

by Roger M. Post Sr.



*A sport-scale icon  
with a 50-inch span.*

MAXFORD USA

# Stearman PT-17

**Y**ears ago, I had a 1/4-scale PT-17 kit that sat in my garage's rafters for what I'm guessing was a couple of decades—something about aging the wood before you build it. Eventually, I either gave, or sold, it to someone, but the thought of having a model of Lloyd Stearman's classic design has never left me.

Back in January 2011, I saw an advertisement for Maxford USA's 50-inch, electric-

powered PT-17 that has John Mohr's full-size -17's Army Air Corps pre-war color scheme and thought that it would be the perfect answer to my Stearman desires. It was small enough that it would fit into my car in one piece, and with an electric motor, I could fly at just about any open field.

A little investigation into the combination packages Maxford offers for this 1/8 scale (rounded off from 1/7.72) model showed that I

could get just the PT-17, or the -17 and the recommended power package, which includes the Uranus 35425 brushless outrunner motor, 60-amp ESC and a 3S 2100mAh battery. They also offer a Detail Upgrade Package that includes two, 1/8 scale pilot figures and two instrument panels. Sticking closely to Maxford's recommendations, I opted to get their power system and detail package, rather than hunt around for equivalent options.



The 1/8 scale pilots fit perfectly in the cockpit, but I had to trim one instrument down and add 1/4-inch balsa stock to the other to get them to fit into the cockpits.

The box for just the model was very securely packed with everything arriving damage-free. It contained the factory-built, laser-cut balsa- and light plywood-constructed fuselage, wings, empennage and N-struts that were pre-covered with Mylar, nylon string for flying wires, a pre-painted 7-cylinder dummy radial engine, scale-looking windshields, a pre-covered hatch that attaches with rare-earth magnets, pre-cut servo mounts, a full set of CA hinges with matching pre-cut hinge slots, a complete pushrod set with all the required control horns and linkages, a pre-bent aluminum main landing gear with plastic fairings, wheels (with treaded tires) and their required mounting hardware, a scale-look-

ing steerable tailwheel-wire strut assembly and tailwheel with mounting hardware, plywood cabane struts and their hardware, carbon-fiber wing rods, a battery mounting platform and Velcro to attach the battery, all the screws, nuts and bolts to complete the assembly process and decals. Possibly it was an oversight, but I didn't receive the detailed assembly manual with color photos, so I printed it from Maxford's website.

A close inspection showed that the constructed parts were made well and that the covering application was quite good. After removing a couple wrinkles, it was time to build.

#### TIPS FOR SUCCESS

The first thing to do is to read through the entire manual and determine that all the correct parts and hardware are included. Mine was an earlier version and had some incorrect screws for the dummy radial engine mounting and not enough correct-length bolts for the aileron control horns (two of the six were too short). So a quick look in the workshop's screw/bolt supply fixed this.

Assembly starts with rudder and elevator pushrods being placed and the tailwheel wire and its strut being trial-fitted into the bottom of the aft fuselage. The horizontal stabilizer must first be placed in its cutout so you can see where

**Included in the kit is a dummy engine that replicates the original 7-cylinder Continental that initially powered the -17s.**



#### SPECS

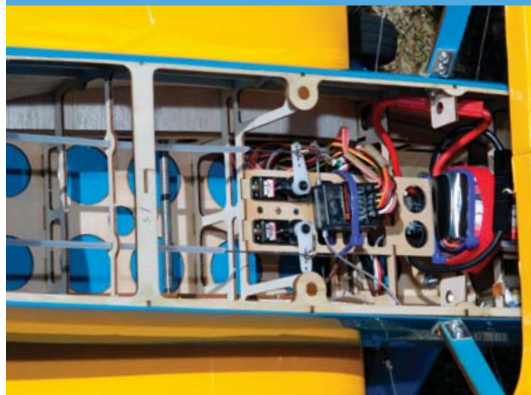
**PLANE:** Stearman PT-17  
**MANUFACTURER:** Maxford USA  
**DISTRIBUTOR:** Maxford USA Manufacturing  
**TYPE:** Sport-scale biplane  
**FOR:** Intermediate to advanced pilot  
**WINGSPAN:** 50 in.  
**WING AREA:** 720 sq. in.  
**WEIGHT:** 4 lb.  
**WING LOADING:** 12.8 oz./sq. ft.  
**WING CUBE LOADING:** 5.72  
**LENGTH:** 37 in.  
**RADIO:** 4 to 5 channels required, with four mini servos; flown with a Spektrum DX7 transmitter, a Spektrum AR500 DSM2 receiver and 4 Hitec HS-65HB servos  
**POWER SYSTEM:** Maxford USA Uranus 35425 outrunner brushless motor, Maxford USA 60-amp brushless ESC, Thunder Power 3S 11.1V 2250mAh 30C Pro Power LiPo battery, Maxford 11 x 7 electric propeller  
**FULL THROTTLE POWER:** 35 amps, 388.5 watts, 6.07 watts/oz, 97.13 watts/lb  
**TOP RPM:** 8,000  
**DURATION:** 7 minutes  
**MINIMAL FLYING AREA:** sports field  
**PRICE:** \$195.99

