



Annual Bus Trip June 6: Reserve Your Spot!

Destinations: Hiller Aviation Museum & Computer History Museum



Above: The Hiller Museum features numerous rare and historic aircraft, including helicopters and pioneering flying machines. Below: The groundbreaking Computer History Museum in Mountain View includes prototypes of many pioneering computers: mechanical, electrical, and digital. The Museum tells the story of computing from its earliest days.



The bus, provided by Sonoma County Airport Express, will be a comfortable touring coach equipped with wifi and a restroom.

Tickets are sold in advance at the PCAM Gift Shop. You can also contact Duane Coppock for more information, at 707-575-7900 or through email at admin@pacificcoastairmuseum.org.

Don't hesitate! The PCAM bus trip always sells out so act soon! ✨

Our annual bus trip takes place Saturday, June 6. We'll leave from PCAM early in the morning and return that evening. This year we'll be making a trip down to the Peninsula to visit the Hiller Aviation Museum in San Carlos. Hiller is well known for its rare and historic planes and helicopters. A box lunch picnic on their patio will follow. Then it's off to the world famous Computer History Museum in Mountain view. Mark your calendars and get your tickets early!

Tickets are \$50 each, and include bus fare, entrance to both museums, and the box lunch. Lunch is provided by Sam's For Play Cafe. Place your lunch order with the museum by May 29 when you buy your bus trip ticket. Get a menu in the PCAM Gift Shop or see page 5 of this newsletter.

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The PCAM Mission

"To Educate and Inspire both young and old about our aviation heritage and space technology, to Preserve historic aircraft and artifacts, and to Honor veterans."

President's Message: Changes and Thanks

Included in this month's Newsletter is an updated Org Chart. I wanted to point out a few changes that have or will be taking place.

We have a new Oral History Program team. John Nelson (who has become one of our primary photographers) and new member Alan Nelson (no relation to John) will be co-chairing the committee. Barbara Beedon, Charley Taylor, and Tom Chauncy will also stay involved. We are meeting this Friday to kick things off.

Allan Morgan will be leaving to move to Texas on May 30th. Allan is a past President, Board Member, and long term Director of our Education Division. Allan has also headed up our annual Pig Roast (coming up June 20). Art Hayssen, Ruth Barron, and Brian Benner will take over the Education Division. Julia Hochberg will be our liaison to the Children's Museum, and I will remain liaison to the North Bay Science Festival and Buck Institute. Anthony Marinelli will take over coordination of the Pig Roast and his company, Task Mortgage, has offered to be the sponsor of this year's event.

Allan – Thank you for all your years of service to PCAM. You will be greatly missed.

Many of you have already heard, but for those who haven't – Christina Olds will be leaving her position as Director of Museum Operations after the Air Show. She may be able to help out part time until the end of the year if we need her. The Board of Directors is al-

ready discussing the DMO position and plans for Christina's replacement.

Another major change, as most of you already know, is that Ron Stout and his wife will be moving to Oregon later this year or early next year. Ron had informed us of this last year. Ron has decided to resign his position as Director of Aircraft and Asset Management but will remain Crew Chief of the A-26 Invader for now. There will be much in store for Ron in the coming months. Lynn Hunt and Mark Fajardin have taken over this division. Mark also remains Director of Aircraft and Asset Acquisitions and our Safety Officer.

I want to thank everyone mentioned above for their past service to PCAM and for stepping up to take over many of these new positions. It's our volunteers who make PCAM the successful organization it has been for the last 26 years.

Lastly, a special thank you to all of you who have volunteered to serve on our AOA badge patrol during our 24 open hours each week. This is a burden that came up due to changes in TSA security requirements. I am working with the Airport office to determine a longer range solution. At this time it looks like we may have to install additional 8' fencing.

As always, if anyone is interested in assisting in any Division, please let us know.

— Jim Sartain

May in Aviation History...

On May 15, 1964, Larkspur resident Marcia Dunn and her mother Thelma Dunn took off from Marin County Airport (Gnoss Field) in Marcia's 1954 Cessna 170B for a six-week cross-country flight. Marcia was pilot, and her mom was navigator. In the photo at right, Marcia's father kisses her goodbye. A local newspaper referred to them as "Flying Females" which sounds condescending nowadays. But women pilots were still scarce fifty years ago and these two made the local news everywhere they went during their trip. In 2013 Marcia Dunn donated that very plane, N2843C, to the Pacific Coast Air Museum. It is currently being restored by the Flight Wing to flying condition. ★



Vietnam Veterans: We Want Your Stories

For a Special Collection Commemorating the 50th Anniversary of the Beginning of Hostilities



To honor our Veterans and make sure their stories do not vanish, the Pacific Coast Air Museum intends to assemble a special collection of personal accounts that will be published in conjunction with the nationwide Vietnam War Commemoration occurring throughout 2015. We are looking for stories by men and women from all branches of the military — Army, Air Force, Navy, Marines, Coast Guard — and civilians as well, whether they involve flying or not.

