VERON ROBOT

Probably one of the earliest designs still available as a kit, this radio control trainer was originally designed as a single function, rudder only model. Indeed, the plan still gives detailed instructions for installation of a rubber driven actuator to operate the rudder. Nostalgia is also created by the instructions to provide trim tabs on the wing trailing edges and the provision for adjusting the angle of incidence on the tailplane.

Since most present day beginners will be advised to purchase two or three functional proportional radio gear, with in-flight trimming facility, the above items are not really necessary. Provided of course that the model is built accurately with the centre of gravity in the correct position.

The kit includes the necessary wood of good quality, pre-formed undercarriage and wheels, a detailed plan and instruction book. A supply of various nuts and bolts are included together with tissue for covering. Engine mount and tank must be bought separately to suit the power plant to be used.

The most unusual feature of this model is the butt joint between F1 and the engine compartment. This would act as a 'knock off' sheer plate in the event of a crash, hopefully saving engine and the rest of the model from further damage. The rest of the model is entirely conventional in construction and no problems were encountered during building.

The fuselage of the review kit was covered in nylon and the wings and tailplane covered with heat shrink film. The model has been subjected to some quite 'heavy' landings and so far, has proved to be very strong.

Fitted with *Futaba Medallion* 3 plus three FD30M servos and a *PAW 19 R/C* engine, the model weighed in at 2lb 15oz. Control movements were set at ±⅜in rudder and ±5/16in elevator.

Attempts were made to fly *Robot* off a grass strip but owing to the length of grass to wheel size ratio, she ended up with her nose buried quite firmly into terra firma. A hand launch was used and with the engine on full power she climbed away into straight and level flight. The inherent stability, so important in a trainer, was tested and once trimmed, the model would fly 'hands off', i.e. no interference from the pilot's transmitter. *Robot* was put into typical "pause" attitudes to simulate the problems which might face a learner and regained her composure into straight and level flight upon release of the sticks. At one stage the engine cut at altitude and rather than descend, the model appeared to ascend. Thermal soaring is not usually associated with this type of model but the wing loading is such that power off gliding is long and flat, with full control response being maintained throughout.

CONCLUSION

Comparatively easy to build although the plan and instructions should be updated. The model is very stable and easy to fly and should give little trouble to a beginner. One of the less expensive kits to be reviewed.

VERON BIG IMPALA

This glider spans 74in and as the name implies, is a stretched version of its predecessor the 52in span *Impala,* which, over the years has proved an excellent first-model for newcomers to slope soaring. Big brother is now developing its own reputation as a trainer.

The kit is very complete with all the necessary wood, hardware and even tissue covering. The plan and building instructions are very clear, construction is straightforward and would present no difficulty to the novice. The main feature of the kit is the ABS fuselage formers, wing and tail ribs. Contact type adhesive is recommended for bonding ABS to balsa wood and our reviewer found this to be entirely satisfactory.

The kit may be built as a three function rudder, elevator and aileron or simple rudder and elevator only model. In addition, the plan gives a further option as a powered thermal soarer using a 1.8cc engine. The review kit was built for rudder and elevator only, control being from a *Futaba Medallion* set with *Futaba FD30M* servos.

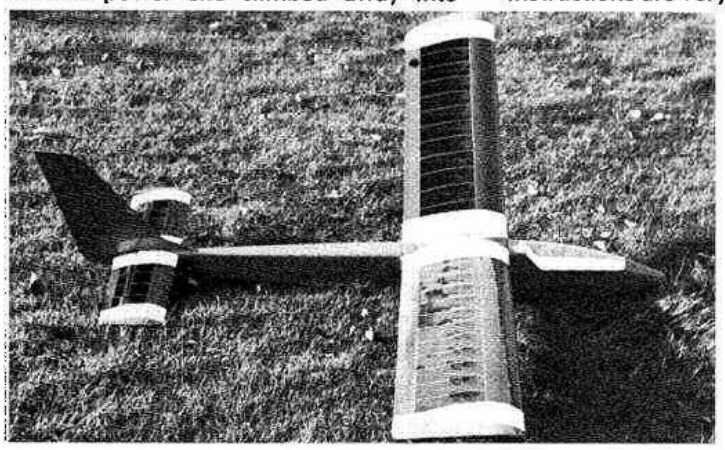
Sheet balsa is used for the fuselage which has a square cross section. Rod-in-tube 'snakes' are used for the control runs and these must be fitted before the fuselage 'box' is closed. It is necessary to secure the control tubes at about 6in centres, and since there are few suitable adhesives for bonding polyetheylene to balsa wood fuselage sides, the following method can be used. Wrap masking tape around the tube then glue the tape to the fuselage side with either PVA white adhesive or balsa cement.

With the ABS moulded ribs provided, it is simplicity itself to build a true wing over the plan. Care should be taken to ensure that when fitting leading and trailing edges the ribs are not distorted.

This model was covered with heat-shrink film and if this is your choice, do not use too much heat to shrink the film or once again there is a danger of distorting the plastic ribs which will of course soften under heat.

With 2oz of ballast to achieve the required centre of gravity the model weighed in at 2lb 12oz giving a wing loading of approximately 9¾oz per sq ft.

First flights were conducted during a sunny autumn afternoon with a gentle breeze blowing straight onto the slope. An initial trimming flight showed that adjustment to the rudder was required. Once this had been completed, the following flights proved the *Big Impala* to be stable with no vices. A stall was characterised by the nose simply dropping, the



Far left: ***the Graupner Beta features entirely conventional balsa airframe construction. Assembly is easy, but there are no foam wing/glass fibre fuselage short cuts.*** Above: ***still entirely relevant, even after 15 years of proven operation, the Veron Robot – a toughie.*** Left: ***also from Veron, the Big Impala for an introduction to slope soaring.***