**COMPONENTS NEEDED TO COMPLETE:** 4-5 channel transmitter and receiver, 4 mini servos, one 6-inch Y-harness (for a 4-channel radio), two 10-inch servo extensions, (if using two channels for the ailerons, add two 6-inch servo extensions), a Uranus 35425 outrunner brushless motor, 60-amp brushless ESC, 3S 11.1V 2100mAh LiPo battery and compatible charger, 11 x 7 electric propeller; there is a Detail Upgrade Package that can be added, which includes two pilot figures and two instrument panels.

#### SUMMARY

The construction was quite good and the Mylar covering needed only a little touch-up with the iron to take out some wrinkles. I recommend picking up the Detail Upgrade Package because it really enhances the PT-17's overall "scale" appearance. It flies very well, and could easily be handled by an intermediate-skill pilot; but most importantly, don't be afraid to add whatever weight is necessary to make it balance at the recommended CG mark: 3 3/8 inches from the leading edge.





There is plenty of room in the radio compartment for your RC gear. To help with balancing the airplane, push the battery as far forward as it will go.

the extended tailwheel wire goes through the pre-drilled hole in the stabilizer. The stabilizer is then glued into position before the tailwheel wire and strut are mounted. Make sure the tailwheel's strut portion is vertically straight—in-line with the model's yaw axis. The remaining empennage assembly steps are self-explanatory.

For the aileron's servo set-up, I used the flaperon mode, so I added two 6-inch servo extensions to my receiver. I prefer this to a Y-connector because it gives you individual control over each servo. The bottom wing halves slide onto their carbon-fiber wing rod and alignment pins. They fit tightly into place and there aren't any bolts to secure them. When the top wing and the N-struts are attached to the overall structure, the bottom wings are then secured in place via their attachment to the N-struts.

## AIRBORNE

With a 44-degree temperature and the sun shining brightly, I at last had the perfect day for a test flight. After double and triple checking that everything was securely tightened, I turned on the radio and plugged in the battery, confirmed that all control surfaces moved in the correct direction and blipped the throttle. The motor response was good and there was enough thrust to fly the model.

When taxiing on bumpy grass, the -17's narrow gear stance had it waddling a little bit, and it's best to hold full-up elevator to keep the tailwheel planted for positive steering. On a paved surface, the biplane taxis very smoothly.

A gradual throttle application to about  $\frac{2}{3}$  had the PT rolling about 12 feet to become airborne. The obligatory right rudder kept it tracking straight, and once it lifted off, it immediately climbed with a 45- to 50-degree AoA. To make the climb-out shallower, I fed in a little down elevator. Once the plane reached a safe altitude, I added seven beeps of down trim and brought the power back to  $\frac{1}{2}$ . With this accomplished, the model was now flying straight and level, hands-off.

After a few circuits, rolls and loops were performed, using some dives to gain airspeed, rather than adding too much extra throttle to pull the model through the maneuver. A small amount of forward stick keeps inverted flight from losing altitude; spins, however, turned into spirals, as the model needs more rudder throw than what is recommended. Stalls were gentle and showed no sign of falling off on a wing.

