

# AVIATION

The Pilot's Buying Guide to Aircraft & Services

# Digest

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*“Mark my word: A combination airplane and motorcar is coming. You may smile. But it will come...”*

—1940, HENRY FORD, Chairman, Ford Motor Company

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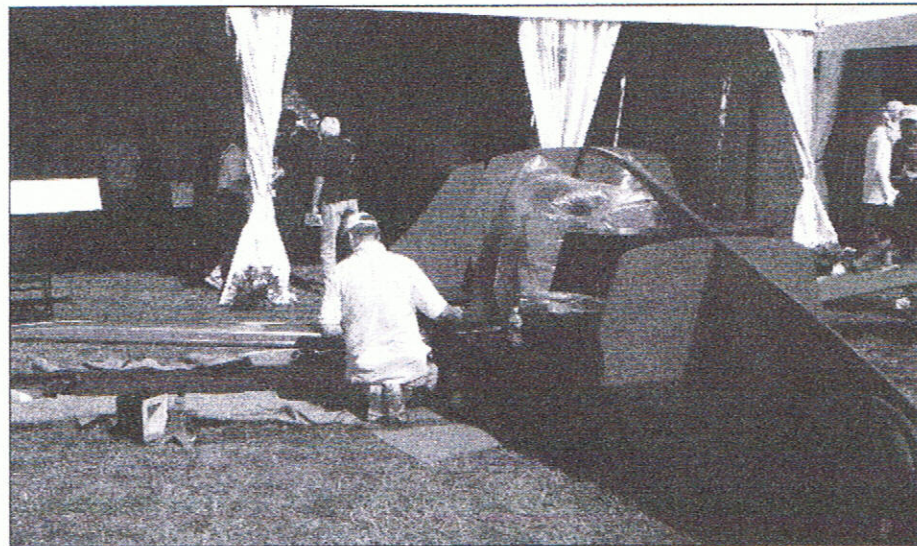
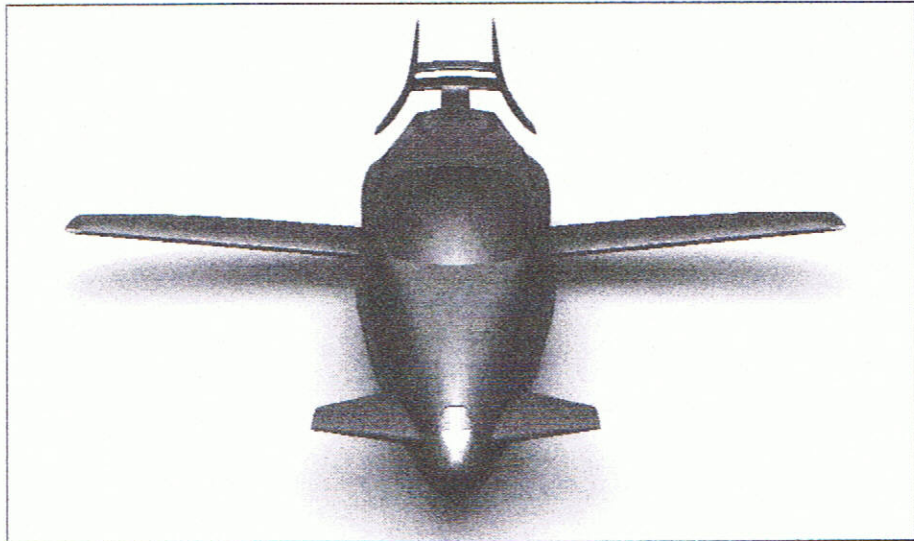
## THE SWITCHBLADE BY SAMSON MOTORWORKS

by Harry Kraemer

In the mid 1960s my father gave me a book on cars and in this book I saw a flying car that Ford was to develop – the Volante (this book is now the center piece of my collection.) The space race was at its peak, the United States was about to put a man on the moon. TV shows like The Jetsons, Star Trek and Lost In Space were on the air. And as a young kid, I thought we would soon have a flying car in our driveway. At that time I became fascinated with flying cars. Over the years I have collected everything I could find related to flying cars (everything I could find and afford.) I have books, models, research papers, CAD drawings from failed companies, etc. I have an entire room full of flying car memorabilia (an interest and collection that has grown for over 40 years).

