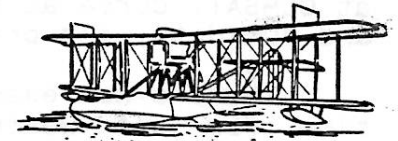


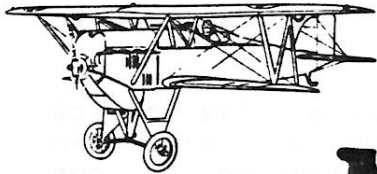
First Navy Fighter - TS-1



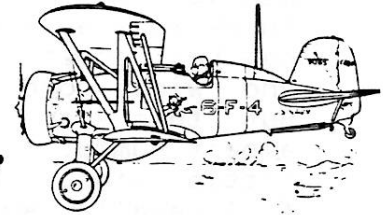
MAXECUTERS



U.S. Navy Flying Boat - HS-1L



FB-5 Navy Fighter - 1927



Famous Boeing F4B-4

# MAX - FAX

THE NEWSLETTER OF THE D. C. MAXECUTERS  
NOVEMBER/DECEMBER 1989

## MEMBERSHIP

Dues for membership in the D.C. MAXECUTERS is \$10 per year for residents of the USA, Canada, & Mexico, and \$11 for all other countries. Your mailing label indicates the last year and month for your current membership. A red X next to the label is a reminder that your current membership has ended. Send a check, payable to the D.C. MAXECUTERS, to the Treasurer.

## PRESIDENT

Bert Phillips  
1709 Crofton Parkway  
Crofton MD 21114

## SECRETARY

Ernie Greene  
8103 Falstaff Rd.  
McLean Va 22102

## TREASURER

Allan Schanzle  
20008 Spur Hill Dr.  
Gaithersburg MD 20879

## MEETINGS

The D.C. MAXECUTERS hold meetings on the first Wednesday of every month at the College Park Airport.

## UPCOMING EVENTS

- Nov 4: PAX River Indoor Contest. See notice in this issue.
- Nov 18: Indoor flying at Farquhar School. 4:00-7:00 PM. See map in this issue.
- Dec ? : Christmas banquet. See Club News.
- Dec 16: Farquhar indoor flying, 4:00-7:00 PM, 10 and 25 cent'er contest.
- Jan 6: Farquhar indoor flying, 4:00-7:00 PM, Profile contest.
- Jan 20: Farquhar indoor flying, 4:00-7:00 PM, Towline glider using "Bogus Scale" Bostonian as "tow-er". See Club News.
- Feb 3: Farquhar indoor flying, 4:00-7:00 PM, Bostonian contest.
- Feb 17: Farquhar indoor flying, 4:00-7:00 PM. 10 inch'er contest.
- Mar 3: Farquhar indoor flying, 4:00-7:00 PM.
- Mar 10: PAX River Indoor Contest.

## CLUB NEWS

ALLAN SCHANZLE

THE SUMMER FUN FLY..... IT'S  
A HAPPENING, NOT A CONTEST

Ordinary weather conditions

just don't exist during contests on the East coast. Certainly not on the weekend after Labor Day for the past 13 years, which has been our traditional time to gather around

at COMSAT, curse at the heat, wind, and humidity, and praise Hung.

There's no reasonable explanation for the weather conditions we've had for the past 13 years.... never rained out. Not when the statistics say, no way. Who do we think we are, Richard Nixon? We've had hot, sometimes very, very, hot, and windy conditions in the past. But this year it was reasonable, albeit humid. Upper 80's, but very little wind. Hung was there in full regalia, sucking several balsa and tissue structures up to the great landing strip in the sky. My 2 1/4 ounce Vultee Vanguard did 2 1/2 minutes (on a test flight, of course) and landed 20 feet off the field (on a rock, of course).

In years past, it has been so hot that I've wondered if I could make it through the contest. We've heard screams of "Take it Hung" from old fogies too tired to chase it one more time. I often thought what it would be like to spill my guts onto Shangrila, and several years ago, I almost did. One question whether this is a model contest or an endurance event, not unlike the Indy 500. But not this year. My friend Connie appeared with sandwiches, fruit, and drink, and hovered like a helicopter until I consumed some of the goodies. She wore a pair of earrings with airplanes hanging down. How's that for support from the fair sex?

This is the MAXECUTER'S Summer Fun Fly, where some of the best rubber scalars gather once a year to look at new creations, tell lies, fly for fun, and compete against friends, cohorts, and comrades. I've been here for each of the 13 years. In fact, I've been coming here before there even was a here, here. COMSAT has been our home field since sometime around 1976, with our first Summer Fun Fly in 1977.

When you're on the hallowed grounds of COMSAT, waiting for the countdown in a mass launch event, and standing between the only two

fellows to have ever won the FAC Grand National Championship, luck and skill aren't enough - you better have a stake ready to drive through their heaving hearts, or at least a blow torch to warm their rubber motors. Those guys could be flying scale replicas of cinder blocks and whip our tails with ease.

Young-uns could live to be 1000 and never know the chills down my yellow spine ignited by our summer annual outdoor affair. Forget it kids - it takes more than blue jeans and Yuppie thinking. Us old fuddy duddies grew up in the era of open cockpits with two wings and round engines. That gives us an advantage. When a model of a Stearman PT 17 cruises overhead, we not only see nostalgia, but we hear the sound of that 220 HP Continental R 670-5 engine. As someone once said, you've come a long way, kid, but you 'taint there yet.

