



THE WINGS OF QUICKSILVER

# The Wings of Quicksilver

BY JAMES LAWRENCE



*The Quicksilver MX II Sport.*

**WHEN I SAW DAVE CRONK** for the first time, I was 29 years old and a bushy-haired, bell-bottom-jeans-wearing new pilot. We were both at the early mecca of soaring—the wonderful Torrance Beach bluffs in Los Angeles—where hang glider pilots flocked every day, and particularly on weekends, to try their hand at soaring the onshore Pacific winds.

On any given day, scores to a few hundred observers would park and walk to the north end of the bluffs that rose higher southward toward the Palos Verdes Peninsula. They came to see this crazy new flying magic up close and personal.

It was 1974. Other than a few zanies like myself, the world knew little about the Rogallo wing design or foot-launched flying in general. Most people thought we were a bunch of hippified misfits with one common trait: a death wish.

I had come to mecca—with a couple months of glides and not a single soaring flight under my belt—to worship the masters, learn from them, and most of all, join that still-elite group of pilots who could magically work the lift band to fly for more than a handful of ground-skimming moments.

At one point as I was setting up my Seagull III glider in the sand, a flash of white caught my eye. I looked up to see a hang glider that was dramatically different from the pointy-nosed Rogallos that dominated the scene. This craft had a fairly high aspect ratio, a rectangular (decidedly *not* Rogallo-shaped) wing, and a conventional tail complete with a horizontal stabilizer and a movable rudder.

It was a gorgeous bird: the crisp, all-white Dacron sailcloth wings and tail were set off by a sparkling airframe made entirely of bronze-anodized aluminum tubing. The handsome pilot was equally striking. He was lean and athletic, with a serious demeanor, and his long brown hair flowed back in the wind. In that moment, I wished I could be just like him, to be so at ease plying the lifting air in his angelic craft.

I noted, too, his distinctive head-forward slouch, seated in the “harness”—little more than a playground swing seat—and was reminded of a sprinter lunging for the finish line tape.



*Dave Cronk flies the original Quicksilver No. 1.*

“Wow,” I said to another pilot. “What the heck is that?”

He followed my gaze and said, “That’s Dave Cronk and his Quicksilver C. He’s the head designer at Eipper-Formance.”

I knew about Dick Eipper, the pioneering hang glider company he formed, and its popular line of quality Flexi Flyer Rogallos. Eipper leaped ahead of the garage-builder crowd with a well-marketed operation and never looked back. And the Quicksilver C was apparently its latest innovation.

I marveled at the performance of the Quick. While the rest of us struggled in the 12-mph ocean breeze to achieve that elusive dream of sustained flight along the rising ridge at Torrance, Dave made everybody look like a bunch of neophytes. Where we beginners were lucky to gain maybe 100 feet above the top of the ridge in one pass before losing the lift, Dave navigated the lift band at will, like he was one of the local seagulls.

Taunting us, he’d ease straight out from the ride to float beyond the waves, exploring the upwind edge of the lift band, then swinging in a graceful arc back toward the ridge...and still end up higher than everybody when he got there.

It wasn’t the last time I’d share the air with Dave Cronk...or the Quicksilver.

### A SHAPE OF DESTINY

That iconic wing/tail design, for so long a mainstay of hang gliders, ultralights, and now special light-sport aircraft (SLSA), did not begin life in the fertile brain of Dave Cronk. The monoplane twinkle in his eye originated, probably in late 1971, with fellow Eipper-Formance designer Bob Lovejoy’s original High-Tailer.

The High-Tailer had excellent performance, but it also had one shortcoming: It was too stable and didn’t turn worth a darn.

Back to the drawing board.

The Quicksilver A that emerged from the High-Tailer’s redesign used the same 30-foot-span, 4-foot-chord wing. But in place of the twin vertical tails was a horizontal, A-frame tube arrangement angling back from the trailing edge of the wing. A cable-braced, fixed horizontal stabilizer and rudder finished off this new “fuselage.” The rudder was moved by lines fixed to either side of the simple plastic swing seat. As the trailing edge of the rudder’s C-shaped frame was unsupported, the rudder distorted a lot. It was still effective at yawing the tail sufficiently for the dihedral of the wings to come into play and effect a turn. A stiffer “D”-frame rudder solved the distortion problem.

Cronk and Lovejoy kept tweaking the design. Load testing uncovered weakness in the trailing edge and that was fixed. Once the Quicksilver B model debuted, ready-to-fly for all of \$965 (twice of what a Rogallo cost), the Quick legend was on its way to glory.

