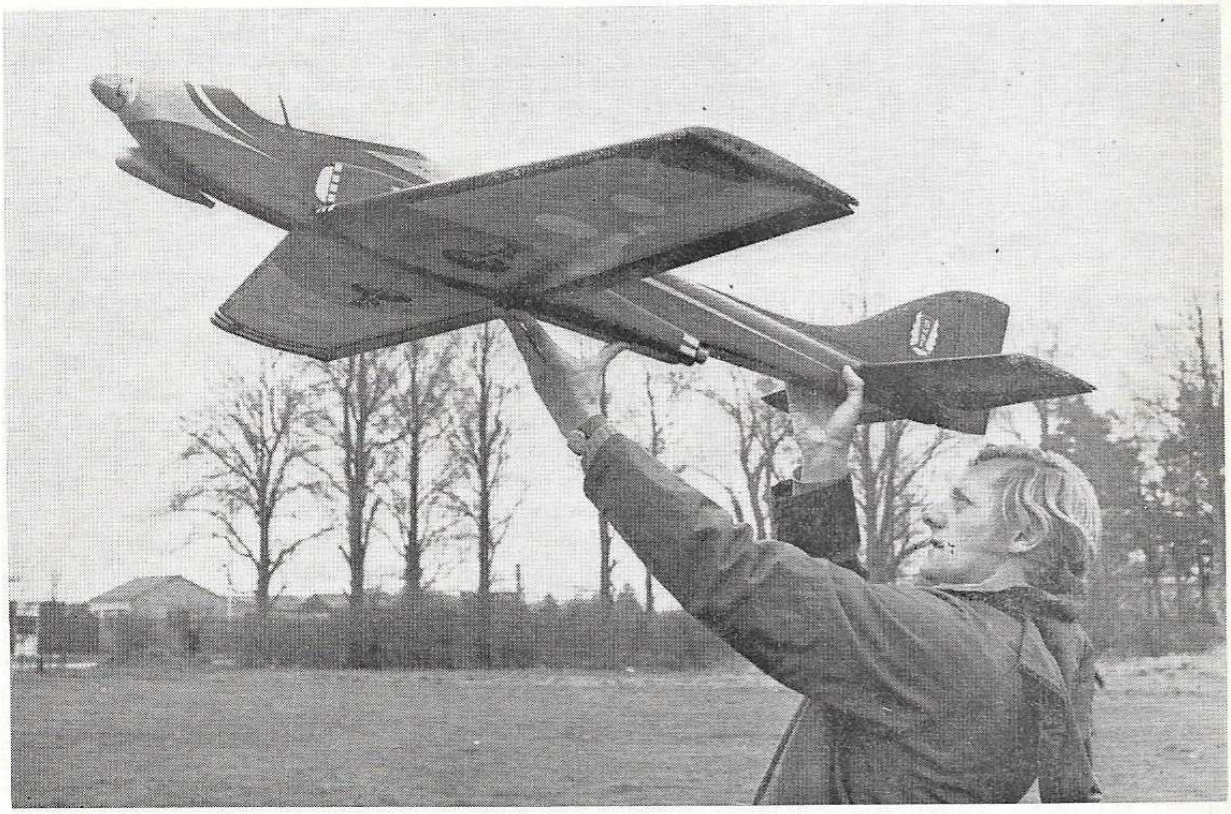
SOME model aeroplanes are the result of many years of trials and tribulations, others, have come about from an overnight inspiration or in some cases, bad dreams. (Awoke screaming and wrote it down quick—Ed!)

I have read many articles such as the one I am attempting to write, where the author expounds his many wonderful and somewhat complicated theories of aerodynamic developments. You can rest assured that this is not going to be one of those articles but on the other hand, I will bore you with what I feel was a natural development up to this model.

