

## IRELAND (Dublin)

One John Byrne and associates have developed and brought to near perfection what they call a "shuttle-launch" system. Martin Mulhall recently received a launch of 4,500 feet off a 5,000-foot runway, flying a K-8 in a 20-knot wind (90% efficiency!). This was achieved by a combination of judicious juggling of throttle, selector and brake on the fluid-drive tow car. This is not as easy as it sounds, since a rapid rearwards movement of the tow car, while "Drive" is selected, tends to stall an idling engine. The procedure is not recommended, however, because so much cable hits the ground immediately after release, that severe kinking is almost inevitable.

— SAILPLANE & GLIDING

## ITALY

The M100S, Italy's principal contribution to the Standard Class, now has a two-place counterpart in the form of the M200. The main tie between the two gliders, beyond generally stylish looks, is in the wing: That of the M200 (or Foehn, as the machine has been named) is derived directly from the earlier single-seater. The span was increased from 49 feet to 59.5 feet in the process, and the aspect ratio from 17.1 to 19. The wing loading varies from 4.8 lbs./sq.ft. (one pilot) to 5.9 lbs./sq.ft. (two pilots) and up to 6.7 lbs./sq.ft. (max load). Maximum permissible flying speed is 140 mph.

The seating is side by side, but in slightly staggered seats. Comfort and visibility have been very carefully considered. Construction throughout is of the classical wood and fabric variety, favored for the ease of repair.



The M200, A new Italian two-seater developed for training.

The Foehn was designed as a high-performance trainer: the best glide ratio is given as 1:32 at 61 mph. Handling is said to be quite good. The ship is certified in Italy according to British BCAR-E Regulations and in France in accordance with the new AIR-2054 Regulations. Both cloud flying and normal aerobatics are authorized. In the Foehn its makers feel they have possibly the most efficient production two-seater in the world, one suitable for training, for competition and for record flying

## POLAND

There is no denying that many of us who followed the last World Championships in South Cerney were surprised by the decision of the Polish team to use Foka-Four sailplanes both in Standard and Open Classes.

As it turned out the Zefir-Three, a sailplane originally intended for competition in Open Class, was not completed in time to permit training of pilots, and as a result Foka-Four was substituted.

From the description published in Polish weekly "Skrzydlatą Polską" (Winged Poland), Zefir-Three is going to be a mighty opponent for the D-36, SHK-1 and the like. It is also evident that Zefir-Three is not simply an improved version of Zefir-Two (which was quite successful in the 1963 World Championships, placing first and second), but an entirely new machine which resembles Zefir-Two in name only.

The Zefir-Three has a wing span of 19 meters. The wing shape is now trapezoidal as compared to the rectangular-trapezoidal wing of Zefir-Two. The wing is laminar (NASA 66-215-416) and equipped with Fowler-type flaps throughout its length. The fuselage is al-

most circular in cross-section and has a sharply pointed nose. The tail end of the fuselage houses a reusable braking parachute. The horizontal tail is of the all-flying type, which is a first for a Polish glider.

This plane took part in Polish National Championships in 1965. Since in this event only Fokas were used, Zefir's participation was for comparison only — and with rather interesting results. It won all events except those which took place in marginal conditions. In these instances forced landings seemed to be in order and the pilot decided to return to the starting point without completing the event.

— GREGORY BANAK

### ZEFIR THREE TECHNICAL DATA

Wing Span	62.34 ft.
Length	26.25 ft.
Height	6.92 ft.
Area	169 sq.ft.
Aspect ratio	23
Empty weight	957 lbs.
Equipped weight	1177 lbs.
Wing loading	6.8 lbs./sq.ft.
Max. L/D (calculated)	42 @ 64 m.p.h.
Minimum sink	2.1 ft/sec. @ 62 m.p.h.
High-speed sink rate	4.8 ft/sec. @ 87 m.p.h.
Minimum speed with flaps	40 m.p.h.
Maximum design speed	186 m.p.h.

