



Freeman Flash

**NEWSLETTER of the FREEMAN FIELD
FLYING ASSOCIATION**

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Larry Bothe, Editor

Website: www.freemanfield.org

Funds for Runway Move on Track, Bids to Be Solicited

This newsletter is out very late in the month because your editor waited until after the Redevelopment Commission meeting on Monday evening, 1/27, to be able to report on funding for the move of runway 5-23. This is major work, like \$5mm worth, and the FAA isn't paying for it, so this is a big deal for Seymour.

In order to facilitate the construction of the Burkhart Blvd. Bypass, runway 5-23 has to be shortened 1000 feet off the northeast end. That 1000 feet, plus an additional 500 feet, will be added to the southwest end. The final completed length of runway 5-23 will be 6000 feet. 1500 feet of parallel taxiway will also be constructed, along with other taxiway intersection work. Invitation to bid on the work will be advertised this week, with the opening in February and award in March. It is hoped that the work can begin in mid-April, as soon as the ground is dry enough for construction. The project is to take about 3 months. Yes, there will be runway closures. Since 5-23 has to be worked on at both ends, it will be closed most of the time. Runway 32 threshold will have to be substantially displaced when they do the parallel taxiway crossing.

In other airport news, it was announced that the airport came in almost \$109,000 under

budget for 2019. Manager Don Furlow attributed the savings mostly to not having any major unforeseen expenses. The budget for 2020 is \$810,000, up from \$784,000 last year. The increase is mostly due to the need to replace some capital equipment.

The project to correct the parking problems down by T-Hangar A is moving slowly. Valeo is still working on the layout, and their lawyers are quibbling over some provisions of the lease. It will all get done eventually, but big companies can sometimes be almost as bad as dealing with the government.

FFFA Meeting News

At the January meeting we talked about recent flying experiences. Larry Bothe told us about his recent flight up from the Atlanta area in a Maule M-7 (see the article further along in this newsletter). Barty Moffett advised that his airplane partner, on fairly short notice, took an earlier retirement offer from Cummins and moved to New Mexico. Their yet-to-be-flown airplane is to go there soon also. It's unclear what Barty will do next with respect to flying. He did get his taildragger sign-off from Lance Bartels this past fall.

We had a short discussion about what we might do as a club this coming year. Helmut

Weislein and Mark Bowling, both from Kentucky, were there, and suggested some flyout destinations in their state. Some of them, like the Lake Barkley Lodge in Cadiz, KY, (straight south of Evansville) or the Tenn Museum of Aviation at Sevierville (near Pidgeon Forge) could be too far for our more northern members. Since, like us, the EAA chapter at North Vernon often has trouble rounding up planes for a flyout, perhaps we could partner with them and try to reach "critical mass" for some flyout destinations.

Our next meeting is on Thursday, February 13th. The program will be a presentation and discussion about aircraft performance. I want to relate performance data to the real world of flying. I'll tell you what to do to be safe, and what not to do so you'll live longer.

Museum Archives

News of the Freeman Army Airfield Museum



The Freeman Army Airfield Museum is a completely separate entity from the Freeman Field Flying Association. Some of our board members (L. Bothe, K.

James) overlap. The FFA on occasion supports the museum with gifts of money for worthy projects.

FMI www.freemanarmyairfieldmuseum.org.

Over the Christmas holidays we got all our more recently acquired books cataloged into the library software system. WWII Post magazines were sorted by date and placed into protective sleeves. Most of the work was done by museum director Bonnye Good's son Xander, who was home for the holidays and looking for some community service work to perform. The library is in really good shape now. Thanks, Xander.

Final completion of the sliding door into our reorganized storage area continues to elude us. We keep finding little things that need to be cut, notched, adjusted, moved, painted, etc. We'll have it done one of these days.

