

WHEEL TO WHEEL
1/16" 1/2" - 17"

GLASS CLOTH
3" WIDE

5/8" GEAR BLOCK OR
RETRACTS
3" CORE

TAPER ALERONS 1/4" TO 3/4"
SHEET WING WITH VERY SOFT
1/16 SHT BALSA

DIHEDRAL 1/8"
UNDER EACH
PANEL

FULL SIZE TIP
VERY SOFT BALSA

FLATTEN BEFORE GLUING
TO FUSE.

S7
S6
S5
S4
S3
S2
S1

5/16 x 3/8
T E
1/2 SOFT BALSA
ELEV

3/8" 5/16" 1/16 SHT TOP THEN DO BOTTOM
1/8" 3/8" 3/8" 1/8"
SLOT L E ON TABLE SAW
STAB CONSTRUCTION

TIP SECTION
SEMI SYMMETRICAL

ROOT SECTION
SYMMETRICAL

1/4 TE
HARD BALSA
FILLER

1 2 3 4 5 6 7
USE SOFT 3/32 BALSA FOR STAB RIBS

1/4 BALSA

2 1/4 SPINNER
NO THRUST OFFSET USED

3/8 SO BALSA
IN CORNERS
CARVE OUT TO
CLEAR ENGINE

1/8 BALSA

USE FIRM BALSA FOR
FILLETS FOR STRENGTH

SIDES OF WING FILLETS ARE CUT STRAIGHT BEFORE
GLUING TO FUSELAGE - BLEND INTO FUSE A FRONT
AND REAR THEN ADD SMALL EPOXYLITE FILLETS
TO COVER JOINT.

1/4 x 1/2 BALSA
FRAME

1/8 BALSA

1/16 PLY
HOLE LAYOUT FOR
PRO-LINE RETRACTS

1/2 BALSA
FILLER
BELOW
TANK FLOOR

1/8 PLY
W-1

1/4 PLY
F-8

1/2 TOP BLOCKS

1/32 PLY OVER 1/8 BALSA
OR 1/8 PLYWOOD
EACH SIDE

1/16 SHT. GRAIN VERTICAL
SOFT BALSA FILL

1/8 PLY
F-7

1/4 x 5/8 SPRUCE TOP

3/4 BLOCK

3/8 SHT. RUDDER

BATT
PACK
RECEIVER

SERVO AREA
1/16 BALSA SIDE DOUBLER GRAIN DIR

1/8 SHT SIDES

1/16 SHT. RUDDER

F-1

F-2

1/4 x 1/2 SPRUCE

F-3

W-1

F-10

F-11

F-12

F-13

F-14

F-4

F-8

F-5

F-6

F-9

F-10

F-11

F-12

F-13

F-14

USE MED BALSA FOR FUSELAGE SIDES
USE SOFT BALSA ELSEWHERE
FINISHED WEIGHT 7 1/4 - 7 1/2 LBS
CONTROL SURFACE MOVEMENTS
ELEV 5/16 - 1/4
AIL 5/16 - 1/4
RUD ALL YOU CAN GET

IMPORTANT
WING & STAB AT 90 DEGREES
TO THRUST LINE

1/8 PLY
F-4A

1/8 PLY
F-11

1/8 PLY
F-13

1/8 PLY
F-12

1/8 PLY
F-13

1/8 PLY
F-14

FULL SIZE PLANS AVAILABLE - SEE PAGE 82

SWEETATER
DESIGNED BY
BUILT BY



Dentist politician, old Don makes natty appearance as he brings the Sweetater to take-off point. Wonder if he ever made councilman of Citrinella.

Sweetater

BY DON COLEMAN . . . Southland's latest competitive Pattern plane is combination of the best of Tiger Tail and European look—the end result being a highly competitive machine with good looks. Sweetater continues M.A.N.'s philosophy of the best in Pattern.

First a little background: A sweet potato, à la Webster, is a tropical, trailing plant with purple flowers and a large, fleshy, orange or yellow root used as a vegetable.

A "sweetater," by contrast, is truly an old Southern tradition—something to

be admired and used to its fullest extent.

