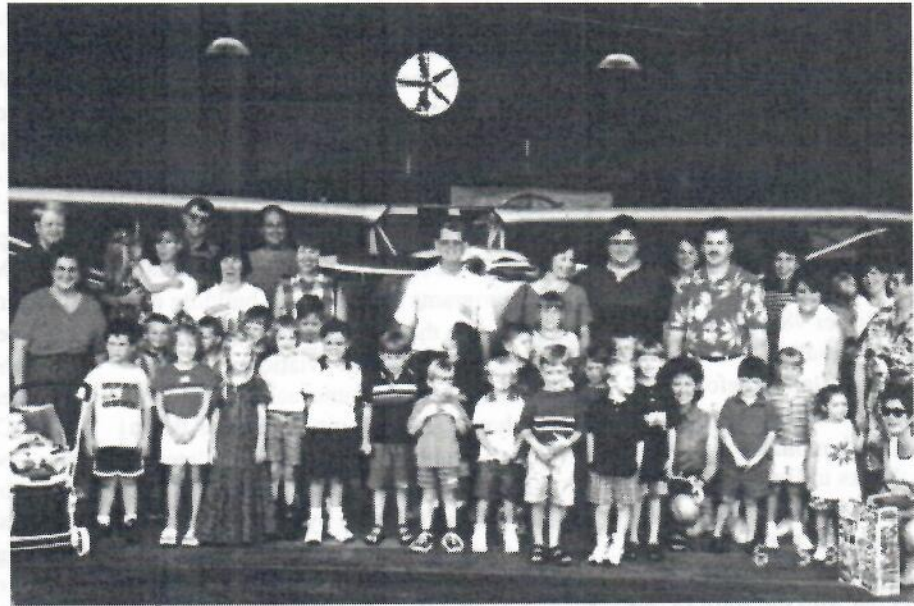




NavCom

September, 1999

NEWS AND
INFORMATION
FOR THE
GWINNETT
COUNTY
CHAPTER OF
THE
EXPERIMENTAL
AIRCRAFT
ASSOCIATION



Some of the children who benefited from the "Duane Huff Airplane Tours Inc." program. See cover story.

AIRPORT TOURS TEACH KIDS ABOUT AVIATION THE EAA WAY

By Wayne Whitaker

Airport Manager John Ferguson had a problem. Gwinnett County Airport kept getting calls requesting "tours" of the airport for various groups of children. Day care centers and other child-care organizations figured that an afternoon at the airport would be a great field trip for the kids. Most youngsters are at least curious about airplanes, and some of course are downright fanatics. But a busy airport manager doesn't have the time to lead tours himself, and in fact there was no one on the county payroll who could be

spared to do the job.

That's where Duane Huff and the spirit of EAA volunteerism comes in. Duane agreed to become the unofficial LZU Tour Coordinator. Over the summer he has shown 13 groups of kids ranging in age from pre-school to teens how the airport, and the airplanes on it, function. Duane estimates the number of people he has educated about general aviation to be around 218 kids and 57 adults.

A lot of pilots these days are bemoaning the fact that there are fewer and fewer little airports where kids can watch small aircraft come and go. Suburban sprawl has just about killed off the neighborhood airpark that junior could ride his bike to and learn about flying. Airports nowadays are vast security-patrolled lakes of concrete surrounded by chain link fence and razor wire. How can children get close enough to satisfy their curiosity about aviation?

continued on page 3

The NavCom

The NAVCOM is the official monthly newsletter of EAA Chapter 690 serving its members and other persons interested in the advancement of Aviation.

Original articles, art, and photos are invited and encouraged. Submit articles in ASCII or Word format and pictures in any format via email to: jdreed@mindspring.com or mail to:

Joe Reed
3585 Spring Valley Dr.
Loganville, GA 30052
770-466-5359

Deadline for submissions is the Last Sunday of the Month

THE NAVCOM is created on a Pentium II 350 computer using Microsoft Publisher 98, and is produced on a **Minolta DI-620 Copier**. Thanks to Alan Langford and Minolta Corporation for printing the NAVCOM each month.

