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Parapalegic pilot earns wings — and the respect of his peers

JANUARY 5, 2015 BY [MEG GODLEWSKI](#) — [10 COMMENTS](#)

Learning to fly is challenging for most people. You have to get the money together and put in the time, overcome learning plateaus, and weather, and equipment challenges. Scott Miller from Albia, Iowa, had an additional challenge on the path to getting his wings — he is in a wheelchair.

Miller's journey began in 2006 while serving in the National Guard. He was riding his motorcycle home from a military drill in Des Moines, when he hit a pothole and crashed. The accident broke his back, paralyzing him from the waist down.

While the accident changed Miller's life, he said it also made him appreciate life more. "I don't take anything for granted," the 25-year-old notes.

Despite the life-altering accident, Miller continued with many of his favorite activities, including an appreciation for motorcycles.



In 2012 he attended the annual [Sturgis Motorcycle Rally](#) in South Dakota. While there, he learned about a friend's father, who runs an air ambulance company and, like Miller, is in a wheelchair.

"He wasn't paralyzed his whole life either," says Miller. "He became paralyzed in an airplane crash in the 1970s. When I heard he continued to fly, I knew I could do it. One of his pilots took me up in a Cessna 152 and after that I was hooked."

Because he was injured while on duty, Miller was eligible for vocation rehabilitation paid for by the Veterans Administration.

Miller used his veterans benefits for flight training.

He got in touch with Jane Berg, who at the time was the chief instructor at **Indian Hills Community College** in Ottumwa, Iowa. The college has a Part 141 professional pilot program.

“It was less than two weeks before the fall term was set to begin,” Miller recalls.

According to Darren Graham, who now holds the title of chief flight instructor/aviation program director at the college, Miller’s education was a team effort.



“We started asking ‘what will it take for us to make this happen for him?’ The whole flight department was involved,” says Graham.

Because Miller does not have the use of his legs — and therefore cannot control the

rudders or brakes with them — it was necessary to find hand controls approved for aviation use. A search of the Internet proved there was a set approved by the FAA through a Supplemental Type Certificate, however, the controls were no longer being manufactured.

According to Graham, Bill Kyle, an aviation expert in Charles City, Iowa, was able to reverse engineer the controls from the still-valid STC. The VA paid for the hand controls.



“That took about three to four months to make them,” says Miller, but rather than waiting to begin his flight training he decided to begin training in the school’s Redbird FMX flight simulator configured as a Cessna 172.

The benefit of the Redbird, which is a motion simulator, is that the instructor has the ability to stop the “aircraft” in mid-flight by pressing the pause button, and if there is a challenge, the aircraft can be reset. This allows student pilots to practice maneuvers such as landings, stalls and turns, over and over again without having to take the time to re-enter the pattern or climb to a particular altitude.

With assistance, Miller was able to climb into the Redbird to do the training.

“He logged about 18 hours in the Redbird,” says Graham. “He worked through the Jeppesen Private Pilot syllabus up through lesson six, which includes slips to a landing, go-arounds, crosswind takeoffs, approach and landings. We were getting Scott what he wanted and he was getting more proficient.”

Although the FARs only allow 2.5 hours of his time in the sim to count toward the 35 hours he needed to qualify for his Private Pilot ticket through the Part 141 program, Miller says he benefited greatly from the experience in the Redbird.

“I was able to learn the maneuvers and get proficient,” he says. “We did everything in the Redbird: We did the instrument flight, we did the night flight, everything. So much so, that when I finally got into the airplane, everything was a no-brainer.”

In the meantime, Miller applied for his aviation medical certificate. Ironically, the fact he is in a wheelchair was not an issue — it was a history of kidney stones that delayed the issuance of the certificate.



When the hand controls were ready, they were installed in the airplane. The special controls consist of two bracket clamps that attach to the pedals.

“They install with a few bolts,” Miller explains. “They hook onto the pedals so there is a stick that comes up. By moving the stick left and right, I can control the rudders. When I push the stick up it applies the brakes.”

