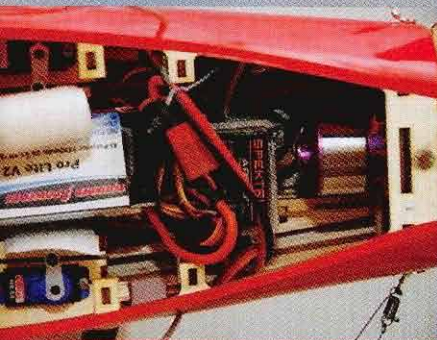
other aspects such as the in-line 6-cylinder engine, twin 7.92 LMG 08/15 machine guns and the plane's flight characteristics have been retained in this fantastic ARF.

TIPS FOR SUCCESS

Although the Albatros D.III comes with an impressive amount of the assembly already done, most people will still get a few enjoyable building evenings out of this model before it is ready to fly. The rudder and elevator are both prehinged, and the tail feathers can be glued in as soon as they are unpacked. The control rods that run the length of the fuselage for rudder and elevator control are already installed and ready to hook onto the control horns after you've removed a little of the covering. I used the Maxford USA Uranus C2812-1200 brushless outrunner and installed it directly on



A generous hatch under the engine provides access to all your gear. The Hitec HS-55's are plenty powerful; they tuck nicely on either side of the Thunder Power battery. The Spektrum radio has been immune to interference, even though it sits right in the middle of the power system.



Left: I can't help but smiling whenever I think about flying this beauty. Above: the level of detailing on the dummy engine really adds a lot of personality to this model and is sure to impress your club mates.

SPECS

PLANE: Albatros D.III
MANUFACTURER & DISTRIBUTOR: Maxford USA
TYPE: Electric WWI scale biplane
FOR: Intermediate to advanced pilots
WINGSPAN: 40 in.
WING AREA: 417 sq. in.
WEIGHT: 24.75 oz.
WING LOADING: 8.55 oz./sq. ft.
CUBE LOADING: 5

LENGTH: 30 in.
RADIO: 4 channels required; flown w/JR X9303 2.4GHz transmitter, Spektrum AR6000 receiver, 4 Hitec HS-55 servos
POWER SYSTEM: Maxford USA C2812-1200 outrunner motor, APC 9x6 SF prop, Castle Creations Thunderbird 18 ESC, Thunder Power 3S 1350mAh Pro Lite v2 battery
FULL THROTTLE POWER: 14.5 amps, 161 watts; 6.5 W/oz., 104 W/lb.
TOP RPM: 8,970
DURATION: 8-10 min.
MINIMAL FLYING AREA: Medium-size park

PRICE: \$145.99
COMPONENTS NEEDED TO COMPLETE: Receiver, 4 5-9g sub-micro servos, 18-25A ESC, servo Y-harness or 2, 12-in. servo extensions, 160W brushless motor & battery

SUMMARY
 Maxford USA offers truly incredible scale details and flight performance with their park-flyer Albatross D.III ARF. These details and an amazing presentation in the air make this ARF a rewarding project for scale modelers and electric pilots alike. Whether it's on display at home or being flown at the field, the plane is a great conversation piece and a fantastic historical replica as well as a fun, lazy-day flyer.



AIRBORNE

The Albatros D.III is both challenging and rewarding to fly. With an all-up weight of less than 25 ounces and 417 square inches of wing area, I highly recommend that you wait for very calm conditions for its first flight. True to the full-scale version, the plane is capable of high climb rates—so much so that a full-throttle takeoff will lift the plane into the sky and have it climbing in a very nose-high attitude unless you add a fair amount of down-elevator trim.

Once it's trimmed for level flight, your next challenge will be to learn how to properly turn a WW I-era biplane. The plane exhibits a fair amount of adverse yaw whenever the ailerons are used, so very active rudder inputs are necessary. The dihedral wants to roll the plane in the direction of the rudder input once you initiate a turn and apply rudder.

I found that to turn the Albatros successfully, I needed to give the plane the rudder input it needs—not what I think it wants. Sometimes, the inputs have to be coordinated, and at other times, you will want opposite inputs. Those who are accustomed to flying in high-alpha harrier flight with their 3D airplanes will find the control inputs very familiar, as harrier flight requires exactly the same mental and motor separation between the controls for smooth, flat turns without a wing dropping too much. None of this is bad, mind you. Once you get the hang of the technique, the plane is quite maneuverable and a lot of fun to fly. It simply isn't a trainer.

