



A Red-Hot WAILEX

First customer-built version a custom craft

JIM BUSH

The dirty faded gray-and blue-striped freight hauler, a Cessna Caravan I Super Cargomaster, squats in front of me on the tarmac like an overdue pregnant guppy. A stainless steel tusk extrudes from the right side of the cowling where it directs hot exhaust from the Pratt & Whitney PT6 turbine engine underneath the area I will occupy. As I climb up the folding ladder into the right seat, I cannot help but stare into the abyss of the white-walled belly of this freight-hauling beast. I recheck my wallet before I strap in, making sure I have enough cash for the sit-down meal that never materializes. I soon learn that “freight dogs” don’t have time to eat, at least not sitting or standing still.

Early morning sun highlights the flame details in the custom paint scheme of Drew Waterworth's Sonex Wailex flying near Wisconsin's Lake Poygan.

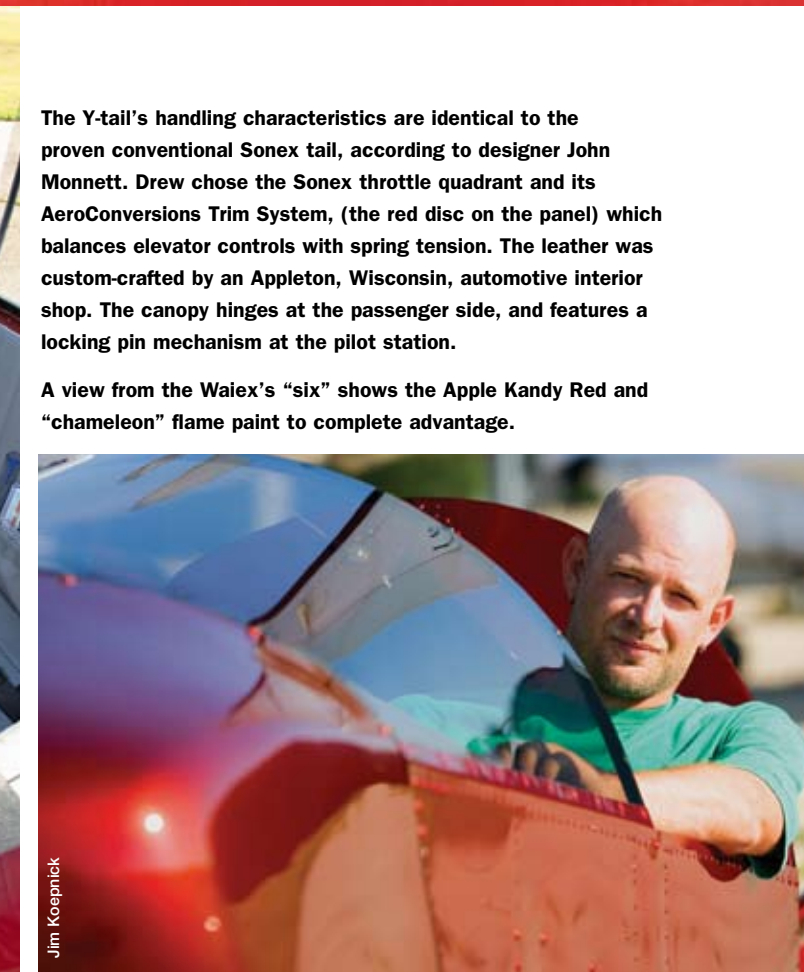
Bonnie Bartel-Kratz



Jim Keepnick



Jim Keepnick



Jim Keepnick

The Y-tail's handling characteristics are identical to the proven conventional Sonex tail, according to designer John Monnett. Drew chose the Sonex throttle quadrant and its AeroConversions Trim System, (the red disc on the panel) which balances elevator controls with spring tension. The leather was custom-crafted by an Appleton, Wisconsin, automotive interior shop. The canopy hinges at the passenger side, and features a locking pin mechanism at the pilot station.

A view from the Waix's "six" shows the Apple Kandy Red and "chameleon" flame paint to complete advantage.

I was invited to fly with Drew Waterworth, chief pilot of Pacc Air, to experience, as he puts it, "the glamorous side of air freight flying." Our route today takes us from Oshkosh, Wisconsin, to Bloomington, Illinois, where we take on a measly 500 pounds of canceled checks. Then it's on to Indianapolis, Indiana, where we exchange the paper for five pallets of John Deere tractor parts. We then head northwest to Rochester, Minnesota, where we bid farewell to our full load of green tractor parts as they are reloaded onto a twin-engine Metro for destination unknown.

