BY AMERICAN

THE NEW CHAMPION

American Champion Aircraft is a little company with big plans.

BY WILLIAM L. GRUBER

AS one might expect of entrepreneurs, Jerry and Char Mehlhaff are dreamers. On the wall in their modest suite of offices at American Champion Aircraft Corporation is a blueprint of what their facility will look like in a few years. A long drive leads to a cluster of big factory buildings, in which the company will churn out hundreds of Decathlons, Scouts, and Citabrias each year. ■ At least, that's the plan. But the Mehlhaffs aren't in any big rush to get there. They want to take things slowly and carefully. ■ "My philosophy is, you make an

PHOTOGRAPHY BY MIKE FIZER

initial investment in something, and then it has to pay for itself," says Jerry. "We're the new guys on the block. We don't want to move too fast. Our main objective is, we want to stay here for the long term, and we're not in a hurry to go into full production because of the cost of doing it. Going into full production would cost millions."

"It has to grow on its own," says Char. "We don't have a bottomless pit to draw from."

The husband-and-wife business partners won't say how much capital they've invested in their fledgling enterprise, but already the dream has started to take shape. Last winter, they opened two brand-new, 12,000-square-foot production buildings on their farm/airport/corporate headquarters in Rochester, Wisconsin, population 746. American Champion is situated on a gravel road just past an apple orchard on Highway D, in rolling dairy country 25 miles southwest of Milwaukee. A farm field seems an unlikely spot for an aircraft plant, but it offers the comforts of a pastoral setting within easy reach of heavy-industry suppliers in the Milwaukee-Chicago region.

A farm field seems an unlikely spot for an aircraft plant, but it's home to American Champion Aircraft.

More important than the erection of the big, blue factory buildings was the company's certification in January of a reincarnated Super Decathlon, which features a new wing with a metal spar (the old Decathlons used spruce spars and metal ribs). Since then, the Mehlhaffs have been busy building and selling airplanes. Production hasn't exactly been at a blistering pace, but it has met the Mehlhaffs' early expectations. As this article went to press, they had completed their ninth Decathlon and had orders for a total of 20 aircraft in 1991, which was the original goal they had set for themselves. Already, they are working on certification of a metal-sparred Scout.

For now, about half their business consists of selling parts for the Champion line; about 30 percent of the parts are manufactured for the export market. "Up until six months ago, it was 100 percent parts," says Jerry.

The Mehlhaffs bought the company—which included type certificates for the Champion/Scout/Citabria/Decathlon line of aircraft—from Tetelestai, Incorporated, of Austin, Texas, on December 17, 1988. The Cham-

pion line, which had its origins in 1929 with the Aeronautical Corporation of America (Aeronca) in Cincinnati, had been out of production for a decade.

The Champion corporate history is somewhat convoluted. Ownership had passed over the years from Aeronca to Robert C. Brown's Champion Aircraft Company in the 1950s and 1960s (when the aerobatic Citabria was introduced), to the Champion Aircraft Division of Bellanca, which manufactured the line from 1970 until production ceased in 1980, through a series of investors to the Mehlhaffs.

When the Mehlhaffs took possession, the company's material assets consisted of 16 semitrailers stuffed with parts, dusty tooling, partially completed fuselages, and what seemed like a ton of disorganized documents. "We had to sort it all out," says Jerry.

Soon, the company started selling parts, and by March 1989, they had a positive cash flow. They began their business in the offices and hangar at their private, 2,500 × 36-foot, paved landing strip, Fox River Airport, at which they had a successful fixed-base operation for many years.

Meanwhile, they went to work on certification of the new wing. An aluminum-sparred wing would be lighter, stronger, and more rigid in aerobatics than one made of expensive and hard-to-find aircraft-grade spruce, they maintained. It also would help to separate them from liability for the older Decathlons, which are subject to several airworthiness directives involving excessive wear on the spars and strut-to-spar attach points on their wooden wings. The Mehlhaffs gathered a team of designers and craftsmen who previously had been employed by other general aviation manufacturers and set to work. Simultaneously, they began construction of their first two production buildings.

Testing of the new wing was extensive and involved a 31,000-cycle load-test series. For their first aircraft, the Mehlhaffs used a fuselage they had inherited in their purchase of the company, but the rest have been built from scratch. The metal wing structure is "dramatically different" from that of the older Decathlons, says Jerry. Only the aileron, bellcrank, and wing tip are interchangeable with earlier 8KCAB–180 models. The actual shape of the airfoil remains the same. Other changes include redesigned landing-gear U bolts and reinforced seat backs (the subject of another AD on the older airplanes).