Not exciting, but we repurposed a wall-hung kitchen cabinet into a floor-standing office supplies storage cabinet. A nice top

repurposed from a previous project completed the unit and gives us an additional work surface in our office area. In another unexciting move, we added nice-looking walk-off mats at the main entrance to the museum. We considered new carpeting in our main building, but now believe that cleaning the existing carpet will be satisfactory and a lot more economical.

Over the years we have cleaned up a lot of parts that were unearthed during the several dig projects at Freeman Field. After an item is buried for 70 years, it comes out of the ground encrusted with hardened clay, minerals and heavy rust. Chipping off the encrusted materials risks damaging the item. A better plan is to use solvent to get the job done. We finally broke down and ordered an appropriately-sized cattle stock tank in which to soak the many long, narrow parts we have (landing gear legs). We hope to have the new tank in place by the end of February.

Going After an Airplane

By Larry Bothe, 1/11/2020

The first weekend of January I had the pleasure of helping a new owner retrieve his airplane from Athens, GA (near Atlanta) and bring it home to Indiana. Here's the story.



A retired corporate jet pilot, Randy, decided he wanted to get back into general aviation after roughly 2 years of non-flying retirement. Further, he wanted an airplane capable of going in and out of short country strips, with reasonable load-carrying capability, but he didn't want to pay north of

\$100k for those attributes. That brought him to the Maule series of airplanes, and specifically the 235-hp version. It took him a while to find one in good shape, but he finally located a 2001 Maule M7-235C in south Florida. He made a deal to buy it, pending a satisfactory pre-buy inspection.

When Randy looked into insurance, he found that the company would require him to get 2 hours of dual instruction before they would cover him alone in the airplane, and 2 hours of solo before he could carry passengers. (Note that Randy has extensive tailwheel experience, but it was some 30 years ago when he was a tech rep for Cessna, flying 180's and 185's.) Now he needs a CFI with Maule experience. This is a problem; Maule instructors aren't standing on every street corner. In casting about for an instructor, he asked his old boss at one of his last corporate jobs, and that guy, who is now also retired, and president of a nearby EAA chapter, to which I belong, came up with my name. Yes, in the 100 or so types I have flown, I have 26 hours in the Maule M-series of airplanes. I also have just over 500 hours of tailwheel time, and I'm current in tailwheel, so the insurance company accepted me. Randy asked if I would go to Florida with him to get the plane, and I agreed.

Since Randy is also an A&P mechanic, he went to FL to do the pre-buy inspection himself. The inspection went fine, but the weather was bad while he was there, so he didn't get to fly the plane. While there, Randy met the mechanic who had been maintaining the airplane. The mechanic, also a pilot, was the only person who had flown the plane in recent times, and he offered to fly it to Indiana. Randy hired him to do that, so my part in this was reduced to doing the dual instruction after the airplane arrived here in Indiana.

We're dealing with little airplanes, so nothing is ever easy. The ferry pilot decided to split the trip up from south Florida into 2 days. He got as far as Athens, GA the first day, but

became very ill overnight, and was unable to fly the next day. With bad weather approaching, he decided to just go back to Florida, by car. Now the plane was marooned in Athens. Hello, I'm back in the go-fetch business!

Randy got a one-way rental car and we headed out last Saturday around noon. After a minor field-expedient repair the next morning in Athens, we took off about 9:30. The 15-knot headwind didn't help, but we made it to Seymour, IN in about 3.5 hours, flying in beautiful weather. After a very necessary restroom break, I spent another hour with Randy doing takeoffs and landings, and declared him ready to take the plane the rest of the way to its new home north of Indianapolis. I did the pilot logbook entries to satisfy the insurance company, got paid, and sent Randy on his way.

Randy is going to make a few small repairs, do some cosmetic work, and then come back to Seymour in a few weeks so we can explore the true short-field capabilities of his airplane. We already know it will get off the ground very quickly. With the 235-hp engine, and vortex generators (a common Maule option), it just leaps into the air! Slowing down for short-field landings should be interesting. Note that short-field speed is 60-mph (not knots). I can't wait!

