



# Spirit of Flight

**Experimental Aircraft Association**

**Chapter 14: San Diego, CA**

**May 2021**



*American Legend AL-18 on RWY 26R. If it looks like a Super Cub, there's a good reason—it was supposed to. Photo by Jim MacKinnon. 4/19*

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## UPCOMING EVENTS

**April 14<sup>th</sup>—IMC Club Meeting 1830 on Zoom.** Actual scenario involving an IFR flight from St. Louis (KSUS) to Waco (KACT). As the flight progresses the pilot experiences instrument issues. Registration info on [faasafety.gov](https://faasafety.gov).

**May 15<sup>th</sup>—Zoom Meeting 1000:** Gary Shank on the benefits of home-based simulators for GA pilots. Contact Kerry Powell or see [faasafety.gov](https://faasafety.gov) for details.

# Chapter Briefing

## EAA Chapter 14 Members



**Brown Field:** Andy Swartz, Brown Field Airport Manager, asked that we share the following information:

“In an effort to promote safety and security on the airport, we ask all tenants to be vigilant of suspicious activity. In the event that you observe an activity on or around the airport, that seems out of the ordinary, please report your concerns immediately. During normal business hours you can contact Airport Operations at 619-424-0455. If you are reporting the matter after hours you can contact anyone of the agencies listed below. Do not attempt to approach, or apprehend anyone behaving suspiciously, but observe their activities and report them as soon as you can. Thank you for your vigilance.”

**Airport Security/Elite:** (619) 574-1503 Ext. 2

**San Diego Police Department:** (619) 531-2000

**Transportation Security Operations Center**  
(877) 456-8722

**TSA SAN Coordination Center:** (619)321-0100

**Chapter Activities:** Information provided by Chapter members.

**Week ending April 3:** Lots of activity: Gene Hubbard, Jim MacKinnon, Jimmy Kennedy, Gert Lundgren, and Ryan all working on their planes or projects. It appears that Gert has lined up someone to do the first flight on his beautiful RV-12. Bill Browne and Ryan have been taking a few flights in Bill's Grumman. Bill wanted to get more experience with his new navigation system. San Diego City Airports held a virtual Pilots' Briefing and all airport tenants were invited to attend, including EAA 14 members. See the highlights of the Briefing elsewhere in the newsletter. On Saturday, Craig Cornford, Gene Hubbard, Jim MacKinnon, Larry Rothrock, and Ryan all were present. Dion Dyer stopped by – has been very busy working on some property here. Jimmy Kennedy took off on a trip in the motorhome to Arizona - his wife was going stir crazy.

**Week ending April 10:** A busy week. Gleb Dorogokupets was getting his annual; Ryan helped Gert bleed his brakes. Though really busy, Dion provided much needed assistance with some Chapter insurance stuff. Patrick Cooley noted he has been out of state for 3 busy weeks. He spent 1 week in Tucson for more Sport Pilot training, then left for Oklahoma to buy a cargo trailer, and then on to New York to pick up his newly purchased plane and load it into the trailer. Then, of course he had to drive it back – 5,500 miles in total in 3 weeks. He has decided to get his Private Pilot license and begin taking lesson as at First Flight – no need to keep going to AZ for Sport Pilot training. And, of course, it is time to

start studying for the PP written exam. Larry Rothrock, Gene Hubbard, and Ryan went to look at 3 possible hangars that may be donated. Mark Albert and Trevor Pearson were seen working away. Chris Constantinides was out for a flight. Ron Shipley and Mary Ann came by for a short visit – great to see him out and about. Ryan had an annual done on his Dragonfly.

**Week ending April 17:** Rumor has it that Gary List has purchased a plane – we're anxious to see what it is. Upcoming changes: As many of you know, President Gene Hubbard will be moving back to Michigan part-time and felt it would be best to step down as President, although he will continue to serve as a Director and as the editor for the Spirit of Flight. Gene “Doc” Lenard, our Vice President, has been very busy with pandemic responsibilities and also needed to step down, although he too will continue to serve as a director. We are very appreciative of all the time and effort they have spent helping the Chapter and we look forward to continuing to work with them. Two Chapter Directors agreed to assume those duties, Trinidad as President, and Larry Rothrock as Vice President. Trinidad is one of our most energetic directors, and has been responsible for several successful events, always ably helped by his equally energetic wife Sharon, and their super energetic daughter Ashley (who serves as our Young Eagle Coordinator). He has been our Ray Scholarship Coordinator, and was instrumental in obtaining a scholarship last year, and another one for this year. This year's recipient will be announced soon. Larry Rothrock has over 10 years under his belt as either President or Vice President of the Chapter and is well positioned to help us exercise our lease option with the City, and to get some hangars to put on it. We welcome them both and very much appreciate their volunteer spirit. We received some sad news this week: long-time Chapter member Richard Kalling passed away. See article elsewhere in the newsletter.

**Week ending April 24:** Ryan sold his Dragonfly and flew it up to its new owner in Tehachapi. Ryan said there was some turbulence close to the mountains, but it was clear weather all the way. On Tuesday, Nigel Worrall stopped by to see if he could do anything to help someone. Ryan was getting ready to take the engine out of his Titan aircraft – so Nigel volunteered to do that. He got it done in no time with all parts accounted for. The Serendipity Club plane saw lots of flying, as usual. And congratulations are in order: Stu Strebbig got his first solo in! And in his own plane! Well done!

**Week ending May 1:** Another oddball week weather-wise. Sunday was beautiful, Monday was raining, Tuesday was cold, Wednesday was beautiful, Thursday and Friday were hot, and Saturday was sunny, clear, just the right temperature, reminding us all that there is no better place we'd rather live, weather-wise at least! The Gang of 4 was busy at the Chapter all week working on projects (Jimmy Kennedy, Gert Lundgren, Jim MacKinnon, and Ryan), joined off and on by Craig Cornford and Trevor Pearson. Ron Shipley has resumed Treasurer duties once again. Gary List is MIA – a one week trip to Hawaii, and then 2 weeks

over in Sedona, AZ – final prep on his new plane???? Stay tuned. Members of the Serendipity Club were really active, and a number of renters on Old Charlie took to the skies as well. On Saturday, the Board of Directors held a Zoom meeting and went over a number of important Chapter matters. See the Minutes elsewhere in the newsletter.

