



ON GUARD SAN FRANCISCO BAY GROUP 2

Group 2's Monthly Magazine

Welcome to On Guard

*By Lt Col Noel Luneau, Public Affairs Officer
Group 2*

Welcome to the third edition of the Group 2 Magazine - On Guard!

You may have noticed some font and color changes. This is to ensure we meet CAP's new Branding guide.

Job Openings. We are looking for an editor for Cadet Programs, and assistant editors for all sections.

Article Submissions. This is your magazine so please contribute to it with short stories, photos, and short videos of your Squadron or event. We are looking for articles for the **October** edition, due 31 Sep 21. Please submit all articles to the Group 2 website [Here](#).

Also please tag Group 2 on Instagram, Facebook and Twitter and we will collect posts, stories and reels there. Tag us on **Instagram** and **Facebook** here: @civilairpatrolgroup2. Tag us on **Twitter** here: @CAPGroup2CA.

In addition, we have a new **YouTube** channel for the group so send us any videos that you want to share with the world!

The QR Code to the right is a link to an online version with viewable video clips.



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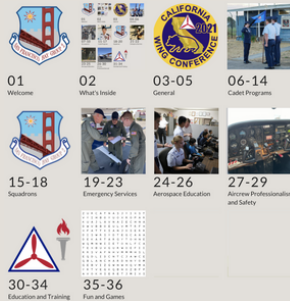
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GENERAL

**WING CONFERENCE
 SEPT 29 – OCT 3**

The California Wing Conference Staff have been hard at work preparing a huge comeback to in person events. We have 52 sessions ranging from Operations to Diversity, plus everything in between. This conference has one of the largest class lists we've had for conferences, so there's something for everyone! This will be a great learning opportunity for new Senior Members and more seasoned members alike.

You have 3 options: you can choose the full conference (\$165), classes only (\$100) or banquet only (\$85). You can invite guests to the banquet to take part in a delicious meal and see awards handed out to members that have gone above and beyond.

Registration for the Wing Conference is [Here](https://conference.cawgcap.org/):
<https://conference.cawgcap.org/>



**INTERIM CHANGE TO CAPR 39-1:
 CIVIL AIR PATROL UNIFORM REGULATION**

Changes to CAPR 39-1, the uniform regulations, have been published in the form of an interim change letter. This is a wide-ranging update and should be read by all CAP members. Changes were made in numerous areas; here are some of the highlights:

- Nameplates may now include diacritical accents and hyphens (some members will finally get to see their name spelled correctly!)
- Aviation badges have been designed and are now authorized for sUAS pilots.
- Hair regulations have been overhauled and are detailed. Among the most significant changes:
 - Women may now wear a ponytail, a single braid, or two braids, provided they do not extend lower than a line from one underarm to the other (braids are to be worn in back)
 - The allowable length of bangs and bulk of a bun for women is described in detail, as is the style and size of hair "parts" for men.

- Hair (continued):
 - A member's hair must be a "natural color." This does *not* mean it has to be the color that member was born with; "natural color" means the color that *anybody* might have at birth!
 - A medical waiver permitting beards is authorized.
- Women are now permitted slacks as part of Mess Dress .
- Women may wear nail polish (must be a solid color and must not clash with the uniform).
- Face coverings (masks, etc.) must cover mouth and nose, must be a solid color (there is a chart detailing what color may be worn with which uniform).
- A Volunteer University badge is authorized.

Get the full change letter:
https://www.gocivilairpatrol.com/media/cms/R_391_with_ICL_2101_Incorporated_5660EEB90E0DB.pdf

2021 CALIFORNIA WING CONFERENCE
 HYATT REGENCY
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SEPTEMBER 29 - OCTOBER 3

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[Conference.cawgcap.org](https://conference.cawgcap.org)

GENERAL

GROUP 2 “OF THE YEAR” AWARD WINNERS

Members of Group 2,

I am pleased to announce the following Group 2 “Of the Year” award winners that will represent us for further consideration at the California Wing level. Please take a moment to congratulate these individuals and units for their exemplary service, especially during this difficult time. We hope to see more of the same at Wing Conference when the wing winners will be announced. Group-level individual winners will be awarded the CAP Achievement Award at a later date through a personnel authorization (more to follow). Congratulations again to all recipients and good luck!

1. Aerospace Education Officer of the Year – Capt Joseph Spears (Sq 156)
2. Airborne Photographer of the Year – 1st Lt Richard West (Sq 80)
3. Aircrew Member of the Year – 1st Lt Michael Gross (Sq 10)
4. Brewer Memorial Aerospace Award (Cadet Category) – C/2d Lt Preston Kwok (Sq 192)
5. Brewer Memorial Aerospace Award (Senior Category) – 1st Lt Kailash Kalidoss (Sq 80)
6. Cadet of the Year – C/Col Andrew Hockel (Sq 44)
7. Cadet Programs Officer of the Year – 2d Lt Kai Chen (Sq 10)
8. Cadet Squadron of the Year – San Francisco Cadet Squadron 86
9. Character Development Instructor of the Year – Ch, Capt AnnaMae Taubeneck (Sq 10)
10. Communicator of the Year – Capt Stephen Swale (Sq 80)
11. Composite Squadron of the Year – Jon E. Kramer Composite Squadron 10
12. Finance Officer of the Year – 1st Lt Leon Lam (Sq 36)
13. Health Services Officer of the Year – 1st Lt James Bird (Sq 80)
14. Incident Staff Member of the Year – Maj Jacqueline Tubis (Sq 10)
15. Legislative Officer of the Year – Capt Christopher Fenolio (Sq 188)
16. Mission Observer of the Year – 2d Lt Ilia Shabalin (Sq 10)
17. Operations Staff Officer of the Year – Capt Louise Mateos (Sq 10)
18. Public Affairs Officer of the Year – 2d Lt Kai Chen (Sq 10)
19. Pilot of the Year – Capt Karin Hollerbach (Sq 188)
20. Recruiting and Retention Officer of the Year – Capt Louise Mateos (Sq 10)
21. Safety Officer of the Year – Capt Anthony Stieber (Sq 10)
22. Senior Member of the Year – Maj George Gadd (Sq 80)
23. Senior Squadron of the Year – San Jose Senior Squadron 80
24. Squadron Chaplain of the Year – Ch, Capt AnnaMae Taubeneck (Sq 10)
25. Unit Commander of the Year – Capt Stephen Collins (Sq 192)

Lt Col Shawn O. Lawson, CAP
San Francisco Bay Group 2 Commander



Group 2 members at the 2019 California Wing Conference.

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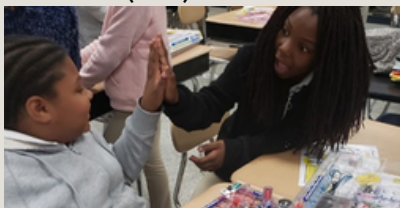
BEST KEPT SECRETS ON MEMBERSHIP OPTIONS

BY CAPT JOE SPEARS

As Civil Air Patrol members, we often mistakenly think that there are two kinds of membership in CAP. Seniors and Cadets. We also tend to think of Senior Membership as the adult members who take staff positions in squadrons and many of whom joined for our emergency services mission. Neither of those views are correct.

Aerospace Education Members (AEMs)

Aerospace Education Members are members of the community that assist in Aerospace Education (AE) and Science, Technology, Engineering, and Math (STEM) outreach. Often, these members are teachers but they can also be scout-leaders, museum-docents, the leadership in other community organizations, or homeschool parents. AEMs have access to all the AE resources that unit Aerospace Education Officers have such as the AE bookshelf in eServices, the free STEM kit program, and the Aerospace Excellence Award. However, AEMs also get access to other, unique programs such as the Next Generation Science Standard materials that we call Aerospace Connections in Education (ACE).



Recruiting a new AEM or supporting a local AEM are the best ways to bootstrap your unit's External Aerospace Education program. Your local AEM

can request help from CAP members to teach individual lessons in their classroom. Local units can also participate in the Adopt-A-Classroom program through an AEM to teach multiple, related lessons with an Aerospace theme. Cadets are strongly encouraged to participate in the Adopt-A-Classroom lessons along with Senior Members.

AEMs pay a reduced, one-time membership fee and annual membership renewal fees are waived while the AEM remains active in the program. AEMs who also sign up for the Adopt-A-Classroom program will also have their one-time membership fees waived. AEMs do not belong to a squadron and therefore don't attend meetings. AEMs do not wear uniforms. AEMs that are also teachers can fly in CAP aircraft as part of our free Teacher Orientation Program (TOP) Flights. Recruiting an AEM counts toward earning the senior member recruiting ribbon.

Cadet Sponsors – CAP's "Boosters"

What most of us call Senior Members are called an "Active Member" in CAPR 39-2. Cadets have the exclusive ability to recruit a different kind of Senior Member called "Cadet



Sponsor Members". Recruiting Cadet Sponsors counts toward the completion of the Cadet Recruiter Ribbon. Cadet Sponsors must be parents, grandparents, or

guardians of current CAP cadets and assist their unit's cadet program. These members can provide two-deep leadership, including during overnight activities. They can also drive a corporate vehicle and other cadet related tasks deemed necessary and proper by the unit commander.

Cadet Sponsors pay reduced national membership dues and are exempt from paying region, wing, or squadron dues. They must complete Level 1 and Cadet Protection but are not required to attend meeting or hold staff positions in their unit. They don't earn awards, rank or decorations but may wear the corporate uniform or appropriate civilian attire when they are helping CAP. Cadet Sponsors are a great way to help support activities, such as O-ride coordination and



external activities, when your squadron is having difficulty finding adult leaders to support. Please reach out to your cadet families to offer this amazing benefit.

CADET PROGRAMS

CADET PROGRAM CHANGES – EFFECTIVE OCTOBER 5TH

BY CAPT JOE SPEARS



During the National Conference in August, National Headquarters announced many

changes to the cadet program. Many of these changes will have an immediate impact on our cadets and are summarized below.

To make the transition smoother, please consider completing your current achievement before 10/5/21.

NEW PUBLICATIONS SHIPPING

BY CAPT JOE SPEARS



As part of the transition to the updated cadet program, many updated publications will be shipped.

There will be a new version of CAPP 60-20 New Cadet Guide, CAPVA 60-100 Cadet Super Chart, and the personal cadet tracker has been redesigned as CAPVA 60-101a and CAPVA 60-101b.



ALL CADET PROGRAM CHANGES

Checkout all of the changes coming to Cadet Programs. Click [Here](#) for the Cadet News and Innovations publication, dated August 2021.

CADET TESTING CHANGES

BY CAPT JOE SPEARS

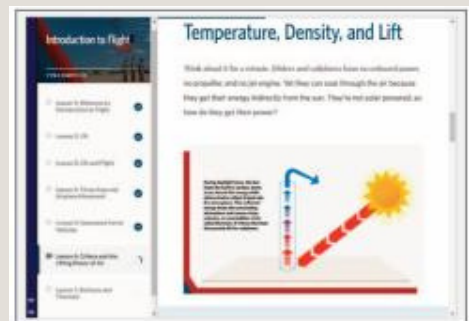
On 5 October, the leadership and aerospace modules will no longer be test-based. Instead, cadets will complete their achievements 1 through 11 as interactive, web-based modules.

The experience - This new format has the cadet do reading, listen to narration, click hotspots, answer questions, match cards and more during the 30 minutes needed to complete each module. Completion of the module satisfies the leadership or aerospace promotion requirement in lieu of the “old” achievement tests.

Alternatives – Cadets who lack web access can still take the written tests

Banking – Cadets may “bank” one achievement in advance of their current level in order to accommodate busy schedules. For example, a C/SSgt could complete the leadership and aerospace tasks for both their C/TSgt and C/MSgt grades at the same time.

Honor Credit – Cadets who completes both the new, interactive modules and also takes the written tests will earn **Honor Credit** and may affix a **silver star** to their corresponding **service ribbon**. **Milestone Award Exams** – Cadets who are studying for the Mitchell and Earhart Award will no longer be retested on materials that they had to cover in previous phases. Cadets taking the Mitchell Award Leadership Exam will only be required to test on topics in Learn to Lead Vol 2. Cadets taking the Earhart Award Leadership Exam will only be required to test on topics in Learn to Lead Vol 3.



