

KR Newsletter

ISSUE #34
APRIL 1978

SUBSCRIPTION RATES

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How are you coming with your KR? Letters I've been getting indicate that this is going to be the kind of year expected 2 yrs ago. KR's are taking to the air regularly now, as indicated by the flight reports in the past few Newsletters.

There is a dark cloud on this rosy picture tho'. I've noticed what seems to be a nation wide apathy on the part of homebuilders, pilots, and aviation related businesses when it comes to supporting local airports and aviation in general. I know it's easy to stand back and let someone else shoulder the responsibility but if we, as a group, don't let our elected officials know that we even exist, there just might not be an airport available when you're ready to fly your winged wonder.

I admit a large part of the problem is a lack of knowledge in where to start, so I'm going to suggest a few things you can do to start the ball rolling.

1. Join an aviation related organization. Two would be better, a national one such as the E.A.A. or the A.O.P.A. and a local county or state organization.
2. Write a letter to your local, state, and national elected representatives. Let them know how you feel about issues and laws directly affecting your interests. I don't mean abusive or crank type letters, they just end up in the trash. A respectful letter that states the facts will draw the most attention and consideration.
3. Interest your non-pilot friends in aviation. Not by those hair-raising war stories and tales of close calls but by taking him to lunch at a nearby airport or just showing him points of interest from the air. A short flight on a C.A.V.U. day can do more to dispel bad publicity than anything else I can think of.
4. A recent trend is for E.A.A. chapters to hold static displays at the large shopping malls that are mushrooming thru-out the country. Should one of this type of outing be on your calendar do what you can to make it educational to the general public. We don't want to look like a bunch of daredevils, just a group of people with a different recreational vehicle.

I'm sure you can think of several ways to promote general aviation. What it comes down to is a critical need for all of to do something.

HAPPENINGS.....DATE CORRECTION: The EAA & AAA Fly-in at Meadowlake airport in Colo. Springs, CO will be on May 28, 1978. Previous Newsletter had it listed as June 4th. Sorry 'bout that.

Fourth annual Southern Calif. Regional Fly-in sponsored by EAA Chapters 1, 7, 11, 92, 96, 448, and 494 on May 5, 6, & 7. Contact Gene Vickerey, 1115 S. Sierra Vista Ave., Alhambra, CA 91801 or phone 213-289-8944.

Anaheim Indoor Aircraft Show will be held at the Anaheim Convention Center in Anaheim, CA on May 19, 20, & 21.

The impatient builders among us will be happy to learn that R/R has added yet another pre-formed section of the KR-2. Now available is a fiberglass turtle deck, ready to mate to your KR-2 wood fuselage. Price is \$115.00 from Rand/Robinson, 5842 "K" McFadden Ave, Huntington Beach, CA 92647.