Once he had the controls, Miller moved out of the Redbird and into the Cessna. He has a wheelchair that he breaks down and carries with him during flights away from the airport. For local flights he leaves his wheelchair on the ground. He does require some assistance with the preflight inspection as he cannot climb up on the wing to check the fuel or reach the oil filler neck in the engine from his chair.



The next challenge was meeting the requirements for the private pilot checkride and finally, finding an examiner who would provide the ride.

Here communication was key, says Miller.

“Because of the hand controls, I have to handle the controls a little differently and I explained to the FAA examiner what I was doing and how I was doing it so he would know exactly what to expect,” Miller explains. “I was able to do my SODA (Statement Of Demonstrated Ability) ride and checkride all at once. It took about an hour and a half.”

Miller passed his checkride Nov. 25.

Graham notes that Miller was an inspiration to the students, as well as staff, at the college.

“Working with Scott has been a joy. He always has a good attitude about him. He reminded us that a lot of us take things for granted and we shouldn’t. We never hears

Scott complain and he always did what he was told. He was an inspiration to a lot of the students.”

Now that he has his private certificate in his hand, Miller has started making plans for his aviation future. He’s thinking about making a few cross-countries. He plans to attend the annual [Antique Aircraft Fly-In](#) at Blakesburg, Iowa, and is also toying with the idea of heading to [AirVenture](#) one day.

There’s also some thought being given to buying an airplane of his own. “I’m thinking about a low-wing Piper model,” he says.

Please share:



Meg Godlewski

Meg Godlewski is GAN’s staff reporter and a Master CFI.

Comments



Gary Ervin says

JANUARY 6, 2015 AT 1:54 PM

The pictures of this hand control appear to be replication of or a slight deviation of the old Union Aviation hand rudder/brake controls.

The Blackwood Mark I hand rudder control which is no longer in production worked beautifully on Piper Cherokees up through 1973. The control itself was STC’d for PA-28 series which covered everything from the 140 thru the 235. It also worked on the

Commanche series, but was not STC's for that group which means getting as STC for a specific plane (usually an owned aircraft). The contact person in Charles City is probably familiar with the Blackwood control and it can be utilized on post-1973 models without extensive modification.

The low wing Piper was much easier to access and fuel and oil checking could be performed from from the wheelchair.

[Reply](#)



Chad Colley says

JANUARY 6, 2015 AT 1:17 PM

Congrats Scott!

I've been wheelchair aviating since 1969 following injury in VN. Back in the olden days there we only a few options available. The quickest and easiest was an Ercoupe which I bought and flew until I had more family than airplane. Moved into rented PA-28s because the "Blackwood" hand control was available for purchase. The Union control you use is very intuitive. Want to bank left ... move the control left etc. Not so with the Blackwood. Mounts on the left rudder peddle on the co-pilots side. Want to bank right in a PA-28 lift up on the control. Go left, push down on the control. With the Union control you can control the rudders and throttle at the same time. Not so in the Pipers. Fly enough and you will eventually need the ability to control both. Believe me on that!. Same oh same oh for rudder control and hand brake in a Pipper.

The Union control you have will work (with the proper STC paperwork) with every Cessna from the 152 to a Skymaster. If you want the easiest A/C to enter, you need a flight in a Cessna Cardinal. I owned one for 12 years and (we gimps adhere to a higher standard) taxied away from every landing I ever made. Wider, faster and arguably one of the sharpest looking A/C to come out in the 60s, 70s or 80s. Getting into a 152/172 is a gymnastic event for us. The Cardinal has a 4 foot door IN FRONT of THE MAIN GEAR. Peace of pie to load yourself and your chair without a

soul in sight.

The Cardinal will allow you to fly completely independent of assistance if that is your desire. As a triple amp I used a tug to open hanger doors and pull the bird out. Preflight completely except for eyeballing the wing tank. 90% of my flights didn't require anything near 60 gal. I ran out of bladder long before fuel.

