



Experimental Aircraft Association

CHAPTER 393

Concord, California

December, 1988

CHAPTER MEETING

December 16, 1988 Fri. 6:00 PM
Concord Elks Club
3994 Willow Pass Rd. Concord

PROGRAM

Christmas Dinner & Awards

Yes, it's time again for that Christmas extravaganza.

If you haven't made your reservations yet you should call Rich Powell at 934-9396 right this moment. He needs to know ASAP if you will be there. Friday, Dec. 9th is the deadline. If you are reading this after the 9th, call anyway. The sooner the better. Remember, that's Rich at 934-9396.

MINUTES OF NOVEMBER MEETING

The treasurer's report was read and approved. We discussed: Dues, exchanging newsletters with other chapters, and Super Saturday. Rosters will be available at meeting, they are not to be used for commercial purposes. The CCAA, Contra Costa Airports Association is now official. Your contribution is will be appreciated. MDPA members get a \$.15 per gallon discount on avgas at Million Air. The Xmas Dinner is Friday, Dec. 16th, RSVP by Dec. 9th. Bar opens at 6:00pm with dinner at 8:00pm. Bob Graves' Stearman has flown! Thirty-five people heard all this stuff first hand.

Thanks to everyone who contributed to our program with a story or building tip.

PRESIDENT'S MESSAGE

Merry Christmas to all. Hope to see everyone at the Christmas Dinner.

NOTAMS

Heavy fines are being levied on people using 123.45 for air to air communication. This freq. is not for air to air use and the feds are cracking down.

Fuel pumps.

If you have a "cube" type pump from Facet with a black or gray viton check valve it is bad news. It should be replaced by one with yellow or white parts. The yellow or white models are not subject to degradation by avgas.

Fuel valves.

There have been reports of non-ball type fuel valves sticking. Fuel starvation can result from this condition. Always use ball type valves for your fuel system.

VIEWPOINT

Xvxn though my typxwritxr is an old modxl, it works quitx wxll xxcpt for onx of thx kxys. I'vx wishxd many timxs that it workxd pxxfxtly. Trux, thxrx arx forty-two kxys functioning wxll xnough, but just onx kxy not working makxs thx diffxrxncx. Somxtimxs, it sxxm to mx that our organization is somxwhat likx my typxwritxr - not all thx kxy pxoplx arx working propxrlly. You might say,

"Wxll, I'm only one pxxrson. It won't makx much diffxxrxncx. But you sxx, thx organization, to bx xfficixnt, nxxds thx activx participation of vxvxy pxxrson. Thx nxxt timx you think your xfforts arxn't nxxdxd, rxmxmbxr my typxwritxr, and say to yoursxlf, "I am a kxy pxxrson and am nxxdxd vxry much.

DEJA VU

Mark your calendars for Friday, December 16. It's the great Christmas Dinner and Awards Banquet. This year featuring Chicken Kiev (\$14) or Ham (\$11). Please call Rich Powell ASAP to make your reservation and send your check with the enclosed order form. R.S.V.P. by Dec. 9th. No-host bar opens at 6 PM and dinner will be served at 8 PM. We need help. Anyone interested in working on the hors doeuvres or decorations, please call Rich Powell at 934-9396.

UNCLASSIFIED

For Sale: Gary Grover's SCAMP, sgl place alum tri-gear biplane. 90% complete incl rigging, VW Eng. Needs minor sheet metal. prop, insts and radio. Call Pat Campbell, 415-689-7212, Concord.

PRO-SEAL KITS in 1 pint, two part kits! For only \$17.00! (Aircraft Spruce sells Pro-Seal equivalent kit for \$30 +) Great for sealing any pressure line. Resist Fuel, Oil, break-fluid, etc. This is The Rubberized Epoxy! Limited Supply on hand. Call Rick Lambert @ 676-9377.

Tri-Q/Q-200 Needs new type canard built, fuselage finished to painting, nice panel, no firewall forward. \$5500.00 Ron Partain, 415-779-0442 or 924 Flintrock Dr., Antioch, CA 94509

Have single seat **Acro Sport** biplane and some loose change. Would like older four seater (Piper or Bonanza) Call Fred Kros (415)399-3716.

Wanted: prop hub for a taper shaft, A-series Continental. Call Dennis Colomb (707)429-0693.

Glasair windshield 3/16". Make offer. Steve Macica (415)792-7510.

Glasair kit. \$10,750. Norm Alumbaugh, P.O. Box 200, Pope Valley, CA 94567. (707)965-2709.

