



September 2010

When: Wed. September 8th - Meeting at 7:00PM

Where: Chapter 526 Hangar, Auburn Airport

-At 6:00 PM, Before the meeting a BBQ will consist of Hamburgers, Hot dogs, HB & HD "fix'ns, Bean side dish, salad and desert. Cost: \$3.00.

What: Subject: AIR TRAFFIC CONTROL presented by Bill Grava FAA

More on presentation on page 4

N E X T M E E T I N G

CONTACT !! August 2010

Greetings:

Back from Oshkosh....back to work...and with the freaky weather last weekend, Summer is nearing its end. I have lived in Auburn almost 8 years, and I have never seen rain in August! Well, what IS happening anyway? Two big subjects in the news for general and sport aviation these days are likely to be in the news more and more. The questionable future of 100LL avgas is one. ADS-B is the other. "Automatic Dependent Surveillance-Broadcast"? New technology, new rules, more money. Maybe that's why we are starting to see tiny jet engines being proposed on some sport aircraft, or even on a motor glider. And, why we are seeing several new electric aircraft being displayed at Airventure. Using Jet A, diesel, or electricity gets around the threat of disappearing avgas. Are you sure you want to put mogas from any gas station in your airplane, or ethanol corn fuel? Meanwhile the ADS-B issue offers no real benefit to GA while imposing a lot of extra cost, ten years from now when avgas powered airplanes will be in museums. I don't know; there is a lot of possibility to consider.

It's too early to tell, to tell where this will all go, and I have infused my twist on it with no small amount of opinion. However, the long and the short of it is, GA and recreational flying are vulnerable to multiple threats. The good news is that EAA and AOPA are working hard to protect our future, our rights, our freedom, and to maintain some element of common sense in response to progressively abundant regulation. Ouch! It's going to get interesting before it's over. Try to avoid turbulence...we you can.

Last month we enjoyed hearing the reports and seeing lots of enthusiasm from our new Air Academy graduates, David and Joe. These guys were definitely appreciative of the chance to experience Oshkosh, Airventure, and the EAA Air Academy, thanks to you, Chapter 526 members. I know you agree, this is a worthwhile endeavor that will pay dividends beyond expectations in many ways. Whether these kids, soon-to-be young adults, become professional aviators or not, they have already been changed by aviation. The perspectives they gained by sharing experiences with kids from all over the USA and in some cases from



(Contact! - Continued on page 2)

(Contact Continued from Page 1) overseas, will continue to inspire them to be productive citizens as well as ambassadors for EAA and for aviation. It (almost) makes you wish you could be a kid all over again, doesn't it? We need people like them in aviation. Let's get some more.

As we move into the last quarter of 2010, I wish we could just slow down the clock. I'm not sure that faster is so much better. Saw an awful lot of Cub knockoffs at Airventure, and fewer Lancairs. It sure didn't help the economy to go racing so fast when we went skidding out of control into this big economic "correction". But, I want to let you know time is marching on and it's going to be time soon to elect a few new Chapter 526 officers and directors for the Board. Are you ready to step up? Are you ready to nominate your friends, buddies, or someone who will do the job? This is important stuff.

We need to take turns leading the Chapter and serving in the different ways we can. When you have a chapter as old as ours, you find out that a lot of members have been this or that over the years. Hey, our first chapter president was even there at last month's meeting. In fact we counted several members present that have their names on the original charter that hangs on our wall. It was quite fitting to have so many of you there when I announced that the Chapter is now officially a non-profit charitable organization. Thirty years is a long time in aviation. Sooner or later we all have to pitch it when we can. And, that makes every one of you are part of it all!

If there is one thing that I want to stress, in writing this newsletter piece for all of you who read it, ...that would be the subject of "safety". Safety awareness is what makes participation in aviation possible. Balancing powerful forces to propel ourselves anywhere in the world is no small feat. Flying takes attention to detail and commitment to discipline. It promotes communication and cooperation. It starts before the start of every endeavor and it's there after the conclusion. The primary function of the regulations governing aviation is safety, for everybody. It works if you work it. So let's all continue in development of our safety awareness so we can enjoy the personal experience of being part of such a fantastic thing, this flying thing.

