



HANGAR ECHOES

Experimental Aircraft Association ★ Chapter 168 ★ Dallas, Texas

To EFIS or not to EFIS

By Mel Asberry

About two years ago Michael Stephan and Marvin Brott along with a few others began to talk about the wonderful world of the Electronic Flight Instrument System or EFIS for short. I, being extremely cheap (or “frugal” as I like to call it), made some kind of statement to the fact that I can buy an awful lot of “steam gauges” for less money; and if someone kicks out the plug of one, I only lose that one. These EFIS go for a wide range of prices; none of which qualify as “cheap.”

There was one manufacturer out there advertising that they were going to produce an EFIS for under \$2000. When asked their opinion on this unit most of the guys doing research said something on the order of “We’ll believe it when we see it.” or “If they can do it great, but don’t hold your breath.”

Well “Frugally Yours” got on the mailing list just for grins. And you know what? They’ve done it. The Dynon EFIS-D10 includes artificial horizon, airspeed, altitude, stabilized compass heading, vertical speed, “G” meter, turn coordinator, clock/timer, and voltmeter (also AOA coming soon). Price? \$1995. AND it fits in a standard 3" instrument hole. To install, I simply removed my gyro horizon, slid in

the D10, teed into the pitot and static lines and then began to hook up the myriad of electrical wires. The total number of wires is 6. Main power, keep alive pwr (for clock), ground, and 3 wires to the RS-232 for calibration. I installed the unit in one evening and while these other guys are still researching EFIS I’m flying one!

Now to be fair to the other guys, my EFIS IS pretty basic. It does not have moving maps or other bells & whistles. And I won’t trust it enough to remove my old round airspeed and altimeter. If you want a moving map and all that other stuff then keep saving your pennies (lots of them). But if you want a good basic EFIS for just slightly more than the cost of a new electric gyro horizon then it’s here. So far... I LIKE IT!

One of the most important things to consider with a new product like this is follow-up service. Well I can honestly say that I’m impressed with the people at Dynon. On my third flight the turn rate indicator said I was turning right when I wasn’t. I called Dynon to get a return authorization and was directed to the Vice-President of engineering. Doug told me “I can send you a download and I think we can correct the problem on the computer.” When I told him that I am computer illiterate, he said “not to worry.” He not only gave me very explicit instructions but gave me his home phone number to call if I had problems with the download. We did have

AUG 5th Chapter Meeting

By Michael Stephan

Our Aug. 5th Chapter Meeting will be held at the Farmers Branch Library, located on the northwest corner of Webb Chapel and Golfing Green Dr. The meeting will be held in the auditorium and will begin at 6:30 p.m. and finish by 9:00.

The program speaker will be Attorney Kent Krause.

He will discuss legal issues concerning homebuilder's liability and well as other topics. This is important to know if you are building and planning to sell someday, or if you are planning to buy a plane or project from someone else. We look forward to seeing you there.



August 9th Chapter Fly-In

By Michael Stephan

This month's fly-in is Saturday August 9th to the Mesuite Municipal Airport to visit Ben and Pat Johnson's new flight school. They are located next to the FBO. I'm sure Pat will prepare a very delicious breakfast for us. We will meet there around 9 a.m.

August 12 Board of Directors Meeting

By Monroe McDonald, Secretary

The August BOD meeting will be held on August 12th at the Farmers Branch Manske Library at 7:00 PM. The minutes from the July BOD meeting (recorded by Monroe McDonald) are as follows:

Directors in attendance: Scott Christensen, Don Christiansen, Sam Cooper, Bruce Fuller, Monroe McDonald, John Peyton, John Phillips, Jim Quinn, Clay Romeiser, Don Wilcox, plus visitor Vern Williams.

The board reviewed the chapter's tool lending policy, as explained by tool custodian Vern Williams. Only a hand-written copy of the policy could be found; Monroe McDonald will create a Word version of this document for board review, to be added to the archives.

Upcoming event schedule:

The **July 29** Hangar Echoes newsletter assembly party will be at Don Christiansen's home in Duncanville.