**General Meeting:** New Vice President Larry Rothrock opened the meeting and welcomed Chapter members and guests. He mentioned efforts being made to obtain more hangars for the Chapter; it was also noted was that we hope to resume Young Eagles activities by July if health restrictions allow it. Program Chairman Kerry Powell then introduced our speakers for the month: Ron Berinstein, Pat Carey, and Mike Carson, all involved with the Southern California Airspace Users Working Group (SCAUWG). See a short overview of Ron's presentation, Hidden in Plain Sight, later in the newsletter. To watch the entire presentation, copy the following link to our website and then in the left-hand side menu, click on Past Meetings and Educational Videos: <https://chapters.eaa.org/eaal4>



#### **Kerry Powell, Program Director**

**May 15—Gary Shank** presents A fun and informative look at the benefits of home-based simulators for the GA pilot. See how you can inexpensively remain current, learn and practice procedures, prepare for new licenses, IPC's and Flight Reviews, and streamline checkouts in new airplanes. Explore the various options available for any budget and find out what the FAA considers acceptable for currency purposes:

- How home-based simulators can help you stay current;
- What procedures work best in the simulator environment;
- What simulators programs are economically available;
- How to prepare and practice for new licenses and ratings;
- How you may stay current by using simulators

Gary Schank is a recently retired Boeing 737 Captain with Delta Airlines. For over 30 years, he has flown Boeing, McDonnell-Douglas and Airbus airliners all over the world. Type Ratings: Boeing 737, Airbus A-330, DC-9, CE-500, SA-227, EMB-145. Captain Schank instructed on the DC-9 for the airlines and is also a Certified Flight Instructor (CFII-MEI), a graduate of the ABS Flight Instructor Academy, an FAA Team Representative, and an owner of a Bonanza A-36. Captain Schank is also a member of Flying Musicians Association and is a practicing attorney.

This will be a Zoom meeting. We will e-mail invitations to members, otherwise contact Program Director Kerry Powell, or visit [faasafety.gov](https://faasafety.gov) and select Region WP09 for further information.



## **President's Message**

**Trinidad Lopez**

Hello Everyone,

Our chapter holds a long and distinguished place in San Diego aviation history. Thank you for the opportunity to serve as EAA chapter 14 president. Here's a little bit of information about myself:

I have been a chapter member for 6 years. During that period of time I have served as a chapter board member and have volunteered for many chapter events. I am also the Ray Aviation Foundation coordinator for the chapter. Many of you know my wife Sharon who volunteers alongside, and you probably know our daughter Ashley who is the Young Eagles coordinator. We own a 1967 Cherokee 140 which is hangared at the EAA. All three of us are pilots and have flown from Baja California to Canada and most of the Southwest United States. Ashley is also currently studying to become a commercial pilot.

I already know many of the chapter members and hope to have the opportunity to meet many more in the months to come, as our chapter slowly resumes activities after the COVID-19 restrictions. We are currently considering reopening the chapter to at least some activities on June 19th. I want to assure you that when we open all health guidance will be taken into account. The safety of our members will be our primary concern.

I want to thank Gene Hubbard for all his hard work and service to our chapter. I also want to thank all our board members, pilots, and volunteers who work so hard to make our chapter run smoothly.

Clear skies,

*Trinidad Lopez*



*Jerry Furnas makes a touch and go in his Aeronca Chief.*  
4/4

# Pilots' Briefing

## Notes by Donna Ryan

On April 1, 2021, a virtual Pilots' Briefing was held between City of San Diego Airports personnel and pilots from Montgomery – Gibbs Executive Airport and Brown Field Municipal Airport. The purpose was to establish a friendly and informative dialog between the two groups. Deputy Director -Airports, Jorge Rubio, welcomed the group. Also present were Andy Swartz (SDM Airport Manager), Charles Broadbent (MYF Airport Manager), Mark Demetrios (SDM Tower), Joel Ryan (FAA ATC Tower at MYF), and David Reed (Airports Education Programs Manager), as well as additional support staff.

Mr. Rubio provided an overview of the recent Falcon accident and a short summary of what will happen with the Gibbs Facility. He answered several questions from the audience on this, and mentioned that Ray from Crown Air, will be happy to answer any addition questions on future plans. He encouraged all in attendance to ask questions.

Mr. Broadbent then provided some information on activities at MYF. Listed below are some highlights:

### MYF Information

- Work on cleaning the recent hazmat spill is being conducted at night to minimize impact to operations (9 pm to 6 am until site is cleaned). The localizer antenna was removed due to contamination under the footings and FAA will rebuild the Localizer antenna array once the cleanup is completed (majority of the work on the Localizer will occur at night and is expected to last for 5 weeks). Concrete work will be conducted during the day.
- Crown Air new FBO construction completed
- Coast Air Center new FBO construction completed
- Because of COVID 19 restrictions, airport personnel were not able to inspect hangars in person; hangar renters were encouraged to self-inspect for any fire or life safety threats. Note: There should be an annually inspected, charged 3A-40-BC fire extinguisher.
- Elite Security Services will be the new security guard contractor.

Charlie held a Vehicle/Pedestrian Deviations (V/PD) discussion:

- Must have prior permission to enter movement area from airport
- Establish two-way communication with tower
- San Diego Fire Department, Airport Operations, and the Tower will handle and coordinate during accidents and incidents – don't play superman and enter the area
- Make sure all gates are secure.



**MYF Movement Areas.** Do not enter red areas without Tower Authorization.

The MYF movement area diagram above shows the area that should not be accessed without tower authorization.

### Brown Field Information

Andy Swartz next covered some Brown Field activities.

