



The AMA History Project Presents: Autobiography of BILL EVANS

September 29, 1931 – December 17, 2017
Started modeling in 1936 AMA #Simitar



Written and Submitted by BE (08/1997); Transcribed and Edited by SS (07/2002), Updated by JS (12/2005, 09/2008, 02/2018)

Career:

- Joined the Northern Indiana Gas Model Association
- Worked for a hobby shop owned by Bob Roberts, manufacturer of the line of Rite-Pitch propellers
- Joined the Air Force in 1952 and worked as control tower operator
- Designed and built the first Lil' Esquire for Midwest Products in 1955
- Designed 75 model airplanes in the *Simitar* series; 30 were published as construction articles
- Designed his first sailplane, the Silent Squire, in 1975
- Published articles in *Model Aviation*, *Model Airplane News*, *Radio Control Modeler*, *Flying Models*, *Model Builder* and *Radio Control Sportsman* magazines
- Started a foam cutting and kit business in 1975 called Soaring Research; the name later changed to Bill Evans Aircraft
- Designed, built and flew the *Saracen*, his first flying wing, in 1975

Aircraft and flying have been a key issue with Bill since a very early age. It began with watching aircraft at the local airport in Gary, Indiana. His first flying effort was folding and tossing paper gliders into the air.

Bill's first building project was a 10-cent Comet kit in 1937. This was followed by many more of the same. In 1943, Bill built his first powered Free Flight model, a Sal Taibi *Brooklyn Dodger* with a Brown, Jr. engine up front. Next were many more Free Flights.

His first Control Line was a Stanzel *Shark G-Line* powered by a Rocket .46. Then came a Walker *Fireball* with a Forster .29. Bill joined the Northern Indiana Gas Model Association and the AMA. He worked in a hobby shop owned by Bob Roberts who manufactured the line of the Rite-Pitch propellers.

Many more U-Controls followed – stunt ships like the Demeco *Bipe* and *Speed Wagons* with McCoy .29, .49 and .60s. Bill's dad owned the Evans and Son Moving and Storage Company in Gary, Indiana, and soon the warehouse was filled with model aircraft.

Radio Controlled (RC) flying for Bill began in 1949 with Vern McNab's Citizen Ship escapement radios. The ships were Free Flight with rudder control and flying was done at Tony Grish's farm in Saint John, Indiana where the Tornado propellers were manufactured.

Bill received much help and encouragement from Bill Braatz, a great modeler who flew *P-38s* in the Pacific during World War II. In 1952, Bill joined the Air Force and served as a control tower operator in several Air Force towers including Hickman Air Force Base (AFB) and Johnston AFB. While in the Air Force, Bill continued his modeling efforts, mostly U-Control.

Upon his return to Indiana from the Air Force in 1955 he moved deeper into RC and designed and built the first *Lil' Esquire* for Midwest Products.

In 1959, Bill, his wife Joan and sons Keith and Billy moved to North Hollywood, California.

His RC flying went into full swing at the Sepulveda Basin flying field in Van Nuys. It was still a rudder-only time; his first design in California was the Hightailer using a McNab radio with a Babcock escapement. Next came possibly the first low wing RC, the Marker. Then Bill designed, built, and flew the first *RC P-51 Mustang*. It was a great thrill to see it lift the tail, go up of the runway, clear the cornfield and rip through the air with the Torpedo Green Head .09 roaring. Next came the first *ME 109* to fly RC.

With the advent of simultaneous, proportional, trimmable control came the break that was needed. Bill's first new era radio was a Kraft.

Bill tuned to slope soaring and his first sailplane design was the *Silent Squire* published in *Radio Control Modeler* magazine in February 1975 and soon after kitted by Midwest.

Next came the *Slope Squire* followed by more than 20 original designs of which more than 10 were published construction articles in *Model Aviation*, *Model Airplane News*, *Radio Control Modeler*, *Flying Models*, *Model Builder* and *RC Sportsman* magazines.

With the advent of the *Silent Squire* construction article in *Radio Control Modeler* in 1975, Bill began a foam cutting and kit business, Soaring Research, which has become Bill Evans Aircraft and still endures today. Late in 1975, comments by old time modeler friend Bill Braatz of Indiana about tailless aircraft gave rise to start Bill thinking about developing such aircraft.