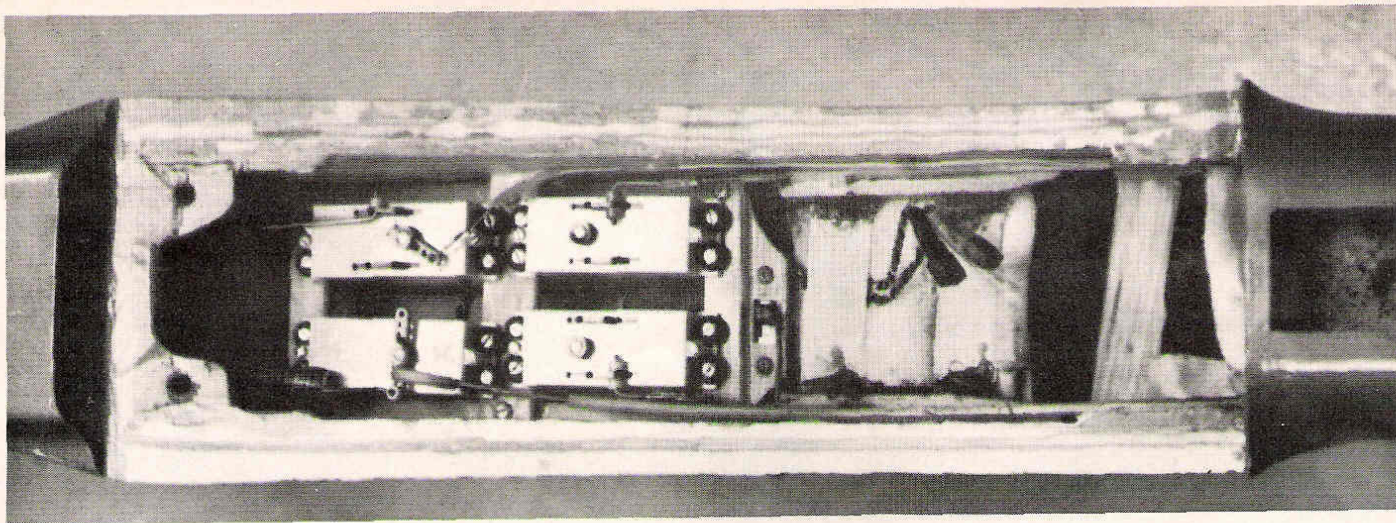
A *Sweetater*, in R/C terms, is actually a Tigertail in disguise . . . After playing second fiddle to Ron Chidgey and his Tigertail more times than I care to admit, last winter I decided to see if

his airplane was truly more capable than my Cutlass. Being the good friend he is, Ron loaned me his old "Blue Rag" complete with fuel-soaked paint job and bullet hole. His Tigertail, by the way, has been the Nats winning airplane for