HONOR CREDIT

A new opportunity for cadets to distinguish themselves



CADET PROGRAMS

2021 ULTIMATE BEAR AND WINGS CHALLENGE

CADET PROGRAMS
17-19 SEP, 2021

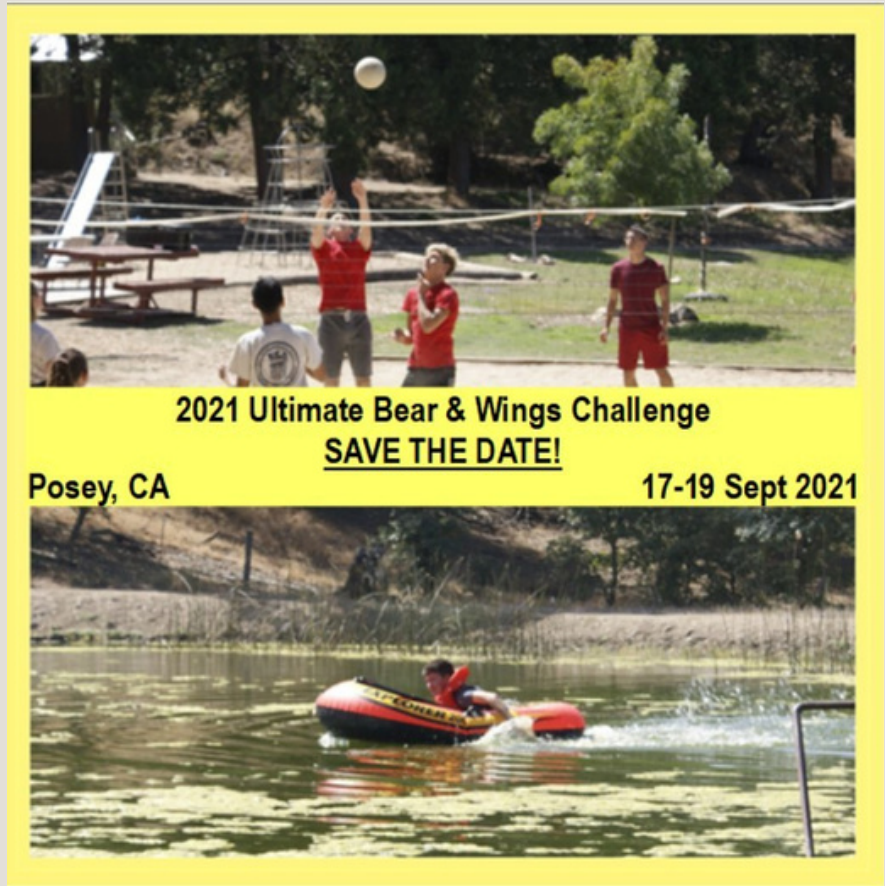
Save The Date!

Ultimate Bear & Wings Challenge is happening Sept 17-19th!

Prepare your teams! Team Registration to open late July. Staff applications to open on July 5th.

More information to come [Here](#):

In 2010, cadets of the California Cadet Advisory Council (CAC) worked to develop an event that was not training focused but one that aimed to have cadet and seniors come together to socialize and have fun. The initial concept was voted on and approved by the cadet council and then sent to the Wing Commander where it was also approved. The cadets involved in its creation continued to develop the program.



In 2011, CAWG held its first UBWC at Vandenberg AFB, where it has continued to call home every year since. Through development and the years of execution the mission and priorities of the activity have not changed.

Priority #1: For Cadets and Senior members from local squadrons to come together at a Wing level activity to socialize and have fun. To renew relationships built at other activities and create new relationships that will last for a lifetime.

Priority #2: The competition.



CADET PROGRAMS

C/2D LT KWOK FROM SQUADRON 192 WINS PRESTIGIOUS BALSEM AWARD

*Each year CAP National Headquarters announces winners of the **Maj. Howell Balsem Civil Air Patrol Public Affairs Exceptional Achievement Awards**. This year's winners include two first-place "Balsem Awards," four second place "Awards of Excellence," and eleven third-place Certificates of Merit." Fifteen members, including two cadets, were among the winners, representing eleven Wings and one Region headquarters (Detailed information on the Balsem award and awardees can be found [Here](#).)*

*One of the two cadet winners is **C/2d Lt Preston Kwok** of Squadron 192, who won the **Award of Excellence for External Media Coverage** for the story "Students Soar in Civil Air Patrol," which appeared in the Carlmont High School news media "[Scot Scoop](#)." The article was also featured nationally as a "Best of School Newspapers Online" article. And is reprinted [Here](#).*

Students Soar in Civil Air Patrol By Preston Kwok

"Semper Vigilans, Always Vigilant." This is the motto that defines Civil Air Patrol (CAP), the Air Force civilian auxiliary. Although it is similar to the well-known Scouts program, many are unaware of what CAP is and the impact the program has on its community and high school students.

CAP was founded during World War II, one of the deadliest conflicts in world history. The start of CAP would not only be impactful in the war but also in many events to come.

When the World Trade Center towers fell during 9/11, emergency services became critical. Aerial photography of the site was requested but the Air Force was incapable of capturing shots with their fighter jets. As a result, the White House and the Air Force tasked CAP to get the photos, thus establishing CAP as a national asset.

While it is not a guarantee that every member of CAP will be able to contribute to such an event, there are still missions being conducted around California and other states.

About every other week, CAP is tasked by the Air Force Rescue Coordination Center or by another emergency service organization to execute a mission. Missions can range from search and rescue to disaster relief and aerial photography.

One such qualified member that participates in emergency service is Cadet Chief Master Sergeant Adithya Patil. As a junior in high school, he is qualified for many operations.

"I love ... the number of opportunities that I get and how I'm making an impact on the world. [CAP is] tasked with life-saving missions, and even though I'm just 15 years old, I have so many valuable ways that I can help out, and I can see the effects that my work does," Patil said.

Anybody in CAP can be a part of a life-saving mission if they are qualified, feel prepared, and have the time to help out. CAP is not an official job, so members take time out of

their personal lives to help out in their community.

"I've been on one [mission] before ... I was at school for robotics and I got a call saying that [CAP] needed my help ... I went home and got my uniform ... the experience was something new to me," Patil said.

Emergency service is one of many ways for a high school student to help out in the community and possibly save a life. However, most high school students do not have the opportunity to do such a service because of when the missions occur. Rather, many will focus on CAP's two other missions: aerospace and cadet programs.

Aerospace is one of three missions that CAP focuses on. In California, the aerospace program is very distinct; they host an annual aerospace camp called Aerospace Education STEM Academy.

The academy is held at Edwards Air Force Base which allows for a unique experience of touring the base and hands-on time with STEM kits.

Cadet Chief Master Sergeant Thomas Durling, a junior, was inspired by the camp. In the future, he wants to fly for the Air Force.

"I got a close-up tour with a couple [of] F-35s which was really neat. From then on, I was fascinated with those jets and decided that I wanted to fly one of those," Durling said.

While cadets can not fly the F-35s, they can fly a Cessna single-

CADET PROGRAMS

BALSEM AWARD

CONTINUED...

propeller plane. These opportunities are called orientation rides. Cadets are given a chance to fly the plane once the pilot, a senior member that has gone through many checkrides to ensure the safety of the cadets, has taken off.

According to the CAP website, their orientation ride motto is "safe, fun and educational." The purpose of the orientation ride is to present cadets with the wonder of flight.

In addition to CAP's missions regarding aerospace and emergency service, CAP's other mission is the cadet program, the main focus of the civilian auxiliary. Anyone from ages 12 to 18 can be a cadet. As a matter of fact, several Carlmont students are a part of this program.

Cadet Staff Sergeant Benjamin Lee, a sophomore, has been in this program for over a year. For him, CAP has had more influence than he ever imagined.

"I initially thought it would be a bunch of kids crowding around and learning about a plane. What I got was completely different — amazing friends, my first real leadership position, making a resume and cover letter, learning to tie a tie, shine my shoes, and pushing my limits," Lee said.

While cadets face challenges such as ensuring that their uniform is perfect, it can help many with facing their future challenges.

"Civil Air Patrol has helped me become a better person and developed discipline in me. I can always push through things that have been hard with my CAP experience. During the summer encampment, I endured and went through some of the toughest and hardest times away from home. Now, whenever I am going through something hard, I always relate back to these moments to tell myself, 'I've done stuff harder than this, I can do this,'" Lee said.

With these skills and trials, CAP helps prepare cadets for their future. Cadet Airman Christian Rave, a senior at Carlmont, shares a similar sentiment. He has the goal of going to the Air Force Academy and CAP has helped him align to those goals.

"[CAP] has shown me that I have the capability to follow [leaders] and be in a military-style environment. It has also allowed me to explore aerospace concepts which I hope to explore further at the academy. Finally, it has given me a good basis with values like leadership and respect," Rave said.

Although Rave is pursuing his goals to go to the Air Force Academy, cadets are not required to go into the military.

In fact, Cadet Lieutenant Colonel Tyler Beal, a junior in college, is pursuing a civilian job.

"I am a third-year student at UC Berkeley studying history, with my ultimate goal being in education. As a result of my experiences with Encampment, I feel ready to tackle

the challenges presented before me in pursuing my goals," Beal said.

Encampment is a modified Air Force basic training camp and in 2019, Beal was the cadet commander for the California Summer Encampment. Cadets come from all over the state to go through a week of intense training. Beal said that Encampment teaches cadets about followership, cadet and military life, and most importantly, teamwork. California's Encampment program gives cadets skills to change themselves as a cadet and in their everyday lives.

As the Encampment cadet commander, Beal's job was to lead almost 300 cadets and over 60 cadre, also known as staff members.

His choice of taking on this significant responsibility was to give the cadets a life-changing experience like he experienced when he was a student at Encampment.

"I remember seeing Encampment as this daunting obstacle and unsure of whether or not I would be able to make it through to the end. However, I left Encampment with a newfound sense of confidence, and it ultimately set me down the path to where I am today. I can safely say that Encampment changed my life, and I wanted to provide that same opportunity for others," Beal said.

While Encampment may be tough both physically and mentally, it is one of many ways Civil Air Patrol has positively affected students. This especially goes for the Encampment

CADET PROGRAMS

BALSEM AWARD

CONTINUED...

honor cadet, Cadet Staff Sergeant Bijan Zarrinkhameh, a sophomore.

“Encampment overall has taught me discipline, leadership, and responsibility. It also taught me how to work with a team. It has affected my future career by showing [me] that I [can] thrive,” Zarrinkhameh said.

All these achievements wouldn’t come without the support of senior members. Senior members are anyone over 18 years of age and they have greater responsibilities such as being a squadron commander.

First Lieutenant Stephen Collins is a squadron commander for the West Bay Composite Squadron 192. While his responsibilities are great in number, such as finance, administration, and public affairs, the position is fulfilling.

“Being a unit commander is very rewarding, in terms of the challenges one must overcome and the satisfaction when the outcomes are positive. I like to see my team succeed and see myself as [being helpful to] the squadron members,” Collins said.

These effective results come about through many skill sets of a commander. The former squadron commander for Squadron 192, First Lieutenant Cale Dunlap, describes his thoughts on the skill sets of a successful squadron commander.

“A squadron commander has to have effective leadership and

communication skills in order to get their members to do things they may not necessarily want to do but for the good of the unit [...] I like to think the really good commanders can read a member, figure out what they’re good at, and get them into the right role to be successful and fulfilled in the organization,” Dunlap said.

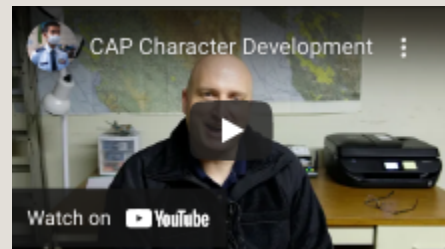
Cadet First Lieutenant Hannah Smith, a senior, can attest to this because at the age of 12, she started as a shy and unconfident leader. But, because of her experience and practice, she has become a better leader and public speaker, Smith said, “As a [non-commissioned officer], you work with cadets on a personal level. You teach them how to move forward in their cadet career, and [you] get to say, ‘that’s my cadet’ when they accomplish their goals. As a cadet officer, you train the [non-commissioned officers] and you get to say ‘that’s my staff.’”