He did research about the Northrop ships and others. Bill decided that, number one, the airfoil would be semi-symmetrical with some reflex. Number two, the C.G. needed to be well forward of the normal 25 to 25% as on conventional planes. Number three, the most efficient, and easy to install control system would be elevons. Finally, number four, vertical stability would best be affected by using a fix vertical fin.

Next Bill worked on and developed the Evans' Simitar Airfoil (ESA). The foam wings were hand-cut and quickly Bill's first flying wing, the *Saracen*, took to the sky off Snake Hill in Malibu Canyon, close to the Pacific Ocean. The slope soaring ability of the *Saracen* was greater than Bill had imagined. Glide aspect of *Saracen* was superior to all conventional gliders he had flown. It flew in lighter wings, thermalled, flew fast and slower, was aerobatic and turned tighter than any conventional turn. To launch at 9 a.m. and land at noon was new to all in 1975.

Several *Saracens* were soon built ranging in span from 49 to 100 inches. The *Saracen* construction article was published in the April 1976 issue of *Radio Control Modeler* magazine.

The *Saracen* was the first in the *Simitar* line of more than 75 designed in the series; more than 30 have been published construction articles.

Early in 1976, Bill concluded that since the *Saracen* flew so well as an un-powered glider, then it would be really great with an engine. So a 48-inch *Saracen* glider was modified to fly with a Cox 049 engine. It was all that was hoped for; performance was outstanding. Named the *Simitar* it was published in the December 1976 issue of *Radio Control Modeler* magazine. The name *Simitar*, which has been applied to all of Bill's flying wing designs as series, came as follows.

Bill reasoned that since the *Saracens* were the infidels that fought the crusaders in the Holy Wars and the power of the *Saracen* was his sword, called a *Simitar*, it would be natural that a powered *Saracen* be called a *Simitar*. Therefore, all that followed would be of the *Simitar* Series.

The *Simitar* (049) was immediately followed by a larger version using a .15 and named the *Simitar* 15. It was published in the December 1976 issue of *Model Aviation* magazine.

In 1977 there was a *Simitar* .35 followed by the *Simitar* 540 (500-square-inch powered by a .40). The 540 was published in the October 1978 issue of *Radio Control Modeler*.

The success of these first four *Simitars* and the acceptance and positive reaction from RC pilots throughout the world lead to the no-holds-barred development of more than 75 designs. From the 24-inch span, a .020-powered Bugs Ear, to the awesome Pole Star Twin with a span of 100 inches and powered by two Super Tiger 3000s, they have all enjoyed the *Simitar* advantage. More than 30 have been published as construction articles.

(signed) Bill Evans
August 1997

The following is a list of publications and designs by Bill Evans.

Non-Construction articles

RCM = Radio Control Modeler

MA = Model Aviation

| Article Name | Magazine | Date Published | Description |
|------------------------------------|-----------------|-----------------------|--|
| <i>Easy Packer</i> | <i>RCM</i> | April 1979 | Plug in wing variation on the <i>Saracen</i> glider. |
| <i>Mystique of the Flying Wing</i> | <i>MA</i> | March 1985 | An article that explains the conception of the <i>Simitar</i> , its development and its attraction to modelers; photos included. |

