

# The Cleco



**Experimental Aircraft Association • Chapter 393 • Concord, CA**

**Mail to: EAA Chapter 393 P.O. Box 272725 Concord, CA 94527-2725**

**MAY, 1993**

## **CHAPTER MEETING**

May 26, 1993 The 4th Wednesday of every month @ 7:30pm; Old Buchanan Terminal Building, Concord Airport. Bring Chairs. *Wear your \$&@% Badges please!*

## **1993 TAIL DRAGGERS**

PRESIDENT	Glenn Werner 676-8786
VICE PRESIDENT	Jim Lewis 930-9429
SEC/TREASURER	Callie Joyner 671-4871
NEWSLETTER EDITOR	Will Price 254-2267

## **PROGRAM**

I've said it before and I'll say it again: Jim Lewis should be appointed lifetime vice president in charge of programs for 393. He's done it again. For this meeting he has scheduled Tom Neel (hope the spelling is correct) of Trimble. Tom will be talking about GPS, a subject dear to most of us. I'm told that he will bring a video (for those of you who need an evening nap) and an engineer (for those who are technically oriented). This one should be another of his winners. Good job, Jim.

## **MINUTES OF MEETING 4/28/93**

**TERRIFIC MEETING!** As always, we started the meeting with our usual business agenda. Larry Harmon of EAA 62 described plans for both the Builder's Conference at Hayward on May 15 (over with by the time you read this) and the carry-over to Watsonville. He also extended an invitation to Watsonville and requested volunteers to help out. If you have some spare time, give Larry a call; you can reach him at:

(408) 238-0194

Thank you, Larry, for a very informative description of both events. Regarding the Builder's Conference, our own 393 is sponsoring the composite workshop under the direction of Glenn Werner. That's a substantial task to take on Glenn and a real contribution of your time and energy.

Your newsletter editor summarized the efforts of 393 and other organizations at Buchanan in presenting a pro-airport position to the Board of Supervisors. (This edition of the Cleco includes a report on the latest happenings.)

Introductions then commenced. Andy Marshall is back in fold (welcome home, Andy); he even donated three copies of his book on composites to the raffle. Thank you Mr. Composite.

The gem of the evening came from Lew Miller. He has finally solved his engine overheating problem--outstanding!! Told us that he did it by installing a new temperature gauge--now that's creativity.

Our long-lost Ryan Young showed his face again--good to see you back, Ryan. Told us he has only about 6 hours into his project over the last 6 months. What he didn't tell us is that he is getting married soon. Let's see, at the rate of 1 hour per month, a 900 hour project will take....hmmm, that's a long time.

We have a new member building a VariViggen (is that spelling wrong??)--how about that. Sorry, but I messed up and didn't get his name.

Lyle gave us a summary of his activities at SunNFun. Good report, Lyle.

We got a ton of lies from Chris Kenyon. I think he was trying to con us into believing his RV has the incredible climb rate of 283 1/2 feet per minute. Come on, Chris; that's faster than a Luscombe.

After the raffle, Mike Arnold told us about how he set a world speed record of 213.17 mph with a 65HP Rotax. Some of the extremes to which he went in designing a clean airplane for the attempt were fascinating. We swallowed hard with him concerning the emergency landing and subsequent damage to the aircraft. Good luck in getting your plane back in the air, Mike. Thanks for an enjoyable evening.

## **SKIMPY READING**

Bad news for this month--you'll just have to make do with a shortened Cleco this month. The Airports Coalition has consumed so much of my time that there has been little left over for anything else. Anyway, if you readers want good stuff and plenty to read, give me a hand. My phone number is 254-2267. If it is constantly busy with others phoning in to participate, don't be discouraged--keep trying.

## **REQUEST FOR OSHKOSH HELP**

One of our new members from the last meeting is Gordon Bowen of Hexcel. It seems that Alexander Aeroplane and Hexcel are co-sponsoring the composite workshop at Oshkosh this year. This year they want to really do something with it. So if you can volunteer a portion of your valuable Oshkosh time to help out they would really appreciate it. Let's have some 393 participation. HEY--this is what EAA is all about! For information call Gordon at 256-7385 (home) or 847-9500 x3727 (work).

