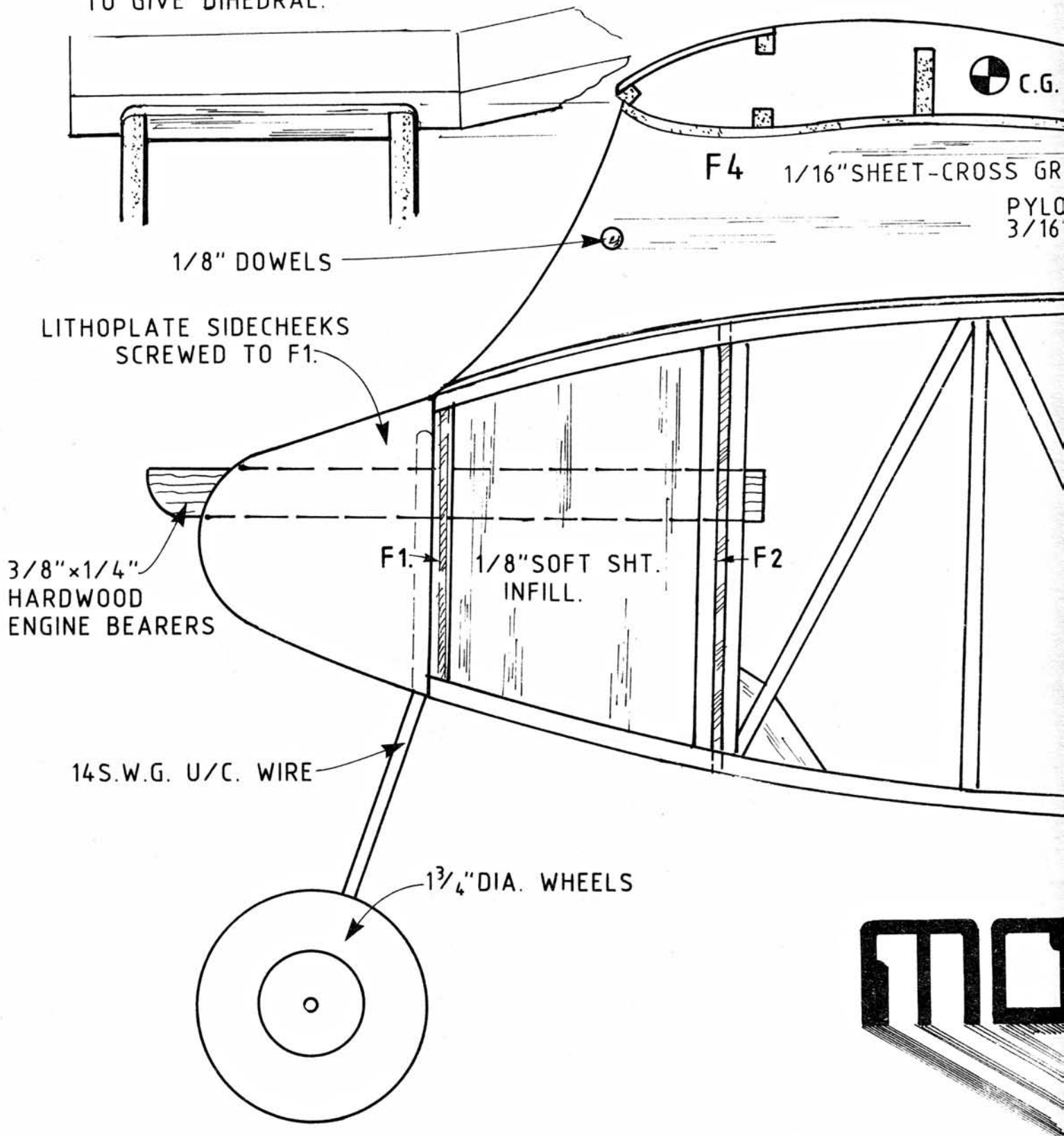
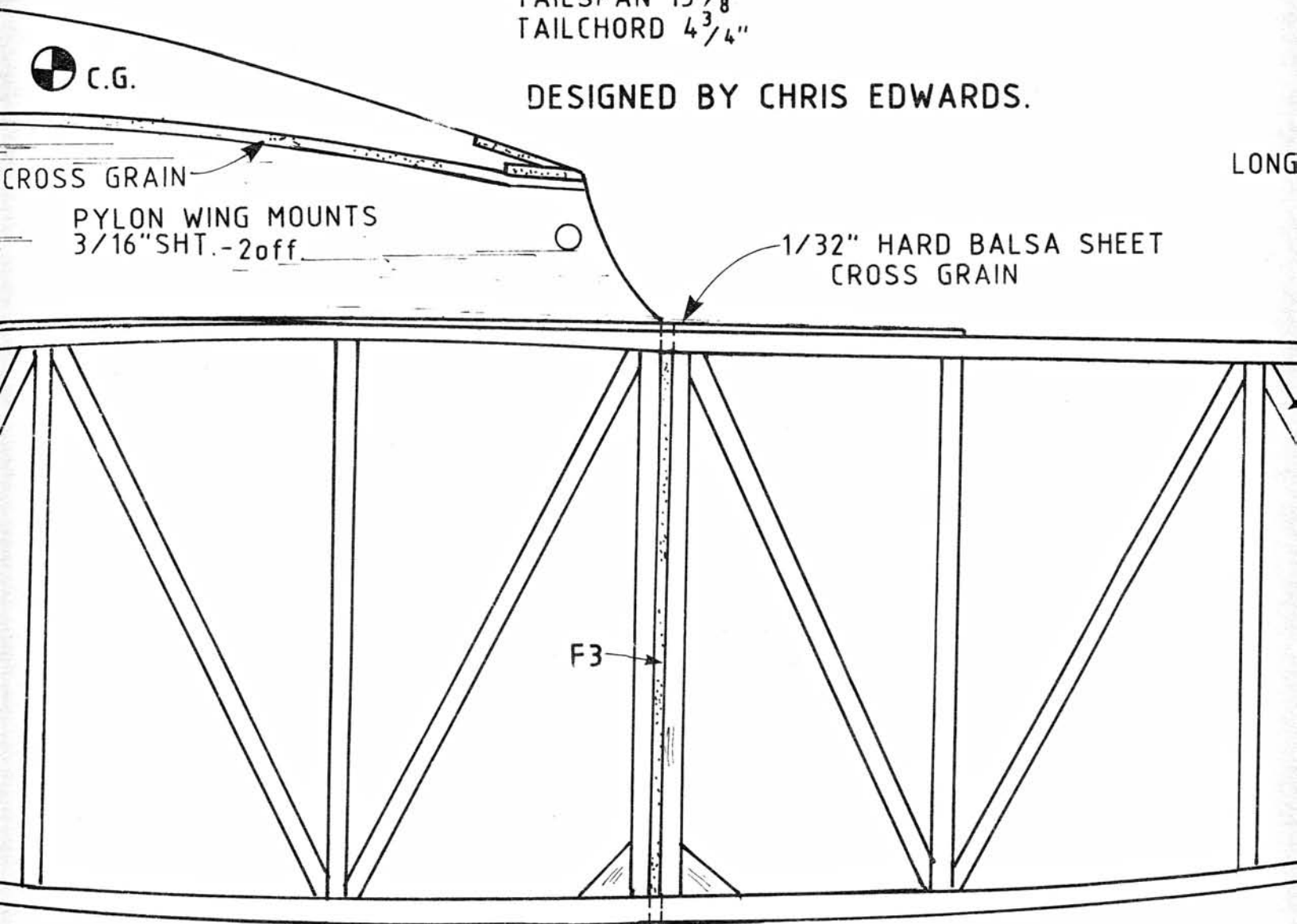


