2 REQD. R4

2 REQD. R5

2 REQD. R6

FIBREGLASS CENTER SECTION

R11A

2 REQD. R11

SAND OFF PLANKING FLUSH WITH TIP OF RIBS & ADD 3/16" SQ. CAP STRIP & FORM TO T/E CONTOUR

3/32" BALSA SHEETING (TOP & BOTTOM)

L/E STRIPS BUTTED TO ALIGNMENT JIG & BUTT BLOCK & SANDED TO RIB CONTOUR

"MODIFIED 2415"

CUT OUT R1 TO CLEAR SERVO INSTALLATION. SERVO CAN BE MOUNTED ON HARDWOOD RAILS EPOXYED TO BOTTOM WING SHEETING

1/16" SHEET BALSA BUTT BLOCK R1 – 1 REQD.

3/32" SHEET BALSA RIB ALIGNMENT JIG

3/32" BALSA L.E. RIB JIG 3/4" @ R1 TO 3/8" @ R13

BALSA FILLER BLOCK

1/8" BALSA

1/16" SHEET BALSA BUTT BLOCK

FIBREGLASS

SECTION A-A THRU L/G MOUNT

R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11 R12 R13

TIPS CARVED FROM SOFT BALSA BLOCKS

HILLCREST BELLCRANKS

HARDWOOD BLOCK - EPOXY TO R9

FRONT SPAR 1/8" BALSA

3/32" X 1/4" X 5-7/8" PLY (FORE & AFT) RETAINING STRIPS FOR LANDING GEAR

3/32" X 2" X 6-1/2" PLY MAIN L/G MOUNTING

BALSA FILLER BLOCK

1/4" SQ. BALSA BRACING

FIBREGLASS UNDERSIDE

3/32" SHEET BALSA RIBS ALL RIBS EXCEPT R1 WHICH IS 1/8" BALSA

(2) 1/16" X 5/8" X 3/4" SHEET NYLON

1/8" SHEET BALSA STIFFENER NOT SHOWN HERE

1/4" SQ. BALSA BRACING NOT SHOWN ON THIS SIDE

5/16" X 5/8" X 3/4" HARDWOOD BLOCK WITH GRAIN VERTICAL TO PLAN VIEW OF WING. DRILL 5/32" HOLE FOR GEAR WIRE

1/8" SHEET BALSA STIFFNER FULL DEPTH

1/8" BALSA

3/32" SHEET BALSA PLANKING (TOP & BOTTOM OF WING)

R13A R12A R11A R10A R9A

AILERON LEADING EDGE CUT FROM 1/8" SHEET BALSA

I HAVE USED AIRLERONS TO HERE BUT ARE VERY SENSITIVE. PRODUCING A VERY FAST ROLL RATE & MUST BE RESTRICTED IN TRAVEL FOR PRECISION FLYING WITH REEDS.

REAR SPAR 1/8" BALSA

BALSA FILLER BLOCK BETWEEN RIBS

3/32" PLY

FRONT & REAR SPARS & LEADING EDGE OUTLINES

REAR SPAR RIB SPACING

FRONT SPAR

REAR SPAR

LEADING EDGE

SPARS ARE FULL DEPTH NOTCHED FOR RIBS. "EGG CRATE TOGETHR"

4 DEGREES

ACTUAL DIHEDRAL 4 DEGREES @ CENTERLINE OF WING RIB SECTION

2 REQD. - R3

2 REQD. R2

2 REQD. R7

2 REQD. R8

R10A

2 REQD - R10

R12A

2 REQD. R12

R9A

R9

CUT 2 (R9) TO FULL SIZE. 2 (R9A) REQD.

1/16" PLY DOUBLER

3/32" PLY INSERT

R11 R12 R13

R11A R12A R13A

ENGINE THRUST LINE OFFSET FOR 2 DEGREES RIGHT THRUST

LABORATORY RUBBER CORK TURNED TO FIT

CUT OFF BOTTLE THREADS

8 OZ FOR MERCO

FORWARD END OF FUSELAGE SIDE

2-56 SCREWS

COVER INSIDE OF JOINT WITH STRIP OF FIBREGLASS CLOTH ABOUT 1/2" WIDE & EPOXY

SERVO INSTALLATION IS LEFT TO BUILDER'S CHOICE DEPENDING ON TYPE OF EQUIPMENT TO BE USED.

