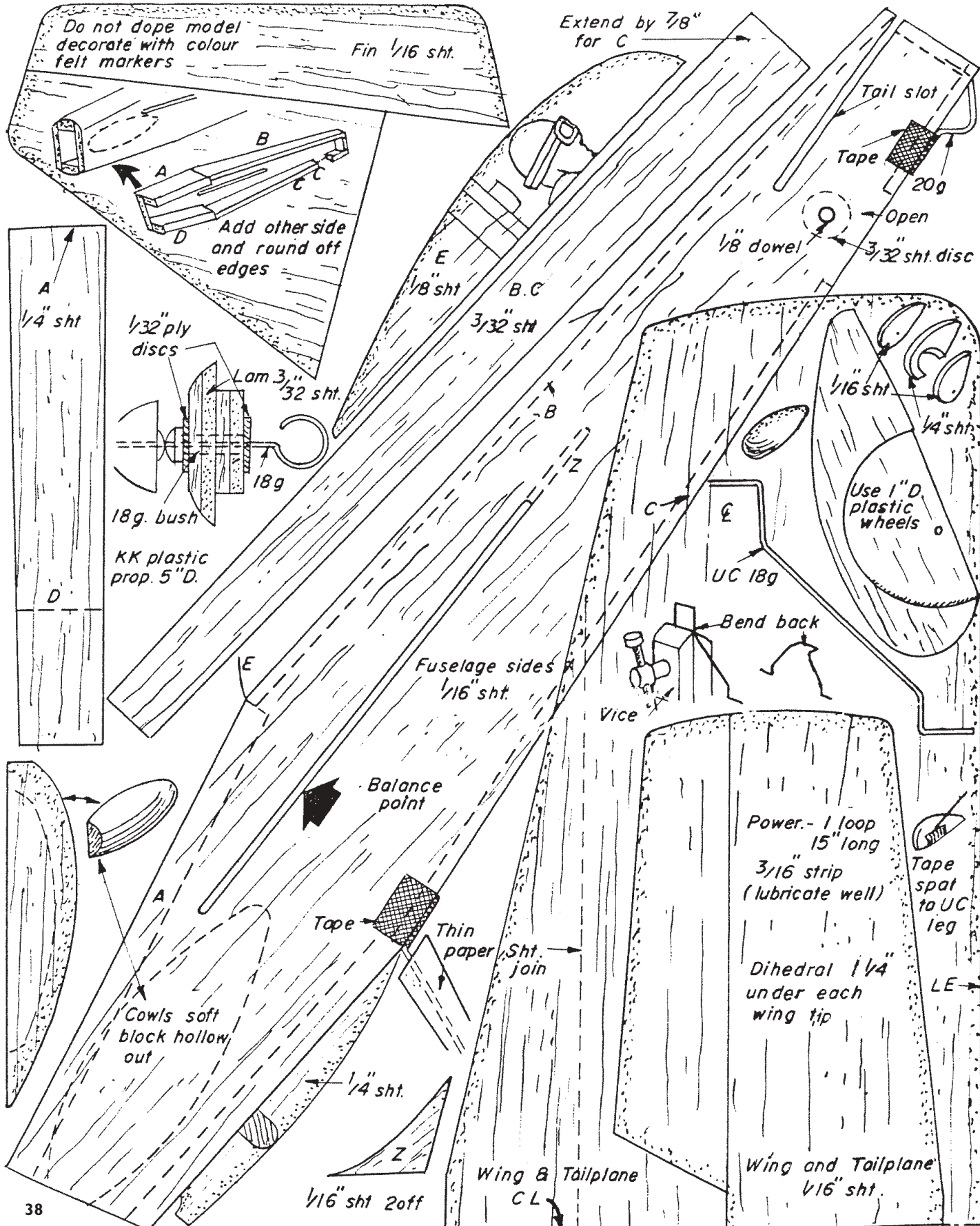
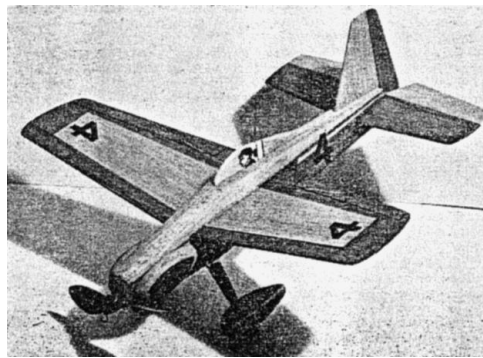