The Jon E. Kramer Squadron 10 holds a cadet commander change of command ceremony. Cadet 1st Lieutenant Padriag Feain (far right) is relinquishing command to Cadet Senior Master Sergeant Hayden Clish (closest right). Major Zoe Morozko (left) presides this change of command.



Cadet Airman Basic Peter Nascimento (left) and Cadet Airman Basic Toby Lee (right) participate in a Wingman Course activity. This activity signifies the importance of teamwork. Both cadets rely on each other to not drop the stick. Photo by Preston Kwock.



Character Development

In the cadet programs, there are many lectures and lessons taught to the cadets. One example is character development. The purpose of character development is to teach cadets and senior members specific skills that will benefit their everyday lives. The lectures go over specific historical examples of how those skills benefited people in the past. The activity incorporates that skill in a special way so cadets can recognize it.

CADET PROGRAMS

BALSEM AWARD

CONTINUED...



Cadets from Squadron 192 listen to a safety briefing from Captain John Heldt. This is always required before cadets go into the air and fly a CAP plane. Photo by Preston Kwock.



Cadet Airman Basic Jonah Gattey (left) is promoted to the rank of Cadet Airman and has earned his Curry Award. He shakes hands with the Squadron 192 commander, First Lieutenant Stephen Collins (far right). Photo by Mary Foster



Cadets of the San Francisco Squadron 86 use the flight simulators. The lesson is taught by Captain Remi Nadeau.



From left to right: 2nd Lt. Garrison Buchanan (Sqdn 192), 1st Lt. James Bird (Sqdn 80) and Senior Member Bhargava Narayana (Sqdn 10) were presented with training certificates by 2nd Lt. Robin Yang (Sqdn 18). They became three of NRA's newest rifle instructors.

GROUP 2 SENIOR MEMBERS BECOME NRA RIFLE INSTRUCTORS

BY 2D LT ROBIN YANG

Three senior members from California Wing's Group 2 become NRA Rifle Instructors to help support the Cadet Programs Conference and NRA Marksmanship events.

The NRA Marksmanship program at CPC is extremely popular. The available slots are limited and are usually filled within minutes of registration opening. That limited availability is primarily due to the requirement of one instructor for every cadet on the range. Finding

qualified senior members is hard, but it's gotten a little easier thanks to the dedication of 1st Lt. Bird, 2nd Lt. Buchanan and SM Narayana. They recently spent two weekends and over 30 hours training to become NRA certified Rifle Instructors.

NRA training is considered the gold standard of firearms instruction and is widely recognized across the nation. Congratulations to all three for their dedication to Civil Air Patrol and wanting to offer this popular activity to our cadets.

CADET PROGRAMS

**CADET NCO SCHOOL
 – OCT 22 – 24**

BY CAPT JOE SPEARS

The goal of the Noncommissioned Officers School (NCOS) is to provide the cadet with a foundation for the intermediate phases of the cadet training in Civil Air Patrol. NCOS stresses the fundamental aspects of instructional techniques, evaluation methods and intermediate leadership laboratory skills.

The graduate of Noncommissioned Officers School will demonstrate:

- • The ability to instruct a class or make a presentation on a CAP related subject.
- • The ability to drill a flight.
- • The ability to evaluate another cadet in drill and in inspection.

The October Cadet Noncommissioned Officers School will be hosted at San Francisco Squadron 86 at the Armory (near San Francisco Zoo). Cadets are eligible to attend if they are in the grades C/SrA to C/CMSgt. Cost is \$60 and includes meals, billeting, training materials and an NCOS T-shirt.

To attend, cadets must submit a completed (with signatures) CAPF 60-81, CAPF 160, CAPF 161, and CAPF 163 to the registration page by 10/2/2021:
<https://tinyurl.com/3p88d6w7>

To apply for a staff position, cadets should email a cover letter and resume to 1st Lt James Hockel and C/Capt Varsha Penumatsa by 9/4/2021

BLUES UNIFORMS

BY CAPT JOE SPEARS

The “Blues” uniform has many different combinations than the ABU uniform. While each of the various uniform combinations are authorized for our cadets, we tend to recommend that our new cadets go with the simplest combination of uniforms in the beginning and can then add other elements, such as the various ties and service coat options, as desired. Although cadets wearing the female uniform may elect to wear a skirt instead of slacks, the example in this article describes wear of the slacks.

Please consider using the uniform sizing chart sent home to cadets last month. **Please note, cadets must have both sets of uniforms, ABUs and Blues to promote to Cadet Airman First Class (the second promotion).**

The simplest version of the blues uniform, the “Class B” uniform, consists of clothing items that include a flight cap, belt, pants, and shirt. Male and female versions of the uniform have slightly different versions of these clothing items, but links to these items are included below. In addition to clothing items, the nameplate and cap device are common to both genders of cadet uniforms. The Curry Blues Voucher can be used to purchase these items on vanguardmil.com but you can also purchase the clothing items using Air Force Base Exchanges (on-base military stores) without the voucher.

Cadets wearing the male uniform must wear a white, V-neck undershirt with their blues uniform but cadets wearing the female uniform may wear either a white V-neck or athletic style undershirt. Cadets wearing the male uniform are required to wear black socks and plain-toed, low quarter shoes. Cadets wearing the female uniform may elect to wear hosiery instead of black socks while also having the option to wear dress boots, pumps, or slip-on shoes.

Low quarter shoes are described as “low quarter, oxford-style, lace-up with a plain rounded toe or a plain rounded-capped toe. Soles will not exceed ½ inch in thickness and the heel will not exceed one inch in height (measured from the inside front of the heel). Shoes will be smooth or scotch-grained leather or manmade material. Shoes will be shined; high gloss or patent finish is optional.”



CADET PROGRAMS

BLUES UNIFORMS

**BY CAPT JOE SPEARS
 CONTINUED...**

In addition, the female version of low quarters allows that "the sole may have a low wedge heel. They will be plain, clean and serviceable, and without ornamentation such as buckles, bows, or straps" (ref. CAP Regulation 39-1).

Shoes, socks, and undergarments can be easily obtained online or at local stores and don't have to be purchased specifically through vanguardmil.com.

A helpful video on blues can be found here:
<https://www.youtube.com/watch?v=ZbhtaxrPStg>



	Male Version	Female Version
Flight Cap	https://www.vanguardmil.com/products/civil-air-patrol-male-airman-flight-cap-uniform	https://www.vanguardmil.com/products/civil-air-patrol-female-airman-flight-cap
Top (Shirt / Blouse)	https://www.vanguardmil.com/products/civil-air-patrol-male-short-sleeve-dress-shirt-uniform	https://www.vanguardmil.com/products/civil-air-patrol-female-dress-shirt-overblouse-uniform
Belt	https://www.vanguardmil.com/products/air-force-belt-blue-cotton-with-mirror-tip-male	https://www.vanguardmil.com/products/usaf-blue-elastic-belt-with-mirror-buckle-and-tip-female
Bottom (Trousers / Slacks)	https://www.vanguardmil.com/products/civil-air-patrol-male-trouser-uniform	https://www.vanguardmil.com/products/civil-air-patrol-female-slacks-uniform

CADET PROGRAMS



LEARN TO FLY

BY CAPT JOE SPEARS

Many of our cadets join Civil Air Patrol for the opportunities that it gives to jump-start a career in aviation. For cadets who are interested in one of the many flight scholarships available (including the CadetInvest scholarships that will open in the fall), one way to be more competitive is to complete the FAA Knowledge Test.

To take the FAA knowledge test, students must complete a study course either in a classroom or through one of many multimedia presentations. Our cadets are eligible for the Sporty's Pilot Shop "Learn to Fly" course for free (which is a \$249 value). In addition, your fee for the FAA knowledge test is reimbursable.

CAP is partners with EAA, the Experimental Aircraft Association. When cadets complete their first CAP orientation flight, EAA considers them one of their "Young Eagles."

A cadet's status as a "Young Eagle" comes with zero obligations, but some great benefits, including:

- FREE access to Sporty's Learn to Fly Course (\$199 value)*
- FREE first flight lesson (\$130 value)**
- FREE Soaring Society of America Cadet Membership
- FREE admission to 400+ science and technology museums
- FREE Academy of Model Aeronautics Student Membership
- FREE electronic copy of EAA Sport Aviation magazine
- FREE access to EEA Virtual Flight Academy - Stage One: Fundamentals of Flight (\$29.95 value)
- Access to valuable flight training awards, education scholarships, and Air Academy camperships

For more information, please visit the CAP Cadets & Young Eagles webpage on the NHQ Website.



FLIGHT SCHOLARSHIP SEASON BEGINS

BY CAPT JOE SPEARS

Flight Scholarship Season Begins As the school year starts, many organizations begin to offer annual flight training scholarships. Many cadets and cadet families are particularly interested in available flight scholarships and how to best apply for them.

In general, the best way to apply for a flight training scholarship is to demonstrate the desire and ability to successfully complete a flight training program. Your membership and progression in Civil Air Patrol is one great way to demonstrate this. Beyond that, you should consider taking advantage of the flight training opportunities available to you as a member.

First and foremost, take advantage of the Cadet Orientation Rider program. By getting in the air, you will demonstrate your commitment to pursue flight training. Completing all five powered O-rides, and if possible all five glider O-rides, you will set yourself apart from other scholarship applicants.

CADET PROGRAMS

LEARN TO FLY

BY CAPT JOE SPEARS
CONTINUED...

Second, last month’s newsletter described how to complete free ground training through CAP’s partnership with EAA. By completing your ground training, you will demonstrate the drive and initiative needed to complete flight training.

Finally, build a personal plan. Speak with flight instructors, either inside of CAP or outside, to set goals and objectives to help you meet your goals. Often the scholarship applications will ask for your personal plan so having this document completed will help set you apart.



CURRENT FLIGHT SCHOLARSHIP POSTINGS

BY CAPT JOE SPEARS



The Patriots Jet Team Foundation – offers aviation scholarships for high school students interested

in pursuing a career as a pilot. These include private pilot ground school, flight training and match grant awards at local flight academies. The deadline for application of the 2021 Special Aviation Award is September 27, 2021 and the application form is [Here](#).



The Experimental Aircraft Association – will open applications

for their Flight Training Scholarships from September 1, 2021 until November 1, 2021 for training that starts Jan 1 – June 30, 2022. For more information, keep watching the EAA website’s scholarship page



The Ninety-Nines – a professional organization dedicated to female aviators,

The Ninety-Nines – a professional organization dedicated to female aviators, The Ninety-Nines offer many scholarship opportunities throughout the year. Most ninety-nines scholarships require students to have been a member for at least 6 months before applying. Link to the Oakland Chapter of the 99s.



CadetInvest – Civil Air Patrol’s single-application for opening scholarships and grants for Flight Training, Career Exploration through things like Cadet Special Activities and undergraduate education, CadetInvest applications are expected to open in September.

Cadets are encouraged to review the application process in advance of the application window opening. Once the application window opens, act quickly because most application deadlines occur on December 31st. The best opportunities in CadetInvest are available to cadet officers, so gain rank quickly to unlock the best scholarship opportunities.



The Matthew Shope Memorial Fly High Scholarships was created to Celebrate the life and passion of Matthew Shope.

A former, CAP cadet Matthew was passionate about flying. He wanted desperately to share that passion and to teach teenagers to fly. As such, the organizations core mission is to provide flight training scholarships to young Americans to achieve their dream of flight.

SQUADRONS



SQUADRON 10 PALO ALTO

STRATO-STAR AUG 21, 2021

On Saturday morning, 21 August 2021, Cadets from Civil Air Patrol - Jon E. Kramer Composite Squadron 10 - Palo Alto competing in the StratoStar High-Altitude Balloon experiments gathered to watch the live launch feed and then discuss next steps. The balloon carrying their experiments reached over 103k ft!



SQUADRON 44 CONCORD

NOT SUBMITTED



SQUADRON 13 WATSONVILLE

FIRE IN THE SKY SEPT 4, 2021

The Watsonville Airport "Fire in the Sky" community event included aerial demonstrations, an outdoor movie, and fireworks display. Squadron 13 cadets and senior members manned the Group 2 recruiting booth to great effect.



CAP Group 2 recruiting booth is a game-changer for recognition and public interest. We had people commenting that they saw the booth from across the field and wanted to see what it was all about.



SQ13 members engaging with members of the public



SQUADRON 18 HAYWARD

FIFTH TUESDAY

East Bay Cadet Squadron held some fun activities on their Fifth tuesday of the month. Members had fun taking time to bond and get to know each other better. Activities held were O-Flights, Guess the Truth About Me, Musical Chairs, and a Bearing test.



