



EAA Chapter 1541 Newsletter January 2016



Wings & Words

Welcome to your new, monthly EAA Chapter 1541 electronic Newsletter.

Publishing a monthly newsletter was one of the final actions taken by the 2015 Chapter Board of Directors at their December meeting. The goals of the newsletter are to provide a means to update members about Club activities, and to provide a forum for ideas on all things concerning our passion – aviation.

Newsletters do not replace websites, but are additive to it. A website is typically “outward-looking”, i.e. it provides information to those interested in the mission of the organization, whether members or non-members. A newsletter is “inward-looking” in that it is written exclusively for the organization’s members and is usually more topical, i.e. what’s happened in the recent past, what’s happening now, and what’s happening in the immediate future.

We want this to be YOUR newsletter, and for that we need YOU! We see a standard set of monthly articles (President’s Corner, CFI Corner, a Maintenance Corner, Project of the Month, \$100 Hamburger locations, etc.) plus a Calendar of Events, Things You Need to Know, and perhaps a classified section. We also want to publish your favorite pictures, and hopefully stories about your special flights. You don’t need to be a Shakespeare to contribute: It’s your story in your words!

If you have an idea for a column, let me know. If you want to contribute in a particular area, let me know. If you come across a potential story area from another chapter’s newsletter, let me know - we’re certainly not above borrowing great ideas that work elsewhere.

This effort will only succeed if it’s collaborative. We have such a great body of talent in so many areas in our Chapter. Our goal is to distribute the Newsletter during the first week of each month, immediately after the Club’s Board of Directors meeting (first Monday of the month), so if you’re going to submit something, please do so five (5) days before month’s end. The newsletter will go to all Chapter members via their submitted email addresses. If you want this changed or re-directed please contact me.

Richard Pearl
Chapter 1541 Secretary & Newsletter Editor
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1.916.715.9666



President's Corner:

Happy New Year to all of us in chapter 1541. Along with the New Year we have new projects taking shape that will be fun and informative activities for 2016.

This is our first chapter Newsletter, and I look forward to the Club actively supporting it. Richard and Bruce will be looking for your input as well for informative and entertaining articles, so reach out to them if you have something to contribute.

One of my goals for 1541 will be to establish three primary areas of content for our chapter. By this I mean to equally provide: (1) a fun and entertaining environment to promote our common interests and friendships. There may be hard work to be done with some of our projects but let's have fun doing it; (2) let's learn something too. Great speakers and informative content is always the goal and I have more about this in a moment; and (3) let's promote the love of flight in our Young Eagles effort and make it something that might spark the love of flight in a young person as we were touched by the magic of seeing the earth from above years ago.

On the subject of learning I am working on arranging a February speaker by the name of Brian Brown. Brian lives in the Lodi area and is a survivor of the crash of his Cessna in a Rocky mountain snow storm. Brian's wife and Daughter were also on board. The story has a happy ending for all, however the moment-by-moment decisions and developments provide many opportunities to learn from his frightening experience.

Brian is a California Firefighter and is trained in first aid and as he will tell all of his skills contributed to a happy ending. Brian's experience is something that he will share with us in February and the best part of his presentation is that he is presentation is a WINGS credit presentation. For the first time we will receive Wings credit for attending one of our meetings. The great thing about Wings credit is that it can reduce your insurance by taking part in the presentation.

I will be looking for at least 2 more wings credit presentations for 2016. If you would like to preview Brian's talk you can watch his interview on Youtube at the following link. <https://www.youtube.com/watch?v=NokGZ4d9mrk> . We will have more information on this via email in the coming weeks.

For now, we are planning to have our January and February meetings at Beermans and will consider going there for a very hot July and August meeting as well.

There are many more things to come in 2016. Thank you for your participation in making 1541 a fun and dynamic chapter.