Along those lines, this month's meeting will feature a speaker from our local TRACON. A fellow pilot will share important information we all need to know about flying in California, and right here at home in Lincoln and Auburn. Yes, and in Grass Valley and Alta Sierra, too. It will be an open meeting as part of FAA's safety program, co-sponsored by the LRAA. It's your chance to understand what is going on and how you are an important part of the system in which you fly. And, we want to keep it that way. We do. You won't want to miss it.

Sometimes I wonder if we really do see what we want to see? Or, in aviation, you see what you expect to see. You think that is the airport, and you see it right there, and so there it (must be) is! It looks just like a lot of other airports, especially in the haze, and with limited time to act on what you see, you go for it. But, maybe it's not exactly (or at all!?) what you thought, at least once in a while. Yeah, we all make mistakes, but it's how we handle them, how soon we detect, correct, and how effectively we manage them. That takes training, believe it or not, and skill that only comes from practice, even if you have the innate talent for flying, like...like most of us do.

So, my world of aviation seems to be always changing. Things are changing fast and it's up to us to see it the way we want to. We have to be involved and participate to get what we want. It's the way aviation works. The way safety works. The way EAA works, when you work it. Involvement. Thank you for being such a big part of my ever expanding world of aviation. I love it.

We'll see you Wednesday night at the airport. Enjoy people enjoying aviation and a spectacular sunset on a late summer evening in the foothills. Take a picture! You'll want to remember how nice it was.

Respectfully yours,
David Consbruck

THE NEXT 526 MEETING, SEPT. 8, 2010, THE HANGER DOOR LOCK ASSEMBLY AND KEYS WILL BE CHANGED AS A SECURITY MEASURE. THE 526 MEMBERS WHO NEED ACCESS WILL BE GIVEN A NUMBERED KEY AND HAVE TO SIGN FOR IT. THE FOLLOWING NAMES HAVE BEEN ADDED TO THE HANGER WAITING LIST, WILLIAM TURPIE & RICHARD CAPEK.

EAA CHAPTER 526

Meeting Minutes August 11, 2010

Opening:

A dinner was put on at the chapter meeting tonight and started at 6:00 PM. There were Hamburgers, Hotdogs Chicken, Potato Salad and Chips. They served Ice Cream Bars at the break. The BBQ was put together by Bill Turpie, Tom Brady, Dick Capek and Dick Rupe. A round of applause was given for another fine job.

The August 11th, 2010 regular meeting of the EAA CHAPTER 526 was called to order by David Consbruck, President at 6:55 PM at the Auburn Chapter Hangar

Present:

Officers: David Consbruck, President, Gary Patburg, Secretary, Dan Wojdac, Director, Rocky Green, Director, Joe Hemmer Director, Bill Turpie, Director, and Milt Ciarlariello, Treasurer.

Members: A total of 31 members signed the roster.

New Members:

None

Guests: Special Guests include Ken Heidger and his family who is one of the original founder of Chapter 526 and the first president, George Ruble (93), Al Thym and Richard Balderson who are the first members of the Chapter.

Other guests included Bret Green grandson of Rocky Green. Bret is going to learn to fly and get his pilot's license. Jim Moore brought his granddaughter Katlin who has taken a Young Eagle flight and wants to learn how to fly become a pilot. Whit Lewis who is interested in helping out in the Young Eagles Program. Dick Rupe introduced his Grandson Joe Johnson who was one of the air academy attendees at Oshkosh and will be giving a presentation on his experience at the end of the meeting.

Approval of Minutes:

A motion was made to approve the minutes from the July Chapter meetings as written and distributed. The motion was seconded with a unanimous vote in favor.