| | | | |
|--|------------|----------------------------------|---|
| <i>It Really Works</i> | <i>MA</i> | October 1987 | A reflection of Bill's 15 years of dedication to the tailless design and an explanation of those who ridicule experimenters. |
| <i>A Step into Aviation History</i> | <i>RCM</i> | January 1988 | A commentary on experimentation in modeling featuring a tailless <i>Simitar CAP-21</i> . |
| <i>Elevons Another Way</i> | <i>RCM</i> | August 1975 | His super-simple effective sliding servo tray for mixing elevator and aileron functions. |
| <i>Practical Slope Flying</i> | <i>RCM</i> | August 1976 | A guide for beginner slope pilots. |
| <i>The First 12,000 Foot Sierra Slope Flight</i> | <i>RCM</i> | June 1977 | Slope flying in the Sierras with his friends. |
| <i>Flight Assurance Techniques</i> | <i>RCM</i> | August 1978 | Pre-flight check plans. |
| <i>Properties of Foam</i> | <i>MA</i> | January, February and March 1978 | A definitive article on foam – its uses, characteristics and cutting. |
| <i>Man Alone Cutter</i> | <i>MA</i> | January 1979 | Incredibly simple, inexpensive and precise one-man foam cutting machine. |
| <i>Firewall Finesse</i> | <i>MA</i> | June 1981 | Aligning and installing firewalls into fiberglass fuses the easy way. |
| <i>Light Weight Foam Wings</i> | <i>MA</i> | December 1984 | The myth of foam wing weight is tested. |
| <i>The Wing Connection</i> | <i>RCM</i> | April 1985 | Wing mounting technique. |
| <i>Joining Foam Wings</i> | <i>RCM</i> | November 1985 | Fiberglassing wing centers. |
| <i>Workshop Organizer</i> | <i>RCM</i> | September 1986 | A simple hold-everything rack on wheels that allows the builder to save steps and find his tools and supplies while building. |
| <i>Night Flying</i> | <i>MA</i> | April 1981 | Flying and pylon racing at night. |

Conventional Aircraft Designs as of 1996

| Plane | Span | Power | Date Published | Magazine/Manufacturer |
|---------------------|-------------|-------------------------|-----------------------|------------------------------|
| <i>Crosswind</i> | 72" | .15 | August 1981 | <i>Model Aviation</i> |
| <i>Dasher</i> | 50" | .40 | October 1978 | <i>Model Aviation</i> |
| <i>Dirtstripper</i> | 50" | .40 | November 1980 | <i>Model Aviation</i> |
| <i>Lil Esquire</i> | 48" | .049 | | Midwest kit |
| <i>Hightailer</i> | 50" | .09 (rudder only single | | |

| | | | | |
|---------------------------|------|---|----------------|--|
| | | channel – ROSC) | | |
| <i>Hotrock</i> | 50" | .40 | November 1977 | <i>Model Aviation</i> |
| <i>Hole Card</i> | 45" | .15 | September 1976 | <i>RC Sportsman</i> |
| <i>Marker</i> | 50" | .09 (ROSC) | | |
| <i>Maximum</i> | 72" | Low wing glider, rudder and elevator | March 1983 | <i>Radio Control Modeler</i> |
| <i>ME-109</i> | 50" | First RC ME-109; rudder only | | |
| <i>Model T</i> | 60" | .40 (high wing, tail dragger) | | |
| <i>P-51</i> | 50" | .09 (first RC Mustang; rudder only) | | |
| <i>Seville</i> | 72" | Low wing glider | May 1977 | <i>Model Aviation</i> |
| <i>Silent Squire</i> | 72" | High wing glider | February 1975 | <i>Radio Control Modeler and Midwest kit</i> |
| <i>Slope Squire</i> | 50" | Low wing glider | January 1979 | <i>RC Sportsman</i> |
| <i>Windduster</i> | 60" | High wing glider | February 1984 | <i>Flying Models</i> |
| <i>Winterhawk</i> | 100" | Thermal glider | May 1978 | <i>Model Aviation</i> |
| <i>Airfoil Test #1</i> | 50" | Flat bottom mod. airfoil test | | |
| <i>Airfoil Test #2</i> | 50" | Semi-sem. airfoil test | | |
| <i>Elevator Roll test</i> | 50" | Test to roll with aileron type elevator | | |

The *Simitar* Advantage

The following is a list of advantages inherent to all *Simitars*:

There are several flight characteristics in the *Simitar* series that make it much more superior in flight performance to a conventional aircraft with the aft mounted horizontal stab!

First, a *Simitar* will not stall! As you reduce power and pull back on the elevator, when it reaches the point where a stab ship would stall, the *Simitar* will merely drop its nose and continue to fly straight ahead with the nose down a bit. So, with the *Simitar*, the tail will never drop, tip, stall, and crash. How many times have we all either tried to force a stab ship into the air or stretch the glide and have it tip, stall, and crash! Never will it happen with a *Simitar*.

