AN EXCITING NEW LOOK IN CLASS III

Dee-Bee

A scale-like original design modeled after the famous National air racers of the 1930's.

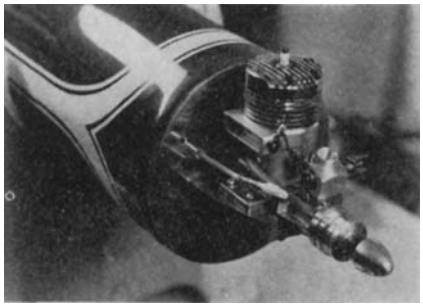
By: DARIO BRISIGHELLA

PERHAPS, as with most avid RC modelers (the word "addicts" would be more appropriate), the latest copies of your magazine is just the "fix" needed to carry you through another month. Upon its arrival, first thing on the agenda, is to quickly thumb through the literary "masterpieces," to the pages devoted to the plans. (Much wear and tear on the pages could be avoided if they were in the beginning.) When you have found the plans a thorough evaluation is begun (generally a two-minute expenditure of your valuable time). Then the final analysis! With no in-between decisions, either this designer (crackpot) has something to offer or it's just too much work (a dud). If the plans and the accompanying photos do nothing for you, a few choice thoughts are quickly aimed at the editor for wasting another issue! The designer's article is left to be read after everything else (including the advertising), or better yet for some other day — then only to see what some of his (hairbrain) ideas are, or whose article he may be accused of stealing them from.

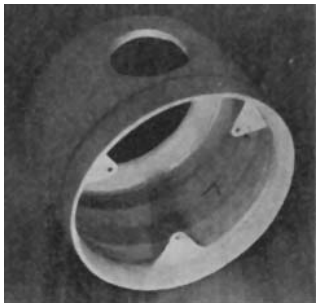
However, it is my hope that something struck home during the scrutiny of these plans and you decided to read this before reading all that advertising! If nothing else, the nostalgia of another era represented in this ship might have captured your attention. National Air Race names like Thompson, Bendix, and Greve, of the 1930's come to mind. And men and planes that made headlines: Holman, Laird, Doolittle, Gee-Bee, Wedell, Howard, Turner, Whitman, Chester, and many more.

The Dee-Bee is a Class III job with a personality of its own. I think it scale-like. It is more Thompson than Goodyear in appearance.

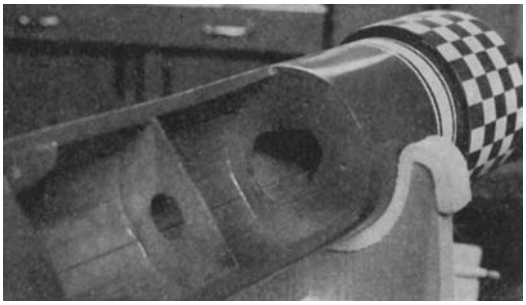
Do miniature Goodyear racers leave you cold? Too much work? Not enough local interest — aside from the ideas of flying, stalling, and landing or crashing all at the same (100 mph) speed? So how about pylon racing sort of unlimited fashion "National Air Racers?" Dee-Bee



A neat-looking front end. Inside the cowl a beam-mounted Enya .60 TV. Note optional polished-aluminum firewall face.

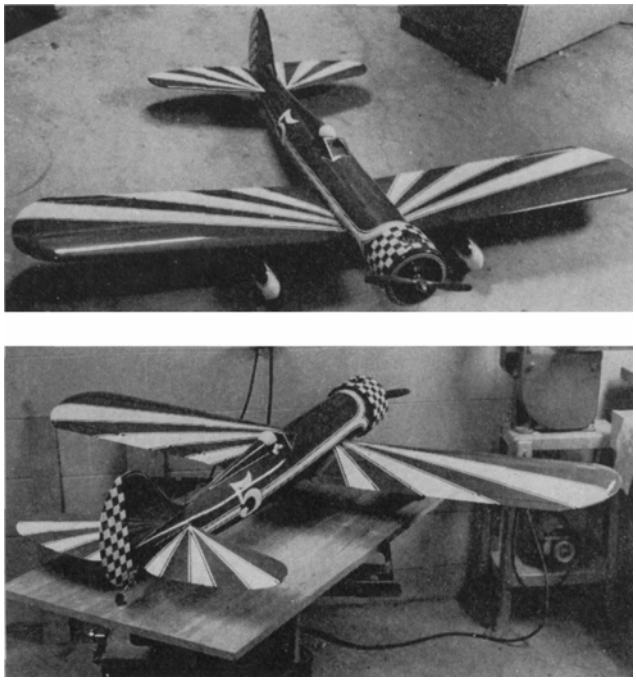


The cowl is made up with cross grained laminations of 1/4 in. balsa. Interior is epoxied.



