

# Replica



On the Web at: <http://www.scaleaero.com/amascale.htm>

May/June 2001

Volume 15 Issue 4

## President's Column May-June 2,001

By Stan Alexander

### The Scale National Championships

Everyone is looking forward to the Nationals and the FAI Scale Team Trials, which will be held in conjunction with the Nationals. With any event of this size sponsorship is essential to assist us with awards and prizes for contestants.

### Sponsors

This year we have several sponsors who have already stepped

forward to help with the Nationals. They include **The Zap Gang, Power Master Fuel, Airtronics, Futaba, Great Planes, Top Flite, SIG Mfg. Inc., Fox Mfg. Inc., Sea-Clusion**

**Aeronautics Plans** and this is just April! So if you have the opportunity to use the products from these companies please let them know we appreciate their support of The Scale National Championships.

### Indoor R/C at the Nationals

On Friday night after all static judging has been completed, there will be an indoor R/C Fun Fly at the Horizon Center in Muncie. We know that several scale modelers have built airplanes for this event and are looking forward to it very much. Looking into the future we see an indoor R/C Scale Nationals on the horizon also. This could be a lot of fun. At least you wouldn't have to worry about strong cross winds knocking you around. Of course you have to watch out for those walls. For more information please contact: Bob Wilder at 817-498-6316, or at NIRAC.org Bob heads the indoor R/C SIG- NIRAC We know of several scale modelers who plan to participate, join everyone!

### Grass Runway and Other Improvements

Many scale modelers like to fly off of grass and especially land back on grass. This has been a goal to provide scale modelers with this option at the R/C flying site. There will be

a grass runway for contestants with tail draggers and skids at the Nationals this year. Steve Kaluf says the surface has been prepared and grass has been sewn. So we hope everything goes well with this additional runway area. It remains to be seen whether the prevailing winds will allow use of the grass runway all weekend but we have our fingers crossed. Also at the National Flying Site there are now permanent toilets and showers for campers. This is great for those who would like to tent camp during the Nationals or any other time during the year. Look for more improvements in the near future.

### New AMA Headquarters Building

The new AMA Headquarters building is now complete and at the June Homecoming event at the National Flying Site AMA will unveil a beautiful headquarters building to all. Several of us who work on the Nationals all year were fortunate enough to have a tour of the building last October. Even in it's unfinished state at that time you could see all of the thought and work that was going into the new building. Energy efficient, beautiful and economical and looked like it will be very functional.

The other great thing about the headquarters building moving is that the Model Aviation Museum at Muncie will just about double in size. There will be rooms for educational projects and additional museum space.

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### FAI C.I.A.M. March Meeting Report

By Stan Alexander

This year's CIAM meeting didn't have a large agenda on it for Scale F4 modeling. There was only one rules proposal from the Dutch representative and committee. This proposal was for a weight increase to 15kg for multiple engine aircraft and turbines or jet model aircraft. It was modified in the committee to accept all F4C aircraft to the 15 kg weight limit.

This proposal was unanimously recommended by the technical meeting and passed the next day.

### 6.3.1 General Characteristics:

Maximum surface area 250dm (this will be increased next year)

Weight:

- a) Maximum weight of the complete model without fuel in flying condition, but including any dummy pilot..... **15kg or 33.33 lbs.**

- b) Model using electric motors, as power source shall be weighed without batteries used for those motors.

(Please Note!) This weight increase takes effect only for F4C beginning January 2005 for international FAI F4 Scale events. This gives everyone 4 years notice. Also it is the opinion of the entire sub-committee present this year to leave the weight issue alone for the following next two rule cycles effective January 2,005 at least.

\*Please note: It has been suggested by some on the AMA FAI Executive Committee that here in the USA, we hold F4C class events NOW with the new weight limit which will take effect during 2,005.

Motive Power:

- a) Rocket or pulse jet engines may not be used
- b) Electric motors, maximum no load voltage of power source 42 volts \*

42 volts is the legal limit in Europe to this type of application. We hope to get this changed in the future! We would love to have a electric power proposal from those in that field here in the USA for the next meeting.

If a model aircraft appears to be noisy in flight etc. (continue as per Sporting Code)

Add to the last paragraph after.....will be the same as for single engine model aircraft. (then add this sentence that was left out of the new Sporting Code by accident) Turbine engines will not be subject to noise measurements.

## Upcoming Scale World Championships for C/L & R/C

2,002 Canada dates are still for July 12<sup>th</sup>-21<sup>st</sup> The dates for this still could change but I doubt it. NASA had been asked to help the Canadians with the 2,002 World Championships but we could not change the dates of our own Nationals in 2,002 due Nationals schedule and our Scale Nationals being set. If

we had given up the 1<sup>st</sup> slot in the time frame we wouldn't have been able to get it back and the Scale Nationals would have been held sometime in August. As NASA President I had asked both Jack Humphrey and Chuck Smith if there was a possibility of changing the date. After having their organizational meeting I was told that they couldn't change the dates at all. The Scale Nationals in 2,002 will start on Thursday and run through Sunday July 11<sup>th</sup>-14<sup>th</sup>. The Scale Nationals (and all of the Nationals) was moved back one week later next year due to July 4<sup>th</sup> falling on Thursday. We plan to propose that in the future the Nationals not be scheduled during a week when July 4<sup>th</sup> falls in.

