Pioneers Of Flight

1910 Deperdussin

SIG

SIGRC92

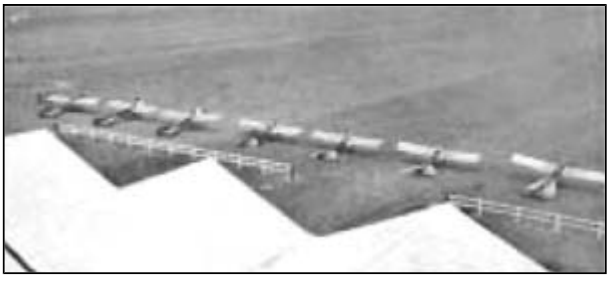
ASSEMBLY MANUAL

SIG MANUFACTURING COMPANY, INC.

Introduction

At daybreak on July 25, 1909, Frenchman Louis Bleriot succeeded in making the first successful crossing of the English Channel. His small monoplane made the 23 mile flight to Dover in 37 minutes despite an overheating 25-horsepower Anzani engine. Just one month later over 500,000 spectators attended the world's first great airshow at Reims, France. There the French airplanes built by Bleriot, Voisin, Antoinette, and Farman dominated almost all of the racing events (although American Glenn Curtiss edged out Bleriot in the premier Gordon Bennett Race).

Deperdussin flightline at Reims airfield near Bethany, France.



Bleriot's cross-Channel flight and the Reims Airshow excited Europe as nothing else had, but no one was more excited than wealthy French industrialist Armand Deperdussin. Immediately he founded his own aircraft-building company, the Société Pour Aéroplanes Deperdussin (SPAD) at Betheny near Reims in 1910.

Not a designer himself, Deperdussin hired a capable young engineer named Louis Bechereau. Together they produced some of the most advanced racing airplanes of the pioneer period.

Pierre Lacombe flying his Deperdussin in 1911.

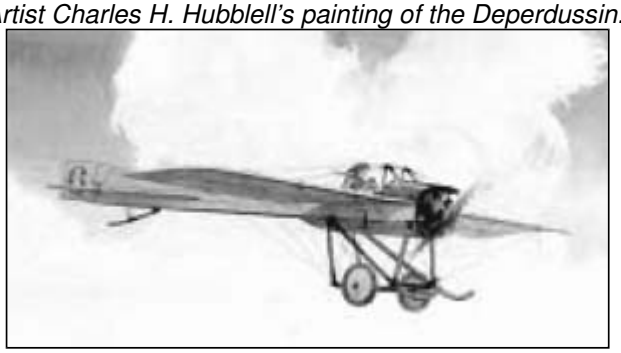
French pilot Jules Vedrines signals his crew to release his straining Deperdussin for another race.

By 1912 Deperdussins were winning all the important races and setting new speed records at nearly every race. French pilot Jules Vedrines won the 1912 Gordon Bennett Cup with a Deperdussin, being the first person in history to fly faster than 100 mph. France's Maurice Prevost won both the 1912 Gordon Bennett Cup and the 1912 Schneider Trophy with a Deperdussin, setting a new world speed record of 126 mph in the process.

Aeroplanes always drew a crowd in 1910.

In spite of their winning racing record, and receiving lucrative contracts to build airplanes for the French government, the company went bankrupt in 1914 when Deperdussin was arrested for embezzling 32,000,000 francs from his company. The company was reorganized with Deperdussin's former rival Louis Bleriot in charge. Bleriot renamed the company Société Pour L'Aviation et ses Derives (SPAD) and retained Louis Bechereau as Chief Engineer. The reborn SPAD company went on to make some of the best fighter airplanes of World War I, building more than 5,600 aircraft for France and other countries.

Artist Charles H. Hubblell's painting of the Deperdussin.



Later model 2-place Deperdussin for the military.

The SIG Deperdussin represents a semi-scale rendition of the early Deperdussin airplanes of 1910 to 1911. This kit is not intended for beginning modelers. However, most intermediate modelers with average building skills will find this kit easy to build and fly. These instructions assume that you are aware of the importance of using the correct type and amount of glue, how to make proper wood joints and how to fly R/C models.

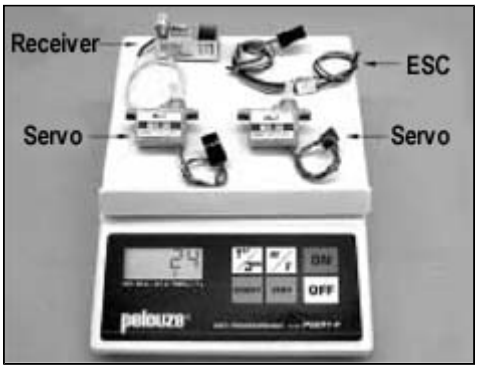
Using the radio equipment, battery pack, motor, and propeller recommended in these instructions, you'll find the Deperdussin is remarkably stable and easy to fly. Designed to be flown indoors, this model can also be flown outdoors in no-wind conditions. Its light weight and low wing loading do not lend themselves to windy conditions. Between flying sessions, you will enjoy displaying this intriguing and unusual airplane in your workshop, den, or office - it's a real attention grabber!

Motors And Propellers

We recommend the SIG EPU001 ELECTRIC POWER UNIT to power the Deperdussin. This motor and gear box system consists of a high-quality brushed electric motor, an integral 7:1 ratio gear box, and a 10 x 5 electric style plastic propeller. Used with a 7-cell 350mAh Nicd battery pack, or 7-cell 500mAh Nimh battery pack, this system has provided good power margins and scale-like speeds in the Deperdussin, along with very good flight duration. The SIG EPU001 power unit is actually manufactured by GWS, which they sell as their IPS-DX2BB-B (note: Maxx Products also markets the exact same power unit as a MAXX EPU-7).

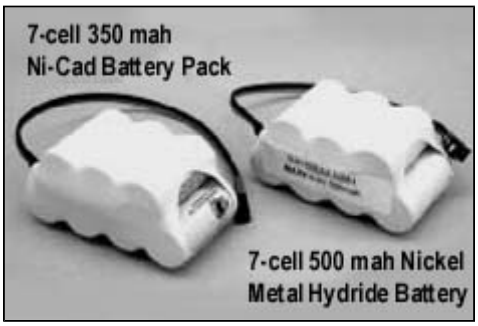
Radio Equipment, Speed Controller, Battery Pack, and Connectors

One of the very reasons that indoor models such as the Deperdussin are now possible is the fairly recent availability of good quality, reasonably priced light-weight micro receivers, servos, and speed controllers (ESC's). Up to this time, such equipment was only available from small, highly specialized sources at relatively high prices.
Here are the airborne radio system components we've used in the Deperdussin.



Item	Weight
Maxx Products (MPI) Micro Receiver	8 grams
Maxx Products (MPI) #MX-30 Servos	7 grams each
Maxx Products (MPI) #MX-9104 Micro ESC	1 gram
7-cell 350mAh Ni-Cd Battery Pack	95 grams
7-cell 500 mAh NiMH Battery Pack	96 grams

A 7-cell battery pack is used in the Deperdussin for two very good reasons. The first has to do with the C.G. realities. With virtually no nose moment, the Deperdussin needs a substantial battery pack to get the airplane to balance and the 7-cell pack does just that. The second reason is flight duration. With throttle management, the 7-cell 350mAh Ni-Cad battery pack keeps our Deperdussins flying for anywhere from 8 to 12 minutes. We've also used 7-cell 500 mAh NiMH (Nickel Metal Hydride) battery packs with good results. In general, the difference between this type of cell and the 350 mAh NiCad cell is that the NiMH pack seems to deliver a little less power with some incremental increase in duration. Both types of cells weigh the same, so they are both usable. Last, the battery pack should be configured in the "hump" shape - four cells on the bottom, three cells on top. This layout offers the most mass in the least amount of space and this is very helpful when making small changes in the C.G. location, if needed.