Not really that much more work in a circular cross-section using 1/4 in. sides and planking. Equipment compartment could be called "space unlimited."

Dario proudly displaying his Dee-Bee and Vespa designs. These models have the same aerodynamic setup. The shape and paint scheme really make them look different.



From any angle this machine seems real. Yet it's a synthesis of several famous Thompson, Bendix, and Greve Trophy racers. Imagine the yards of masking tape used in the paint scheme!

(sorry Don Brown, but I have the same initials) was not designed with this in mind, but it has some merit, as well as size, that many multi-flyers are accustomed to. The fuselage will accept any equipment (even your tool box); nimble fingers are not required for equipment installation.

Dee-Bee is a scale-like composite of many great National Air Racers. The 1929 Thompson Trophy winner, Doug Davis's Travel Air Mystery ship; the 1931 winner, the Granville Gee-Bee; and the 1933 Thompson and Bendix Trophy winners; the Wedell-Williams Special. (Source, National Air Race Sketch Book, Published by Floyd Clymer, $2.00.) A little of each and, just to be sure of its flying ability, the airfoil and moments from my contest ship, Vespa (A.M. April 1967), and, presto, an instant Dee-Bee. It not only is a crowd pleaser, but a real performer as well —but don't try to convince someone it's a modified Vespa.

It is a known fact that about 80% of today's RC'ers are not contest minded, but rather fall into the category of sport flyers, many of whom are more than adequate builders and flyers. This model offers some qualities for both. For contest work a trike gear is hard to beat, but those hard-nosed judges just might overlook some of those ground handling items for a change, and score you a little higher for your effort against those trike jobs. In any event, the conventional gear jobs offer a lot of self-satisfaction and pride. The first real push to build Dee-Bee came from my good friend, John Kozieja, who was never without the same old comment, "when you've seen one Class III ship you've seen them all." I must concur he's almost right but with Dee-Bee he has changed his mind. I'm sure you will agree with him too. I saved all the prototype work by using my Vespa for the platform of Dee-Bee. All I needed was a new shape. (How original can you get; they all need a wing, stab, fin, etc.) And now after flying Vespa for over two years, I'm done changing. Vespa flies very well, so why make Dee-Bee different? Happily, this decision paid off.

You may wonder about the all-sheathed surfaces, the extra weight. Well, many of the National Air Racers were all plywood or aluminum covered. Also I hate sanding dope on silk over open structures. Sure, weight can be saved on an open structure. Also money and, with the cost of balsa today, you could buy black walnut for less. With the space available in the tank compartment you could almost take a crack at the endurance record, and a good definition for the radio-servo compartment would be "space unlimited."

I spent more time on the drawing board, working out the main gear details, than on the building board. To prevent the pants and fairings from poking holes through the bottom of the wing, there are the extra half of a landing gear mount, and the strut braces. The flex needed for really hard landings, is not as great as normally had from single L.G. struts, but with the ability to hold the nose high for three-point landings, and the slight outboard flexing "of the gear and shock absorbing wheels, no problems have been encountered. The gear, pants, and fairings really finish off the model. The open cockpit, large circular cowl, and classic paint schemes add to the realism. As to the ailerons, suit yourself. I prefer strips.

Fuselage construction varies from most cylindrical types because I don't enjoy strip planking. Who does? With the %" basic sides and the top and bottom blocks, the planking is kept to a minimum. More importantly, these sides and blocks aid alignment and speed construction. Excepting the cowl, the fuselage builds quite easily. Let me add now that Dee-Bee was designed for flying, not crashing,

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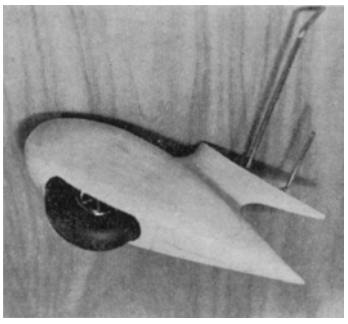
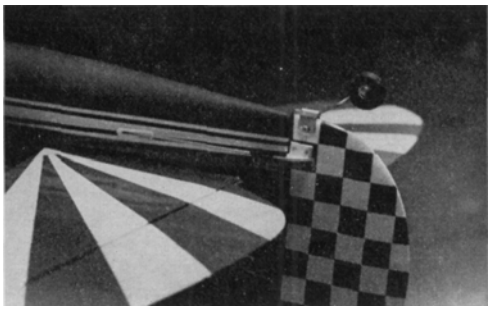


The Low Bounce Du-Bro tires are a must with pants. To prevent fairing poking wing, use two gear wires.