There is an annoying similarity to the now empty belly of the Caravan and my grumbling stomach as we head back to Oshkosh. This is Drew's life five days a week, arriving home each night on the back side of midnight. He flies the same route to the same airports with the same cargo. The only change is

the weather. This is the career path he chooses to pursue, for the time being.

But Drew's passion is building airplanes. The only thing I find missing on the Caravan is a bumper sticker that reads "My other plane is a Waix." The rear interior cargo bay of the Caravan could comfortably hold Drew's homebuilt, sans wings of course.

When I first laid eyes on Drew's Apple Kandy Red Y-tail Waix, the first customer-built example by the way, I

had to resist the temptation to call 911 or reach for a nearby fire extinguisher because this baby is "red hot" in every sense of the word! In the air it resembles a flaming ball ripped deep from the center of the sun. The dagger-pointed flames on the wings and tail section are chameleon-like as they meld a multitude of brilliant colors—from bright red into green, orange, and copper—with each change in wing angle.

The dagger-pointed flames on the wings and tail section are chameleon-like as they meld a multitude of brilliant colors.



Mark Shable



Drew Waterworth

Drew built the Waiex in his single-stall garage.

Drew was born in southwestern Wisconsin and raised in a farming family. His interest in aviation would come much later, but his passion for building things sprouted when he was only 5 years old.

"My grandfather was to blame for my inquisitiveness," Drew said. "I used to tear apart anything I could get my little hands on, like radios, farm equipment, and tractors, just to see what made them work. They had all run perfectly fine before I tore into them, but what did I know? I was only 5 years old, turning wrenches as my grandfather stood behind me with a devilish smile."

When Drew was in the twilight of his teenage years he joined the United States Marine Corps, where he proudly served for four years. After the military, he enrolled in college and thought he wanted to be a teacher. That was until he took his first airplane ride.

"In 1997, after my good friend and aviation mentor Pat Purtell gave me a ride in his ultralight, I decided to buy an hour of flight time in a Cessna 150 to see if flying was something I might like to pursue," he said. "I started taking flying lessons from a World War II B-17 pilot named Larry Marks. Larry seemed to be more like a frustrated fighter pilot as he racked that little Cessna around the sky with a never-ending grin on his face. Two things happened to me that day. The first one was I knew I was really hooked on flying, and the second one was I realized that someday, someone was going to pay me to fly airplanes."

Drew shifted his focus and abandoned the thought of teaching children for a living. He quickly earned his commercial and flight instructor certificates and multiengine and instrument ratings. After graduation, he found a job instructing at the United States Air Force Academy, teaching primary flight to new cadets at Colorado Springs, Colorado. For the next two and a half years, Drew

A custom plane deserves a custom panel. Drew's features a Stratomaster electronic flight information system that contains both flight and engine instruments, and an AvMap full-screen GPS.

taught the fledgling pilots how to keep a T-41 (what the Air Force calls its 180-hp Cessna 172s) right side up and the wheel side down. Drew said he learned a lot of valuable lessons flying in Colorado but knew he didn't want to be a career instructor.

"I had always enjoyed weather flying, the real hard IFR stuff," he said. "I knew I didn't want to go into the airlines because I liked the single-pilot flying. I shifted gears again when I received a call from an old classmate—Mike Anderson (son of Vern Anderson, a longtime volunteer pilot for EAA) telling me there was a new air-freight business starting up back home in Oshkosh. The name of the company was Pacc Air, and I was hired as one of their pilots."

Drew soon found himself flying an Aztec loaded with bank mail, canceled checks, and anything else that would fit in the back. Drew also found his "dream job" as he flew one of the worst IFR routes in the nation, taking him from Iron Mountain, Michigan, across northern Wisconsin to Minneapolis, Minnesota. This was all single-pilot, IFR night



Drew Waterworth



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Bonnie Bartel-Kratz

A happy "freight dog," Drew flies a Cessna Caravan I by night, and the Waiex for play.