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## From the President . . . Hayward Builder's Conference

Proof of the inherent resourcefulness of this Chapter was evident this weekend when some of the members were called with too little information and even less time to prepare for and participate in the Hayward Builders' Conference. The uncertain leading the uninformed into the unknown went undaunted.

The event was the fourth Builders' Conference sponsored by Aircraft Spruce and Kitplanes Magazine. The intent was to inform the airplane builder wannabes on the various types of construction, and show them some of the different finished products. Aircraft Spruce supplied us with the necessary materials to demonstrate the different building techniques. Chapter 663 demonstrated welding skills, Chapter 62 covered some ailerons with the stits process and did some rib stitching. Chapter 20 had the responsibility of making as much noise as possible with the metal working table. The loneliest group of all was also Chapter 62, with the electronics and instrument workshop. (I think the problem is most of us don't even know how to ask the questions on instruments.) Our beloved Chapter 393 had the busiest work table of all with the composite materials. Wannabes and builders alike seemed to swarm our table all day long, asking questions and trying their hand at things like "stippling" and "laying

up" and "wetting out." Our own Lou Miller jumped right in and began lecturing the group on procedures and precautions using glass cloth, resin and micro-balloons.

Harry Heckman, Lyle Powell and Larry Laughlin all answered questions and demonstrated their techniques, too. We lent one of our own, Chris Kenyan, to the metal builders table where he made as much rivet noise as the rest of them. We even offered our flying airplanes, with two Long-Ezes, a Glasair III, and an RV-6 for static display. Other examples of kit built planes were also on display. The Lancair 4ES, a Glasair III, an RV-6A, an Express (formerly Wheeler Express) and an unfinished Kitfox.

I feel the workshops were a success in relaying the information to the attendees, and it definitely was a success for the one and only lunch truck owner who made several trips to re-stock his shelves. I hope Aircraft Spruce sees as much added revenue as a result of this builders' conference as the lunch truck guy made that day.

Just trying to help . . .

Glenn Werner

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## GOOD WORK, GLENN

From everything I've heard, 393's participation in the Builder's Workshop was a real credit to our chapter. Glenn is to be congratulated on taking the lead and involving us. That's what EAA is all about. Good show, Glenn.

RICHARD S. POWELL



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## PROGRESS REPORT--BUCHANAN FIELD

There have been two important meetings since the Board of Supervisors meeting last April 6: the Internal Operations Committee met on May 10 and the Board on May 18.

### IOC Meeting--May 10

We had about 25 people representing The Airports Coalition at the IOC meeting. Following are some of the points that we made.

1. There is no way through enforceable ordinance to restrict helicopter training further than the self-imposed restrictions currently followed by HAI.
2. If the County wishes to eliminate helicopter touch-and-go training activities on the field, there appears to be only one solution. That is, the County can renew its effort in working with interested groups to find an alternate training site acceptable to HAI.
3. Regarding the petition labelled *HELICOPTER NOISE AND SAFETY PETITION - 1993*, we congratulate the anti-helicopter people for enlisting support for a cause of their concern. Although we take exception to the terms "SAFETY", "Safer location" and "dangerous" we are sympathetic to the desire to reduce noise over homes and businesses.
4. We hope that the community does not feel pilots are totally oblivious to noise concerns. The current Buchanan noise ordinance is not legally enforceable: it is in violation of Federal law. Buchanan pilots know this, yet they comply with it because they feel it is fair and reasonable.
5. We say let's each remove our feet from concrete and cooperatively work to resolve conflict. Let's not waste our time and energy in strategy for outwitting the other side. We can begin by working together in a renewed effort to find an alternate training site that is practical for the activities of HAI.

### IOC Recommendations

The Internal Operations Committee is comprised of Supervisors McPeak and Smith. Smith was absent from the May 10 meeting but had a representative taping the hearing. Overall, the consensus of our TAC members at the meeting was that we were heard and treated fairly. The ensuing IOC status report submitted to the Board, included 14 recommendations which basically addressed 2 points.

