



# Sport Aviation®

The Spirit of Aviation® | [www.eaa.org](http://www.eaa.org)

Vol. 66 No. 12 | December 2017

# Original

The Tri-Pacer that time forgot



## Your Cub

The 2018 Sweepstakes J-3

## Business Classic

The Cessna 195 turns 70

## Racer's Edge

Behind the scenes with Team Chambliss

## The Davis DA-2A

Homebuilding's well-kept secret



# Midwest LSA Expo

Low cost among the high tech

BY DAN GRUNLOH

**THE STATE OF ILLINOIS** is well-known for highly variable weather. The Midwest LSA Expo in Mount Vernon, Illinois, has occasionally experienced the extremes of temperature and wind Illinois can provide, but this year the weather was perfect during the ninth annual event held September 7-9. All of the major popular LSA models were represented, but a few of the display booths were nearly empty. Exhibitors from Florida, Louisiana, Texas, and elsewhere were dealing with record flooding, or preparing for an approaching hurricane. While we were having great weather in Illinois, some of our friends were trying to save their homes and airplanes.

Trade shows of this nature are usually not busy affairs. The expo is free and open to the public, but with no air show attraction, there isn't much to do but gawk and talk to salesmen. What can be seen, however, is a steady flow of aircraft being moved into the exhibit or out of the exhibit area to go flying. People are going out for rides! If past years are any indication, a dozen or more airplanes may have been sold during the three-day event.

The first thing I saw when entering the exhibit area was a gaggle of four Czech-built SportCruiser LSA parked together. Their sporty styling and large bubble canopies emphasize why this category of aircraft is

popular. There are about 300 SportCruisers in the United States. Piper Aircraft marketed them under the name PiperSport for a while, and they are now represented by U.S. Sport Aircraft in Addison, Texas.

I've talked with general aviation pilots who looked at the two rear seats in their four-seat airplane and noticed they were empty most of the time. After switching to a sport pilot certificate and a new LSA to avoid the third-class medical requirement, they report having more fun and flying more often. A customer of one of the LSA represented at Mount Vernon wrote on the company Facebook page, "The airplane is a pilot's dream come true." You can't do much better than that.

It has been 10 years since the transition option for U.S. ultralight pilots to upgrade to sport pilot began. Thousands of pilots made the change, but many of us are still looking for low-cost flying at the higher level of performance. As it turns out, we can have it with the smart use of modern technology.



A 2016 Czech-built SportCruiser LSA from Joliet, Illinois.

*Above: The front row of about 25 outdoor exhibits at the Midwest LSA Expo.*

Among the displays at Mount Vernon was a single-seat all-composite motorglider, the Ekolot KR-01A Elf, a mid-wing pusher with a tricycle landing gear, which is available as a ready-to-fly special light-sport aircraft (S-LSA). Ekolot (of Poland) also manufactures the dazzling KR-030 Topaz, a cantilevered high-wing with an all-glass cockpit, autopilot, and deluxe interior.

The Elf motorglider is designed for those of us who have the "circling disease," that is, pilots who want to begin turning whenever an area of lift is encountered. The Elf could have been an ultralight in the United States, but the top speed is too high. The 36-foot wing uses flaperons, and the construction is all-composite carbon fiber and Kevlar. The display aircraft doesn't have airbrakes (to save weight), but they are normally available.

The air-cooled Polini 200 engine has plenty of power according to U.S. Ekolot distributor Krzysztof (Kris) Siuba, EAA 1018876, from DeKalb, Illinois. It has electric start, and there is a prop brake to stop the custom-designed folding prop from spinning. He said he has 12 hours on the Elf but hasn't had time to do any gliding. It weighs 256 pounds without the parachute, and the gross weight is 550 pounds. Normal cruise is 68 mph, the glide ratio is an excellent 26-to-1, and the minimum sink rate is around 120 fpm. The 29-hp Polini engine burns about 1 gallon per hour (with no gliding), and the Elf holds 4 gallons.

The cost for this aircraft complete is \$37,000. Ask yourself how often you really need two seats in a motorglider. Ekolot can also supply Elf airframe components for experimenters. Versions are being built for electric power, a V-twin, a four-cycle engine is under development, and there is even a double fuselage twin boom project underway.