TAPER SERVO RAILS & 1/4" SQ. TOP STRINGER TO MATCH

SERVO RAIL

COWL MOUNTING ANGLE BOLTS GO INTO OVERLAP. SAFETY ATTACHMENT OF FIBREGLASS NOSE SECTION TO FUSELAGE SIDES.

COWL MOUNTINGS ARE NYLON ANGLES FROM "MIDWEST BUILDERS ACCESSORY KIT 60"

3/32" BALSA DOUBLER ENDS HERE

3/32" PLY WING CRADLE DOUBLER

THREADED NYLON INSERTS BOUND WITH FINE WIRE, SOLDERED, & EPOXYED TO HARDWOOD CROSS MEMBERS. DRILLED & TAPPED FOR 4-40 SCREWS.

WOOD KEYS INTO NOTCH IN 1/16" PLY DOUBLER

NYLON

HARDWOOD

1/16" SHEET BALSA DOUBLER

ELEVATOR MOUNTING DETAIL

1/8" SHEET BALSA

1/8" X 1/4" BALSA

1/4" SHEET BALSA RUDDER

1/8" X 3/8" BALSA SPLICED TO PLY RUDDER SPINE

RUDDER PLANKED WITH 1/16" SHEET BALSA & SANDED FLAT WITH EDGES ROUNDED OFF

MOLDED FIBREGLASS NOSE SECTION EPOXY CEMENTED TO MAIN FUSELAGE FRAME

3/32" PLY

3/32" BALSA DOUBLER

3/32" BALSA SIDES

3/32" PLY

MERCO "61" SHOWN

MOLDED FIBREGLASS COWL

FIBREGLASS NOSE SECTION

PLANS SHOW 0-0-0. I HAVE FOUND THAT A SHIM .032 FOR DOWNTHRUST BETWEEN TOP MOTOR MOUNT AND FIREWALL IS ABOUT RIGHT. CENTER OF LEADING EDGE STABILIZER IS ABOUOT .032 ABOVE FUSELAGE REFERENCE LINE FOR OPTIMUM TRIM. THIS MAY VARY FROM PLANE TO PLANE.

FUSELAGE SIDES COVERED WITH ONE THICKNESS OF THINNEST FIBREGLASS CLOTH AVAILABLE BEFORE ATTACHING TOP AND BOTTOM SHELLS AND NOSE SECTION. DO ONE SIDE AT A TIME. STRETCH CLOTH TIGHT AND HOLD WITH MASKING TAPE OR PINS BEFORE APPLYING SLIGHTLY THINNED RESIN. CLOTH WEAVE SHOULD SHOW AFTER RESIN SOAKS IN UNIFORMELY. DO NOT APPLY MORE RESIN WHEN SET. SAND TILL CLOTH SEEMS TO BE ABOUT HALF GONE. FLOW ONE OR TWO COATS OF HOBBYPOXY FILLER THINNED AT LEAST 50% (ABSOLUTELY WATERY), WHEN WELL DRIED SAND SMOOTH. VERY LIGHT. STRONG. GOOD DENT RESISTANCE. ATTACH TOP, BOTTOM, NOSE WITH HP FILLER EPOXY. SAND SEAMS. FINISH WITH STUFF PUTTY KNIFED RIGHT OUT OF CAN ON LOCAL AREAS. IF YOU USE DOPE, WAIT A FEW DAYS AND DON'T GET TOO MUCH FILLER IN IT.

ROUT TO ACCEPT FIBREGLASS OVERLAP ON NOSE SECTION

DETACHABLE 8" TOP FLITE CANOPY WITH MOLDED FIBREGLASS "CUFF". EPOXY TO CANOPY.

MOLDED FIBREGLASS SHELL FOR TOP DECKING. MAY ALSO BE CARVED FROM SOFT BALSA BLOCK & HOLLOWED OUT

ROUT OUT 1/8" PLY RUDDER SPINE TO ACCEPT .045 PIANO WIRE & EPOXY CEMENT WIRE IN PLACE.

3/16" DIA. NYLON ROD DRILLED TO RECEIVE WIRE RUDDER KEEPER. EPOXY IN PLACE.