Before long, the Quicksilver C debuted with an increased span of 32 feet, a deeper chord (to 5 feet), and a larger tail. The airfoil camber was reduced from 12 to 8 percent camber. Jack Schroeder, another free-flight pioneer, joined Dave Cronk to fly



The GT 400

the C model in the 1974 U.S. Hang Gliding Nationals. Jack won the event in the rigid-wing class.

### BRING ON THE HORSES

For a few years in the 1970s, Quicksilver was the superior-performing hang glider of its day. In time, other rigid wing designs, including the Icarus II and V, Manta's Pterodactyl Fledgling, and ultimately Rogallo flex-wing designs themselves, began to challenge, then eclipse Quicksilver's reign as top glider in the soaring stack.

Eipper-Formance saw the handwriting on the wall, and the wall said, "Power!" While some die-hard souls hung power units on flex wings, the Quicksilver's "conventional" aluminum frame offered the best platform for motorized flight.

Soul-weary at the number of friends and flying comrades he'd lost to the sport, Dave left Eipper around the time he and his partners were bought out by Lyle Byrum. Lyle was a slick dude, high roller, former Texan car dealer, general aviation pilot, and one clever cookie when it came to business. He and a group of investors figured the powered Quick would sell like hotcakes. He bought the company and renamed it Quicksilver.

And man, were they right, as in Dan Johnson once referencing the Quicksilver as "*the J-3 Cub of ultralights!*"

The first powered Quicksilver was the C model. It sported the classic weight-shift sling seat but now included



The Quicksilver Sport 2S, which is now available as an experimenter light-sport aircraft kit.

a cranky McCulloch MAC-101, 12-hp engine with a V-belt reduction drive, pusher prop, and all of 1.7 gallons of fuel. It still had to be foot launchable—the FAA hadn't evolved the ultralight regulations yet to accommodate wheel launching.

The first production powered Quicksilvers had a much more reliable 15-hp Yamaha engine. There was a spring-loaded throttle on a down tube, but the landing gear was still the pilot's legs. It cost \$3,995, a tidy sum in those days, but for a complete airplane, including engine, that you



The GT 500 was the first Primary Category aircraft certificated in 1993. Very few aircraft took advantage of that category.



The original High-Tailer red tail that evolved into the original Quicksilver design.

didn't have to lug to the top of a hill to fly, it was a bargain anyway you looked at it.

A short word about the laudable Quicksilver kits, past and present: All the parts came shrink-wrapped on large cardboard sheets, clearly labeled and identified. The assembly manual was a work of art. All the instructions were step-by-step, with copious illustrations to guide you through construction. Dave Cronk, engineer/artist that he was, made those wonderful manuals what they were.

One of my happiest memories of the time was cruising alongside a road near Salinas, California, in 1981, 100 feet up in the air, feeling the morning wind in my face and enjoying the gentle manners of the Quicksilver. I'd wave at cars that would honk as they raced by—my airspeed was all of 30 or 35 mph. The “airplane” Quick in time became *the* way so many people realized similar flight desires, without the hassle of having to go to an airport. What a heady, free time; it was at the beginning of ultralight flying as a sport and an industry.

#### SUCCESS SECRETS

Two prime reasons for the Quick's enduring legacy were its ease of assembly and the fact it was a cupcake to fly. Forgiving, sufficiently responsive, and sheer fun, it was the perfect ultralight for a world hungry for grassroots aviation. Call it OWT—on the wing training—many of us learned about powered flying by flying our ultralights.

Before long it became clear the Quick would surpass even Byrum's original vision; it did sell like hotcakes: 15,000-plus and still counting.

New models were developed, including the Quicksilver MX, which evoked Byrum's desire for three-axis control instead of simplified two-axis (weight shift for pitch, rudder for yaw-roll coupled banking). The first MX (for Multiple aXis) had a movable elevator for pitch, and because pilots asked for true three-axis control, Dave tried spoilers on top of the wing.

Nope—didn't do much, so back to the drawing board. Next came ailerons and that did the trick: The Quicksilver was now a three-axis airplane. This new model, the MXL (for aiLeron), sold like *blueberry* hotcakes.

Quicksilver parlayed its success into an expansive dealer network and new models. Training aircraft were needed, so Dave and company created a two-seat Quick. These birds existed in a quasi-legal gray area. They were too heavy for the ultralight category and carried two people. FAA let them pass as trainers, but many abused the privilege by using them for two-person recreational flying.

