





An 18½ inch span Free Flight Scale  
Model for Bambi Owners of the

## TIPSY JUNIOR

THE TIPSY JUNIOR is a single place low wing design which has had considerable success as a full scale airplane. It is a simple design with much eye appeal with its small size and harmonious surface profiles. This free flight Bambi powered model of the Topsy has all the eye appeal and is still fairly simple to build and fly. It does take a little more care in trimming out for flight than say, a good high wing sport model, but, due to its small size and light weight, it is virtually crash-proof.

**Fuselage.** The fuselage is made up of two-sheet balsa sides, with sheet balsa formers, and a plywood motor mount. It is best to cut all of these out before starting any assembly. Note that the fuselage sides must be made to the extended length shown to account for their curvature in the plan view. Then assemble the fuselage starting with a 3/32nd square tail post at the rear. Install the formers working forward, and using care to see that the side sheets are bending symmetrically. Cement the motor mounting in on top of the sides before installing former F 1. Add the stringers, starting with the top and bottom centre stringers which are ¼ x ¼. Trim off the top stringer between F 5 and F 6 to allow for the 1/32 combing, and then install the combing. Install the combing forward of the cockpit, either wrapping or strip-planking with ¼ sheet. Fill in the fuselage bottom between F 10 and the tailpost with ½ scrap balsa. The bottom of the fuselage forward of the wing is made from block balsa after the wing is attached. Note that all balsa should be light grade unless otherwise noted, to keep the weight down.

**Empennage.** The rudder fin, stabiliser, and elevators are carved from light ¼ sheet balsa solid model style. They are hinged with soft copper wire which greatly facilitates trimming.

**Wings.** Cut out ribs, spars, leading and trailing edges as indicated on the plans. The rib section shown is the centre rib, and since the wings have a slight taper to them, each



Designed by Walt E. Mooney

rib should be trimmed to fit on assembly. Trim off the trailing edge of the rib. The extra height this gives the aft end of the rib is sanded off after the basic wing assembly is lifted from the board. The spars can be cut from one piece of balsa with the dihedral angle already in them or spliced at the centre.

**Landing Gear.** The landing gear is made from music wire to the size and shape indicated on the plans.

**Assembling.** Locate and cement the wing in place on the fuselage. Carve and install the forward fuselage block. Cement the stabiliser on the fuselage, and then fit and cement on the fin. Now give the entire model three coats of clear dope, being careful not to let the wing develop any warps. Press the tail wheel wire into the ¼ fill-in and add a patch of silk to reinforce it, cementing well. Add the bond paper fillets. The upper ones can be rounded over a finger before installing. Slide the plastic tubing over the landing gear legs. Now give the entire airplane two coats of silver dope.

**Powerplant.** Make up the fuel tank from 1/32 celluloid sheet. Cement it to F 2 in the location shown after pushing in a piece of plastic fuel line which has enough length to allow trimming later. The line doesn't push well under the motor mount and around a corner. Remove the tank that comes with the Bambi and store it in a safe place for some other time. Then install the Bambi as shown with 2½° of right thrust.

Make the cowl next. The original model has a two-piece hollow balsa cowl which has since been replaced with a fibre-glass cowl in the interests of greater abrasion resistance. The model doesn't break, but its small size makes even a good runway the equivalent of a ploughed field, and nose overs are to be expected.

**Finish.** The original model has decal letters in red and Indian ink striping to indicate the ailerons. Then two very thin coats of clear were sprayed all over.

**Flying.** The best way to test fly is to do all the flights R.O.G. gradually increasing power until a take-off is effected. Glide tests should be made previously to obtain a straight fast glide. Ballast is necessary to give the centre of gravity shown, and then use the elevators and rudder for trim. Once a satisfactory glide is obtained, use thrust adjustments to give a shallow climb with a wide left turn. A right turn with the original model always gradually winds on in.