Tillsonburg, Ontario- Tillsonburg Airport

Entry fees quoted at the sub-committee meeting

Pilots \$350 Canadian

Managers \$350 Canadian

Helpers \$100 Canadian

It was voiced by several sub-committee members including myself that the F4B and F4C pit area should be placed together at future events. They should not be separated as they were in Switzerland. It was noticed, by several sub-committee members that it was like two different contests. Over all most thought the Swiss WC was one of the best held except for this main sticking point. I also voiced my opinion that the organizers shouldn't give oral promises of discounted airfares and free rental cars during the contest. The organizers need to have information of this type locked into a contract before presentation to the sub-committee and delegates. In 2,000 this one item cost the U.S.A. and the Canadian teams thousands of dollars extra in travel expenses which were unexpected.

2,004 World Championships, through Matti Jyllila submitted an oral bid to host the 2,004 World Championships in Finland to the Sub-committee. All 9 members present agreed this would be a good venue for the World Championships and it was suggested that he ask for a vote on this issue. On Friday the Finish delegate asked for a vote to help the country with organization and obtaining finances. But there were two other countries that had proposals also, Spain and Poland. The Polish delegates were the only ones prepared with a written proposal with site information as well as dates, costs, maps etc. While the Finish delegate gave everyone an oral presentation the Polish delegates were passing out the written proposal of their own. Bottom line was the Polish delegates were prepared. The vote was 20 for Poland, 9 for Finland and 3 for Spain. So the 2,004 World Championships will be held in Poland.

\*\*\*\*\*

## An Introduction

At Toledo of this year, a man whom I was working with within the NASA booth, told me a story of desperation, excitement, and of commitment. The story he told brought tears to my eyes and roused my sense of duty, a feeling not unlike that of a man giving of himself to defend his country. I could not turn him down. So now, that said, I have become the new REPLICA editor. My apologies to Stan Alexander for the dramatics, it has become habit with the group I hang out with to cause a little embarrassment, all in the name of fun. One week you are the pigeon, next week you are statue. My name is Dave Nellis, I reside in Sterling Heights, Michigan, which is just North of Detroit. By trade, I am a construction electrician. I have been modeling since 1975, and began scale modeling in 1980. I am good friends with Skip Mast, Steve Sauger, Cliff Tacie, George Maiorana, Mariano Alfafara and the late Ron Sears. Everything I have learned about scale modeling has come from these fine gentlemen. I have been an occasional judge at various contests including the NATS. I am currently building a 1/4 scale clipped wing Cub based on the Sig Kit. I have made dozens of modifications to the airframe to bring it more into scale. I am a somewhat accomplished machinist. Most of my work is automotive, but I have done some aerospace work. I am building a nine cylinder radial engine from Hodgson plans. It will not be used in a model but it is functional. If you need something machined for a model, let me know, I might be able to help. I am also a 12" to the foot pilot and will attend the NATS on Saturday flying down in a Cessna Cardinal RG. As far as the newsletter goes, I will do my best to bring NASA members a quality newsletter but please understand that I am new at this and I am still learning. So if I misspell a name or put someone else's name on your picture, kindly inform me and I will make any corrections. You can also help me out by writing an article for REPLICA about anything scale. It does not have to be long and drawn out. Just enough to let others what is going on. I hope to hear from you.

Dave

## Volunteer NASA Positions at the Nationals

We need administrative personal at the Nationals to fill other very important positions. While these aren't judging positions they are *equally important* with regard to running The Scale National Championships.

By adding these positions it will help to insure that we have the best possible Nationals we can offer the competitors. Well...there were so many people who jumped in and volunteered from the Jan-Feb issue we are repeating our request.

In the past, people seemed to feel *these positions* were not important. This couldn't be farther from the truth. To the organization *it's one of the most important*.

## NASA - Promotion Coordinator

In charge of NASA merchandise sales, raffles, collect memberships and responsible for creative marketing of NASA. There has *never* been anyone in this officer position. Bonnie Rediske conducted this function from the transmitter impound...which does not work very well.

We have had other people volunteering to do this on a temporary basis at the R/C and C/L site from year to year...it is time we added this Officer position so we can provide the best service to our members and our competitors at the C/L and R/C sites.

**October 13<sup>th</sup> & 14<sup>th</sup>**  
**1<sup>st</sup> Annual NASA**  
**OCTOBERFEST SCALE RALLY**  
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**C/L Event Director-TBA**  
**F/F Event Director- Ernie Harwood**

Look for more information on the NASA web-site: <http://www.scaleaero.com/amascale.htm> and in the next Replica. Sound interesting? We have the entire Muncie Flying Site to ourselves from one end to the other.

Fair Skies & Tail Winds,

*Stan Alexander*

May 10<sup>th</sup>-12<sup>th</sup> Battle of the Coral Sea

Before the Battle of the Coral Sea, the opposing fleets were able to see their advisory. During the Battle of the Coral Sea it was realized, that this was the first battle in Navel history where the opposing fleets never saw each other's ships. This battle took place only 6 months after Pearl Harbor.

