F4U-1

CORSAIR

Scale: 1:6

Wing Span: 84.5"
Length: 67"

This plan was drawn from measurements and photographs of the full size aircraft preserved in the F.A.A. Museum Hendon, Somerset and many published photographs.

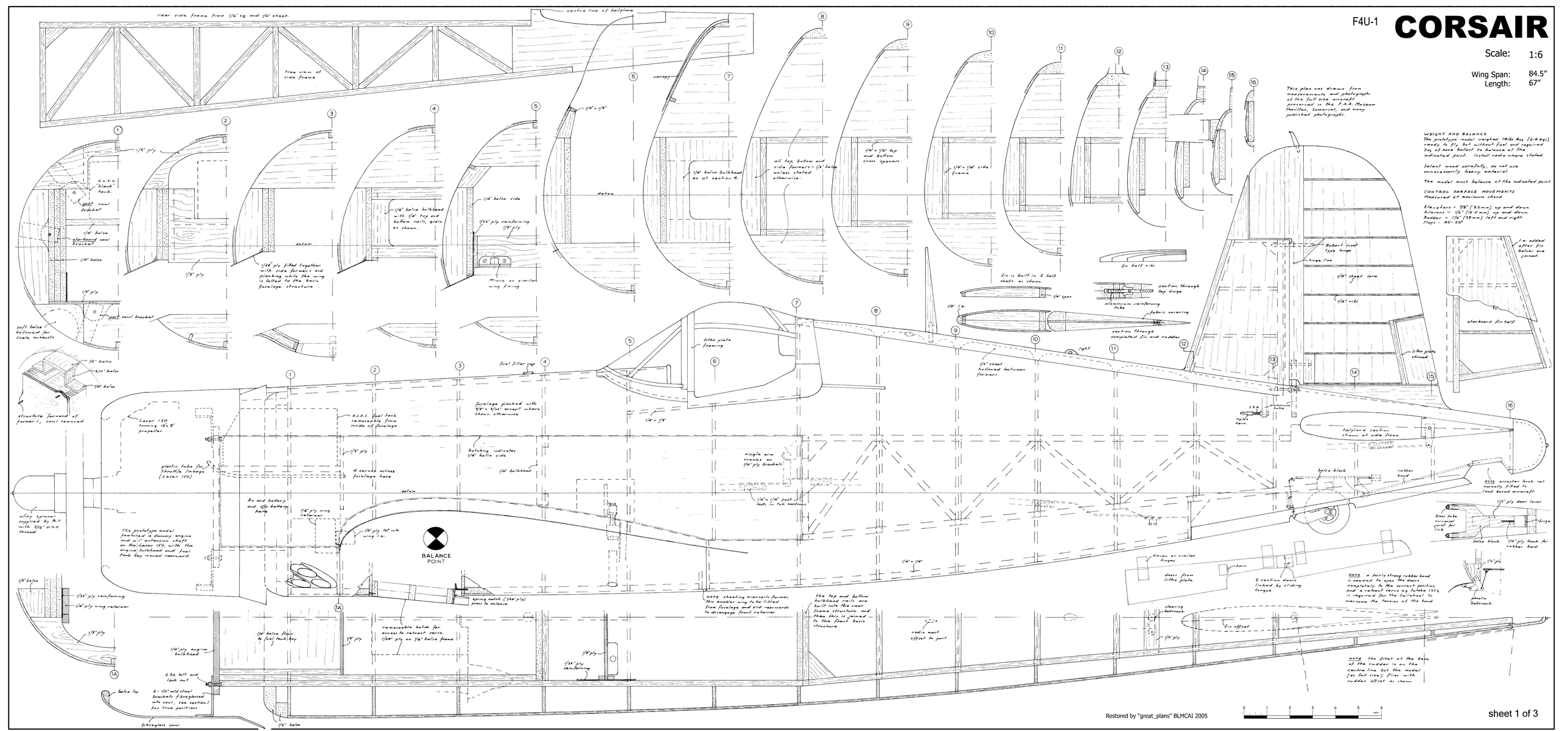
WEIGHT AND BALANCE
The prototype model weighed 14½ lbs (6.4 kgs) ready to fly, but without fuel and required 7oz of nose ballast to balance at the indicated point. Install radio where stated.

Select wood carefully, do not use unnecessarily heavy material.

