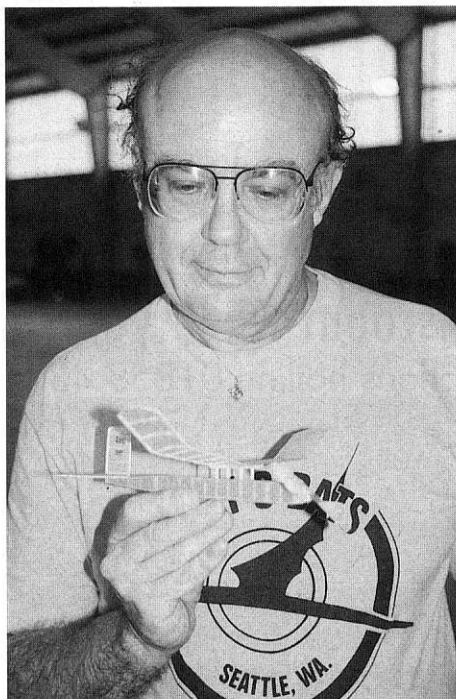


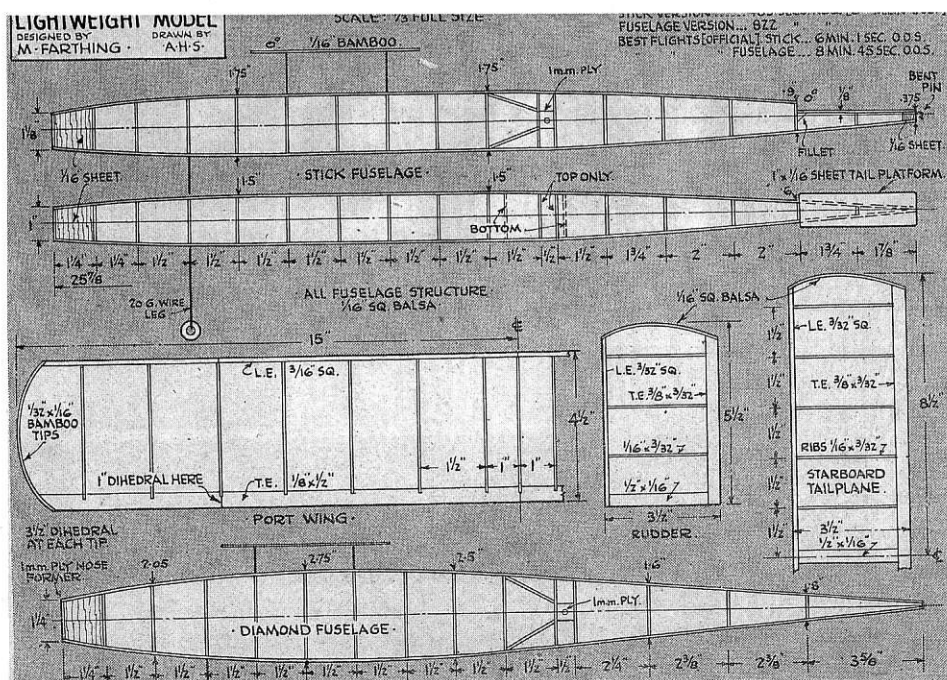
LIGHTWEIGHT PISTACHIO

Aeromodeller readers will be familiar with the 'Pistachio' international rubber power scale event, which has fans from the UK to Belgium, USA and Japan. Several good subjects have been published in this magazine in recent years. However, you may not have heard of the unusual variant of the class created by those madmen in the Miami Indoor Model Aircraft Model Association, known worldwide as MIAMA. This is the 'Model of a Model' class, where, instead of modelling a full-scale aircraft, you create a miniature of a F/F outdoor fuselage or cabin model to Pistachio size. This can be either rubber or gas of any vintage. While looking through an old Aeromodeller belonging to MIAMA President Dr. John B. Martin Jr, we discovered an ideal candidate for our 8" span midget, Mike Farthing's Jan. 1943 outdoor rubber lightweight.

