PRESENTED WITH RADIO MODELLER FEB 90
COPYRIGHT ARGUS SPECIALIST PUBLICATIONS, ARGUS HOUSE, BOUNDARY WAY, HEMEL HEMPSTEAD, HERTS. HP2. 7ST.

ANGLE CYL. HEAD UPWARDS TO CLEAR SILENCER FROM FUSE. SIDE (2 STOKE) ENSURE MUFFLER CLEAR OF GROUND IF NO U/C IS FITTED.

OFFSET MOUNT TO ALLOW FOR SIDE-THRUST.

THROTTLE SNAKE-CHECK AGAINST YOUR ENGINE.

F1.-1/8"PLY.

NOTE-SLOT FOR TANK HATCH TONGUE.

F2-1/8"PLY.

5-1/8"LITEPLY.

TANK BAY HATCH. CUT OUT OF 1/8"FUSE. TOP AFTER ASSY.

1/8"PLY TOUNGUE FITS INTO SLOT IN TOP OF F2.

SERVO SLIDER

1/8"PLY. DRAWN FOR FUTABA FP-148/S100. ADJUST TO SUIT SERVOS USED.

FRONT REAR

SERVO TRAY CHANNEL-2 OFF 1/16"PLY, SPACED BY 1/8"x1/8" SPRUCE AT SIDES & 1/8"x1/4" AT REAR ONLY.

REMOVE FRONT PORTION AFTER FITTING/GLUEING TO ALLOW SLIDER TO BE REMOVED.

SERVO TRAY/SLIDING MIXER NOTES.
1. IF IT DOESN'T FIT, BINDS, SNAGS OR MISBEHAVES IN ANY WAY -SCRAP IT & START AGAIN.
2. CHECK FOR SUFFICIENT ROOM TO ACCOMMODATE FULL ROLL/PITCH PLUS TRIM. DIMENSIONS OF PROTOTYPE -FUTABA CHALLENGER 6, FP-S 148 SERVOS.
3. NOTE ANGLE OF TRAY IN FUSE. SIDE VIEW. THIS ALLOWS (A) STRAIGHTER PUSHRODS FROM ROLL SERVO TO TORQUE RODS (B) ALLOWS SLIDER TRAY TO BE EXTRACTED AFTER SERVO REMOVED.

OFFSET ANTENNA TUBE.

WING.

SPINNER 1.1/2" -2" ADJUST COWL TO SUIT.

1/8"SQ. HATCH RAILS.

HATCH

TYPICAL FUSELAGE CROSS SECTION.

1/4"x1/8" FOR HATCH SCREWS

HATCH.

1/8"MED. BALSA TOP.

FLEXIBLE PLASTIC TUBE FOR RX. ANTENNA, RUN AERIAL TO FIN TOP.

SUGGESTED DUMMY HEADREST.

FIN STRUCTURE 1/16"FULL OUTLINE CORE. 1/8"x1/8", 1/8"x3/8" /8" SHEET EITHER SIDE AS NOTED.

1/8"x1/4"

1/8"x3/8"

1/16"CORE

1/8"SQ. RIBS.

1/16"CORE

1/8"SQ. RIBS.

ENGINE ON C.L.

THRUST LINE 0°/2° DOWN.

4oz SLEC(BLUE CAP) ON BOTH PROTOTYPES.

FUSELAGE SIDE, TOP HALF FROM 1/8" MEDIUM BALSA. MARKED THUS

RUDDER SERVO -RIGHT.

THROTTLE SERVO -LEFT.

ELEVON SERVO TRAY-SEE DETAIL

3/8" IN FRONT CORNERS OF TANK BAY.

FUSELAGE LOWER SIDES FROM 1/8"LITEPLY OR 3/32" MED./HARD BALSA/FULL LENGTH 1/64"PLY DOUBLERS -PLY INSDE MARKED THUS-△

1/8"x1/2"PLY EACH SIDE OF FUSE. FOR U/C FIXING SCREWS.

RX. NICAD.

1/16"x1"PLY TONGUE ON FRONT INSIDE OF HATCH.

HORN FOR PITCH PUSHROD, SCREW INTO 1/4"PLY PAD

1/8" SHEET EITHER SIDE OF FIN CORE.

3/8"x3/8" N.L.E.

PUSHROD EXIT-PORT SIDE.

1/8"SHT. GRAIN.

CONTROL HORN

FUSELAGE BOTTOM AFT.

FUSELAGE TOP AFT OF F4.-1/8"MED. BALSA GRAIN.

1/8"PLY U/C MOUNTING.

1/8"BALSA BOTTOM

HATCH 1/8"BALSA. FIT IN BETWEEN SIDES, CRACK AT FUSE HERE SECURE WITH TONGUE AT FRONT & TWO SCREWS AT REAR.

1/8"PLY HATCH SCREW PLATES.

1/16"PIANO WIRE SKID EPOXIED INTO FIN CORE. -OMIT FOR HAND LAUNCH MODELS.

USE COMMERCIAL DURAL U/C 3-3.1/2"DEEP WITH 8-10" TRACK.

3/8" △ SECTION SOFT BALSA.

