



Taxiing out to the flight strip—we should have Phil explain that flight jacket since we have heard differently regarding California weather.

BAR-FLI

By PHIL KRAFT

To be a Champ requires planning, in depth as well, so our present World Champ felt it necessary to be ready for all conditions and designed a windy or turbulent weather plane to be ready for any condition at Corsica. Many were disappointed at the Internats because Phil did not fly the Bar-Fli since it's a good-looking, well-conceived, multi pattern aircraft.

► About two years ago, we tired of flying the Mark II Quik-Fli and decided to design something a bit different. I had flown several of Maurice Franklin's deep fuselage designs (The "Henchman," M.A.N.) and was very impressed with their smoothness. It was apparent that the increased side area was an asset in many maneuvers. Consequently, the Bar-Fli has plenty of fuselage depth.

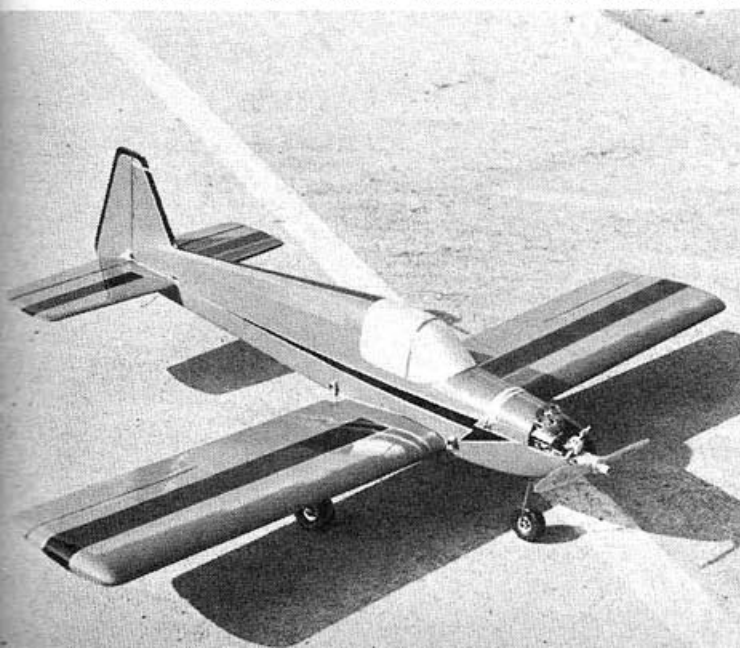
The wing design is quite straightforward. I favor the constant chord barn-door approach for simplicity as well as performance. Later experiments with several types of taper wings on the Mark III Quik-Fli confirmed this opinion. The Bar-Fli has a full symmetrical 15% airfoil. Consequently, it is faster than the Quik-Fli. After trying several semi-symmetrical sections, it became apparent

that the symmetrical section is a must for stunt use.

The Bar-Fli's large rudder in conjunction with ample fuselage side area gives excellent rudder control. This is very helpful in the double stall turn, knife edge, snap roll, etc.

Overall, I've been quite pleased with the results and performance of the Bar-Fli. Possibly it (*Continued on next page*)

Typical straight forward Kraft design is apparent in this view of the Bar-Fli. Note that engine, Enya 60 TV, is canted same as Qwik-Fli II.



Take-off is clean and fast, bit steep here and the speed can be seen from blurred image of Phil and helper (looks like Cliff W.) in background.



BAR-FLI . . . continued

is a bit small for competition; however, it is an extremely smooth flying aircraft which does very pretty maneuvers, particularly under adverse conditions, such as in high winds or turbulence. Although not designed specifically for snap maneuvers, it does them extremely well and has the unique ability of stopping instantly when the controls are released. You don't have to lead the little ship in spins or snap rolls which is a definite asset. The same applies to 4 point and 8 point rolls. In general, it is a very precise little airplane to fly and is one of my favorites for sport use.

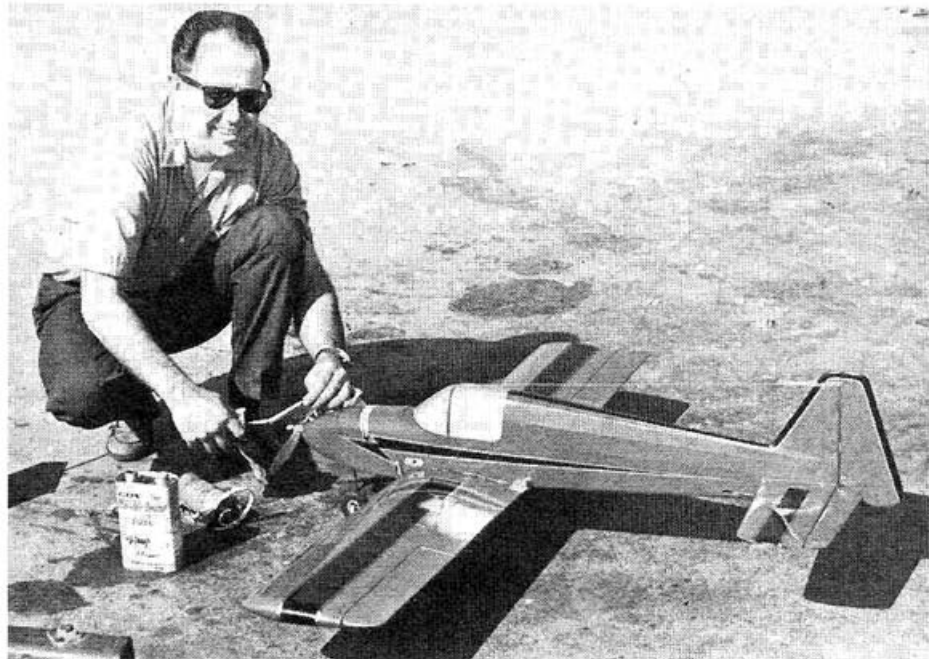
Early last year, modifications were made to the Mark II Quik-Fli which resulted in the Mark III. In practicing for the Internats, I really couldn't make up my mind which airplane to use. However, it was finally decided to use the Quik-Fli because the weather conditions in Corsica were forecasted to be quite mild.