Second, a *Simitar* has a wider speed range. It will fly slower and faster than a conventional ship. Given the same weight, same power, same wing area; the *Simitar*, since it will not stall, will fly slower and since it has less drag, will fly faster!

Next, a *Simitar* is aerodynamically stable! Hands off at quarter throttle, tap a bit of left aileron gets the right wing tip up a bit; let go and a *Simitar* will do left 360s until you say quit! Anyone of any age who cap tap left stick and right stick can fly down on the stick since it will not stall pitch control, it is not required for slow flying. Take-off and landing for first time flyers are no problem!

Aerobatics? A *Simitar* will do all maneuvers a conventional pattern ship will do, except better and more easily. Plus, it will tumble for and aft as well as tip-to-tip. And it makes tight turns!

Just think about it – the fastest ship in the world, the *SR-71*, is a flying wing! The fastest passenger ship in the world, the *Concorde*, is a flying wing! The space shuttle, which has the world's distance record, goes into space and re-enters at 18,000 mph over the Indian Ocean to land at Edwards, is a flying wing. None of these ships have aft mounted horizontal stabs. Ever wonder why? Performance!

Paul Harvey recently made the statement: "Before too much longer, no aircraft will be built with horizontal tails."

***Simitar* Designs as of 1996**

- *Advantage #1*: 64" wingspan, .40 power, round cowl, tri gear; to be published in 1998
- *Advantage #2*: 64" wingspan, .40 glow or .15 geared elect, tail dragger, cowl cheeks - to be published in 1998
- *Alien #1*: 50" wingspan, .40 engine, space ship with single wing
- *Alien #2*: 50" wingspan, .40 engine, biplane space ship
- *Alien #3*: 50" wingspan, .40, anhedral, space ship
- *Alien #4*: 50" wingspan, .40, swept forward wing, space ship
- *Astron*: .40", .15 engine, X-Wing star fighter; published April 1979 in *Model Aviation*
- *Astron 40*: 50" wingspan, .40 engine, X-Wing star fighter; published November 1979 in *Radio Control Modeler*
- *Astron 3000*: 85" wingspan, 16 square feet, Super Tiger 300, X-Wing star fighter
- *Bugs Ear*: 24" wingspan, .020 power; published March 1982 in *Model Airplane News*
- *Bottom Line*: 64" wingspan, .60 engine, non-functioning canard
- *Bullet*: 40" wingspan, .40 engine, racing version of the *Slow Motion*
- *Boogie Board*: 20" wingspan, .40 engine, swept forward wing
- *Charger*: 64" wingspan, .05 and .15 electric version of the *Slow Motion*; published August 1990 in *Model Aviation*
- *Classic*: 64" wingspan. .40-.60 power, mixture of early racers and fighters; to be published in 1998
- *Centron*: 60" glider, futuristic, space looking; published in June 1979 in *RC Sportsman*
- *Desperado 40*: 50" wingspan, .40 engine, space looks, anhedral wing; published in April 1984 in *Model Aviation*
- *Desperado 60*: 60" wingspan, .60 engine, space looking, anhedral wing; published March 1988 in *Radio Control Modeler*