REAR FUSELAGE SIDES FROM 1/8"BALSA, TRUE LENGTH FROM PLAN MARKED ON SIDE VIEW.

RELIEVE STBD. TOP & BOTTOM TO CLEAR ENGINE.

COWL NOTES.
MAKE UP FROM 1/4" OR 3/8" SOFT SIDES, EITHER 1/2" IN CORNERS OR SCRAP SHEET AROUND 1/4"x1/2"△ IN CORNERS

TOP DECK TREATMENTS:-
1) CLEAR CANOPY WITH PILOT (OR SPRAY INSIDE, FORGET PILOT) -KIELKRAFT "PHANTOM" CANOPY IS IDEAL!
2) OPEN COCKPIT/WINDSCREEN/PILOT BUST & HEADREST FOR OLD TIME LOOK.
3) LEAVE SQUARE FORGET PRETENCE-A TAILESS UGLY BOX.

3/16"SHT. TIPS & GUSSETS

L.E. 1/4"x3/8"

R2 R2 R2 R2 R2 R2 R2 R1 R1 R2

1/16"SHT. L.E. TOP & BOTTOM, UNBROKEN TIP TO TIP.

1/4"x1/8"SPRUCE SPARS TOP & BOTTOM, ONE LENGTH FOR EACH-NO JOINS!

LINE R1's UP WITH FUSE. SIDES.

Mk1. TIP.

Mk 2. TIP.

1/16" VERTICAL WEBBING-ALL BAYS.

'BUBBLES'

DESIGNED BY DERECK WOODWARD.

A 40.1/2"SPAN TAIL-LESS SPORTS AEROBATIC MODEL FOR 20/25 2 STROKE OR O.S.26 FOUR STROKE, BOTH Mk.1 (O.S.26FS) & Mk2 (O.S.25FP) WEIGHED 2LBS.12OZ. READY TO FLY. RADIO-4CH. FUTABA CHALLENGER

1/4"x1/16" CAPSTRIPS TOP & BOTTOM.

T.E. FROM 1/4"x3/8"

CONTROL NOTES.
ELEVON ON FULL ROLL & PITCH COMMANDS MOVE A LONG WAY (±3/4") HENCE LARGE ANGULAR MOVEMENT OF PUSHROD & TORQUE RODS TAKE PLACE. PAY PARTICULAR CARE TO OBTAIN FULL & FREE MOVEMENT WITH NO STRAINING OF JOINTS. BALL JOINTS ARE A GOOD OPTION HERE.

3/4"x1/16"TOP & BOTTOM T.E. CAPS UNBROKEN TIP TO TIP.

CONTROL THROWS.- MEASURE PITCH & ROLL AS SEPARATE MOVEMENTS AT WIDEST POINT OF SURFACE.
PITCH 1/2" EACH WAY
ROLL 1/2" EACH WAY
RUDDER 1" EACH WAY.

UNBROKEN SHEET ON TOP

2 STRIPS ON BOTTOM

WING SERVOS AS VIEWED FROM UNDERNEATH.

ELEVONS-3/8"SHEET CARVED DOWN TO 1/8"THICK T.E. SEE WING SECTION FOR ELEVON AT ROOT.

ELEVON TORQUE RODS-FROM 1/8" OR 3/32"DIA. PIANO WIRE-STIFFNESS IS ESSENTIAL.

1/4"PLY BLOCK, GLUE TO WING & FUSE. SIDE, FOR NYLON HORN-FIXED END OF PITCH LINK.

TO SET ELEVON REFLEX, SHAPE ELEVONS IN ONE PIECE. FIT WITH LOWER EDGE OF ELEVON AT ROOT ON TOP EDGE OF LOWER FUSE. SIDES. GLUE TIP PORTION ONLY, THEN CUT ELEVON FREE.

ELEVON CONTROL THROW DATUM.

RIBS-R1. 1/8"BALSA, 2.OFF.
R2. 3/32"BALSA-14.OFF.

EXTENT OF TOP WING SHEETING ON BOTH VERSIONS-UNBROKEN. LOWER WING-2 PIECES.

1/4"x3/8" L.E.

2.1/2"

1/8" TIP RIBS UNDER SHEETING.

1/4"x1/16" "CAPSTRIPS" SPACED AS BUILT UP WING.

T.E. 1/4"x3/8" WITH 3/4"x1/16" CAPSTRIPS.

CUTOUT AS PER BUILT-UP WING. BOX IN WITH 1/8"SHT.

FOAM WING DETAIL-N.T.S.

Mk.1 USED BUILT UP WING.
Mk.2 USED FOAM PART SKINNED WITH 1/16"BALSA.

FOAM WING NOTES.
1) USE A ONE PIECE FOAM CORE & SKINNING MATERIAL.
2) 1/4"L.E. & T.E. AS BUILT UP WING.
3) Mk2. USED A FOAM CORE WITH 1/16"BALSA SKIN AS BUILT UP WING SHEETING-SEE SKETCH.
4) CUT OUT LOWER SKIN & FOAM FOR ELEVON SERVOS DO NOT CUT TOP SHEETING.