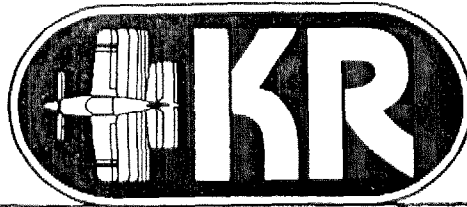


Issue no. 78
DEC.,
1981



KR NEWSLETTER

	RATES	
USA	\$12.00	Yr
CANADA	\$15.00	Yr
OVERSEAS	\$20.00	Yr
		U.S. Funds

A basis for ideas and food for thought only. Use of any of the idea material is at the user's discretion. Not affiliated with Rand/Robinson Engineering Inc.

MERRY CHRISTMAS & HAPPY NEW YEAR

Can you believe it? We are at the end of another year. Where does the time go? I suppose this year went by more quickly for me because of my move to Oklahoma. There was never enough time to get anything done and my Newsletter schedule has suffered greatly. All that is now behind me. I've bought a house, I've got a phone (918-227-2988) and other than the few thousand chores associated with settling in a new home, things are getting back to normal. Bear with me while I get things arranged around here.

By the way, my home address is 335 Lynn Lane, Sapulpa, OK 74066 and any of you can drop by if you're passing thru the neighborhood. Newsletter mail will continue to the Jenks P.O. Box, makes it easier on the postman.

I stopped to visit a couple of times on my last trip from California (I've made 5 this year). Rex and Phyllis Taylor of H.A.P.I. in Eloy, AZ was the first stop and Rex was kind enough to take me on a tour of H.A.P.I.'s new facilities. He wanted me to be sure and pass on the following warning on carb ice.

Test stand engines using the POSA carb have developed carb ice in the intake system. Rex advises that all users of the POSA should use some method of carb heat to combat this problem.

My next stop was in Albuquerque, NM at the home of Jim & Anna Demick. Jim has a 99% complete KR-2 that will be flying soon and I figured a look at a KR would provide a nice break in a long trip. Indeed it did. Jim has a KR-2, built mostly to plans except for the empennage. Long an admirer of the Gloe Swift, Jim has adapted the lines of the tail of his KR to match that of the Swift. The result is almost a 3/4 size replica of the 1946 classic. Flight tests are to begin in January '82 and we should get some report on flying qualities shortly after.

CORRECTION.....Last month, in the ads section, I ran an ad for Ken Scheiman. He is selling his KR-2 kit and would deliver within 200 miles. Unfortunately there is a typo in the ad. Ken lives in Ohio (OH) not Oklahoma (OK) as the ad indicated. Sorry 'bout that...see the corrected ad in this issue.

