



NEWSLETTER

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**** A monthly publication for communication between KR builders and pilots world wide.****
Edited & published by Ernest Koppe, 6141 Choctaw Dr., Westminster, CA 92683 714-897-2677

I'm packed and ready to go, all last minute preparations made (I think) and waiting impatiently for the annual Oshkosh adventure to begin. The EAA Convention and Fly-in gets bigger every year and in spite of the "fuel crisis" is expected to again bring record breaking attendance.

There is going to be something missing for some of us though...Ken Rand won't be there. The enthusiasm he generated will be present however, via the hundreds of KR builders carrying on his ideas.

The KR forum is on Monday, July 30, 12 noon to 1:15 p.m. Dan Diehl and I will ride herd and try our best to answer your questions. See you there!

SURVEY

The survey is now officially closed (at least til next time). Below are the final listings to date.

KR-1	25%	Bryan Bossart, Racine, WI	KR-2	90%	M Raymond Juste, Jonqueires
KR-2	30%	Tony Winstead, Ewa Beach, HI			France
KR-2	30%	Charles Collins, Jacksonville, FL	KR-2	80%	M Paul Planel, Thionville,
KR-2	70%	Frank Lovko, Huntington Beach, CA			France
KR-2	10%	Paul Semco, N. Providence, RI	KR-2	90%	Ed Nelsen, Idaho
KR-2	15%	C Prentic, Ganges, BC Canada	KR-2	90%	Fred Wegner, Des Moines, IA
KR-2	5%	Larry Oppegaard, King, NC	KR-2	80%	B.E. Larson, Beaumont, CA
KR-2	18%	Larry Zepp, Bowling Green, OH	KR-1	30%	Homer Sanders, Decatur, IL
KR-2	80%	Richard Narber, Glendale, AZ	KR-2	70%	Darrell Bosely, Marietta, OH
KR-2	15%	M Marc Pichot, Mimizan, France	KR-2	15%	" " " "
KR-2	70%	M Roger Boucheix, Biarritz, France	KR-1	100%	Melvin Boggs, Columbus, OH
KR-2	50%	Carroll Brooks, Columbia, SC	KR-1	95%	Kurt Kannwisher, Lithonia, GA
KR-2	40%	Harold Bates, PawPaw, MI	KR-2	40%	Charles Cooke, Felton, CA
KR-2	85%	Merv King, Bird-In-Hand, PA	KR-2	30%	Kenneth Brown, Naples, FL
KR-2	95%	Jes Thomsen, Sonoma, CA	KR-2	12%	Vernon Cheney, Scottsdale, AZ

TIPS FROM OTHER BUILDERS

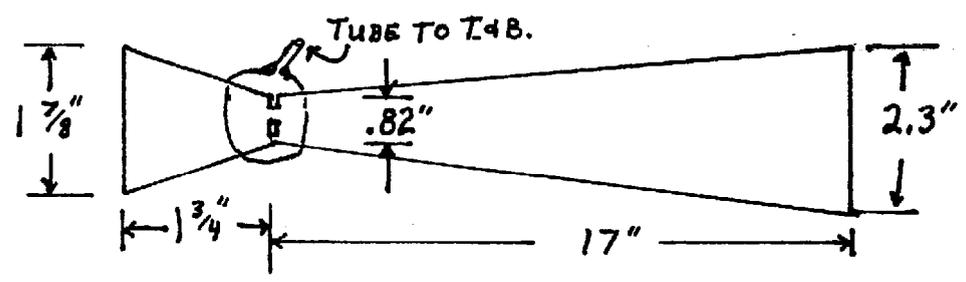
I have a special problem I ran into hooking up my control cables. I had my KR-2 perched on a box when I swaged my cables on. I aligned everything up and checked them three times before the swage job. After the swage job it looked perfect...until I took it OFF the box! With weight on the tail wheel, the cables from the tail wheel became slack! At the present I am trying to locate a set of compression springs such as used on a Stinson L5. I ordered a set of springs from A/C Spruce & Spec. but the springs were too large. If you have a line on a smaller spring let me know...Bruce Gilinsky, Box 989, Lakeview, OR 97630 Phone 503-947-2575 after 5:00.

P.S. If anyone in my area would like help with their KR's, come down, call, or write!

