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VOL. 7, NO. 2

APRIL 1981

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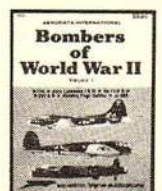
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Vito Tomeo's Sea Fury uses a gear drive to achieve scale speeds. Feature article on this model appeared in the December '80 issue.

want a plane that does 95 mph at three feet of altitude. Realism is going as fast as possible, and let's please the crowd and to hell with the judges. These guys raise Cain when they're downgraded for super-sonic maneuvers.

But the writing is on the walls for these guys. The contest performance

of the 1/5-scale models during the last season has been spectacular. In one local meet here in Florida, all three of the top planes were the larger, .90-engined aircraft. The 1/5-scale ship certainly puts the normal .60-powered model at a disadvantage, both in static judging and in flight performance. In his Editorial

in that first October issue, Pat Potega predicted that these 1/5-scale models would quickly find their way into the winners' circles . . . and he really hit that one right on the head.

However, these big airplanes do have some shortcomings. They put some proficiency demands on the builder. Getting a model of this size in under 15 pounds isn't that easy, and you have to meet that weight restriction to fly in Sport Scale. These planes will fly well up to 20 pounds, of course, but then they are only legal in the Giant Scale class. Building light is an art, and it's one the modeler would do well to acquire before tackling a project in this class.

As mentioned, the breakthroughs in engines have stimulated more and more 1/5-scale designs. We personally feel that the gasoline engines haven't proven too successful in these models because of the lack of the correctly pitched props. If you want an airspeed in the 60-70 mph range, and you have an engine that is restricted to about 7,000 rpm, then you are going to want a very high-pitched prop. Diameter is of secondary importance here, and if there

(Continued on page 77)

BEST IN SCALE

It's no accident that Arizona's Kent Walters won the first-ever U.S. Scale Masters Championships. He chose the reliability of a proven aircraft, and scored flights of 95.5 and 96.5 with his SBD-3 from the Bob Holman "Plan Pac" design. Congratulations to Kent on capturing the garlands!

The Dauntless makes the scratchbuilder's job easier. Since the fiberglass cowl and two-piece canopy are already included, you only have to cut the wood parts to get a fantastic contest machine. The Plan Pac sells for \$30.00 (plus \$2.50 shipping).

Bob is considering the manufacture of a fiberglass fuselage for the Dauntless. Those who are interested in obtaining one should write for more information on price and availability.



The Dauntless on its 96.5 point flight at the Masters. Looks uncannily real, doesn't it!?

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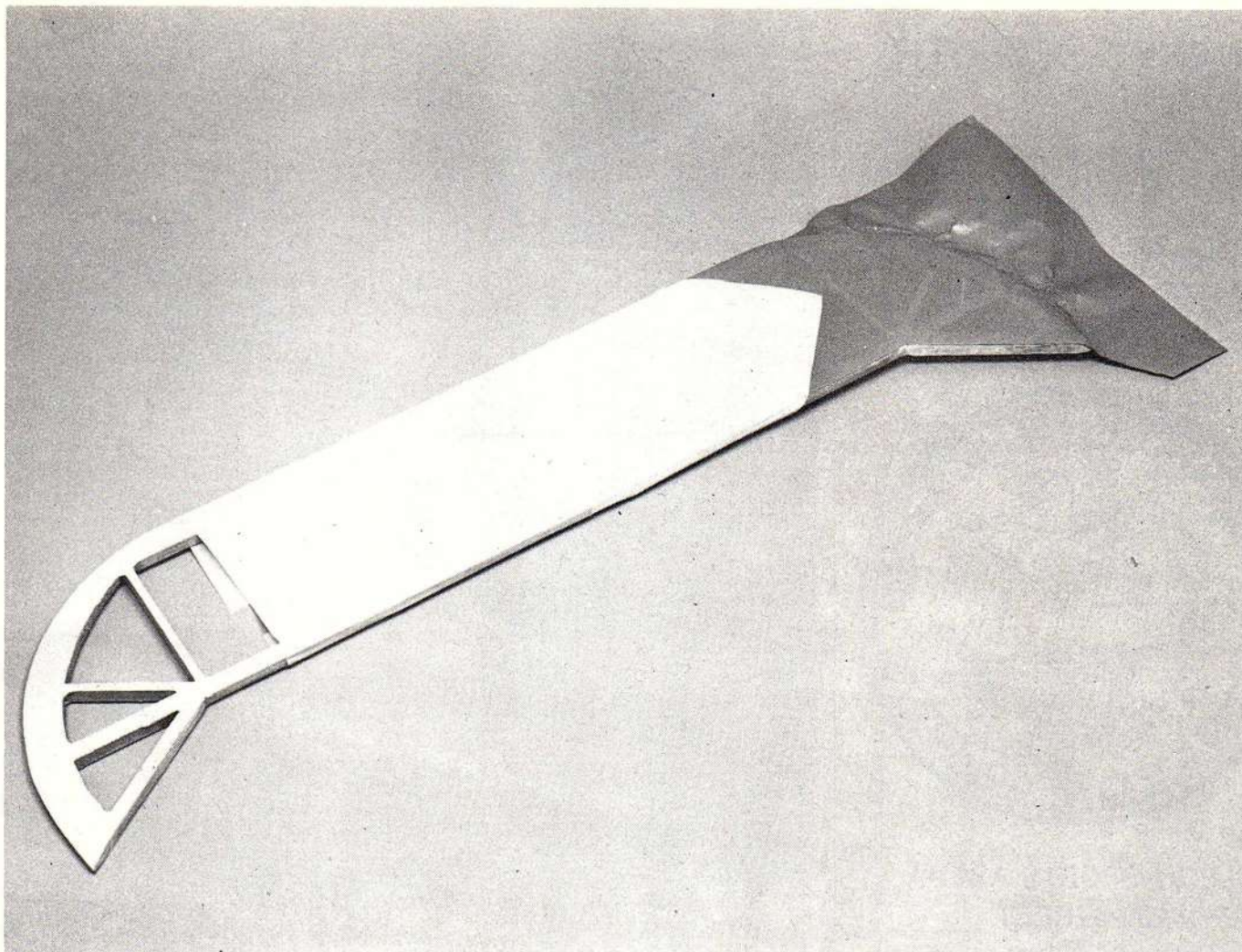
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One of these samples we did was a stab, which was done in several pieces of FabriKote. Lighter colored pieces were applied diagonally with no problems.

SR/CM LOOKS AT... **FABRIKOTE**

An exciting new covering material hits the marketplace. This one just may be the answer to your prayers. Staff Report J. R. Naidish photos

When a new covering material comes out, it's always big news. This is especially true when the world's leader in covering materials (exempting the silkworm, of course) introduces the product. Top Flite's new FabriKote is one of the most versatile and different covering materials we've ever seen.

Actually, there are two different products here. FabriKote is a woven textured covering material which comes in pre-painted finishes. It is

intended for large aircraft by virtue of its inherent strength. FabriLite is the companion product. It is slightly thinner and lighter, and is less forceful when shrunk, so that it is suitable for sailplanes or smaller airframes.

We've seen and used synthetic cloth coverings before. They are available as materials germane to the industry, or you can use Dacron lining material from the fabric store. They can be applied with heat, and

they shrink drum tight. So does FabriKote or FabriLite... but that's where the similarity ends. Those other materials have a definite warp and whoof to their weave, i.e., they have directional grain. Apply them crossgrain, and they bow between the ribs of an open framework wing. When applied in the correct spanwise manner, they impart no torsional rigidity to the airframe.

FabriKote and FabriLite can be applied even diagonally on any sur-

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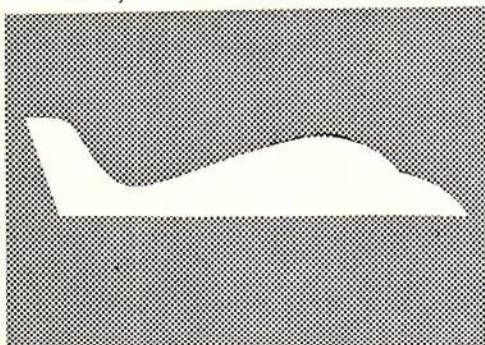
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12 scale r/c modeler

This is about a 2" radius, and the FabriKote went around it with ease. You'll find application easier than Monokote.

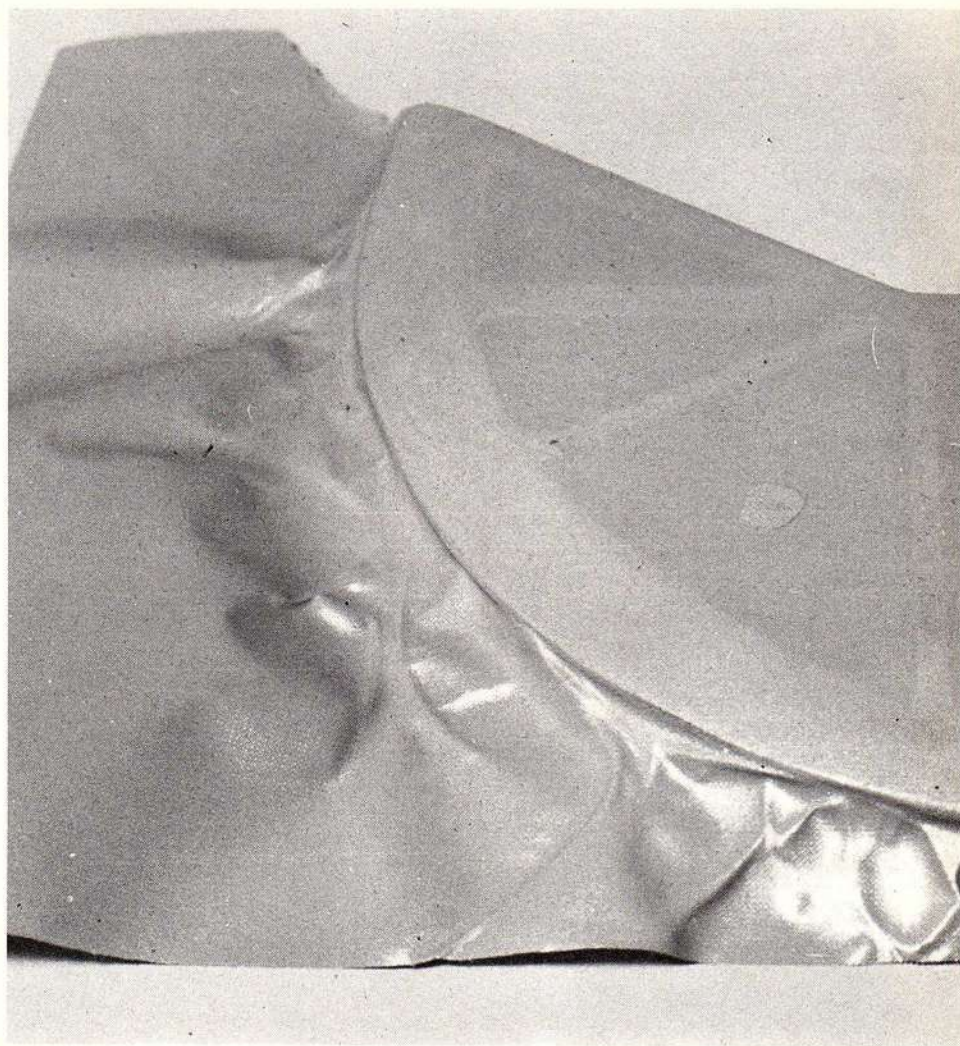
face. They shrink unilaterally, and impart about 25% torsional strength to whatever they are applied over. That's the most significant breakthrough in covering materials, in a nutshell. The implications are staggeringly monumental. Never before has a modeler been able to achieve a scale-like fabric finish without sacrificing some torsional strength. Even the old silk-and-dope system couldn't impart the inherent strength that FabriKote does.

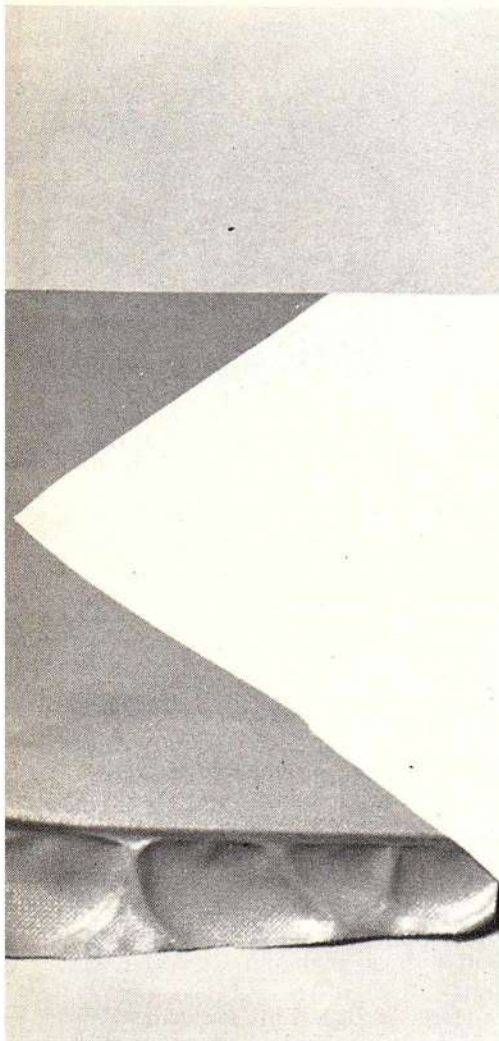
When you handle FabriKote, you don't have to watch for grain direction. That should add up to quite a bit of savings over other materials. You can cut out the parts needed, with disregard to any direction of grain, so that the waste factor should be about the same as when using Monokote. When you run the stuff through your fingers, it feels "softer" than most other fabric-type coverings. On closer examination, the fiber count looks totally different, with a much smaller thread and a

closer weave. The stuff looks more authentic on the average .60-sized airplane, we feel.

Naturally, if the stuff has no definite weave or grain direction, then it must be a pleasure to pull around curves. That's just what our tests concluded. We gave the samples to our local hobby merchant, knowing that he had a good familiarity with all the various covering materials. He took an old elevator and cut some swatches from the sample pieces. The first thing we told him was that he could set the iron at the normal Monokote temperature (the other covering materials require excessive heat to get a good bond). He went to work, tackling corners, tight radii, and open areas. The stuff flowed on like Monokote.

As a matter of fact, we must admit that it may have even been easier to apply than Monokote (at least with the FabriLite). The stuff didn't have any tendencies to stick to itself, or react to static electricity, as Monokote does. We intentionally put pieces on crossgrain and diagonally, yet they applied equally as well. The material trimmed off the edges even



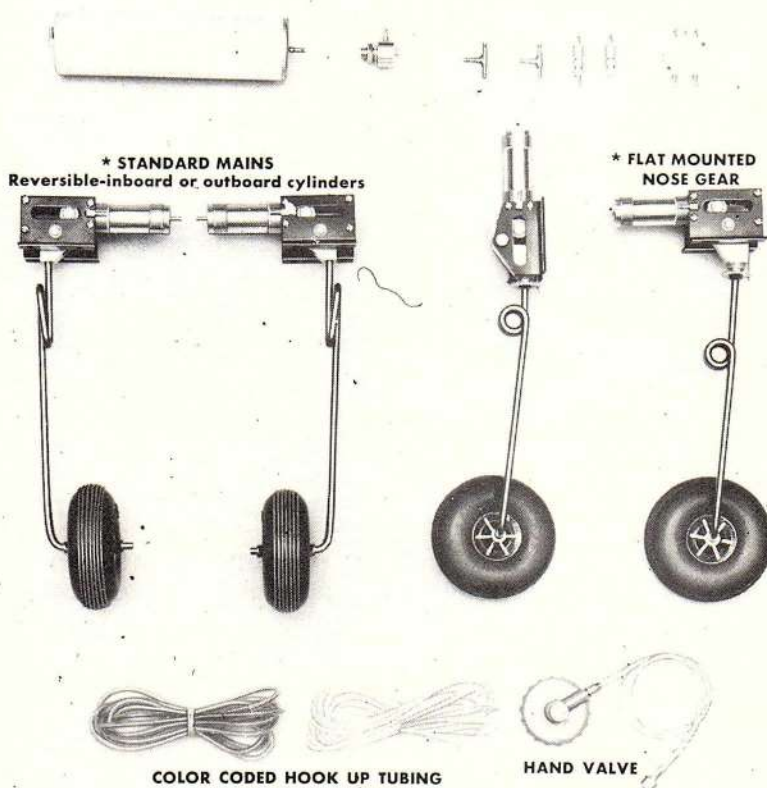


smoother than Monokote. But watch out for the shrinking characteristics. This stuff will continue to shrink as long as you add heat. Like most other fabric-based coverings, the FabriKote could actually induce a warp if applied with too much heat over a sustained period of time.

Our tests showed FabriKote to also be superior to Monokote and other coverings in another important area. We accidentally induced a wrinkle by applying heat to the center of a piece which wasn't attached along the edges. The wrinkle looked really bad, as if the underside adhesive surfaces had made contact and were permanently bonded. If this had been Monokote, the best result we could have hoped for would have been a noticeable crease where we tried to press out the wrinkle. But the FabriKote popped right out, and smoothed to a level contour. That really shocked us, and was one of the most pleasant surprises we had, for it meant that heavy-handed dolts like us could somehow manage to get a decent finish with the stuff.

Since it's pre-painted, there's nothing more to do than iron it on. You

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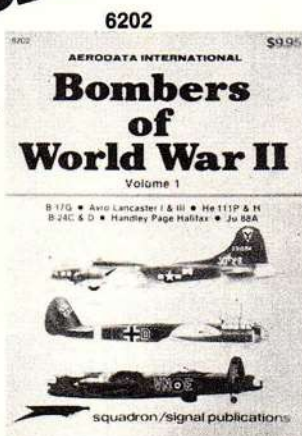
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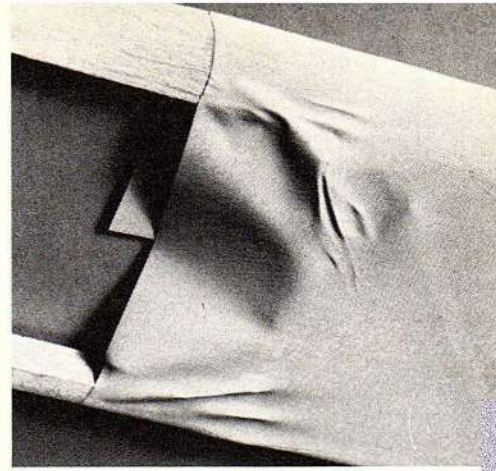


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These wrinkles were even worse when we started to iron the piece, but they all disappeared with applied heat. Note fine fabric look. Monokote over FabriKote gives a very authentic ultra-shiny fabric-looking covering.

can apply standard hobby paint directly over it, and even Pactra dope can be applied. The material will be released in six standard colors at first (white, red, yellow, blue, orange and black), but more colors will be available as production increases. The material bonds very well to itself, and since it goes on at such a low temperature, Super Monokote can be used for trim details. We also think that it would be ideal for making gapless hinges, or an even better hinge than the old Monokote hinge.

Here's a little hint for using FabriKote. When applying it to plywood or other difficult materials, spread a layer of Ambroid glue in place first (thinning it with SuperPoxxy thinner helps to spread it evenly). The FabriKote will stick great, but make sure the glue has dried for at least a day. On metal cowls, landing gear, etc., use Hot Stuff to get a true mechanical bond with the covering (make sure to pre-shrink the FabriKote over the work first). To be sure of avoiding eventual fuel leaks, spread a swipe of Hot Stuff along any seams in the FabriKote which may be exposed constantly to raw fuel, such as in the engine compartment.

The FabriKote is completely fuel proof, and there's no need to take the same precautions we have been accustomed to when using Monokote (epoxy sealing the edges, etc.). But everyone knows how unstable Monokote can be in humidity changes, until it is re-ironed. Is FabriKote plagued with the same frustrating problem? We're happy to report that our test sample passed the "pucker and wrinkle" test with flying colors. We subjected it to the worst possible test . . . we left it locked in a closed

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station wagon on a typical California day.

This test has even blistered black paint applied over fiberglass, so we knew it would have to raise havoc with the FabriKote. If it didn't warp the structure, it would most likely blister because of the lowered humidity inside the car. Most modelers don't realize that the Monokote pucker syndrome is not a result of heat, but it's actually the underlying airframe shrinking as moisture is lost in the wood. The covering stays the same; the airframe just shrinks a bit.

As it turns out, not only did a day's heat not affect the covering, but an entire weekend in the car didn't cause any puckering or wrinkling. It must be noted that the nighttime temperatures dropped as much as 30 degrees, and the humidity shifted from early morning fog to almost arid within any 24 hour cycle.

The most critical concern remained till last. Did FabriKote weigh more than the competition? Our scale wasn't the most sophisticated in the world, but it was a laboratory-quality gram scale, and comparative differences were what we were after. Here's what it looked like:

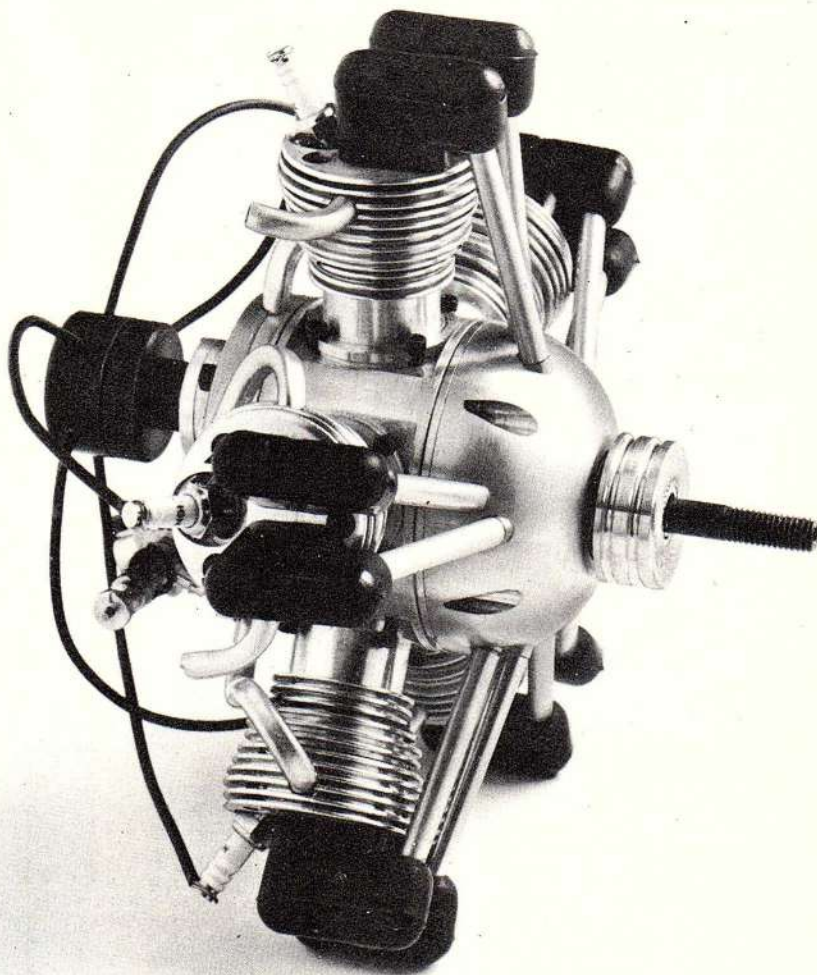
FabriKote: 8.6 grams/sq. ft.

The Competition: 9.5 grams/sq. ft.

Both items were the same color, and we found the FabriKote white to be less than 7 grams/sq. ft. Admittedly, trying to discern any significant weight difference on a complete model may be almost nit-picking, yet the fact remains that a 6-foot length of FabriKote (48" width) weighs about 21.6 grams less than the competition. That's darned near an ounce saved per roll, but we personally think that variations in quality control could negate all these numbers.

But, given the fact that these products may weigh about the same, the fact remains that the FabriKote came out with a better strength to weight ratio, especially if torsional rigidity is considered. The ease of application, temperature and humidity stability must all be taken into account, of course. In all, our preliminary tests conclude that FabriKote is one heck of a fine covering material, and we rate it as a five star item which every scale enthusiast should try.

