

✈ BEFA Newsletter ✈

BEFA: Phone (425) 237-2332, M/S 94-35

840 West Perimeter Road, Renton, WA 98057-5346

New Solos!

<u>Name</u>	<u>Date</u>	<u>Instructor</u>
Jon Brooks	11/13	Marshall
Vicky Ambrose	12/13	Demco
Kyle Hoover	12/17	Turlington
Bill Jones	12/22	Demco

Congratulations!

<u>Name</u>	<u>Date</u>	<u>Rating</u>	<u>Instructor</u>
Joe Edwards	12/6	Instrument	Allen
Nathan Price	12/8	Private	Olmstead
Tim Cassidy, Jr.	12/8	Private	Hickman
Tyler Wilson	12/20	SES	Yager
Olivier Ferrante	12/21	Private	Davis

Coming Events

<u>Event</u>	<u>Time</u>	<u>Date</u>	<u>Location</u>
• <u>Aircraft Maintenance Team</u>	6-9pm	TH	RNT
(Contact Walt Cameron)			
• <u>Board Meeting</u>	5:00pm	1/18	RNT
• <u>Crab Feed and General Membership Meeting</u>	5:00pm	2/16	RNT
• <u>Instrument Ground School</u>	5:15 PM	2/11	RNT
• <u>Private Pilot Grnd School</u>	4:30 PM	2/5	RNT
• <u>Northwest Aviation Show</u>		2/23-2/24	
<u>Puyallup Fairgrounds</u>			

**From Your President
By Frank Marshall**

Fleet Upgrades Continue

One More Warrior to be Added: We have just signed an agreement to purchase a 1981 PA28-161 Warrior that appears to be in near perfect condition with 2006 clear-coat paint, a lower than average airframe time, a low time Mattituck engine with Millennium cylinders, no damage history and complete logs. It includes a very nice S-TEC 60 autopilot (which has glide slope tracking).

We owe many thanks to Howard Wolvington, our airplane

purchaser extraordinaire, who at the board's behest stayed on the lookout for a good deal on a Warrior, found one, negotiated a good price, and sealed the deal.

Although it does not currently have a usable IFR GPS, and one of the radios is a not-so-desirable KX170B, that will soon change (see following articles). This airplane will provide an economical platform for both Private Pilot and Instrument training and for shorter length cross country trips.

We plan to have the pre-buy inspection done at its current location in California in early January. The current owner has committed to fixing any discrepancies found. After that the airplane will be flown to Washington as soon as practical.

So Much for GPS Commonality: Some time ago we decided to work towards a fleet standardized on a single GPS model. This would allow members to move easily between airplanes without having to learn multiple GPS user interfaces. The model of choice at the time was the KLN 94, which is now in many of our airplanes.

Then along came the brand new Cirrus, factory-equipped with a beautiful all-glass cockpit and two Garmin 430 GPS's. (If you're keeping score at home, that's two interfaces.)

In the meantime the FAA began developing a new kind of instrument approach called an LPV approach (for "Localizer Performance with Vertical guidance") that exploits the extreme GPS accuracy potentially available with the Wide Area Augmentation System (WAAS). With appropriately equipped and certified GPS receivers these approaches are virtually precision approaches with minima as low as 250' above the touchdown zone and ½ mile visibility (in ideal terrain and obstruction situations). Renton is scheduled to get one in November 2008, and Paine Field already has one. (Both have somewhat higher minima than quoted above.)

It is possible to upgrade a Garmin 430 to a Garmin 430W, which has WAAS capability. I don't believe such an upgrade is available for the KLN 94.

The owners of the two newest additions to our fleet, the second C182RG and the CT210, have worked together to upgrade their airplanes with a common state-of-the-art avionics stack.

The GPS model they have selected is the Garmin 480. It is

fully certified for LPV approaches, and has many other powerful features not available in our other GPS models. (OK, scorekeepers, that's three.)

While the pace of technology improvements has made it impractical to settle on a fleet-wide standard for a single GPS model, we do seem to be moving in the direction of having one standard for some of our top-end airplanes (see next item below), and another standard for the lower end airplanes.