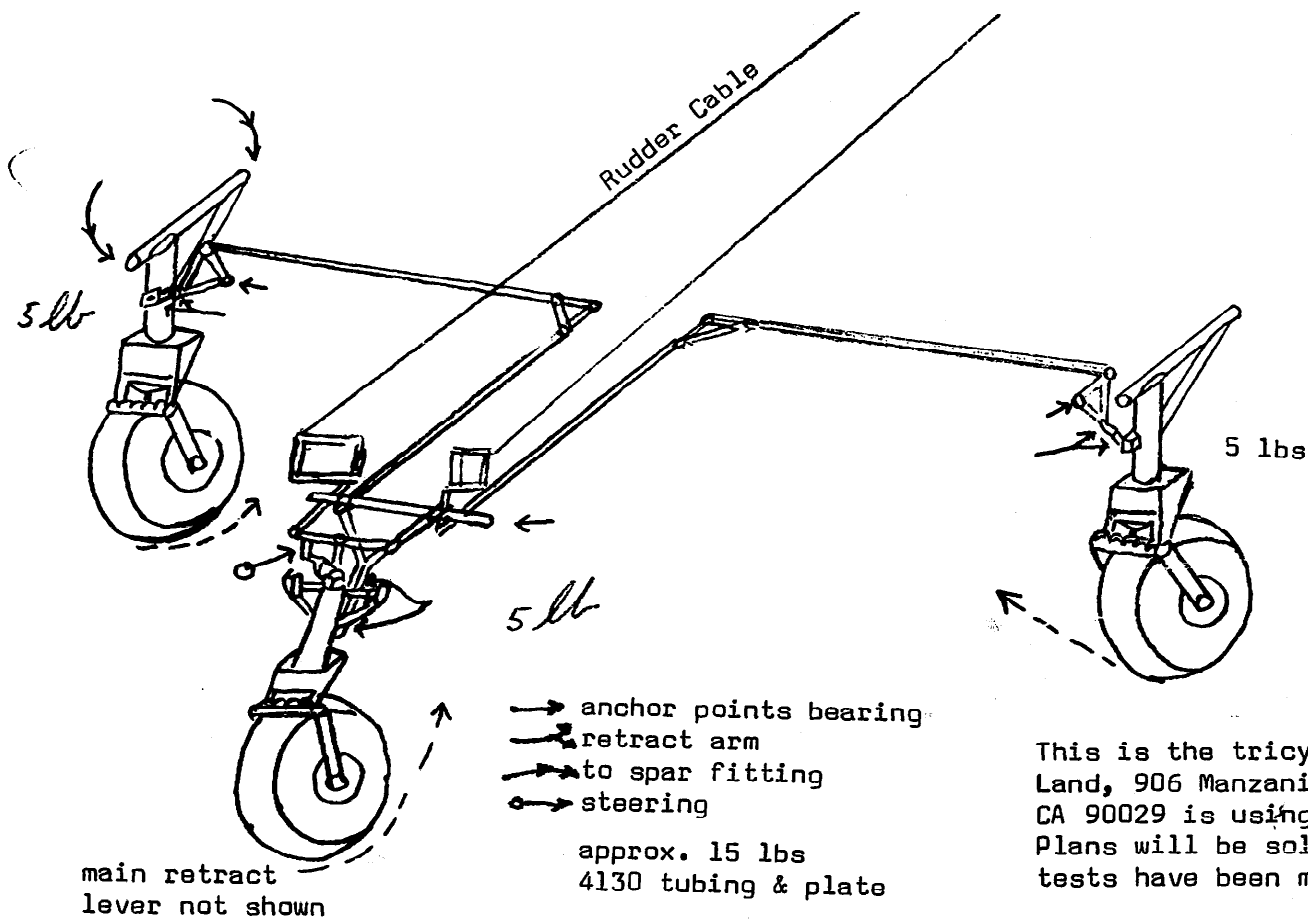
Contrary to popular belief, writing, editing and mailing the Newsletter is not my sole occupation. I work days as a construction foreman and in my "spare time" work on the Newsletter, a room addition to my house and try occasionally to squeeze in some time on my own project, (after assorted "honey do" chores). You can see from this schedule it is not possible for me to check out each idea or modification submitted to the Newsletter. So I will continue to pass along as much volunteered info and drawings as possible. I leave it to your discretion as to whether or not you use them in your aircraft.

QUESTIONS & ANSWERS

- Q. What kind of tape is used to seal the gap where the wings connect?
 A. I used Scotch "Mystic" tape, available in assorted colors but any fabric based tape would probably work.
- Q. How do you hook up the throttle linkage for the Posa carb?
 A. Most builders are replacing the cable on the slide with a shaft, then almost any linkage may be devised, according to your needs.
- Q. I have heard rumors there is a KR club in the San Jose, Calif. area. Do you have any info on this club?
 A. I have not heard of anyone forming a KR club in any area as of yet. Should there be one I would be happy to print any info sent to the Newsletter.
- Q. Has a KR-1 or 2 flown using a Corvair engine?
 A. Not to my knowledge, however there is a great amount of interest in this engine, so it is probably a matter of time
- Q. Has anyone experimented with different kinds of foam? What kinds are acceptable?
 A. Most foams can be used if it is the right density, 1.8 to 2.2 lbs per cubic ft is recommended. I have seen a urethane foam that should not be used. It is yellowish and appears to disintegrate constantly. Just touching the stuff will leave your hand covered with a film of sparkling, grainy dust.
- Q. Have there been any failures of the magneto belt?
 A. No.
- Q. Will the KR landing gear really hold up under rough grass fields?
 A. At least two KR's are operated out of grass strips and to date I have heard of no problems.
- Q. I hear some people have trouble with their stick/cables binding in one direction and slack in the other. Comments?
 A. This has happened to several builders and is caused by the pivot point of the stick not being in line with the cable attach point. It is easily remedied once the problem is recognized.
- Q. I have not been able to get the 7075 T6 .020 aluminum for my KR-2 firewall. Is there an acceptable substitute?
 A. You bet, Rand recommends using .005" stainless steel and will be happy to sell you some. Write to Rand/Robinson for the latest price list for this and several other new items.
- Q. Has anyone used bi-directional fiberglass rather than Dynel on the Rand designs? Any reason not to use it?
 A. Yes, it has been used. No reason not to if you don't mind some itching.
- Q. Has anyone glassed the plywood section of the fuselage?
 A. Yes, with very light cloth ($\frac{1}{2}$ oz) for a longer lasting finish.
- Q. What information is available on prop hub extensions? I have seen comments that advise anywhere from zero length to 3". What are the problems?
 A. I have heard of no problems with the bolt on extensions, nor in my opinion should there be, as long as the propeller is balanced correctly.
- Q. Could you publish a list of V-speeds for a KR-2 w/1700 VW?
 A. $V_a=135$, $V_c=135$, $V_{le}=200$, $V_{lo}=200$, $V_{ne}=200$, $V_x=90$, $V_y=100$. These figures are in IAS mph. They will vary depending on weight and prop.

