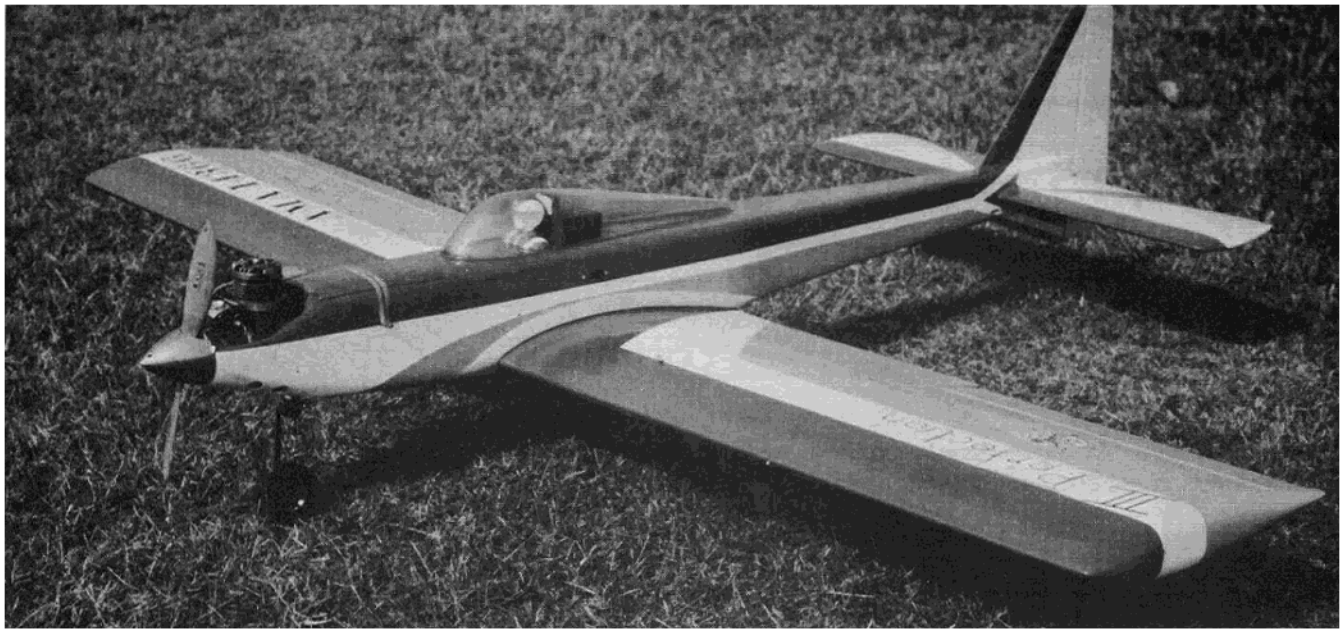
III PERFECTION

The III Perfection is not just another contest winning aircraft, but an extremely smooth, straight flying machine that was designed to fly the F.A.I. and A.M.A. pattern to perfection, and to exceed the best pilot's ability.