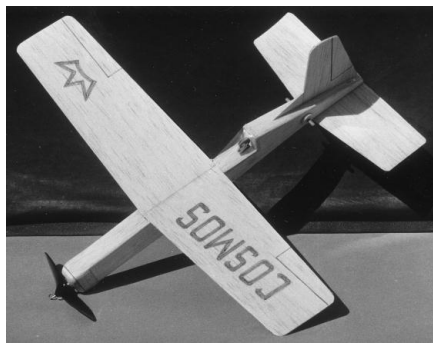
COSMIC WIND

AEROMODELLERS (like dress designers?) would be lost without supplies of the humble pin. For holding sheet coverings, frameworks, etc., in position while the cement sets they are invaluable. On the subject of pins, herewith two tips. Firstly always use the glass-headed modelling variety, they are easier to position accurately, and to push in. Secondly, when removing pins, rotate the pin several times before pulling it out. The pin will withdraw easier and you will avoid damage to the parts being held together. Heaving a pin straight out often causes trouble with a delicate structure. You will only need a handful of modelling pins, some medium grade balsawood, and a few odds and ends to get right in building the rubber-powered model featured here. It is a simple-to-build, sure-fire performer, of the famous Good-year Trophy racing aeroplane, *Cosmic Wind*, designed by Lockheed's test pilot Tony LeVier in 1947. Its a good looker and flies as well as it looks. The plan furnishes all details. Spend a moment on balancing this little racer correctly. Test glide over long grass and obtain a straight glide. Then wind on the turns and get flying. Fly to the left and avoid right hand turns. Rudder adjustment is sensitive. See you on the starting line!

