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**My Other Plane
is a**

Globe "Super" Swift



*Kaufman
and his Swift
outside its hangar (the SE WI Aviation
Museum in Racine, Wis).*

by Matt McDaniel

Author's Note: This is the first in a series of articles that will introduce Cirrus Pilot readers to some of the many COPA members who own and fly multiple aircraft. I hope to give equal time to the plane, the pilot and the reasons a Cirrus owner might choose to own and fly one or more other aircraft types. If you know a COPA member who owns or flies multiple aircraft and wish them to be considered for inclusion in this series, please drop me an email at: matt@progaviation.com.

Once upon a time, there was no TSA and security allowing only ticketed passengers onto concourses. Anyone was welcome on a major airport's observation deck to watch airplanes come and go. In the late 1960s, most of those airplanes were still piston and turboprop airliners. It was the end of an era that would soon succumb to kerosene, black smoke and jet-noise. But for young Bruce Kaufman, watching those pre-jet airliners come and go from the observatory at Cleveland's Hopkins Airport was the beginning of a love affair with aviation. An affair that now has him holding two sets of aircraft keys.



Kaufman and the author do a touch-n-go at Wausua, Wis. during their record-setting charity flight.

Of course, that first set of keys is for a Cirrus, albeit a unique one. Dr. Kaufman's 2002 SR22 wears decals that shed light on its status as a U.S. national aviation record holder (see *Cirrus Pilot*, Nov/Dec 2006). The other keys turn the ignition of our subject: A gorgeous 1946 Globe Swift. It bears little resemblance to itself 62 years ago, before it became a "Super Swift" and left its brethren trailing in its wake.

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Data Chart – 1946 Globe GC-1B Swift

	ORIGINAL CONFIGURATION	CURRENT CONFIGURATION
Engine	Cont. C-125 125 hp. @ 2550 rpm.	Cont. IO-360 210 hp @ 2800 rpm.
Propeller	Fixed Pitch	Hartzell Constant-Speed
Seats	2	2
Wingspan	29 feet, 4 inches	29 feet, 4 inches
Length	20 feet, 10¾ inches	20 feet, 10¾ inches
Height	6 feet, 1 inch	6 feet, 1 inch
Wing Area	131.63 sq. ft.	131.63 sq. ft.
Max Gross Weight	1,710 lbs.	1,970 lbs.
Wing Loading (1g)	12.99 lbs./sq. ft.	14.97 lbs./sq. ft.
Power Loading (@MGW)	13.68 lbs./hp.	9.38 lbs./hp.
Baggage Capacity	100 lbs.	100 lbs.
Fuel Capacity (usable)	27.8 gal.	53.8 gal.
Wheels/Tires/Brakes	6.00 × 6, Expander Tubes	5.00 × 5, Cleveland Discs
Landing Gear	Conventional, Retractable	Conventional, Retractable
Cockpit Flight Controls	Dual Panel-Mounted Yokes	Dual Floor-Mounted Sticks
Stall in Landing Config (V _{so})	50	52
Stall – Clean (V _s)	57	60
Rotation (V _r)	60	65
Best Angle of Climb (V _x)	Unknown	72
Best Rate of Climb (V _y)	Unknown	86
Typical Climb	90	110
Cruise Climb	100	135
Economy Cruise	115	145-155
Max Cruise	130	175
Max Normal Operating (V _{no})	140	140
Never Exceed (V _{ne})	185	185
Flaps Extended (V _{fe})	90	90
Landing Gear Operating (V _{lo})	100	100
Maneuvering Speed (V _a -MGW)	Unknown	123
Final Approach (V _{ref}) – Clean	70-75	85-90
V _{ref} for Wheel Landing	65-70	80
V _{ref} for 3-Point Landing	65	75

*All Speeds in mph. Some speeds based on best available data or approximations due to lack of specific info in original 1946 aircraft manual.

Major Differences between original and current configurations shown in blue.

Globe Aircraft Company was one of dozens looking to capitalize on the projected post-World War II aviation boom. Their GC-1A design, which had roots in both Culver and Johnson aircraft designs, was meant to appeal to ex-fighter pilots with its retractable, conventional gear and sporty handling. Its performance was anything but fighter-like with only 85hp on tap! Less than five months after the GC-1A was certified, in May 1946, the GC-1B was rushed into production with 125hp, providing zip-pier performance and safer handling. To meet early demand, both Temco and Globe would mass produce the Swift simultaneously, building over 1,240 in 1946 alone (up to 15 per day)! Production quickly outpaced demand as the post-war boom went bust. Globe went bankrupt and Temco obtained all assets and manufacturing rights. Swift production ended near 1,500 aircraft in August, 1951.

