



SERVING THE SACRAMENTO COUNTY SHERIFF SINCE 1941

# Sacramento County Sheriff's Air Squadron Newsletter

THIS MONTH'S MEETING

## First flight:

### Remembering the first taste of aviation

Taking a young child for their first aircraft flight is a terrific experience.

Last month I had the joy of taking **Felix**, young son of our bookkeeper, for a first ride. I think it will be a memorable experience he will never forget.

And the flight brought back to me my first 1966 ride in a general aviation aircraft. I was excited and a bit nervous. We departed from Chicago's Midway in a C152. Minimal avionics, lousy seats and no intercom. It was wonderful!

When Felix and I began to move down the Sac Executive runway, I watched as he looked out the side window. His face showed a mix of excitement and wonder. As we climbed higher into the sky, he couldn't believe the sight and with a bright sun and cotton-candy clouds, his excitement grew.

We flew a Bay Tour route which included a pass over the Golden Gate Bridge and then a turn toward the North Coast passing directly over Stinson Beach.

Felix talked to me about the noise of the engine – which in a C182 is loud – and the feeling of moving through the air.



For Felix, the flight ended all too soon. As we landed the experience of flying on an airplane for the first time left a lasting impression on Felix and me.

It was something I hope Felix will want to do again. And for me it was a thrill to see a young child's reaction to the wonder and excitement of aviation.

**Dale Terry, Newsletter Editor**

### Tedd Stiles

Pilot Mentor - Military & Commercial

July 17<sup>th</sup>, 5:30 pm

Squadron Headquarters KSAC



Tedd is a past United Airlines Flight Officer, piloting as Captain B-737, B-727, B-777 and B-747 jets.

After leaving United, he was a corporate pilot flying Cessna Citations and King Air aircraft.

Now, Tedd mentors pilots who are seeking "Dream Careers" with the military and airlines.

His students have received 13 job offers to date.

# Commander's Column:



## Supporting young aviators

The Sacramento Sheriff's Air Squadron is proud to continue its tradition of supporting Sheriff Cooper and his community involvement programs.

This year marks the second anniversary of our scholarship initiative, which began with a focus on helping local pilots advance their careers. Last year, we awarded ten scholarships to deserving pilots, and this year, we are excited to shift our focus to the younger generation.



In partnership with the California Aerospace Museum, the Sacramento Sheriff's Office, and our dedicated Air Squadron, we are sponsoring ten children from the Sheriff's youth outreach programs to participate in an introductory aviation camp. This unique opportunity is designed for 8-12-year-olds and promises to be an unforgettable experience.



The camp offers a comprehensive introduction to aviation, combining classroom learning, expert instruction, and hands-on experiences. Participants will have the chance to explore various aspects of aviation, from the basics of flight to the intricate workings of aircraft. Additionally, the program includes exciting field trips to CalFire, the US Coast Guard, and the Sheriff's air assets, providing a well-rounded understanding of the aviation world.

**Julie Circle and Lisa Keenly**, our dedicated scholarship chairs, have worked tirelessly to ensure the success of this program. They have also extended an invitation to Air Squadron members who own planes. If you are interested in taking one or more of these enthusiastic young aviators on a local flight Friday July 19th, please contact myself or Lisa Keenly.

The Sacramento Sheriff's Air Squadron is committed to fostering a love of aviation in our community's youth. Through this program, we hope to inspire the next generation of pilots and aviation enthusiasts. Thank you for your continued support in making these dreams take flight.

## Joining tail dragger ranks

I joined those fellow pilots who fly tail wheel aircraft. On my way back from Palm Springs Air Museum I visited SoCal and picked up a Citabria single-engine two-seat aircraft. Citabria is "airbatic" backwards and reflects its flight capabilities from +5g to -2g. I picked up my tail-wheel endorsement last month.

## Sheriff's Rodeo

Plan for the thrill of the Sacramento County Sheriff's Rodeo, Saturday, July 6<sup>th</sup>.

Added to the annual Folsom Rodeo, the extra day's events include bull riding, barrel racing, plus fireworks. Sheriff Cooper will be leading the Grand Entry Welcome.

Funds from the rodeo will be used to provide equipment, training and aid to employees and their families. Sheriff Cooper's goals include focusing department resources on combating drug use and gang activity among young students.

Go to [sacsheriffsrodeo.com](http://sacsheriffsrodeo.com) for tickets.

**Shawn Britton, Commander**

# California Aerospace Day: glimpse into future

By Dale Terry

On June 5<sup>th</sup>, the Aerospace Defense Alliance of California (ADAC) hosted the second annual California Aerospace Day. The one-day event brought together a cross-section of California's aerospace companies with state legislators to showcase the industry's impact on the Golden State's economy.

Over 200 people attended the event held at the Aerospace Museum of California. **Tom Jones**, the museum's Executive Director, and Squadron member said, "this conference brings together the best and brightest in the aerospace industry."



NASA Astronaut **Michael Hopkins** was the keynote speaker. In 2020 Hopkins arrived at the International Space Station via the SpaceX Crew Dragon – it's first operational flight. Many years at NASA, several spacewalks and hundreds of hours in space gave Hopkins a unique perspective that he effectively shared with those in attendance. Today, he is on the executive leadership team at Stratolaunch, a Mojave, CA based company providing high-speed flight test services. Stratolaunch originally was built by Scaled Composites.