Very simple tailwheel installation with inserted tube-bearing forward of the hinge line of the rudder. Note use of pushrod exit guide.

Dee-Bee

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and the less experienced builders should note that the wing is rather deep set. So get that stick or button time on a trainer type. Don't try learning on Dee-Bee; it's no trainer by any means. Wing construction: Horizontal alignment of the ribs is assured by use of the sub-leading edge and sub-trailing edge, cemented to the oversized 1/4"-thick L.E. and 1/8"-thick T.E. Select straight-grain balsa and use a straight edge for cementing the sub-L.E. and T.E. to the center line, which should be 27/32 in. from each edge. Pin the completed L.E. and T.E. assembly to the plan and place a 3/32 sheet or shims under the main spar location, install the ribs, etc.; shimming under the space is necessary so that, when the wing is turned over, it will make contact on the building board as it did when started.

Wing sheathing should overlap the L.E. as shown. At the T.E. on the side of the wing you start first, the sheathing should butt the T.E. and overlap the T.E. on the last side covered. The wing tip blocks may not be the best way to produce rounded tips, but find me a faster way.

The wing fairing is installed after the center section is fiberglassed, messy but worthwhile. Sharp edges on the T.E. of all control surfaces make for better response and care should be taken to produce and maintain these edges. Select straight-grained firm balsa for the ailerons, the elevator, and rudder as well. Laminated C-grain balsa works best. The aileron horns are longer than the stock types available so you'll have to make your own. Horizontal and vertical stabilizers. Construct as shown. Their construction is typical. But a word about warping. When finishing, silking, doping, painting, etc., treat both sides equally and at the same time; not one side first then, when dry, the other — this is when the warps occur. Fuselage: Alignment is a must right from the beginning. Cement (epoxy, please) the motor mounts to Formers F-l and F-2 using your engine temporarily bolted in place (a tri-square will help), to hold alignment. Use centerlines! This unit determines the fuselage accuracy. After cementing the 1/4" doublers to the 1/4" sides (right and left, don't forget) cement them to F-l and F-2, holding the top edges parallel to a flat surface with some short 2 x 4 blocks for props. When dry, add the remaining formers, checking lengthwise alignment. Add top and bottom blocks, and the small amount of strip planking and you are home-free.

I add the cockpit and head-rest just after sanding. Sanding the cylindrical shape is easy. Obtain a sanding belt from a 4-in. portable sander then cut it to make a long narrow strip which is used like a shop-polishing rag. This prevents flat spots which show up when you get started on the finish.

Cowl: It's not as hard as it looks. Cut annular segments from 3/4" thick balsa planks, epoxy together to form rings, which are laminated to plywood cowl ring, and shaped. I don't have a lathe. By making a 1/4" thick plywood adaptor bolted to the cowl attachment ring, my drill press and sandpaper got the job done in short order. Apply fiberglass resin or epoxy to the inside of the cowl.

A needle-valve extension is not shown because I believe that once you've broken in an engine you could just as well break off the needle valve if you stick to one brand of fuel. The setting doesn't change. An exhaust opening is not needed because most of the residue clings inside the cowl. Removal for cleaning is simple with three screws.

Landing gear, pants, and fairings: Silver solder or "shiny-brite" is a must for joining the 5/32" main gear to the 1/8" gear braces. Make a simple jig to assure alignment. Epoxy these units to WP-1; laminate WP-2 and WP-3 to inboard side of the gear. When dry, install wheels and complete assembly with the outboard WP-2, WP-3, installing the WP-4's to each side of WP-1. Shape to the contour shown. I was able to bend the gears and braces, solder the joints, cut out all plywood and balsa parts, and epoxy both gear assemblies together, less shaping, in a five-hour period.

Dee-Bee is quite groovy and responsive, an all-around flyer. You can slow her down to a walk for landings, but you must fly her, don't follow her, through the sky.