To all of you who made this another grand gathering, I doff my hat in thanks. At one time, I counted over 65 people on the field, of which 28 were contestants. One of the on-lookers was Pat Daily, who just 5 days earlier wheeled into his old homestead in Rockville MD after a 27 month tour of bolstering the Philippine and Hong Kong economies. I haven't seen the collection of stuff (Pat has twice called it "junk") that he and Sandy shipped back from the far East. To here him tell it, they could open up a Chinese version of Sears. Welcome back, Pat, and we eagerly await your return to the modeling scene.

"PP" IS FROM SOUTH AMERICA

In the last issue, I gave you lads a quiz on international designations. The feature plan was a Klemm with registration letters of "PP", and I asked who of you could identify the country that uses "PP" (this is getting embarasing....Ed.) Well, quite a few of you sent in

the correct answer..... Brazil!!!!!!  
Gold stars go to Dick Howard, Nick Ropar, Robert Wynne, Len Wiczorek, Jim Alaback, and Glenn Simperts. Glenn also sent a complete listing of registration letters from the 1949-50 JANES ALL THE WORLDS AIR-CRAFT. Check elsewhere in this issue for that list.

THE KLEMM IS MUSIC TO  
TO MY EARS

Oh my goodness, you better be sitting down for this one. As noted above, the feature plan in the previous issue was a Klemm 31, drawn by yours truly. A renewal check came from Allen Lawton in Connecticut with the following note:

"Schanz,..... Find somewhere in here the appropriate check, but along with it, you gotta take some tongue-in-'check'. Your nifty flying Klemm has some attributes amenable for shrink down to an Embryo Endurance conversion ---- which could be called "Klemm-In-Time" (a latter day Klemm, so to speak."

OK, youse guys and gals, the Editor will make the following offer. Someone design, build, fly, and send a photo and plans for use in MAX-FAX, and you get a free one year subscription to this bi-monthly trashwrapper. Offer good only for the first received plan and photo.

?????? BOGUS SCALE ??????

Leave it to Bert Phillips, our President and creator of the only true "towline glider" at last years indoor contest, to come up with this event. Bert proposes an event called "BOGUS SCALE", with the following rules.

"Plane must meet all Bostonian rules and be recognizable as whatever full sized plane its

supposed to look like. There is one exception. If the full sized plane does not have a windshield, Then your model does not have to have one (such as the Spirit Of St Louis.)

"Biplanes are eligible, maximum size for each wing not to exceed 16" span and 3" chord.

"If the real plane had wheel pants, and your model has three-dimensional wheel pants, you get a 1 second bonus per flight. There is no penalty if you leave them off. There is no penalty for wing struts on or off, but somebody besides you has to recognize it as an imitation of whatever.

"There are a lot of planes around. FAT CAT (Cougar, FM 3/88), Boston Coupe (Monocoupe, MA, 6/89), DeHalibut Bostonian Bosty Moth (DH 80 Puss Moth, MB, 8/87), Mooney's Old Howard (MB, 7/85), Mooney's Hyannic Helio (Helio Courier), and Mooney's Rearwin.

"If three BOGUS SCALE planes show up at PAX RIVER in March 1990, we'll have an event for them. First place will be a pat on the back."

Bert has offered to be the judge, but your editor reserves the privilege to judge (recognize???) anything resembling a Lacy or Fike. That's a hint, folks, 'cause I'll never recognize one of those suckers, not in a million years. I don't even accept the full scale pieces of junk as aircraft, so in my warped mind, a small scale replica cannot possible exist!!!

THE CHRISTMAS BANQUET

Christmas Banquet?? It's only early November! Yea, I know, but this will be the last newsletter before the annual event. This year we've had some problems getting a location, but Pat Daily, 14908 Rocking Spring Dr., Rockville MD 20853, (301) 871-7709 has taken on the duty of getting us a restaurant. Contact him around the middle of November to make reservations. Wives, friends, and one

night stands are welcome to join in on the occasion.

INDOOR AT FARQUHAR SCHOOL

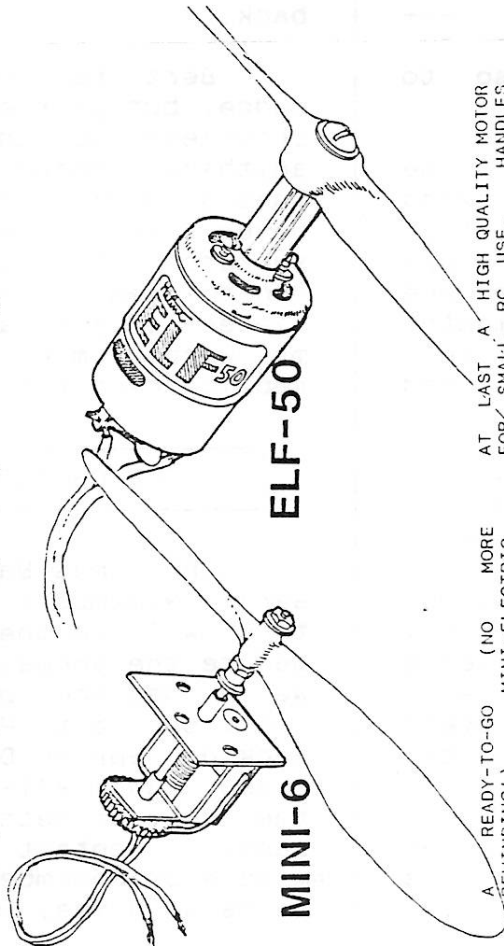
Check the UPCOMING EVENTS schedule and you'll see that the old site at Sherwood H. S. is no longer available, at least not for the next few years while it undergoes renovation. Tom Schmitt has found another place, Farquhar middle school, that is in the same general area. The address is 16915 Batchlors Forest Way, in Olney MD. The gym is located in the rear of the building, with the entrance opposite tennis courts at the end of the parking lot. If the weather is questionable, call 279-3673 for information on school closings.

