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RC MODELER

THE WORLDS LEADING MAGAZINE FOR RADIO CONTROL ENTHUSIASTS

THIS MONTH

VOLUME 8, NUMBER 3

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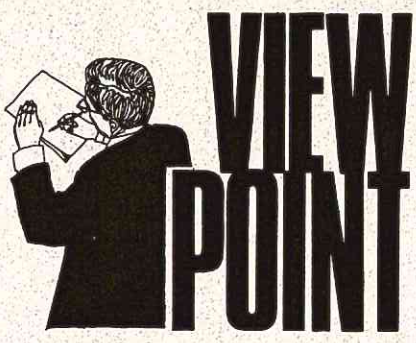
COVER: Lovely Christa Adams, daughter of noted RC'er, Dick Adams, paints a beautiful scene for the two prototypes of the Valley Flyer, a joint effort design by some of the nation's top RC'ers, and members of the Valley Flyers R/C Club of Southern California. Ektachrome transparency by Reed Packard. **FRONTSPIECE:** John Holland built this delightful Eindecker which is equipped with an O.S. .19 and E.K. Logictrol III equipment. Flies beautifully. Has very germanic type pilot complete with spiked helmet. Photo by Henry J. Nicholls.



On the morning of December 10, 1970, the Los Angeles Times Newspaper carried a front page story entitled, "Model Planes Growing Peril To The Airways," accompanied by a photograph of an RC'er launching a power glider with a caption under the photograph which said something to the effect that radio controlled model aircraft flew to 27,000 feet and has prompted an FAA investigation as to their growing peril to aircraft. The article was by-lined by Times Staff writer Steve Emmons. This front page item was subsequently picked up by various newspapers across the country.

If there was anything at all significant about this article, it was in the amount of half-truths, omissions, and misrepresentations that would lead the average reader to believe exactly as the headline specified – that model planes, and more specifically, radio controlled model aircraft, were a definite peril to full size air traffic. The article carried such statements to the effect that there were no safety regulations involved in flying model aircraft and led the reader to believe that the average model flew at altitudes in excess of 20,000 feet and at speeds of 200 miles per hour. These, of course, were world record figures that they were quoting, but the manner in which the article was written would definitely lead the average reader to believe that this was everyday occurrence.

Immediately upon seeing this article, I contacted John Worth, Executive Director of the Academy of Model Aeronautics and provided him with a copy of the

article. Without further commentary on the Times article, the following is a copy of the letter that we sent to Mr. Nick B. Williams, Executive Vice President and Editor of the Los Angeles Times:

Dear Mr. Williams:

On December 10, 1970, the Los Angeles Times carried an article entitled "Model Planes Growing Peril To The Airways," which was by-lined by one Steve Emmons. This was carried on the front page of the issue of that date and was accompanied by a photograph by Deris Jeannette. That article is the subject of this letter.

As a publisher of a magazine devoted to radio controlled model aircraft and, one with a world wide circulation, I am quite aware of the various techniques used by publications of all natures in order to sell their aforementioned publications. I feel, however, that his article considerably overstepped the bounds of ordinary journalism. It is an article that contains a great number of half-truths, untruths, and statements based on careful omissions of fact that could be quite damaging to all concerned. As an example, the worlds record with regard to altitude (27,200') and the world speed record (198.8 mph) and distance record (234.47 miles) and the non-stop duration record (11 hours, 32.5 minutes) were held under rigidly controlled conditions implied by the sanctioning body for all aviation, whether full scale or model, the Federation Aeronautique International in Paris, with supervision provided by the U.S. Navy, the Federal Aeronautics Administration, and the Academy of Model Aeronautics. When an altitude record is attempted, it becomes a restricted air space and the FAA restricts all full scale air traffic within a safe region. In addition, the altitude record attempts are made at the U.S. Naval Weapons Station in Dahlgren, Virginia, with tracking

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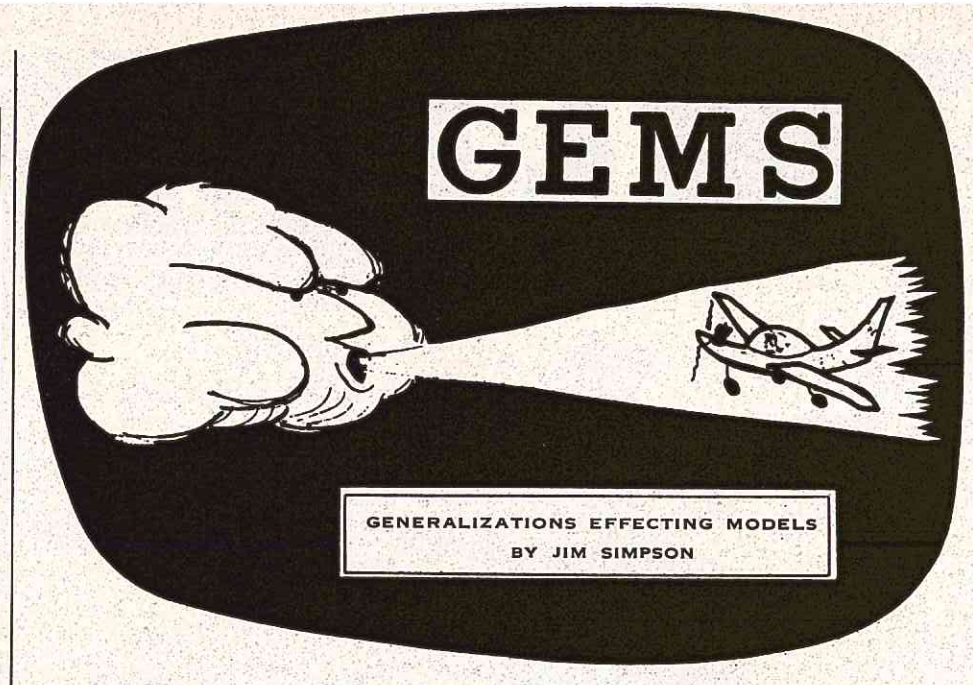

Assuming you are now an accomplished radio control modeler, that is you assembled your ARF, installed your radio and can take off, fly around and even land; also you've been to a club meeting or are now a club member, the next consideration is where to from here?

If you find yourself asking "why go anywhere, I'm satisfied as is" then read on because you, McDuff, are in a rut! And you're not alone. The great majority of RC modelers stop development at this point and, in so doing, violate the law of "eternal progression." Take a few moments to look all about you and realize the dynamic surroundings. Your children are growing and learning, your city is growing and learning, etc., etc. So why don't you do likewise? What in the world do you mean, "how?" Let's start with the basics!

Competition is a one-word description for the success we, as a whole, enjoy today. Were it not for competition we would all be driving Model "T's", if driving at all. Think about it.

OK!, you say. Competition is good but I'm not flying against them! Why, people like Weirick, White, Bridi, Stockwell, Williams, Kraft, Krause, Rankin, Carey, Pierce, they're 'Experts'!

Sure they are. They're the best. But they didn't get to be the best by sitting on their can crying about it. They went out and, "fair and square," whipped Dunham, Bonner, Kazmirski, Brett, Usher, and, likewise, they before them. And so on.

Interested? If not in beating all comers at least in improving yourself? Allow us to suggest a program (ladder to success) for you to accomplish one step at a time.

A long time ago we said take off's were optional but landings were mandatory. As long as you have to do something you might just as well do it right. Instead of being satisfied with any arrival that does not require a change of props, do this: Pick a small spot somewhere on your runway and practice landing on it. It can be a wet spot after a rain, intersection of concrete slabs, painted line, or, for that matter, just shoot for the first five feet of the approach end of the runway. What you're learning here is accuracy. So practice, practice, practice and, for goodness sake, use a nylon, or fiberglass prop, unless you're a millionaire, that is.

While you're at this touch and go practice-to-develop-accuracy, be sure to fly the landing pattern each time. That is take off, climb, left turn, level flight, left turn, begin descending downwind leg, left turn, continue de-

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engine clinic

By Clarence Lee

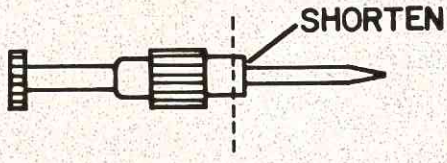
There are lots of letters this month so we will forego any technical discussion and get right to them.

Dear Mr. Lee:

I recently purchased a Veco .19 for use in an R/C car. I tried breaking in the engine using a 9/4 prop; I experienced very difficult starting, and the engine would not run at all unless the gas tank (a clunk tank) was held six inches lower than the engine and the needle valve was ALL THE WAY in. I noticed that there was needle valve leakage even with the needle all the way in and I assumed the needle valve body was defective. I obtained a new engine and this one ran very well and peaked satisfactorily with the gas tank level with the engine and the needle valve several turns open. The engine was run rich in the RC car for several runs and gradually leaned out. After less than half a gallon of fuel was used, this engine is performing the same as the first – i.e. rough starting, running with the needle valve all the way in, and pinching the gas line too! All screws on the engine are tight, the gas line is not clogged, and new glow plugs were tried. Several friends have experienced the same problem. I would appreciate any suggestions you might have. Thank you.

Yours Truly,
Norman Dick
Bronx, New York

I have received quite a few letters lately with this same problem. Evidentally the last run of Veco .19 spray bars had the seat a hair too deep. Even with the needle valve completely closed the engine could not be fully leaned out. The needle valve would bottom against the spray bar retaining nut. The solution is very simple. Just file a little material off of the needle valve body which, in effect, makes the needle itself a little longer. (See sketch).



Lowering the tank also will lean the mixture as you found out, but this is not the way to go. Your second engine worked okay when new because new engines require richer mixture settings. As they break in they will run with leaner mixture settings and you ran out of adjustment.

Mr. Lee,

What is your opinion on running an engine at less than full throttle for extended periods. I fly a modified "Ugly-Stick" with an Enya 60II, 11-7 Top Flite, and Duke's for my fun plane at ½ to ¾ throttle about 50% of the time. Some of my flying partners say I am asking for problems. (They attribute some of theirs to this). I am on gallon No. 5 with no problems at all. (It starts and idles good, top end about 11,500). I don't want to go to a smaller engine because the extra power comes in handy.

Thank You,
Julian A. Garrett
Satellite Beach, Florida

The only problem associated with running an engine at reduced throttle is increased varnish and carbon build-up. Especially if the engine uses an exhaust restrictor or muffler. Throttling back richens the mixture, which is fine, but this richer mixture coupled with the exhaust restriction, will speed the varnish and carbon build-up. I would recommend you run some Peak Power or Glow Life through the engine every dozen or so flights which will help retard the varnish build up.

Dear Mr. Lee,

I have a problem with a K & B .45 R/C. I normally fly using the .19 through .35 size, and have no trouble using the unprotected finger start. For the .45 I obtained a rubber finger protector as is common around our field. The problem is that this motor backfires with vengeance. I use K & B 100 and a TF 11-5 with a Fox R/C plug on 1.5v. Once started the motor runs and idles well but it seldom starts without first breaking one or two props across my fingers and requiring several pauses to tighten the prop. None of us at the field are able to prevent this though sandpaper behind the prop-nut washer was used. The thrust washer is not keyed to the shaft on this engine. All of this occurs at an idle setting of the carb and gets worse as the carb is opened further for the start. The engine has about 45 minutes bench and a dozen or so flights. It is stock and was purchased about 2 years ago. The problem appears to be getting worse as more time is put on the engine. WHAT GIVES?

Laird Stanton
San Diego, California

Laird, only one thing can cause an engine to kick back, and that is too much fuel in the cylinder. Somehow you are managing to flood the engine every time you start it. Nine out of ten times a weak starting battery is the cause. Especially in cooler weather. You have to keep choking the engine until it fires, and when it does, it is suddenly loaded. Check your battery and make sure the plug glows orange – not dull red. A high tank position can cause gravity feed which will, in turn, load the engine, so check for this. Possibly you are not using the correct starting procedure. In warm weather choke the engine once

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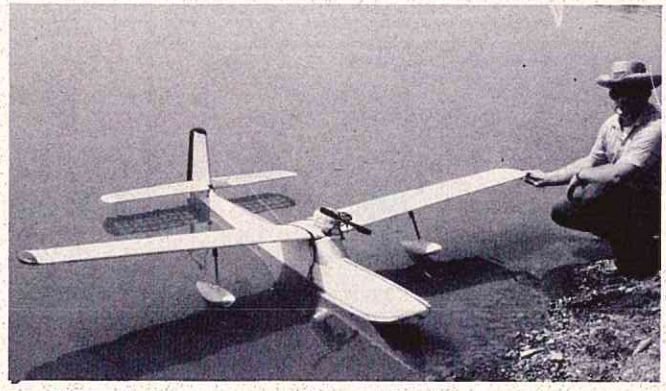
SUNDAY FLIER

KEN WILLARD

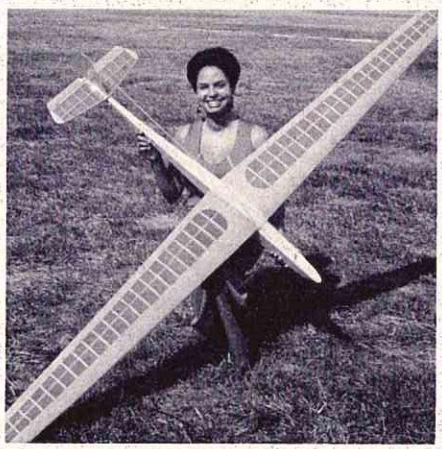
BELOW, LEFT: Bob McBride's 9½' Custom Privateer, with fiberglass hull by Ron Vincent. 17½ pounds, with .60 power. Note chine forward of step. Very Majestic. BELOW: Gene Babcock's scale Dornier Libelle – 1½"-1' from Jane's "All The World's Aircraft" 1924 issue. Looks great. 42½" span. 36½ oz. T.D. .049 with throttle.



Did you ever have one of those times when everything seemed to go right for you? Well, that's the kind of month November has been for me. Now by the time you read this, in February 1971, things will probably have evened out and I will have again caught more than my share of downdrafts. Meanwhile, let me tell you about a real "fun month" of Sunday flying.

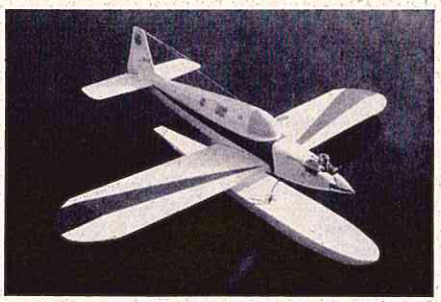
First, though, I've got to get a couple of things cleared up. In the December issue of RCM I had a column devoted to seaplanes and flying boats. Unfortunately, as Fearless Leader pointed out in his "Viewpoint" column in the January issue, the pictures that went along with the text not only didn't get mixed up – they didn't even get published. Same old story – everybody rushed, and shorthanded and all. So, to the extent that they can be found, I've asked Don if he could print some of them with this issue – together with identifying captions.

Then, in the January issue, I included some pictures of the Maxisailer being displayed by one of the world's loveliest participants in the R/C sailplane sport. And the captions didn't get into print! So, here's another photo of Vernelle Wiseman, who frequently assists with the officiating and record keeping at the soaring contests of the North Bay Soaring Society, and whose husband, Malcolm, is a real soaring enthusiast.



Now on with the November story.

Early in the month, I went out to the pond where the South Bay Seaplaners fly to watch Jim Sunday test his newest creation – a single float version of the Flea-Fli + 10. Except for some tricky water handling characteristics, due to his unusual tip float design, it was very successful; came up on the step and took off easily, and with the Supertiger .23 up front, it really performed. It was particularly interesting to me to note that no additional fin area seemed to be needed to offset the increased side area presented by the single float. Here's a shot of it at rest; note width of the float.



One of the essential elements of flying off water is the retriever vessel. Plus a captain, of course. And here's Captain Bob Schneider of the rescue squad, churning back to shore with a couple of seaplanes that dunked slightly on landing and killed the engines.

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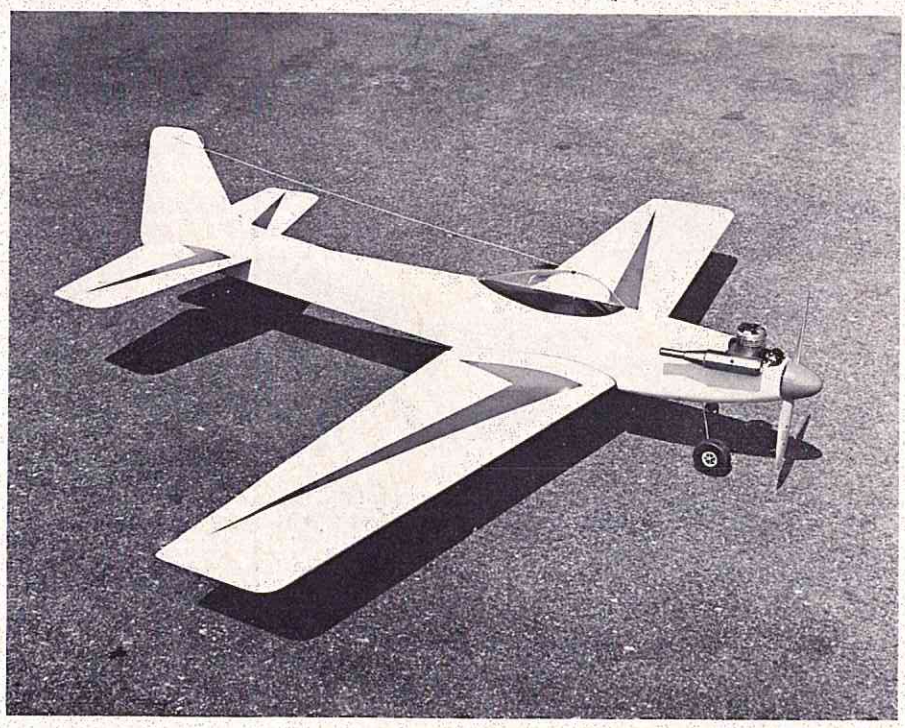
KITS & PIECES

BERNIE MURPHY and DICK SONHEIM



The 'New Californian,' designed by Jim Oddino, is now being kitted by R.B. Products.

The "New Californian" designed by Jim Oddino, began to show up late in the contest season on the West Coast being flown by a number of the top fliers. A kit is now available from R.B. Products, P.O. Box 193, Camarillo, California 93010. The kit comes in the form of a fiberglass fuselage with a fiberglass covered foam wing and foam stab cores. The price is $59.95. The manufacturer has engineered a very clever firewall and engine mounting unit that is easily installed into the fuselage. The fuselage is available separately for $29.95. The "New Californian" is an excellent flying airplane and, now that kits are available, I expect it to become as popular in other parts of the country as it has on the West Coast.

This past weekend at the RCM Winter Nationals in Tucson, the fly-off was won by Bill Salkowski flying a "New Californian."

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The BS Racing Team headed by Bob Smith is kitting their Miss BS P51 Mustang. Bob Smith holds both the FAI and The Formula II records with this aircraft. The FAI record, by the way, is 139 mph on standard FAI no-nitro fuel. The P51 kit comes complete with a fiberglass fuselage, foam wings with 1/64" plywood sheeting, foam stab, and all hardware including motor mounts. One of the secrets to its speed is the laminar flow wing with special built-in ailerons that eliminate drag. This model looks fast just sitting on the ground! The kit may be purchased from P.D. Products, c/o Bob Smith, 8509 Lennox Avenue, Panorama, California 91402. The price for the complete kit is $59. 95.

•

From K & B Manufacturing, 12152 Woodruff Avenue, Downey, California 90241, comes what may best be referred to as the new generation in high powered, high performance engines. The new Veco .61 R/C Series 71 has a number of improvements over the old engine including increased rpm. Besides a number of internal changes, the Veco sports a new machined head with deeper fins for much better cooling. All Veco .61's now come with a Perry Carburetor. For fliers who are looking for that little extra performance from their plane, you will be most happy with the new Veco .61. They are now available at your local hobby shop and the

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Miss BS P51 Mustang, kitted by Bob Smith's BS Racing Team.

The amount of complexity suitable in a model aircraft paint job, and how to achieve it, is discussed in the following study.

My modified Schweizer 2-32, as shown on the cover, and in photo 2, represents what I consider a minimum effort. The blue on the bottom contrasts well against white clouds, the red top, and the rudder outline provide contrast against a blue sky or white clouds. Now for some model flyers (and some model watchers) we have a complete paint job.

If you personally prefer more trimmings read on. Fig. 4 shows the addition of a simple blue leading edge trim on the wing. A red outline, as used on the rudder, was also applied to the bottom of the wing.

Still too tame? O.K. circus wagon fans, how about photo 5? Is that a complete paint scheme? No way! Look at that pure-as-the-driven-snow type elevator. I just had to have more red stripes. See the pretty elevator in photo 6. But that made the rudder look too pure. A rudder is a good place for equipment manufacturers emblems. (Photo 7). The next addition was a blue line on the body. The addition of that blue line serves three purposes. 1) It makes the body look long and lean. 2) It shows the angle of attack of the plane in flight. 3) It prevents the blue trim on the wing and stab from running smack into the pure white of the body and just quitting there.

By now I hope you fellows who paint your models one solid color are beginning to grasp the importance of all this artistic jazz. For example, the Schweizer 2-32 has a very fat body. The longitudinal stripes of red, white, and blue make the body look thin. Conversely, the red and white stripes on the long, skinny wings make the wings look shorter. I think! Well, at least those stripes help when we slope soar over volcanic rocks. I know! But all seriousness aside, dear reader, won't you admit that my paint job is great for posing near Yucca plants?

If you are not won over yet, forget it. But for you converts, here is the secret of how to thrash out what should go where and how much. First pencil in proposed border lines on the full-size drawings of your plane. Try at least two or three ideas. Next, cut out colored paper in the size and shape of your proposed trim. Then tape the paper in place. At this point you can add, subtract, or modify as desired. Then apply masking tape against the edges of the colored paper. Remove the paper and apply your favorite finish.

I have always enjoyed applying a nice paint job to my own models and always get a real thrill from seeing a pretty model in flight. Also, in my opinion, people outside our hobby will respect us more if we fly attractively finished models.

I hope that this "study" has helped clarify your own thinking on "the amount of complexity suitable in a model aircraft paint job."