Our Fighting Men Unjustly Vilified

Many Vietnam Veterans returned home only to find that a confused and angry populace took out their frustrations on the men who fought the war rather than the politicians who started and prolonged it. Soldiers, sailors, fliers, and other fighting men were ignored, shunned, or treated with outright hostility regardless of the visible or invisible wounds they had received in service of their country. Director of Museum Operations Christina Olds described the return of her father, ace and fighter wing leader Colonel Robin Olds, to Washington D.C. “We barely recognized him. He had lost fifty pounds and his uniform just hung on him. We all cried as we engulfed him with hugs and kisses. As we were driven in a car out of Andrews Air Force Base, we passed through an anti-war protest. They swarmed around us and we could hear them chanting ‘Murderer’ and worse. They spat on the car. My father was simply rigid with shock. He was horrified, angry and hurt and as we left the protest behind us he said, ‘What in God’s name has happened to my country?’ I looked at his face and saw tears running down his cheeks. He’d served his country for over twenty five years, had led an entire fighter wing, and flown 152 combat missions just in the last year. What a terrible home-coming.”

It was no different for men in the ranks. It’s small wonder that many Veterans simply chose to remain silent.

Long-Deserved Recognition

It is late in the game, and too late for many, but we don’t want silence. We want to retell your stories, not only to honor the sacrifices you and your comrades made but to help us understand and support Veterans returning from today’s battles. The younger generations must learn from the elder, and hopefully gain wisdom, compassion, and understanding from what they have to say.

If you would like to tell your story of Vietnam — to honor a fallen comrade, to set the record straight, to share a laugh, or just to document what you experienced — please let us know. Contact Straight Scoop Editor Peter Loughlin at pcam-news@loughlinmarketing.com and we’ll arrange for an interview. 🌟



Flight Wing Report: First Flight, C-IA Maintenance, and Mass Casualty Drill

By Lynn Hunt



First Flight

An historic event in the development of the PCAM Flight Wing occurred on Saturday, April 18, 2015. Members of the Flight Wing flew a Flight Wing aircraft for the first time as Stinson 9093K took to the air after a prolonged period on the ground. The event was without much fanfare as this was a maintenance/test flight and a time of learning regarding the airplane and the pilots who were flying her. All went well and this event will be followed by more evolutions until eventually you will see the aircraft and crews providing rides to our members and visitors. More to follow.



Left to right: Don McKenzie, Henry Granger, David Cooper work on a C-IA prop.

C-IA Trader Maintenance

Maintenance continues on the C-IA. Crews recently removed both propellers, disassembled and cleaned the internal components and reassembled them using new seals. It was an opportunity for several of our people to be exposed to this older technology and learn to preserve and maintain this, the largest of the Flight Wing fleet. You are never too young to start the learning process as can be seen by two promising prospects shown here receiving their first C-IA cockpit orientations.



2105 Triennial Mass Casualty Drill

In an effort to be prepared for a worst-case mass casualty event, the Emergency Services of Sonoma County conduct a training exercise every three years. This exercise invites participation from over fourteen local agencies and provides them an opportunity to coordinate their resources in order to respond to an event of large magnitude. So where is the most logical place to conduct such an event? Why not out at the airport for a simulated plane crash? And if the simulation involves airplanes, where would one find an assortment of available aircraft? Why, an air museum of course!

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On Friday April 24, 2015, emergency service agencies in Sonoma County were alerted to respond to a simulated event at the Charles M. Schulz-Sonoma County Airport. The Pacific Coast Air Museum made available its C-118 and F-5, and the Flight Wing provided the C-1A and a 415C Ercoupe.



NOT A REAL EMERGENCY: JUST A DRILL. These photos show a “mass casualty drill” by the county. Read the story for details.



Of course any well organized mass casualty simulation requires simulated victims so a call went out to PCAM for volunteers and several members responded. Each was prepared for the event, and sported an array of simulated injuries. Many were placed inside the various aircraft for rescue.

On a lighter note, past President Jim Cook, having sustained a simulated head injury, was asked to participate with two rescue dogs. Jim snuck out into a grassy field and lay down in order for the dogs to find him. Just moments after he disappeared from sight, several witnesses observed a very large buzzard begin to circle his location. So convincing was the quality of the make-up he was wearing. 🐦

Bus Trip Box Lunch Menu: Order when You Buy Your Ticket

As explained on page 1, those going on the June 6 Bus Trip to the Hiller Museum and the Computer History Museum **must order lunch in advance** when they buy their Bus Trip ticket. Get a “Sam-Wich” (sandwich) or Specialty Salad. Cost of lunch is **included** in the Bus Trip price!



Sam-Wich (Includes your choice of bread, salad, dessert, and beverage, plus lettuce, tomato, & mayo.)

