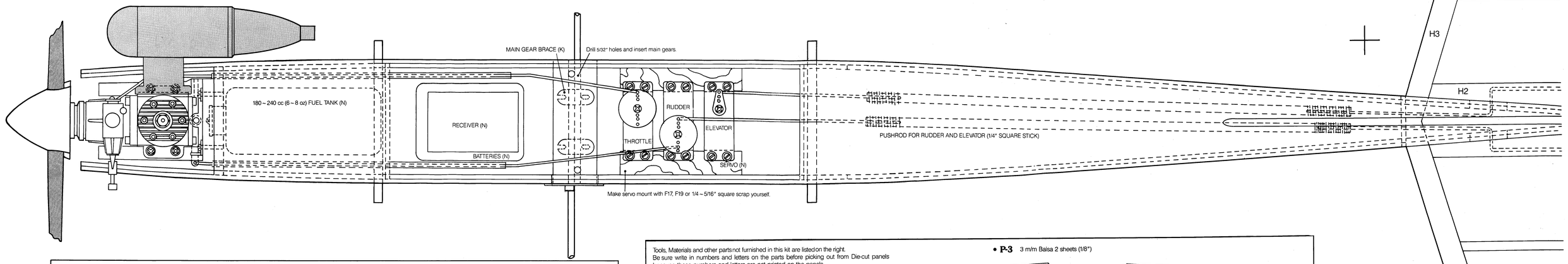


• CONSTRUCTION MANUAL FOR R/C MODEL COSMO HURRICANE 40 S

Tools, Accessories, and others not furnished in this kit.
It is recommended to check with your local dealers or hobby shops.

• TOOLS

Modeller's knife, Screw drivers (+, –), Sand papers (Grit #100 1 ea, Grit #150 1 ea), Coping saw, Balsa cutter, Long nose pliers, Small electric iron, Drill bit (3/32", 5/32"), Hair drier, Pins, Niper.

• MECHANICAL PARTS

Nylon hinge (included) . . . . . 17 ea
Rod adjusted (included) . . . . . 4 ea
1/4"×24" (6×6×600m/m) wood stick . . . 2 ea
5/32"wheel stopper . . . . . 1 ea
21/4" wheel (nose gear) . . . . . 1 ea
2.5" wheel (main gear) . . . . . 2 ea
10-6" or 11-6" propeller . . . . . 1 ea
2" spinner . . . . . 1 ea
240 cc (8 oz) fuel tank . . . . . 1 ea
40 ~ 45 cuin (6.5 ~ 75 cc) engine . . . . . 1 ea
40 size engine mount for 40 engine (included) 1 ea
3 ~ 4 channel R/C system

• MATERIALS

Glue for wood working . . . . . A few
Cyanoacrylate adhesive . . . . . 40 g
Epoxy bond . . . . . 20 g
Film for covering

• BEFORE STARTING

You will need only wooden parts and plan in earlier steps of construction and in order to avoid missing or confusion, it is necessary to secure other and accessories apart from your work place.

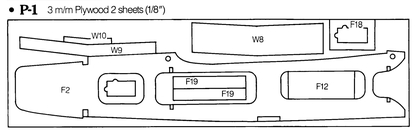
① Alphabets and Numbers are printed on the wooden parts and these are representing.
W: Part of Wing
F: Parts of Fuselage
H: Part Stabilizer and elevator
V: Fin and Rudder
Numbers: Sequences of construction
K: Furnished in the kit
N: Not furnished in the kit
(Example)
F2 (P-1): Fuselage part, construction sequence second, in die-cut panel P-1.
② All wooden parts are suggested to be segregated by the letters W, F, H and V.
③ You can choose the starting construction anything from wing, Fuselage, Stabilizer and Rudder and it is recommended to begin two or three jobs at one because you have some time to work on another parts while glued parts dry.
④ Sequences in this plan will help you to save time and effort.

Tools, Materials and other parts not furnished in this kit are listed on the right.
Be sure write in numbers and letters on the parts before picking out from Die-cut panels because those numbers and letters are not printed on the panels.

