

BOAT REPORT

by JERRY DUNLAP



B&M MFG.

LeeCraft XT460

A tried and true racing tunnelhull

Before I launch into a review of the B&M LeeCraft XT460, I'd like to provide a little background about the design and the individuals who are associated with the boat. Anyone who follows model tunnel-boat racing knows the names Tommy Lee and LeeCraft Tunnels. A resident of Culman, AL, Tommy established the ultimate speed record of 75mph for an outboard-powered tunnel boat powered by a modified K&B 7.5. He also holds the record for top speed in the 3.5 Tunnel class with a 3.5cc Novarossi-powered LeeCraft 21 tunnelhull. Besides his expertise in making model tunnelhulls go seriously fast in a straight line, Tommy is also an accomplished model boat oval racer who has won numerous regional and national championships in model tunnel-boat competition.

THE HISTORY OF LEECRAFT

In 1985, when Tommy was looking for a new 7.5 tunnel design to manufacture, he started the LeeCraft business. Rod Geraghty of Geraghty Performance fame had developed a 32-inch wooden tunnelhull that ran very well. He gave Tommy a set of line drawings for the boat, and Tommy built a wooden plug for the design so molds could be made for a fiberglass version. Tommy began manufacturing the new polyester resin and fiberglass XT460 in 1986.

The LeeCraft XT460 immediately dominated the 7.5cc and 11cc tunnelhull classes in regional and national events. In straightaway speed events, the XT460 holds the IMPBA records in the 7.5cc (75.201mph), 11cc (70.159mph) and 13cc (71.997mph) modified-engine classes. The IMPBA



The B&M LeeCraft XT460 comes with a lightweight epoxy glass hull and cowl and a formed radio box.

PHOTOS BY WALTER SIDAS



Left: I used threaded brass inserts instead of blind nuts to secure the motor-mounting attachment screws.

Below: I also used brass inserts and screws to hold the cowl in place. Plywood brackets that I glued to the transom support the threaded inserts.



1/3-mile oval (2-lap) competition records for the same three engine classes are also held by the XT460 along with the 1/4-mile (2-lap) records in 7.5 and 11cc. The XT460 is the current NAMBA straightaway record holder in 7.5cc stock (52.32mph), 11cc stock (50.90mph) and 11cc modified (57.39mph) classes. In NAMBA 1-mile heat racing, the XT460 possesses the records in 7.5 stock and mod classes. Besides holding most of the records for speed in 7.5 and 11cc tunnel classes, the LeeCraft XT460 has won numerous championships sponsored by the three national model-boating organizations.

B&M'S XT460

In 1997, Tommy sold the plug and molds for the XT460 to Bill Berdzar and Dr. Lohring Miller of Eugene, OR, better known as B&M Mfg. All of B&M's XT460s are now molded in epoxy glass, and their sponson alignment is checked over a plate-glass surface. Before a boat is sold, its sponsons are "blueprinted" to make sure it provides the utmost in speed and performance.

The assembly and operation booklet provides all the specific measurements needed to attach the engine to the transom. Any

SPECIFICATIONS

Hull length: 34 in.

Beam: 13 in.

Weight: 6.5 to 7 lb.

Price: \$300 (plus S&H)

Comments: the XT460 produced by B&M Mfg. is a cutting-edge competitor with a proven race record; it wins races. Each hull is checked before it leaves the factory, and you can build it and be out at the pond in short order. The XT460 also makes a fantastic sport boat with a stock engine for power. Be sure to visit B&M's website: www.pond.net/~yayoe/.

Hits

- Lightweight, epoxy glass construction.
- Very precisely constructed.
- Fast and maneuverable.

Misses

- Some pinholes in epoxy glass require filling.

