3 16" DIA. DOWEL
1/16" SHEET SHEAR WEBS (GRAIN VERTICAL) FROM RIBS 2-TO 13
SPOILER OUTLINE - DRAW ON WITH PEN TOP SIDE ONLY
REGISTRATION NUMERALS (MAROON) LOWER LEFT & UPPER RIGHT PANELS
1/8" X 1/4" BALSA SPARS TOP & BOTTOM
LEADING EDGE 1/4" X 3/8"
SCRAP BALSA
D-1
1/16" SHEET (TOP & BOTTOM)
1/16" SHEET BOTH SIDES
1/16" X 1/4" CAPSTRIPS
T.E. 1/16" X 1" TOP & BOTTOM
3/16" DIA. DOWEL
D-2
1/16" X 3/16" SHEAR WEBS (GRAIN SPANWISE)
AILERON OUTLINE (DRAW ON WITH PEN TOP AND BOTTOM)
PHANTOM LINE REPRESENTS OUTLINE OF LEFT WING PANEL
WARNING PATCH (RED) TOP AND BOTTOM

SP-0010

NOTE: ALL FUSELAGE AND BOOM PLANKING 3/32" BALSA STRIPS - SAND TO A SMOOTH CONTOUR

CUT OUT VELLUM STENCIL WITH POLISH WORD FOR "CAREFUL" AND SPRAY ON WING WARNING PATCHES (4 PLACES), ALSO ON BOOM ARROW (EACH SIDE) USING WHITE PAINT

D-1 (1/32" PLY) 2
3/16" DIA HOLE LOCATE FROM F-6
D-2 (1/32" PLY)
C-4 1/32" PLY
C-3 3/16" BALSA
3/16" DIA HOLE - LOCATE FROM F-6 - D-2 ONLY

C-1
C-2
C-3
C-4
3/32" SHEET TOP ONLY
3/32" TOP AND BOTTOM
CUT-OUT FOR NEEDLE VALVE
CUT-OUT FOR EXHAUST (BOTTOM ONLY)
SEAM
C-2 1/8" 2 REQ
COWL REAR 3/16" SHEET (CUT OUT AS SHOWN)

SCRAP BALSA
RIB SETTING TEMPLATE
D&R BANTAM SERVOS SHOWN
WING HOLD-DOWN HOOKS .062 DIA. (2) SEE SIDE VIEW

C-1 1/8" BALSA (2) TOP
BOTTOM
CUT-OUT FOR CYLINDER HEAD (RIGHT SIDE ONLY)

17 16 15 14 13 12 11 10 9 8 7 6 5 4
ALL RIBS ARE 1/16" SHEET 2 OF EACH REQUIRED

ELEVATOR 1/4" SHEET
TIP 1/4" X 1/2"
SCRAP
HINGE (4)
STAB COVERED WITH 1/32" SHEET BOTH SIDES
3/16" SQ.
ELEVATOR PUSH-ROD .040 DIA. WIRE (2 REQ'D.)
1/8" DIA. BRASS TUBE - CRIMP & SOLDER PUSH-RODS TO CABLE
1/16" DIA. WIRE JOINER
ELEVATOR HORN POSITION
1/8" X 1/4" BALSA

.040 DIA. CANOPY HOLD-DOWN HOOKS (3) SEE SIDE VIEW
FUSELAGE LONGERON ADD 1/64" PLY DOUBLER
CANOPY LONGERON ENDS AT BULKHEAD #4
WARNING STRIPE AND ARROW (RED)
BALLAST COMPART.
BATTERY COMPARTMENT
RECEIVER COMP.
FUSELAGE PLANKING NOT SHOWN

3 2 1A 1
1/32" DIA. FLEX CABLE AND SHEATH
GOLDBERG 1/2A HORNS (2)
1/8" BALSA FAIRING (2 REQ'D)