1. That the Board resume its effort in finding an off-airport site for helicopter training that is acceptable to HAI. This is to be a cooperative effort involving broad involvement. It is to include the Airport Advisory Council, Concord Chamber of Commerce, Public Works Department, Manager of Airports office, Pacheco Municipal Advisory Committee, Pacheco Town Council, People Over Planes, Vine Hill residents, and The Airports Coalition. The HAI

management is comfortable with the arrangement and has expressed optimism that the problems can be resolved.

2. That the County proceed with the installation and testing of the noise monitoring equipment. It is generally accepted that one full year of noise monitoring be completed in order to gain sufficient data to design a reasonable noise ordinance. The County intends to follow these guidelines. To that end, the Airport Advisory Committee is to submit its recommendations based on preliminary noise monitor analyses to the Board by June 30, 1994. The Board will not pursue an amendment to the existing noise ordinance (or a new one) until these studies are completed.

Supervisor Smith dissented on the first 7 recommendations of the IOC report (summarized by my Item 1). He expressed concern over the potential cost and the legal liability to the County.

### Board Meeting--May 18

This meeting was attended by Patrick Corr and Will Price. As we had anticipated, it was essentially a formality in that the Board accepted the recommendations of the IOC. However, it was not without some dissent. Supervisor Smith raised his objection to the first 7 items (continue searching for an alternate helicopter training site). Patrick reiterated the willingness of HAI to cooperate in the overall efforts. After some discussion, the entire report was approved with Supervisors Smith and Powers voting against the alternate site search.

### Commentary on the Overall

The Airports Coalition has made its voice heard and will be an important part of the equation in future airport developments. We consider that the recommendations of the IOC to the Board are reasonable and fair and that they reflect concerns we have expressed.

Regarding a noise ordinance, the Board has committed to ensuring that it be done right. That is, data will be gathered over the period of one year with our active participation. Only after careful analysis (including our input) will any recommendation be made. In the opinion of many of us, the studies will prove our contention: that noise levels at Buchanan Field are not excessive. In fact, if the Single Event Noise Exposure Levels of the John Wayne Airport were implemented at Buchanan Field, few if any of us would be in jeopardy. You can be certain that TAC will be active in ensuring that any new ordinance is fair and reasonable. Furthermore, the FAA will not approve noise levels that unreasonably low.

We are optimistic about Buchanan pilots receiving fair and reasonable treatment. Thank you for your support.

## Larry Kett Laughlin



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### PERSONAL PROFILE--CHRIS KENYON

Here we are back in the interviewing business--this time it's Chris Kenyon. He's the guy with the RV with a climb rate exceeding that of an F16. He's also the guy who recently had a little party at his hangar complete with a stripper! I won't mention any names, but his pictures of the event showed some pretty dignified members of our organization in attendance sporting very broad grins at the goings on.

Well enough of the gossip; let's get on with the rest of the interview. .... Hey, wait a minute!!! Is that all I got from him in a 2 1/2 hour interview? I always knew Chris could talk forever and not say anything, but this is ridiculous. I'm certain he had more than that to say, but it's all I can find stored on the disk. Wow, he must have been boring as hell. Oh well.

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### FLAPS AND THEIR EFFECTS

#### All you ever need to know about flaps

By Ted Spitzmiller

Taken from "Air Progress", May 1992

Trailing edge wing flaps have been an important part of the design of new aircraft with increasing frequency since the 1930s for a variety of reasons.

In the case of the World War Two B-29, they permitted the use of a high-speed, low-drag airfoil which achieved exceptional performance at altitudes above 30,000 feet. The use of this airfoil, however, would have required extremely high landing speeds had it not been for the development of the "Fowler" type flap. This type of flap not only extends downward, but aft as well, increasing the B-29's normal 1739-square-foot wing area by an additional 332 square feet--a full 20 percent.

The Boeing 727, a product of the 1960s, is another example of effective flap design. At a gross weight of 158,000 pounds, the airplane has a stall speed of about 154 knots without flaps extended, but only 120 knots with 15 degrees of flaps.

