



RED JENSEN

MASTER UAS TECHNICIAN



Lexile Ranges

Level 1: Less than 810

Level 2: 810-1000L

Level 3: 1010-1200L

Level 4: 1210-1400L

Level
4

Robert “Red” Jensen is one of those NASA aeronautical innovators that does a little bit of everything.

Officially, Red is the Master UAS Technician for NASA’s Armstrong Flight Research Center, which is located at the famous Edwards Air Force Base in California. UAS is short for Unmanned Aerial Systems, which is a fancy name for unpiloted aircraft most people these days just call drones. And that’s exactly what Red spends a lot of his time building, flying and otherwise tinkering with to help NASA learn all it can about operating drones in the increasingly crowded skies.

Red also is an Operations Engineer and Chief Pilot of subscale UAS aircraft, and he’s responsible for drone pilot training and certification for researchers at Armstrong and NASA’s Jet Propulsion Laboratory in Pasadena, Calif.

Red’s base of operations, his home away from home, is the Armstrong Model Lab, just a short walk from the edge of Rogers Dry Lakebed, the historic desert sheet of clay where some of the most iconic aircraft in aviation history took off and/or landed – including Chuck Yeager’s

X-1 (the first plane to fly faster than the speed of sound), the X-15 rocket plane (an airplane capable of reaching the edge of space), and the Space Shuttle.

Step inside Red’s domain and you will hear 3D printers buzzing in one corner, and see shelves full of small drones from past and current projects packing the walls. On those same shelves, you might find assortments of wings, rolls of high-tech composite materials on a towering stand (much like what teachers use to hold butcher paper), and a variety of aeronautical research projects at every stage of development.

Also filling the lab are other members of Red’s team – technicians and university interns – who are most likely hunched over projects, or discussing among them what’s next for a particular aircraft test. It’s the kind of place that when you walk inside, the ambience can’t help but inspire you to look for an available screwdriver, strap on a pair of safety glasses, and join in by getting busy with some hands-on work. You might think that a guy like Red, who is responsible for so much, and who works with cutting-edge aviation flight test programs for a complex organization like NASA, spent years



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in school earning advanced degrees while writing peer-reviewed academic papers for the most prestigious engineering colleges in the nation.

You would be wrong.

It's an important truth about life: Not everyone attains their career goals, their dream job, by taking the same path. Yes, many who work for NASA do follow the more typical route of high school and college, perhaps with a summer or two spent working as an intern. For most, that kind of rigorous schooling is the best way to be properly trained for careers in science, technology, engineering or math. Of course, others might graduate from high school, skip college, and spend a few years working while trying to figure out what career path they want to take and how best to achieve it. For Red, it was a case of following his own unique journey, bypassing the traditional college-to-career track, encountering a few twists and turns, but never straying far from his love of flight that started at a young age when he flew model airplanes.

Red was always interested in building things and figuring out how things worked. Like

many young people with those interests, he saw himself as growing up to become an engineer. That made the most sense to him. But after getting accepted into an intern program, he found that a formal engineering program just wasn't for him. He needed a different option for engaging his passions about flight. Meanwhile, there still were bills to pay, so Red took jobs where he could find them. At one point, he swept floors in an auto body shop, then began to apprentice in the auto paint shop. With a good eye for detail, and relying on what he had learned about painting radio controlled (RC) airplanes, he soon became an expert at custom paint jobs on cars, and in working with specialized paints.

At the same time, he kept proficient with his hobby of flying RC planes, an interest that also kept him frequenting his local model shop for parts and other supplies. Red soon established himself there as a beloved customer, and often struck up enthusiastic conversations with the model shop's owner. The two became such good friends that when the elder owner decided to retire, he offered Red the chance to purchase the model shop – which Red did!



Running a small business, even one as dear to him as a model shop, wasn't exactly a role – or a career – Red had envisioned himself doing, but it was a chance for him to chase a new direction for his life. With some money coming in, and not being one to sit still for too long, Red went through pilot training and earned his private pilot's license.

At the same time, he started to work as a test pilot for a company that built drones, and wound up working there ten years while he also continued to own and manage his model shop. As a drone test pilot, his position sometimes required him to fly vehicles at Armstrong, which allowed him to get to know the people there – and for the people there to get to know him. His expert model making skills soon became evident. So, when an opportunity to join the NASA team as a government contractor, and get paid to do the very thing he loved most came along – well, it turned out he was in the right place at the right time to start a new career working at one of the most revered places in aviation history.

Today, Red oversees many different projects that find their way through the Armstrong Model Shop. He also manages the technicians and ever-changing corps of student interns who come from universities near and far for the chance

to help NASA. And all of them have never been busier. With millions of drones offered as holiday presents each year, and major companies wanting to deploy their own fleets of unmanned aerial vehicles for all sorts of purposes such as package delivery, new drone-related air traffic control systems and aircraft designs must be designed and tested. The drones needed to support that research often falls to Red and his team at Armstrong to build.

At any given time, there are about 20 different aircraft in the Model Lab. Some are so small you can hold them with one hand, while the largest can weigh more than 200 pounds and have wing spans more than 20 feet long. Some are small scale models of proposed aircraft designs that aren't ready yet to be built full size. Test flying these smaller scale models is less expensive than building a full-sized airplane, which may or may not have some new design features that engineers are not ready to risk flying with a pilot on board until they prove it's safe.

All of this activity means it is an exciting time for anyone interested in aviation, and Red is thrilled to be a part of it. He counts himself lucky that his education and career choices gave him the hands-on skills, experience and opportunity he needed to land his dream job at NASA's premier flight test center.

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