THIS ISSUE

The feature plan for this issue is a Coconut Scale version of the Travel Air by Dave Rees. We tried to get everything on the foldout plan, but the front view just would not fit. You'll find it on one of the 8 1/2 x 11 pages. Also check Daves's discussion on plasticized finishes. It gives the whole story on the use, application, and acquisition of TCP. Claude Powell has a suggestion for overcoming "Modeling Malaise", and Rich Hensel discusses how to justify the purchase of that new microwave oven you have been considering for the past year or so. As noted above, you'll find a complete list of international markings, complements of Glen Simpers, and a complete list of contest results for the Summer Fun Fly. And finally, Tom Schmitt gives us the standard high quality photo pages. See you at Pax River.

**FLASH!**  
**HILINE INTRODUCES**

Two New High Quality Motors



A READY-TO-GO (NO REWINDING!) MINI-ELECTRIC. USES A HIGH POWER MANUFACTURED MOTOR. FREE-FLIGHT MODELS UP TO 5-OZ. & 150 SQ. INCHES BEST IN IT'S CLASS!

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AT LAST A HIGH QUALITY MOTOR FOR SMALL RC USE. HANDLES MODELS UP TO 24 OZ. AND 350 SQ. INCHES AREA. TURNS A 7X4 PROP 8000 RPM ON 4 CELLS! QUIET, SCHOOLYARD RC IS HERE!

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- ELF-50 RC SYSTEM WITH 4X800 BATTERY-- \$41.95

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## MODELING MALAISE, COULD THIS BE YOU ?

Claude Powell

When I get saturated with long term projects, modeling or otherwise, I look for an escape. I want to do something that's modeling related but I don't want to get heavily involved. I tend to look at modeling mags, old plans and anything else I can pick up and put down quickly or just sit at my workbench with a building itch but not knowing what to do. The solution is usually a Comet or Megow ten center. These are easy to build and require only minor changes for flyability. No laminated wing tips or trying to build super lite, just follow directions.

This usually works to make me a happy and contented kid again but

I don't always bring the models to contests because I feel (I think) they won't look ADULT enough. Wrong thinking, but it's hard to change. At any rate the next PAX RIVER indoor contest has solved my (and maybe your) problem because there is an OLD TIME 10 and 25 center event. WHOOPEE!! I don't have to try to build a museum quality original model to compete with Schanzle, Srull or Rees.

For those of you whose modeling production has sagged in the last couple of years, this is your chance to jump back in. You will love it. After all, isn't this the FAC concept?

## DON'T PIN THOSE LAMINATIONS DOWN, . . . . NUKE 'EM!!

Rich Hensel

Some of you probably use this method for making laminations, but for those who don't, here's a quick way to make them - wing tip, whatever.

Make the form at least one-half inch longer (spanwise) than the actual tip outline. Soak all laminations as usual, and be sure to rub the form edge with crayon, candle wax, or wax paper. Use any water-soluble glue to coat the mating surfaces of the laminations, and then fasten them to the form with strips of masking tape. Any excess glue will be squeezed out from the laminations. Make certain that you wipe ALL of it away. When everything is lined up and secured, place the form onto a piece of plastic wrap or wax paper, cover it with a piece of the same material, and put it into the microwave. Set the machine on HIGH for about three

minutes. The wood will feel bone-dry when it's done. Let everything cool down for a few minutes before you remove the tape. That's it. Your laminated tip should retain its shape permanently, and you can make a pair of wing tips in less than an hour. In fact, Tom Schmitt says that he can make a laminated wing tip in six-minutes-flat with no spring-back at all. I don't know - I don't doubt Tom's veracity, mind you - but I don't know. Maybe his microwave is faster than mine!

On another subject, if you want to make a good vacuformer, there's an article in the Aug. '89 issue of Scale Auto Enthusiast. My first test mold was a scrap balsa block, 1.2" x 1.4" x 5.5" - about the same size as a stick of butter. Result - perfect. This gizmo is inexpensive, easy to build, and it really works.

PHOTO PAGES

Tom Schmitt

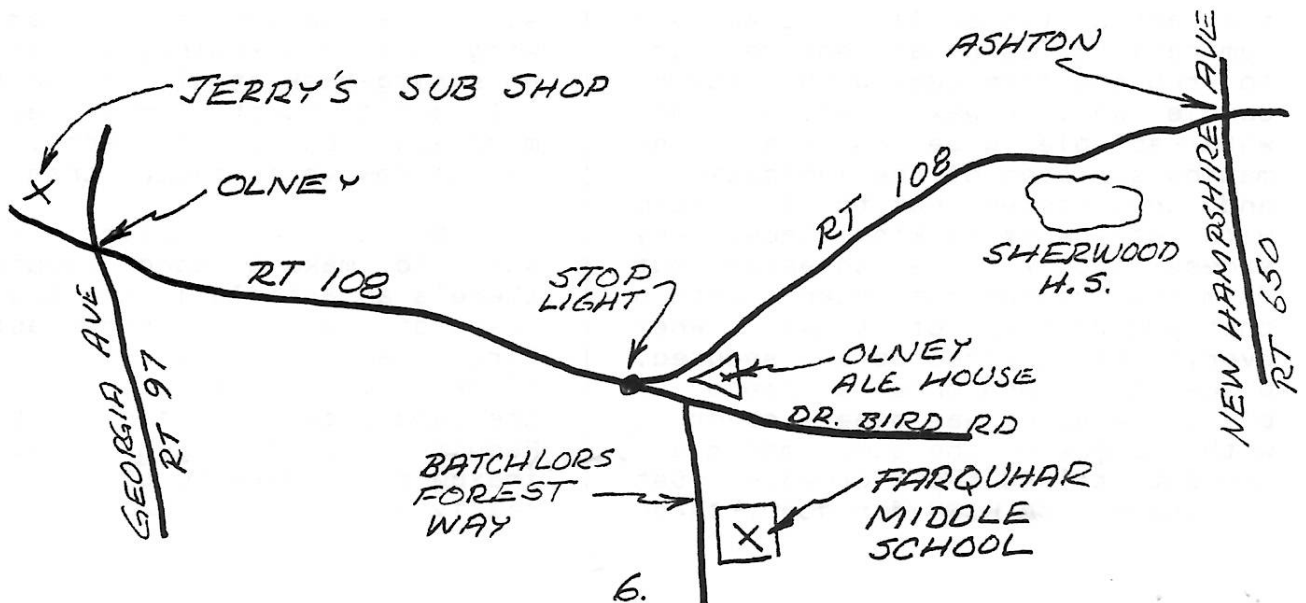
1. This issue's featured plan, Dave Rees' prize winning COCONUT, the Travelair 6000; photo by Dave.
2. Bill Bell with his great Stearman from the Guillow kit.