The **August 5** program speaker will be Kent Krause (attorney) on homebuilder's liability and other topics.

The **Sept. 6** airport meeting will be breakfast at the Cedar Mills airport on Lake Texhoma, starting at 0900.

The **Oct. 7** program speaker will be Paul Thayer, former LTV head and navy pilot.

The **Oct. 11** airport meeting will be the annual chili cook-off co-hosted with the McKinney chapter.

The **Nov. 11** program speaker will be US Repr. Sam Johnson, former pilot.

The **Nov. 15** airport meeting will be at Stephenville for lunch.

President John Phillips appointed Monroe McDonald nominating committee chairman for the next slate of officers.

August 26th Newsletter Assembly

By Michael Stephan

The September issue of the Hangar Echoes will be assembled on Tuesday Aug. 26th at 7pm in the home of Clay Romeiser located in University Park at 3205 Amherst Ave. (214-739-6364 for directions)

We were at Clay's a few month's ago, but his project is progressing so quickly that this may be our last chance to see it before it goes to the airport. So, if you want to see a nearly finished RV-9A, be sure and clear out a few hours and come on over. Oh, and yes, fold a few newsletters.

A Message from the President

By John Phillips

You all know I'm pretty mild-mannered, but periodically I do get riled up and write to someone in Washington. Well, I got a letter back from Senator Kay Bailey-Hutchison this week. Before I tell you what she had to say, let me tell you what I told her. I had sent 3 emails to her. 2 were sent shortly after 9/11, and concerned reopening the skies to VFR traffic and "little guys." The third was sent when it was reported that security at the Phoenix airport tried to take Joe Foss' Congressional Medal of Honor away from him because they didn't know what it was and thought it might be used as weapon. I thought my e-mails were pretty clear and straightforward. Don't penalize general aviation 'cause we didn't cause the problem, and let's have some common sense in security. What I finally received back from the Senator—more than 18 months after my last email to her, is a form letter thanking me for my concern for the airline industry, and assuring me that she's fighting hard to ensure that airports and airlines can get "war risk insurance." Huh!?!? That's the sort of thing that might get me steamed up enough to fire off another email to her about her incompetent staff and/or her own disinterest/disregard for what her constituents are saying!

Now, don't misunderstand, I like the Senator [as well as I like any politician] and I'll probably vote for her again. What I am suggesting is that I, John Phillips, adult resident of Dallas County, Texas, am literally invisible and completely insignificant to my elected representatives. I can send e-mails all day long and not make a dent in the system. But, what I can do that makes a difference is to support organizations that support me. In the airplane world that means EAA and AOPA. I don't see 100% eye-to-eye with EAA and AOPA on everything they support, but when EAA and AOPA send an e-mail to Washington it gets noticed. JOIN UP and KEEP YOUR MEMBERSHIPS UP TO DATE.

Next, I got an e-mail earlier this week from Sam Cooper. Sam, you'll recall was in the middle of his really fascinating talk on engine power management in June when the projector bulb blew out and we had to circle around his laptop to get the finish. I was so impressed with the information that I had asked Sam for a copy of his slides. He couldn't send it to me right away, because he needed to get permission from the folks at Advanced Pilot Seminars who did the research and created the seminar on which Sam based his own. True to his word, earlier this week Sam sent a copy of his slideshow to a number of us. Thank you, Sam.

Thinking about Sam reminded me that we have a wealth of talents in the 168th and generous members who share it with each other. From time to time I think it's good to acknowledge a little of it and say thanks. At the risk of overlooking someone, I want to start by saying thanks to



everyone who has opened their home or hanger to us on a Tuesday evening for newsletter foldings. Thanks to all the folks who toil to produce Hanger Echoes for us each month, the writers and picture takers, the editors, and the folders and stampers. Thanks to our Treasurer, with whom we trust our small fortune. Thanks to Ann Asberry who's always on the move and organizing something good. Thanks to our Secretary who dutifully records the antics at Board meetings and sends in our EAA insurance application before each flying event. Thanks to the Vice-President who hustles up interesting speakers for us each month. Thanks to Vern Williams, the Tool Custodian, for putting up with my meddling last month. Thanks, on behalf of all the kids, to Jim Quinn and all the Young Eagles pilots. Thanks to all our Hanger Echoes sponsors, who help keep the kitty full. Thanks to our Flight Advisors and Tech Counselors, always willing to lend an ear and a hand, and great advice. And, last but not least, thanks to all of us as members, for supporting the 168th and each other.