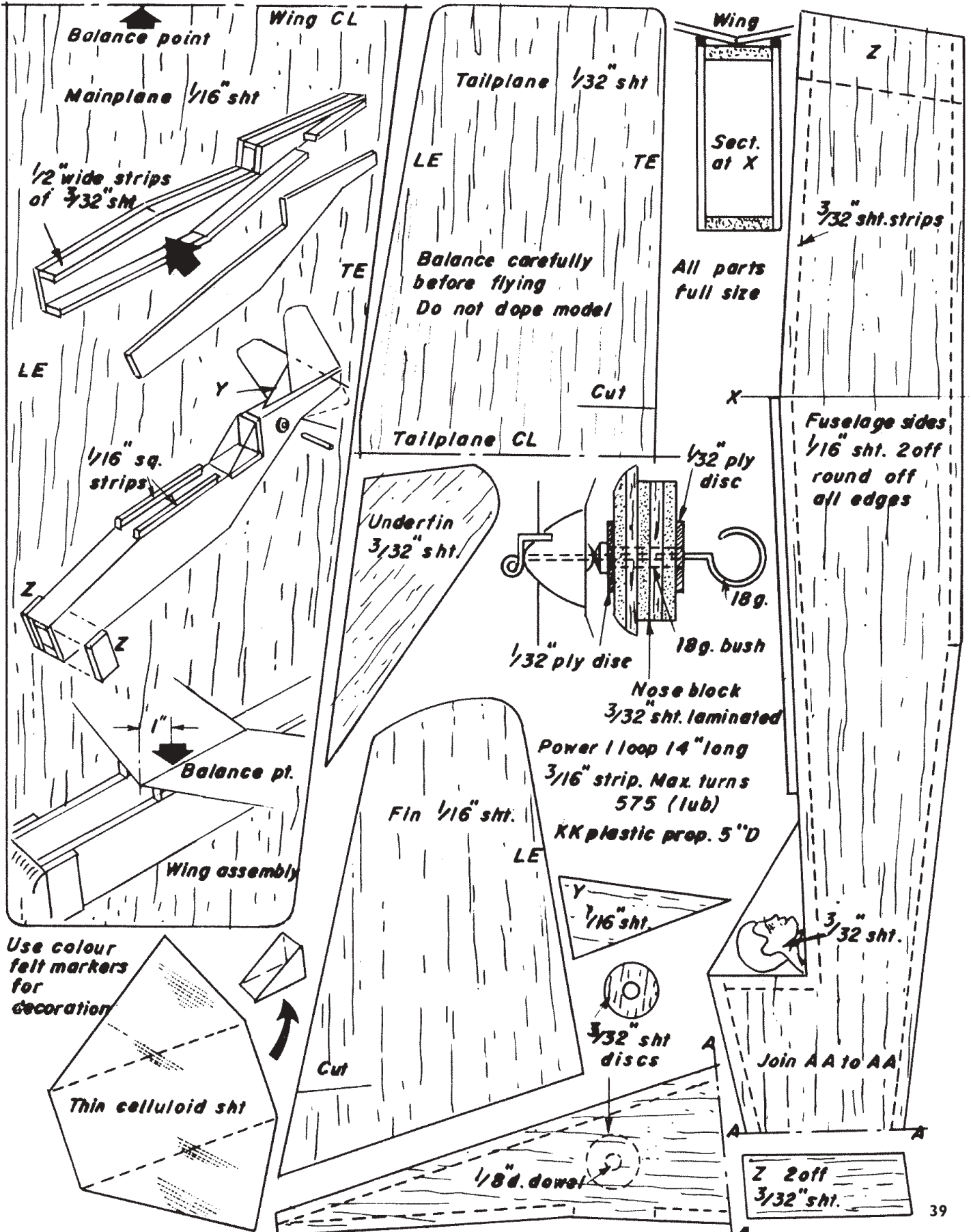


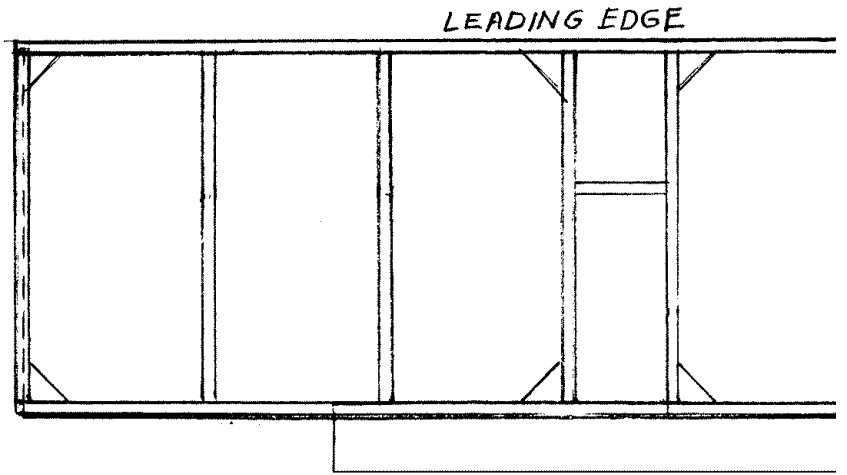
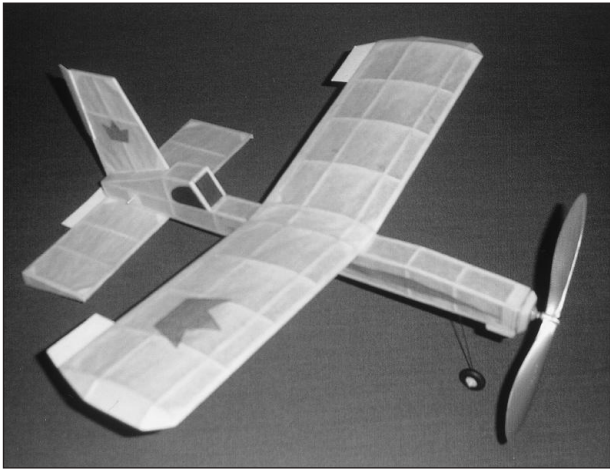
COSMOS

THE RIGHT GRADE OF BALSAWOOD
CHOOSING the correct grade of balsawood for your model is far more important than most aeromodellers realise. Balsawood is usually sold in three grades—Hard, Medium and Soft. For small rubber-powered models, "quickie" sheet models, and small scale jobs **MEDIUM** grade is the choice. Hard is for bigger power and R/C models and C/L jobs. Soft is used mainly for covering fuselage structures and wing leading and trailing edges. Using hard balsawood where the designer specifies medium grade, can ruin the balance, put up