SQUADRONS



SQUADRON 36
SAN JOSE

REID-HILLVIEW OPEN HOUSE
AUG 28, 2021

Hardly Working?

Last Saturday, cadets staffed our airport, Reid-Hillview Open House. For many cadets, this was their first time staffing an "airshow". They were tasked with crowd control, recruitment, and set up and clean up. During our downtime, Lt. West explained the basics of UDF. During lunch, our very own color guard gave a great performance with the National Anthem. At the end of the event, cadets assisted other booths with their clean-up.



SQUADRON 80
SAN JOSE

NEW MISSION PILOTS

San Jose Senior Squadron 80 congratulates Capt Stephen Swale on passing his F91 and becoming California Wing's newest SAR Mission Pilot.



San Jose Senior Squadron 80 congratulates 2d Lt Ondrej Podlaha on passing his F91 and becoming California Wing's newest Mission Pilot. He is shown below with SM Swaminatha Vasudevan their newest Mission Observer.



SQUADRON 86
SAN FRANCISCO

STRATO-STAR
AUG 21, 2021

This video is a compilation of pre-launch interviews with Civil Air Patrol cadets of San Francisco Cadet Squadron 86 regarding the experiments to be carried onboard the CAP High Altitude Balloon Challenge Strato-Star Mission 0436 for August 21st, 2021. A post launch video of interviews regarding the results of these experiments will be posted in September, 2021.

The five experiments include digital watch, AAA battery, dental X-ray film, mini marshmallows and sea monkeys. Identical items will be placed in a control capsule and also in a flight capsule and will be evaluated before launch and after recovery, looking for any changes that the extreme environment of near space might have caused.

The interview was conducted by Captain Bob Nadeau, who is the Aerospace Education officer for Cadet Squadron 86 in San Francisco, CA.



SQUADRONS



SQUADRON 156 TRI-VALLEY

SEPTEMBER 15TH OPEN HOUSE

Our squadron continues to thrive. Because of this, we want to share our many successes with the community. Our cadet staff has planned a squadron open house on September 15th during our normal meeting times and we ask for you to help spread the word.

We have many promotional flyers and handouts that can be shared. We also have an [Eventbrite registration page for the event here](#)



Last month, Sqn 156 announced a new squadron T-shirt designed by cadet staff.



SQUADRON 188 OAKLAND

OAKLAND AIRPORT HISTORY

94 years ago, on August 16, 1927, the infamous **Dole Air Race** began at what is now Oakland Airport. Some fascinating footage [https://youtu.be/4B9T9MCq_h8] and a good introduction [https://en.wikipedia.org/wiki/Dole_Air_Race] ... "The Dole Air Race, also known as the Dole Derby, was a deadly air race across the Pacific Ocean from Oakland, California to Honolulu in the Territory of Hawaii held in August 1927. There were eighteen official and unofficial entrants; fifteen of those drew for starting positions, and of those fifteen, two were disqualified, two withdrew, and three aircraft crashed before the race, resulting in three deaths. Eight aircraft eventually participated in the start of the race on August 16, with only two successfully arriving in Hawaii; **Woolaroc**, a Travel Air 5000 piloted by *Arthur C. Goebel* and *William V. Davis*, arrived after a 26-1/4-hour flight, leading runner-up **Aloha** by two hours." ...

The spirit of further, faster, higher continues today.



SQUADRON 192 SAN CARLOS

PLANE WASH AUG 21, 2021

Last evening, CAP members from Squadron 10 joined us in a plane wash and potluck. Cadets scrubbed every inch of the Cessna 182, enjoyed pizza, and played capture the flag. Cadets enjoyed the opportunity to meet and socialize with others and had a fun time washing the plane together.



EMERGENCY SERVICES



WHERE'S WALDO?

BY CAPT STEVE SWALE, SQ 80

Since August 25, 2021, Civil Air Patrol aircrews have been flying our two “Waldo Ultra 50” systems over the Caldor, Monument, and Dixie fire burn areas in Northern California to furnish high resolution aerial imaging to the California National Guard.

Operations are based out of Group 5, Composite Squadron 14 headquarters at KSAC (Sacramento Executive Airport), and have included Group 2 aircrews and base staff specialists from the entire California Wing. This article is intended as a pictorial description of the Waldo Ultra 50 system from the perspective of Group 2 operators during recent NorCal operations to better acquaint our members with this national capability.

What is Waldo, how do we fly it, and what have been some challenges in recent operations?

THE WALDO INSTRUMENTATION SYSTEM

The Waldo Ultra 50 equipment pod is a high resolution dual camera package with integrated onboard GPS capability that can be mounted to the wing strut of CAP aircraft such as C172, C182 and C206.

A dedicated GPS antenna is mounted to the top of the aircraft wing and cables for power and data are then routed into the cockpit, carefully attached to the aircraft skin using 2” wide adhesive tape. In the cockpit, the system is controlled by the “Waldo system



Mounting the Pod. Photo BY SM S. Vasudevan



Connecting the cables. Photo BY SM S. Vasudevan

operator” using a laptop computer where the image data is ultimately collected.

The concept for creating aerial imaging is that a number of individual, high resolution two-dimensional aerial photographs are captured at pre-planned latitude and longitude points. Using the GPS-based system navigation, the Waldo flight crew works together to fly the aircraft along a pre-planned route at a specific altitude and slower than a pre-planned ground speed. If the aircraft is within position parameters, the system will capture a static image at that pre-programmed point.

EMERGENCY SERVICES

WHERE'S WALDO?

CONTINUED...

If the aircraft fails to meet positioning parameters, a picture will not be triggered and image capture for that point will need to be reattempted later. However, filling in missed images at a later time presents problems of matching image lighting and visibility (smoke?) conditions of the original neighboring images.

Once the crew returns to base, the often huge image data set is uploaded via broadband to the Image Processing Unit (IPU) which attempts to integrate the multiple static images into one seamless high resolution mosaic as the essential sortie deliverable.



Waldo system operator's display. Photo by SM S. Vasudevan

FLYING THE WALDO SYSTEM

The Waldo system operator's laptop display is a true north oriented map display showing the six planned "imaging grid lines" for this sortie over the Caldor fire. The planned grid lines are the six red lines, oriented north-south in the rectangular box east of Placerville.

The system designates its "current grid line" by the long blue line superimposed over one of the red ones. In this display, the west-most red grid line has been selected as the current grid line by the Waldo System Operator and all steering information (described later) will be relative to the current grid line.

DISPLAYING THE AIRCRAFT TRACK AND PLANNED GRID LINES

To the west of the rectangular box, between the labels "Placerville" and "Plymouth," and west of the label "49," you will find a small collection of black dots with a small open circle on the eastern end. These black dots are successive GPS fixes to show the aircraft's current flight track calculated by the Waldo system. A limited number of fixes are displayed and so this symbol appears to behave like a small black worm inching its way toward the planned grid line.

PILOT'S "MIRRORED" DISPLAY

A recent change to Waldo system operation has been the "mirroring" of the Waldo system operator's display on an iPad available to the pilot (see photo below.) Two years ago during initial Waldo training the MO (Mission Observer) would hold the Waldo system laptop so that both the pilot and MO could monitor the display. As a matter of operational risk management this was revised so that the MO and pilot would each now have their own display and could more effectively execute the responsibility to scan for other aircraft when maneuvering under VFR (visual flight rules).

EMERGENCY SERVICES

WHERE'S WALDO?

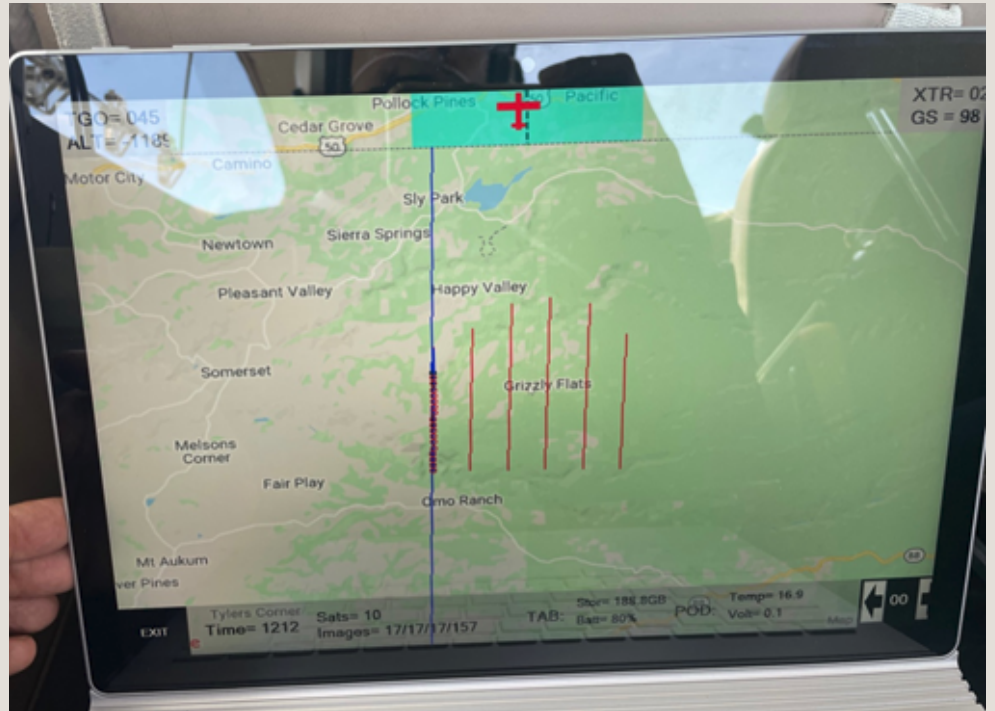
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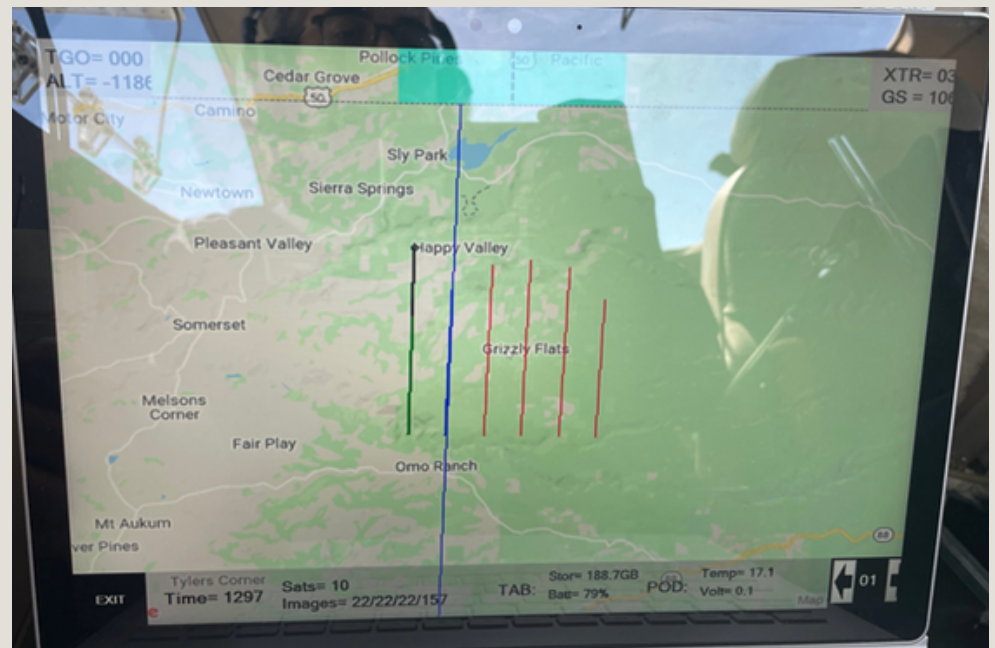
Pilot's iPad echoing Waldo System laptop display using "Duet" application.
 Photo by Capt S. Swale

Once the pilot maneuvers the airplane to track along the planned grid line a red airplane symbol will appear to slide into the light blue rectangle at the top of the Waldo operator's display and the display on the pilot's iPad. The pilot's job is to fly the aircraft so that the "Red Baron" symbol stabilizes on the dotted black line in the middle of the blue rectangle. For purposes of avoiding confusion, pilots should think they are "flying the dotted black line to on top of the Red Baron."

