



EAA Chapter 52 Sacramento CA.

November 2019 Edition

Fiber Optic

By, Cedric Hughes

The small plane hit the narrow grass strip with a sharp *thud*. The approach had been high and we had overshot the runway. I felt my hands tighten around imaginary straps and my knuckles go white as my dad and I rushed closer and closer to the looming oak tree in front of us. *100 feet away. 50 feet away. 20 feet away. Stop.* My eyes unclenched as we lurched to a halt under the shadow of the wooden giant. I looked to my left at my dad who had flown us up to a small meadow in the Berryessa hills in a Kitfox. He seemed unfazed by our narrow miss. "See, nothing to worry about," he remarked jovially. We had reached Fiber Optic.

Two hours prior, my dad and I had climbed into the cramped cockpit of the Kitfox, ready to paint the sky with its shining red fuselage. This was the day that we would be flying up to a secluded patch of heaven in the hills known only to a few rugged pilots as Fiber Optic. We climbed up through the crisp December air and journeyed out over the farmland of the central valley. My mom, flying with one of my dad's friends, was ahead of us in another Kitfox. After cresting the mountains that embrace Berryessa Lake, we descended down into the small meadows and valleys of the mountains, peering down on the valley below us. Our approach followed a few minutes of circling, looking for the secret meadow amongst all of the other nooks and crannies. After our precarious landing, I stepped out of the plane and wandered to the edge of the meadow. Looking down on the lake, I stretched out my arms and let the surrealness of the mountains wash over me; another stretch of California taken in.

I walked back toward the growing encampment of planes. More of my dad's flying friends had arrived. We all set up for our picnic under a rusting old sign that read: *Danger! Buried*

Fiber Optic Cable! After lunch, I began exploring the meadow. It was riddled with old farming equipment, long-forgotten tools, and even a stone bathtub. One of the plows was branded with a year: 1890. We had landed on one of California's early homesteads. Fiber Optic offered endless enjoyments with its small hills to conquer and meandering streams. The meadow's seclusion had preserved it for the few daring pilots bold enough to descend among the trees. After an hour or two of lazy wandering, my family and I returned to the plane. Along with lunch, we packed two young oak saplings that had sprouted in our yard; perfect for the Berryessa hills. We took them out to the edge of the meadow and, using sticks and rocks, planted them into the fertile California soil.

As my dad and I took off, leaving Fiber Optic, I looked back. I saw out of the corner of my eyes the two saplings. One day I will return, and when I do, I hope to find my two oak trees melting into the Berryessa hillside.

Efficiency: Lound and not Proud

By, Dave Hirschman (AOPA)

I recently attached video cameras to a Cessna 180 Skywagon equipped with a large-diameter "seaplane prop" set to maximum rpm and recorded both its performance and decibel level. With the propeller knob full forward and wide-open throttle, the Skywagon's takeoff roll was 620 feet and lasted 14 seconds. Once established in a 75-knot climb, it ascended at 1,100 feet per minute, took 1 minute 50 seconds to go from brake release to 1,000 feet agl—and the sound beside the runway was a screaming 98 decibels. Then, at pattern altitude, the pilot reduced engine/prop rpm to 2,500 as per the pilot's operating handbook.

But what would happen if the pilot set 2,500 rpm on the ground and then went to full throttle for takeoff? Would performance suffer?

On the next two takeoffs, the pilot did just that—and his takeoff roll was 20 feet shorter and three seconds quicker, his rate of climb was 150 feet per minute higher, and time from brake release to 1,000 feet agl was reduced by more than 20 seconds.

Oh, yeah, and the noise near the runway dropped 10 decibels.

Klaus Savier, founder of Lightspeed Engineering and designer of multiple aircraft speed modifications, said

all airfoils—including propellers—see a sharp increase in drag as they approach the speed of sound.

“The drag rise on propeller tips starts at about 0.84 Mach and goes up sharply from there,” he said. “The loss of efficiency is dramatic.”

Engine horsepower increases with rpm, but as propeller tips approach the speed of sound, the amount of thrust they produce drops off rapidly.

“It doesn’t do any good to add horsepower if you’re losing propeller efficiency as a result,” he said. “That’s a losing proposition.” Large-diameter, two-blade propellers on direct-drive engines are the most susceptible to high tip speeds. Think Cessna 180s and 185s, T-6s, and old Beechcraft Bonanzas.

Reducing rpm at high power settings can have negative consequences, even in normally aspirated engines. In extreme cases, high manifold pressure and low rpm can cause detonation or preignition that could damage or destroy engines. Check with your engine manufacturer to find out whether your airplane’s engine is capable of safely operating at less than full rpm.