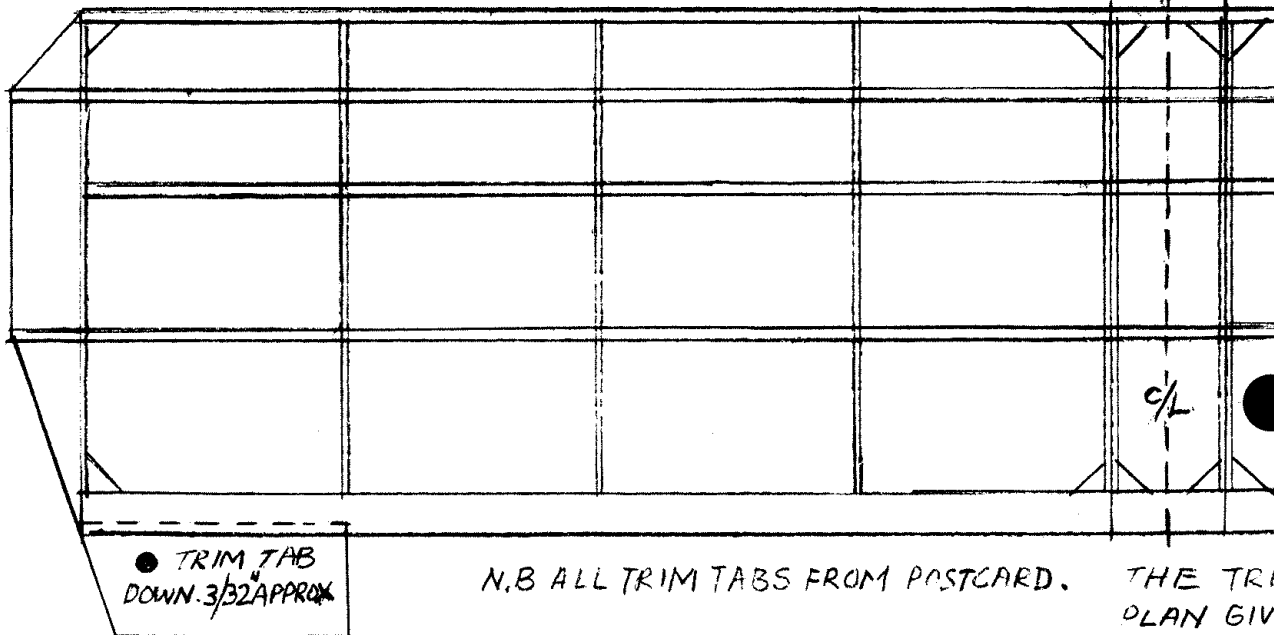
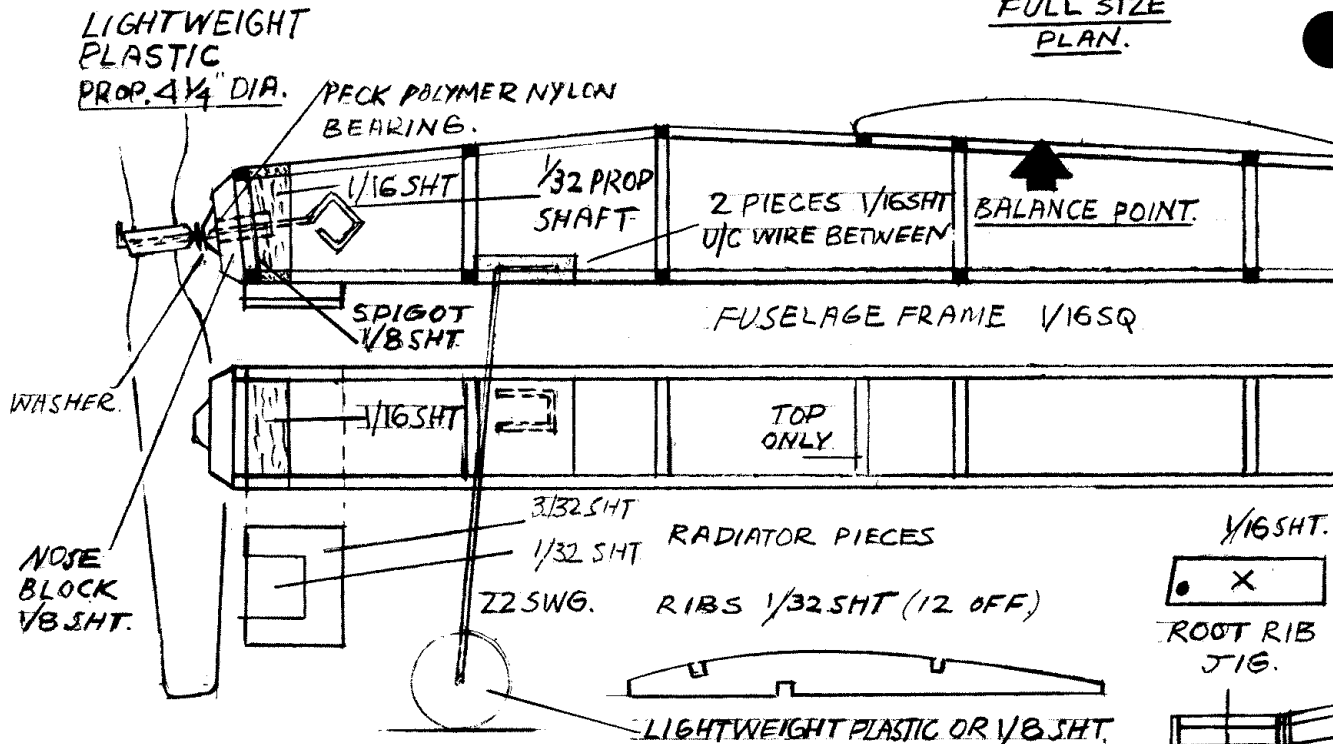
the weight and seriously affect the flight performance. One well-known balsawood manufacturer "colour-codes" the ends of his sheet and strip. Green for medium, red for hard. Pressing the balsawood between finger and thumb affords a rough and ready guide. Soft compresses easily, medium offers a little resistance. Hard can be compressed hardly at all. Use medium grade for Cosmos, the snappy little all-sheet job herewith. Have it ready for that next club meeting. Incidence and down-thrust are built-in. Just carefully balance as shown. On tests my original Cosmos climbed almost vertically—has a good glide too! Get out that **MEDIUM** balsa and help yourself to some real "get-up-and-go" flying right now.