Also thanks to Barney Barnes and his merry band who fold, staple, mutilate and mail the NAVCOM each month.

In keeping with the spirit of all aviators, permission is hereby granted for the reproduction of the NAVCOM articles by other EAA Chapters provided proper credit is given to the author and to the NAVCOM.

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President's NOTAM

by Frank Wilcox

One of the benefits of attending Oshkosh for Southerners is the cooler summer weather. Not so in 1999. Temperatures in the low 90's the first 3 days of the convention kept most people touring the indoor exhibits or attending forums to stay out of the sun. Sat. a cool front went by and it was very comfortable for the last four days. Every kind of aircraft - vintage, homebuilt, warbird, etc. were there by the hundreds, both rare and not so rare. Sport Aviation will publish the statistics. Judging for awards must be a major challenge. Looking over these large displays of aircraft and realizing that each required hundreds of hours to construct or rebuild is mind boggling. We can be proud that "our" EAA exists to provide opportunities and programs that facilitate building and displaying these many aircraft so critical to the future of sport aviation.

There were two unusual flights to the air show. A 65 HP ultralight was flown from Argentina and Burt Rutan's latest design, the Proteus, came from California. The ultralight flown by a 38 year old auto and motorcycle mechanic over 7000 miles in 36 days, crossed the Amazon Jungle and 2100 miles of water. (Some of you may have seen him at Sun "n Fun). Rutan's newest plane has two turbojet engines and flew at 50,000 ft. non stop from Calif. It circled above Oshkosh for 2 1/2 hours taking video pictures before landing. Read more about these flights in future issues of Sport Aviation.

One event that Margaret and I attended was the appreciation breakfast for Technical Counselors and Flight Advisors. The speaker, representing an insurance company, emphasized the value of using counselors and advisors for the insurance benefits as well as for the valuable advice. I represented Chapter 690 at the Chapter Officers Seminar and a session for persons interested in chapter buildings such as ours, where I shared our experiences to an interested audience. The forum chaired by FAA Administrator Garvey was interesting as always. Also on the stage and giving a short talk was Sec. of Transportation Skinner.

After Oshkosh we traveled west to Oregon for a family celebration. At Tillamook, Oregon we toured an unusual

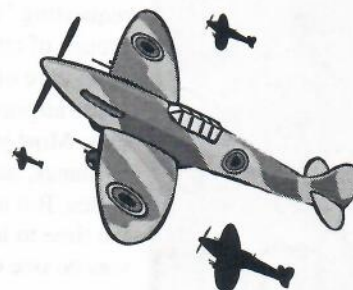
aviation museum - unusual because it is housed in a WWII blimp hangar. Photos taken during that period showed eight blimps used for anti-submarine patrol, all inflated and ready for flight, inside the hangar with the doors close. The displayed aircraft, most of them flyable, were dwarfed by the size of the building. So were we. One of the two original hangars, both made of wood, filled with bales of hay waiting shipment, burned in the early 90's. With its rare aircraft and other interesting exhibits, this is one of the more truly historic aircraft museums we have visited.

Back to Chapter business - our next major project is the annual Classic Air Fair, October 3rd. The planning is complete and major committee responsibilities have been assigned. A large attendance from the local community is expected. All members are encouraged to help in some way. Call Chairman Bill Curtis or Volunteer Coordinator Jeff Boatright.

Don't forget nominations for chapter officers will be made at the October meeting. Please be prepared to present the names of your choice as candidates. The slate will be completed that night and published in the November NavCom. Voting by ballot is scheduled for the November chapter meeting. Absentee ballots will also be accepted.

Help Wanted!

As you may know, we are starting the work on the mezzanine and volunteers are needed. You do not have to be a construction engineer to participate, just show up and help out. Bring some hand tools if you can. Battery operated drill would be nice. With 200 chapter members I am sure there will be plenty of volunteers????