The MAXECUTER'S September "Fun Fly"

3. A fine flying Pfalz D12 by Bill Roedel seen in WW I event.
4. The winner in EARL STAHL SCALE, Rolfe Gregory with an Interstate Cadet.
5. All the EARL STAHL SCALE flyers with their mentor Earl in the center.
6. Dangerous Dan Driscoll with his ME 109 from Earl's plans.
7. Our President Bert Phillips with his Howard (sans pants) by Earl.
8. We welcomed Mike Escalante back for a visit (now with the Cactus Squadron), seen here assisting Jerry Paisley with his Cessna.
9. Tony Peters seen here with a nifty Fairchild 45, traveled from the New York area with Don Ross and Gene Scheper to join the fun.
10. Dave Rees picked up second place in WW II with his Fairey Fulmar.
11. Pat Berg winding his Rearwin Speedster in the GOLDEN AGE event.
12. Jerry Paisley with three maxes was the person to beat in EMBRYO; sharp eyed timer was Bill Ceresa.
13. Talk about exuberance at the FUN FLY; look at Professor Bud Carson accepting his "first" first place trophy in the hard fought GOLDEN AGE event. Also note the beautiful trophies provided by Capt. Pat Daily.

MAP TO FARQUHAR MIDDLE SCHOOL

THIS YEARS INDOOR FLYING SITE









# SUMMER FUN FLY 1989

## FAC SCALE

NAME	AIRCRAFT	---STATIC---					-FLIGHT-			S
		C	C	W	T	B	F	F	F	
		O	O	O	O	O	L	L	L	R
		N	L	R	T	N	T	T	T	E
		S	O	K	A	U				
		T	R	L S		1 2 3				
1. SRULL, DON	LIPSHIGH P-13	28	18	10	56	35	99	-	-	168.25
2. REES, DAVE	NICHOLAS BEASLY NB3	27	18	10	55	10	100	-	-	142.5
3. SCHANZLE, ALLAN	KLEMM 31	28	18	10	56	10	76	91	-	141.25
REES, DAVE	COLIBRI	29	19	12	60	10	60	80	-	140.0
4. SIMPERS, GLEN	MACCHI C-202	27	18	10	55	10	23	46	57	122.0
5. EGGERT, WALT	P47-N	23	15	8	46	10	56	63	64	118.0
6. CARSON, BUD	SE5-A	23	16	10	49	15	47	52	-	116.0
7. HOUCK, MARK	NIEUPOORT 12	18	12	8	48	15	25	40	51	114.0
8. HOUCK, JOHN	HANROIT HD-1	25	15	9	49	15	22	46	-	110.0
9. BELL, BILL	MARTIN T4M-1	27	15	10	52	15	20	40	21	107.0
10. PAISLEY, JERRY	BOEING F4B-4	25	17	9	51	15	30	40	-	106.0
BELL, BILL	INTERSTATE L-6	28	15	9	52	0	24	44	47	99.0
11. YODER, MARV	SE5-A	20	12	7	39	15	43	-	-	97.0
EGGERT, WALT	CESSNA C-34	24	16	9	49	0	39	-	-	88.0
CARSON, BUD	WRIGHT AIR SEDAN	22	15	9	46	0	37	-	-	83.0
12. ESCALANTE, MIKE	GYPSY MOTH	20	12	7	39	15	29	-	-	83.0

## EARL STAHL SCALE

NAME	AIRCRAFT	---STATIC---					-FLIGHT-			S
		C	C	W	T	B	F	F	F	
		O	O	O	O	O	L	L	L	R
		N	L	R	T	N	T	T	T	E
		S	O	K	A	U				
		T	R	L S		1 2 3				
1. GREGORY, ROLF	INTERSTATE CADET	27	17	9	53	0	51	93	-	128.75
2. DRISCOLL, DAN	HOWARD	23	17	10	50	0	73	75	38	117.5
3. PAISLEY, JERRY	STINSON VOYAGER	25	17	10	52	0	65	-	-	114.5
4. SCHANZLE, ALLAN	VULTEE VANGUARD	27	17	9	53	10	32	51	-	114.0
5. POWELL, CLAUDE	HURRICANE	25	16	9	50	10	22	21	42	102.0
6. PAISLEY, SCOTT	REARWIN SPEEDSTER	20	12	7	39	0	48	54	-	101.0
7. BOWERS, HURST	INTERSTATE CADET	24	16	10	50	0	42	43	50	100.0
8. PHILLIPS, BERT	HOWARD	23	18	9	50	0	25	-	-	75.0