LEADING EDGE

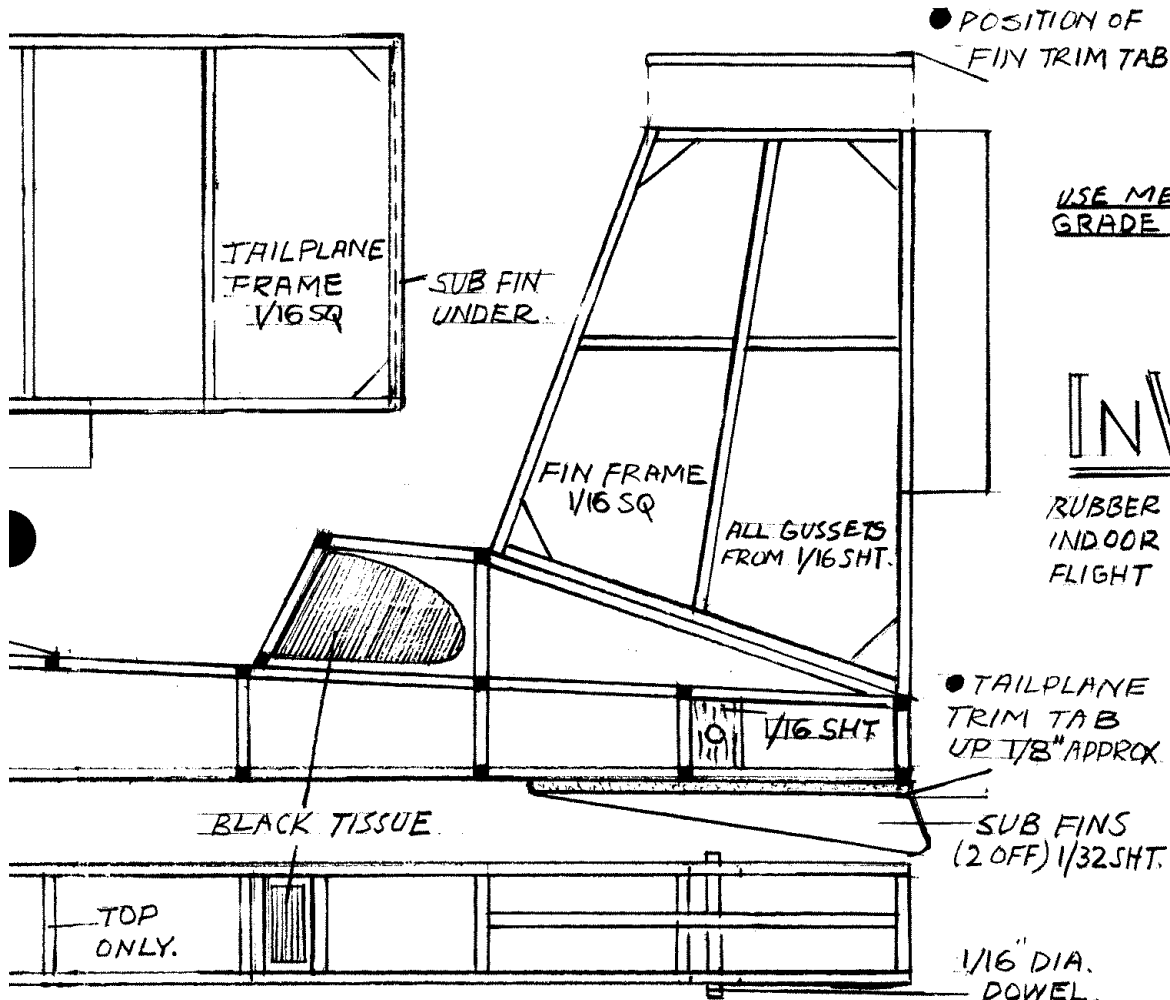
FULL SIZE PLAN.