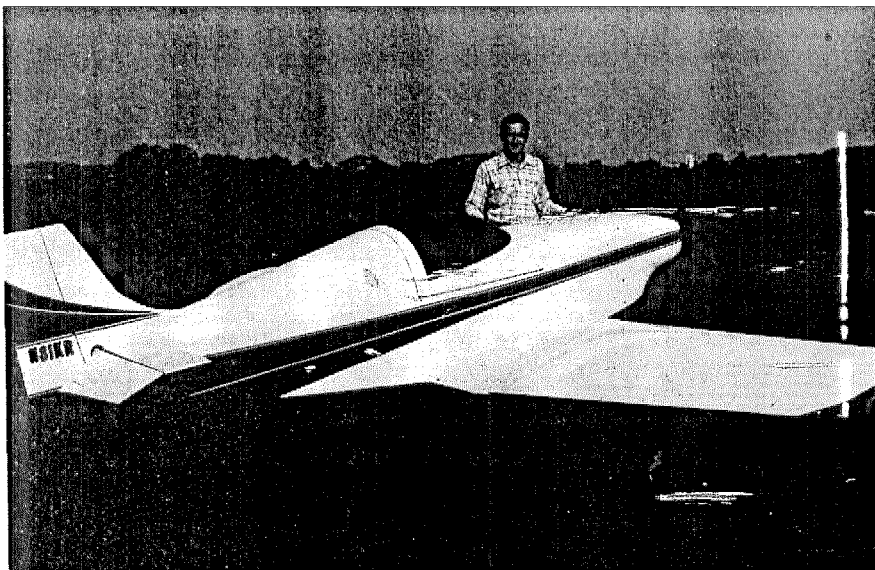
QUESTIONS & ANSWERS

- Q. What are the degrees of travel for the control surfaces on a KR-2? I couldn't find the answer in my plans.
- A. Rudder 30° each way, elevator 30° up 20° down, ailerons 1½" up ¾" down (measured at the inboard trailing edge). I consider these minimum amounts of travel for safe flight. KR-1 uses the same travel.
- Q. I've seen several references to micro-balloons in your Newsletter. Where could I send for some?
- A. Wick's Aircraft, 410 Pine St., Highland, IL 62249 phone (618)654-7447. Aircraft Spruce & Specialty, P.O. Box 424, Fullerton, CA 92632 phone (714)870-7551.
- Q. Are you still selling the "Sting" exhaust? If yes, how much should I send to get one, if no, where can I get a good tuned exhaust for my Revmaster 2100D?
- A. I do still sell the "Sting", price is \$180.00 plus shipping. My inventory is currently depleted and I will begin a new production run as soon as enough orders are received.
- Q. I have just glued foam to rudder, horz. stab., & elevator. Do you apply fiberglass before installing on the fuselage? Are they inspected by the FAA before glassing?
- A. Yes, to the first question but when the inspection is made on the parts is up to the local FAA inspectore. The parts can be inspected after fiberglassing if the surface of the glass has not been sanded.

FLIGHT REPORTS

Our Quaker state KR builders have been busy lately. Here are two flight reports from builders in Lancaster, PA.....

From Mark Kaufman, 2107 Plymouth Road, Lancaster, PA 17603...."The first flight was on Sept. 26, 1981, everything went perfectly with no problems whatsoever. The aircraft presently has 28 hours on it. The only problem experienced has been a faulty airspeed indicator which had a tendency to stick at 110 mph. Empty weight is 552 lbs. It is equipped with a Revmaster R-2100D with starter, alternator, oil cooler, and mixture control. Also installed is a Genave Alpha 200 nav/com with antennas built into the wings and tail surfaces. The propeller is a Great American of 52" diameter and 48" pitch, with this prop the engine will turn up to 3800 rpm static. I never exceed 3500 rpm so full throttle is never used. Rate of climb when flown solo is 1800 fpm and 1200 fpm with a passenger.



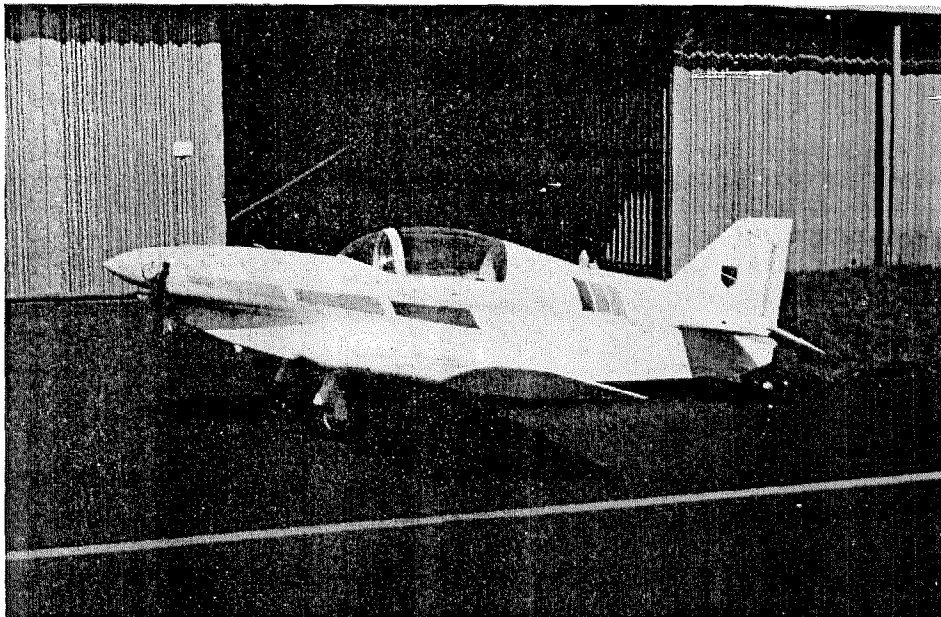
Cruise speed is 160 mph with a stall speed of 45 pmh. The aircraft flies hands off and has no bad habits. Also the FAA removed the restrictions after 25 hours. The plans were followed except for the use of two layers of 6 oz. bi-directional cloth instead of dynel. I am extremely pleased with the plane and feel that for the time and money invested, you can't beat the KR-2.

