

by Jason Carter



Off and flying with no added expense



The TB-20 includes a brushless motor, speed controller and hobby-grade radio equipment preinstalled to get you in the air as quickly as possible.



HOBBY LOBBY

TB-20

When new items come across my bench for review I usually know what I'm looking at. When I found the Hobby Lobby TB-20 in front of me, I had no idea what a TB-20 was. Was it a real plane? A quick internet search revealed that the TB-20 is indeed a real plane. Manufactured by Socata in Tarbes, France (the TB denotes the city of manufacture), the TB-20 is a light, single-engine piston plane that was designed in the late 1970s and was the first plane in Europe with a variable-pitch propeller. Today the TB-20 serves primarily as a training and personal aircraft.

CONSTRUCTION

The TB-20's lower fuselage and wing are built from bead foam. The upper portion of the fuse is made from vacuum-formed Lexan. Inside the fuse you'll find that the servos, pushrods and receiver are installed and within easy reach. A plywood firewall is glued to the front of the fuse and serves as a foundation for both the motor mount and the steerable nose gear. Directly

behind the nose gear is a hinged plastic battery hatch that houses the 2S 1800mAh Li-Poly battery. Vertical and horizontal stabilizers are both constructed from smooth molded foam. The foam wing has carbon and ply reinforcement for added durability.

TIPS FOR SUCCESS

As I assembled the TB-20 I noticed that the only hardware retaining the wing is a set of screws that bolt through the rear of the wing. Although there are two holes at the forward portion of the wing slot in the fuse, there is nothing provided to secure the forward portion of the wing. I opened the battery compartment, marked the location of the forward holes on the wing, and cut a couple pieces of 1/8-inch wood dowel that I epoxied into the wing.



PHOTOS BY ROY GRAHAM

SPECS

PLANE: Hobby Lobby TB-20

MANUFACTURER: Hobby Lobby

DISTRIBUTOR: Hobby Lobby

TYPE: Outdoor scale electric park flyer

FOR: Intermediate pilots

WINGSPAN: 41 in.

WING AREA: 256 sq. in.

WEIGHT: 19 oz.

WING LOADING: 10.7 oz./sq. ft.

LENGTH: 30.75 in.

RADIO: 4 channels required; flown with included 72MHz Mode 2 radio gear with neck strap

POWER SYSTEM: TowerPro 2408-21 brushless motor, TowerPro 18A ESC, Starmax 2S 1800mAh Li-Poly battery

FULL THROTTLE POWER: 9.9 amps, 80.2 watts, 4.22 W/oz., 67.5 W/lb.

TOP RPM: 6,600

DURATION: 10+ minutes depending on conditions

MINIMAL FLYING AREA: Ball field

PRICE: \$209

COMPONENTS NEEDED TO COMPLETE: Foam-safe CA or epoxy

SUMMARY

The Hobby Lobby TB-20 is a great scale park flyer that, thanks to the included electronics bundle, can have you in the air with no added expense. The TB-20's 19-ounce weight makes it ideal for days with winds below 10 mph, and the tricycle landing gear with a steerable nose wheel makes crosswind landings fun.



AIRBORNE

Most park flyers have conventional landing gear, with a tailwheel or skid to save a little weight and drag. The TB-20 with its tricycle gear is much more stable on the ground and offers more precise control with the steerable nose wheel. After a minute or two of throttle and rudder manipulation, I felt comfortable enough with the plane to line it up on the runway and give it some throttle. As the plane moved along I gave a slight bit of up elevator and very gentle rudder inputs to help it track down the runway. With a bit more power and a little more elevator, the TB-20 lifted off without a fuss. Since the box the plane arrived in described it as an aerobatic trainer, I climbed high and initiated an aileron roll. At this point the TB-20 nearly screamed "What are you doing?" Make no mistake about it: The TB-20 may be an aileron trainer, but that does not mean aerobatic trainer.

As I continued flying I tried other basic maneuvers such as an inside loop. At full power the TB-20 has enough oomph to perform a loop but, since such maneuvers aren't what would be expected of a full-scale TB-20, I decided to back off and take the plane for a leisurely flight. This was when I found a happy medium between my flying desires and the plane's abilities.

At half throttle the plane had no problem moving through the air. I made several laps around the half-mile paved oval behind my house before coming around to land. Given the light weight and slow flying speed of the plane, the crosswind was pretty stiff. I countered with a bit of rudder and eased off the throttle a bit as I began final descent. It's an odd feeling, purposefully making the plane slip sideways through the air on approach, but just before touchdown I straightened it and greased that landing. With a newfound enthusiasm for crosswind landings, I lined up for several more touch-and-goes and practiced until I felt the Li-Poly losing punch.

My next series of flights were made from a high school football field. Once again, I took off from a paved surface, this time the track that surrounded the field. The TB-20 took off great from the asphalt. I decided to try a landing in the grass to see how the spring steel landing gear would fare. I gave the plane a slight nose-up attitude and descended toward the field, and it landed without incident. I taxied around, pointed the plane into the wind, and hit the throttle. To my surprise, the TB-20 moved along and lifted off from the grass. I was so excited that the little plane handled the grass so well that I climbed into the wind and performed a graceful stall turn before coming back to land—once again in a crosswind—in the grass.

During initial assembly I had issues trying to press the plastic spinner over the aluminum hub it slides onto. To help the spinner slide, I heated the hub with a torch for a very brief moment then pressed the spinner into place. I did this twice, let the hub cool, then used a hobby knife to clean up the molten portions of plastic. With this method the spinner is still a press fit, but it's much easier to install and there's no risk of losing it in flight.

After a rather ungraceful landing in the grass I managed to put the front landing gear through the light-ply firewall. After a bit of repair with epoxy, the TB-20 was back in action. Although the TB-20 can take off and land on short grass, it is best suited for paved surfaces.

CONCLUSION

The Hobby Lobby TB-20 is an absolute blast. If you're looking for a fun, easy-flying scale plane that won't break the bank, the Hobby Lobby TB-20 is a definite contender, especially given the fact that at \$209 it includes industry-standard 72MHz radio gear with three-wire servos, an 18-amp brushless speed control and a brushless outrunner motor. I can't wait to put a small video camera on this plane and get a pilot's perspective of those crosswind landings.

Links
Hobby Lobby International, Inc.,
www.hobby-lobby.com, (615) 373-1444

For more information, please see our source guide on pg. 185.