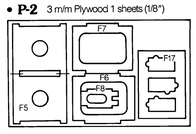
• FURNISHED PARTS

WING	W	1 ~ 21	Engine gear, Bolts, Nuts	1 set	Rudder, Elevator horn	1 ea
FUSELAGE	F	1 ~ 24	Nose gear, Bolts, Nuts	1 set	Dowels	2 ea
STABILIZER	H	1 ~ 7	Main gear, Gear braces, Screws	1 set	Decals	1 ea
FIN	V	1 ~ 9	Aileron horn	1 set	Instruction sheet	3 ea
			Wing Bolt	1 set	Spinner	1 ea

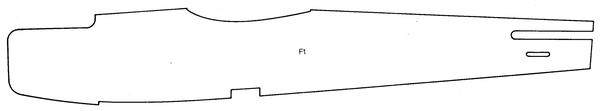
• P-1 3 m/m Plywood 2 sheets (1/8")



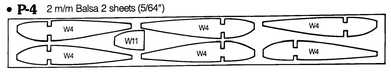
• P-2 3 m/m Plywood 1 sheets (1/8")



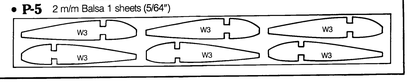
• P-3 3 m/m Balsa 2 sheets (1/8")

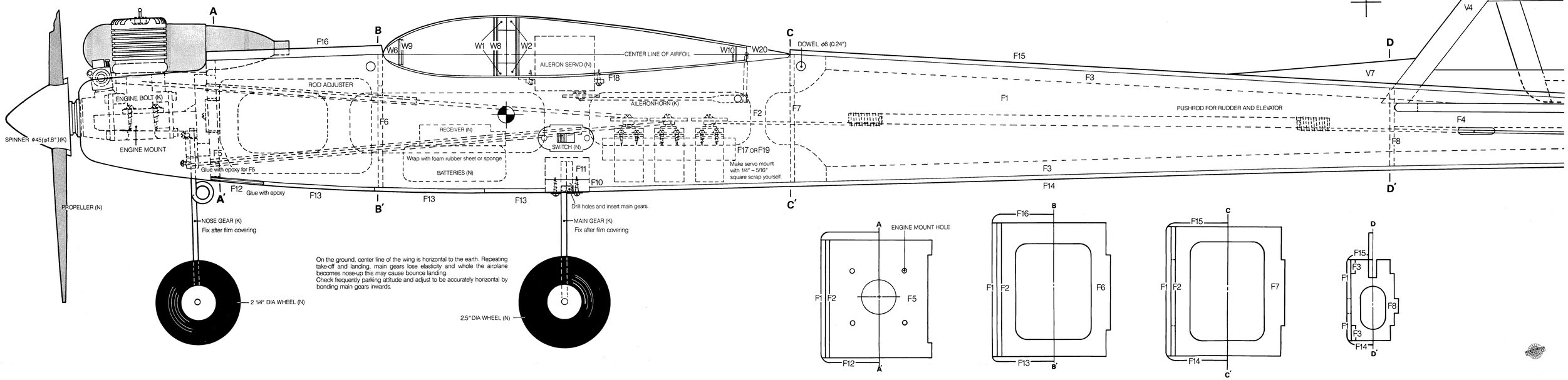


• P-4 2 m/m Balsa 2 sheets (5/64")



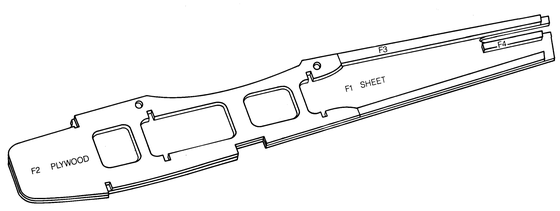
• P-5 2 m/m Balsa 1 sheets (5/64")





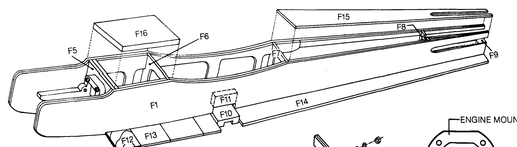
On the ground, center line of the wing is horizontal to the earth. Repeating take-off and landing, main gears lose elasticity and whole the airplane becomes nose-up this may cause bounce landing.
Check frequently parking attitude and adjust to be accurately horizontal by bonding main gears inwards.

• FUSELAGE CONSTRUCTION I

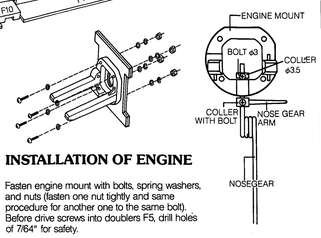


① Glue F2 to the side panel F1, make sure one left side and one right side.
② Glue F3 and F4 to the side panel F1, after cutting them off just the same size as shown.