□

EVOLUTION OF A PAINT SCHEME

Photos And Text By
IRVIN LENZ

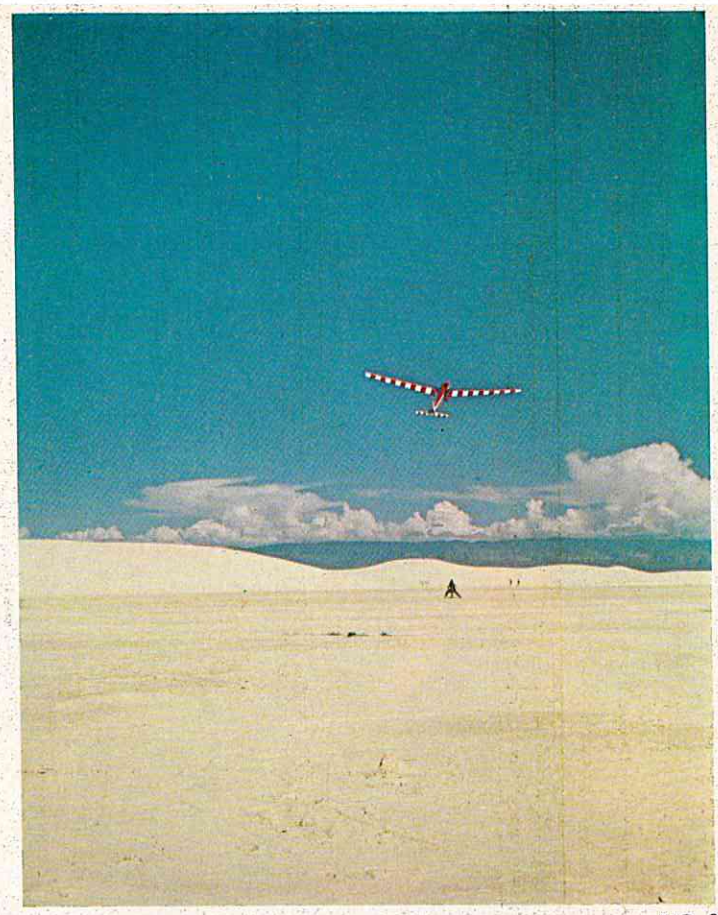


FIG. 6

FIG. 2

FIG. 5

FIG. 4

FIG. 7

culver cadet

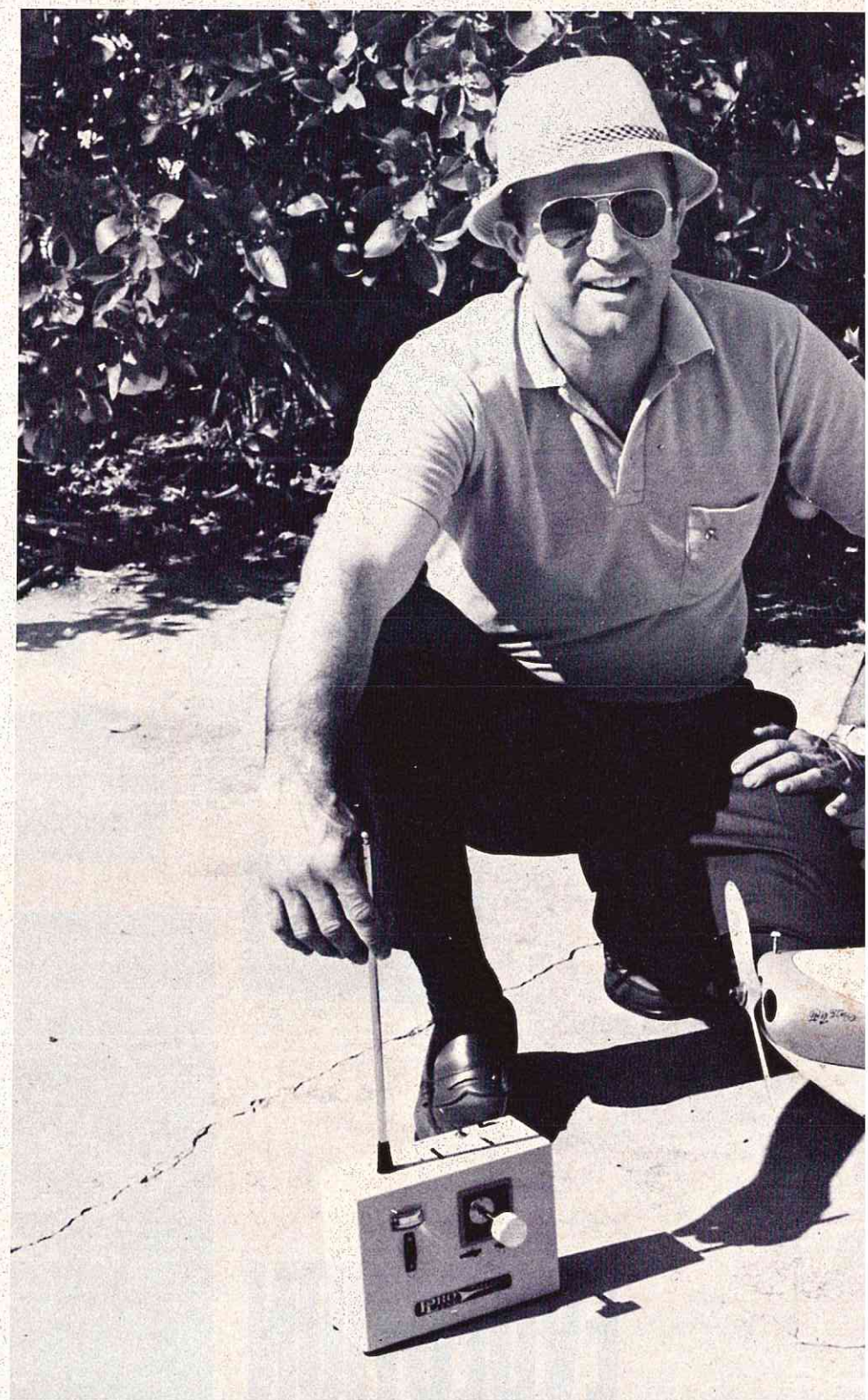
The whole story is a feeling that comes over you when there is an uncontrollable desire to do something to, or perhaps, even for oneself. Such as building a model airplane that is just a little different than the next guys, or as the case may be in this day and age, girls. But in this instance we decided to build something that had retractable gear, was fully scale and, for the difference, featured a semi-elliptical wing.

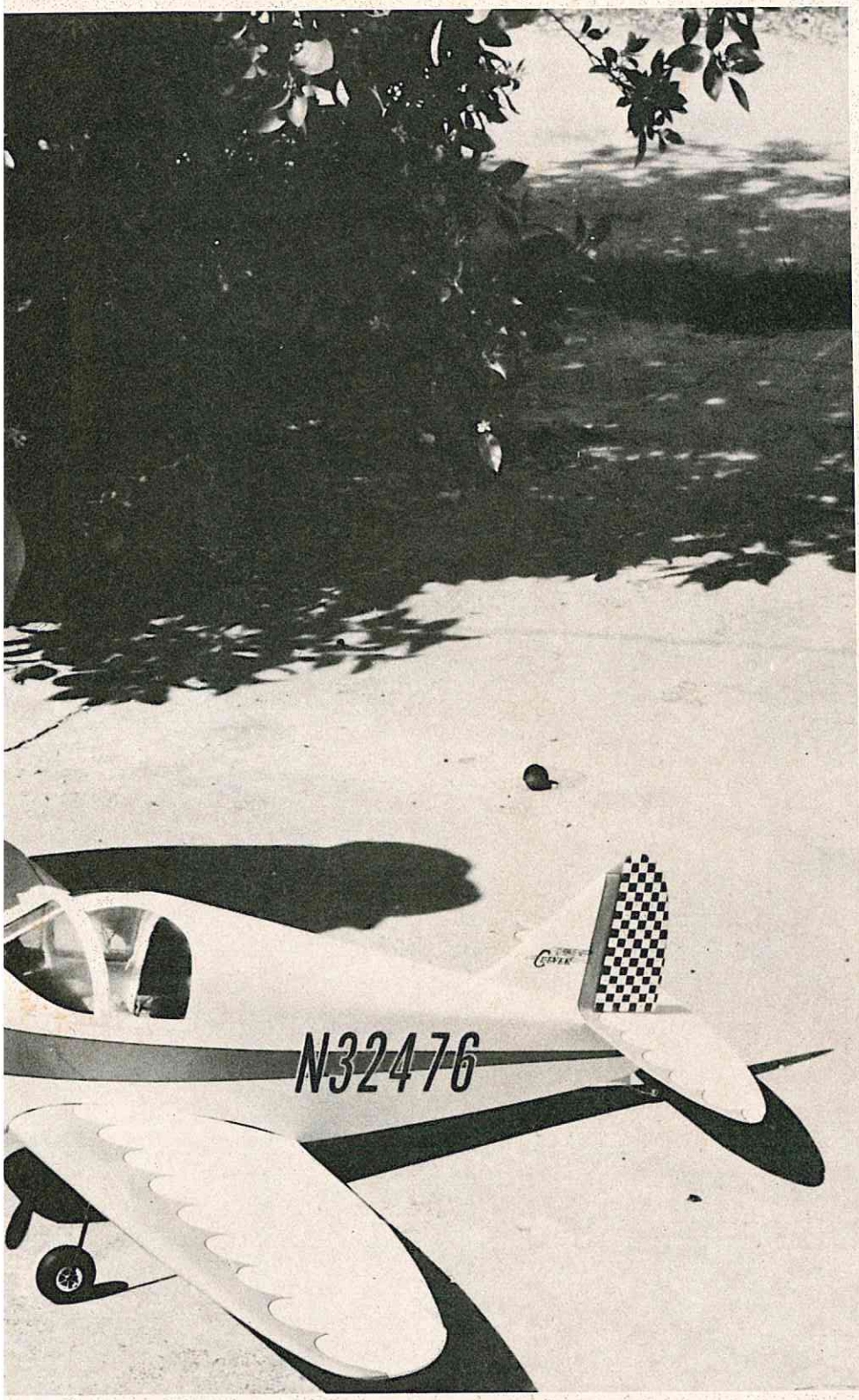
The little Culver was ideal, easy to build, and best of all, it is all wood covered and easy to simulate. No rivets, lacing, and such trivia to complicate matters if you are contest minded. Being of no mind at all, I decided to model mine after a local hero's full scale prototype. Besides, he wanted to buy the finished model to hang in the hangar next to the real one. Isn't that just beautiful? Pity I can't find him now that the bird is finished. Oh well, the thought lingers on.

So, you say, this is exactly what you have been looking for. A neat little scale ship that is small enough to throw (gently of course) in the car and not take up too much room, and easy to assemble when you get to the field. Great, get some wood and start hacking. Don't forget the 1/32" plywood. Makes for neat turtlebacks. For that matter you could cover the whole ship with it.

There isn't anything really difficult about the construction, just lots of 1/8" sheet balsa for the sides and bottom. Try to pick your sheets very carefully. The sides should be as nearly the same in weight and grain. All the forward bulkheads are made from 1/8" ply except for F-6 and the firewall.

I have the mold for the cowl and if you need a cowl write to me and I will make arrangements to get one to you, although it is very simple to make your own mold. I made mine from balsa. You could even make the whole cowl from balsa. No matter, at





photos and text by Frank Capan

least put a cowl on because it looks terrible without it. There are no scale details on the cowl and the slots are not in the wing. There are so many different mods around I figure you would rather do it yourself.

I would suggest building the wing before you get too far on the fuselage. This will enable you to align the wing to the fuselage properly and drill the front holes for the hold down dowels. One word of caution with the wing. Build it straight and add a degree or two of wash-out in the tips. If you have a wing jig this would help, but be very careful. A crooked wing will give some very interesting flight results . . . for a very short time.

The rudder tail post should be installed before sheeting the bottom of the fuselage. You can install the horn and pushrod completely inside but I found it easier to have the horn come out through the side so I could also hook up the tail wheel.

I think you will find room inside the fuselage to install just about any type of equipment you wish but balance this little beast just aft of the landing gear. Roughly speaking, about 3/4 inch back. I didn't show the installation of a retract gear because at the time there wasn't the abundance of retracts on the market. It is best to use your manufacturers instructions for proper retract gear installation. The plans show 3 inch wheels but I used 2¼" wheels which were about scale for the ship I was modeling. Besides, you can get away with a smaller hole in the wing! In the full scale aircraft there are two small windows in the cockpit floor that enabled the pilot to actually see his wheels in the up position. Pretty sneaky!

The scale Cadet I modeled had tinted windows and didn't have the full size side glass. The owner had cut it down. Originally, the sides came all the way over the top. Visibility was good but I

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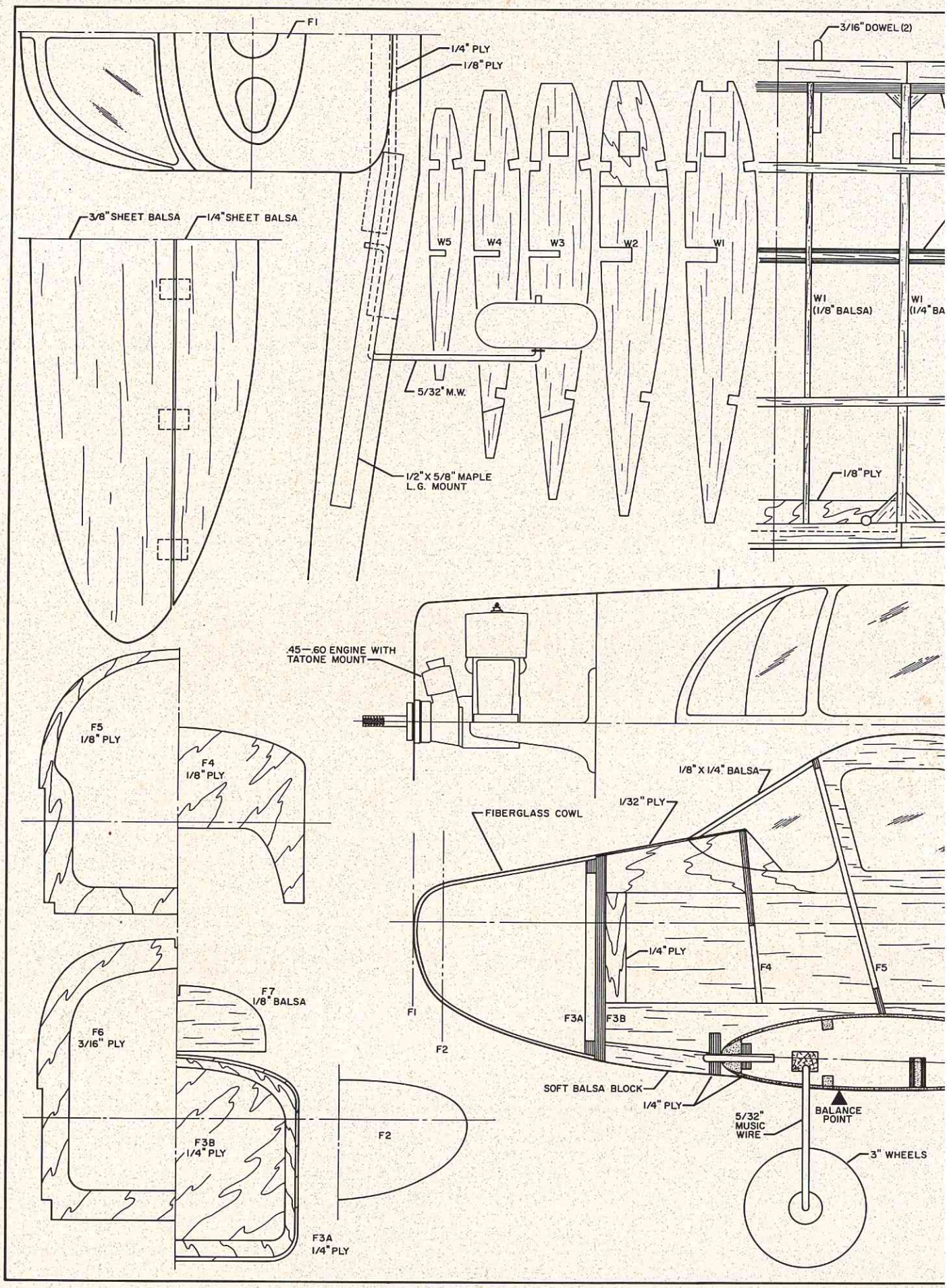
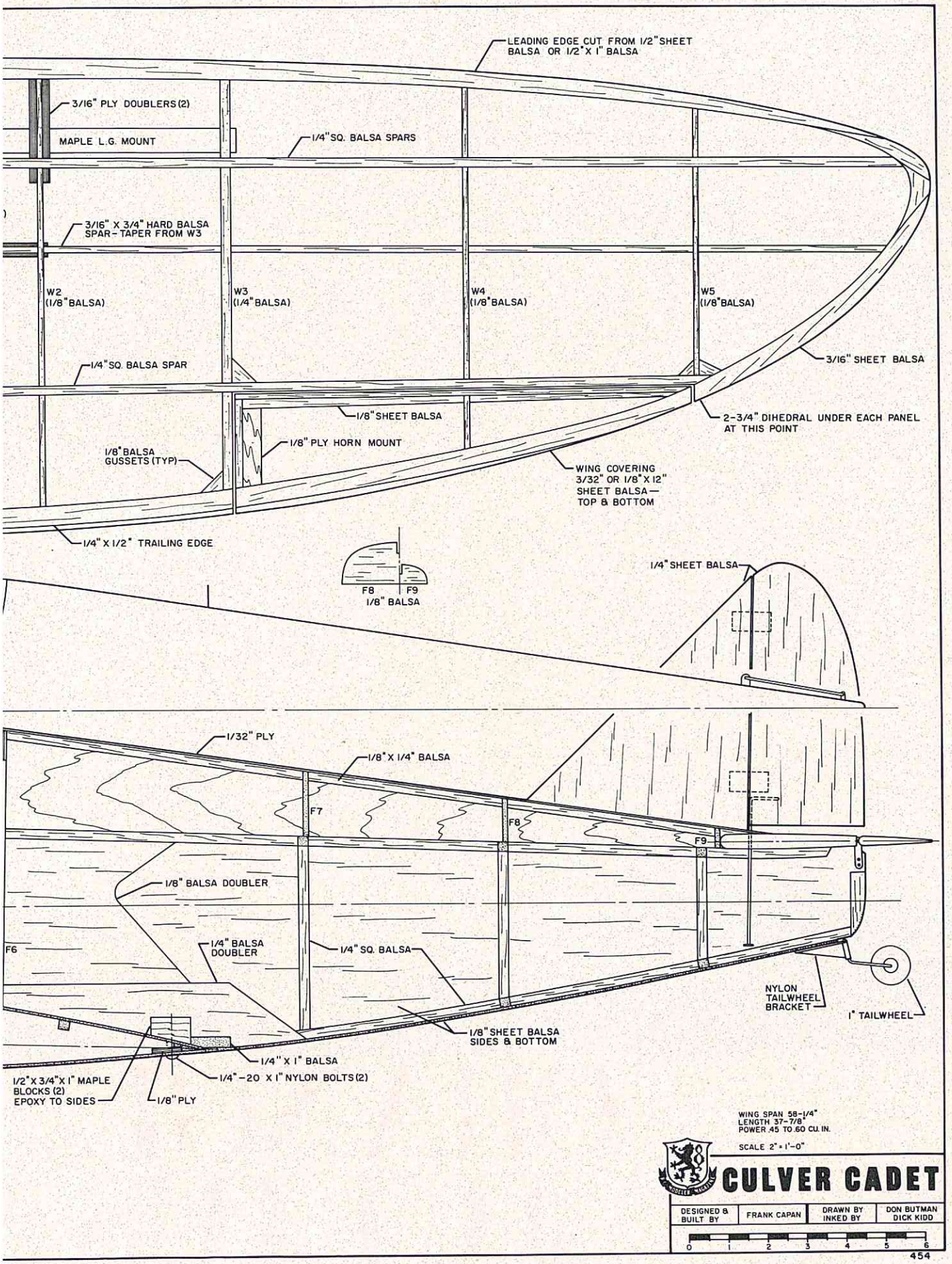
PLANS AVAILABLE ON PAGE 88





WING SPAN 58-1/4"
LENGTH 37-7/8"
POWER .45 TO .60 CU. IN.

SCALE 2" = 1'-0"

CULVER CADET

DESIGNED & BUILT BY	FRANK CAPAN	DRAWN BY INKED BY	DON BUTMAN DICK KIDD

0 1 2 3 4 5 6

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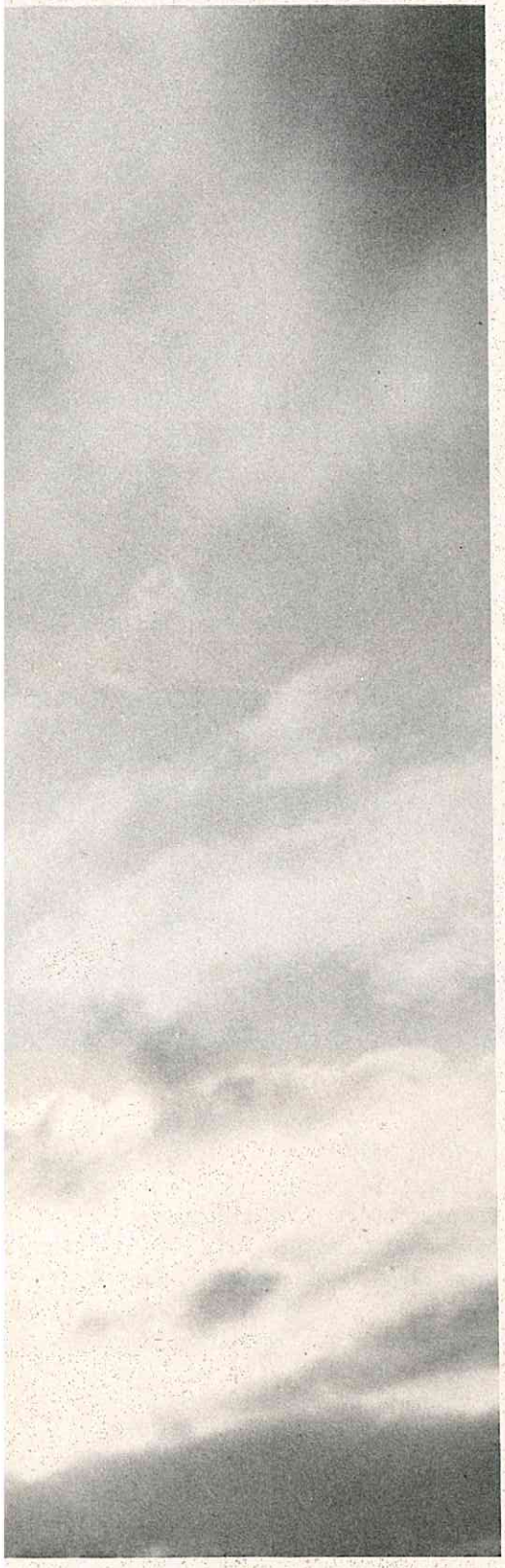
ORANGE JULIUS



by JW Headley

As usual, we didn't have a model to fly, (one of the many problems of living in California is that there are too many flying days, and not enough building nights). This, and the recent purchase of a nice new three-channel proportional set (suitably disguised as a lawnmower in the family checkbook), brought on the usual crisis of what to build. Looking through the pathetic heaps scattered around the garage floor, there seemed to be a shortage of gliders, our latest glider having struck a large rock which happened to be floating on El Mirage dry lake, during a recent flying session out in the desert.

We've always been more interested in the easier-to-build type of model and, as a rule, anything that takes over two weeks to construct usually never gets finished. With this sort of time schedule, it's obvious that there isn't too much time to spend on an intricate structure, or something that's going to take several months to apply the finish. However, we didn't want a simple retangular box type model, so after a few hours doodling on a few sheets of graph paper, and a brief study of the latest in glider shapes from current magazines, we came up with the lines for the "Julius."

We decided to make the wing all sheet and eight feet in span for a couple of reasons; the first being that balsa sheet happens to come in four feet lengths, the second that we've never had an eight foot span model. We were also interested to see how an all-sheet wing this size compared to a built-up type in terms of strength as well as weight. We were a little worried as the building proceeded that the whole thing was going to be too floppy, but when the final sheeting was applied the wing suddenly became tremendously rigid, and none too heavy. The finished weight of the wing, covered and painted, was actually just under fifteen ounces. The only problem we found was to be very careful handling the finished wing in the workshop, it's too easy to knock things around with the wing tips when moving the wing from place to place.

The total weight of the model, with two servos, receiver, etc., came out slightly over two pounds according to my wife's kitchen scales (these may be a few ounces out either way). At this weight the model flew very well in moderate conditions. A small amount of additional ballast might be required for a very windy day.

We've written a few lines on the model construction as follows. Anyone who has built any of Ken Willards designs should have no trouble with this model.

WINGS

The wings, which are all sheet, are built first. Four sheets of balsa are required, the two bottom surfaces being 3/32" sheet, and the top surfaces 1/16" sheet. These sheets are four feet long, and taper from six inches wide at the root to four inches at the tip.