Airport Tours..... *continued from page 1*

And if that curiosity isn't satisfied, will general aviation lose them forever to other pursuits, like computer games or powerboats?

The perfect answer to that dilemma is a goodwill ambassador, a knowledgeable pilot who can get the kids inside the fence and show them around.

This is a perfect job for Duane, a technical counselor, retired teacher and long-time pilot.

Duane says the children really enjoy the little airplane simulator that Chapter 690 uses to demonstrate how the control surfaces on an airplane function. After they experience the simulator, Duane takes them to a real airplane -- his Aeronca Chief -- to show them that the control movements really do work as demonstrated.

Now we all know about Duane's Chief and the many awards it's won, and the magazine articles that have been written about it. His fellow EAA members like to tease him about his airplane, but the reality is that it is indeed an exquisitely restored prize-winner. But Duane doesn't lock it away for safekeeping as some people might be tempted to do with a machine that took years of labor to restore. Instead he shares it with the general public, educating them about aviation using a basic aircraft with easily understandable systems and controls.

One group of children who came to the airport was made up entirely of visually impaired youngsters. Through Duane they got the opportunity to learn about aircraft literally through a hands-on encounter. It's one thing to explain that an airplane has to have a long wing, a tail, ailerons, etc., and another thing entirely to feel how long that wing is, to move the smooth fabric-covered control surfaces and understand how they affect flight.

Of course Duane lets all the kids know about the Young Eagles program, and encourages them to come out for scheduled Young Eagle events.

Duane has had help from other Chapter 690 members, notably Greg Jannokos, Glen Clark, Larry Bishop, and Dale Schonmeyer. Sometimes the groups are rather large, like the birthday party for the airplane-crazy kid that was attended by 24 children and 17 parents. At events like that it's great to have some help.

Duane's education effort is a perfect example of taking a problem -- what to do with all these kids who want to come to the airport -- and turning it into an opportunity. It's probable that some of the young people he chaperons at LZU will come back some day, as student pilots and perhaps eventually instructors, charter pilots, and EAA members. Even those who never set foot at the airport again will remember the place with a warm feeling, and good community PR helps keep airports open and healthy.



GEORGIA AVIATION ACADEMY/ EAA YOUNG EAGLES SUMMARY

The 1999 session of the Georgia Aviation Academy ended last week, and thanks to all the hard work by staff & volunteers, the camp was a great success. Held at SciTrek's downtown Atlanta facility, the camp included many activities and projects designed to illustrate the use of math and science in aviation, with an emphasis on practical applications.

CFT's from Atlanta-Northside Aviation (RYY), Fulton Flight School (FTY), and The Flight School (LZU) joined teaching professionals in staffing the camp, allowing campers to get a real feel for aviation. CAP's Dekalb Cadet Squadron 09065 was well represented, with one member serving on staff, and ten cadets presenting programs during both sessions.

Speakers from the Tuskegee Airmen, American Airlines, USAir and United Airlines joined EAA & 99's volunteers in presenting programs for career day. Twenty-one kids (and two Moms) flew Young Eagle flights at Fulton County on Saturday the 7th to end the camp experience, hosted by a number of local EAA volunteers.

Special thanks to EAA Members - Chapter 690 - Sue Adams, and Frank Settle and all those who participated in the planning and implementation of the 1999 Georgia Aviation Academy:

Two Place Ultralight For Sale

CHALLENGER II "STANDARD", always hangared, 503 W/ Dual Carbs. Excellent workmanship. 25 Hrs. total time. Fiberglass nose & center section. Raised cockpit mode kit -- tinted w/shield, shldr. harnesses, 6" Alum wheels/tires, upholstered seats & interior, 2-tone blue/white. Extras: elect fuel gauge, remote radio antenna, brakes, 5" Hagge Alum wheels/tires, 50' cable housing, carb. splitter kit, plugs, 4 X 8 tinted lexan & parts for doors, extra paint/fabric. Optional: ICA 21 Icom receiver, Garmin GPS89. Price in \$13,500 range, negotiable -- plz.call: "C.F." or Carol @ (706) 235-0644 (Rome, GA)

**We are born naked, wet, and hungry.
Then things get worse.**

To TBO and Beyond...