ON THE WATER

The correct propeller depth is where the centerline of the propeller is even with the bottom edge of the sponson. I used a prop-thrust angle of -2° , and I ran a reworked Octura 1450 propeller. The first couple of times I ran the boat, the engine operated nicely with a fairly rich needle-valve setting. The boat cornered great, but it wasn't going to win any races. When I tried to lean the fuel mixture, the engine ran with good power for a couple of laps and then stopped. That first outing proved that the boat was capable of running just fine, but there was something wrong in the fuel system. I solved the problem by simply elevating the tank. The next time I ran the XT460, the engine ran powerfully while continuing to exhibit excellent handling down the straightaways and through the corners.

7.5cc motor mount from Du-Bro, Octura, or Prather Products can be used. For this project, I used a K&B 7.5 Pro and a Du-Bro 7.5 motor mount. The transom is backed with 1/4-inch plywood to accept blind nuts. I, however, elected to install 6-32 threaded-brass inserts. A dab of thick CA must be applied to each insert before you screw it into place.

Since the cowl is constantly removed and reattached, I used 6-32 brass inserts and machine screws in place of the normal sheet-metal screws to hold the cowl in place. I made 1/4-inch plywood braces and glued them to the front of the transom to support the threaded inserts.

INSTALLING "STUFF"; RADIO, LINKAGES AND FUEL TANK

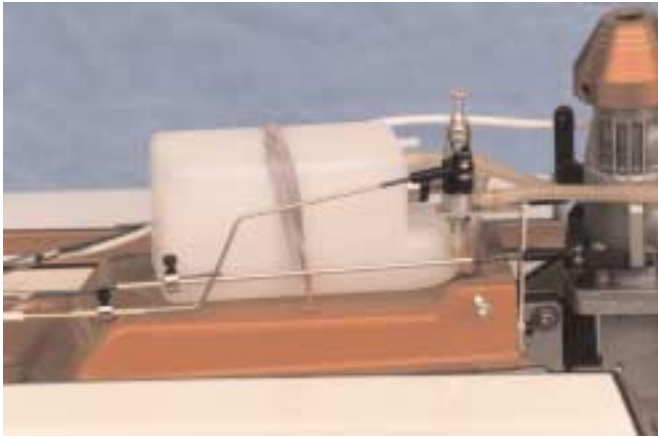
Racing 7.5cc tunnelhulls require heavy-duty steering servos. I used a Futaba S3302 servo to handle the task of turning my XT460. A standard S-148 Futaba servo is more than adequate for throttle control. The new K&B 7.5 Pro has an adjustable mixture-control needle valve, and I take advantage of this feature by installing a mini servo in the radio box. Connected to the mixture control, the servo allows me to adjust the engine's fuel mixture while the boat is running. I used Robart Mfg. plastic radio-box seals to connect the engine's steering linkage to the steering servo. The linkage wire is 1/16-inch-diameter wire, and I used wheel collars to connect the two-piece pushrods so I could easily adjust their length. Ball-and-socket connectors provide the pushrods with a solid connection to the engine's steering arm. I used Sullivan throttle cable to connect the throttle servo to the carb. The mixture-control linkage from the third servo exits the radio box through some plastic tubing. I made the mounting bracket for the mixture-control needle valve from 0.060 K&S aluminum sheet stock and secured it to the transom using one of the motor-mounting attachment bolts.

A radio-box lid is not included in the kit, so I made one from 1/16-inch plywood. I prefer to use the full-length antenna supplied with the receiver, so a piece of 1/16-inch plastic tubing inserted through the lid serves as my antenna guide.

A 12-ounce fuel tank will provide about 8 minutes of run time, and this is more than enough for heat racing. To secure the tank,

B&M LEECRAFT XT460

I screwed two small, brass cup hooks into the tank-mounting area and used rubber bands to prevent the tank from shifting around. With the tank positioned flat on the mounting area, I did experience fuel-draw problems with the K&B 7.5 Pro. To



The fuel-tank setup and the steering linkage are shown here. Everything is easy to get to.

solve this, I used two pieces of pipe-insulation foam to elevate the tank as high as I could under the cowl. The higher fuel tank location provided much better fuel draw.