LSC Glider Topics

Planning a Soaring Cross Country

By Bob Walker (OB1)

This month's article is an overview of soaring cross-country planning. Yes—gliders can fly cross-country! As a glider pilot becomes more proficient and seeks out new challenges, flying longer distances is a common goal. This short article can't possibly cover all the nuances of glider cross-country planning – many books have been written on that topic. Instead, it'll provide a high-level overview of preflight planning. Much of the planning process is similar to planning a flight in an airplane. The obvious

difference is the reliance on thermal activity for a successful glider cross-country. Fuel calculations are much simpler, too 😊.

PREPARATION

Early preparation (i.e., mostly wishing and hoping) for a cross-country flight begins days before the actual flight. When it comes to weather forecasts, glider pilots are some of the most optimistic individuals you'll ever meet. If the long-range forecast calls for sunny skies and reasonable winds, it's a potential soaring day. Once a good day is identified, usually a couple days in advance, the next step is to recruit a tow pilot. LSC is lucky to have a willing cadre of volunteers.

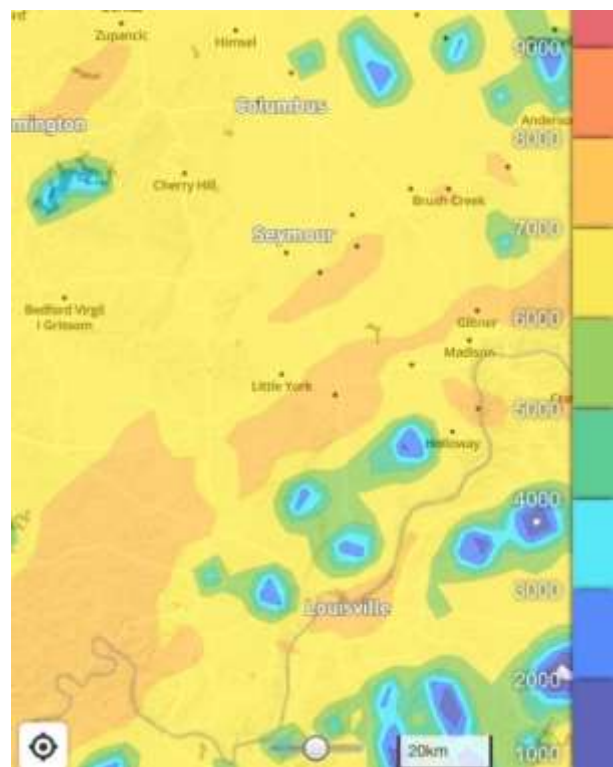
As you read on, keep in mind that each pilot has a different system for preparing and planning a cross-country flight. In spite of the different techniques, adherence to the requirements of the FAR preflight requirement is a must. FAR 91.103(a) specifically mentions "...weather reports and forecasts, fuel requirements, alternative available if the planned flight cannot be completed..." Of course, the fuel requirements can be disregarded. However, the weather reports and forecasts are a basic part of the information.

Skipping ahead to the morning of the flight, there's much work to do. Usually, the first step is to check the METAR and TAF reports (always before the first cup of coffee). The surface winds and cloud bases are important factors in making a go/no-go decision. A forecast of light surface winds and high cloud bases can often be the indicator of great day.