## HAND LAUNCH GLIDER

PLACE	NAME	FLIGHT TIMES (SEC)						BEST
		1	2	3	4	5	6	
1.	SIMPERS, GLEN	141	31	78	25	46	26	265
2.	HOUCK, MARK	16	19	17	21	-	-	57

## THE RACES

NAME	AIRCRAFT	ROUND ELIMINATED					PLACE
		1	2	3	4	5	
FLIGHT A							
REES, DAVE	CESSNA CR-2	X					
SRULL, DON	CESSNA CR-2						1
HOUCK, JOHN	GEE BEE D	X					
ROEDEL, BILL	MR. MULLIGAN	X					
GREGORY, ROLF	SUZY	X					
BUCHANAN, DOUG	MR. SMOOTHIE	X					

## WW-I

NAME	AIRCRAFT	ROUND ELIMINATED					PLACE
		1	2	3	4	5	
FLIGHT A							
REES, DAVE	MARTINSYDE S-1						1
PAISLEY, JERRY	ALBATROS DIII	X					
SRULL, DON	DH-6				X		2
CARSON, BUD	SE5-A		X				
YODER, MARV	SE5-A	X					
HOUCKE, JOHN	HANRIOT HD1	X					

## FLIGHT B

HOUCK, MARK	NIEUPOORT 12		X				
BERG, PAT	SE5 A		X				
EGGERT, WALT	SE-5			X			
ROEDEL, BILL	PFALZ D 12	X					
MEYERS, STEW	FOKKER D7	X					
GREGORY, ROLF	DH 6			X			3

## WW-II

NAME	AIRCRAFT	ROUND ELIMINATED					PLACE
		1	2	3	4	5	
FLIGHT A							
SCHANZLE, ALLAN	VULTEE VANGUARD		X				3
REES, DAVE	FAIRY FULMAR				X		2
HOUCK, JOHN	BOLTEN PAUL DEFIANT	X					
ROEDEL, BILL	P-39		X				
SIMPERS, GLEN	MACCHI 202	X					
BERG, PAT	WILDCAT		X				

## FLIGHT B

HOUCK, MARK	P-51A	X					
PAISLEY, SCOTT	STORMAVIK						1
POWELL, CLAUDE	HURRICANE			X			
KLEINERT, RANDY	HELLCAT		X				
EGGERT, WALT	P-47		X				
ESCALANTE, MIKE	HELLCAT	X					

POWER SCALE

NAME	AIRCRAFT	---STATIC---				-FLIGHT (SEC)-			S C	
		C	C	W	T	B	F	F		F
		O	O	O	O	O	L	L	L	R
		N	L	R	T	N	T	T	T	E
		S	O	K	A	U				
		T	R		L	S	1	2	3	

1. SRULL, DON	HANDLEY PAGE	29	19	12	60	35	116	-	-	142.5
2. EGGERT, WALT	CURTISS CONDOR	28	18	12	58	35	120	-	-	140.5
EGGERT, WALT	CURTISS MF FLY BOAT	27	17	12	56	35	59	114	-	138.5
3. BOWERS, HURST	CORBIN SUPER ACE	23	17	9	49	0	55	105	-	127.75

EMBRYO ENDURANCE

PLACE	NAME	AIRCRAFT	BONUS PTS	FLIGHT TIMES (SEC)				TOTAL PTS
				1	2	3	SUM	
1.	PAISLEY, JERRY	EMBRYO II	9	120	120	120	360	369
2.	PAISLEY, SCOTT	SUPER DORK	6	108	80	90	278	284
3.	BERG, PAT	LUCIFER	8	52	86	115	253	261
4.	DRISCOLL, DAN	1940 FLYING YANKEE	3	74	74	64	212	212
5.	BUCHANAN, DOUG	DESERT PEACH II	5	96	OOS-	-	96	101
6.	POWELL, CLAUDE	PRAIRIE BIRD		57	39	-	96	96
7.	PHILLIPS, BERT	FLYING YANKEE		46	-	-	46	46

NAME	AIRCRAFT	ROUND ELIMINATED					PLACE
		1	2	3	4	5	
FLIGHT A							
POWELL, CLAUDE	BUCKER JUNGMAN		X				
REES, DAVE	NICHOLAS BEASLEY		X				
PAISLEY, JERRY	CESSNA C-145				X		
CARSON, BUD	FARMAN						1
HOUCK, JOHN	AMERICAN EAGLET		X				
SIMPERS, GLEN	TAYLORCRAFT		X				
FLIGHT B							
DRISCOLL, DAN	HOWARD				X		3
PHILLIPS, BERT	HOWARD		X				
YODER, MARV	CURTISS ROBIN		X				
HOUCK, MARK	AERONCA 7AC			X			
YANOSKY, TOM	CORBIN SUPER ACE				X		
ROEDEL, BILL	CORBIN SUPER ACE			X			
FLIGHT C							
KLEINERT, RANDY	PIPER J3		X				
BERG, PAT	REARWIN SPEEDSTER			X			
BELL, BILL	MONOCOUCPE			X			
BUCHANAN, DOUG	ALLIED SPORT		X				
GREGORY, ROLF	CESSNA C-37					X	2
PAISLEY, SCOTT	REARWIN SPEEDSTER				X		

OLD TIMER CONTEST - COMSAT - AUGUST 13, 1989

<u>FLYING ACES MOTH EVENT</u>			PLACE
NAME	AIRCRAFT		
Dan Driscoll	----- Flying Aces Moth		
Rolfe Gregory	----- Flying Aces Moth		[1]
Frank Rowsome	----- Flying Aces Moth		
Scott Paisley	----- Flying Aces Moth		2
Bob McLinden	----- Flying Aces Moth		3