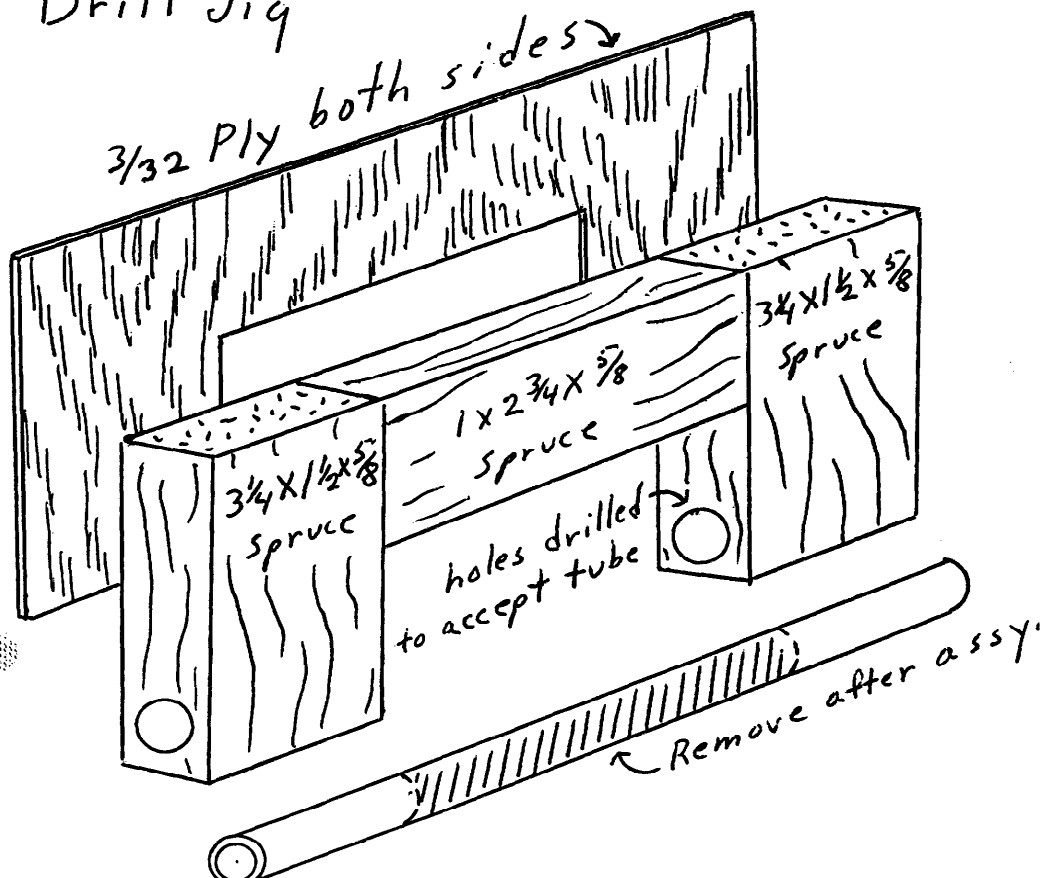
BUY SELL TRADE

- BUY.....I'm looking for a Revmaster 1834 D w/electrics (low time). Call 1-506-466-1410 collect, or write to John Reid, 457 Milltown Blvd., St. Stephen, N.B. Canada E3L 1K2
- SELL....Bosch starter, small, light, strong...\$30.00 Allen Cox, 201 Honeysuckle, Casper WY 82601 or phone 307-265-2172.
- SELL....L-16 parts (from CAP) still in original wrap. Will fit Aeronca Champs & Chiefs, Bob Eppersen, 1653 Beaver creek Rd., Oregon City, OR 97045.
- SELL....KR-2 or -3 canopies for the 6' plus builders. Excellent optics...\$240.00. Write to Siegfried Richter, 43475 Schoenherr, Sterling Heights, MI 48078 for more info.
- SELL....1974 412 VW engine, 12,000 mi. Contact Harold Parker, R.R. 1, Diagonal, IA 50845.
- BUY.....KR-1 or KR-2 90% or more complete. Send info to Bob Dingwall, 5832 Raphael Dr., Huntington Beach, CA 92649.
- SELL....Nichrome wire and plans for hot wire foam cutter...\$1.00. Bernie Steinbaugh, P.O. Box 64, Waterville, OH 43566. (NOT FOR USE ON URETHANE FOAMS)
- SELL....Beautiful VW props as displayed at Oshkosh. Send for free brochure. The Prop Shop, Box 237, St. Ansgar, IA 50472.



This is the tricycle gear Don Land, 906 Manzanita, Los Angeles, CA 90029 is using on his KR-2. Plans will be sold after complete tests have been made.