Ron Wright
President



1541 Event Calendar:



January:

- ✚ January 6, 2016 (Wednesday) - EAA 1541 Board of Directors meeting, Pizza Roundup, 6:00 P.M.
- ✚ January 16, 2016 (Saturday) - KLHM Historical Aircraft Display Day (also discounted fuel)
- ✚ January **19**, 2016 (**Tuesday**) EAA 1541 General Membership meeting, 6:00 P.M. Cattleman's Restaurant – Roseville. Dinner - \$12.99/person; bring the wife/S.O. Presentation on the world of Silent Flight – Soaring: Richard Pearl

February:

- ✚ February 1, 2016 (Monday) - EAA 1541 Board of Directors meeting, Pizza Roundup, 6:00 P.M.
- ✚ February 17, 2016 (**Tuesday**); Cattleman's Restaurant; bring the wife/S.O.). Joint meeting with LRAA. Presentation on surviving a crash – Brian Brown.
- ✚ February 20, 2016 (Saturday) - KLHM Historical Aircraft Display Day (also discounted fuel)

Upcoming Major Club Events:

May 14, EAA 1541 Poker Run, originating from KLHM
June 11, Lincoln Regional Airport AirFest 2016

On-Going (non-Lincoln) Events: note – this section will be building as we go forward; if you know of an event that should be added, please advise.

- ✚ 4th Saturday of each month – Rancho Murieta Airport (KRIU) Chapter 1476 Historic Aircraft and \$5 Lunch, 9:00am-1pm, and 11:00am-1:00pm, respectively

Club Executive Roster



Officers:

President – Ron Wright (ronpw@hotmail.com; 1.916.240.5980)
Vice President – Ken Schwartz (ken.schwartz@att.net; 1.916.355.1101)
Secretary – Richard Pearl (pennyrich@aol.com; 1.916.715.9666)
Treasurer – Jim Hughes (jim.hughes@att.net; 1.530. 432.6608)

Board Members:

Bruce Estes (brucee7837@aol.com; 1.650.504.4464)
Tony Kasabasich (tonykasabasich@yahoo.com; 1.916.806.8575)
Tom Lieb (tlieb1@earthlink.com; 1.206.612.1762)
Bob Miller (bmillerpharmdmba@gmail.com; 916-253-2667)
John Perry (john.perry@tghaviation.com; 530-320-2247)
Richard Ryan k6hnc@yahoo.com
Dug Smith (dug@dugbart.com; 1.916.780.2681)

Club Christmas Party

The Club 2015 Christmas Party, held Saturday December 12th in Beermann's (almost-opened) Theatre Room was a HUGE success. We filled the room to capacity and a great time was had by all.

Outgoing president Richard Bristow turned the gavel over to incoming 2016 president Ron Wright. Both presidents extolled the excellent work done by Board members and also those members contributed to making the club – and all its activities – a success these past two years.



Santa arrived via a Van's RV since his sled was in the shop for repairs.



The highlight of the evening was our own Danny Hull, who played various instruments and sang, accompanied by two excellent musicians on the drums and guitar.



Great camaraderie, great food, and great music....it doesn't get any better.



Member Spotlight – Dick Rupe



This month's spotlight is on Dick Rupe. Dick is 79 years young, and if you don't think that's young, just try following Dick for a day. As a child, Dick was always looking at airplanes in the sky, and he knew that someday he would be a pilot. Dick started flying in 1960. He quit counting his hours when he got to 3,000. Dick has owned 30 different airplanes, but says that his Piper Cub-3 was his favorite. He admits that maybe it's his favorite because the Cub was the first airplane he owned. Today, Dick owns a "Must Aircraft Escapade" that he built, and is currently building an RV-6A with Ken Schwartz. Dick flies the Escapade a lot, sometimes just around the pattern, or maybe to a local event.

Dick retired from the Air Force after 29 years in active and reserve duty where he was a jet mechanic and flight engineer. In addition, Dick worked as an aircraft mechanic for many years at McClellan Airport, and also owned an automotive shop.

These days, Dick can be found at Lincoln Airport on most mornings, where he is typically helping someone on a project. Dick has a wealth of knowledge and loves to share that knowledge with anyone that needs help. Dick is also one of the more active members of EAA 1541, always helping our chapter with events. Whether it's cleaning a hangar for the Tri-Motor, or making coffee for the monthly meetings, you can count on Dick to be there helping.