The pilot will need to make continuous tiny corrections and counter-corrections to nullify any drift between the



Waldo System Operator's display as aircraft nears completion of the first grid line. The "black worm" is superimposed over the grid line with five more planned photos remaining for this line. Other status information along the lower border is relatively self-explanatory. Photo by SM S. Vasudevan



System Operator's display as aircraft completes the first grid line and advances the blue "current grid line" to the next red line. Lower status line shows that 22 of 22 planned photos have been captured and stored. Photo by SM S. Vasudevan

EMERGENCY SERVICES

WHERE'S WALDO?

CONTINUED...

dotted line and the "Red Baron," which may involve subtle rudder adjustments to negate the need to roll the aircraft and therefore inadvertently point the Waldo camera cross-track rather than straight down.

FLYING THE AUGUST NORCAL FIRE/SMOKE ENVIRONMENT

Considerable variation existed at KSAC during the last two weeks of August depending on the direction of the prevailing winds, and this also seemed to be the case in the areas of interest (AOI's). During this period, CAP sorties were not approved to enter the TFR (temporary flight restriction) areas which were defined as 'surface to 12,000' MSL. This meant that imaging was planned for 13,000' MSL during this period above both the Dixie and Caldor TFRs.

Arriving over the Caldor fire on August 25th, a quick look at the ADSB traffic display made it clear why we were not cleared into the TFR. Displayed below us was a beehive of aircraft symbols maneuvering underneath the smoke.

Though somewhat of a surprise, oxygen bottles from uninvolved Group 2 and Group 5 aircraft were borrowed as a

rotating pool of oxygen bottles to support operations, and crew members provided their personal cannulas.

Dominating the area of both the Dixie and Caldor fires was a smoke plume climbing to an estimated 14,000' MSL. Below is a picture of the smoke plume from Dixie and a significant smoke layer spreading beyond the main plume. The southerly wind in the area of the Caldor fire on 25 August by contrast cleared the smoke from the imaging area.



Smoke plume over Dixie Fire with surrounding smoke at altitude. Photo by Lt Col N. Luneau



Caldor fire from ~11,000' with southerly wind clearing smoke from imaging area. Photo by SM S. Vasudevan

The southerly wind during August 25 cleared smoke from the vicinity of KSAC and the Sacramento basin resulting in VFR operations. On August 29 the wind velocity had reduced to allow the Sacramento Basin to fill with smoke resulting in MVFR conditions and virtually no discernible horizon below 6000' although the ground was visible. Under these conditions, an IFR instrument scan was necessary as an insurance policy against an unforecast reduction in flight visibility.

SORTIE DELIVERABLES

After post-processing, the integrated sortie images are registered to Lat/Long and available in a GIS map format. The following series of screen shots from our GIS display demonstrates the degree of "zoom" available in the high resolution images collected on 25 August in the vicinity of the Caldor fire. Individual structures in this data set are easily discernible but are not included in this article to protect the privacy concerns of the owners and for this reason this data is handled under the limitations of "for official use only" (FOUO).

NEXT STEPS?

After post-processing, the integrated sortie images are registered to Lat/Long and available in a GIS map format. The following series of screen shots from our GIS display demonstrates the degree of

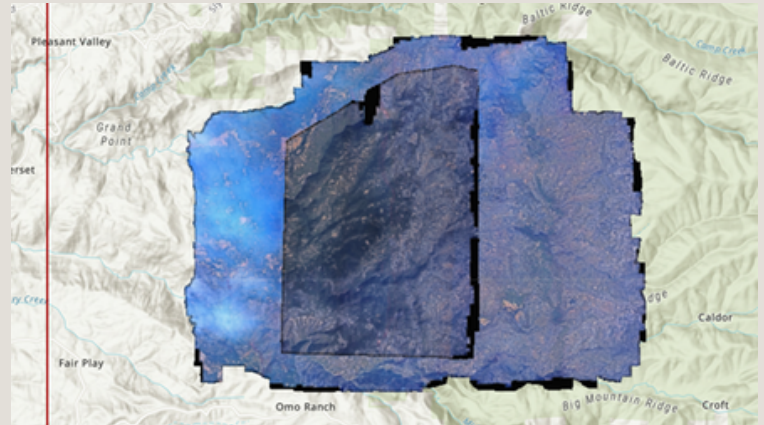
EMERGENCY SERVICES

WHERE'S WALDO?

CONTINUED...



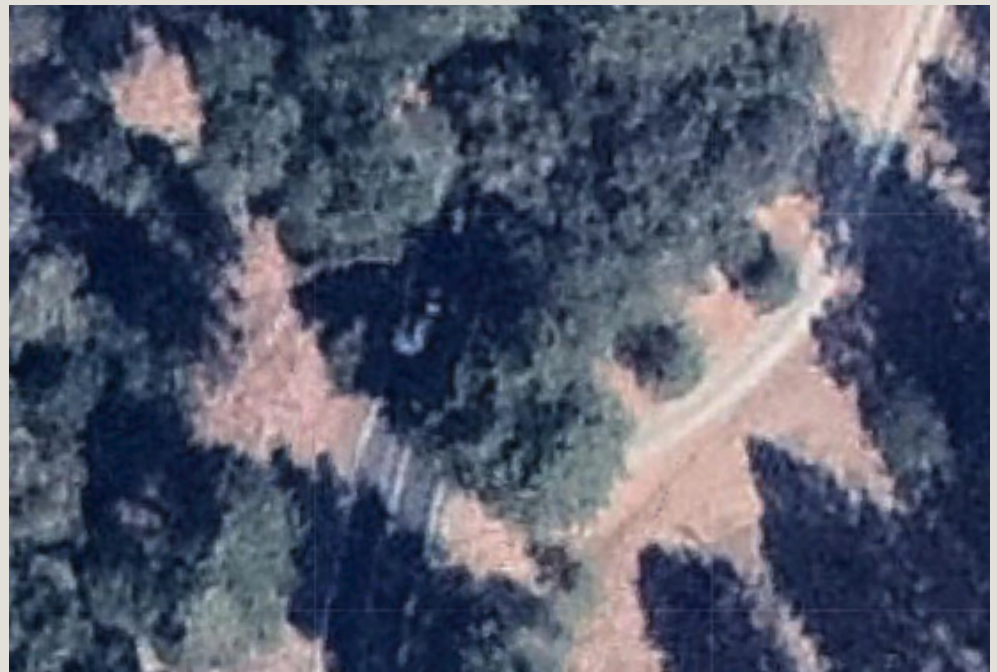
Caldor fire post-processed GIS image data set.



Caldor fire post-processed GIS image data set zoomed.

“zoom” available in the high resolution images collected on 25 August in the vicinity of the Caldor fire. Individual structures in this data set are easily discernible but are not included in this article to protect the privacy concerns of the owners and for this reason this data is handled under the limitations of “for official use only” (FOUO).

So now that you know “Where’s Waldo,” maybe this is the sort of mission where you’d like to make a difference?



Caldor Fire post processed GIS image data set zoomed to demonstrate the capability of Waldo to provide high resolution images of ground infrastructure.

EMERGENCY SERVICES

GROUP 2 AND GROUP 5 JOIN FORCES TO EXPAND THE sUAS TEAM

BY 2D LT J. ALVAREZ

On 29 August 2021 five members of Squadron 188 of Group 2 and other members of two groups met at the Lime Ridge Open Space in the City of Concord, CA, to increase the number of Mission Pilots and Technicians in Group 2 and 5’s sUAS teams. The training continued on 5 September 2021.

Capt Karin Hollerbach continues to move forward putting together an impressive group of dedicated senior members for this sUAS team in the California Wing .

For the event on 29 August 2021, Capt Hollerbach certified 1st Lt Garth Howard of Group 5 as Check Pilot, who became the first check pilot for the group. Lt Col Anthony Hamill tested for his Form 91u, 2d Lt Jose Alvarez for his Form 5u, 2d Lt Nicholas Irvine for his Form 5u, and Capts Lou Rivas, Tim Roberts and 2d Lt William Fenech trained for their technician ratings.

Participating in the event as support was 1st Lt Margaret Salimi, the incoming Squadron 188 Commander. Lt Salimi is organizing the first sUAS Mission Aircrew School in Northern California, scheduled on 18-19 September 2021. Lt Salimi is also the Group 2 lead for sUAS team development.

For the event on 5 September 2021, Capt Karin Hollerbach, Lt Margaret Salimi, Lt Michael Gross, Captain Tim Roberts and Lt Jose Alvarez continued striving for mission readiness. Capt Hollerbach also took the Skydio X2D one step closer to mission readiness.



Capt Hollerbach, Lt Irvine, Lt Col Hamill, Lt Howard, and Capt Roberts at Lime Ridge Open Space in Concord. Photo by 2d Lt J. Alvarez.



Capt Rivas, Lt Fenech, Capt Roberts, Lt Col Hamill, Capt Hollerbach, Lt Howard, and Lt Irvine at Lime Ridge Open Space in Concord. Photo by 2d Lt J. Alvarez.

EMERGENCY SERVICES

GROUP 2 AND GROUP 5 JOIN FORCES TO EXPAND THE SUAS TEAM
CONTINUED...



Lt Irvine, Lt Col Hamill and Lt Howard at Lime Ridge Open Space in Concord. Photo by 2d Lt J. Alvarez.



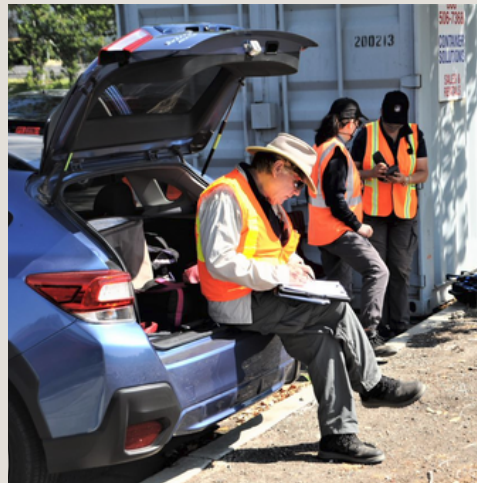
Capt Rivas, Lt Irvine, Lt Col Hamill, and Capt Hollerbach at Bayside Parkway in Fremont, CA. Photo by 2d Lt J. Alvarez



Capt Hollerbach at Bayside Parkway in Fremont, CA. Photo by 2d Lt J. Alvarez



Capt Hollerbach at Bayside Parkway in Fremont, CA. Photo by 2d Lt J. Alvarez



Capt Hollerbach and Roberts and Lt Salimi. Photo by 2d Lt J. Alvarez



Skydio X2D. Photo by 2d Lt J. Alvarez

AEROSPACE EDUCATION



Cadets assist the launch of Balloon 1

Time & altitude of Balloon 1

THE CAP HIGH ALTITUDE BALLOON CHALLENGE HAS FLOWN

BY CAPT V. HENSON

On August 21, the CAP High Altitude Balloon challenge flew. Launched by StratoStar, a STEM education company specializing in educational high altitude weather balloon operations, two balloons went aloft in the skies over Indiana.

Between them, the balloons carried over 650 experiments designed and assembled by cadets representing 186 squadrons from every Region.

Seventeen squadrons represented the Pacific Coast Region. Four squadrons represented the California Wing, all from Group 2: Squadrons 10, 18, 86, and 156 all sent experiments to the top of the atmosphere.

The object of the exercise was to send experiments to an altitude of 100,000 feet (commonly accepted as "the edge of outer space") and return the experiments to earth. Duplicates of the experiments remained on the ground.

Before the flight, the cadets predicted how exposure to the radiation and cold of space would affect the materials they sent aloft, and after the flight to test their hypotheses by scientific measurements on the materials from their flight capsule and the control capsules that remained on Earth.

The experiments from the Group 2 squadrons were carried on both Balloon 1, which reached an altitude of 87,621 feet before bursting and parachuting to earth, and on Balloon 2, which achieved an altitude of 103,057 feet.

The flight was streamed live, and was watched by some 1,900 people. Telemetry fed altitude, temperature, and other data to the ground tracking station, and CAP had two aircraft maintaining visual tracking in the early and end stages of the flights. GPS data from the balloons kept the trackers aware of the flight path and facilitated quick recovery of the capsules on landing.