For more information on FabriKote, check at your local hobby outlet. Manufactured by: Top Flite Models, 1901 N. Narragansett, Chicago, IL 60639. □



**The most distinctive sound in the air...
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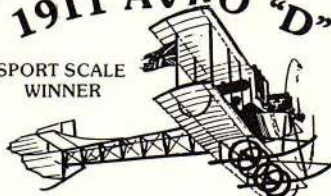
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WINNER



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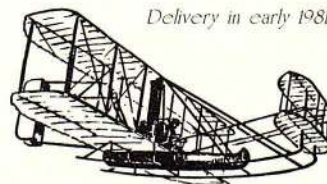
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SCALE SHOWCASE

Items for the Builder of the Model



A.R.F. "JETS"

Scale modeling isn't always rivet details and scale props. There are lots of "borderline" scale buffs, who just like to fly something that looks like a real-life airplane. It's to this group — otherwise known as the "sport fliers" or "week-end fliers" — that these two new kits imported by Circus Hobbies are directed.

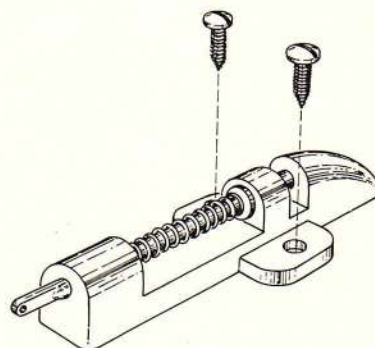
Both the small .049-sized F-16 and the .40-sized F-15 Eagle are amazing examples of today's technology. When you open the box, you know why, for out comes a finished and painted foam fuselage, a set of wings which are ready to use, and enough hardware to finish the airplane. Only engine and radio are needed, plus a little glue to attach some reinforcing supports.

The paint jobs are impressive. The white areas are sealed with what looks to be a clear polyurethane. All the trim colors are done, and only the pressure-sensitive decals need be applied. They are very handsome airplanes, and it shouldn't take more than two evenings to get the jets into the air. The kits are so attractive that, the day we took them over to the local hobby shop, two customers placed orders for the F-15 before the planes were even out of their boxes and assembled.

The little F-16 comes with fixed landing gear, plastic cowl, metal aft strakes for the fuse, and even a set of injection-molded missiles. There's plenty of room to nestle two or three servos in the fuselage. The design is intended for elevator and aileron controls, with optional throttle control available. The rudder is not hinged and, since it's already painted, this would be a bit of work to do.

The F-15 is a much bigger model than the F-16, and the Eagle is intended for .40 engines (even though the kit says the plane will fly on .20-.30 power). This is a "full-house" design, with a four function radio needed. Both aircraft have full-flying stabs, just like the prototypes. The engine mounts upright, which may not be the most appealing, but it certainly is practical.

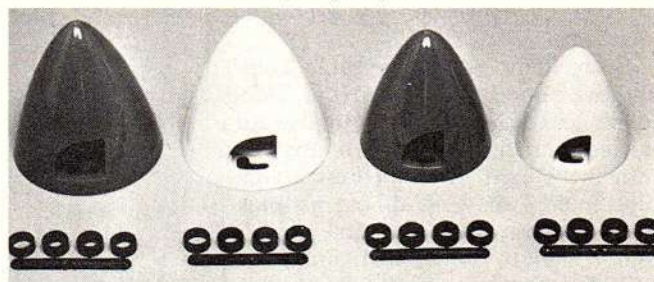
Circus Hobbies will be marketing these kits through hobby shops. The F-16A kit sells for \$49.95, while the Eagle retails for \$89.95. Available through Circus Hobbies, 1241 E. Glendale Ave., Sparks, NV 89431.



FOURMOST BOMB RELEASE

The Fourmost Bomb Release is a very simple gadget. A spring-loaded stainless steel pin sits inside a molded nylon housing. Two screws secure it to the model. Attach a piece of thread or thin cable to the actuating pin, and let a servo do the work. The device is so simple that it can't fail. Because it's spring loaded, you can attach the bomb without turning on the radio. By adjusting the tension of the string, the release mechanism can have a delayed actuation, so that it can be ganged to another function.

The unit weighs 1/10 ounce, and is available in hobby shops. As manufactured by: Fourmost Products, 4040 24th Avenue, Forest Grove, OR 97116. Price \$2.50.



KWIK-LOCK SPINNERS

At last, a spinner that has no visible backplate, no non-scale screw for pulling the nose cap down, and which can be removed with relative ease. Du-Bro's Kwik-Lock Spinners are the most novel approach to the old spinner locking mechanism that we've seen. Essentially, the backplate, which nestles inside the spinner cone, has four holes, which align with locating pins in the spinner cone. These four pins slide through the backplate's locating holes, then are engaged (when a keyed ring is rotated) by a locking ring behind the backplate.

Two small tabs, which protrude slightly from the backplate inside the prop slots, are the key to opening and closing the spinner. Slide a screwdriver or knife blade behind the prop, move the locking pin in its slot, and the ring behind the spinner is engaged. Nothing shows externally, and the prop can't slip off the backplate. Even when the prop loosens up from a backfire, the spinner still stays engaged. Only moving the small locking tab will again release the nose cone.

The locking mechanism works great with electric starters, and the clean unbroken lines of the spinner look great on a scale airplane. The units are molded of polycarbonate, which will withstand distortion up to 30,000 rpm. It is also a very temperature-stable material, so the spinner should remain concentric in all climates. There are four adaptor rings, to suit any given engine shaft size. The styling of these spinners is what you'd expect on most military type models (like the

P-51), and it should adapt to many civilian aircraft also. The spinners are available in the usual four colors (matched to Monokote), and they are available in seven sizes from 1½ to 3 inches.

Check out these spinners at your local hobbyshop. They range in price from \$2.50-\$4.00. Manufactured by Du-Bro Products, Inc., 480 Bonner Rd., Wauconda, IL 60084.

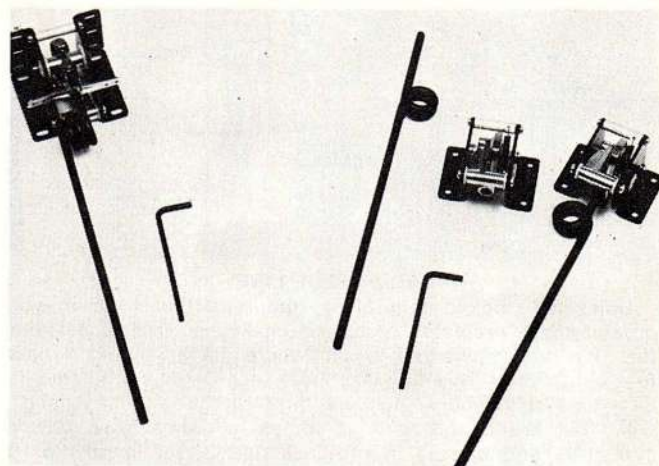


HI THERE, BIG BOY!

Midwest Model Supply has a very well-detailed ¼-scale pilot figure available. This is a full-length representation, which comes with its own seat chute. The figure comes fully assembled and ready to paint. The molding is done in a warm flesh tone, so that the face and hands look correct just as is. All the harness straps, and flight suit details are molded in. The figure represents a civilian pilot, but could probably be modified into a military configuration.

Because of the size and amount of detail in this pilot figure, the retail price is about \$40.00. Once you see it, you'll see that the price is reasonable. Distributed by Midwest Model Supply Co., 1354 Naperville Dr., P.O. Box 518R, Romeoville, IL 60441.

Check your dealers for these mufflers, or order directly from: Quarter Headquarters, P.O. Box 12321, San Francisco, CA 94112. Price is \$19.95 (plus \$1.50 postage when ordering direct).



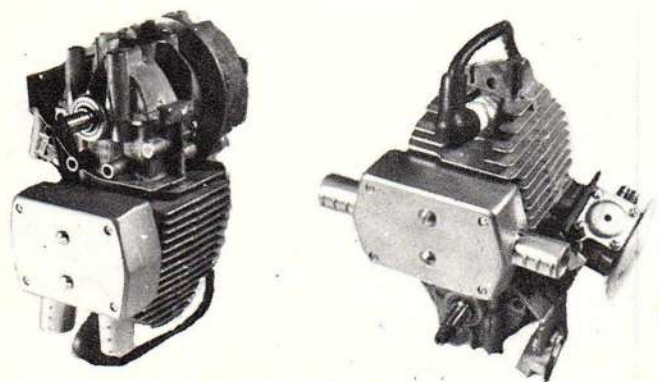
IM RETRACTION

Circus Hobbies is now importing the IM Products retracts. These are a quality item, essentially based on the over-center actuation principle used on retracts like the Southern R/C units and the D & B system. The difference is that these units use a metal mechanism, instead of nylon. This greatly enhances the wear characteristics of the system. The frames are metal, and they are designed to be actuated by any retract servo. There is a spring-assist to help aid the up-cycle mode.

The main gear units are available with either 5/32" or 1/8" wire struts (specify when ordering). The nose gear unit, which is purchased separately, comes with a standard 5/32" wire strut. The struts are black anodized. The nose gear steering is via a self-centering tiller arm, which will accept either a pushrod or cables.

The main gear housings measure 1-5/16" in height, which should fit easily into most wings. All bearing surfaces are nylon shimmed, to minimize wear and friction. What is most surprising about these retracts is not merely the quality, it's also the price. A set of mains goes for \$39.95, while the nose gear unit is \$27.95.

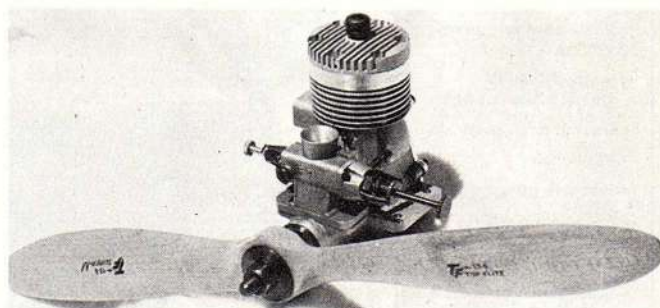
The units will be available in hobby shops, as distributed by: Circus Hobbies, 1241 E. Glendale Ave., Sparks, NV 89431.



QUADRA DAUL EXHAUSTS

Quarter Headquarters is now manufacturing two new muffler variations for the Quadra engine. Both styles have dual exhaust ports, which are great for either in-line scale subjects or scale applications like the twin-stacked Pitts. The QM-TT2 is designed for inverted applications, such as under a Pitts or Cessna type cowl. The QM-TT3 is designed with side exhaust stacks, which are ideal for in-line applications.

These mufflers are cast aluminum, and mount to the engine with two screws. Each unit comes with two lengths of heat-resistant neoprene tubing, to route the exhaust gasses out the cowl. Nylon hose clamps are supplied for securing the pipes.



DIESELIZED FOX

Davis Diesel Developments now has a conversion head available for the Fox .45 BB R/C engine. According to the manufacturer, this conversion will deliver 12,000 rpm on a 12-6 prop, or 9,000 rpm on a 14-4. The idle is about 2,000 rpm, with a fuel consumption of 2-3 minutes of running per ounce of fuel (depending on prop size). You'll also find that the engine will run cooler, because diesels inherently generate less heat in combustion, and diesel fuel has more lubricity. Conversion takes only minutes, requiring only the change of the engine head.

Hobby shops carry the diesel conversions, as well as the diesel fuel. Manufactured by Davis Diesel Development, Inc., Box 141, Milford, CT 06460. Price \$40.00 (plus \$2 postage if ordered direct).



AQUA BLUE LINE

Don't feel locked into black neoprene fuel lines in your quarter-scale projects. Aerotrend makes a translucent blue fuel line that allows you to see where the gasoline or diesel fuel actually is. This line has been especially formulated for 1/4-scale applications. It has a high tolerance to heat, and it won't get brittle and hard. It comes in either 3/32" I.D. or 1/8" I.D., and is sold in pre-packaged 3-foot lengths or by the roll (at 43¢ per foot).

Check for this fuel line at your local hobby retailers, as manufactured by: Aerotrend Products, 44 West Prospect Street, New Haven, CT 06515.

ZENAIR TRI-Z

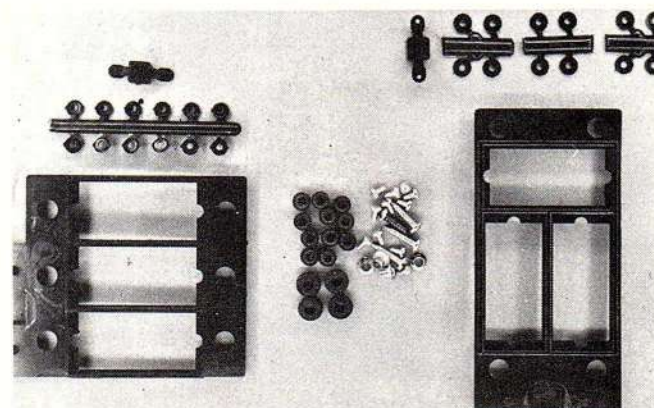
The Zenair TRI-Z CH300 is an attractive two place Canadian homebuilt, with racy wheel spats. J-5 Enterprises has released a kit of the Zenair, in 1/4-scale. With a wingspan of 79.5", the 18-22 pound model is designed for engines in the Quadra size.

The kit is most unusual, in that fiberglass is used extensively, not only for the fuselage, but also for items like the skins for the wings, fin and stab. The ribs are 1/8" ply, and



the landing gear, and preformed canopy are also provided.

Check at your hobby shop for this new kit, as manufactured by: J-5 Enterprises, P.O. Box 82, Belmont, Ontario, Canada N0L 1B0. Price \$139.50.



ACE'S TRAYS

Lots of scale radio installations use the miniature Bantam servo, from ACE R/C. Now there's a servo tray specifically

A LIMITED PRODUCTION KIT

- Five piece canopy
Each section moulded separate for exact scale
- Flaps and dive brakes
have all 318 holes made for you
- Scale cowl w/dummy engine
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- All balsa construction
- Built up ailerons and tail feathers. Parts are all die cut
- JEM LOC construction
- Beautiful decal sheet

JEMCO "MASTER SCALE SERIES" R/C KIT

Designed to satisfy the most demanding scale buff!

SBD-5 "Dautless" Dive Bomber or A-24



Send \$3 for information pack-includes 1 framed 5x7 color picture, three 3x5 color pictures, a four page catalog and other neat items!

SPECIFICATIONS

Span	64
Wing Area	780
Length	51
Engine	60-90
Channels	4-8
Weight	9-12 lbs.

OPTIONAL FUNCTIONS

- ★ Retracts
- ★ Flaps
- ★ Dive Brakes
- ★ Retracting Tail Hook
- ★ 1000 lb. bomb drop
- ★ 2-100 lb. bomb drop
- ★ Sliding canopy
- ★ Rear M.G. storage compartment
- ★ Operating bomb yoke
- ★ All of the above are fully illustrated on the plans

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engineered for these servos. The trays will also fit many of the smaller size servos from other brands of radios. Available in either a three-across or 2-plus-1 style, these trays retail for \$1.98. No mounting hardware is furnished, and a separate package of mounting screws is available for 98¢.

These items are available at all hobby retailers, or they can be ordered directly from ACE R/C. Check ACE's catalogue for order numbers. ACE R/C, Box 511, 116 W. 19th Street, Higginsville, MO 64037.



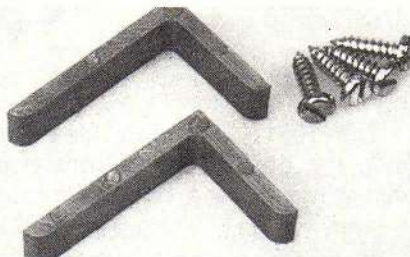
LARGE LIBERTY SPORT

Wendell Hostetler's successful giant-scale Skybolt (featured in *Giant Scale Models, Vol. II*) is now joined by another large airframe, the popular Liberty Sport. Another biggie, this biplane has a 77" span, offering 1700 sq. in. of area. At 22-26 pounds, the Liberty Sport has a wing loading in only the 30 oz./sq. ft. range, which makes for a good compromise between a floater and a model with solid penetration.

The Liberty Sport does make a few concessions for superior aerobatic performance, by subtle deviations from exact scale. In the construction department, the airframe is mainly balsa, with plenty of basswood and ply. Super Coverite is recommended for strength. Optimum performance is based on the choice of engines, with chain saw types in the 2-3 hp range recommended.

The detailed plans come on two 42 x 82" sheets, with a complete 18-page instruction manual included. The manual has sketches, photos and lots of invaluable information which relates to any giant-scale aircraft. The optional cowl, wheel pants, canopies and landing gear are also available.

The plans are available directly from: Wendell Hostetler's Super Scale Plans, 1041 Heatherwood Lane, Orrville, OH 44667. Price \$21.50 (postpaid).



PICAGOODIES

Included in Pica Product's new line of nylon hardware goodies is a nifty 90 degree angle bracket, which is ideal for mounting a cowl, or even for mounting a servo. Drill and tap them to suit your particular application. They are molded of virgin nylon, for maximum strength and durability.

Check for these, and other quality nylon accessories, at your local hobby shop, as manufactured by Pica Enterprises, 2657 N.E. 188th Street, Miami, FL 33180.



THE FOLLOWING FEATURES ARE STANDARD ON ALL SILVER SEVENS!

- *Servo Reversal Switches
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- *Trim/Aux Location Variables
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- *Dual Rates on Three Channels
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- ★ STANDARD GIMBAL SINGLE STICK TRANSMITTER KIT
11G237 \$174.95 Complete Systems start at \$299.95
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11G227 \$239.95 Complete Systems start at \$364.95
- ★ DELUXE METAL GIMBAL SINGLE STICK TRANSMITTER KIT
11G217 \$209.95 Complete Systems start at \$334.95

THE FOLLOWING OPTIONS ARE AVAILABLE FOR THE SILVER SEVEN

*MIXER--mixes any two channels together either bi-directionally or uni-directionally. (11G505 \$11.95) Note: Currently, the Exponential and Mixer can't be used at the same time.

*PROGRAMMABLE PUSH BUTTONS--move the control surface to an in-flight programmable location at the push of a button. For one or two functions. (11G510--One Function \$8.95) 11G511--Two Function \$11.95)

*EXPONENTIAL RATE on three channels gives a "soft" neutral for smoother flying. (11G500 \$17.95)

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Weight: 1.82 oz.
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14G20A Atlas Kit, \$28.95
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U.S. Scale Masters



The 1981 U.S. Scale Masters program will continue the tradition started last year of selecting the best in Scale from around the country. This year's expanded regional selection meets will ensure a better representation at the big finale in August.

Both classes in Sport Scale will be recognized, as well as Precision Scale. Only the top five in the Sport Scale classes will be invited to the Masters Fly-Off, as well as the top three in Precision Scale.

For more information on the U.S.S.M.C. program, contact the co-chairman in your area:

East Coast Chairman:

Dale Arvin
3428 Charlestown Pike
Jeffersonville, IN 47130
Phones: (502) 588-9109 (O)
(812) 283-5719 (H)

West Coast Chairman:

Harris Lee
c/o Scale Squadron of So. Calif.
24672 Seacall Way
Dana Point, CA 92629
Phones: (714) 760-9466 (O)
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E. P. (Tom) Sawyer Park, Louisville, KY
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3428 Charlestown Pike
Jeffersonville, IN 47130
Phones: (502) 588-9109 (O)
(812) 283-5719 (H)

EAST COAST REGIONAL (June 13-14)

P.G.R.C. (Washington, D.C.)
Bill Hinnant, C.D.
2103 Lakeshine Drive
Alexandria, VA 22308
Phone (703) 360-3424

SPOKANE SCALE INTERNATS (June 13-14)

Barons Model Club
Dick Carson, C.D.
3029 W. Hoffman
Spokane, WA 99205
Phones: (509) 327-4579 (H)
(509) 747-1644 (O)

WESTERN SCALE NATIONALS (June 20-21)

So. Calif. Scale Squadron
George Kileen, C.D.
23261 Del Lago Dr. #9
Laguna Hills, CA 92653
Phone: (714) 855-4061

TEXAS SCALE AIR GROUP REGIONAL (June 27-28)

Charles Viosca, C.D.
3804 Wooded Creek
Farmers Branch, TX 75224
Phone: (214) 241-1172

THIRD ANNUAL ROCKY MOUNTAIN NATURAL LITE CLASSIC (July 11-12)

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1909 Beechwood
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Phone: (303) 542-1856

AMA NATIONALS

(Check with AMA for official dates)

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PROGRAM ENDORSED BY N.A.S.A.
(National Association of Scale Aeromodelers)

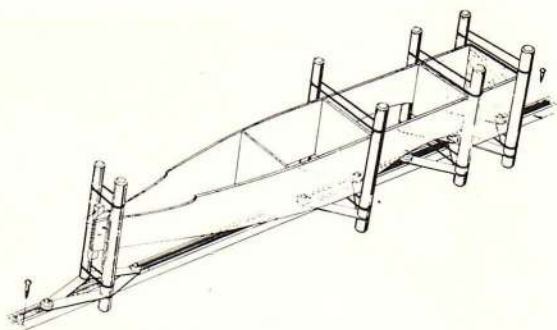
ALL EVENTS WILL USE THE 1980-81 AMA RULE BOOK



MUSEUM SCALE HANRIOT

After six years of research and work, Jim Kiger has completed his 1/5-scale Hanriot H.D.1. The drawings for this model are so accurate that they virtually could serve for factory drawings. Details such as the control system, guns, engine and instruments are included. The three rolled sheets (30 x 77") are packed with details. The model spans 70", and is intended for .60-.90 engines. For those in need of documentation, there are also 46 color photos available (assumedly of a replica aircraft).

The plans sell for \$35.00 (postpaid) direct from: Replicraft, 1400 Gomes Rd., Freemont, CA 94538.



FOURMOST FUSELAGE FIXTURE

Fuselage jigs vary in quality (and accuracy) from the very good, to the totally inaccurate. This one falls in the top-quality class, for it offers a lot of versatility, along with self-alignment and good accuracy. Naturally, only slab-sided fuses will work, but it's simple to slide the alignment pins to the correct location to align a firewall, bulkhead or tail area. Once in position, the rubber bands pull the alignment pins accurately to the correct distance, so that the centerline is always accurate.

The fixture will accommodate structures up to four feet long. Check your local retail outlet for this unit, or order direct from: Fourmost Products, 4040 24th Avenue, Forest Grove, OR 97116. Price \$29.95.



STREAMLINED SLIM LINE

The ever-popular Slim Line Sport Scale II muffler has undergone a complete face lift. The objectives behind this streamlining were to give the muffler more efficiency, to permit an easier flow of exhaust gasses, and to add more beauty to the aircraft.

In order to achieve these objectives, the plugs at the ends of the exhaust tubes have been eliminated. This creates an even more "slim line" appearance and reduces the restriction of the exhaust flow. The front tubing radius has been changed to conform to the i.d. of the straight tube, again to allow more efficiency. The black anodized finish stays neater looking longer, runs cooler, and tends to look less conspicuous on scale installations.

The muffler strap has also been upgraded. There are no longer any spot welds, so that the strap ends are now much stronger and less prone to breakage. The Sport Scale II silencer is a major improvement over the previous style, and we're sure that they will be even more popular in scale circles.

Hobby shops stock the Slim Line brand, and prices vary according to the engine and size required. Manufactured by Slim Line, P.O. Box 3295, Scottsdale, AZ 85257.

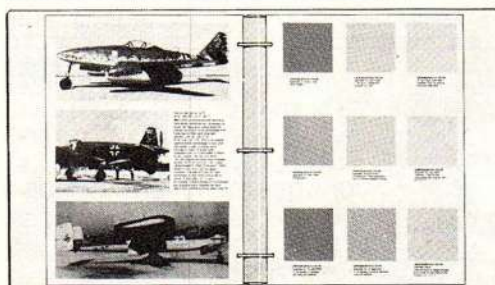
REPLA-PHOTOS

Another service from the ever-expanding documentation source of Repla-Tech International is the availability of documentation photos. These are a compilation of rare National Air Race photos, combined with shots of the latest in aerobatic airplanes. Not to be confused with photo services which



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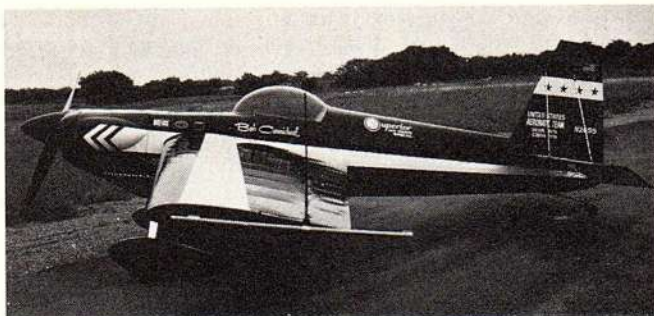
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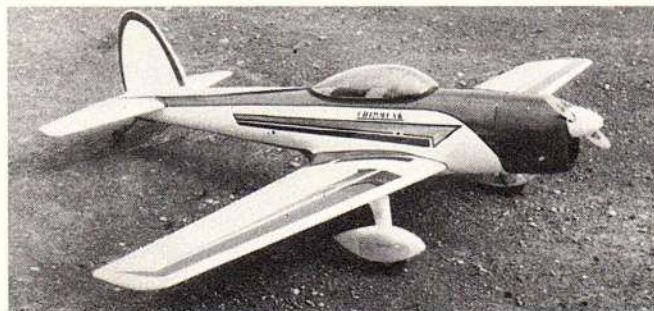
This definitive work is now ready for delivery. Rush your check, bank check, money order or postal money order today (U.S. funds only), \$39.95 (+ \$2.25 Shipping)

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offer military aircraft, this is a specialized service. The prices are very reasonable, with black-and-white shots costing 25¢, and color prints are 75¢ (postage on each is 50¢). All photos are standard 3 x 5" format.