- *Desperado 3000*: 85" wingspan, Super Tiger 3000, space looking, anhedral wing; published in March 1988 in *Radio Control Modeler*
- *First-in-Line*: 40" wingspan, .40 engine, two wings in line one behind the other in line, the first in line either full-size or model ever flown; to be published in 1998
- *Folker T-D-7*: 45" wingspan, .40 engine, scale *Folker D-7* with *Simitar* airfoil, no horizontal aft mount stab
- *Future Shock*: 60" wingspan, .40 flow or 25 elect, twin fins; published October 1994 in *Model Airplane News*
- *Future Sixty*: 64" wingspan, .60 engine, long, slim vertical fin, anhedral wing; to be published in 1998 by *Flying Models*
- *Hotshot*: 48" wingspan, .15 engine, styled as *Slow Motion*
- *Leading Edge*: 60" wingspan, .40 power, twin fins mounted on wing, jet look; published in January 1990 in *Radio Control Modeler*
- *NT-2T*: 64" wingspan, .40 power, *Do Dah*-like fuse, this one has no tail to tell, neither horizontal nor vertical
- *Pole Star*: 60" wingspan, .40-.60 power, jet looking; published in March 1991 in *Radio Control Modeler*
- *Polestar FBI*: 70", 80" and 96"- span versions of the *Pole Star* called by many the FBI (flies by itself)
- *Polestar Twin 45*: 64" wingspan, two .45 K&B Sportsters, twin fuse a la F-82
- *Polestar Twin 6000*: 100" wingspan, two Super Tiger 3000s, twin fuselage
- *Polestar X EPO*: 50" wingspan, .60 power, severe wing taper, expert pilots only
- *Saracen-Libra*: 72" wingspan glider, first of all the *Simitar* series
- *Saracen*: 72" wingspan glider, updated airfoil from the *Libra*; published in April 1976 in *Radio Control Modeler*
- *Lil Saracen*: 48" wingspan, glider, small version for hot slope flying
- *Saracen 120*: 120" wingspan, glider, largest *Saracen*
- *Shooter 40*: 50" wingspan, .40 power, sleek jet look; published in July 1991 in *Model Airplane News*
- *Shooter 60*: 60" wingspan, .60 power, larger version of the *Shooter*
- *Skywalker A/2*: 45" wingspan, .049 power, jet looking
- *Skywalker 40*: 50" wingspan, .40 power
- *Skywalker 60*: 60" wingspan, .60 power, all *Skywalkers* were published in a triple construction article in the March 1985 issue of *Radio Control Modeler*
- *Sierra Trainer*: 60" wingspan, .40 engine, highwing, tail dragger; published in the December 1986 issue of *Model Builder*
- *Starshot*: 60" wingspan, .40 engine, severe forward sweep wing
- *Stroker*: 60" wingspan, .40 four-stroke engine, sport looking, low wing
- *Simitar*: 48" wingspan, .049 power, the first *Simitar*; published in the December 1976 issue of *Radio Control Modeler*
- *Simitar 15*: 60" wingspan, .15 engine; published in December 1976 in *Model Aviation*
- *Simitar 35*: 50" wingspan, .35 engine, jet looking, tri gear
- *Simitar 540*: 50" wingspan, .40 engine, jet looking, very popular; published in October 1978 in *Radio Control Modeler*

- *Simitar Deuce*: 60" wingspan, .15-.25 power, hand-launch; published in August 1981 in *Model Airplane News*
- *Slow Motion*: 60" wingspan, .15-.40 power, sporty low wing tail dragger; published in January 1987 in *Model Aviation*
- *Senior Slow Motion*: 64" wingspan, .40-60 engine; published in October 1993 issue of *Model Aviation*
- *Slow Motion 09*: 48" wingspan, .09-.15 engine; published August 1997 in *Model Aviation*
- *Simitar Trainer*: 60" wingspan, .25 engine, pitch control on wing and yaw control on rudder
- *Simitar Q*: 50" wingspan, .40 engine, *Simitar* for quickie racing
- *Seamitar*: 60" wingspan, 7.5 ducted fan, twin fins, possibly the first ducted fan to fly off water
- *Simitar 61: P* – 60" wingspan, .60-power version of the *Simitar 540*, first *Simitar* with retracts, published in *Model Aviation* in October 1982
- *Simitar Sport*: 60" wingspan, .40 power
- *Simitar 21000*: 100" wingspan, quarter scale *Simitar* with lines of the *Simitar 540*; published in 1982 in *Model Airplane News* magazine's giant steps
- *T-CAP-21*: 72" wingspan, 60 power, scale CAP-21 with *Simitar* airfoil with no horizontal stab
- *Texas Time*: 50" wingspan, .40 power, jet like and fast
- *Top Gun 40*: 45" wingspan, .40 power, futuristic look, anhedral wing
- *Top Gun 60*: 40" wingspan, .60 power, futuristic look, anhedral wing
- *Tracer 40*: 50" pattern ship; published August 1986 in *Radio Control Modeler*
- *Tracer 60*: 60" wingspan, .60 power pattern ship; published in August 1986 in *Radio Control Modeler*
- *Tracer 1/4-Scale*: 85" wingspan, S.T. 3000 power, pattern ship
- *Tradition*: 64" wingspan, .40 power, stretched fuse, version of the slow motion
- *Twin 09*: 60" wingspan, twin engine .09
- *Twin 049*: 48" wingspan, twin .049 engines
- *Twin XIX*: 62" wingspan, twin .19 engines; published February 1982 in *Model Aviation*
- *Twiceguy*: 60" wingspan, .40-.60 power, biplane version of *Wiseguy*
- *Upchuck*: 50" wingspan, .40 power, combat ship
- *Vader Down Under*: 60" wingspan, .40 power, vertical fins mounted on aft bottom of fuselage; to be published in 1998
- *Wiseguy*: 60" wingspan, .40 engine, jet looking low wing; published in March 1996 in *Radio Control Modeler*
- *Wiseguy 3000*: 85" wingspan, 1/4-scale version of the *Wiseguy*
- *Zipity Do Dah*: 64" wingspan, .40 engine, all out fun ship; published in February 1995 in *Radio Control Modeler*
- *Zipity Do Dah 3000*: 85" wingspan, 1/4-scale version of the *Do Dah*