ALL BULKHEADS 1/8" BALSA UNLESS OTHERWISE SPECIFIED 2 EACH REQUIRED
1 TOP
2 TOP
2 BOTTOM
3 TOP
3 BOTTOM
4 TOP
5
SOFT BALSA FAIRING
1/8" PLY 6 REQ.
1/8" PLY 4 REQ'D
6-2 PUSHER PROP SHOWN
PARTING LINE
C.G.
COX BABY BEE MOUNTED ON SIDE USING TANK EXTENDER. IF OTHER ENGINES OR TANKS ARE USED ADD SPACER TO MAINTAIN PROP POSITION
INNER RIBS 1/16" X 1/8" OUTER 1/16" X 3/16"
FIN COVERED WITH 1/32" SHEET (BOTH SIDES)
T.E. 3/16" X 3/8"
RIBS 1/16" X 1/2"
SPAR 1/4" X 1/2"
POLISH FLAG RED & WHITE (BOTH SIDES)
ANTENNA EXIT
RUDDER HORN
1/4" X 1/2"
CANOPY BLOCK 5/8" X 1" X 2"
CANOPY LONGERON
REC MT. 1/32" PLY CUT FOR ROD
FUSELAGE LONGERON
FAIRING BLOCK
1/16" DIA. PUSHROD BEND TO SUIT
2 5/16" SQ. HARD WD. SERVO MOUNTS
SP-0010
REGISTRATION (MAROON) EACH SIDE
OUTLINE OF 1/8" BALSA CORE
1/8" X 1/4" THWARTS (3)
GOLD N' RODS (2) SNAKED THROUGH AS CONVENIENT
1/16" PLY DOUBLERS FROM HERE FORWARD
FAIRING BLOCK
SKID - 2 THICKNESSES 1/8" SHEET PAINT TO RESEMBLE WHEEL
OPTIONAL TOW HOOKS .050 DIA. BIND TO 1/8" PLY MOUNT
GOLDEN ROD INNER TUBE FOR ANTENNA CONDUIT
1/16" BALSA SHEAR WEBS - GRAIN LENGTHWISE
0" 1" 2" 3" 4" 5" 6" 7" 8" 9" 10" 11" 12"

DUMMY WHEEL 1/32" PLY CENTER 3/16" BALSA OUTSIDE (2) SAND TO TIRE SHAPE. GLUE ON AFTER PAINTING.

WINGSPAN: 72" WING AREA 364 SQ. IN. 23 OZ.

'OGAR' STAND-OFF SCALE

A POLISH 2-PLACE POWERED SAILPLANE
DESIGN & PENCILS: HOWIE APPLEGATE

D.J.M

SZD Ogar–Powered bird of Poland

Unique in concept, the Polish SZD Ogar powered soarer is a natural for modeling. Stand-Off Scale/**Howie Applegate**

I suppose all of us want to build a model that's a little bit different from the rest. While going through a soaring magazine, I saw some three view drawings of several sailplanes. Ogar caught my eye as "the" different airplane. A powered sailplane without a power pod seemed quite novel. Before starting construction, let's take a minute for some background on the full-sized machine.

Ogar is a Polish design, built by SZD. It has a 17.5 meter span (approximately 56.5 ft.), two place seating configuration, with the student in the front seat and the instructor in the rear. The seats are staggered so the occupants' shoulders overlap (the student's right with the instructor's left). Power is a 68 H.P. (a V.W. engine modified for aircraft). The ship has a partially retractable wheel in the belly and is equipped with wing tip casters to help prevent ground looping.

I took a few liberties with this ship to ease construction and still insure good structural qualities. I decreased the aspect ratio of the wing from 16 to 1 to 14 to 1. This permitted me to place the spar near the maximum curvature of the wing and still keep the leading edge planking from becoming too wide. Naturally the tail area was increased and the wheel is a dummy glued to the belly. The wing tip casters were omitted, and a set of optional tow hooks were added. The fuselage was slimmed down also.