Project Reports:

Evert Young reported that slow progress in being made

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Sept Pre Meeting Bar B Q @ 6 PM
Hamburgers/Hot dogs/Chicken/salad/desert
(same as last month)

FLY-IN EVENTS etc. :

Chico Air Show Sept 24 - 26

Below is a URL with various aviation events as wells more detailed information of the events listed above and they are listed by month

<http://www.flyincalendar.com/index.cfm?m=9&y=2010&v=1>

YOUNG EAGLES

Chapter 526 will be flying on a Sunday September 12, 2010 as opposed to our normal Saturday operations. If you are planning on being a pilot, be sure to be there early.

FYI - The chapter flew 58 youngsters on Aug 15th.

Chapter 526**YOUNG EAGLES CALENDAR 2010**

Rain days are exactly one week later for Mar thru Aug. Flights Begin at 08:00 and end at 1300 Volunteers should arrive early for setup. *Rain Day Sep 18th & Oct 16th

Pilots should arrive early for an event briefing

Sun Sep 12, 2010*

Sat Oct 09, 2010*



Our September Chapter meeting (Presentation) will be presented by Bill Grava.

Mr. Grava is currently an ATP and CFII. He has flown a variety of aircraft from the Cessna, Piper, Beech singles, twins, King Air as well as logging some Citation time.

He has been with the FAA for 25 years starting at SAC Executive, then Sky Harbor Tower for 13 years and now with NOR-

CAL TRACON (SINCE 2001). He has also worked the old "Sacramento Approach" so is very familiar with the local area.

Mr. Grava will give our chapter a presentation regarding AIR TRAFFIC CONTROL operations around Sacramento / Auburn.

As a special note, Corl Leach will also attend and has agreed to award FFAST TEAM SAFETY CREDITS to anyone in attendance. Additionally, President Dave Consbruck has agreed to allow non-members from the LRAA to attend this event. We might even be able to have some of them join our chapter !

Lincoln Airport and the LRAA (Lincoln Regional Airport Association) will be holding an Aircraft Display Day on the 20th of February and then the 3rd Saturday of every month thereafter from 8 until 12 noon. The 3rd Saturday for September is the 18th. Also, discount fuel price of \$2.99 per gallon will be honored Friday, Saturday and Sunday.

The picture below has had some funny comments which I thought some of you may get a kick out of the text associated with the picture.



**Aircraft Crashes Into Building
Terrible, just terrible.**

I wonder how the folks in those buildings felt?

This is going to really stir up a stink

(Minutes Continued From page 3)

on their Thatcher CX-4 project. They are currently working on the metal that holds the windshield in place and that it has to be hammered out into shape which is a very slow process.

Jack Prock gave an update on his Velocity Project stating that the minutes from the last meeting was wrong. He didn't have an engine (an IO 540) yet so he couldn't mount it but as of now he thinks they have located one.

Tom Kuklo gave an update on building his "Strider" float plane. He said that he is done with the wings and control surfaces. He wants to get them on the airplane so that they can do a preliminary weight and balance to help place the engine. They are from an RV9. (See the Pictures on our Chapter website EAA526.org)

Don Farrand is in the final stages of his RV 12 project. He says he is having trouble with the oil pressure read out from the engine. Stan Kisbey who recently completed his RV 12 project is working with him. Don is optimistic he can get this problem repaired and get to flying. (See the Pictures on our Chapter website EAA526.org)

Stan Kisbey reported that he has almost 50 hours on his newly completed RV 12. He says it is a wonderful airplane and encourages everyone to try it. There was a comment that there are more than 7000 RV kit planes flying. (See the Pictures on our Chapter website EAA526.org)

Marty Maisel updated us on his Cavalier project saying he is working on the wing tip tanks which are almost complete, as well as some initial wiring behind the dash. (See the Pictures on our Chapter website EAA526.org)

Treasurers Report: Milt Ciarlariello

Miscellaneous Reports:

Ivan Karnezis member and Auburn Airport Manager gave us a report on the Airport. The seal coating of the runway, taxiways and aprons contract will be awarded on the 23rd of this month. Which means they will receive a notice to proceed about the first of September. At that time Ivan will receive a schedule of events and he will be able to notify everyone of the particular dates the airport will be closed. He thinks the runway will be closed for approximately 1 week. He reported that they have been working on the lights which are nearly finished and they will start working on the beacon and getting back up into shape. He reported that he has received 3 reports of fuel theft at the airport. 70 gallons was taken out of a war bird in the tie down area, and two other single engine airplanes in another row had more than 70 gallons stolen while in the tie down area. He asked that everyone be on the lookout for unauthorized people around the airplanes with barrels or other means to remove fuel. He pointed out that they have cameras in the area which may help identify who took the fuel.