Part Two *(continued from last month)*

Eleven tips for operating your piston engine to attain maximum longevity and minimum maintenance expense along the way to major overhaul.

This originally appeared in Cessna Pilots Association magazine. by Mike Busch (mbusch@avweb.com)

3. Never cold-start without a preheat.

How cold is cold? There is no magic temperature. Any start with the engine temperature at or below 32 F should be considered abusive. Starting at or below 20 F should be a capital crime.

Oil pressure is not the issue! Using multigrade oil in wintertime, lubrication isn't really an issue even at subzero temperatures. Cold-starts damage your engine because the pistons heat up much faster than the cylinders do, temporarily reducing piston-to-cylinder clearances to the point where metal-to-metal contact is unavoidable.

Preheating is easy. Tanis heaters are simply wonderful. In above-zero temperatures, a couple of 100W shop lights and a blanket can keep engine temperature 40 F above OAT. When away from home, paying for a night in a heated hangar is worth every penny.

4. Avoid unnecessary thermal cycles.

Hours don't wear engines out...thermal cycles do! If your engine ran 24-hours-a-day in a test cell at cruise power, it would probably go 6,000 hours between overhauls. The reason our engines don't last nearly that long is because we start them up and shut them down and heat them up and cool them down every time we fly (and sometimes when we don't).

Try not to start your engine unless you intend to fly. Don't taxi your airplane from the hangar to the radio shop--tow it. Don't stop at the fuel island before taxiing to parking--call for the fuel truck. Whenever you start your engine, imagine that you just tossed a \$20 bill out the storm window.

Get as many hours as you can per thermal cycle. A few long trips are much easier on your engine than a lot of short hops. Long-range tanks are terrific if they let you cut down on fuel stops. Training flights are the worst--train in someone else's airplane if you can.

5. Warm up and cool down gradually.

Don't be in a hurry to take off. Allow plenty of warm-up time between engine start and departure. The colder the OAT, the more important this is.

Throttle-up very slowly at takeoff. Each takeoff involves going from idle to max power. Do this as gradually as conditions permit. One excellent technique: (1) taxi into position and hold; (2) throttle-up slowly to 50% power with brakes locked;

(3) check all engine instruments; (4) release the brakes; (5) throttle-up smoothly from 50% to 100% power while on-the-roll, taking at least 10 seconds to reach full power.

Practice programmed cool-down procedures on every descent. A good rule is to figure out how many inches of MP you need to lose to transition from cruise to approach or pattern speed, then use your DME, LORAN, or GPS time-to-station readout to begin a programmed cool-down that many minutes out. Reduce power no faster than 2" MP every 2 minutes. Use a stopwatch, don't guess.

6. Use conservative power settings.

If you operate your engine at the high end of the envelope, you are trading performance for longevity. Your engine will last longer if you use more conservative power settings. This is especially true when it comes to turbocharged engines.

Cruising at 65% power is an excellent tradeoff. In exchange for the few knots you give up, you gain significant fuel economy, cooler engine temperatures, longer engine life, and a quieter cabin.

7. Operate oversquare!

The old saw about never allowing MP to exceed PM/100 is bunk! Continental authorizes cruise operation at 1 to 3 inches "oversquare" for most normally-aspirated engines, and allows 9 to 12 inches "oversquare" for most turbocharged engines. Check the cruise charts in your POH or obtain the Continental operator's manual for your engine. Operating at minimum RPM and maximum MP (within the allowable envelope) actually helps your engine last longer.