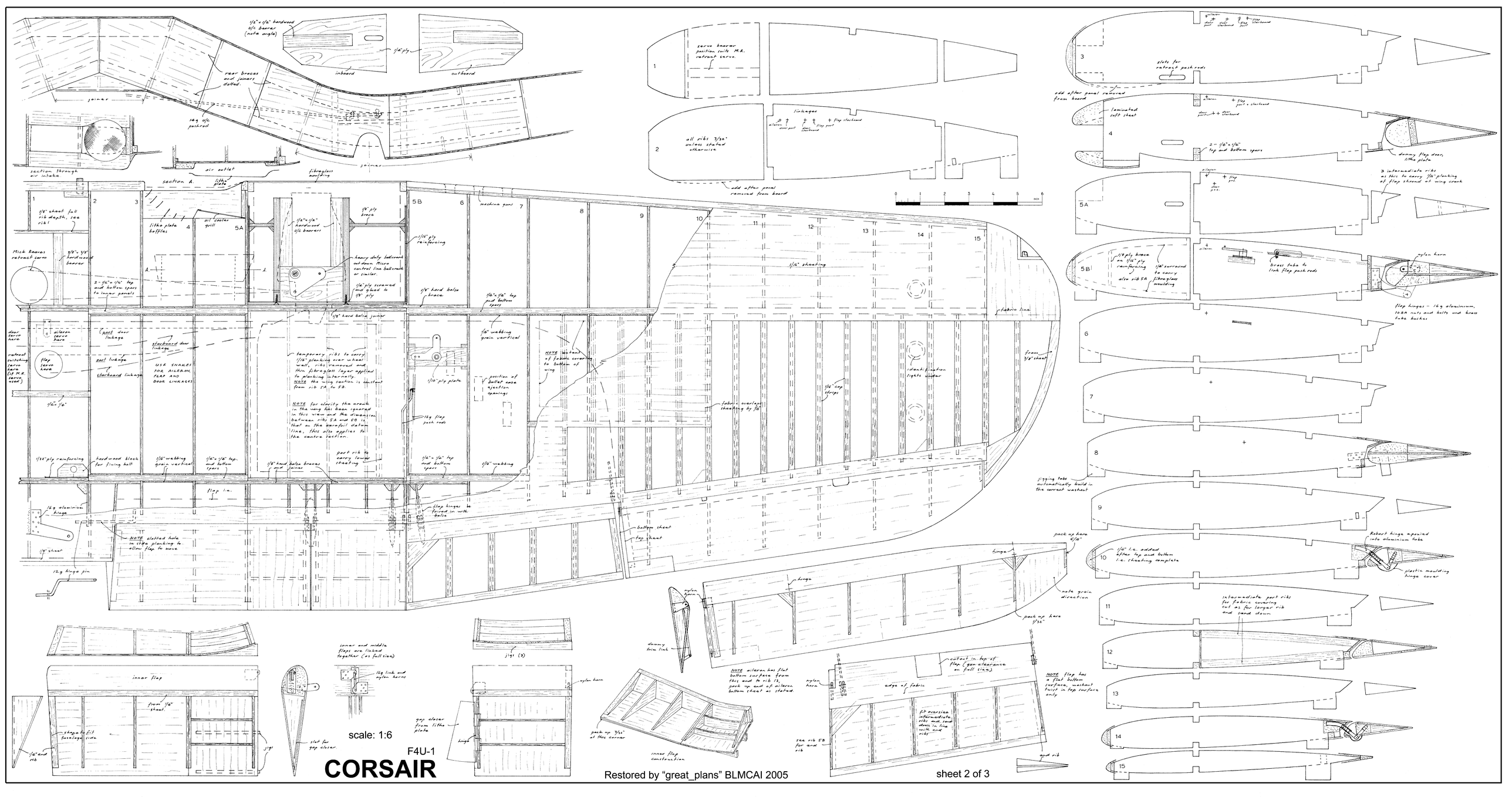
The model must balance at the indicated point.