From Carl A.O. Huckfeldt, 11009 W. Tulane Ave, Littleton, CO 80127..."KR-2 N8524P signed off 10-20-81. A lot of minor fixing had already been done. I had the aircraft off the runway twice, off the right side and off the left side that is! First time due to inexperience, pilot forgot that right torque (REMEMBER LEFT RUDDER). Second time was a high speed run and was slowing for taxi way, let the stick back too quick and drifted off the runway to left. This time I poked a hole in the bottom of the left wing on a reflector stake. Repairs were made. The inspector showed up on 10-20-81 and signed the aircraft off. He said it was nice looking aircraft, the first KR-2 he had seen in the raw. A lot of taxi tests later to gear alignment fixed and to solve a heating problem. I turned the aircraft over to a 1500 hr taildragger pilot, David Guerriero. He owns and flies the DeJagger homebuilt. A couple of weekends later, after replacing tail wheel (wore out), he was making a high speed run and blew the right main tire. No damage to the aircraft but ended up in the toolies again. That spring steel gear sure is hell for stout. Right then and there I decided to go to stronger tires. I replaced the original sut-up with 500-5 McLeary 6 ply. I now can't see out period. Before was bad enough, time to wedge the tailwheel. GREAT, now I can see over the nose in a tail low configuration. I am very narrow minded about not being able to see where I'm going. 11-14-81 BIG DAY...wind light. Put 9 hrs on rented 152 scouting area for likely landing spots just in case, then made two full stop landings. Now back to the T-hanger and the KR-2. I made 4 power runs down the runway (5000') flying the tail. This darn thing finally feels like an airplane should. Everything felt so right I decided I could fly it. The wind went down to hang-glider weather, so was no problem. I made a full power run-up, everything is green. Full power tail up, 60mph back off stick a bit & we are flying. Now the fun begins (VERY, VERY BUSY). This aircraft

is not a 152. I made about $1\frac{1}{2}$ laps of the airport, realized I was holding forward stick so I tried the electric trim, one click and pressure is gone. Next problem! Temp is going and oil pressure is going down so I headed for crosswind (dirt) it is a lot closer. Oil showing on the windshield, flew it right on, no time to fool around. On shutdown, discovered oil was being thrown out around prop hub, also found that the needle in the Posi carb had rotated from vibration. Engine wasn't producing full power although it was OK on run-up. NOTE: Be sure and check that needle for proper setting and see to it that it will stay there. The aircraft was very stable, any or all the oscillating due to pilot induced (lack of experience) 125 hrs tri-gear aircraft. As to the heating problem I personally think I made the intakes just too small and too much oil in engine (heat expands, remember) Well, back to the shop for a few fixes. Should be back in the air shortly. I don't know top speed but was flying 100 mph in pattern and set it down about 60 mph."

From Jim Peris, 129 Crest Ave, Lancaster, PA 17602...."N-31097. We did our series of taxi tests and improved everything we could think of and on July 24, 1981 we decided to test. My KR-1 has about 1300cc VW, empty weight 482 lbs, gross weight 711 lbs. Took off at 2900 rpm's and climbed out about 80 and did one turn around the field. I called (no radio) the tower before and stated one time around. CHT was around 450° oil temp 160 @ 60 lbs. Power approach at 80 and a touch down at 50, straight roll out. Beautiful! I'd say that my KR-1 has a sink rate of a Grumman, but bleeds off very fast. From the first flight to 8 hrs. later we fine tuned the KR...re-ground the valves (more power) re-timed the engine, worked on the prop and cleaned up the plane.