BY WILLIAM E. THOMAS

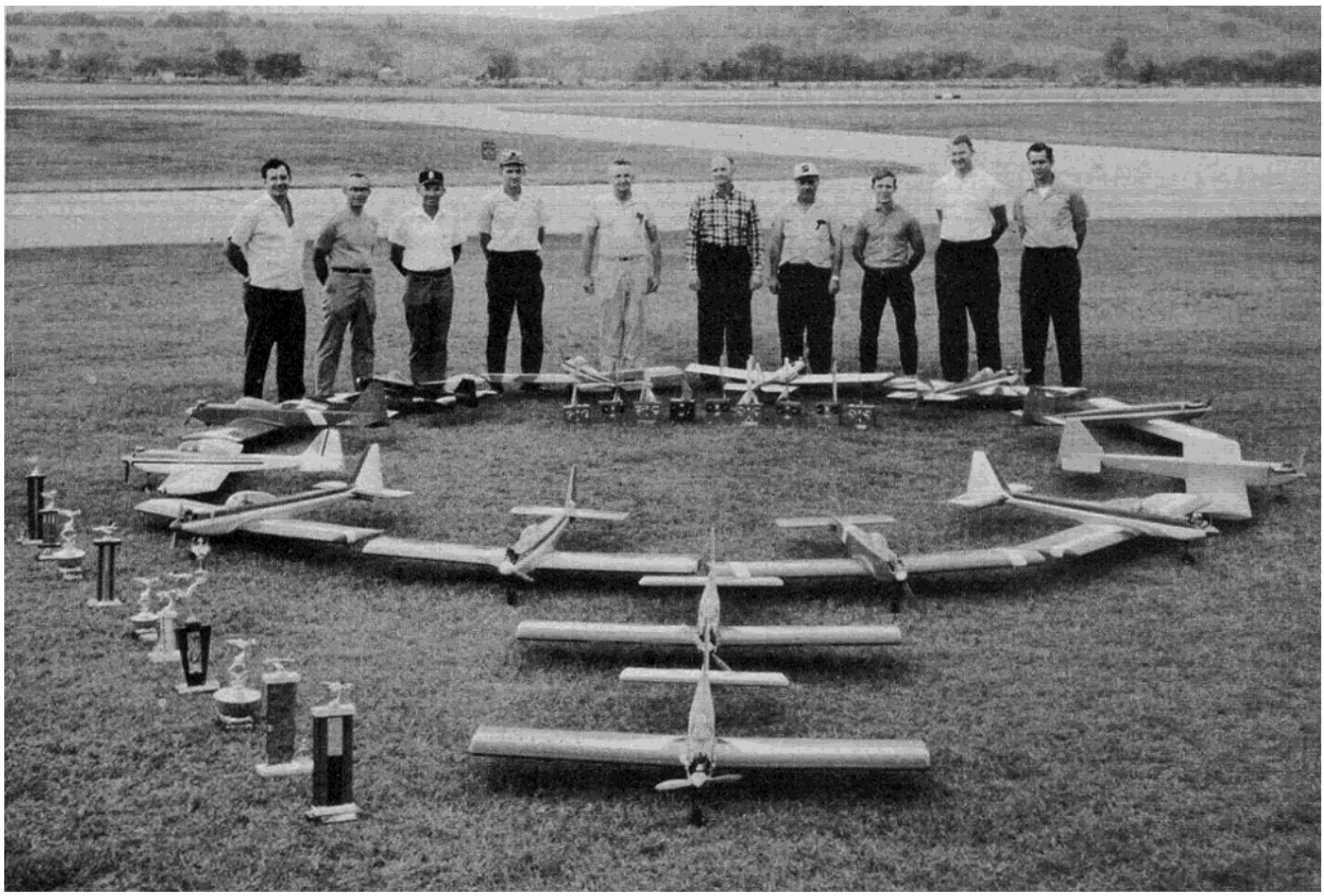
PHOTOS BY DALE WILLIAMS



The human mind is undoubtedly God's greatest gift to man. From this relatively small area we are able to create visions of yesterday, the reality of today, and the dreams of tomorrow.

When I think of the visions of yesterday, I always remember my first contact with the beautiful machines that fly. I was a five year old; a bundle of energy looking for worlds to conquer; bugs, worms, grasshoppers or anything that walked, ran or flew, to examine, when out of the eastern horizon came a roar that scattered all the chickens on the small Kansas farm that was my home. As soon as I could gather myself together, I started pursuit of a beautiful red biplane. Since I could catch those pesky chickens, it shouldn't be too hard to catch that big red bird, and with all that noise I sure couldn't lose it, but the reality of today caught up with me about then, in the form of a barbed wire fence. That stopped my pursuit (temporarily). Oh well, I was about out of breath anyway, so over the horizon went my first contact with airplanes.

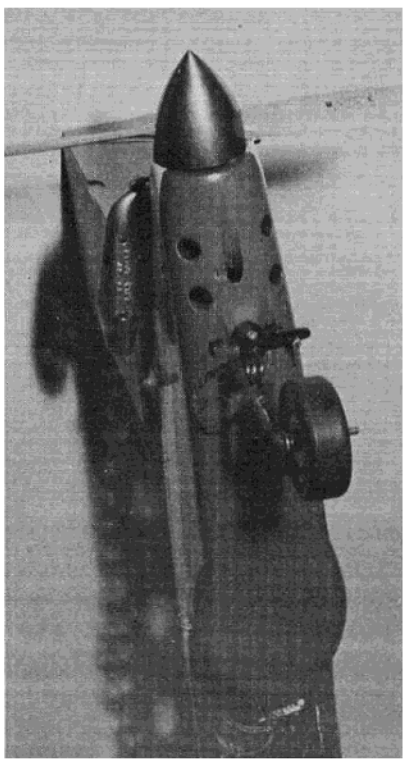
I immediately decided however, that I should be flying one of those, so construction material became the first order of business. A scrap of board for the fuselage . . . If I could only tear this old orange crate up, it would make dandy wings . . . that old hammer should help . . . ouch! I must remember to keep both hands on that hammer handle, I can't hit the other one if I do that! . . . Now a tin can lid to make that big silver disc that was on the front of that beautiful machine . . . now to assemble. Ouch! I can't keep



This is an "Okie" balsa flower . . . very pretty and very expensive, and all III Perfections! L. to R: Jim French, Ed Spann, Bill Thomas, Delmar Mosher, Bill Hamilton, Larry Sartor, Bob Bretz, Ralph Thomas, Kent Rollmann, and Don Ness.

both hands on that hammer handle and start those nails through the wing . . . Now to get a nail through this tough tin can lid and nailed on to the front and, eureka! I have a beautiful flying machine all my own and tomorrow I will chase that biplane down.

