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P-40 QUARTER MIDGET RACER

Quarter Midget racing is sweeping the country, and what's nice is that many of the winning planes are original designs. The P-40 has already shown great potential in several races. By JACK SHEEKS.

Wish we could tell you that this little ship is the descendant of the great balsa God "Speed" or that we have been working on the basic design for over 10 years to make it perfect. But we have done none of these things. We can say that it has proved to be a very good design that is stable in flight and is not too shaggy when it comes to speed. The P-40 took shape not long after my ME 109 proved to be such a good competitor. We decided to try and make the next ship even faster, with an enclosed cowling and modified rib pattern. The landing gear was placed further out in the wing in order to get better ground handling. This helps to get around the first pylon quicker. The straight leading edge of the wing helps the ship turn quicker after getting it in knife edge flight. With these modifications, the only ship both Hal Vandiver and myself liked, that would still be a military ship, was the P-40. So we built one to see if it would cut the mustard.

The little ship isn't doing too bad in competition. Hal has flown it in two different meets now and placed third in the Lafayette, Indiana 1/4 Midget races. He couldn't quite beat the K & B's with his Tigre. But third isn't too bad out of 35 entries. He then went to Rough River, Kentucky, for the 1st Mint Julip meet. By this time he had modified the ship and had a hot K & B 15 growling in the cowl. He was a lap ahead of most of his competition when she quit. He changed plugs, props, fuel filters and flew his second heat. Again on the eighth lap she quit, while leading the race. The culprit was in the tank. The clunk had slipped off and he was only drawing half the fuel from the tank. This has since been remedied.

Our P-40 weighs in at 2 lbs, 9 ozs. with a Blue Max radio, Tigre 15 and MonoKote, so there shouldn't be any problem with weight. Midwest balsa was used throughout.

The only thing we have to say about getting more speed out of a ship is to be sure she is clean. By this we mean no rough areas on the fuse or flying surfaces. This slows you down considerably. Use all the tricks you have seen other pylon racers use and give the P-40 a try. We think you will like it. It maneuvers very well also, and would make a good ship for sport flyers.

CONSTRUCTION

The construction of this ship is very simple. Begin with the wing ribs. Cut the templates out of thin aluminum and sandwich enough 1/8 inch balsa rib blanks between them for one wing half. Drill a couple of holes through the ribs and bolt the ribs and templates together. Now carve the ribs to shape. Next cut the 1/16 inch balsa sheet to size for the bottom planking, placing it over the plan. Pin the lower 1/4 sq. balsa stringer in place on the planking glueing it on the inner edge. Put the ribs in place on the stringer and glue each of them securely. Glue the top stringer into place now.

While this is drying do the other wing half. Next comes the leading edge and the rear planking on the top of the wing. Before planking the right wing on top, install the aileron controls, then plank over them. After this is dry, cut out for the aileron. Next plank the rest of the wing. Carve the tips to shape and install them. Then hinge the aileron (trailing edge stock) and install it. Cut out the section of the wing that receives the servo and install the dowel that holds the front of the wing. Set the wing aside now, because the only thing left to do is to drill the wing hold-down holes and this is done after the fuse is complete.

Next cut the stab, elevators and rudder from 3/16 inch balsa, sand to final shape and install hinges.

The fuse is started by cutting the two sides from 3/32 balsa. Next cut out and install the 1/32 plywood fuse doublers. Saw the firewall from 1/4 or 3/16 inch plywood. Whatever your bag is. They both work well. Next cut the other formers from balsa as per the plans. The lower section of the fire wall can be either balsa (hard) or plywood, since it is only used to hold the tank. Epoxy the firewall to the body sides. Pull the rear of the body sides together and glue a piece of scrap 1/8 balsa between them. Let this dry.

By the way, I forgot to tell you to install the landing gear blocks in the wing before you plank the front half. Sorry about that . . . age you know. Don't forget the dihedral braces.

Install the body formers as shown, also the motor mount and the fuel tank. Glue the stab into position. Glue the top nose block into place, along with the lower nose blocks. After these have dried, carve and sand them to shape. Plank the turtle deck with 3/32 balsa, topping it with 1/4 inch balsa. Install the NyRods from the bottom, making sure they are secure, then plank the bottom with 3/32 balsa.

Install the hinges in the lower part of the rudder and glue it into place, along with the tail wheel bracket.

Shape the fuse to fit the spinner with the engine installed. Next build the cowling as shown and glue the blocks of hard wood into place for the cowling hold-down screws. Put the cockpit details in and build the canopy from medium celluloid. Put any other details on now, such as the scoops, etc. Set the wing into the saddle and drill it for the wing hold-downs. Sand the ship and finish anything I have forgotten to tell you about.

MonoKote or paint the ship next. Bend and install the landing gears, along with any other tid-bits you wish . . . such as the radio!

Set the controls up for very little deflection of the elevator and rudder, at least to begin with. This will help you get used to a small ship that is quick. There are no bad habits in the flying of the ship. It grooves well and is very stable, so have a ball and we'll see you at the races. ●

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