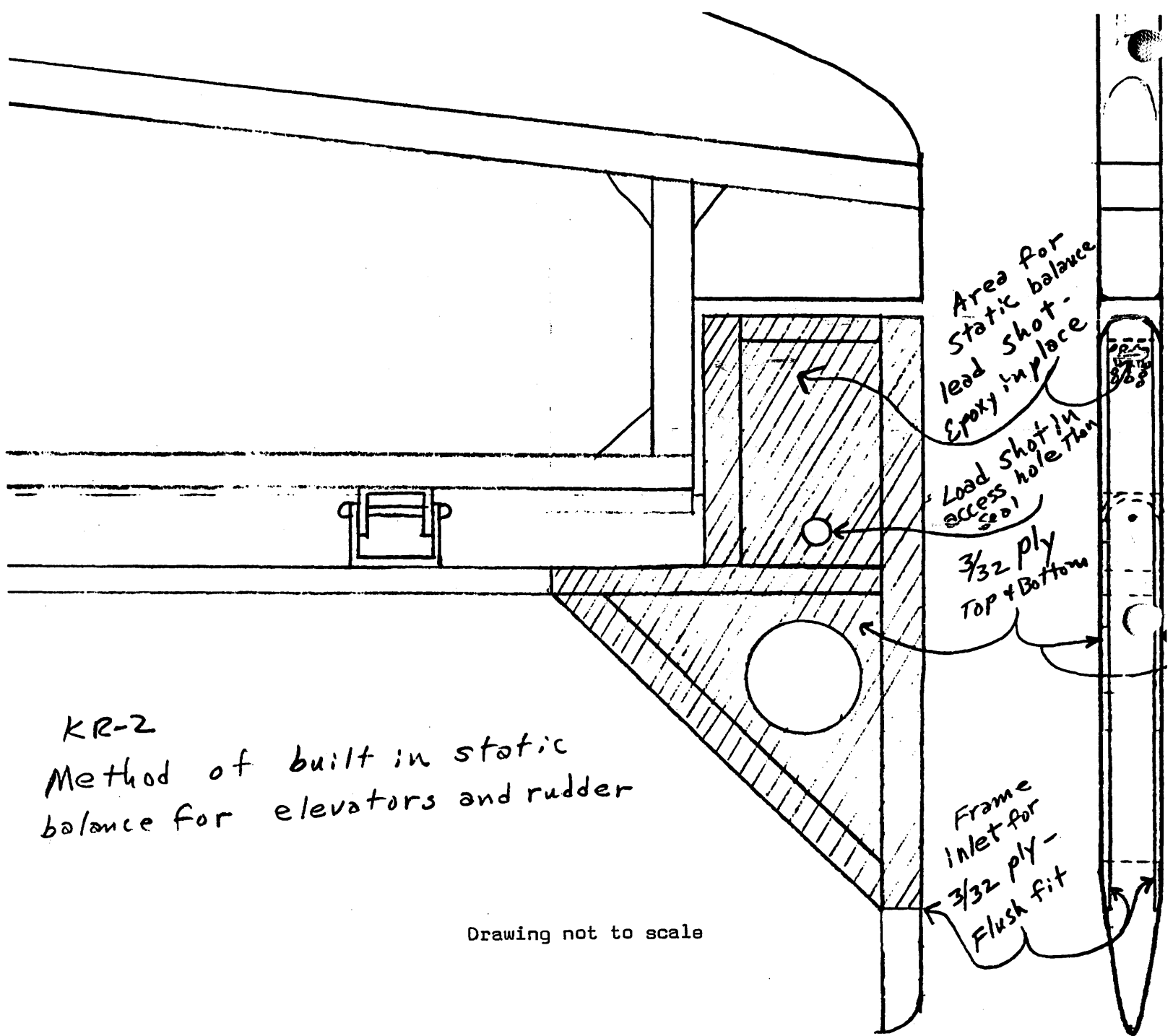
Drill Jig



Here is a drawing of a wing attach fitting drill jig I constructed for my KR-1. As you can see it can be made with scrap wood.

1. Cut spruce to size
2. Drill end blocks
3. Insert tube to align wood
4. Glue and staple ply to both sides
5. Epoxy 3/16 I.D. tube in place.
6. Remove center section of tube after cure

John Karnage
3301 NW 42nd St.
Ft. Lauderdale, FL 33309



KR-2
 Method of built in static
 balance for elevators and rudder

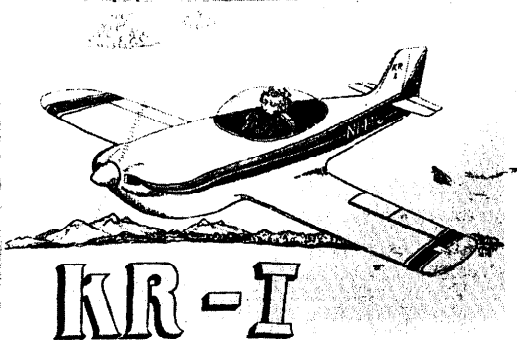
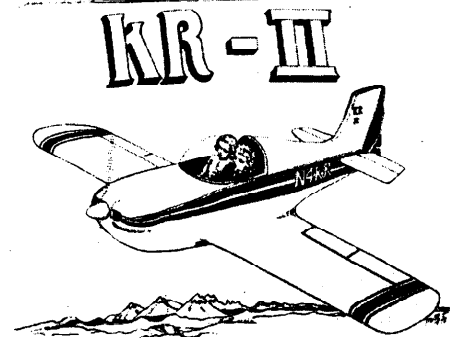
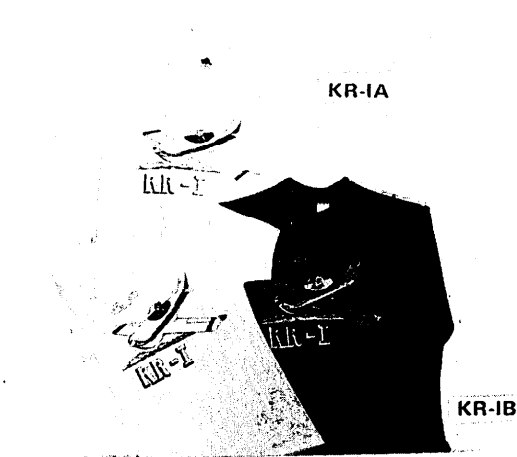
Drawing not to scale

Noticed comment about static balancing of elevators and rudder. I have already incorporated them in my KR-2. I will also use the Revmaster 2100 engine. The construction and covering is complete and it is very rigid and strong.....Garth Hess
 881 Emory Ct.
 Upland, CA 91786

FLIGHT REPORTS

Ivan McLay, 1206 Cheyenne Ct., Boulder City, NV 89005 is flying a KR-1 with a 36 hp VW. He has only 5 hrs on it because of some cooling problems (solved now) and reports the aircraft handles great. The 36 hp provides marginal power with an A/C empty weight of 410 lbs and a 170 lb. pilot but it flies....2900 rpm = 120 IAS w/3 blade CA prop.