Precision welding. Aluminum, stainless, 4130. Eric Schuldt, 1820 Baldwin Dr., Concord, CA 94519. (415)827-0259.

Soft-Com Headsets with-out the Intercom Unit (still avail. from Soft-Com). They work great and \$75.00 for the two pair is a bargain! Larry Laughlin @ 758-3532.

Wanted: Cessna 170B or early model 172. Also need Lyc. 0-360 for my T-18. Jordan Coonrad (415)769-9766.

Note. Unclassifieds are free and easy. Just call Jordan Coonrad at (415)769-9766 or leave a message.

CALENDAR

Dec. 16
393 Christmas Banquet
Jan. 10
Chapter 393 Board Meeting

OFFICERS

President	Rich Powell (415) 934-9396
Vice President	Bill deProsse (415) 827-0199
Sec./Treasurer	Russ Giffin (415) 935-2887
Newsletter Editor	Jordan Coonrad (415) 769-9766
Coffee Host	Louie Goodell (415) 682-4198

GLASAIR III SYTEMS, part 2 & 3

Lyle Powell
Oct. 1988

Electrical 1-50 amp alternator (Motorola) driven 2:1 instead of 3.25:1.

This eliminates most alternator failures. Diode isolator for 2 batteries, 2 busses. 1-25 amp battery, 1-12.5 amp battery. Batteries-- "Gates"-- this is a "starved liquid electrolyte" battery, 10 year life. No case or vent system required. 2 master switches, paralleling relay. 2nd battery: 1 Navcom, transponder and encoder, 1 fuel pump and 1 hydraulic pump. Linear alternator regulator, alternator failure light, 2 ammeters (loadmeters) and 2 voltmeters. Approximately 30 C.B.s. Will initially use standard magnetoes but later plan dual distributor ignition system.

Hydraulic System

1. Brakes--automotive tubing and hoses and steel fittings. Silicone non-hygroscopic fluid--non-flammable. Brakes are large Cleveland units.
2. Gear. Instead of backup hand pump--2- 5.5 pound electric pumps. 2 pairs of parking-brake valves select one or the other, and select 1 battery or other. Additional fluid reservoir on second pump. Manual switch operated second system that by-passes all microswitches and relays. Backup cable release for uplocks, and dump valve for "up" hydraulic line. Also "direct-down" button for first pump to bypass any electrical faults. 2 hydraulic pressure gauges--one up, one down, to eliminate any leak between systems. *Shuttle valves not reliable.*

Vacuum Standard pump with "Precise Flight" manifold pressure system backup-- cable selected. Operates 2 gyros--adequate backup for letdown and approach.

Trim Electric in all 3 axes-- 4-way switch on stick for pitch and roll (1980 Dodge Colt mirror adjustment switch). Panel switch for rudder trim. Trim done by 6 ounce gearhead motors and screen door springs. Avoid trim tabs in this fast airplane because of flutter.

Autopilot Century I wing leveler and tracker. Servo under left seat and operates aileron push-pull tube by cable with stiff spring at each end.

Consider "Nav-Aid" autopilot.

Speed Brake-Spoilers On 59LP (Glasair I) belly board, aft-hinged, works well---170 IAS deployment on 59LP. Want 250 IAS deployment on Glasair III.

Spoilers, aft hinged, on upper wing skin, approximately 4" x 12", 70% chord, 2 feet outboard from fuselage. Deployment by auto headlight or window servos. May use hydraulic cylinders for deployment if electric servos are a problem.

Cabin Ventilation Air inlets--NACA inlets on sides aft of firewall, and in dorsal fin. Butterfly valve shutoff in all. Heat--exhaust pipe--bypass valve regulator. Extractor outlet important, cannot rely on air leaks in tailcone.

Instruments

- a. Flight: Conventional flight instruments plus HSI and angle of attack indicator (pneumatic). Pressure sources^{for AOA} are 1/8" holes at leading edge and 12 1/2% of chord on lower skin on outer wing panel. Indicator is 240 mph airspeed with redone face.
- b. Engine: "Vision Micro" 8 instruments, actually 13 because of dual-indicator instruments, electronic, digital and analog on same face. Central processing unit, Milspec type transducers. All usual engine instruments plus fuel flow, EGT-CHT all cylinders, V-A meters (2), OAT, timer.
- c. Annunciator lights (idiot). I'm an idiot when distracted.
 1. Water in fuel (filter cannister)
 2. Low vacuum
 3. CO warning (electronic)
 4. Low oil pressure (45 psi). Sensor at front of engine, where normal pressure is 50 psi.
 5. Hydraulic pump "on" (2)
 6. Door unlocked (2)
 7. Gear-flap sequence (gear before flaps or "light")

8. Flaps down (green)
9. Speed brake deployed
10. Transmitter keyed
11. Fuel pressure low
12. Alternator failure (from regulator)
13. Landing gear position (transit, down- 2x3)
14. Fuel selector valve off (2)
15. Oxygen tank valve "on"

These lights make check-list very short and more reliable.