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Monnett's custom-built AeroVee 80-horsepower powerplant delivers 150 mph at 8000 feet in the Waix.

flying through ice, snow, rain, and a combination of all three. Drew stuck with it and eventually became Pacc Air's chief pilot. In that role he flies a more southerly route in the Cessna Caravan, but he found himself longing for flying low and slow in clear weather, enjoying the scenery.

"When I go to work flying over multiple states at 9,000 feet from point A to point B, it becomes kind of mundane," Drew said. "I wanted something that I could fly on a Saturday afternoon cruising along under 2,000 feet. There was nothing up high I wanted to see because the beauty was all below me."

Drew found a Soneri for sale on the Internet and thought it looked reasonable, but when he picked up the airplane, he found it to be in

pretty sad shape. The builder had modified the two-place homebuilt into a single-place tricycle-geared freak show with a fuel tank installed in the front seat and a heavy Corvair engine mounted up front.

"The owner said it would fly, so out of stupidity I wanted to prove him right," Drew said. "The CG was way off, and the engine was not finely tuned by any stretch of the imagination. Needless to say, I found religion on that flight—I did a lot of praying!"

Drew trucked the airplane home to Oshkosh and wanted to show John Monnett, the Soneri's designer and current Sonex Aircraft guru, his new pride and joy. Needless to say, John was not impressed. The Soneri was meant to be a light taildragger, and according to Drew, this metamorphosis of the airplane had the makings of a lead brick. Drew realized that in its current condition it was unsafe to fly.

"I thought a lot about what John had said about the hybrid Soneri," Drew said. "In less than four hours from the time I showed John the airplane, I took the wings, motor, fuel tank, interior, and airframe down to the tubes because I was determined to make it right, the way John had designed it in the first place. I mounted one of Monnett's Aero Vee engines.... This is the first airplane I had taken apart, and it was a huge learning experience for me," added Drew.

Drew had every intention of keeping the restored Soneri and had flown it only 10 hours when Monnett tantalized him with his new Waix. He quickly found a buyer for the Soneri and ran the short distance to the Sonex complex at Oshkosh's Wittman Regional Airport with cash in hand. Drew picked up his Waix kit on December 10, 2004, and immediately began poring over the plans and material in his single-car garage.

His typical day was spent getting up early, working three to seven hours on the Waix, and then flying freight at night. Drew soon found that building an airplane was not as intimidating as he thought it would be.

"The Sonex Aircraft designs are amazing," said Drew. "The airplanes themselves are simple and fast, not RV fast, but not RV expensive either. The builder support from the company is first rate. If I messed something up, I would head over to the factory and grab a new part. But first I had to listen to a small sermon from 'Father John' whereby he would show me how to fabricate the part the correct way. This was known as the 'Monnett way' of doing it," added Drew, tongue in cheek.

Drew was determined to fly his Waix as soon as possible. In the meantime he continued to pick the brain of its creator, John Monnett.

"Drew reminds me a lot of what it was like when I was a kid, building

Drew Waterworth

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Drew Waterworth

Drew credits Bodie Colotti, owner of Denny's Autobody in Columbus, Wisconsin, and Wes Waterworth (not pictured) for the Waieix's good looks.

and flying airplanes, but without the earring," Monnett said. "He is very energetic and focused, but he does not fit our demographic as far as customers go. He's young, a professional pilot, and enjoys sport flying. But more importantly, he likes to build, and in many ways it's how I feel. To me the flying is secondary, but the building is what drives Drew and I. I would like to find more customers like Drew, but unfortunately the lack of time, and money and family responsibilities take over when most wannabe builders are younger. So the majority of the guys building these airplanes are old like me.

"Seeing a young guy along with a well-built airplane sets a good example, especially when it's the first customer-built Waieix. But Drew's cus-

tom-built flaming hot rod shouldn't be a deterrent to a new builder who just wants a simple airplane to fly."

Drew stuck with the Monnett philosophy of keeping it simple and light by sticking to the plans—well almost. Drew wanted his Waieix to stand out from the crowd so he added one slight design change and a radical paint scheme.

"I was bored building one day, so I decided to spice it up a little and add a smoke system. I have about 45 seconds worth of oil smoke and trigger it with a switch on my stick. I know John likes airplanes that are loud and smoke, so I took it one step further with a paint job that would put some color back into his hair," added Drew with a smile.