JOHN H. PHILLIPS

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to remove the unit from the panel but with Doug in Washington and Ann on our end we got the problem solved in short order and I can hardly wait to get into the air again.

More later after I've had a chance to turn this thing upside down a few times.

Upcoming Events

Local

- **Aug. 2** EAA Chapter 1347 BB-Q Fayette Regional Air Center (3T5) La Grange, Texas TIME: 11:00 a.m.–1:00 p.m. NOTE: Contributions go to scholarships for students interested in aviation. FFI: Lance Herrington 979/249-4200.
- **Aug. 16** Abilene, TX. Pioneer Aviation Day. Elmdale Airpark (6F4), Fly-in, missing man flyover, program honoring aviation old timers in attendance, former POWs, etc. Contact: david duncan 915/676-1944 or 915/766-3769, reb-dunc@swbell.net
- **Aug. 18** Frontiers of Flight Museum Dallas Love Field Dallas, Texas Celebrating North Texas' contribution to aviation & aerospace on the 100th Anniversary of powered flight by the Wright brothers throughout 2003: The Aerospatiale/BAC "Concorde" Supersonic Transport Presenters: Concorde Pilots Capt. Ken Larson & Capt. Glenn Shoop Time: 7 p.m. RESERVATIONS: 214/350-3600
- **Aug. 23** Granbury, TX. Fly-in Breakfast. Granbury Municipal (F55), Contact: John Holt 817/570-8533
- **Aug. 23** Sherman, TX. 3rd Annual Taste of North Texas Flyin. Sherman Municipal Airport (KSWI), 3rd Annual Taste of North Texas Flyin. 10 a.m. to 2 p.m. Come sample great food from area restaurants. Lots of entertainment for all ages. Live Band. Displays. Free ice cream. Drawings for free gas (100LL). www.airnav.com/airport/swi Contact: Jeff Miller

(903) 892-7035, airport@ci.sherman.tx.us

- **Aug. 23** Free Lunch Fly-In Tyler, Texas NOTE: free hot dogs, hamburgers, chips and drinks. TIME: 10:00 a.m. til 3:00 p.m. FFI: 903/597-1334 www.tylerjet.com
- **Sept. 13** 8th Annual Fall Fly-In & Airshow Sulphur Springs, Texas NOTE: Airport will be closed from Noon until 2:00 p.m. for the airshow. FFI: www.eaa1094.org
- **Sept. 19-21** EAA Chapter 471 Fly-In/Airshow Abilene, Texas NOTE: Fly-bys by the B-1, C-17, C130, T-38 and various warbirds.

National

- **Jul. 29–Aug 4** EAA AirVenture 2003 51st Annual EAA Fly-In Oshkosh, WISCONSIN

News and Notes:

By Michael Stephan

Flash Gets Paint

Doug Reeves' RV-6, dubbed Flash, has recently returned from the paint shop. As you can see, Doug was inspired by the paint scheme of the Cessna T-37 "Tweet" trainer used by the Air Force. Mike Taylor of Razor's Edge RV Painting, located in Tuscaloosa, Alabama, did the work, and the results look fabulous. Doug recommends him without hesitation. The whole procedure is detailed on Doug's web site, www.vansairforce.net.



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Engine Management Presentation Available

The engine management presentation delivered by Sam Cooper at June's Chapter meeting is now available as a Power Point Slideshow. The charts and graphs in the presentation require some study and now you can do it in the comfort of your home. The information is based on the APS seminar hosted at the GAMI facility in Ada, OK. If you are interested in receiving the presentation, email me, mstephan@shr.net, and I will email back to you the Power Point (PPS) file. To view the presentation you must be able to view Microsoft's Power Point format. Thanks Sam for an excellent presentation and for making it available for those who did not see it at the meeting.