Tom Brady gave a brief report on the Young Eagles. The next YE program will be on August 15th which is a Sunday at Auburn. This is the only Sunday Program and will revert back to Saturday from then on. He asked for some help in flying and on the ground as well. Starting time was set for 8:00 AM.

Don Van Sant gave a brief report on Golden West. He said that Golden West came out in the black at the last fly-in and there will be another Golden West next year. They are working toward a new president and board members. There is a meeting at 10:00 AM the 21st of August. He wanted to thank everyone for volunteering and passed out pins in recognition of their help.

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Open Issues: New Business: None

Old Business:

Dave Consbruck gave the following update:

The chapter was finally granted its tax exempt 501 (c) 3. Dave read the letter from the IRS which was short. He compared the one half page letter to the ream of paper that they required and was sent in with our application. We are now considered a public charity!

Program:

Milt Ciarlariello gave a report on Kid Venture at Oshkosh. It was a success and the Director of EAA has made a special effort to reward Chapter 526 for their efforts and what they do a Kid Venture. Milt had all the volunteers come up to the front of the room and explained what each had done and gave them a commemorative coffee mug, baseball hat and award ribbon. Those attending and receiving the awards were Bill Turpie, Glen Maxson and his son, Dan Wojdac, David Consbruck, Greg Duda, and Lynn Cook. A big round of applause followed the awards.

David Maxson and Joe Johnson were introduced. David and Joe were the two Air Academy attendees representing Chapter 526 at Oshkosh this year. They both gave a report on what they learned and how their experience went. Both David and Joe plan on a career in aviation. David says he wants to get into the Technological part possibly programming UAV (Un-manned Aerial Vehicles) and Joe wants to get into the Air Force and become a pilot or engineer.

Dave Consbruck ended the Air Academy discussion with a call for possible candidates for next year. The earlier we get the names in the better our chance of ensuring our nominees will attend.

Safety:

Joe Hemmer gave a brief safety program regarding cabin heat. The problem is that most of the heating systems on our airplanes are from an air scoop passing air across the exhaust muffler and then into the cabin. The problem is the potential for getting exhaust (carbon monoxide) into the cabin from a cracked exhaust. Signs of carbon monoxide poisoning are headache, dizziness, and sleepiness. It was suggested that we get the carbon monoxide detectors from aircraft spruce and so which are test strips or color change indicators. Some of the attendees at the meeting said that by the time the color changes on the indicator it's too late and you might be in trouble already. Others suggested that you can go to Home Depot etc and get a carbon monoxide detector alarm that is used in a house and mount it into your cabin/cockpit. As a side note it was brought up that if you are a veteran or active military, you can get a 10% discount at Home Depot or Lowes. On the same subject, Dan Wojdac brought up the fact that exhaust systems only last about 10 years on aircraft. At that time you should send your system in and have it checked and repaired or replaced as required. Also it was brought up that your carb heat uses the same source of heat and that if you get an RPM drop of more than 200 to 300 you may have an exhaust leak.

Agenda Items for next meeting: The next general meeting will be at September 8th, 2010 at the Chapter Hangar. The next Board of Directors Meeting is on September 7th, 2010. Check the Chapter website at www.EAA526.org for more details.

Adjournment: Meeting was adjourned at 8:45 PM. Minutes submitted by: Gary Patburg Secretary

Tech Quiz - Answer Next Month

What is an electric machine having two armature windings, one acting as a generator, and the other as a motor, but having only one magnet frame?

Commonly used in military aircraft as a DC current transformer.