For maximum flight performance, indoor R/C models require attention to the weight of everything they must carry aloft, including connectors. We used and like the small 2-prong Dean's connectors for connecting the battery pack to the ESC. There are other connectors available on the market that are also suitable for the Deperdussin.

Last, use a radio system with an excellent transmitter. We find that features such as servo throw adjustments (EPA), servo reversing, servo sub-trim adjustments, etc. are very helpful in setting up and flying the Deperdussin.

Required Tools

A selection of glues

- SIG Thin, Medium and Thick CA
- SIG Thin CA Applicator Tips
- SIG Kwik-Shot CA Accelerator
- Heat-Activated Covering Adhesive, such as SIG Stix-It or Solarfilm Balsaloc.

A selection of hand tools, such as

- Regular size and miniature screwdrivers
- Pliers (flat nose, needle nose, round nose)
- Tweezers and/or small hemostats
- Hobby knife with sharp #11 blades
- Sandpaper - assorted gritsModeler's "T" pins
- Power drill and hand "pin vise" (for small diameter drill bits)

Assorted drill bits, including

- .031" (1/32" or # 68)
- .046" (3/64" or # 56)
- .063" (1/16" or # 52)
- .078" (5/64" or # 47)
- .093" (3/32" or # 42)
- .109" (7/64" or # 35)

Paint

Since fuel proofing is not an issue with electric powered airplanes, the only reason to paint any part of the Deperdussin is to improve the scale appearance of the model. And because light weight is so important in an indoor model, we've tried to keep the painting on the Deperdussin to a minimum. Too much paint, or the wrong kind of paint, can add unnecessary weight in a hurry. Do not use thick, heavy paints like epoxy or enamel on these large areas of the model. We prefer thinned SIG Supercoat Dope or "waterbased acrylic craft paint" (see note below). One coat is usually all that is necessary. A completely filled glossy paint job is not necessary or desirable, and it's too heavy for this type of model. One coat usually achieves the "old time" look we are after.

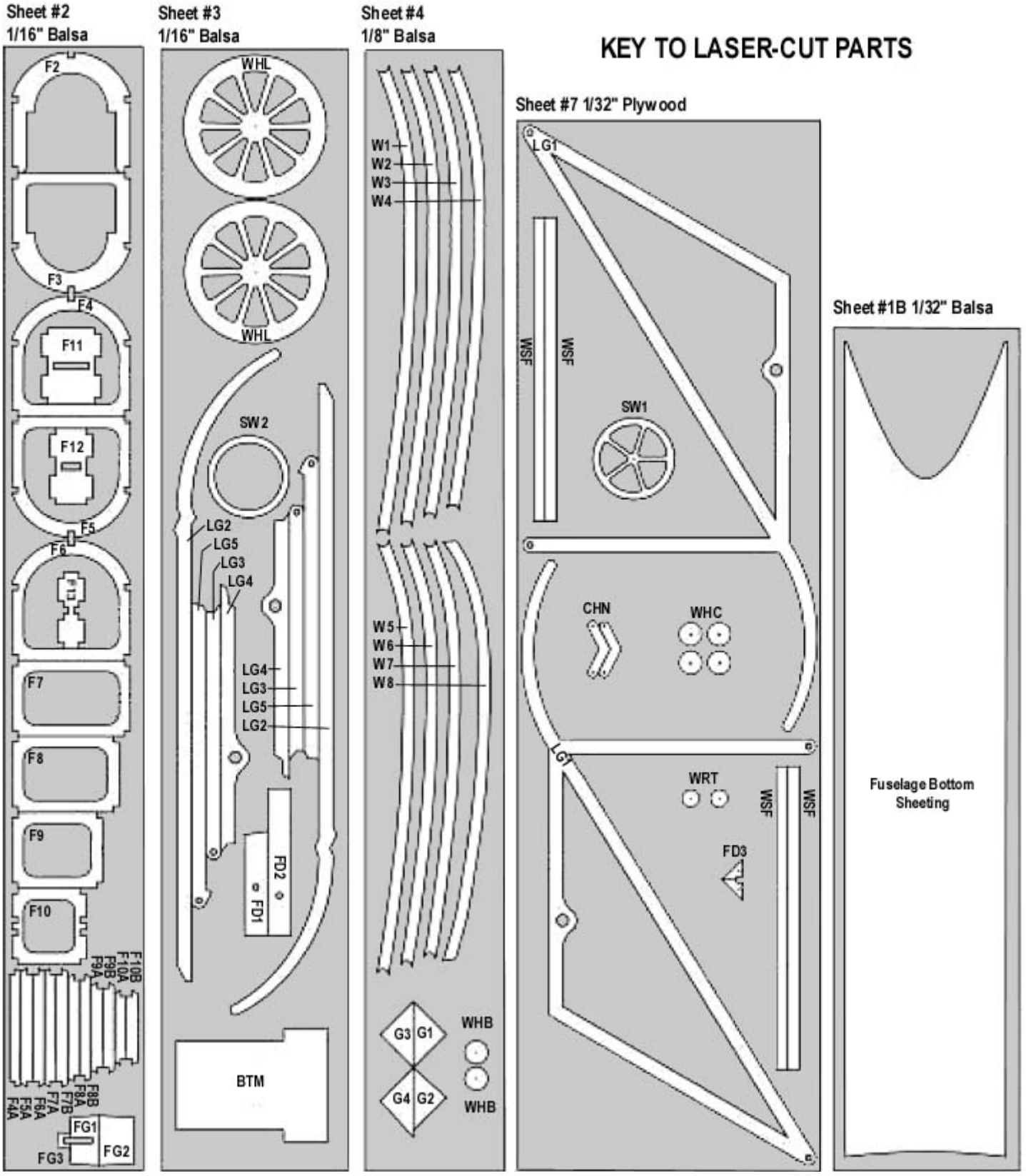
* Water-Based Acrylic Craft Paint: These inexpensive paints are sold in the craft departments of stores such as Wal-Mart, K-Mart, and similar outlets. They seem to be manufactured under many different brand names, such as Delta Ceramcoat™ and Apple Barrel Colors™. They are available in a huge variety of colors. We found that thinning these paints with equal amounts of water produced nice results, when either brushed or sprayed, with very little weight build-up. Clean-up is also easy, using just warm water.

A few painting guidelines:

1. Paint the landing gear struts, cabane struts, and tail skid a brown color to look like varnished wood.
2. The dummy engine, dummy gas tank, and other molded plastic parts can be painted with the water-based acrylic craft paints, or they can be painted with Testors Model Master™ enamel paints for plastic models (using the spray can products whenever possible). The engine crankcase was painted "steel" color. The cylinders are black. The dummy gas tank looks great painted copper, just like on the full-scale Deperdussin. Use your imagination and keep in mind that flat or semi-gloss colors usually look more realistic than high gloss paints.
3. We've tried a variety of colors for the balsa wheels on our prototype Deperdussin models: gray to simulate steel wheels, brown for wood wheels, or black for painted rims, which was also common. It's your choice and a matter of personal preference.
4. The amber colored surgical tubing that is provided for the tires can be easily dyed black with regular household variety Rit Dye™. That looks good with gray or brown wheels.