Cruise at the lowest RPM and highest MP that the book allows for the percentage of power that you desire. You usually have several possible RPM/MP combinations to choose from at lower altitudes in a normally-aspirated airplane, and at virtually all altitudes in a turbocharged airplane.

Low RPM operation provides numerous benefits: better cylinder compression, lower frictional losses, improved propeller efficiency, cooler-running valves, lower EGTs and TITs, and a quieter cabin.

Continued on page 7





Chapter 690 member Fred Meyer in his Meyer 360. Check out the article in August Sport Aviation for all of the details.

Chapter 690 Members Fred Meyer and Joe Tate are owners of Aircraft Technologies, Inc. Who supply kits for the above aircraft as well as the Acro One and the Atlantis. Give them a call at 770-806-9098 or visit their website at: <http://www.airshowunlimited.com>



1999 Fall Annual AirFair

It's that time of year again. The temperatures are cooler, the trees are starting to change and EAA Chapter 690 is having its Fall Annual Airfair on Saturday, October 2nd. With hopes for blue skies and unlimited visibility, this year's event will be better than all events that have gone before.

Start with our world famous all you can eat Pancake Breakfast then appease your appetite for aviation paraphernalia by shopping among the many vendors. We'll have children's activities to keep the kids occupied, Static Displays of Projects for the older kids in us all, aircraft of all types and, of course, Biplane rides (hopefully taken well after the "all you can eat" breakfast).

Lunch will be available from 11:00 am to around 2:30pm

with hog dogs, Bar-B-Q, and a corn roast. There will be lots of opportunities for our members to help. The low cloud cover last year reduced our need for volunteers because of the low turnout of planes and people. This year we're hoping for blue skies and a high ceiling, so we will need all the extra help we can get parking aircraft and cars, preparing food, selling EAA 690 trinkets and, of course, welcoming all to LZU. There is always a need for a cheerful member of EAA 690 to direct people and answer questions. If you wear your EAA 690 name badge and a smile visitors will seek you out for assistance. If you would like to volunteer to help us out at this year's AirFair: contact Jeff Boatright at (404) 315-6869 or e-mail him at jboatright@emory.edu.

See you at the AirFair!



Events Calendar



Saturday, Sept. 11, 1999

McMinnville, TN

Fly-in country ham breakfast at Warren County Memorial Airport (RNC). Call the airport at 931-668-7050 for more information.



Saturday, Sept. 11, 1999

Roxboro, NC

Young Eagles Rally at Person County Airport (TDF). 10 a.m.-4 p.m. Call 910-364-1111 for more information.



Saturday-Sunday, Sept. 11-12, 1999

Atlanta, GA

Wings over Dixie Airshow at Peachtree City-Falcon Field (FFC). Presented by Dixie Wing of CAF. Call Jim Friday at 770-631-2469 for more information.



Saturday-Sunday, Sept. 11-12, 1999

Griffin, GA

Builders' Workshop at Griffin-Spalding County Airport (6A2). Includes welding & finish/spray painting. Hosted by Alexander SportAir Center. Call 800-967-5746 for more information.



Sunday, Sept. 12, 1999

Camden, SC

South Carolina Breakfast Club meeting at Woodward Field (CDN). Call Anne Hawkins at 803-432-9595 for more information.



Saturday, Sept. 18, 1999

Collegedale, TN

Collegedale Pilots Club/EAA monthly fly-in breakfast at Collegedale Airport (3M3). Call the airport at 423-236-5008 for more information.



Saturday, Sept. 18, 1999

Dawson, GA

EAA Chapter 354 monthly pancake breakfast fly-in at Dawson Municipal Airport (16J). Call Ron Acker at 912-888-2828 for more information.



Friday-Sunday, Sept. 24-26, 1999

Augusta, GA

Eighth Annual Boshears Airshow 99 at Daniel Field (DNL). Military aircraft, aerobatics, flight demonstrations. Call 706-738-8060 for more information. www.boshears.com.