Knife-edge flight requires a good head of steam at the entry to maintain it, as there is a lot of drag with those two wings and their supportive struts. One thing I did before I flew this was to watch some videos of John Mohr flying his stock Stearman. He does what appears to be a low-level forward slip down the length of the runway with the smoke on. Well, I don't have the smoke, but I did try this cross-control maneuver. It worked out great, but it sure was funny to see the airplane's nose pointing in a different direction than which the PT was traveling.

After 6.5 minutes of flying, the battery ran out of juice, so I glided the -17 in for a soft touchdown. It has a nice flat glide and I was able to make the runway without a problem. I did cut the downwind leg at the numbers to ensure the plane could make the runway.

Once I got the high AoA under control, the -17 proved to be a smooth flyer and quite stable. I'm looking forward to a summer of barnstorming fun with this one.

## MAXFORD USA STEARMAN PT-17



As ARFs are notorious for weak landing-gear areas, I beefed up the PT's with some triangular stock placed inside the fuselage. I also changed the mounting bolts and nuts to 4/40s, using blind-nuts in the plywood mounting plate.

Quick connectors are used on the aileron control horns and the rudder and elevator servo arms. I had to drill out their holes to get the connectors' pins to fit in. When installing the radio, I had to slightly carve out the servo openings so they would accept the Hitec HS-65s. From here, I hooked up the radio and checked to see that everything was going in the correct direction.

When I added the instrument panels to the cockpits in the hatch, I discovered that they were both the same size, however, the

openings varied because of the fuselage's contour. So, for the front one, I had to trim it slightly to get it to fit and, for the aft one, I had to add some 1/4-square balsa stock to get it touch the hatch's sides and top. The pilots mount on straddled Popsicle sticks that need to be cut to a four-inch length, not 3 5/8 as the manual states. The latter length is too short. Once the windshields were added, the hatch assembly was complete.

The motor and ESC are now plugged in, tested for correct motor-rotation direction and then mounted on and in the fuselage.

When attaching the cabane struts, remember to also include the four swivels required for the flying wire rigging. They go on the top-outside of each strut. The top wing is then assembled and attached to the cabanes, and then the N-struts are added with the required swivels: four per strut, with one each on the top-inside and two on the forward-bottom. The N-struts have a certain way they go on, so correctly match up the holes before you start placing the bolts, swivels and nuts. Four other swivels are mounted to the fuselage with wood screws; two are located in front of the lower wing's leading edge and two are located in front of the landing gear's upper fairings.

Once the flying wire rigging is completed, the dummy radial is trial fitted and attached. The propeller was then balanced and attached, and when the decals were placed, the assembly process was complete.

After I set up the given control throws, it was time to balance the model and here is where it got interesting.

When completed, the model weighs 3 pounds 9.5 ounces. The 2.2 pounds listed in the specs is just for the ARF without any electronics. To get the -17 to balance at the 3 3/8-inch mark, I had to add 6.5 ounces to the nose. The main problem was: where?! I wound up placing 3.5 ounces in the dummy radial's hollow crankcase area, one ounce on the firewall and picked up a Harry Higley 2-ounce, brass prop nut to replace the stock nut. That did the trick and I now had a bal-



**When you install the tailwheel strut fairing, ensure that it is vertically straight (parallel) to the fuselage's yaw axis.**

anced model. Now, if you are concerned about all that additional weight, don't be. There is plenty of wing area and power to fly this model at the total 64-ounce weight, and that was proven on the first flight.

### CONCLUSION

So after a few days of work and a little changing of some hardware, I finally had the Stearman that I have always desired. It looks great, flies well and sure gets some attention from my flying buddies. If you're a Stearman fan, this Maxford model will fill the void of one missing from your hangar. And, there is just something about two wings, open cockpits and a round motor that is very satisfying! 🍷

Visit [find.flyrc.com/071102](http://find.flyrc.com/071102) to watch the video!

#### Links

**Harry Higley**, [www.harryhigley.com](http://www.harryhigley.com)

**Hitec USA**, [www.hitecrcd.com](http://www.hitecrcd.com), (858) 748-6948

**Maxford USA**, [www.maxfordusa.com](http://www.maxfordusa.com), (866) 706-8288

**Thunder Power**, [www.thunderpowerrc.com](http://www.thunderpowerrc.com), (702) 228-8883

**Spektrum**, distributed by Horizon Hobby, [www.spektrumrc.com](http://www.spektrumrc.com), (800) 338-4639

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