Write for more details on this photo documentation service: Repla-Tech International, 48500 McKenzie Hwy., Vida, OR 97488. \$2.00 brings their complete aircraft catalogue.



1/4-SCALE CHIPMUNK

The Chipmunk is a nearly ideal subject for modeling in giant-scale. It has flowing lines, a minimum of drag, a reasonably low scale airspeed, and good possibilities for basic structural engineering. It's no wonder that R/C Kits has jumped on the bandwagon with their version of Art Scholl's famed air show mount.

The Chipmunk spans 8 feet, with 1,800 sq. in. of area. With an all-up weight of 18-20 pounds, this Quadra-powered machine should have plenty of performance. To facilitate construction, the kit contains a foam wing and stab, with 3/32" balsa sheeting. The fuselage is a unique 1/64" rolled plywood structure. No planking is required on the fuselage. The model includes a canopy, and a set of complete plans.

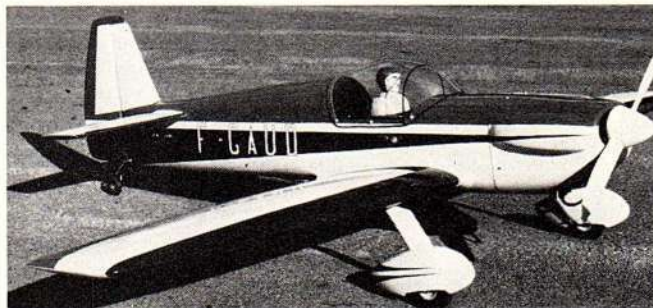
Price of the big Chipmunk is \$179.95, and it is available through hobby retailers, or direct from: R/C Kits, 706 Easton, N.E., North Canton, OH 44721.

CAP 20-L

Space-age technology makes possible one of the most unique pre-fab airplanes on the market. This giant-sized CAP 20-L is huge, with an 81" span. But it isn't its size that makes it impressive, it's the way this model builds. The

fuselage is epoxy/glass, which doesn't surprise anyone, but the wings, stabs and every other component are made with an epoxy/glass over foam method. What this yields is a hard-skinned, fuel-proof model, that's almost ready to paint right out of the box. All that's required is to put everything together with epoxy, paint, install the radio and engine (a Quadra), and go flying. The manufacturer states that you can have this model done, less equipment and paint, in 30 hours.

Naturally, you say, such an airplane would weigh a ton. But that's the pleasant surprise. The 1,220 sq. in. model comes out at 17 pounds. At that weight, it is capable of almost vertical performance . . . just like the full-size CAP. At a scale of 3 1/4" = 1', this aerobatic model qualifies for both Q.S.A.A. and I.M.A.A. rules.



The kit also includes an impressive assortment of hardware. a thick (125 mil.) canopy is included, preformed landing gear, C.B. tailwheel, hinges and control horns, plug-in wing hardware, and even 3-views and paint documentation. This is one building experience that you won't want to miss . . . never has a giant-scale model come so complete.

Higgins Aero Comp, Inc. has recently changed its address. Direct all inquiries to them at: 635-3 North Twin Oaks Valley Road, San Marcos, CA 92069. Phone (714) 744-6867. Price \$329 (Introductory Special \$289).



R.T.F. CHIPMUNK

Model Rectifier Corporation's Ready-To-Fly de Havilland Chipmunk is a really cute little package. Admittedly, it's all foam, but it does come prepainted, with decals installed. It looks realistic in the air, and is powered by an Enya .09TV

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Hawker Sea Fury F.B. Mk II, as featured in December '80 Scale R/C Modeler.

VITO TOMEO

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Phone (305) 792-8591

engine, which is already installed, along with the fuel tank and throttle linkage. The elevator and rudder are pre-hinged, and the pushrods are made and installed in the fuselage. Even the little items like wing dowels, canopy, muffler, prop, spinner and wheels are factory installed. Virtually all that's required is to drop the MRC 3-channel radio in place and go flying. The experienced flier might prefer to use all the parts supplied to connect the ailerons, to get even better performance from this aerobatic machine. There's even a pilot figure and instrument panel . . . again, all installed and ready to use.

Check out this little model at your local dealers, as manufactured by: Mode Rectifier Corporation, 2500 Woodbridge Avenue, Edison, NJ 08817.

to just chuck them into the trash, the smart thing to do would be to simply sharpen them. The new Sharpy, from Peck Polymers, certainly makes that job a bit easier. This sharpening block is easy to use, and we were surprised that blade sharpening wasn't such a deep dark mystery.

The board has two sides, a "sharpening side" which serves to get the dulled edge back into shape. Then turn the block over and use the "honing side" to get a dazzlingly sharp edge. We found that after the first half dozen blades, we could get an edge comparable to the original . . . and it only took a minute. The Sharpy comes with complete instructions, and it can also be used for scissors and fish hooks.

Available at hobby outlets, as manufactured by: Peck Polymers, P.O. Box 2498, La Mesa, CA 92041. Price \$1.95.



HONE THOSE BLADES

We can hardly imagine the dollars we've thrown away on X-Acto blades that have become dulled. While it's convenient



GIANT 180 PARTS

Bob Morse's exceptional scratchbuilt Cessna 180 was first featured in **Giant Scale Models** (Vol. 1, 1979). It was an instant success, and now those who want an easier way to build this 1/4-scale model can order custom-made components. You still are scratchbuilding, but the hard-to-make components can now be ordered, which saves a lot of time, especially in locating the more esoteric materials.

There are five different parts packages available. Package

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The HOBBY & CRAFT GUIDE TO AIR-BRUSHING is packed with tips on air-brushes, paints and techniques. Included are sections on weathering, camouflage, mixing paints, preparation for painting, plus much more. Thirty-two full color pages will help you improve your air-brushing techniques plus give you ideas for lots of other hobby projects. Still only \$4.95.

Look for them at your local hobby, art, hardware or department store, or write Dept. 822



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#1 consists of the foam tail surfaces. These are wire-cut cores for the entire empennage group. The stab and elevators sell for \$14.00, while the rudder and fin assemblies sell for \$6.00.

The landing gear package consists of 3/16" 6061-T6. These are shipped pre-bent, and you can specify to have the axle holes either drilled or undrilled. The 3/16" axles are \$2.00 extra. The gear legs sell for \$25.00.

The third package is the 3/4" diameter oval struts for the wings. These are also formed from 6061-T6 aluminum, and the 24" long struts sell for \$5.00 per pair.

The fourth package is a set of parts templates, to help minimize wood waste and allow for easier building. The ribs, bulkheads, doublers, etc., are all ready to cut out and glue in place. The templates sell for \$5.00 a set (no postage necessary).

The final item is the aluminum wing tongue for the plug-in wings. This will be available in the Spring of this year, and will sell for \$10.00.

Add \$2.00 shipping on all orders (except templates), and order these items direct from: Frank Costello, 27 Kearney Street, Dover, NJ 07801.

BEEFY ENGINE MOUNTS

With 1/5-scale catching on, the need for beefier motor mounts for the .90-sized engines has arisen. Sig has expanded their motor mount selection to include an "extra heavy duty" set for engine in the .60-.91 class. The firewall legs measure only 2", making it easy to fit these units within any cowl. The beams are extruded from an aluminum alloy which is formulated to withstand stress and vibration. The engine mount comes with 6-32 self-tapping machine screws for securing the engine.

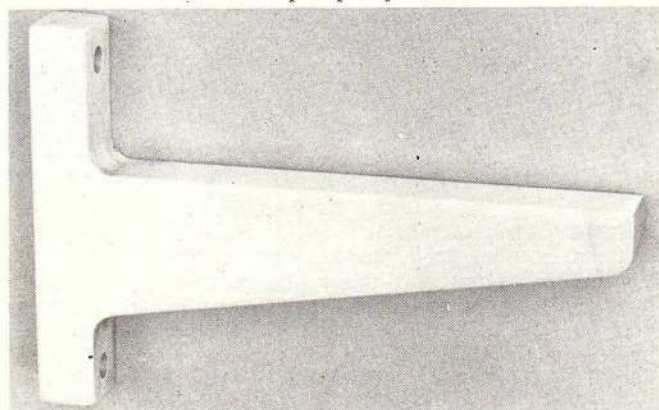
Check for these at your hobby retailers, or order directly from Sig Manufacturing, Route 1, Montezuma, IA 50171. Part #SH-626 sells for \$2.25.

* * *



SHRUNKEN C.A.R.

The Jomar coupled aileron and rudder system (C.A.R.) has been revamped into a new, smaller format. Originally designed for those big 1/4-scale ships, which almost always require the



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ailerons to be coordinated with rudder in the turns, the new smaller format of the unit makes it practical for even smaller models.

The new unit measures 1-9/16 x 2-1/2 x 9/16", and it weighs just a tad under 3 ounces. The module is installed between the receiver and servos (no connectors supplied). In use the movement of the aileron stick will give coupled aileron and rudder (rate adjustable on the C.A.R. unit). When the rudder stick is deflected, the unit automatically disengages, so that the rudder can be used independently for spins, etc. This is all done electronically, and the unit is potted in epoxy to eliminate damage. The unit carries a 1 year guarantee.

Order the C.A.R. system direct from: Jomar Products, 2028 Knightsbridge Dr., Cincinnati, OH 45244. Price is \$44.95.

* * *



SIG'S 172

Hank Pohlmann has done very well during the last year, proving the contest worthiness of the prototype of the Sig Cessna 172 kit. With several firsts under his belt, the model was declared fit for kit release, and the Cessna is now on hobby shop shelves.

With a 65" span, the airplane has nice relative size, being big enough to detail well. As one might imagine, the 645 sq. in. wing area makes this 7 1/2-8 pound model a lightly loaded machine.

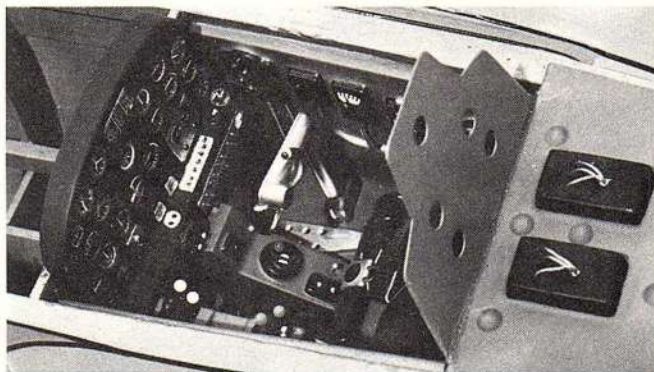
The Cessna is designed as one of the Kwik-Bilt models, with a balsa and ply keel in the center of the fuse, and the ex-

ternal fuselage being nothing more than a molded ABS plastic shell. This makes for a really fast building job, and the outside always looks perfect. The use of ABS plastic also permits authentic corrugated flying surfaces and lots of other realistic scale detail.

As with most Sig kits, the 172 comes complete with extensive hardware. The wing is molded foam. There's even an authentic factory 3-view for scale documentation. These Sig Kwik-Bilts have proven to be an ideal blend of fast building and good flying. The beginner to scale will find the Cessna just the right speed for their skills. For the pro, Hank's record of first places in such meets as the Mint Julep make the Cessna a good contest candidate.

Check out this one at your local retailer, as manufactured by: Sig, Montezuma, IA 50171. Price \$89.95.

* * *



DETAILED INTERIOR

Royal Products has expanded its line of scale cockpit interior kits to include one for almost every kit they make (they are also compatible with other comparably-sized airframes). Currently, there are cockpit kits for the Corsair (three sizes), B-17, P-38 (illustrated), P-51D (four sizes), Spitfire, B-25, Bearcat, FW-190 and Zero (four sizes).

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If you're building a model of a prototype which used an in-line engine, such as the Allison or Rolls-Royce, you'll thrill to the authenticity of these new custom-made scale exhaust systems. Specifically designed for .60 engines, they'll fit most popular kits and/or scratchbuilding plans. Available in three or six stack versions!

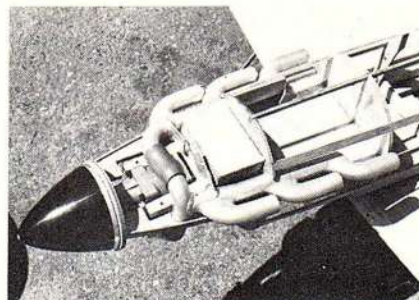
They really work! These scale stacks are efficient, quiet, and they make the engine sound better. Realistic exhaust smoke adds realism to the model in flight.

Because these are handmade items, please send a photostat (Xerox copy) of the top and side views of the nose area of the model you're building, and specify the engine you are using. Although these can be retro-fitted to an existing model, we suggest that you fabricate the nose area around the exhaust stacks.

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Model of MiG-3 built from Scale R/C Modeler plans by Al Casey (1/8th Air Force) and featuring the Slimline scale exhaust system. (J. R. Naidish photo)

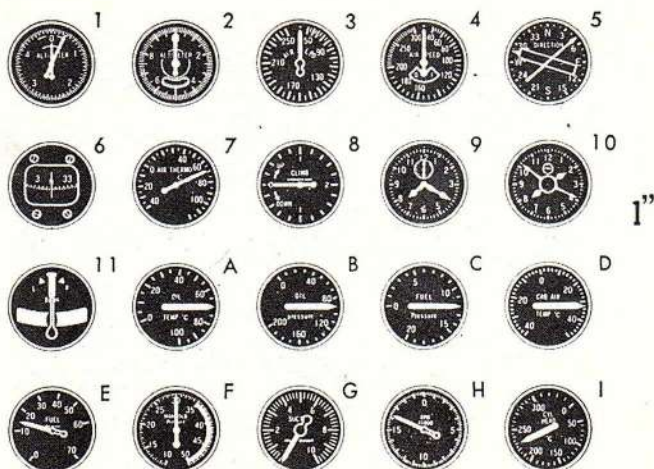


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Each kit comes complete with instrumentation, appropriate radio and navigation consoles, floor panels, stick and even a detailed seat ensemble. Everything needed to deck out the pilot's office is included, as well as complete instructions on how to assemble and decorate all the equipment.

One look at these kits leaves the impression of a thoroughly researched project, with even the minutest details clearly molded into the vacuformed panels. Each subassembly is designed to go together quickly, and the addition of a little paint makes for a truly outstanding cockpit interior.

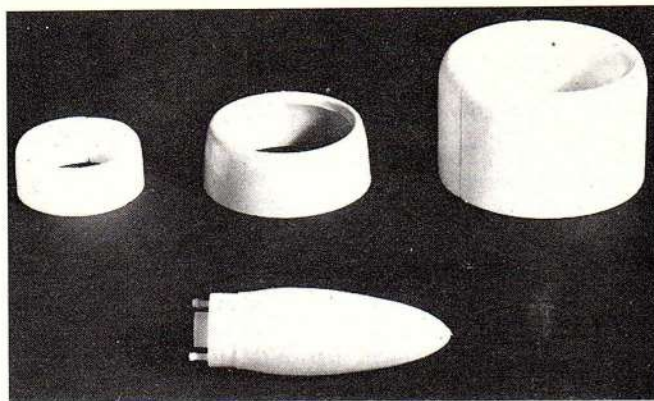
You'd think that such scale accessories would be rather costly, but the Royal cockpit interiors range in price from \$6.95-\$9.95. Available from local hobby outlets, as manufactured by Royal Products, 790 W. Tennessee, Denver, CO 80223.



BIG DIALS

Gas Model Products has released their 1/5-scale and 1/4-scale instrument faces. These are photo printed, to insure the optimum quality, and we found the reproduction quality very good. All of the most commonly used instrument faces are included, and each package not only contains the dial faces in both sizes, but there is an instruction sheet that tells how to make your instrument panel look right. Considering that you get both the 3/4" and 1" instruments, the \$1.49 price is a good deal.

Get these at your retailers, as manufactured by: Gas Model Products, 8773 Russet Drive, Cincinnati, OH 45239.



AXIFLO ACCESSORIES

Midwest Products has their ducted fan development program in high gear. Their A-4 Skyhawk is already in the hobby shops, and they are now in the process of updating the original RK-049 fan. All three of their fans now have molded urethane inlet cowls available as optional accessories. These are intended for applications where the fan is externally mounted on the airframe, such as in their Heinkel kit for the RK-40. They really go a long way toward increasing the efficiency of the fans. Prices range from \$5.95 to \$6.95.

Their RK-20 fan now has a larger capacity fuel tank available as an extra item. The capacity is increased to a full 6 1/2 ounces, which greatly improves flight times. Price of the tank is \$3.95.

Order these parts through the Customer Service Department at Midwest Products, 400 South Indiana Street, Hobart, IN 46342. While you're at it, enclose 50¢ for their new full-color model catalogue.

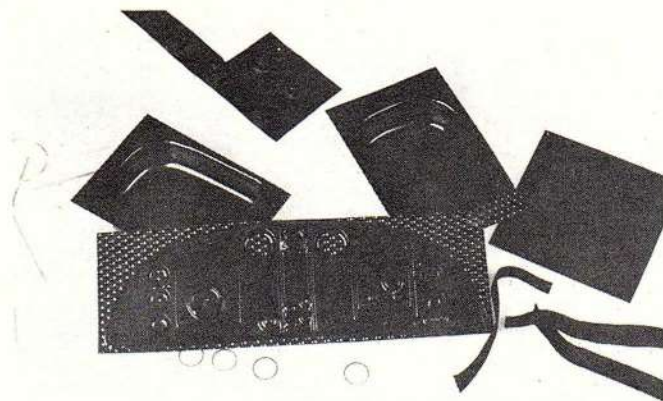


BIG STARDUSTER BIPE

An almost 1/4-scale version of the ever popular Stolp Starduster biplane is available in plan form from R/C Kits. Just slightly smaller than true quarter-scale, the biplane has a 7 1/2-foot top wing, and offers some 3,000 sq. in. of area. Designed to accept a chain saw engine, the finished model will weigh about 25-30 lbs.

The plans call for rather conventional construction, with balsa used throughout. The fuse builds in two half-shells, and the empennage is solid sheet. Even the cowl and wheel pants are balsa fabricated. The plans come rolled in a shipping tube, and all the parts needed to build the model are clearly illustrated on the three large plan sheets. According to the designer, the big biplane proves to be highly aerobatic when the proper pore plant is installed, and the large areas provide a very light wing loading, for good stability and easy handling.

While the plan set is only available now, there are tentative plans to introduce a full-blown kit later this year. The complete plans sell for \$30.00 (plus postage), and they can be ordered directly from: R/C Kits, 706 Easton, N.E., North Canton, OH 44721.



GIANT COCKPIT KITS

A full line of 1/4 and 1/5-scale cockpit interiors is being marketed by Jim Messers Quality Model Products. These feature vacuformed instrument panels, seats, etc. Everything is included, such as dial lens material, control wheel, seat belt materials, etc. You get a full and complete cockpit in each kit.

There are cockpit kits available for most popular giant scale models, including the Concept Fleet, Godfrey's Stearman, Nosen Cub, Ziroli F4U, Platt Me-109, and the J-5 Cub and Stinson. Prices are in the \$15.00-\$18.00 range.

Jim carries a very extensive line of scale plans, kits, and lots of goodies . . . all in giant scale sizes. Write for more information to: Jim Messers Quality Model Products, 106 Valley View Drive, Allegany, NY 14706.

FOURTH ANNUAL Q.S.A.A. FLY-IN

Las Vegas again showed itself to be the mecca of monster models, as the Quarter-Scale Association of America hosted the world's biggest big airplane weekend.

Staff Report J. R. Naidish photos



1



2



3

1. The "Best of Show" model was Dick Enos' magnificent Curtiss Goshawk. 2. Attractive Fresca paint scheme applied to Joe Zimmerman's rendition of Don's Custom Hobbies' Piper Tomahawk. 3. Bill Hunt from Florida got Best Finish with this K&B SuperPoxxy and Imron finished Miles Sparrowhawk.

The annual Q.S.A.A. (Quarter-Scale Association of America) Fly-In has certainly become a tradition. In just a few years, the event has gone from very humble beginning, with a handful of dedicated modelers trying to organize a show out in the middle of the Las Vegas desert. Today, the meet has become one of those "must attend" institutional

events. If you're a modeler, you simply must attend Toledo each year, and ranking perhaps second would be the Q.S.A.A. affair. They come in droves, not necessarily to fly, but to enjoy the camaraderie these large models seem to breed, and to learn about giant scale aircraft.

Actually, there's a lot more going for this meet than enjoyment and education (although those are cer-



1. The team of Meyer, Meyer and Krentz showed up with the biggest model of the meet. Hughes H-4 spanned 16 feet, and was powered by eight K&B .61s. 2. Dick Enos' second entry was a magnificent Curtiss Pusher. It has 88" span and flies with an O.S. .60 four-cycle. 3. Bert Ayers flew this beautiful Travelair "R." Quadra-powered at 21¼ lbs. 4. The prototype of the Parker Planes Cessna 172 was on hand. It flew well.

the Thursday static exhibit, since the convention area could easily accommodate 200 models, and some three dozen manufacturers' displays. In comparison to the facilities of the previous year, the space was doubled . . . and every square inch of it was needed.

Probably the biggest question in everyone's mind as they arrived in Las Vegas was how many aircraft there would be this year. There was some concern about the potentially detrimental effects the advent of the new I.M.A.A. organization would have on the Las Vegas group. Would the Q.S.A.A. lose support and, if so, how much? No one wanted to see any harmful effects result from this . . . the better interests of the large airplane movement was uppermost in everyone's thoughts.

One merely had to walk into the convention area at the Showboat on Thursday to find the answer. That huge hall was a veritable sea of tables, atop which were more airplanes than one could see from any one vantage point. They seemed to go on forever, and the more one walked, the more airplanes one discovered. Last year's tally was 166 aircraft, and it looked as if this year would easily match that. By the time the weekend was over, some 191

airplanes had been officially registered. We'd consider that a pretty strong vote of confidence in the philosophy and policies of the Q.S.A.A.

The turnout was so large that it exceeded all expectations. Not only were there large numbers of men and machines, but they came from even farther afield than they had in years past. A large contingent came from France, even chartering a plane to deliver them and their aircraft. Al Grey and the German group again presented themselves, with a new B-17 even better than last year's. We all remembered with some sadness of the failed stabilizer which caused the sudden demise of their big bomber last year, and all hopes were that they would have better luck this year.

Entries were on hand from Sweden, Australia, South Africa, Brazil and England. The true international scope of the Q.S.A.A. was never more obvious. One could immediately tell how anxious these people were to exchange information, to learn of our technologies, and to enjoy the mutual enjoyment of flying big airplanes. We saw them devouring whatever merchandise was available with abounding enthusiasm. They bought retracts as if they were not

tainly enough, in themselves). The fact that it takes place in Las Vegas certainly adds to its appeal. The bright lights, shows, fine food and "casino fun" (commonly known as gambling) all add a dimension to this modeling meet that can't be found anywhere else.

In truth, this writer is slightly shocked. As this report is being written, the headlines are reading bizarre horrors of the big MGM Grand fire. It's hard to believe that, just a short time ago, we were actually there for the better part of a week. The idea of a place filled with so much excitement and gaiety turned into an inferno is appalling.