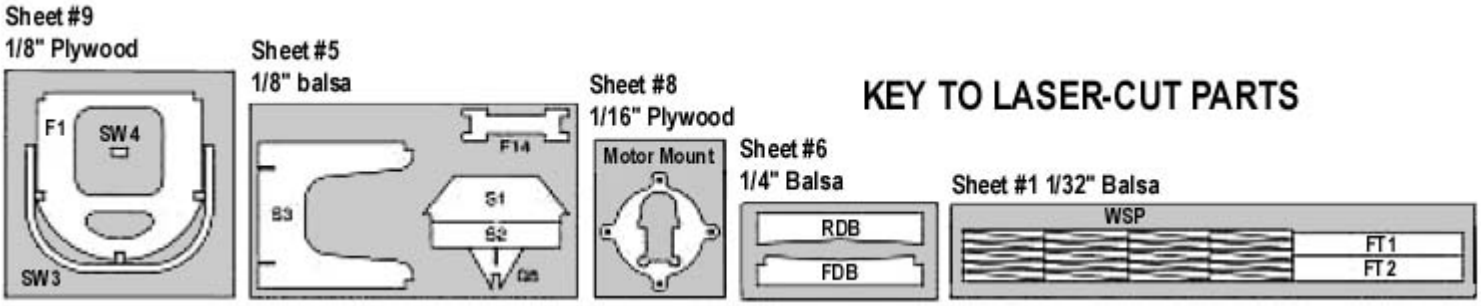
COMPLETE KIT PARTS LIST							
Balsa Sticks & Sheets							
2	1/16"x1/4"x12" Rib Stiffners	4	1/8"x1/8"x42" Fuselage Longerons	7	1/8"x1/8"x36" Fuselage, Stab, Elevator, Fin, Rudder, Wing Tip Braces, LG Cross Braces	1	1/8"x1/4"x36" Cabane Struts
2	1/4" dia. x24" Balsa Dowels; for Wing Trailing Edges	2	1/4" dia. x30" Balsa Dowel; for Wing Leading Edges	1	1/4" dia. x7-1/4"" Balsa Dowel; for L.G. Spreader Bar	2	1/32"x1-5/8"x18" Fuselage Side Sheeting
1	1/32"x3"x3" Fuselage Bottom Sheeting						
Laser-Cut Balsa							
1	1/32" thick Sheet #1; FT1, FT2, WSP	1	1/32" thick Sheet #1B; Fuselage Bottom Sheeting	1	1/16" thick Sheet #2; F2, F3, F4, F4A, F5, F5A, F6, F6A, F7, F7A, F7B, F8, F8A, F8B, F9, F9A, F9B, F10, F10A, F10B, F11, F12, F13, FG1, FG2, FG3	2	1/16" thick Sheet #3;WHL, LG2, LG3, LG4, LG5, BTM, FD1, FD2, SW2
2	1/8" thick Sheet #4; W1, W2, W3, W4, W5, W6, W7, W8, G1, G2, G3, G4, WHB	1	1/8" thick Sheet #5; G5, S1, S2, S3, F14	1	1/4" thick Sheet #6; FDB, RDB		
Laser-Cut Plywood							
1	1/32" thick Sheet #7; CHN, WSF, WHC, WRT, LG1, FD3, SW1	1	1/16" thick Sheet #8; Motor Mount	1	1/8" thick Sheet #9; F1, SW3, SW4		
Hardwood							
2	10" Bamboo Sticks; for LG Mounts, Tail Skid	1	1/8"x3/16"x3" Basswood Stick; for Rudder Servo Mounts	1	1/4"x3/16"x3" Basswood Stick; for Elevator Servo Mounts		
Wire Parts							
1	.020" dia. x12" Straight Wire; for Rigging Hooks	2	.046" dia. x1-1/2" Straight Wire; for Axles				
Hardware							
7	#1 x3/8" Sheet Metal Screws; for dummy motor	4	#2 x1/4" Sheet Metal Screws; for motor attachment	3	0090 x1/8" Round Brass Machine Screw; for pilot	2	0090 x1/4" Round Brass Machine Screw; for steering wheel
1	0090 x1/2" Round Brass Machine Screw; for steering wheel	4	0090 Brass Hex Nut; for pilot(3) & steering wheel (1)	10	0090 Brass Washers; for pilot(6) & steering wheel(4)		

Miscellaneous Parts							
2	Molded ABS Plastic Dummy Engine Halves	1	Molded ABS Plastic Fuselage Top Deck	1	Sig Easy Hinge	32	1/16" od x 1/4" Aluminum Tubes; for wing rigging points & swage tubes
4	1/4" id x 1-5/16" Aluminum Wing Mount Tubes	1	10 ft. Monofilament Pull-Pull Line	1	8 yds. Elastic Thread; for rigging wires	1	2 ft. Dacron Thread
1	22" Rubber Tubing; for tires	1	Pilot Sheet	1	3/4"x3" long Velcro®	1	19-1/2"x90" Red Covering Material
1	Decal Sheet	1	Full-Size Plan	1	Instruction Book		



Use a pencil to mark each of the parts according to these diagrams.

NOTE: When it's time to remove a part from a sheet, use a sharp #11 hobby knife to slice through the small bridges that hold the part in the sheet. Do not try to push the parts out of the sheet without first cutting through the bridges, or you may end up with a lot of broken parts.



FUSELAGE CONSTRUCTION

1a. Identify laser-cut balsa sheet #2 by comparing to the "Key To Laser-Cut Parts" diagrams. Sheet #2 is 1/16" thick balsa and contains fuselage formers F2 through F13.

b. Use a fine point pen to mark the part number of each part right on the wood.

c. Use a sharp #11 hobby knife to cut through the retaining tabs that are holding each part in the sheet, and then carefully remove the parts from the sheet. Use one or two light swipes with a fine grit sanding block to remove any remnant of the retaining tabs that remains on the sides of the parts. Handle the parts carefully ... being only 1/16" thick they break easily!

d. Repeat steps a, b, and c to remove former F14 from laser-cut balsa sheet #5.

e. Repeat steps a, b, and c to remove former F1 from lasercut plywood sheet #9.

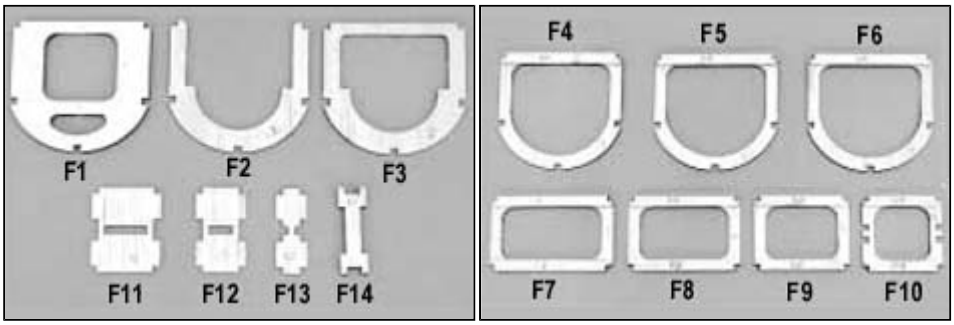
2. Formers F4, F5, F6, F7, F8, F9, and F10 need to be reinforced with their corresponding A and/or B parts. Be sure to line up the common edges of these parts carefully when gluing them together.

a. Glue F4A along the top of former F4.

b. Glue F5A along the top of former F5.

c. Glue F6A along the top of former F6.

d. Glue F7A at the top of former F7, and F7B at the bottom.



e. Glue F8A at the top of former F8, and F8B at the bottom.

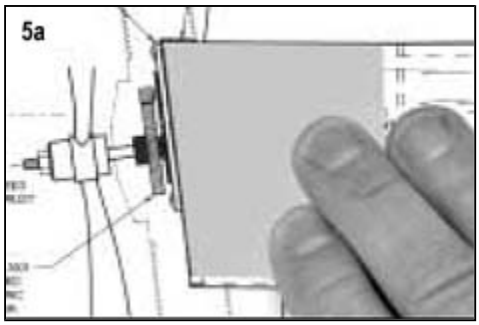
f. Glue F9A at the top of former F9, and F9B at the bottom.

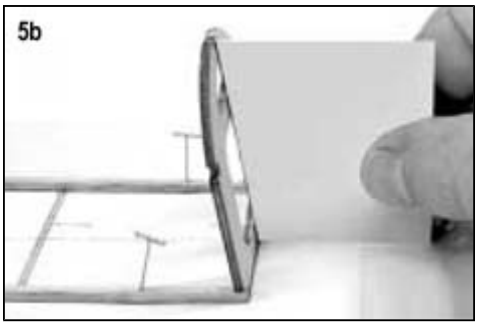
g. Glue F10A at the top of former F10, and F10B at the bottom.