- Operations personnel are on duty from 7 am to 7 pm, Monday through Friday, and from 9 am to 5 pm on the weekends. If there is an incident on the airport, contact them immediately; do not try to assist without permission or remove the aircraft without FAA authorization.
- Gate #2 will be closed until probably July when a new gate can be installed; gates 1, 3, and 4 are working.
- Please report any bird activity or bird strikes; Airport Operations has pyrotechnics to encourage the birds to go elsewhere.
- FOD on the taxiway continues to be an issue; a laptop and packages of half eaten food were among the items recently found.
- The tri-pad area used by helicopters will be off limits until September or so as it is nesting season for the burrowing owl.
- As up at MYF, Elite Security Services will be the new security contractor. Contact Andy if you have concerns or requests.
- Crack repairs to the runways and taxiways are ongoing; he anticipates that slurry seal application on 26L will occur in July.

### Aircraft Education Program

David Reed, the new education programs manager provided an overview of the purpose of the program:

- Safety of flight
- Develop best practices to reduce noise impacts on communities
- Show the public that pilots are making efforts to reduce noise impacts where safety allows
- Develop education materials for pilots and public
- Is non punitive—relies on support of pilot community

Noise abatement is important as some communities have pushed to close airports down because of noise. David pointed out that there are 4 basic community concerns.

- Low flying aircraft
- Noise too loud
- Aircraft constantly circling
- Aircraft activity constant

David broke down the different areas of responsibility for safe aircraft operation:

**MYF and SDM:**

- Assure physical facilities of airports are safe for aircraft use
- Manage Noise Management Program
- Have no control over how and where aircraft are flown

**FAA/ATC:**

- Formulate and enforces rules and regulations under which aircraft are flown
- Ensure aircraft are a safe distance from one another
- Has authority over aircraft in flight

**Pilot in Command (PIC)**

- Federal law gives PIC final authority and responsibility over how aircraft are operated
- PIC is responsible for flight safety

David next briefly reviewed some of the general operating and flight rules from Title 14, Part 91.

Except when necessary for takeoff and landing, no person may operate an aircraft below the following altitudes:

- Over any congested area of a city or town, or open air assembly of people an altitude of 1,000 feet above the highest obstacle within a horizontal radius of 2,000 feet of the aircraft.
- Over other than a congested area, an altitude of 500 feet above the surface, except over open water or sparsely occupied areas. In those areas, an aircraft may not be operated closer than 500 feet to any person, vessel, vehicle, or structure.

David shared a copy of the noise management kneeboard display for MYF. He also shared a draft of the AOPA Noise Awareness Steps.

**MYF Tower Information**

Joel Ryan, from the FAA Air Traffic Control Tower at MYF, noted that MYF is the 4<sup>th</sup> busiest general aviation airport in the United States. He shared the importance of using ICAO types:

- PA28 . . . hasn't been in use for years. Know your type. It makes a difference to them if you an Arrow

or a Dakota. Common types include PA28A, PA28B, PA28R, PA28T.

- All Aztecs are PA27, regardless if it was sold as a PA23-250. PA23 – Apache; PA27 – Aztec
- Mooney –M20T or M20P
- When incorrect types are input, such as PA28 or MO20, the approach controller receives a wake turbulence error for sequencing aircraft.
- When requesting flight following, please provide your full call sign, type, requested VFR altitude, and destination.

Joel provided some outbound tips for Montgomery:

<b>Minimum info to Ground Control and Local Control (Tower)</b> <ul style="list-style-type: none"><li>• Type</li><li>• Call Sign (full call sign)</li><li>• ATIS Code (arrival LC)</li><li>• Position</li><li>• Intentions</li></ul>	<ul style="list-style-type: none"><li>• Runway assignments are based on direction of flight, type of pattern work and volume.</li><li>• Be specific on type of pattern work. T/G or taxi back.</li><li>• Full stop / taxi back preferred on RY28L to reduce runway crossings and based on inbound traffic volume.</li></ul>
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**Proper initial call for departure:**

"...N562W at Kilo and Golf with ATIS Hotel, ready to taxi, request ...

vs.

"...N562WKGH, ready to taxi" (no additional info provided)

**Please taxi when you're issued instructions.**

Prefer pilots call:

- On the uncontrolled portion of TWY K approaching TWY G
- Out of parking approaching TWY J
- Out of parking holding short of TWY H from transient

**If you're ready for departure but DO NOT have access to the runway:**

- Call when you are ready AND have have access to the runway
- Have complete understanding of Line Up and Wait (LUAW) instructions

He added these departure tips:

- If Tower controller gives different departure instruction/approval than expected or requested, advise ATC immediately.
- Do NOT fly up the final approach course when departing east (V66, RYAHH)
- Avoid crossing final at arrival altitudes
- Permission is NOT needed for frequency change outside of class D
- Do NOT depend on traffic advisories from tower when outside of class D; those are workload based

- Do not make low altitude/early crosswind turns unless instructed or permitted

Joel then supplied these arrival tips:

#### **Be accurate on position reports**

- “Over Mt. Helix” vs. “2-3 miles north of Mt Helix” can affect the planned sequence
- There is a good chance that someone IS over Mt. Helix and hasn’t checked in yet

**Enter the pattern for 28L from the west on a 45 degree entry**

**Report “..., ABEAM THE NUMBERS OF [rwy]” if you have not been sequenced or cleared.**

**DO NOT assume you are #1 and turn base**

**If planning a full stop, please advise the tower. If making an unplanned full stop, advise you are exiting the runway and holding short of another runway if applicable**

#### **Exiting RY28R/28L onto RY23**

- Get permission (rarely denied)
- Do not join H unless instructed or approved by the controller (rarely denied)
- No hold lines on 05/23, so hold short of the 10R/28L signage when exiting 28R and taxi past 10R/28L signage when crossing 10R/28L, hold short TWY H.