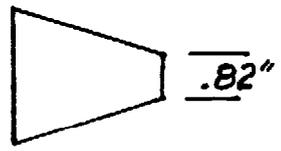
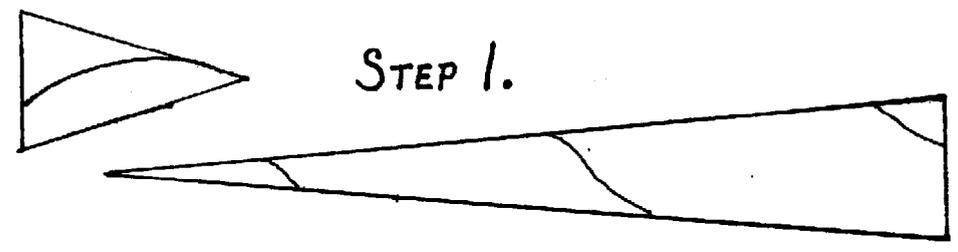
* * * * *

When shaping the elevator, I tried three (3) times to get a perfect trailing edge. On my third try, I made a trip to the local hobby shop and bought two sections of Balsa Trailing Edge and worked it into the foam and now have a perfect straight and level trailing edge. The big thing that I have found is in the shaping of the foam but a trip to your local shoe repair shop will enable you to buy the kind of sandpaper he uses on his shoe grinder. It's about 1 1/2" wide and a roll is 25 yds. long. It's just the right size to put on a good 2 x 4, thus you do not get any high or low spots in the foam. If anyone cannot find it, I will be glad to get it for them as I can buy it wholesale...Jack Spring, P.O. Box 1234, Gulfport, MS 39501.

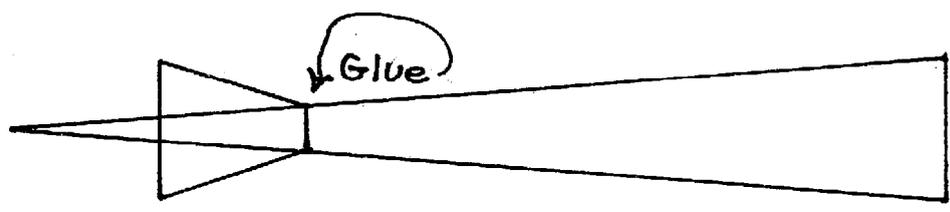
Garth Hess wanted a turn bank in his instrument panel but without an unsightly venturi hanging out and without the high cost of an electric instrument. So....with some research and handiwork, he fit the following system to his KR-2.



STEP 1. Roll two cones of plastic (drafting Mylar best).



STEP 2.

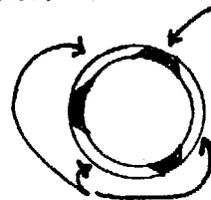


STEP 2. Cut tip off input cone and slip over outlet cone. Coat with release agent

STEP 3. Cover with two layers of approx. 12 oz. 1 sq.yd. fiberglass cloth and Rand/Robinson epoxy.

STEP 4. Remove plastic form, cut 3 hack saw slits at narrow neck as shown. Clean up rough edges.

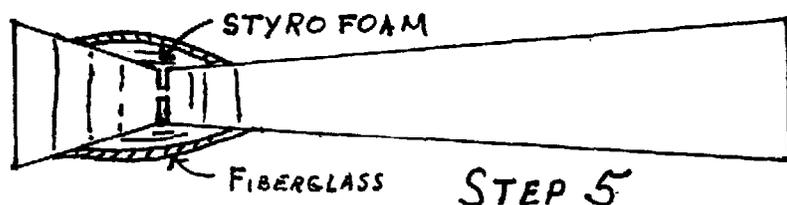
SUPPORTING MATERIAL



3 HACKSAW CUTS

STEP 4.

