



Class I. The Miles Master, which has the Miles Control Unit. A step in the direction of uniformity.

## OFFICES TO LET—OR HINDER

*Standardisation Impracticable, but Uniformity of Cockpit Layouts Possible by "Zoneing"*

By SPARROW "

ONE of the most popular subjects for discussion among pilots, old and new, is cockpit layout. I have taken part in many of these arguments and there are always as many opinions as there are pilots present. Eventually someone suggests standardising the layout of cockpits, and it is very hard to convince them that, at worst, it is impossible and, at best, it is not worth it.

I have been lucky enough to have flown a good many types of aircraft and have kept photographic records of the cockpit layouts of quite a few of them. The following remarks and suggestions, based on this experience, will, I hope, lighten this old argument.

First, is standardisation necessary? And secondly, what degree of standardisation is possible and desirable?

Only a limited degree of standardised layout is possible (of standardised details more anon), but in my opinion a much greater degree of uniformity is possible. In the R.A.F. the majority of pilots are flying one type and one only for quite long periods. The advantage conferred by a standard layout are largely lost except on those R.A.F. pilots whose job entails flying many types during a day, such as those at various Experimental, Communication and Maintenance Units, and, of course, the Ferry Pilots. Although these pilots have very few accidents due to confusing the controls on one type with those on another, they are the first to press for a more uniform cockpit arrangement.

Some years ago I was shown two cockpit mock-ups at

Martlesham. These models were made in an attempt to standardise layout; one was for single-engined aircraft and one for multi-engined machines. As far as I know they were never completed, because at an early stage the impracticability of the scheme became apparent.

Who would care to design identical cockpits for a low-wing single-seater fighter and for a Parasol Army Co-op. machine? Or for a small twin-engined single-seater and a four-engined bomber? At the time when I saw these mock-ups, the industry was pretty hard up for orders, and had the originators of this experiment pressed their case, they would have stood a fair chance of getting the scheme adopted in spite of design and constructional complication. The fact that the policy was dropped and machines to each specification were treated individually, justifies the assumption that absolute standardisation is impossible.

Standardisation is a practical impossibility because it complicates control runs during installation and servicing; the extra complication means wasted weight, man-hours and cost as well as material. Complication of control runs is the final and most important factor in the way of a standard cockpit arrangement. The auxiliary control runs have a far greater effect on the position of the various auxiliary control levers and handles and, therefore, on the layout, than do the flying control runs.

There are two things to consider when fitting a component into a uniform layout. First, position, and