For the typical General Aviation aircraft, the use of flaps is often not quite as dramatic but equally as effective. The single-engine Cessna series (152/172/182/210) employ the effective "slotted" flap and achieve a respectable reduction in stall speed and landing speed of about ten knots. The corresponding Piper singles (PA-28 series) use the "simple" flaps, which are somewhat less effective. On the low end of the efficiency scale, the flaps on the American Yankee AA-1 reduce the stall speed only one mile per hour, from 66 to 65 mph.

Flaps are auxiliary lifting devices typically designed into the trailing edge of the inboard portion of the wing. When extended, flaps move downward, creating an increased camber (curvature) to the airfoil, increasing the lift coefficient (effectiveness) of the wing. Consequently, flaps allow a wing to produce more lift at a given airspeed.

Reducing stall speed, although generally the most notable aspect of flaps, is not the whole story in their use. The approach angle of an aircraft is an important factor in the ability of a pilot to select a predictable touchdown point, especially where obstacles prevent lower approach profiles. This is where the use of flaps is especially appropriate. The price of the increased lift produced by the flaps is increased drag. This drag requires you to lower the nose to maintain the desired approach airspeed. On some aircraft such as most Cessna singles, the approach angle can be dramatically increased, allowing the aircraft to clear obstacles at the end of the runway and still touch down close to the threshold.

Proper use of flaps, especially those which produce high drag at high flap settings, require a thorough knowledge of the flight envelope of the aircraft. You should not attempt to fly an aircraft into any portion of its flight envelope unless you have received training from a flight instructor who is experienced in that particular aircraft.

The following flight exercise can help you explore the low speed/high drag flight characteristics of flaps:

Select a safe altitude--one which permits experimentation without having to worry about the ground--3000 feet above ground level (AGL) is typically sufficient. Student pilots SHOULD NOT perform this exercise without an instructor aboard. Rated pilots who are not comfortable with maneuvering at minimum controllable airspeed should consider putting an instructor in the right seat as well.

We used a 1979 Cessna 172 equipped with slotted flaps which can be extended to 40 degrees. Levelling off at 8500 MSL, 75 percent cruise power was established. Our test plane indicated 100 KIAS (115 KTAS knots true airspeed, under the current flight conditions). Your indicated airspeed will depend on the altitude at which you are flying. Also, you should remember to clear the area periodically; a mid-air can ruin your whole day! We first extended the flaps to their first indexed location of ten degrees. You might note that the upper portion of the white arc on the airspeed indicator may prohibit you from doing this if you are in an older C-172, which did not permit any flap extension greater than 85 KIAS. If this is the case, select a power setting which puts the indicated airspeed at the top of the white arc, or increase your altitude to produce a lower indicated airspeed.

As this first "notch" of flaps is extended, you will note the high-wing plane (such as the C-172) tends to pitch

up, while the low-wing aircraft tend to pitch down. Adjust the pitch to return the aircraft to straight and level balanced flight, in trim. Give the airplane a minute or so to become stabilized and then note the airspeed; with this first ten degrees of flaps, we lost about four knots.

Again, move the flap selector to the next index (20 degrees for this C-172) and allow the aircraft to stabilize in trim before noting the new airspeed. Our test aircraft lost another nine knots.

Moving the selector to the 30-degree position produced even more pronounced changes as we lost 17 knots; and the final increment to 40 degrees dropped the airspeed 24 knots to 46 KIAS! Note that if you are doing this exercise in an aircraft which is close to maximum gross weight, or on a hot summer day, you may have to bring power up to "full" in order to maintain altitude. Also, if you are not smooth with the pitch increments, you can easily get the aircraft well behind the power curve and may not be able to maintain altitude even at full power!

We graphed the results. Through the first 20 degrees of extension, the reduction in airspeed, although noticeable, was not nearly as dramatic as the loss from 20 through 40 degrees.


We can perform a similar experiment and look at the stall speed. The problem here is that the stall speed increments between the various flap settings are often difficult to discern. Also, the high angle-of-attack produces such inaccurate airspeed readings that it is possible for us to fly at "zero" indicated airspeed. So for the sake of clarity, we graphed the numbers from the Pilot's Operating handbook and labeled that line as "Stall Speed."