A Picture From Our Youth

By Marvin Brott

We would like to start a new segment in Hangar Echoes, which on a monthly basis would ask all of you to guess who the young airplane enthusiast in the picture is. The answer will be included in the next month of Hangar Echoes. Who do you think the young aviator is in the following picture?

Please send Michael Stephan or Marvin Brott your picture. We will scan it and sent it back immediately. All of us

went to the airport on our bicycle or got someone's mom to drive us so we could see the DC-3 land or check out the latest Cessna. Some pictures may actually be in color and have a RV-3 in the background rather than a DC 3. Please send in those pictures of our young airplane days.



Fabricating Air Intake Ducts

Part 1: Building Test Parts

By Sam Cooper

Note: Even though the target vehicle is a car, the methods discussed can also be used on a custom built aircraft.

Project Background:

Gary Hunter, one of the speakers at our February 2003 meeting, briefly discussed making air intake ducts for the Exxon Flying Tiger using flexible "swim noodles" to mold the engine's air intake ducts. In the case of the Exxon Flying Tiger, these are long (4 feet plus), pretty large in diameter (~4 inches) and made from carbon fiber to save weight.

Several weeks later, I was looking at my friend Tom Moe's Factory Five Racing Roadster car project (a.k.a. Ford Cobra replica). It became obvious that he is going to need a custom air intake duct between the mass air flow (MAF) sensor and the throttle body on the intake manifold. Tom had come up with all of the reasonable alternatives and had pretty much settled on putting the MAF behind the intake manifold, but in front of the firewall. This was going to require a custom "U" shaped duct about 4 inches in diameter.



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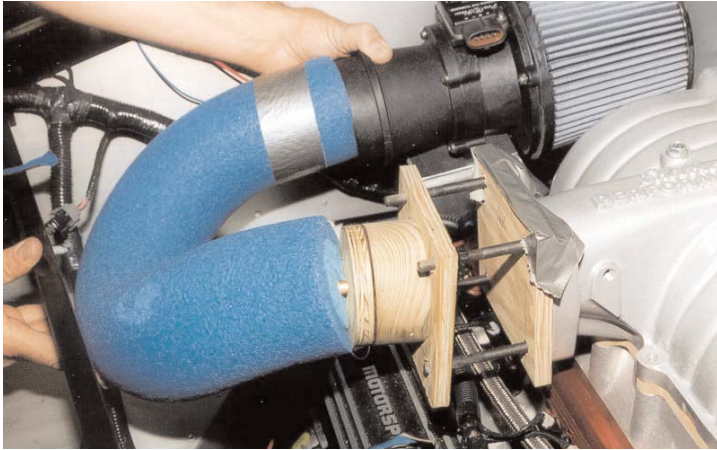


Figure 1

See Figure 1 for the proposed air intake duct, modeled by blue tubing.

The key question was how would we fabricate this “U” shaped air intake duct? We came up with two alternatives. One, to use the Hunter techniques to make a custom composite air intake duct. The backup plan was to have a local shop fabricate a part from 4-inch aluminum tubing sections.

Researching the Technique:

Never having done this, Tom and I discussed the problem to identify our major issues. First, the engine compartment is going to be warm, probably 200°F, or more. Second, we needed an epoxy and fiberglass fabric system that we could easily handle in a home workshop. Third, we needed more details on Gary Hunter’s methods. Fourth, we decided to build two test parts before attempting the final part.

After a little research with the Aircraft Spruce catalog and website, we settled on the PTM&W Industries PR2032 resin and PH3660 hardener epoxy system. We can buy it in small quantities as needed, and this combination results in a 1-hour pot life for the mixture. If we use a 150°F, 4 hour post cure the glass transition temperature of the resin goes all the way up to 196°F.