FRONT VIEW OF WING PYLON MOUNTS: NOTE ANGLED RIB R3 TO GIVE DIHEDRAL.

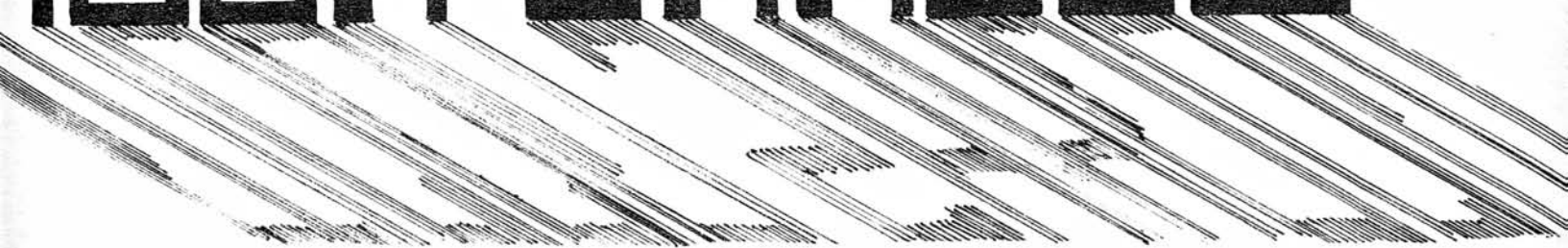


A 36" WINGSPAN, HALF SCALE VERSION OF  
ED. ROGERS ORIGINAL DESIGN OF 1937.  
WINGCHORD  $6\frac{5}{16}$ "  
TAILSPAN  $15\frac{5}{8}$ "  
TAILCHORD  $4\frac{3}{4}$ "

DESIGNED BY CHRIS EDWARDS.