Friends, I am still chasing that beautiful, noisy machine and in much the same way as when I first saw it, through models. So if the sight or sound of an airplane excites you, don't fight it, come along with me and we will gather up a few pieces of lumber, some orange crates, an old can lid, some rusty nails and build a flying machine that is capable of doing the AMA or FAI pattern to perfection. The name of this machine is III Perfection and, as the name implies it is an attempt to design, not just another contest winning airplane, but an airplane capable of exceeding the best pilot's ability. This is not a 90 or 100 mile an hour bomb, it is an extremely smooth, straight flying aircraft. The weight is extremely important and has ranged from 5¾ pounds to 7½ pounds, the lightest ones using Sig Contest Balsa and HobbyPoxy finish are the best fliers, but the heavier ones are very good windy weather airplanes.



Detail shot of electric nose gear brake and cooling holes.

I use the very fine K and B Veco 61 for power and the Log III Logictrol to put this machine through its paces, including a C Novice win at the 1968 Nat's.

I have not mentioned the three most important ingredients in winning contests, so here they are: practice, practice, practice. So before the weather gets too good, let's build two or three III Perfections and go practice.

Construction is very straightforward but I will attempt to pass along a few of the tricks I have picked up.

Fuselage:

After all parts have been cut out, draw the fuselage top view on the 1/4" x 4" x 48" contest grade balsa top block. Very carefully, lay this out using the centerline you have drawn down the center of the block. The straightness of your fuselage is dependent upon this layout. Next, pin the top block down and saw almost through at the tank compartment

bulkheads, and glue the 3/8" triangular stock to the top block. This completed, assemble the motor mounts and their bulkheads, but don't glue them. Cut out the 3/32" contest balsa sides and use contact cement to attach the doublers. Make sure you have drawn the reference line on the inside and outside of the fuselage and make doubly sure they are in TRUE ALIGNMENT. After gluing the doublers in place and thinning the motor mounts to 1/4" thickness through the tank compartment, glue the motor mounts to the fuselage sides aligning the top of the motor mounts with the reference lines. Clamp, and let them dry for a couple of days. I use Ambroid or Sigment throughout, because I think epoxy is too heavy. While the sides are drying, cut out and assemble the horizontal stabilizer. I use a 3/4" plywood building board on which I build the stabilizer. Do not put the elevator on until the stab is glued into the fuselage. Glue the fuselage sides and bulkheads to the top block, use a 4" triangle to align the sides with the top block. Pin and clamp this assembly and let dry. Leave the fuselage pinned down until the horizontal stabilizer has been inserted, aligned and glued in place.

You will notice that the III Perfection utilizes center hinged ailerons. This is Jack Capehart's and Ben Herman's suggestion from their design articles in R/C Modeler and you should try them. I think you will see the difference and like it.

The rest of the construction is as shown on the plans.

Finish:

I use Sig epoxy thinned 1/2 with alcohol for the sealer and filler (two coats), sand with 2-0 sandpaper between coats, and sand with 4-0 before the HobbyPoxy color is applied. You will have some wood grain showing with this method, but it is light and fast, and will not warp anything.

Flying:

Balance 3-5/8" to 3¾" from the leading edge of the wing. I use Midwest control horns with two extra holes drilled toward the inside. I use the inside holes for rudder and elevator.