• FUSELAGE CONSTRUCTION II



③ Glue each of F5 together with epoxy solidly.
④ Glue F6, F7, F8 and F9 to fuselage side panel in sequence with care not to be twisted, fix engine mount on F5 and glue to fuselage.
★ CAUTION: Fuselage should not be twisted, and glue again with epoxy to F5, F6, F7, F8, F9 solidly.
⑤ Glue F10 ~ F16 in sequence.
⑥ Put dowel in the hole as shown after film covering.
⑦ Cut off and trim all notches with knife, plane and sand papers.

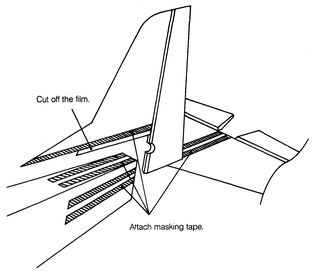


INSTALLATION OF ENGINE

Fasten engine mount with bolts, spring washers, and nuts (fasten one nut tightly and same procedure for another one to the same bolt). Before drive screws into doublers F5, drill holes of 7/64" for safety.

• FILM COVERING

Cover film over the whole surface. It is recommended to cover units with single color and apply deals for variation because overlapping of films may cause troublesome bubbles.



① Check and trim any openings of wing and fuselage joint or of rudder, stabilizer and fuselage.
② Blow off dust on the surface.
③ A thin coat of clear dope will add efficiency of covering but excessive coat will heart permeability of balsa wood and may cause bubbles.
④ Cover wing, fuselage and tail surfaces in sequence.
⑤ Apply decals as you like.
⑥ Finish joint of tail surface to the fuselage as shown with applying masking tape Cut off the excess of covering film surfaces as shown and glue with epoxy. Remove masking tapes after glue is dried completely.

• MECHANISM INSTALLATION

Instruction sheet is based on the 4-channel R/C system.

If you have 3ch system, please to fix a rudder or a aileron.

① Make servo beds according to your system for yourself.
② Make sure rudder horn and elevator horn in positions exactly.
③ Glue aileron servo bed F18 on the bottom removing films as shown.
You can use servo bed in the kit for yourself if you need.
④ 40 ~ 45 cuin (6.5 ~ 75 cc) engine will match this kit.
Refer to the plan to install the engine.
Use cosmo 240 cc (8 oz) fuel tank and connect silicon tube for fueling.
⑤ Connect the pushrods for aileron, elevator, rudder and engine as shown in the plan to get the instructed angles.
⑥ Install switch on the left side of the fuselage and wrap the receiver and batteries with foam rubber sheets or sponge before shipping.
Lead out the antenna wire of receiver from the left side of the fuselage and tie to the top of the fin.
⑦ Install propeller, spinner and wheels.
⑧ Fasten wing with rubber band to the fuselage.
⑨ Check balance and adjust with weights.
⑩ Test the smooth operations of the hinges.
⑪ Now you got a your own airplanes' check with other modellers in your area and consult the hobby dealers.
We are sure to success your flight.