It had all the right stuff - long body, lots of wing area and dead simple to build. It also had a parasol mount wing- a great feature for endurance. There is no scale ranking for this class (as opposed to Mooney ranking for scale replicas of full size aircraft) thus the sole judge



BACK TO 1943 WITH DAVE LINSTRUM AND A CLASSIC DESIGN BOIL WASHED DOWN TO SMALL-SIZE PERFECTION



Mike Farthing's original 1943 Lightweight forms the basis of this little gem.

is the stopwatch. Models are hand launched and the best time of 3 flights wins the pot. Naturally this is an indoor event, suited to your local leisure centre or even Cardington. Our version won at the first meet entered, posting times of 58 sec, 54 sec and 52 sec in the 60' ceiling at an Air Force hangar in Tampa, Florida. To get this performance it's essential to build with indoor materials to minimum weight- ours was a mere 1.5g.

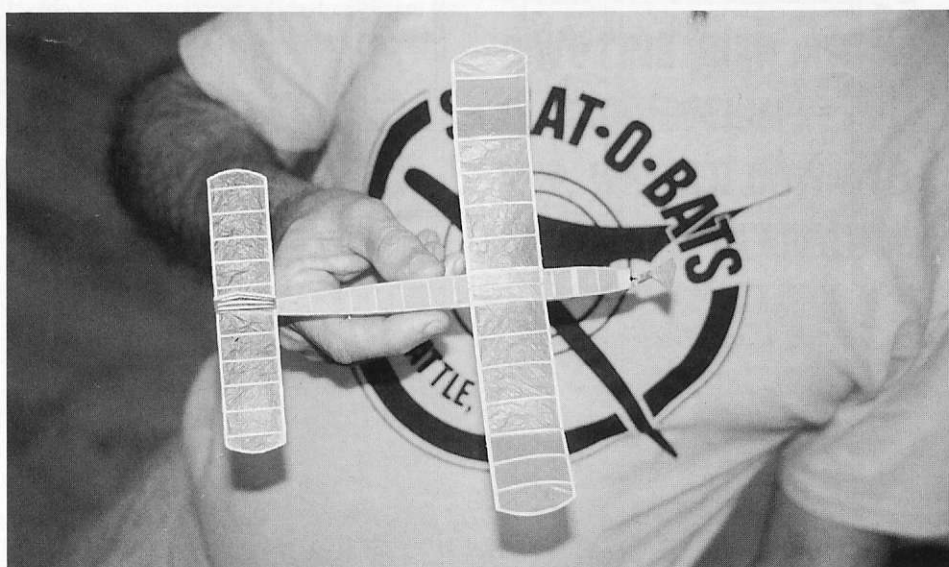
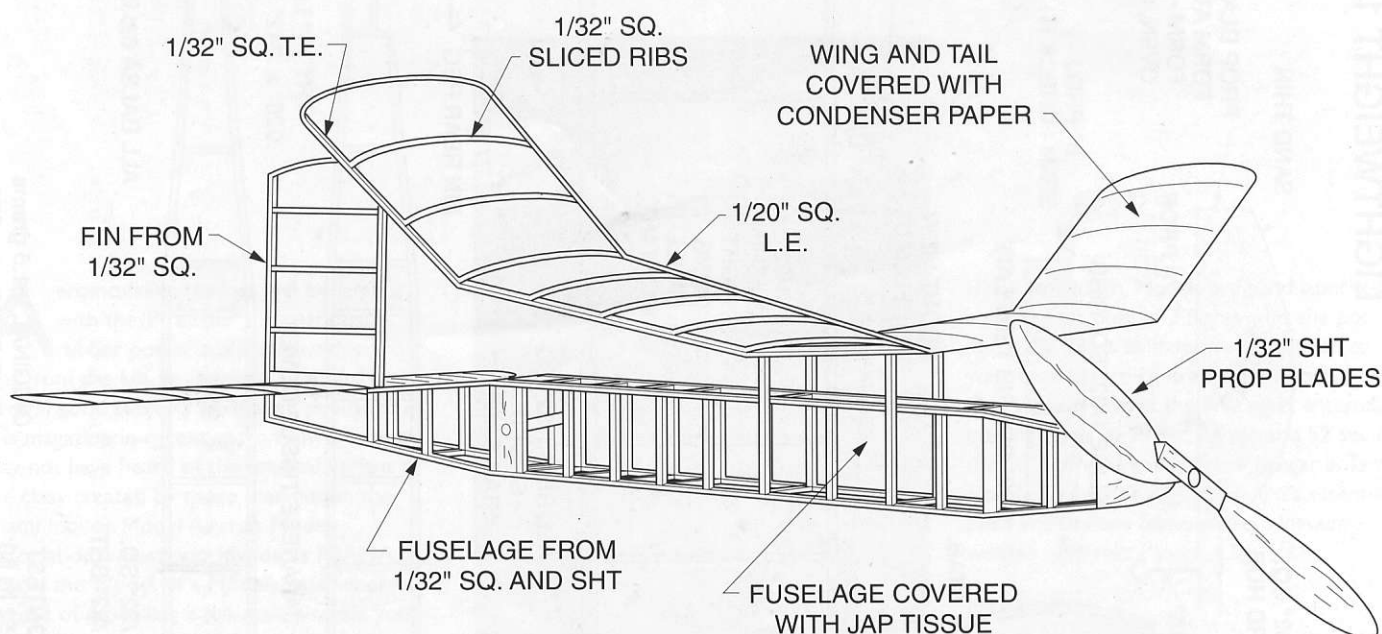
UP FRONT