ADDING LEAD

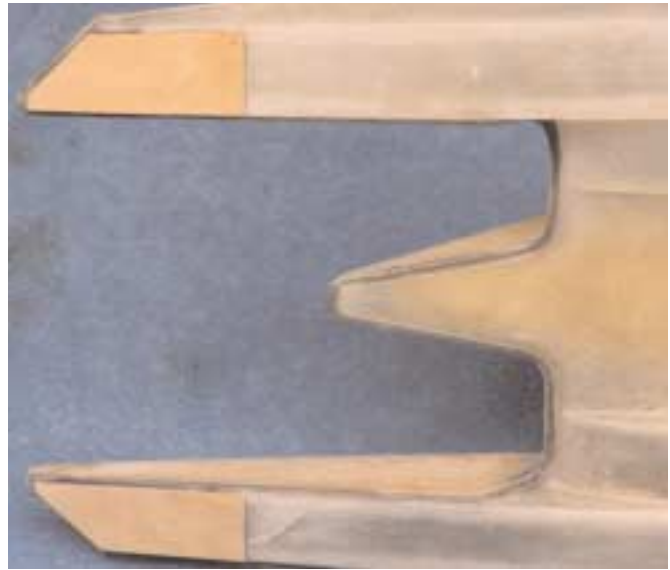
Every good-running LeeCraft XT460 I've ever seen had stick-on lead applied to the inside edges of the front sponsons. At the recommendation of Mark Anderson (who has one of the fastest LeeCraft XT460s ever), I added 8 ounces of lead shot to the inside of the sponson tips. First, I cut small openings into the bottom front sponsons about 3 inches from the front tips and then poured in a mixture of lead and epoxy resin. Mix up sufficient epoxy to cover the chopped lead and mix it all together in a mixing cup. Check the weight of the "lead soup" on the measuring scale and add 4 ounces to each sponson. Position the model so the sponson tips point downward while you pour the mixture into each sponson. When the resin has hardened, use $\frac{1}{16}$ -inch plywood to cover the holes in the sponsons. These plywood caps should extend $\frac{3}{4}$ inch past the access holes.

FINISHING TOUCHES

Many owners of the best-running XT460s modify the left sponson by adding an outside ride strake. The strake on my XT460 is



To help cornering performance, I added a strake to the bottom of the left sponson. It is made of a strip of wood that I sanded to shape and glued to the sponson bottom.



The plywood caps on the bottom of the sponson tips cover the holes that I poured the epoxy and lead-shot mixture into. The "lead soup" is a much more effective way to balance your boat than to simply stick weights on the outside edges.

shaped from a $\frac{3}{16} \times \frac{3}{8}$ -inch wood stringer that I sanded into a diagonal wedge shape. It extends from the back edge of the sponson forward to the back edge of the inside sponson step. I used CA glue to attach the strake to the sponson's bottom outside edge and applied putty to blend it into the sponson.

To keep it as light as possible, the boat's epoxy glass hull is manufactured without a gelcoat finish. There were some small pinholes and a few small voids in the finish, but this is common to all epoxy glass boats. To prepare the hull for finishing, I sanded it with 400-grit wet/dry sandpaper and sprayed primer onto it to see whether any pinholes or blemishes popped out. I used automotive glazing putty as needed to fill the surface. A little more sanding and a few more coats of putty and primer made the hull ready for painting. I used automotive spray cans to apply final coats of white, metallic red and metallic light blue. Striping tape, peel-and-stick decals and rub-on numbers and letters gave the boat its final touches. My friend Bruce Mooring applied a final coat of fuel-resistant clear to the hull.

CLOSING COMMENTS

As a competitive model-tunnel design, the B&M LeeCraft XT460 has definitely withstood the test of time. The abundance of records that the design has accumulated attests to its excellence. The epoxy glass hull is extremely durable and will stand up to the demands of all-out racing. ↓

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Novarossi; distributed by Rossi Sales of America, 1325 Carol Dr., Memphis, TN 38110; (901) 396-7485.

Robart Mfg., P.O. Box 1247, St. Charles, IL 60174; (708) 584-7616; www.robart.com.

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