<i>Fresh Roasted Turkey</i>	Bread	Salad	Dessert	Beverages
<i>Ham and Cheese</i>	<i>Whole Wheat</i>	<i>Pasta</i>	<i>Fudge-Nut Brownie</i>	<i>Coke</i>
<i>Gourmet Vegetarian</i>	<i>Sourdough</i>	<i>Coleslaw</i>	<i>Cookies:</i>	<i>Diet Coke</i>
<i>Pesto Chicken</i>	<i>White</i>	<i>Potato</i>	<i>Chocolate Chip</i>	<i>Sprite</i>
<i>Roast Beef</i>	<i>Rye</i>	<i>Fruit</i>	<i>Oatmeal-Raisin</i>	<i>Bottled Water</i>
<i>Tuna Salad</i>	<i>Soft French Roll</i>		<i>Peanut Butter</i>	

Cost of Lunch is INCLUDED in the Bus Trip Price!

Specialty Salads (Includes crackers, dessert, and beverage. Your choice of ranch, bleu cheese, honey dijon, thousand island, Italian, or fat-free Italian.)

- *Shrimp and Avocado*
- *Garden Salad w/ Chicken (or Shrimp)*
- *Chef Salad*
- *Tuna Chef*
- *Chicken Caesar*

Gift Shop May News: What's Wrong with this Picture?

Simple: You're not in it!

The Gift Shop at the Pacific Coast Air Museum is very successful, and is an important asset in welcoming visitors to the Museum and generating revenue. But we're short-handed.



We have only seven people to cover all shifts, and we need more to relieve some volunteers who currently cover multiple days a week.

If you want to be part of a winning team, have fun, and help the Museum, we need you! No experience is necessary. We'll train you to run the register, welcome visitors, and do other basic jobs. It's a great way to meet interesting people, get out of the house, and contribute to the community. Contact Gift Shop Manager Mike Lynch at 707-575-7900 or [send him an email](#).

PCAM Tee Shirts

Snoopy is back! He's on tee shirts available now in the Gift Shop, proudly showing off a B-25 Mitchell



surrounded by the words "Pacific Coast Air Museum, Santa Rosa, California."

And we've still got a great selection of Canadian Forces Snowbirds kids' jackets. Great gifts!

Get your discount! All Museum members get a 10% discount on these and all regularly priced merchandise! ★

New Tail Markings for PCAM F-106

By Jim Mattison, F-106 Crew Chief

The markings on PCAM's F-106 are for the 48th Fighter Interceptor Squadron, a unit that General Jimmy Jumper, Colonel Joe Rogers, and our own Colonel Dave Pinsky flew with. Mike Eodice, my Assistant Crew Chief, noticed that the 48th squadron insignia decal was severely deteriorated. He asked if he could repaint it and I told him go ahead. I posted a few pictures of his prep work to the F-106 Facebook Group. John Carr, a former 48th Jet Engine Mechanic saw them and contacted me, offering to donate some fresh decals. A few weeks later, new tail decals arrived and Mike applied them. On Air Defense Command aircraft, the right side of the tail had the ADC Emblem and the Squadron Emblem was on the left. Our F-106 is now marked correctly. ★



In Case You Missed It: April 15 Member Meeting Guest Speaker: Richie Roads: Life is Sweet at 2000 Feet

By Peter Loughlin

Our guest speaker at the PCAM Member Meeting on April 15 was none other than Richie Roads, well-known San Francisco Bay Area radio traffic reporter. If you listened to the airborne traffic reports on radio stations KGO, KBLX, or KNBR from the late 1990s through 2008, you heard the voice of Rich Davis, Richie Roads, or a number of his other pseudonyms. Richie gave us a fast-paced and engaging talk, liberally illustrated with his own aerial photos of familiar Bay Area landmarks and interchanges.



An animated Richie Roads, former KGO airborne traffic reporter, told us what it was like to make an emergency landing on a freeway during rush hour.

Richie had been doing broadcast work of various kinds for many years. In the late 1990s he found himself working for a big outfit called Metro Networks that supplied talent to radio stations. Like many of us, he was familiar with the KGO helicopter at the heliport in Sausalito, which you can see from 101. He'd always thought being an airborne reporter would be a great job, but only the big names at KGO like Stan Burford and Lin Durling were ever allowed in that chopper. Eventually, the folks at Metro Networks convinced KGO to allow some of their people to ride in the back seat to report traffic for other stations. One day Richie got to do it when the regular reporter was unavailable.

As he puts it, that was the beginning of his altitude addiction. He began to report on traffic from the helicopter on a regular basis and he continually pitched the idea to his boss that he should do it full-time. He was told he'd better have a very compelling reason. He piped up in true on-air personality fashion and quoted a famous poem, "All of us born will merely die, I was surely born to fly." Apparently convinced by Richie's

persistence and creativity, the boss shipped him off to Hayward for flying lessons in Cessna 172s. He never obtained a license himself, but became fascinated with general aviation and eventually logged about 12,000 hours in the air next to highly talented helicopter and fixed wing pilots.