Prior to Bruce's purchase of his Swift GC-1B, in May 2007, the plane had gone through a 15-year restoration, including a long series of modifications to transform it into a "Super Swift." Nearly half of the Swifts produced are still registered as flyable and they have a cultish following. The Swift has become one of the most highly modified certified production aircraft ever built. There are a dizzying array of STCs available for the aircraft, not to mention the hundreds (probably thousands) of "Field Approved" modifications done to individual airplanes. There is no specific formula of modifications to create a Super Swift. "Super Swift" is a generic term typically used to separate the lower horsepower from the higher horsepower examples. Swifts now typically range from 85hp to 220hp and generally the "Super Swifts" are those with 180+hp, constant-speed props, and gross weight increases. Kaufman's modification list is far too extensive to detail here. Compared to its 1946 configuration, it carries twice the fuel, 13% more gross weight, 40% more power, and at least a dozen performance STCs that help it cruise 50+mph faster (up to 175mph, or 10mph below V_{ne}).

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What would possess a Cirrus owner to purchase such a second aircraft? Kaufman didn't make such a decision lightly and defining his mission led him to the Swift. The Cirrus is a stellar IFR cross-country machine. Bruce uses his to go places far from his Wisconsin home; like Boston, Santa Fe, and the Bahamas. But, no single airplane can serve every purpose and Bruce has a lot of purposes for flying: The challenge, the travel, and the fun. He'd always wanted to learn to fly a taildragger and to learn some basic aerobatics – two things a Cirrus can't do. He occasionally likes to fly purely for fun and would prefer not to burn a lot of fuel doing so. Then he and some partners put a deposit down on *the-jet* and he realized that some retract experience might be a good idea too, but, experimental aircraft are not his thing. So, what plane has a tailwheel, is mildly aerobatic, is really fun and relatively cheap to fly, has retractable gear, AND is certified? Well, in small GA aircraft there are very few choices which fit that description. The Swift does! Throw in Bruce's desire to eventually use the plane for a Commercial checkride and you add the need for a constant-speed prop – something the unmodified Swift lacks, but which all Super Swifts have. However, finding a good Super Swift is challenging due to their age and the daunting task of learning the myriad of STCs and which combinations of them are good, bad or ugly. Over a year of research narrowed the field to three planes. A thorough logbook examination revealed one with meticulous documentation of its modifications and restoration. It had a sparse panel and no interior except seats, allowing a clean canvas for designing both to suit Bruce's desires. Dr. Kaufman had found his Swift!

I'm the lucky one teaching Bruce in his Swift and ferrying it as necessary. In doing so, I've come to understand why Swifts have such a cult following. It is both totally docile and a complete handful all at once. In the air, it trims up easily and I've found it easy to hand-fly on three-plus-hour flights. Yet, it has fingertip sensitivity and practically begs to be maneuvered. The control forces are fairly light, even at high speed, yet very well harmonized. The flaps and gear are operated by the same electro-hydraulic system, and since the same pressure is applied to either system, the flaps come down incredibly fast to their 30-degree extension (full down in about one second). Because of this, the pitch change seems dramatic but is easily managed, if anticipated. As with the Cirrus, I fly a tight pattern in the Swift and find it works very well for managing glide should the power fail. The Swift's reputation as being a handful on landing is not entirely unfounded, but probably exaggerated. During landing, the plane definitely requires constant attention and is never entirely predictable. As Swifts have been modified over the decades, handling characteristics have

The Globe Swift factory in full production, sometime in 1946 (note the flag with 48 stars). This facility was in Ft. Worth, Texas and is where Kaufman's Swift was built. All Temco-produced Swift's were built in nearby Grand Prairie, Texas.



Dr. Bruce A. Kaufman

PERSONAL DATA

Age: 52

Born: Cleveland, Ohio

Living: Milwaukee, Wis.

Status: Never married, but attached! No children.

Education:

College – Dartmouth College – A.B. Biochemistry – 1974-78

Medical School – Cleveland – Case Western Reserve University – 1978-82

Residency in Neurosurgery – CWRU/Cleveland - 1982-88

Fellowship – Pediatric Neurosurgery – Chicago - 1988-89

Occupation: Pediatric Neurosurgeon

Employer: Children's Hospital of Wisconsin

Hobbies: Wine, Baseball, Travel

AVIATION DATA

Earliest Aviation Memory: Watching the airliners at Cleveland airport.

