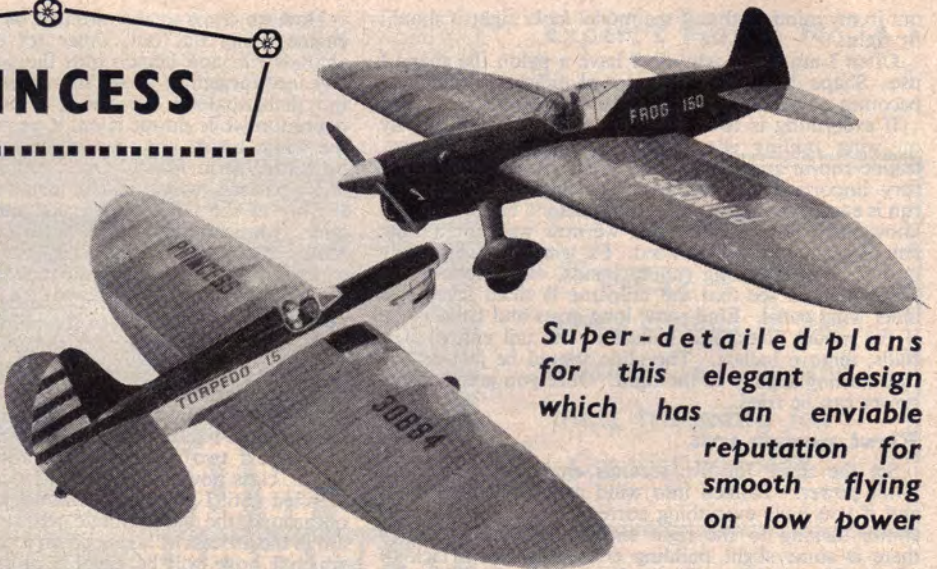


PRINCESS

A 36 in. SPAN
CONTROL-LINE
AEROBATIC
MODEL FOR A
WIDE RANGE OF
ENGINES FROM
1 c.c. to 2.5 c.c.
BY GORDON
CORNELL



Super-detailed plans for this elegant design which has an enviable reputation for smooth flying on low power

"PRINCESS" is one of the most advanced small stunt designs to date, and has been developed through a series of designs capable of completing the S.M.A.E. Stunt Schedule. The plans show the very latest version as flown in the World Championships at Brussels, 1958, where it earned plaudits for very smooth performance with such a comparatively small engine as the Frog 150. Whilst its appearance might suggest a difficult model to build, its construction is relatively simple making it eminently suitable for the intermediate modeller and

since the plans are very comprehensive, let's get down to the facts that will make your model a success.

Almost any 1 to 2.5 c.c. engine is suitable, the originals have been powered by the new Frog 150R and a K & B15. If you choose to use 1 c.c. keep the weight down to approximately 13 oz. The tank may appear unconventional but it is theoretically correct; when a few more modellers use this type we will see far less overruns due to the engine leaning out—it gives most consistent feed in flight. Make the cowling exactly as shown on the

FULL SIZE COPIES OF THIS 1/7TH SCALE REPRODUCTION ARE AVAILABLE PRICE 6/6 PLUS 6d. POST AS PLAN CL724 FROM A.P.S.

PRINCESS
DESIGNED BY Gordon Cornell
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6/6

REVISIONS

MATERIALS LIST

CONSTRUCTION

ASSEMBLY INSTRUCTIONS

DETAILS

WINGS

TAIL PLANE

LANDING GEAR

ENGINE MOUNTING

COUPLER

PROP

NOTE CONCERNING CONSTRUCTION

PRINTED AEROMODELLER PLAN, 1959

plan giving plenty of airspace around crankshaft and cylinder, otherwise you will have the overheating troubles I experienced at Brussels.

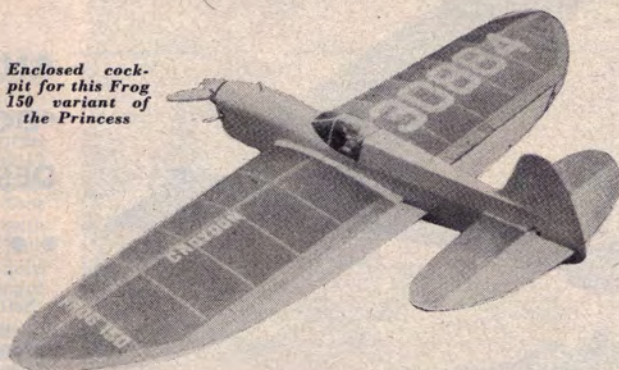
A brief word on materials, select each piece carefully for the job it is to do, making sure it is the correct cut and texture as stated. Since balsa varies in weight from 6 lb.-16 lb. per cubic ft. here is the difference in weight between being light or heavy. There is a lot of balsa in this model, be careful. Use plenty of cement, it does not weigh enough to cause concern, at least not measurable.

