



**S**PITPANZER is the 23rd model built by myself since I first began R/C modelling in December 1964. Of these, number one crashed due to pilot error, and three due to equipment failure. Apart from two models which I now fly, all the others are owned or have been owned by other modellers. Why so many models? Simple—I love designing aeroplanes!

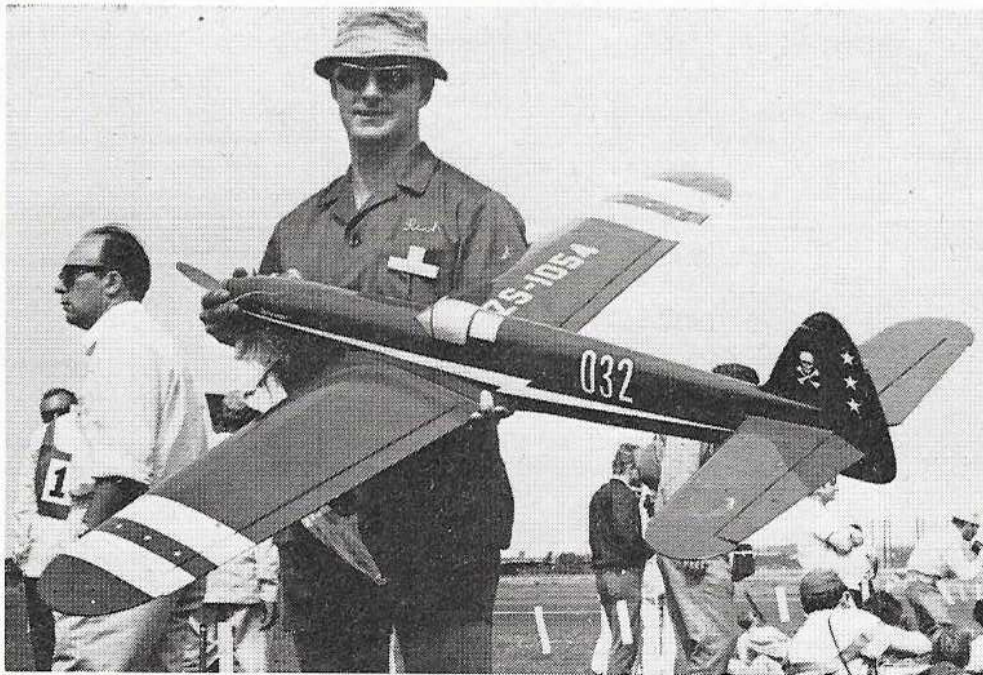
Spitpanzer, therefore, represents the good points of most of these models. This aeroplane is relatively easy to fly with no bad characteristics, yet it can perform beautiful flick manoeuvres when required to do so. It is capable of performing well at high altitudes (density altitude  $\pm$  7,000 ft.) and at sea level, and also handles wind and gusty conditions with ease.

Construction is relatively simple and I have attempted to list major construction points. Should you decide to build the 'Spitpanzer' and encounter any building problems, do not hesitate to drop me a line at Box 738, Gwelo, Rhodesia.

## Construction

### Wing

Start by building the wing. I prefer foam wings mainly because I believe a much truer wing can be built. After cutting out foam



Richard Brand with prototype Spitpanzer at 1969 World Championships where he gained well-earned eighth place. Model performs aerobatics at very high speed.

cores glue trailing edge spar and undercarriage units in place. Cover the cores with a one-piece prepared balsa sheet. Apply the contact adhesive with a sponge to prevent excess glue weight. Join the two halves, ensuring alignment and dihedral are correct. Shape entire trailing edge and ailerons from a straight  $\frac{1}{2}$  in. sheet to the desired section. You will find the small mini-plane a useful tool for this job. Next, glue and tack glue the trailing edge to the wing in the appropriate places. Make up the blocks and glue to wing. Shape and sand wing before cutting out ailerons and fibre glassing the centre section. One layer of yellow bandage fibre glass cloth will be adequate. Gouge out the wing to accept the aileron control horns, *no* differential is desirable. Finish the wing by applying two coats of baby powder and dope, lightweight tissue and thin coats of baby powder and dope to desired finish.

For those who like conventional wing structure, this is shown on the plan.

### Fuselage

Begin by building up the engine bearers plywood plate, engine bulkhead and nose wheel block as one unit. Next cut out sides to fit, apply doublers and triangular fillet strips. At this stage, the desired wing and tail incidences can be ascertained. Pin down the port side of the fuselage on a straight building board and glue the engine bearer unit and rear bulkhead in place. Attach the starboard side and front top and bottom blocks. When dry, clamp the tail together ensuring alignment by measuring half the distance of the fuselage width from the building board. When set, remove from the board and add false deck and fuselage bottom. Fill in nose area with selected blocks and tack glue a plywood disc slightly oversize to aid initial shaping for the spinner. Tack glue rear top fuselage block to the false deck and then shape entire fuselage to approximate shape. Cut off rear block, hollow to reduce weight and then fit per-

manently in place. Fit dummy cockpit, add fillets, cut out engine compartment, fit nose ring and finally shape the fuselage. Finish the fuselage by applying two coats of baby powder and dope, silk covering and thin coats of baby powder and dope to desired finish.

### Tail group

Construction of these units is straightforward. Finish the tail group (and ailerons) by applying a thin coat of epoxy glue the easy-does-it way, then sand with 3M Blue-cut 220 grade paper. Baby powder and dope as required.

### Final Assembly

After all parts are ready for spraying, the model can be assembled. Make sure that the model is aligned throughout. Fill in dents and fillets with filler, then give the entire model one final coat of dope before spraying your favourite colours.

### Control Movements

No hard and fast rules can be laid down for required surface deflection. My model is set as follows: Aileron  $5/16$  in. up and down. Elevator 15 deg. up and down. Rudder 15 deg. up and down.

### Flying

With airplane checked out for nil warps, proper c.c. position and controls at neutral, hit open the throttle, get airborne and enjoy your flying.