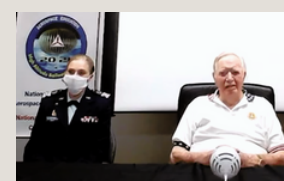
The exercise is a competition among the squadrons for the best overall package of experiments, scientific analyses, explanatory write-ups and posters, and documenting videos.

The winning squadron will take home the Col. Joe Kittinger Cup, named for the first man to be in space when he parachuted from a balloon at 102,000 feet in 1960. In addition to the Cup, the winners take home a \$5,000 grant from Col Kittinger to be used for STEM education for their unit.

Each capsule weighed 13 grams empty, and could weigh no more than 40 grams with the experiments aboard. Sq. 10 sent yeast, a battery, coffee beans, poppy seeds, radish seeds, bean seeds, gummy worm pieces, tic tacs, and popcorn kernels (all in 27g!). Sq. 18 sent broccoli seeds, a polaroid photo, and a penny cut in half. Sq. 86 sent digital watch, AAA battery, dental X-ray film, mini marshmallows and sea monkeys, and Sq. 156 sent baking soda, Orbeez, and colored construction paper.

Upon return the materials were subject to numerous tests: had their weight changed? Their physical size? their elasticity? Their tensile strength? Their ability to absorb water? Their ability to germinate? Their effectiveness in cooking? Their brittleness? their taste or smell? Many tests were devised!

Stay tuned, and next month we'll have a wrap-up. Perhaps one of our squadrons will win the "Col Joe Kittinger Cup!"



"Col Joe" describes his flight and his career while the balloons fly

AEROSPACE EDUCATION

REGION LEVEL AEO SCHOOL AT THE CAWG WING CONFERENCE

BY CAPT V. HENSON

A region-level AEO School will be held at the Wing Conference in Sacramento (and offered in TEAMS) on Thursday, Sept 30.

Aimed mostly at those seeking a Technician rating in the AE specialty track, there will be useful information for anyone interested in Aerospace Education.

Attendance also fills a requirement for the Senior rating, and AEOs who teach units in the school fulfill a requirement for the Master rating.

Subject areas include:

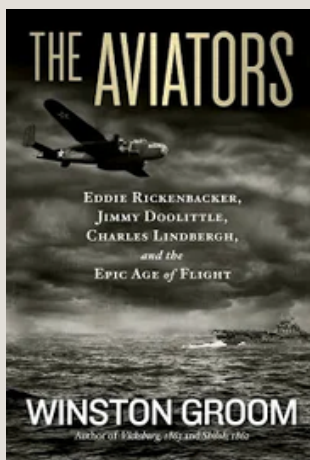
- History of CAP
- AEOs and AE defined
- AE book/AEO appointments/Specialty Track
- AE Products and Programs
- AEX program
- AE Awards
- Budget, Grants and Funding
- Plans of Action and Activity Reports
- Inspections

This is no cost and no formal registration but, for planning purposes, if you wish to attend (in person or via TEAMS) please email:

mark.fridell@cawgcap.org

AEROSPACE EDUCATION READING CORNER - "THE AVIATORS: EDDIE RICKENBACKER, JIMMY DOOLITTLE, CHARLES LINDBERGH, AND THE EPIC AGE OF FLIGHT" BY WINSTON GROOM

REVIEW BY CAPT V. HENSON



AE Editor's Note: *I am an aficionado of books on aviation and space, and plan to include, each month, a brief description/review of an AE related book. Review contributions welcome!*

You certainly know that **Charles Lindbergh** was the first man to fly solo (and nonstop) across the Atlantic Ocean in 1927. Did you know that, as a civilian, he flew P-38 Lightnings in combat against the Japanese in World War II? That he devised a way to stretch the fuel efficiency of the P-38, adding 400 miles, and two hours, to their range? You probably know that **Eddie Rickenbacker** was the most accomplished American fighter pilot of World War I, winning the Medal of Honor and becoming the American with the most awards for valor in that war. He was a race car designer and driver, a pioneer in air transportation, and long-time head of Eastern Air Lines. During World War II while touring air bases in the Pacific the B-17 he was in ran out of fuel and ditched in the ocean. The 7 survivors, under Rickenbacker's leadership, drifted for 24 days in rubber life rafts. You may also know of **Jimmy Doolittle** leading the raid on Tokyo by 16 B25 bombers flown off the deck of the carrier USS *Hornet*. This daring raid was a huge "shot in the arm" for America, our first attack on the Japanese homeland since the Pearl Harbor attack and after months of unrelenting defeats at the hands of the Japanese. Moreover, it came as a tremendous shock to the Japanese, who believed the American war fighting capability had been so crippled at Pearl Harbor that the homeland was invulnerable.

With "*The Aviators*" author Winston Groom, an accomplished historian and writer (probably best known for the novel *Forrest Gump*) has written three important biographies of these men, tracing their involvement in aviation from their childhood dreams and throughout their lives. These lives were full of twists and turns, considerable setbacks and extraordinary and heroic accomplishments, Groom has weaved the three tales into something much bigger; while it highlights not only their individual accomplishments and tribulations but also emphasizes their place in the larger picture of the evolving field of aviation. Indeed, the last part of the book's subtitle is crucial, for Groom has essentially written *four* biographies, one for each of the famed aviators, but also, a pretty good biography of that "Epic Age of Flight."

I recommend this book for your information and for your reading pleasure.

AEROSPACE EDUCATION

LOTS OF AEROSPACE EDUCATION FEATURED AT THE NATIONAL CONFERENCE

BY CAPT V. HENSON

The CAP Virtual National Conference was held August 12-14, and was attended live by nearly 5,000 CAP members worldwide. More than 140 sessions were held; talks, panel sessions, round table discussions, and demonstrations filled the schedule. Often, with multiple events scheduled at each hour, it was difficult to choose which to attend! In the end it rarely mattered because many (perhaps most) events were recorded and the recordings were available almost immediately after the event. It was possible, even practical, to attend some events live and watch others over lunch, at breaks, or in the evening after the sessions.

If you missed it, no sweat, the recordings will be available for six months after the Conference. Members are invited to log in *and watch and to show the recordings at Squadron meetings.*

A lot of the sessions and presentations were Aerospace Education oriented. Some were aimed at AEOs, helping them navigate the AE world. And some were just fascinating aerospace education!

StellarXplorers COMPETITION SET TO BEGIN

BY CAPT V. HENSON

StellarXplorers is months-long space system design competition. It requires end-to-end design of all facets of a space mission, including spacecraft design and systems development, configuring payload, fuel systems and operation. The cadets are formed into teams, given a scenario describing the system’s mission and constraints. The teams must devise a solution to a typical space design problem, from designing the satellite, defining the orbit, and choosing parameters for the launch vehicle.

The entire simulation is conducted using an industry

standard space-mission planning and simulation tool called “System Tool Kit” .

The competition takes place from October to April. There are three qualifying rounds, a semi-final round, and a final round of graded competition. The first round focuses on orbit planning; the second round on satellite design, the third round on launch operations. The semifinal round two of those three areas together, while the Finals requires optimization of all three areas.

Until the finals, the competitions are conducted locally, while the finals are held at Space Center

Some particularly interesting Sessions:

- AE Program Updates
- Spaceflight: The Latest Developments in Spaceflight and Space Exploration
- We Are Clear for Take-Off! CAP’s Stellar STEM Kit Program
- The Sky is Not the Limit
- Its Dangerous to Go Alone - Take This!
- Take Flight with TakeFlight Interactive
- Exploring Space Ethics, Cyber Ethics, and STEM Ethics
- CAP’s Aerospace Education to the Rescue of our Country’s Critical Aviation Needs
- AEX in a Virtual World: Complementing Your Program with an At-Home Option
- Let’s Go to Orbit! - Intro to StellarXplorers
- Google Earth: Situational Awareness in Mission Planning

[Click Here to Visit The Conference](#)



Click [HERE](#) to view a video introduction

Houston. The top 10 teams in the semifinals advance to the finals.

Teams consist of 6 cadets and must have one adult supervision (who may supervise up to 5 teams). Technical mentors are encouraged (they must register with the competition). **Registration closes October 4;** click [HERE](#) for more information.

AIRCREW PROFESSIONALISM AND SAFETY



AIRCRAFT DIFFERENCES

BY MAJ GEORGE MICHELOGIANNAKIS

Group 2 is lucky that most of the airplanes in its fleet are equipped with a Garmin G1000. However, this does not mean that we should expect to only fly behind a G1000. It is important before we accept to fly in any airplane to honestly assess how proficient we are with its equipment. Particularly if we are used to flying the G1000 and now are going to fly with different avionics in varying weather conditions.

Current pilot qualifications have a whole set of endorsements devoted to the G1000. But if a CAP pilot has flown only behind a G1000 in the last couple of years, can they hop in a round dial airplane and navigate VFR through busy airspace? Or fly an instrument approach? What if the airplane has a touch screen navigator?

To the right is a picture of N6183E. You will notice that the two large screens of a G1000 are missing. It also has no autopilot. This may make some of us cringe and prefer to book a G1000 airplane when we have the choice. But unfortunately, this means we pass on the opportunity to fly an airplane that is approximately 200 pounds lighter than our G1000 Cessna 182s, carries more fuel, and can carry more passengers and payload.

Notice the Garmin GNS 400. It has a small screen indeed, but it is a fully capable WAAS IFR certified navigator that also shows traffic and weather. However, it has some quirks such as not knowing airways like newer navigators. What about the Apollo GX55 right above it? Did you know it is the only unit in CAP airplanes that has an internal database of CAP grids? It even has an onboard VHF DME receiver, which our G1000s do not have.



CAP483 (N6183E) Photo by Lt Col Noel Luneau

In the future, our group may acquire, permanently or temporarily, another aircraft with different avionics. For instance, in California wing, a few of our G1000 airplanes have the KAP 140 autopilot or have a Garmin G500 instead of a G1000.

We should not underestimate the need for transition training, even if it is just watching educational videos, to understand their differences. The lack of airways in the GNS 400 could have caused an IFR deviation during a flight a few years ago. But do not let the differences scare you. In order to keep your skills sharp and avoid "getting spoiled" by the G1000, fly all of our aircraft on a regular basis.

AIRCREW PROFESSIONALISM AND SAFETY

Capt Tony Stieber, renewed Mission Pilot with Capt Keith Breton, on 19 Aug 21.



New Mission Check Pilot

Capt Keith Breton renewed Mission Pilot and initial Mission Check Pilot with Maj Jeff Ironfield, on 13 Aug 21.



Lt Col Doug Crawford, renewed CAP Pilot with Capt Daniel Bradley, on 26 Aug 21. Shown is the ORWG Cessna 206 that he utilized.



Maj Mark Fridell, renewed CAP Pilot with Lt Col Noel Luneau, on 19 Aug 21.



Maj Jeff Ironfield renewed CAP Pilot with Lt Col Noel Luneau, on 17 Aug 21.



New Mission Pilot

Lt Ondrej Podlaha, (on left) completed initial Mission Pilot with Maj Jeff Ironfield, on 13 Aug 21.



New Instructor Pilot

Lt Jeff Ferland renewed CAP Pilot and initial Instructor Pilot with Capt Keith Breton, on 29 Aug 21.



New Mission Pilot

Capt Stephen Swale, completed initial Mission Pilot with Lt Col Noel Luneau, on 10 Aug 91



New Mission Observer

1st Lt Alexander Arnoldy completed Mission Observer, on 1 Aug 21.



New Mission Observer

SM Swaminatha Vasudevan completed Mission Observer, on 1 Aug 21.



AIRCREW PROFESSIONALISM AND SAFETY

WHERE IS THE CAP GLIDER?

BY LT COL NOEL LUNEAU

For those wondering where yellow CAP glider N420BA is, it's at Minden, Nevada airport awaiting return to Byron Airport.

Over a couple of weekends in June, volunteers took the glider apart, and put it in it's box for transport. Maj Bob Semans drove the glider to High Sierra Pilots for important avionics work.



Volunteers taking N420BA apart.

As some of you know the CAP powered fleet has had ADS-B installed for a couple of years now. But now N420BA has had ADS-B installed and also has a fresh Annual Inspection. We expect it to be back at Byron by the end of September. Many thanks to Maj Bob Semans, Capt Eric Choate, Capt Van Henson, and Capt John Stevulak for getting this done!

WHAT IS THIS ADS-B?