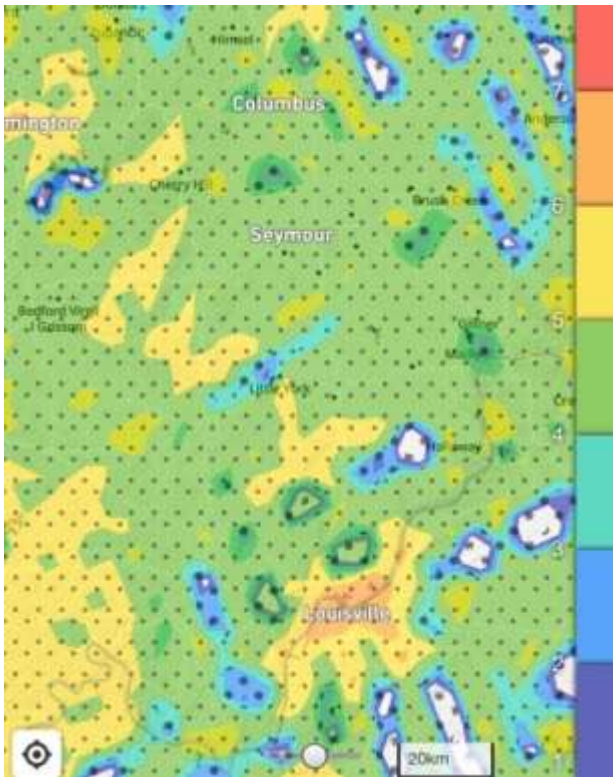
The next step is to review weather sources specific to soaring. These sources, some free and some requiring a subscription service, provide thermal strength and thermal height throughout the day. As a reference, a good day around Seymour would be a mid-afternoon forecast of 4 knots (400 fpm) thermal strength and thermal height of 5,000 ft.

A basic tool for forecasting soaring conditions is the Skew-T/log-P plot. Based on data from sounding balloons (temperature and dewpoint recordings from surface up to 53,000 ft.) and models developed by NWS and NOAA, a Skew-T plot can be used to predict cloud bases and tops, relative thermal strength and atmospheric stability. I won't go into detail on the Skew-T, but I recommend that all pilots take time to review the plot. If you understand the plot, you also have a basic understanding of the atmosphere (such as lapse rates, condensation level, stability, etc.).

It is probably safe to say that a large majority of glider pilots, especially ones without a degree in thermodynamics, use more advanced (user friendly) soaring forecasts than the Skew-T plot. There are a number of sources that provide useful information in an easy to read format. Below are graphics from one source showing the thermal strength and thermal height for a great day last Spring (May 23, 2019). This was one of the rare days when some thermals topped out around 7,000 ft.



THERMAL HEIGHT (Avg 6,000 ft.)



THERMAL STRENGTH (Avg 4 kts)

In addition to showing thermal strength and height, these sources also show winds aloft, windshear, turbulence, convective activity and mountain wave for various times of the day.

Before selecting a route, the next step is to check NOTAMs and information on airspace restrictions. It's not uncommon to see TFRs for VIP movements and special events pop up around Seymour. In the western U.S., TFRs are often in effect for firefighting areas.

At this stage of the planning process, we've established the outlook for soaring conditions and the geographic areas to avoid. The next step is to select a route. In general, LSC glider pilots plan a route that departs KSER and returns. The most common route is a triangle or out-and-back.

There are a few important factors in planning a route. First, how far can one fly? That's a tough question. The length of the soaring day, strength of thermals, height of thermals, winds aloft, glider performance and pilot skill

level are the key variables in selecting a realistic route distance. It's worth mentioning that strong thermals allow for faster cruise speeds. On days where thermals are consistently available, average cruise speed determines the maximum distance one can fly. Some of the more advanced soaring services can help with estimating maximum route distance. An excellent day in Seymour might allow for distances exceeding 300 kilometers (so I've heard).

Another consideration in planning a route is terrain and availability of landing areas. For example, one should always plan (and fly) a route so that a safe landing can be made. In mountainous terrain, being within reach of an airport is essential. Familiarity with landing areas in the event "*the planned flight can't be completed*" also addresses a requirement of FAR 91.103(a). Safety first!

Get out the sectional, ForeFlight or navigation device. It's time to draw some lines and plan the route. Glider pilots use onboard navigation devices and sectionals to plot a route and track a flight's progress. The onboard computers display the route, show present position, compute optimum speeds to fly and calculate glide range.