The Cardinal Club is a fantastic resource for all things "Cardinal". Go online and ask if a Cardinal owner is close enough for you to coordinate a flight see. We're pretty good about that. He or she may even show you the secret handshake if you don't pee the seats.

Chad

[Reply](#)



rraty says

JANUARY 6, 2015 AT 12:39 PM

I own an Ercoupe, a plane designed in the 1940's without rudder pedals. The idea of no rudder pedals never caught on (the plane flies fine, but I guess real pilots need rudder pedals even though they tend to get themselves in trouble with them). The Ercoupe would be an ideal plane for a person that can't use their legs, no modifications would be required. Many qualify as light sport also. It is low wing, so entry could be a little more difficult, though.

[Reply](#)



Michael Dean says

JANUARY 6, 2015 AT 1:37 PM

I actually earned my Sport Pilot license in an Ercoupe. I love the way it flies. Plus "top down" flying, in the summer, is as close to open cockpit as you can get in spam-can airplane. (I guess, technically, it is open cockpit, isn't it?)

But getting in & out is a bit of a struggle. And I have some use of my legs. I had polio in the late 50's. I have some movement, and full feeling, in my legs. Just not enough muscle to be able to walk. I don't know if it would be any more of a struggle for a paraplegic. But it's certainly worth a look.

And non-SLA Ercoupes (D models & later) can be had at a pretty attractive price. There's more of a demand for the C & C/D models, because they're LSA. So they tend to run a bit higher. But still reasonable.

[Reply](#)



Michael Dean says

JANUARY 6, 2015 AT 12:13 PM

Scott? As another "wheelchair" pilot, allow me to suggest staying away from the low-wing Pipers. Not that they are bad airplanes. It's just that your hand controls not work in them. (Your controls is copied from the "Union" controls. whereas the Pipers use the "Blackwood" controls. Also no longer being made.) And getting in & out is a major PITA. I have about 6 hours in a Cherokee 140. It flew fine. But climbing over the wing, then over the right seat, to get into the left seat, was not fun.

You might want to think about a Cessna 177 Cardinal. Not only are the Union controls already STC'd for it, but it has large entry doors, on both sides, that make getting in & out a snap. (Relatively speaking, anyway.) There's no wing strut in the way, either. Don't quote me on this, but I think it has a lower seat – in relation to the ground – than the C172, also. Sure seemed like it to me, anyway.

[Reply](#)

Leonardo says



JANUARY 6, 2015 AT 8:35 AM

Beautiful story! thumbs up Scott!, on a separate note will be good to do the article less “commercial”...

[Reply](#)



Don Purney says

JANUARY 6, 2015 AT 8:13 AM

Congratulations!

I once had a student that used the exact same type of control that you have. His control had an adjustable ring at the end of the handle that he could put his arm through. This allowed him to adjust the throttle with his hand and simultaneously work the rudders by moving his forearm from side to side.

His story does not have a happy ending however. The local FSDO seemed to work overtime to put obstacles in his way and his SODA ride ended after just two minutes in the cockpit when he was unable to operate the emergency fuel cutoff.

[Reply](#)



Lloyd says

JANUARY 6, 2015 AT 7:48 AM

Gee that's a gutsy effort mate, shows what determination and persistence will do, well done Scott.

[Reply](#)



Hugh says

JANUARY 6, 2015 AT 7:30 AM

Scott, Well done. I lost my lower right leg shortly after I was discharged from the Army in 1973. I had just about finished PP training but hadn't yet taken the test. Not being able to walk for some time, no job and a long rehab I shifted course and went to A&P school for 2 years. I no longer pursued a Piloting career but never lost my desire to fly so, just before I retired in 2008 I went back and finished, got, SODA, PP rating and bought a PA-28-180; I also own 2 Ercoupe's, both in long term restoration. I am enjoying my journey and hope you are doing the same. Hugh

[Reply](#)



Sharon Tinkler says

JANUARY 6, 2015 AT 6:10 AM

See you at Blakesburg, Scott!

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