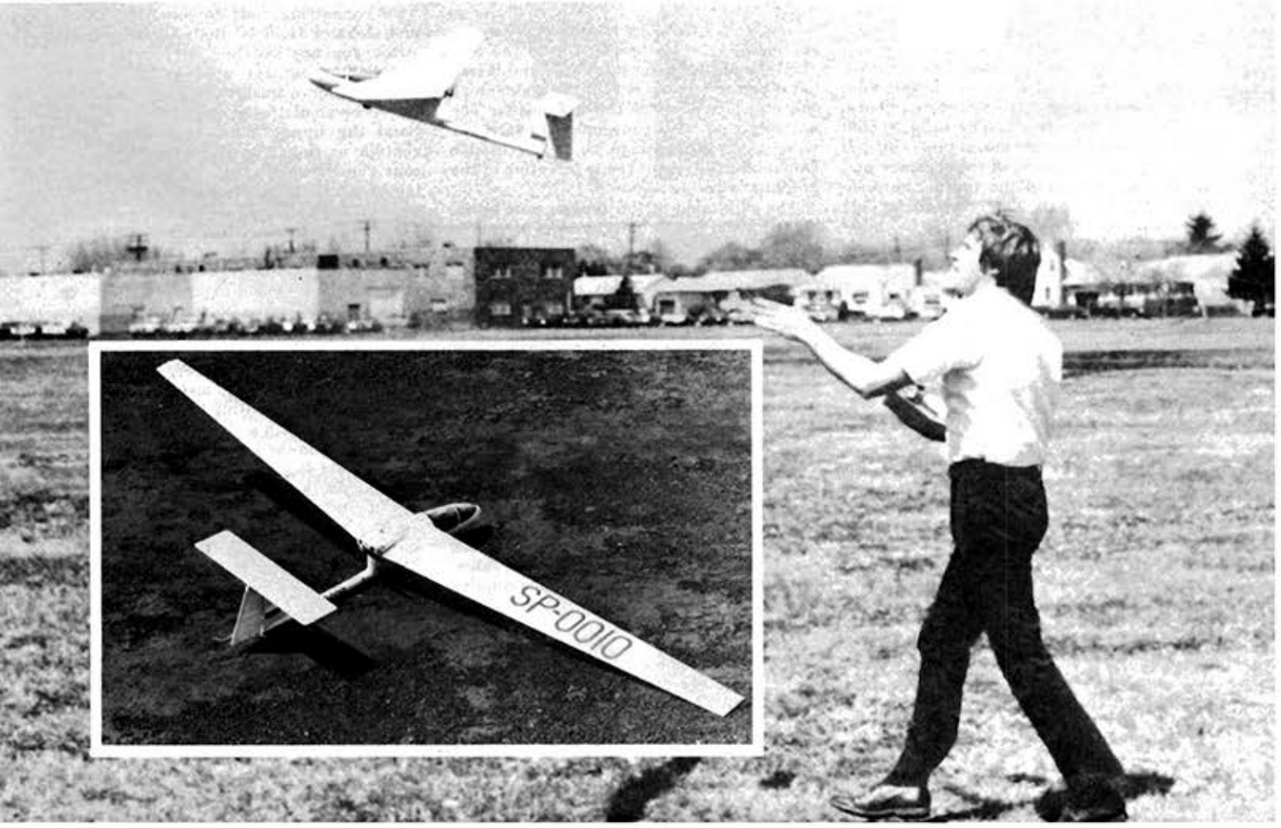
Now let's get down to building.