Vertical Communication Antennas

As the News Letter Editor the receipt of aviation articles from some of the members is very helpful. This month there was more space than available articles so I cruised the Internet to see what I could muster. Saw a number of articles on W.W.II. Aircraft but since many of the members are builders it is my thinking that articles related to aircraft building may be of more interest. Did some more pounding of the keyboard and did not find anything jumped out at me so I thought that maybe an article on antennas may be of use.

Most antennas used for communication are vertical. A wire antenna has the virtue of simplicity but has some short comings in terms effective energy radiation.

Most aircraft com antennas are made of a material such as fiberglass with a fine wire wrapped about the rod shape formed by the fiberglass. Fiberglass antennas have an advantage over wire vertical antennas because most wire antennas are $\frac{1}{4}$ " wavelength and the glass ones are generally $\frac{5}{8}$ " in electrical length.

Radio waves travel in open or what is called free space at the rate of a little over 246 feet in 250 nanoseconds or $\frac{1}{4}$ of a microsecond. Radio waves travel a bit slower along wire at about 234 feet in the same $\frac{1}{4}$ microsecond or technically expressed as a Velocity Factor of 95%.

It works out that $\frac{1}{4}$ of microsecond is relative to $\frac{1}{4}$ of a radio wave which is what is commonly considered the appropriate distance or length of a vertical wire antenna. In other words if we divide 234 by the transmit frequency we end up with the length for a $\frac{1}{4}$ wave vertically polarized antenna.

It turns out that $\frac{1}{4}$ wave vertical antennas typically have a radiation resistance of about 37 ohms. The typical lead between the transmitter and the antenna is coax which is a nominal 50 ohms. (Small diameter coax is generally 53 ohm and the larger diameter coax generally found on base station systems is a little over 50 ohms)

Ain't too hard to see that there is a mismatch between the wire antenna and the antenna lead or 37 ohms as compared to 50 ohms. The net result is the voltage across the lead line will be more than the voltage between the vertical tip of the antenna and the ground plane implying that the wire antenna reduces the effective radiation.

A $\frac{5}{8}$ length of wire comes closer to matching the 50 ohms of the coax so it is said that the $\frac{5}{8}$ wave antenna has higher gain than the wire antenna. In addition the radiation angle is lower on the $\frac{5}{8}$ antenna because less of the signal is pseudo bounced skyward. Another advantage of the $\frac{5}{8}$ antenna is its ability to radiate energy over a wider spectrum than the wire vertical. So, in short the fiberglass antenna generally works better than the wire antenna.