Author Jack Headley with two prototypes of the Orange Julius. Excellent soaring machine even in lightest air.

Six inch wide sheet balsa can be used if you can find it, but we joined a four inch wide sheet to a two inch wide sheet that had been cut diagonally to give the desired taper.

When these sheets have been made, draw the locations of the spar and the wing ribs on the lower surface using a ball point pen. Pin these sheets down to the building board, making sure that they are flat. Cement into place the main spar, which is made from hard 1/8" sheet, and the 1/4" leading edge. Make the ribs outboard of the dihedral braces and cement these into place along with scrap pieces of block balsa for the wing tip. When both wing panels are dry they are joined using the dihedral braces shown. Add the ribs at the root section and the small pieces of T.E. section to re-inforce the trailing edge, then sand overall. The upper surface sheeting is now added, one wing at a time. Make sure that the wing is not warped at this stage, using plenty of pins and a flat building board. After the top surface is quite dry, sand the leading edge flat and add the 1/8" sheet nose fairing. The correct airfoil shape can now be made, a typical section being shown on the plan. Cover the wings now using your favorite material. Our prototype was covered in medium weight silkspan, then doped. The wings are now complete except for the root fairing blocks, which are added after the fuselage has been completed.

TAIL

The tail assembly is made from 1/8" sheeting and is quite conventional. Use good quality wood, not too heavy, and make sure the hinges revolve freely.

FUSELAGE

Once the wings and tail have been completed, the fuselage can be built. Cut out two fuselage sides from 3/32" sheet, and cement into place the 3/16" square longerons and spacers. When these have dried, the two sides are joined together at the wing station using frame F1 and the spacers at the trailing edge station. When this is all quite dry, join the fuselage sides at the tail, and fill in the remaining spacers, then repeat for the nose section. Add the sheet pieces at the nose and the block balsa at the tail, in the cabin region, and then the nose block. Sheet the underside of the fuselage, and install the cabin floor. Now cement into place the frames F2 to F5 and cover with 1/16" sheeting. This can be made from a single piece

of wood, since the curvature is easily obtained if the wood is first soaked in water. Cut this piece oversize initially, wet, and pin in place temporarily. When dry, trim to the final shape and cement into place. The addition of the wing dowels and the ply sheeting under the nose completes the fuselage. Sand all over and cover.

The canopy is made from a large bubble type canopy reversed. Make up a floor and also a forward and aft former to suit the local shapes, and cement the canopy to these. A hook epoxied to the underside of the floor will provide a suitable attachment for a rubber band to hold the canopy in place.

All that remains now is to cement the tail surfaces in place and connect up the controls. Contour the wing seating rails to fit the wing, and make sure that the wing and tail are aligned correctly. Now install the small filler blocks to fair the wings to the fuselage.

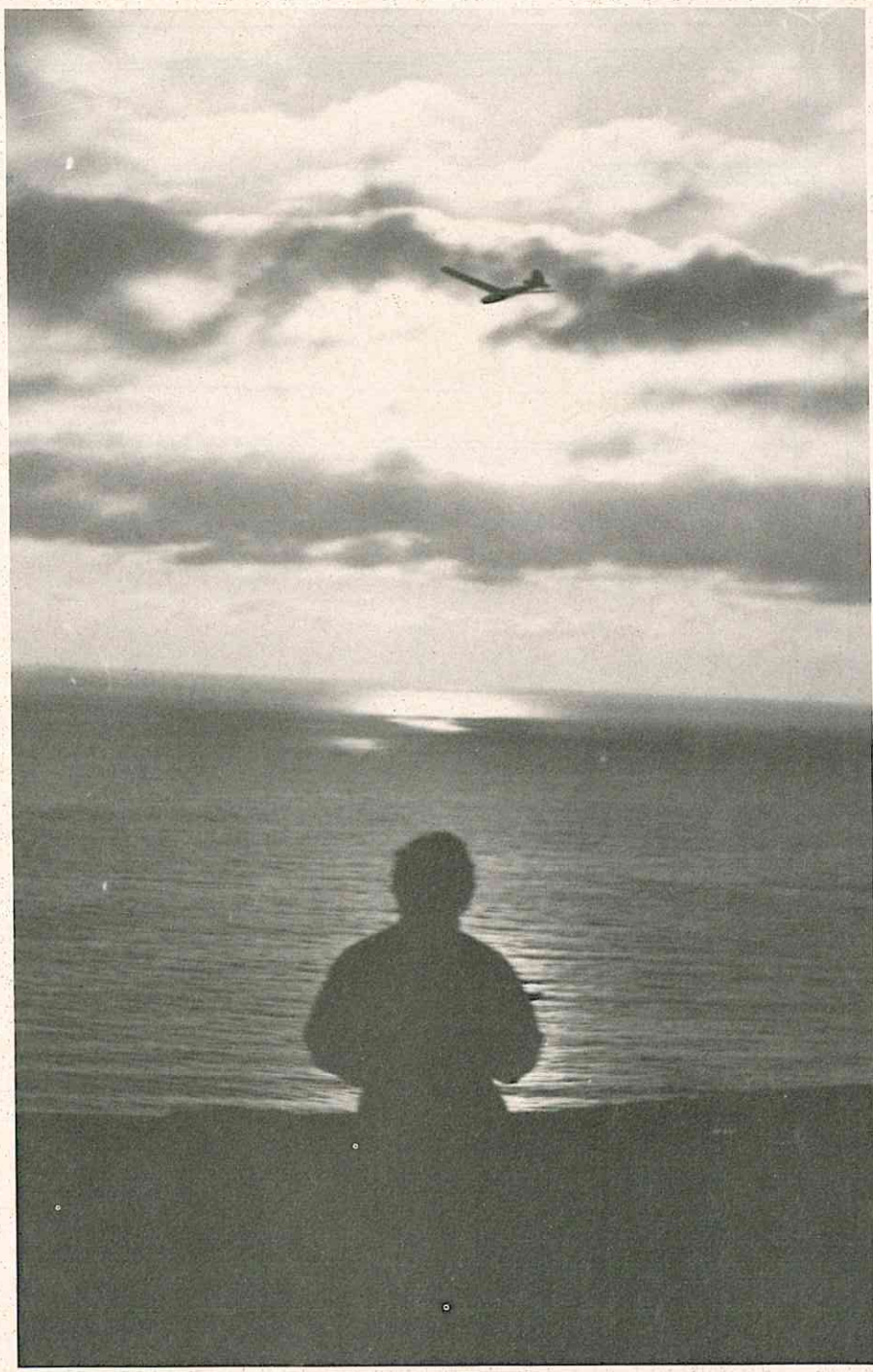
RADIO

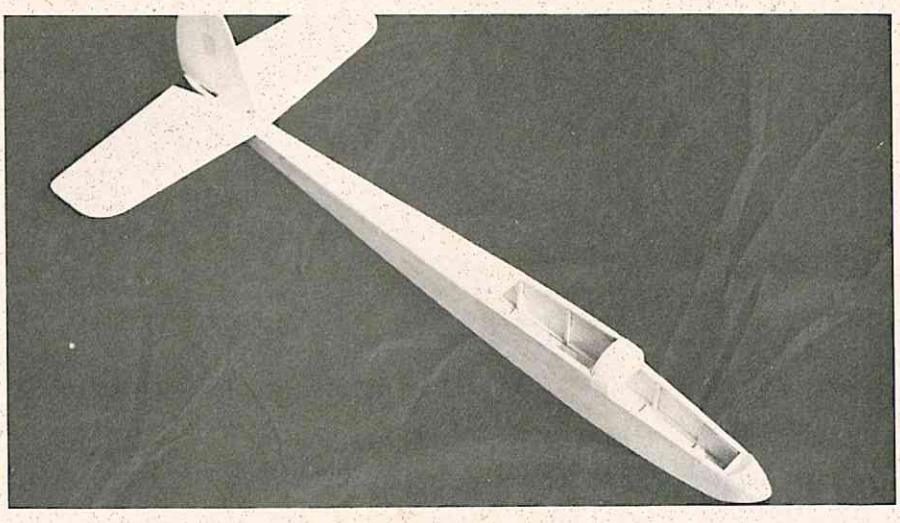
The prototype was fitted with an OS radio, the two servos being fitted on the floor (using double sided sticky tape) as shown on the plan. The receiver and battery pack go in the cockpit region.

FLYING

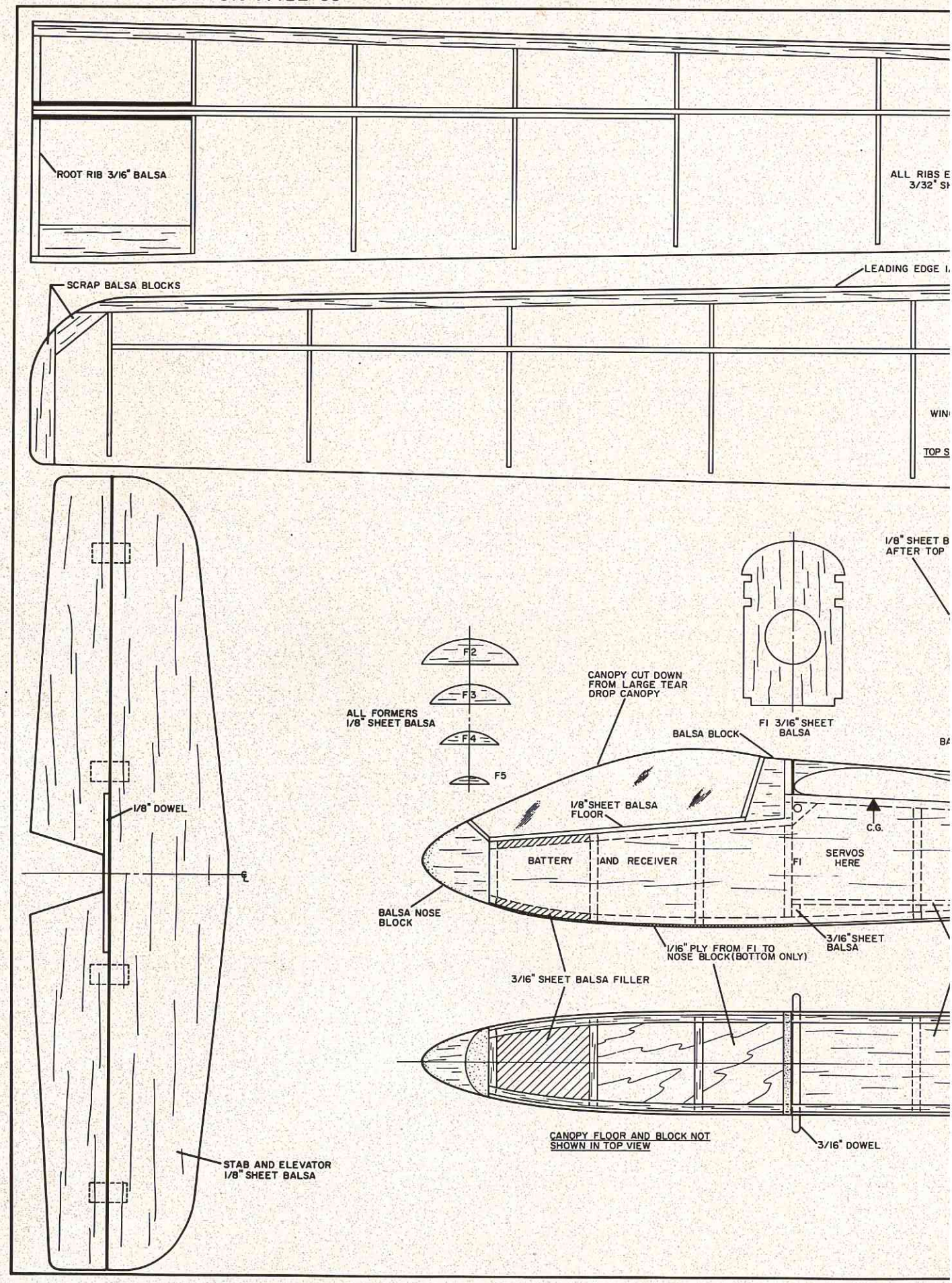
For once we can say the model flew straight from the drawing board. We ballasted the prototype so that the C.G. was at the main spar location, and this is where it has remained. Our first day of flying went as follows. The first flight, ably handled by Kevin Flynn (the builder of -002) was for around ten minutes, the model cruising around the sky very majestically. The second flight saw several series of consecutive loops and spins, and the third flight was cut short after some forty minutes to answer the call of nature (how do these record breakers handle this problem?). This concluded the first day of flying, and a very satisfactory day it was.

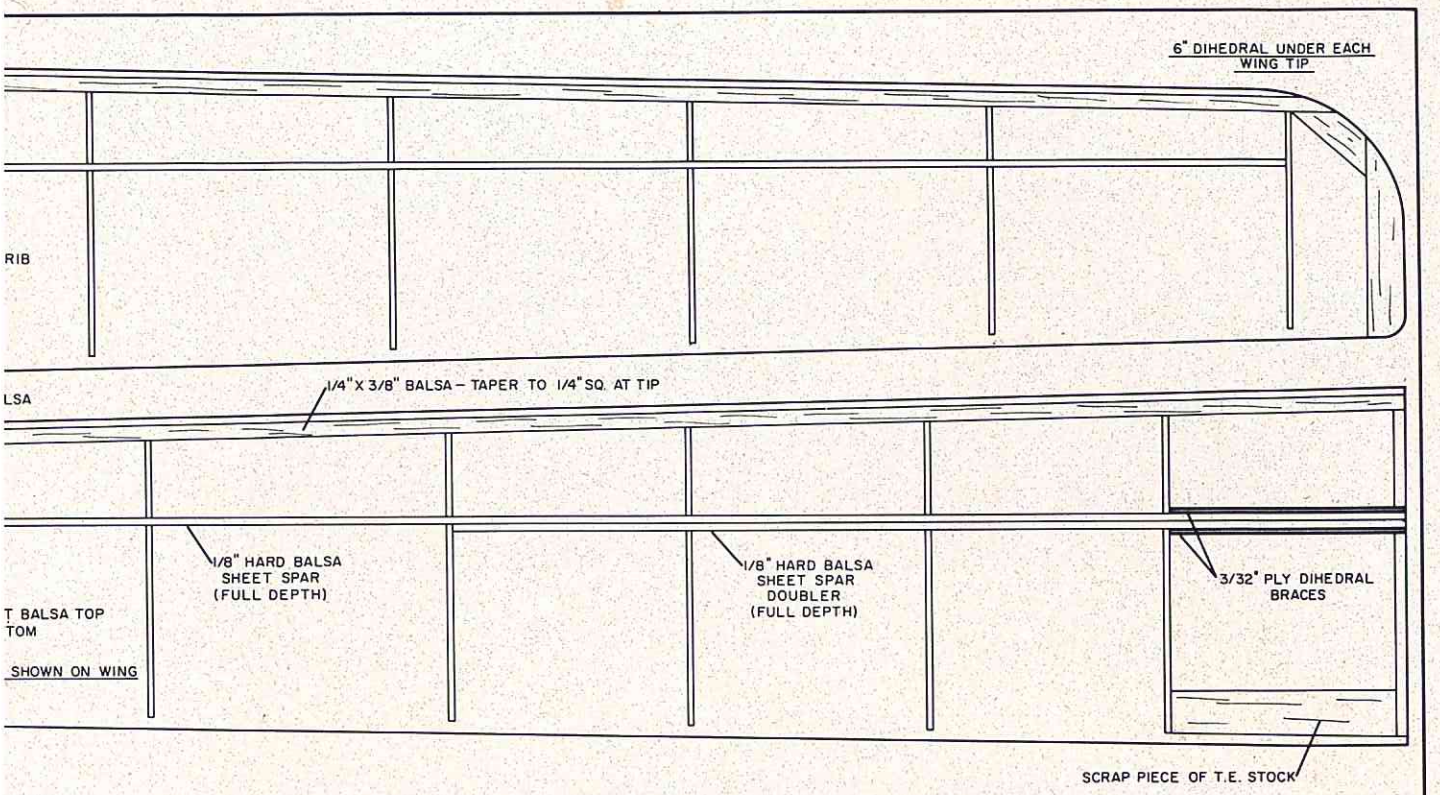
Good luck. □





PLANS AVAILABLE ON PAGE 88

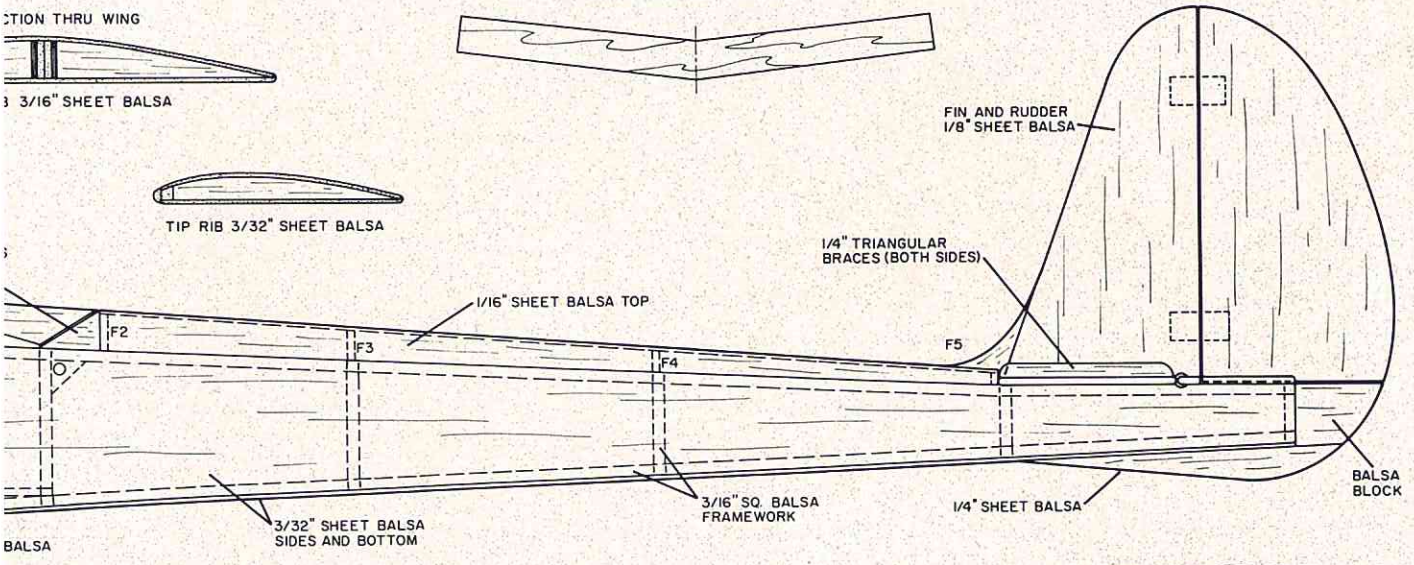


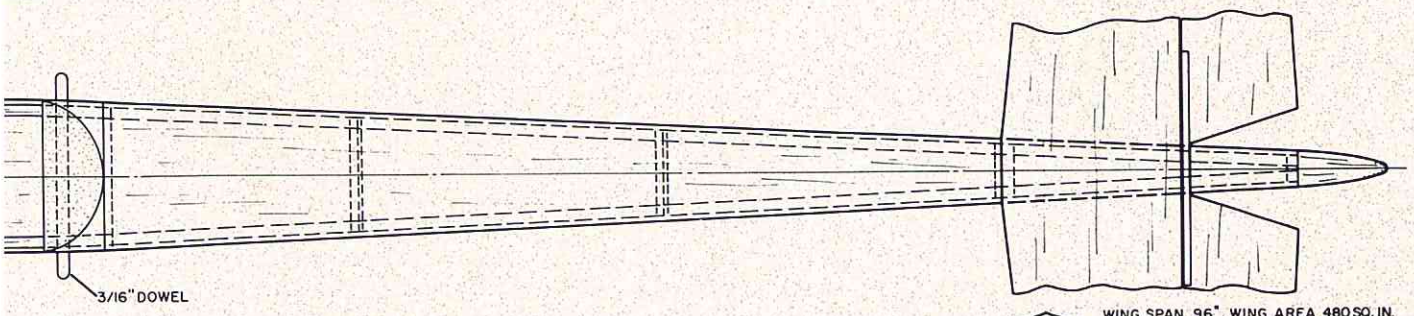


ADDED
IN PLACE

CTION THRU WING

3/16" SHEET BALSA





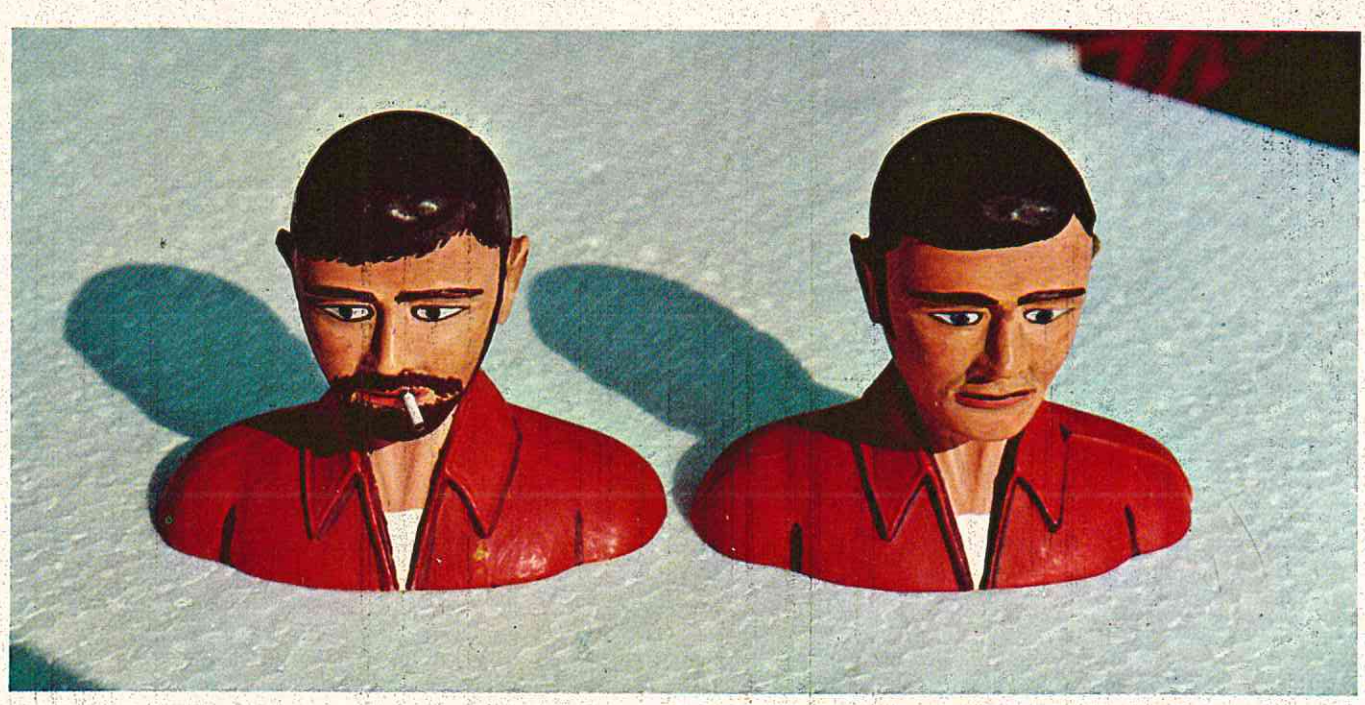
WING SPAN 96" WING AREA 480 SQ. IN.
LENGTH 37-3/4" (APPROX)

ORANGE JULIUS

DESIGNED & DRAWN BY	J. W. HEADLEY	INKED BY	DICK KIDD

0 1 2 3 4 5 6

455



step-by-step

PILOT DETAILING

for R/C Modelers

BY DEWEY NEWBOLD

At one time or another during my life, I've been involved in nearly every type of modeling. A list of my activities would include slot racing, plastic modeling (aircraft and cars), U-control, model railroads, and almost anything else you can think of. When I started in R/C about three and half years ago, I was amazed at the level of craftsmanship exhibited in the finish and construction of most of the models I saw. Mirror finishes are something I still have trouble obtaining! However, there was one area which except for a few scale jobs, seemed to me to be universally neglected. That area is underneath the canopy.