Gary Hunter suggested that we use a lightweight bi-directional fiberglass fabric. Tom and I settled on Aircraft Spruce’s 1522 E-glass, a 3.74 oz/sq yd bi-directional fabric. It is nominally .0055 inches thick. This may be thinner than we need, but we wanted to be sure it would follow the tight contours needed for his air intake duct.

Prior to building the first test part, some e-mail with Gary Hunter allowed us to establish the basics.

- 1 Start with a polyethylene swim “noodle” flotation device of the correct diameter. Our 4-inch noodle is two parts with a roughly 3/8 inch hole bored in the center of the inner part.
- 2 Insert a flexible 3/8 inch OD copper tube into the noodle, leaving material sticking out the ends.
- 3 Bend the noodle to shape.
- 4 Apply mold release wax to the outside of the noodle, which does not need to be buffed.
- 5 Use a bi-directional fabric cut on the bias (45° to the weave). (Note: Gary thought an 8.8 or 5.5 oz/sq yd fabric would work.) Using two pieces for one layer (half the circumference per piece) lay the impregnated fabric along the longitudinal axis of the noodle, butting or slightly overlapping the edges. Each successive layer is applied so the butt joint, or overlap, is 180° to the previous layer. Use at least three layers, four or five will eliminate pinholes from the layup.
- 6 Allow the composite to cure.
- 7 Pull out the copper stiffener.
- 8 Twist and pull out the swim noodle.
- 9 Trim the air duct to size.
- 10 Post cure the air duct.

Tom and I use a gram scale to weigh the fabric and resin mixed for each layer. This improves the control and repeatability of our composite fabrication process. I made a lookup table at the desired resin to hardener weight ratio to eliminate math errors when calculating how to mix the epoxy for a given batch. To wet out the fabric, we placed our cut fabric pieces onto larger pieces of plastic sheet placed on a clean,

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flat surface. A squeegee allowed us to uniformly wet out the fabric. The wetted fabric is then applied to the part while on the plastic and then the plastic is peeled off.

Making the First Test Part:

A two foot long straight piece of swim noodle was prepared over which a 1 foot long duct with about 4 layers was built. After a couple of days of curing, the swim noodle was easily pulled out. The inside of the duct was pretty rough and it had pulled away from the noodle in one area. Figure 2 shows the roughness of the inside of the air duct and the outside of the noodle.

We learned a number of things from this part. First, the epoxy/fabric weight ratio (E/F WR) for a layer is critical. Our first layer had an E/F WR of ~1.2. It was fully wetted, but had a lot of pinholes and did not stick to anything very well. With an E/F

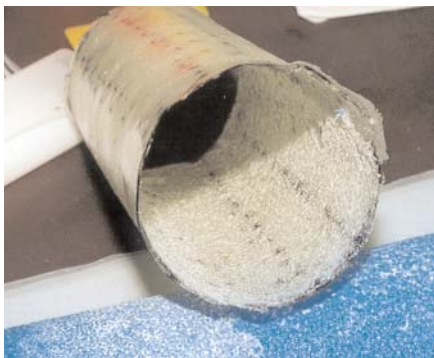


Figure 2

WR of 1.5, the extra epoxy filled the pinholes and let the wetted fabric stick to things. At this WR there is clearly extra resin, but eliminating pinholes is more important than structural weight in this application.

Volume Ratio versus Weight Ratio:

The strongest epoxy and fiberglass composites are usually at a "50/50" ratio of resin and fabric. Well, that target ratio is a volume ratio. Our E/F WR target of 1.5 above is a 60/40 weight ratio. These are not the same kind of ratios! I actually do not know what volume ratio our 1.5 E/F WR composite is actually at, and do not really care. The critical point is that if you weigh your fabric and resin, do not use a target weight ratio that is really a volume ratio! Get the desired weight ratio from the Designer.

Second, we did not wet the waxed noodle with epoxy before applying the first layer. So, the dry first layer did not stick very well to the noodle. That is why part of the layer pulled away from the noodle. Some part of the noodle will have gravity trying to pull the fabric off of the noodle, so wet the noodle before applying the first layer.