# NOON SHADOW

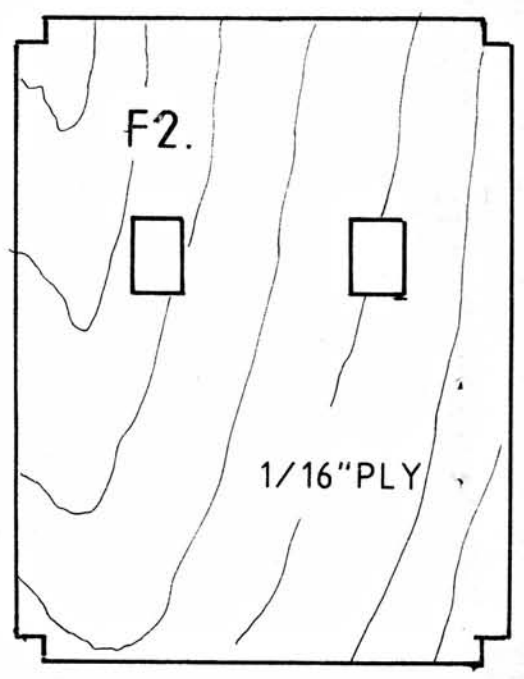
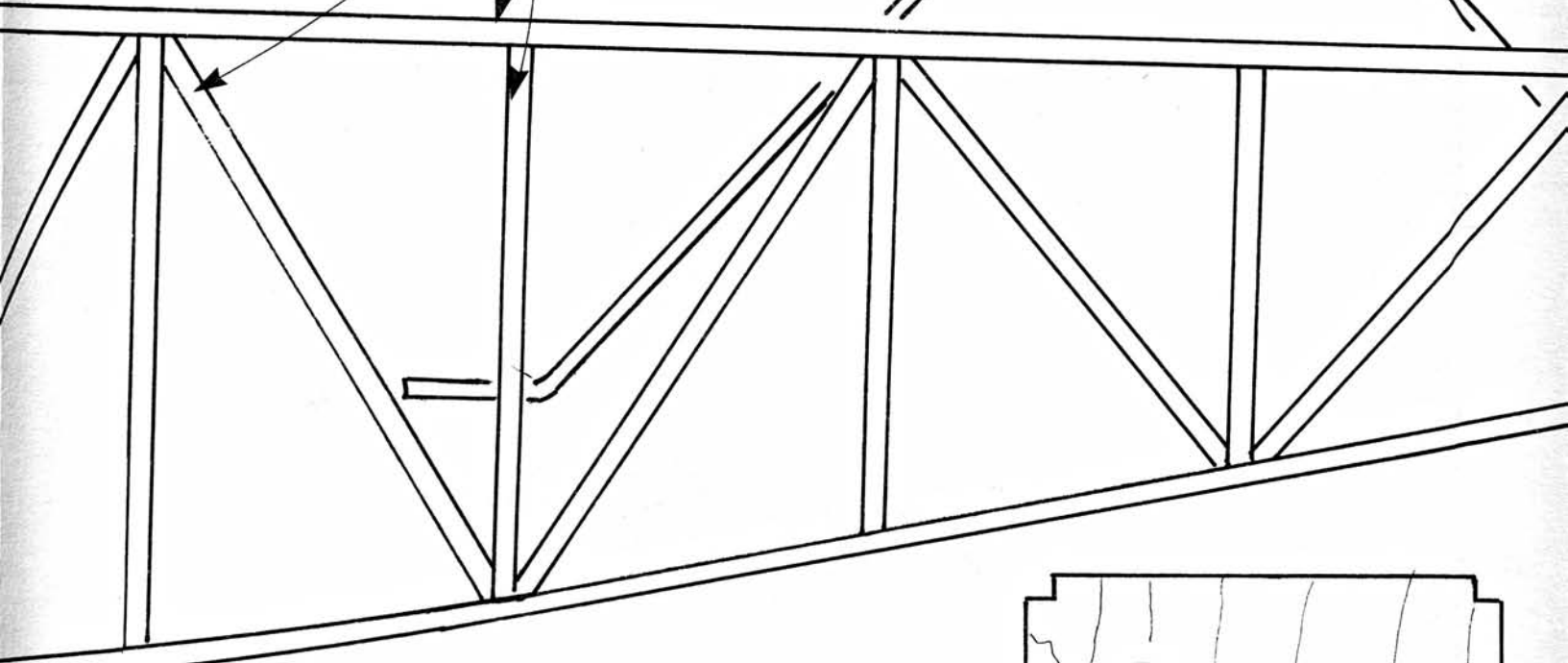
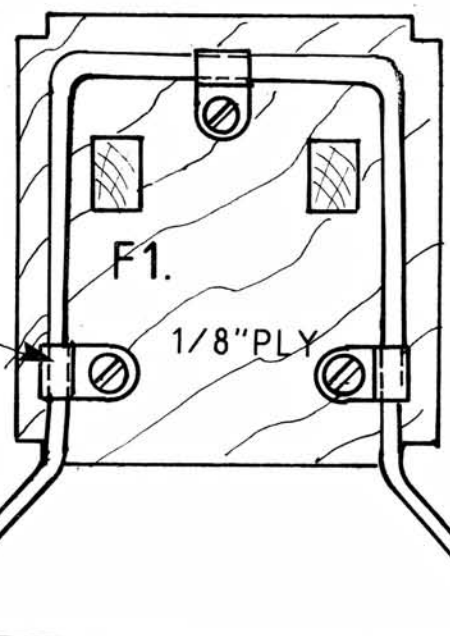


OF  
37.

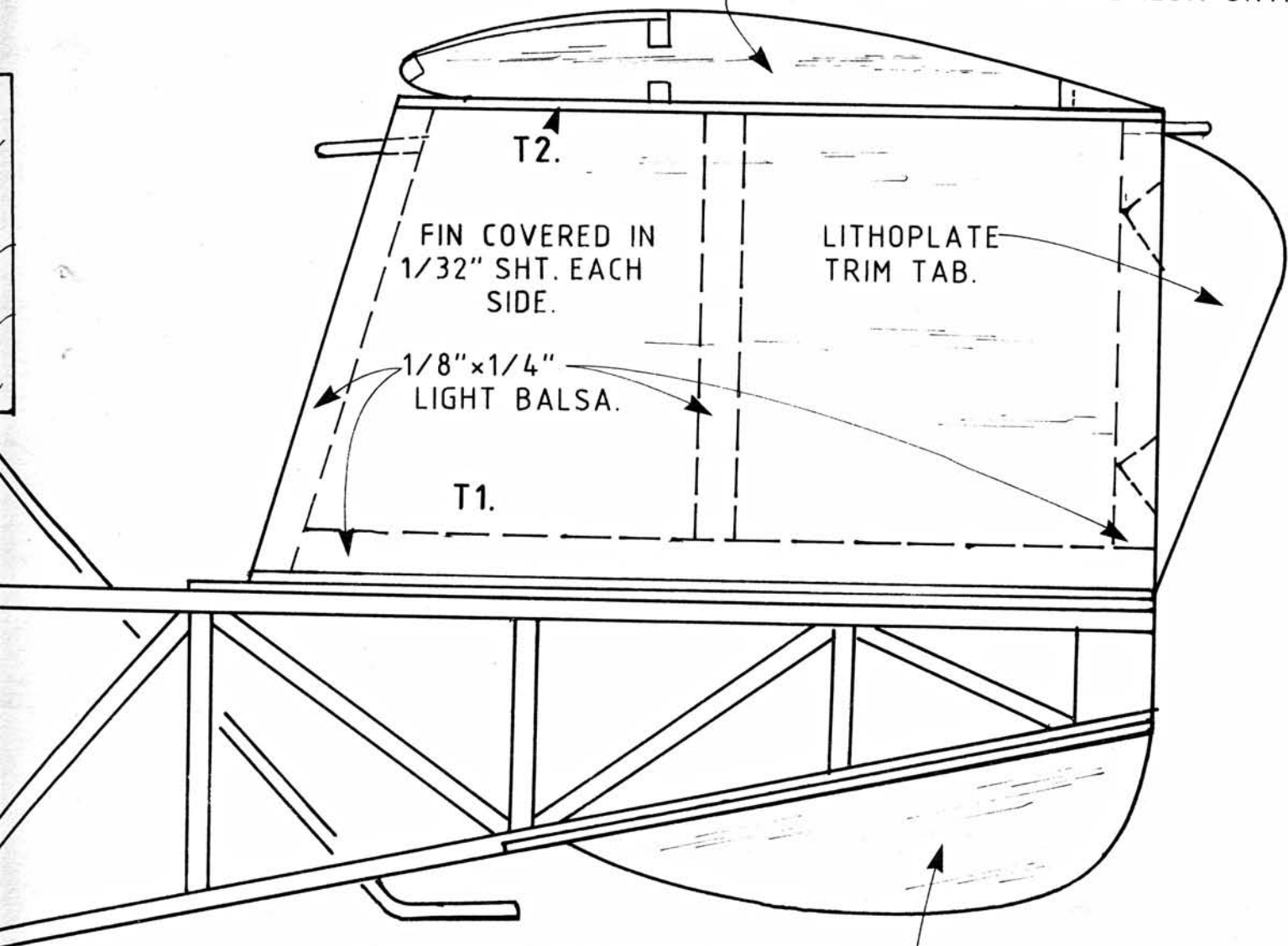
EET

LONGERONS & UPRIGHTS 1/8" SQ.  
HARD BALSA.