Early in 1967, after having a comparatively successful period with my *Spectre* designs, I felt that the model size was on many occasions, due to our usual windy weather, at a disadvantage. So an overnight inspiration prompted me to put pencil to paper and after two hours my creation was born and duly named *King Spectre.*



For those of you who do not remember or did not see King Spectre, the wings spanned 9 ft., but with a root cord of only 15 in. tapering at the tip to 9 in. The stabiliser had a span of 36 in. with a fin height of 24 in. from the ground. As you can surmise from these dimensions. King Spectre had a fairly high aspect ratio configuration and was my first design with a symmetrical wing section. An overall weight of 9¾ lb. needed every ounce of power my *Rossi* racing 60 could turn out.

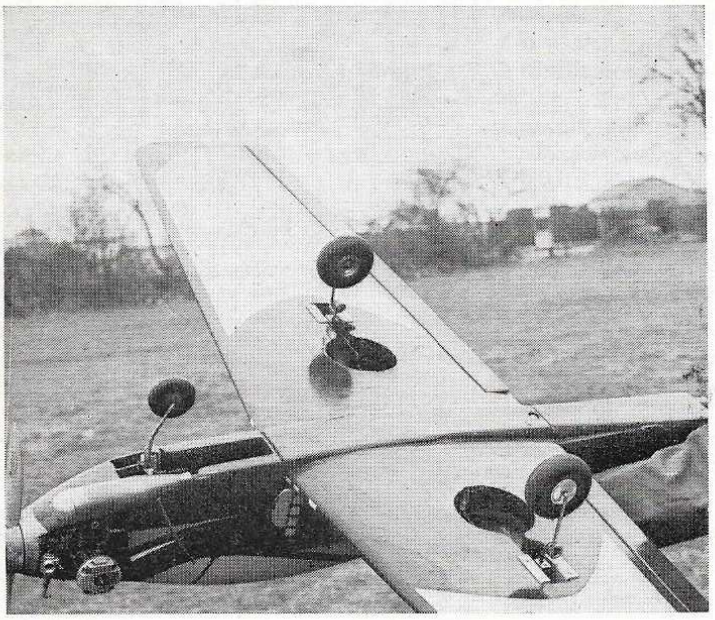
From this model started a long line of developments and changes in model size but the basic configuration did not change drastically through all the subsequent designs. Because of the impressiveness in flight and effortless handling through the aerobatic pattern, this made me want to continue building and flying this size of model, but after a season the power turned out by the Rossi started to wane. This made me think that a model of the same basic layout, but lighter and a little smaller, would probably give me the best of both worlds. After the total destruction of King Spectre at the Corsican World Championships due to severe tail cone damage in transit, the new model was developed.

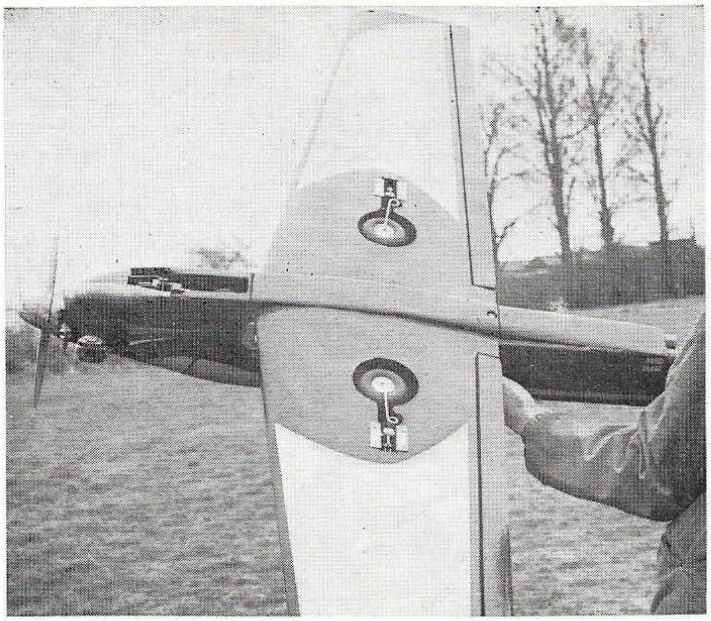
The In-between Spectre was so named by Tony Dowdeswell because of the midway size between the King and basic Spectre with a wing span of 7 ft. and an all up weight of 6¼ lb. To quote the Editor at this model's first outing 'certainly it is his best Spectre yet' which I also felt to be true as the model flew its way through the pattern to claim the highest score.

