



## The AMA History Project Presents: Biography of AL RABE



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Al Rabe was active in Control Line Precision Aerobatics in the 1960s and 1970s, initiating a number of design and trim innovations that have become standard features of Stunt aircraft. He was a three-time National Champion in Stunt, published a number of design articles, and produced a column for *American Aircraft Modeler*.

Al was a two-time recipient of the Walker Cup, and as a member of the first-place U.S. team, he placed second individually in the 1978 World Championships.

As a youngster, Al flew Control Line aircraft. At age 15, he learned to fly full-scale aircraft, soloing on his 16<sup>th</sup> birthday. He became a pilot for Braniff Airlines and then for other airlines after Braniff's demise. He retired in 1996 with more than 25,000 flying hours and 7,000 hours as an instructor.

This background encouraged him to compete with semi-scale stunt airplanes that required aerodynamic theory and knowledge to make these less than optimum configurations fly competitively. In the 1968 Nats, Al competed with a semi-scaled *Mustang* that had a removable wing with scale-like dihedral. The aircraft featured a device that permitted adjustment of the pushrod to trim the elevator position.

Finally, the airplane had a removable rudder that worked in conjunction with the elevators to compensate for "gyroscopic precession." These innovative features caused much controversy, but they worked and Al qualified for the 10-person fly-off in his first appearance at the Nats.

Al was determined to win Stunt with a semi-scale aircraft – preferably a World War II warbird – to prove that this type of aircraft could be competitive. He spent much time practicing and trying to make this type of aircraft fly, often getting in more than 100 flights a week. His first article on the *Mustang* came out in the June 1969 issue of *American Aircraft Modeler*.

In the 1969 Nats, Al flew the *Bearcat* with a fixed wing and an ST-46 engine. This model had a large fuselage, small dihedral wing, and what became known as the Rabe rudder. Two new innovations included a sliding block adjustable lead-out fixture and swapping the leadouts, making the one the "up" leadout by reversing the bell crank location. Despite the heated debates

over the innovations, Al finished in second place – a mere four points behind the winner!

In 1970, *American Aircraft Modeler* published the *Bearcat* article, and then named *Bearcat II*, featuring even more changes to the aircraft. At that summer's Nats in Glenview, Illinois, he flew with the *Bearcat III* that included a profiled airfoil, a removable fuel tank that could be accessed through the removable wing/fuselage opening, a swept-forward TE on the wing, and a molded-balsa fuselage.

The following year Al showed up at the Nats with a huge, removable-wing Hawker *Sea Fury* powered by an ST-60. With a 60-inch wingspan, the model had a polyhedral wing with flaps in four sections, an asymmetrical airfoil, and shock-absorbing landing gear made from wire and brass tubing. He did not fare so well at the contest, but the aircraft was impressive with its large size and deep, hollow sound.

Al returned to the 1972 Nats with *Sea Fury II*, boasting a number of changes to the original configuration, and came away with first place in the Open division of Control Line Precision Aerobatics. It was only his fifth year in the competition.

The 1973 Nats were held in Oshkosh, Wisconsin, and Al again won the Open Stunt Championships and was awarded the Walker Cup flying against the titans of Control Line Stunt, including Bob Gieseke and Bill Werwage. Al took the battered trophy home, refinishing it, and built a wooden shipping case for the award that is still in use today.

Al was one of the first to use ear protection when flying the large, loud Stunt airplanes, and he urged others to do so as well.

In 1974, Al returned to the lighter-weight aircraft, flying his *Mustang V*. His newest innovations included positive incidence in the stabilizer, a canted engine that allowed an internal muffler, a canted fuel tank, and reverse asymmetry in the wing. He placed third at the Lake Charles, Louisiana Nats. He was also an unsuccessful candidate for AMA president that year.

Al placed fifth in the 1975 Nats, third in the 1976 Nats, and again won the Walker Cup in the 1977 Nats. He placed second at the World Championships Team Trials and finally had a place on the team!

Al built a new *Mustang* for the World Championships, but crashed it and had to take his older *Mustang*. He finished in second place behind teammate Bob Hunt, and the team, including Bob Gieseke, placed first in Control Line Precision Aerobatics!

Al dropped out of modeling in 1980 when Braniff began to have financial difficulties, but returned in 1999, competing in the Vintage Stunt Championships. He still flies regularly, attends

a number of Vintage Stunt competitions, and has produced a number of new aircraft. He has produced a number of videos on design, construction, painting, and finishing Control Line Stunt aircraft.

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