3. The basic framework of the fuselage will be built upside down on the plan. Pin the FUSELAGE FRAME TOP VIEW to your building board and cover with wax paper or plastic wrap for protection.

4. Pin two 1/8" sq. x42" balsa sticks onto the plan for the Top Longerons. Bend the longerons where needed to follow the plan exactly from former F1 all the way back to the tail end.

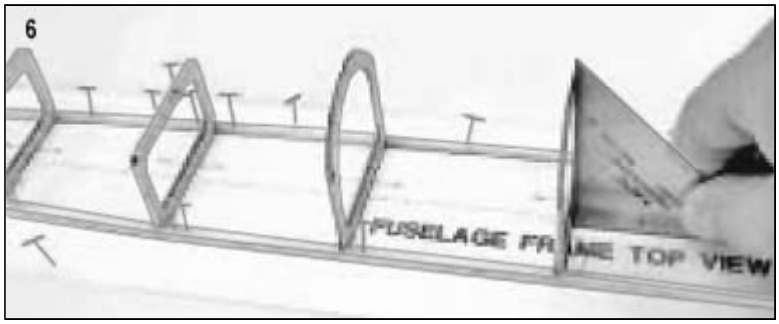
5a. Get a piece of scrap cardboard approximately 3" square to make a downthrust gauge to use while installing the plywood firewall F1. Lay the cardboard on the side view plan as shown, with the top edge lined up with the top of the fuselage, and then mark the angle of the firewall on the cardboard. Cut along the marked line.





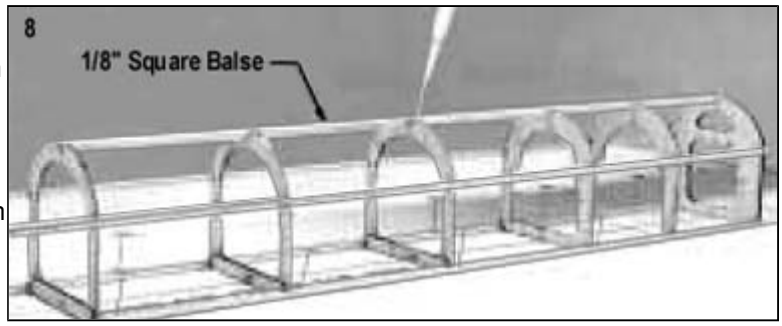
b. Glue the plywood firewall F1 in place at the front of the fuselage. Use the cardboard downthrust gauge to set the proper angle of the firewall while the glue dries.

6. Glue fuselage formers F2 through F14 in place. Make sure all these formers are glued in perpendicular (90 deg.) to the building board.



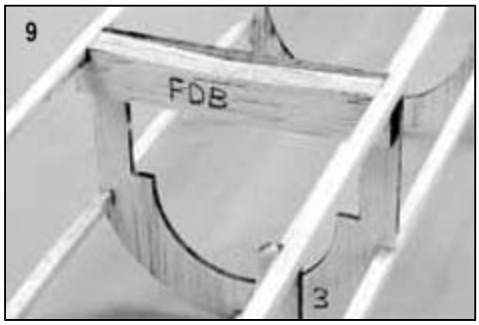
7. Glue the remaining two 1/8" sq. x42" balsa sticks into the appropriate notches of the all the formers for the Bottom Longerons. Double check with the cardboard downthrust gauge to make sure the F1 firewall stays in proper position while you install these longerons.

8. Cut a piece of 1/8" sq. balsa stick to go in the bottom notch of formers F1 through F6. Glue in place. When dry, unpin the fuselage frame from the building board.



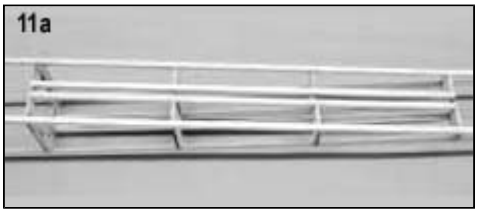
9. Glue the laser-cut front dihedral brace FDB in place on the front of former F3. Study the plans, including the cross-section drawing, to make sure you understand exactly where it goes.

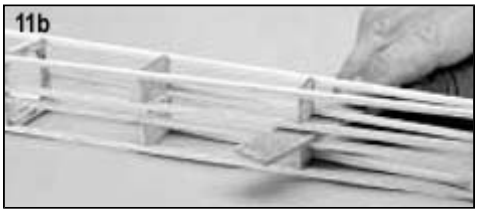
10. Glue the laser-cut rear dihedral brace RDB in place on the rear of former F6. Study the plans, including the F6 cross-section drawing, to make sure you understand exactly where it goes.



11a. Cut four pieces of 1/8" sq. balsa x 9-3/16" long. Glue two of these sticks in the notches on the right side of formers F10, F11, F12, and F13, and glue two on the left side. These sticks create a slot into which the stabilizer will be mounted later.

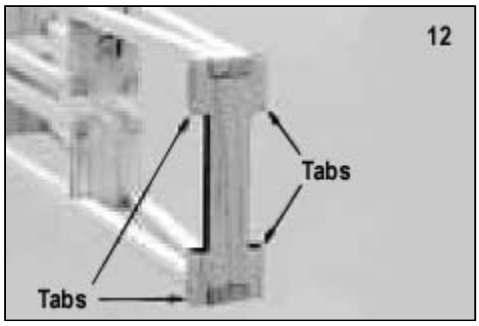
b. Use a fine tooth razor saw blade to cut out the small portions of formers F11, F12, and F13 that are inside the stabilizer slot. Touch up any rough edges in the slot with a "sandpaper file".





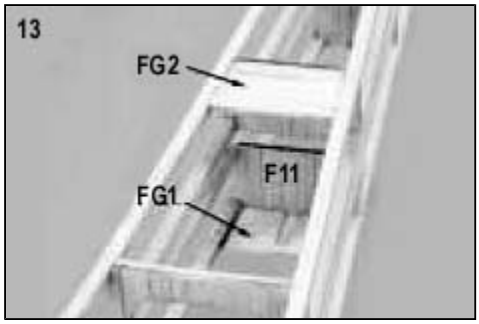
Modeler's Tip:
In this instance our "sandpaper file" is a small piece of scrap 1/8" thick plywood with 100 grit sandpaper glued to both sides. This is a handy tool to have in your shop - make several sizes while you're at it.

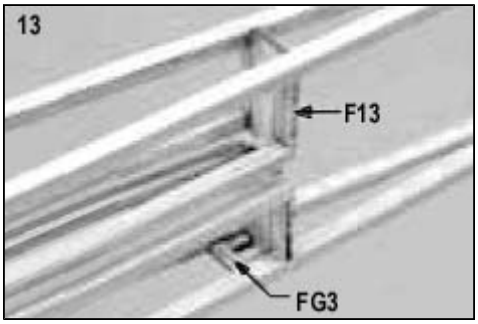
12. Trim the tabs off each side of former F14. The purpose of these tabs was to aid in assembly of the fuselage frame. Now that the frame is glue together, the tabs are no longer needed. Trim the tabs off with a knife or razor saw, and then sand F14 flush with the longerons.



13. Glue fuselage gussets FG1 and FG2 in place in front of former F11. Also glue fuselage gusset FG3 in place in front of former F13.

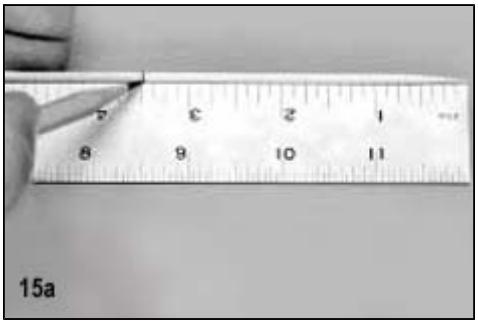
14. Inspect all the glue joints in the fuselage to this point and apply more glue where needed. Let dry. Then use a small sanding block with 100-150 grit paper to block sand the flat sides, top, and bottom of the fuselage structure, touching up all of the joints.



