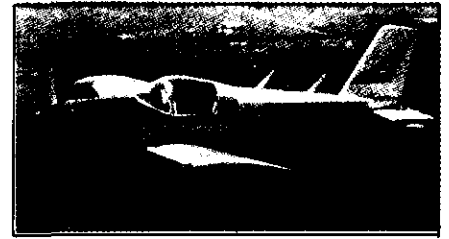


PL-1 PL-2 NEWSLETTER



NUMBFR 50

WINTER 1975-1976

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PAZ SEZ

I am writing today to: Raymond Voegelle (not Nogelle) to see if he is flying his PL-2. Also to David Thomas - Wisc.

I had news from Edwin Levi, Savannah, Georgia - He is flying his PL-2 - Built in 2,800 man hours (four years) at a cost of \$2,000.??? Seems impossible. Any way "Proud Lady" (as he named it) or she, IS FLYING - and Ed seems very happy.

I am now taking flying lessons every week end - Soloed again, and hope to fly my PL-4 soon.

FROM THE EDITOR

Ed Levy of Savannah, Georgia called on Dec. 8 and said he had flown his PL-2 and then had 8 hours. He gets 125 m.p.h. cruise at 2150 rpm with 108 h.p. and initial rate of climb of 1400 fpm. Ed built his PL-2 in approximately 2800 hours doing virtually all of the job by himself.

KEN BROWN, 5-3 Ross Ade Dr., W. Lafayette, In 47906 with Plan #284 for a PL-2 is a new subscriber

Jack Henderson, 1718 Grace St. R.R. 2, Streator, Illinois 61364 also joins the new subscribers.

DARRELL RADFORD, 83 - 12th St. Paso Robles, Calif. has recently purchased PL-1 4725G from Mr. Joseph Anthony which has been flying since 1969.

KENNETH AND MILDRED ARNOLD send news:

We have done very little in the PL-2 construction business. We have not started working on a wet wing so far. We flew down to Wichita Falls on October 4th, as you know from Tommy Phelps' letter to you. He left shortly after noontime so he could not report to you that we brought back a couple of trophies. One was for traveling the farthest distance, and the other was for Reserve Grand Champion, which is second best. There was a T-18 there that was quite super, and of course, the BD-4 which was next door to us at Oshkosh, but the judges disqualified him as he had not made the entire ship by himself. In other words, they did not consider that he was in the class of Amateur Builder. Only that disqualification placed us in the second place. ha.

KENNETH AND MILDRED ARNOLD cont.

Sam and Mona McKee were great hosts. We flew down Friday afternoon and spent the night with them. We had a lot of fun and talk of PL-2 building. Sam is making a wet wing, and we certainly filled our eyes with information. And of course, Twusna added a touch of beauty and grace to a good fly-in. Sam taxied his ship across the field and placed it alongside of our ship, so we designated them the before and after. He is doing a grand job, and our last note from him indicated that it should be flying by now.

DAVE PANTON gives some useful information in the article written for EAA Chapter 185

Having helped build and restore steel tube, wood and fabric sail-planes, I felt I would like to try working in aluminum. The past four years have been very educational and I think I'd go the same way again. What have I learned to pass on to others? Lots of goodies and gems learned the hard way. Advice is cheap, experience is not! The following items are from experience and apply to almost any home-built.

1. Money: be prepared to spend lots of it--double your worst estimate and then add more.

2. Dealing with parts suppliers is not always simple. Try not to pay all cash in advance. I've done it and waited up to two years without getting all the parts I ordered. So far I've got refunds, but the letter writing is a nuisance and resultant project delays waste time needlessly.

3. Customs: (Dave lives in Windsor, Ontario) be prepared for a continual arm wrestle and a lot of running around between numerous office to clear goods in your possession, in the mails or in bonded trucking warehouses. I've finally engaged a broker, the expense is easier to take than high blood pressure. I've always found every customs man polite and helpful but they are all locked into difficult procedures.

4. Aluminum: import from Detroit warehouses, all at once if possible, as the savings are substantial. Aircraft grades are available in all odd sizes mostly "off the shelf". Local suppliers yawn and offer one size on a take-it or leave-it basis.

5. Forming aluminum 2024-T3 (hard). Mostly straight bends are needed and it is springy, tough stuff to handle. I designed and built my own press brake. It is very slow and tedious but does very accurate work and complex bends easily. Sheet metal shop leaf type brakes leave a lot to be desired and are best for furnace ducts and such.

6. Forming soft aluminum (2024-0). Compound curves and curved flanges without flutes must be formed from soft aluminum pounded out over hardwood blocks with a soft lead-tin alloy bar. The hardwood came from an old pew, the bar from Canadian Tire and the technique from an E.A.A. publication". Once learned, it is not difficult except to describe by written word.

DAVE PANTON cont.

3

7. Heat-Treating. Soft 2024-O aluminum must be heat-treated to harden it after forming. None is done in Windsor and the customs procedure hagg precludes Detroit. Mine was done in Toronto in two batches at \$70 each. Parts come out of water quench distorted, are stored in dry ice and one must remove and reshape them over the form blocks quickly as they warm up to room temperature, only a few minutes later they are hard.