Drew enlisted the help of his cousin Wes Waterworth and master painter Bodie Colotti, owner of Denny's Autobody in Columbus, Wisconsin, to paint his airplane. He chose the House of Kolor brand of

paint with Apple Kandy Red as his base color and figured the painting process would take three to four days, easy. He soon learned the 95 percent finished airplane he now owned was the easy part. The remaining 10 percent—known as the detail work—was the most time-consuming.

"I completed building the Waieix on January 10, 2006, and had flown it 20 hours just to work the bugs out," said Drew. "It was completed without paint, and after everything checked out okay, I took it apart so the painters could work their magic."

He and his painting companions created vinyl outlines for the flames, which Drew thought would alleviate the tedious and time-consuming taping process. But in his attempt at perfection, he and Bodie spent more than 13 hours preventing bleeding of the paint by making sure that wherever the flame crossed over a rivet head, they diligently cut around

the rivet with a knife. The result is stunning, as the straight lines of the flames are razor sharp. Drew estimates the entire painting process took more than 100 hours to complete, all of it in six days.

"Bodie and Wes deserve all the credit for the Waieix's good looks," said Drew. We all put in a lot of 15- to 16-hour days, but it was well worth it. The Waieix has one coat of primer, two coats of Cider red, three coats of Apple Kandy Red, and two coats of clear over the entire airplane. The chameleon-like changing flames are what really stand out," added Drew.




Although the bright red finished product stands out like a fireball with a mirror finish, the one design feature that has the most meaning to Drew is his N number—N612BW. The number represents a lasting tribute to a mother from a loving son.

"The N number represents my mother's birthday of June 12, and the

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Jim Koepnick

As if a really hot paint scheme on top of the first customer-built WaieX wasn't enough, Drew threw in a smoke system to boost the fun factor.


letters are her initials, Barbara Waterworth," said Drew. "Unfortunately, while I was building the WaieX, my mother was diagnosed with cancer and passed away before I could finish the airplane. That's why I dedicated the airplane to her."

When the paint finally dried, Drew reassembled his WaieX and found the paint added only about 20 pounds to his total empty weight of 650 pounds. He installed the 80-hp Aero Vee engine up front that swings a 54-inch black Sensenich propeller, for a respectable cruise of 130 miles per hour. To monitor the engine performance, Drew installed a Stratomaster screen that contains both flight and engine instruments, including dual head temps, dual exhaust gas temps, vertical speed, airspeed, altitude, fuel, and rpm. To further assist him in his navigation while he watches the countryside below, Drew installed a panel-mounted full-screen AvMap GPS.

Drew also claims the tinted canopy gives him a much-appreciated greenhouse effect in the frigid Wisconsin winters and a somewhat shielded effect from the summer sun.

So what did it cost this "freight dog" to build his airplane, and what does he do with it?

"I have about \$35,000 in the airplane right now," said Drew. "I pay \$1,450 a year for insurance and a full-hull replacement value of \$50,000 on the WaieX. Ninety percent of my flying is by myself, always under 2,000 feet chasing smoke rings in the sky. The other 10 percent of my flying is done with my wife, Sarah, who has a calming effect over me. She is the brains and beauty behind the airplane and more than once kept me focused when I was the most frustrated. She really likes to fly and show off the airplane with me," added Drew.

So the next time you're out flying and you see what appears to be a flaming, smoking meteor hurtling your way, don't panic. Just smile and wave, because it's probably Drew taking his wife out for dinner somewhere. 

MAKE & MODEL: Sonex WaieX
N-NUMBER: N612BW
CERTIFICATION: Amateur-Built Experimental

LENGTH: 17 feet 7 inches
WINGSPAN: 22 feet
HEIGHT: 72 inches

MAXIMUM GROSS WEIGHT: 1100 pounds
EMPTY WEIGHT: 650 pounds
FUEL CAPACITY (gallons): 16 U.S. gallons
SEATS: 2

POWERPLANT MAKE & MODEL:
AeroVee 80 hp 2180
HORSEPOWER: 80 hp
PROPELLER MAKE & TYPE:
Sensenich 54 inch FP

CRUISE SPEED/FUEL CONSUMPTION:
130 mph at sea level, 150 mph at 8000 feet,
5.5 gal per hour
POWER LOADING: 13.125—Positive load is
+6.0 Gs, Negative load factor is—3.0
WING LOADING: CG limits are 25-29%
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