Traffic Reporting is a Team Sport

By the year 2000 traffic in the Bay Area was building to crisis proportions, and traffic had actually become a news item along with general news, weather, and sports. The need for airborne traffic reporting was great and Richie was in the right place at the right time. He and other traffic reporters were trained to cover more than just traffic, and did live coverage of police chases, fires, and other news-making events. Even today's digital traffic detectors aren't as

good at reporting traffic as a human being in the air.

Aerial traffic reporting is a team sport. The pilot and reporter must have a good rapport so they can support each other. The reporter must communicate where they need to go and the pilot must do so safely. Then the pilot must orbit the plane over the event on the ground so the reporter can see it and report it on schedule. Pilots also have to know what to watch for, such as the stream of slowed and stopped cars that might indicate a wreck ahead. If a pilot knows what you're looking for, you don't have to coach him or her every moment.

The communications setup was fairly complicated. Reporters and a group of producers communicate via two-way radio. The producers direct the reporter to the locale they need covered. Then the reporter calls in and at eight minutes after the hour the techs patch them in so the reporter is actually "coming to you live."

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Why is traffic always reported “on the eights”? Because that was how KCBS originally set it up, and KGO followed suit.

What’s So Sweet about 2,000 Feet?

For a long time Richie reported only from the back seat of the KGO helicopter, where the view was limited. One day, the lead KGO traffic reporter was unavailable and Richie got to fly in the front seat. He was ecstatic about the immense field of vision above, below, and to the sides, and it seems his excitement was apparent. His producers back at the station asked him what the heck was going on and he quickly retorted, “Life is sweet in the front seat!” That seemed to satisfy them.



Richie in one of the many helicopters he’s reported from.
That’s Mount Tamalpais in the background.

Later back at Hayward, his regular Cessna 172 pilot said, “So you like the front seat? Well let me tell you, life is sweet at 2,000 feet!” And that is how Richie’s tagline came about.

What’s so special about 2,000 feet? It seemed that all the traffic pilots wanted to become flight instructors. The air traffic controllers at Hayward, where many of the radio stations’ planes were based, kept flight instructors and their students at about 2,000 feet. So flying at 2,000 feet implied that you had joined the hallowed ranks of flight instructors, where the pay was better and life was, well, sweet. It also happens that 2,000 feet is a convenient altitude from which to report the traffic.

Famous Events

One of the most famous events Richie reported occurred in April 2004, when the Bay Bridge was gridlocked for 13 hours because of a suicidal suspect walking around on the upper deck. It brought everything to a standstill and snarled traffic for miles on both the eastbound and westbound approaches.

He got the company award for reporting on April 29, 2007 when a gasoline tank truck crashed and burned on the 880/580 interchange, the MacArthur Maze in

Oakland. The intensity of the fire caused the overpass above the tanker to collapse. Traffic was brought to a complete standstill on virtually all routes approaching the Maze, which is one of the most important and heavily traveled interchanges in the entire Bay Area.

Post 9/11

Richie had only been flying a few years when the events of September 11, 2001 grounded all civilian aircraft, including traffic reporters. Finally, the president of AOPA (Aircraft Owners and Pilots Association) spoke before Congress and enlightened them about how important the general aviation industry was to the country. General aviation resumed, but they had been grounded for six to eight weeks.

When Richie finally launched again they had to work under some severe constraints. There was a lot of waiting on the ramp for clearance, usually fifteen to twenty minutes but one time it took forty. There were difficulties in the air trying to get approval to fly to the locations they needed to go. Once, while flying in the helicopter, they were told to hold over the San Mateo Bridge. They were nearly in line with the commercial jets approaching the Oakland airport, and had a few harrowing moments. Air traffic

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constraints finally loosened up again but they had to fly way up at 5,000 feet. This posed a challenge for identifying things on the ground but they could see the entire Bay Area at a glance.

Mayday on May Day

Richie experienced numerous “crazy landings” over the years. The rest of us call them emergency landings, but to them they were crazy landings. Sometimes just a warning light would come on and the pilot would set down at the nearest airport or helipad as a precaution. Other times, you’d hear an odd sound or the engine would conk out fairly spectacularly. A few times his helicopter had to land on ball fields. With only one exception, the public never heard about these emergency landings.

That exception was so public it made the national news. On May 1, 2007, he and his pilot were on their way out to Antioch in their Cessna to cover a wreck on Highway 4. There was an audible “clunk” and the engine started making a racket. They had lost a valve. Richie insisted they could make it the few miles to Buchanan field in Concord, but the pilot could tell his rate of descent was too fast for that. So he called in his mayday and shot a landing on the freeway.