When finishing, do not spare dope and fuel proofer since this little extra weight soon pays off. An under-doped or unproofed model soon suffers from ingress of fuel and up goes the weight above the well-finished model, at the same time becoming completely unreliable. Spare no expense, it is cheaper in the long run.

Flying the Princess is easy, but do not take any chances. The undercarriage shown on the plan is for grass, if the model is to be flown over tarmac fit a longer tailwheel assembly to make model sit almost level on ground (this tailwheel assembly will not allow the model to take off on grass so choose warily). Line length required will vary according to weight and speed should be between 45 ft.-50 ft. (It was flown in the Gold Trophy on 55-ft. lines.) Use only steel lines .008 in. to .010 in. diameter.

Use a good commercial grade of fuel and retain the same engine settings for starting and running for every outing, by so doing you will soon find reliability.

Enclosed cockpit for this Frog 150 variant of the Princess



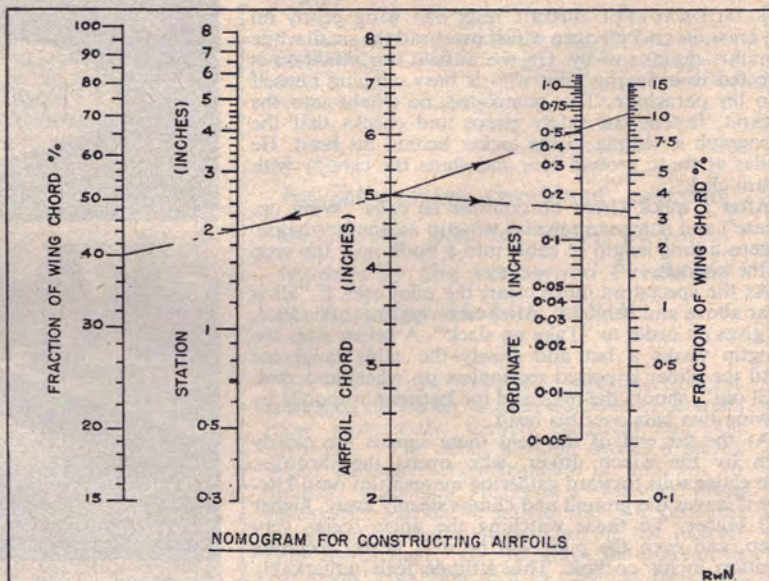
The flight record in contests last year were:

- Fifth: Gold Trophy.
- Second: Enfield Controlline Rally (lost by 1/2 point).
- Fourth: British Team Trials.
- Second: Wanstead Controlline Rally.
- Thirty-second: World Championships (Brussels).
- Third: Southern Area Rally.

The plan has been specially drawn to cope with a wide variety of engine sizes and has full instructions to enable the modeller with at least one controlline type under his belt to follow the building stages without cause for query. We know the "Princess" is going to be a number one favourite among plan builders with the popular A.M.15, Frog 150 and newly introduced (to British shops) Enya, Fox and OS15's. For smoothness, the "Princess" is a beauty deserving of its regal name as you'll soon find out in that first exciting lap.

An easy way to obtain airfoil sections

described by R. W. NEW



THIS NOMOGRAM is designed to assist in drawing out airfoil sections. In the case of wings where the airfoil chord is not constant, numerous calculations may be involved, and this reduces the number of computations.

To illustrate its use consider the Benedek section B-8556-b, published last month. Assuming a wing chord of 5 inches, find the dimensions involved at the following positions.

Station	40 per cent. chord
Upper	10.5
Lower	3.2

Draw a straight line from the point 5 inches on the centre scale, to the extreme left hand scale at the position marked 40 per cent. Read off the value in inches at the intersection with the station scale, namely 2 inches.

Similarly, draw a straight line from the centre scale to the extreme right hand scale at position 10.5 per cent., and a further line to position 3.2 per cent. Read off the values at the intersections with the ordinate scale, namely 0.53 inches and 0.16 inches respectively.

Normally, accuracy to two decimal places is sufficient.