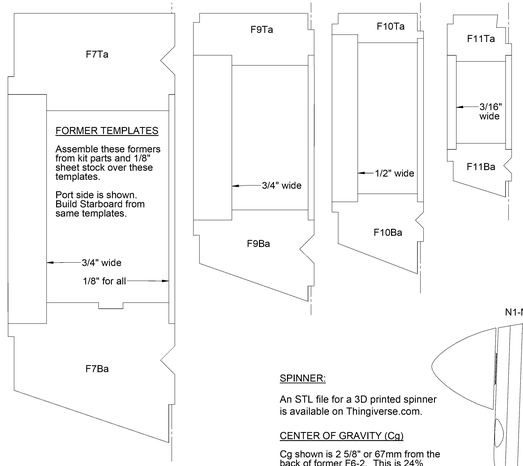


FORMER TEMPLATES

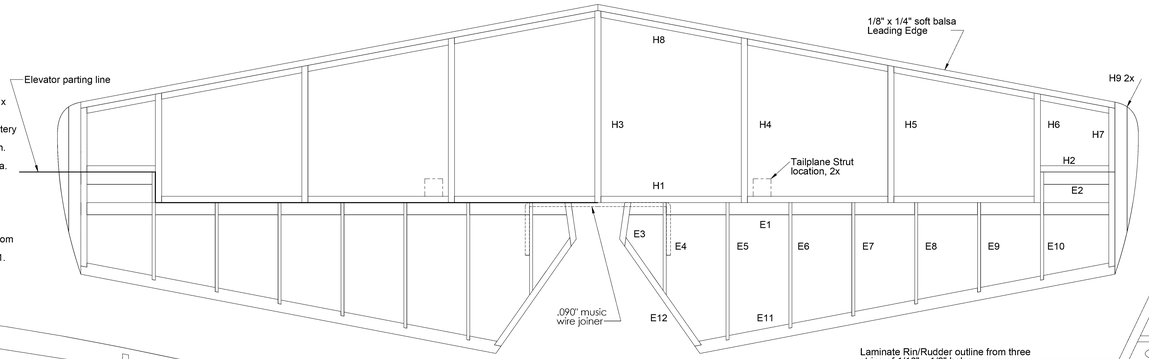
Assemble these formers from kit parts and 1/8" sheet stock over these templates.

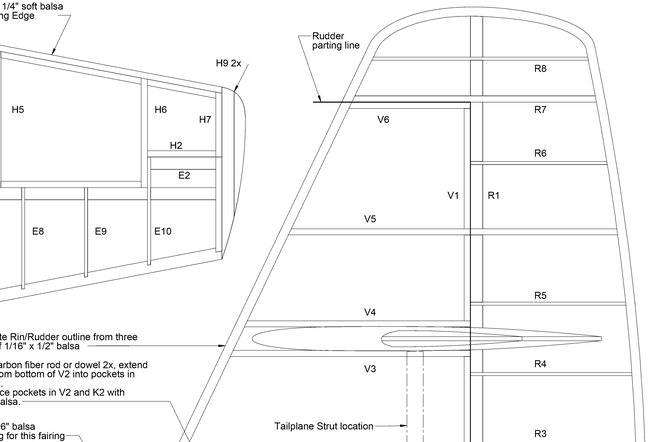
Port side is shown. Build Starboard from same templates.

FUSELAGE--ASSEMBLY ORDER

Build the port (left) side first--use the "a" former halves.

1. Preassemble Keels K3/4 and K5/6 over the plan.
2. Double ply Formers F6-1 and balsa Formers F6-2 by matching outlines.
   1. See Hatch Detail at bottom right.
3. Preassemble Formers F7, F9, F10, and F11 over plan.
4. Keels K1 thru K4--pin these parts flat to the plan.
5. All "a" Former parts--install perpendicular to plan.
6. Keel K5/K6 and Wing Saddle K7--glue into Formers.
7. Rear Stringer--connect the top corners of Formers F8 thru F12 with a 1/8" x 3/16" balsa strip.
8. Hatch Rail K8--glue bottom side to Formers F4, F5, and F6.
9. Hatch Rail K9--glue top side to Hatch Formers F4H, F5, and F6H (see Battery Hatch Detail below).
10. Bracing--add 1/8" square braces diagonally between formers where shown.
11. Sheet the bottom hull between F1 and F7 with 1/8" balsa.
12. Sheet the bottom hull from F7 to F10, and from F10 to F12 with 1/16" balsa.
13. Unpin the assembly and check for flatness.
14. Battery Tray--glue to F4 thru F6
15. Repeat assembly steps for the right half of the fuselage--use "b" former halves.
16. Servo Tray parts ST1 and ST2, and Wing Bolt Pad WB--glue to F8 (see Servo/Wing Bolt Detail below).
17. Stringers--1/8" x 3/16" balsa strip stock.
    1. Dampen the stringers with water and alternate the installation order from side to side to avoid warping the fuselage structure.
18. Nose Block--stack and glue parts B1 thru B6 using hole to align, glue to F1.
19. Cabin--see Cabin Detail to right.
20. Fin Fairing--after covering, glue parts F10T and F11T into place. Use cardstock or 1/16" balsa to create fairing between fuselage and tail fin.