TINPLATE CLIPS  
BENT ROUND U/C.  
WIRE & SCREWED  
TO F1.



TAILRIB 10off.-1/16"L/BALSA SHT.



T2.

FIN COVERED IN  
1/32" SHT. EACH  
SIDE.

LITHOPLATE  
TRIM TAB.

1/8" x 1/4"  
LIGHT BALSA.

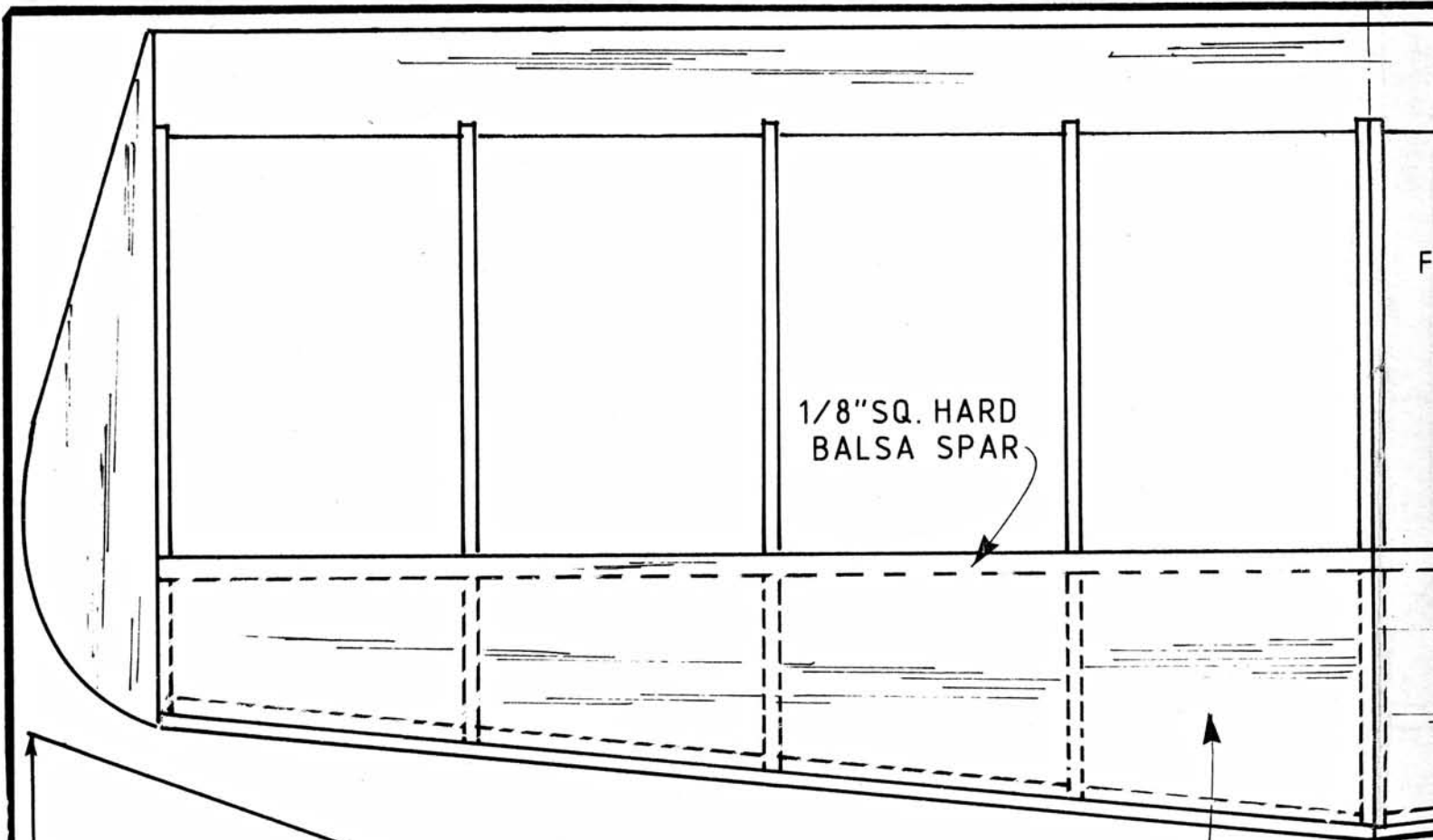
T1.

UNDERFIN  
1/8" LIGHT BALSA.

F3.

1/16" HARD BALSA SHT.