The Japanese Task Force consisted of the Port Moresby Invasion Group, a smaller Tulagi Invasion group, a support group, a Covering Group and finally the Striking Force.

Port Moresby was very important to the USA and other allies, as it was a springboard for the offensives in the southwest Pacific. After the shock of December 7<sup>th</sup> the US had succeeded in breaking the Japanese navel code, and thus possessed detailed intelligence concerning the upcoming Japanese Navel operations. We knew of the plans to attack Port Moresby and the approximate date of the attack. The Japanese would use Moresby to attack Australia and the other surrounding countries of military value.

On May 1<sup>st</sup> the carrier Lexington's task force rendezvoused with the carrier Yorktown's force about 250 miles west of Espiritu Santo, and combined under Rear Admiral Fletcher's command. On May 4<sup>th</sup> the first strike force was launched from the Yorktown. It consisted of 12 Devastator torpedo bombers and 28 SBD Dive-bombers. Eighteen F4F Wildcat fighters were assigned for cover over the carrier. During this time period independent squadrons attacked separately. They often overestimated what they saw. They did little damage other than one destroyer and a few landing craft.

The 2<sup>nd</sup> and 3<sup>rd</sup> attacks also were largely a waste of time and bombs. Both sides were now in the area and over the next few days search planes were sent out to find the enemy forces. On May 7<sup>th</sup> task force scouts spotted a small task force including a carrier. This was the Shoho.

From the Lexington-  
10 Wildcats of VF-2  
28 SBD Dauntless of VB-2  
12 Devastators of VT-2

From the Yorktown-  
10 Wildcats from VF-42  
7 SBD Dauntless of VB-5 and VS-5  
10 TBDs of VT-5

This is exactly how it happened. Weldon Hamilton expected the enemy force was nearby. Below him, at 12,000 feet were Dixon and his VS-2. Underneath were Brett's torpedo bombers of VT-2. The Fighter planes were divided into two groups including a low group VT-2 and the high group VB-2.

As they approached they could recognize the enemy carrier from the light colored flight deck. It was the Shoho. Hamilton radioed this to the other aircraft in the group. VS-2 was the first group to attack. They began their runs from 12,000 ft. exactly down wind, simplifying the problem of



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## *Battle of the Coral Sea Part II*

*By Stan Alexander*

### Time Line:

December 7<sup>th</sup> Pearl Harbor  
December 10<sup>th</sup> Guam Falls  
December 31<sup>st</sup> Admiral Chester Nimitz assumes command of the U.S. Pacific Fleet  
January 1-14<sup>th</sup> Ugaki writes a sketch of future operations  
April 2<sup>nd</sup>-6<sup>th</sup> Japanese Navel general Staff approve Midway invasion  
April 18<sup>th</sup> Doolittle raid on Japan  
May 6<sup>th</sup> Corregidor surrenders

aiming considerably. The Zero fighters tried to shoot down the Dauntless dive-bombers but they were too fast. The Zeros just passed by the slower SBDs as they made their dives on the Shoho.

Cdr. Bob Dixon mad a near perfect dive and put his 500 lb. bomb amidships, wrecking the flight deck and preventing the launching of any more aircraft from the Shoho. The 2<sup>nd</sup> bomber dropped another 500lb. bomb on the carrier's port side and was a near miss causing internal damage and blowing two aircraft off the flight deck. After numerous bomb and torpedo hits the Shoho, on fire sank that day. On that day the now famous words were radioed back by Dixon "Dixon to carrier, scratch one flattop."

## The First Carrier to Carrier Battle

On May 8<sup>th</sup> both fleets launched reconnaissance aircraft early that morning. Fletcher had 121 aircraft available, while Takagi had 122. That morning Ens. Smith found the Japanese task force at about 8:00am The US fleet commanded by Fletcher ordered the launch of both carriers attack forces. The Shokaku and the Zuikaku disappeared into a rain squall.

The attack started at 10:57am a combination of SBDs and Devastators made their attacks on the Shokaku and the Shokaku was heavily damaged by at least three bomb hits. The Devastators torpedo planes never made any hits during the attack. The Shokaku finally brought the damage back under control and made the trip back to Japan. It nearly capsized on the way.

The Japanese carriers had launched their aircraft about the same time as our forces had. Scouts saw the Japanese attackers from the Yorktown. Both the Yorktown and the Lexington turned into the wind and launched every aircraft possible. The task force pushed its speed to flank with all gun crews at battle stations.

The Japanese torpedo planes unlike our own had an excellent attack record. They managed to attack the Lexington and put two torpedoes into the carrier. Captain Sherman avoided the all the other torpedoes in the attack. The Yorktown managed to avoid all the torpedoes but not the bombs. But the Lexington was listing by 7 degrees and three of her sixteen boilers were partially flooded. Corrections were made by shifting the oil ballast, and later that day the "Lady Lex" resumed flight operations. But about 1:00pm the Lexington was shook by an explosion, possibly ignited by fuel vapor. Other explosions rocked the Lexington and later that day the Captain ordered the crew to topside and shortly ordered them to abandon ship, as the fires could not be contained. The USS Phelps fired four torpedoes into the burning ship to finally sink her as many of her crew cried.