Third, the inside of the duct was rough because the texture of the swim noodle transferred to it. Gary Hunter told us to smooth the inside with an extra disposable layer.

4a Apply one layer of fiberglass to the waxed noodle. In our case, two layers because we are using very light fabric.

4b Allow the fiberglass to cure, then fill and finish with a bondo type material. Keep the fill as thin as possible. Sand the fill to a smooth finish.

4c Slit the filled layer with a Dremel carborundum cut off blade (narrow) longitudinally along the length of the noodle.

4d Cover that slit with vinyl electrical tape.

4e Wax the outside of the thin, filled layer.


Then, we can proceed with step 5. Now, after the swim noodle is removed, the filled layer will still be inside the air duct. We handle this with the following:

8a Grab the filled layer at the split line with a pair of duck-bill pliers. Start twisting and tugging gently on the filled layer to get it to release. Work slowly and it will come out.

Fourth, this actually works!

Making the Second Test Part:

A roughly two foot long swim noodle was prepared with a single ~9 inch radius 90° bend in it. The filled layer was made with two layers of fabric and filled with Superfil. After sanding the fill smooth, it was slit along the inside radius. After the filled layer was prepared, we only stuffed the two ends with swim noodle, instead of the complete noodle. Vinyl tape was used on the slit, and then mold release wax was applied. We applied three layers of fabric to make the test part all in one session. After a couple of days of curing, the noodle and filled layer were removed. Tom said it took some time, but they did separate.



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Figure 3

The results were much better. Figure 3 shows the filled layer on top, with filler missing in places, and the air duct below. The inside of the duct was much smoother. The duct also had not pulled away from the male form. We only had filler stuck to the inside of the air duct in a few places.

We learned a couple things from this part. First, the bend complicated the draping of the fabric, especially when the edges went from the inside to the outside of the radius. So, we will cover the “U” bend in sections, using four or six overlapping pieces for each layer. We may also need to trim the corners to remove excess fabric along the inside radius of the bend.

Second, the simple curvature of even this 90° bend significantly stiffened the part. I can deform the part locally, but that deformation is absorbed in only a few inches. By comparison, the straight first test piece would easily deform along its entire length. I expect the compound curvature of the final part to be reasonably stiff.

We are pretty happy with this second test part. So, now we will tackle making the real thing. We will tell you about that in the next article.

July's Fly-In to Hicks

By Michael Stephan

July's Breakfast at Hicks brought out a good-sized group. The food at Hicks is delicious. That, along with the group of airplanes that flew in, made for a very enjoyable time. Along with many of the regulars, we had quite a few that I haven't see in a while. Chris Pratt updated me on the progress of his RV-8. Les Palmer and I looked over the RVs. Leon flew his vari-eze in. John Snyder's RV-6 was a study in craftsmanship. The Welsch's Katana even found some room on the crowded ramp.

After finishing the big breakfast, we walked a little of it off with a stroll down to Jay Pratt's Hangar to take a look at the projects underway. The RV-8s that were in the quickbuild stage a few month's ago are just about ready to fly. But, the



focus seemed to be Jay's latest airplane; the Super Cub sized North Star. The North Star is a kit developed by Custom Flight LTD., and is based on the popular Super Cub. Since the plane is experimental, many improvements not allowed for the certified Super Cub have been incorporated into the design. It is not a modified Super Cub, but is a whole new airplane. It is a very nice design. Jay finished the wings some time ago, and covering is the next step. I asked Jay about the kit, and he alluded that he is spoiled by the completeness of Van's kits.



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But, he is putting this kit together rather quickly. Kudos to Jay. More information on the North Star and Custom Flight LTD can be found at <http://www.customflightltd.com/>.

Summer Picnic at Shortstop

By Bob Hassel

What happens in June, east of Dallas at the start of the hot North Texas summer? Correct it's the great newsletter-folding event at Ann and Mel Asbury's. It was time to head out and socialize with the great folks of EAA Chapter 168. Ok, so we also folded the newsletters! Yep there was the natural flock of RV's but there were also some other great looking planes.