Three models of this size took to the air over a period of 12 months until for some reason we all went mad and started to build much smaller models around the 60 in.-66 in. wing span.

My own version, named *In-Spectre* was very fast, very responsive but very twitchy, which necessitated the greater amount of concentration and work to perform a smooth schedule. After the Bremen World Championships we all decided to go back up in size.

Using once again the same basic Spectre lay-out, I upped the size and swept the wings back a little, fish shaped the fuselage to be in keeping with





Continental trends, and so the jet-like Centurion was born. This model incorporated retractable undercarriage, at that time a complicated extra. On this occasion, it really did fly straight off the drawing board, so well in fact that it took top honours at the 1970 British Championships, but like all good models, it eventually wore out. So two more Warriors were built with identical layouts with the exception of fuselage profiles.

I suppose my desire to build this Centurion Mark 2, with the jet-type appearance inlets, outlets, etc., was that I wanted something different to look at in the air. So although as I previously stated, the development from the King Spectre to the present-day Centurion Mark 2 was a natural development inspired only by changing trends and weather conditions. The ability for the plane to perform the aerobatic schedule was kept in mind at all times.

My own approach to the schedule is fairly basic, for example with the size of model I usually fly, a weight of around 8 lb. is preferable and for this a good reliable power house is essential. Believe me there is nothing worse than trying to drag a model through the aerobatic schedule in front of a set of judges and a public crowd with the engine spluttering and sagging at the top of a loop.

Retract system is not essential and people will always argue whether or not there is any practical advantage in it. However, retracts certainly help with appearance. Wheel wells here allow plenty of space for the wheels which may be accidentally knocked out of alignment in a hard landing.

The first Centurions were powered by HP 61 engines, which performed very well, in fact an HP 61 went a long way to helping me win the Nationals in 1970. Recently I have been using Veco 61's with the Perry carburettor; I must admit that this engine was put in the model straight out of the box and has never been touched since, it gives me ample power in the climb and idles for ages without cutting.

Getting back to the model though, I like mine to have a neutral trim, so that the plane will not fly in a straight line for very long without needing a signal from me.

All this jazz about a model flying hands off is best left to slope soarers. For obvious reasons an aerobatic model does not want to be too stable, otherwise you will find it difficult to stall and spin. But on the other hand, you do not want a vicious snappy model especially when you're stretching the landings out (eh Fred)!

I may be biased but to me my Centurion Mark 2 layout seems to give the best of both. I could go on about how you should and should not fly the schedule plus all the technical bumff, but I would prefer to leave that to Mike Birch. He likes talking about that side of modelling, and there is the additional fact that he believes it all!

Some of the photographs printed with this article were taken shortly after I had rapidly repaired my Warrior Mark 2 prior to a contest flight after a near fatal mid-air collision.

Construction is, typical of aerobatic R/C models, so I don't think full details of the method is necessary but I would like to mention a few points.

For those of you, like me with limited time for building, foam wings and tail are made by a number of manufacturers. I have used them now for a number of years with great satisfaction, from personal use I can recommend the ones made by *True-Line,* these are both light and strong (my mid-air collision proved the latter).

If you wish to build your own, then I have supplied the root and tip rib templates for sandwich type construction.

I always cover with tissue, followed by two coats of sanding sealer. Colour is commercial cellulose, sprayed on and finally proofed with *Tufcote.*