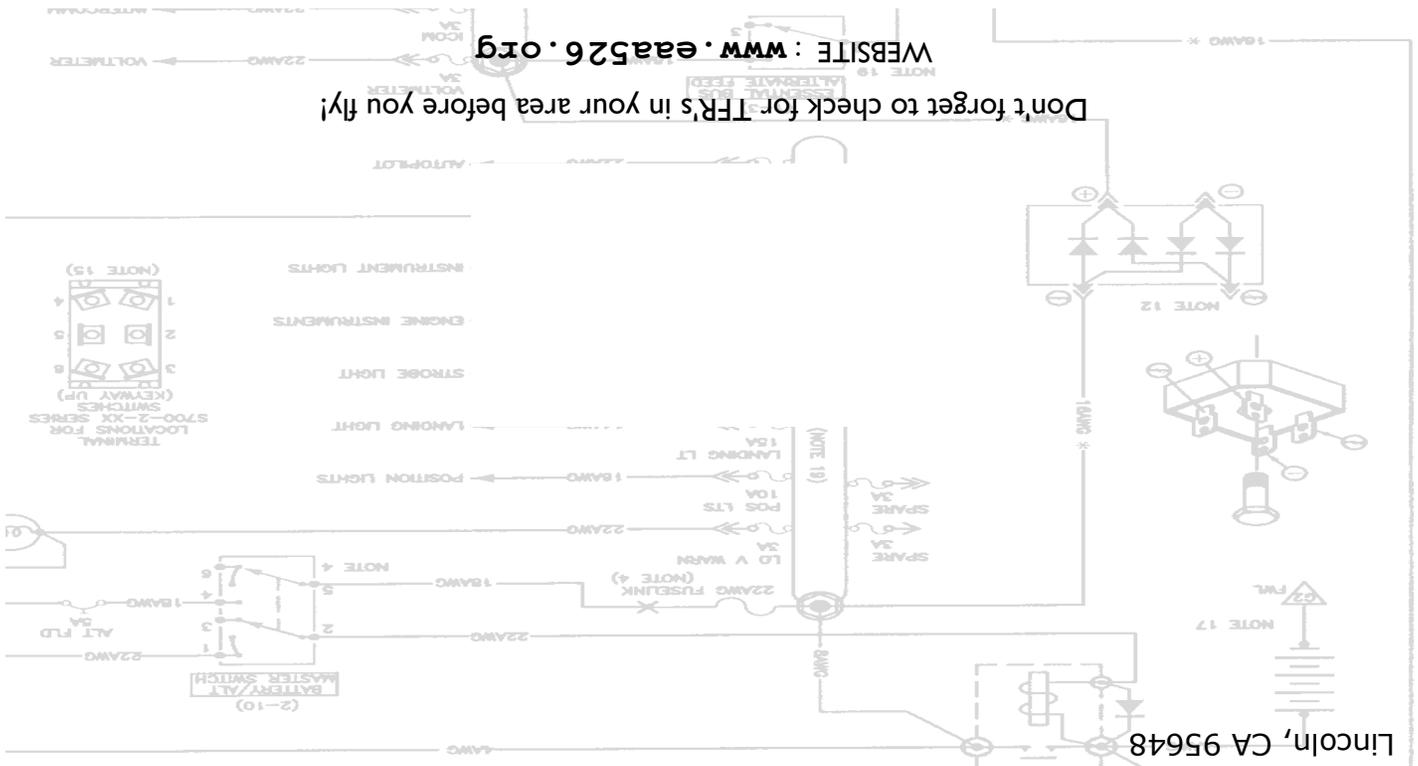
For those of you that would prefer to make your own antenna do the divide the 234 by the frequency which should be about 127 Mhz and then multiply the result by 2.5 to find the length of a piece of wire $\frac{5}{8}$ in length. Just remember the 234 number is in feet so at some point the numbers will have to be converted to inches for easier measurement.

The other piece to the Vertical Communications Antenna is the Ground Plane. In the case of a metal airplane the ground plane is just there. However, the fabric or fiberglass craft is a horse of a different color and requires a metal plane in which the antenna is centered and the minimal radius is about 24 inches.

Often you will see the term of one antenna is some number of Db gain over another. Every time the Db is 3 that means the voltage on the tip is doubled. Again the higher the radiation voltage the better the signal output.

September 2010

Peter Requa
 EAA Chapter 526 Membership
 388 Savannah Drive
 Lincoln, CA 95648



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|------------|----|-------------------|--------------|------------------------|-------------------|---------------|
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| Secretary | 11 | Gary Patburg | 916-240-6105 | Young Eagles | Tom Brady | 530-888-0769 |
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| Director | 11 | Rocky Green | 916-408-8838 | Qtrmst/Comsry/Name tag | Bill Turpie | 916-759-6898 |
| Director | 10 | Daniel Wojdac | 530-823-0382 | Hangar Manager | Dick Capek | 530-887-8315 |
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| Director | 10 | Greg Duda | 530-274-4452 | Wearing Apparel Chair | Ivan Karnezis | 530-269-1410 |
| Tech Couns | | Richard Stahlman | 530-263-4497 | | | |

To contribute information to the newsletter, email to ea526nsltr@aol.com with 'EAA526' in the subject line Most common document or image types shouldn't be a problem.

EAA Chapter 526 meets the second Wednesday of every month at the east end of the Auburn Airport (hangar #115) at 7:00pm. To join, just show up at a meeting or call Peter Requa at (916) 645-7592.