The top end planes are for the most part flown by instrument rated pilots (the CT210 *must* be flown by instrument rated pilots by BEFA rule), so it does make some sense to have the more capable GPS units in those airplanes, since much of the added capability relates primarily to IFR flight. At the same time the less expensive KLN 94's are still very capable systems that enhance the flying experience in our lower end airplanes.

BEFA gets a third Garmin 480: With that kind of thinking in mind, we have just taken advantage of an opportunity to purchase a slightly used Garmin 480 from a member for about half the price of a new one. We plan to install it in 7568T, which will mean that both of our 182RG's, as well as the CT210, will have this top-end unit.

This will replace both the KLN 94 *and* the No. 1 KX-155 nav/com radio currently in the plane, freeing them up for other uses. This will happen at about the same time we take possession of the new Warrior, which will arrive needing a good IFR GPS and one additional modern nav/com radio like a KX-155. Thus after a little musical chairs with these components, we will have a nice distribution of avionics across much of our fleet. (I love it when a plan comes together.)

Fuel Surcharges: Surcharges and rates for January are as follows:

Aircraft	Base Rate	Surcharge	New Rate
BE76	\$159.00	\$37.24	\$196.24
C150	\$52.00	\$10.78	\$62.78
C172	\$68.00	\$15.48	\$83.48
C172SP	\$75.00	\$17.44	\$92.44
C172XP	\$120.00	\$14.90	\$134.90
C182Q	\$100.00	\$25.48	\$125.48
C182RG	\$105.00	\$25.87	\$130.87
Citabria	\$75.00	\$15.48	\$90.48
C210	\$169.00	\$29.79	\$198.79
PA-28-151	\$68.00	\$15.48	\$83.48
PA-28R200	\$99.00	\$17.64	\$116.64
PCATD-M	\$15.00		\$15.00
PCATD-NM	\$20.00		\$20.00
SR20-WD	\$113.00	\$23.52	\$136.52
SR20-WE	\$133.00	\$23.52	\$156.52

("M" and "NM" refer to members and non-members,

respectively, and "WD" and "WE," to weekdays and weekends plus holidays, respectively.)

Safety and Operations Briefing

By Wes McKechnie, BEFA Operations Manager

THANKS TO VOLUNTEERS

Just an informal note of thanks to the many, many volunteers who spare either 10 minutes or 10 hours of time towards helping BEFA. It's a pleasure working with each of you and I hope that the general membership realizes what a significant and critical part you play in keeping costs contained at BEFA, yet help provide a top class flight experience for your fellow members. If you have not done so yet, please contact the Staff to get on board with what time you can spare. We'll have an article in February on some of the major tasks completed or well underway with the help of our BEFA volunteers!

PRIVATE PILOT GROUND SCHOOL

It appears that the Boeing LEAD Off-Hours Aviation Ground School is a casualty of LEAN +. It's a little confusing as I just got notice that my assignment with LEAD has been extended, but I can't find any classes to teach nor support to back them up. So, we'll expect the worse and declare they're gone and we're (BEFA) going to pick up the slack with a **BEFA PRIVATE PILOT GROUND SCHOOL, STARTING IN THE BEFA CLASSROOM on Tuesday, FEBRUARY 5TH, 2008 AT 4:30 pm.** Classes are Tuesday and Friday for 20 classes. Each class is 2 to 3 hours, depending on subject. BEFA member Tuition will be \$300, non member tuition will be \$330. Call the office to register (425) 237-2332, or e-mail. Payment for the class (with cash, check or on your BEFA account) is required at time of registration. This tuition fee includes all supplies.

BEFA PILOT LOUNGE UPDATE

We're getting there! We have the lounge area taped off now and are looking for volunteers who have experience spraying a light texture over the sheet rock and then painting it. We'd like to thank all the hard working volunteers that continue to make this happen. If anyone has any experience and would like to volunteer for this task, please contact me. Thanks.