At 20:00 Lexington disappeared below the surface of the Coral Sea, taking with her 216 crewmembers and the remains

of 36 aircraft. Many of its crew had been with the "Lady Lex" since her commission in 1927.

At this point it's interesting to note that the Yorktown had a tighter turning radius of about 500 yards while the Lexington had a turning radius of about 750-1000 yards. The tighter turning radius of the Yorktown allowed her to avoid the torpedo attacks and helped to save the ship.

Our own torpedo attacks up to this battle and during the battle of Midway were usually failures. The TBDs were finally removed from front line service. Helldivers and TBF Avengers took over the tasks of torpedo attacks after Midway.

In many circles the outcome of the Battle of the Coral Sea is still debated. But the Japanese fleet turned back giving the USA a strategic victory. The Japanese drive to the south and Australia was over for now and as it turned out for good. Within less than a month only seven months since the unprovoked attack on Pearl Harbor the second carrier battle of the Pacific war would take place and would be the turning point of the war with the Japanese- The Battle of Midway Island.

*A combination of excellent intelligence, bravery, skill and just plain luck would make the difference in each of these battles.*

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# MANEUVER REALISM SPEED

Kent Walters, [Kentwltrs@aol.com](mailto:Kentwltrs@aol.com)

Most scale modelers have considered speed on frequent occasions and how it affects many other forms of maneuver realism that are observed in flight. This was also a question to scale modelers for many years since ambiguous terms were earlier used in competition for judging maneuvering speed and overall flight realism.

This article will briefly look back in the history or "epilog of scale speed" and then provide a detailed review of the many other observed speed-sensitive features in flight affecting maneuver realism. These include correct flying attitudes such as realistic bank angles in scale-size turns, energy management to permit realistic vertical maneuvers, realistic flight stability, realistic g-factor loading appearances on airframe or passengers, and others. All of these realistic features are influenced by speed if models are to perform like full-size aircraft. However it is not in the manner some had expected by attempting to fly at scale speed. The primary physical reason is simply because the accelerating pull of gravity cannot be scaled to smaller values similar to the smaller sizes of our models. This subtle consideration of the fixed-gravity environment we fly our miniature aircraft produces a notable conflict in scale speed with all the other forms of maneuver-flight realism. In other words "you can't have your cake and eat it too" with scale speed if we are to fly realistically for all the other maneuver realism features we often take for granted. The basic physics for understanding this are also presented in this article.

These considerations have provided another well-defined speed relation used by NASA and others in optimizing model speeds for maneuver realism. This has historically been known as Dynamic Similitude Speed (DSS) by the aircraft industry when using RC scale models (much like those we fly) when studying prototypical flight characteristics. Despite this sophisticated name, most modelers would likely better recognize this simply by the descriptive terms of "Maneuver Realism Speed." Further examples of this DSS

feature using tables and graphs are also provided in the latter section of this article for a broad range of scale-size models.

Recognition of these physical relations and the latest changes in competition guidelines also helps achieve a level-playing field for small and large-scale models of different vintages. This is particularly important after giant-scale models were included in Sport Scale competition in 1992 by the AMA. For example, most modelers had recognized that scale speeds favored larger models better approaching full-size dimensions. However, it was also apparent there were significant added costs in trying to follow this path. Some had further argued this was also taking its toll in new participants in a hobby intended for a variety of "miniature size" scale models.

The earlier ambiguous requirements of "scale like speeds" also invited inconsistent judging, particularly since judges often did not know the scale of the model or the maneuvering speeds of the full-size aircraft from which to scale. There was also difficulty in judging speed itself despite any "gifted mental ability" to make all these calculations while judging.

*Article continues here:*

[www.scaleaero.com/maneuver\\_realism\\_speed.htm](http://www.scaleaero.com/maneuver_realism_speed.htm)

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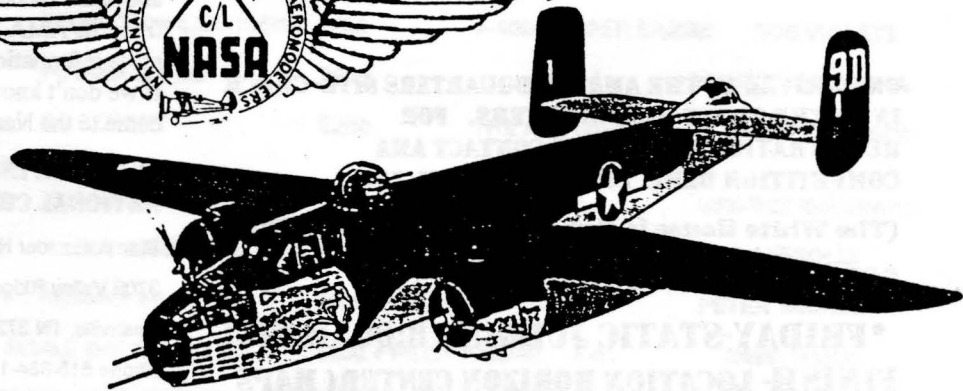
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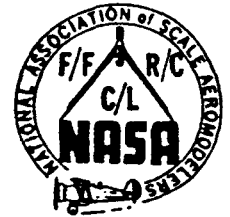
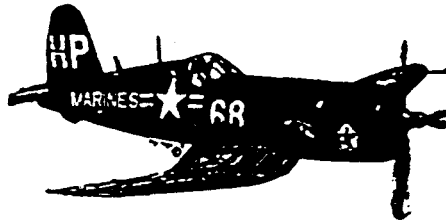
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- TEAM SCALE

