



Completely decked out in Kurtzer Air Service colors, all red with silver floats, our little 2-in-1 Taylorcraft makes a very appealing project.

# T-CART FOR TWO by Walt Mooney

● This model was designed for the Flightmasters Seaplane scale contest, with a wingspan of 24 inches. The drawing was made so our illustrious editor (*Thanks Walt, I didn't think you had noticed. Ed.*) could also have it reduced to Peanut Scale size for the magazine. Since the model was intended to be built in two sizes there are no wood

gliding speed and thus harder landings.

Try to keep the tail structure light but don't omit the gussets. The contoured part of the nose of the model is mostly block balsa carved to shape after it is cemented in place on the fuselage structure. The fuselage side stringers, shown by the double dot dash lines on the side view, can be omitted from the small model with very little loss in scale realism.

The floats are constructed in egg-crate fashion by installing the slotted float formers in the slots in the center keel. After this assembly is dry add the float longerons two at a time so as to minimize the possibility of getting a crooked float assembly. Add a small scrap block to the nose of each float and carve it to the nose shape.

While the rest of the airplane should be covered like any other model, the floats should have a little special treatment. First, before covering, give the float structure two coats of thin dope. This will help seal the balsa wood and keep it from soaking up a lot of water if the covering gets punctured. Then cover the floats and double cover the bottoms. Apply as many coats of dope as it takes to get them absolutely water tight. If your dope is thin, this may take four or five coats. Note that on the full scale Taylorcraft, only one water rudder is fitted. Straight take off runs are a must for model seaplanes and you may find two water rudders are required.

The MODEL BUILDER

When your model is completed and you are ready to fly it, check to see that there are no warps in the wings or the tail. The model should balance right at the step. Since a float installation is draggy, don't expect a super glide; but it should be smooth and virtually straight. Test glide over a lawn. Wax the bottoms of the floats before you attempt a water take off. The wax will tend to reduce water drag.

Test fly the model initially over land by hand launching. Start with only a few turns in the motor and work up to almost the maximum possible. The model motor should be capable of giving a fairly rapid climb and the flight path during the early part of the climb should be straight. Apply thrust line adjustments to obtain a straight flight.

If your model will barely climb when hand launched, add a bigger motor or additional loops of rubber. It will never get off the water unless it will climb very well. It's astounding how much drag a little water has compared with the drag of the wheels we're all more used to. If your model turns under high power, adjust it to climb straight by adjusting the thrust line to point in the direction opposite to the turn. Any thing beyond the mildest of turns on the water will result in a turn-over. If the model dunks itself, it will generally get some water in the fuselage. Drain it out and let it dry or you'll be attempting to fly a model that is heavy and out of balance. ●

important to select lightweight balsa for the model structure. As drawn, it will be stronger than absolutely necessary.

All the construction follows pretty standard practice and should not present any problems if you have built one or two models before. Some special items are worth considering, however.

While weight should be kept at a minimum, a seaplane needs fairly strong structure; first, because it takes a larger than usual rubber motor to get a seaplane off the water . . . almost twice as much power as is required by a landplane. Second, a seaplane requires several coats of dope to insure a waterproof airplane, and the extra dope may tend to warp a really lightweight structure. Last, the weight of the float installation results in a slightly higher