As they came down, Richie could see the cars behind them slowing down and giving them plenty of room. He was more concerned about the cars in front of them, which they were rapidly overtaking and whose drivers might not be looking in their mirrors. Cessnas don’t have horns. But everyone avoided everybody else, and the pilot took taxiway San Marcos Right. That is to say, they exited the freeway on the San Marcos off ramp, a recently constructed exit which Richie had ironically derided as unnecessary, underutilized, and overpriced. That day it was just right for a Cessna 172. They pulled to a stop off the freeway, shaken but safe.



The MacArthur Maze at the Oakland-Emerald City border, which looms large in any traffic reporter’s (or commuter’s) life.

The authorities from about eight different agencies showed up and debriefed them. Richie even reported his own forced landing live on KGO. Stations around the country picked it up, and Richie played a recording of it for us at our meeting.

The California Highway Patrol at first considered having the pilot fly the plane right off the freeway once it was repaired, but in the end it was towed by

back ways over to Buchanan Field.

Richie expressed his thanks to the PCAM crowd and said it was a privilege to speak in front of this group, which represented hundreds of thousands of accumulated hours in military, commercial, and general aviation aircraft. Our hats off to Richie for the years of service he provided in helping us get where we are going when on the ground!

About Richie Roads

Richie Roads started his career as a barker in the Broadway area of San Francisco. His next stop was Las Vegas where he spent the early ‘80s as an announcer on the hotel, casino, and night club scene. He returned to his home town of New Orleans in the early ‘90s where he became an on-air personality for two of the most popular radio stations in the southern major market, WNOE and KOOL 95. He came back to the San Francisco Bay Area in 1996 (where he had lived as a teenager) to be hired by the nation’s largest radio reporter contract provider, Metro Networks. A year later he signed on for Airborne Reporter Patrol and spent the next eleven years giving guidance for those stuck in commutes and reporting on major local news events from San Jose to Santa Rosa. In the process, he logged over 12,000 hours in several aircraft and enjoyed a multitude of aeronautic experiences. ✪

May 20 Guest Speaker:

Major Tom Byrne, USAF (Ret.)... Linebacker II - A Tanker Pilot's Stories



Tom will be recounting stories of Operation Linebacker II, sharing what he saw and heard from the cockpit of a KC-135 he was flying out of Thailand.

From December 18th through December 29th, 1972 USAF, USN and USMC aircraft engaged in Operation Linebacker II which utilized massive B-52 airstrikes in and around

Hanoi and Haiphong. Eleven days of around the clock strikes (except on Christmas Day) resulted in the North Vietnam government agreeing to peace accords to effectively end a war of over ten years. Tom was there, refueling the heavy bombers, the strike aircraft that took out the SAMs, and the fighters that protected both.

About Tom Byrne

After receiving his Air Force Wings in September 1969, Tom flew the Boeing KC-135 Stratotanker and was assigned to the 379th Bomb Wing at Wurtsmith AFB, Oscoda, Michigan. Tom flew over 100 combat missions in Southeast Asia from U-Tapao, Thailand during the Vietnam War. He also provided aerial refueling and navigation (before GPS) on numerous flights of USAF Tactical aircraft across the Pacific to their bases in Thailand. As with most of our speakers, Tom has more stories than time permits but he will be sharing some of his best, including bringing home a crippled USAF F-4 Phantom. If Tom seems familiar to you, it's because he made a previous appearance as guest speaker in May 2013. In this encore appearance he will share further details about Linebacker II and other stories.

Time and Location:

Wednesday, May 20, 7:00 p.m.
Mesa Beverage Company, Inc.
3200 N. Laughlin Road. Santa Rosa, CA 🌟

Help Wanted: Administrative Assistant for PCAM Office

By Christina Olds

We need some office help! Our highly valued David Kinzie, who has managed a lot of the administrative functions here in the PCAM office for the past two years, is moving on to other things. Although he'll still be deeply involved in the Museum and helping out on Hot Dog Thursday, he won't be helping in the office any more. We need someone to take his place.

We are looking for someone to come in at least two or three days a week for four hours at a time on an ongoing basis to help with answering the phones, sending out membership letters and other correspondence, keeping our member database up to date, and doing similar jobs. We need someone with computer skills including the Microsoft Office Suite of Word, Excel, and PowerPoint. If you know about social media (Facebook) so much the better! There is also a museum database called PAST PERFECT which is used in processing membership information and we can train you in this once you're comfortable with PCAM basic information.

It's a fun, friendly and busy environment. You'll be part of PCAM's highly valued office staff, without whom our Museum could not function. There are always interesting visitors, fun goings-on, and a family atmosphere. If you're interested, contact me at christinaolds2@gmail.com or 970-333-1196 🌟



Office volunteer David Kinzie is moving on to other things. We need someone to fill his role!