At this point, the weather and NOTAMs are checked. The soaring forecast looks great, the route is planned, and the computers are programmed. It's time to pack a snack and pull the glider out of the hangar. Next month's article will pick up at this point and take you on a cross-country flight. We'll also discuss Part 2 of glider performance. Until then, fly safely.

Winter Operations; Airline World

By Adam Springmeyer, January, 2020

Hello FFFA Members, and welcome to 2020. I would like to wish all of our members a Safe and Happy New Year. I would also like to apologize for not having November or December articles for you. Family issues popped up, and airline trip schedules didn't leave any time for writing. Also, in my

October 2019 article, I made an error. I called my engine the Pratt and Whitney CF-34-8E5 engine. The correct title should have been a General Electric CF-34-8E5. This was my mistake as I was using an old printed text manual. I want to thank Steve Morse for catching this error.

Starting out 2020, I want to share with you how winter operations are handled in the airline world. When adverse weather hits an airport, the airport managers implement their plan to clear the runways, taxiways, and ramp areas. When the snow begins to stick to aircraft, the only way to get rid of it is to spray it off with an alcohol-based mixture called Glycol.

There are several companies that produce somewhat different products. Each company sends their product data to each airline and contractor who may use it. This data is then published by each airline, then compiled and made into a file that pilots need to reference when getting de-iced.

This data shows the product, hold over time, temperature, and mixture ratio.

Before we get too far, we need to define several terms.

- Type I Fluid – Orange color, used to melt frost, and ice that is already sticking to the aircraft
- Type IV Fluid – Green color, used to prevent new snow, ice, freezing rain,

and all other precipitation from sticking to the aircraft

- Hold Over Time – The time that an aircraft is safe to accomplish a takeoff after being sprayed with the glycol mixture
- Intensity – Determines if there is a hold over time available based on the weather at the airport. The chart is divided into Green, Yellow, and Red areas. These colors are based on the glycol mixture, temperature, and weather. See the chart included with this article.

Here's one of the charts that tells us how much time we have based on one of the types of deicing fluid we sometimes use.

TABLE 4B. FAA GUIDELINES FOR HOLDOVER TIMES ABAX ECOWING AD-49 TYPE IV FLUID MIXTURES AS A FUNCTION OF WEATHER CONDITIONS AND OUTSIDE AIR TEMPERATURE

CAUTION: THIS TABLE IS FOR DEPARTURE PLANNING ONLY AND SHOULD BE USED IN CONJUNCTION WITH PRETAKEOFF CHECK PROCEDURES.

Outside Air Temperature		Manufacturer Specific Type IV Fluid Concentration Neat-Fluid/Water (Volume %/Volume %)	Approximate Holdover Times Under Various Weather Conditions (hours: minutes)							
Degrees Celsius	Degrees Fahrenheit		Freezing Fog or Ice Crystals	Snow, Snow Grains or Snow Pellets			Freezing Drizzle ²	Light Freezing Rain	Rain on Cold Soaked Wing ³	Other ⁴
				Very Light ¹	Light ¹	Moderate				
-3 and above	27 and above	100/0	3:20-4:00	2:50-3:00	1:50-2:50	1:10-1:50	1:25-2:00	1:00-1:25	0:10-1:55	CAUTION: No holdover time guidelines exist!
		75/25	2:25-4:00	2:05-2:15	1:40-2:05	1:20-1:40	1:55-2:00	0:50-1:30	0:10-1:40	
		50/50	0:25-0:50	0:40-0:45	0:25-0:40	0:15-0:25	0:15-0:30	0:10-0:15		
below -3 to -14	below 27 to 7	100/0	0:20-1:35	2:50-3:00	1:50-2:50	1:10-1:50	0:25-1:25 ⁵	0:20-0:25 ⁵		
		75/25	0:30-1:10	2:05-2:15	1:40-2:05	1:20-1:40	0:15-1:05 ⁵	0:15-0:25 ⁵		
below -14 to -26	below 7 to -14.8	100/0	0:25-0:40	0:40-0:50	0:30-0:40	0:15-0:30				

THE RESPONSIBILITY FOR THE APPLICATION OF THESE DATA REMAINS WITH THE USER.