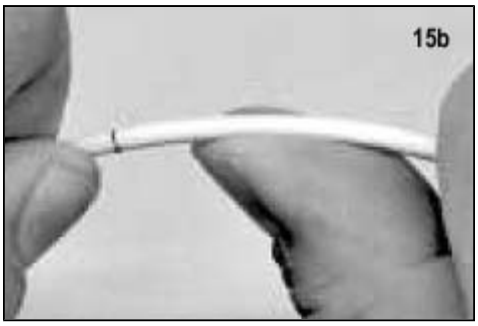


15. Even though we're not going to glue it until after the fuselage is covered, let's make the Tail Skid now.

a. Choose the straightest of the two 10" pieces of bamboo provided and put a mark 3-1/2" from the pointed end. The 3-1/2" area between the mark and the end of the stick needs to be bent to a curved shape for the bottom of the tail skid, as shown on the plan.
Note: We'll cut off the pointed end later, but for now the excess length will be handy during the bending of the bamboo in the next step.

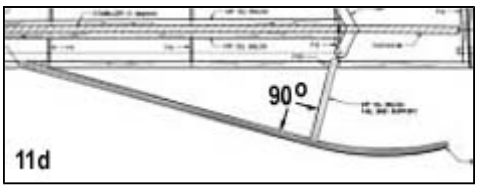


b. There are a lot of different ways to bend wood, but for this application we've found that the easiest method is simply to do a "controlled break" of the area we want formed. In other words, we simply bend the bamboo slowly until it just starts to break. Start with the tip of your thumb near the 3-1/2" mark. Bend the stick over your thumb until you feel it start to break. Stop, move your thumb about 1/4" or so further along in the area you want formed, and then bend again. Continue moving along in small increments in the area you want formed, bending it to the point of almost breaking, until you have the shape you want. Don't worry if a few strands of bamboo start to get loose on the outside of the curve. Once you've got the shape you want, thoroughly soak the entire bent area of the bamboo stick with thin CA to re-strengthen it. When dry, sand off any rough spots.



NOTE: Don't worry if the bend in your tail skid doesn't match the plan exactly. No doubt the tail skids on the full-scale Deperdussins were all a little different too.

c. Cut off the excess 1" or so of the pointed end of the bamboo tail skid to match the length shown on the plan. Sand the bottom tip of the tail skid round.



d. Cut a 1-3/4" long piece of 1/8" sq. balsa stick to make the Tail Skid Support. Use sandpaper to make the bottom end of the support slightly concave to provide a good joint to the round bamboo tail skid. Glue the tail skid support permanently to the tail skid, making it perpendicular (90 deg.) to the skid.

e. Trial fit the tail skid on the bottom of the fuselage. You could glue it on now, but we've found it's a lot easier to cover the rear of the fuselage without the tail skid in place. So set the tail skid assembly aside for now.

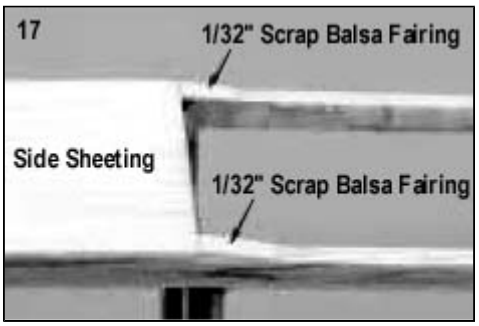
16. Two sheets of 1/32" x 1-5/8" x 18" balsa are provided for sheeting the sides of the fuselage from F1 back to F7. The best procedure is to lay one of the 1/32" balsa sheets on a piece of wax paper on your flat building board. Then lay the side of the fuselage down flat on the balsa sheet. As you hold the fuselage down flat against the balsa sheet, start tack gluing formers F7 thru F3 to the sheet. Also glue the top and bottom longerons. Let dry. Then repeat the process to glue 1/32" balsa sheeting onto the other side of the fuselage. When dry, trim, and sand all the edges of the side sheeting flush with the structure.

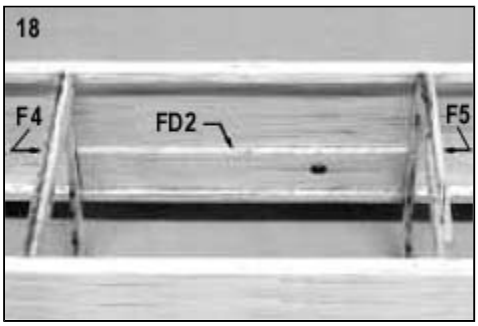
17. Cut four pieces of 1/32" scrap balsa x 1/8"x1/4". Glue them on the sides of the top and bottom longerons at the end of the side sheeting at F7. Taper them down to blend smoothly from the end of the sheeting into the longerons. This will make the covering material go on a lot smoother later.

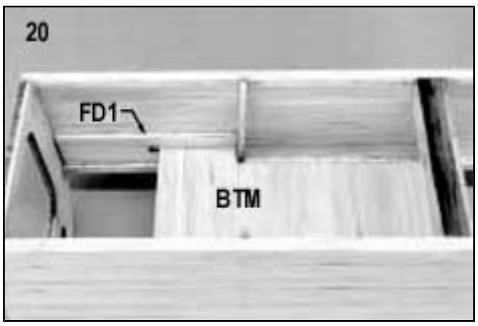
18. Glue a balsa FD2 fuselage doubler on the inside of both the right and left fuselage sides between formers F4 and F5. Make sure the hole in FD2 is properly located, closer to former F5 than F4, as shown on the plan and in this photo.

19. Glue a balsa FD1 fuselage doubler on the inside of both the right and left fuselage sides between formers F1 and F2.

20. Glue the balsa BTM battery mount in place.

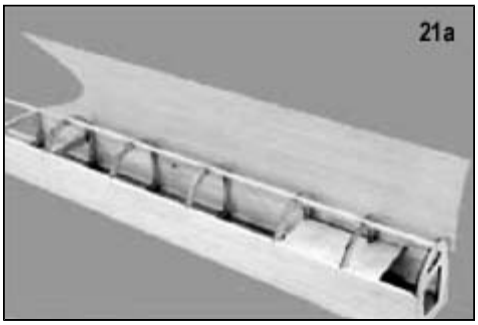




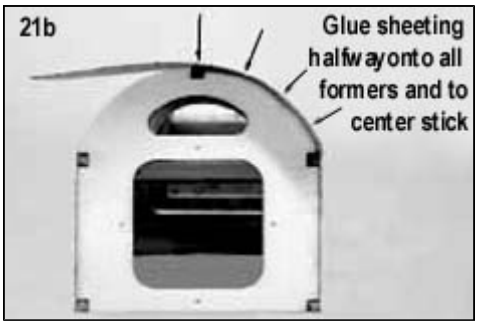


21. Next install the laser-cut 1/32" balsa Fuselage Bottom Sheeting, which runs from formers F1 to F7. This is probably the trickiest part of the entire assembly of this model, but if you follow this proceedure it goes pretty easy.

a. First glue one edge of the fuselage bottom sheeting in place on one side of the fuselage as shown in this photo. Glue the edge of the bottom sheeting against the edge of the side sheeting. Use only enough glue to get a solid joint and then let it dry completely before proceeding.



b. When dry, start carefully bending the bottom sheeting around the fuselage formers, one at a time, starting in the middle with former F4. At this point just bend it halfway around the former, to the 1/8" sq. balsa center stick. Hold the bottom sheeting in tight contact with F4 while you apply a small amount of thin CA glue from the inside. When that glue is dry move on to the adjacent former F3 and do the same, tack gluing the bottom sheeting in place to that former. And when that's dry, move on to former F2, and then F1, and then back to formers F5 and F6. After you have the bottom sheeting tack glued halfway around all the formers, then glue the sheeting to the 1/8" sq. balsa center stick.

