Micro Pitts

Pitts Special for the RFFS-100 by Chris O’Riley
All wood 1/32 inch sheet unless otherwise stated.
Construction notes:

Use the lightest, thinnest 1/32 balsa for all wood except where indicated on the plans.

The best time to color the plane is before assembly. Colored dye does an excellent job at providing full color at a virtually insignificant weight gain. Stripes can then be added with paint or markers.

Sand the front of the fuselage to provide a completely flat surface for the cowl to mate with, then glue the cowl on. Also, reinforce the bottom opening (directly in front of where the bottom wing will attach) with some string opening (directly in front of where the bottom wing will attach) with some string saturated with CA. The wood is fairly stressed in this area, and could split without this reinforcement.

Attach the bottom wings by carefully sliding them through the slots in the fuselage and gluing them together. Once together, position and align the wings within the fuselage and glue with a small drop of CA on the leading and trailing edges on the inside of the fuselage.

Connect the two elevator halves with a small 1/16 inch stick, then attach the elevators to the horizontal stabilizer with thin slivers of rubber band. Glue the horizontal and vertical stabilizer to the fuselage, making sure they’re in alignment, then attach the rudder.

At this time, glue in the small reinforcement blocks for the landing gear where indicated on the plan, then sheet the bottom of the fuselage with an oversized piece of 1/32 balsa. If you have any uneven bowing in the bottom of the fuselage, glue the bottom sheet a little at a time, gently removing the bowing as best as possible. Once glued, carefully trim the bottom sheet and lightly sand the edges. If you’re coloring the plane, dye this bottom sheet before attaching, and then color the edges after trimming with marker.

Prepare the bottom wings with a dihedral of 1/8 inch. Top wings with a dihedral of 5/8 inch, but don’t join them yet.

Build the landing gear from small diameter music wire. Each side is made from two separate pieces, as shown in the diagram below. Predrill small holes through the reinforcement blocks, and test fit the landing gear. Connect the two pieces of each side, held in place in the fuselage, by wrapping with thread and saturating with CA, or by wrapping with a single strand of copper wire and tinning with solder. Next, glue each side into the reinforcement blocks and, finally, attach the rear struts together where they cross with either thread and CA or copper wire and solder. Glue on the balsa landing gear struts and then the wheels and wheel pants.
Construction notes:

Add the components in the standard manner. I use rubber cement to attach the coils so they can be easily removed if necessary. The coil wires may be passed through the openings on either side of the rudder and the space for the elevator joiner to travel. As shown in the picture, slide the battery up into the cowl until it hits former F1. Secure the battery by reaching in through the bottom opening with a pair of tweezers to grab the “J” hook.

Place the RFFS-100 horizontally in the center of the cockpit. I gently pressed it into the bottom wing until the posts beneath the battery and motor connectors penetrated the wing. This keeps the board from sliding forward or back, and holding it down with a finger as you remove the battery leads keeps it from being pulled up. I use a length of thin coated copper wire for the antenna, which is passed to the rear of the fuselage and exits through a small hole in the bottom sheeting.

Built as shown, the plane should balance where indicated on the plan. If needed, a penny or two may be placed in the nose, beneath the battery to bring the CG forward. Double check your controls and your MicroPitts should be ready to fly.

On this page, I’ve also included outlines for an alternate set of bottom wings, interplane struts and a solid rudder, should you want to use ailerons. If you choose this, you’ll have to relocate the battery into the cockpit to compensate for the decreased weight on the tail. You might also want to remove all dihedral from the top wing and decrease it in the bottom wing to somewhere between 1/4 to 3/8 inch. Doing so will necessitate the use of the alternate struts to maintain the height of the top wing. When gluing the ribs to the wings, simply trim and discard the excess from the back - there’s no need to add ribs to the ailerons.