Dick was one of 50 people that formed our EAA 1541 Chapter about 30 years ago, and was Vice President for the first year. We all are very fortunate to have Dick as a member. If you are at the airport in the morning, look for Dick around the North Hangars. Stop by and say "hello". He's a great guy.

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Member Profile by Bruce Estes



Maintenance Corner – Jim Hughes

Since my area of expertise is electrical stuff, the first few articles will be on some of what I've found keeping our 1962 Cessna 175B flying, and what I've found helping others fix electrical problems.



The 30+ years that I've worked as an electrical engineer helps me analyze and deductively analyze and fix electrical problems without 'shot-gunning', saving a lot of money and time. Also, this is an open invitation to other members who want to write an article that will be of interest to our member pilots.

So first, some **Quick Notes** :

- With the cold weather, check your tire pressures. Per Goodyear, our tires lose 1-2 psi for a 10 deg F Drop. So, when we went from summer temps of 90deg F, to 40 deg F, a change to 50 degrees, your tires have lost up to 10 psi, enough to give you a 'pinch flat' with the sidewalls bulging.
- With the 'lots of darkness' we have this time of year, if you use a PAR36 landing light, consider using the Q4509, the 100 hr quartz version of the 4509 tungsten lamp, which actually only lasts about 10 hrs, running on 14.2 volts. Also, the 4595 as a taxi light is a great choice. At 300 hrs life and a wide beam, it works great. I use both and they're still alive after 3 yrs and 200+ hrs!
[NorCal Flight Center has these in stock.!]

Have You Pre-flighted Your Battery?

With pilots flying with more electronics and relying on them more, we are depending on the electrical system to keep all of this stuff alive.

The 'heart' of the electrical system is the battery. Since most of us fly with a 12 volt, lead-acid battery, that's what this will cover.

We'll look at the other parts in future articles.



Quick notes – an aircraft battery usually has a life of 3-5 years. If yours is older than that, it's probably lost much of its amp-hr capacity, and may not be airworthy.!

BTW -The lead acid battery was invented in 1859 by French physicist [Gaston Planté](#). So it's 156 year old technology and still works well.!

Is your battery safe to fly?

There are 2 main tests for a battery – state of charge, and reserve capacity.

✚ **State of charge** is the percent of its stated amp-hour capacity, and is easily measured as its voltage.

A fully charged '12 volt' battery will measure 13.0 volts at 100% state of charge. A battery that has '0' charge, will measure 12.0 volts or less. A 'rule of thumb' is to use the 'tenths' part of the voltage to indicate the charge. So, at 12.7 volts, a battery is at about 70% state of charge. 12.4 volts is 40%, and so on.

Measuring the battery voltage must be done with an 'open circuit', that is, with no load on the battery and after 2-3 hours of being charged. You can't just switch on the master and read the voltage on your panel, assuming that you have a voltmeter. The master contactor and panel instruments will put a few amps of load on the battery, and you'll get an inaccurate, lower voltage reading.

You'll need to use a digital multimeter. Inexpensive meters are available on Amazon. Use the DC volts, 20 volt setting. Get access to the battery and touch the meter probes to each battery terminal. If you get a reading of 12.7 volts or more, you're good-to-go. If the voltage is less than 12.7, the battery needs a recharge. Connect a charger with 2 amp capacity and charge it until the voltage reaches 14.5 volts, about 3-4 hours.



After engine start, monitoring the battery/bus voltage is important to see that the battery is being recharged properly and that your alternator is supplying the loads ok. But, most certified aircraft don't have a volt meter. The FAA specifies an ammeter, or load meter, as on a Piper. If you don't have a voltmeter, you can buy a small digital meter that plugs into the 'cigar' lighter socket. If you don't have a 12 volt socket, you can easily install one, and plug in one of these small digital meters. I use one like this.

So, after engine start, you should see a positive charge rate on the ammeter, and the voltage climbing to 14.2-14.5 volts within a few seconds. We'll look at 'what if it's not showing a positive charge and/or the voltage is not rising to 14+ volts quickly', in a future article.