First Flight: Cleveland-Toronto to see Grandma in a Vickers Viscount (four-engine turboprop airliner).

Mentors: Paul Ricotta, a frat-brother who flew in college (also a Cirrus owner). EMT helicopter pilots I flew with (mostly Vietnam vets) while moonlighting as a "chopper doc" during surgical residency.

First solo: I had two. Since I trained out of Chicago Midway, the first solo was done at Aurora, Ill. (10-2-88). I became lost in the practice area and found my way back via "water tower localization!" So, first solo at Midway was really my second solo (10-30-88).

Initial Training: C-172, among the 737s at Midway (1988-89).

Private Certificate Achieved: 7-23-89

Instrument Training: C-182 out of Sprit of St. Louis, Mo.

Instrument Rating: 8-9-96

Aircraft Owned: C-182, with nine co-owners (1991-2002). SR22 6-Pack, with one co-owner (since 11/02). Globe Swift (since 5/07). "The-Jet" position #142, with two co-owners.

Proudest accomplishments in aviation:

- Romp Around Wisconsin – Set a national aviation record by landing at 104 Wisconsin airports in one day. Raised over \$12,000 for Children's Hospital of Wisconsin pediatric neurosurgery in the process. Voted Most Memorable Aviation Record of 2006 by the National Aeronautic Assoc.
- Second Pilots Tour of Israel with Barry Schiff, which included the only flight of general aviation from Israel to Jordan (and back)
- Great Hawaiian air race (multiple years)
- Pilots tour of New Zealand – including getting New Zealand license

All time favorite flight: All of the above, plus logged flights in a P-51, B-17, Waco, and Navy N3N (Stearman).

Total Time: ~1,200 hours

certainly been affected. Originally, the wing had leading-edge slots forward of the ailerons, giving them better authority at high angles of attack. Those slots are closed on Bruce's plane for cleaner aerodynamics. Several maximum gross weight (MGW) improvements have increased wing loading as well. Good for turbulence, bad for glide-ratio, etc. Most Swift pilots only perform wheel landings (touch on mains first, then lower tail). This is attributed to the large original main wheel well openings, which extended up into the wing's leading edge. It was said that as the tail came down to the three-point attitude, the wheel wells would flood with air causing tremendous drag and an unpredictable plunk onto the runway. True or not, the reputation stuck. Bruce's plane has smaller than original wheels, tires and wheel wells and three-point landings seems no more "exciting" than wheel landings (in light winds). Where the Swift is truly a handful is during crosswind operations. The plane's rudder is very effective, sometimes too much so, which can set up an out-of-phase chase between pilot inputs and reactions. The answer is aileron. If the pilot uses liberal amounts of aileron for crosswind correction, rudder usage becomes much easier to manage. Since wheel landing the Swift is the only safe option in crosswinds, one must time the lowering of the tail just right. Pull it down too early and the plane will launch again. Wait too long and the rudder will become ineffective causing the airplane to go where the winds tells it to. Find the sweet spot and put the tailwheel down just in time to use it for directional control, as aerodynamic control yields to Goodyear Tires and Cleveland Brakes (yet another STC).

Is Kaufman's Swift fulfilling its mission? It would certainly seem so. In between the frustrating moments of learning to master a spirited taildragger, Bruce always seems to be smiling in his Swift. His mind is in constant motion, mulling his plans for the new instrument panel layout he intends to install next winter (to be detailed in a future installment of this series). Most of all, Bruce thrives on the challenges the Swift presents him. The challenges of taming the taildragger, the six-decade-old systems design, keeping all the STCs straight, working towards a Commercial checkride, keeping it polished like a mirror and, most of all, the challenge of ensuring his flying is both fun and affordable. **COPA**

About the Author: *Matthew McDaniel is a Master & Gold Seat CFII, ATP, MEI, AGI, IGI and CSIP. In 18 years of flying, he has logged nearly 10,000 hours total and over 4,000 hours of instruction-given. As owner of Progressive Aviation Services, LLC (www.progaviation.com), he has specialized in Cirrus instruction since 2001. He's also an airline pilot, currently flying the Boeing 717 and holds four turbine aircraft type-ratings. Matt can be reached at: matt@progaviation.com or 414-339-4990.*