Wait for or request frequency change to Ground Control

**Please don’t linger after exiting a runway. Call GC as soon as you’re given the frequency change**

- Limited exits and high volume

He provided some specific Runway 23 instructions.

- Don’t stop on the runway if unsure where to exit, keep moving and ask.
- Preferred exit onto Taxiway E
- Do not turn onto a crossing runway without ATC approval (99% approval rate)

He next outlined the most time-consuming read-back issues. These generate hundreds of extra transmissions each day.

- No read-back at all
- Read-backs without call sign
- “Blind transmissions” without call signs
- Pilots must read-back runway assignment and complete hold short instructions with call sign. Read-back of taxi route is good practice for students and reinforcement but is not required.

Joel cautioned against the following unacceptable position descriptions:

#### **UNACCEPTABLE:**

**“HOLDING SHORT OF THE LEFT”  
“HOLDING SHORT OF THE PARALLEL”  
“HOLDING SHORT”  
“TAXI VIA HOTEL BRAVO”**

He then shared this miscellaneous information:

- The GA pilot trend of using 4-letter call signs in group forms is causing confusion to controllers. Example: FORTY-ONE-TWENTY-SEVEN
- Early birds (before 9:30 am) get special requests: Short approaches, stop and go’s, practice 360’s and 270’s in the pattern, etc.
- The following website has helpful videos:

[https://www.faa.gov/airports/runway\\_safety/videos/mfy/](https://www.faa.gov/airports/runway_safety/videos/mfy/)

Joel also discussed minimum information necessary to give to ground control and local control (Tower):

- Type
- Full call sign
- ATIS code (arrival LC)
- Position
- Intentions

He pointed out that runway assignments are based on direction of flight, type of pattern work, and volume. He asked that pilots be specific on type of work, e.g. T/G or taxi back. He noted that full stop/taxi back preferred on RW28L to reduce runway crossings and based on inbound traffic volume.

#### **Brown Field Tower Information**

Mark Demetris, the Air Traffic Manager for Brown Field, discussed some of the issues, requirements, and requests for pilots using Brown Field.

- On intersection Bravo, some pilots go through broken lines and then stop at full lines – it seems to be mostly students that do this. Remember: follow taxi instructions and hold short where instructed.
- At Brown if a pilot calls in and says he wants to land, the Tower assumes he will be making a full stop. But maybe the pilot really just wants to do a stop and go; it is OK to say that rather than ask to land.
- Helicopter traffic has increased significantly; while the Tower tries to be lenient if there is no one else there, some helicopters are spending too much time on the runway, he cautions helicopters to be aware and not make this a practice.
- He repeated Joel’s admonition to learn the proper designators and use them (no more PA28).
- Several pilots ask for Option even though they intend to land (this happens especially with students). We prefer you don’t ask for Option, just ask to Land, and if you need to do more, tell the Tower as soon as possible.
- Please ask questions if you don’t understand the instructions. The Tower will give you position points, like Poggi or Prison. If that isn’t clear, just say, “I don’t know where this is.”

- While you don't have to report to the Tower if you are just skirting the Brown Field Airspace, it is silly not to. Reporting enables the Tower to let you know what is going on – like jumps occurring at the lake.
- Flight-following. More pilots are doing this and it is a good idea – safer for all concerned.
- Proposed Navy drop zoom. All stakeholders should ensure that the impact to the airport is minimal and any concerns should be shared with Andy Swartz, as there may be a definite impact on operations. The FAA is deciding on safety concerns and it is in the hands of the FAA.

In a later email, Mark shared the following information:

IFR and VFR would still be able to arrive and depart between jump operations. And, in fact, the low-level static line jumps will probably cause little to no disruption at all if they conform to the traffic pattern as I have insisted on.

It is the high level jumps I am truly concerned about. With a 6 to 8 minute descent time it **WILL** close down the right downwind for several minutes. One trip in the pattern for a Cherokee/Cessna etc. is approximately 4 minutes—that means two turns in the pattern affected. Of course, we can always put those aircraft into left traffic and keep things moving, just understand that there will a lot more enforced left traffic pattern and the right will be less available. For the jets it may require holding out of the airspace by SoCal TRACON.

Would there always be delays? No. Would they necessarily be long delays? Not necessarily. I am just not sure. When we sit down with the FAA we will have several things to consider and when we have a final product as relates to procedures, we can move on from there.”

## Richard Kalling Gone West



We were saddened to hear of the recent passing of Richard Kalling in April. Richard was a long-time director, and over the years served as President, Vice President and newsletter editor. He had been in ill health for a while and had moved a couple of years ago to be closer to family, but until he moved, he was a familiar face around the Chapter, always willing to volunteer for whatever task needed to be done and always glad to engage in hangar talk with members and visitors.

Richard was our go-to person for arranging insurance for a variety of Chapter outings, especially for the Ocotillo Wells fly-ins/campouts. He also coordinated/manned our booths whenever the Chapter participated in local air shows. When it was time for him to serve Chapter lunches, he was well known for his baked potato bar with all the fixings. Adept at a variety of maintenance tasks, he fixed the coin counters on a variety of our coke machines and installed the water purifier under the sink in Hangar 1. He had a beloved RV-6, as well as a Piper Colt and loved flying them both. One of his favorite activities was volunteering at Oshkosh and he did that for many years.

His long-time friend, past EAA-14 President Joe Russo stated,

I probably knew Richard longer than anyone else at EAA. We worked together at Fedmart from late 1972 through 1975, selling cameras. Richard was working on his master's degree in chemistry while I was in law school. He was always generous to a fault, quirky, but not bad quirky, and a great friend. As our careers took shape, we lost touch for a few years and when we reconnected, he was the one who renewed my interest in flying and persuaded me to join EAA.