The next airplane at Mount Vernon found in my search for low cost and higher performance was the two-place Belite Chipper, an amateur-built kit. Designer James Wiebe, EAA 859932, has latched on to an important concept to reduce the cost of a kit airplane. Building the Chipper out of flat aluminum honeycomb sheets reduces the complexity and the cost of the pre-manufactured components. It also reduces the building time and saves weight. The kit is reminiscent of a die cut balsa model kit, but instead of balsa, it is computer-controlled laser-cut honeycomb aluminum sheet material.



Ekolot Elf single-seat, all-composite motorglider.

## THE NEXT AIRPLANE YOU'LL WANT TO BUILD

Introducing  
The B-Models

**SONEX-B WAIX-B**

- More Room and Comfort
- More Panel Space
- More Fuel
- More Engine Choices
- More Standard Features
- Less Build Time!
- Same Great Flight Characteristics!



More of What  
You Want!

New! Check-Out the  
**XENOS-B** The New  
Motorglider  
Reality Check!



**sonex**  
aircraft LLC

Learn more about Sonex Aircraft kits at:  
[www.SonexAircraft.com](http://www.SonexAircraft.com) or call: 920.231.8297

mt-propeller

- 62 Service Centers
- More than 210 STCs
- 30 certified propeller models
- 130 Million Fleet hours
- More than 69,000 blades

- 35 years of production
- No active ADs on any MT-Propeller
- Best weight to price ratio in the industry



MT-Propeller  
Headquarters, Germany  
Phone: +49-9429-94090  
Fax: +49-9429-8432  
sales@mt-propeller.com

MT-Propeller USA, Inc.,  
Florida  
Phone: (386) 736-7762  
Fax: (386) 736-7696  
info@mt-propellerusa.com

[www.mt-propeller.com](http://www.mt-propeller.com)



The Winner's Propeller!

Power to the  
Sport Pilot...



**AeroVee Engine Kit**

AeroVee 80hp \$7,495  
AeroVee Turbo 100hp \$10,995

**AeroInjector**

Throttle-Body  
For 30-125hp  
4-Stroke  
Engines

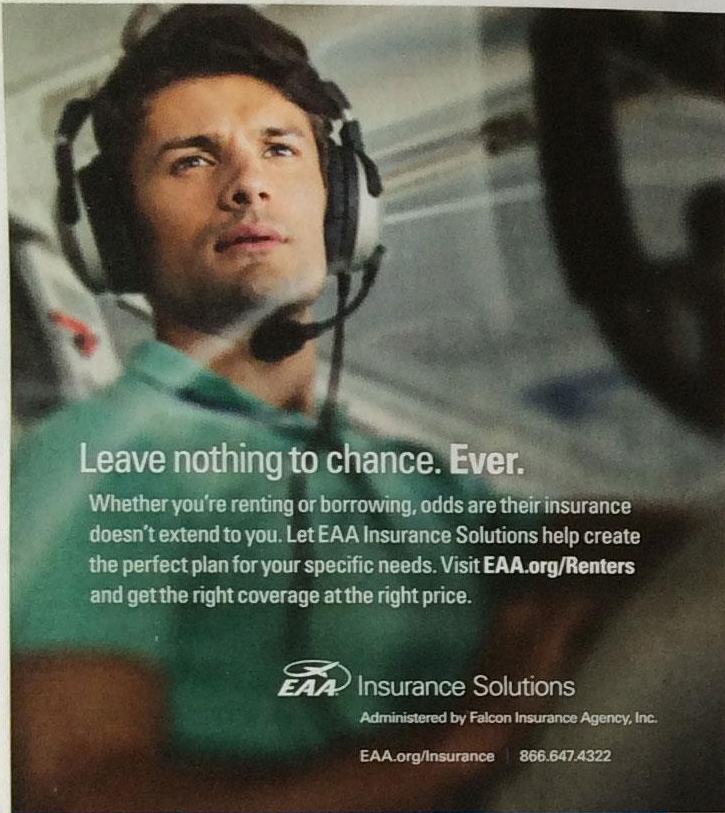


**\$395**

Included in AeroVee Price!