GRIEVANCES/INCIDENTS:

- • 12/7/07 735LH Gustlock left out.
 - • 12/20/07 Pitot cover left off.
-

Notes From The Office

'Attaboys For Our Volunteers

Your fellow members continue to pitch in to keep us running smoothly, often saving money in the process. This month we thank:

- Daryl Hickman (CFI), for filling oil bottles.
- Karen Stemwell (CFI), for working front desk.
- Daryl Hickman (CFI) for doing a parts run.
- The Float Plane group who cleaned up 736NN.
- Daryl Hickman (CFI) for getting fuel for the float truck
- Christopher Duffel for donating a PC monitor.
- Daryl Hickman (CFI) for moving planes.
- Erv Trappa for donating a DC headset and flight manuals. A generous donation.
- Rob Laird for updating GPS data bases and repositioning planes.
- Rob Laird for taking on the big task of hauling 733XW fuselage. Thanks Much!
- Keith Murphy, Carey Lunsford, Mark Gaponoff and Daryl Hickman (CFI) for helping Tom Howard and our regular BEFA Crew, Walt Cameron, Matt Smith, Ernst Langhout and Ron Larson with maintenance and hangar tasks over the Holidays.
- Mark Gaponoff for hauling junk.
- Will Allen (CFI) & Daryl Hickman (CFI) for helping load junk.
- Daryl Hickman for moving planes..
- John Scearce, Keith Murphy, Bob Carpenter and William Eng for doing an outstanding wash job on N41896, on a miserably wet & cold day.

Volunteer Help Is STILL Needed

BEFA has a regular need for volunteer help. Unfortunately, Boeing work demands are making it increasingly difficult to provide community service. BEFA has many needs and cannot satisfy them without member help. If you can contribute, please call the office to volunteer. Some of the things that require volunteers are:

- Help is needed cleaning out the ramp cracks and pouring in sealant.
- Airplane washers needed.
- Oil bottle fillers needed
- Members with painting experience for painting the pilot lounge
- Members with wood/Pergo floor installation experience needed

If you can head up or help on any of the above projects

please let Wes know. Your efforts are greatly appreciated!

BEFA Crab Feed and Membership Meeting, February 16, 2008

By Ken Sain, BEFA Vice President



The annual BEFA Crab Feed will be held this year on Saturday, February 16, 2008, at 5:00pm in the Renton hangar. BEFA will again be providing crab as the principal entrée along with a variety of salads, rolls, desserts and beverages (water, soft drinks, coffee and tea). For members who would prefer items other than these, we will once again set aside space on the serving table to accommodate "potluck" offerings. Just let us know ahead of time what you plan to bring, and whether any special provisions are required (i.e. electrical power for warming trays, etc.). Those bringing potluck items of their own should plan to arrive a little early (~4:30pm), so that the serving tables can be ready to go when the dinner service begins at five.

A registration form will be placed on the counter of the BEFA Renton office beginning January 5th where you may sign up in person. Or if that's inconvenient, you may notify the BEFA office staff by phone, or e-mail them at befa_office@mindspring.com. Please let them know that you'll be attending and how many guests you expect to bring. The cost this year will again be \$16 for adults (the same as in past years). Children twelve years old and younger are still free. Payment may be made by cash, check or billing to your BEFA account.

As always, we could also use some volunteer help with logistics.

- Set-up and take-down of chairs and tables (4:00pm the day of the event).
- Placement of utensils, plates, napkins, and tablecloths (most already exist in storage)
- Wipe down, fold and stack tables after the event

Extra columns have been provided on the sign-up sheet where you may designate whether you will be bringing a "potluck" item or can volunteer to help with logistics. If you are willing to lend a helping hand, please feel free to contact either me or Joe Kranak. I can be reached by cell at 206-240-2872 or via e-mail at ken.sain@boeing.com. Joe can be reached at home (425-391-6071), at work (206-856-7948), or via e-mail at joe.kranak@boeing.com.

Please mark your calendar and we'll see you there!

From Your Safety Officer

By Bob Guthrie

My last news letter has two topics, first the BEFA instructors who were at the last CFI meeting received the required annual recency report form, those of you who were not there but work out of RNT, I put the form in your box. There were two instructors from PAE that were not at the meeting, and I mailed the form to you. We all need to turn in the completed form to Mike Sievers by the end of January to stay on the Board approved list of CFI's.