The pilot and dashboard of most airplanes look as if they were added as an afterthought and provide a strange contrast to the appearance of the rest of the airplane. Williams Bros. produces some excellent pilot figures, but for some reason they are usually installed with very little thought or imagination. The pilots eyes, helmet, and shirt are often hurriedly painted with cheap, glossy enamels and the face left in bright pink plastic. The end result looks like something that cost a dime at the dime store. The reason for this has always puzzeled me since, in most cases, the builder's skill is readily attested to by the plane's beautiful exterior.

I remember once seeing a beautifully built and finished, delta-shaped pattern airplane in which a completely unpainted pilot figure had been glued upside down and facing backwards! Painting pilots seems to be a stumbling block for most modelers. If not left out completely (which often looks better than a poorly done pilot figure), the pilot, a few bottles of paint, and a cheap brush are handed to the modeler's wife "because her hands are smaller." Painting a life-like and detailed pilot figure, like carving props, is not nearly as difficult as the final product appears. By spending just one or two extra evenings, you can have a pilot figure which will improve the appearance of your airplane 100%. About a year ago, I became intrigued with the hobby of painting military miniatures. These tiny replicas are painstakingly researched and unbelievably detailed. I painted several and used them as Christmas gifts and I still do one every once in a while. When it came time to install a pilot in my new "El Gringo," I decided to use some of the techniques I had learned while painting the miniature soldiers. The result was most pleasing and I have painted several since, refining my original methods. I have now developed a fairly cut-and-dried procedure which produces a very realistic pilot in about two hours. In the following I will explain this pro-

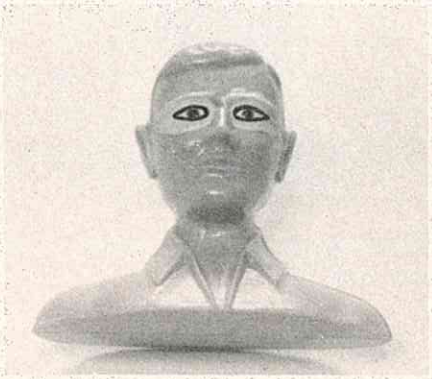
cedure along with a few hints on installing and mounting the pilot in your ship.

STEP #1) The first step is to obtain the proper materials. In addition to the pilot, you should have a #000 and a #2 artist's brush. The #000 brush is for fine detailing and the #2 brush can be used for larger areas such as the coat and helmet. Be sure to buy quality brushes. Also, an X-acto knife, a tube of plastic model cement, a tube of Scotch-(3M) Super Strength Adhesive, a bottle of turpentine, epoxy, and paint.

A word about the paint is in order. Cloth, hair, and skin are not glossy. For this reason you need **flat** colors. I cannot over-emphasize the importance of this to the appearance of your pilot. Only racing and military helmets should be glossy (provided they are not cloth or leather). I use Floquil paints which are available at most good hobby shops. They are bottled as Flo-Paque or as Floquil Colors for Military Miniatures. Colors are flat and dry almost instantly. The paint is also fairly fuel proof. A small artist's pallette (the kind that looks like a cup cake pan) is also very useful for mixing colors.

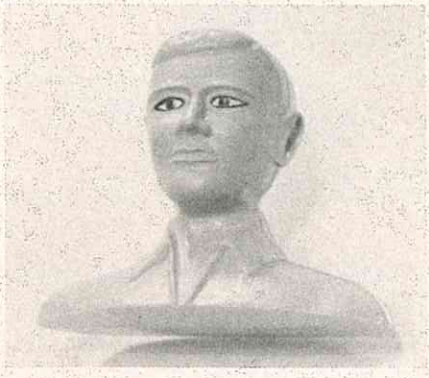
Pactra enamels can be used where glossy colors are needed. Pactra "Flats" are also useful. Before painting, all mold flash, rough glue joints, etc., should be removed with an X-acto knife. Any repairs can be made with the plastic cement. All modifications necessary for mounting the pilot in your airplane should be made at this time (refer to installation hints).

STEP #2) Now we can begin painting. The first part to be painted is the eyes. Begin by painting the general area of the eyes with Floquil White. Next, using the #000 brush, paint in the irises (the colored part of the eye) by making a small circle with Pactra Sea Blue. Put a small dot of Pactra Royal Blue in the center of this circle nearly covering the lighter blue. By varying the position of the irises, you can have your pilot looking straight ahead, sideways, cross-eyed, or what have you. Next, carefully outline the eye with Floquil Brown (F71). The outline should just touch the iris on the top and bottom. This will prevent a bulging appearance in the eyes.



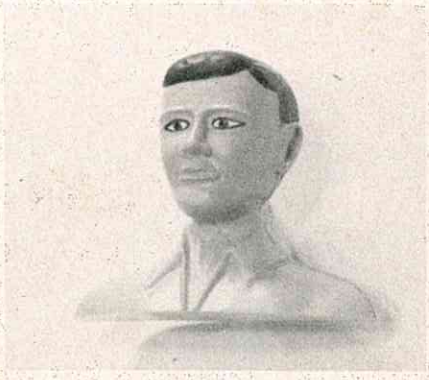
STEP# 2
Eyes painted and outlined.

STEP #3) Next, the rest of the face and other exposed areas of skin are painted with Floquil Buff(F75). Regular Flesh is too pink. When painting around the eyes, come very close to the brown outline, almost covering it, so that only a very thin brown outline is left. The eyes should now take on a more realistic appearance.



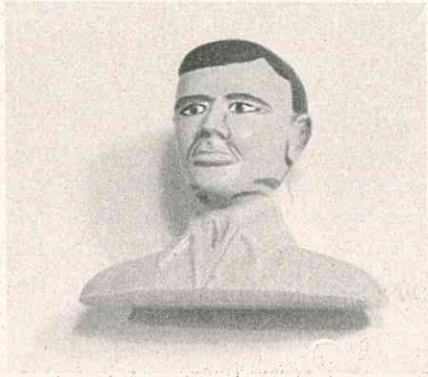
STEP #3
Base color painted on face.

STEP #4) If the pilot is not wearing a helmet, the hair should be painted at this time. I use Floquil Brown (F71) or Dark Brown (M70). (The 'M' stands for Military Colors.) Beards and eyebrows should be left until STEP #8. The edge of the hairline should be slightly rough around sideburns and the back of the neck.



STEP #4
Hair added.

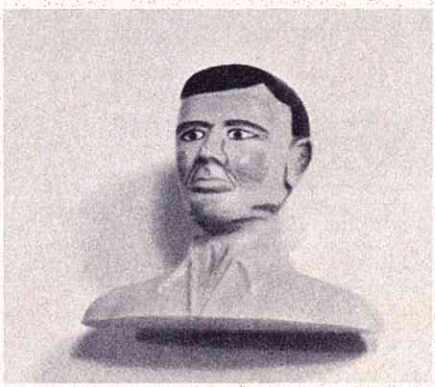
STEP #5) Now we will begin the process of shading and adding different flesh tones to the face. This is the most difficult part of the job, but it adds a great deal to the realistic appearance of the pilot. The next three steps take a little practice and may not work perfectly the first time. If you are unsuccessful, the face can be repainted with Buff and STEP #5 through #7 omitted. First, the various shadows, outlines, and wrinkles enhanced using Floquil Beige (F81). This is done mainly around the mouth, nose, ears, and under the eyebrows. The jaw line should also be enhanced some. Don't be alarmed if the lines appear too prominent at this point.



STEP #5
Beige outlines and shadows painted. Don't be alarmed if lines appear too prominent at this point.

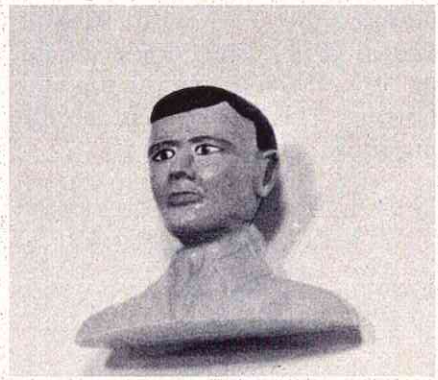
STEP #6) The reddish tones must be added next and this is done by using a light red wash made from turpentine with a few drops of Floquil Scarlet (M26) added. Dab some of this mixture

on each cheek and spread it out using the #000 brush. Some red should also be added to the forehead and neck area in the same manner.



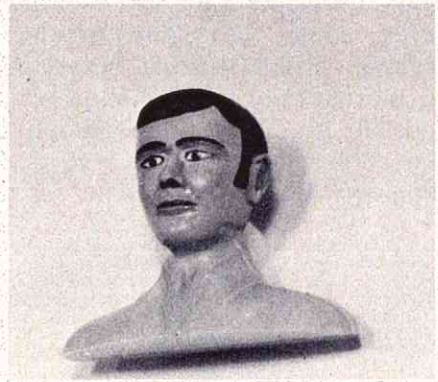
STEP #6
Red flesh tones added to cheeks and forehead.

STEP #7) At this stage, your pilot will probably look something like a circus clown with bright rosy cheeks and sharp lines on his face. In this step, we will blend the different tones to achieve a more subtle effect. We will use three different mixtures to do this. You should prepare, and have within reach, the red wash used in STEP #6, some plain turpentine, and a tan wash made by adding a small amount of Floquil Beige (F81) to some turpentine. Use the #2 brush, and starting with the clear turpentine blend the Beige lines and red tones by brushing over them. Be careful not to brush through the base coat. Also do not let the mixtures run onto the hair or in the eyes. If more red or beige is desired in spots, add it using the red or tan wash. Keep alternating with the three mixtures until the desired effect is achieved. Look at your own face in a mirror, (if you can stand it), and notice where your face is redder and darker. When you are satisfied with the skin tone, let it dry for a while. If the face is too pale, a thin coat of the tan wash can be brushed on very lightly all over the face (except eyes and hair). When a lot of turpentine is used, the face sometimes dries glossy. If this happens, spray with Testor's Dullcote. The lips should now be painted a dark pink mixture of Buff and Scarlet.



STEP #7
Final blending of face tones to achieve a more subtle effect.

STEP #8) Now we are ready for the final detailing of the face. Add the eyebrows and beard or mustache if desired. Next, mix Floquil Scarlet and Pactra Royal Blue to make a dark purplish color. With this color, paint the openings in the nostrils and a thin line separating the lips.



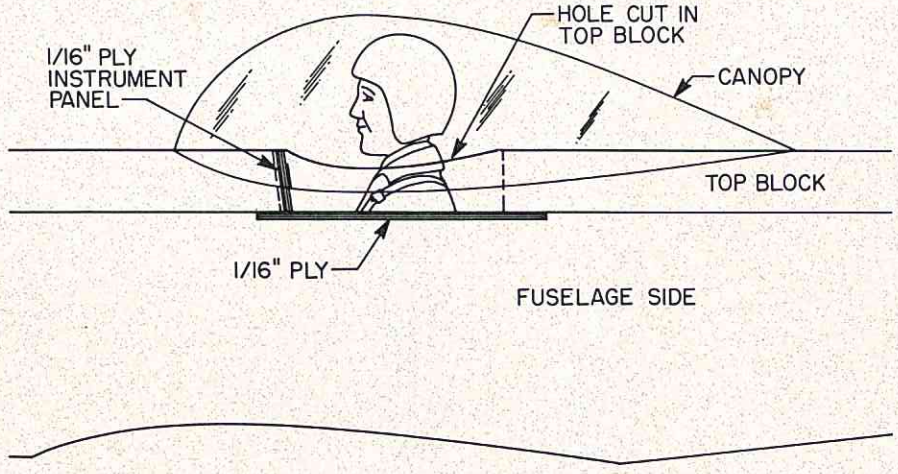
STEP #8
Hair and eyebrows added to complete face.

STEP #9) Choose a flat color that matches the paint scheme of your airplane (Floquil Scarlet was used on the pilot in the photos) and paint the pilot's jacket. Do not paint the bottom as the glue may not adhere to the paint when the pilot is installed in your airplane. Now use a darker shade of the same color (not black!) to outline the collar and any other wrinkles and folds in the jacket or shirt. White shoulder straps should be outlined in grey. Details such as goggles, sunglasses, etc., should be painted and added to complete your pilot. 1/16" piano wire is excellent for cigarettes and cigars on the 2" scale pilots.

STEP #9
Clothing added to complete pilot figure.

OPTIONAL ACCESSORIES!

You are now ready to mount the pilot in your airplane. All painting and detailing under the canopy should be done at this time. A nice instrument panel can be made using the Tatone or I-M scale instruments. The spot where the pilot will be glued should be left unpainted because the glue used to secure the pilot will adhere better to the bare wood. A simple method of mounting a pilot in most pattern ships is shown in Fig. 1. Once your pilot is installed and the canopy is glued on, it will be practically impossible to get to him to make repairs. For this reason, the pilot must be mounted securely. I use Scotch Super Strength Adhesive because it sticks well to both the plastic pilot and the wooden cockpit floor. (It is also excellent for gluing pilots in the plastic A.R.F. planes.) Accessories such as goggles and sunglasses should also be



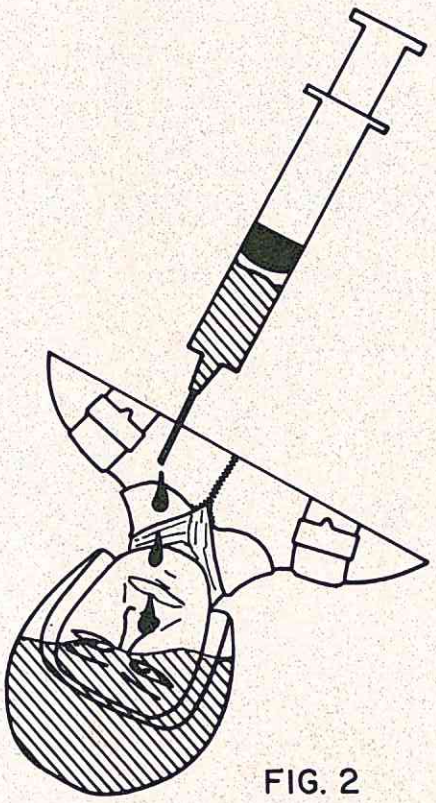


FIG. 2

glued securely. In case you are still in doubt, drill a small hole in the bottom of the pilot figure and using a syringe, fill the pilot about ¼ full of Hobbypoxy Formula II. Put a piece of tape across the hole to keep the epoxy from leaking out and set the pilot upright so that all the epoxy runs down in the base. When the epoxy has cured, you can drill and tap the pilot and bolt him to the airplane (Fig. 2-4). If you have to use only the head of the pilot, fill it about ½ full of Sig Epoxylite and the rest with Hobbypoxy II. Then install as in Fig. 5. Whatever method you choose, make sure the pilot is mounted securely. Last fall, a friend of mine spent several hectic nights prior to leaving for the Winter Nats repairing his pylon racer in which the pilot had vibrated loose. When you have your pilot mounted and all interior detailing complete, wash the inside of the canopy to remove any finger prints. Before gluing the canopy down, make sure there is no balsa dust or other foreign matter hiding in the corners of your cockpit. The first time the airplane is flown, engine vibration will spread the

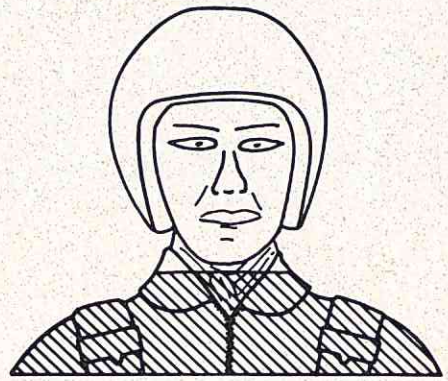


FIG. 3

dust all over the inside of the canopy. Now glue the canopy or windshield on very carefully and you are finished. Use a pin to poke a tiny vent hole somewhere in the canopy. This will prevent the expanding air from loosening your canopy on a hot day.

The methods I have described may seem like a lot of extra trouble, but when you see how much a well-done pilot figure adds to the appearance of your airplane, I think you will agree that the results are well worth the effort. □

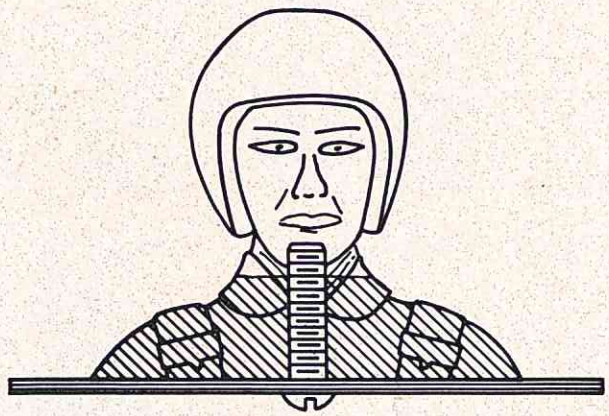


FIG. 4

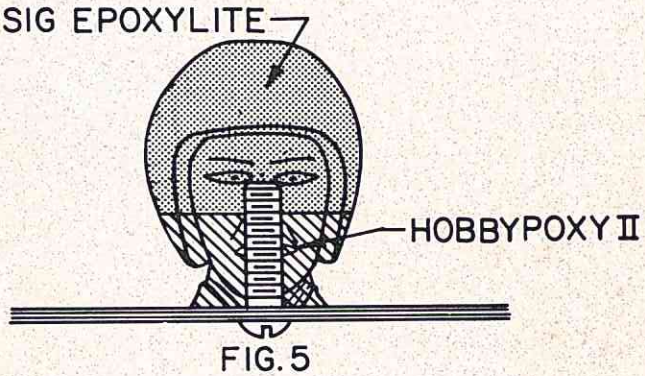
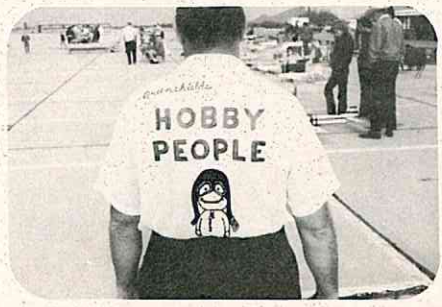


FIG. 5

ASTRO FLIGHT INC.
Los Angeles, California
BRIDI HOBBY ENT.
Harbor City, California
CARTAY PRODUCTS
Drasco, Arkansas
CHOPP PRODUCTS
Tinley Park, Illinois
DEVCON CORP.
Danvers, Massachusetts
DUMAS PRODUCTS
Tucson, Arizona
E.K. PRODUCTS, INC.
Hurst, Texas
FIBRE FOAM PRODUCTS
Tucson, Arizona
FRANKLIN GLUE CO.
Columbus, Ohio
GOULD INC.
St. Paul, Minnesota

R/C MODELER MAGAZINES 1970 WI

HEATHKIT CO.
Benton Harbor, Michigan
HOBBY PEOPLE
Los Angeles, California
JOY PRODUCTS CO.
Menominee, Michigan
KAISER MODELS
Billings, Montana
KRAFT SYSTEMS, INC.
Vista, California
KYOSHO CORP.
Santa Ana, California
MODEL PLAN SERVICE
Tustin, California
MYCO
E. Patterson, New, Jersey
NIELSEN ENTERPRISES
Port Arthur, Texas
ORBIT & MICRO AVIONICS
Fountain Valley, California
PACTRA INDUSTRIES, INC.
Los Angeles, California
PENFORD PLASTICS
Prospect, Ohio
PERRY AEROMOTIVE, INC.
N. Hollywood, California
PETTIT PAINT CO., INC.
Belleville, New Jersey
PRO LINE ELECTRONICS
Phoenix, Arizona
R/C ENGINEERING
Phoenix, Arizona
R/C KITS
N. Canton, Ohio
RAMCO HOBBY PRODUCTS
Randolph, Massachusetts
ROCKET CITY R/C SPECIALTIES
Huntsville, Alabama
SIG MFG. CO.
Montezuma, Iowa
SLK CIRCUITS
Durham, North Carolina
STERLING MODELS
Philadelphia, Pennyslvania
SUPERIOR SIGNAL CO., INC.
Spotswood, New Jersey
SU-PR-LINE PRODUCTS
Plainfield, Illinois
TAB BOOKS
Blue Ridge Summit, Pennsylvania
TARAN PRODUCTS
Santa Clara, California
TATONE PRODUCTS
San Francisco, California
THE TESTOR CORP.
Los Angeles, California
TOP FLITE MODELS
Chicago, Illinois



TEXT BY FRANK CAPAN

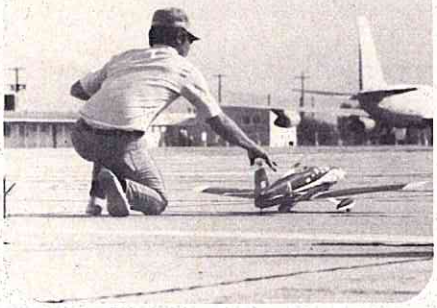
RCM PHOTOS BY

JIM SIMPSON • JOE BRIDI

FRANK CAPAN

TER NATIONALS

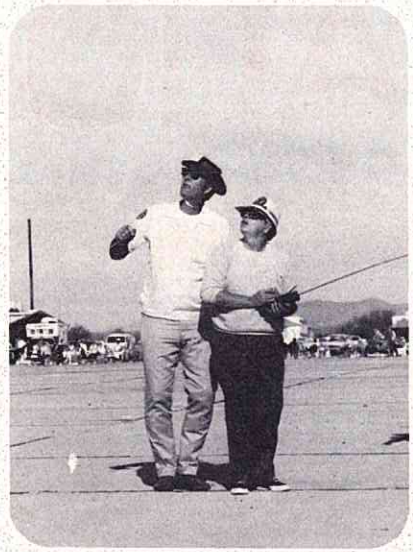
MARANA PARK – TUCSON, ARIZONA



LEFT: The A/L Team entry speeds toward the first pylon. RIGHT: Bill Salkowski holding perpetual trophy.

ABOVE: Who's nervous? RCM photographer records anxious moments. BELOW: Big John Elliott calls for Paul White during pylon heat.

BELOW: Larry Leonard with magnificient Liberty Belle.

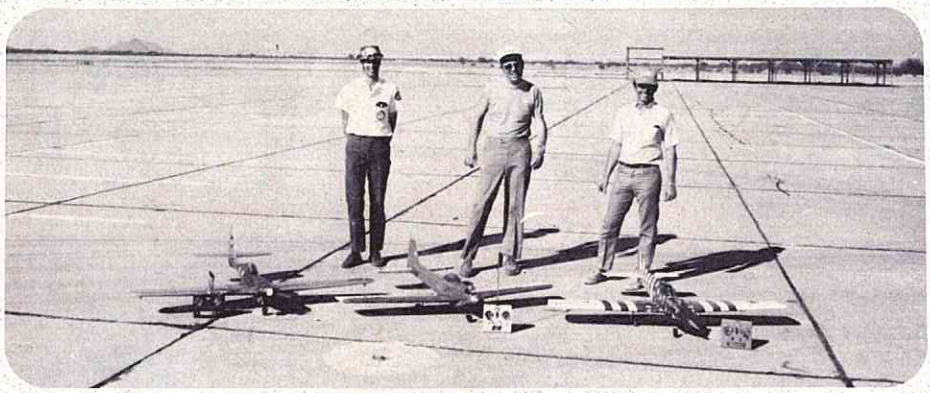


Lloyd Nicholson, Bill Salkowski, and Larry Leonard, ready for the fly off.

