

Krainock does it again!

by Ed Slobod

This account of my record flight is given by Ed Slobod, because as Contest Director and driver, he was in the best position to see everything going on. Rubber-necking with a glider at 2000 ft. is usually bad form.

Record flying is a combination of people, equipment and weather. With the weather, you take your chances like everyone else. My airplane and radio performed flawlessly this summer, with a total of 12½ hours in the air and 150 cross-country miles flown. The 120° heat, long distances, strong turbulence and fine dirt caused no problems. No special battery packs were required, and on two occasions we totalled four full hours in the air.

My crew this year was Eddie Slobod, his son, Paul, and usually, Ted Buxton, Bill Nibley, Terry Smith, Gene Schatt and Paul Scibetta. We have spent six Saturdays in the desert this year, and this record couldn't have been set without them.—Jerry Krainock

Last Labor Day, while everyone else was enjoying the holiday, indefatigable Jerry Krainock and his merry masochists went out once again (for the fourth time in the past five weeks) to do battle with Mother Nature in yet another quest for the elusive FAI Glider Distance Record. Jerry already held the record of 18.4 miles, and you are probably wondering about his motivation. . . or sanity.

Well, Jerry had his reasons, as you shall soon learn, but you might ponder the plight of the crew who could look forward to another day of strained necks, sunburned eyeballs, parched throats and the inner glow that comes with defeat.

It had been two weeks since our last landing at Lovejoy Butte and, since we



TOP: Jerry launches his Pierce Duckie at the beginning of the 27-mile flight which gained him a new World Record. BOTTOM: Reclining on the tailgate of a station wagon, with Paul Slobod as spotter, Krainock makes it all look deceptively easy.



had been unable to get past the Butte on three previous runs of 13, 15, and 16 miles, a decision was made to try a different course. In addition, the Pierce Duckie had been retrimmed and showed vast improvement in thermal climb. The course chosen was a run down Highway 138 to the end of the road, a distance estimated to be 23 miles.

First launch was at 10:50 a.m. and there was no lift, but Jerry hit some zero sink at about 60 ft. After several

circles, the sailplane began to go up. It took about eight min. to get to "go" altitude, approximately 1000 ft., and we were off. Normally, the lift is better around 1:30 p.m., so we didn't expect much more than a trial run. However, the lift was good and we had gone about 11 miles (and gotten up to about 3500 ft.) before Pierce Duckie began to come down. Frantic searches for dust devils and hawks proved fruitless, and we

(Continued on page 122)

KRAINOCK

(Continued from page 84)

stopped the cars and watched with heavy hearts as the P.D. descended for an apparently imminent landing.

Jerry was just about to cross the telephone wires at about 50 ft. when a slight breeze came up. As soon as Jerry felt it, he began circling. The first two circles were zero sink but after that he started to climb. It wasn't long before he was back up to where it was safe to continue. Since I was driving, I couldn't watch the model, except for an occasional peek out the side window while nervously watching the odometer, and from time to time asking about the estimated altitude. When the odometer indicated we had only three more miles to go and were at 1500 ft., I began to think we might make it.

I told Jerry that we had gone 20 miles and had just passed 70th St., and Jerry remarked "Good, we only have six more miles to go." Something, obviously, was wrong, but as long as we were still up and making good progress, I didn't dwell on it. Shortly afterward, I told Jerry that I could see the freeway about a mile and a half away. He told me that when we got to the top of the ramp that crosses the freeway, we would be able to see the end of the road which was our destination.

When we came within a half-mile of the freeway, I uncrossed my fingers, and for the first time in all of my trips, allowed myself to believe that we were going to make it. We crossed the freeway with about 800 ft. of altitude, and the end of the road looked to be about a mile away. . .we had it made! It just remained to find a soft spot to put the bird down.

As it happened, all of the nearby fields were full of bushes, so Jerry did his thing and landed on the side of the road in the dirt next to telephone poles and between railroad tracks. When I told him that my odometer read 26+ miles, Jerry had figured 23. We did a recheck of the map, and it came out close to 26.2 miles (later verified as 27.2 miles). No one had remembered the champagne, so we broke open a six-pack of Squirt and toasted our victory.

Getting back to the question of "why?", the first reason has to do with the airfoil section used on the Rubber Duckie. Its speed range and the stability, plus a relatively low sink rate so impressed Jerry that he was sure the section, if used on a cross-county ship, would provide the right combination to do the job. He persuaded Bill Watson to cut some constant chord foam cores which went with a standard set of Duckie cores to make up a 10 ft. polyhedral wing.

Combined with the fuselage of a Pierce 970, the design looked good from the start, but later tests indicated it was lacking in climb ability. This was borne out when, in one session, Bill Nibley used his Pierce 970 to scout the area for lift before Jerry launched. Bill would find it and Jerry would launch, trying to climb out to where Bill's ship was. Well, it couldn't get up there. At first it was thought that the extra weight was holding it down, but after Jerry and Bill Watson talked it over, they concluded that the ship was being flown with the CG too far forward (38%).