My second topic comes from a recent Flight Training article, which described how real emergencies are never exactly like those you trained for. The author then described a real emergency that he had to deal with and I never came to a conclusion about his thoughts on training. I am going to approach the subject from my personal experience. Training for an emergency causes you to think, and in my opinion that is the most important first step in dealing with that unexpected event. I believe unexpected events happen in flight in one of two ways, suddenly something is obviously wrong, or there is a degradation that you don't observe because of cockpit distraction. Some years ago, we were crossing the Rockies enroute to Red Deer, Alberta on a clear day at about 10,000 feet. There was enough turbulence to cause me to deviate to the North and the mountains were spectacular. I was noticing a change and my wife was trying to get my attention - she wanted a small change in course to get a better picture. It took me a long time to realize carb ice was forming, and I had picked out my landing spot and turned to it before I turned on carb heat. Carb ice on a clear day is something I did not expect, but I got it. Sometimes the event comes slowly. The second event occurred after a training flight that had gone on successfully for over an hour. We made our first touch and go to the north when at about 500 feet the engine began to vibrate like it had just tried to swallow something. We still had power so we turned back declared an emergency and landed to the South. Sometimes the event comes suddenly. The important point in my opinion deals with the training that all those CFI's gave me, think first, make a decision and use your check list.

Fly safely and enjoy the experience.

Bob Guthrie

Drift Lines

By Austin G. Watson, P.E.

It was 11:00 AM, Sunday, December 16th on an IFR flight plan at 3000 feet in VMC heading north out of Tacoma Narrows for the NDB 15 into Renton. Winds aloft were reported at 40 mph at 3000 feet blowing from the south at 170 degrees. Airspeed in the Cessna 172 was 95 while ground speed on the GPS was pushing 140.

Northwest of downtown Seattle, ATC directed me, "78440, Heading 070, Maintain 3000." I turned until the DG pointed right on 070. Altitude was right on. The nose of the plane was pointing straight for Carnation, but out the window to the left I was heading for the hills southwest of Monroe. GPS said heading 050. Wow, that's some drift.

ATC cut me loose to VFR flight rules into Renton and I prepared for a bumpy descent from 40 mph winds at 3000 feet to 8 knot winds at the surface.

Now, go back in time to 1939. Sir Francis Chichester is in England and has just purchased a 65 HP deHavilland Gypsy Moth biplane he plans to fly to Australia, in VFR with no winds aloft reports. To get there he had better know his drift angle correction.

In his book, "Solo to Sydney", (Stein and Day, NY 1930) Chichester says in Chapter IV,

"On Wed Dec 18, I took the plane over to Brooklands for final touches

First, there were the drift lines to be painted on the wings. Nobody seemed to know anything about this, so it took a lot of time and hot air before they were finally fixed.

The idea is roughly as follows: - Suppose the plane is drifting 10 degrees In that case an object in the path of the plane will slip off at an angle of 10 degrees.

Sitting in the cockpit, paint a line on the wing corresponding to the path this object follows in making its 10 degree angle, so that after the plane has passed the object, this line on the wing will continue to point to the object.

Conversely, if you see an object emerge from under the end of the line and later notice the line still points to it, you must be drifting 10 degrees.

Similarly you paint in lines on both port and starboard wings every 5 degrees up to 30 degrees."

Just what was Chichester up to? It took me about three days to visualize it and figure it out. But that was after learning about the "Drift Indicator", an instrument used by WW-I pilots.

The drift indicator enables a pilot looking through a telescope at the ground to determine his direction of motion relative to the ground. The scope is mounted vertically and rotates about its own axis. It has a cross-hair which appears in the field of view. Imagine a scope looking straight down between your legs through the underside of the fuselage. Looking straight down and you will see the ground moving under you. As the airplane moves over objects on the ground, terrain will appear through the telescope to drift

backward in the direction of flight. Rotate the telescope until the cross-hair is exactly parallel to the apparent line of motion of the objects on the ground. When the cross-hair becomes parallel to the relative motion of the ground the scale reads the drift angle between the actual line of motion and the axis of the airplane.

Chichester's drift lines, painted on the wings were in effect a God's Eye View Drift indicator.

Here is what a drift line paint job might look like with a pilot sitting behind the wings (Figure 1). In this example, the plane appears to be heading towards Mount Baker. This is the picture you might see when passing over Paine Field with the DG pointing your nose at 359, and planning to go north 359 to Bellingham with a 45 mph crosswind from the west.