From this experiment we can determine that the greatest benefit from lift afforded by the flaps is in the first 20 degrees of extension. The last two increments, from 20 through 40 degrees, produce the most drag. Because the Cessna flaps are so effective and produce such high drag in the last ten degrees, Cessna began limiting flap extensions to 30 degrees in the early 1980s. Full-flap go-arounds in the Cessna, on hot days or at near gross weights, can require high levels of proficiency. This is why instructors rarely solo students the first time with flaps.

There is another interesting side effect which can be observed during this exercise, and that is the decrease in rpm as the speed decays.

We started the exercise with a power setting of 2600 rpm and observed a loss of about 50 rpm at each step. As the aircraft lost speed, it required a higher angle-of-attack to remain in level flight. This in turn produced an increase in angle-of-attack on the propeller blades, resulting in more propeller drag and less rpm. But that's another story.


Full-flap approaches can produce high vertical rates of descent at minimum airspeeds. Poor pilot judgement in the flare has left more than one aircraft with a damaged nose gear and bent firewall. To effectively and safely use flaps requires a thorough understanding of their effect as well as good instruction and a high level of proficiency. It is prudent to seek the counsel of an instructor whenever you fly a new type of aircraft, especially one with potent flaps.



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### HUMOR IN THE AIR

Swiped from John Meyer, EAA 663, Livermore

*Mooney 666RG:* San Carlos Tower, Mooney 666 Romeo Golf is seven east. We would like to transit your area westbound and would like flight following."

*San Carlos Tower:* Mooney Six Six Six Romeo Golf, San Carlos Tower, transition approved. We can't help you with flight following. We don't have radar but they gave us a toaster and a microwave."

*Mooney 666RG:* Oakland Tower, Mooney 666 Romeo Golf, 1800 feet on the localizer."

*Oakland Tower:* Mooney Six Six Six Romeo Golf, Oakland tower. The airport is below VFR minimums. What are your intentions."

*Mooney 666RG:* Oakland Tower, 6 Romeo Golf, I'm gonna finish this ILS approach, taxi to the FBO, and relieve myself."

*Oakland Tower:* (After a long pause) "Six Romeo Golf. Uhhh, guess I didn't get your flight strip. Cleared to relieve yourself."

### DID YOU KNOW THAT...?

The Lycoming FLYER says that automotive fuel octane is rated differently than aircraft fuels. For instance, premium 90 octane auto fuels test in the 80's on the aircraft scale.

The following message appears on a safety card in the pocket of airliners. Prepared by the FAA, it is a mandatory statement that must be included in all airlines.

*"If you are sitting in an exit row and you cannot read this card or cannot see well enough to follow these instructions, please tell a crewmember."*

Now isn't that interesting?

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## WELL HERE IT IS

I'll be darned. I just found the rest my interview with Chris on another disk. My goodness, Chris, sorry about the confusion.

For those of you who are not so enlightened, Chris is an illustrator--a guy who draws pictures for a living. He told me that he has loved to draw things for as long as he can remember. In fact, in the fourth grade (in Phoenix) he drew Santas in colored chalk on all blackboards of the school. He got Hershey bars for each one--ended up with a ton of bars and being the most popular kid in school (until his Hershey bars ran out).

While attending high school in Phoenix he did illustrations for magazines. His first real sale was an illustrated hunting and fishing map of Arizona. Sports AField bought it for \$100. He was so thrilled with the sale that he let his brother talk him into a loan of the entire \$100. Gullible younger brother--doesn't even remember if it was paid back.

During the summers he worked for the forest service and game department and stretched that out for two years after high school to save money for college. Then it was off to the Los Angeles Art Center; that was 1950. Of course those senior of us know what was going on in 1950: Korea. Needless to say, the draft board didn't feel that an artist was essential to keep in school so after one semester he received his greetings. Basic training was--were else--Fort Ord. But even the Army recognized talent so he was assigned to permanent cadre painting targets, etc..

Eventually his group was moved to Yucca Flats for atomic testing. They were six miles from air burst ground zero on atomic tests. They sat on desert floor with their backs to the blast and were ordered to turn just after blast and observe, then ordered to sit down just prior to arrival of the shock wave. After the shock wave passed they got up and walked to ground zero.

