

# Flying on—and off—the job

## Meet an engineer who pilots aerobatic and racing planes

BY KATHY COOK

Among the thousands of people at Boeing who work on aircraft, chances are, many of them dream about flying planes. John Housley took his dream and made it real.

Today, the Global Strike Systems engineer flies aerobatic and racing planes, using what he knows about propulsion systems to help his planes perform well both in competitions and at work. “Flying these types of aircraft, as well as designing and testing new ideas, increases my credibility with our military customers,” he said.

Housley’s interest in planes goes back to early childhood when he spent hours building and flying plastic models with his best friend—who today is Housley’s crew chief at racing competitions. Housley went on to fly control-line airplanes (model-size planes that fly in circles and can perform aerobatics) and then to radio-controlled aircraft competitions. He brought his passion for flying to college, where he earned a degree

in aeronautical engineering—which landed him a job at McDonnell Douglas in 1978.

“A fellow engineer’s enthusiasm for experimental aircraft got me interested in flying full-scale aircraft,” said Housley, who took flying lessons, learned some basic aerobatic maneuvers, bought his first plane and got into racing. “It was straight-line, informal racing—nothing like Formula One air racing that I do now.”

Formula One air racing is like car racing in that the aircraft must meet very strict design specifications including wing area, cockpit height, minimum weight, fuel carriage, a fixed-pitch propeller and restrictions on the size and type of engine (200 cubic inches/3.3 liters and 100 horsepower/75 kilowatts).

Also, Formula One airplanes are small. Housley’s *Aero Magic* weighs 585 pounds (265 kilograms) empty. It’s a custom-built, single-seat plane with very few amenities that would add weight, and accordingly not overly comfortable. The propeller is wood, although Housley said most of his competitors have changed to composite propellers.

The aircraft has a half-fabric, half-composite cover over a steel tube-welded frame, with wings made of composite material.

Although he has flown the aircraft as fast as 260 mph (418 kilometers per hour) in level flight, Housley’s typical race speed is around 220 mph (354 kph).

“There aren’t a lot of airplane races these days,” Housley said, but he’s competed in the largest U.S. competition, the National Champion Air Races in Reno, Nev., nearly every year since 1991. The race is limited to the fastest 24 aircraft, based on qualifying times.

But Housley won’t be flying *Aero Magic* in this year’s race. He’s stripping down the plane and rebuilding it to shave time off his record by reducing weight and improving aerodynamics. “This is where my engineering skills come in very handy,” he said.

Although his race plane is grounded for now, Housley isn’t. He’s part owner of a Pitts Special S2-A aerobatic plane and has flown in two local competitions “Although my race plane can do some aerobatics, the Pitts was built for aerobatics,” he said.

Housley loves flying, but beyond fun and relaxation, his hobby is also beneficial to Boeing. Housley said working on his plane helps him solve problems on the flight ramp. Boeing’s military customers “know that I know what it’s like to feel Gs, to fly in formation, to fly upside down, or to be the first to try out a new design,” he said. “Of course, it’s not the same level of flying that they do. But having this real-life experience is a very helpful supplement to my engineering education.” ■

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**John Housley (bottom left), a propulsion engineer for Global Strike Systems, loves to fly on and off his job. Among the aircraft he flies on his own time is his Pitts Special S2-A aerobatic plane (below), shown near the Gateway Arch in St. Louis. The experiences he has when flying aerobatic and racing planes increases his credibility when talking with Boeing’s military customers, he said.**



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