The new Decathlon is 40 pounds lighter than its predecessor and has 24 pounds more useful load. It is powered by a 180-horsepower Lycoming AEIO-360-H1A with a Hartzell constant-speed propeller and sells for a base price of $64,500. Numerous option packages are available at additional cost. Aircraft delivered so far have ranged from bare-bones

base models to those fully equipped with nav/coms, lorans, and gyro panels. A gyro package adds another $3,995 to the cost; prices for various Terra, Narco, and King radio packages are quoted on request, and buyers can pretty much equip their airplanes however they want, weight and space permitting.

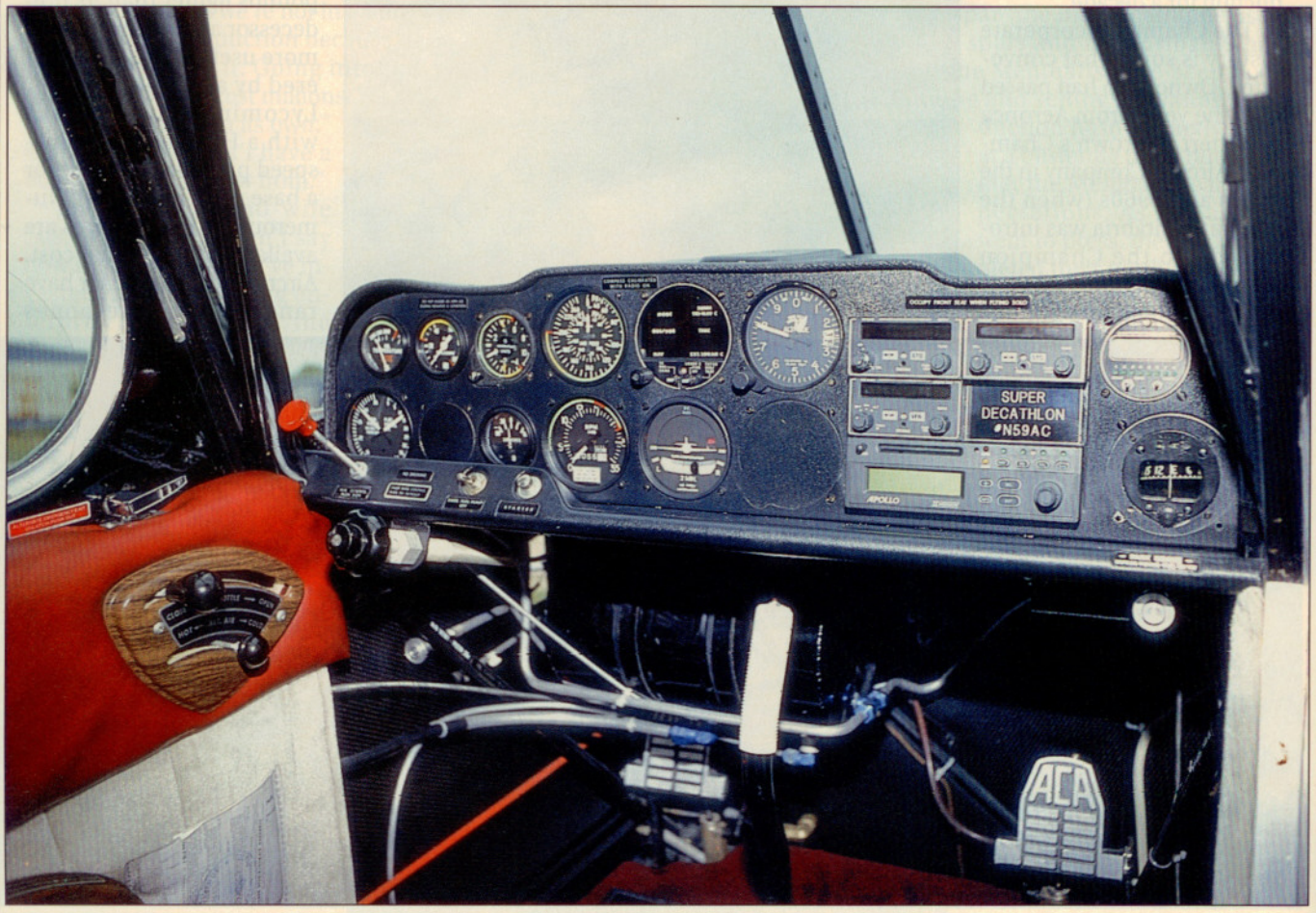
"We are back-ordered until November, and on the first of the year, there's going to be a price increase, as yet undetermined," says Jerry.