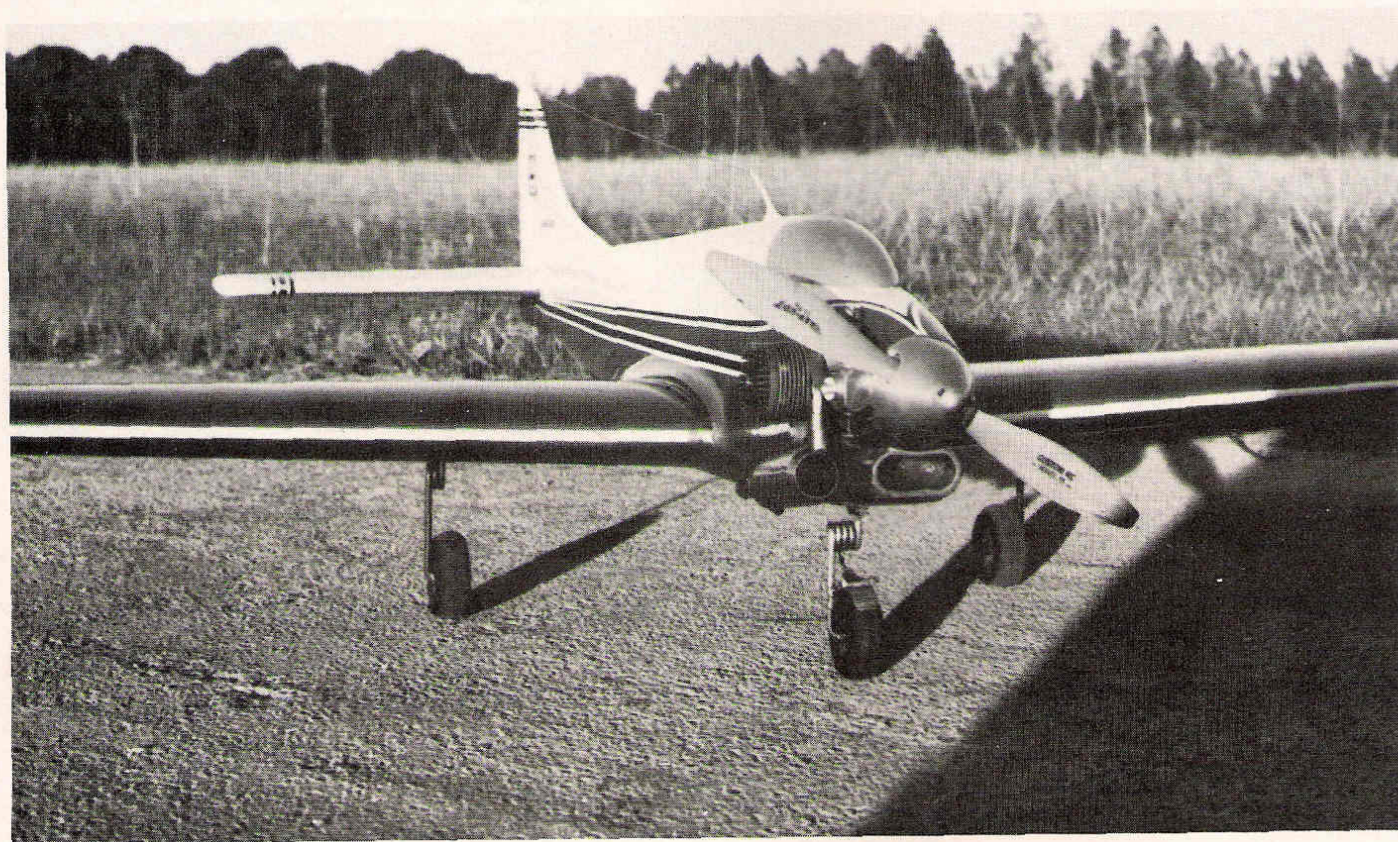
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Deep-bellied bird designed to fit the retract gears so necessary to being high point man at any contest—clean and sleek describes it well.





Lots of room in that cargo hatch - 4 Pro Line servos have more than enough room; receiver in front of servos, battery pack beneath fuel tank.



Almost head-on view shows the nose area to good effect. Webra Blackhead .61 with Silenciaire muffler; note the wheel brake on the nose gear.

SWEETATER . . . CONTINUED

the last two consecutive years.

After flying several gallons through it, I had to admit that it really flew well. In fact, the looping maneuvers were easier to control and to make a more constant speed, and the landings were considerably easier to set up and execute. These revelations really had me in a bind. I thoroughly enjoyed flying it, but I just couldn't stand to look at it. It seemed that I was forced to choose between flying capabilities and appearance . . . the old "Blue Rag" was a proven performer, but it still had its major drawback—its ugliness. (Sorry, Ron.)

Someplace during the torment of decision-making, the idea of combining the "new look" appearance with the flying characteristics of the Tigertail

finally dawned on me. The impact of European design that influenced the fuselage profile of the Cutlass still had its good points—particularly that dealing with more lateral area in front of the C. G. to help rolling maneuvers.