920-231-8297

[www.AeroConversions.com](http://www.AeroConversions.com)



## Leave nothing to chance. Ever.

Whether you're renting or borrowing, odds are their insurance doesn't extend to you. Let EAA Insurance Solutions help create the perfect plan for your specific needs. Visit [EAA.org/Renters](http://EAA.org/Renters) and get the right coverage at the right price.

**EAA** Insurance Solutions  
 Administered by Falcon Insurance Agency, Inc.  
[EAA.org/Insurance](http://EAA.org/Insurance) 866.647.4322

© 2017 Experimental Aircraft Association, Inc.

## EXPERIMENTER

ULTRALIGHT WORLD

The builder joins the tabbed parts together with aluminum channel and rivets. The wings have aluminum tube spars and plywood half ribs. Belite recommends covering the Chipper with Oratex prefinished aircraft fabric. It saves time and weight.

I jumped at the chance to go for a ride in the Belite Chipper with James. Entry into the prototype was from the right side for



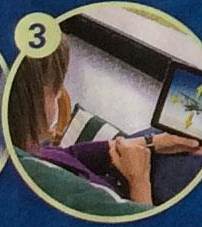
View of Mount Vernon airport terminal from the Belite Chipper.



Young Eagles Flight



EAA Student Membership



Sporty's Learn to Fly Course



First Flight Lesson



EAA Scholarships

# The Young Eagles Flight Plan

Your route from Young Eagle to licensed pilot



Visit [EAA.org/FlightPlan](http://EAA.org/FlightPlan) for more information.

Find us on Facebook at [Facebook.com/EAAYoungEagles](https://www.facebook.com/EAAYoungEagles)



EAA Young Eagles  
Presenting Sponsor



EAA Young Eagles  
Flight Plan Partners

**sporty's**  
pilot shop  
*Learn to fly here.*

**EMBRY-RIDDLE**  
Aeronautical University

EAA Young Eagles  
Supporting Sponsors

**GARMIN.**

**ROTORWAY**

**LIGHTSPEED**



**GLOBAL AEROSPACE**

both occupants. The pilot enters first followed by the right seat passenger who closes the door. It worked for me even with my total knee replacement. There is a short center stick and plenty of elbow-room. We are both full-size pilots, and James said we were probably near gross weight on takeoff. The Chipper has large fowler flaps and drooped ailerons (or outboard flaperons) making it a very effective STOL aircraft. The maximum climb angle was truly astounding with two people on board, on a warm day, and only 80 hp.

James offered me the controls, and I made a few gentle turns, but I hardly ever fly fixed-wing airplanes anymore since I converted to weight-shift trikes 17 years ago. I prefer to have the expert demonstrate the hardware. James did stalls with and without power, and with and without flaps. The ailerons are amazingly effective at raising a wing while fully stalled with minimal airspeed. I didn't know you could do that. At that moment, I thought if every airplane handled like this in a stall, there would be fewer loss-of-control accidents.

The max level indicated airspeed that warm day was 99 mph at about 2,500 MSL. James said 90 mph is a reasonable high cruise. One of the landing approaches was deliberately high (too high for my trike), and a slip was used to dump excess altitude. It was a convincing demonstration. The cost of a Belite Chipper airframe kit is amazingly low. If it was teamed up with a used 80-hp Rotax engine, there might be hope for someone like me on a very tight budget.



The Belite Chipper is low-cost, homebuilt, STOL fun.

Find links to the exhibitors and pictures from the Midwest LSA Expo at [www.EAA.org/extras](http://www.EAA.org/extras). *EAA*

**Dan Grunloh**, EAA 173888, has been an EAA member and volunteer since 1981, and he has logged 1,600 hours in ultralights and light-sport aircraft. He can be reached at [dangrunloh2@gmail.com](mailto:dangrunloh2@gmail.com).

## U.S. Sport Aviation Expo

January 24-27, 2018  
[www.SportAviationExpo.com](http://www.SportAviationExpo.com)



### FLYING INTO THE FUTURE

EXHIBITIONS. DEMONSTRATIONS.  
 WORKSHOPS. FORUMS. FOOD.



YOUNG, ACCOMPLISHED  
 AND READY TO BLOW  
 YOU AWAY



DONATE TO MAKE  
 A DIFFERENCE



YOUR MULTIMODAL LOGISTICS CENTER