A letter from his friend Phil Greenberg, who sponsored Bill Evans for the Model Aviation Hall of Fame.

Dear Friend and Modeler,

Now is the time to honor Bill Evans by electing him to the [Model Aviation] Hall of Fame.

The reasons for this are numerous and compelling.

Bill started his modeling in the 1940s in speed and stunt U-control as well as Free Flight competition. As radio control equipment became available, he naturally gravitated to Radio Control. He continued his designing for Midwest in the form of the Esquire family.

The most notable of Bill's achievements came when he designed and perfected the airfoil used in his SIMITAR series. This is a reflex median line airfoil with a zero moment coefficient, allowing removal of the horizontal stabilizer. The result is a totally modern aircraft, with outstanding flight characteristics. For the 25 or so variations of the basic configuration, all have flown successfully.

He designed the sliding tray mechanical mixer for a simplified tailless control system. He developed and still markets a double-sided tape for attaching balsa skins to foam wing cores. He developed and still markets an iron-on hinge for control surfaces.

The *SIMITAR* configuration has been utilized in over 105 designs. In addition, 25 conventional designs were created. Of these, 80 or more construction articles have been published in the model aircraft magazines (*MA*, *MAN*, *Flying Models*, *Model Builder* and *R/C Sportsman*). The response to these construction articles has been overwhelming. The magazines have sold over ten thousand of sets of plans. Bill's company, "Bill Evans Aircraft" has sold thousands of kits, as well as thousands of parts such as wing cores, tapes, and hinges. Wing cores are cut for many other R/C designs. For many years, the *Simitar* design has been rated as the Number One plan choice of RCM and *Model Aviation*'s readers – a tribute to the interest and excitement Evans always inspired.

The uniqueness and popularity of these designs is verified by the frequency with which the various modeling magazines publish them. The magazines have also published more than 70 of Bill's articles on the various aspects of modeling in addition to building and flying of R/C aircraft.

The election of Bill Evans into the [Model Aviation] Hall of Fame has been endorsed by some of the most prominent modelers of our time, including other Hall of Fame members. Some of these are Bill Winter, Frank Garcher, Dick Sarpolus, Gus Morphis and Gordon Stahl.

While editor of *Model Aviation* magazine, Bill Winter requested an endurance version of the *Simitar* design from Bill Evans. The two collaborated on the new design and it was published under both names. Bill Winter built this airplane for his own flying pleasure and enjoyment. Where in the world can you get a better approval rating, than to have Bill Winter build one of your designs?? Bill Winter has probably designed more models than any other person in the hobby has. So he certainly had sufficient choices, but he built the Bill Evans *Slo-Motion* design

anyway. He also built and flew the Desperado and Senior Tradition Evans *Simitar* designs. Bill Winter writes... “and have enjoyed greatly his innovative variations in configurations.”

All of the endorsements of Bill Evans’ candidacy have been as positive and powerful as the Bill Winter support. It is truly the time to elect Bill Evans to the [Model Aviation] Hall of Fame. He is most deserving of this honor.



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