*Requiescat in pace, Richard.*

*Richard Kalling volunteers for EAA Warbirds of America at Oshkosh, July 27, 2017*



*Richard Kalling Undated Photo*



*Ryan takes a fuel sample as part of the preparation for his night cross-country flight.*



*Ryan gets ready to check the navigation lights.*



*Checking the oil.*

## Ray Scholarship Update

**Ryan Flores**

As for April, Paul and I have successfully completed the first long cross-country to KF70 (French Valley) after several attempts were cancelled due to weather. Shortly thereafter, I was able to complete the same flight solo. This month, we are going to hopefully complete the night cross-country to KSNA (John Wayne), followed by the 200-NM flight to Redlands later on in May.



*Either checking the Hobbs meter or getting ATIS. Both are important*



*Checking the rudder on the walk-around.*



*Checking fuel—only time you have to much is if you're on fire!*



*Preflight done, Taxi clearance, time to taxi out to the runway.*



*And on his way!*



## B-2 SPIRIT: A Game-Changing Asset

By George A. Haloulakos, CFA, MBA

*George A. Haloulakos, CFA, is a university instructor, author and entrepreneur. His published works utilize aviation as a teaching tool for Finance, Game Theory, History and Strategy.*

The B-2 Spirit dramatically altered the landscape for national defense policy, resource management and the military/aerospace industry structure. Its highly advanced technologies created a capital asset with significantly greater firepower, survivability and accuracy that meant *fewer bomber aircraft were required versus previous generations that had hundreds and even thousands of such assets on alert.*

### **Stronger National Defense**

The B-2 Spirit strategic bomber provides an unmatched combination of heavy payload, long range and stealth on a single platform. Moreover, since it is one of the most survivable aircraft in the world, the B-2 is able to fulfill the necessary tasks for a successful strike mission: *surprise, suppression and evasion.* This is because the B-2 is able to reduce detection with its low observable technologies coupled with composite materials and aerodynamic flying wing design that gives the aircraft the ability to penetrate complex, sophisticated adversary defenses. As such, this puts the adversary's high-value, heavily defended targets at risk since the B-2 can reach any point in the world within hours.

Here are few metrics that affirm the aforementioned capabilities. The B-2 Spirit can fly at high subsonic speed and reach an altitude exceeding 50,000 feet. Its intercontinental range enables the aircraft to fly 6,000 nautical miles *without* refueling and 10,000 nautical miles with a *single* refueling. With a two-person crew (a pilot and mission commander), the B-2 can deliver a payload of 20 tons with pinpoint accuracy.

In sum, from a defense policy perspective, the aforementioned characteristics enables the B-2 to offer increased efficiency, firepower and flexibility versus prior generation bomber aircraft. This enables the US Air Force to fulfill strategic defense capabilities with fewer aircraft, thereby freeing up capital for other projects. The next section provides further clarification.

### **Efficiency Gains in Resource/Asset Management**

To fully appreciate how the B-2 Spirit has altered resource management, that, in turn, has affected both national defense and the political economy, it is worth reviewing how the advanced technologies of the B-2 have streamlined the resources required for combat missions. *Our comparison will examine the number and type of aircraft required for Standard, Precision, Precision plus Stealth strike missions versus the B-2.* In this comparison, Standard refers to conventional gravity bombs while Precision refers to laser guided bombs. Precision plus Stealth is the use of laser guided bombs with the Lockheed F-117 Nighthawk, a stealth attack aircraft that requires forward basing due to limited range (approximately 1,000 miles) and a much smaller payload versus a strategic bomber. The B-2 **is** Stealth, but unlike the F-117 has intercontinental range plus a very large payload.

Standard or conventional gravity bomb missions typically require 32 bombers (B-52 or B-1B), 16 escorts, 12 aircraft for suppression of adversary's defenses and 12 refueling tankers. Precision strike missions require 16 bombers (B-1B or B-52), 16 escorts, 12 aircraft for suppression of adversary's defenses and 11 refueling tankers. Precision plus Stealth uses 8 strike aircraft (F-117 Nighthawk) and 2 refueling tankers.

*Note the numbers and use of different bomber aircraft to align the aircraft payload capabilities with the type of bomber weapons used for a strike mission. Also noteworthy is the absence of escort and suppression aircraft when Stealth is deployed.*

**In comparison, two B-2 Spirit stealth bombers can accomplish the SAME as each of these types of bomber groups described above!** Since the B-2 has a significantly greater success rate in accuracy and survivability, this means fewer capital assets (human, physical and financial) are at risk while providing superior capabilities in projecting our nation's firepower when needed. This staggering comparison is even more amazing when the B-2 combat record is examined with other US Air Force bomber aircraft whose service life intersected with the B-2. [Source: *Beyond the "Bomber": The New Long-Range Sensor-Shooter Aircraft and United States National Security* – The

### **B-2 Achieves Higher Success / Lower Risk Combat Record**

For our purposes of “comparable analysis” we have utilized *strategic jet bomber aircraft* whose service lives have intersected during the past 50+ years. In this comparison we have included the **B-52, B-1B and FB-111** as each of these bomber aircraft have service lives that have either dovetailed or intersected with the service life of the **B-2**.

#### **B-2 Combat Performance in 1999 Balkans War**

The B-2 destroyed one-third of all Serbian targets in the first eight weeks of the war with just **six (6) B-2s** making non-stop global flights from Missouri to the Balkans with refueling.

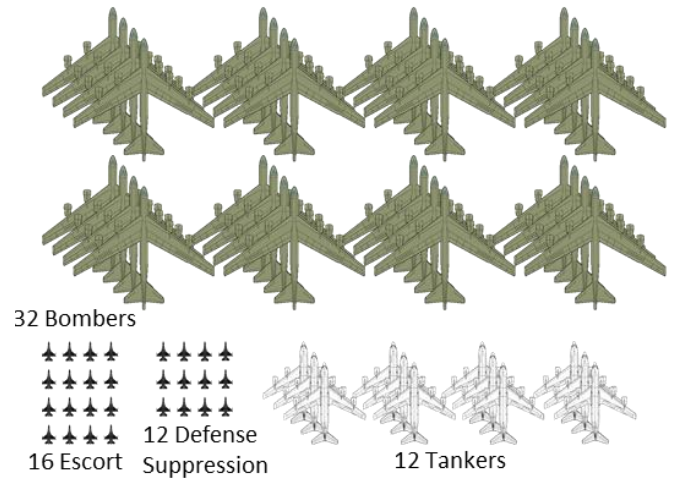
Over the course of the war, the B-2 flew just 50 out of 34,000 (or less than 0.15%) of the total sorties by NATO (North Atlantic Treaty Organization) strike aircraft, but hit 11% of the targets, including a crucial bridge over the Danube River in Serbia that had stymied all other NATO strike aircraft for two weeks!