There is a time of the year when everything seems to come together. Winter is at the front door . . . the food bins are filled for the cold winter ahead . . . and everything settles down for the family Thanksgiving feast. Right?

Wrong! This is the time of the RCM Winter Nationals. Whether it is cold and raining or, as the case may be, snowing, this is of little importance. So it's down to the store to lay in a supply of winter things since we've heard reports of previous weather conditions at the Winter Nationals. After loading the car with equipment we headed for Tucson on the far horizon.

After several hours of moaning and gnashing of teeth about drivers and cars in general, we arrived at Marana Air Park and settled down for the night in preparation for the wet and cold

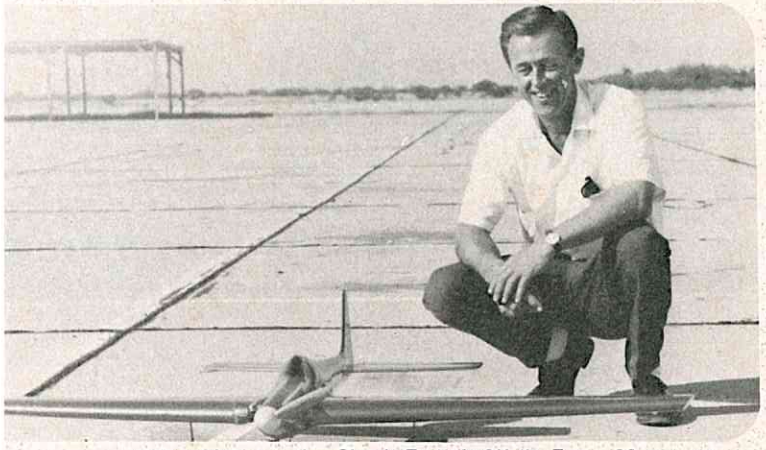


Early morning at Marana, and a few of the contestants making ready for the day's events.

LEFT: Bob Stockwell — still smiling at this point. RIGHT: Larry Leonard's entry featured KB .40, Kraft radio.

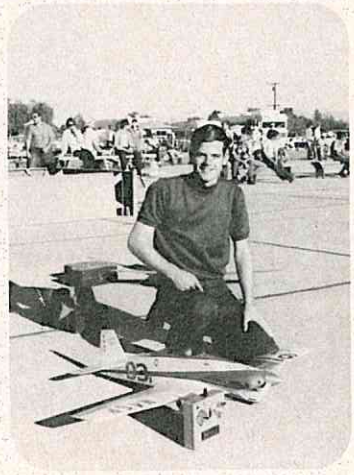
A line-up of big ones in which the little ones were carried.

Jim Fosgate with ProLine equipped Daddy Rabbit pattern entry.

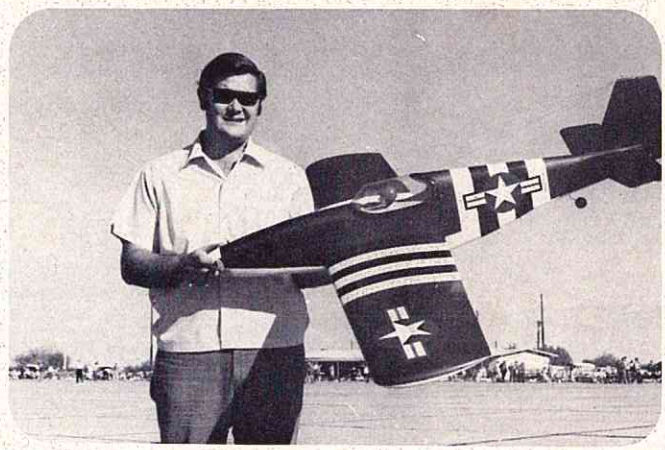


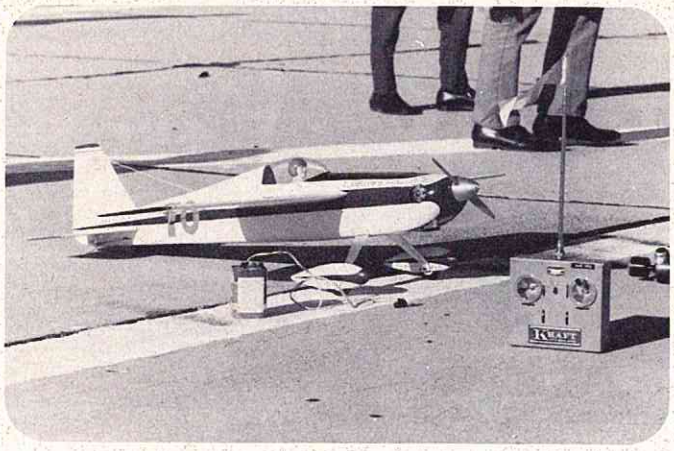
Best design award — Chuck Fuller's 6½ lb. Enya .60 pattern ship used cardboard covered foam wings with glass fuse.

Dan McCann holding model for visual sighting by 1st pylon crew.



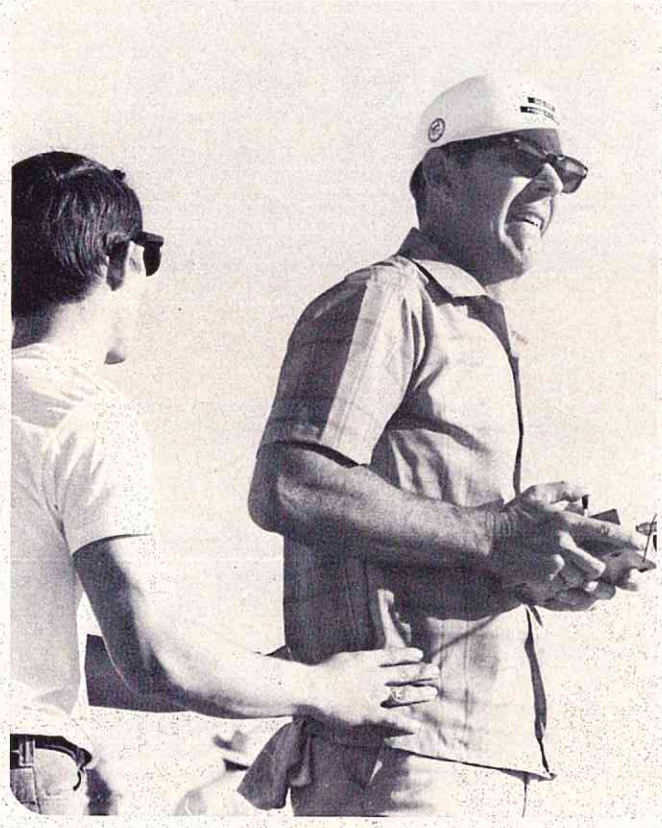
Terry Prather, Grand Champ Formula I.

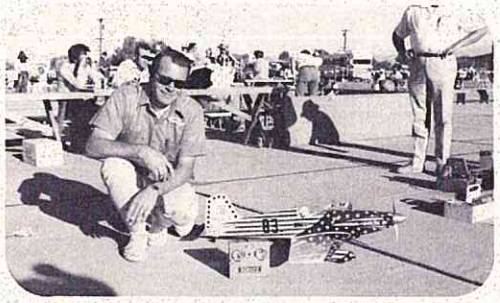




ABOVE: Mason Wood with original stunt design ALA P-51. BELOW: Ed Rankin, Ft. Worth Thunderbirds, concentrates on negotiating pylons.

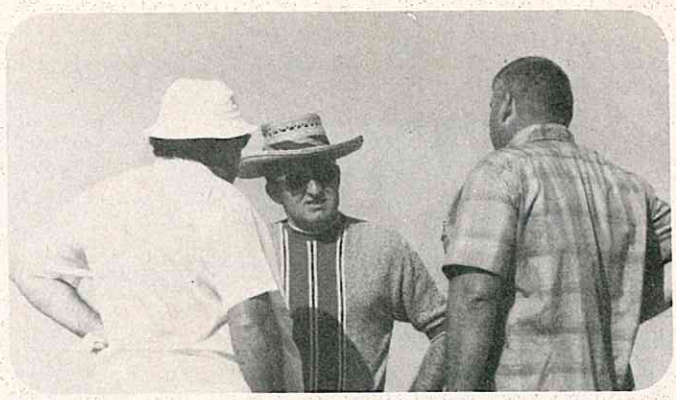
ABOVE: Owl Racer scaled from full sized aircraft by Duke Crow. Kraft, KB .40. BELOW: Eric Fabor and disheartening Bits & Pieces.





ABOVE: Bill Allen, 2nd Place Class B. BELOW: RCM's Joe Bridi scans pit area during contest lull.

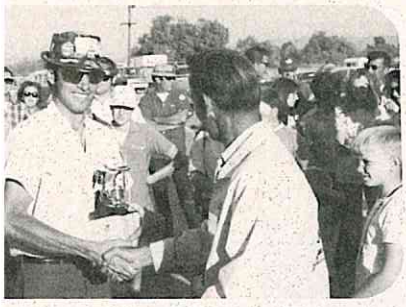
Noted glider expert, John Brodbeck, Jr., with Jeff Bertken assist· for power try.



No one argued with Frank Capan and friends.

Doug Spreng with talking Funky Chicken.

Norm Page with his "Minnow" and Pro-Line 5th Class D Expert.



Lloyd Nicholson accepts 2nd place trophy.

contest the following morning. As dawn arrived and we prepared to register for the days events, we staggered out to the field and looked around for the rain and cold weather which apparently had not yet arrived. Nice.

In fact, let me tell you about the three nicest days I've seen for a long time. The 1970 Winter Nationals, were, in fact, beautiful. This has to be one of the most convenient and accomodating places to fly in the entire country. Everything you need is right at the field . . . restrooms, rest areas, resturant, but not necessarily in that order. For the family, there are plenty of things to see around the area. Tombstone is not too far for a comfortable drive. Old Tucson is very near and new Tucson is very nice. In fact, Arizona is one beautiful state.

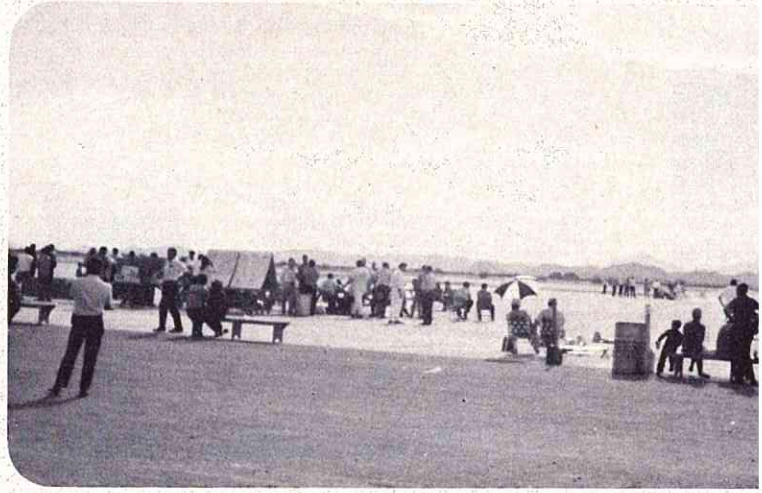
But, enough of the PR for the Chamber of Commerce. Friday morning sign ups and flight lines were established and everything was beginning to take shape. There were a few howls from the late entries about the late entry fee but they had been adequately forewarned in RCM press releases

(continued on page 56)

LEFT: Ted White, RCM's 'Novice of the Year' talking with fans.

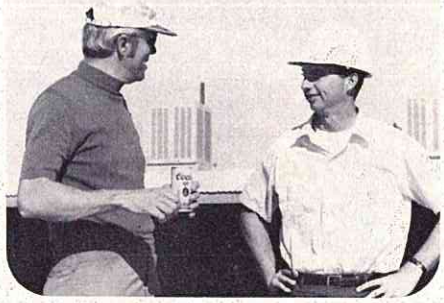
RCM's Executive Editor, Pat Crews, presenting awards — Chuck Watkins, Class B First Place, receiving prizes.

Sam Crawford, center, hardest working man at any contest.



Partial view of the Marana Air Park flying site.

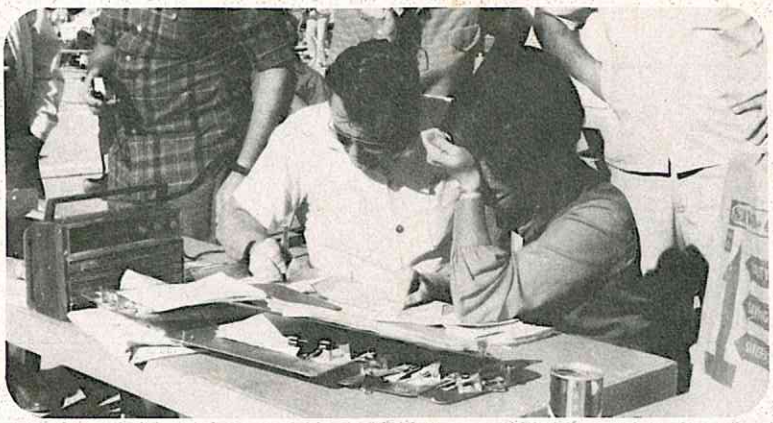
ABOVE: Jim Oddino (who recently showed the German's how to hold their liquor) with his Class D Expert entry. BELOW: Flip-over lap counters used for pylon races.



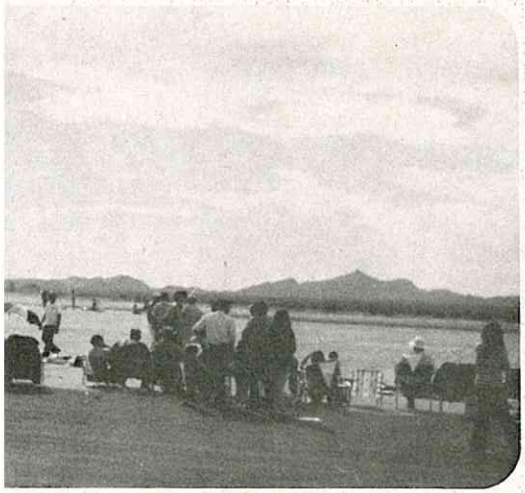
Two top contenders, Bill Salkowski and Norm Page.

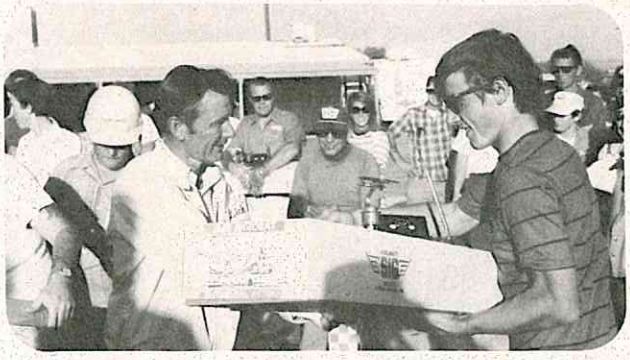
Main desk after things started rolling.

Brixby, a 1st in Class A Pattern.



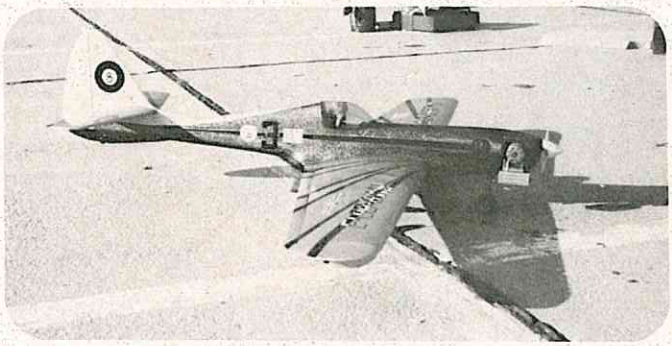
RCM's Exec at work at main table.

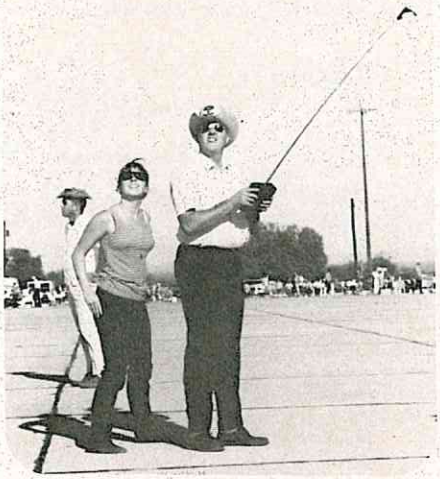


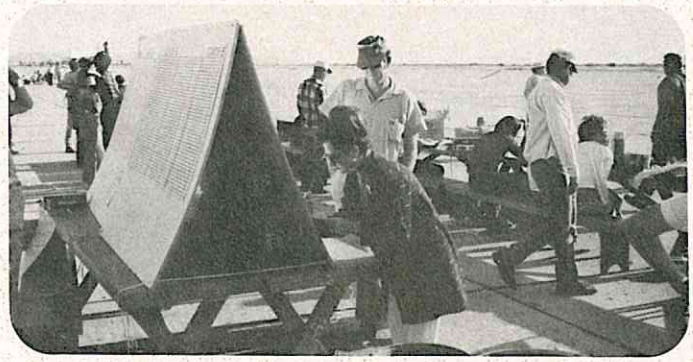


RIGHT: Merchandise awards donated by Winter Nat's Co-sponsors.

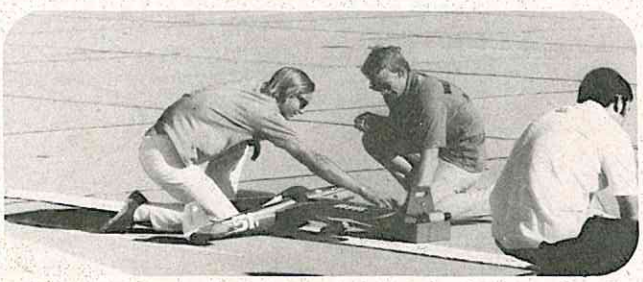
Lloyd Nicholson's impressive pattern design sported retracts.





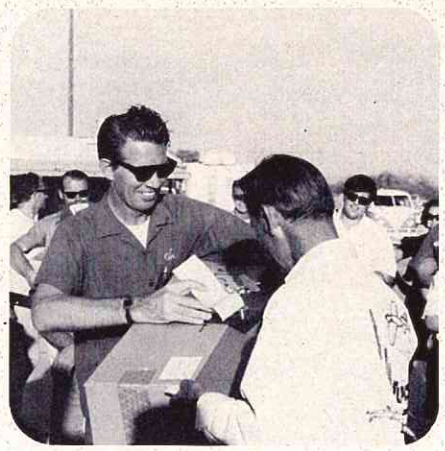


LEFT: Debbie calls for big Al Strickland. RIGHT: Scores marked on large, easily seen board.



Rob and Chuck Smith with Shoestring, Kraft radio.

Larry Leonard and 1st place victory.

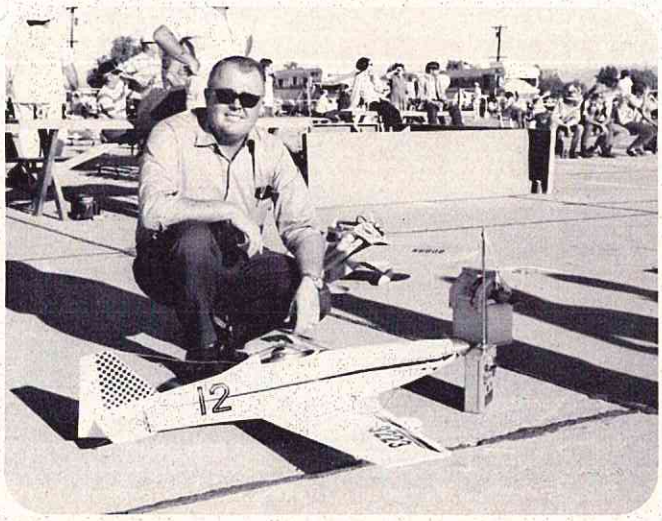


Joe Howard, a first in Class D/N.

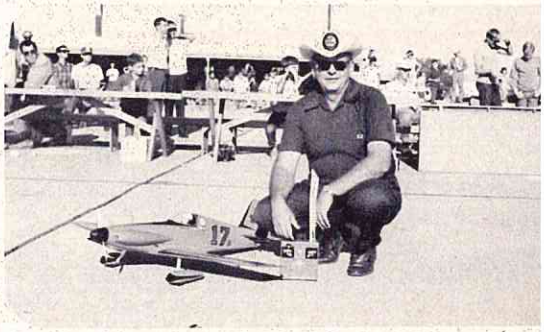
Fibrefoam Products static display — Vulcan in foreground.

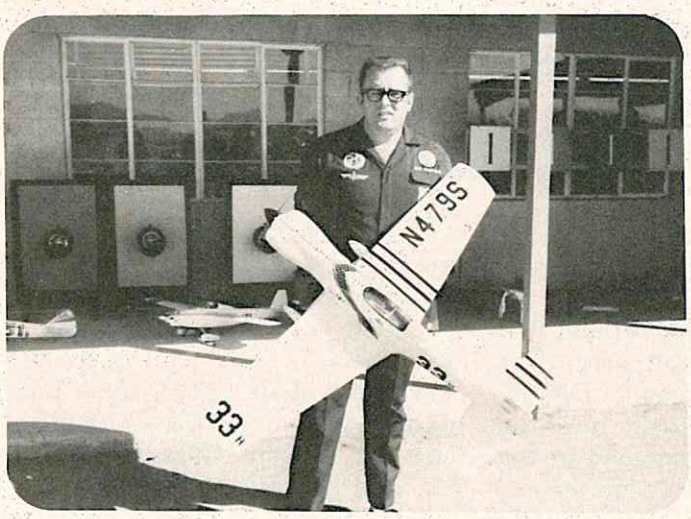
LEFT: Cliff Weirick with Ray Downs.

LEFT: Loren Tregalles and pylon entry. BELOW: Jack Hertenstein ready to race.



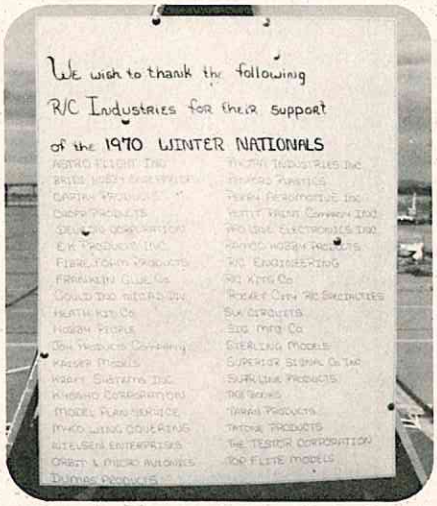
Ed Rankin and Midget Mustang.





RCM's Jim Simpson with Ballerina entry.

Whit Stockwell accepting award.



ABOVE: A tie for first, Terry Prather and A/L Racing Team. RIGHT: An honest-to-goodness female contestant. She flew, he called. Heath radio. BELOW: Rex O'Connor's beautiful Proctor Nieuport framework, built by Howard Ames of Douglas, Arizona.

FOR WHAT IT'S WORTH

Kemp Bunting, of Munster, Indiana, writes that most everyone of us has disassembled and thoroughly cleaned an RC carburetor, only to find upon reassembly that it would not function as well as before. This problem can be caused by improper adjustment, but Kemp found another cause as well as a cure. Cleaning removes deposits that were helping to seal against air leakage. Since the engine would rather draw air than fuel, poor fuel draw will result. The needle valve setting becomes critical and the idle is non-existant. The cure is simple. Coat all moving parts with fuel resistant grease, such as a high-temperature silicone type, to restore the original seal. Try it on your problem engine and you may save yourself the cost of a fancy new carburetor.