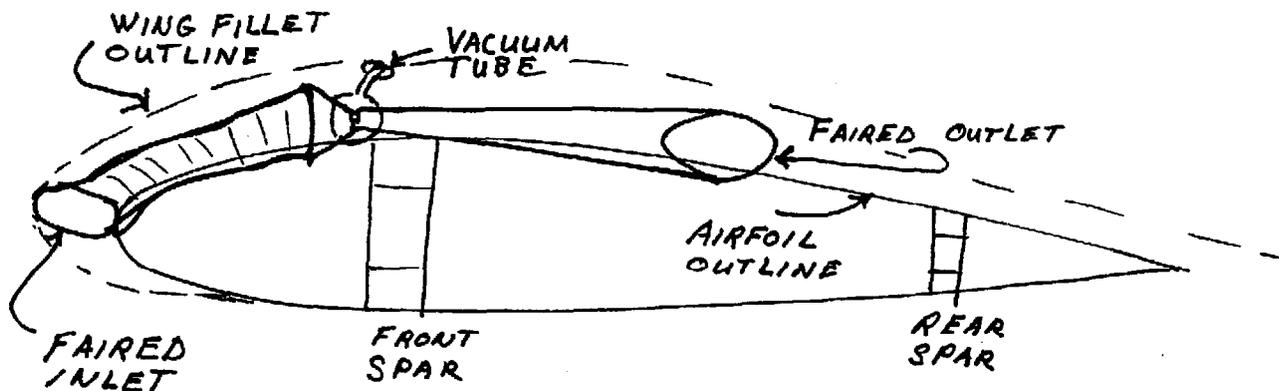
STEP 5. Wrap thin strips of styrofoam around throat on top of slits (urethane foam will not work). Cover it with two layers of fiberglass cloth forming an airtight pouch over the saw slits.



STEP 5

STEP 6. Drill hole in pouch to accept plastic tube that leads to T. & B. indicator. Pour lacquer thinner into hole to dissolve out styrofoam. Epoxy in place.

LOW DRAG VENTURI WING ROOT INSTALLATION



Shaped styrofoam cylinder covered with two layers fiberglass and epoxy to fit inside wing fairing. Styrofoam then dissolved out with lacquer thinner.

The same type of fairing could be used with a store bought venturi but would be considerably heavier.

It may be necessary to use a vacuum regulator to limit the vacuum to the required amount. With the venturi I constructed for my KR-2 the required two inch Hg vacuum will be reached at approximately 102 mph.

Garth Hess
881 Emory Court
Upland, CA 91786

FLIGHT REPORT

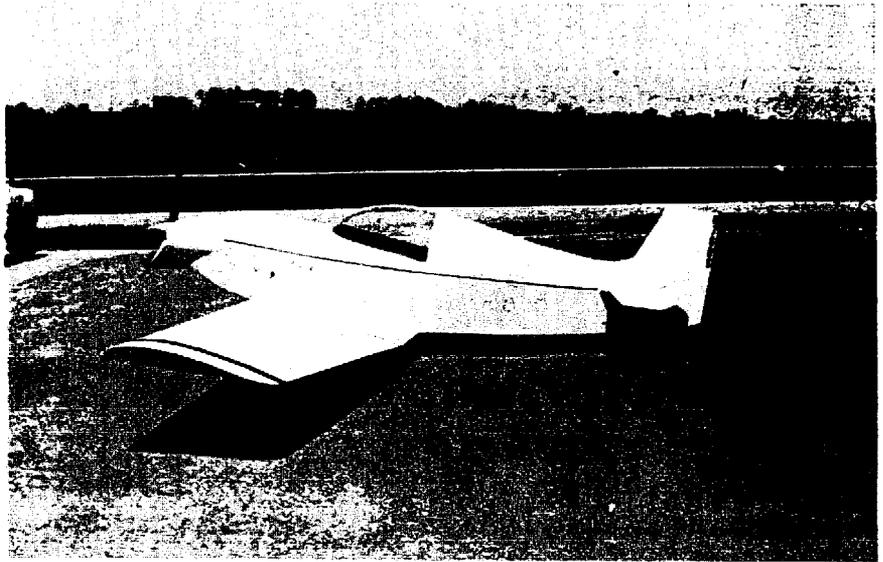
The KR-2, N78RS was built by Ron Sorrell, 6505 Sassafras Ln, Independence, Ky 41051. The power plant is a 1600cc VW turning a R/R 3-blade prop set 82° at the tip (only a few degrees from full low pitch). The max static rpm was 2950 rpm, in flight max rpm was 3150, max oil temp 220°F, oil pressure at 45 psi, #2 cylinder (hot one on the VW) 375°F.

After a thorough pre-flight examination of the aircraft by Ron Sorrell and the flight test pilot, the 1600cc VW power

plant was fired up. Taxi out from the hanger area was normal and the brakes worked very well to hold N78RS up to 2400 rpm (Ron turned his own cast iron rib cooled brake drums for the R/R furnished brake assembly). A check list was used from end to end and everything given a double check.