The official headquarters of the Fly-In was the Showboat Hotel/Casino. This huge facility is off the famed "strip," but it was much more accessible to the flying field. The hotel was much more practical for

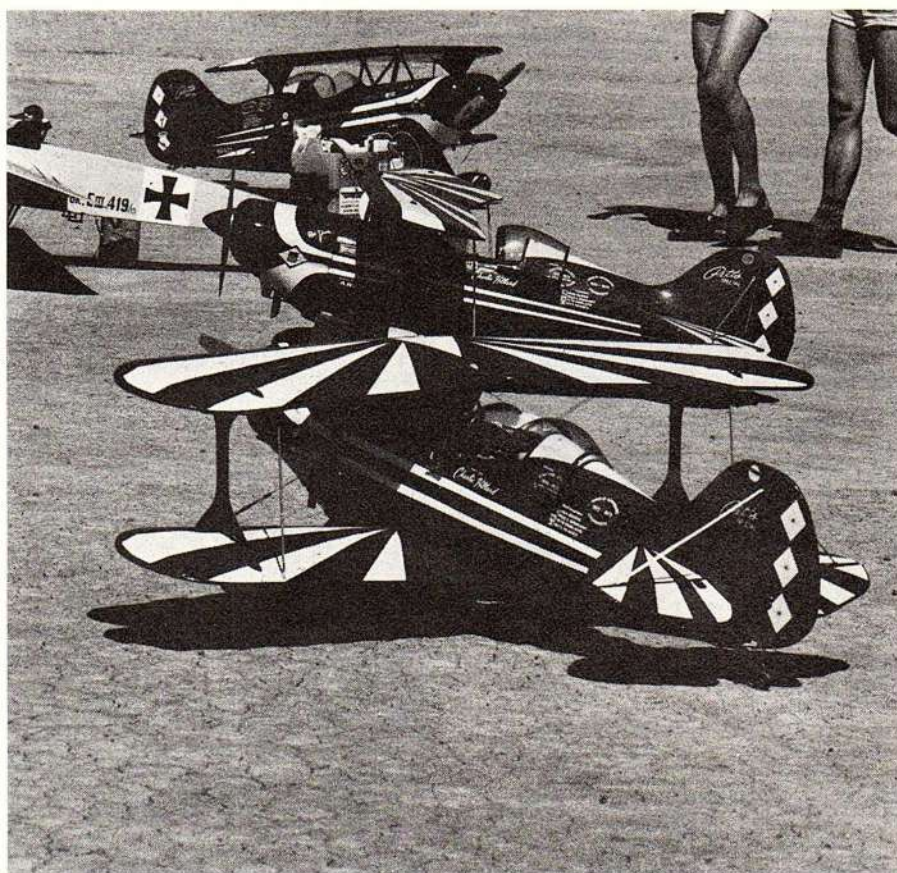


The German team again showed up with their B-17. It flew this year with no dire consequences.

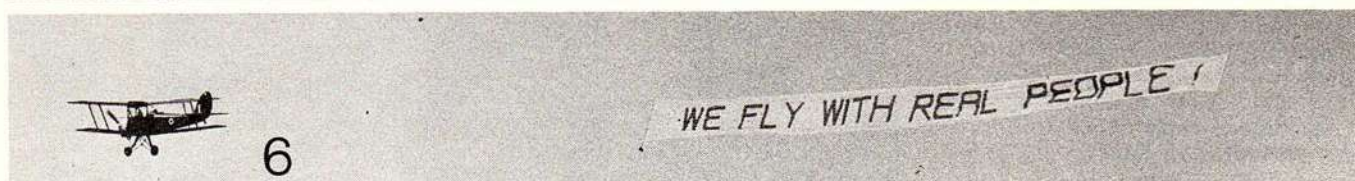
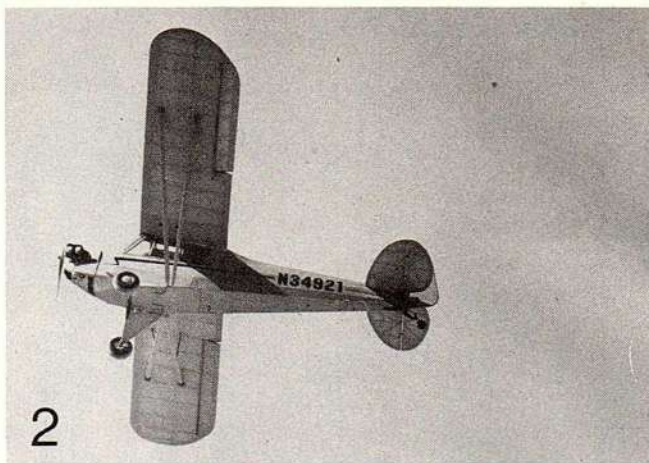
going to ever be available to them again (which might have been the sad truth). A few manufacturers had to surrender their only samples of engines and hardware . . . they were even willing to ask manufacturers to take the merchandise out of the models the representative was flying!

And what merchandise they had from which to choose. There were prototypes of improved engines, Cosmocon's tuned pipe, samples of soon-to-be-released retracts, and hardware of all types. Taking an overview of what we saw, it was pretty obvious that quarter-scale has reached another plateau, and that yet another quantum leap in technology is on the horizon.

In comparison to last year's meet, this year's Fly-In showed how truly far the whole state-of-the-art in giant models had progressed. The biggest breakthrough had to have been in the power plant department. In particular, Bob Seigelkoff's introduction of the Kawasaki engines under the C.B. Enterprises label has opened up whole new vistas. The Kawasaki 3.1 c.i.d. engine made last year's under-powered dogs into good performers



Just a few of the many Byron Pitts Specials which flew at the meet. Very popular design, and flown with numerous powerplants.



1. Ken Runestrand demonstrates the proper way to make an emergency landing after losing a wheel . . . no damage. 2. One of the many J-3 Cubs flown at the meet. Sorry we didn't catch the pilot's name. 3. Charlie Parker does a fly-by with his 172. 4. Mel Santmeyer does a fly-by with his Piper Tomahawk . . . an aerobatic performer. 5. A nicely decorated Grumman Tiger. One of these developed wing flutter and destructed. 6. Burnis Fields tows a banner welcoming the TV show, but for nothing, because they never showed up to do any taping.

this season. The Kioritz has also offered the same increases in available power. Quadra has improved their product, as has E.W.H. (Super Hustler).

Last year, Darrel Cline's P-51 (modified Nosen kit) barely got off the ground with a Quadra under the cowl. This year, re-engined with the big Kawasaki, the model not only flew around in a most reasonable manner, but pilot Larry Routh did some spectacular maneuvers. The model got top honors in the Stand-Off Scale category, which shows what an engine change can do to an airplane.

We predict that this new generation of power plants will breathe new life into the large model movement, with new vistas of available aircraft to be explored. This will especially apply to the World War II military birds. As these machines begin to fly with some semblance of performance, the retracts (which are soon to be available from several manufacturers) and ancillary hardware will invariably follow. When practical WW II aircraft are flying, there will be a new surge of modelers responding to these exciting war machines.

The rules for aircraft which could



Ralph Brooke's Tiger Moth flew very well, but met an untimely end. Ralph imports this superb kit under the Brookes Models Products name.

participate were that models had to be either Scale or Stand-Off Scale, which meant that a reasonably accurate scale outline had to be observed. To meet the size definition,

the airplanes had to be within 5% of true quarter-scale ($3''=1''$). There was no minimum span, so that even .60-sized airplanes could enter (such as the Bridi Minnow kit). On subjects like the B-17, where true $1/4$ -scale would be impractical, a minimum wingspan of 96" was required. Of course, aircraft larger than quar-

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Lou Proctor came to fly his Nieuport 28-C1, which is the prototype for his successful kit. O.S. Max twin provided the power. One of the best aircraft on the field.



Olle Bergquist and his wife pose with their Hiperbiplane, which they brought all the way from Stockholm.

ter-scale, such as the Byron Pitts, were qualified.

There were some monster-sized models on hand. The German B-17 spanned slightly over 12 feet, and the design group of Meyer and Krentz from California brought a 10'9" span Hercules flying boat, equipped with eight (!) K&B .61s. Even Bud Nosen flew a 1/3-size F4U Corsair.

But, the most monstrously sized model on the field was the half-scale 1928 Heath Super Parasol, entered by the design team from Rual Engineering. This 150" span beast weighed about 100 pounds, and used a 60cc Honda 4-cycle engine for power. The model had been flown just weeks prior to the meet, and it was planned to have the model enter the "Marathon of Flight" duration

event. With a capability of over 20 hours of non-stop flying, the model looked like a winner. The ship had two radios, one for control, which was a normal Futaba 8-channel rig, and another unit which telemetered such data as engine head temperature, rpm, etc. back to the ground crew. Unfortunately, radio problems kept the model from competing in

(Continued on page 66)

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SCRATCHBUILT P-40 KITTYHAWK

**One of England's leading scale designers
discusses his scratchbuilt version of the P-40.
Lots of good ideas here.**

By Brian Taylor Photos by the author

I suspect that most of us, certainly those interested in warbirds, have a mental list of aircraft which they would like to model. To be perfectly honest, the P-40 was never anywhere on my personal list. However, I found myself looking around for something a bit out of the ordinary. I had built all the Spits, P-51s, Corsairs, and the like, but there had to be more to WW II than these

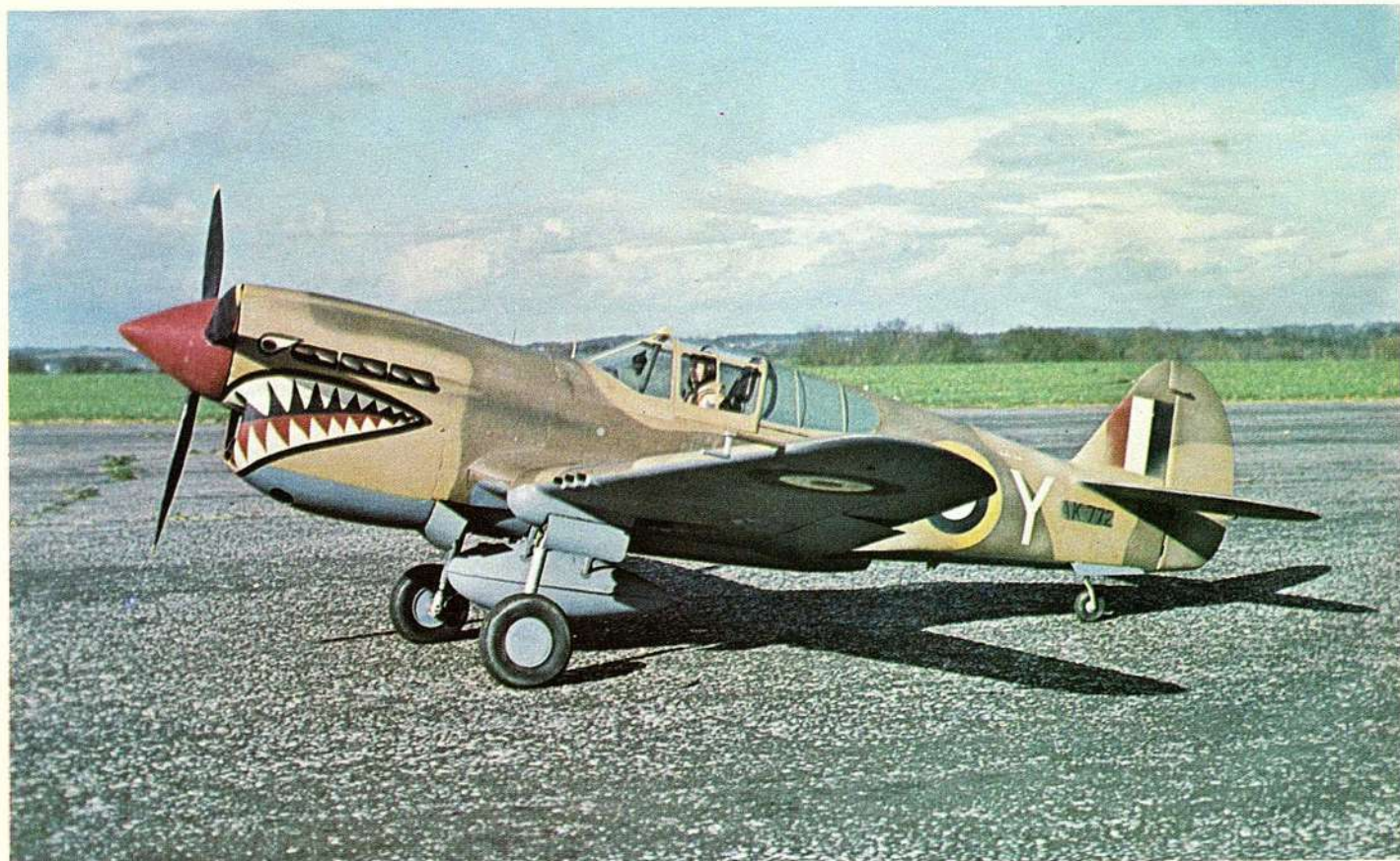
same trite aircraft. It was then that I "noticed" the Kittyhawk . . . and the more I studied the moment arms and areas, the more I liked the plane.

Although the Curtiss Kittyhawk (or Warhawk as it is known in the U.S.) is not one of the real glamour aircraft of the War, it did serve an important function. We should give it not only a place in scale modeling because of the adventures of Chen-

nault the famed Flying Tigers, but also because this trim little fighter did yeoman's duty until more efficient fighting machines could be produced. It held the line when there simply were no other stop-gap airplanes available.

Many of you modelers may tremble at the thought of scratchbuilding but, believe me, it's almost as easy

(Continued on page 58)



SCALE P-40s

TAKING TOP FLITE'S TIGER BY THE TAIL

Some simple-to-do modifications which turn the pussycat P-40 kit by Top Flite into a real Flying Tiger.

By Jerry Antzak

Photos by the author

Under the designing talents of Dave Platt, Top Flite Models was one of the first U.S. kit manufacturers to make a firm commitment to the then newly-formed concept

of Stand-Off Scale. This was over a decade ago, and one of the first kit designs to appear was the P-40 Warhawk. The shark-mouthed machine was an instant success, and today it is probably one of the most modeled aircraft in their kit line,





The Warhawk is a kit with plenty of age, yet it has endured to remain one of today's best scale aircraft.

aside from the ever-popular P-51 Mustang.

The success of these designs is no great secret. Dave designed a lot of good lines into the models, and he also added generous amounts of stability and easy handling. As a matter of fact, my introduction to R/C Scale was with the Top Flite P-51. I flew the model for some four years . . . and then traded it for a kit and a set of retracts! A model has to be good to command that kind of long-lived performance.

But the Warhawk is the subject of this kit modification article. The stock kit is a very satisfying item,

with reasonable scale outline and very predictable flight performance. The thrust of this article is to show you a half dozen or so easy modifications which can be done in order to make the P-40 a totally contest-caliber aircraft.

The primary areas affected by the modifications are:

1. Built-up tail surfaces
2. Clear plastic rear cockpit windows
3. Tailwheel relocated to scale location
4. Wing fillet lengthened
5. Installed correct retract system
6. Installed split flaps
7. Added appropriate belly fairing

You'll find the basic Top Flite kit a real joy to work with. That box

art is a real turn on, and I'm sure that alone has helped make the Warhawk a popular kit in the hobby shops. In general, the balsa is of good quality, but I felt that the quality of some of the die-cutting left a bit to be desired (especially the fuselage formers and most of the "die-crushed" plywood). (We have been informed by Top Flite that they are in the process of re-vamping most of their scale kits, and that the cutting dies are being refurbished. PHP) I was very impressed with the hardware package in the kit, and the molded plastic cowl is very nice. This is quite a rugged cowl, and it will handle a lot of abuse.

Before construction begins, you will want to have the engine of your



choice on hand, as well as the appropriate P-40 style spinner. I opted for the O.S. Max .60 Schneurle front rotor for my project. C.B. Associates makes a fine spinner to fit the P-40. This one has a metal backplate, so that the spinner will track true. I'd suggest buying an extra nose cone (available separately), so that you can have one for the three-bladed static prop.

Those all-balsa tail surfaces supplied in the kit were probably all right for Sport Scale when it was a fledgling contest activity; but today's contest scene dictates the more authentic built-up empennage. Use a profile section that has the highpoint of the camber at about 33% of the chord. The maximum thickness should be about $\frac{3}{4}$ –1". This is mostly an eyeball airfoil, and the determinants for correct sizes will be the available wood for the leading and trailing edges.

Remember to use the lightest wood grades available to construct the stabs and vertical fin. Even though the P-40 has a long nose moment, excessive weight in the tail group will necessitate ballast under the cowl. The elevators and rudder are solid balsa, but lots of $\frac{1}{2}$ " lightening holes were drilled to cut weight (it may sound like nit-picking, but it all pays off). The fin and stabs are sheeted with 1/16" balsa. The rudder and elevators were covered with silkspan, to save weight and to give that fabric feel. At the time, Top Flite's new FabriKote covering material wasn't available, otherwise I would have used this iron-on fabric.

Fibre Glass Evercoat, of Cincin-

That long nose moment helps keep the C.G. within limits, but it's very prudent to keep the built-up empennage light.

nati, Ohio, makes a good lightweight filler, which I use for such areas as the fin fillet. The same company makes a variety of epoxy glues, resins, microballoons, etc. Many hobby shops handle these items, and some are even available through major paint outlets.

The wing goes together in the conventional built-up fashion. Be sure to allow for the plumbing and hardware for the retracts. There are several companies which make rotating retracts for aircraft like the Warhawk. I selected the Rhom Air units, mainly because they have a proven track record of trouble-free performance. They are a pneumatic system, which can be slowed down by using the Hydralock conversion cylinders. The 90-degree rotation is achieved by an over-center working pivot arm. This ball-link will protrude slightly when the gear are in the folded position.

When installing the retracts, be sure to use a 1/4" ply mounting plate, and tie this into two supplemental W-3 and W-4 ribs cut from 1/8" ply. This forms a solid box in which to mount the retracts. Because the wing tapers quite abruptly at the gear location, the landing gear will actually leave the balsa sheeting on the top of the wing exposed through the wheel wells. I used a piece of 3x5" card stock to cover the area, and I applied some droplets of white glue to simulate panel detail. Remember that the retracts fold back, and that means that the retracting gear will change the Center of Gravity. Always check for the proper C.G. with the wheels up in the wells.

The kit supplies a set of alignment wedges, which are used to verify the proper amount of washout. The one situation where a warp might be





Plenty of wing area and a comfortable amount of dihedral (plus some washout) make the P-40 a very stable machine.

accidentally introduced is during the sheeting process. Be sure to lock the wing firmly in place when applying both the bottom and top sheeting. Use the supplied shims to key the trailing edge, and make another set of similar devices to shim under the leading edge out near the tips. I rely heavily on the Robart Incidence Meter to verify the washout in both wings. Make sure the glue used to hold the wing skins in place is thoroughly dried before removing the assembly from the building board. I took the time to hollow out the wing tip blocks, after they were shaped . . . every little bit helps.

You just can't expect to be competitive with an aircraft which doesn't have flaps. The Warhawk used a large set of split flaps to give it good short-field performance. The kit-supplied flaps are a little too flexible, so I substituted 1/16th" plywood. This was reinforced with 1/8" hard balsa ribs to strengthen the trailing edge of the wing, although these may not have been necessary. A strip of hardwood was added along the top edge of the wing's trailing edge, since this area

is quite thin and fragile. Robart "horny point" hinges were used, and a torque rod system was used to actuate the flaps. Be sure the flaps can be lowered at least 30-40 degrees.

When the wing is assembled to this point, sand everything down to a fine finish. Use polyester filler or spackling compound to fill all dents and dings. A coat of clear dope is applied, then a light sanding to take off the "fuzz." I then silkspan the entire wing, using a 20% thinned solution of clear dope to adhere the paper covering. Once dry, another coat is added to insure proper adhesion. Keep the silkspan away from the fillets, for it will form small bubbles over the non-porous fillers used there.

The ailerons are done last, with 1/8" wide strips of card stock cut from a 3x5" card. Glue these on to simulate ribs. Cover the entire structure with a light grade of silkspan, and seal with several coats of thinned dope.

Once you've gotten to this stage, the hardest parts are done. The fuselage requires only minor modifications. I added a Vortac bomb release mechanism in the belly fairing. The fairing shown on the plans is far too small, and it must be extended approximately 2 3/4" aft of

the wing trailing edge. Discard the plastic piece supplied in the kit, and make a new one from a lightweight balsa block. Hollow this out once it is shaped, and fill with polyester filler. You can also use the supplied plastic fairing, then add to it with wood.

The plans show the wing fillet ending about 2" behind the wing's leading edge. I extended the fillet all the way to the leading edge, which is more accurate. To accomplish this, add on an extra piece of the plywood fairing base that's supplied in the kit. The actual fillet extension was made out of a small balsa block. Feather it in with polyester filler and spackling compound until it looks like one flowing line.

The solid window at the rear of the cockpit detracts from what is a crucial area of the model. A clear plastic window looks better, and it's a simple matter to cut out the existing one and glue in a piece of butyrate. When making this modification, plan ahead by scalloping out formers F-10 and F-11, so that they don't show through the new window. I used light cardboard stock to conform to the curves created by scalloping out the formers, as the fuselage side behind the window.

I happened to have an old D & B

cockpit interior kit around, so I used that. Since this company is defunct, other options would be to check out the interior kits made by Royal Products, or the ones available from Dave & Al's in Ohio. A full-blown interior isn't essential, but it certainly couldn't hurt your contest score.

When working in the aft area of the fuse, don't forget that the built-up fin and new rudder will necessitate shimming the fuselage sides out about 3/16" (approximately). The tailwheel was relocated forward about 2 1/2" from the position shown on the plans. I decided not to make it retractable, but that is strictly a matter of personal choice.

Just as with the wing, the fuselage is also covered with medium silkspan. Once the entire model is covered, two more coats of thinned clear dope are applied (always sand between coats to level the surface), then four coats of sanding sealer, which is clear dope mixed with generous amounts of talcum powder. I find that this gives a very light and easy finish, with much less effort than using resins.

Inspection hatches, doors and panels are simulated with the old 3x5" card stock. Glue in place and seal

with a couple of coats of clear dope. When all the detailing is done and the surface is smooth and filled, a coat of silver dope is applied over everything. This serves two purposes. The silver makes any surface irregularities very easy to spot. Secondly, the final coats of color can be sanded through in places to simulate weathering.

Mark off the rivet positions with a felt tip pen. The rivets are applied by injecting a drop of a mixture of Elmer's glue and 20% water through a hypodermic needle. Since the P-40 had flush rivets, I knocked the tops off the rivets with a swipe or two of sandpaper.

Once you start covering a model with dope, you have to stick to it, since little else will apply over it. I finished the model in Pactra's dope, but I had to darken both the gray and Olive Drab to make them conform to the color chips. Spray the gray undersides first, then blend into the Olive Drab upper surfaces. All markings were painted on, with stencils made from paper and held in place with rubber cement. Spray lightly, for you don't want the marking or insignia to appear raised. I have found that reds and yellows seem to have poor covering qualities,

so I spray a coat of silver on before applying them.

Once everything is painted, highlighting the panel lines is done with a light spray mist of flat black. Mask the area adjacent to the rivets, then make a quick pass with the spray gun, so that just a mist is applied. It works best if the paint is cut with about 80% thinner, so that the color is more like a wash. Don't do each and every panel line, for that will look grotesque, but highlight only about 30-40% of them . . . just enough to give the illusion.

While you've got the black wash in the gun, give the gun areas a blast to simulate burns. Exhaust stains are best achieved with a wash of 80% thinned gray, with a mist overcoat of black wash. Weathering is further carried out by sanding through (with wet, very fine paper) the skin paint, so that the silver undercoat is exposed. Do this on areas of logical wear, such as around the cockpit and near the inspection panels, guns, etc. Take a small brush and dab it almost dry with silver paint; then use this along edges too small to sand.

Take the spray gun again, and load it with that 80% thinned black wash. Stand back a bit, and let a

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Modifying the cockpit is a piece of cake, with the rear windows replaced by clear butyrate.

fine mist of black fall over the entire airplane. This may sound drastic, but it does wonders in making the markings and insignia stand out, and

it keeps the model from looking too factory fresh.

My finished plane came out at eight pounds. This is very amazing, considering that there are seven servos aboard. Remember to check the C.G. with the gear in the retracted position.

All of the modifications will do nothing to change the basically sound performance of the Warhawk. The term "pussycat" is an understatement. It must be kept in mind that this kit was originally designed for an event which placed a high premium on flight performance. It was expected that all the guys who were hooked on Pattern flying would go wild about planes like the P-40. That prophesy came true, and the P-40 still has a reputation as a good Pattern machine.

Since you have established the C.G. with the wheels up, be prepared for a noseheavy feeling on take off. A friend of mine who had a P-40 experienced trouble with it always pulling to the left in maneuvers. I don't know if that was because of a warp, but the cure was to add 2 degrees of right thrust. I built that into my machine, and it flies fine, but I don't know if I built in the same warp or not. I'll leave that decision to you.