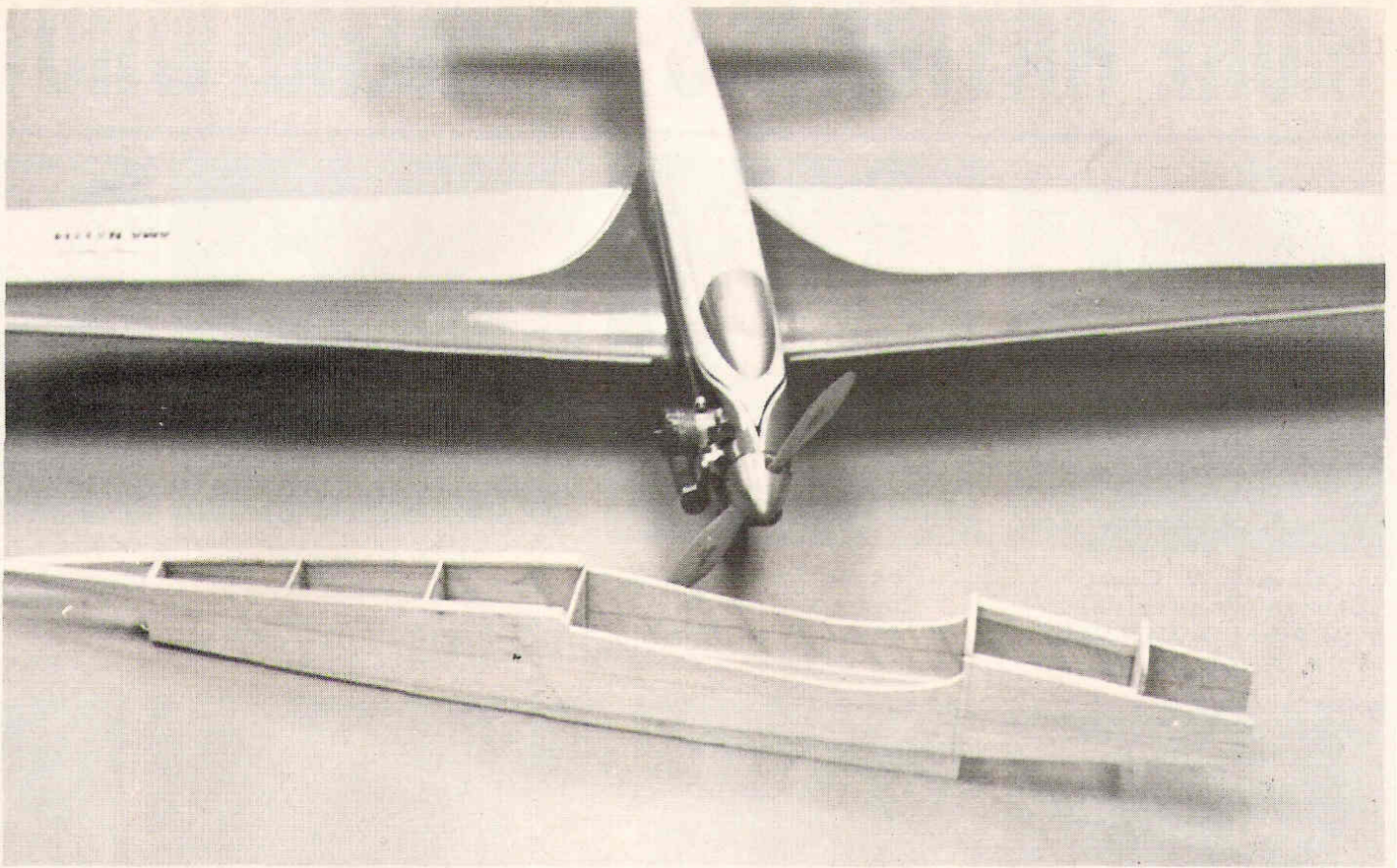
In rehashing the fuselage side view, primarily I wanted to allow more room for retract nose gear installation and tank position. Lou Penrod handled this problem very well, I thought, with the scoop in the nose of his "Cajun Queen," so the logical thing to do was copy it. The scoop with deep sculptured lines gave ample room for installations, gave good lateral area of C. G., but did not sacrifice appearance. Secondly, I felt the lateral area in the tail cone needed to be reduced to improve the crosswind Pat-tern flying characteristics.

With these thoughts in mind, the profile of the Sweetater emerged. In order not to disturb the Tigertail flying capabilities, the remainder of the airplane is duplicated. So, you see, a Sweetater is in reality a Tigertail dressed up in European clothing.