<u>PACIFIC ACE EVENT</u>			PLACE
NAME	AIRCRAFT		
Tom Schmitt	----- 20 inch Pacific Ace		2
Bill Bell	----- 30 inch Pacific Ace		3
Dan Driscoll	----- 30 inch Pacific Ace		[1]

<u>FREE-FOR-ALL EVENT - WINGSPAN UNDER 30 INCHES</u>			PLACE
NAME	AIRCRAFT		
Dan Driscoll	----- Flying Yankee		
Rolfe Gregory	----- Flying Aces Moth		[1]
Bill Bell	----- Ole Reliable		
Doug Buchanan	----- Ole Reliable		
Tom Schmitt	----- 20 inch Pacific Ace		2
Frank Rowsome	----- Flying Aces Moth		3

<u>FREE-FOR-ALL EVENT - WINGSPAN 30 INCHES AND OVER</u>			PLACE
NAME	AIRCRAFT		
Dan Driscoll	----- 30 inch Pacific Ace		3
Bill Bell	----- Bluebird		
Doug Buchanan	----- Sparky		2
Don Srull	----- Whippet		[1]

<u>FREE-FOR-ALL EVENT - ANY OLD TIMER</u>			PLACE
NAME	AIRCRAFT		
Dan Driscoll	----- 30 inch Pacific Ace		
Doug Buchanan	----- Ole Reliable		
Don Srull	----- Whippet		2
Rolfe Gregory	----- Flying Aces Moth		3
Frank Rowsome	----- Flying Aces Moth		[1]
Bill Bell	----- 30 inch Pacific Ace		
Tom Schmitt	----- 20 inch Pacific Ace		

**The flight of the reptile**

Readers may recall the mechanical pterodactyl, *Quetzalcoatlus northropi*, that was constructed for the National Air & Space Museum (C&EN, Oct. 28, 1985, page 72). Little was known of how the creature managed to fly, and the hope was that the project would contribute to knowledge of aerodynamics and paleontology. The hope was partly realized, but the reptile spun in last year during a demonstration at Andrews Air Force Base.

It now turns out that a similar enterprise was pursued successfully by one Erich von Holst some 30 years ago. The source of this information is Lucien Trueb, science editor of *Neue Zürcher Zeitung*, in Zurich. Trueb learned of the project from a reader, A. J. Keller, who brought him a book by von Holst.

In 1956, von Holst built a model of *Rhamphorhynchus*, a flying reptile that lived about 150 million years ago. The idea, again, was to learn something of how the creature flew (Wie flog *Rhamphorhynchus*?). The full-scale model had a wingspan of about 3 1/2 feet (as opposed to the 18-foot span of the half-scale *Q. northropi*), and a movie was shot of it in flight.

The model *Rhamphorhynchus* was made of Japan paper and balsa wood and powered by a stout rubber band (ein kräftiger Gummiband). It flapped its wings and achieved an angle of climb of up to 30 degrees with two to three flaps (Flügel-schlägen) per second.

## PLASTICIZED FINISHES, A MUST FOR TODAY'S SCALE FLYER

Dave Rees

One of the most difficult challenges a free flight scale modeler faces is keeping the models in trim over a reasonable life span. This is very necessary for FAC flying due to the large number of models required to successfully compete in all the events at a given meet. Few of us are industrious enough to build a new air force of 12 or 14 airplanes every year or two, and must depend on our "old dependables" for some events. Indoor flying requires yet another squadron of competitive models.

An additional obstacle has been gradually developing over the past ten years or so of FAC flying: the models have been getting steadily lighter. Designers and builders have collectively realized that to get those winning times, the airplanes must be lighter than the ones we used to fly a few years back. Remember those afternoon mass launch events at last year's NATS? What a display of airplanes that float! But, as the structures get lighter, the chances of warping increase. The answer to both of these problems is a fully relaxed finish.

Aircraft dope, or nitrocellulose lacquer, is one of the lightest and oldest finishes known to modeling. It also has the highest shrink rate. Fortunately, there is a solution to the problem that was developed long ago by the aircraft industry - so long ago that it has almost been forgotten: Tricresyl Phosphate (TCP). This mixture of isomers, whose formula is  $(\text{CH}_3\text{C}_6\text{H}_4\text{O})_3\text{PO}$ , is a colorless, odorless liquid which is stable, nonvolatile and nonflammable. It is miscible with all common thinners and solvents, but not in water. Most commonly it is used as the plasticizer in vinyl (PVC) upholstery and a plasticizer plus fire

retardant in lacquers. Some is used in high pressure lubricants as well.

To a scale modeler, its use is simple. Mix ten drops per 4 ounce airbrush jar with the thinner before adding the dope, shake everything well and spray as you normally would. You will notice that it increases the gloss somewhat, which I find helpful since it is impossible to rub these models. But most important, the finish will stay completely still. The first ship I built using TCP was the Caudron 460, which is still as straight and as glossy blue as ever after six years. I used a whole bottle of Aero Gloss Curtiss Blue to paint the ship with no clear undercoat.

There may be a down side for you, depending on your style of building. If you depend on the dope shrinkage to pull the tissue up tight, it won't with TCP. If you depend on the dope shrinkage to supply skin strength to the model, it won't with TCP. If you cover carefully so no wrinkles are present before painting, and balance the structure to take the loads, TCP is just what you are looking for.