Saturday, Oct. 2, 1999

Garfield, GA

Monthly fly-in at Hacienda de Gay Airstrip (Pvt). Food served 11 a.m.-3 p.m. Fly market. Call Don Gay at 912-982-3421 for more information.



Saturday, Oct. 2, 1999

Lawrenceville, GA

EAA Chapter 690 pancake breakfast fly-in and aviation program at Gwinnett County Airport (LZU). Breakfast 8-10:30 a.m. Contact Joel Levine at 770-394-5466 or jlevine@akorn.net for more information.



Saturday-Sunday, Oct. 2-3, 1999

Bessemer, AL

Wings & Wheels '99 Airshow at Bessemer Airport (EKY). Aerobatics, demos, displays, aircraft & car judging. Contact Johnny Ward at 205-966-6402 or gldr31@aol.com for more information.

Saturday-Sunday, Oct. 2-3, 1999

Visit the EAA 690 Website at: <http://eaa690.home.mindspring.com>



Technical Corner

By Greg Jannakos

Our project visit to John Leder's Velocity XL/RG Elite will be on Saturday, Sept. 11 from 10am till noon. Come see a very exciting plane which has a lot of interesting aspects to it.

Directions are as follows:

From intersection of 124 (Scenic Hwy) and SR78 (Snellville-Main Street):

Take 124 south

Turn left onto Centerville-Rosebud Rd

Turn right onto Mink-Livsey Road

Go thru Stop Sign (after stopping, of course)

Turn right into Belle Glade Subdivision

You should be on Belle Glade Trail, if not call!!!

John Leder

3690 Belle Glade Trail

Lithonia, GA. 30058

Home: 770.785.7720

Work: 770.934.3297

To TBO and Beyond.....

Continued from page 4

8. Maintain optimal CHTs (350 -425 F).

High CHTs are bad for your engine. The aluminum alloy used in your cylinder heads begins to lose its strength as the CHT rises above about 400 F. Excessive CHTs over a long period of time can result in head cracks or even catastrophic head-to-barrel separations. Even though your CHT redline is 460 F, you should try to keep your CHTs at or below 400 F for normally-aspirated engines or 425 F for turbocharged engines. Do this by opening cowl flaps, increasing airspeed, reducing power, and/or enrichening (listed in descending order of desirability).

Low CHTs aren't great, either. Cooler-than-optimum CHTs (say, in the low 300's F) can result in increased deposits on spark plugs and exhaust valve stems. The latter will ultimately result in accelerated exhaust valve guide wear and a premature top overhaul. Try to keep your CHTs at 350 F or more.

9. Keep baffle seals in tip-top shape.

Flexible baffle seals are crucial to proper engine cooling. If any air is able to leak past the baffle seals (between the rigid baffles and the cowling), the cylinders can develop serious hot



Young Eagle News

By Bill Coleman

The weather on July 17 wasn't much better, but it was flyable. With six pilots, we were well prepared to fly dozens of kids. Unfortunately, only a baker's dozen showed. Nevertheless, a good time was had by all. Here's a breakdown of who flew:

Theresa Andrews - 2

Joe Friend - 2

Edward Kobs - 3

Joel Levine - 3

Greg Rands - 2

Frank Settle - 1

For Theresa Andrews, Edward Kobs, Greg Rands and Frank Settle, this was their first Young Eagle rally. Welcome aboard! Veteran Young Eagle pilots Joel Levine and Joe Friend also got in on the fun.

Ran Minton helped me out on the ground. Thanks everyone, for your support.

Our next Young Eagle rally is scheduled for Saturday September 18 at 9am.

If you can fly, or help out on the ground, or know of kids who might be

interested in flying, please contact me. You can reach me at 770 978-0196

or by e-mail at aa4lr@radio.org.