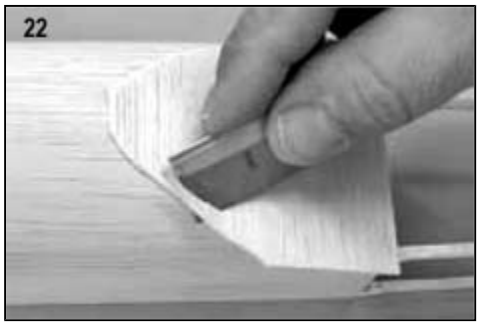


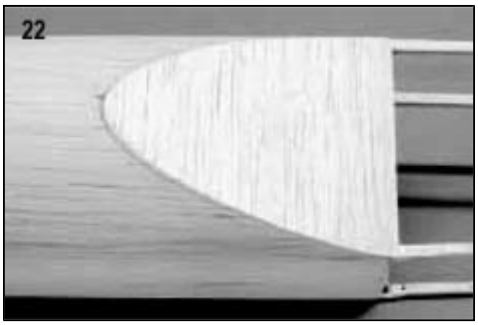
c. After the sheeting is glued halfway around all the formers to the center stick, go back to former F4 and trial bend the bottom sheeting the rest of the way around the former to the other fuselage side. Pay close attention to the fit of the bottom sheeting against the lip of the fuselage side sheeting. Most likely you will find that the bottom sheeting is a little too big for a perfect fit. This is because we deliberately made the bottom sheeting a little large to allow for slight differences between models.

Continue trial bending the sheet at each former to check the fit. Make a mental note of how much material needs to be sanded off the edge of the bottom sheet to achieve a good fit. Then use a 100 grit sanding block to sand down the edge evenly, until it does fit properly. Work carefully and gently to avoid breaking the bottom sheeting.

d. When satisfied with the fit, finish gluing the bottom sheeting completely in place against all the formers and side sheeting. Let dry.

22. Glue the 1/32"x3-1/4"x3" balsa piece provided onto the opening at the back of the bottom sheeting. Let dry. Then trim and sand the edges of the balsa flush with the bottom sheeting. Note: The grain of this piece goes cross ways on the fuselage.

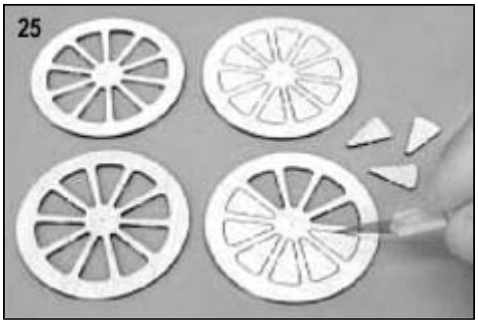




23. The fuselage is now ready to be covered. Cover before proceeding.

LANDING GEAR

24. Carefully remove the following parts for the wheels from the laser-cut sheets:
    40 - WSP 1/32" balsa wheel spokes from sheet #1
    4 - WHL 1/16" balsa wheels from sheet #4
    4 - WHB 1/8" balsa wheel hubs from sheet #5
    4 - WHC 1/32" plywood wheel hub caps from sheet #8

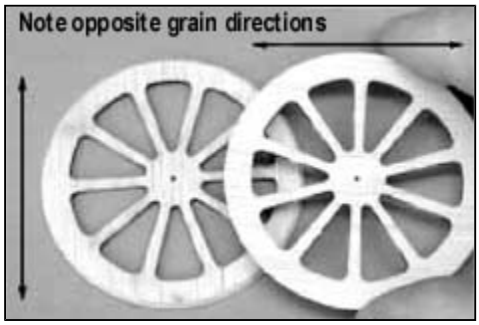


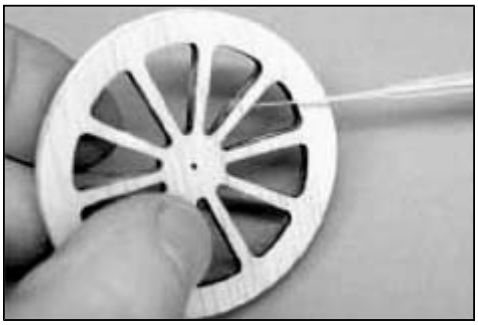
25. Use a #11 hobby knife to cut loose the "pie shaped" scrap pieces between each of the spokes of the WHL parts.

26. Two of the WHL pieces will be laminated together to form the basic core of one wheel assembly. However before gluing them together, use a flat sanding block with medium grit sandpaper (100 to 200 grit), to bevel the outer edge of each WHL piece. Hold the sanding block at a 45 deg. angle. Bevel only one side of the piece. The purpose of the beveled edge is to provide a groove for the rubber tire to fit in after the WHL pieces are laminated together with their beveled edges facing each other.

27. It's important to work on a flat surface when laminating the WHL pieces together to insure that the finished wheel comes out flat, so it will roll straight and true with no wobble. First lay a piece of waxed paper down on the flat surface.

Next lay a WHL piece down on the waxed paper with its beveled side up. Position a second WHL piece, beveled side down, on top of the first one. Rotate the top piece so its grain direction is 90 deg. to the grain direction of the bottom piece. This will provide maximum strength to the finished wheel.

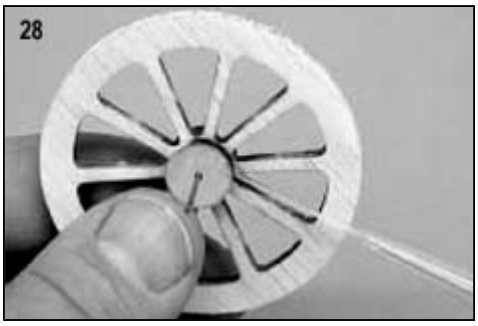




Carefully match up the spokes of the two WHL pieces exactly. When satisfied with the positioning, hold the parts flat while tack gluing them together with Thin CA glue at 3 or 4 spots around the outer edge. Put the drops of glue right in the beveled groove. Not too much, just enough to tack glue the WHL parts together. After the glue dries, you can pick up the laminated part and continue gluing along the spokes and hub areas.

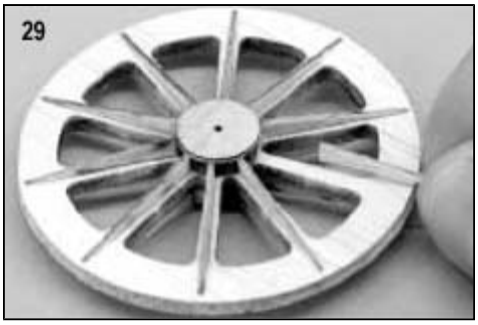
NOTE: It's best to use a fine applicator tip (such as SIGSH10220) on your CA bottle during assembly of these wheels. In fact, a fine tip is preferred for the assembly of this entire kit. Building featherlight models like the Deperdussin requires that we change our thinking a bit from the old habits we've used in building much heavier sport type models. With the small parts involved here, it's not desirable to flood a large area with a lot of glue. It's much better to get a little glue exactly where you need it, and a fine applicator tip does that for you.

28. Next glue a 1/8" balsa WHB wheel hub and a 1/32" plywood WHC wheel hub cap onto each side of the wheel assembly. To insure that the center holes in all these parts are in correct alignment, it's best to first dry assemble all these parts onto a piece of .046" dia. x1-1/2" music wire (provided for the axles) as shown. Then, while holding everything snuggly together put a small drop of thin CA glue into each joint. Don't get any glue on the wire! When dry, you can take the wire out and put a little more glue on the joints if they need it.



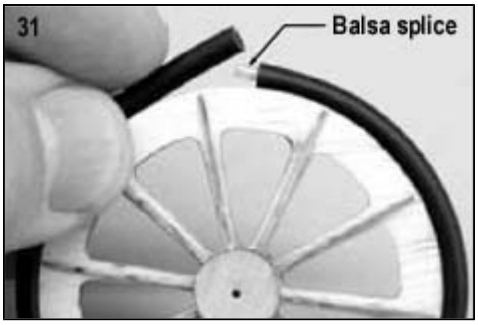
Note: After finishing the gluing, you may find that the center hole has become clogged with excess glue and the axle wire won't fit in the hole anymore. If so, drill out the hole with a .046" dia. (3/64" or #56) drill bit. Make sure the wheels will spin freely on the axle wires.