1/8" PLY RUDDER SPINE

4-40 SCREWS

2-56 SCREWS

EPOXY NYLON BLOCKS INSIDE - THREAD 2-56

1" TRAILING EDGE STOCK

NO BULKHEADS IN FIBREGLASS

STAB SET AT 0 - PLUS 1/2 DEGREES

END OF NOSE SECTION OVERLAP

1/4" X 3/8" HARDWOOD OR SPRUCE SERVO RAILS

F1

THRUST LINE

HARD ALUM MOTOR MOUNTS WILL ACCEPT MERCO 49-61 OR FOX 59 AS SHOWN

3/32" PLY DOUBLER FROM THIS LINE FORWARD

WING MOUNTING NOT SHOWN BOLTS OR DZUS RECOMMENDED

SPONGE RUBBER WING SEAT

1/4" SQ. TOP & BOTTOM STRINGERS

3/32" X 1/4" BALSA TRUSS BRACES (ON EDGE)

SHEET BRASS & SOLDERED TO 3/32" PIANO WIRE

2-56 FLAT HD. STAINLESS STEEL MACH. SCREW (AS RUDDER LOCK) (SKID RETAINER)

3/32 BALSA SIDES

1/16" SHEET BALSA DOUBLER

1/8" NYLON TAIL SKID

3/32" PLY INSERT

1/16" PLY DOUBLER WITH LIGHTENING HOLES

3/32" PLY WING CRADLE DOUBLER

WING SET AT 0 DEGREES

WITH NO FUEL, AIRPLANE BALANCE IS CORRECT WHEN TAIL (JUST) STAYS DOWN WHEN PUT DOWN

3/32" BALSA DOUBLER ALL AREA FORWARD OF THIS LINE

MOLDED FIBREGLASS SHELL FOR BOTTOM OF FUSELAGE, MAY ALSO BE BUILT UP AND COVERED WITH SHEET BALSA.

ELEVATOR TRAVEL 9/32" UP & DOWN SPIN 1/2" UP

RUDDER TRAVEL 1-1/2" RT. & LT.

FRONT SPAR RIB SPACING

R13A R13

CUT 2 (R13) TO FULL SIZE. 2 (R13A) REQD.

HARDWOOD BLOCK

S1 2 REQD.

1/16" SHEET BALSA TOP & BOTTOM

ALL ELEVATOR RIBS 3/32" SHEET BALSA

S2 2 REQD.

S3

S4

S5 2 REQD.

FLAT SIDES PREVENT CORK FROM TURNING

NOSE WHEEL TILLER TO SUIT. MODIFIED TOP FLITE SHOWN

.040 HARD ALUM. TANK MOUNT - SPRING PRESSURE TO REAR

LOWER NOSE WHEEL BRACKET MADE FROM ALUM. OR TOP FLITE NYLON

TYPICAL FRONT COWL MOUNTING - NYLON THREADED 2-56 ATTACHED TO FIREWALL FROM BACKSIDE

HARD ALUM BACK PLATE (CUT FROM "3/16 ALUM.)

OUTLINE OF COWL AT SECTION B

.040 HARD ALUM. HEAT & VIBRATION SHIELD

3" MAIN WHEELS & 2-3/4" NOSE WHEEL USED ON 7-1/4 LB. VERSION 61 ENGINE) 2-3/4" MAIN WHEELS & 2-1/2" NOSE WHEEL USED ON 6-1/4 LB. VERSION (49 ENGINE)

F1 3/32" PLY

BRAKE CABLE HOLE

1/16" SQ. FENCE AIDS ALIGNMENT & GLUEING FIBREGLASS TOP & BOTTOM

3/32" BALSA DOUBLER

3/32" BALSA SIDES

1/4" SQ. BALSA STRINGER

3/32" BALSA

TIPS ARE CARVED FROM SOFT BALSA

1/16" SHEET BALSA (TOP & BOTTOM)

HARDWOOD GRAIN VERTICAL. DRILL FOR 4-40 SCREW

LEADING EDGE 1/4" BALSA

1/16" PLY BOTH SIDES

1/8" HARD BALSA FRONT SPAR

1/4" BALSA REAR SPARS

1/16" PLY

3/32" I.D. BRASS TUBE

3/32" PIANO WIRE

TIP SECTION

S6 2 REQD.

R/C modeler hammerhead

DESIGNED BY	JAMES FIELDING	DRAWN BY	DICK KIDD

0 1 2 3 4 5 6