Paul Strengell, of Covina, California, submitted an effective idea for patching holes in polyethylene fuel tanks, such as the Sullivan type. Welding plastic is a very common thing and can be done with a soldering iron. The welding "rod" can be cut from old polyethylene bottles such as empty Titebond bottles. Cut strips about 1/8" – 3/16" wide to make the "rods." To make the repair, simply melt the plastic in the area of the hole or crack with a soldering iron and flow in melted plastic from the "rod" to fill in any voids or holes. Practice on an old bottle before tackling a tank. You'll find this quite an easy and effective method.

An inexpensive way to insulate long wire pushrods is to use lightweight plastic fuel line over 1/16" wire. This works quite well and costs considerably less than NyRods or Teflon tubing. This idea submitted by Joe Bouterse, of Middlebury, Indiana.

If you've ever had difficulty in starting a nut in a very tight place, try using a length of solder that will reach down into the blind area. Loop one end of the solder around the circumference of the nut and twist the nut until the loop tightens securely around it. You can now reach the blind area and hold the nut securely enough to thread the bolt into it. George H. Gresovic, of Clay, New York, used this idea when mounting the M.A.N. 2-3-4 transmitter P.C. board (switch mounting location) to the transmitter case.

Users of Super MonoKote have undoubtedly noticed that it has a tendency to become loose in spots when seasonal temperatures fluctuate significantly. Although use of a hand iron will tighten the skin again, LCDR Harold W. Kelly, of Fort Meade, Maryland, has found that a compact hand hairdryer, acquired on Taiwan, has proven to be a superior tool. Advantages of a hairdryer are: the ability to get heat into areas where an iron is too large and awkward to use or where there is danger of damaging decals or trim MonoKote; the possibility of an iron sticking to an unnoticed oil smudge or other foreign matter on the MonoKote is avoided; and finally, the hairdryer will not cause any accidental dents or creases where MonoKote is covering planked or solid balsa areas. Similarly, the hairdryer is quite useful in shrinking Super MonoKote over curved, convex surfaces where the flat surface of an iron will only make minimal contact with the area being worked.

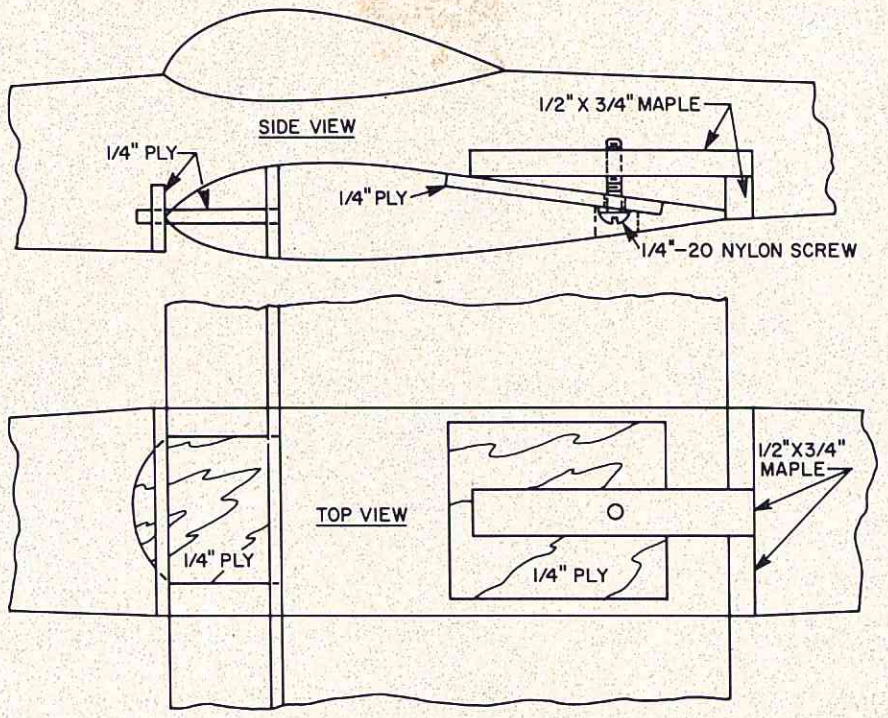
Ron Simonson, of Alberta, Canada, has used the following idea for an inexpensive and leakproof fuel tank. First, find a tin container of the right capacity that will fit into your model. Then, cut about a 5/8" hole in one end, remove the contents and clean it out. Then take that old pint can out of the garbage, (the one with a screw top) take off the cap, and remove the male portion of the cap with a torch or soldering iron. These tops are simply soldered on in most cases. Resolder the male part into your new fuel tank. Now, drill the required number of holes in the cap, remove the gasket, and solder in the brass tubes for your vent and filler outlets. To make your pickup, fit a washer over a piece of brass tubing, fill it in with solder, file or grind it to a smooth cone, attach it to your flexible tubing and pickup tube, and your tank is ready for use. Don't forget to replace the gasket in the cap. The total cost is about 10 cents since you probably mixed the original contents with your rum anyway.

Instead of gluing sandpaper to the inboard section of your wings to simulate wing walks, try mixing fine emery (about #280) with black dope and paint on your walks. The finished wing will be authentic in appearance and it will be permanent. Mix enough emery with the dope to make a consistency approximating that of light cream, and keep stirring while using. This

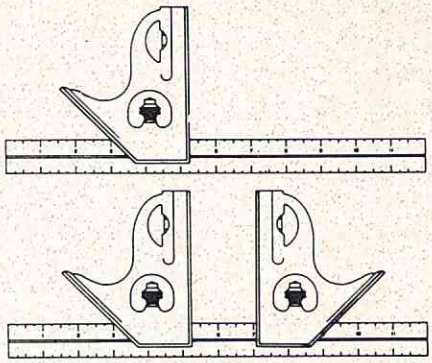
idea was submitted by Joseph Weizer, of Havertown, Pennsylvania.

The presence of large rubber bands holding a wing on an otherwise clean model has always rubbed Raymond Cole, of Baltimore, Maryland, the wrong way. While fixed wing bolts cure the problem of appearance, they create the problem of broken wings and fuselages when the model is involved in a minor mishap. Ray designed a wing hold-down that embodies the best features of both methods. It employs a single bolt to hold the wing in place but also allows the wing to slide sideways, or cock at an angle, upon contact with an immovable object. The leading edge of the wing can be held by the usual dowel method or by a plywood tongue and slot. The rear hold-down consists of a piece of hardwood motor mount stock and a nylon bolt. The motor mount stock is drilled and tapped for a ¼-20 nylon bolt. A ¼" plywood plate is built into the top of the wing and drilled for the bolt. The motor mount stock is bolted from below and is used as a clamp between the top of the wing and a hardwood block built into the fuselage just behind the wing. The hardwood block in the fuselage should extend all the way across and have a shallow notch cut in it to accept the motor mount stock. The installation is neat, simple, and works exceptionally well.

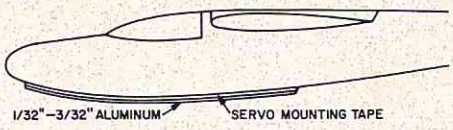
If you want a simple fuselage jig that can be used on any type of model aircraft, simply buy two carpenters squares on the 98¢ "Special" table at your local hardware store. Remove the base from one ruler and install it on the other ruler as shown in the sketch. It is necessary to cut a 1/8" slot 1/2" deep by 12" long in your workbench in which you will drop the free side of the ruler. This makes a free standing large adjustable clamp which is perfect for holding fuselages



squarely while gluing the formers in place. Richard Kelly, of Issaquah, Washington, has three of these clamps and several slots on a line in his workbench. Absolutely true fuselages become quite simple with this adjustable jig.



If you're a glider fan, this method of making a glider skid, submitted by Bob Buckner, of San Diego, California, is worth its weight in gold. First, make sure the bottom of the fuselage is clean. Then put a strip of servo mounting tape on where you want the skid. Now, since the tape is "double sticky-back," you can put on an aluminum skid 1/32" to 3/32" thick on this tape. If you put two strips of tape about 1½" to 3" apart, depending on the width of the fuselage, this protects it even more. Also, if you make the tape double thickness, this protects your beautiful fuselage bottom even more from that one rock that could have scratched it or even poked a hole in it. One additional feature of this type of skid is that after it gets scratched or torn up a bit you can simply rip off the tape and install a new one.

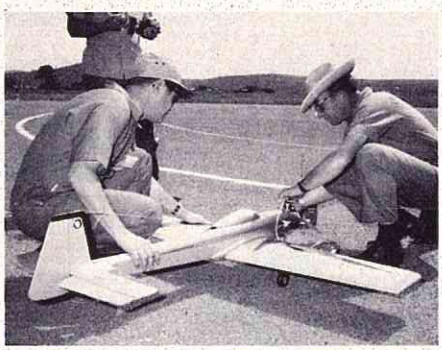


If you are in the middle of a building project and run out of glass headed pins, you can make up some of your own from ordinary straight pins. Simply mix up some epoxy glue with the head end of the pin into the glue, give a quick twirl, take out of the glue and stick into a spare piece of foam pointed end first to dry. Repeat this process with further pins until either pins or glue run out and you should have enough to last all year. Using Devcon 5-Minute Epoxy the pins are ready for use in approximately 20 minutes. This idea was submitted by Eric Friend, of Kent, England. □

Top Puebla winner – Elias Villegas won Orbit Electronics Trophy for best FAI pattern performance. Carlos Everest of Carta Blanca, meet co-sponsor, does honors as thunderstorm breaks . . . .

TOP OUT

JERRY KLEINBURG



Salo Feiner holds for Feliciano Prat during Puebla pattern round. Pair finished 2nd and 3rd at annual meet. Ship, a Kaos – popular in Mexico – powered by HP-61.

TWO DOWN . . .

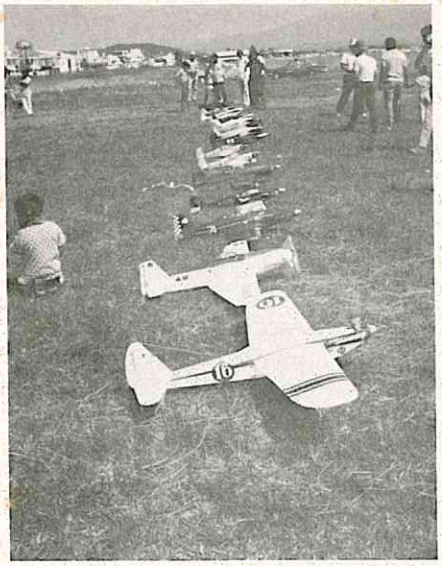
It's official – location for the 1971 RC Pattern World Championships will be the Bucks County Airport just up the road from Doylestown, Pa., and close to Willow Grove NAS, site of many Nats meets. A nice location, and with the tentative dates of 15-19 September, it's just about an ideal time of the year for RC buffs to witness the first RC World Championship to be staged in the U.S. Naturally, the question for RC fans will be whether the U.S. team of Jim Whitley, Phil Kraft, and Ron Chidgey can retrieve the RC pattern crown again after losing it to the German team in 1969 in Bremen. For aerophiles in general, the question will be – Can the U.S. team make it three in a row?

What we're referring to are the two other recent world meets where U.S. aero efforts came out on top in full-scale aircraft internats competition. During 1970 these included the 6th FAI Aerobatic Championship where, for the first time in the 10 year history of the meet, a U.S. team was victorious; and the International Soaring Championship, a relative newcomer to the world meet scene.

RC'ers are familiar with the planes flown in the 6th FAI

Dr. Alex Elizondo had attentive help from his son, Jorge. Dr. Elizondo veteran Mexico City RC'ers, 5th in annual Puebla pattern classic.

"Vill-Fli," was winning formula for Elias Villegas in Puebla. Combination Kwik-Fli and Kaos, ship had Webra B/H, KDH retracts with Royal Hi-Power servo, and EK Pro radio. 6½ lbs. Excellent pattern flying . . .



LEFT: Puebla meet showed growing Formula I action. Lineup shows well done ships, flying showed Mexican pilot skill increasing also . . .

RIGHT: Luis Castaneda Jr., fastest RC'er in Mexico, with original midget Midget Mustang. Ship, an amazing 2½ lbs. with K & B .40, 3 Orbit servos, 10 oz. fuel tank. Span 39", 300 sq. in. Despite size, stable and easy to fly. (Future RCM feature).

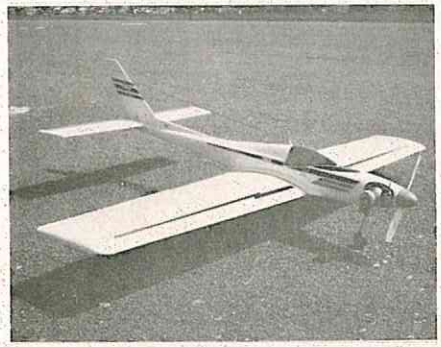
Championship which was hosted by the British in Hullavington, England. Bob Herendeen, the current U.S.Aerobatic Champion, flew his Pitts Special Bipe to a very close 2nd place win behind Russia's Igor Egorov and would most likely have taken the top spot if the engine in the Pitts hadn't quit during an inverted spin. In the allowed re-fly, the zero he received for the missed recovery portion of the spin lost Bob an estimated 190 points. He finished behind Igor by only 123.5 points . . . Right behind Bob and the Pitts in the finals was another familiar name and plane, Charlie Hillard and the Spinks Akromaster, who came within 3%, or 383 points (out of 12,802 total points) of the event leader. A mighty close meet and a tough one on the judging . . . The Spinks, by the way, is recognized as a natural for RC and may soon equal the Chipmunk in popularity among modelers. In international aero-

(continued on page 50)

Prettiest original pattern ship was Typhoon I by Emilio Lozano of Mexico City. Beauty weighed 7 lbs. had 60" span, 52" length. Balsa frame with ST .60 G power. Nice flyer . . . (Future RCM subject . . .)

Scoring innovation – Pattern scores were averaged, flashed to spectators after each maneuver. System worked well in Puebla, Mexico meet.

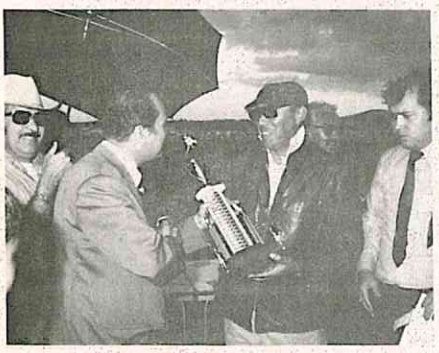
Puebla contestants were judges too. Mexican solution for consistant level scoring. High and low score ignored. Note visible score for spectator interest. (That's snow-capped Mt. Popacatopl in background).

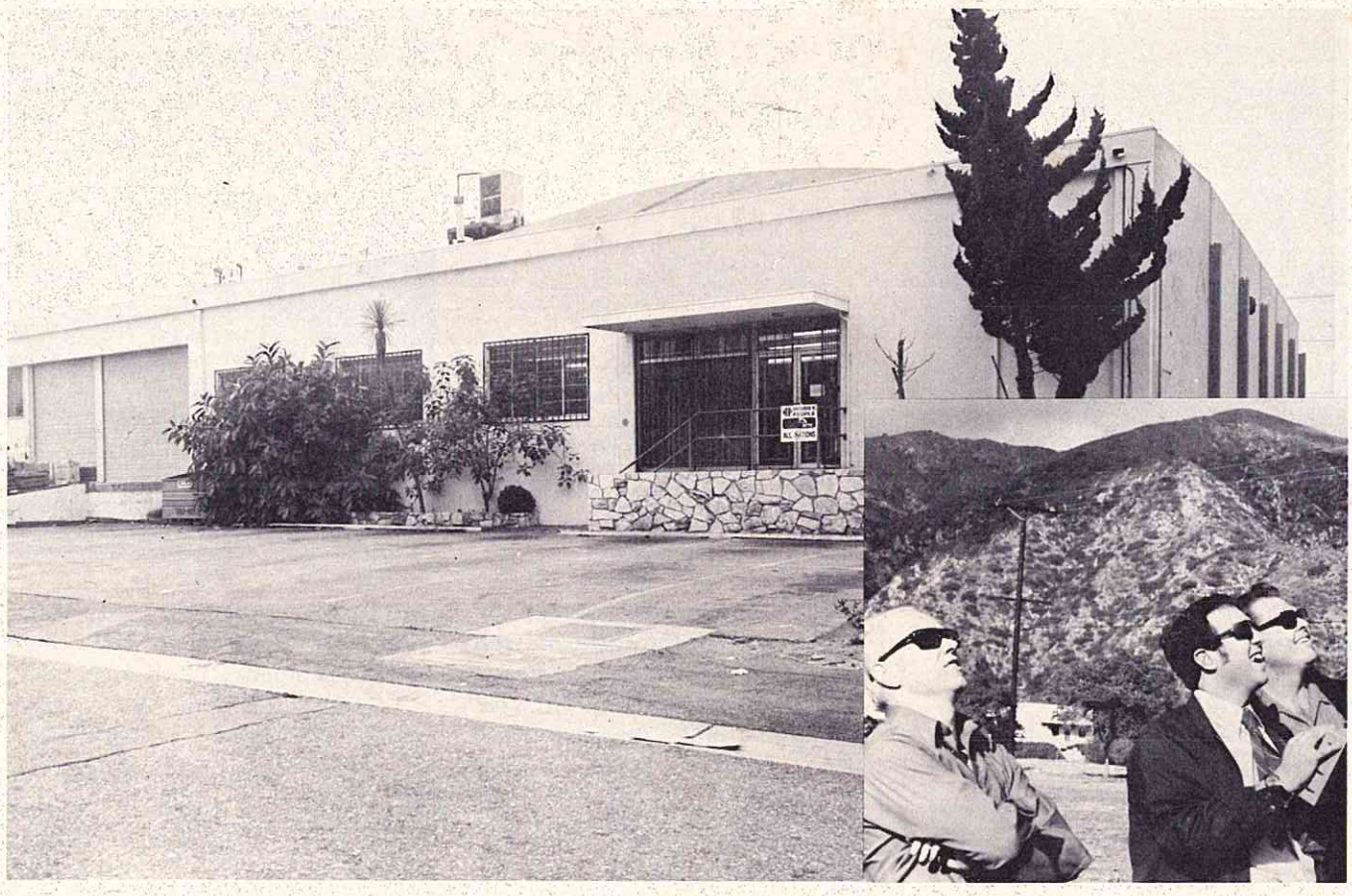


1st in Formua I – Emilio Lozano receives winner's loot as storm clouds gather. Carlos Everest made presentation. Lozano planes known for outstanding workmanship.

Carlos de Silva, 3rd in Pylon I. Unfortunate incident prevented almost sure win for Monterrey RC'er . . . Yours truly has presentation honor . . .

M.A.F. General Fernando Hernandez-Vega was interested Puebla spectator. So was son Miguel. Luis Castaneda, Puebla RC Club mainstay, shows pair winning Formula I Mustang by Emilio Lozano. RC has broad following in Mexico.





ABOVE: The Hobby People sales offices and warehouse. INSET: Paul Bender, center, switches from Formula I for a day of thermal soaring with RCM Editor Don Dewey, left, and Ron Neal, right.

RCM VISITS HOBBY PEOPLE

One of the fastest growing and largest mail order and retail hobby centers in the United States is Hobby People, 130 East 33rd Street, Los Angeles, California 90011. Dealing in all forms of models and crafts as well as educational science supplies, Hobby People is owned by Paul Bender, an active RC'er whose prime field of interest is in Formula I pylon racing.

Paul Bender's two prime assistants are Roy Castleberry, a modeler from the age of twelve. Roy, active in the San Gabriel Valley Radio Control League,

(continued on page 60)

Standing at the customer counter in the office area are John Greenshields, Paul Bender, and Roy Castleberry. The mail is brought in here, opened and sorted as to orders and catalog requests. The orders are typed, checked over by John, the general manager, and then taken into the warehouse area to be pulled, packed and mailed.

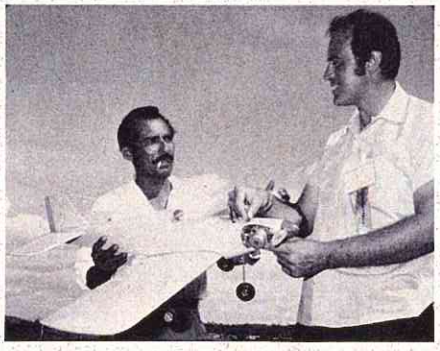
This photo taken inside the Hobby People warehouse shows the main isle with all the secondary isles branching off. Each isle is broken down into the specialty areas of modeling. Example: balsa plane isles, plastic isles, railroad isles, etc.

(continued from page 47)

batics women don't take a back seat and, among the fair sex at Hullavington, Mary Gaffany, U.S. Woman's Champion, helped the U.S. cause by amassing the highest point total in compulsory maneuvers. However in the final tally she was outpointed overall by Slovana Sovitskaya of the Soviet team . . .Neil Williams, who captained the British team and placed 5th in individual scores, provided most of the drama of the meet. Advocating the meet as a demonstration of flying skill, he circulated a pilot's petition which led to giving Bob Herendeen the chance to fly the remaining maneuvers he missed when he had to deadstick in after losing power in the Pitts. Sportsmanship in action . . . . It was also Neil who showed very real and cool flying savvy when he had a major structure failure in his Zlin during a practice flight. He flew inverted to avoid losing a wing and at the last moment rolled upright in landing to set the ship down. Then the wing broke off!

While RC'ers are familiar with aerobatic power planes flown by our full-scale bretheren, this isn't quite the case when it comes to the super soarers seen in Marfa, Texas, during the 9-day International Soaring Championships. Open class gliders – called superships – have wingspreads that exceed 70 feet and gross out to the ¾ ton mark! It was the German made Schempp-Hirth HS-3 Nimbus flown by George Moffet that helped bring World Championship honors to the U.S. in this every-other-year meet. George's Nimbus is considered to be the world's largest competition glider and features a 30.6 to 1 aspect ratio for its wingspan of 72'-2". A glide angle of 51 to 1 (which means a glide of a mile per 100 foot of altitude in dead air . . .) gives the 1400 lb. bird a 56 mph airspeed out of a placarded top speed of 137 mph. (with 240 lbs. of water in its wing tanks for ballast!). George reached that maximum speed several times in the nine days of stiff competition that took him some 2290 miles of flying and almost 50 hours of piloting. It was a gruelling endurance exercise for all of the 80 pilots who had come from some 25 countries for the test of pilot skill with their graceful soaring ships.

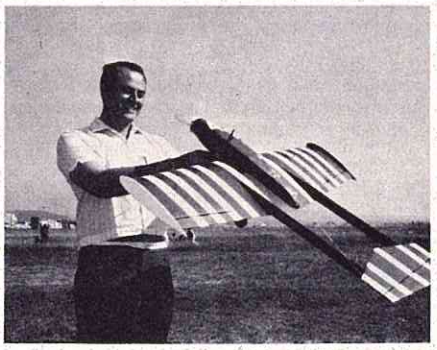
. . . And now it appears the considerable efforts by John Worth and others within AMA have been successful through the intial phases in establishing the RC Pattern World Championship



Victor Sossa and Mario Sanchez ready K & B .40 powered Underdog (yes, Ken Willard . . .) for Unlimited Pylon event at Puebla. 3 lbs. 38" span, Monocoted, Kraft radio.

Jorge Bustos (L.) and 30" span Ciclon Unlimited pylon entry. 2¾ lbs., ship called "Nonato" (Unborn).

Lightest Puebla Ciclon racer, 2¼ lb. ship by Gaston Mathelin placed 2nd. Diamond airfoil shows George Killeen disign influence. K & B .40, Logictrol radio.