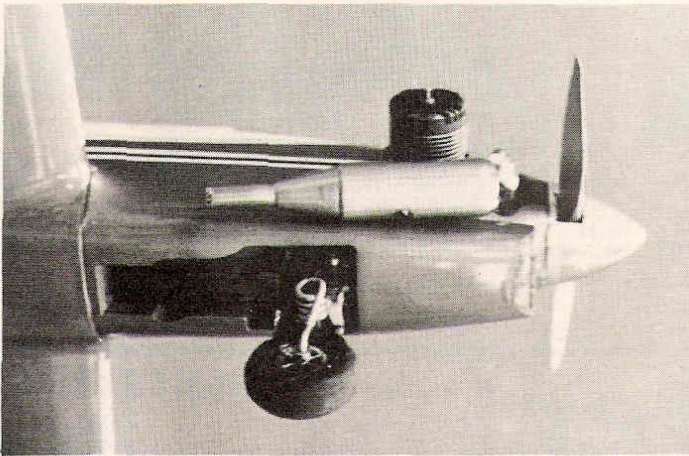
As to construction, only some major considerations are in order since the plans are relatively self-explanatory. This construction method has been in use for years and the airplane truly falls together.

CONSTRUCTION

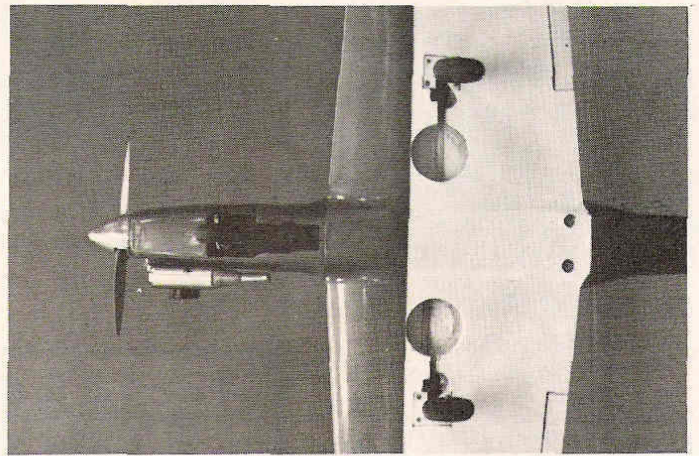
The wing is a foam core primarily for reasons of simplicity and ease of construction. The airfoil is symmetrical at the center section progressing to lifting at the tip. This is quite simple to do with foam, but somewhat difficult to



It's amazing how anything so square and boxlike as the unfinished fuselage can be so clean and round with just a bit of effort; good finish helps.



Pro Line retracts are standard with Don and his Southern cohorts.



Still another view of the underside showing landing gear wheel wells.

reproduce in built-up foam. By using quality light balsa sheeting with Southern Sorghum, the final result is that it is competitive, weight-wise, with built up wings. The foam wing is also quite easy to modify for retract gear installation.

The method of stab construction is quite unique in that it produces the lightest, quickest, straightest stab possible with *minimum effort*. The only requirement is a flat workbench and the combination L. E.-jig. This balsa piece can be easily made with a table saw.

The fuselage is crutch-type construction built upside down right over the top view of the plans. This is quite simple and insures accuracy.

FINISHING AND FLYING

The Sweetater is a large airplane that

needs a good .60 to get it really going, and it seems that the faster it goes the better it flies. With maximum power, however, the thicker-than-usual wing makes the airplane fly and fly more slowly than some of the thin wing bombs that are pointed rather than flown. This quality, which makes for more constant speed maneuvers also makes weight a consideration. I have flown three Sweetaters varying in weight from 7 1/2-8 1/4 lbs. and I believe that 8 lbs. dry is pushing maximum unless you have a real horse for an engine. We have found that the finish on a airplane can make you or break you, weight-wise, unless appearance makes no difference at all. Do yourself a favor and refer back to the Cutlass article in the October 1970 issue of Model Air-

plane News. This explains in relative detail our skyloft-dope method of producing a smooth, light, extremely durable finish. The only change in these last two years has been to use acrylic enamel color coats instead of acrylic lacquer.

These remarks concerning construction have been very broad, but believe me this airplane is very easy to build, and even easier to fly.

If you like the European look, and if you prefer a proven performer, try a Sweetater—you'll like it!

By the way, for those who don't like scratch-building, contact your local dealer—this Sweetater is available now in both standard and deluxe kit form by Southern R/C Products. ■