Next Hot Dog Thursday May 7



The first Hot Dog Thursday of the season took place April 2. The weather was warm, the breeze was cooling, and lots of folks showed up.

Join us for the next one on May 7 between 11:30 and 1:30. \$5.00 covers your admission, a large hot dog, chips, and soda or water (\$4.00 for Museum members). Ice cream is available at an additional charge. Hot Dog Thursday is an important fund raiser for the Museum, and a pleasant way to get out of the office for an hour or two.



Left to right: Airport Manager Jon Stout, Airport Property Specialist Lori Schandel, Airport Marketing Specialist Gina Stocker, and Airport Assistant Manager Steve Lange at the April event.



Some students, teachers, and aids from a nearby school program paid a visit, and enjoyed the climb-aboard aircraft after eating their hot dogs.

We would like to thank [La Tortilla Factory](#) and [Sonoma County Office of Education](#) for sponsoring the May Hot Dog Thursday.



We also express our appreciation to sponsors [North Coast Air](#) and [Task Mortgage](#) for helping make the April Hot Dog Thursday event possible. If you would like to sponsor a Hot Dog Thursday, contact Roger Olson at 707-396-3425. 🌟

New Members Since February

- Gabe Kearney, Santa Rosa
- Darryl Simpson, Rohnert Park
- Keith Waxman Family, Santa Rosa
- Jim & Nancy Tatum Family, Martinez, CA
- Mitch & Elisabeth Cox Family, Concord, CA

Air Show Volunteers Needed

Help us put on the best Wings Over Wine Country Air Show ever and get in free! Get your friends, family, and co-workers to volunteer as well and they'll all get in free too! We need people to do everything from helping set up, to serving the beer, to staffing the information booth and lots more. The best jobs go first so contact Dave Kinzie, our volunteer coordinator, now, at davidkinzie@yahoo.com or 415-279-8759.

Air Show Flashback

Chuck Aaron in the Red Bull Helicopter amazed the crowd at the 2014 Wings Over Wine Country Air Show with loops, rolls, and... and we just don't know *what* those maneuvers are called, if they even have a name. Spectacular!



©Peter Loughlin

Of MiGs, Drones, & Parachutes

CJ Stephens on Flying the MiG-15, Part 2

By Peter Loughlin

Last month's issue of the Straight Scoop (April 2015) set the stage for CJ Stephens' test flights in a two-seat MiG-15 UTI. He was testing the parachute recovery system developed by FNC Corporation for the Navy's BQM-74 target drone.

Flying the Tests

The test canisters were carried aloft by the MiG on the pylons that normally held the plane's external fuel tanks. Removing those tanks cuts the MiG's fuel load by half. So from the moment CJ released the brakes to touchdown he had about 20 minutes. Of course he knew this going into the project. The plane's limited flight time became one of two major considerations.



CJ Stephens with the MiG-15 UTI he flew to test parachutes for the Navy's BQM-74 Target Drone. That's a test canister under the left wing.



This low-resolution image shows an actual drop. The parachute is well on its way to opening though the canister has barely left the plane. The pale white puff in the right half of the image is the smoke from the parachute ejection charge.

Testing took place out of California City, California, at an airport about ten miles from Mojave. Most of the flights were made in the winter so they avoided the extreme heat. CJ did the flying and either Steve Penning or Bruce Etchell (the aircraft co-owners) would accompany him as crew chief. When a round of testing was done they'd return to Sonoma County and leave the MiG in the desert. The FNC team would then analyze their data, make some changes to the test device, and schedule more flights. This went on for about three years.

CJ's job was to deliver the payload at the altitude and speed specified for that day's tests. The goal was to make sure that the parachute popped out and opened normally at any speed and lowered the test canister (and thus, presumably the drone) safely to the ground without tangling, ripping, or disintegrating.

The first drop was from 1,000 feet and 350 knots. When the 'chute popped, all the shroud lines sheared off. The heavy concrete slug, sans parachute, fell like a bomb and because of its significant forward speed it "went a bit farther than expected" as CJ so drily put it.

Dealing with Weight Differential

And here we encounter CJ's second major consideration: directional instability due to weight differential. The MiG-15 is a small plane. The hard points are pretty far outboard on the wings. It could carry the weight of two test canisters fairly easily as long as it was balanced. But dropping 840 pounds off of one wing instantly made the plane turn into the heavy wing. It required a lot of input on the controls to correct, but because the MiG has swept wings this resulted in a lot of adverse yaw. (Adverse yaw is caused by the drag of the downward-deflected aileron making the plane point its nose away from the direction it is rolling). More significant input on the controls and CJ had the plane flying straight and level again.

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As an experienced test pilot, the issues of limited fuel and weight differential were no surprises. But there's no way to really know just how a plane will react until the first time you do it. After that he knew what to expect.