Another Mario Sanchez entry was fast Rossi .60 powered twin boom "Speedy Gonzales II." Flew well despite lack of rudder. Lost elevator in practice. Totalled. 3½ lbs., 44" span, Kraft radio.

Another diamond airfoil entry in unlimited was 42" span original by Emilio Lozano. ST .40 ABC engine, Kraft radio. Flew well at 3½ lbs. in mile-high Puebla altitude.

Casteneda fleet. Luis Jr. flew all events, excelled in racing and topped Ciclon event with smooth flying 39" Mustang. Note "regular" Formula I ship . . .

at a U.S. site in 1971. Of course, from here on out, it'll depend fully upon the high enthusiasm and dedication of AMA'ers to finance and labor to organize a well conducted meet. In that regard all indications to date show success is a sure bet . . . A U.S. team victory, regardless of what happened elsewhere in international competition, rests heavily in the hands (thumbs?) of our well-seasoned and practiced team. In any case, it won't be any shoo-in, and certainly a contest not to be missed!

ON THE SCENE . . . Puebla. Mexican RC'ers are again in the midst of the 5-contest series that's used to select their FAI team, this time for the 1971 World Meet. We had the opportunity to be on the scene for the third of these contests which was held in Puebla (a pleasant 1½ hour drive east of Mexico City along a dual interstate highway that reaches above 10,000 feet as it threads past snow-capped peaks that top 18,000 feet . . .). It's obvious that pattern skill is continuing to grow and it appears Mexican RC pilots are out to improve the 13th place they scored in 1969 when they sent their first team into the international fray. Elias Villegas and Salo Feiner continue their dominance of pattern flying and it looks as though they will again be part of the team. The third team spot is still in contention with Feliciano Prat, who managed the 1969 team currently having an edge for it. However he still has plenty of competition from Bob Guzman, Paco Gallegos, Luis Casteneda, Dr. Alex Elizondo and Jorge Bustos . . .

Gaining rapidly in popularity south of the border – and elsewhere – is pylon racing, both Formula I and a wide open Mexican chili variety where anything goes for 20 laps around a standard ¼ mile 3-pylon course. Interest in the latter event is bringing on development of many original aircraft to find the best combination of control and power in the search for greater speed. Leading speed merchant in "Ciclon" racing, as the unlimited event is known, is Luis Castaneda, Jr., who has packed a hot K & B racing .40, an Orbit radio and 3 servos, and a 10 oz. fuel tank into a 39 inch span, 300 square inch package weighing 2½ lbs. that flies faster than anything else in the mile high altitudes of Mexico. The speedy 'package' takes the shape of a scaled down Midget Mustang that is surprisingly stable and gentle to handle. We predict its popularity will grow . . . Luis' main competition has come from Emilio Lozano, Mario Sanchez, Gaston Mathelin, Victor Sossa and Jorge Bustos who also showed up in Puebla with their own originals for the exciting 20 lap races.

Formula I was another hotly contested event flown by some 20 fliers who also showed increased technical savvy with the

450 sq. in. birds and reflected their growing flight handling experience at finding the 'minimum distance groove' around the three pylons. Mile high plus altitudes of just about all of the Mexican flying sites has added an extra tough ingredient in Formula I, but at Puebla the gain in handling this dimension was noted in the crash-free heats and the increased number of 2 minute heats than previously seen . . . Fastest and most consistant pylon pilot was Carlos De Silva from Monterey with his K & B (GA) .40 powered Minnow. It appeared he would be an easy winner with a perfect string of wins but an unfortunate incident when his plane brushed a photographer from a well known California RC magazine at the start of a semi-final heat caused a lost prop and a zero heat. His gracious understanding and acceptance of the loss helped in maintaining the sportsmanship and spirit that characterize Mexican contests where each meet is a looked-for opportunity to extend genuine hospitality and to make it a memorable occasion. (As an example, no entry fee is ever charged at any Mexican contests.) Puebla was no exception in these social refinements, and Carlos – despite the heat of competition – provided added proof of the gentlemanly character of Mexican RC pilots . . . And as an added measure, this writer was given the honor of presenting Carlos with the 3rd place trophy he won despite the unexpected handicap!

Here's the rundown on the winners in each event:

Pattern Elias Villegan, Salo Feiner, Feliciano Prat.

Formula I Emilio Lozano, Jorge Bustos, Carlos de Silva.

Ciclon Racing Luis Castaneda Jr., Gaston Mathelin, Ramon Virgilio.

Officiating was Jaime Carbo as Contest Director with Jorge Leal directing the racing events. Tabulation was handled by Aurelio Elias, Olaf Wetzel and Carlos Gonzales.

Following recent practices, judging for the contest was done by the contestants themselves. As is the case everywhere pattern flying is done seriously, the Mexicans have also been seeking to save the problem of establishing a dependable judging situation. Contestant judging has so far proven to be the most satisfactory arrangement in attempting to bring about a uniform and effective way of scoring pattern flying. Mexican contest managers have found that by assuring equal area representation is always included in the 5-man panel and that by eliminating the high and low scores on each flight, a high order of scoring uniformity has been achieved. Consequently, the-judge-yourself method has been accepted for all Mexican contests and appears to be universally preferred by the fliers.

Not to rest on their laurels

however, an innovation was added to the scoring system for the Puebla meet as a trial. It was aimed at giving spectators and waiting fliers an idea of the scores as they were being given. This was done by having a score signaler whose job was to check the score of each of the judges and to raise an easy to see 1-to-10 number which reflected an approximate unofficial average of the 5 scores given for the maneuver. Score posting on score sheets was done so that the adding and averaging could be quickly done and the signal flashed the spectators before the next maneuver began. It all worked surprisingly well and there was a noticeable rise in spectator and contestant interest; so much so that the system may spread to other Mexican contests . . .

That's how it is with contests south of the border — always something new and vital. And take my word for it, they're always exciting! □

COMING NEXT MONTH

•

Don Dewey's full-house, 21 ounce 30" span low wing aerobatic multi.

•

RCM reviews the Kraft Series 71 proportional systems with frequency switching and fast charge batteries.

•

The 'Frantique Two' an unusual .19 to .40 powered vintage type aircraft.

•

Leon Shulman's guide for trouble-free contest operation.

•

RCM looks at the new MRC F-710 proportional system.

•

The all-new ½-A midget racing event.

•

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APRIL ISSUE OF
R/C MODELER MAGAZINE

WINTER NATS

(continued from page 37)

and publicity. As the entries arrived from all over the country, and the contest got under way it was interesting to view the various types of stunt ships. One comment that could definitely be made is that it looks as though retractable landing gear is certainly here to stay. A great number of entries were equipped with an equally varied number of different retractable systems. There was also talk of several new retracts in the works to be available shortly. The overall quality of the stunt ships were very good and so was the flying. In fact, there was a very short spread of points between the top fliers so that the contest could very well swing toward anyone putting on an exceptional flight.

As per previous Winter Nationals scheduling, stunt was

flown in the morning and Formula I in the afternoon. There were some complaints, but whoever heard of a contest with no one complaining about something or another?

The radio systems in evidence were Krafts, Pro-Lines, Orbits, EK, Logictrol, a few Heathkits, Royal Classics, and a new system, the Integrated Design Digital Proportional. Last, but perhaps far from least, there was another new system present which made a very interesting debut. And that debut captured the number one slot in the flyoffs! Of course, Bill Salkowski's driving helped a little. This radio system is a combined effort of Bill and Jim Oddino who fool around a little in radio as well as bringing home the contest hardware. Overall, it seems that radios are becoming more and more reliable with very few problems in evidence. Unfortunately, there were a few frequency mishaps and several crashes occured due to this problem, but this was cleared up in short order.

And then the stunt flying started to get mean. I doubt if anyone has seen so many good fliers gathered together at one meet. I, personally, very quickly assumed my last place position to keep out of everyone's way. As it developed, it finally settled down between Lloyd Nicholson, Larry Leonard, and Bill Salkowski as the three finalists. The contest ended with Larry on top followed very closely by Lloyd and Bill. When it was time for the flyoff, the same judges were used so that there would be no question of difference in judging. Bill Salkowski flew first and put in a very fine flight capably assisted by his caller who, by the way, never missed one maneuver. Bill was followed by Larry Leonard who had an equally good flight with the exception that he couldn't position his Liberty Belle into the spot and subsequently lost the critical number of needed points on his landing performance. Lloyd Nicholson was aware that he really had to put in a tremendous flight and apparently concentrated a little too intensely. His take off bounced a bit and then his figure M was a little shaky. But all three contestants flew exceptionally well and led a field of 104 entries in competition pattern. Who said stunt was dead?

Sat. night was banquet night in the restaurant right at the Marana Air Park. After finishing a prime rib, the circle people gave out their yearly awards for Formula I and Formula II. The winners are listed elsewhere in this report. It seemed almost too short a time but then it was all over and many retired to the saloon and others just plain retired for the big day ahead.

Sunday morning brought with it high cloud cover and cold. I thought "Aha, here it comes," but to no avail, as I soon had to shed my winter jacket and run around in my shirt sleeves. As soon as the stunt flyoffs were

completed, the pylons were up and the circle cutters began to finish their heats. In Formula I, that Bob Smith was something to see! He sat there calmly, allowing the time to run down, while waiting for the others to start their engines and then just reached over and with a single flip his engine was screaming. (Why, Clarence, why?) That Smith guy was something else! Around the first turn and he's in the groove already – there's no telling what he could do if he ever got serious about all this!

There were many hot ships and good fliers such as Ed Rankin, who put in an outstanding performance, but received one zero when his engine wouldn't go. He won first on all of his heats except this one. What a race he and Smith and Leonard would've made. Speaking of Leonard, Larry had two zeros which put him out of contention. It looks like a little luck really helps in an event like this.

There were some newer people who did exceptionally well. It was interesting to see new fliers entering competition, and in this case, their ships were right up to par with the top contenders in appearance as well as in performance. And, as these novices improve their flying, they will be top notch contenders in 1971.

There were somewhere in the vicinity of 50 to 60 entries in Formula I which made for a hectic time in figuring heats. This is always a hassle at any contest although the RCM Winter Nationals had exceptionally well run races and innovative ideas. As an example, the number one pylon was rigged with lights instead of flags, with the "flagmen" well hidden behind the light barricade. The lap counters were visual consisting of flip over panels with the lap number painted on each panel. Each counter, then, would just flip the panel as the lap was completed. The caller could glance over and see what his lap was and only had to remember which panel was his.

As usual, there was a little confusion at times, but overall I would say that it was an extremely well run contest and the Tucson RC Club, which were responsible for it, should be extremely proud. Even happy that it is all over for another year!

There was a fly-off in Formula I, too. There were three teams involved for 6th, 7th, and 8th positions respectively. The Can-Can team of Ed Nielson came in first followed by Bob Bleadon and Ron Shorr. There was also a fly-off for 4th and 5th place between Whit Stockwell and Ted White, which was won by the younger Stockwell. Speaking of the Stockwells, what a stellar performance by the senior member of that team. This was a superb effort highlighted by the most outlandish cries and groans and terror stricken screaming imaginable. It was just beautiful! He came through it all however, and finished his laps, and Mr. Bob deserves a big hand.

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Hobby People employs Jeff Young as their, in house, full-time artist. Jeff makes up all their advertising for the magazines, Hobby People News, and their Giant Hobby Catalog. HP has a complete art department including an IBM composer and headlining machine.

This photo shows the HP 'Security Room', a special room that is kept locked containing all the radio control systems, engines, and other valuables.

RCM VISITS HOBBY PEOPLE

(continued from page 48)

has built all types of models including Wakefield, Scale, Free Flight, U-Control. He has been active in radio control for the past 15 years. Roy's background includes former positions as a clerk in a hobby shop; wholesale hobby distributor salesman; and employee of Kraft Systems. For the past 2 years, Roy has been chairman of the nationally renounced Air Circus and Trade Show at the Whittier Narrows Recreation Center.

John Greenshields started modeling in 1940 and was a member of the Air Scouts and Civil Air Patrol, obtaining his private pilots license in 1948. John was former president of the Houston, Texas Hobby Hawks for three years; president of the Valley Circle Burners, Van Nuys,

One of the several modern shipping tables where the orders are pulled from stock and put on a 10 foot "ready table" and then the shipping clerk will remove the order from that table, check it to be sure all the items ordered are there and then pack the order. From the packing tables the orders are sent to the mailing area to be weighed and have the postage put on.

California; president of the Southern California Control Line Association; Control Line Director at the Nationals; and member of the BIRD's R/C Club Board of Directors for three years; and currently serves as a Contest Director and first vice president for the BIRD's R/C Club. An interesting side note is that John's daughter, Debbie Hannon, has won trophies in national competition in control line events and now flies radio control with her father.

One cannot help but be impressed by the modern facilities at the Hobby People retail center which includes up-to-date modern systems for fast and accurate processing of the daily orders. Hobby People uses an IBM magnetic tape system to keep up-to-date computerized mailing lists of all customers. For customer contact, there is the Hobby People News, a newspaper loaded with special values not always advertised nationally for their customers. The Hobby People catalogue has hundreds of pages and has a fully illustrated selection of hobby goods.

R/C Modeler Magazine is proud to salute one of the nations top mail order and retail firms, staffed by active radio control enthusiasts who have their customer and their customers modeling interest as their prime concern. □

CULVER CADET

(continued from page 19)

think the sun coming in made it a little warm.

The cockpit will probably be the most bothersome. I'll tell you how I did it. I filled the cockpit area with soft balsa blocks and just tack glued them in position. When dry I carved the shape of the cockpit, sanded and brushed on a couple of coats of dope and sealer to make a smooth surface. I bought some 1/16 plexiglass from the local airport supply and molded it over the cockpit area by first heating the plexiglass over the oven and when it starts to sag quickly press it over the cockpit sides and mold it into shape. I used cloth gloves and just worked the material around the sides. It sounds pretty looney but much to my surprise it actually worked. I used the same type of gloves the film people use which are made of soft material so you won't scratch the film.

Next, after allowing the glass to cool, trace the door outline, leaving enough extra material to epoxy to the cabin walls. I used a jig saw to cut the glass, being careful not to crack it. After cutting and sanding the edges smooth, trace the glass outline on the cockpit sides. Of course, you'll have to remove the shaped balsa sides and trim the cockpit to shape. By cockpit I am speaking of the section that goes over the top of the cockpit. I then cut the sides to the thickness of the glass so it fits flush. Just like a routed edge around the cockpit door. Tinting the glass was also much easier than I thought. I just got some Rit dye and followed directions and placed the glass in the hot solution watching that it wasn't hot enough to soften the glass. You just keep rolling the glass around and watch it and when it's the right color rinse it off when it cools a little. Wasn't that easy?

So that is about the story, children. The rest is just plain building and sanding, and sanding and . . . . yecch! Cover the model with silkspan and dope and paint or whatever other arrangements you care to make. By the way, the windshield was tinted the same way and it was just regular ol' sheet you get at the friendly hobby shops found in your town.

After painting, install your equipment. I used an Enya 60 in mine without any special exhaust system but I think it probably would be a good idea to install one. I just opened the bottom of the cowl and it seemed to work fine. Make sure that there is plenty of air coming in to cool the engine, especially around the head. I opened the front of the cowl on both sides to allow air to come in.

The tail surfaces are scale and if you are more interested in sport flying it wouldn't hurt to add another 10% or so of area to the horizontal stabilizer.

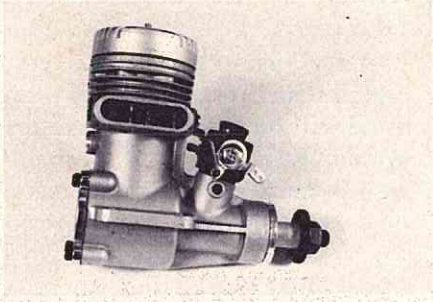
On my model I used the early Royal Products retract gear which worked very well with a 180 degree servo. Whatever you use, be sure it operates smoothly because it is very nice to have the wheels down when landing!

Basically this is a simple little airplane to build. It should make a neat little scale thing to have around. Flying a tail dragger like this little shorty is not as bad as you might think. As a matter of fact it tracks very well. In fact, I was surprised at how straight it went.

Just make sure everything is straight and you have enough power and the CG is right and you said your prayers and keep smiling through it all and good luck. □

KITS & PIECES

(continued on page 14)



price is $65.00.

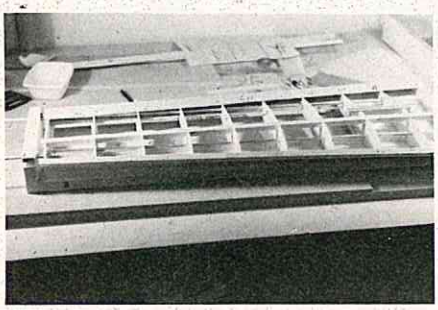
Over the years, Joe Bridi has designed a number of excellent flying airplanes, several of which have been kitted by various manufacturers. Joe's latest design, the Kaos, is being kitted by Joe Bridi himself. Joe has earned his living over the years as a cabinet maker and his skills in that trade show up in the quality of the kits he is producing. All the ribs, formers, and other wooden parts are very accurately machined and makes the kit a pleasure to build. The Kaos kit goes together so quickly and easily that it is possible to build and cover the airplane in about 6 evenings of work. If you have some doubts that you can build a .61 powered contest type pattern ship in that length of time, don't take my word for it, talk to John Broadbeck, Jr., of K & B Manufacturing. John built three of the Bridi Kaos kits in as many weeks in preparation for the Winter Nats in Tucson.

The Kaos follows the design trends of the last year using a double tapered wing. This design feature greatly improves the rolling characteristics of an airplane and improves performance, especially in windy weather. Contrary to what many people believe, a double tapered wing on a properly balanced airplane does not induce increased stall characteristics.

The fact that the Kaos is a very easy airplane to fly and can be landed at relatively slow speeds also makes it a good airplane for a beginner. Before we get into the construction details of how to build yourself a patter ship in six evenings, I would like to make one more comment about the Kaos kit. This is a very complete kit, in other words, you get everything you need to build the kit, with the exception of the covering and wheels.

Before you start construction of your wing, I recommend that you build an RCM wing jig. The ribs are predrilled to be used in this type of a jig. If neither you nor any of your friends have an RCM wing jig, here is a quick and

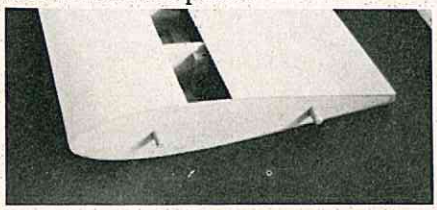
easy substitute. Go down to your local hardware store and buy two ¼" steel rods 36" long. Clamp the steel rods to the top of a 2 x 4, 8" long, so the rod centers are 5½" apart. Lay your T-square on the top of the 2 x 4 making sure the rods run parallel and perpendicular to the 2 x 4. The ribs are then simply slid onto the steel rods through the predrilled holes.



First Evening: With the wing ribs in place on the wing jig, glue the top spar and the leading and trailing edges that are pre-notched to the ribs. Glue the front and rear planking in place and add the cap strips and the 3/32" sheeting in the center of the wing. While the wing is drying you may start on the fuselage. The fuselage is built upside down. The ¼" square stringers and cross braces are glued to the fuselage top. The fuselage sides, which are indexed for bulkhead numbers 2 and 3, are glued to the top block. Use Devcon 5-Minute Epoxy to glue the motor mounts and bulkheads in place. Use C-clamps to hold the fuselage sides in place against the motor mounts. Glue the plywood wing dowel plate in place and the 1/16" sheeting on the bottom of the fuselage. Epoxy the plywood wing nut plates into position on the fuselage and glue the 1/16" ply sheeting under the nose of the airplane on the fuselage.

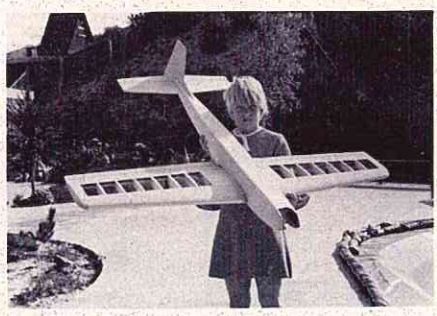
Turn the wing over in the wing jig and glue in place the bottom spar and the leading and trailing edge sheeting. Epoxy the landing gear blocks in place and add the cap strips. At this point do not add the sheeting to the center section of the bottom of the wing. This will be done after the wing hold down dowels are glued in position. Let your wing and fuselage dry overnight.

Second Evening: Build the 2nd wing panel in the same manner you did the first section remembering when you slide the ribs on the steel rods that you must have a left and a right wing. While the top half of the wing is drying, edge glue the bottom of the stabilizer sheeting together. Glue the leading edge, trailing edge, tips, spars, and cross pieces in place on top of the bottom sheeting. Glue the top sheeting in place and let dry. Glue the rudder, the sub rudder, and the pine insert together and pin down to a flat surface to dry. Put the hatch cover in place and epoxy the hatch hold down pins in position. Next, turn your wing over in the jig and complete the bottom as you did with the first panel. Before you call it a night, shape the rudder and elevators as shown on the plans.



Third Evening: Join the wing panels. Cut about a ½" long piece of ¼" dowel and insert one in each of the two holes of the center rib. When you join the two wing panels, this will ensure that they are perfectly aligned. Here, again, to speed up your building, use 5-Minute Devcon Epoxy for joining the wing panels. Be sure to put a 1" block under each wing tip for dihedral. While the wing is drying, epoxy the vertical fin and the stabilizer in position on the fuselage. Use a triangle or a square to be sure they are lined up perfectly. Glue the wing tip blocks in place and add the ailerons using nylon hinges. Be sure you have the aileron pushrods in position before pinning the ailerons to the hinges. Lay the fuselage in position over the wing and mark the position of the wing hold down

dowels in the leading edge of the wing. Insert the two hold down dowels in the ¼" hole you have just drilled in the leading edge of the wing. Glue the plywood plate to the top and bottom spar so the dowel extends through the plate. You can now finish sheeting the bottom center section of the wing and glue the 1/16" ply hold down plate in position. Fasten the rudder and elevators in position, again using nylon hinges. The two elevators are epoxied to the wire and horn assembly that is provided. Lay waxed paper over the top of the wing and fasten to the fuselage. The balsa wood fillers can now be glued into position. The last thing to do this evening is to fiberglass the center section of the wing.



Fourth Evening: Sand the entire airplane, starting with a coarse sandpaper, and working your way down to a fine paper. This will take a good part of an evening depending on the type of finish you desire. Remember that the quality of the final finish depends on the surface you begin with. If you are going to use silk and dope you can then apply several coats of dope to the framework.

The Fifth and Sixth Evenings may be spent covering and finishing your Kaos.

When mounting your radio gear, wherever possible use the trays that are supplied by the manufacturer for the servos. Do not use the double faced tape for mounting your servos. Almost all radio manufacturers today will void the guarantee if this type of

mounting is used for their equipment.

The Kaos is a relatively easy airplane to fly, yet in the hands of a pro such as Joe Bridi, it will place at, or near the top, in any pattern contests. The quality of workmanship in this kit and the hardware that is included in the Kaos Kit by Bridi Hobby Enterprises is an excellent buy for $47.50. □

SUNDAY FLIER

(continued from page 12)

Incidentally, the single float seaplane conversion for landplanes seems to be gaining in popularity with each passing month. Len Purdy, of Lanier Industries, sent me some very interesting shots of his new "Convert-A-Float" project which makes it possible to change one of his low wing jobs from landplane to seaplane and back again in a very few minutes. Here's a lineup of some of the test models:

And here's a great shot of one of them rising off the water:

There ought to be a lot of activity around the lakes come next spring, what with Len's seaplanes and Paul Sherlock's new amphibian.