LY

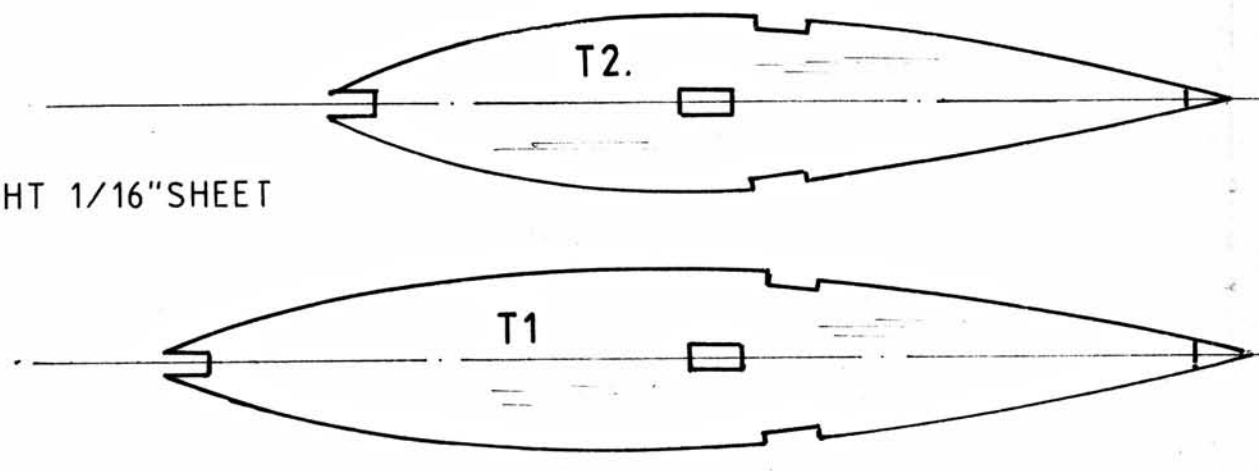


1/8" SQ. HARD  
Balsa SPAR

1/32" LEADING EDGE SHEET  
UPPER SURFACE ONLY.

IMPORTANT!  
TAILPLANE HAS ITS OWN  
DIHEDRAL WHICH IS  $2\frac{3}{4}$ "  
WITH ONE PANEL FLAT ON  
BUILDING BOARD.

LIGHT 1/16" SHEET



TRAILING EDGE  $5/8" \times 3/16"$  MED.

SLOT T.E.  
FOR  $1/8"$  RIBS.