**HOSTED BY: NATIONAL ASSOCIATION OF SCALE AEROMODELERS  
NASA'S WEBSITE [HTTP://WWW.SCALEAERO.COM/AMASCALE.HTM](http://www.scaleaero.com/amacscale.htm)**

**\*TEAM SCALE C/L- UNOFFICIAL EVENT**

**AMA SANCTION #00,000**



## SCALE AEROMODELING'S 75TH NATIONAL CHAMPIONSHIPS

### 2,001 AMA SCALE NATIONAL CHAMPIONSHIPS INFO LINK

**ENTRY FEES 1ST ENTRY \$50 ADDITIONAL ENTRIES \$20 EA. \* FAI QUALIFIER ENTRY FEE \$50 (SEPERATE EVENT HELD DURING NATS.**

**LATE FEES APPLY AFTER JUNE 1ST,**

**ON ARRIVAL AT THE AMA HEADQUARTERS SITE- CHECK IN AT THE EVENT HEADQUARTERS. FOR REGISTRATION KIT- PLEASE CONTACT AMA COMPETITION DEPT. 765-287-1256 EXT. 230**

**(The White House is Nationals- HEADQUARTERS)**

#### **SCHEDULE OF EVENTS:**

**\* FRIDAY-STATIC JUDGING 8:00AM TILL FINISH- LOCATION HORIZON CENTER( MAPS INCLUDED IN CONTESTANT PAK.)**

**SATURDAY 8:00AM - 4:00PM FLIGHT COMPETITION**

**SUNDAY 8:00AM- FINISH FLIGHT COMPETITION, AWARDS TO FOLLOW.**

**\*NASA'S BANQUET WILL BE HELD AT THE HORIZON CENTER on Saturday evening, with special guests on hand. Last year's banquet was one of the most successful we have had. Great company, great food and good times.**

#### **\*AMA AREA RECOMMENDED MOTELS:**

**AMERIHOST OF MUNCIE, 3011 W. Bethel Ave. Muncie 765-282-0600**

**RADISSON HOTEL ROBERTS, 420 S. High St. Muncie 765-7417777**

**HOLIDAY INN EXPRESS, 4201 W. Bethel Ave. Muncie 765-289-4678**

**LEES INN, 3302 N. Everbrook Ln., Muncie 765-282-7557**

**SIGNATURE INN, 3400 CHADAM LN., MUNCIE 765-284-4200 OR 1-800-822-5252**

**SIGNATURE INN IS OUR SCALE NATS HQ.**

**\*\* Motels Listed here are AMA recommended lodging with special rates to AMA members. BE**

**SURE TO TELL THE HOTEL CLERK YOU ARE WITH THE AMA AND ATTENDING THE NATIONALS FOR SPECIAL ROOM RATES! \*\***

There are several other hotels listed on the AMA website. The above are recommended by AMA. Campsites are available also from the AMA Website. You can contact anyone listed here for more information on the 2,000 Scale National Championships. If we don't know, we will find out for you. We want everyone to come to the Nats and have a GREAT TIME!

#### **FOR MORE INFORMATION ON THE 2,001 AMA SCALE NATIONAL CHAMPIONSHIPS PLEASE CONTACT:**

Stan Alexander NASA President

3709 Valley Ridge Dr.

Nashville, TN 37211-3831

Phone 615-834-1879 or E-mail onawing@mindspring.com

#### **DALE ARVIN R/C EVENT DIRECTOR**

3428 Jeff-Charlestown

Jeffersonville, IN 47130

Phone 812-284-0762 or E-mail darvin8094@aol.com

#### **ED CULVER C/L SCALE EVENT DIRECTOR**

120 Tammy Dr.

Gamer, NC 27529

Phone 919-553-0577 or E-mail cliffrc@cs.com

#### **AMA COMPETITION DEPARTMENT**

Steve Kaluf AMA Competition Director

5151 East Memorial Dr.

Muncie, IN 47302

765-287-1256 or skaluf@modelaircraft.org

**Indoor Electric R/C Fly-In Friday night!**

**Friday Night Special! !! After Static Judging concludes there will be an Indoor R/C Electric Fun Fly at the Horizon Center- Featured will be Scale, Pattern, Pylon and other model types. Everyone is invited to participate or just take a look. For more information please contact: Bob Wilder at: 817-498-6316 or check the web-site at: NIRAC.org**