- 1 Use light freezing rain holdover times in conditions of very light or light snow mixed with light rain.
- 2 Use light freezing rain holdover times if positive identification of freezing drizzle is not possible.
- 3 This column is for use at temperatures above 0 °C (32 °F) only.
- 4 Heavy snow, ice pellets, moderate and heavy freezing rain, and hail.
- 5 No holdover time guidelines exist for this condition below -10 °C (14 °F).

CAUTIONS:

- The time of protection will be shortened in heavy weather conditions. Heavy precipitation rates or high moisture content, high wind velocity, or jet blast may reduce holdover time below the lowest time stated in the range. Holdover time may be reduced when aircraft skin temperature is lower than OAT.
- ABAX ECOWING AD-49 TYPE IV fluid used during ground deicing/anti-icing is not intended for and does not provide protection during flight.

In next month's article I will explain the various methods for applying deicing fluid, and tell you some of the experiences I have had while being deiced.

As usual, if you have any questions that you would like answered, please feel free to email me at adam.springmeyer@gmail.com. Fly Safe, and Blue Skies.

Glider Operation Information

The Louisville Soaring Club would like aircraft flying at SER to know that the gliders almost always operate off runways 14/32. However, that does not mean that the wind favors 14 or 32. The gliders and tow plane use 14/32 because it is convenient to where the gliders are stored. ... All the gliders have radios. When approaching the field, especially on weekends, call addressing *Seymour Glider Operations* and ask where the gliders are; they will tell you. It actually works best, when glider operations are in progress, for power planes to use 5 or 23. FMI www.soarky.org, or call Maggie Hettinger, President, 502-303-3944

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Ask an Instructor/Airline Pilot

Do you have a question about some phase of aviation? It could be about pilot certification, logging flight time, FAR's, how airlines do things, instrument flight, or anything else. Send a message to Adam Springmeyer at adam.springmeyer@gmail.com and receive a personal reply directly in your e-mail.

Local Event Calendar at a Glance

Feb 13, FFFA meeting, aircraft performance
Mar 31-Apr 5, Sun 'n Fun 2020, Lake land, FL
Jun 6, Columbus Airport Day, details later
June 13, Museum Airplane Ride Day, SER
Jul 20-26, AirVenture 2020, Oshkosh, WI
Sep 11-13, KY Sprt Avn Wknd, Rough River, 2I3
Sep 26*, Madison Air Show, 1PM, IMS

*An asterisk means Cliff Robinson will be performing an air show at that event. If you want to see world-class aerobatics with no admission charge, attend one or more of these events.

Freeman Field Flying Association meets the 2nd Thursday of each month, 7:00 PM, at the Freeman Army Airfield Museum. No meeting in July. Christmas dinner in December.

Airport Authority meets the 3rd Monday of each month at 7:15 PM, terminal building conference room.
Museum Board meets the 3rd Tuesday of each month, 6:15 PM, main museum building, map room.

Join FFFA: Dues are \$10 per year. Send a check, payable to FFFA, to Larry Bothe, 1082 Governors Ln, Seymour, IN 47274-1135. Include e-mail address and phone number. 1/2 price after the 4th of July.

Freeman Flash issues going back to 1999 are available if you contact the editor.

Sell - Buy

Have something you want to sell or buy? FFFA members get a free ad. Send an e-mail to LBothe@comcast.net to place an ad.

Cherry Hill Aviation

Aircraft Maintenance & Annual Inspections
Tube & fabric work a specialty
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Lance Bartels 812-322-6762

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Cliff Robinson, Madison, IN 812-701-9990
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Eagle Avionics

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Call Andy Zeigler, 812-344-0468

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