$1/8"$  SQ. LEADING EDGE

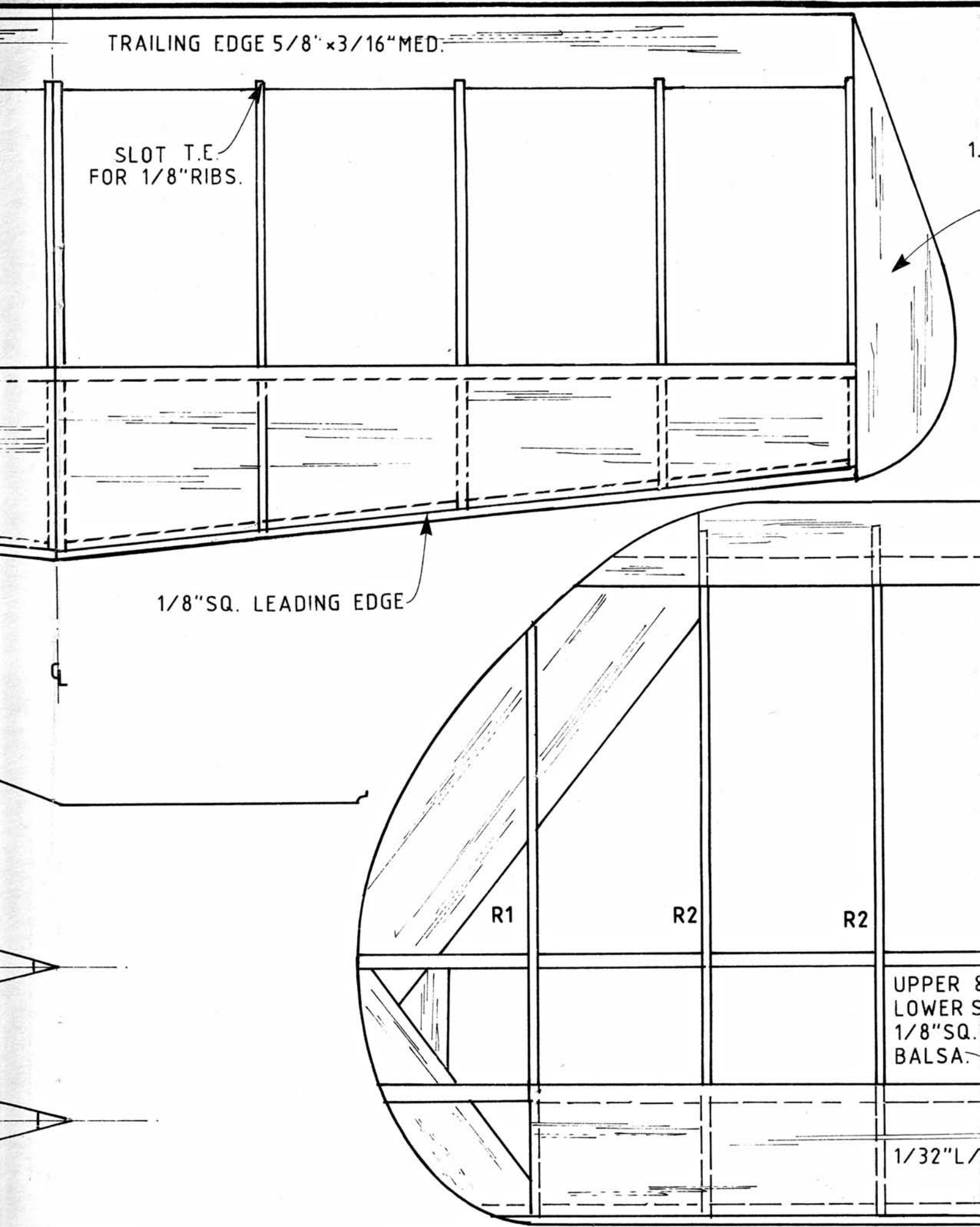
R1

R2

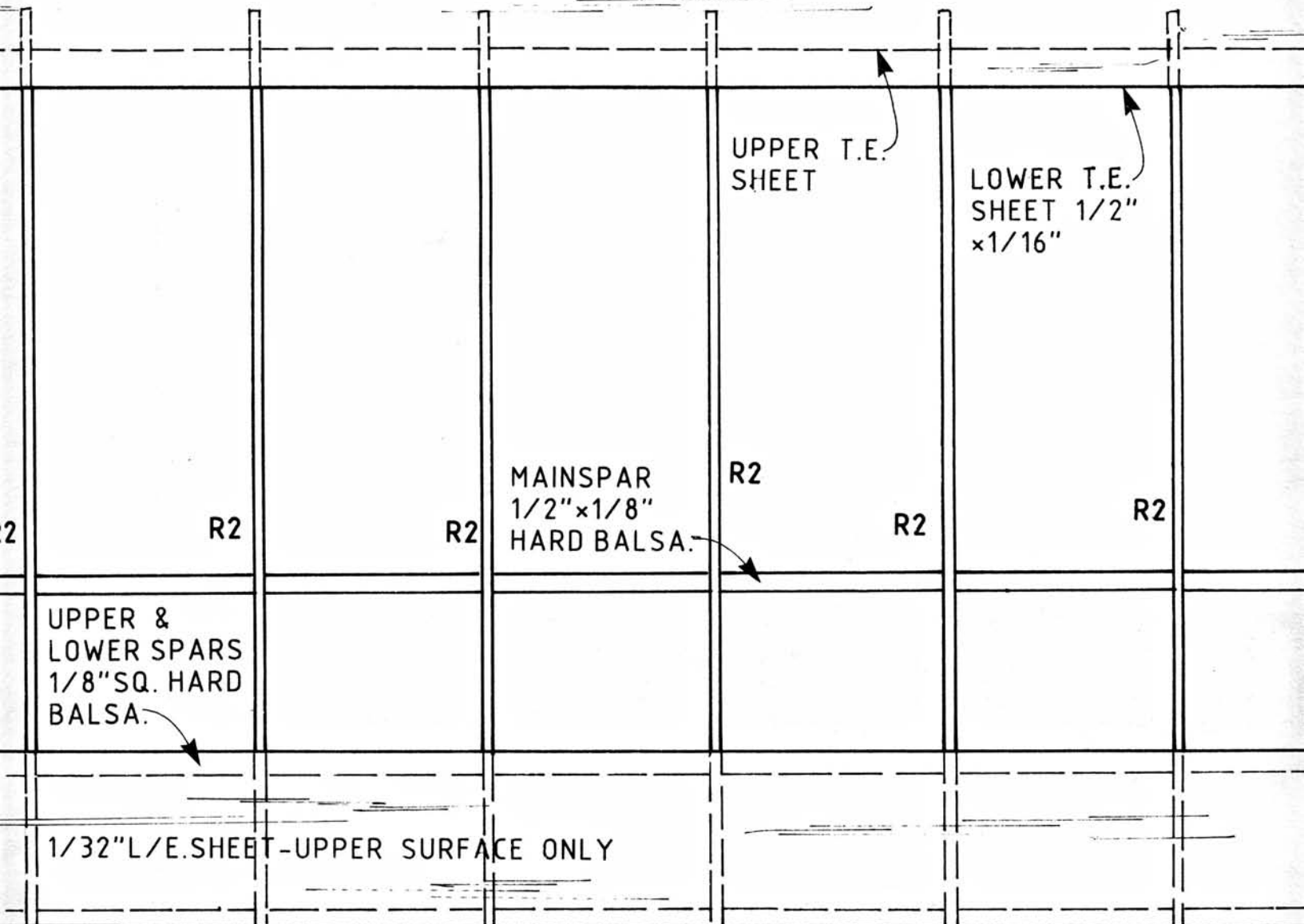
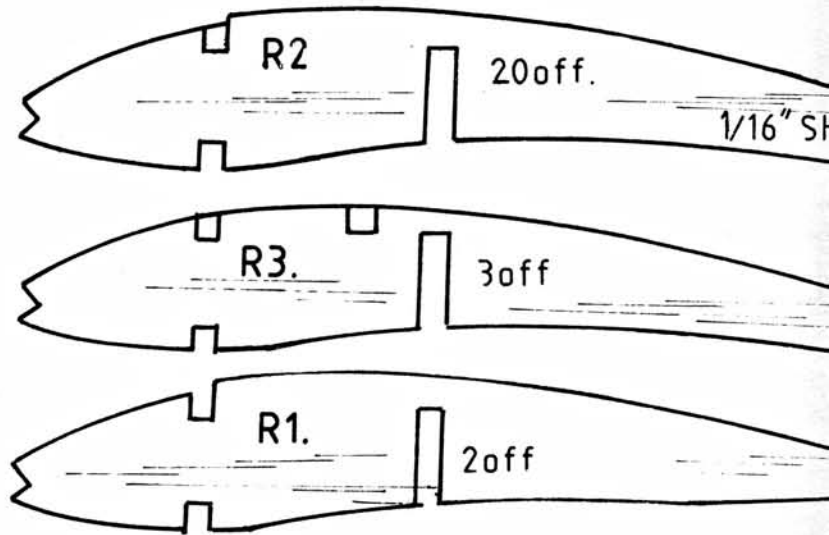
R2

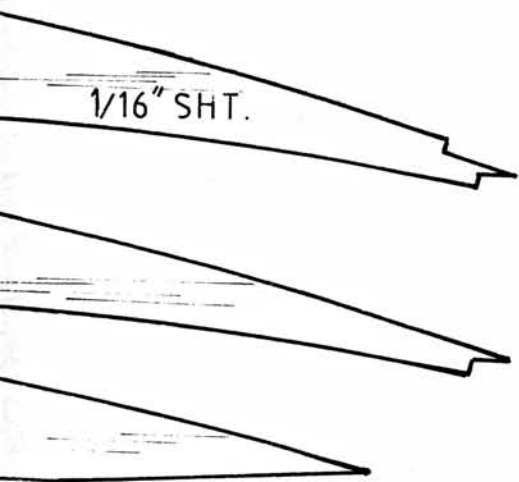
UPPER &  
LOWER S  
 $1/8"$  SQ.  
BALSA.

$1/32"$  L/



1/8" SHEET BALSA TIPS.  
ON BOTH TAILPLANE &  
WING TIPS.