May you have as many happy hours flying the III Perfection as I have enjoyed. ●

FULL SIZE PLANS AVAILABLE
SEE PAGE 70

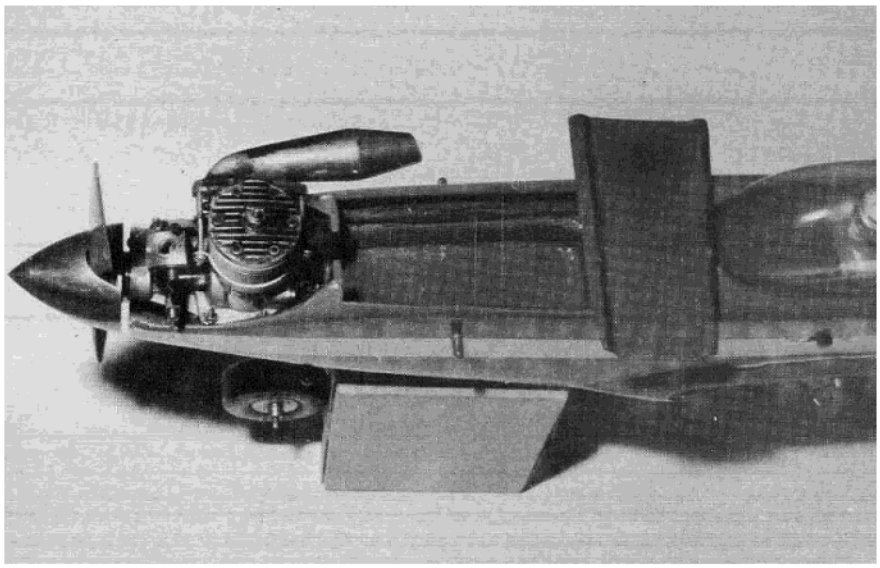
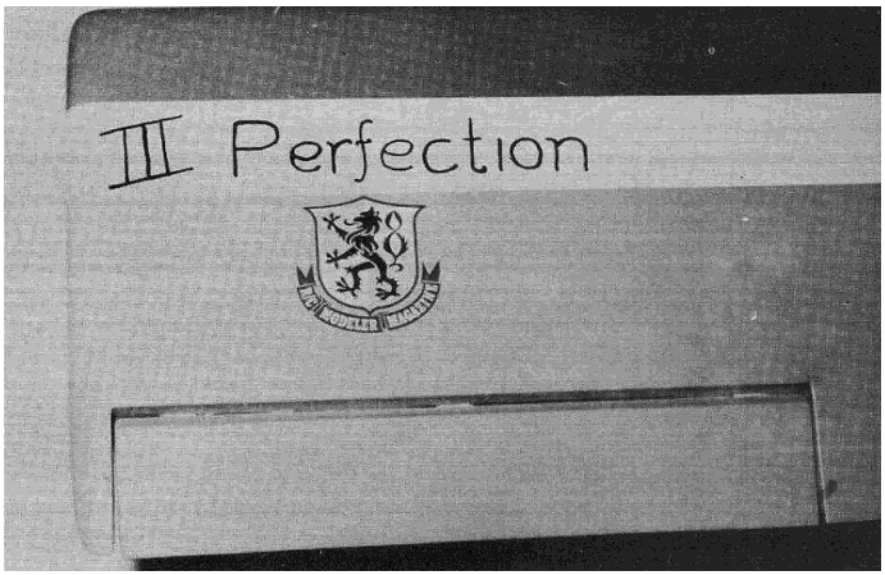
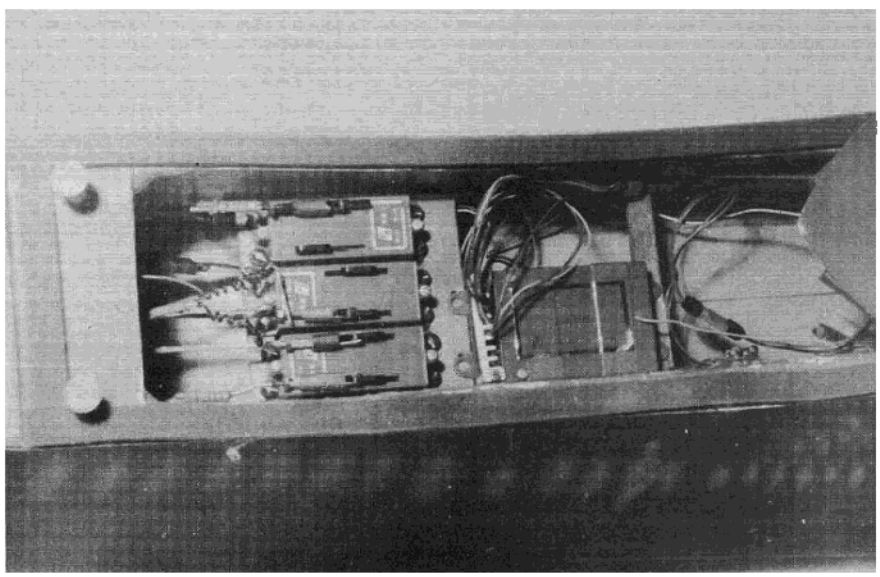


Photo of engine installation and isolated tank compartment.



Note use of center hinged ailerons on III Perfection.



E. K. Logictrol III mini system is almost lost in large radio area.