Of course, you don't have to wait until the next rally to introduce kids to the wonders of flight. Young Eagle forms and certificates are available in the bottom of the blue filing cabinet in the hangar. You can leave completed forms in the cabinet, and I'll forward them on to Oshkosh.

spots. Inspect the baffle seals at every preflight, and immediately replace any seals that have deteriorated.

Baffle seals must always fold up/forward, never down/backward! Engine cooling requires that there be a high pressure area above the cylinders and a low pressure area below them. The baffle seals must be oriented so that this pressure differential presses them tightly against the cowling. Any seals that fold downward or backward will allow air to bypass the cylinders.

Black rubber baffle seal material is trash. It typically loses its sealing ability in just a few hundred hours. Always use silicone baffle seal material available from RAM (red) or Victor (blue). It will last to TBO or beyond.

Continued next month

Classifieds

Wanted: One or two partners for my Ercoupe. If interested call Greg Jannakos 770.277.1637 after 5:00PM or gpjann@mindspring.com **ALSO Wanted:** 12V Transponder and encoder.

For Sale: MINI-MAX Materials kit complete. \$4000.+ invested. \$2800. obo. Includes; all necessary wood, hardware (AN), metal, wheels, brakes, wheel pants, cowling, wing tips, 2, 5gal wing tanks. seat belt, plans serial #712, T-88, fabric. No welding required. All you need except engine, paint and instruments. Can use VW or two stroke for power. David Posey, 770-442-0988 after 7pm.

For Sale: Zenair Super Zodiac HDS (speed wings) Taildrager, Airframe 90% complete, leading edge wing tanks option, strobe and light kit, wheel pants, many extras, Jabiru 3300 (120 HP) engine with mount. Gregg Howell 770-995-6527 ghowell56@aol.com

Wanted: Project Cub, Chief, or Champ. Flying (But Needing Work) or Non-flying ok. Leave a message at 678-376-0482 or email SaundersJS@aol.com

For Sale: Lycoming O-235-C1 Engine with 1190 Hours since new. Includes Bendix Mags, Harness, Plugs, Starter, Alternator, Fuel pump, Exhaust stacks, and baffeling. Also included is an engine stand. \$5,500.00. Contact Earl Evans after 6:00 pm or E-Mail to AvmtEarl@aol.com. 770-229-8670.

For Sale: Two KR2 projects complete through boat stage and on gear. Most controls installed, cowls, header tank and canopy. Zero time HAPI 1834 cc aero converted engine with mount, prop and exhaust. Have plans, 10 years of newsletters and uninstalled Dan Diel fixed landing gear. \$5000 OBO, Consider trades – looking for metal project suitable for Jabiru 80hp engine. Ron Dewees 404-876-3481, e-mail Rdewees@juno.com

For Sale: RV6A 0-320 C/S prop 100 hrs. total time engine and airframe. Can be seen in EAA hanger #4.; Charlie Patterson 770 9384131 or charliepatterson@mindspring.com. price negotiable. Possible trade for J-3 etc.

For sale, perfectly built RV8 empenage with electric trim and Variprime interior (600\$). Also for sale 28 years of Sport Aviation (300\$) less then a 1\$ each. Call Carl Bell 770 263 7998 for information or inspection

For Sale: 1977 BD-4, 160 Lycoming, 505 TT, 505 SMOH, stock taildragger, flat windshield, fiberglass wings (short), full gyro panel, new mags, new tires, RST 572 navcom, Mark 16 navcom, AT50 xponder, encoder. Well built, flies nice! \$19K. On the EAA ramp at Gwinnett County. Mike Huffman, 404-229-9123, mhuffman@bwsys.com **WANTED:** Passenger seat (RH) for 1965 Cessna 150F. I am willing to reupholster it or might consider a matched set of seats with good upholstery. Mike Huffman, 404-229-9123, mhuffman@bwsys.com

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Monthly Meeting
Friday, September 10
7:00pm at the Chapter Hangar

Newsletter of EAA Chapter 690
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NavCom