Southern California is Still TOPs for Thrill Rides!

Karen Vaughn, AEM

"November Two-Zero-Three-Seven-Tango cleared for launch on two-two-right. Break. Winch. Whiteline. Whiteline!" After a three-count, the mile-long cable goes taut, and I am forced back into my seat as the 340 horsepower turbo diesel revs us. Less than a second later, the Schweizer SGS 2-33 is airborne at 40 miles per hour. Maj. John Chapman slowly pulls back on the stick.



Glider at about four seconds after launch. Photo credit: Capt. Jeff Vaughn

"100 feet…"
"200 feet..."
"300 feet..."
We are now pulling G's at a 40-degree angle, but it feels like we are pointed straight up.
"400 feet..."
Less than a minute later, we release at 1400 feet over the other end of the runway. Wow. I have to catch my breath.

For Civil Air Patrol (CAP) cadets and senior members this happens about 400 times per year at Los Alamitos Army Airfield (KSLI) in Orange County, California, but I was the first CAP Aerospace Education

Member (AEM) to experience it as a Teacher Orientation Program (TOP) ride. CAP Los Alamitos Glider Training Squadron 41 is one of only a handful of units in the U.S. that uses a winch to launch gliders.

Squadron Commander Maj. John Chapman discussed the objective of CAP glider training. He explained that glider flying is the most cost-effective way for CAP to train pilots. The squadron's primary purpose is to provide orientation rides and initial flight instruction for cadets. To support that mission, the squadron needs senior members to instruct, operate equipment, and generally run the program. When the cadets have all flown, any remaining flight time is used to train seniors. Flight instruction is open to all CAP cadets and regular seniors for a small fee per flight. The instructors are all volunteers.

Squadron 41 personnel include seven glider flight instructors (CFI-G), three CAP check pilots, four orientation ride pilots, two ground school instructors, three tow plane pilots, four winch operators, and several trainees. Besides the glider and winch, CAP recently supplied the squadron with a flight simulator through the Aerospace Education STEM kit program. Plus, several members are building their own glider simulators.



Learning to fly on the CAP STEM Kit Simulator. Photo credit: Capt. Jeff Vaughn

Lt. Col. Stanley Clark informed me that a TOP ride was available, and I had the option of riding in a glider or a powered plane. I chose the glider. On Tuesday, April 16, I met with Sq. 41, at the CAP building at Los Alamitos Joints Forces Training Base. Due to severe winds, glider operations had to be canceled that day. Nonetheless, I stayed very busy on the simulators.

The squadron simulator is run by 2nd Lt. Yama Yaqubi, who explained that the average interested cadet is very tech-savvy and can significantly improve their glider skills using a simulator. Using the CAP STEM Kit Simulator, I was able to try both a winch launch and an aero-tow off of the simulated Los Alamitos Army Airfield and quickly learned how to land the glider.



Flying the tandem simulator with Maj. Allen. Photo credit: Capt. Jeff Vaughn

I also tried a two-place glider simulator being built by Maj. Ronald Allen. His plan is to make this simulator truck portable, allowing a cadet to virtually fly the O-ride or lesson in the simulator while waiting to fly in the glider. This is a dual-controlled, tandem-configured simulator that uses the Condor II simulation package. It's truly a sight to behold. My lesson was short, but very effective, since Maj. Allen was instructing from the back seat as is done in practice.

During my debrief, Maj. Chapman reiterated his goal that the simulators become a vital component to the success of glider instruction. "A glider cockpit is a poor classroom. In the simulator, you can practice and see what happens several times."

On Tuesday, April 30, I returned to Los Alamitos for the practical part of my TOP flight experience. After signing in, I was briefed by Maj. Chapman,

and then I went with Capt. Jeffrey Vaughn to preflight the Schweizer 2-33. From its general appearance, down to the cotter pins and bolts of the ailerons, we thoroughly inspected the workings of the glider. Lt. Col. James Welliver explained the winch operation. He, Capt. Robert Littlefield, and 2nd Lt. Richard Miller were in charge of transporting and operating the winch.

Another truck was responsible for transporting the pop-up tent, tables, chairs, and supplies (safety vests, radios, water, first aid, tool box, etc.) for the Glider Operations Desk (Glider Ops) and for towing the glider to the active runway. After our safety briefing, 2nd Lt. Thomas Rooney drove the truck towing the glider. Wing Runner Capt. Vaughn communicated and walked with the glider holding the nose, while CAP members took turns holding the wing as we walked the glider to the runway.



The winch operating crew (l to r) Capt. Robert Littlefield and 2nd Lt. Richard Miller. Photo credit: Karen Vaughn

After walking about a mile, the glider was detached and turned around. Next, we set up Glider Ops. Capt. Ronald Hodge was Safety of Flight, and he logged the flight stats and ran the show. Meanwhile, 2nd Lt. Rooney drove to the winch and brought the cable down the runway, while Maj. Donald Myhra remained at the CAP base monitoring the radio and flight operations.



2nd Lt. Han Lee of Sq. 150 holds the cable for inspection by Maj. Chapman as part of the pre-launch checklist. Photo credit: Capt. Jeff Vaughn

My flight mission was slated first. Once we were secured in our seats, Maj. Chapman reviewed the pre-flight checklist, the various gauges, controls, early rope break procedures, and the basic flight maneuvers we would do. We both okayed the condition of the winch cable loop and tested the release mechanism. Maj. Chapman then obtained his launch clearance from Los Al tower. We were now ready to launch, "*November Two-Zero-Three-Seven-Tango cleared for launch …*"

After the cable was released, we leveled the glider and checked our location, airspeed, and direction. Then I took it all in-- the landscape, the San Gabriel and Santa Ana Mountains, the Pacific Ocean, the clouds, the blue sky. It was simply beautiful. But I couldn't laze in the magnificence surrounding me. Maj. Chapman gave me the controls for a couple minutes and had me do the maneuvers I learned on the simulator. As we descended to 1000 feet, Maj. Chapman took over the controls. Communicate with the tower. Check air speed, altitude, and direction. Is



Glider at about six seconds after launch. Photo credit: Capt. Jeff Vaughn



Glider on short final for landing. Photo credit: Capt. Jeff Vaughn

the runway clear? Engage 25% brakes. Turn base leg. Square up with the runway. Engage 50% brakes. Turn final. Level the wings. Check altitude. Look at runway end. Apply full brakes. Let the bird sink. Release brakes some. Touch down. Roll out. Skid. Stop. Wow!



Glider on roll out after a perfect landing. Photo credit: Capt. Jeff Vaughn

Then we did it again! Once aloft, I did some turns while trying to maintain my airspeed.

After exiting the glider, I went to Glider Ops to get the next passenger, and three cadets were now waiting for O-rides. While waiting, they practiced on Maj. Allen's simulator nearby.

My full TOP glider experience was just amazing. The program is amazing. No fewer than 12 senior members were directly involved to make the glider operations run smoothly that day, and they operated like a well-oiled machine. Wow.

I encourage you to talk to your squadron leaders about taking a trip to SoCal and getting TOP-rides or O-rides in a glider with the incredible members of Squadron 41. Go ahead. Experience your own WOW! Contact them at http://sq41.cawgcap.org/