# TOP GUN STATIC & FLIGHT AWARDS

ALL INCLUDE A CUSTOM TROPHY PLUS A DONATION FROM THE SPONSOR

	<u>SPONSOR</u>	<u>AWARD</u>	<u>AIRCRAFT</u>	<u>PILOT</u>
<b>STATIC AWARDS</b>				
HIGH STATIC-DESIGNER	AEROTECH	\$200	AVENGER	NICK ZIROLI JR.
HIGH STATIC EXPERT	R.A. MICROJETS	\$200	SE-5A	MICHAEL GROSS
HIGH STATIC TEAM	RAY & ROBIN'S HOBBY	\$200	SUPER OUB	GRAEME MEARS
BEST CIVILIAN AIRCRAFT	DAVE PLATT MODELS	\$200	AIRBUS	PETER MICHEL
BEST JET AIRCRAFT	IRRIGATION SERVICES	\$200	F-100D SUPER SABRE	BOB VIOLETT
BEST MILITARY AIRCRAFT	FUTABA RADIO	\$200	TU-4	GEORGE MAIORANA
BEST BIPLANE	RO REPORT	\$200	THE RED WACO	CHARLIE NELSON
CHARLIE CHAMBERS CRAFTSMANSHIP AWARD	THE ZAP GANG	\$200	TU-4	GEORGE MAIORANA
BEST PRE- WW 2 AIRCRAFT	GLENN TORRANCE	\$200	DH-2	RICH FEROLDI
ENGINEERING EXCELLENCE	ROBART MFG.	\$200	AIR BUS	PETER MICHEL
BEST COCKPIT INTERIOR	SCALE INT. MAGAZINE	\$200 + PILOT FIGURE	P-61	GREG HAHN
GREY EAGLE AWARD	MODEL AIRPLANE NEWS	\$200		HAL PARENTI
TOP GUNS AWARD	TOP GUN HUGGERS	\$100 + ROBART WHEELS/TIRES		MIGUEL BARASTAIN
CRITICS CHOICE	AIRTRONICS & VAN DELL JEWELERS	\$200	F7F TIGERCAT	MIKE SELBY

## FLIGHT AWARDS

BEST 2 STROKE PERFORMANCE	MOKI ENGINES	MOKI 2.10	BF-109E	JEFF FOLEY
BEST 4 STROKE PERFORMANCE	SAITO ENGINES	SAITO 150	AERONCA	CLIFF TACIE
BEST GAS PERFORMANCE	AIRCRAFT INT.	SW 5000	P-61 WIDOW	GREG HAHN
BEST MULTI PERFORMANCE	RON NORRIS	\$100	P-61 WIDOW	GREG HAHN

## HELICOPTER AWARDS

BEST COCKPIT INTERIOR	AERO HOBBIES		HELICOPTER KIT	
BEST CIVILIAN	RWK HOBBIES		HELICOPTER KIT	
BEST MILITARY	CYBER HELI		HELICOPTER KIT	
CRITICS CHOICE	SCALE HOUSE & VAN DELL JEWELER		HELICOPTER KIT	



NASA member Roy Vailincourt standing behind his Hawker Typhoon during static judging, finished 4<sup>th</sup> in Designer scale.



Static judges working on Lee Rice's Ki-61, the banner for Pacer Technology, the main sponsor.



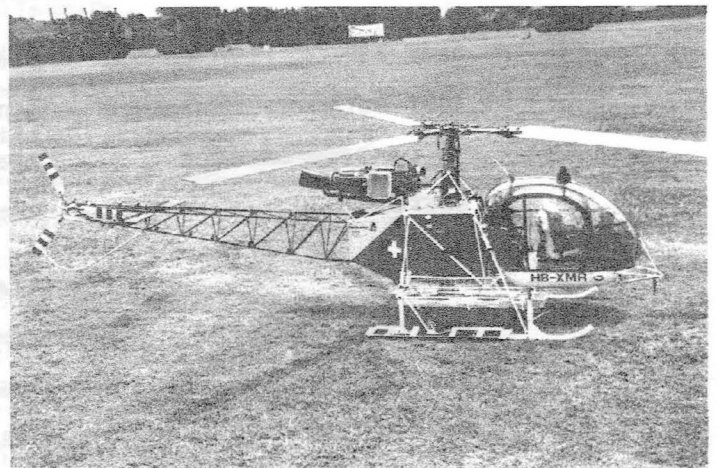
Tom and his lovely wife, Diane, watching over their F-82 during static judging.



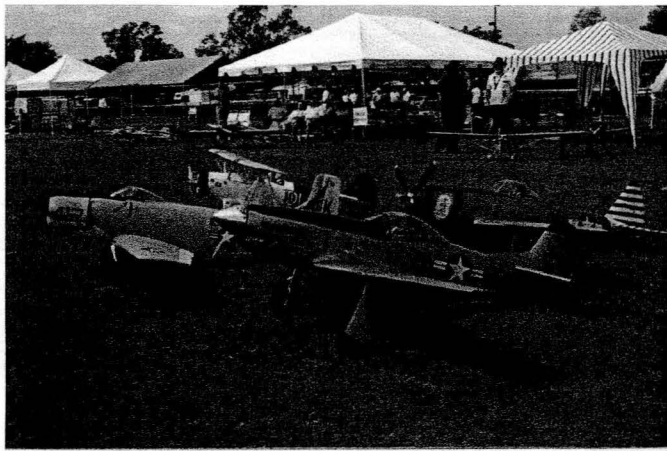
Terry Nitsch explains a point to the Craftsmanship Judge on Friday Nitsch went on to fly BVM Rafale B-01 to 1<sup>st</sup> place in Expert.