H3

H2

V4

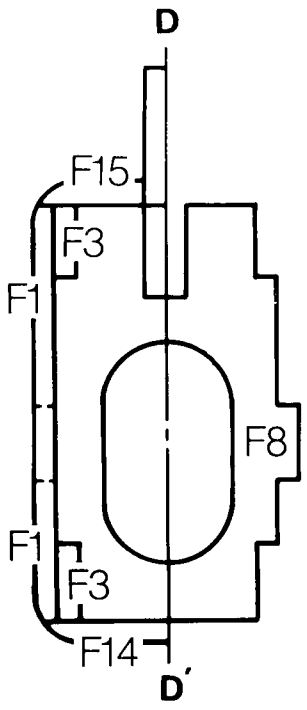
D

V7

F4

F8

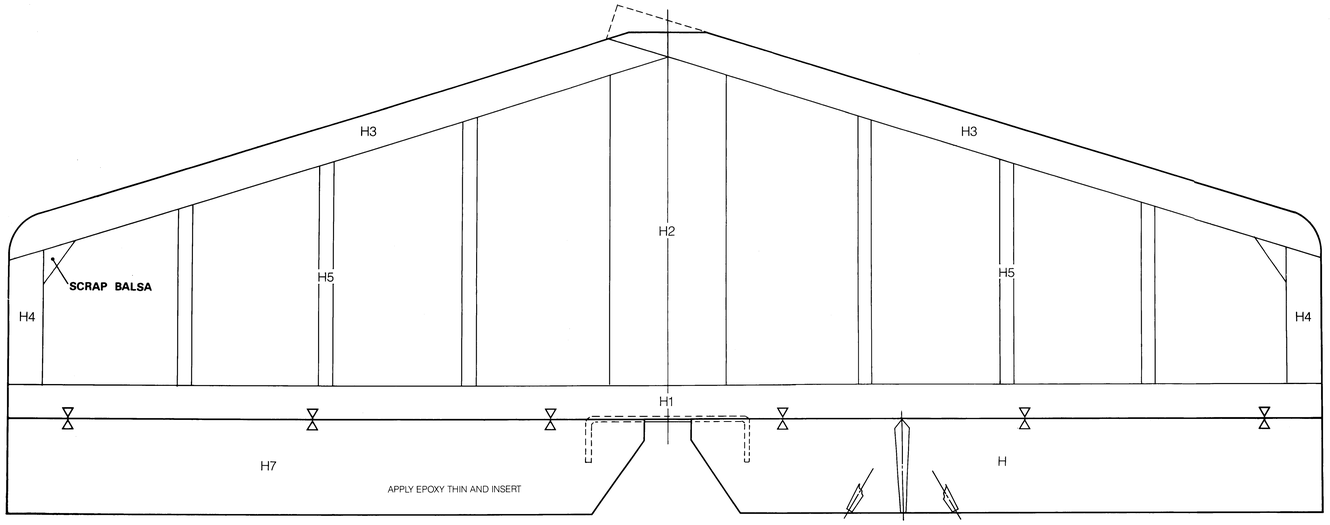
D´



COSMO
R/C TRAINER MODEL

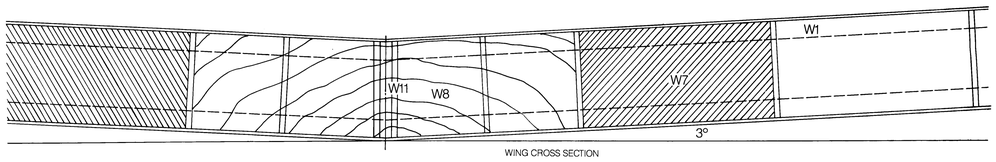
HURRICANE 40 S

40-45 ENGINE

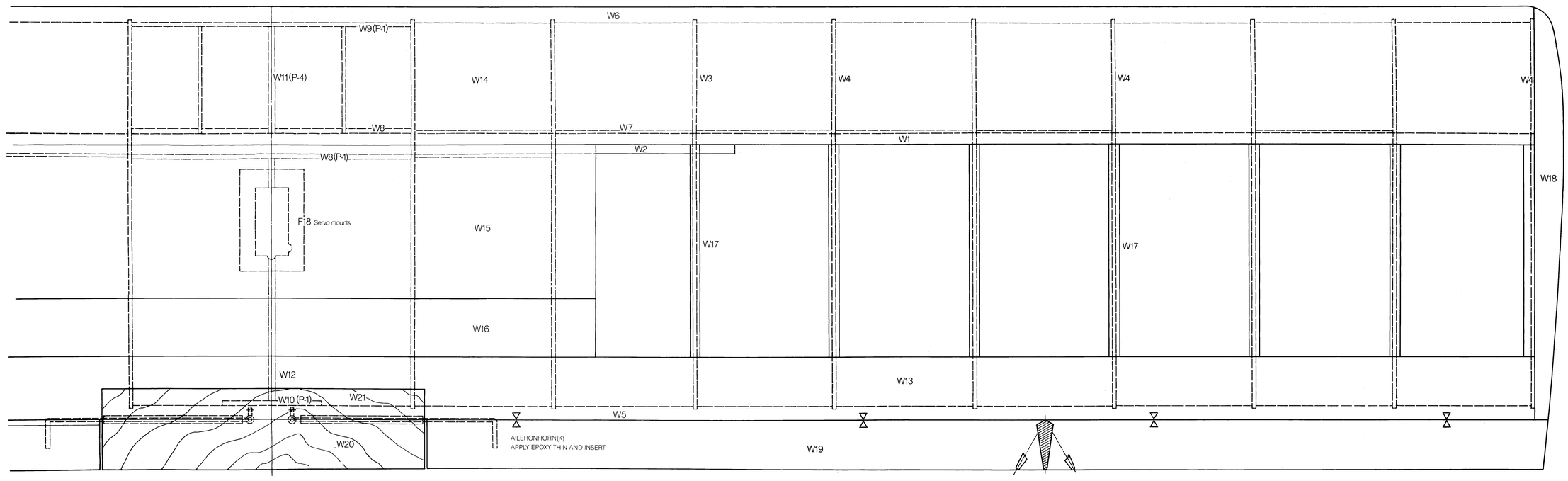


☆ SPECIFICATION ☆

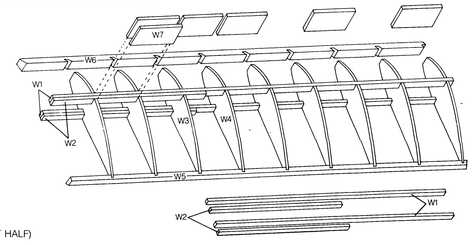
- LENGTH . . . . . 46 inch (1180 mm)
- WING SPAN . . . . . 61 inch (1540 mm)
- WING AREA . . . . . 666 Sq. in (43 dm²)
- ENGINE . . . . . 40-45 cuin
- TOTAL WEIGHT . . . . . 88 ~ 93 oz (2,500 ~ 2,600 g)
- RADIO SYSTEM . . . . . 3-4 CH



WING CROSS SECTION



• WING CONSTRUCTION I

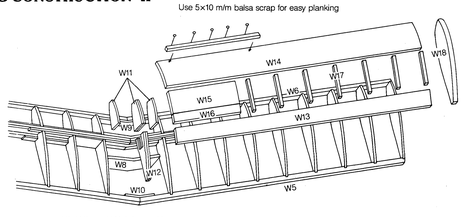


(RIGHT HALF)

① Glue spar doubler W2 to spar W1 as shown. Make sure one left side and one right side.
② Platform ribs W3, W4 will help you to fabricate wing structures on a flat workable and a half of W3, W4 is platform ribs.
Snap these platform ribs into bottom spar alternately normal ribs.
Assembly is going on from bottom spar and ribs, top spar, trailingedge W5, leadingedge W6, shear webs W7 in sequence and glue completely.
You can do the same procedure on the left wing half.
③ Cut off platform of ribs after glued parts are dried.

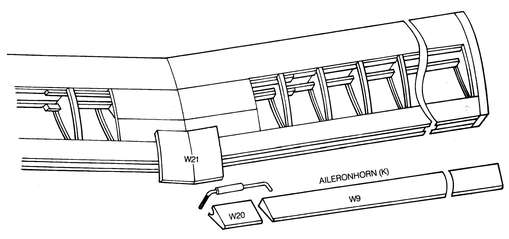
• WING CONSTRUCTION II

Use 5×10 m/m balsa scrap for easy planking



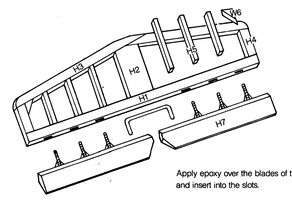
④ Glue dihedral brace W8, W9 and W10 in positions.
NOTE: One of W8 is position marked for center rib piece and this maked should be glue in front.
⑤ Glue center rib piece W11 and W12 and reinforcement W12 in sequence.
Double by gluing two W11 and W12 for center ribs.
⑥ Cover wing planks W13, W14, W15, W16 and W17 in sequence.