Those big flaps really are effective, so use them with discretion until you get used to them. Especially on landing, learn to carry enough power to give solid penetration. If you built the wing with

(Continued on page 74)



Chennault's Flying Tigers



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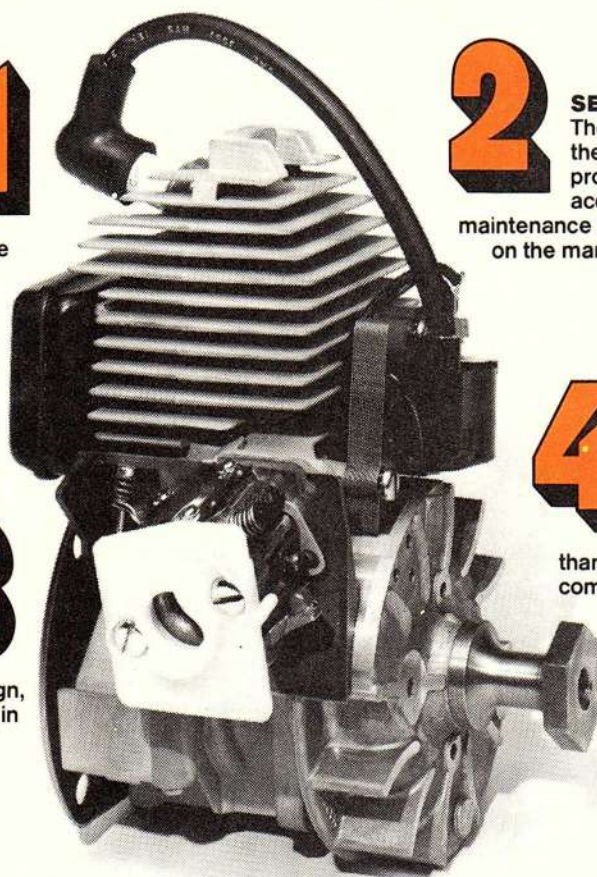
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Complete Kit Concepts

Authentic 1/6 Scale Beechcraft Bonanza V35B

SPECIFICATIONS:

Wing Span- 67"
Wing Area- 700 sq. in.
Length- 53"
Weight- 8-9 lbs.
Channels- 4-6
Power- .60

**Suggested
Retail Value**
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**Factory
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(Include \$8.00 for
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Sorry, no C.O.D.s



Special scale effects also included:

- Louvered inspection panel
- landing light • grill • scale
- nose gear strut & wheel doors
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Scale features include
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control surfaces included in
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**Factory
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1/5 Scale P-51D Mustang

Actual photo of model on final with operational flaps and scale retracts extending.

SPECIFICATIONS

WING SPAN 85"
WING AREA . . . 1300 sq. in.
LENGTH 76"
Ready-to-fly weight . . 22½ lbs.
CHANNELS. 4
(6 for flaps & opt. retracts)

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Suggested Retail Value..... \$699.95
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Byro-Jet Fan Unit Suggested Retail Value \$62.44



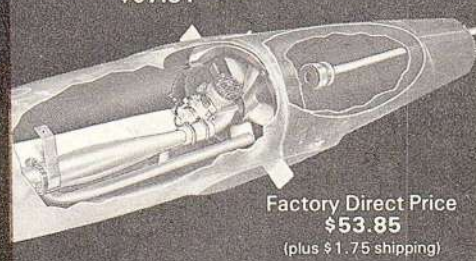
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Factory Direct Price
\$216.21
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Factory Direct Price
\$53.85
(plus \$1.75 shipping)





This big, light floater makes a very stable flyer. Top speed might hit 40 mph! (J. R. Naidish photo)

The inimitable Fokker Eindecker has been modeled many times, and no wonder, for it's one of Anthony Fokker's early successful designs, and it was perhaps one of the most stable WW I fighters. The airplane was actually somewhat of an enigma, for it was designed before the war as a basic utility plane . . . merely to get someone from point A to point B.

What turned this pussycat of a monoplane into one of the most treacherous aerial combat machines

of the early war had little to do with the design of the aircraft. True, it was maneuverable, and the 100 hp Oberursel gave sufficient power to enable Max Immelman to perfect his famous evasive maneuver of the half loop with a half roll on top. But the E III wasn't a thoroughbred fighter . . . all it really had going for it was the simple advantage of a machine gun which fired through the propeller arc.

Fokker did not invent the idea of eccentric cam gears to synchronize

the machine gun's lethal slugs with the whir of the prop, but he was the first to convince the military minds of the practicality of this technique. So the lowly Eindecker suddenly found itself labeled the "Fokker Scourge," as it menaced the poorly armed Allied machines. Maybe it was more the inadequacies of the machines against which it was pitted that made the E III a legend. The Eindecker had to rely on the element of surprise. No Allied observer suspected that a German plane could

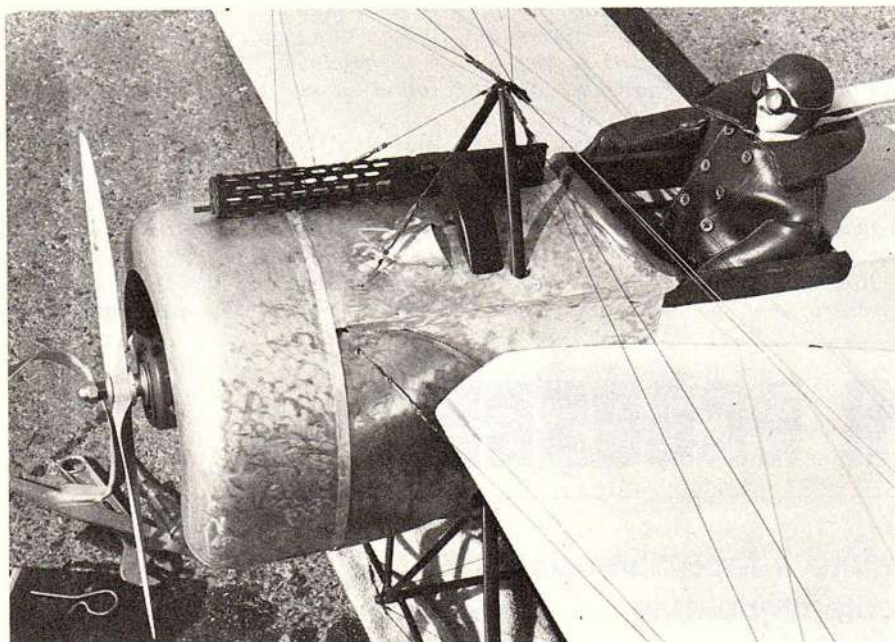
THE "FOKKER SCOURGE"

The Eindecker E-III gained quite a reputation as a fighter, and this quarter-scale model has earned a reputation as a real scourge on the contest circuit.

By John Lockwood Photos by Jack E. Hancock



The author and his favorite Precision Scale model. The plane has won almost every contest it has entered.



Young Hermann in his cockpit is raring to go. Note profusion of rigging wires. Cables which operate the wing warping actuate from the pylon below the fuselage. (J. R. Naidish photo)

46 scale r/c modeler

fly either head on or directly astern and shoot away. Immelmann loved to dive out of the sun to further heighten that element of surprise. The unwary Allied fliers would expect the plane to either climb above (to shoot downward) or drop below them, to get a shot upward from a wing or cockpit mounted machine gun. So the shock of hearing the slow-paced chatter of machine gun fire from a plane directly behind must have been a real surprise, indeed!

Take away the "secret weapon" (pilots were told to not fly over Allied territory for fear of being downed), and the Eindecker was a rather mundane aircraft, looking every bit like the contemporary Morane-Saulnier machines of the day. Lateral control was from wing warping, a feature which has been faithfully duplicated on the model. The wing spars were, by definition, rather flimsy so that the fabric covering could flex when the cables were pulled. It's frankly amazing that Immelmann was able to perform his favorite maneuver on so flimsy a wing structure!

Other than that, the E III was a typical steel-tube structure in the fuse, with a wooden wing. That characteristic horseshoe shaped cowl was done to avoid any fuel build ups from the leaking bottom cylinders . . . it was simply a way of avoiding the fliers' most feared enemy—fire.

* * *

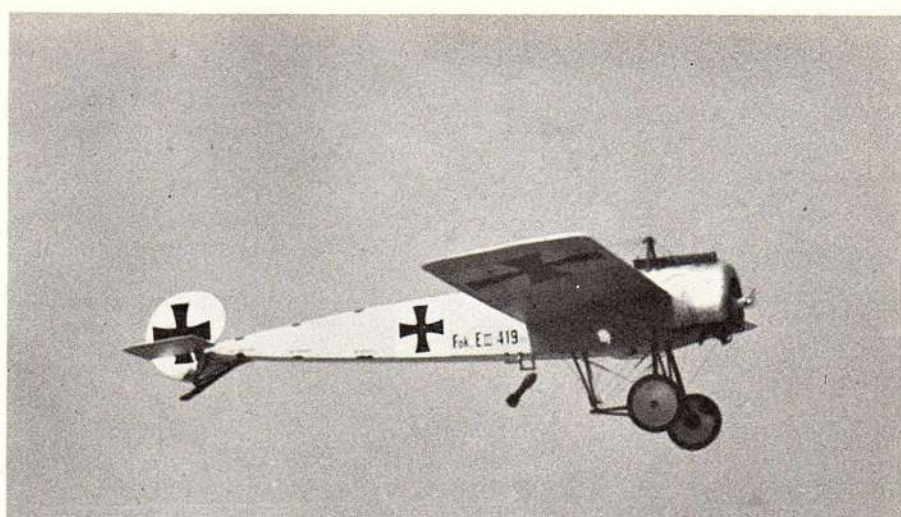
But, the "Fokker Scourge" lives some 65 years later! In the form of a 1/4-scale model of the Eindecker, again panic was wreaked on the field of combat. This time it was a more civilized form of combat, where the gladiators flew without malice. Because of the model's inherent size and design, it has extreme versatility, capable of being flown in Sport Scale, Precision Scale and Giant Scale classes.

The E III cleaned up in the 1970 WW I Jamboree (where it was Grand Champion), the Canyon Crosswinds contest (where it again was crowned Grand Champion), the Tucson Winter Nats (winner of the Mammoth Scale class), and the 1980 Western Scale Nats (first in AMA Scale) and a very close second in the U.S. Scale Masters Championships. I personally feel that I actually won this last meet, but that's a matter for others to dispute or discuss. Having a model that will fit whatever classification is available really extends the limits of one's contest participation. Naturally, I'm

not advocating that you jump around from class to class, but this is a model design that can be built any number of ways, so simply construct and detail it to the limit of your talents.

If you are into AMA Precision Scale, don't let the simple, clean lines of the Eindecker fool you. There's plenty of room for detailing, both on the exterior (especially if you like turnbuckles), and a cockpit that affords plenty of attention to details. AMA Scale seems to foster the selection of basic-looking models, without too much complexity. The Eindecker can be well documented, is reliable and rugged enough to not look shabby after a season of flying, and can be built with a perfectly scale sub-structure. I have found that I tend to give up a few static points to the other airplanes, but those points can easily be made up in flight points . . . and the E III is a very good performer. It even has a unique bomb drop option, which we'll discuss later.

As mentioned, this is a quarter-scale machine. The Fokker has a 99.5" span, which makes for some very good impression points from the judges. Also, the big format makes detailing much easier. The



It's bombs away! The ordnance is released from the pilot's hand, which protrudes through a hole in the wing. Light shining through the hole is visible on the fuse. (J. R. Naidish photo)

cockpit on my machine has an altimeter, fuel pressure gauge and fuel flow bowl, airspeed indicator and three valve handles. There is also a map holder in the middle of the control panel. These details can all be seen without the need of a magnifying glass and, even better, they were built without the need for one. The control stick is easily fabricated from

brass tubing, a piece of welding rod and a couple of wooden blocks. The pilot's seat is a construct of balsa and 1/32" ply. The entire seat is covered with woven bamboo from a fruit bowl found at a local import shop . . . this adequately simulates wicker.

With some 1,790 sq. in. of area, the Eindecker tends to be a floater at the typical 11-12 pounds of weight. A Webra .91 is more than ample power, and most of the flying is done at about 3/4 throttle (or less). The wing loading comes out to a scant

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1st Military Scale
1978 MACS

Mirage III \$139.95

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Sixth Place:
U.S. Scale Masters
Championships Qualifications

Grand Champion
1st Military Scale
1979 MACS

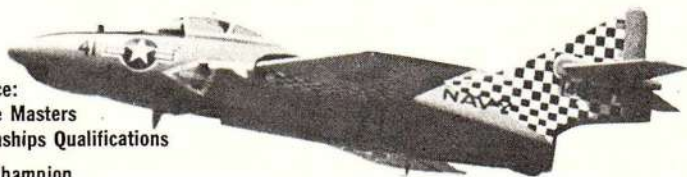
F9F-8 Cougar \$139.95

STATISTICS: Length 56" / Wing Span 47" / Wing area 755 sq. in. / Wing loading 23 oz. / Designed for Turbax I & K&B 9100 / Rhom retracts. FEATURES: Light weight epoxy glass fuselage / epoxy inlet ducting system / engine cover cap / clear plastic canopy / Full size plans, w/ templates and comprehensive photo illustrated construction book. Fuel-proof decals available \$9.95

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Photos by P. H. Potega



The tail skid also serves as the bottom hinge for the comma-shaped rudder. Shock absorbing via a rubber band.

15.5 oz./sq. ft., which qualifies this as a sailplane! If you are usually subject to windy flight conditions, you might want to consider a removable weight at the C.G., so that you can add 2-3 pounds when the breeze comes up. This will greatly improve control . . . remember that we're dealing with a wing warping system for lateral control.

That wing warping system is distinctive. Many may be skeptical of the feasibility of such a method of lateral control, but I can assure you that I've been flying it now for over a year, and it works great. There is a slight lag in response, but you quickly learn to compensate for it (don't forget that you're putt-putting along at about 30 mph). The need for rudder is always there, and all that happens if you continue to lean into the "ailerons" is that a pro-

nounced side slip results.

The real airplane used pulleys up on that pylon over the wing center section. Pull on cables strung through these pulleys, which ran out to attachment points behind the spars, and the wing warped. The model faithfully duplicates this system, and all the hardware can be had from any hobby shop which carries Proctor fittings and hardware for model boats. Futaba S-15 servos easily handle the task of deflecting the wing. I always make it a practice of demonstrating the wing warping system in front of the flight judges before flying. They inevitably are really impressed by the "gadgetry," which hopefully puts them in a good frame of mind to judge the model.

No model is perfect, of course. The Eindecker does have one inherent flaw, at least as far as an AMA Scale is concerned. The Fokker tends to be such a simple design that the only real places where the judges can nit-pick are the cockpit and engine areas. The cockpit is pretty easy to make presentable, given a bit of building skill. But that semi-exposed 9-cylinder engine is a real bear to do well. The cowl is made from a 12 quart aluminum sauce pan, which I picked up at K-Mart for

(Continued on page 72)

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MODELERS**

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"Whether in sport flying or in competition, I find the C & D Glo-Driver and Start-Pac to be an indispensable combination. In addition to sure starts under all conditions, the C & D Glo-Driver provides the added confidence for the competitor of knowing that his plug is good before going to the flight line." Joe Bridi



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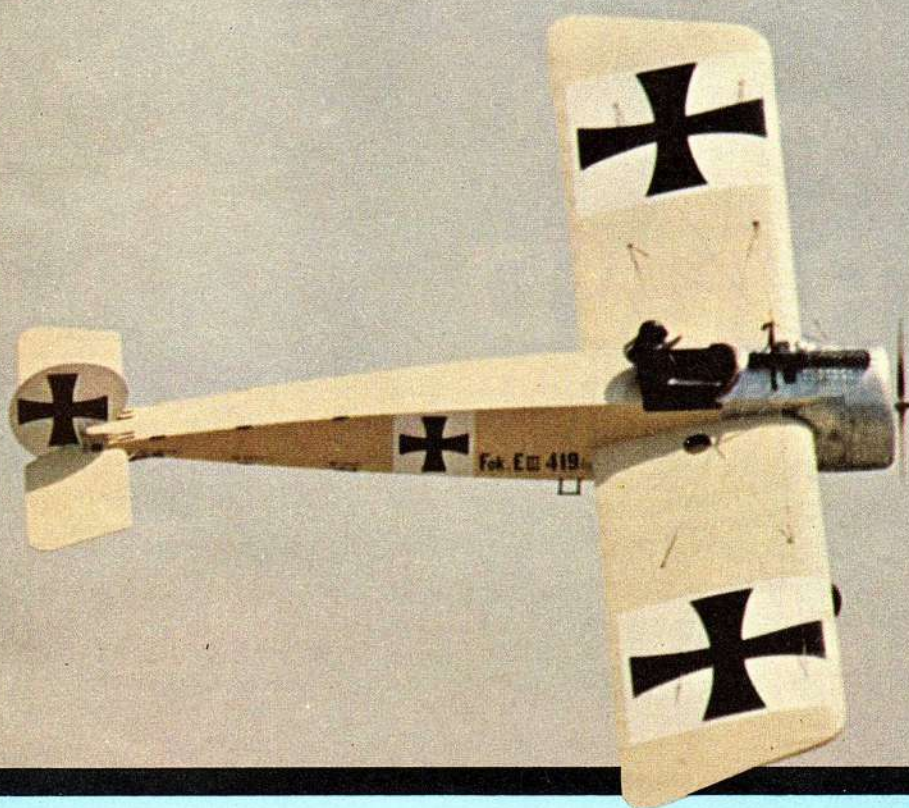
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1

U.S. Scale Masters



Championships

GRAND FINALE

The first-ever Masters Champion is crowned in a weekend of highly competitive flying among the best fliers in the country. Staff Report

Photos by J. R. Naidish

"Mission To Mile Square"

*(To the tune of
"Wabash Cannonball")*

Fountain Valley Tower, 1/8th Air
Force here,
Requesting landing clearance . . .
Hide the women—hide the beer.
We've heard that there's a mighty
meet,
Biggest of the year.
With all the best in U.S. Scale
invited to appear.

We've brought our very best pilots,
To share in all the fun,
And you know we'll do our damndest
To come out Number One.

There's Captain Kent,
and Colonel Bob,
They've armed their birds of war . . .
Ol' Dan from Albuquerque,
And listen up, there's more!

These lyrics, written especially for the occasion of the first annual U.S. Scale Masters Championships by Phoenix's Al Casey, proved to be the highlight of the Saturday night banquet. But to start the story on

2



3



4



5



We've brought our man from
Texas . . .
He's new to the Mile Square scene.
Ted White's his name—
from Dallas—

And watch him boys, he's mean!
The ground support crew's present,
Pit lizards, callers and all . . .
And we have come prepared to really
Have ourselves a ball.

Refrain:
*Listen to the rumble,
The rattle and the roar,
As the 1/8th Air Force scrambles . . .
Climbing from the Valley floor.*

We'll do our best to beat your best,
And if that's not to be,
We'll know that we have flown
against

The best we've ever seen.
Our thanks to the Scale Squadron,
Harris, Bob, Bert, Denny and
Shane . . .

And you can bet your goggles
That we'll be back again.
You've treated us so royally,
Year after year,

That there's no place we'd rather fly
In all the West than here . . .
(Except, of course, for Phoenix).

Refrain:
*Listen to the rumble,
The rattle and the roar,
As the 1/8th Air Force scrambles . . .
Climbing from the Valley floor.*

We'll do our best to beat your best,
And if that's not to be,
We know that we've attended
The best meet in history.

1. The Grand Champion of the United States in Sport Scale is Arizona's "Cowboy" Kent Walters. 2. Earl Thompson's Focke Wulf FW-44J took a hotly disputed first place in AMA Precision Scale. 3. The jets took their share of trophies, with Bob Violett (right) taking second place with his A-4D, and Tom Cook finishing fifth with his F-4 Phantom. 4. Jemco's Jim Meister had the highest static score with his SBD-5, but he could only fly to third place because of mechanical difficulties. 5. Ted White came from Texas to pin down a fourth place with his M.B.-5.

task" syndrome: first to climb Mount Everest, to the South (or North) Pole, etc. How many of us really know (or really care about) the second man who crossed the Atlantic? Being first is always newsworthy, and the U.S. Scale Masters Championships was the first national competition generated, promoted and organized by the scale fliers, themselves.

Maybe it wasn't just the fact that this was the first time that the scale fliers got together to select their own champion that made this an important weekend of flying . . . the fact that it was one of the best weekends of head-to-head competi-

Saturday night would be to get ahead of the tale; however, it's worthy of note that the mood of the song properly expresses the feelings shared by all the contestants . . . it was "the best meet in history."

"Firsts" in anything always seem to generate their own excitement . . . philatelists drool over a first-issue stamp, and numismatists go crazy over those mint coins. We always revere the "first-to-complete-any-

The details on Kent Walters' Dauntless were truly outstanding.

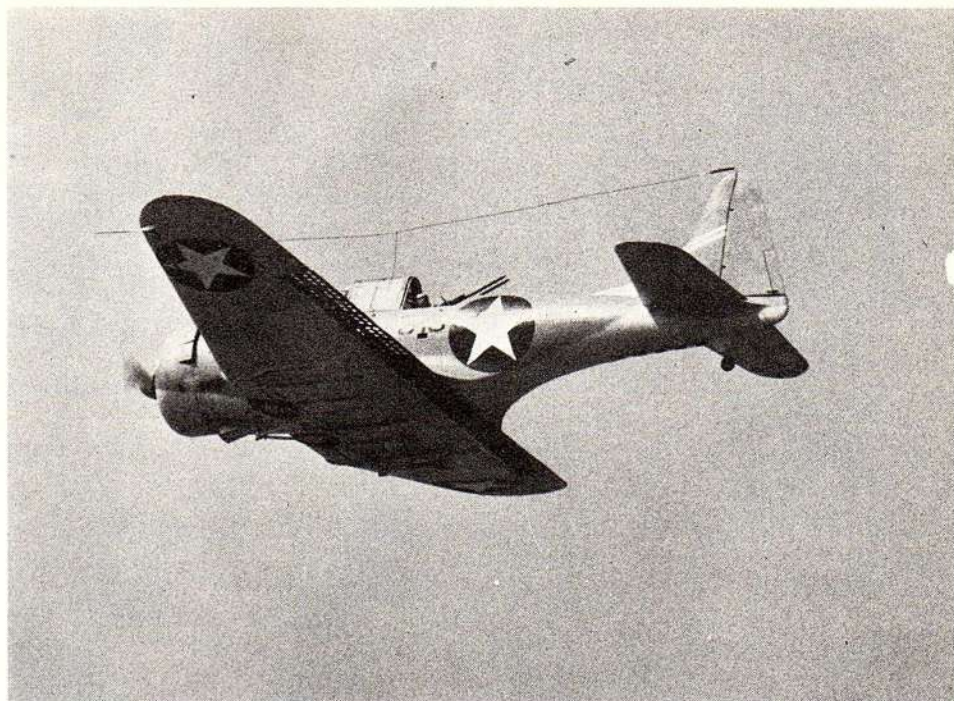


tion certainly is important. The Southern California Scale Squadron—who hosted the first “invitational” finals—set out to run one of the smoothest scale contests ever. We’ll see how well they succeeded (or failed).

The concept of a Masters is nothing revolutionary or new. It’s been done in Pattern for years, and the system of eliminations is used in everything from baseball to bowling. It was originally decided to have a group of regional qualifying fly-offs to narrow down the field of potential entrants in the big finals. There were originally five events slated, each in a geographic area (Florida, Wisconsin, Pennsylvania, Indiana, and California). This would give most of the fliers in the country a chance to qualify. Later, the AMA graciously agreed to cooperate by designating the AMA Nats as a qualifying event. This meant that 30 pilots (five from each region) would be coming to California in October.

The thrust of such a program is to not only keep the big final fly-off closely controlled, so that each flier can receive the maximum in services and attention (good quality control), but also this eliminations system helps to ameliorate the element of luck in selecting a national Scale Champion. Lady Luck still has some influence, as this report will show, but an eliminations system lessens the chance that some rank upstart could manage a few good flights and win all the marbles.

While all of the glory seems to go to the “firsts” in this world, the very fact that no one has set any precedent or plowed the acreage before means that the going might be a little shaky the first time around. The planning that goes into a contest of this size is staggeringly monumental. Not only are you trying to make all the plans for the actual Masters fly-off, but you are faced with the coordination of all the regional events. Harris Lee virtually tackled this job as a one-man dervish, making phone calls, writing letters, etc. The Scale Squadron chipped in, but it soon became apparent that it was the typical case of “the few doing too too much.” Those clubs who inherit the task of running the Masters in the future (the finals is passed from club-to-club on a rotating basis, with the 1981 event scheduled for the Mint Julep crowd in Kentucky) will have to be cognizant of the amount of work involved, and be prepared to have the spirited teamwork of every club member.