Radios 2 Nav-Coms, Loran C, DME, Glide slope and MKR BCN, XPDR and encoder. HSI connected to Loran or VOR-loc. Radio master. Intercom, headsets--plugs in bulkhead behind, out of way.

Safety Harness Automobile type. Retractable Honda in 59LP--prefer GM type because of locking feature on lap belt, inertia reel on shoulder belt. Anchors well designed--full thickness purchase on airframe.

Lighting Standard nav lights--tips and tip of rudder. 3 strobes. 2 landing lights alternate flasher 40x/minute (J.C. Whitney). Cabin lights--tiny eyeball lights x 4, plus dome light.

Oxygen We commonly fly 15-18,000 feet. 22 cubic ft bottle on shelf in front of panel, within reach for off-on. Nasal cannulas (reservoir type)--always ready in pouch on right side of cabin. Regulator mounted in panel, (right side), also flow meter. Filler tube and wrench carried. I use welding oxygen--works fine if bottle is in cabin where water vapor in it won't freeze. Most FBOs no longer have oxygen service, but all have welding oxygen--are willing as long as you have filler tube and wrench and know

how to operate them.

This Glasair III (N4K) has been in progress for $2\frac{1}{2}$ years, has about 1 year further to go. Most of above systems working or tried out on Glasair 59LP which has 1000 hours on it. It is an F.T. with 180 HP and usual cruise of 215 mph (187 KT), top speed 225. Wood propeller, fixed gear, 27 ft. span.

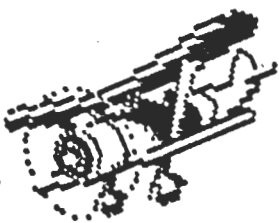
DECEMBER 16, 1988



ANNUAL EAA CHRISTMAS BASH

FOOD! ENTERTAINMENT! JOKES! AWARDS!

BRING A FRIEND! BRING A DATE! BRING THE WHOLE FAMILY!



THE CLUB ROOM, CONCORD ELKS LODGE
3994 Willow Pass Rd.

MENU

HAM \$11.00

CHICKEN KIEV \$14.00

Dinners include wine, salad, rolls, vegetables, rice pilaf,
dessert and coffee.

We must have your reservation by December 9.
Please call Rich Powell as soon as possible (415)934-9396
AND send the form below to:

Rich Powell
12 Oak Knoll Loop
Walnut Creek, CA 94595

Name(s): _____

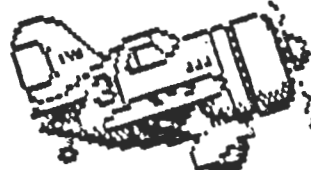
Ham _____ X \$11.00 = _____

Chicken Kiev _____ X \$14.00 = _____

Amount enclosed = _____

Make check payable to Chapter 393 & mail to:

Rich Powell
12 Oak Knoll Loop
Walnut Creek, CA 94595



THIS SPACE AVAILABLE

Business card ads (subject to board approval) from EAA members are \$35 a year. Send your ad and check to EAA Chapter 393, PO Box 2269, Walnut Creek, CA 94595.

RICHARD S. POWELL



Hilltop Optical Co.

HILLTOP PROFESSIONAL BLDG.
SUITE NO. 27A

1855 SAN MIGUEL DR.
WALNUT CREEK, CALIF.
94596

(415) 935-8822



Off.: (415) 685-4959

RANDY ALLEY
Insurance Agency, Inc.
Agent

1850 Mt. Diablo Street
Concord, CA 94520

Larry Kett Laughlin

Lk 288948



- Carpet & Vinyl Sales
- Expert Installation
- Steam Carpet Cleaning

P.O. Box 883 • El Cerrito, CA 94530 • (415)758-3532

EAA Chapter 393
P.O.Box 2269
Walnut Creek, CA 94595



DUES ARE DUE! 12/88

FRED W. EGLI
1900 MEADOW RD.
WALNUT CREEK

CA 94595