Your first step should be to study the full size plan, then get two photocopies. Tape one to a small piece of artist foamcore mounting board (scraps are often found at art frame shops) and cover with wax paper. Be careful when popping parts off this glue barrier-run a blade under the glue joints to separate. Use the spare copy for templates- rib, tips and prop.

Cut two prop blades, sanding tips to $1/64$ ". Cut another blade as a cap. Soak in very hot water for 5 minutes, dry on a napkin, then position at a 17° angle to the axis of a 2" diameter cylinder- a small bottle will do; use a small plastic prop as a reference. Secure the 3 blades with a rubber wrap. Dry overnight, then carefully remove. Make a hub from hard $3/32$ " square, cutting 45° ledges $3/8$ " long for the blades (see plan). Insert a piece of .015" music wire (available at guitar shops) in the centre, then affix the blades on the ledges. The rubber hook to the shaft is bent after it's inserted in the noseblock. We used a cyano glue Teflon tube applicator for the bushing. Put a very small bead or Teflon washer on the shaft. The noseblock is 5 laminates of crossgrain $1/32$ " sheet, note the $1/16$ " noseplug on the back. Build in 3° down and 2° right thrust.

GET SLICING

Previous indoor modelling experience will help during construction - the parts are tiny and flimsy. A ladies eyebrow tweezer is essential to pick up parts. A very sharp scalpel or a broken-to-a-point double edge razor blade (not stainless) will slice up the 'indoor' balsa nicely. The entire model (except cabane and hub) is built from $1/32$ " sheet - get yours from SAMS. Note that indoor balsa comes in narrow sheets but is very light. Use a small



Man and machine - Daves' example flies very well. The secret? Weight! Keep it down to about 1.5g and you won't go far wrong

steel straightedge to strip off the sticks, and slice around the ply template for ribs. The nose and rear peg support are from sheet.

Having sliced enough strips and cut all the ribs (cut these on a scrap of dark artists' matboard) you can now start to lay down the airframe. Make sure the wing posts and cabane are made from very hard $\frac{1}{32}$ " or model RR bass; note the 2° wing incidence. Use thin (50-50) aliphatic resin glue or acetate base cement for joints, applied with a toothpick. Use only a dot of glue at each joint.