The FAA has a great document explaining ADS-B archived [Here](#) on Craggy Aero. Below is an excerpt from their ADS-B Equip-Now, Winter 2017-Spring 2016 newsletter.

The FAA states that "Automatic Dependent Surveillance-Broadcast

(ADS-B) uses a GPS satellite system to track aircraft in real time, requiring less assistance from air traffic control (ATC). ATC will be able to manage the flow of traffic far better. "ADS-B increases safety and efficiency to help meet the increasing air traffic predicted in coming years," said Bobby Nichols, FAA Surveillance Services Group manager.

ADS-B has the following characteristics:

It's **Automatic** and transmits location and other information nearly once per second versus a transponder every 5-12 seconds.

It's **Dependent** on the aircraft being equipped with a rule-compliant position source and signal transmitter.

Surveillance is achieved by the aircraft emitting a signal providing position and a velocity vector derived from a position source, typically a GPS receiver.

Broadcast of signal data is sent to controllers and any aircraft equipped to receive ADS-B."

HOW DOES ADS-B WORK?

The FAA explains that "ADS-B works by having aircraft avionics regularly broadcast position, velocity, and identification information from an aircraft to ATC and other aircraft that can receive ADS-B data. This data is transmitted on one of the approved ADS-B data links.

This transmission is referred to as ADS-B Out. Aircraft within "line of

sight" equipped to receive the data and ADS-B ground stations up to approximately 250 miles away receive these broadcasts. The ADS-B ground system then processes this data and displays it to ATC for use in separating aircraft. Aircraft equipped with ADS-B In also receive the ADS-B Out signals from other equipped aircraft."

WHY SHOULD THE GLIDER(S) HAVE ADS-B INSTALLED?

Although gliders do not normally have to have ADS-B out, there are two situations where it is a valuable requirement.

The first situation is to be "seen" by other aircraft with ADS-B In displays, so as to allow an early avoidance of a conflict. The second situation is to be seen by ATC. Both of these are very desirable benefits as a sailplane is usually slower than all other overtaking traffic, except perhaps a balloon or the Goodyear Blimp. ADS-B, may allow other aircraft to see and avoid the glider earlier, and provide traffic alerts to aircraft under ATC Flight Following.

COOL, SO WHAT ARE WE GETTING?

N420BA is getting a Trig TT22 Class I Mode S Transponder with a built-in Altitude Encoder, a TN70 WAAS GPS Receiver and WAAS Antenna, and a Pneumatic Airspeed Switch. In addition, Maj Bob Semans is supplying a donated PowerFlarm portable that will display other ADS-B and Flarm aircraft in the area.

Cockpit pictures continued on the next page.

AIRCREW PROFESSIONALISM AND SAFETY

WHERE IS THE CAP GLIDER?

CONTINUED...

BY LT COL NOEL LUNEAU



The Trig TN22/TN70 combo.



Glider front seat with the new ADS-B transponder in the front center.



The PowerFlarm in the rear seat above the glareshield.

We will be starting up operations again at Byron Airport in October. Come join us!

DOV LINKS

PROFESSIONAL EDUCATION

Aircrew Education

1. Would You Go? IFR Cross Country Into Low Ceilings And Scattered Storms
 - a. Bold Method - 8/21/21
 - b. Link [Here](#)
2. Why Calling 'Go-Around' Is An Action, Not A Decision Point
 - a. Bold Method - 8/31/21
 - b. Link [Here](#)
3. (Don't) Drop the Mic!
 - a. FAA Safety Briefing - September/October 2021
 - b. Link [Here](#) for article on page 12
4. FAA Fire Fighting With Drones
 - a. FAA - Jul 20, 2021
 - b. Link [Here](#)

Accident Case Studies

1. Pilot Inadvertently Lands On Wrong Side Of Half-Grass, Half-Pavement Runway
 - a. Bold Method - 8/29/2021
 - b. Link [Here](#)
2. Accident Case Study: Airframe Icing
 - a. AOPA's Air Safety Institute - 7/20/2016
 - b. Link [Here](#)

Aircrew Professionalism

- CAP Aircrew Professionalism
 - NHQ Aircraft Operations
 - Link [Here](#)
- Aviators Code of Conduct
 - NHQ Aircraft Operations
 - Link [Here](#)
- Aircrew Code of Conduct
 - NHQ Aircraft Operations
 - Link [Here](#)

CAP AIRCRAFT

SEEN THIS MONTH



BFL T206 at the Group 2 SAREX In Livermore



CAP aircraft tied-down at Livermore Airport during the Group 2 SAREX.



Unknown CAP aircraft tail at the NorCal Mission Aircrew School

EDUCATION AND TRAINING



BUILDING A STRONG CAP VOLU INSTRUCTOR CORE

BY RICHARD WEST

Wanted: CAP VolU Instructors

Civil Air Patrol Volunteer University (CAP VolU) provides the structure for implementing the Senior Member Education and Training Program. Think of CAP VolU as a university structure with provosts, deans, chairs, and instructors. While the first three handle the administrative aspects of CAP VolU, instructors are the key to making E&T work for senior members by providing opportunities to complete the required learning modules.

Unlike instructors for the legacy SLS and CLC, members must apply to become CAP VolU Instructors, take the required training, and receive the endorsement of their chain of command. Only CAP VolU Instructors are authorized to teach learning modules and award credit to participating members.

Without a sizable cadre of CAP VolU Instructors, Group 2 will be unable to effectively offer E&T opportunities to the broader membership. We need you to become a CAP VolU Instructor. Anyone can become a CAP VolU Instructor. We strongly encourage Commanders, Deputy Commanders (for Seniors), and Education and Training Officers to apply to allow you to teach learning modules as part of your squadron's regular meetings.

CAP VolU Instructors can teach either "online" as part of an online cohort run through CAP VolU or "face-to-face" which allows for in-person one-on-one or small group learning (including hybrid models using Teams).

CAP VolU Instructors can teach any level they have already completed, so anyone who has completed Levels 2 and 3 would provide valuable service in helping the bulk of our members advance through those levels.

For more information:

- [the process for becoming an instructor](#)
- [the instructor application](#) (please answer "All" for question 9: "What level(s) do you want to teach?")

Gp2 CAP VolU Instructor Census

CAP Volunteer University makes knowing who the qualified instructors are incredibly complicated. Even when specific instructors are identified, it is very likely that CAP VolU has incorrect/incomplete set of credentials/permissions for them. This census is an attempt to locally address both of these issues. If you are a current or potential CAP VolU Instructor, please take a moment to complete this census.

California Wing Education and Training is planning on piloting a "Level 2 Day" concept in the near future. Three CAP VolU Instructors minimum will be needed. Any Level 2 (or higher) CAP VolU Instructor or Assistant Instructor can teach and fulfill the service requirements for Levels 4 and 5.

EDUCATION AND TRAINING

2021 CALIFORNIA WING CONFERENCE E&T SESSIONS

BY RICHARD WEST

Two conference sessions will be dedicated to the Senior Member Education and Training Program. These are an opportunity to learn how to navigate the program and successfully implement the program within your unit.

<https://conference.cawgcap.org/>

Mechanics of E&T Systems

1530-1630 Thursday, 30 Sep 2021

On 4 Aug 2020, Civil Air Patrol replaced the Senior Member Professional Development Program with the Senior Member Education and Training Program. This conference session will cover the basics of the program, clarify terminology, and review the tools used to administer the program. With the program's one-year anniversary behind us, this session will provide a preview of any changes coming in FY22.

How to Conduct E&T at the Unit/Group

0800-0900 Saturday, 2 Oct 2021

Civil Air Patrol's Senior Member Education and Training Program promised to democratize the professional development. Gone were Squadron Leadership Schools, Corporate Learning Courses, Region Staff Colleges, and National Staff Colleges with limited offerings, travel, and lodging expenses. Members could pursue their professional development on their own terms and timelines close to home. However, how many squadrons and groups have been able to develop their programs to fulfil this noble goal? This conference session will cover the requirements to establish an instructor core, which echelon should handle which levels, and some tips on how to manage a successful program. Attendees will also be invited to share their experiences, good or bad, as an instructor or student.

While not required, it is recommended that attendees who are not too familiar with the structure of and tools for the Education and Training program attend the Mechanics of Education and Training conference session prior to attending this session.

ANNOUNCEMENT

Level 2 Day (L2D)

09 Oct 2021 @ Travis Air Force Base

Complete all the Level 2 Part 1 and Part 2 moderated modules in a single day.

<https://forms.office.com/r/BWGxA3eGbN>

Squadron Commander Course (SCC)

09/10 Oct 2021 @ Travis Air Force Base

Complete all the modules for SCC in a single weekend.

<https://forms.office.com/r/WJ827K6p8T>



EDUCATION AND TRAINING**THE BENEFITS OF AN ALTERNATE SPECIALTY TRACK****BY RICHARD WEST**

If you've been privileged/unfortunate to hear my opinions on specialty tracks, you'd know I'm a big proponent of having an alternate specialty track. "Why do I need an alternate when I only need to make progress in one?" I hear you asking. Well, Dear Reader, have you looked beyond the Technician checklist? Each specialty track has its unique challenges which can throw up roadblocks to the traditional 6-12-18 month cadence.

Let's analyze that last sentence a bit closer for a moment. While it is easy to simplify the time-in-rating requirements to six months for Technician, twelve months for Senior, and eighteen months for Master (three years total), not every specialty track follows this cadence. A classic example is Aerospace Education where 6-12-18 is, in fact, 6-6-12. This is not to say that advancing in the AE specialty track is easier. Advancing requires providing a breadth of learning opportunities to members which has no fixed schedule.

Similarly, Inspector General requires a total of two years service as an IG for the Master rating.

However, seven years of CAP membership is also required. An ambitious IG may be waiting a long time for that silver star on their Leadership Ribbon if they join the track early in their CAP career.

Another possible roadblock to timely advancement in a specialty track is the requirement to serve at higher echelons. Not every specialty track allows you to earn a Senior or Master rating while remaining a squadron officer. An example of two popular tracks where higher echelon service is required are Emergency Services and Operations. Both ES and Ops require you to serve at group (or higher) for Senior and wing (or higher) for Master.

Appointments at group and wing are not automatic, so you may wait for a position to open up.

Even if your specialty track doesn't explicitly require higher echelon service for advancement, some of the checklist items could require permissions or activities not available to squadron level officers. For example, Financial Management Master requires you to audit accounts, budgets, and banking software only accessible to wing or higher echelon Finance Officers. Yes, you theoretically could do that without that assignment, but it certainly would not be to a level of "mastery" that would be expected by outsiders looking at your records.

Further complications across different specialty tracks include requirements to attend specific schools, courses, or events. If these are not readily available or convenient to your schedule, advancement in your track may be delayed until another opportunity presents itself. Similarly, you may need to attend an event as a participant for your earlier ratings and return later as staff. There are many examples of "annual events" where demand is low and the overhead is high, so you may be waiting for a larger group of people in the same predicament before an opportunity arises unless you are willing to travel to another wing or region.

Now, Dear Reader, are you going to have a second look at your selected specialty track pamphlet?

There are more gotchas than a single article can convey. Hedge your bets and expand your experience by progressing in an alternate specialty track.

By the way, are you continuing to make progress in all your tracks even if you've "mastered" one of them?