He finally ended up in Korea where he spent nine months as a minefield "expert." That is, he went out and poked around to determine the minefield patterns. After four months of that he was assigned as an intelligence sergeant. Now Chris, isn't that a contradiction: *intelligence sergeant and illustrator?*

After surviving Korea and being mustered out, he went back to work for the forest service for few months to make enough to get married and go back to school. After five semesters at the Art Center he felt he had the world by the tail so moved to New Haven, Connecticut from which he could commute by train to New York in announcing his arrival.

He told me that it didn't take much pavement pounding to realize that the world of illustrating and advertising were not waiting with bated breath to grab up this kid from Arizona with his portfolio of Western drawings. One day some guy liked two of his drawings so bought them for \$150 each to use as covers on some Western pocket books. Seems the person was the owner of Avon Books. They became good friends and Chris sold him many more drawings.

After some success in New York he went with the Campbell-Ewald advertising agency in Chicago. They handled Chevrolet, a very BIG account. He says that the security regarding new cars was unbelievable. The Army had cleared five times to handle secret information but Chevrolet was worse. He almost had to deposit his first-

born to check out photos of new model cars to use for ad sketches.

Success in Chicago got him the real plum that he wanted: a job in San Francisco with prize ad agency. Since that time he has done illustrations for all major auto companies, Chevron, BofA, Wells Fargo, Atari (covers of software), Apple, you name it.

He was even approached by Lorne Greene to do Bonanza comic strip. Did a lot of work but nothing came from it--the project would need to carry too many unreasonable expenses. From his description, it sounded like a 50-50 proposition: his half was to do all the work and the other's half was to collect all the money. His wife said "don't do it" and she was right. After about six months of frustration he threw in the towel.

As member of SF Society of Illustrators he got involved with the Air Force doing illustrating. Curtis LeMay started program with illustrators to document the service--basically he wanted artists and illustrators to pictorially document the air force. In order to give the artists some clout in moving around, they gave them GS15 ratings.

This got him flights in a wide variety of military aircraft including the F102 Delta Dagger, F104 Starfighter, F4 Phantom, T38 with F5 engines, T33, B52, C5A, C141, C130, and KC135.

When in fighter aircraft the pilot would inevitably ask him if he new how to fly. Then and there he decided to take flying lessons so that he could say Yes and take advantage of the opportunity to fly the aircraft in which he was riding. Tells me that he had a great time playing the part of Chuck Yeager.

As part of the training he was photographing and illustrating, he went through several courses. He survived survival training at Mather AFB as required by SAC. He lived through parachute training over water. He even pulled 12gs on test sled. (He has done 9 in fighters.)

He didn't make any money at this endeavor but he travelled all over the world and had a ton of fun.

On the family side, he met his wife Jean at the LA Art Center and only caught her eye because he wore cowboy boots and hat to school one day which attracted her (she loves horses). Little did she realize that he was an imposter. Chris told me that her interest remains hay going in one end and fertilizer coming out the other. She has no interest in flying. She does have another fascinating hobby: garage sales. Apparently she goes to garage sales before they are scheduled to open and buys the good stuff before everyone else arrives. Now that's clever.

Their one son has degrees from Berkeley in Computer Science and Nuclear Engineering. He now works for a company the builds CatScans and uses computers in design.

Their daughter went to Cal Poly (San Luis Obispo) and majored in animal science. She had intended to be a vets assistance but decided on family. She is now married and lives in Walnut Creek.

Sounds like a terrific family, Chris--you've done good.

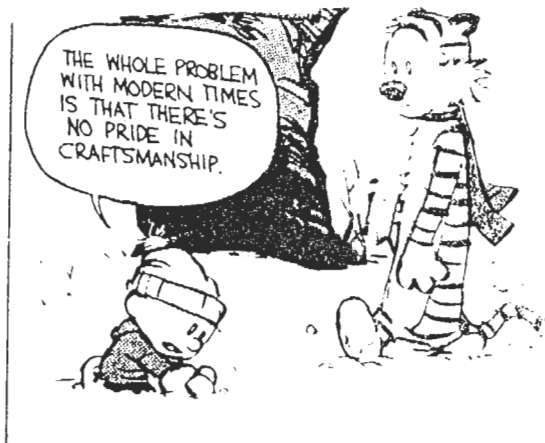
You're also a neat person to have in our Chapter--where else could we find a member with so many lies about his airplane. It was a pleasure visiting with you for an evening. Thank you.