The key to a fully charged battery is the voltage regulator, which controls the alternator output voltage and limits the maximum current. It should be set to 14.2 to 14.5 volts, with the engine running at about 1,000 rpm and normal loads.



Most voltage regulators are adjustable and it only takes a few minutes to make the adjustment. But it takes 2 people to safely do this safely. If yours is not adjustable and you're not getting at least 14.0 volts, there may be other problems; the wiring, alternator, or the battery itself. A shorted cell will cause a loss of 2.2 volts, and the battery will not charge above 12 volts. More on the rest of the electrical system in future articles.

- **Reserve capacity** is how many amp-hours your battery is capable of supplying to the loads. This requires an easy test, but you'll have to recharge the battery immediately after this test before you fly. Your battery has a stated amp-hour capacity, defined as the load current it will supply for 20 hours, to a point where the voltage is down to 10.0 volts. So, a 20 amp-hour battery will supply a 1 amp load for 20 hours. But because of internal resistance, higher currents will cause some of this energy to be lost as heating of the battery. So, a 10 amp load won't be sustained for 2 hours.

The test, without damaging the life of your battery. This is for a new Concorde AGM battery [BTW, this is all they sell now]:

1. After a one-hour rest from initial charge per the instructions, 13.0 volts.
2. Check with landing light 100 watt, (10 amps) for 2 minutes.
3. With load in place: 12.4 volts.
4. After removing load: 12.8 volts.
5. After a 2-hour recovery: 12.9 volts.

If the voltage doesn't get back to at least 12.6 volts, the battery has lost enough capacity to not be airworthy.

What kills a battery ?

- A low state of charge. If a battery is left for days, with a voltage of less than 12.5 volts, it will sulfate and permanently lose capacity.
- Leaving the master on, or other load that discharges the battery below 12.5 volts.
Note - never jump-start a dead battery, or hand prop the engine to start with a dead battery [unless it's an emergency].

If you do a jumpstart, 3 bad things can happen:

- ✚ Once the engine is running, the alternator will recharge the battery at its max capacity, 50-80 amps, which will overheat the battery and can cause the plates to warp and short a cell.
- ✚ The alternator is working at max load, trying to recharge the dead battery and supply all the loads too, so it can overheat and damage the diodes, or bearings
- ✚ If you do fly with a dead battery and the alternator fails, [see above], the battery is at a very low state of charge and may only supply power for a few minutes. If you're flying a retractable gear aircraft, when you select the 'gear up', the battery has no capacity to supply the high current and the alternator won't either, so it may trip off, leaving you with a total loss of power, of your doing.

What to do? Connect a battery charger designed for aircraft batteries, or one that will limit the charge to 10% of the rated capacity [2 amps for a 20 amp-hour battery], and let it recharge for 10 hours. Be sure that the charger will limit the voltage to 14.5 volts. Most cheap chargers can kill a battery with excessive voltage, over 15 volts. But if you monitor the voltage and keep it below 14.5 it'll be ok.

So, take care of your battery and you'll get a full, useful life from it, and it won't let you down when you need to rely on it, beyond cranking your engine to life!

I'd be happy to answer any questions that you have on electrical issues and will help troubleshoot problems that you may have. Email me.

For more info, see the following references.

<http://www.concordebattery.com/otherpdf/5-0324-rg-manual.pdf>

<http://www.avweb.com/news/features/Batteries-Dying-Young-223129-1.html>

EAA CHAPTER 1541
Board Meeting Minutes
December 2, 2015

1. Richard Bristow presiding, VP, and Treasurer in attendance, plus other Board members; quorum reached.
2. Holiday Party at Beermann's discussed – 98 tickets committed, 80 sold; we can go to 120.
3. Doug/Jim/Jack working on T-shirts
4. Ron Wright – asked Board and all members to send ideas for future agenda items; also ideas for social events and education.
5. Richard Pearl briefed the group about the plans for the Lincoln AirFest 2016.
6. Bruce Estes briefed the group about the Poker Run, scheduled for May 14, 2016.
7. Bruce Estes – volunteered Richard Pearl to create a Chapter e-Newsletter. Pearl accepted since he had no choice and will draft up a format
8. Meeting adjourned 8:00.