N.B ALL TRIM TABS FROM POSTCARD.

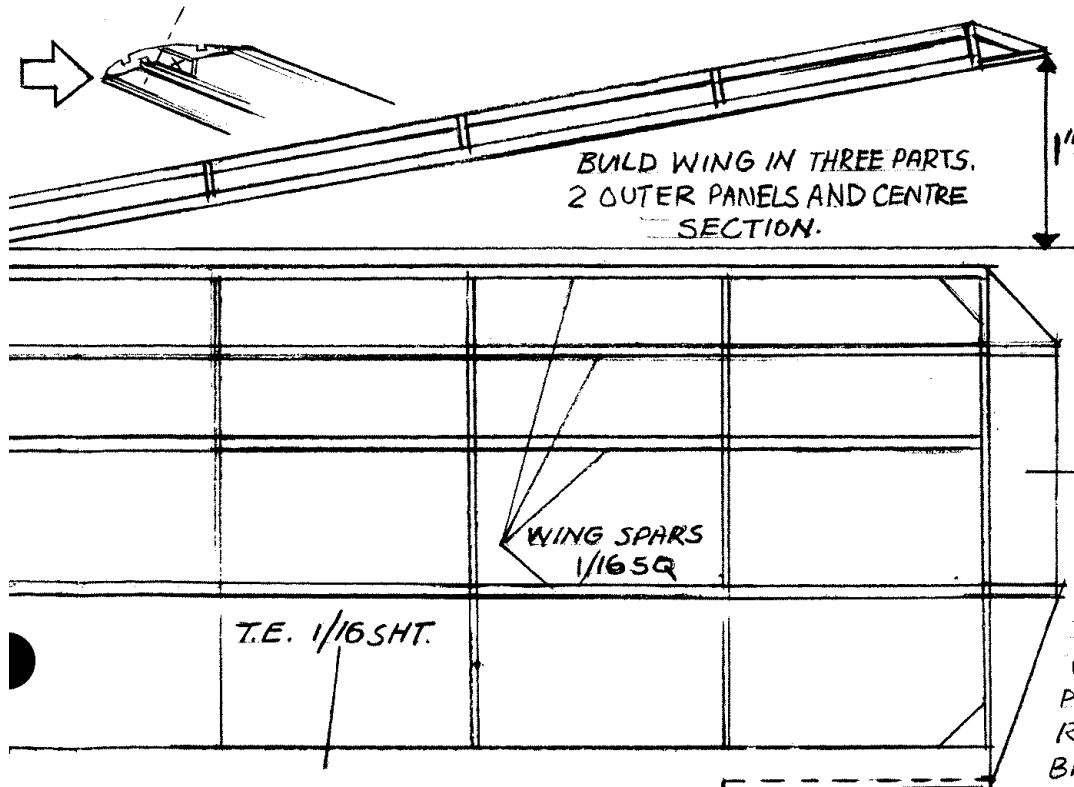
THE TRIM PLAN GIV PATH IN

DESIGNED BY RAY MALMSTRÖM



INVICTA

RUBBER POWERED INDOOR FREE FLIGHT MODEL.