If so, you may find that flying quieter brings better performance, too.

Young Eagles Pilot Named Sport Class Rookie of the Year in Reno By, EAA National

October 10, 2019 - Former Young Eagle and current Young Eagles pilot Joe Coraggio of Glendale, Arizona, was named Sport Class Rookie of the Year at the STIHL National Championship Air Races in Reno, Nevada, in September.

Joe, EAA Lifetime 563242, started hanging around at Capitol Airport in his hometown of Brookfield, Wisconsin, at the age of 12. Pilots there dubbed Joe the ramp rat, and he honored that nickname by calling the race team he went on to start Ramp Rat Racing. Joe was inspired by everything he saw at the small suburban airport, including homebuilt airplanes.

He went on from Brookfield to earn a degree in aerospace engineering from the University of Minnesota and start his career as a pilot. Joe has been a

pilot and certificated flight instructor for nearly 20 years, with 13 of them as a commercial airline pilot. He currently flies the Airbus 319, 320, and 321. Joe has more than 10,000 flight hours in more than 80 different types of airplanes.

After being inspired earlier by homebuilts, Joe built his own airplane — a highly modified Long-EZ that he named Betty. He also owns a Lancair Legacy that he races in the fiercely competitive Sport Class at Reno.

He is a longtime EAA volunteer and a second generation Young Eagle. Since Joe's Young Eagles flight, he has dutifully passed it on and provided more than 85 Young Eagles flights to young people.

Leading up to his first STIHL National Championship Air Races competition, Joe spent many hours in Arizona with fellow race pilots, practicing formation flying and a variety of simulated emergency maneuvers. He was accepted into the 2019 Pylon Racing Seminar, a prerequisite to participating in the National Championship Air Races. He earned his Sport Class Race Pilot Certificate in June.

In Reno, Joe recorded a speed of 274.386 mph, to qualify for the pole position for the first Sport Class Bronze Heat. Flying the 6.7757-mile Sport Class course, Joe completed Heat 1C with a total of six laps in 09:01:402 at an average speed of 274.720 mph, taking first place and bumping him into the Sport Class Silver Heat. Joe finished the week placing sixth in Sport Class - Silver with an average speed of 278.337 mph.

"Our deceased friend and former Sport Class racer Lee Behel was quoted as saying that he raced because he wanted to live life as a participant, not a spectator," Joe said after his race experience. "His words are what inspired me to put in the work and gain the skills to be able to race. Flying at speeds nearing 300 mph 50 feet off the deck was fun, educational, and extremely humbling."

Joe thanked sponsors and partners BendixKing for the avionics equipment it provided for the airplane, Air Capital Insurance LLC for supporting the team's insurance needs, and Plane Schemer for the logo and graphic arts needed for the team.



EAA CHAPTER 52
CHRISTMAS DINNER
Saturday, December 14^h, 2019

Aviator Restaurant

6151 Freeport Blvd, Sacramento, CA

Buffet

Tri Tip

Herb Roast Chicken with Bread Dressing

Scallop Potatoes and Green Beans w/ Bacon & Onion

Tossed Mixed Salad, Rolls and Butter

Peach Cobbler

Choice of Drink

(Cider, Soda, Tea or Coffee)

\$30.00/Person (Includes Tax & Tip)

Schedule of Events

2:30pm to 3:30pm Social Hour

3:30pm to 5:00pm Dinner

5:00pm to 6:00pm Gift Exchange

(Bring Gift \$15.00 Minimum)



PLEASE RETURN THIS PORTION WITH YOUR CHECK MADE PAYABLE TO: EAA CHAPTER 52, P.O. BOX 15743, SACRAMENTO, CA 95852-5743

Name _____ Number of Guests _____

X'S \$30.00 = \$ _____

PLEASE RETURN NO LATER THEN NOVEMBER 29, 2019

Calendar:

2019 is Wrapping Up!

NOVEMBER

12 Nov, Board Meeting

26 Nov, Gen Meeting, Election

December

7 Dec, Christmas Party

10 Dec, Board Meeting

A Message from the Editors:

The Wing Flap has a website! We made this for the chapter so more members can get involved with the Wing Flap. If you have photos from an event or want to write about anything aviation, it will be included in future Wing Flap editions. The website is <http://bit.ly/WingFlap> and it includes previous Wing Flap editions as well. Thank you and see you in the sky.

Thank You,

Carson & Cedric

(FIRST DAY AS A PILOT...)

CONTROL

**TOWER: Can you give me
your position?**

**ME: I'm next to a cloud that
looks like a lion.**

CONTROL

TOWER: Can you be more specific?