Power plant was run up from a 300 rpm idle to 2400 (brakes holding) with a burst to 2950 rpm. KR-2 N78RS was taxied to runway 29 with a chase plane close behind. When all was clear, N78RS took the runway and full throttle was eased in, as airspeed increased the tail was lifted. A quick look at the airspeed indicator

at lift off was 65 mph, 80 mph climb was established and climb was 800"/minute at full throttle of 3150 rpm. CHT 325°F and going up, oil temp 190°, oil pressure 45 psi. After turnout on cross wind leg the pilot pulled on the left gear latch (cable cross tied to the right gear latch) and kicked the gear handle down with the right foot and gear locked in the up position, airspeed jumped to about 95 mph still climbing. The pilot established 100 mph (CHT steady at 375°F) in a climb to 3000' with chase plane in sight as arranged, the purpose being to take movies of N78RS while establishing the power off stall speed. The landing gear was dropped * and N78RS was positioned to the right side of the chase plane so that movies could be taken, stall speed was 48 mph ind., stall buffets were noted prior to stall and the KR-2 fell through with wings level and nose back to the horizon full power (3150) back on. After the stall speed was learned (48 mph) and while the landing gear was still down, N78RS returned to the pattern at 90 mph (the pilot figured his maneuvering speeds and pattern speeds on a rounded up stall speed of 50 mph... $1.7 \times 50 = 90$ mph, downwind at 80... $1.5 \times 50 = 80$, base leg at 75 mph... $1.4 \times 50 = 75$ and approach at 70 mph... $1.3 \times 50 = 70$). On crossing the "fence" airspeed came down to 60-65 mph and N78RS touched down on the main gear and stuck, no bounce, no float and the tail was held off until the tail just dropped to the runway. No brakes were required at the turnoff and N78RS was taxied to the hangar and shut down..flight lasted 20 minutes.



*NOTE..Know the landing gear lowering sequence, it is important! I attempted to lower the landing gear by pulling on the up latch (pilot side) first -the gear DID NOT unlatch. I tried again by pulling up on the up latch HARDER -this time the pulley block (routing the latch cable to the right side down latch) came "unglued" gear still in up position - need less to say, I had visions of this beautiful KR-2 belly landing on the runway and prop blades going all over the place but a KR-2 gear hanging up? Impossible (I am a KR-2 builder)! I visualized my plans, kicked the long gear handle with my right foot and "lifted" the left gear latch, gear swung down part way and I jerked it in all the way and the rat trap springs snapped both latches into place. So, kick the gear handle down first, lift the pilot side latch and pull the gear handle back all the way and your landing gear is down and locked in position for landing....it is easy. KR-2, N78RS has 10 hrs flight time on it now and we hope to have it at Oshkosh '79!.....Eugene T Muzynski, 6680 Daly Rd., Cincinnati, OH 45224.

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QUESTIONS & ANSWERS

- Q. What is the minimum travel necessary for the elevator and rudder?
A. Rudder 30° each way, elevator 30° up, 20° down. While we're at it, aileron travel should be 3/4" down, 1 1/2" up, measured at the inboard trailing edge.
- Q. Where can I get the landing lights for wing leading edge and the leading edge cover?
A. You may order landing light assemblies from most of the aircraft supply houses or from the parts dept. of the major aircraft manufacturers. This can be an expensive way to go though (\$100.00 or more). With a little effort you can make one yourself, using a high intensity lamp from an auto parts store and a thin sheet of plexi-glass.
- Q. Do the 4130 steel parts have to be hardened or may they be used as is?
A. The 4130 steel parts do not have to be heat treated but they should be painted with a rust inhibitor.
- Q. I'm using the belt drive Slick magneto but I've never seen the completed assembly. Do you mount the pulley to the mag drive or remove the drive on the mag first?
A. Remove the drive lugs on the mag drive and bolt the pulley to the mag drive.

BUY SELL TRADE

FOR SALE...KR-2 project, fuselage ready to come off the table. Spruce kit, plywood kit, landing gear castings, axle kit completed. Two gallons Rand epoxy, rudder pedals, tinted windshield, plans....\$650.00. Howard Bohl, 13822 Marquette, Westminster, CA 92683 or phone 714-897-1854

FREE...KR-1 fuselage layout form on very long solid core door. Saves lots of layout work. Wanted...a used or workable prop to be used to run in a 1700cc engine. Nothing fancy, just cheap. Bryon Bossart, 147 Lakefield Ct., Racine, WI 53402, phone 414-639-3049.

KR-1 fuselage, on gear, almost all parts to complete incl. new VW engine for sale due to death of my husband. Cost...\$2830.00 and asking \$2300.00. Doris Reiman, 1418 Highview Dr. Perry, IA 50220 phone 515-465-2490.

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