The B-2 posted greater operating efficiency versus the B-1B in this same venue while using an equal number of aircraft. By comparison, **six (6) B-1B** aircraft flew 2% of total NATO sorties (or 13-times more than the B-2) while dropping 20% of the ordnance. *In other words, on an apples-to-apples basis, an equal number of B-1B aircraft (six) had to fly roughly 6-times more sorties than six B-2 bombers to match the B-2's combat record of hitting 11% of all targets.* Yet, only the B-2 was able to hit the aforementioned crucial bridge over the Danube which had eluded all other NATO strike aircraft. thereby affirming the B-2's efficiency advantage.

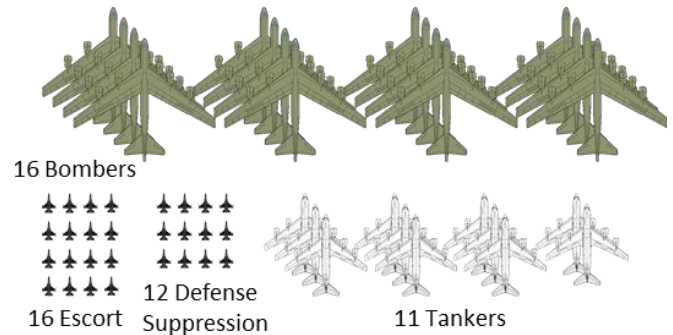
This is not meant to denigrate the B-1B, a most versatile and powerful strike aircraft, but rather to illustrate that the advanced technologies associated with the B-2 enable it to be more efficient because it is able to do more with fewer sorties at lower risk. The B-2 requires a two-person crew versus three for a B-1B. Therefore in the example given from the 1999 Balkans War, six B-2 bombers placed 12-crew members in combat while six B-1B bombers placed 18-crew members (or 50% more) in combat. This affirms not only a higher efficiency rate for the B-2, but lower attrition risk since fewer crew members are needed for a mission.

As of this writing, both the B-2 and B-1B have experienced zero combat losses. However the same cannot be said for the other bomber aircraft used in this comparison. The B-52 and FB-111 both experienced losses in combat with lower accuracy versus their aforementioned successors. While these two bombers performed admirably in high-profile missions, their success was tempered by the loss of aircraft and combat personnel. This provided the incentive for further advancement in technologies to increase the success rate while lowering the attrition risk to both aircraft and crew. The outcome was development and deployment

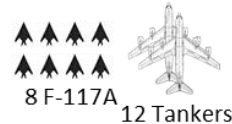
#### **Gravity Bomb Mission**



#### **Precision Strike Mission**



#### **Precision + Stealth**



#### **B-2 Mission**



**36x Force Multiplier.** Two B-2 Spirits can deliver the same mission effectiveness as a 72-plane entourage based on B-52s or B-1Bs flying a conventional gravity bomb mission.

of the B-1B (initial operating capability reached in 1986) and the B-2 (1997). But before these advanced aircraft could be deployed, the B-52 and FB-111 shouldered the burden of long-range strike missions that carried high attrition risk. Two such *long-range strategic* bombing missions are given as examples for this paper in which these aircraft were essentially the “tip of the spear.”

#### **Operation Linebacker II (US Christmas Bombing vs Vietnam 1972)**

For eleven days, 207 B-52 bombers launched continuous aerial bombings on North Vietnam. While this mission led to resumption of eventual settlement talks, 16 B-52 bombers (each carrying a crew of 6) were shot down by the enemy for an aircraft loss rate of 7.7%.

## Operation El Dorado Canyon (US Airstrike vs Libya 1986)

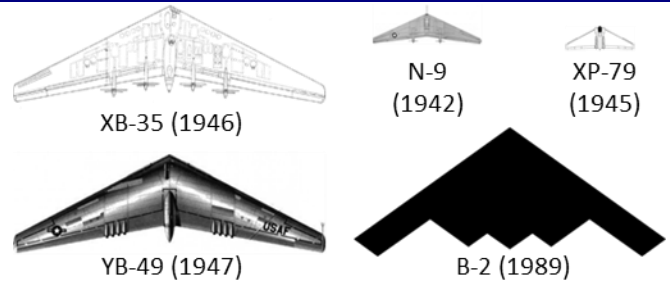
This strike mission featured 18 FB-111 bombers (each carrying a crew of 2). Nine (9) of the 18 FB-111s (or 50%) released their ordnance on target. One FB-111 was shot down by the enemy for an aircraft loss rate of 5.6%.

As a reminder that it is the portfolio or mix of different types of aircraft that generates the highest probability of successful, accurate strikes with the least risk (the central theme of my book *CALL TO GLORY*), it is worth noting that in Operation Desert Storm (1991), B-52s flew 1,620 sorties while delivering 40% of the weapons dropped by coalition forces and with zero combat losses. The FB-111 strategic bomber was not used in Operation Desert Storm but two variants of the airframe, the F-111E and F-111F, were deployed with great success. The tactical F-111 variants were credited with delivering approximately 80% of the war's laser-guided bombs and destroying over 1,500 enemy tanks and armored vehicles. As part of a mixed force, the F-111 variants had zero combat losses.