## CALENDER OF EVENTS

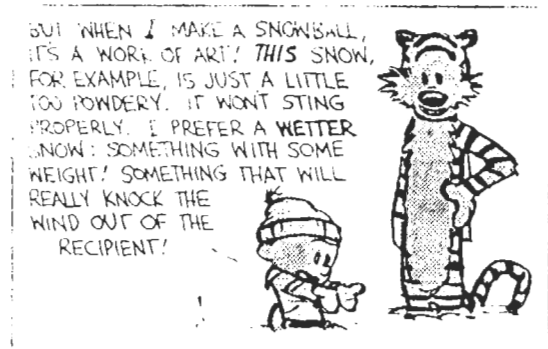
Here we go on the annual calendar of events. Notice, that some have question marks for the dates. They were "leftover" from last year and I assume that they will be sponsored again this year. If you know the dates, please let me know.

May 21-23 Columbia Luscombe Fly-in  
 May 23 Corning, CA Antique Fly-in and Airshow.  
 May 22, 23 Exchange Club of Redding.  
 May 23 Paso Robles 4th Annual Warbird Fly-In  
 Air Show. Call Glen (805) 238-4858  
 May 28-30 Watsonville Antique Fly-in.  
 June 5-7 36th Merced Antique West Coast Fly-in.  
 Call Don Nolte (209) 384-1144.  
 June 12-13 43rd Annual Moonlight Fly-In Air Show,  
 Porterville. Call Mike or Frankie  
 (209) 781 0706.  
 June 19-20 Lions Airshow, Ukiah. Call (707) 468-  
 8626 (evenings).  
 June 26-27 24th Annual Truckee-Tahoe Airshow.  
 Call (916) 587 4119.  
 July 3 Oakwood Lake Resort Air Show,  
 Manteca. Call Steve Stavrakakis  
 (209) 6322689.  
 July 4 Reid-Hillview 4th July Picnic Fly-In.  
 July 7-11 EAA Fly-In, Arlington, WA.

July 17-18 Budweiser Warbird Invasion, Tracy  
 Airport. Call (805) 498-7221.  
 July 23 Wings for Charity, Livermore, CA,  
 July 24 Vacaville Air Fair, Nut Tree Airport (707)  
 446-0322  
 ??? Evergreen Fly-In  
 ??? Madera Fly-In  
 July 29-August 4 OSHKOSH. Call (414) 4264800.  
 Aug 20-22 Gathering of Warbirds, Madera  
 Aug 21-22 Aviation Expo: Tribute to Women, Van  
 Nuys  
 Aug 28-29 Hawthorne Air Fair, Hawthorne  
 Sept 4-6 California Air and Water Festival, Long  
 Beach  
 Sept 10-12 Chico Antique Airshow, Chico  
 Sept 19 Santa Maria Air Fair, Santa Maria  
 ??? Pacific Coast Air Museum (Sonoma  
 County) Open House  
 Oct 1-2 Calif International Airshow, Salinas  
 Oct 2-3 Travis AFB Air Expo  
 Oct 16 Santa Barbara Airshow  
 Oct 16-17 Chino Air Show  
 Oct 23 Edwards AFB  
 Oct 23-24 Pt. Mugu Air Show  
 Oct 24 Castle AFB Airshow  
 Oct 30-31 March AFB Open House  
 Nov 7 Fall Fly-In and Airshow, Half Moon Bay



For some strange reason, the thought of Lyle Powell as a kid comes to mind when I see this.




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## COMPOSITE BUILDER SUPPORT GROUP

For information about the Composite Builders Group, call Lyle Powell at 938-3217. To be placed on the mailing list for the CBG, send your name and address to Jordan Coonrad, PO Box 2878, Alameda, CA 94501 or call him at 769-9766.



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