Kent Walters' Dauntless flew so flawlessly that his average score for the contest's six flights was over 90!

Thus, while the desire for achieving a perfect meet was there within the Squadron, there were some details which fell by the wayside. The invitations to those who qualified in the various regionals didn't go out as promptly as they should have, and many fliers found themselves invited to a contest without sufficient vacation time remaining. Then there's always the cost factor, and airline prices for crosscountry flights were exorbitant. A few fliers wiped out their first-line aircraft only days before the event, as it all turned out, there were only 21 Sport Scale entrants on board in California for the three-day event. However, when the word gets out of the success of the first Masters, we have a feeling that next year's event will have a full attendance.

The Scale Squadron was very aware of the difficulties inherent in having a West Coast site for the first Masters. Through various fund raising efforts, enough money was raised to pay half fare to the judges and officials. It was believed that the only way to conduct a fair and impartial contest was to avoid any suggestion of local favoritism. Each of the regional events was asked to send two representatives, one to act as a static judge and the other to flight judge. As it turned out, some last minute cancellations made this impossible, but there were still representative judges from several other states.

Speaking of fund raising, that was

one of the most difficult areas of the event. It was decided early in the game that sponsorship would be solicited on a cash-only basis. The idea of having to hand out packages of clevises, covering materials, etc., would somehow not be fitting of the stature of a Masters event. While major contributions by Futaba, Byron Originals, World Engines, K&B, Bridi Hobbies, Jet Hangar Hobbies, Ellco Plastics and several other manufacturers were a big boost to the event, it is hoped that next year will see a more supportive role from the industry which always profits from major events of this sort.

Because of field restrictions at the flying site, direct solicitations of money are prohibited, so it was difficult for the Squadron to get much benefit from the tickets that were available from the national raffle which was going on. *Scale R/C Modeler* had contributed two Caribbean cruises for two people each as prizes for the raffle. These were valued at about \$1,000 for each prize. Tickets were sold at Toledo, and hawked by the major clubs in the regionals. As it turned out, the big drawing revealed both winners as living within 50 miles of the contest site!

Scale R/C Modeler also donated the first and second place trophies in AMA and Sport Scale. By a special arrangement, the magazine donated 25 beautiful bronze eagles as recognition trophies to all the fliers who achieved the honor of qualifying for the Masters. Even these trophies were valued at \$40 each, so there was definitely no lack of hardware, and everyone went home with



The look of determination on Violett's face tells the story. He went without sleep in order to rebuild . . . and earned a second place trophy.

a trophy. The Masters also received significant exposure in all the magazines. Numerous ads appeared in all the hobby publicat[i]ons, and the co-operation of the modeling press was a contributing factor to the success of the meet.

Actually, it was one of the prizes that evolved into one of the numerous human interest stories of the meet. "Cowboy" Kent Walters who, as the song says "armed his bird of war" for the contest, had expressed a need for a new radio. He was building a huge B-17, and he had often said that he'd love to get a Futaba radio for the monster bomber. As it turned out, Futaba offered a deluxe 8-channel rig as one of the prizes for the Masters. You could see the motivation in Kent's eyes from the beginning of the first flight . . . he had his mind and heart set on that radio!

Because everyone knew that the contest would most likely be decided in the air, it was agreed that there should be three days set aside for the contest. Friday would be

strictly for static judging, and also give the fliers and their families a chance to get to see a bit of Southern California (the headquarters was across the street from Disneyland). With this system, Bert Baker the contest C.D., would have Friday evening to check all the scores, and to correct any apparent deficiencies prior to the first flight on Saturday.

The wisdom of this was obvious when the static scores began appearing on the toteboard. By having an eliminations system, the one problem would be that only the best-of-the-best would be in attendance. This meant that the scores would be very close. No one realized how close until the scoreboard revealed a 6½ point spread in static scores among all 21 contestants. This would have been even less, had not Frank Tiano's P-51 been possibly misjudged. The Mustang was the first model into the circles, and it was an issue as to whether the judges started out scoring a bit on the low side. Aside from that incident, the judging was very consistent, with all the points ranging from 90 to 96.5. Jim Meister led the league, with his SBD Dauntless grabbing the highest static score. This was no

surprise, since he had virtually walked away with his regional event.

The cast of demi-gods who attended this Olympian event was impressive. From Florida came Bob Violett and Art Johnson. Bob was campaigning his A-4D (wait till you hear the story of this man's battle to gain a trophy . . . it's truly one of the human sagas of the weekend). From Missouri came Tom Cook, with one of the most spectacular machines ever. His huge F-4 Phantom was the biggest model there, and it was powered by twin ducted fans.

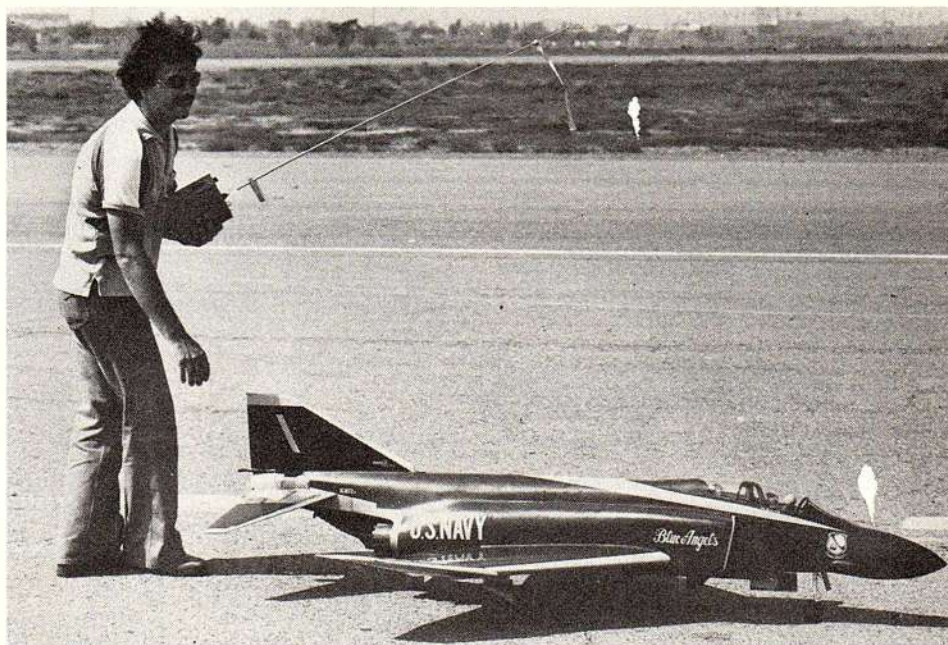
Ed Izzo and his charming wife traveled from Massachusetts to campaign an immaculate Focke Wulf FW-190. Ed is an old Pattern flier, which may have been his nemesis, for his model didn't rely heavily on any "trick" gadgetry . . . and one of the real lessons of this event was that just having a spectacular scale model isn't enough, nor will just flying well-executed maneuvers do the job. You need a competitive edge . . . whether it be bomb dropping, or a drogue chute, there has to be that certain extra which elevates your model above the rest in the judges' eyes.

Let's face it, in a contest of this

calibre, all the models are essentially identical in quality, and it takes a better-looking banana to whet the judges' appetite. At the Masters, the second, fourth and sixth place machines were ducted fans (a trend that was echoed at this year's Nats). As a matter of fact, the only "stock" machine to place in the top five was Ted White's Martin Baker M.B. 5 (Ted's superior flying is what accounted for that trophy).

Anyone who says that WW II is dead better change their thinking. Except for the ducted fans, all of the machines in the top ten were WW II fighters. There were the usual P-47s, F4Us, Spitfires and P-51s in the crowd. What separated them from the models you usually see at contests is that they were either from scratch, or so modified that to call them a kit was to pay the manufacturers an unnecessary compliment.

Frank Tiano, from New York, and Phil Sibille from Virginia, rounded out the East Coast contingent. Garland Hamilton came from Denver, with a superb Corsair. As mentioned in the song lyrics, Ted White was there from Texas, and Dan Parsons came from Albuquerque. Of course, we musn't forget the group from



This shot gives some perspective of the size of Tom Cook's big Phantom.

Phoenix, who travel in such numbers that they generated their own crowd.

In a contest so closely scored, what kind of strategy do you use? Do you play the conservative role, waiting for the other guy to make that critical mistake? Or, should one

approach it with a "go for broke" attitude? It was pretty obvious that no one was viewing the weekend with any caution, for they all knew that it was strictly a put-up-or-shut-up contest.

Out of such an attitude came some true stories of the thrill of victory and the agony of defeat. What tales there were of the fickle finger of

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That drogue chute deployment upon landing was certainly a crowd pleaser, and it helped get Tom a fifth place trophy.

fate, as engine problems plagued Phil Sibille's gorgeous Spitfire, or when Jerry Ortega's radio problems continued to haunt him (even after getting a virtually handmade radio for the contest). Then there's Art Johnson, who drove all the way across the country to compete with

his big F-82 Twin Mustang. On Sunday, Art wasn't anywhere to be found, and we were told that he had gotten ill during the night, and had decided to drive back to Florida. We thought no more of it, but later learned that he spent three weeks in a California hospital, with a bad case of pneumonia!

But maybe the real saga of sportsmanship which typifies the spirit of this contest was Bob Violet's struggle toward victory. Bob's first

landing with the A-4D was a real bouncer, and the jet finally got into a pogo situation from which Violet decided to try a go-around. He poured the coals to it, but the model was hanging with the nose straight up. The inevitable snap really tore up the airframe, but Bob had no intention of calling it quits. Larry Wolfe, proprietor of Jet Hangar Hobbies and a business competitor of Violet's, offered the use of his shop. With John Brodbeck Jr. to assist, Bob set out on an all-day repair session.

Such sportsmanship between rivals set a definite upbeat tone for the whole contest, and Bob's determination underscored the importance all the fliers placed on winning this meet. Violet did successfully complete the repairs and managed to get in a flight in the last round on Saturday . . . but the story doesn't end there. Bob *again* smacked the A-4 on landing, and Larry's shop was again pressed into service, as Bob settled in for an all-night repair session. Bob showed up on Sunday with a really scarred and battered looking model, but he then proceeded to turn in some of the highest flight scores of the meet, with a 92.5 and

(Continued from page 61)

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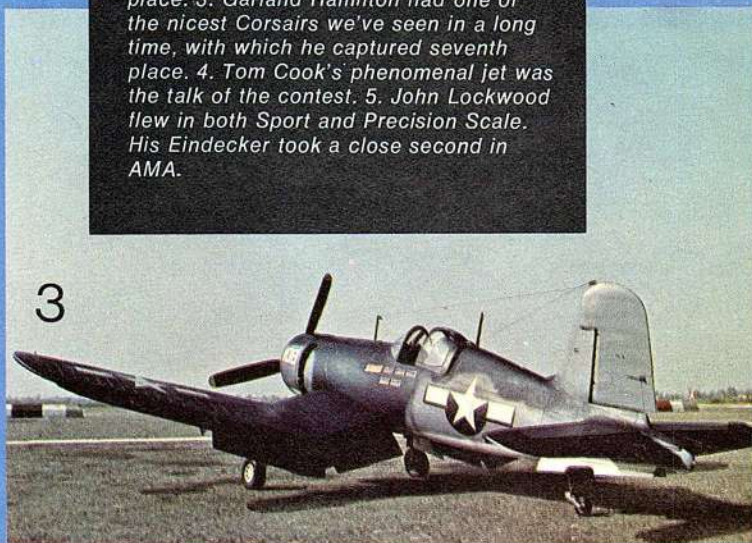


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1. Phil Sibille's Spitfire was very impressive, but mechanical troubles kept him out of the trophy running. 2. Larry Wolfe's Jet Hangar Hobbies Cougar just missed a trophy, and wound up in sixth place. 3. Garland Hamilton had one of the nicest Corsairs we've seen in a long time, with which he captured seventh place. 4. Tom Cook's phenomenal jet was the talk of the contest. 5. John Lockwood flew in both Sport and Precision Scale. His Eindecker took a close second in AMA.



SCRATCHBUILT P-40 KITTYHAWK

(Continued from page 34)



as building a kit. In some respects, it's easier, since you don't have to waste time interpreting what the kit designer had in mind. Most often I find that kit builders spend more time modifying the kits . . . it would be far simpler to cut out the parts yourself, and be guaranteed of getting exactly what you want. As the old saying goes: "If you want something done right, do it yourself."

My plans, to those who have worked with them before, are easy to fol-

low, accurate and well detailed with building hints. The hard parts, such as the canopy, spinner and figerglass cowl, are all available from Bob Holman, P.O. Box 741S, San Bernardino, CA 92402. Even you relative beginners out there won't be disappointed if you tackle this project. I use the word "beginners" to mean those who have some solid kit building expertise, not a newcomer to R/C.

This is a .60-sized model, so you

won't have to evict the kids in order to make sufficient building room available. I'm not at all into the Giant-Scale movement which is the rage today, for I've seen the vans, trailers, campers and what not that are being used just to get a model airplane to the flying field. As of yet, I'm not convinced that "big is best," so I'll stick to the established parameters for a model. You'll find that this airplane doesn't buzz around the sky as if it had been stung by the bluetail fly.

The Kittyhawk has a span of 65", and it's obvious that to achieve those prototypically realistic slow flight speeds, it's important to keep the weight down to a reasonable level. The prototype weighs 9 lbs., 3 ozs. ready to fly. That's a fully equipped airplane, with flaps and retracts, so you can be sure that the woods are all on the light side. One very nice feature of that shark-mouthed nose on the P-40 is that it is a long moment arm up front. This helps minimize the need for extra ballast, and the radio gear can effectively be used to get the correct balance. My receiver and battery pack are right behind the fuel tank, while the servos sit directly under the pilot.

Finishing the model is probably the most likely place for weight build up. My finishing techniques are a bit unorthodox, especially in this age of miracle coverings and resins. I have always gotten the best results with banana oil (non-shrinking dope) and talcum powder (the talc makes for a sealer and filler). Since I've never tried any other method of finishing, I can only assume that my method is lighter than most. For example, I am building a Messerschmitt Bf-109F. I weighed the fuselage before beginning my finishing techniques. I then gave it my usual two coats of sealer, tissue covering and three more coats of the sealer mixture. The final weight, ready for the color coats, was only 1 ounce heavier than the untreated fuse.

The one characteristic of the P-40 is that big spinner. I was tempted to reduce the outline dimension somewhat, because the prop had hardly any area left. But to alter that distinctive nose area would be a dead giveaway. I resorted to using a 13" prop, and I'd suggest that you keep that in mind when selecting an engine. I'm using a Merco .61, which is not the most powerful engine in the world. It does a good job of swinging both the prop and big spinner, so I can only assume that any engine with a high torque curve

will perform equally. There is no practical way to get a commercial silencer under that tight cowl, but it wouldn't be too much work to fabricate your own (or just let it hang out, as they say).

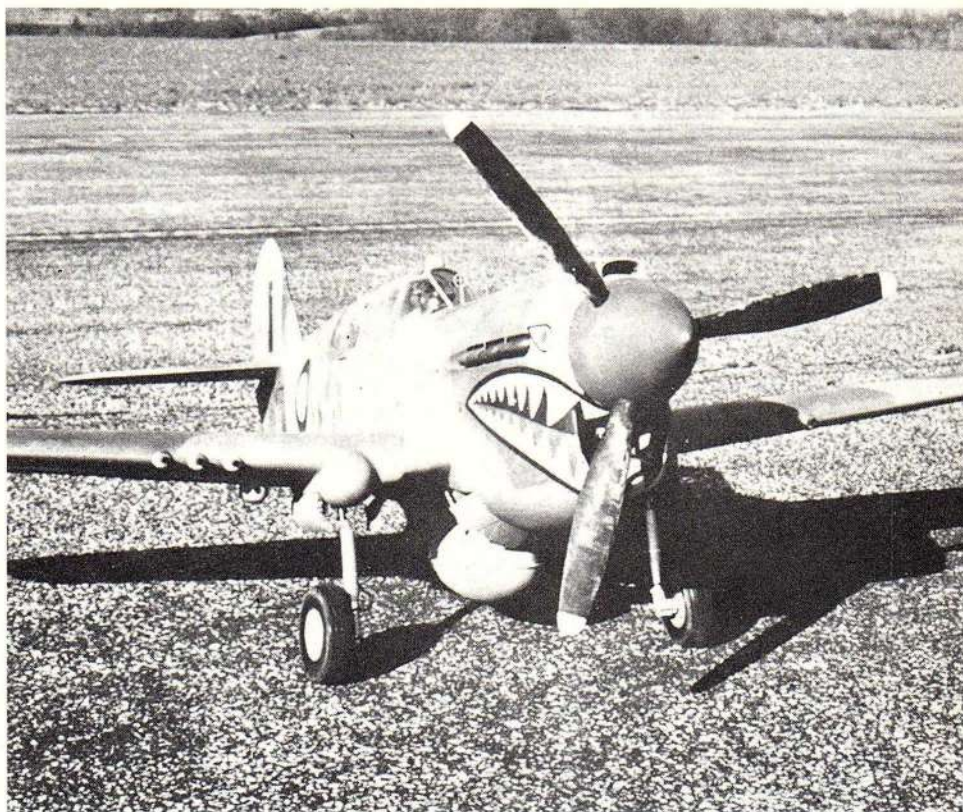
While the model shown here has retracts, the plans show only fixed gear. The units I used were custom built by a friend of mine who needed some relief from his usual hobby of making live steam railroad models. The rotating motion is achieved by a set of beveled gears. These worked just great, until I damaged one on an ill-executed landing. I was going to repair them, but Fred Coulson offered me a set of the commercial units he manufactures. Since these required no major alterations to the wing, I installed them.

I'm not familiar with the retract units sold in the U.S., but I suspect that almost any of the commercial units which rotate 90 degrees will work satisfactorily. Remember, since you are scratchbuilding, you aren't locked into using the pieces that come already cut in the kit box!

The retracting tailwheel is a home-made affair. It uses a simple folding arm mechanism, which is the same principle the Robart unit incorporates (believe me, I had built my tailwheel long before Robart released theirs, so don't accuse me of cribbing the idea). The tailwheel is steerable, and the control horn disengages from the pushrod when the gear retracts. To ensure that the parts reconnect when the wheel comes down, a light centering spring is used.

The gear doors on the mains and the tailwheel are functional, and it will actually take you longer to get these installed and operational than it does to put the retracts in. Many modelers cheat on the P-40 and simply eliminate the doors altogether, or else they fix them permanently open . . . both are considered sacrilegious by the pros! When you do a low fly-by with all the doors neatly sealed shut, all the cursing and fiddling you had to go through to achieve the effect will be worth it.

The general construction of the Kittyhawk is relatively standard for most WW II fighters. There's little to caution you about, other than to emphasize the importance of getting that big wing straight. Get that washout correct, with hopefully the same amount in each panel! I use a system of building tabs, which are shown with each part. By indexing the tabs for each rib properly with the building board, you wind



The shark-mouthed Kittyhawk features functional gear and doors, as well as a droppable belly tank.



The P-40 is a big machine, with a 65" span, and it flies nicely on an over-propped .60 engine.

up constructing a very simple egg-crate structure for the wing. The sheeting is initially only applied back to the spar, so the structure is very flexible at first. Be careful at this stage, for the wing won't stay true until the lower sheeting is applied. I suggest making two jigs—one for the leading and the other for the trailing edges, to lock the wing until the lower sheeting is applied.

The flaps on the P-40 work very well, and they are large enough for even the most shortsighted judge to see. In calm air, full flap will de-

liver very slow and realistic landings. In windy conditions, I have found that a slight degree of flap (about 10-15 percent) will offer better control than with no flap at all.

I have yet to find the perfect material from which to construct the split flaps. No matter what is used, there seems to always be some distortion because the flaps are so large. Being split flaps, there's not too much material available to get a rigid structure. On the prototype, I made my own fiberglass sheet stock, from which the flaps were cut. This is done by making a laminate of cloth and resin, which is sandwiched between two pieces of window glass (use Saran Wrap or

put mold release on the panes first). This makes for some pretty straight flaps, but they do come out a lot heavier than I would prefer.

The P-40 also features a bomb or belly tank drop. Since I only had a 6-channel radio to work with, I interconnected the bomb release mechanism with the flap linkage. This proves to be a workable compromise, and the slight flap movement is hardly visible when making the bombing pass. The one drawback, of course, is that the flaps can't be used for take off, and if you are the type of contestant who like to show the judges how the flaps work before

you take off, then you won't find this method very sound.

Those twelve exhaust stacks can be a real nuisance to fabricate by hand. After carving the first two, you'll be fishing for a shortcut. What I did is to make one master stack from hardwood. Paint this with mold release (or wax) and gob on a thick coat of silicone bathtub sealer. This makes a perfect rubber mold. Now all that's needed to do is paint in a layer of fiberglass resin and you can duplicate as many exhaust stacks as you need.

I find that mixing in a bit of talcum powder with the resin im-

proves the consistency, and it renders the finished piece less brittle and easier to carve. You might want to consider making two rubber molds, to expedite the entire operation. You'll undoubtedly find countless other applications for this homemade molding system, and I put it to good use for the dummy engine cylinders on my BT-13 Valiant.

I also understand that Slim-Line Mufflers now custom make scale exhaust systems for the in-line engines. While I have not seen these, they sound like the perfect solution to the Kittyhawk's problems, since you would get the correct exhaust stacks, eliminate the problem of not being able to get a muffler to fit under the cowl, and wind up with a functional scale exhaust in the bargain. From what I understand, you have to send a copy of the fuselage plans (a Xerox of the nose area should do) to Slim-Line, and also specify the engine to be used.

There is really no shortage of data on the P-40 series, so you should have no difficulty finding a suitable color scheme. The Kittyhawks saw service on all fronts and there are many versions which don't sport the typical shark mouth. I decided to do a machine from the R.A.F. 112 Squadron based in North Africa. I have always admired the desert color scheme, and who could resist that colorful shark's mouth? The two Aircam books on the P-40 come highly recommended. Originally printed in England, they are distributed in the U.S. under the Arco-Aircam designation. Volumes No. 6 and No. 7 deal with the P-40, and these books are packed full of photos and drawings.

The Kittyhawk turned out to be a very good flying airplane. With the light wingloading, it can be slowed down nicely for realistic performance. Swinging that big prop also helps to avoid building up excessive speed. All I can say about the flight performance, without getting into a lot of flowery rhetoric, is that there were no surprises. The P-40 did everything I thought it would, which includes a full array of maneuvers. Because the P-40 was designed so early in the war, it has a lot more inherent stability than some of the later fighters. I urge you to try the Kittyhawk . . . you won't be disappointed. □



This shot really captures the authentic flavor of the Kittyhawk. It could have been taken from a WW II scrap album.



With those big split flaps lowered, the Kittyhawk drags in for a slow landing.



As a scratchbuilt project, the P-40 offers basic construction and fine performance.

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U.S. Scale Masters



GRAND FINALE

(Continued from page 56)

a 91.5. Combined with his very good static score of 94, Violetta garnered a well-deserved second place. The ultimate irony was that, by being able to use Larry's shop to complete the repairs, Bob was able to bump another ducted fan model out of finishing in the top five . . . Larry Wolfe's F-9-F Cougar wound up in sixth place!

As mentioned, it was to be a real contest of flying skills. In that department, there's none with a smoother touch, none with a more proven reliable airframe, than Kent Walters with his SBD-3 Dauntless. With the taste of that Futaba radio in his mouth, he posted the two highest flights of the contest (95.5 and 96.5) to show that he can handle even the toughest competition. He flew like a demon, with an adroit touch seldom seen at contests. His bomb drops were even perfection, as he consistently made those 70-degree diving attacks on the runway . . . and each time the bomb hit within feet of the white line. He exhibited precision when none was called for, and he put a certain something extra into each maneuver, which the judges were quick to detect and reward.

Actually, in the middle of the contest, things were so close that no one wanted to predict who would walk away with hardware. Young Jerry Kitchen was in contention for third place after the fifth round, only to find himself in tenth place once the sixth round was completed. Places were changing hands with each maneuver. Ted White didn't even realize that he had a prayer at getting a trophy, until someone pointed out to him that he was almost tied for first place with only one round to go in the contest. Ted just loves to fly low, and he put on some maneuvers with his M.B.5 that would have set any pilot's teeth



Talk about jet-like performance, Tom Cook's F-4 was a rocket with its twin ducted fans. The model weighed 17 lbs.