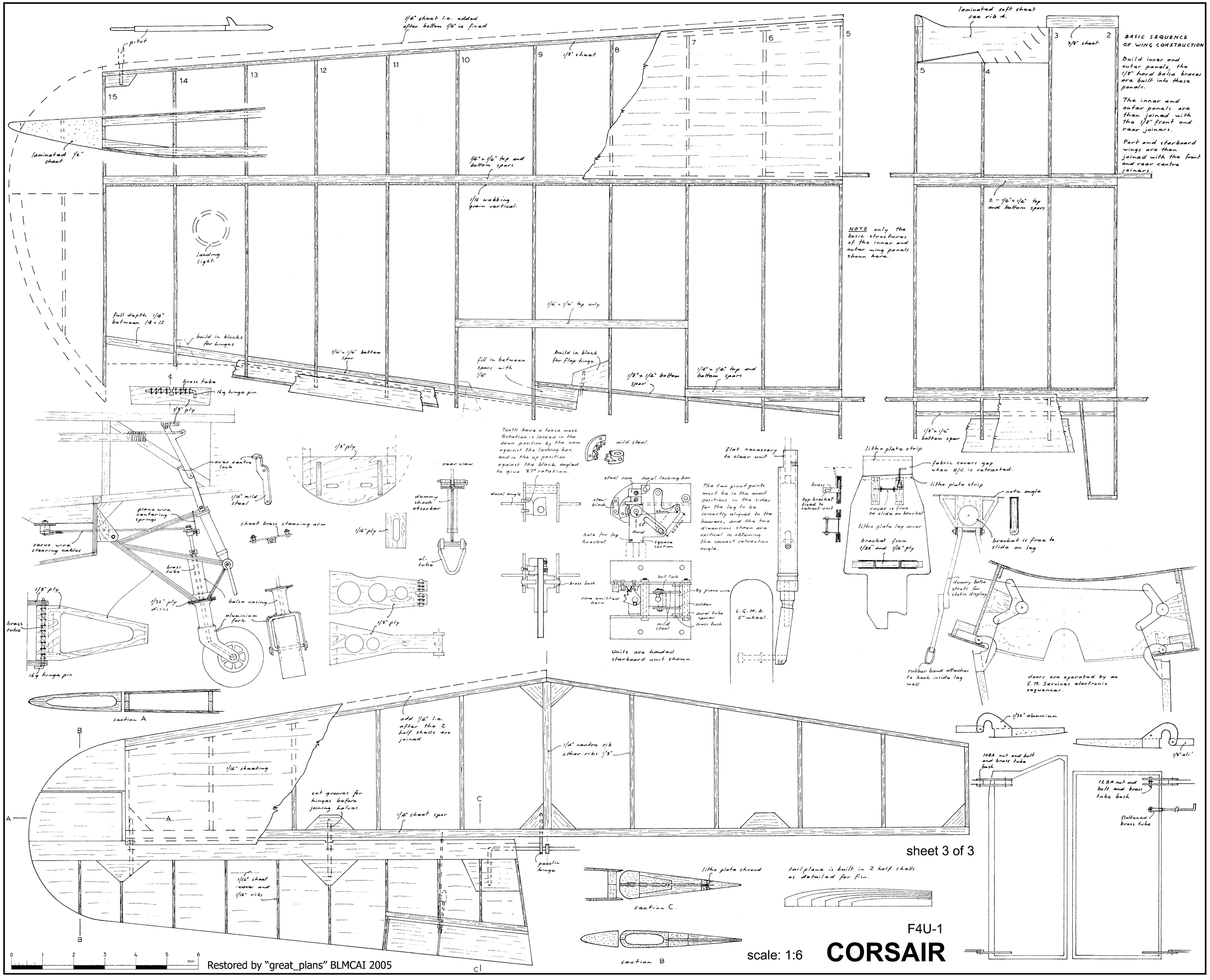
CONTROL SURFACE MOVEMENTS
Measured at maximum chord.

Elevators – 7/8" (22mm) up and down
Ailerons – 1/2" (12.7mm) up and down
Rudder – 1 3/4" (32mm) left and right
Flaps – 45-50°