On the Sunday preceding the record attempt, Jerry took two oz. out of the nose to move the CG back to 46%. They were right. It made a big difference. When flown against Rick Pearson flying Dave Peltz's Grand Esprit, it was only slightly poorer in thermal climb than the Grand Esprit. We all agreed that the climb ability was now excellent. Having watched the development from the beginning, including all of the recent record attempts, I would judge the model, in the hands of a good flier, to be as good as anything presently in the air . . .when all the performance parameters are considered.

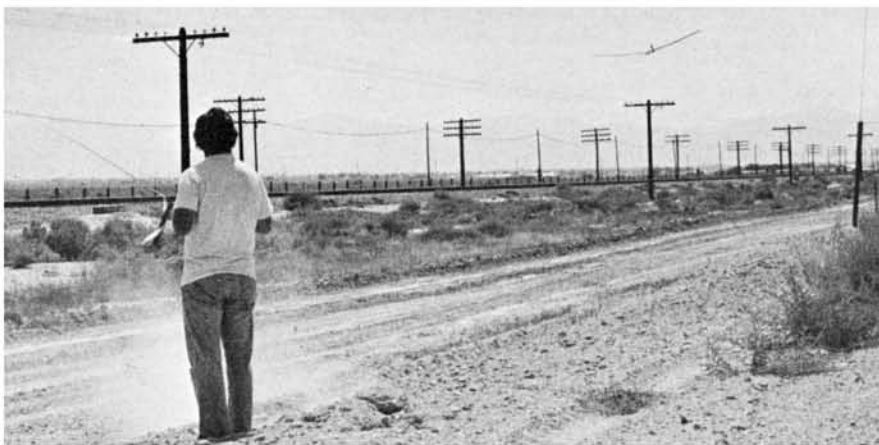
Reason Two. Jerry had heard a rumor that someone in Texas or Arizona had broken his record of 18.4 miles. Although a call to the AMA revealed that his record was still intact, Jerry probably figured that the distance was not great enough and was bound to be bro-

ken. Decision—why shouldn't he be the one to break the record?

It is my feeling that it took a combination of a good model, a good flier, and exceptional conditions to do the 27.2 miles. That record is going to be hard to beat. However, I know that Jerry is still bothered by the thought that there may be a thermal street 35 miles long somewhere in Texas. Also, I understand that he is now studying maps for a possible *50-mile* run. Ugh!!!

American Aircraft Modeler

January 1975



Records come in odd places. Jerry sets his Duckie down among multiple obstacles.



The smile of victory is 27 miles wide.

Soaring for Records

by Jerry Krainock



The merry masochists gather to celebrate a World Record. Left to right, Paul Scibetta, Bill Nibley, Jerry Krainock, Ed Slobod, Paul Slobod and Tom Osborne.

Have you ever considered flying for World Records, but thought you weren't good enough, or didn't have enough know-how, or, perhaps, that it just wasn't worth the effort?

Actually, while there is a lot of work and time involved, the rewards are very satisfying. I mean, when was the last time someone in your club came to the meeting wearing a grin from ear to ear, and brandishing a certificate from the FAI in Paris, signifying that *he* has flown higher, faster or farther, *officially*, than *anyone* else ever had?

My preference is glider flying and my specialty is Cross-Country Distance. On June 10, 1972, I set a World's Record for RC sailplanes, Cross-Country Distance. I spent four weekends in the desert, and maybe \$750 in a one-year period before I was successful, so the cost in time and money was not prohibitive.

The purpose of this article is to pass on some of the lessons I learned, as well as to encourage some of the rest of you to try this aspect of the hobby. My observations deal specifically with gliders, but may help other RC fliers in their quests for records.

For Cross-Country Distance and Altitude, the most important characteristic a glider should have is size, followed by stability. The bigger the glider, the higher you can see it, and the farther you can go before you need lift. It's as simple as that! A sailplane built to FAI maximums will be visible at 7000 ft. on a clear day, and that's 2000 ft. over the current record.

A cross-country model may not need to be built to the full FAI limits for size, but it should be up to the maximum weight. You may choose to make the trade-off because of special lift conditions in your area. The high weight will help you cover ground, and that's important. I would like to see someone build a model with 11 sq. ft. of wing area at an all-up weight of 11 lb., with a semi-symmetrical wing section. In the desert, a combination like this will really cover ground.

Some may question the idea of using high wing loadings and a symmetrical wing profile, thinking that a floater would have lower sink between thermals

(Continued on page 126)

SOARING RECORDS

(Continued from page 85)

and, hence, a better chance of completing the course. In practice, it doesn't work out that way. When the lift quits, the thermal search begins—and the thermal could be anywhere. A fast-flying sailplane can explore three-to-four times more area than a floater—especially if some upwind or crosswind flying is required.

The second most important design consideration is stability. It is extremely important to be stable around the pitching axis. When your airplane hits turbulence at 3500 ft. and starts into a series of stalls, you have to be able to stabilize it quickly and easily. I would recommend long tail moments, large stabs, forward CGs, and a moderate-sized elevator with minimum deflection.