29. Glue the 1/32" balsa WSP wheel spokes in place on each side of the wheel. Again use thin CA and a fine applicator tip to keep the glue application to a minimum.



30. If you want to paint your wheels, do it now (refer to the section on PAINT).

31. Complete the wheels by gluing a piece of surgical tubing around the outside to serve as the tire. Again, use thin CA and a fine applicator to keep the glue application under control. Start by tack gluing one end of the tubing in place in the groove with a single drop of glue. Now work your way slowly around the perimeter of the wheel, lightly gluing the tubing in the groove as you go. It's not necessary to stretch the tubing as you put it on, simply make sure you are keeping it straight and not weaving side to side. When you get to the last 1" or so, stop gluing. Carefully measure and cut off the unglued end of the tubing to proper length to mate up with the first end. Prepare a small "splice" to go inside the two ends of the tubing. A balsa stick approximately 1/16" square x1/4" long should be about right. Cut it from a piece of scrap 1/16" laser-cut balsa sheet. Glue it halfway inside one end to the tubing, and then join the other end up to it. Holding everything in position, finish gluing the end of the tire to the wooden wheel.



32. The Deperdussin's main landing gear struts are made of a plywood and balsa lamination. Locate the plywood core LG1 and balsa parts LG2, LG3, LG4, and LG5.

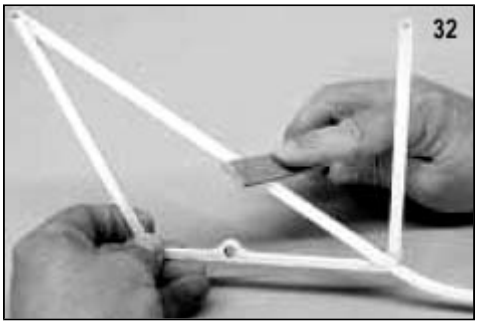
a. Start by tack gluing a balsa LG2 on one side of LG1, being careful to line up all the edges carefully. Use only two or three spots of glue along the part to hold it in position. Make sure you keep the assembly flat.
Don't create a bow or twist in the assembly by gluing the parts together in mid air. Work on a flat surface while gluing.

b. Then tack glue parts LG3, LG4, and LG5 in place on the same side of LG1.

c. Now tack glue LG2, LG3, LG4, and LG5 parts on the other side of LG1.

d. Now that all the parts are laminated together, flow thin CA glue liberally along all the joints and edges to make sure everything is adaquetly glued together. Let dry.

e. When dry, block sand all the edges of the skid assembly to clean up any rough spots.

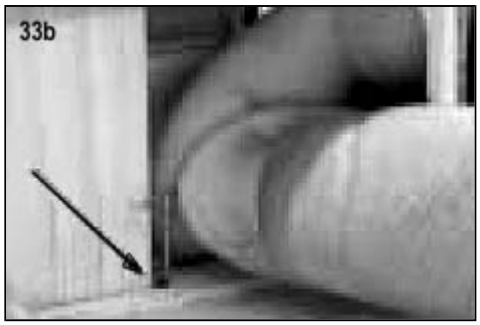


Note: Old photos show that the landing gear struts on most original Deperdussins had just slightly rounded corners, not airfoil shaped as you might think they would be. Remember, this was just 7 years after the Wright brothers first flew! Streamlining was not a big consideration at the slow speeds these airplanes flew.

f. Repeat the process to make the second main landing gear strut assembly.

33a. Cut two pieces of bamboo 3-3/8" long for the bamboo landing gear mounts.

33b. Make four holes through the fuselage sides for the bamboo landing gear mounts, using the holes already in the FD1 and FD2 doublers inside the fuselage as your guide. We suggest first poking a pin through the side sheeting from the inside hole to mark the location, and then using a sharp hobby knife to enlarge the hole to final shape.



c. Glue the two bamboo landing gear mounts in the fuselage, being careful to have an equal amount of bamboo sticking out each side of the fuselage.

34. With the fuselage upside down on your bench, dry fit the main landing gear to the fuselage. Do not glue yet.

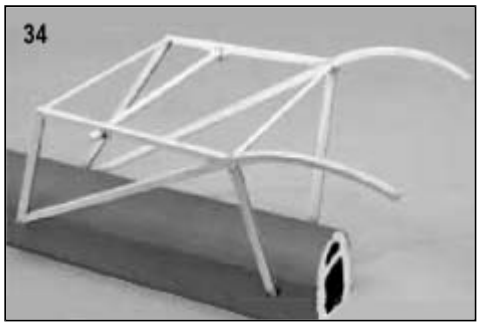
a. Install the laminated main landing gear struts on the bamboo landing gear mounts. Do not glue at this time!

b. Slide the 1/4" dia. x7-1/4" balsa dowel spreader bar through the holes in the landing gear struts. Carefully spread the landing gear struts apart until they are approximately 3/8" from the ends of the spreader bar. Do not glue at this time!

c. Cut two 1/8" sq. balsa sticks 6-1/4" long for landing gear cross bars. Note: These two cross bars are not shown on the front or side views of the plans, because they could not be clearly shown. Study the next photo to see where they go -- one at the rear corner of the landing gear framework, and one at the front.

d. Bevel the ends of the 1/8" sq. balsa cross bars slightly to match the angle of the landing gear struts. Place the cross bars in the landing gear assembly, using the tension of the side struts to hold them in position.

e. Double check the final fit and alignment of the entire main landing gear assembly. When satisfied with the alignment, glue all the parts together.

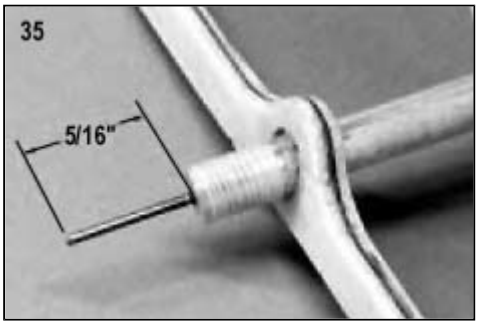


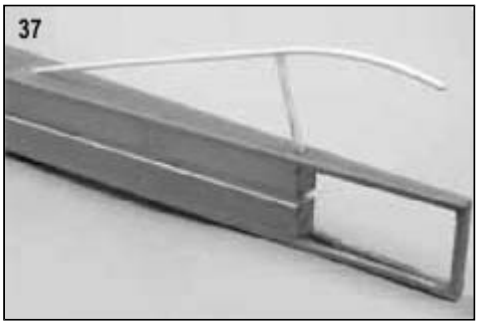
35a. Drill a .046" dia. hole in the center of each end of the balsa spreader bar. Make the holes about 15/16" deep. Press a .046" dia. x1-1/2" straight music wire axle into each hole. Leave about 9/16" of the axle wire sticking out of the end of the spreader. Make sure the axle comes out straight and parallel to the spreader. Then flow Thin CA glue around the wire. It will soak into the balsa spreader, gluing the wire permanently in place.

b. Dacron thread is provided for wrapping around both ends of the balsa spreader bar to make it stronger. Wrap the thread tight and close together. Soak the thread wrap with Thin CA glue and then quickly wipe dry with a rag.

36. Place the wheels on the axles and double check that they rotate freely. Then press the 1/32" laser-cut plywood WRT wheel retainers onto the axles. Slide WRT up tight against the wheel, and then back it off about 1/32" so the wheel can turn freely. Put a drop of Medium or Thick CA glue, or epoxy glue, on the outside of WRT to hold it on the axle.