8. Assembly means building more jigs and fixtures to locate parts correctly. This is vital for reasons which become crystal clear shortly after one has ruined an assembly by drilling rivet holes through mislocated parts.

9. Cleco fasteners. One never has enough, they can be purchased used in Detroit at two for 25¢. One finally uses them all up and has a 3 lb. sillon with 35 pounds of clecos bristling all over in a very impressive fashion.

10. Chemical Treating. Tear everything apart again de-burr all the zillion-and-one rivet holes and chemically remove all oil and surface residue with Metal Prep 33. Then treat with Alodine #1201 and within 24 hours spray paint with zinc chromate primer. A lot of trouble, but well worth the effort as later corrosion inside inaccessible places can result in early bird retirement.

11. Rivetting. Again, spend the money and get a good slow-hitting gun and a variety of rivet sets to reach into awkward spots. Same thing with bucking bars as all sorts of odd-ball shapes are needed. Rivets can be purchased in mixed lots cheaply. Buy a rivet cutter and cut them to correct lengths as required. High pressure air is needed for larger sizes (5/32") and rivets located in solid places. I've used up to 125 PSI thanks to a converted refrigerator compressor inspired by George Mann. The technique, once learned, is simple. Learning can be a disaster as a misplaced rivet gun does a lot of damage instantaneously. Again care, caution and solid fixtures remove rivetting from the realms of a "terrorist activity". I feel an important safety precaution is the use of ear protectors as the noise is quite astounding. Steel toed shoes also are wise to protect one's toes from falling bucket bars.

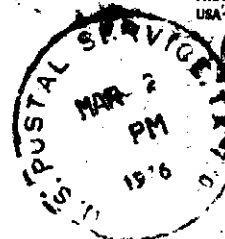
12. Machine Work. Here's where friends and fellow builders can be a big help. Same thing with welding although it is not too expensive to have small amounts farmed out. I've done most of my own except where inert gas welding would cause less distortion. The cost is worth it by reducing assembly trouble later.

13. A good place to mention Murphy's Law: "Whatever can go wrong, will wrong." Tolerances always seem to add up the wrong way. Parts which should fit, won't. The vital component needed to finish that last assembly was somehow missed in the last shipment. The trusted precision tool is found to be in error. We all know how the law works and I suppose a lot of the non-builder's challenge is in trying to lick it. The satisfaction in completing a nasty assembly must truly be due to beating old Murphy at his game.

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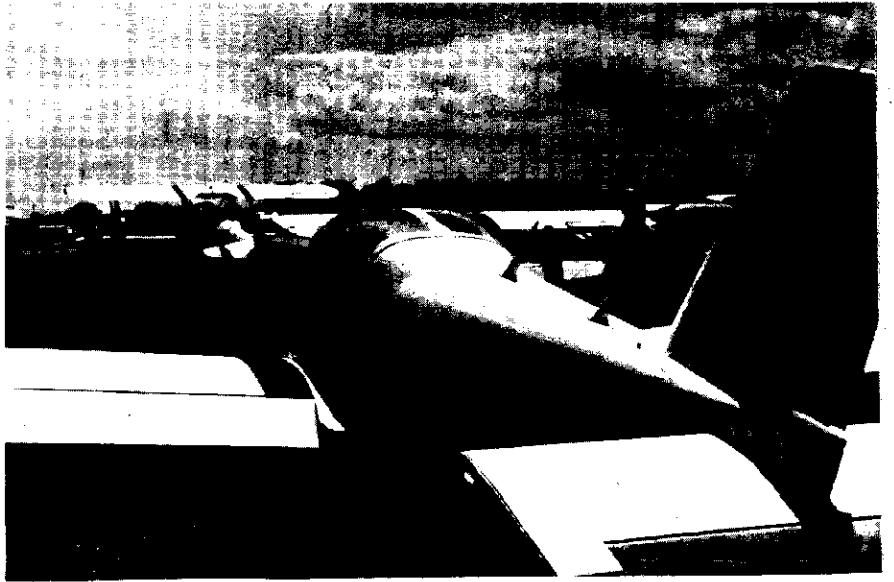
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FIRST CLASS MAIL