A TIP OR TWO

Let the frames dry while you form the curved tips. Make an overlength matboard form for wing, fin and stabiliser. Sand some sheet to $\frac{1}{64}$ ", strip off $\frac{1}{32}$ " wide by form length, then soak as with the prop described earlier. Apply glue to a strip, then stack another on it. Tape to form at one end, stretch along the curve, then tape the other end. Microwave on high for a minute, then carefully cut the excess loose. Do this five times, then affix tips.

Now you can box up the body and add dihedral to the wing. With such thin leading and trailing edges a very tight joint is necessary. I just nick and crack the members, then use a drop of cyano. Check that the joints are all tightly glued before covering. We covered the body/fin with the lightest Japanese tissue and the wing/stab with condenser paper. As this paper is rare, you can use tissue overall. It's essential to break paper fibres to prevent warps. Cut the tissue slightly oversize for parts to be covered (full span for wing), then crumple and spread out flat for ironing. This crinkled paper will not warp, as broken fibres have no pulling power. Do not dope or watershrink.

NEARLY THERE

Assemble the entire model in one piece - no removable wings here! Add the optional .015" wire gear leg and non-rotating wheel. Use a pin or a bit of .015" wire for the rear peg (bend an 'L' in one end). Make a winding stooage that will hold this peg on your flying table while you stretch wind. We used a 14" loop of .025" x .042" FAI Tan II rubber; you'll need a good rubber stripper to get this fine a strand! If such materials aren't available to you then you may be able to get rubber strand from the core of a good golf ball whose cover has seen better days. Simply peel off the cover and unwind the core rubber. Now you're ready to go and fly - enjoy your nostalgic miniature!

AM

MIKE FARTHING
LIGHTWEIGHT 1943, ENGLAND

45° 3/32" HARD ATTACH BLADE 45°
HUB ENLARGED VIEW CARVE BEVEL

3/32" SQ.
HARD HUB

PROP BLADE 1/32" SHT 'C'
FORM AT 17° ON 2" DIA.
FORM - BAKE DRY IN
OVEN, GLUE TO HUB

L.E.  T.

8" PROJ
SPAN - CHECK IT!

1/32" PLY RIB TEMPLATE

STAB.

FRONT VIEW
DIHEDRAL

7/8" POLY

1/4" DIH

WET
FORM
LAM

CHECK
8" PROJ
SPAN

WING

'L' END
PIN REAR PEG

STAB

TRY 14" LOOP
.025" x .042" FAI TAN

ALL BALSA 6lb INDOOR WOOD

WON 1st CONTEST
0:58, 0:54, 0:52 IN 60'
MACPILL AFB TAMPA

ORIGINAL = 1.5 grams
LIGHT FLIES LONGER!

GEAR .010"

GEAR .010"

1/64" PLY
NOSE CAP TO
FIT NOSE PLUG

IN

GLUE TO
STAB C/L

2° RT

SHAPED STRIP
1/32" SQ. BASS
POSTS & CABANE

2°

WING

ALL RIBS 1/32" SQ
SLICED
STAB SAME

1/32" x 1/16" T.E.

WET FORM
ALL TIPS
2 LAMS 1/64"
x 1/32" ON
MATBOARD
FORM - GLUE
STRIPS, TAPE
TO FORM, THEN
MICROWAVE
1 MIN ON HIGH
CUT OFF EXCESS

- 1/20" SQ. L.E.

DIHEDRAL

**MOUNT ON
CABANE**

1/32" SQ. T.E.

CONDENSER PAPER COVER
TOP ONLY 7

WET
FORM
LAM

1/20" SQ. L.E.

.015"
TEFLON
TUBE
BUSH

BUILD IN 3° DN 2° RT
NOSE BLOCK
5 LAMS 1/32" SHT
X GRAIN

**ASSEMBLE
WITH TWN
TITEBOND**