



Experimental Aircraft Association

CHAPTER 393

Concord, California

November, 1988

CHAPTER MEETING

November 23, 1988 Wed. 7:30 PM
Buchanan Field BRING CHAIRS
Terminal Building BRING CHAIRS

PROGRAM

Show & Tell

Yes, it's time again for that perennial favorite, starring your fellow EAA 393 members and you. Come prepared to share your best airplane building tips, anecdotes, or flying stories.

NOTAMS

Radio Systems Technology of Grass Valley, CA is having a special promotion on their kits. Here's the deal: If you order something from them and mention your EAA Chapter's number, you will receive a 10% discount AND 20% of the sale will be donated to the chapter by RST.

MINUTES OF OCTOBER MEETING

Many thanks to Lee Hamilton for a chilling account of his trip to the North Pole and back again.

VIEWPOINT

Please send, opinions, helpful hints, jokes, gossip, anything, to Jordan Coonrad, P.O. Box 2878, Alameda, CA 94501.

CHRISTMAS PARTY UPDATE

Mark your calendars for Friday, December 16. 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. Reservations must be in by Dec. 9.

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, decorations, or entertainment, please call Rich Powell at 934-9396.

CHRISTMAS GIFT IDEAS

How about a romantic flight around the bay area in a DC-3? For \$100 you can relive aviation in the 40's and take a one hour flight aboard "Sentimental Journeys." Call (800)634-1165 for more information. It's a jolly good time.

BUTTON UP

Looking for performance fasteners & fittings? Send \$5 to T.A. Shulgin Co., 815 Arnold Drive #11, Martinez, CA 94553 for a copy of their catalog. The \$5.00 is fully refundable with the first \$50 order.

NEW ADVERTISERS

Thanks to Randy Alley for signing on and offering this additional support to Chapter 393.

UNCLASSIFIED

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.

28HP Rotax aircraft engine complete with prop and exhaust, \$350. Ed Rudolph (415)254-2198.

Shopsmith with some accessories. Call Ed Rudolph (415)254-2198.

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

1947 Ercoupe 415CD project. Fuselage inspected and chromated, wings need inspection & cover. No firewall forward. Many extra interior parts. All logs and registration. \$750 O.B.O. (916)624-0109.

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.

Telex Headsetsw/dynamic mikes, Exec. cond. & work great, 2 sets Larry Laughlin (415)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. 6 Chapter 393 Board Meeting
- Dec. 16 393 Christmas Banquet



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

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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 an 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 2½ 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

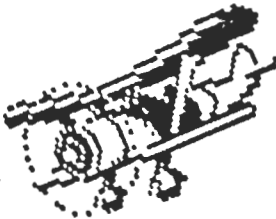


ANNUAL EAA CHRISTMAS BASH

FOOD! ENTERTAINMENT! JOKES! AWARDS!

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

THE CLUB ROOM, CONCORD ELKS LODGE



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): _____

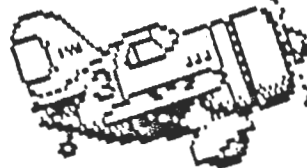
Ham _____ X \$11.00 = _____

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



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DUES ARE DUE! 12/88

FRED W. EGLI
1900 MEADOW RD.
WALNUT CREEK

CA 94595