Each test flight followed the same carefully planned pattern. The actual drop point for the test was about two miles from the airport. He would take off and fly straight to the test point. He'd make one dry run during which he would not drop. He'd turn around and make his first drop while the team of technicians on the ground filmed, watched, and measured. He'd throw a selector switch to arm the second canister to drop and, fighting weight differential and adverse yaw, he'd turn around and make his second drop. Once flying clean and light and with very little fuel left he'd head straight back to the airport and land. Fortunately, the uncontrolled California City airport had very little traffic and he never had to burn up fuel waiting for another plane to land.



The FNC crew loading a test canister onto the MiG at California City. FNC was the military contractor developing the recovery system. The gaping black maw at the right is the MiG's air intake.

What if it Didn't Drop?

If the first canister hung up and did not drop he would not have tried to release the second. He'd have hung on to it to avoid the weight differential problem. But with all that extra weight and flying very fast to overcome it, the 6,000-foot runway at California City would be too short. So still with plenty of fuel he would have headed straight for the long runway ten miles away at Mojave and made a hot landing and long rollout.



CJ and the first test canister. The shroud lines failed and the canister fell like a bomb.

The second drop was the crucial moment. If that one hung up he'd be trying to fly a heavy, poorly balanced high performance aircraft low on fuel ten extra miles to Mojave. It sounds nearby for a fast plane, but "nearby" is relative; CJ said he might have just barely been able to make it there on his remaining fuel. If he'd spent time trying to shake loose the stuck canister or think things through it became extremely doubtful.

The airplane still had its original ejection seat, but the actual ejection charges had been disabled by order of the FAA. So if he had lost control, CJ would have had to blow the canopy and climb over the side. But at the low altitudes at which these tests took place there would not have been time to bail out.

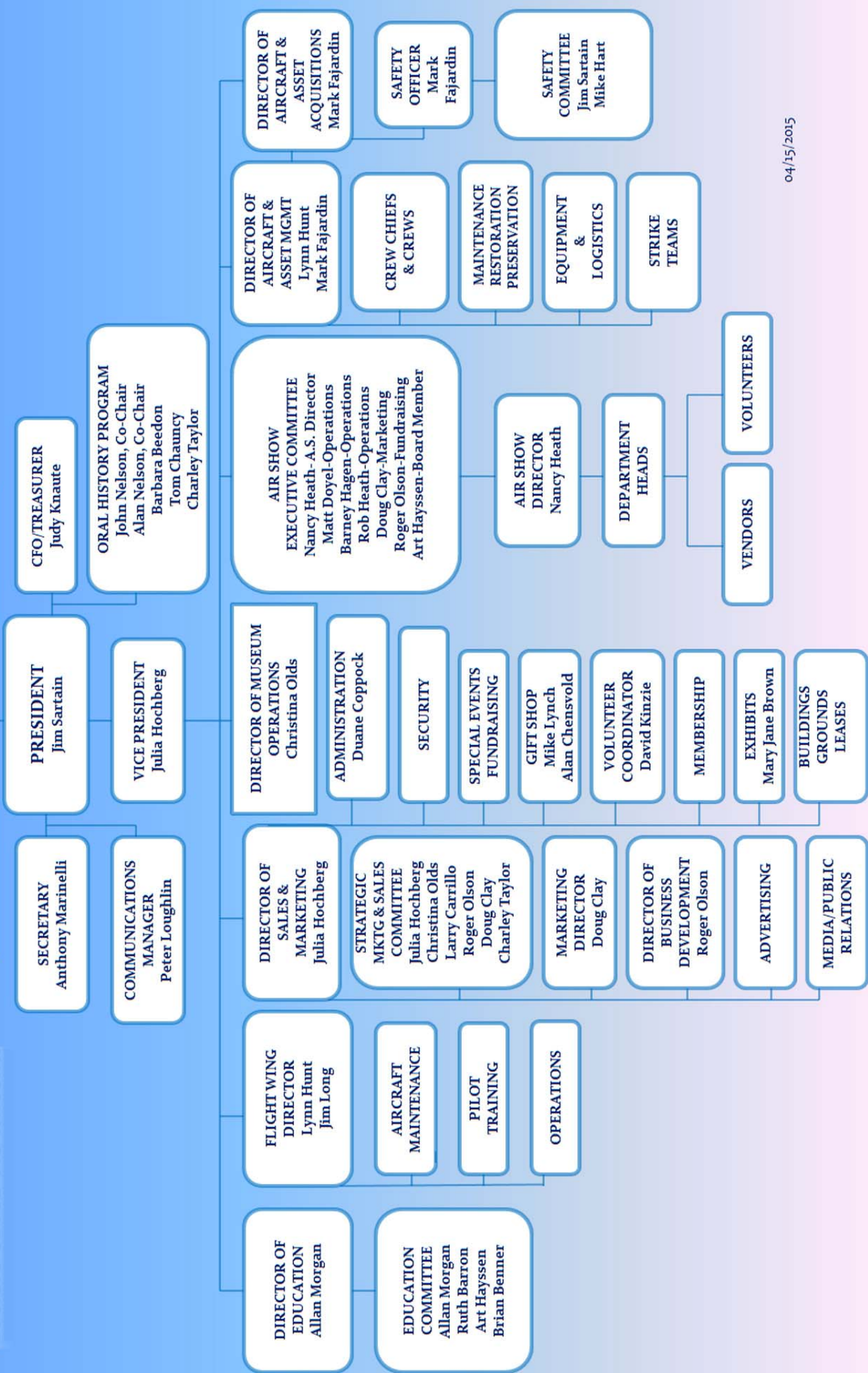
These are some of the things that hover in the back of a test pilot's mind, and which may require vast reserves of experience and a bit of luck to overcome. Fortunately, over the course of about three years and thirty-odd drops, all of the canisters separated properly from the plane and he never ran out of fuel, so he never had to solve these particular puzzles.

