



The AMA History Project Presents: Biography of ROBERT R. RANDOLPH

Born March 10, 1923 Started modeling in 1940
AMA #5848



Transcribed by NR (04/2000); Edited by SS (2002), Reformatted by JS (01/2010)

Career:

- Flew on five U.S. F1D World Championship Teams
- Served as team manager in 1988 and in 1996; all six of these U.S. teams won the World Championship for the USA
- Set seven F1D world records
- Has held the world record in all four F1D ceiling categories
- Has concentrated on indoor events for the last 35 years
- Exceeded 40 minutes on all six official F1D flights at the 1990 World Championships; no one has ever duplicated this consistency.

Honors:

- 1984: AMA Distinguished Service Award
 - 1991: National Aeronautic Association selected Bob's Cat I world record as one of the 10 most important records of the year. The Space Shuttle Atlanta was number nine
 - 1991: Top Cat 90, National Free Flight Society indoor model of the year
 - 1998: AMA Pioneer Award
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The following was taken from a Model Aviation Hall of Fame application submitted by Mr. Robert L. Gibbs on behalf of Mr. Randolph.

*Academy of Model Aeronautics
5151 East Memorial Drive
Muncie, Indiana 47302*

Subject: Recommendation for [Model Aviation] Hall of Fame; Robert R. Randolph (AMA 5848)

Gentlemen:

I first met Bob Randolph in the early 1960s at an indoor event, which he was conducting at Bolling Air Force Base in Washington, D.C. In 1968, the USAF reassigned Lt. Col Randolph back to California where we became great friends and flying buddies. Bob has a talent for obtaining the use of great indoor flying sites that is unequaled.

It would be almost impossible to list all of the wins and honors earned by Bob during his 65 years of aero-modeling. However, some of his accomplishments are so outstanding that they alone would seem to support his selection to the Hall of Fame.

For example, Bob flew on five U.S. F1D World Championship Teams and served as Team Manager in 1988 and in 1996. All six of these U.S. teams won the World Championship for the USA.

Next, consider Bob's seven F1D world records. No one except Bob has ever held the world record in all four F1D ceiling categories. In order to hold them all at the same time, Bob had to break the Cat II record twice and the Cat I record three times. His latest record was set January 21, 1996.

Bob is not really into scale but he has designed and built two Peanut Scale Indoor Models. The first won the 1973 Nationals (Nats) and the other won at the 1977 Nats. This is another example of Bob's remarkable ability. In addition, he currently holds the AMA records for Rise-off-Ground (ROG) Cabin (204) in Cat I and Cat IV and also for HL Stick (201) in all categories.

While Bob has concentrated on indoor events for the last 35 years, he had previously been active and successful for 30 years in the outdoor Free Flight arena (refer to the enclosed extract from the NFFS 24th Annual Symposium Report, 1991).

Special Honors: In 1984, AMA awarded Bob their Distinguished Service Award. In 1991, the National Aeronautic Association selected Bob's Cat I World Record as one of the 10 most important records of the year. The Space Shuttle Atlanta was number nine.

Also in 1991, the NFFS selected Bob's Top Cat 90 as their indoor model of the year. This ship exceeded 40 minutes on all six official F1D flights at the 1990 World Championships. No one has ever duplicated this consistency.

At the age of 79, Bob continues to advance the state of the art. He retains a youthful enthusiasm for competition. He is also the leading candidate to break 60 minutes in Cat IV.

Your favorable consideration of this recommendation is sincerely requested.

*Robert L. Gibbs AMA 5405,
Moreno Valley, California*

The following is an abstract from the NFFS 1991, 24th Annual Symposium Report 10 models of the year, which was referred to in the above document.

Top Cat 90
Designed by Robert R. Randolph
By Andrew Tagliafico

Robert Randolph's Top Cat 90 is one of the most successful and consistent indoor designs. It has

been a national champion, and multiple AMA record holder. At the 1990 world championships, Top Cat 90 flew six flights of over 40 minutes. The design evolved from Bob's 1984 Boron Bomber and 1986 Top Cat. It features a variable pitch propeller, boron ribs, asymmetrical wing camber, and a small stabilizer.

Bob Randolph has always been closely associated with aviation. He worked as an armament mechanic for Curtiss Wright, an experimental mechanic for Consolidated Vultee and a research analyst for North American Aviation. In 1973, he retired as a Lieutenant Colonel after serving 30 years as pilot and procurement officer in the United States Air Force. Bob became a modeler as a boy of eight and has been very active for 60 years. Always a Free Flight enthusiast, he had a complete fleet of Zeeks and a big Westerner that won many contests in Southern California.

For the past 29 years, he has devoted his modeling efforts exclusively to indoor. He has had several dozen Nats wins and has set 22 national records.

“What I really love about indoor flying are the long majestic flights,” he said. “I also enjoy competing in indoor because the main factors are model design, building skills and flying ability. Luck is reduced to maybe a 5% consideration.”

A strong competitor, Bob was on the 1984 (Japan), 1986 (England), 1990 (Johnson City) USA, 1994 (Romania) and 1998 (Romania) Indoor Team. At the 1990 World Championships, all six of his official flights exceeded 40 minutes. Bob was team manager in 1988 and in 1996. The U.S. team won first place all six years.

“My design philosophy is quite simple,” he said. “I will try anything that might increase performance. I build more models and variations than others and test, test, test. Indoor flying provides the repeatability that allows you to test your ideas and to develop and improve your models. If you are methodical, the results are much better than wind tunnel testing. I make between 500 and 700 test flights each year and like to be well prepared for contests.”

On the subject of Bob's innovative variable pitch prop, he has this to say, “The hub is mostly Cezar Banks design. My contribution was the use of nylon adjusting screws, a one-piece driver arm and spring, and a lot of developmental testing to get the pre-load and spring tension right and get some reliability. The VP [variable pitch] prop adds between .0085 and .0114 grams, but it is worth it. It is adjustable max high pitch. I use it to reduce the number of back off turns and for altitude control. Besides these two benefits, the launch RPM is about half that of a non-VP prop.

“Unlike most others, I adjust my props so that all of their change is done during a prolonged climb phase. At the top altitude, I go to fixed low pitch. Best climb time to date is 24 minutes. At launch with very high torque, the prop is max high pitch so that only slightly in excess of cruise thrust results. This differential is essentially maintained over most of the rubber motor's decaying torque curve.”

Top Cat 90 L-1 is the low ceiling version of Robert Randolph's consistent Top Cat design. It

currently holds the indoor world record in Category I and the AMA records in FID and stick; having broken all records previously set by Top Cat 90. On May 3, 1991, it set all three records with a remarkable single flight of 32:09 minutes. An excellent construction article appeared in the September 1991 issue of Model Aviation magazine. It is required reading for all indoor enthusiasts, and Bob graciously acknowledges the sources of many of his techniques and materials.

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