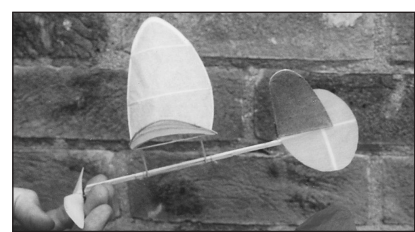
TRIM TAB POSITIONS SHOWN ● ON THE DRAWING. FOR A LEFT HAND CIRCULAR FLIGHT MODEL. USE A MEDIUM SIZED HALL, GYM, ETC.

BALANCING
 INSTALL RUBBER MOTOR (055) TAUGHT BETWEEN PROP DRIVE HOOK AND REAR DOWEL. WHEN BALANCED REMOVE RUBBER MOTOR AND INSTALL FLIGHT MOTOR. FLIGHT MOTOR: ONE LOOP OF 055 RUBBER STRIP 12" LONG (LUBRICATED).



Pee Wee – ARTICLE & PHOTO: CHRIS STRACHAN. BUILDER: JOHN VALIANT. Plan on pages 14 and 15.

Pee Wee was the first of Ray's designs to be published, in the November 1940 edition of *Aeromodeller*. It was particularly fitting that, with the enthusiastic support of the vicar, we flew a collection of them in Harston village church during Ray's memorial service in 2002. If you build one do not be put off by any of the perhaps, surprising – at least to modern eyes – features of the plan. The unsupported outline of the tailplane works fine as does the pivoting post for the fin and the sliding arrangement for the wing. The carved wooden prop looks a bit like a small but shapely log but it works fine, and with all that dihedral you can fly it in as small a circle as you like. Mine weighs 1.5 gm and is good for up to two minutes on a loop of 30 thou rubber. Give it a go – it may be one of Ray's first but it is also one of his best!



Aeronca – ARTICLE, PHOTO & BUILDER: DAVID LEECH. Plan on page 18.

This lovely little all-sheet profile model of the Aeronca took my eye in 2003 when I returned to aeromodelling after a 50-year break for girls, families, work and other things. Michael Marshall flew an Aeronca at one of the winter indoor nights in the Gropius hall at Impington Village College. I was hooked by the idea of such simple construction. So much so that when I heard Chris Strachan and Gordon Hannah discussing which model should be offered with a plan for the next Impington indoor event in the following Spring, I piped up and suggested the Aeronca. This proved a good ploy as it made the plan available to me! My first effort used fairly heavy wood and was sprayed a light blue with car touch-up aerosol.

Despite the resulting excess weight it flew in a very satisfying

manner with a Peck grey plastic propeller. The indoor event was to be judged on duration so I immediately set-to with lighter wood and thin acrylic paint, this time in a bright orange. The lighter wood resulted in an early wing break during trimming, which spoilt the appearance a bit, but modern cyano adhesive soon had the model flying again.

No, I could not match the experts in the duration stakes, but both models have since given me hours of pleasure. I have subsequently used Ray's excellent construction methods in own-design models, which have proved both durable and excellent performers. A useful tip for a lightweight finish on all-sheet models such as these, it to use highlight marker pens – the yellow being particularly effective.

Mini Master – ARTICLE & PHOTO: CHRIS STRACHAN. BUILDER: PETER FAIRBAIN WITH MODEL. Plan on opposite page.



This is a rather conventional model when compared with many of Ray's creations but it is a brilliant flyer. It is also one of his most dense plans with all the parts interlaced in a small space. I once had the

temerity to tease him about this style of plan and received a distinctly dusty reception. He took all aspects of his designing very seriously and I should have known better! It did not take long before I was forgiven.

Build it to plan including all that downthrust. Fit an IGRA or Peck 7" prop cut down to 6" and fitted with a proper freewheel and zero end load arrangement. Use a four strand pre-tensioned motor of

about 90 to 100 thou rubber, three times the length between hooks. Fly it to the left with lots of wash-in on the left wing. Wind to 1500 turns and it will do over 60 seconds. With care you can even get it to glide quite respectably.

It is a super little small field flyer and a regular winner of our club duration competitions on the Impington sports field. If you are not a performance fiend you can use a simpler set up with less rubber and you will have a very nice and rather pretty little sport flyer. Definitely one not to be missed.