When we visited the factory, Jerry and Char were showing a prospective airplane buyer around the place. Ken Ferrara is a pretty typical Decathlon customer. A 37-year-old airline pilot and former U.S. Marine Corps aviator from Lakeridge, Virginia, Ferrara is shopping for an aerobatic aircraft in which he can compete, but he also wants an airplane in which he can take his family for fun flights on sunny Sundays.

"I flew a Pitts yesterday, says Ferrara. "It costs twice as much, and besides, what's it good for besides aerobatics? This is better for sightseeing, for boring holes. It's a compromise."

Ken Hubatch of Cedarburg, Wisconsin, has put 37 hours on his brand-new Super Decathlon. While hanging around at the American Champion tent at Oshkosh, he couldn't help gushing over his factory-fresh mount. "I love the plane. It's just a delight to fly," says Hubatch. He wanted an aircraft he could use for recreational aerobatics, but he doesn't plan to compete. "Plus, I can also take my daughter or my wife or my friends for little joy rides. You can *see* out of the thing. You can't see out of a Pitts. It's a good, simple, family-fun airplane."

Having flown several older Decathlons, Hubatch said



he noticed "a big difference . . . . The new one has very crisp controls."

"*Very* crisp controls," echoes Tom Myers of Palo Alto, California, who recently retrofitted his 1977 Decathlon—the very first Bellanca Super Decathlon, by the way—with American Champion metal-spar wings. He says the new wings give him improved performance throughout the airplane's flight envelope. A wing retrofit costs $15,800, and the only parts reused are the wing tips and ailerons. A starburst paint job is extra. The Mehlhaffs will give you $3,000 off that price if you trade in a pair of old, wooden wings, even if the spars are cracked. They want to get the older wings off the market to help limit their liability.

Our flights in two new Super Decathlons at Fox River confirmed that the aircraft are "crisp" and responsive. We flew N59AC, which was equipped with optional aileron spades (the Mehlhaffs bought the supplemental type certificate for the spades installation from noted aerobatic pilot Marion Cole), and N106AC, a heavier airplane fitted with a full gyro panel. It really was like flying two entirely different airplanes; the spades made all the difference. Although N106AC performed acceptably well in rolls and loops, the spade-equipped N59AC rolled gleefully and responded effortlessly to much lighter control inputs. Spades cost $550 and should be considered a must-have option if you plan to do much acro in the airplane.

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The Decathlon is tame as taildraggers go; you solo from the front seat, and visibility over the nose is excellent, with no need to S-turn while taxiing. The aircraft is equipped with toe brakes, which are a lot more user-friendly than the awkward heel brakes in Champs. With its joy sticks, tandem seating, and basic metal panel, you feel like you're flying a real airplane, not one designed to imitate a car. The cockpit is surprisingly roomy. You climb in via an external metal step by grabbing onto the exposed structural tubing in the front of the cockpit and hauling yourself aboard. There is ample room to sit comfortably with a parachute on your back, and the door is fitted with a quick-release handle for emergency egress (whether or not you will be able to get out in the event of a catastrophic airframe failure is a debate we won't get into here). A five-point competition harness with quick-release buckle is a $595 option, but consider it a must if you will be flying aerobatics. Other nice options include an intercom system ($400).

With enough power to pull you through a climbing vertical slow roll, the Decathlon is, of course, spry in the takeoff run and climb-out. Once airborne, it will maintain a ridiculously nose-high attitude without a care in the world. Inverted systems are standard (a header tank allows two minutes of inverted flight), and the airplane is approved for a range of maneuvers such as loops, Immelmans, snap rolls, and hammerheads. It handles aerobatics capably, although it's no Pitts. That is part of its wide allure as an aerobatic trainer: It makes you work at performing the maneuvers

cleanly. Still, it has the performance to meet the needs of many basic-level and some intermediate-level aerobatic competitors (advanced- and unlimited-level competitors need airplanes with better performance—and much higher price tags).

The Decathlon also has the speed (130 knots at 75-percent power), range (510 nm at 75 percent), and cockpit comfort to suit many cross-country sojourns. It's the kind of airplane you will want to fly low to the ground, enjoying the excellent view out both sides of the cockpit.