Next Month: Part 3, Dealing with Surprises 



PACIFIC COAST AIR MUSEUM

PACIFIC COAST AIR MUSEUM BOARD OF DIRECTORS





The Pacific Coast Air Museum

Location

One Air Museum Way, Santa Rosa, CA, 95403
www.pacificcoastairmuseum.org
707-575-7900

At the Charles M. Schulz-Sonoma County Airport, north of Santa Rosa. Hwy 101 north to Airport Blvd. and go west. Turn left on North Laughlin Rd, right on Becker Blvd. then right on Air Museum Way.



Hours

Tuesday, Thursday, Saturday and Sunday.
10:00 a.m.—4:00 p.m.

“Climb Aboard”

A selected aircraft is available to “Climb Aboard” the third weekend of each month (weather permitting). Please visit our web site at www.pacificcoastairmuseum.org or call 707-575-7900 for details or more information.

Member Meetings

Normally held on the third Wednesday of each month, 7:00 p.m. at Mesa Beverage Company, Inc. 3200 N. Laughlin Road, Santa Rosa, CA

“Straight Scoop” Newsletter

The museum newsletter, “Straight Scoop” is published monthly and is available online on the museum’s web site. Members are encouraged to submit articles for possible publication. Deadline: the 26th of the month prior to publication. All articles in the newsletter are covered by copyright. If you wish to submit articles or use any of the content, please contact Peter Loughlin, Editor: pcam-news@loughlinmarketing.com, 707-575-7900.

Membership Renewals

\$40 per year individual; \$60 per year for families. Send renewals to the museum, address below.

Address Corrections

Please send to Pacific Coast Air Museum, One Air Museum Way, Santa Rosa, CA 95403

Visit our web site at www.pacificcoastairmuseum.org or call 707-575-7900 for more information.

Read the “Red Baron Flyer,” the quarterly newsletter of the Charles M. Schulz-Sonoma County Airport: <http://www.sonomacountyairport.org/red-baron-flyer>

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PCAM YouTube Video Channel
<http://www.youtube.com/user/PCAMvideos>



STRAIGHT SCOOP

May 2015

*Climb Aboard
 May 16-17, 2015
 Supersonic Weekend:
 T-38 Talon F-106 Delta Dart
 F-4C Phantom II F-4 Blue Angels Cockpit*

REMEMBER THESE DATES

May 7, 2015	11:30 a.m. - 1:30 p.m.	Hot Dog Thursday
May 20, 2015		No Air Show meeting this month
May 20, 2015	7:00 p.m. - 9:00 p.m.	PCAM Member Meeting at Mesa Beverage
May 27-29, 2015	Various times See Schedule at.....	Collings Foundation B-17 & B-24 visit Santa Rosa http://www.collingsfoundation.org/event/santa-rosa-ca/
June 4, 2015	11:30 a.m. - 1:30 p.m.	Hot Dog Thursday
June 6, 2015	7:30 a.m. - 6:00 p.m.	Bus Trip to Hiller and Computer History Museums
June 15-19, 2015	10:00 a.m. - 12:00 p.m.	Aviation Summer School Course 1 (adv. registration requ.)
June 17, 2015	6:00 p.m. - 6:45 p.m.	Air Show Meeting at Mesa Beverage
June 17, 2015	7:00 p.m. - 9:00 p.m.	PCAM Member Meeting at Mesa Beverage
June 20	5:00 p.m. - 7:00 p.m.	Annual Pig BBQ
June 22-26, 2015	10:00 a.m. - 12:00 p.m.	Aviation Summer School Course 2 (adv. registration requ.)
July 2, 2015	11:30 a.m. - 1:30 p.m.	Hot Dog Thursday
July 11, 2015	9:00 a.m. - 3:30 p.m.	Aviation Merit Badge Class (advance registration required)

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