Speakers reminded state government officials that California has been in the



<b>Aerospace Museum of California</b> 3200 Freedom Park Drive McClellan Park, CA 95652	12:00 PM	Registration & Exhibits Open
	1:15 PM	The Future of Aerospace is Here in CA Panel
	2:15 PM	Climate Change Technologies/Sustainability Panel
	3:15 PM	The Path to Space Exploration is Through CA Panel
	4:00 PM	Closing Remarks
	4:30 PM	Cocktail Reception



forefront of space exploration for decades. And the aerospace industry supports more than 511,000 high-paying jobs, generates more than \$100 billion in annual economic activity, and generates \$7 billion in state and local taxes.

Your Newsletter editor was able to meet with leaders from aerospace manufacturers, professors and legislators. Panel discussions touched on STEM and workforce development, climate change and sustainability, and innovation and technology.

The event also gave attendees the opportunity to view a new museum exhibit showing off the decades of **Clay Lacy** and his work with Hollywood blockbusters.

Lacy's Astrovision camera system revolutionized the film industry. Now, the unique camera system is displayed inside a full-sized Lear jet.

One of the exhibit's videos tells how Frank Sinatra would fly with Lacy, and it inspired the song "Come Fly with Me."



# Safety Brief:

## Angle of attack



By Hunter Jefferson, CFII

Stalls and spins account for many general aviation accidents. No matter what aircraft type I am flying, when the stall horn starts sounding, it gets my attention.

Many aviation organizations have been promoting increased stall awareness training as well as the use of angle of attack indicators. The belief is that these areas would reduce the number of stall/spin accidents.

OK, let's start with some basic principles.

Wings stall when the critical angle of attack is exceeded. Every aircraft has an angle of attack where maximum lift (stall) occurs.

In our private pilot ground school, we learned that the angle of attack (AOA) is the angle at which relative wind meets the chord line of the wing.

At a high AOA (around 16 degrees or so in most of the airplanes we fly) the airflow begins to become turbulent over the top of the wing instead of smooth. When this happens, a loss of lift occurs since most of

our lift comes from the low-pressure airflow over the top of the wing. See the diagram below for the effect of an increasing AOA.

The key to remember is that the amount of lift a wing produces varies with the angle of attack and airspeed.

If you maintain the same angle of attack and increase airspeed (thrust), the aircraft will start to climb.

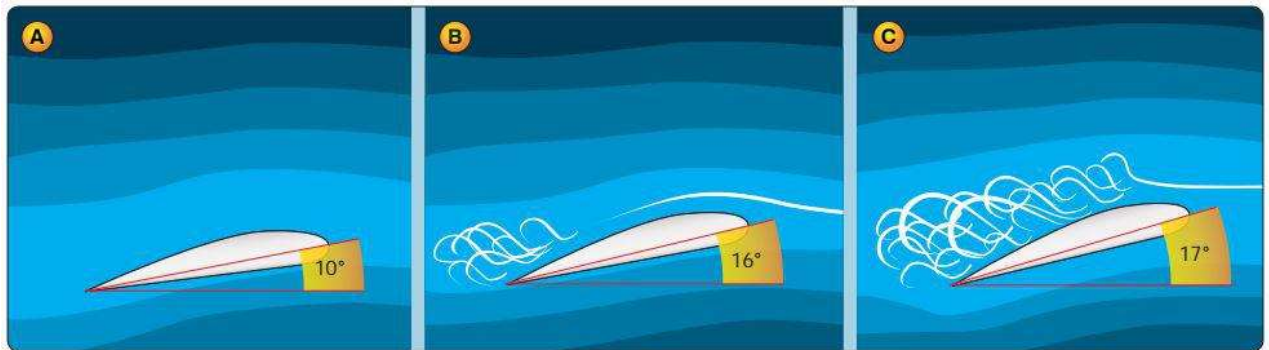
If you maintain the same angle of attack and decrease airspeed, the aircraft will start to descend.

If you reduce air speed and want to maintain your current altitude, the angle of attack must be increased. And, as the aircraft slows down, it will be necessary to continually increase the amount of backpressure on the controls to maintain that level of flight.

AOA indicators used to be found only in military fighters, high-end corporate jets and some airliners. Now, almost all new single-engine airplanes are equipped with lightweight digital AOA indicators. And these indicators allow us to fly more safely and accurately in many phases of flight.



Remember that definition of AOA I mentioned earlier? Well, the AOA indicator measures the angle between the chord line of the wing and the relative wind. Since an airplane's wing always stalls at the same "critical" angle, the AOA indicator warns pilots when they're approaching an aerodynamic stall.



Remember:

1. A large angle of attack at a low airspeed produces the same amount of lift as a lower angle of attack would at a higher airspeed.
2. When the airspeed is low, the AOA must be high to balance the required amount of lift against the weight of the airplane.

There are many AOA indicator models made by avionics manufacturers. Next time you are thinking about aircraft upgrades, consider an AOA addition to your cockpit.

Perhaps you watched the new Blue Angles movie on Netflix. Look carefully and you will see an AOA indicator to the left of the HUD.

OK, how does an angle of attack indicator fit into the picture?