Glue W15 and W16 together before planking.
Soak balsa in water to be smoothly bent for curved surface of wing.
You can easily blank wing by pinning up some balsa scrap as shown.
⑦ Cut off the notches and excesses of planks for gluing wing tips W18 and trim W18 as shown.

• WING CONSTRUCTION III



⑧ Assemble ailerons as shown in picture.
A. Fix ailerons W19 to tailingedges W5 with hinges.
Make slots for hinges with a knife and a hinge guide.
B. Make groove for aileron horns in trailingedges W5 and fix them with W20 to the trailingedges and glue W21 as shown like A.
★ CAUTION: Do not move ailerons before epoxy dries completely or hinges may not operate.
⑨ Remove notches and sand will to trim wing streamlined.
⑩ Check balance of the wing and adjust by adding weight to the lighter side.

• STABILIZER CONSTRUCTION



Apply epoxy over the blades of the hinges and insert into the slots.

① Cut in 1:1 scale as shown in picture, glue H2 to H1 and glue H3, H4 in sequence.
★ CAUTION: It is recommended to build with instruction on flat table.
② Glue H5 after cutting in 1:1 scale.
③ Glue H6, triangle cutted from scrap balsa.
④ Cut off and trim with knife as shown in picture after inserting link in center of H7 and gluing.
⑤ First deciding the point where hinge is applied, insert hinge and glue after trimming.

• FIN AND RUDDER CONSTRUCTION

① After cutting off V1 ~ V8 in the same size as shown in picture, glue V1, V2, V3 in sequence and glue for V4, V5, V6.
② Glue V9 to V8 after cutting off in the same size as shown in picture.
③ First deciding the point where hinge is applied, insert hinge and glue after trimming.