Submitted

Richard Pearl
Secretary, interim

EAA CHAPTER 1541
Chapter Meeting
December 12, 2015
Beermann's Restaurant
Holiday Party

1. Meeting opened 6:40 pm by President Bristow. Review of 2014 & 2015 accomplishments: Tri- Motor, BBQ's, Young Eagles, Poker Runs, hands-on assistance by members to other members, LRAA coordination, much improved financial status. Richard B. received a well-deserved round of applause.
2. Incoming president Ron Wright introduced the new Board members and thanked the outgoing Board; discussion about finances (very good shape). New Officers and Board members for calendar 2016:

Officers/Board members:

President – Ron Wright
Vice President – Ken Schwartz
Secretary – Richard Pearl
Treasurer – Jim Hughes

Board Members:

Bruce Estes
Tony Kasabasich
Tom Lieb
Bob Miller
John Perry
Richard Ryan
Dug Smith

Per decision of the Officers: bank-signing privileges can be exercised only by Ken Schwartz (Vice President) and Jim Hughes (Treasurer). All previous signors are to be removed from the Approved List for calendar 2016 or until further notice.

3. Plaques presented to Bristow (as president, and especially as the leader of the Tri-motor effort) and Estes (exceptional service); plaque for Boothe (not attending). Additional high-achievers recognized (Schwartz, Kasabasich, Smith, Rupe, Braun, and others).
4. Santa Claus arrived via a Van's RV as the sleigh was down for repairs.
5. Bristow launched his (finally) last Tri-motor quiz
6. Meeting adjourned at 7:15 at the start of the dinner service.

Submitted,

Richard Pearl
1541 Secretary

EAA CHAPTER 1541
Board Meeting Minutes
January 6, 2016

1. President Ron Wright presiding. All club officers and Board members present. 6:00pm start; Round Table Pizza, Lincoln.
2. Minutes of December 2015 Board meeting and General Membership meeting previously distributed; no corrections. Richard Ryan volunteered to be the Club Assistant Secretary, filling in for Richard Pearl, as required.
3. Ron Wright – discussion of completing necessary EAA and State of California paperwork, including special documentation for holding raffles. Club VP and Treasurer will work on submittals.
4. Ron Wright updated the group on a concept to purchase a hangar at LHM for the EAA. Discussed price is \$65,000 for the 1,900 sf hangar. The deal would require bank financing. The group was favorably inclined to pursue, once the major stumbling block of hangar reversions by the city of Lincoln is resolved. Bob Butera gave intel about a conversation he had with Jennifer Hanson, the City Public Services director and the Airport Manager. Nothing can/will be done until the reversion issue is resolved, most likely within a few months.
5. Club meetings.
 - (a) January General Membership meeting will be held on TUESDAY, January 19 at Cattleman's restaurant. Richard Pearl to give a talk on the World of Silent Flight – Gliders. Diner at 6:00pm; \$12.99 pp – wives/S.O./family invited.
 - (b) February General Membership meeting will be held TUESDAY February 16 at Cattleman's restaurant. \$12.99 pp – wives/S.O./family invited. Brian Brown presentation on surviving a crash. WINGS credit. Joint EAA/RAA meeting.
 - (c) March meeting – Wednesday March 16 – LHM hangar TBD. Richard Bristow to present.
 - (d) April General meeting April 20 – Jim Hughes to present.
 - (e) May or June – Icon amphibian, possibly at local lake for BBQ. Tony K. to secure.
6. Young Eagles – Chris Braun will be doing pancake breakfasts on YE days.
7. AOPA flight review session – January 12th; Double Tree hotel ballroom. 7:00pm. Informal dinner at Elephant Bar restaurant across the street – 5:00pm
8. Meeting adjourned 8:00.

Submitted

Richard Pearl
Secretary