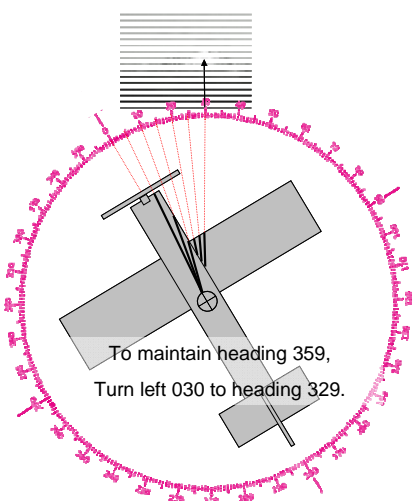


Figure 1. Drift Lines

So why is this useful? You get the winds aloft report. You plan your flight. You take off and fly the calculated heading and get to your destination. Maybe not... Suppose you don't have a winds aloft report. Chichester didn't. Or suppose you don't trust your winds aloft report, or maybe the weather changes.

Next time you fly, climb to cruise altitude; set your heading on your DG; look out the window; imagine you have drift lines painted on your plane and see what your drift angle really is. Does it match your expectations? Now you will really know what your correction angle needs to be to get to your next waypoint. Do this at each waypoint to stay on track. No batteries required!

SPERRY DRIFT INDICATOR

[The Sperry Drift Indicator. By Neil Mac-Coull. *Aerial Age*, Aug. 16, '15. 600 words. Diag. Illus.]

In steering the aeroplane by compass alone there is no correction for drift, and no way of calculating it except by use of a map; so that, in a flight over unknown ground or over water of such extent as to preclude the use of landmarks, a pilot frequently finds that he has been thrown to the side by a cross wind more than he has calculated.

The Sperry Gyroscope Company has devised a drift indicator that shows the exact direction of travel. It consists of a prismatic monocular telescope mounted in such a way that a clear vision of the ground below may be obtained. When looking through the telescope, which is so made that it is always in focus, five fine parallel hairs are seen across the field of vision. On account of the speed of the aeroplane, every object seen through the telescope passes so quickly that it looks like a line. In using the indicator it is simply necessary to turn the telescope in its frame by a handle until the hairs are parallel to the streaks passing the field of vision. A pointer secured to the telescope makes it possible to read on a graduated scale the angle between the true course taken by the aeroplane and that indicated by the compass. By a device connecting this instrument with the compass, the pilot is able to correct for drift and keep the machine in the desired course. The weight of the combined instruments is only seven pounds.

Represent BEFA at the 25th Annual Northwest Aviation Trade Show

By Ken Sain



On February 23rd and 24th, the Northwest Aviation Trade Show will be held on the Western Washington Fairgrounds in Puyallup. To provide information about our association to enhance membership, BEFA staffed a booth at last year's show along with nearly 150 other exhibitors including aircraft manufacturers, aviation products companies, avionics manufacturers, FBOs, software providers, flight schools, government agencies, etc.

This year's event will feature AOPA's Phil Boyer (Saturday at 1pm), along with other speakers and interesting exhibitors. BEFA will again have a booth both days and welcomes members interested in attending the event to help staff our exhibit (free admission and parking for staff). A sign-up sheet with 2-hour shifts is available at the BEFA front desk. Alternatively, you can contact me directly (206-240-2872 or ken.sain@boeing.com) with your availability. More information about the event can be found at www.washington-aviation.org.

For the Web Heads: Links

SCHEDULE MASTER: <http://www.schedulmaster.com>
 or
 1-800-414-6114 using your user ID, password and phone menu

Jeppesen Employees Flying Association:
<http://www.flyjefa.org>

BEFA Homepage: <http://www.befa.org>
Webmaster: John Searce john.p.searce@boeing.com

Classified Ads

This space available for free classified ads by BEFA members. Contact the newsletter editor.

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	1) Ops Manager: Leave voicemail (425) 237-2332 or Pager 206-540-7720	
	2) Ops Officer, or 3) Any Board Member	
Everett		
Office: No phones at this time in Everett. Please call RNT Office in an emergency, otherwise call Doug Jacobs or Oscar Naimi (phone numbers below).		
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