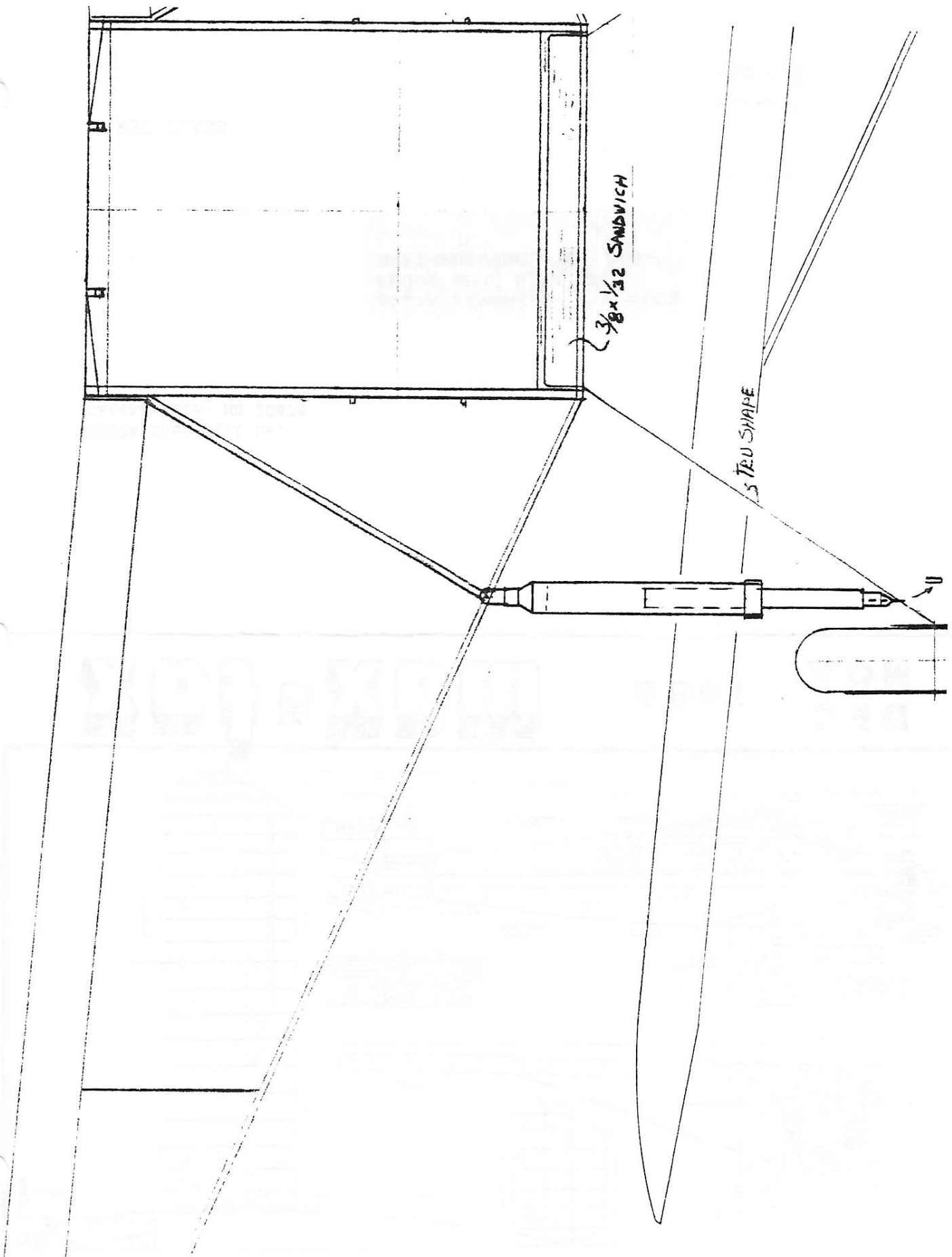
The mechanics of shrinkage are as follows. The tissue surface greatly magnified looks like a grid or screen of fibers. When the dope is applied, it bridges these interstices with a thin film which begins to shrink and draw the fibers together. TCP helps to inhibit this shrinkage. There are some other things you can do to reduce shrinkage. First, use an airbrush rather than a paintbrush. The airbrush tends to coat the fibers rather than make the film bridges, while brushing not only forms these film bridges, but

drives small drops of dope through the tissue, creating small blobs on the underside. The resulting finish is much heavier, in addition to causing more shrinkage. Needless to say, the less dope, the better, even for airbrushing. For this reason, I like to paint only white tissue: it takes less paint to cover and the colors look brighter.

TCP can be obtained from airports or shops that specialize in recovering old fabric airplanes. Rees Industries will also begin to sell this product (Rees Industries, 301 Yearling Dr., Goldsboro NC 27530). Try it on your projects for the '90 NATS, which I am sure you are all working on by now.