Quite probably it wouldn't have made a great deal of difference whether I had flown the Bar-Fli or the Quik-Fli but perhaps because it is larger and has a thicker wing section, the Quik-Fli is a bit smoother due to its constant speed characteristics.

For contest use, the Bar-Fli is a little on the small side. I believe the Mark III Quik-Fli is about as small as practical. The reason for this is that maneuver position is as important as the maneuver itself. Smaller airplanes are usually faster than large ones and consequently the maneuvers take up every bit as much space. Because of this, they must be flown closer to the judges and lower which gives the judges an excellent perspective of any goofs the flyer makes. However, for the new AMA pattern the flying characteristics of the Bar-Fli may be an excellent compromise. Right now, I am considering putting this type of fuselage on the Quik-Fli wing and tail, because results might prove to be interesting.

I have heard from friends flying the Bar-Fli who have added 3" to the total wing span who feel it improves its performance by giving a slightly lighter wing loading for improved landing characteristics. I tried adding 6" to the wing which turned out to be a bad mistake, as the extra long wing had entirely too much inertia making for poor aileron response. I have also heard from others who put the wing from the Lanier plastic aircraft on the Bar-Fli with excellent results.

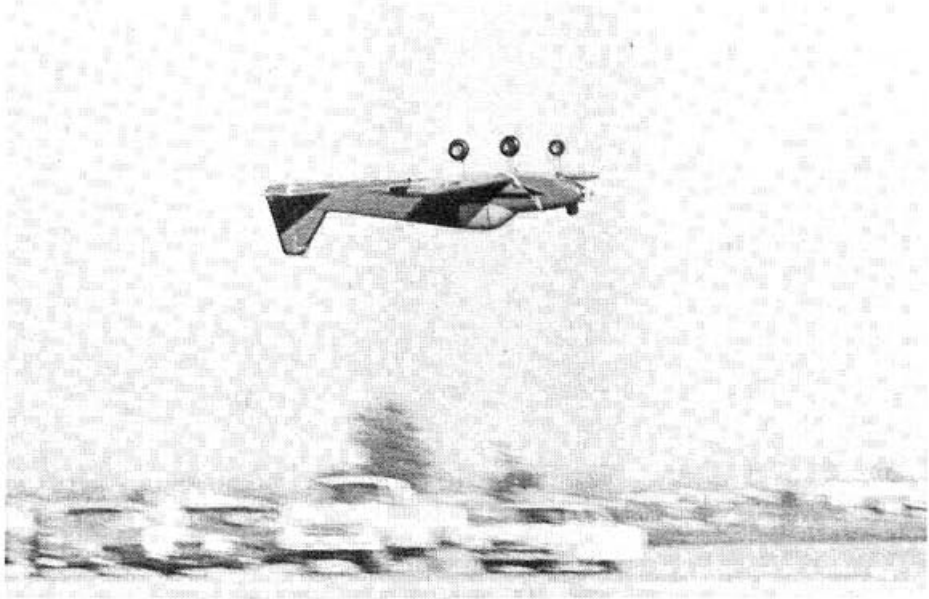
The construction is quite simple and straight forward and should require little explanation. The fuselage can be built on a flat work surface as all of the bulkheads are installed in a straight line. The balsa canopy is quite large, but anybody handy with (Continued on page 66)



Weather changed a bit here as Phil prepares his engine for flight. Nicely finished and trimmed machine reflects sun in this photo. Note rubber band and dowel wing holddown arrangement.



Two incredibly sharp flying shots of the Bar-Fli going through its paces. Precision is how Phil describes the flying performance for the bird and upright or inverted it is precise.



Bar-Fli

(Continued from page 36)

a sharp knife should be able to whittle it out quite easily. To improve the appearance of the nose, the plans show it fairing into a 2½" spinner.

With today's radios, the all up weight should come in at approximately 5 to 5½ pounds. After installing our new light-weight gear, my original Bar-Fli has gone decidedly nose heavy. However, since most builders have trouble with tail heavy airplanes, this should work out just fine. The model is not very sensitive on C.G. location, I've tried moving the C.G. back to the 60% point of the wing with the only result being a bit of additional elevator sensitivity. All in all, I think that you will find the Bar-Fli to be a great deal of fun to fly. I still fly mine quite a bit and hope that you enjoy it also. Incidentally, the name comes from the bar-like fuselage. No other connotation is intended—I think.

NOTE TO BAR-FLI BUILDERS— NASCO DIE-CUTS AND DRAWING KITS

Continuing the partial kit service for M.A.N. building projects inaugurated in the May issue, NASCO is making available die-cut balsa parts, nine sheets in all, for the Bar-Fli. Also included in the kit are full-size paper patterns of fuselage sides, solid sheet control surfaces, and plywood parts, plus a set of regular M.A.N. plans. Price is \$8.75. For Post Office Special Handling, add 25¢.

Send order to: Northrop Aeromodeling Supplies Company (NASCO), 56 Holly Lane, Newark, Delaware 19711.

Delivery should start about July 15.