Take off..1000 ft., cruise gear down..100, gear up.. 120, cowl flap closed at cruise..128 mph. Power stall, left & right, steep..40. Power off stall steep..50, fell through smooth, landing approach..80, over fence.. 70. Bleed off to 50, touch down (without flaps) I have flaps but did not get a test yet. Cyl. head temp. when gears were up went from 400 to 325 which gave me a chance to close cowl flaps. My flight which was a real thriller, happened a few



Sats. ago. I was flying around the field at 800 ft. and was doing a series of turns. I heard a real loud bang! Everything in the plane shook real bad. I cut the engine and the shaking was so bad, the key fell out of the switch. I had to go for the fuel valve right away. This lasted for 5 to 6 seconds. I was parallel to the field so I did a short S turn and dove to field at 90 to 100 mph to get down fast. I flared out over fence and I heard the gear horn go off. Well...I did not want to try any more close ones, so I landed gears up. Only damage was the cowl bottom. Three guys from the field helped me lift the plane to its feet and pushed it into hanger. Later we found that the prop had bad glue joints and fatigued and broke off 4" from the hub. Spinner then came off and hit the windshield. One bottom bolt on the bell housing at the motor mount was broken off and the flange on the crank case broke off on top mount, a couple of more seconds and I would have lost 150 lbs. in the front...no good at all! I'm now building 1835 and a new prop. I can't wait to fly again...a KR will hook you if you fly any variety of planes..they are slick, clean, quiet and responsive. Lesson to learn...check all props for glue joints (a directive came out on this), put a safety cable on the engine. It will make you feel more secure."

BUY SELL TRADE

WANTED...unused KR-2 kits. Contact Lee Carroll, 3559 Alder Place, Chino CA 91710 phone (714)597-4604, NO COLLECT CALLS, prefer So. Calif.

FOR SALE...KR-2 wood kit, dynel & a few instruments. Plus 2 1/2 yrs KR Newsletters & plans #4316. Lost job, need cash. Will deliver withing 200 miles. Kenneth Scheiman, P.O. Box 7, Grand River, OH 44045 phone (216) 255-6926 no collect.

FOR SALE...KR-2 project, approx. 2/3 complete. Fuselage completed wired, & cables. Elevator & rudder foamed, wings need foam. Also have some instruments; compass, M.P. gauge, & turn & bank. Canopy, gascolator, 4 gal. epoxy, everything to finish... including 2100 Revmaster engine and a \$250.00 deposit on a Maloof prop. \$4000.00. Randy Eloffson, 12542 Manley, Garden Grove, CA 92645 phone (714) 893-1157 no collect.

FOR SALE...KR-2 project. Fuse on wheels, foamed & glassed. Spars signed off, empennage finished, plus instruments & hardware. Will sell for cost. Montreal, Canada area. Call (514)684-1573.

FOR SALE...GB-1 project. Lower fiber-glass fuselage, all the spruce for complete plane from Aircraft Spruce and Specialty, all fiberglass matting & cloth, 1 gal. epoxy, 2 gal. laminating resin, foam kit, plans & pictures. \$950.00 invested, will sell for \$450.00. Arthur Silverman, 872 S. Lucerne Blvd., Los Angeles, CA 90005 phone (213)937-9370.

FOR SALE...KR-1 project. Fuselage with wing studs complete, spars signed off, tank & cowling complete. Needs only wing foam & glass to complete. R/R tubular engine mount. VW converted. E. Rhodes, 3618 14th Ave. North, St. Petersburg, FL 33713 (813)323-3087.

JOIN E.A.A.