Last issue of the Newsletter had a picture of a KR-1 belonging to Butch Grafton, 1605 Eucalyptus Dr., El Cajon, CA 92021. The picture looked so good I had to see the aircraft "in the foam" so to speak. Off I went to the Fla-Bob airport open house hosted by EAA Chapter #1. The KR-1 looked better than anticipated, a really nice aircraft. I had to know if it flew as well as it looked so at first opportunity I cornered Butch and urged him to send some figures to the Newsletter. His letter follows.....flew my KR-1 to Fla-Bob Feb. 28 and was trapped by Ernie Koppe into promising to send in a report on performance, etc. on my ship. The airplane has about 30 hrs. since the initial restriction, which gives over 100 hrs. with no problems. Haven't had to make any changes. The longest trip has been from San Diego to the Casa-Grande, AZ Fly-in. Everything worked fine. I built the engine, using all new parts. Stock single port heads, 92 mm Alloy cylinders (1834 cc), slick belt drive mag., Honda 125 alternator, 29 mm Posa carb., Corvair oil cooler. Had the crank, pistons and rods balanced by Rimco in Santa Ana, CA. I use the warm cowled air for induction, no carb. hart. One loses a little performance with the warm air but it is simple and I have had no icing problems. Here's a few press. and temp. figures. Oil pressure out of cooler, hot, 40 PSI (In cooler 55 PSI). Oil temp., depending on ambient, from 160°-220°. Cyl. head temp., from #3 plug, 260°-400°. I take my oil temp. from a tapped hole on the lower left side of the case. My ship is probably one of the heaviest KR-1s (490 lbs). Some of the extra weight is in the wing tanks, wobble pump & a fairly heavy radio (Genave 600, 1½ system with VOR). I carry 13 gal. of fuel in the wing tanks and 9.2 gal. in the nose tank. Fuel is transferred from wings to nose with the wobble pump. Until a couple of weeks ago, I had been using a Wayne Ross 52 x 46 fixed pitch prop. I am now experimenting with a Warnke ground adjustable. I cut an inch off each blade (54" to 52") and am fooling around with the pitch. With the pitch setting I had today, full throttle gives 3625 rpm and 160 mph. Cruise power setting of 3400 rpm at 1500' msl indicated 150 mph. I talked with Warnke today and we are going to try a 50" blade and play with the pitch. Will see what happens. By the way, I pushed over from 3500', leveled off at 1500', indicating 198 mph. No problem, nice smooth pull out. Even tho' the ship is small and lively, it is surprisingly easy to fly. Stalls are gentle with no tendency to fall off on a wing. Carrying a little power (1500), the break comes at 53 mph. Ease off the back pressure and recovery to level flight is quite simple. Probably the most noticeable difference between the KR-1 and a larger airplane is control of pitch attitude. This ship, with the 5" central stick, is quite "touchy" and if a person is heavy handed, when sliding down on final approach, the airplane will appear to be a cork bobbing in the water. But if the airplane is flown with gentle pressure, using thumb and fore finger on the stick, there is no problem. The KR-1s could probably get by fine with about half the elevator. The KR-1 descends quite rapidly, which makes it quite easy to enter traffic fast and still get down without going 3 or 4 miles past the airport on down wind. I usually enter traffic around 130 or 140, slow to 120, get the gear out, slow to 100 turning from downwind to final, then let the speed bleed off thru' 80 or so, then just fly the airplane and land. A person must get used to sitting so close to the ground in this tiny ship, otherwise there could be a tendency to round out too high, slow the ship and drop it in. The airplane seems to land best in almost a 3-point attitude. In other words, when landing hold it off just a tiny bit nose low and the airplane will touch down with the tail wheel barely off the ground. Then, unlike other conventional geared airplanes, there is no need to suck the stick clear back, just let the tail lose all lift and you are on solid. And then is when you will find the ship so nice. Directional control is terrific, good rudder control, straight as an arrow. Far better than any of other tailwheel airplanes and I must say I have flown most of them, from J-3 Cubs, thru Stearmans, Ryans, North Americans, Mono coupes, Swifts, etc. thru' Lear 25s. In closing, let me say that the KR-1 is easy and fun to fly and a low time tri-geared pilot should have no trouble with the ship. Just drive it around on the ground for a while and remember, gentle pressure on the stick for controlling pitch.



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