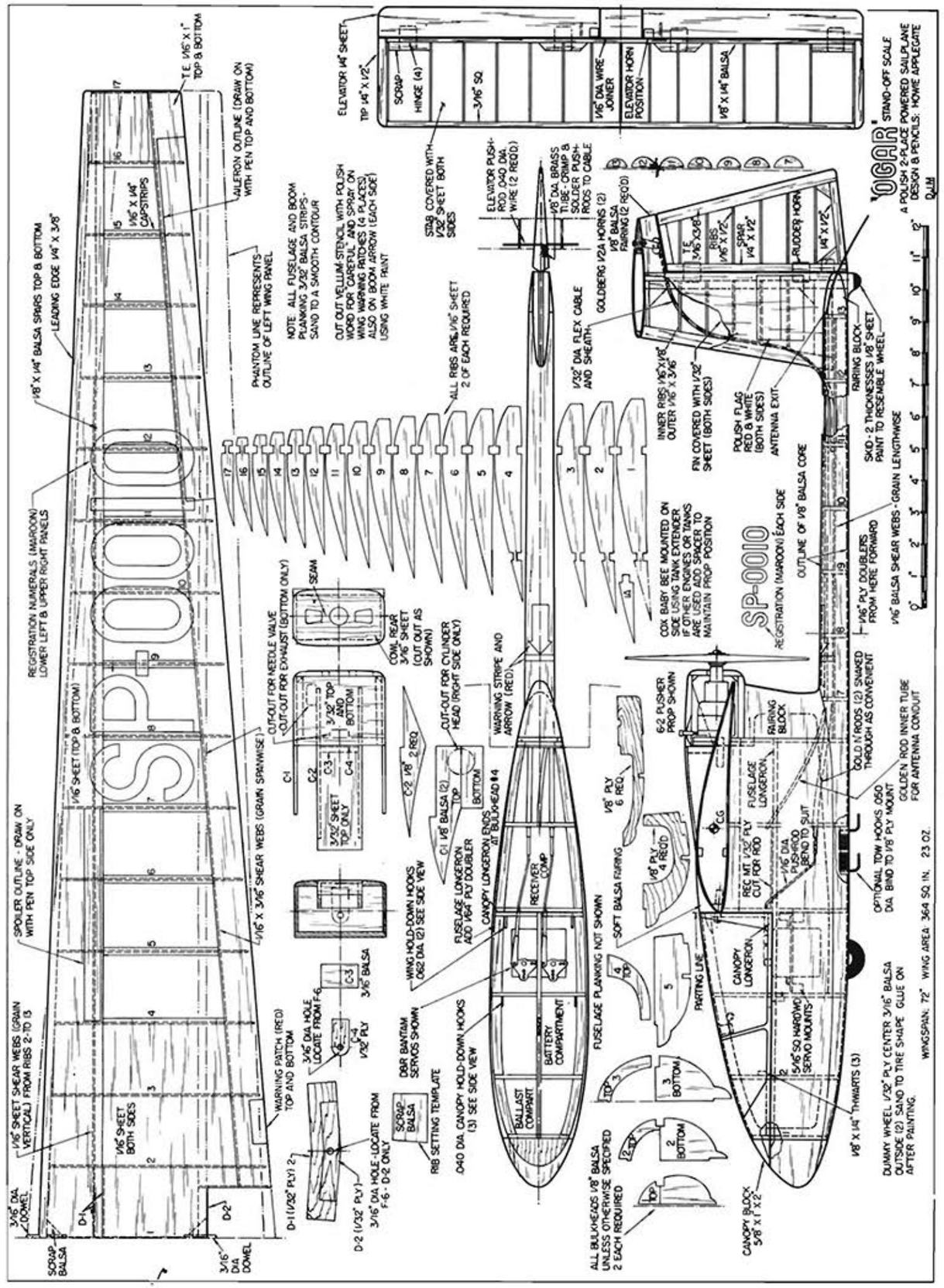
Fuselage and Boom

The fuselage is definitely the most difficult part to build. The construction is ⅛" sheet profile reinforced with 1/64" plywood on both sides. This profile can be pinned directly onto the plans. Use some scrap strips of 1/64" thick plywood as shims to

Ogar is about to demonstrate the wing mounting system. Cartwheeled in, popped free, undamaged. **Photos below:** Lunchtime at Grumman. Howie gets it off, no hi-start required. A cowled in .049.

PHOTOGRAPHY: HOWIE APPLEGATE





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