Write to:

Experimental Aircraft Association
P.O. Box 229
Hales, Corners, WI 53130
Telephone (414)425-4860
Office hours: 8:30 - 5:00
Monday - Friday

TRADE...have Rajay turbocharger for 2100, 75 hrs TT. Will trade for Rajay for 1800cc engine. Robert Patlovany, 700 Henning, Apt. 37A, Sulphur, LA 70663 phone (318)528-2786.

FOR SALE...R/R engine mount for VW..\$50.00 Gerald M. Bates, 4794 San Bernardino St., Montclair, CA 91763 phone (714)626-8779.

FOR SALE...KR-2 kits. All metal, including gear parts & upholstery kit. Make offer. Kenny Ranta (515)262-4122 (Iowa)

FOR SALE...1835 turbo charged engine by Rocky Webster (E. Koppe's brother), with Super carb, Dan Diehl case, alternator, & starter. H.A.P.I. prop hut, 4216 Slick mag., supertin...\$3100.00. Also have asst. parts Lyc. engine mount..\$100.00, rudder pedals...\$22.00, aileron hinges (5) \$20.00. Have all KR Newsletters...make offer. Harry Hermann, 37247 51st St. E. Palmdale, CA 93550.

TRI-GEAR PLANS...Retractable system that uses Rand's parts, wheels, gear legs and spring bar. Conversion plans..\$25.00. Bill DeFreze, 7530 Ironwood Dr., Dublin, CA 94566 phone (415)828-2111.

THE DIEHL SUPERCASE

The only accessory case on the market designed to fit either of Rand's engine mounts. Provides electric starting and 20 amp solid state alternator. Now available with starter on top to allow clearance for tri-gear.

Current Prices

ACCESSORY CASE.....	\$125.00
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MAGNETO DRIVE.....	40.00
STARTER.....	65.00

We also have the special tailwheels for the KR's. These are \$15.00 and will fit the Rand fork. And... TRANSISTORIZED FUEL TRANSFER PUMP for \$25.00. Price on wheels and pumps include shipping....Dan Diehl, 1855 N. Elm, Jenks, OK 74037.

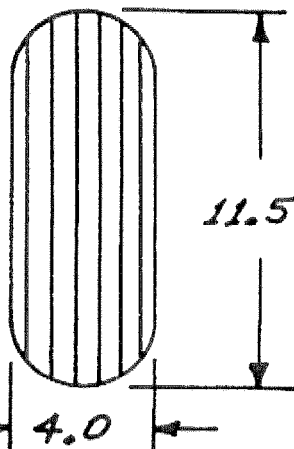
TRI-GEAR REVISITED

Never rains but what it pours! A newly developed tri-gear is being introduced for the KR's and another is under consideration. To date, there have been no tests of either tri-gear on a KR. It is information that should be passed on to all KR builders though. I have seen the prototype of the New Zealand tri-gear (the KR-2 in R/R's shop is supposed to get the first set). It appears to be a well designed gear. Be sure you correspond with one or both of the following individuals before you order anything. Know exactly what you are getting and when before you order.

HOTLINE FROM NEW ZEALAND....Aero Trading Ltd., a New Zealand company has been manufacturing Air-Oleo landing gears from a large variety of homebuilt aircraft over the last 7 years. Their range covers from Jodel D11, Minicab, Sirocco, Pazmany PLII, Turner T40, Mustang II to Zenith and Tri-Z. At the request of your editor, we have now developed a fully retractable tri-cycle Oleo-landing gear for aircraft with a max A.U.W. of 1200 lbs. The main struts are made from al alloy castings. The main fork, scissors and retract links are milled from solid al alloy 2024 T6. Each gear incorporates its own pressurised hydraulic strut which provides the force for downlock, retract and uplock. The retract cycle is only 3 seconds. The main wheels incorporate disc brakes and the nose gear is either castering or fully steerable. The landing gear can be fitted as a retro-fit on existing KR-2's all ready flying. The complete set including wheels, tyres and brakes sells for U.S. \$950.00 Ex Los Angeles. Instruction drawings are available at \$25.00 set, re-fundable by purchase of landing gear from: AERO TRADING LTD., 16 CLIFF RD., TORBAY, AUCKLAND, NEW ZEALAND phone 403-9397