Sheet the shaded area between F1 and F7 with 1/8" balsa, use 1/16" balsa panels from F7 thru F10 and from F10 thru F12.

SPINNER:

An STL file for a 3D printed spinner is available on Thingiverse.com.

CENTER OF GRAVITY (Cg)

Cg shown is 2 5/8" or 67mm from the back of former F6-2. This is 24% MAC.

PROTOTYPE SPECIFICATIONS	
Wingspan	60"
Length	46.6"
Weight	56oz
Wing Area	558 sq in
Power	2315-880kV x 2
Propellor	10 x 7
Battery	3S 3300mAh 4S 2600mAh

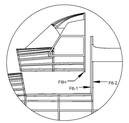
Copyright 2025 by INFIELD AVIATION
Copying for resale of this drawing without the written approval or consent of AMA is expressly prohibited.

CABIN DETAIL:

Build the cabin roof after the fuselage is assembled.
Use the detail drawing to the right as a guide.
Use scrap balsa between the cabin roof formers to create the outline for the windshield.
Attach the Side Window Frames after the fuselage is covered.
The windshield and side windows can be made from PET sheet.

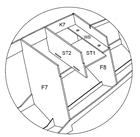
BATTERY HATCH:

After fuselage assembly is complete, cut stringers between Formers F4 and F4H, and between F6H and F6-1.
Carefully remove the cabin/hatch assembly.
Use magnets and a locating pin to attach the hatch to the fuselage.



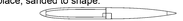
WINGBOLT PLATE AND SERVO TRAY:

Install the Wingbolt Plate WB and Servo Tray parts after the formers, keels, and wing saddles are all in place (one Saddle deleted in inset drawing for clarity).
Glue ST1 to Former F8, and then ST2 to ST1 and Saddles.
Glue WB to F8 using notches to position; glue WB to Saddles
Epoxy nylon 1/4" x 20 nuts to the underside of WB to capture the Wingbolt Screws.



Step 3: laminated outline in place, tail group ribs sitting on alignment feet.

Step 7: alignment feet removed, sheeting in place, sanded to shape.



TAIL GROUP ASSEMBLY

Sheeting the fin and horizontal stabilizer and covering the rudder and elevators as open frameworks provides durability with a scale appearance.

1. Begin Fin/Rudder assembly by laminating their outline from three strips of 1/16" x 1/2" balsa around a form.
   1. Pin the cured outlines into place over the plan.
2. Install the tail group framework parts in numerical order.
3. The feet on many of these parts will hold the parts at the correct angles when the feet are square against the board.
   1. Additionally, all of the Fin "V" and Hstab "H" parts have feet that lift them 1/16" up from the board--this will hold them in the correct position relative to the Rudder and Elevators until the Fin and Hstab are sheeted.
4. After the assembly has been completed, separate the Rudder from the Fin and the Elevators from the Hstab by cutting through the outlines where shown on the plan.
5. Sheet the upper side of the Fin and Hstab with 1/16" balsa while they are pinned flat to the board.
6. Unpin and remove the support feet from the bottom of the tail group parts.
7. Sheet the lower Fin and Hstab.
8. Sand to shape and install hinges.

Plans No. 1150

INFIELD ENGINEERING by Paul Kohlmann

Copyright 2025

Laser cut kit available!
www.infieldengineering.com

Title			
60" Grumman Widgeon			
Size	Dwg. No.		Rev
X	G44 Widgeon.sldrw		B
Scale: 1:1	Weight: 56-60oz	Sheet 1 of 4	