### Northrop: Transformed From Respectable Company to Industry Leader

Although just 21 B-2 aircraft were built, thereby implying a unit cost of \$2.1 billion, the enormous success of this capital project transformed Northrop – the primary contractor – from a solid, respectable company in the military/aerospace sector to an iconic global industry brand. Moreover, it helped to fulfill the potential as envisioned by its legendary founder, Jack Northrop. Financially, Northrop's industry reputation was based on its success as a manufacturer of light-weight, economical fighter aircraft (notably the T-38 and F-5) which for decades have served as trainers as well as assets sold to overseas US allies while also used by the US Air Force and US Marine Corps. Northrop's legacy as an innovator in aerodynamic design can be traced directly to its entrepreneurial founder, Jack Northrop, who created the flying wing that would eventually become the company's global brand identity. Beginning in 1929 with the Avion Experimental #1 and continuing throughout the 1940s with the N-9 Flying Wing, XP-79B Flying Ram, XB-35, YB-49 and the YB-35, Northrop laid the foundation for what would become the B-2.

Since the flying wing concept was based largely on intuition rather than analytics, the early pioneering variants of this design relied on very skilled test pilots to make it work. By the 1980s computer and fly by wire technologies were developed to resolve control and stabilization issues that plagued the early variants. This transformed the flying wing from a novelty into a formidable combat asset. As a technology driver, the B-2 not only changed the role of the strategic bomber but its technical advancement elevated Northrop into an industry leader. Given that Northrop Grumman was selected as the prime contractor for the next generation stealth bomber, the B-21 Raider, it can be inferred that the accumulated experience and investment associated with the B-2 was the foundation for this contract.



*Nearly Fifty Years of Northrop Flying Wing Development. These scale drawings illustrate the experimental aircraft that led to the B-2 Spirit.*

## Letter to the Editor

**Lista Duren**

In this month of appreciating mothers, I've been thinking of the women who nurture and lead at EAA14. One who is present at every general meeting and every board meeting, who takes notes, writes minutes, contributes multiple articles to every newsletter, welcomes newcomers, and staffs booths at chapter events is Donna Ryan. Thank you, Donna, for all you do for us!



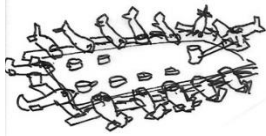
*Cessna 140 in the pattern. 4/19*



*Gert and Ryan make a first taxi test in Gert's new RV-12. 5/7*

# May 1, 2021 Board Meeting

**Donna Ryan, Chapter 14  
Secretary**



## *Provisional Minutes – Pending Board Approval*

The meeting was called to order by President Trinidad Lopez at 10:02 am on May 1, 2021.

Directors and officers present were: Gene Hubbard, Jimmy Kennedy (by proxy), Ted Krohne, Trinidad Lopez, Kerry Powell, Kevin Roche, Larry Rothrock, Donna Ryan, Ron Shipley. Directors and officers absent were: Gene Lenard, Ashley Lopez (excused), Jonathan Robbins (excused), Alan Sparkes, Stu Strebis. Guests: 2 Ray Scholarship Candidates

## **Board Decisions**

(Subject, moved by, seconded by, pass/fail)

March 2020, October 2020, November 2020, and April 2021 Board Meeting Minutes reviewed and approved. Trinidad Lopez/Gene Hubbard: passed.

Treasurer's Report reviewed and approved. Trinidad Lopez/Gene Hubbard: passed.

Recommended one of the applicants as the recipient of the 2021 Ray Scholarship. Ron Shipley/Kevin Roche: passed, with Trinidad Lopez abstaining as he is the Ray Scholarship Coordinator.

Committee composed of Trinidad Lopez, Larry Rothrock, Donna Ryan, and Ron Shipley will select and authorize payment to the insurance company with the most suitable package for our Chapter with a cap of \$7,000 per year. Donna Ryan/Ron Shipley: passed.

Authorize Larry Rothrock to obtain donations of hangars, if they are offered, and authorize costs of up to \$1,000 per hangar to move them. Larry Rothrock/Ted Krohn: passed

Authorize the removal of Gene Hubbard as signer on the Chapter checking account and the addition of Trinidad Lopez and Donna Ryan as signers on the Chapter checking account. Donna Ryan/Ron Shipley: passed.

Motion to adjourn. Trinidad Lopez/Ron Shipley: passed.

## **Action Items**

### *Previous:*

Larry Rothrock will explore the possibility of obtaining a new grant for a new flight simulator (pending).

### *New:*

Ron Shipley will prepare a cost analysis of how we can meet costs if we exercise our lease options based on current costs and proposed City costs.

Donna Ryan will continue soliciting quotes for Chapter insurance and will present them to the Insurance committee.

Gary List will provide information about the status of upgrades to our current simulator.

Trinidad Lopez will contact our tax preparation service to ensure we will not need an extension.

Donna Ryan will prepare the required letter to the bank regarding the change in signers on the Chapter checking account.

## **Old Business**

Chapter Insurance: Donna Ryan provided background information on Chapter General Liability and Hangarkeeper insurance. We have received one bid and have reached out to 3 additional companies for quotes. A committee composed of Trinidad Lopez, Larry Rothrock, Donna Ryan, and Ron Shipley will review the quotes and select the bid that best meets our obligations. The Board set a cap of \$7,000 per year for the insurance. A motion was made to this effect. Efforts will continue to be made to find reasonably priced insurance.

Lease Option: Larry Rothrock and Gene Hubbard reviewed the status of exercising our lease option. Larry and Gene discussed documents that had been sent out to the Board prior to the meeting. Trinidad Lopez mentioned the need to accurately identify the current costs for ground preparation and taxiway access. Gene Hubbard discussed the proposed plan and past bids for ground prep. The decision on when to exercise the lease option depends in part on the donation of hangars; we need to begin recouping the increased lease costs with additional rental income as soon as possible if we exercise the option. The Board asked Ron Shipley to prepare a basic cost analysis of how we can meet costs comparing existing rents/lease prices and possible increased lease prices. This topic requires further discussion and will be put on the agenda for the next meeting.