It is my practice to adjust the airplane to fly in a shallow dive with full down trim. In lift, full up trim and slight back stick are needed to climb at the maximum rate.

Polyhedral is also necessary for the same stability requirements. In practice, you have to be able to fly the airplane rudder only, and polyhedral has to be the best way to do it.

If you feel you need help in laying out a record ship, you can refer to articles in *RCM* by Preston Estep, Jr.; in *AAM* by Harley Michaleus; in *Model Builder* by Le Gray; and in *Flying Models* by Maynard Hill, for the basic parameters of glider design.

The Grand Esprit is a suitable kit, although a bit small. If an Olympic were scaled up, with a flat-bottom airfoil and sturdier construction, it would probably be satisfactory.

Last year, I flew my 11-ft. Pathfinder I, a J&P products Kestral at 10.5 lb., and an Astro Flight ASW 17, with which I did 18.5 miles. The ASW was lost overhead for about 10 min. on that flight, but was brought back into view after being put into a prolonged spin.

One further word on design: You don't have to have a super airplane, but it does have to be visible. When a glider is up high, wing chord is what shows, not span—so keep your aspect ratio under 15.

This also brings up the importance of color. Orange is excellent, as is any color that shows black at a distance. My personal preferences are metallic blue

and red. At altitude, they show black and, when I'm low enough to tell the red from the blue, I start looking for lift in earnest. Don't use pastels, as they seem to fade out in almost any off-color sky.

So now you have an airplane and are ready to go out and fly for a record. What's next?

You need a crew of AMA members and one or two cars. If one of them also happens to be a full-sized glider pilot, it doesn't hurt a bit.

I like to fly from the trunk of a full-sized sedan, lying down, with the trunk lid removed. It makes for excellent visibility. You should have someone else back there with you to relay directions. The driver and another observer can watch for clouds, burned fields, dust devils, and other signs of lift, and in general tell you where to fly. Remember, your bird is at 4000 ft. and you don't want to spend too much time looking away from it.

You will need to find a suitable course to fly. Ideally, the course should have a long, lightly traveled road that is parallel to, or at right angles to, the prevailing wind. The average wind velocity should never exceed 10 mph and, of course, the lift conditions should be good for the length of the run. Flying upwind continuously or over downtown New York City is considered bad form. If the terrain along the road consists of a series of rock quarries, selection of a different course would be prudent.

When you are flying down the course, don't stop to look for lift. Keep going until you find it. Go into a search pattern if you have to. The place you stop is probably the place you will land, unless you have already encountered lift.

If you have another couple of friends in another car with walkie-talkies, trailing at about a half-mile, they often can tell whether you are climbing, or in sink, when you can't tell yourself.

Of course, another obvious question that comes to mind right now is: How did I get this thing off the ground in the first place? Winches are okay, but they are cumbersome, heavy and not always reliable. Try a "hi-start hard-tow." Fifty feet of 3/8" surgical tubing, with 350 ft. of 180-lb. test cord—and one of your

fast buddies running—will tow you up to 380-400 ft. This method has been successful even with an 11-lb. airplane with a 21-oz. wing loading. Out here in the West, we usually have no trouble finding lift at that altitude.

The FAI will accept maps with scales up to 1:100,000 for short flights, but topographical maps like that are not readily available. A series of maps in a scale of 1:24,000, taped together, will serve a few valuable purposes.

First, you can declare your starting point and goal with excellent accuracy. Secondly, the features shown on the maps are excellent references to use in your flight log. Third, you can use the maps for planning the flight—to mark areas where there may be lift caused by a geographical feature; or to show places where you have encountered lift or sink in the past.

If there is a local, full-sized soaring operation, contact them to see if you can find someone who knows enough meteorology to be able to predict to you in advance the soaring conditions. Nothing is quite so frustrating as to drive 40 miles and then be blown out.

And now for the good part—the paperwork. If you go through all the hassle of building the airplane, assembling a crew, and doing a 30-mile hop, but fail to file the paperwork, your whole effort has gone down the drain.

Start out by obtaining your sanctions and FAI stamp from AMA headquarters, along with an FAI rule book. Read those parts of the rule book pertaining to world records, and make sure you follow them.

A recognized scientific body has to measure your distance and pick off latitude and longitude. Go to your nearest college or university and visit the geography department. With any luck, they will have a cartography lab and, if you sweet-talk the head of the department, you'll have no trouble getting a letter on their stationery, certifying your claim.

Have your CD keep an accurate log of the flight, draw your scale three-view, do a brief description (and I mean *terse!*) of the flight, and the rest of the dossier. Add your \$20 filing fee (in my club, if your claim is certified, the club treasury picks this up) and your dossier is sent off to Washington. If all goes well, in two months you're the first on the block with a certificate from Paris,

saying you went higher, faster or farther than anyone else. Your friends will love it!

There you are. It really is easy. If you're going to spend the next year flying anyway, give yourself a new challenge for the next season. Pick a record you think you can break and get it on. When you make it, you'll feel a tremendous sense of achievement!