## INTERNATIONAL AIRCRAFT MARKINGS

<b>AN-</b>	Nicaragua.	<b>VP-AAA—VP-AZZ</b>	Gold Coast with Ashanti, Northern Territories of Gold Coast in British Togoland.
<b>AP-</b>	Pakistan.	<b>VP-BAA—VP-BZZ</b>	Bahamas.
<b>CC-</b>	Chile.	<b>VP-CAA—VP-CZZ</b>	Ceylon.
<b>CF-</b>	Canada.	<b>VP-FAA—VP-FZZ</b>	Falkland Islands.
<b>CN-</b>	Morocco.	<b>VP-GAA—VP-GZZ</b>	British Guiana.
<b>CP-</b> or <b>CB-</b>	Bolivia.	<b>VP-HAA—VP-HZZ</b>	British Honduras.
<b>CR-</b>	Portuguese Colonies.	<b>VP-JAA—VP-JZZ</b>	Jamaica.
<b>CS-</b>	Portugal.	<b>VP-KAA—VP-KZZ</b>	Colonies and the Protectorate of Kenya.
<b>CU-</b>	Cuba.	<b>VP-LAA—VP-LZZ</b>	Leeward Islands.
<b>CX-</b>	Uruguay.	<b>VP-MAA—VP-MZZ</b>	Malta.
<b>CZ-</b>	Principality of Monaco.	<b>VP-NAA—VP-NZZ</b>	Protectorate of Nyasaland.
<b>EC-</b>	Spain.	<b>VP-PAA—VP-PZZ</b>	Islands under the rule of the Western Pacific High Commission.
<b>EI-</b>	Ireland.	<b>VP-RAA—VP-RZZ</b>	Northern Rhodesia.
<b>EP-</b>	Iran (Persia).	<b>VP-SAA—VP-SZZ</b>	Protectorate of Somaliland.
<b>ET-</b>	Ethiopia.	<b>VP-TAA—VP-TZZ</b>	Trinidad and Tobago.
<b>F-</b>	France, Colonies and Protectorates, less Morocco.	<b>VP-UAA—VP-UZZ</b>	Protectorate of Uganda.
<b>G-</b>	United Kingdom.	<b>VP-VAA—VP-VZZ</b>	St. Vincent.
<b>HA-</b>	Hungary.	<b>VP-XAA—VP-XZZ</b>	Colonies and Protectorate of Gambia.
<b>HB-</b>	Switzerland.	<b>VP-YAA—VP-YZZ</b>	Southern Rhodesia.
<b>HC-</b>	Ecuador.	<b>VP-ZAA—VP-ZZZ</b>	Protectorate of Zanzibar.
<b>HH-</b>	Haiti.	<b>VQ-BAA—VQ-BZZ</b>	Barbados.
<b>HI-</b>	Dominican Republic.	<b>VQ-GAA—VQ-GZZ</b>	Cyprus.
<b>HK-</b>	Colombia.	<b>VQ-FAA—VQ-FZZ</b>	Fiji Islands.
<b>HS-</b>	Siam.	<b>VQ-GAA—VQ-GZZ</b>	Grenada.
<b>I-</b>	Italy.	<b>VQ-HAA—VQ-HZZ</b>	St. Helena.
<b>LG-</b>	Guatemala.	<b>VQ-LAA—VQ-LZZ</b>	St. Lucia.
<b>LI-</b>	Liberia.	<b>VQ-MAA—VQ-MZZ</b>	Mauritius.
<b>LN-</b>	Norway.	<b>VQ-SAA—VQ-SZZ</b>	Seychelle Islands.
<b>LR-</b>	Lebanon	<b>VR-BAA—VR-BZZ</b>	Bermuda.
<b>LV-</b>	Argentine Republic.	<b>VR-GAA—VR-GZZ</b>	Gibraltar.
<b>LX-</b>	Luxembourg.	<b>VR-HAA—VR-HZZ</b>	Hong Kong.
<b>LZ-</b>	Bulgaria.	<b>VR-JAA—VR-JZZ</b>	Johore.
<b>MC-</b>	Monte Carlo.	<b>VR-LAA—VR-LZZ</b>	Colonies and Protectorate of Sierra Leone.
<b>N</b>	United States of America.	<b>VR-NAA—VR-NZZ</b>	Colonies and Protectorate of Nigeria, including British Cameroons.
<b>OB-</b>	Peru.	<b>VR-RAA—VR-RZZ</b>	Malayan Union.
<b>OE-</b>	Austria.	<b>VR-SAA—VR-SZZ</b>	Straits Settlements.
<b>OH-</b>	Finland.	<b>VR-TAA—VR-TZZ</b>	Tanganyika.
<b>OK-</b>	Czechoslovakia.	<b>VR-UAA—VR-UZZ</b>	State of Brunei (British North Borneo).
<b>OO-</b>	Belgium.	<b>VT-</b>	India.
<b>OY-</b>	Denmark.	<b>XA-</b> or <b>XB-</b>	Mexico.
<b>PH-</b>	Netherlands.	<b>XH-</b>	Honduras.
<b>PI-</b>	Philippine Republic.	<b>XT-</b>	China.
<b>PJ-</b>	Curaçao (Netherlands West Indies).	<b>XY-</b>	Burma.
<b>PK-</b>	Netherlands East Indies.	<b>YA-</b>	Afghanistan.
<b>PP-</b> or <b>PT-</b>	Brazil.	<b>YE-</b>	Yemen.
<b>PZ-</b>	Suriname (Netherlands Guiana).	<b>YI-</b>	Iraq.
<b>RX-</b>	Republic of Panama.	<b>YJ-</b>	New Hebrides Condominium.
<b>SA-</b>	Saudi Arabia.	<b>YR-</b>	Rumania.
<b>SE-</b>	Sweden.	<b>YS-</b>	El Salvador.
<b>SN-</b>	Sudan.	<b>YU-</b>	Yugoslavia.
<b>SP-</b>	Poland.	<b>YV-</b>	Venezuela.
<b>SR-</b>	Syria.	<b>ZA-</b>	Albania.
<b>SU-</b>	Egypt.	<b>ZK-</b>	New Zealand.
<b>SX-</b>	Greece.	<b>ZP-</b>	Paraguay.
<b>TC-</b>	Turkey.	<b>ZS-</b>	Union of South Africa.
<b>TF-</b>	Iceland.		
<b>TI-</b>	Costa Rica.		
<b>TJ-</b>	Jordan.		
<b>URSS</b>	Russia (national letters followed by a number).		
<b>VH-</b>	Australia.		
<b>VP-</b>	British Colonies, Protectorates and Mandates as follows:—		
<b>VQ-</b>			
<b>VR-</b>			

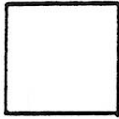


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