Status of Current Simulator: Gary List reported by email that he is currently out of state, but when he returns, he will call PFC and see if they will fix it.

## **New Business**

Hangar Donations: Larry Rothrock discussed possible hangar donations; the actual number is still unknown. The Board agreed that accepting any hangar donations was in the Chapter's best interest and had a direct bearing on exercising our lease option. The Board passed a motion authorizing Larry to accept the hangars if offered, and authorized costs of moving them with a cap of \$1,000 per hangar.

Ray Scholarship: Trinidad Lopez had invited the three applicants for the 2021 Ray Scholarship to make a presentation to the Board about their qualifications for the scholarship. One of the applicants was unable to attend, but Trinidad and Ashley Lopez had interviewed her the day before. The other two applicants made brief presentations to the Board. Both young men made fine presentations as to their qualifications and their desire to have a career in aviation. The Board later discussed the candidates and passed a motion recommending one for the Ray Scholarship.

**Tax Preparation:** Ron Shipley noted that a new tax preparation company would be doing our taxes, as the previous preparer had passed away. The new company is Mission Tax Service. It appears that we will not need to request an extension, but Trinidad Lopez will follow up with the company to ensure we are in compliance.

**Reopening the Chapter:** Like everyone, the Board is anxious for the Chapter to reopen, but we are very conscious that we need to meet any CDC, EAA National, State or City requirements/guidelines to do so safely. Governor Newsom has announced that there will be no further restrictions as of June 15<sup>th</sup>, and it is possible we could be open for a possible General Meeting on June 19<sup>th</sup>. However, much could change between now and then. The Board decided to meet on Saturday, May 29<sup>th</sup>, to specifically discuss this topic. Prior to the meeting, directors should review applicable restrictions/guidelines on meetings, including such subjects as social distancing, mask requirements, sanitizer use, food service etc.. A decision will then be made as to when we can reopen. Kerry will try to have a tentative speaker lined up.

**Change in Signers on the Checking Account:** The Board passed a motion to remove Gene Hubbard from the checking account as he has moved, and to add Trinidad Lopez and Donna Ryan as signers. Donna Ryan will prepare the required letter for the bank to make this change.

**Food Service Requirements:** Donna Ryan briefly reviewed current requirements for food service that would affect such activities as our pancake breakfast. The Board agreed to revisit the subject at the May 29<sup>th</sup> meeting. While we may reopen the Chapter in June, we may decide to delay food service until a later date.

**Bob Johnson Memorial:** Trinidad Lopez reminded the Board Meeting of Bob Johnson's Memorial that would be conducted via Zoom later on May 1<sup>st</sup>. Larry Rothrock will represent the Chapter at the Memorial.

**Upcoming Board Meeting:** The next Board Meeting will be on Saturday, May 29 at 10 am. The following were identified as being agenda items: When and how we will reopen the Chapter to activities; exercising the lease option; obtaining new simulator; fixing current simulator; membership drive, food service.

President Trinidad Lopez adjourned the meeting at 12:05 p.m.

Submitted by Donna Ryan



## Marketplace

**SONEX-A KIT.** Firewall aft with empennage. Has VW engine mount and assembly manuals; no wings. Asking \$2,500 or make offer. Text Ryan at 858-229-4875 for more information and additional pictures. (3/21)



**HANGAR AVAILABLE AT RIVERSIDE AIRPORT.** Port a Port Exec 1, 42' wide. For sale for \$16,500. Ground. rent is \$256/mo. Includes elec/trash/portafoo/security-lighting. Available March 1, 2021. Excellent condition. Contact mikerox2500@gmail.com (2/21)



*New plane on the EAA ramp. The FAA says it's a Colt but it looks like a Tri-Pacer. 4/30*

# May 2021

## Facebook

<http://www.facebook.com/pages/EAA-Chapter-14-San-Diego-CA/134162329986593>

## Chapter Website

<http://www.eaa14.org>

## EAA Chapter 14 Memberships

Applications are available at our Brown Field hangars and on our website.

### General Chapter Information:

Donna Ryan (Chapter Secretary) (858) 273-4051. Leave voice mail or text.

[eaal4contact@gmail.com](mailto:eaal4contact@gmail.com)

Director Name	Phone #	Email
Gene Hubbard	(858) 722-1918	nx421gn@gmail.com
Ted Krohne	(619) 208-1771	tedkrohne@hotmail.com
Jimmy Kennedy	(858) 274-6266	jk@kencomgraphics.com
Gene Lenard	(619) 442-4978	elenard@mac.com
Ashley Lopez	(619) 277-8518	ashleylopez8518@gmail.com
Trinidad Lopez	(619) 661-7117	bajaassy@aol.com
Kerry Powell	(760) 613-4389	kgpowell@roadrunner.com
Jonathan Robbins	(619) 572-5087	snibbornoj@gmail.com
Kevin Roche	(619) 249-1285	tkevinr@rocketmail.com
Larry Rothrock	(619) 507-4455	rothrock@znet.com
Donna Ryan	(858) 273-4051	rryan@san.rr.com
Ron Shipley	(619) 857-5201	ronaldshipley@cox.net
Alan Sparkes	(619) 463-2648	alspa700@mac.com
Stu Strebig	(619) 346-9788	trail2texas@yahoo.com

EAA Chapter 14 (with answer machine) (619) 661-6520

## Chapter Events

**Open House at the Brown Field hangars:**  
every Saturday from 9:00 am to 2:00 p. Lunch at 11:30

**Young Eagles Flights:**  
9:00-1:00 am, second Saturday of the month

**Pancake Breakfast:**  
7:30-9:30 am, third Saturday of each month

**General Meeting:** 10:00 am, third Saturday of each month

**Directors Meeting:** after lunch in the library. 3<sup>rd</sup> Saturday

## Hangar Phone:

619-661-6520

Experimental Aircraft Association  
San Diego Chapter 14  
1409 Continental Street  
San Diego, Ca 92154-5707