KR builders and owners....by now you have probably heard of me. I have been building a tri-cycle landing gear for about three years and have been selling plans to build the gear as a fixed tri gear system. Since then I have developed a new tire that is just perfect for the KR's. Both tri gear plans and the Lamb Tire have been advertised in the Newsletter. Mrs. Jeannette Rand and I have been discussing the possibility of me manufacturing a tri-cycle gear fully retractable to fit or retro fit a plans built KR-1 or KR-2. This will take quite a large investment and extensive testing program. The gear system complete with wheels, brakes, and Lamb Tires will sell for approximately \$1200 to \$1500. So I need to know how many of you would be interested and whether you have the KR-1 or KR-2. Send your response to Mike Lamb, 5327 West Ave., L-10, Quartz Hill, CA 93534. If you have questions send a self addressed stamped envelope.

INFLATED



NEW!

THIS TIRE FILLS THE SIZE GAP BETWEEN THE 500 X 5 AIRCRAFT TIRE AND THE 3.40-300 X 5" GO-KART TIRE

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TIRE - \$25.00 ea.
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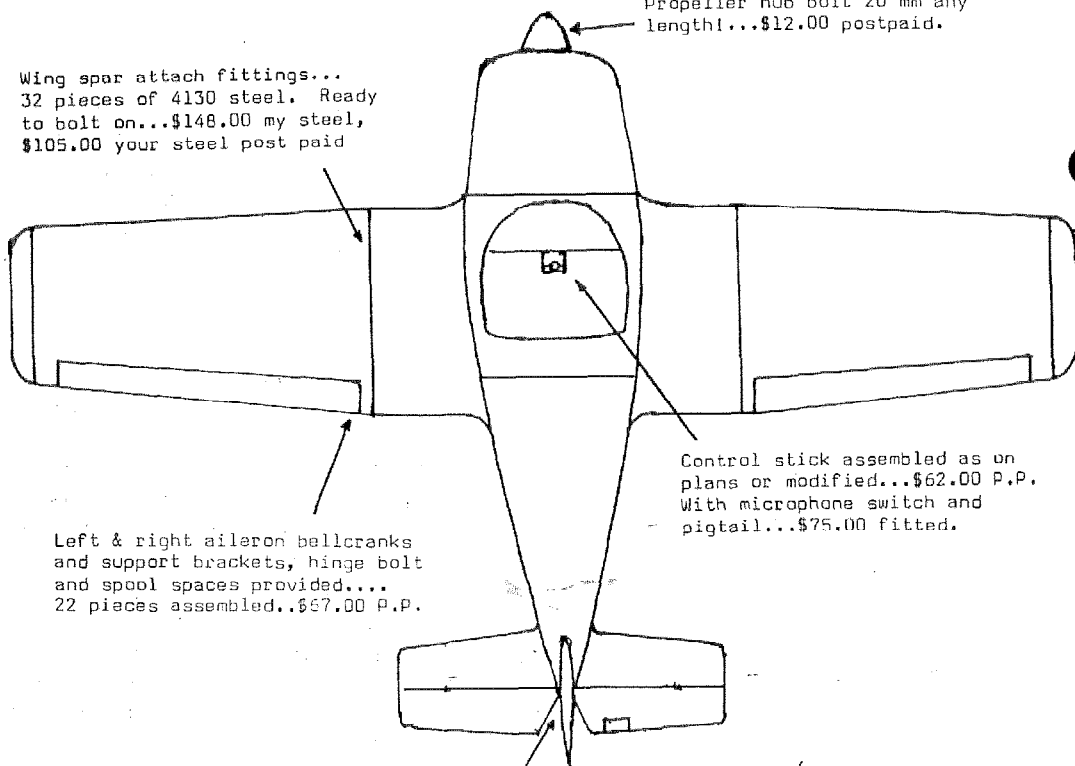
Miniature Metrics has several
services and products. Send
a S.A.S.E. for more info.

No instructions are given
which conflict with plans
or Newsletter. We prefer
you refer to plans or consult
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