That's Jerry Mrazek's beautiful Rans S-14 in the foreground. Yes that's a Cessna 150 in the background. David Cheek brought it in. It even has an armrest in the cockpit. That must be a fun plane to fly! A

friend (Russ) that I brought along to the event couldn't take his eyes off that S-14! This was one of two beautiful, fun looking single-seaters that showed up.



Russ also got a good look at another interesting plane that flew in. The beautiful, totally unique 2 place award winning Pober Pixie II built by Michael Hoye.

Check out the instrument panel on this plane. Now where was that EFIS going to fit? The craftsmanship was evident everywhere you looked.

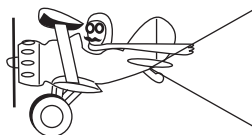


This type of event is what flying and the EAA is all about! Great grilled sausages, tons of deserts, cold drinks, laughter and tall tales echoed through Mel and Ann's hangers. BTW, there seem to be fewer newsletters to fold up and mail out since everyone seems to be enjoying the newsletter on the great Chapter web site!

2003 Central Texas Fly-In

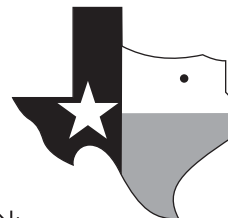
By Bob Hassel

There is nothing like a drive down I-35...that'll make you wish you had flown! It seems you get in line in Dallas and get out of the same spot in line when you get to your destination. Trying to get there any faster will leave you frustrated and mostly unsuccessful. Jan and I had decided to go the 2003 Central Texas Flyin outside of Waco. We loaded up the



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van with a cooler, sunscreen, clothes, etc and prepared to head out. After a change of cars (the first one wouldn't start) we slid into the southbound herd on Friday evening and headed for a hotel just down the road from the flyin in Waco. When we got to the hotel I meet a really nice guy from Amarillo that had driven down to see what this RV thing was all about. Even after 7 hours on the road he was still smiling!

We hadn't even made it there yet and were already meeting nice folks!

Next morning, a quick drive down the road and we were parked in the shade of a tall oak tree, listening to the sound of incoming aircraft. Everywhere you looked were shade trees (my thanks to Ann Asberry for pointing out the difference between mesquite and oak for a city slicker). Tucked under



the trees were beautiful aircraft and more were arriving all the time. There were alternative engines, several

RV9s, beautiful RV4s, great food, those fun folks from Team RV, our great hosts and hardy volunteers... where do you stop?

Just before noon and the great lunch, Team RV managed to get at least 10 RVs to fly in formation for the crowd below. I spent far too much time with my mouth hanging open to get good pictures of that!

There was the usual line up of folks watching and rating the landings along the grass strip. We tried to see each aircraft that was there. Jan was busy inspecting the rivet jobs to compare how we were doing. We were both admiring the paintwork on all of the aircraft.

There were two airstrips, one for RV's (actually homebuilts) and the other for the "other" aircraft. For those



builders in the Chapter that aren't building an RV, I even got a picture of another aircraft! (Jan loved this one!)

To quote Larry Pardue's keen observation and great words: "...I don't know who all contributed to the Scott fly-in this year, but I appreciate Mike and Bonnie Anderson, and Phil and Anne Gresham very much. Phil has been having some medical problems, but seemed to be enjoying the event from a gold cart. The volunteer controller was excellent. It is apparent that many people helped prepare the field and helped with parking, cooking and serving. One guy was telling me about all the Chiggers he got, cutting grass. Thank you also to extraordinary promoter Doug Reeves. I do hope this fly-in under the trees continues. It is unique..."

More pictures of this down home fun event can be found on my website at <http://www.hassel-usa.com/ct03.htm> or Doug Reeve's great site at <http://www.metronet.com/~dreeves/vaf.htm>



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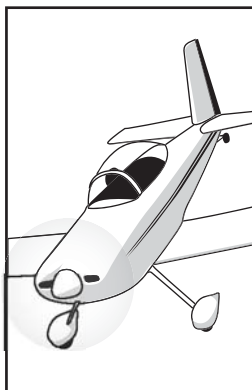
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