Some consider me a flying car historian rather than simply an enthusiast; however it may be I cannot wait for a mass produced, practical flying car/motorcycle. One vehicle that is truly a door-to-door travel machine. I follow the progress for all of the flying cars currently on the drawing boards (for more information see [www.roadable-times.com](http://www.roadable-times.com)) and one that I see as having a lot of potential is the Switchblade (Designed by Mr. Sam Bousfield) by Samson Motorworks. The Switchblade is a 3-wheeled fully enclosed flying motorcycle. It is a sleek looking machine that looks like it is moving just sitting still. Being a long time motorcycle rider (I own several antique motorcycles and 3-wheeled vehicles) as well as a pilot this really catches my attention. Combined with the trend of “going green” and the consumer looking to spend wisely I have noticed an increase in the number of 3-wheeled motorcycles/cars being produced and sold. Such vehicles are usually very environmentally friendly and economical to operate. So for the prudent pilot, the Switchblade could be the perfect solution.

I recently had the chance to conduct an interview with Mr. Sam Bousfield,



Top: Rendering from Samson Motor Works

Bottom: A Samson Motor Works Employee assembles the engineering prototype at Oshkosh 2009. Photo: Dave Demerjian, Wired.com

President of Samson Motorworks (<http://www.samsonmotorworks.com/>). The company is currently working on 3 vehicles: the Switchblade, Hybrid AeroBike, and the AeroBike. The company refers to the vehicles as Multi Mode Vehicles (MMV). A MMV is the SUV for the aviator, a true off-road vehicle. Plans are for the Switchblade to be the first available. The Hybrid AeroBike and the AeroBike are

non-flying vehicles. In Addition to the MMVs Mr. Bousfield is also working on a record breaking racing plane design. The Switchblade has evolved over the years from the SkyBike Flying Motorcycle which had a telescoping wing design to the Switchblade which has a scissor wing design. The wings on the Switchblade move forward like scissors to store within the belly on the vehicle for ground use. Mr. Bousfield told me that



they are still refining the Switchblade and will release new images when they have settled on the final design. The new scissor wing design solved many issues that may have slowed down development. And in addition with this new wing design they are able to increase the wing-span and do away with the canard. It also has reduced the stall speed. The company has chosen DAR Corp (<http://www.darcorp.com/>) as the lead engineer and the companies are working together to refine the final design. DAR Corp has worked on other successful aircraft designs such as the Piaggio Avanti and the Milner AirCar (another flying car).

The Switchblade will be available in kit form and the company plans to have the kit available before the end of 2011. A completed Switchblade is estimated to cost around \$80,000.00 including the engine and avionics. With side-by-side seating with room for golf clubs, the Switchblade is the ultimate getaway vehicle. And with a cruise speed of 150 MPH (with a 150 HP engine) and over 200 MPH with a 230 HP (the Switchblade is being designed to accept a variety of powerplants) engine the Switchblade competes with the factory produced high-performance singles that sell for over a half-a-million dollars. The company estimates that it will get 55 mpg on the ground and 22 mpg in the air using automotive gasoline. Range is estimated to be 880 miles on the ground and 340 in the air. The Switchblade will also be equipped with heating and air conditioning to keep you comfortable on the ground and in the air.

To assist builders and to facilitate training the company plans to set up Assembly Assistance Centers and Switchblade MMV Learning Centers throughout the country. The centers would most likely be part of a 141 school and Mr. Bousfield has a business plan to attract and retain career instructors to the program. And in an effort to reduce the build time and ensure proper assembly the Assembly Assistance Centers will be available to builders. I think the Assembly Assistance Centers and the Switchblade Learning Centers will be vital to the success of the Switchblade. Too many manufactures do not have adequate support or proper training in

place prior to their product launch and the consumer is left to learn on their own (usually by costly mistakes).

I see endless marketing possibilities for the Switchblade. For the pilot that also rides motorcycles this is the perfect vehicle.

Imagine the cost savings. For one you will not need to rent a hangar at the local airport (T-hangar rent ranges from \$300 per month to as high as \$700 per month depending on your location). No more car rentals once you arrive at your destination. In some

### Switchblade Equipment List:

- Digital instrument panel that changes automatically from ground vehicle to Flight instruments automatically
- Fully adjustable plush leather seats for two people plus room for 50 pounds of baggage
- Emissions friendly engine options with dual ignition and fuel injection systems
- Safety Glass front windshield and Lexan side windows
- Heating and air-conditioning
- Stereo mp3 player with satellite radio capability
- Comfortable safety harness
- Front and Rear disc brakes with anti-lock braking (ABS)
- GPS Moving Map with Navigation Capacity Options
- Dual Ground and Aircraft Lighting System
- Aviation COMM and Radio options (not included)
- Aviation ELT (Emergency location transmitter)
- Ballistic Parachute Recovery System (BPRS)