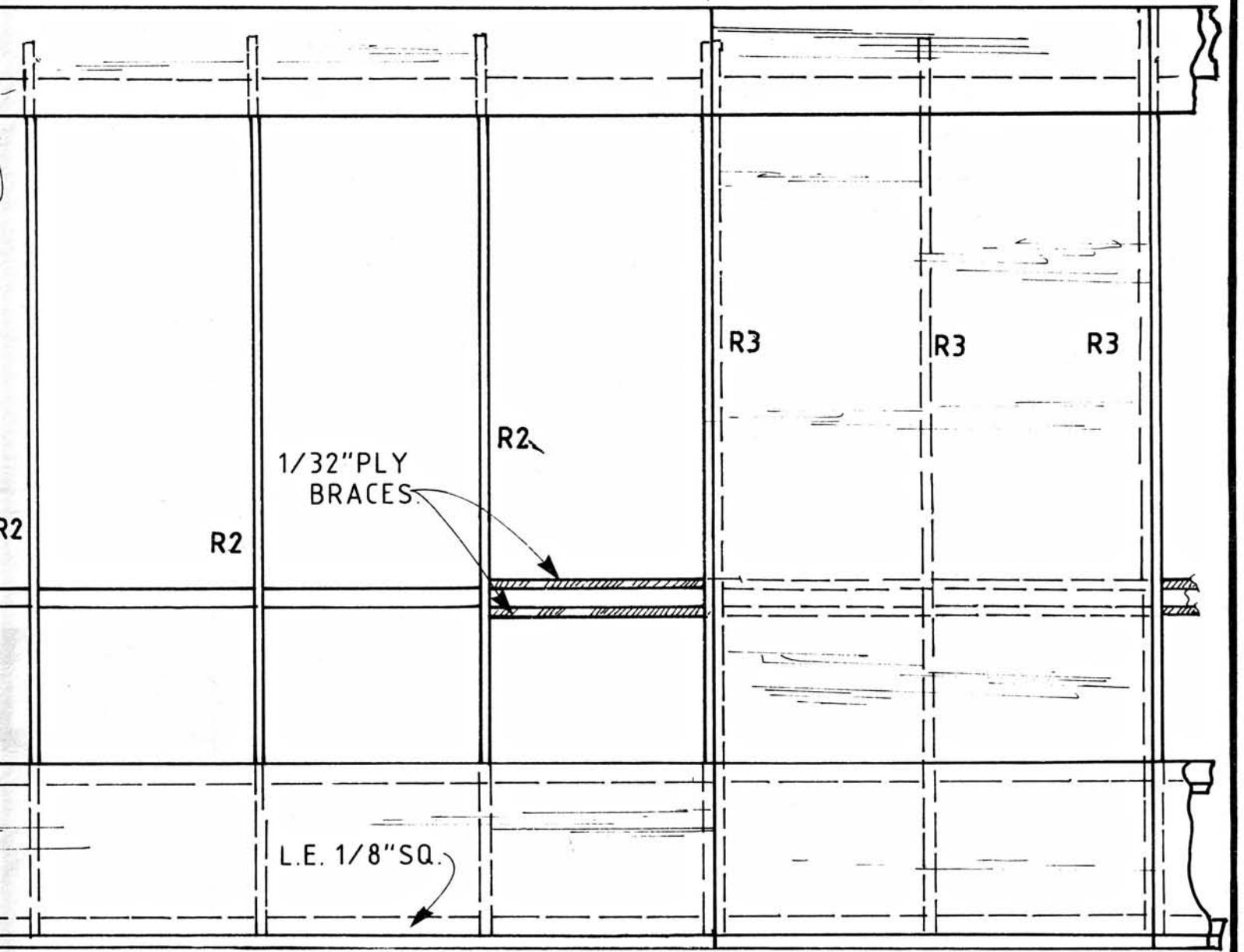




WING DIHEDRAL  $3\frac{3}{4}$ " UNDER EACH WING TIP.

DIHEDRAL BREAK POINTS

NOTE FLAT CENTRE SECTION.



# CHASE A SHADOW!



**Chris Edwards's half-scale version of Ed Rogers's 1937 Shadow is presented in time for Vintage Weekend**

**I** FIRST bumped into the Shadow via vintage enthusiast Alan Whitehead who was lucky to come across the original fuselage at an auction. The Shadow was built by Ed Rogers of Weybridge before the war and is a remarkably original and, in some ways, modern design. Ed Rogers was a very congenial aeromodeller who owned his own model shop in Weybridge High Street. For those interested, an article about Ed Rogers and his models appeared in the 1990 SAM Yearbook. A good photograph of the Shadow and Ed is featured in this article. This shows what is thought to be the first of a number of models built with the Shadow suffix, others being named Scorching Shadow, Silent Shadow, Sizzling Shadow and so on. The name Shadow apparently originated from the shouts of an excited young onlooker: 'Look at its shadow, Dad!' as he watched the model flying low on a sunny day. Modern builders of the smaller version will be relieved not to have to paint their model in the turquoise that one Shadow was known to be coloured. The Shadow was one of Ed's earlier designs which, due to its characteristic form, seems to be the one remembered by most modellers.

## Restoration

Anyone who first sets eyes on the original will immediately fall under its spell and when Alan asked me if I would restore it I knew I could not refuse the challenge. The surviving fuselage was remarkably intact, still bearing the original airdraulic ignition timer, coil and wiring. Sadly the original engine was not in the airframe when found. Fellow club member and engine enthusiast Doug Walton tried a Brown Junior against the engine bearers and reckoned that this was the unit used, particularly as the Brown were one of the relatively few American petrol engines available in the UK pre-war. Ed was also known to be a Cyclone and Ohlsson fan. The fuselage bears the name Shadow in large matt black letters on both fuselage sides, painted on a natural linen covering over the airframe. The covering is edged on all four longerons with a strip of black coloured linen cut with pinkish shears as per contemporary

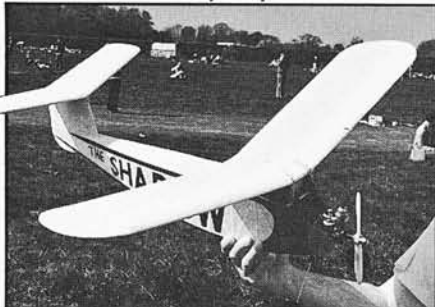


Chris with 36in Mini-Shadow (also entitled Moon Shadow, for convenience) at the ASP Design

full-size practice. On the top of the fuselage is Ed's shop address and 'phone number plus a nice note reminding the finder that return of the model would bring about a small remuneration.