"Did you do some *Jerrybatics?*" Char teased after we returned, alluding to the fact the Jerry has never had formal aerobatic training. But his aviation credentials are solid. He's been flying since 1962, when he soloed in a 7AC Champion. He also earned his private and commercial certificates in a 7AC Champ. A U.S. Navy flight-deck crewman in an A1 Skyraider squadron in Vietnam, Jerry has been a CFI since 1967 and has based his business at Fox River since 1970. The Mehlhaffs operated a flight school with 14 aircraft at its height and were Mooney and Piper dealers. They still own Skyport Ercoupe Services, which does Ercoupe modifications; they hold a dozen STCs and parts manufacturer approvals (PMAs) for Ercoupes.

The Mehlhaffs hope eventually, maybe by 1993, to become a factory repair center for aircraft in the Champion line, offering reconditioning, recovering, and other services beyond the routine annual inspection. But all that will come in good time. Right now, they're thinking about getting the Scout flying, and then the Citabria. They expect the utilitarian and non-aerobatic Scout to be a big seller. Standard Decathlons (a fixed-pitch prop and 150 hp instead of the 180 hp in a Super Decathlon) and constant-speed-prop-equipped, 150-hp Decathlon CS models also are on the drawing board. Sadly, the Mehlhaffs don't have any plans to build the low-end Champs, which they figure just couldn't pay for themselves.

"Proceeds from parts helped finance the Decathlon; the Decathlon helped finance the Scout; the Scout will help pay for the Citabria," says Jerry. "We're not interested in any outside investors. Our engineering is done strictly as we can afford it."

Sounds pretty level-headed for people in the business of building airplanes you fly upside-down. But we're talking here about the Middle West, where folks know that hard work pays off, and it takes some time to reap what you've sown. □

American Champion Super Decathlon
8KCAB–180
Base price: $64,500

Specifications

Powerplant	Lycoming AEIO-360-H1A, 180 hp
Recommended TBO	1,400 hr
Propeller	Hartzell HC-C2YR-4CF/FC7666A-2
Recommended TBO	5 yr or 2,000 hr
Length	22.9 ft
Height	7.7 ft
Wingspan	32 ft
Wing area	169.1 sq ft
Wing loading	10.64 lb/sq ft
Power loading	10 lb/hp
Seats	2
Cabin length	8 ft 10 in
Cabin width	2 ft 5 in
Cabin height	3 ft 11 in
Empty weight	1,305 lb
Max takeoff weight	1,800 lb
Useful load	495 lb
Payload w/full fuel	255 lb
Zero fuel weight	1,287 lb
Fuel capacity, std	43 gal (40 gal usable)
Oil capacity	10 qt (8 engine, 2 inverted systems, etc.)
Baggage capacity	100 lb, 10.4 cu ft

Performance

Takeoff distance, ground roll	626 ft
Takeoff distance over 50-ft obstacle	1,239 ft
Max demonstrated crosswind component	17.4 kt
Rate of climb, sea level	1,250 fpm
Max level speed, sea level	134.8 kt
Cruise speed/endurance w/45-min rsv, std fuel	
@ 75% power, best economy	128 kt/3.37 hr
5,000 ft	(9.7 gph)
@ 65% power, best economy	121 kt/3.8 hr
5,000 ft	(8.8 gph)
@ 55% power, best economy	111.3 kt/4.3 hr
5,000 ft	(7.9 gph)
Service ceiling	15,800 ft
Absolute ceiling	17,300 ft
Landing distance over 50-ft obstacle	1,051 ft
Landing distance, ground roll	424.5 ft

Limiting and Recommended Airspeeds

V_X (best angle of climb)	52.2 KIAS
V_Y (best rate of climb)	69.6 KIAS
V_A (design maneuvering)	114.7 KIAS
V_{NO} (max structural cruising)	139 KIAS
V_{NE} (never exceed)	174 KIAS
V_R (rotation)	52 KIAS
V_{S1} (stall, clean)	48 KIAS
V_{SO} (stall, in landing configuration)	48 KIAS

For more information, contact American Champion Aircraft Corporation, Post Office Box 37, Rochester, Wisconsin 53167; telephone 414/534-6315.

All specifications are based on manufacturer's calculations. All performance figures are based on standard day, standard atmosphere, sea level, gross weight conditions unless otherwise noted. □

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