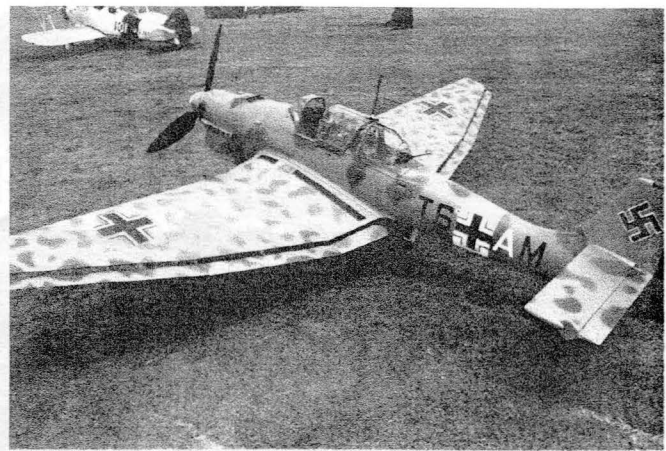
Ton Czick's F-82 Twin Mustang entered in Expert.



The winning static scale helicopter- look for this competition to expand next year.



Some of the Zirola Air Force at Top Gun this year. In the background is Nick Senior's Stearman biplane.



Ju-87 Stuka A-1 by Jim Wilkinson powered by a G-38. This beautiful model was later lost on take-off.



Past NASA President, now FAI Technical Secretary- Bob Underwood checks a frequency analyzer to see if there are any problems during the weekend.



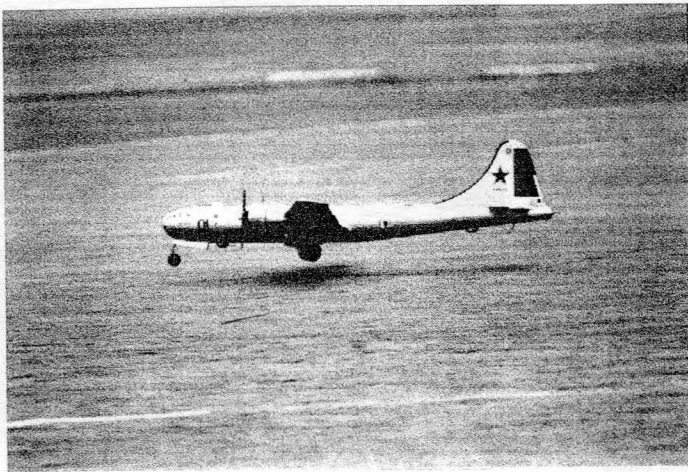
From Brazil, NASA member Eduardo Esteves' 1/3<sup>rd</sup> scale SIC Spacewalker entered in Team scale finished 7<sup>th</sup>.



Lee Rice's Ki-61 during static judging, flew in Expert.



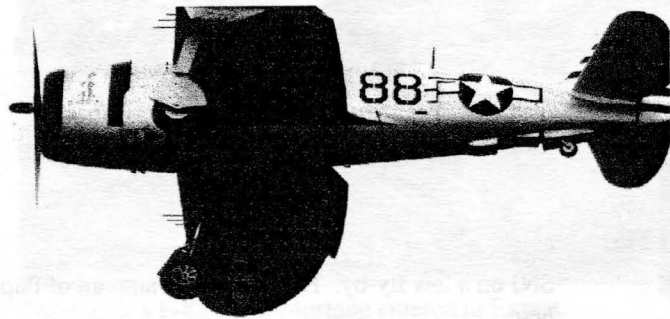
SNJ on a low fly-by. Note the small amount of flaps being us here.



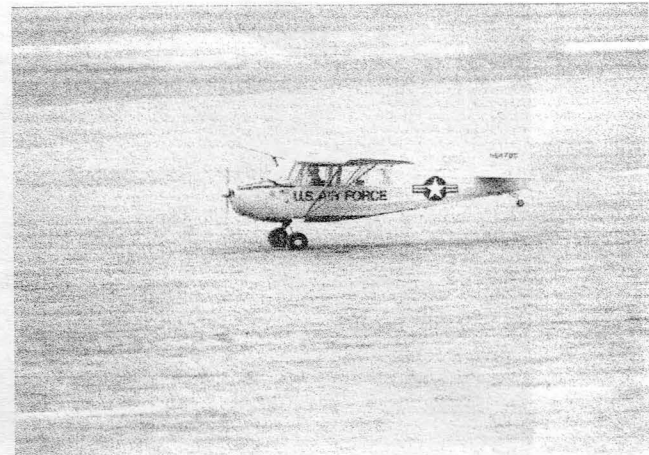
The TU-4, a B-29 knockoff built by George Maiorana and piloted by Dave Pinegar, finished 2<sup>nd</sup> in Team Scale (finally, George gets his name spelled correctly. Ed)



A close-up of the F-16 by Gustav Campana in Expert, model was from a French kit with a Belgian paint scheme from the Tiger Meet.