The Shadow had what might be called the first pylon and T-tail, features both well ahead of their time. The fuselage is a substantial box section and the fin has a thick symmetrical aerofoil section. Research began on the missing wing and tail feathers! The first step was to contact Roger Hurd who wrote the SAM article on Ed Rogers. He immediately wrote back with a wealth of information. Roger can remember Ed and can recall seeing the Shadow pre-war. In his letter he provided a sketch of the wing

**Straightforward lines mark the little Shadow as a fine sport performer.**



plan together with a suggestion as to wing section. This was very heavily undercambered; a good indication of the true shape is provided by the pylon mount and also from an Ed Rogers wing bought at the same auction from another of his models. It was about this time that I realised I just had to make a smaller replica to check out the performance of the wing and tailplane I designed for it. With all this

information and photographs from a picture of the Shadow in the October 1947 Aeromodeller, I had all that was needed to produce Shadow's smaller sister, nicknamed Moon Shadow, a name I think Ed would approve of. Moon Shadow was designed at half scale, just right for the Irvine Mills. She flew straight off the veritable drawing board so if you are the nervous type this model will suit you, as she has no vices.

## Make your Moon Shadow

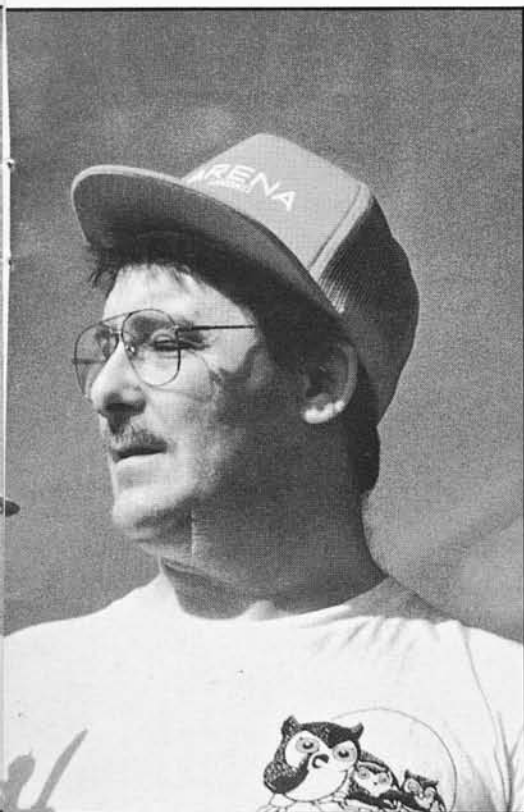
Building Moon Shadow is easy and should present no problems. Begin by building the two fuselage sides directly over the plan. Join together with formers F2 and F3, and when set pull and glue rear ends together. This will give the fuselage its correct curvature. Next, add F1 to front of the body, then add cross members from front to rear. Sheet top and bottom from F1 to one bay to the rear of F3 with the grain across the fuselage. Sheet the last three bays, top and bottom of the tail area, to support fin and underfin. Now add engine bearers and wing supports, checking that the latter are running parallel.

## Wing and tail

These should present no problem as they are of traditional construction, so will not be elaborated upon, but do not forget to add dihedral to the tailplane.

## Fin

Build a basic frame of 1/8 x 1/4in to broken lines on plan, then add half of T1 and T2 and vertical outer strip of 1/16 x 1/4in. Remove from plan and construct reverse side. Sand smooth and cover with 1/32in light sheet with grain running vertically. The tailplane seat is



s Day, Old Warden, this year.

formed using stock 1/2 x 1/8in trailing edge section cemented to fin top with taper running to the centre of fin. This can now be glued to the fuselage.

### Covering

The entire airframe should now be sanded and can be covered with tissue. I choose natural vintage Solartex as this closely approximates to the linen covering on the original Shadow. The undercarriage is fixed to F1 with five clips made from tin sheet and 8BA self-tapping screws. Trexler air wheels would look ideal. The fuselage side cheeks are cut from alloy sheet or lithoplate and attached to sides of F1 using previously mentioned self-tapping screws. Add dowels to wing pylon and fin.

You now have a Shadow worthy of casting over any flying field but you might like to paint The Shadow and trim in black on the fuselage as per the photograph of the model. One big Shadow had EEUR emblazoned above and below the wings. As you will never guess, this stood for Edward Ernest Uttermare Rogers!

### Flying time

My Moon Shadow uses an old Mills S75 and is flown on a 7x4 prop, but any .5 to .8 engine will suffice. Provided there are no warps, the model is rigged squarely and the CG is as shown the model should be ready for that well-used patch of long grass. Trim for a long floating glide. Power runs should proceed with the engine burbling at just half power. If the trim looks good increase power to roughly three-quarters. If possible, your Moon Shadow should turn 'left' under power and 'right' on the glide as mine seems happiest this way. Let us hope that vintage weekend at Old Warden this year is 'overshadowed'!

### Footnote by clubmate Doug Walton - we couldn't resist this one!

As a footnote, Chris Edwards must stand a good chance of entry to the Guinness Book of Records on account of his prolific output of vintage models. Over the last five years Chris has made around 250 models, with a record four models being made in just a week! Chris, an enthusiastic member of the newly formed Billesley Free Flight Flyers Club in Birmingham, will scale a design up or down

and produce a drawing in an evening, then spend all night making it. Typical of his models are a twice-size Hepcat, a one-and-a-half size Miss Fortune and half, three quarters, full and one-and-a-half scale Junior 60s. Anyone who has seen his models will admire his constructional techniques and their superb finish. In case you are wondering, Chris is on his fourth Moon Shadow and is drawing plans for half-size versions of more of Ed's models - Son of Shadow, Silent Shadow, Sizzling Shadow, Signal Shadow, and more besides.



Top: Simple engine installation allows ease of access and adjustment. That's an Irvine real Mills .75! Above: Fuelled up and ready to go - the mini-Shadow about to get away for more Vintage fun-flying...