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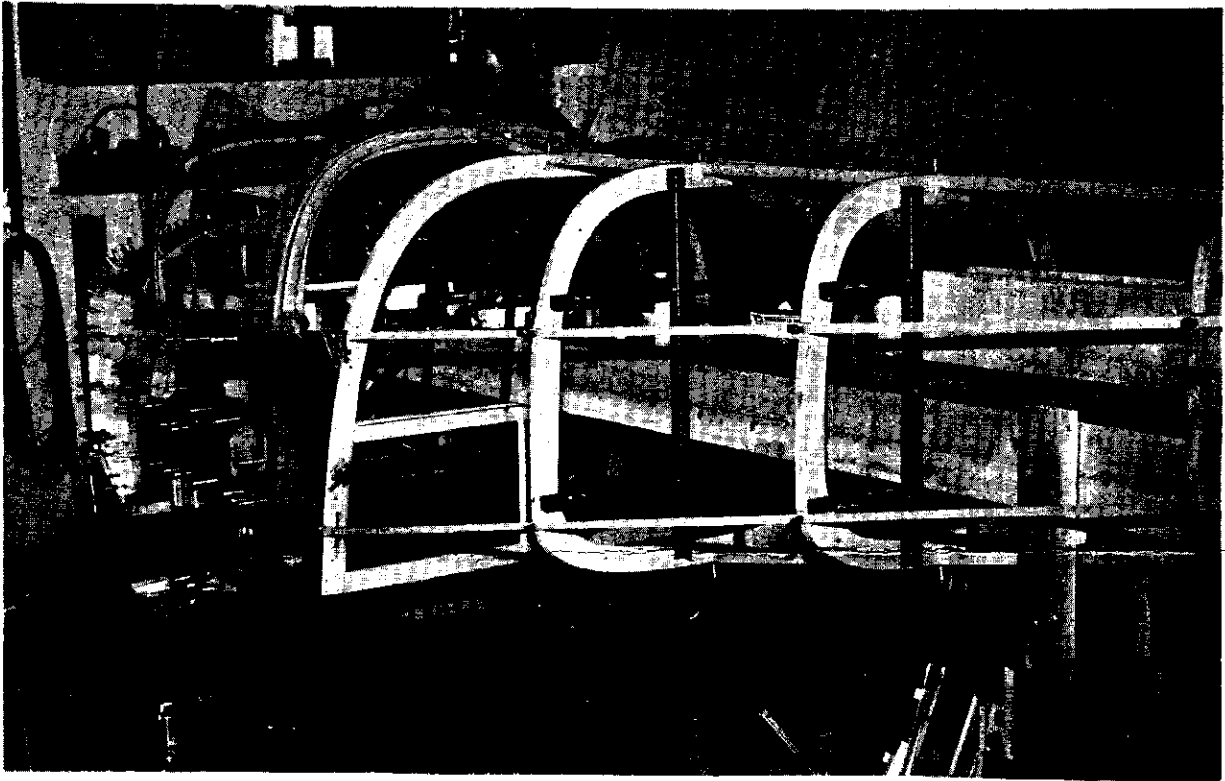
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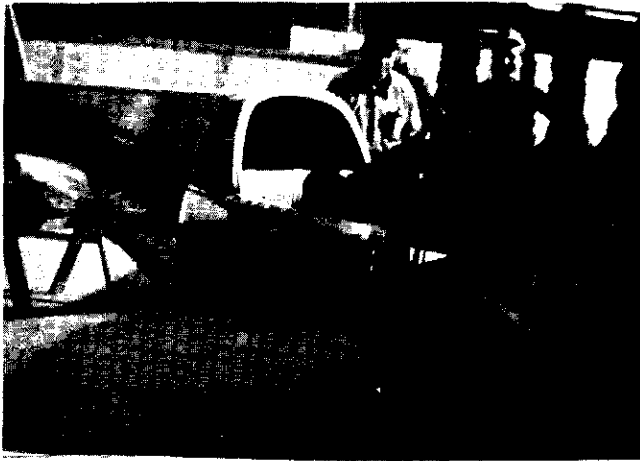
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W.C. GRAMATZKY DALLAS

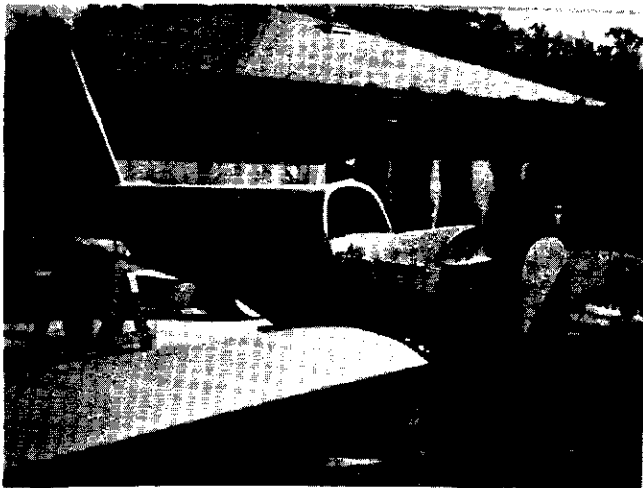
1. THE MASTER PL DESIGNER
2. KENNETH ARNOLD (MO.) PL - 2 #8
3. SAM McKEE (TEXAS) PL - 2 #181
TRYING ON KA'S PL - 2 FOR SIZE
AT OSHKOSH '74



1



2



2A



3

1. DAVE PANTON (CANADA) PL-2 #110
2. JOHN ALTIZER (CALIF) PL-1 #315
3. THOMAS PHELPS (TEXAS) PL-2 #49