MACH 20

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H

A 42" WINGSPAN CLUB 20 CLASS AEROBATIC MODEL
FOR FOUR FUNCTION RADIO CONTROL & 0·20 cu in MOTORS

Basic fuselage sides (denoted thus – ^) are from 1/8" sheet
Upper fuselage decking has 1/8" sides & 1/4" sheet top

ALL WOOD IS BALSA UNLESS STATED

1 3/4" dia spinner – rounded nose to meet SMAE safety code

Canopy from cut down commercial item

Fill in with soft block

Rx

Servo area

Nicad

F1 1/4" ply

1/8" cockpit floor

1/32" ply doubler

1/16" ply nosering

3/8" × 45°

F1

F2

F3

F4

F5

F6

Fuselage formers all from 1/8" sheet – cut holes to clear pushrods, tank feeds etc

Upper fuselage sides – 1/8" sheet

1/16" ply reinforcement

1/4" sheet top

1/32" ply doubler back to here

wing nut support plate

Wing bolt centre lines

1/8" underside sheeting

1/8" × 3/8" doubler

Fill in both sides of fin with scrap sheet

Entire tail assembly is 3/16" sheet – note anti-warp strips on ends of tailplane

Sand to section as shown & fit commercial horns & hinges

16 s w g pianowire joiner

H.B. 20 shown mounted as in the original using bolts thro' the radial lugs. Nuts behind firewall (F1) are soldered to scrap tinplate to prevent them from turning. For beam mounted motors fit nylon engine mount to F1
Nose may be lengthened by up to 1" provided that the C of G remains unaltered

C of G

1/8" sheet cockpit floor

3/8" × 45°

1/8" wing saddle

1/8" sheet underside – may be fabricated as a removable hatch if desired such as to afford access to the fuel tank for routine maintenance

Fair underside of wing into fuselage with scrap soft sheet

Optional u/c – uses 2" dia wheels on 10 s w g commercial pianowire legs

Typical wing section showing optional u/c mounting blocks with ply reinforcement

Typical wing section showing aileron construction & hinge

Spruce spars

W1 W10

W1–W10 cut individualy from 3/32" sheet. Notch for mainspars (& u/c blocks if fitted) & punch pushrod holes. Cut away ribs W7–10 for aileron construction

W1

W10

F1

F2

F3

F4

F5

F6

1/8" sheet wing saddles

1/32" ply doublers

1/4" × 3/8" sternpost

1/8" × 3/8" doublers

1/16" ply nosering

Cut away to clear motor

Fill in between nosering & F1 with 1/2" sheet

4 oz tank in this bay

3/8" × 45°

1/4" ply wing fixing support let in to notches cut thro' both wing saddle & ply doubler

Build wing in two halves & join after completion. Join with wings inverted on a flat building board to ensure that top of wing is level, with dihedral in underside only
Reinforce with glass-fibre tape & resin

3/16" dia wing locating dowels

1/16" t e sheeting – top & bottom

1/16" × 5/16" false leading edge

1/4" × 3/8" leading edge

Soft block wingtips

Scrap balsa reinforcement

W10 W9 W8 W7 W6 W5 W4 W3 W2 W1

1/4" sheet false t e

3/8" sheet leading edge to aileron

Top & bottom mainspars 1/4" × 1/8" spruce

U/C blocks (if fitted) are 1/2" × 3/8" hard wood. Cut ribs to suit & reinforce with scrap 1/32" ply

Box in servo cutout with scrap sheet

1/16" × 1/4" capstrips

16 s w g pianowire pushrods

Commercial nylon bellcrank

1/8" ply support plate

To avoid damage to t e of wingtip – soak liberally in cyano adhesive
Treat tail tips in like manner

Note extra aileron riblet

Hole for single wing retaining bolt – use commercial nylon bolt set & reinforce inside of t e with scrap balsa

1/16" centre section sheet top & bottom

1/16" × 1 1/2" sheet trailing edge – top & bottom

Commercial nylon control horn & hinges – reinforce inside aileron to support horn fixing screws

Drawing preparation, layout & tracing by R. M. & K. Hart, Hemel Hempstead