Note the main landing gear, tail wheel and flaps on this P-47 during a landing approach.



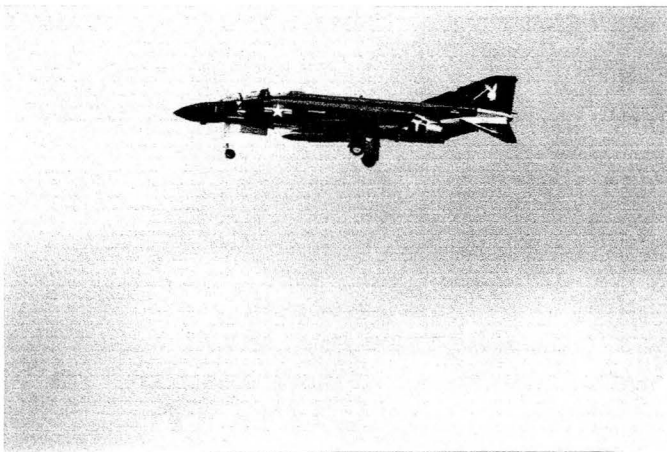
NASA member Cliff Tacie's Aeronca L-16. Cliff brought this simple model and finished 5<sup>th</sup> in a field of 29 entries.



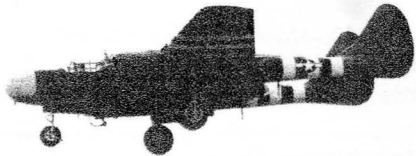
A Yellow Aircraft F/A-18 by Davie Matthews, flying in Expo centerline fuel tank come off centerline and caused stability problems and the model lost it gear on landing. It was repaired and later flew again.



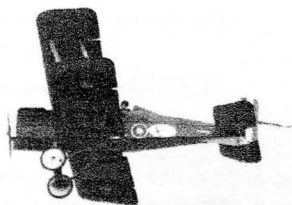
The Zlin-526 by Steffen Zolin and flown by Javier Mangudo in Team scale, finished 5<sup>th</sup> overall.



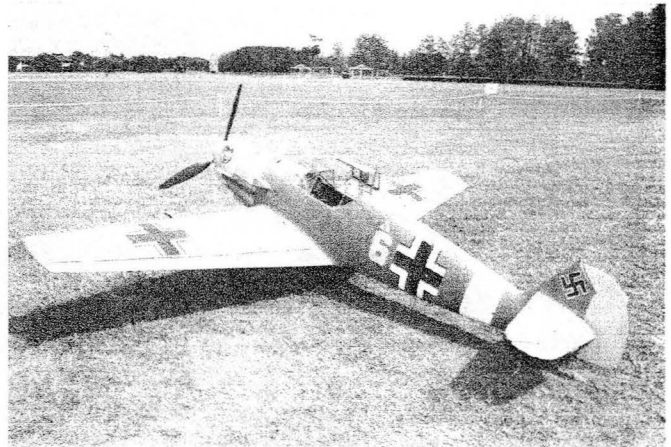
Another Team scale entry flown by 18 year old Dave Malchione Jr., the youngest competitor at Top Gun. He finished 3<sup>rd</sup> with Sam Leonard's F-4 Playboy Phantom.



Greg Hahn's P-61 Black Widow in a slow fly-by. The model was finished in D-Day invasion colors. He finished 2<sup>nd</sup> in Expert by less than 1/2 point.



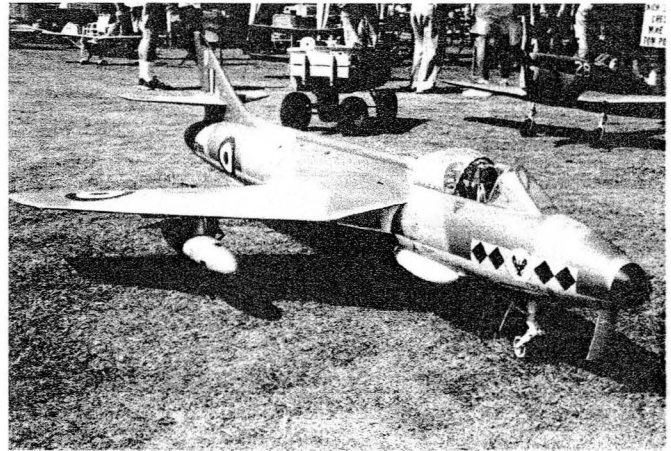
The SE-5 by Michael Gross in Expert scale.



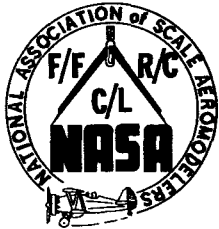
This was the fourth year at Top Gun for Jeff's 109. The model was flown with a new paint scheme.



Jeff Foley's winning Bf-109 E-3 Trop taxiing in from a flight. Note the right wheel is pushed up into the strut from the landing stress.



Dave Platt's Hawker Hunter jet fighter to be flown in Team scale This year at the Nationals with Terry Nitsch as the pilot.



**In This Issue:**

- President's Column
- NASA's On the Web
- Top Gun pix and awards
- Battle Of The Coral Sea II
- Want Ads

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