The Albatros D.III isn't particularly fond of inverted or knife-edge flight, nor would I expect it to be with its scale-like high-lift, undercambered airfoil. It loves scale aerobatics like huge loops and spiraling barrel-rolls, and it looks fantastic doing them. The plane has plenty of lift and slows down great for flybys, so you have lots of time to admire its looks. I found it easy to glide it in for smooth touchdowns most of the time as long as I remembered to carry a bit of power over the threshold. The spring-loaded landing gear and tailskid easily absorb the shock of less-than-perfect landings.

I used the recommended power system, and the motor pulled 22 amps for almost 240 watts with the recommended APC 9x6SF prop. Although the battery had no problem delivering the power, the current was well above the ESC's 18A rating and the power was well above the motor's 160W rating. Instead of pushing the motor and ESC so hard, I backed off to APC's 9x4.7SF prop which drew 14.5 amps. This was spot on the rated power levels at my altitude, and still gave great flight performance. The ESC and LiPo remain cool, even after a long flight at partial throttle, while the motor does get pretty warm. Be sure to check the power with a wattmeter before you fly; and keep a close eye on temperatures.

the plywood firewall in seconds with enough room for my Castle Creations Thunderbird-18 ESC and a Thunder Power Pro Live v2 1350mAh 3s to sit neatly behind it.

The impressive scale dummy engine (a replica of the full-scale 180hp Mercedes 6-cylinder in-line) is assembled and requires only a screw and a drop or two of CA to get it into place. I painted the wood on the inside of the machine-gun mounting base and attached the two machine guns to it with thin CA. Having mounted on the fuselage, I admired the plane's amazing scale detail and almost felt guilty that I had done such little work to achieve it!

Both sets of wing halves arrive assembled with struts and cable (the newest kit has thinner, more scale-like struts than the review model shown). Again, the ailerons came hinged, and there is a well-designed compartment in each wing in which the aileron servos hide.

Take care with the aileron servo installation because the servo *must* be recessed into the ply cutout so that its side is flush with the covering; if it isn't, the other side of the servo will protrude from the covering on the top of the wing. My servo of choice, the Hitec HS-55, was a bit larger than the cutout was designed for, so some modification was necessary. You may not need to modify aileron servo cutouts when using the SG-50 servos that Maxford recommends.

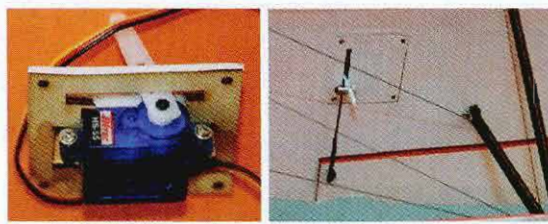
The manual for the Albatros recommends the use of a Y-adapter for the aileron servos; when wrapped in black electrical tape and run into the fuselage, it looks like tubing for the radiator. Since I always prefer to have separate radio control of each aileron for ease of setup and trimming, I ran two servo extenders into the fuselage and used black shrink-

wrap to disguise them.

The remaining electronics installation is very easy, and there's a place for everything, but it does take patience and finesse for those of us who have big, clumsy hands to get everything neatly put together. The result, however, is extremely satisfying because all of the electronics are hidden.

CONCLUSION

In a model with such fine details, it would be easy to write an entire review on details alone. It would, however, be a shame not to mention what a fine finished product those details contribute to. Simply put, this model is stunning both in the air and on display. In addition to the scale engine, machine guns and offset radiator, the glossy red and yellow covering draws the eye and looks per-



The aileron servos sit in cutouts in the ply mounting plate. I had to enlarge the cutout slightly to accept the Hitec HS-55s I wanted to use. This view shows the neat servo installation and the realistic rigging.

fect. (The radiator in the initial D.III airplane was in the center of the wing, but its position was later changed because if it was damaged during combat, steam and water would scald the pilot.)

More than any other RC airplane that I've flown lately, the Albatros D.III inspires the imagination, and for me, it has rekindled an interest in both world history and aviation history. My hat is off to Maxford USA for being able to do all this with an electric ARF that I can fly in the local park. Now, does anyone have a Sopwith Camel that hasn't been in a dogfight lately? ☺

Links

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

Castle Creations, www.castlecreations.com, (913) 390-6939

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

JR, distributed exclusively by Horizon Hobby Distributors, www.jrrobots.com, (877) 504-0233

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

Spektrum, distributed by Horizon Hobby, www.spektrumrc.com, (800) 338-4639

Thunder Power Batteries, www.thunderpowerrc.com, (702) 228-8883

For more information, please see our source guide on page 121.