### Preliminary Specifications:

- Estimated GTOW . . . . . 1500 LB (Gross Take-off Weight)
- LENGTH . . . . . 15'6"
- WIDTH . . . . . 5'6"
- HEIGHT . . . . . 5'1"
- SEATS . . . . . 2 (side by side)
- SPEED . . . . . 90+ mph on wheels – 134 mph cruise flying
- RANGE . . . . . 880 miles ground, 340 miles air
- MPG . . . . . Estimated 60 mpg ground, 22 mpg air
- WINGSPAN . . . . . 23'5" main, 5'6" canard.
- WING LOADING . . . . . 20 psf
- ENGINE . . . 150 hp Freedom Motor twin rotor (or applicable motorcycle engine)
- ESTIMATED TBO . . . . . 2000 hours (Time Between Major Overhauls)
- FUEL . . . regular unleaded automobile gasoline (any fuel capable - freedom motor)
- FUEL CAPACITY . . . . . 16 gallons including reserve
- STALL SPEED . . . . . 70 mph (with flaps extended)

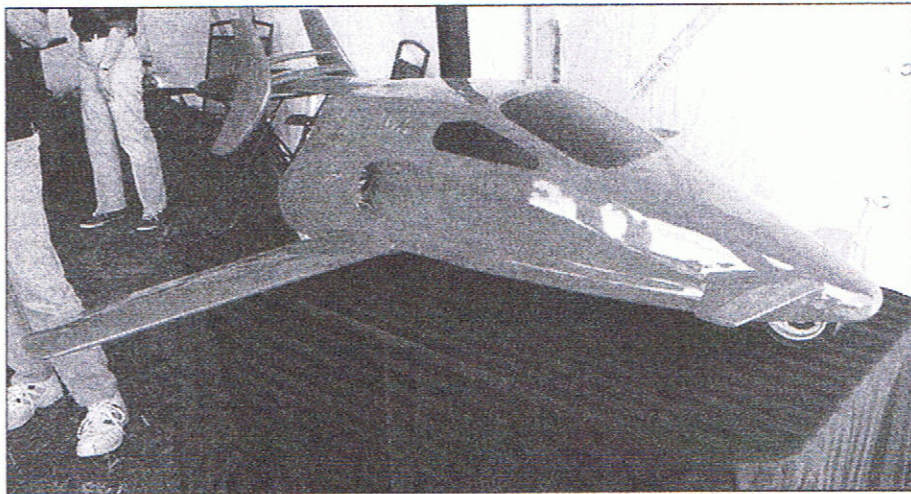
### Standard Features:

Driver adjustable seat, continuously variable transmission (cvt) with forward, neutral, reverse, and flight mode, leather interior, safety glass front windshield, lexan side windows, heating & air conditioning, stereo cd, California ULEV rating, seat belt / safety harness, front and rear disc brakes, video rear view monitor, glass cockpit, automatic vehicle leaning in turns, extendable wings, dual ground/air lighting system, redundant ignition system, redundant battery system, Navigation radio, ELT (emergency location transmitter), back-up air speed, altimeter and attitude, ballistic chute recovery system.

(Provided from website [www.samsonmotorworks.com](http://www.samsonmotorworks.com))



# Aircraft Review



Scale model being shown off at Oskosh 2009. Photo: Jason Paur, Wired.com

states you do not need to have a motorcycle license to drive a 3-wheel motorcycle and insurance and registration is usually less expensive. And instead of paying 20 to

30 thousand dollars for a high end motorcycle (or second car) and well over a hundred thousand dollars for a half way decent cross country aircraft (used), you

can have a Switchblade that replaces both. The bottom line is that the Switchblade offers convenience and money savings in a very practicable vehicle.

## Flying Cars Are Not Something New

Flying cars actually predate the Wright Brothers first flight. This is not to say that they were successful in flying. The earliest known flying car is from the late 1800s. You will also be surprised to know that many of the major automobile manufacturers have had flying car concepts or have experimented with designs. These manufacturers include General Motors, Ford, and numerous others. Boeing has had a few concept models over the years. Glenn Curtiss also developed a flying car in the early 1900s that reportedly did have a successful flight. Today NASA is a big supporter of flying cars.



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