Along about the middle of the month – November 15, in fact – Keith Brewster, of the Silent Flight Center, had one of the more unusual soaring contests of the year. He called it the "Plastic Turkey Shoot." Plastic because it was a "one design" contest in which all contestants flew a Canyon Plastics 1-26 Schweitzer. Turkey Shoot because first prize was a real Thanksgiving turkey! There were three events – precision landing, three minute max, and then a choice of a one minute precision flight and spot landing combined, or a repeat attempt at a three minute max. And you had to pick your event in advance. It was a real fun event; here's a shot of the contestants with the three ships, all identical (the planes, not the fliers) which they took turns flying. Winner isn't shown – he was taking the picture. And I can tell you right now – that turkey was delicious!

For any modeler who wants to get a glider going in a hurry, that Canyon Plastic Schweitzer certainly does the job. Takes about a total of two hours to install the equipment, smooth off the molding flashes, and get into the air. I would suggest that you make sure the dihedral braces give you at least six degrees in each panel, to give better turning characteristics, and get maximum throw on the rudder.

There aren't too many women fliers in R/C. But they certainly seem to be showing interest in

the soaring aspect. Here's a shot of Jane Springer going for her five minute thermal flight to qualify for level one in the League of Silent Flight. She still has some spot landings to make, but as of this writing, it looks like she'll be the first woman to qualify for membership in the LSF.

That's a sun shade above the transmitter box. As everybody knows, any thermal that's worth flying in, always lines itself up directly in front of the sun!

Another phase of R/C flying that seems to be gaining rapidly in popularity is the "quarter midget" pylon racing. This was originally proposed some time ago in RCM and some rules were drawn up, but nothing much happened. It was a little ahead of its time. The NMPRA settled on the .40 powered bombs, and it became a great crowd pleaser. Then the Formula I and Formula II classes came along (as re-identified from "Goodyear") and speeds continued to increase until they were well over 100 mph.

Then came the lightweight airborne receiver and servos, and the idea of .15 powered racers again looked attractive. So some enthusiasts got together, and some races are being held. The rules are still in the formulative stage – seems everybody has their own pet variation, but they'll settle down, and this should be a popular addition to the R/C scene.

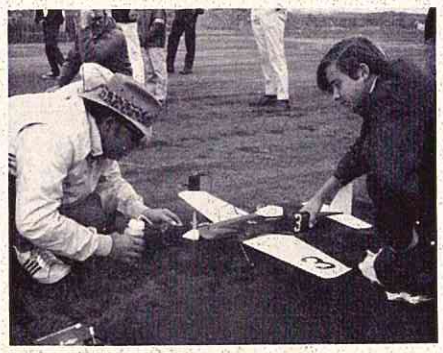
At a recent Pioneer R/C event, some of the new ideas were tried out. One which is getting a lot of attention is the need for an effective idling speed, since it is

required to start up the engine, throttle back, and taxi fifty feet to the starting line, where you should stop, unassisted, and then start the race when the starter gives you the flag. Here's a shot of Gary Korpi, Les Anderson, and Bob Andris beginning their taxi to the starting line.

It was obvious during this contest that idling a racing engine presents a problem. In fact, if the rules had been strictly enforced, several of the models would have been disqualified because they overran the start line during the taxi. But these things will be worked out.

Most of the racers are using the Max .15, although the K & B .15 with a special throttle arrangement was used by Gary Korpi, and it looks promising.

The models look just like the Formula I jobs, only about ¾ size. Weight runs from 2½ to 3 pounds, and it is evident that the lightweight is a definite advantage for this size model. This shot of Bob Andris, with Rick Walter as his pit man, gives a good idea of the size.



Bob made his own plug and formed the Little Toni fuselage out of fibreglass. Interesting sidelight; Bob says that flying gliders, with the necessity for planning all landings as "deadstick," has

been a great aid to him in flying the racer when it comes to bringing it in! They really float — and fast.

It's going to be very interesting to see if the quarter midget event lives up to its anticipated promise. It will take some strong leadership, such as the NMPRA, to get agreement on the rules. And then it should grow steadily in popularity. Like all racing events, it will eventually be suitable for experts only. And that's as it should be, according to the general consensus as I hear it.

To wind up November as a fun month of flying, I really lucked out. I have been working on qualifying for level three in the LSF, and that requires a half hour thermal and a two hour slope flight in addition to the goal and return flight which I got earlier. Now a two hour slope flight just takes two things — patience, and a wind blowing against a hill for two hours. But a half hour thermal needs the right day, the right air currents, and right place at the right time. Oh, yes — if you want to, you can substitute a second half hour thermal flight in lieu of the two hour slope flight. But not many do that, because it's a little harder to come by.

Anyway, as luck would have it, I went to the slope twice — only to find it dead calm both days. No problem — watched the surf fisherman, had fun, and went home. The wind would always come up later.

Then on November 24 I went out to have lunch, looked up at the sky, saw a couple of puff ball clouds, and, since I had the MaxiSailer in the back of the station wagon, went over to the Pioneers' field, set up my hi-start, and made a couple of tries. No luck; couldn't seem to quite get up to the lift. Then I stretched the rubber a bit further and tried again. Right in the middle of the tow I saw the model hit a bump, so as soon as it released I circled back, and away went the MaxiSailer. Once it was up in the

lift, all I had to do was watch it, and whenever I saw it start to sink, cruise out of the area until I found another updraft. Thirty minutes later I brought it down. Best lunch hour I ever spent.

Now all I needed was a two hour slope flight. And then the rains came – and the wind. But it was just too miserable, and I wasn't in all that hurry.

Then, last Saturday, the rain stopped, and a light breeze was blowing. So I headed for Sunset Beach. As I went along I noticed a couple of cumulus clouds forming – it was about ten in the morning – so, since it was right on the way, I decided to stop off at Delmar where we do the winching and thermalling. The wind probably wouldn't come up on the slope before one or two o'clock in the afternoon anyway.

Glenn Froelich was there with his hi-start, which he made up using surgical tubing, about fifty feet, and around 350 feet of nylon line. I hooked up the MaxiSailer, it shot into the air, released at about three hundred feet, and came down like a giant hand was pushing on it. I was in a giant area of sinking air.

As luck would have it, Don Lillie had retrieved the line, but couldn't go up because someone was up on his frequency. So up I went again. And this time I went right up into the thermal that was causing the surrounding sinking current which I had hit just the moment before. So once again, by cruising from thermal to thermal, I made a second flight of over thirty minutes, all within one week – and I'd been trying for several months just to get one!

So, like I said, November was one of those months when things just seemed to work out for great flying fun.

Hope you all have a month like that real soon. □

ENGINE CLINIC

(continued from page 10)

or twice with the battery disconnected. Flip the engine several

more times with the battery still disconnected to get the fuel into the cylinder. Then connect the battery and flip it hard. It should take off every time. In cold weather follow the same procedure except give the engine a **small** exhaust prime. Get one of Tatone's prime bottles or an old nose spray bottle. Don't use a regular fuel bulb as it is too easy to over-prime. Close the piston when you prime the exhaust. The small amount of fuel that you squirt against the piston will be plenty.

Dear Mr. Lee,

My winter project calls for a pusher engine in the range of about a .40 or a .45. As I see it there are no pusher props available in such size as this may require.

What I am wondering is if there is an engine manufactured that has a crankshaft that is set up for clockwise rotation so that perhaps I could use a conventional prop mounted backwards.

Perhaps one of the rear valve engines would work out better, I have had no experience with these at all.

In the event that such is the case that no one has such a set-up would it be possible to obtain a crank, so cut, from you for one of the K & B engines.

This power is for a tailess wing, and having worked on the real thing years ago at Edwards AFB, I am most interested in this sort of a design, now the plans are available for one from one who has had much success with it.

Sincerely,
D.B. Dobson
Mitchell, South Dakota

To my knowledge, Mr. Dobson, there is nothing available in the way of a left hand crank in the .40 size engines. Left hand cranks can be had for the old Veco .45 if you happen to have one of these around. This same crank will also fit the Veco .50. Left hand cranks are also available for the Veco .61 for others out there who might be interested. In the October issue we discussed reversing the rotation of rear rotor engines and front rotor engines that had removable front plates, if you should happen to want to go this route. We also asked if anyone knew of a source of counter-rotating (pusher) props, to let us know. Several people wrote in to tell us that an 11 x 7¾ fiberglass pusher prop is available from Performance Aero Products, Box 6064, Shirlington Station, Arlington, Virginia 22206.

Dear Mr. Lee:

I noticed in your column appearing in the September issue of the R/C Modeler Magazine that a couple of modelers had written in regarding the overheating of their engines. I thought I would write to you and tell you of my experience which might be of some possible assistance in the future.

After many, many trouble free flights on my Super Tigre .60, I began to have heating problems. The engine would slow down after a few minutes of flight and start, it would appear to me, to seize up. The engine was extremely hot. Numerous times I opened the needle valve to richen the mixture and this seemed to help for a short time but gradually the engine would again start running hot and seizing up. The entire engine was cleaned, the fuel lines replaced, carburetor cleaned, etc. There seemed to be no reason for the apparent leaning of the engine. Finally, and embarrassingly so, I decided to check the filter in the tank. This is the brass ball bearing type (I'm not sure of the proper name). I had been using this for sometime and found when I tried to blow through it that it was almost completely plugged. This accounted for the leaning of the engine and when replaced the problem was solved.

This is just something else a modeler should check if he has an engine that is overheating, especially if he has been using a filter in his tank for sometime without making sure that it is clean.

Yours Truly,
V.A. Bird
Calgary, Alberta, Canada

Thanks for sending in your problem along with the solution, Mr. Bird. I like these kind of letters as I don't have to strain my brain coming up with an answer. Any of you other fellows who have had problems for which you worked out the solution, let us know.

Mr. Lee,

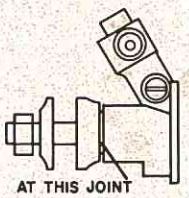
I have just built and flown my first R/C plane. One of my biggest problems was with my engine. Surprisingly though, the fault is not with the idle. It is with the compression (so I've been told). I've also been told it is losing pressure at the area indicated in my illustration. The engine is hard to start, but when it does start it runs well. Can it be fixed? If so, how?

Thanks,
S. Taylor
Pasadena, California

Your engine has both cylinder compressions and crankcase compression. Most people are familiar with cylinder compression as this is what you feel when you flip the prop. Crankcase compression or base pressure as it is also called can only be felt when the glow plug is removed and the engine turned over. It is very small in proportion to cylinder compression. However, crankcase compression transfers the fuel from the crankcase into the

cylinder. If the crankcase pressure is low the engine will have bad fuel draw, be difficult starting, and in general not perform satisfactorily. Crankcase pressure is most often lost through the front bearing as you have indicated in your sketch.

If your engine is losing crankcase pressure out the bearing it will show up as excessive fuel leakage while the engine is running. A few drops or wetness is okay. However, if you can see the fuel coming out like a spray gun, the crankcase, crankshaft, or both will have to be replaced.



ENYA .19 R/C

Dear Clarence,

Please give me your opinion on the following:

Assuming that lowering the compression ratio reduces the power of a glow engine, (normally thought of as a disadvantage), what can be said of the advantages, if any. What will it do to idle, rpm spread, more controlled intermediate rpm range, vibration, starting, etc. Also slower rpm.

My scale Piper Cub requires a .45 engine, but I have room for a .60 which I would modify to a lower C/R if it would give me more scale-like performance.

Sincerely,
Roy McGuckin
Pittsford, New York

There is no real advantage to lowering the compression of your engine assuming, of course, that the compression ratio is not too high to begin with. None of our present engines that I know of have this problem. It is true that low compression will let the engine idle a little lower and smoother, but this small advantage is outweighed by the disadvantages. Harder starting, lack of power, greater fuel consumption, etc. You would be better off to leave the compression ratio alone and just throttle back if you want more scale-like performance.

We will close the column this month with a letter that does not have a question, just some interesting information.

Dear Mr. Lee,

Ref. your July 70 R/C Modeler on glo-plugs.

My grandfather had an engine which provided power to his grain elevator that employed a hot plug for starting and running. It probably could be classified as a glow plug engine, one cylinder, two cycle, side port.

Rather than an electrical source and a resistance element, this hot plug was heated with a blow torch.

Date of manufacture – 1899.

Sincerely,
Roger M. Wilhelm
Dayton, Ohio

GEMS

(continued from page 8)

scent, left turn to final approach. Keep wings level, descend smoothly, and, using minimum amounts of throttle action, guide your craft to a nearly stalled touchdown on the spot you're intending to hit; then do it again and again.

The more you fly in this manner, the better you will become and, the better you get, the higher your confidence goes. When you're pretty good you'll be willing to find out just how good you really are. Go find someone you think is as good as you are (or better) and challenge him to a touch-and-go contest.

This can be done in one of two ways: You each use your own airplane and take turns flying while trying to hit the predetermined spot. The guy who gets the highest percentage of successful spot touch-and-go's wins! The other way is use the same plane and take turns trying but don't do this unless you trust your opponent!

After you get the landings down pat try a rat race. So far as we know the inventor of this event is T/Sgt. Jim Duckworth who is presently stationed on Guam. He and Jim Simpson did a lot of rat racing and it appears to be something which any airplane can do with equality!

All you do is this: Agree on a course (we use our runway which is about 140 feet long and 20 feet wide). You must fly over it straight and level from downwind to upwind then do whatever you please to get back downwind and do it again. After experimenting you will probably make tight left hand (they're easier) turns at each end of the

course. The course is short enough to allow you to see each other and so you don't need officials or "callers" and, as you can guess, the guy who does it most times wins! We've raced the "Chigger" (a 500 sq. in., 2.75 lb. biplane with a .19) against a Quick Fly (660 sq. in., 6 lb. monoplane with a .60 up front) and had many dead heats, so, you can see no special plane is needed for it.

The benefit you will derive from this event is a taste of what makes competitors what they are. I can't begin to describe the thrill of winning and won't attempt. Just go try this and experience it yourself. It also gives a side benefit of learning to think on your feet which you will find valuable later on.

The next item on your ladder requires more than one "flying buddy" and is best done as a group organized 'thing.' The Ft. Worth Thunderbirds uses this routine as a club contest and this year will use it in the National Fun Fly to be held in Ft. Worth in 1971.

While you're rounding up the "gang" and making noises like "let's have a contest," sneak out to the flying field with no one around and try this. Make a take off as you always have but, when you get 100 feet of altitude, pull in more up elevator and see how steep you can climb your ship. Notice when it stalls it drops the left wing (usually) and, if you don't let off the up elevator, it will spiral down or maybe spin (if your airplane has an aft center of gravity (CG).) Continue to practice the steep climb to see how much altitude you can gain in 30 seconds beginning the moment you start the take off roll.

The second maneuver in the fun fly schedule is a spin. To enter a spin you climb as steep as possible and when the aircraft stops you slam both control sticks to the lower left hand corner. This gives low throttle, left rudder, up elevator, and left aileron. (If your airplane won't

spin with all this don't enter the fun fly until it will). The spin is characterized by a vertical descent while turning to the left as opposed to a spiral which is the plane's nose flying a spiral or descending circular path! To stop a spin simply release the control sticks and it should stop. If not then move both sticks to opposite corners. That is, high throttle, right rudder, down elevator, and right aileron. If it is still spinning get ready to build another plane as this one was too tail heavy! After doing the maximum number of spins you dare, directly from the 30 second climb, recover, fly downwind then orbit, and prepare to do 30 seconds worth of rolls.

Why did you turn white? Oh, yes, we did forget to teach you rolls, huh!

To start just fly straight and level, give a "tap" up elevator, then hold full right aileron, when airplane is upside down and while holding right aileron "tap" down then continue to hold right aileron until airplane is upright again at which time you release the stick to neutral position then give enough "up" to return to level flight. After you've done this awhile, try consecutive rolls, holding right aileron then alternate "down" and "up" as the plane rotates (the problem is your timing!)

The next maneuver is 30 seconds of loops which is entered from straight and level flight simply by holding "up" and using appropriate "right" or "left" aileron (at the bottom of the loop only!) to level the wings! Big deal, huh?

The last maneuver is: (you guessed it!) the accuracy landing. If in the first 20 foot square, 15 points, second square 10 points, third square is 5 points, and if the engine is still running after landing you get an additional 15 points!

So there you are, sir! Now hop to it and find out the thrill of winning. Next on the agenda (or step on your ladder if you will) is pattern and pylon contests. □

VIEW POINT

(continued from page 5)

facilities by Naval Optical tracking and Radar equipment. The distance record was under the auspices of the Governors office for the State of New York, with state police and vehicles assigned by the Governor himself, to supervise the record attempt. All such attempts at records are made under extremely stringent rules set up by the Academy of Model Aeronautics in cooperation with Federal and local authorities, and performed by licensed and insured fliers.

With regard to a statement in the article that a model plane crashed on a Van Nuys airport, this was a six ounce free flight model that had drifted in from some distance and had landed near a hangar area and could not have caused any damage regardless of what it had hit. Such an incidence is certainly rare. With regard to radio controlled model aircraft, we are quite concerned about maintaining proper safety standards wherever they are flown or demonstrated, and have some of the most strictly enforced and stringent safety regulations known to any sport. These rules were established by the modelers themselves and incorporated as part of the by-laws and enforced by the Academy of Model Aeronautics who sanctions each and every contest. In addition, the majority of radio control fliers in this country are members of the AMA chartered clubs and operate under all of the safety rules and regulations of the Academy.

We feel that this article was certainly damaging with regards to public relations and public information, which we feel is the prime purpose for a publication whether it be a daily newspaper or a monthly magazine such as our own. As an example, nowhere was there a mention of the use of radio controlled model aircraft for recording temperature and wind directions during

forest fires; the use of radio controlled model aircraft for commercial filming, such as used by Walt Disney Studios; the use of radio controlled model aircraft for aerial filming for institutional and public documents; the use of radio controlled model aircraft for crop dusting and cloud seeding; the extensive use of radio controlled model aircraft by NASA to test many types of aircraft prior to the construction of full size aircraft, thus saving the government many, many thousands of dollars; and many, many other such public services, all rendered by modelers through the medium of their sport. Nowhere in the article was there a mention of the United States team that competes against virtually every other nation in the world on an every other year basis and an Olympic type competition, nor any mention of the many famous personalities of our time that engage in this highly competitive sport.

We have been contacted by the Los Angeles Times on numerous occasions to provide information concerning model aircraft for articles that were supposedly being written. We would be more than happy to supply accurate information for any future articles of this nature if the staff writer so desires. We would be more than happy to cooperate in any way possible to prevent the type of damaging misinformation which appeared in your issue of December 10th.
Sincerely yours,
R/C MODELER MAGAZINE
Donald W. Dewey
Editor and Publisher

In addition to the many, many letters sent to the Los Angeles Times by members of the R/C Industry and the model press, the following letter was sent to the Editor of the Times from the Academy of Model Aeronautics:

Dear Sir:

The model plane story by Steve Emmons in the December

10 edition of the L.A. Times is a classic example of why so many people are disenchanted with contemporary news media – failure to tell the whole story, with the result that a distorted picture is created. In claiming "Model Planes Growing Peril to the Airways," the story omits facts which were provided to the reporter; facts which would change the nature of the story to reflect a more favorable image of model plane flying activities.

The writer implied that thousands of hobbyists fly model planes higher, and faster, and longer than is typical. He quoted performance records without indicating that these are unusual, rare, and flown under special and safe conditions. The 27,200 foot altitude record for radio controlled model planes, for example, was flown with FAA advance knowledge and clearance in government controlled airspace over a weapons range which was off-limits to all commercial and private air traffic. By contrast typical model plane flying for sport or recreation is conducted within a few hundred feet of the ground with considerably less performance potential.

The writer also failed to note that each of the records were for single flights, made in different countries at widely separated times and places, with special airplanes designed for the purpose rather than typical of those flown by the average hobbyists.

The real story was overlooked almost completely – that thousands of hobbyists fly model planes regularly and with an impressive safety record, through voluntary compliance with safety standards established by the Academy of Model Aeronautics. Here again the writer left out a key fact – that the FAA's decision in the early sixties to **not** *impose regulations, following an extensive review of model plane flying practices, was largely based on satisfaction with the self-regulatory nature of the activity established and pro-*

moted by AMA leadership. That judgement was justified by the record and nature of the Academy, which is a non-profit association of aeromodeling enthusiasts without commercial motivation. Incidentally, the Academy of Model Aeronautics includes many airline pilots among its membership.

From the AMA viewpoint the likelihood of model planes becoming a peril to the airways was grossly exaggerated by the story in the Times. A few isolated reports do not justify the "peril" label of your headline. To the many thousands who know better, the story served mainly to cause confusion and discourage credibility concerning newspaper reporting in general.

Sincerely,
John Worth
Executive Director
Academy of Model Aeronautics

Copies of these letters have been sent to the Federal Aeronautics Administration to supplement our own concern for the damaging nature of this type of article. We would like to commend John Worth and the Academy staff for their quick response to this unwarranted and unjust adverse publicity. The Academy has always had a close working relationship with the FAA and we are certain that if RC'ers will continue to improve their own personal philosophy concerning individual safety and concern and well being of the general public, the transient nature of a single article designed to sell newspapers by frightening their readers with misinformation will soon be forgotten. It is the responsibility of this writer, as well as every other single RC sporting enthusiast to create the proper public image and a feeling of confidence and acceptance on the part of the general public. This can only be accomplished by acting as responsible adults participating in an adult sport in such a manner as to reflect credit upon all of our fellow enthusiasts. □

WAGGER

By Loren Dietrich

"Hey Bonedoggler," queried Walt, "what's this dog-eared old book on the workbench? It looks like it's a hundred years old."

Wagger's bloodshot orbs swiveled to take in the volume, then he grunted his answer without pausing in his epoxy smearing. "More of the accumulated wisdom of Great Uncle Balderdash Bassett. He spent a lifetime watching and making notes; when it came time to shuffle off to that great hobby shop in the sky he found that he had a lot of answers for questions that nobody had asked yet. Therefore, he compiled a volume and put it in a time capsule outside his solid brick doghouse. I found it the other day when I went to the pantry for fresh supplies."

"Hm'm'm," mused Walt, thumbing through the dusty tome. "Hey, Wagger, listen to these basic rules for R/C'ers." (The following is quoted directly from *The Wisdom of Balderdash Bassett.)*

A wing will always warp in a direction that will assist torque, thus causing a disasterous spiral dive.

A stabilizer will always warp so as to assist the wing in causing disasterous spiral dives.

Disasterous spiral dives will always break the wing and stabilizer.

Repaired wings and stabilizers always warp. (Everyone join in the chorus.)

A temporary repair will fail at the worst possible time.

Anything which CAN fail in flight WILL.

When something which works is improved it doesn't work as well.

Old airplanes get heavier due to meteorite dust if nothing else.

A person staring at an airplane punches holes in the air, thus causing a 'watched' airplane to fly worse than when it is flown privately. The more people watching, the worse the airplane flies.

When landing an airplane toward you, follow its wanderings with the aileron stick. This will automatically cause the airplane to fly toward you and crack you smartly on the shinbone.

If your fuel tank foams, pack it loosely in sponge rubber. The fuel will still foam, but you will now have a nice sponge to hold the spilled fuel in contact with the structure you didn't fuelproof.

A well-constructed seaplane will not allow the water to leak out, thus assuring a maximum of wood soaking, rust and corrosion.

It is not rational to put $300 in a toy airplane and then throw it off a cliff. This is called slope soaring.

Slope soaring winds were better yesterday, but will be good again next spring.

A sailplane which is too heavy for thermals is also too light for slope soaring.

Interior details of scale models can usually be seen more easily after the first flight.

"I'll say this for your Great *Uncle Balderdash,"* Walt snorted. "He certainly had experience with R/C models."

"I wonder if any of our friends out there have any 'Balderdash-isms' of their own!"

WHAT DO YOU THINK? □