sheet 1 of 3


1/2" x 1/2" hardwood u/c bearer (note angle)
1/4" ply
inboard
outboard
rear braces and joiners dotted.
joiner
14g u/c pushrod
section through air intake.
air outlet
1/16" plate
fibreglass moulding
section A.
joiner
servo bearer position suits M.R. retract servo.
all ribs 3/32" unless stated otherwise
add after panel removed from board
linkages
aileron
elev port
elev starboard
flap port
flap starboard
slots for retract push rods
add after panel removed from board
laminated soft sheet
2 - 1/8" x 1/8" top and bottom spars
dummy flap door, litha plate
3 intermediate ribs as this to carry 1/16" planking of flap shroud at wing crack
1/8" sheet full rib depth, see rib 1
litha plate baffles
oil cooler grill
1/16" x 1/16" hardwood u/c bearers
1/8" ply brace
1/16" ply reinforcing
machine guns
Mick Reaves retract servo
1/8" x 1/8" hardwood bearer
2 - 1/8" x 1/8" top and bottom spars to inner panels
heavy duty balsa and dull Micro control line balsa or similar.
1/16" ply screwed and glued to 1/8" ply
1/8" hard balsa brace
1/16" x 1/16" top and bottom spars
1/8" hard balsa joiner
1/16" webbing grain vertical
1/16" shearing
fabric line
aileron servo here
port door linkage
starboard door linkage
port linkage
starboard linkage
flap servo here
USE SNAKES FOR AILERON, FLAP AND DOOR LINKAGES
temporary ribs to carry 1/16" planking over wheel wells, ribs removed and thin fibreglass layer applied to planking to hermetically
NOTE the wing section is constant from rib 5A to 5B.
NOTE for clarity the crack in the wing that has ignored in this view and the dimension between ribs 5A and 5B is that on the aerofoil station line, this also applies to the centre section.
1/16" ply plate
position of ballast case ejection openings
NOTE 1/16" sheet of fabric covering to bottom of wing
1/16" cap strips
fabric overlap sheeting by 1/16"
infantry station lights clear
from 3/8" sheet
1/16" ply flap push rods
part rib to carry forward sheeting
1/16" webbing grain vertical
1/16" x 1/16" top and bottom spars
1/32" ply reinforcing
hardwood block for fixing bolt
1/16" webbing grain vertical
1/16" x 1/16" top and bottom spars
1/8" hard balsa brace and joiner
flap i.e.
16g aluminium hinge
NOTE slotted hole in 1/8" planking to allow flap to move
1/8" sheet
12g hinge pin
flap hinges be formed in with balsa
bottom sheet
top sheet
jigging tabs automatically build in the correct washout
1/16" x 1/16" hardwood u/c bearer (note angle)
1/4" ply
inboard
outboard
joiner
14g u/c pushrod
section through air intake.
air outlet
1/16" plate
fibreglass moulding
section A.
joiner


1/4" sheet l.e. added after bottom 1/16" is fixed
pitot
laminated 1/2" sheet
1/8" sheet
1/4" x 1/4" top and bottom spars
1/16 wabbing grain vertical.
landing light.
full depth 1/4" between 14 x 15
build in blocks for hinges
1/4" x 1/4" bottom spar
1/4" x 1/4" top only
fill in between spars with 1/4"
build in block for flap hinge
1/8" x 1/4" bottom spar
1/4" x 1/4" top and bottom spars
brass tube
16g hinge pin
1/8" ply
over centre lock
1/16" mild steel
plano wire centering springs
servo wire steering cables
sheet brass steering arm
brass tube
1/32" ply discs
balsa casing
aluminium fork
1/8" ply
brass tube
16g hinge pin
1/8" ply
rear view
dummy shock absorber
1/16" ply
ali tube
1/8" ply
Teeth have a loose mesh. Rotation is locked in the down position by the cam against the locking bar, and in the up position against the block angled to give 87° rotation.
mild steel.
dural angle
steel cam
dural locking bar
steel block
33mm
52°
dural
hole for top bracket
square section
brass bush
ball link
cam omitted here
8g plano wire
solder
dural tube spacer
brass bush
mild steel
Units are handed starboard unit shown.
The two pivot points must be in the exact positions in the sides for the leg to be correctly aligned to the bearers, and the two dimensions shown are critical in obtaining the correct retraction angle.
flat necessary to clear unit
L.G.M.A. 5" wheel.
brass
top bracket fixed to retract unit
litho plate strip
fabric covers gap when U/C is retracted.
litho plate strip
cover is free to slide on bracket
litho plate leg cover
bracket from 1/32" and 1/16" ply
note angle
bracket is free to slide on leg
dummy balsa struts for static display
rubber band attaches to hook inside leg well.
doors are operated by an S.M. Services electronic sequencer.
laminated soft sheet see rib 4.
3/8" sheet
2 - 1/4" x 1/4" top and bottom spars
1/8" x 1/4" bottom spar
NOTE only the basic structures of the inner and outer wing panels shown here.
BASIC SEQUENCE OF WING CONSTRUCTION
Build inner and outer panels, the 1/8" hard balsa braces are built into these panels.
The inner and outer panels are then joined with the 1/8" front and rear joiners.
Port and starboard wings are then joined with the front and rear centre joiners.
section A
add 1/4" l.e. after the 2 half shells are joined
1/4" centre rib other ribs 1/8"
1/16" sheeting
cut grooves for hinges before joining halves
1/4" sheet spar
paxolin hinge
1/16" sheet core and 1/16" ribs
litho plate shroud
section C.
section B
tailplane is built in 2 half shells as detailed for fin.
1/32" aluminium
1/8" ali
10BA nut and bolt and brass tube bush
12BA nut and bolt and brass tube bush
flattened brass tube
sheet 3 of 3
F4U-1
CORSAIR
scale: 1:6
Restored by "great_plans" BLMCAI 2005