Frank Tiano's P-51 was a very controversial model. Some minor disagreement about its low static score.



Ed Izzo came from Massachusetts to compete with his FW-190. Lack of razzle-dazzle gadgetry may have been its downfall. Finished 13th.



The Bobsie Twins: Ted White and Dan Parsons fly together a lot, so that's why they both fly Martin Baker M.B.-5s, which Dan designed.

on edge . . . this man has nerves a little stronger than piano wire. He really earned the fourth place he eventually achieved.

Jim Meister was expecting to do better than third place. He had beat Kent Walters at his own game just a month before at the So. California qualifying event. His SBD-5 was one of the few kits there, being the prototype for the Jemco kit of the Dauntless. It was a magnificent machine, acknowledged by all who saw it as one of the finest Sport Scale kits ever to have been modeled . . . and it justifiably deserved the 96.5 static score it received. But Jim was plagued with engine problems, and the fact that he still didn't have much flight time on the plane was noticeable. Still, his third place honors were nothing to sneeze at.

Perhaps the most significant aircraft at the meet was Tom Cook's

exceptional F4-J Phantom. This huge brute of a jet was six feet long, with a 60" span, and it weighed 17 lbs. The two Turb-ax fan units were powered by modified K&B 7.5 engines. Boy, did that motor scream, as the model did the full complement of flight maneuvers. What a sight to see a model that large flying as if it were a .60-sized machine. The *piece de resistance* was that drogue chute, which deployed immediately after the big jet touched down. If there was a favorite of the crowd, it was the Phantom, and we had numerous people approach us to ask when it would next take wing.

Speaking of crowds, we've never seen the Mile Square facility so packed with onlookers. A conservative estimate was that there were some 3,000 spectators on Saturday, with perhaps double that on Sunday. They were a supportive bunch, and a continuous narrative over the P.A. system kept them all involved and well entertained. We wonder how many of them really appreciated what they were seeing and if they

really understood that never before had two dozen fliers of such exceptional skill been gathered in one place?

But there was no stopping the lanky Arizonan, and Kent's fervent dream of getting a new radio for his big B-17 was realized . . . the guy was smiles from ear to ear. Everyone concurred that he deserved the honor of being the first ever U.S. Scale Masters Champion . . . it couldn't have happened to a more competitive and friendly guy. But everyone knew that, had it not been for the tweak of a needle valve, the adjustment of a clevis, the nudge of a transmitter stick, that it could have been anyone's victory . . . that's how close the whole contest was.

The judging was considered very good by all of the contestants. Admittedly, there was the usual case of having one set of lenient flight judges, while the other line was harder to score. But, in perspective, even this divergence was a mere point or so difference. No one, except Fankie Tiano, had any beefs about

the static scores, which is usually the crucial area for scale contests. One of the objectives of the Masters concept was to get the leaders in scale from around the country together to see how each area of a contest was handled. This was to be a learning experience, and many modelers went home with new ways of doing things. This is a giant step toward unifying scale judging, for unified judging can only grow out of a sense of unified thinking.

Some of the subtle differences were pretty apparent. Ed Izzo, for example, was a little surprised to see models getting consistently better flight scores for mechanical options, while he used his flying expertise to impress the judges with aerial maneuvers. Ed's FW-190, with only flaps and retracts, was probably very competitive back on the East Coast, but the judges were looking for other things at this contest. Also, the emphasis on scale speeds and maneuver placement seems to vary from area to area. Only time will tell if the Kent Walters approach can win in Kentucky next year, but at least we have begun to make significant inroads into getting Scale into a contest format where you can expect the same scores no matter where in this country you compete.

It seems that, in the past, the AMA Nats has suffered unnecessarily at the hands of critics who didn't appreciate the regionalism of scale contests. Differences in interpretation of the rules book on such matters as scale speed can be traced to local emphasis (or lack thereof) on such matters.

Also, the Editor was quick to point out, in his brief remarks at the Satur-



Bob Frey demonstrates the perfect maneuver to execute when the gear fails to come down. No damage.

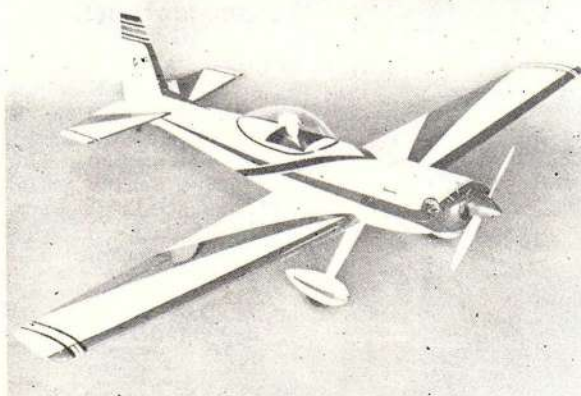
day banquet, that the concept of a Masters inherently allows a more practical and honest method of selecting an FAI Sport Scale team. He noted that any number of the models at the contest that weekend might, given the opportunity, have been just as competitive in the FAI arena as those which flew in Canada last year (as an interesting aside, not one of the qualifiers who flew in international competition even showed up at the Masters).

By the way, that Saturday night banquet was only surpassed by the

hospitality suite the Squadron had on Friday evening. The song reprinted at the beginning of this article was first unveiled by Al Casey at the Saturday banquet, in the middle of a power failure. Needless to say, the tin eared modelers failed to appreciate the intricate musical complexity of the piece, which was obviously influenced by Bach's Brandenburg Concertos.

In recognition of Harris Lee, who coordinated the entire Masters, the fliers presented he and his wife with a lovely silver serving platter in commemoration of his distinguished service.

The final day of the contest was almost anti-climactic. There were




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Art Johnson drove from Florida to compete, only to have to leave in the middle of the contest, and he then spent three weeks in the hospital.

lots of back-and-forth place changes among the top fliers, yet it was apparent to everyone that no one could even come near to Kent's scores. Even worse, it looked as if a few protests might blot the clean record of the meet. As mentioned, Frank Tiano's static score was the object of some discussion among the contest officials. The judges were reconvened, and the decision was that the score must stand as it was originally recorded. In the opinion of this humble reporter, the whole issue again seemed to be the type of rules in-

terpretations we have found to be more regional than universal. Frank's documentation had some areas of ambiguity, and it was this "gray area" which caused the misunderstanding.

Worse than that was the situation with John Lockwood in AMA Scale. There were only three entrants, which came as a major disappointment to all, since there were more trophies than contestants. One has to wonder if all the hassles and expense of supporting AMA Scale at this and other events is justifiable. The Scale Squadron would be the first to admit that their expertise in AMA Precision Scale is limited, for the very reason that you can't get good at something unless you practice, and you can't practice if

there is no one to practice on. This, essentially, was the causal force which resulted in a very sticky situation.

A little mistake started it all. The score sheets for AMA had only one line designated to show both Landing Perfection and the Spot. The judges had to remember to score these as two separate maneuvers. In the heat of the late Sunday afternoon, the tired judges overlooked the irregularity in the score sheets, and they forgot to record Earl Thompson's last landing with his immaculate Focke Wulf FW-44J. Did he hit the spot or didn't he? Not only was a 32" high trophy at stake, but the winner was to receive a Byron Originals F-16 kit, complete with the ByroJet fan system.

John Lockwood, who had flown the pants off his Eindecker in order to make up the tremendous deficit between his and Earl's static scores (64.5 points difference), was shocked to find that the judges hadn't recorded the landing that would have made the difference between first and second places. The flight judges were reconvened behind closed doors, and the consensus was that they could all accurately agree that Earl had made the landing. John did not file an official protest, although the look of disappointment on his face at missing the big one by so little was obvious. As in any sport, the judges' decision is final, of course. It's too bad that the first Masters had to have this blot on its record, but it's a situation which would have been difficult to avoid.

We can guarantee one thing . . . coming in dead last in a contest of

(Continued on page 76)



CHRISTEN EAGLE 1

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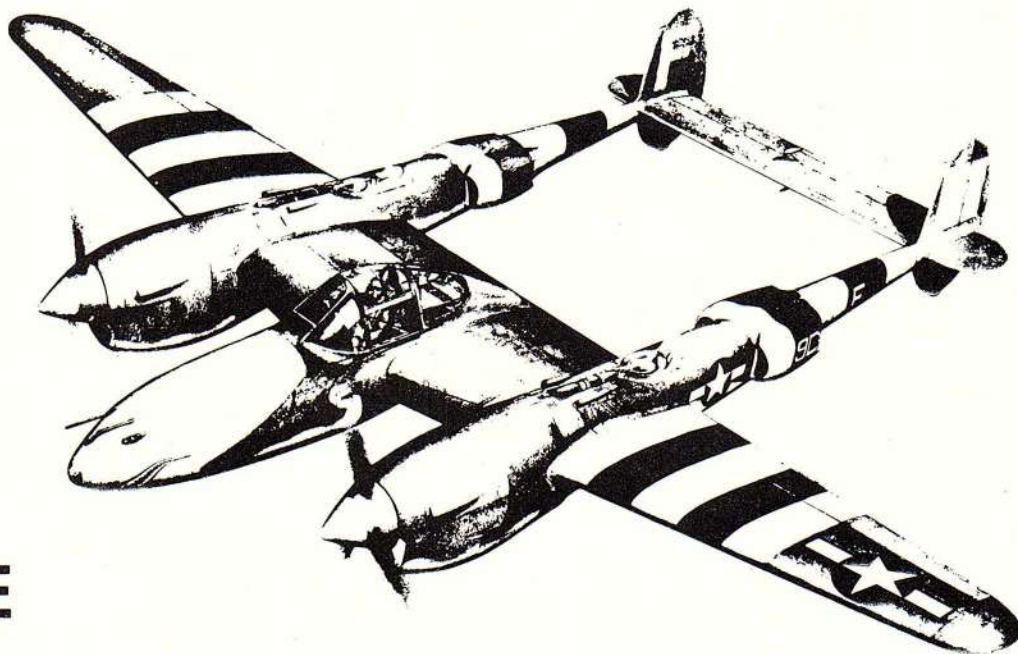
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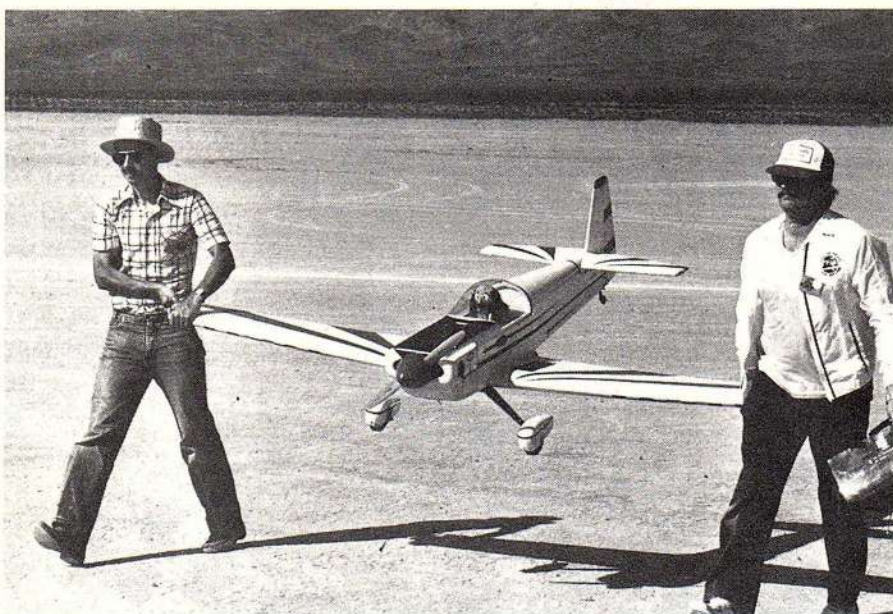
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One of the French entries was this CAP-21, which featured a homemade gear-driven set of .60s. Model by Christian Bossard.



Bill Hunt shows how to transport a giant-scale model . . . with the help of a friend!



One of the biggest losses at the meet was the demise of the Satellite City "Hot Stuff" Concept Fleet. Needless to say, none of the glue joints were broken in the crash! Built entirely with Hot Stuff, of course.

66 scale r/c modeler

Q.S.A.A. FLY-IN

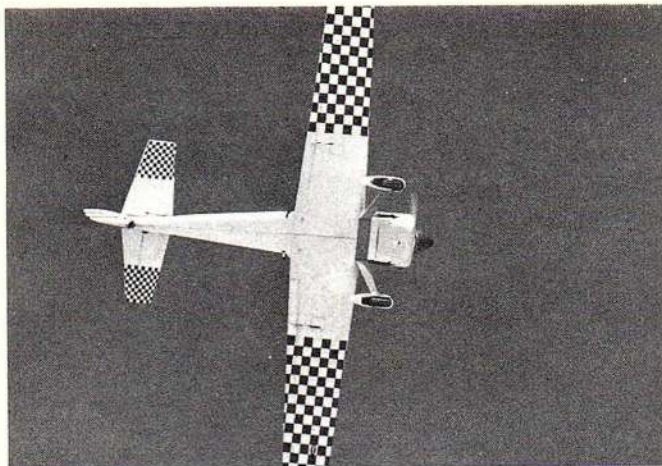
(Continued from page 32)

the Marathon. Rual also showed a 75" span version of the Parasol, which is intended as a future kit, for .60 engines.

The Marathon originally had four entries scheduled, but only the Pahlow/Bridi "Spirit of St. Louis" entry (last year's winner) and Leo Hooper's entry actually got airborne. An interesting entry, with its own ground-to-air refueling system, via a long tube, couldn't get airborne because of mechanical difficulties. The Hooper team gave up rather early in the game, so Pahlow again sailed to another victory, this time pressing the record to 4 hours, 47 minutes in the air; covering a distance of 208 non-stop miles. When they landed, they admitted that they hadn't even fueled up for a complete tank-capacity flight, and that they could have kept going if they needed to. The Marathon really proves the reliability and performance of today's equipment.

One notable manufacturer who was conspicuous by his absence was the crew from Byron Originals. Always staunch supporters of the big aircraft movement, they did not attend this year's activities because their current product line only had one airplane which qualified for the rules (1/3-scale Pitts), and they would not be permitted to demonstrate the ducted fan models. Since their P-51 also didn't meet the size requirements, it was not eligible. It's too bad that they couldn't be there, but at least there were numerous example of their Pitts Specials flying throughout the weekend.

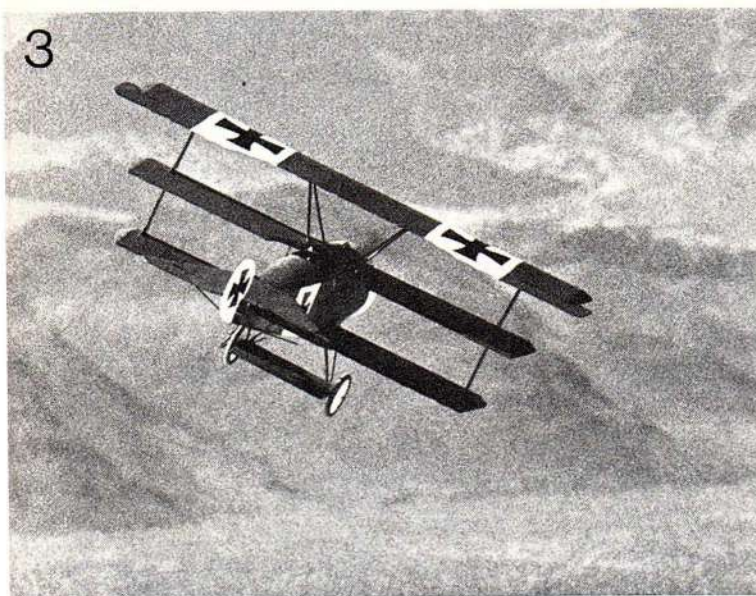
The three-day weekend out in the desert revealed several things. First, there was much more flying activity this year than last, but we still feel that to call this event a "Fly-In" is somewhat of a misnomer. The majority of aircraft were there strictly for static display. That being the case, to put them on display out in the middle of a desert makes little practical sense. We're willing to acknowledge that there will always be a certain number of models at any get-together which haven't flown, for one reason or another. But, when five of the 13 aircraft which received trophies haven't even tasted flight,



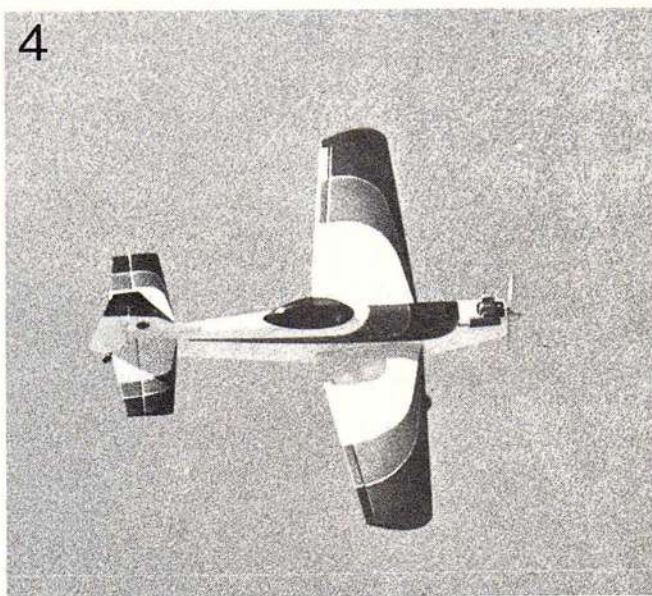
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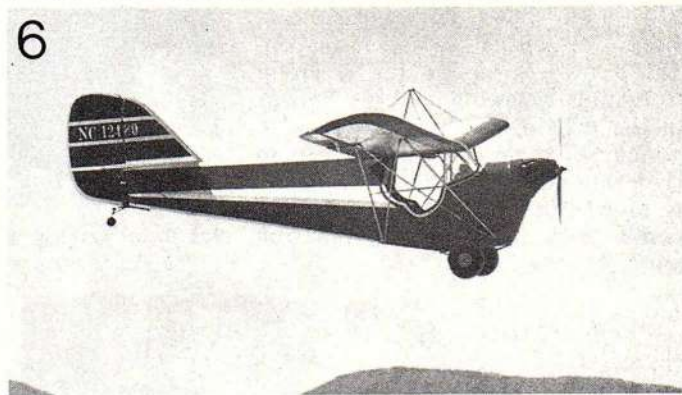
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6

1. Messrs. Bossard's entry from France does a slow roll. The CAP-21 used two geared .60s for power. 2. One of the many impressive Nosén 310s on the field. While very over gross, they tend to handle well. 3. Palmer Cramer's DR.1 really flew up a storm. Scratchbuilt model uses a .91 for power. 4. Spinks AkroMaster, by Keith Schrader, Jr., really did all the maneuvers. 5. Bob Seigelkoff (C.B. Associates) put the last flights on his Ag-Cat, then it was put into retirement. 6. Aeronca C-3, by Manny Casqualho, flew with an O.S. 4-cycle engine. Acrylic enamel finish. 7. Bob Shuttleworth's Sopwith Pup uses a Quadra for power . . . very authentic.



7



Ken Runestrand brought both this 1/3-scale Sopwith Pup with his 1/4-scale L-4B. Both are great flyers.

then we must say that the theme and spirit of a "Fly-In" is being misapplied.

Naturally, we're not advocating that only flying aircraft be permitted . . . that would be crazy. But, maybe it's time the people who make the rules realize that by continuing to reward aircraft which are obviously not even flight-worthy, they are promoting a static display event comparable to Toledo and other trade shows. Let's not confuse the issues—either we fly radio-controlled models, or we are a group promoting museum-quality hangar queens. There's nothing wrong with having some exceptional models to gawk at, but the question remains as to whether rewarding non-flying models with trophies is in the true spirit of a *Fly-In*?



Bob Baker looks on while George Johnson tries to get the carb adjusted on the Honda 60cc engine which powered their Heath Parasol in half-scale.



Larry Routh's superb flying helped get Darrel Cline's P-51D the "Best Stand-Off Scale" award. Sure looks real here . . .



. . . and even the ditching looks authentic!



The big stunt of the weekend was going to be a special inverted landing with Chuck Fuller's Fleet, so the wing walker is removed, a low inverted pass is lined up, and the final photo tells the result . . . he might have made it, except for the tire ruts in the dirt.

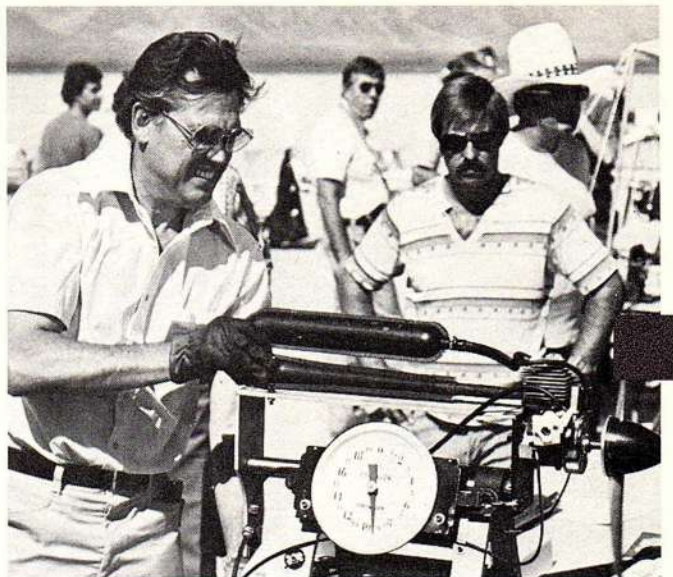
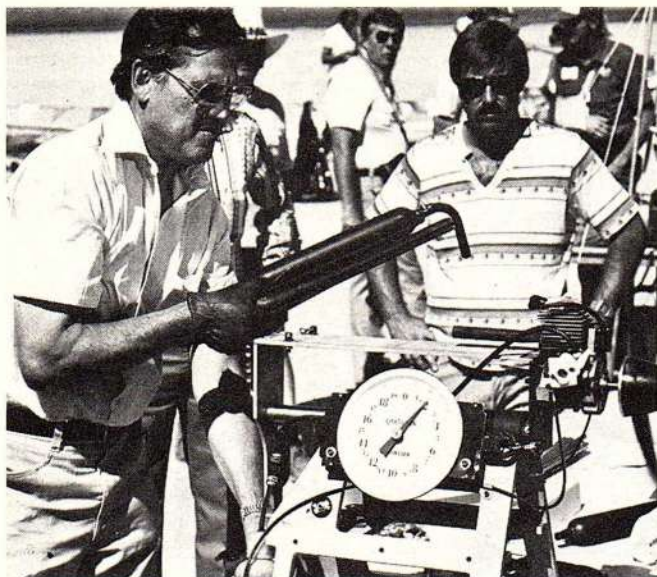
But there were more airplanes in the air at all times, which avoided the awkward lulls of last year when spectators started asking if everything was over. It's probable that the overall increase in flying activity must have been, in part, accountable for the higher number of crashes. Even though stringent safety measures were observed, and all airplanes had to have been flown before the meet, there were still a lot of destroyed airframes. A frequency scanner was on site, and there were a few times when discernible interference was observed.

Of course, if you're going to have an airplane go in, there's no better site than the middle of a dry lake bed out in the desert. There was never any danger of any harm to either participants or spectators. But the carnage was devastating. We saw wing flutter on a Grumman Tiger (what a surprise that was!), wings peel off on other models, radio failures, and all other imaginable sorts of prangs.

In our opinion, much of the damage could have stemmed from the desert conditions. We saw aircraft sitting for hours out in the baking sun, only to crash with mysterious radio failure. Heat and electronics aren't very compatible, and most of the pilots who have never had to come to terms with the desert conditions probably never experienced receiver drift, battery drain and the thousands of other gremlins that can spring up mysteriously from the heat. Also, the dry air tended to loosen fabric coverings, thus opening up the potentials for structural failures, flutter, etc. The smart fliers took precautions, and kept their airplane covered, or at least in some shade. Equipment which monitors battery conditions and radio performance should be in every large-scale flier's flight box.

Overall, the weekend was a spectacle of flight and fun. The airplanes just get better and better, with workmanship never before possible on model aircraft. These big airplanes have spawned a whole new generation of building skills and talents. Dick Enos' "Best of Show" Curtiss Goshawk was a prime example of that. From the moment we entered the auditorium on Thursday, the only model on everyone's lips was "that spectacular Goshawk." When we found out it was Dick's handiwork, we knew it had to be something special, for we have long been familiar with the craftsmanship of this talented modeler.

