The Minimum

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the rough edges on the wing.

Next big item to build is the fuselage, this is constructed by cutting out the fuselage sides and sliding them over the wing and to the center. Then, cutout the engine mount or firewall and glue it securely into place with Expoxy cement. Be sure that both sides of the fuselage are parallel to each other and in line with the wing, glue and allow to dry.

Assemble the stab, also secure the mounting nuts for engine to the firewall and glue. Plank top and bottom of fuselage; be sure that the fuselage tapers to the back as shown in the plans. Sand off edges and hook up the stab.

Then, cut out rudder, glue it to the fuselage. Grain must be running in the right direction. After allowing time to dry, reglue all the open parts of the plane.

FINISHING: Before you cover the plane, sand all the rough edges with #400 grid paper. Give the frame one coat of clear dope and allow it to dry. Now apply the covering. For this, use either paper or silk. I used Silkspan and found it excellent.

The covering method is the wet covering method and is used by many model builders. Wet the covering material and place it on a piece of newpaper. Apply dope to all parts of the framework except the middle ribs. Stretch the paper, or silk, over the framework and work with it until it is all fastened and all the wrinkles are out of the covering. Do this individually on each surface of the wing. Doping should now be started. Three coats should be applied to the wing. Sand after each coat with fine paper. After the three coats of clear dope, apply at least two coats of color, over which another coat of clear should be applied. Be sure to let each coat of dope dry thoroughly before applying the next.

Now that you have finished your Minimum, I am sure that you will want to see how it flies. On this subject I have some advice for both the learner and the expert. The Minimum was designed for for snappy speed and delicate handling, so it would be better to fly your first few flights with a slow engine and plenty of line.

As your confidence increases, so may the speed of the engine, but still use plenty of line. Do not shorten the line until you hav mastered most of the simple tricks you can do.

World Free-Flight Internationals

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were required to register their arrival between the hours of 10 a.m. and 12 midnight on Monday, August 12. Tuesday, Wednesday and Thursday were set aside for the contests, activity at the airfield starting at 7:30 a.m. and ending at 7:00 p.m.

In at least one respect, the Wiener Neustadt gathering set a new record for World Championship meets and that was in the number of nations represented. In all, contestants from 30 different countries attended, compared with 24 at the last World F/F Championships at Leutkirch, Germany, in 1961. The thirty competing nations were, in alphabetical order: Australia, Austria, Belgium Brazil, Bulgaria, Canada, Czechoslovakia, Denmark, Finland, France, East Germany, West Germany, Great Britain, Holland, Hungary, Ireland, Israel, Italy, Japan, Luxembourg, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, U.S.A., U.S.S.R. and Yugoslavia. Not all these countries, of course, had full teams of three men in all three contests. In A2, there were 23 full teams, plus two entries from Spain. In the Power event, there were 19 full teams, plus two entries from Ireland and one each from Belgium, Israel, Luxembourg, Spain and U.S.S.R. Wakefield included 20 full teams, plus two entries each from Spain and U.S.S.R. and single entries from Australia, Brazil, Belgium and Turkey. In contrast to the early years of international model flying, the number of proxy-flown entries was very small, only nine out of a total of 203, in fact.

A2 Glider

The first day of the contests proper, was devoted to the A2 glider event. Last time (1961) this was won by Anatol Averiyanov of the USSR, and Holland as team winners. Best American performance, then, was by Jim Daley who placed 8th and the U. S. was fifth in the team placings.

The results of past free-flight world championship events have clearly shown that if a contestant expects to be in the running for an outright win, nothing short of a maximum in every round can be considered adequate. It must, therefore, have been disappointing to the fifty-seven A2 contestants who failed to reach a max in the first round. The average number of maxes scored in the second, third and fourth rounds was 39, but in the opening round, amid rain showers, only 14 were recorded from the 71 contestants. In the second round, thirty-eight maxes were scored in warm and calm conditions, but the thermals were liberally interspersed with downdrafts and already, the number of perfect scores were down to only eight. These included Erichsen of West Germany, Avory of Canada, Modeer of Sweden, Foucart of Belgium, Franke of East Germany, Prochazka of Czechoslovakia, Hansen of Denmark and da Silva Amado of Portugal. By the time round three came up, after lunch, the weather had made another quick change and although another 37 three-minute flights were returned (including maxes by all three U. S. team members) the number of perfect scores were whittled down to only three: Erichsen, Avory and Foucart.

In the penultimate round, a bumper crop of maxes (42) improved the position of some of those who had started badly, but among the three leaders, Foucart dropped 23 seconds, leaving only Erichsen and Avory with a full 720 second score. At this point, their nearest rivals were Zlatev of Bulgaria and Modeer of Sweden, both well placed, only 12 seconds behind and either of them a possible winner if the leaders struck trouble. In fifth position was Foucart, followed by Van't Rood of Holland a further 13 seconds back.

During the actual contest, it was difficult to discover exactly how the positions were shaping up, due to the fact that the scoreboard lagged rather a long way behind the actual progress of the contest, but study of the score sheet indicates that, at this point, the Dutch team were leading with 2031 points, followed by the USSR with 2002 and somewhat further down, by West Germany and Canada with 1930 and 1890 points respectively.

So to the final round. Would it be an individual win for the Canadian or the German or would we have a fly-off, or would both be beaten by a near rival? When the results were known, it was Hans-Gerd Erichsen's score, only, that survived unbroken. Ernie Avory, thirty years a model builder, lost 9 seconds of his final flight after striking a downdraft. Bo Modeer from Sweden kept up the pressure by scoring another max, thereby finishing only 3 seconds behind Avory, but the unfortunate Zlatev was down after only 2 min. 3 sec. dropping him to an eventual 10th place in the results table. Foucart, after his promising start was eventually worse off, scoring only 92 seconds to fall from 5th to 18th. Another casualty was poor Van't Rood, who not only dropped from 6th to 15th in the individual results, but, worse still, deprived the Dutch of the team championship. His two team mates, Ed. Nicolaas and Frits Polak, finished strongly with maxes to take 4th and 12th places, but the team's total was overtaken by the Russian score by 20 points. West Germany held on to third place, narrowing the gap in so doing and Canada, the only team with two entries in the first six, maintained fourth position.

The winner's models were simple high aspect ratio designs with sheet balas wings mounted on a slim fuselage via a short pylon. One model used a Jedelsky type wing—curved sheet balsa with stiffening ribs on the under-surface—and the other omitted the ribs, the necessary stiffness being achieved by using selected balsa sheets, shaped to the required section with a hard leading edge strip and quarter-grained trailing edge. The wing was equipped with a thin elastic turbulator fixed about ½ in. in front of the L.E. Incidentally, turbulators were also used by all the second place Dutch team. Ernie Avory's model was fairly orthodox, built-up polyhedral wing, small built-up stab, long tail moment and short nose. The Russian ships were quite attractive. They used built-up surfaces, tip dihedral, slight stab dihedral and some forward fin area.

An inaugural banquet followed the first day's flying. This, contrasting with the