When the sport pilot rule came out in 2004, two-seaters could be grandfathered in as experimental light-sport aircraft (E-LSA), with proper inspection and some paperwork bureaucracy...but only until 2008. Those owners who didn't get with the program missed the boat. Two-seater "ultralights" could then be registered as experimental amateur-built (E-AB) and used for ultralight training...as long as dealers didn't charge for it. There went a lot of revenue and many dealers closed up shop.

The ultralight industry had gone through a major slump after the disastrous mid-1980s "exposé" (journalistic hatchet job) by ABC's *20/20* TV program. The public, believing the program's lies and distortions and horrified by the gruesome graphics of showing a pilot falling to his death, reacted predictably: Within six weeks of that show, half the orders for *all* ultralight companies were canceled. Ultralight flying, which had been well on its way to filling the skies with aircraft, was dealt a near-fatal blow from which it never fully recovered.

Quicksilver Aircraft continued as a market leader, although it too felt the pinch. Most ultralight companies folded even quicker than they had opened. In the meantime, Quicksilver introduced the GT line, designed by Dave Cronk, who had returned to the fold, and Tom Price. The enclosed cockpit, double-surface-winged, three-axis single-seat GT 400 was a legal ultralight. The later two-seat GT 500 was too heavy and fast for the FAR 103 ultralight category. It was offered as an E-AB kit or ready-to-fly airplane (Sportplane Class) in the new FAA category of Primary Aircraft.

Along the way, Lyle Byrum sold the company. It languished and was sold again in 2012 to Will Escutia and Dan Perez. They renamed it as Quicksilver Aircraft. Escutia is the president; Perez wrangles the day-to-day operations at Quicksilver HQ in Temecula, California. The new management team has big ideas for the future.

## THE QUICK REBORN

I tracked down Will Escutia at EAA AirVenture Oshkosh this year to get a sense of his vision for the company. He said, "I loved the feeling of flying a Quicksilver from the first flight. I thought, 'Flying is a universal dream. And here's an opportunity for all to do it.' I stayed engaged with this idea, and in 2012, purchased the company with the help of investors."

## ON QUICKSILVER WINGS

Quicksilver Aeronautics offers a full line of ultralights, special light-sport aircraft (S-LSA), and experimental amateur-built (E-AB) kit aircraft:

**Sport 2S** – two-seat (side-by-side) open-cockpit E-AB kit (starting at \$23,999) (three models available)

**S-LSA Sport 2SE** – ready-to-fly (\$39,999)

**GT 500** – two-seat (tandem) E-AB kit, currently in S-LSA certification process (starting at \$29,900)

**MXII Sprint** – (side-by-side) ultralight-style E-AB kit

**MX Sprint** – single-seat ultralight (starting at \$19,999)

**MX Sport** – single-seat ultralight

Get all the details here: [www.QuicksilverAircraft.com](http://www.QuicksilverAircraft.com).

Escutia and Perez inherited a company struggling to stay aloft and only producing kits. In less than three years, their re-energized Quicksilver Aeronautics has made significant strides.

"We love kits and continue to make them, but we wanted to take the company into the S-LSA arena as well," Escutia said. After 19 months of certification rigors, the S-LSA certification was awarded to the Sport 2SE two-seater in June of this year.

"Our principal idea for going the S-LSA route was two-fold," he continued. "We want to give non-builders a ready-to-fly, affordable airplane. And we want to grow our dealership network by giving them an aircraft they could legally train in and be able to charge for that training. We also want to help them increase profits by providing them with E-LSA kits that they can either sell outright or build for their customers."

E-LSA kits do not have the same restrictions as E-AB kits: They can be built almost entirely by a dealer.

"We feel that's good for the customer by giving them more options, and good for the dealer, too," Escutia said. He plans to grow the world dealer network as well.

"China, India, and other countries are like the U.S. was 20 years ago: A new generation of pilots wants to experience ultralight flying," he said. "The Quicksilver is geared toward that market. It doesn't require a lot of construction. It's easy to fly safely."

Quicksilver just sold 77 airplanes to its first dealer in China. The sleeping civilian pilot giant is about to awaken in that vast country.

I asked Will what he likes most about flying the Quicksilver.

"The ability to take off from a small field...that's freedom for me," he said. "To fly and see things up close—it's very exciting. When you land at a different airfield, you meet new people who come over to talk to you about the airplane. I like to encourage them to try this kind of in-the-open flying."

"Most of my flights are alone, but the ones I remember best are with other people. Two-seat flying gives you that flexibility, and you remember the story of the flight you shared very well." *EAA*