EDUCATION AND TRAINING

THE BENEFITS OF AN ALTERNATE SPECIALTY TRACK

BY RICHARD WEST

Brief Position Description for Duty Assignments	
Specialty Track	Main Duties
Administration	Establish and administer policies, procedures, and standards concerning publications, forms, and correspondence management; prepare administrative authorizations.
Aerospace Education	Implement aerospace education programs for cadets and senior members at the squadron level and promote AE in local schools.
Cadet Programs	Broad field: see CAPR 20-1 and CAPP 52-15 for details. The primary responsibility of every CP is to create the conditions necessary for youth to succeed as CAP cadets in the areas of leadership, aerospace, activities, DDR or testing.
Chaplain	Conduct character development instruction for cadets; provide a comprehensive ministry to CAP members and families affected by the SAR mission. This must be done in a pluralistic setting that recognizes personal ministry limitations while ensuring religious needs of all parties are accommodated as much as possible.
Character Development	Assist and support CAP chaplains and squadron commanders by providing moral and ethical instruction to cadets, and by supporting chaplains during emergency services missions.
Command	Lead unit; must be knowledgeable of CAP regulations, pamphlets, duty positions, and missions.
Communications	Establish programs to maintain and operate unit radio equipment; monitor unit communications; implement communications plans and programs from higher headquarters; maintain accountability of equipment issued from higher headquarters and equipment issued or acquired at the unit level.
Education and Training	Assure the training and manning of the unit's staff and senior membership; maintain unit training records and resources; assist testing officer in security of any training examinations; prepare documentation in support of training awards for the commander's review; submit applications for awards.
Emergency Services	Coordinate ES activities; develop working relationships with local search and rescue/disaster relief agencies; develop and maintain an adequate ES force (personnel and equipment) and alerting system.
Finance	Manage and maintain unit's finances, ensuring accountability
Health Services	Advise commander and unit of medical issues (health, sanitation and hygiene) related to missions, training, and mitigation of risks. Teach first aid and CPR classes.
Historian	Assist the commander on all historical matters and implement a unit historical program; collect and preserve material of historical significance.
Information Technology	Manage and direct unit information technology (IT) program; serve as the unit web security administrator (WSA); assign and edit permissions for assigned members; ensure that operational security (OPSEC), information security (INFOSEC), virus definition and appropriate software updates are performed in a timely manner; develop and implement local unit IT policies and procedures in support of CAP's missions; develop and implement training programs for unit members to ensure efficient use of all IT assets; oversee the development and maintenance of the unit's website in coordination with public affairs; assist the unit commander in generating up-to-date measurable performance data extracted from available information systems; provide support for network administration, approved hardware, and approved software. Track IT related support issues and inquiries for submission, through proper channels, to higher headquarters.
Inspector General	Assist with complaint investigation and resolution as well as unit compliance inspections (wing-level assignment)
Logistics	Responsible for receipt, issue, storage a insured and those drivers are qualified a
Operations	Develop and implement operations plans of operations programs; coordinate operating procedures for the control and programs.
Personnel	Process applications, duty assignments,
Public Affairs	Promote CAP within the community. Cr
Recruiting and Retention	Establish and maintain a list of local sch Aircraft Owners and Pilots Association (/ and aerospace related contacts; give prt visit non-CAP facilities (such as schools,
Safety	Implement safety programs for education
Standardization/Evaluation	Development and oversight of the trainr implementation of the accident preventic

Extracts from the Student Guide for Level 2 Part 1 moderated module "Choosing your Duty Assignment and Specialty Track"

Specialty Track Quick-Look Table

Specialty Track	People Skills	Technical Skills	Administrative Skills	Public Speaking	Minimum Advancement Time	Travel
Administration	Mild	Moderate	High	Mild	2.5 years	Usually no
Aerospace Education	Moderate	Varies	Moderate	Moderate-High	2 Years	Varies
Cadet Programs	High	Varies	Moderate-High	Moderate-High	3 Years	Varies
Chaplain	High	Moderate	Moderate	High	2.5 years	Yes
Character Development	High	Mild	Moderate	High	3 Years	Varies
Command	High	Moderate	Moderate-High	High	4 years	Yes
Communications	Moderate	Moderate-High	Moderate-High	Mild-Moderate	2.5 years	Usually
Education and Training	Moderate-High	Mild	High	Mild	2.5 years	Usually no
Emergency Services	Moderate	High	High	Moderate	5 Years	Usually
Finance	Mild-Moderate	Moderate-High	High	Mild	3.5 years	Usually no
Health Services	Mild-Moderate	Moderate	Mild-Moderate	Varies	2.5 years	Usually no
Historian	Moderate	Mild-Moderate	Moderate	Varies	2 Years (less if MA or PhD in history)	Varies
Information Technology	Moderate	High	Mild-Moderate	Mild-Moderate	3.5 years	Varies
Inspector General	High	Mild-Moderate	High	Moderate	3.5+ years	Usually
Logistics	Moderate	Moderate	High	Mild-Moderate	3 Years	Varies
Operations	Moderate-High	Moderate-High	High	Mild-Moderate	2.5 years	Varies
Personnel	Moderate	Mild-Moderate	Moderate	Mild	3 Years	Usually no
Public Affairs	High	Mild-Moderate	High	High	2.5 years	Usually
Recruiting and Retention	High	Moderate	High	Moderate-High	4.5 years	Usually
Safety	High	Moderate-High	High	Moderate-High	2.5 years	Varies
Standardization/Evaluation	High	High	Moderate-High	Varies	3 Years	Usually

While useful, these miss the minutia that makes each track unique and could present a roadblock to timely advancement in rating

EDUCATION AND TRAINING

GROUP 2 EDUCATION AND TRAINING ACHIEVEMENTS

BY RICHARD WEST

August Senior Member E&T Program Levels

Capt Taubeneck, AnnaMae (536697) [Sq10]

Level 3 — Grover C. Loening Award
2021-08-09

SM Black, Crystal (666834) [Sq44]

Level 1 — Membership Ribbon
2021-08-03

SM Putnam, Edward (667777) [Sq13]

Level 1 — Membership Ribbon
2021-08-03

SM Law, Kwok Tung (669312) [Sq10]

Level 1 — Membership Ribbon
2021-08-10

SM Taghavi, Ali (667871) [Sq10]

Level 1 — Membership Ribbon
2021-08-10

SM Nouripour, Ivan Arsalan (611350) [Sq18]

Level 1 — Membership Ribbon
2021-08-24

SM Buenaventura, Raymond (669927) [Sq10]

Level 1 — Membership Ribbon
2021-08-26

August Specialty Track Ratings

1st Lt Tsay, Thomas (571027) [Sq80]

Finance — Senior
2021-08-10

Lt Col Dolgin, Stephen (145482) [Sq18]

Character Development — Senior
2021-08-27

2d Lt Fontanilla, Teresa (629290) [Sq18]

Administration — Technician
2021-08-03

1st Lt Bird, James (643656) [Sq80]

Emergency Services — Technician
2021-08-24

Capt Fortenberry, Steven (350561) [Sq80]

Emergency Services — Technician
2021-08-24

Maj Gadd, George (413027) [Sq80]

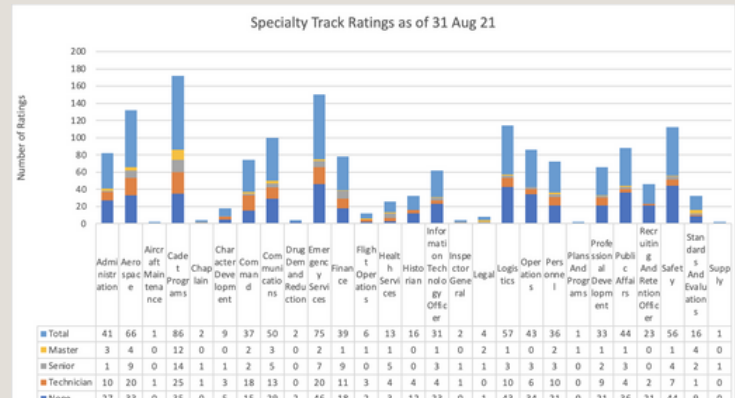
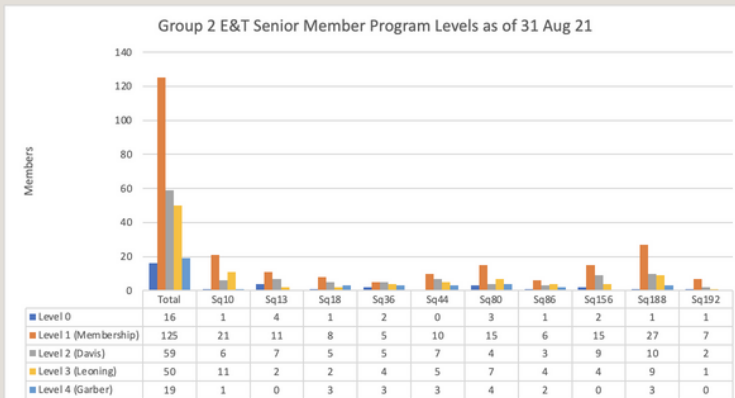
Emergency Services — Technician
2021-08-24

Lt Col McDowell, Kevin (217242) [Sq80]

Emergency Services — Technician
2021-08-24

Lt Col Tupper, Daniel (222257) [Sq80]

Emergency Services — Technician
2021-08-24



FUN AND GAMES

ON GUARD QUIZ

BY RICHARD WEST

Each edition of On Guard will have a quiz. Each quiz is worth 500 points for correct answers and 500 points for speed. Speed points will be based on a par-time set by considering all responses. Time starts as soon as the quiz loads, so do not open the quiz until you are ready.

This edition of the On Guard Quiz comes from the San Francisco Bay Group 2 Reignite Celebration Pub Quiz. This five question round is the "Famous Male Seconds in Aerospace" round. Unless specifically stated, only enter the last name of the woman who answer the question. Spelling counts!



AUGUST'S ON GUARD QUIZ ANSWERS

This woman became the first to pilot her own balloon on 18 Aug 1805. In 1811, Napoleon named her his first chief of air service. Sadly, she became the first woman to perish in an aviation accident in 1819 when her hydrogen balloon burst into flames.

Sophie Blanchard

While Emma Lilian Todd is the first woman recognized for designing her own airplanes starting in 1906, this sister of two famous aviation brothers could possibly claim she was the first female aircraft designer when their aircraft first flew on 17 December 1903.

Katharine Wright

On 15 June 1921, this woman became the first black woman and first Native American to earn an international aviation license from the Fédération Aéronautique Internationale after being forced to learn French and move to Paris to train in a Nieuport 564 biplane as no American flight school would admit either women or black people.

Bessie Coleman

Over four days in June 1963, this woman became the first woman and first civilian in space aboard Vostok 6.

Valentina Tereshkova

An original member of NASA's first female astronaut class (dubbed the "Mercury 13") in 1961, this woman bested John Glenn in multiple flight, cognitive, and psychological tests but never got to go to space as the program was cancelled. Fittingly, she surpassed John Glenn's record as the oldest person to fly in space by five years when she launched on Blue Origin's New Shepard 16 mission on 20 July 2021. On Earth, she was the FAA's first female Flight Inspector and the NTSB's first Air Safety Investigator.

Mary Wallace "Wally" Funk



CAPID	Last	First	Charter	Total
656494	Gu	Cayden	PCR-CA-214	1000
633943	Salimi	Margaret	PCR-CA-452	900

Only two eligible members participated in the August On Guard Quiz. We thank them and congratulate them on getting perfect scores. Sargent Gu edged out Lt Salimi for speed. Without a large sample size, no par time was set for the quiz.

The current series of On Guard Quiz will have ten rounds, so there is plenty of time to get your name on the leaderboard.

FUN AND GAMES

MYSTERY WORDSEARCH

BY RICHARD WEST

Up for a challenge? How about a wordsearch without an answer key? There are 25 items hidden in this grid which are connected by a common theme. The hidden items can appear horizontally, vertically, and diagonally; possibly in reverse.

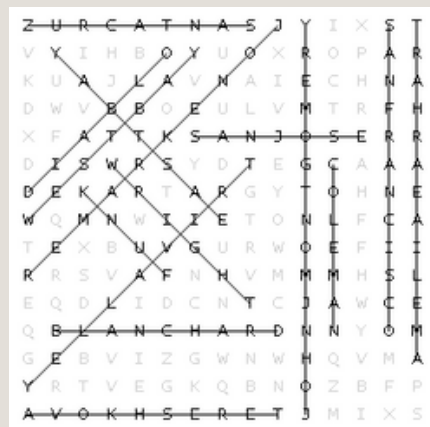


AUGUST MYSTERY WORDSEARCH

BY RICHARD WEST

The theme of last August's Mystery Wordsearch? The ten squadrons of San Francisco Day Group 2.

- Jon E Kramer (Composite Sqdn 10)
- Santa Cruz (Composite Sqdn 13)
- East Bay (Cadet Sqdn 18)
- John J Montgomery (Cadet Sqdn 36)
- Diablo (Composite Sqdn 44)
- San Jose (Senior Sqdn 80)
- San Francisco (Cadet Sqdn 86)
- Tri-Valley (Composite Squadron 156)
- Amelia Earhart (Senior Sqdn 188)
- West Bay (Composite Sqdn 192)



As an easter-egg, the five answers to the On Guard Quiz were also included in this wordsearch.