One just had to set eyes on this



Klaus Novak, of Cosmocon, demonstrates with a thrust stand what performance gains are accrued from using his tuned pipe. The results are impressive, as the scale shows.

superb biplane to know that it was a cut above the ordinary. The attention to detail was apparent in the skin detailing, with beautifully executed rivets and rib stitching. But the character of this model went deeper than that. The 94" span model, which had taken a year to build, featured such luxury details as working navigation lights, an operational auxiliary fuel tank, on-board starter, etc. The real *coup de grace* was the cockpit. The map light worked, and there was an accurate map. The fuel gauges actually registered, and they could be set up so that the gauge would read half full on takeoff, then read $\frac{1}{4}$ -full upon landing! This model did more than capture the flavor of the full-

size machine . . . it was a veritable miniature duplicate of the famed Curtiss pursuit ship. The 25 pound model had a Quadra installed, but Dick was planning to switch to a Kawasaki before trying the first flight.

Another miracle of the builders' art was Geoffrey Way's Fieseler Fi-156 Storch. The 112" span model featured an ingenious system of wing folding, which was judged as Best Mechanical Achievement. The Webra .91 engine had been converted to ignition, and the 17 pound model took six months to complete. Since the model had not been flown, there was no way to tell whether the wing folding mechanism was practical. Another nice touch on this airplane

from British Columbia was that the oleo struts in the undercarriage were fully functional.

One must speculate on the future of these large models. There are such fantastic strides being made in perfecting the construction and detailing of these large models, that it appears as if there is an endless rainbow of possibilities on the horizon. By definition, these larger models are easier to detail than their smaller counterparts. We have seen what has happened to the models at the trade shows, with every conceivable detail in place. If they can reach near perfection with a .60-size airframe, then what is to happen on a model designed for a Quadra?

It's not the ultra-detailing that concerns us. No, it goes beyond that. Once the detailing has become popular or stylish, then can competition be far behind? Unfortunately, modelers have a penchant for trying to outdo each other, or themselves. Someone will try to make Dick Enos airplane look simple, then another tries to outdo them both. Because there is already an established reward for doing that, i.e., a trophy, then the desire to compete is stimulated.

Well, you say, there's nothing wrong with that. Intrinsically, there is nothing wrong with some friendly sportsmanlike competition. But, the way the technology is moving along in the giant scale sector, it's only a matter of time before these luxurious models are fully capable of flight. You suddenly have a different ball game. The philosophy of a "Fly-In" without competition will be in direct conflict to the type of models

(Continued on page 75)



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The October '78 issue of *Scale R/C Modeler* carried the complete construction article on the MiG-3, including two pages of color 3-views suitable for documentation. Copies are available for \$2.50 each from: Back Issues Dept., *Scale R/C Modeler*, 7950 Deering Avenue, Canoga Park, CA 91304.

The plan sheet is enormous, being almost 10' long (!), and it is packed with construction hints and scale references. Plans are sent third class mail for \$10.00 a set (add \$1.00 for first class postage) from: Hal Osborne Plan Service, 1932 Conejo Lane, Fullerton, CA 92633.

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(Clipped-wing version shown -- plans also show full wing)

THE "FOKKER SCOURGE"

(Continued from page 48)



Our friend Hermann shows off his pilot's garb, all custom tailored especially for him. (J. R. Naidish photo)

about \$7.00. It is perfect in scale outline, so no judge will dock you a point for it. But that darned engine is a nightmare to make authentic. I took the easy way out and used a set of Williams Bros. 1/4-scale cylinders. The judges in Precision Scale seem to frown on using fabricated components, so the only way you can expect to really clean up in static points is to diligently make a complete engine from scratch. Personally, for the extra bother, I'll stick with the semi-prefab system.

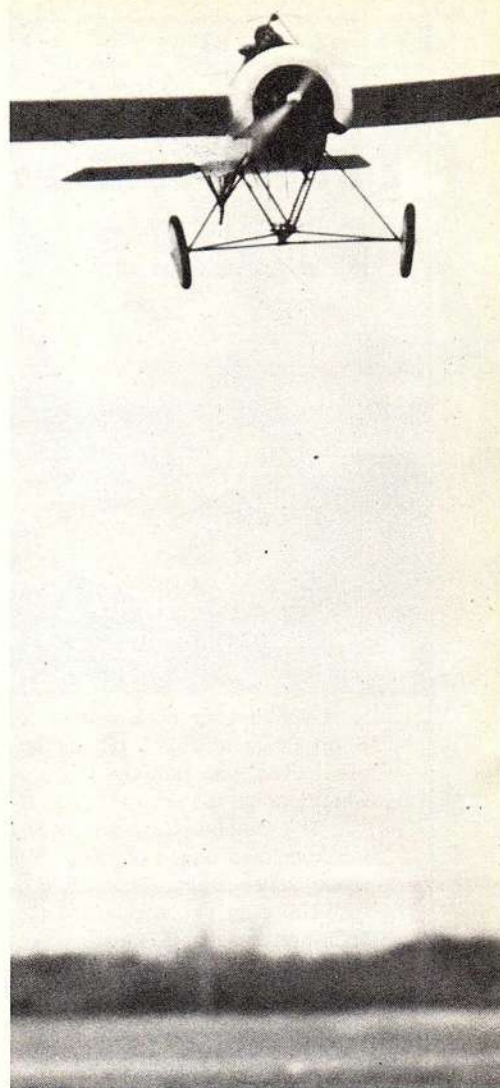
I previously mentioned the unique bomb drop available with the Fokker. In the 1915-16 era, bombing was nothing more than throwing a stick of dynamite or a hand grenade overboard. Having no observer/bomber, the pilot was at his own wits as to how to attack an enemy hangar. Because of his position over the center of the wing, even seeing the target was a problem, let alone trying to hit it. The problem was handily solved by cutting a nice hole right through the wing. This served as a window, to tell when to flare

on landings, as well as an observation port for bombing runs. When a bomb was needed, the pilot simply held it out at arms length, and dropped it cleanly through the hole in the wing.

Because the pilot in this size model is so large, it's a simple matter of hiding a servo inside Fritz' torso. A trip wire in his hand serves as a bomb release. He must make the whole flight with the bomb in position in the hole, but the release action looks great, especially if you come in low and slow, so that the judges can see it up close.

I had a few doubts about the wing warping system, at first. Would there be control reversal? Would the airspeed be so great that the servos would actually stall? These were all mysteries, and I was pretty much on my own. One of the pressing questions was the actual covering on the wings. Too tight, and the wings wouldn't deflect enough; too slack and there might be flutter or lack of structural integrity.

I decided on Coverite. Ironically, the one small shortcoming in this material was the bonus I needed to make the warping system work. Coverite does not impart any diagonal



John does a fly-by for the cameras. Only a rock-steady machine makes maneuvers like this possible.

or torsional strength to the structure it covers. That's why the fabric has a directional weave, and it must always be run spanwise. The material worked superbly. The wing has enough inherent rigidity that flutter is no problem, yet the Coverite gives just enough to allow the control cable to twist the wing along its thin trailing edge.

The warping system works very well. Immelmann's favorite maneuver is very easy, as are regular rolls. The control response stays solid all the way down through the landing flare. The big comma-shaped rudder is also very effective, and you'll get very used to using it in all the turns and maneuvers. The full-flying elevator doesn't take much control throw (which is typical of the sensitivity of the full-size aircraft).

The Fokker monoplane is a joy to fly. The low lateral Center of Gravity makes for very nice ground handling. Don't get too cocky in the wind, but in calm conditions, you can taxi the Eindecker all over



the place. I like to emphasize the slow flight characteristics of the model throughout the flight. I ease the throttle open very slowly on take off. The E III picks up speed very slowly, with a little bit of rudder dancing at the initial part of the ground roll (very prototypical). Let the tail come up by itself, as the model picks up speed . . . you'll probably be moving along at a leisurely walking pace. The plane is a pleasure to handle once its on the mains, and you could drive it around in this attitude for a full tank of fuel. After a very long ground roll, a touch of up elevator (actually, a transition from a touch of down to neutral) and the big model is airborne.

Back off the throttle as much as you dare, to play up the large size and majesty of the model. Remember, the Fokker had a maximum speed of 130, and it took a full five minutes to get to 1,000 feet. Use more power as needed for the chandelles, loops, Immelmann's, etc. I like WW I because you can really "talk" a good flight. Everything is

(Continued on page 81)

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TOP FLITE'S TIGER

(Continued from page 40)

the proper washout, the Warhawk will be very docile in the stalls.

That wide-track landing gear makes ground handling a joy. Because the tail wheel has been moved forward, it won't need as much throw to see a noticeable turning movement. You'll have to keep on the rudder as the airspeed increases and the tail comes up. Don't let the plane come off too early, for that wing likes to be generating a lot of lift before getting airborne. I make it a practice to not suck up the gear in the critical moments right after lift off. The change in C.G. could catch you unaware, with a nose up pitching motion.

The P-40 was just made for aerobatics, and you'll find very few maneuvers that it won't do. It's stable about all axes, and has a very smooth control feel. Having lots of power under the cowl isn't too critical for Sport Scale contest flying, where the hottest maneuver you might do is a loop. But, if you intend to hot rod the plane on weekends, then get the hottest power plant you can find for those big vertical maneuvers. Slow flight, which is what the purist in scale realism will be looking for, is delightful, with no wing dropping or loss of controllability.

It's no wonder that the P-40 from Top Flite has survived for over a decade. It's a classic of good looks and nice performance. With the modifications outlined in this article, you can take a basically sound kit and update it to the Flying Tiger that is needed to win contests.

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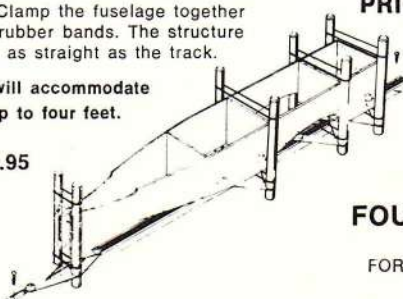
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EDITOR'S NOTE: For those who are dyed-in-the-wool aficionados of the Warhawk, there is a big memorabilia gathering at the Civic Center in Birmingham, Alabama, on February 21-22. This will be a seminar on the Chennault Flying Tigers, with the actual pilots as guest speakers. The Alabama Gun Club, which is hosting the affair, promises that there will be numerous wartime pilots who actually flew the venerable P-40. General admission is \$3.00, and banquet tickets are available for \$20.00. Contact: Virginia McVay, P.O. Box 321, Northport, AL 35476, for reservations. □

Q.S.A.A.

(Continued from page 70)

that are being built. Right now, it may seem like an academic discussion, but the writing is on the wall, as was evident by the number of aircraft that were most likely almost expressly built for the "Best of . . ." awards. Inadvertently, we're promoting the one thing we want to avoid . . . open competition.

But it's a losing fight, because the competitive spirit is indomitable and ingrained into every modeler. Sure, you may say, you have no personal interest in competition at all, and you never fly in contests. You may not have any overt desire to compete, but you do pit your talents against yourself every time you build a model . . . you can't help but compete against yourself; otherwise you'd never improve. Plus, competition, *per se*, with these bigger models won't be like the high-pressure and hot airplanes we normally associate with contests. These big, lazy machines are the perfect vehicle for competition.

It's a two-headed snake. To do away with the trophies right now would possibly eliminate those beautiful aircraft we enjoy looking at—it would slow down progress, for these master builders are pushing outward the horizons of the hobby. We are all benefiting from the informal competitive spirit, so to stop it would be a disservice to ourselves.

On the other hand, if we let it continue, and if it reaches its inevitable and logical conclusion, then we will have done ourselves a disservice by allowing the competitive spirit to destroy the low-key, fun aspect of the quarter-scale movement. If the competitive edge ever becomes the guiding force behind such activities as the Las Vegas meet, we will have lost something that is very important to our personal enjoyment of this hobby.


But what is the answer to the dilemma? There really is no answer. It's hard to underplay the trophy winners. They are big news, and the magazines tend to give them dis-

(Continued on page 80)

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The Martin Baker 5



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U.S. Scale Masters



(Continued from page 64)

this magnitude would be an honor!! Most modelers only dream of a match of their peers, with no "dead wood" to slow down the contest. They envision a gathering of competent fliers controlled by the best in judging, with sufficient time to get in enough flights to prove the best man. The Masters Championships was all of that, so to have even flown in it was the fulfillment of a dream.

Next year there will be an expanded format for the Championships program. More regional events will be added, to allow for better representation from the entire country, with travel getting more expensive, the idea of more regionals makes more sense). Look for the ad in this issue which announces the complete schedule of qualifying events. The Chairmanship will be divided between Dale Arvin, who handles all the events East of the Mississippi; and Harris Lee will use the experience he gained from last year's meet to coordinate the West Coast activities. The first fly-off has already occurred, over the New Year's weekend, at the Tangerine meet in Florida. The 1981 Masters schedule becomes even more important when one realizes that this is an FAI Team selection year for both AMA and Sport Scale. It remains to be seen whether the pilots will shift their emphasis from the Nats, which has been the traditional event for selecting the teams.

The first U.S. Scale Masters Championships is now history, and it has left a legacy of success that will set a mark for future meets to equal. The Southern California Scale Squadron put together a superb combination of judging and site capabilities, and the resulting contest showed what a success the planning was.

Perhaps the best way to sum up the feeling of the meet is to quote from one of the many letters of appreciation received from the contestants. The following remarks are excerpted from a letter written by Phil Sibille; "The overall feeling of this contest was that one was watching an airshow of full-size aircraft demonstrating how well they could perform the maneuvers their designers had intended . . . exactly what scale modeling is all about." □

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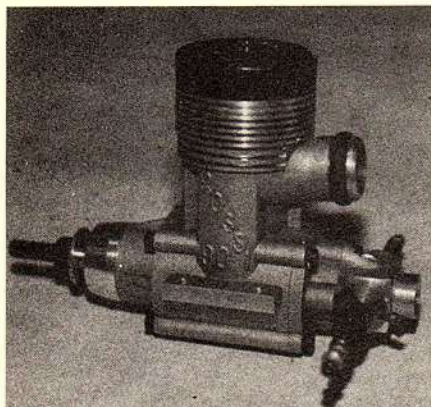
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DAVE PLATT ANSWERS

(Continued from page 10)



The Rossi .90 is the most powerful engine in its class. Good throttle response and top performance will continue to make it the cherished favorite in 1/5-scale.

were props in the 16-12 range, then we might see some better performance.

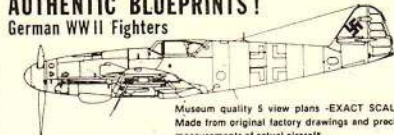
But the .90 isn't the only logical choice. Vito Tomeo's outstanding Sea Fury (December '80 *SR/CM*) shows what can be done with a .60 in a gear drive. Vito uses the H.P. .61 in the Stewart Maximizer, to turn an 18-10 prop at about 7,200 rpm. With this 2.4:1 gear ratio, Vito's plane flies beautifully in the 70 mph range. At a scale of 1/6, this corresponds to 420 actual miles-per-hour . . . perfect for a scale Sea Fury. Stewart announced that the .90-sized Maximizer is available, and we have already heard some rave reviews of this unit.

The choice of .90 engines isn't phenomenal, but there are enough to go around. The reliable O.S. Max .90 has met with favorable acceptance, with its easy-to-set throttle and tolerance to overheating. The H.P. 1.20 twin is another interesting power plant. We gave this one the nod for the 1/5-scale Spitfire which we will be releasing as a kit any day now. The smoothness of this twin is a joy to behold. We're still holding our breath for the long-awaited Super-Tigre .90 . . . but it is still merely long-awaited!

The Macchi 202 which we have been flying during the last year was powered by the Rossi .90. This is the thoroughbred of the class. It's powerful, thirsty, has a beautiful throttle and has first class handling characteristics. If you want the top of the line in power and performance (and also price) you should strongly consider the Rossi.

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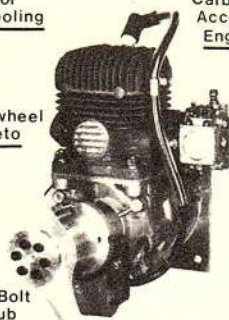
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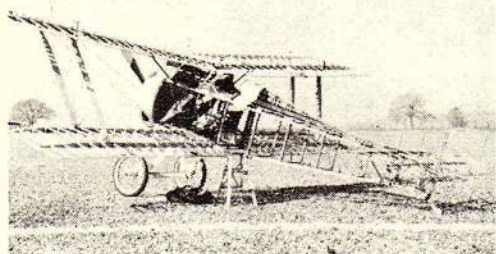
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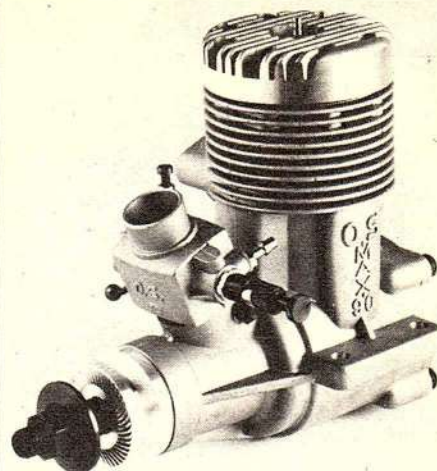
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The Max .90 is the faithful standby engine for the 1/5-scale set. Dependable and reliable. (Photo courtesy World Engines)

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If you've been a reader of *Scale R/C Modeler* for any period of time, you will recall that the April '78 issue detailed the parameters for a liquid cooling system for model aircraft. I have been using a system based on the principles outlined in that article, and I have had amazing results. One of the biggest advantages is that you can actually get away with scale outlines on the air intake and outlet areas! It has taken the more spacious cowls of these larger airplanes to really make this idea practical. We have developed our own system, which we hope to be releasing soon.

Finally, there are retract systems which will handle these heavier machines. Our own R.L.G. system has been doing very well, and we now make it with a 90-degree retraction angle. Airway Retracts, from California, has just released a set of retracts which look very substantial.

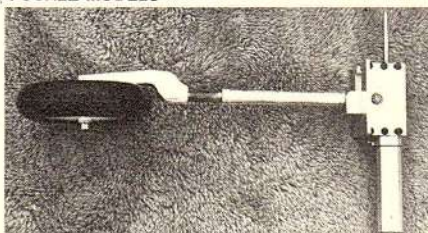
As can be seen, the promise for continued growth of the semi-big airplanes couldn't be better. More and more new designs are coming out, and the prospects for bigger and better engines is very promising. The most important factor in promoting the new growth of 1/5-scale is its track record, and these bigger airframes have been consistently winning contests. We predict . . . and it's a safe prediction, too . . . that the 1981 contest season will see even more of this class of airplanes in the winners' circles. ☐

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Art Johnson's big P-40 is modeled after the actual aircraft he flew as a Flying Tiger. Lots of scale detail make this a contest-winning machine. (P. White photo)



Dave's Macchi 202 flies with lots of performance with the Rossi .90 under the cowl. Dave is building a revised version, which will be even lighter than the 18 lb. ship shown here. (P. White photo)

MAMMOTH SCALERS

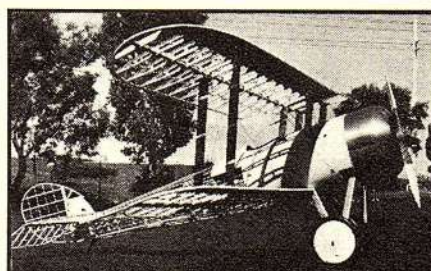
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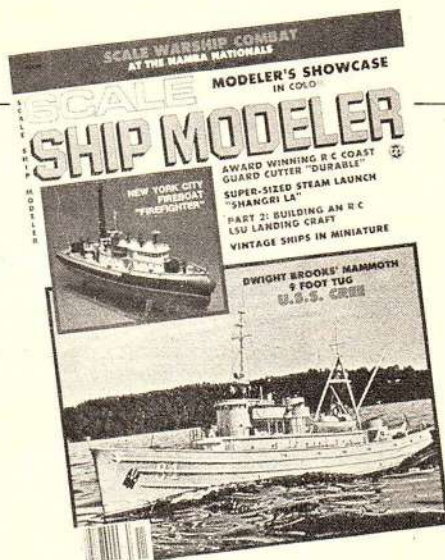


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Q.S.A.A.

(Continued from page 75)

proportionate space for publicity. We adulate the achievements of these winners, both as an example to emulate (or beat, if you have a competitive bent), and to admire. Everyone likes to be a hero, so why shouldn't the next guy try to get some of the magazine ink? We would all like to get our photo in the pages of the mags . . . that's only human . . . but the only way to do it is to get competitive and outdo the other guy.

We're sure that the leadership of the Q.S.A.A. will keep a vigilant eye on this matter, and take every precaution to insure that the Las Vegas weekend remains a low-key fun activity. At the same time, they will hopefully recognize their role in fostering creative modeling and advancement of the state-of-the-art. We all want to see more of the quality work that fellows like Dick Enos can produce, but we don't want to have to accept it at the penalty of losing the fun of flying big models.

The Vegas weekend was another memorable experience this year. The excitement of that "tinsel town" makes for some real fun, and the accommodations for so large a group of modelers couldn't be better (this city is designed for conventions). The flying field might be a little inconvenient, in terms of creature comforts, but the catered hot food and organized flight line makes it acceptable. There were some wind storms again this year, but for those who came prepared and knew what to expect, there was no discomfort. What minor inconveniences there were had to be weighed in the balance of having such a large flying site within traveling distance of a major metropolitan center.

When, some five years ago, Ed Morgan had an idea about a major modeling event with only large scale airplanes, the critics were many. But today, after four years of success, the Q.S.A.A. has proven itself to be the focal point of the giant scale movement. That long Las Vegas weekend has become an institution, and we predict that each October will see even further growth. One look along a flightline that virtually straddles the horizon, with spectator cars parked six deep along rows almost a quarter-mile long, and you know that you are standing in the middle of the mecca of monster models.

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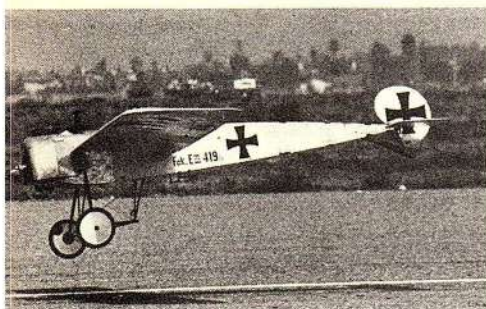
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THE "FOKKER SCOURGE"

(Continued from page 73)

happening like in a slow motion movie, so you can really have a heavy monologue to deliver to the judges while you're executing the maneuvers.

Build up a small melodrama, about how the furious Hun is going to make a low strafing and bombing pass with an initial dive out of the sun. Tell how he'll cut the motor during the first part of the glide, to preserve the element of surprise. As he approaches the airdrome, the pilot hoists a bomb in his outstretched arm, etc. The judges will love it, and it describes faithfully the prototypical action the judges should be watching for. Since everything is go-



ing so slowly, the judges can really savor the entire maneuver.

In windy conditions, keep more power on (and don't forget the trick of adding extra ballast). Wind gusts will make your flying look erratic and imprecise, so get through the maneuvers quickly. As long as you've done a good job of rigging the wings, they'll take any amount of stress.

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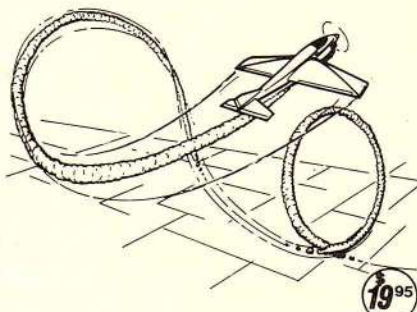
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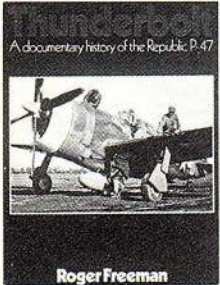
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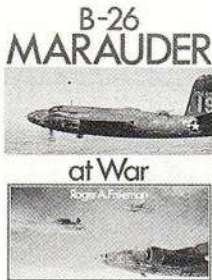
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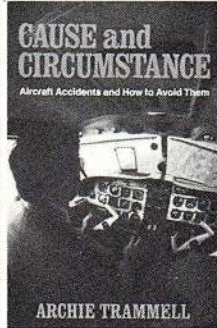
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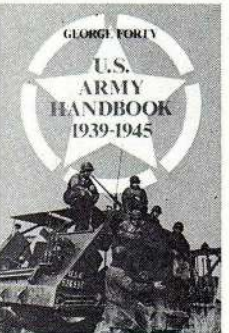
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