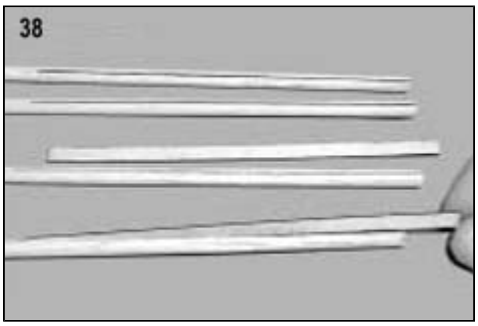
37. Cut away the covering material at the bottom rear of the fuselage to open the holes where the tail skid is to be mounted. Glue the tail skid in place.





WING CONSTRUCTION

38. Two 1/4" dia. x30" balsa dowels are provided for making the wing leading edges, and two 1/4" dia. x24" balsa dowels are provided the trailing edges. Notice that each dowel has a 6-1/8" long slot in one end. Glue a 1/32" plywood WSF wing stiffener in each slot with thin CA. Make sure the edges of the WSF plywood do not protrude outside the diameter of the dowel.



When dry, sand very lightly to smooth out any rough spots. Then trial fit the stiffened end of the dowel inside one of the 1/4" id aluminum wing mount tubes. If the dowel is too big, gradually sand it down until it fits properly. You want the wing dowel to fit inside the aluminum tube with a little bit of friction, but not too much.

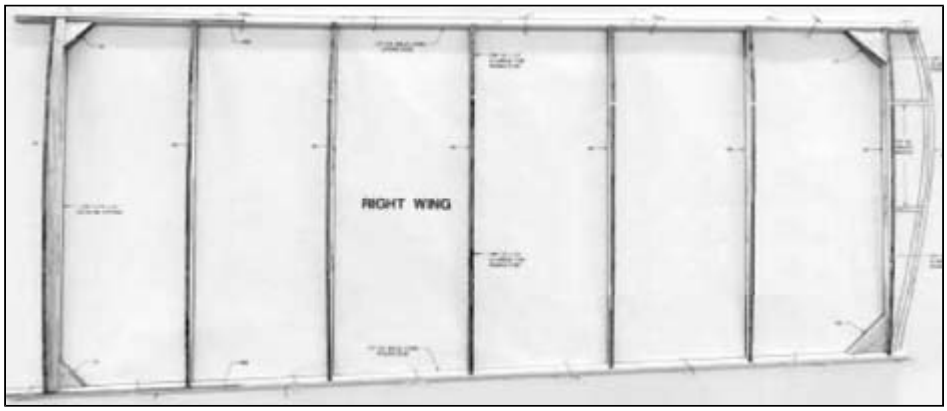
The idea is to achieve a snug fit that will hold the dowel in place, yet allow the dowel to be easily removed when you want to take the wings off your airplane. Obviously, you don't want it so loose that the dowel falls out.

39. Cut both of the 30" long balsa leading edge dowels to exactly 24-1/2" long, taking the excess length off the tip end of the dowel, not the end with the WSF plywood insert. Save the leftover piece of balsa dowel to be used later as a sanding tool.

40a. Pin the plan for the right wing panel to your building board. Cover the plan with wax paper or plastic wrap to keep glue from sticking parts to the plan.

b. Pin one of the 1/4" dia. x 24-1/2" balsa leading edge dowels in position on the wing plan. Make sure the plywood reinforced end of the Leading Edge is at the root end of the wing panel and that the plywood insert is vertical, as shown on the plan, to provide max. strength.

c. Now pin the 24" long balsa dowel trailing edge and all the wing ribs (W1 thru W7) in position on the plan. Double check to see that you have the plywood reinforcements in the root ends of the dowels situated vertically for maximum strength. After these parts are securely pinned in place, glue all the joints with thin CA.

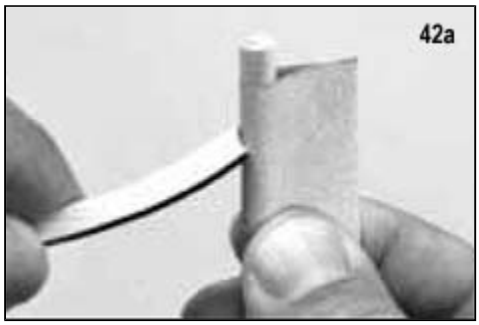


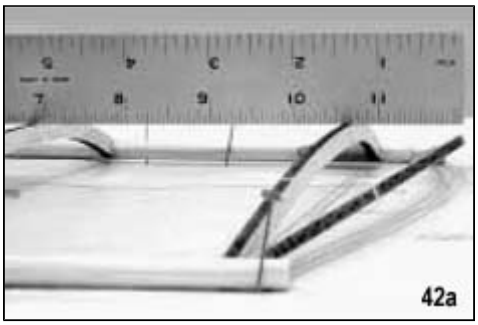
NOTE: It's best not to push pins through the leading and trailing edges - they may split. Instead, straddle all narrow parts with crossed pins pushed into the building board, as shown here.

41. Glue in balsa wing gussets WG1, WG2, WG3, and WG4 in the four corners of the wing panel. Be sure to carefully identify each gusset, as each one is a different shape.

42. Install a 1/16"x1/4" balsa rib stiffner along the inside of the W1 wing rib. Start by first cutting the the balsa stick to length, then taper the ends as necessary for a good fit, and then carefully glue it in place. It should be flush with the top edge of the rib. (Note: The very first printing of plans called for 1/32" rib stiffner - that is a typo - it should be 1/16").

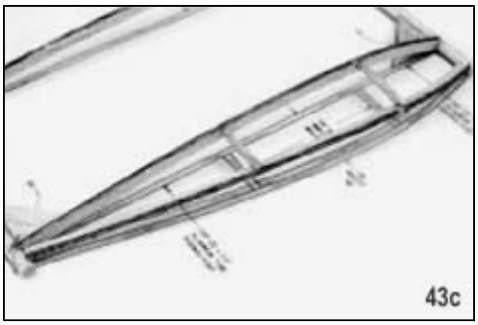
43a. Tip rib W8 requires some fitting where each end meets the leading and trailing edges. Take a piece of the leftover 1/4" dia. balsa dowel (Step 39) and wrap a piece of 220-300 grit sandpaper around it. Use this to sand a semi-circle shape into both ends of rib W8. Hold the sanding dowel at an angle that duplicates the angles of the leading and trailing edges.





Sand carefully and keep trial fitting W8 in place in the wing repeatedly until you have achieved a satisfactory fit.

Note the proper position of W8 from the photos - the outer edge of W8 should be tipped outward to achieve the full wingspan shown on the plan, and the top of W8 should be slightly lower than the rest of the ribs (notice the gap between W8 and the ruler laying on top of the other ribs).



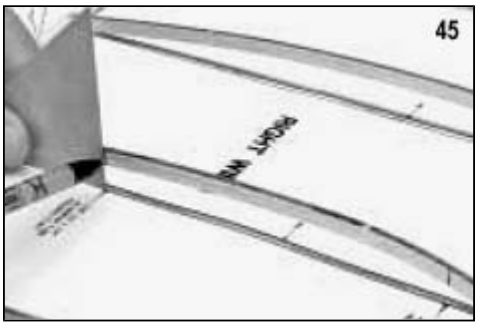
b. When satisfied with the fit of W8, glue it in place. When dry, use a fine grit sanding block to sand off the excess leading and trailing edges until they are flush with the wingtip rib.

c. Cut to length and glue in position the 1/8" sq. balsa wingtip braces.

44. When dry, the entire wing can be removed from the building board. Double check all the joints for adequate glue and apply a little more if necessary. Let dry. Then carefully clean up any rough edges and glue joints with the sanding block.

Repeat Steps 40 through 44 to construct the opposite wing panel.

45. Lay the wing panels back on the plan and use a 90 deg. triangle to mark the locations of the 1/16" od x1/4" Aluminum Tube Rigging Points (4 per wing panel) onto the outboard faces of wing ribs W4 and W7. Glue the rigging points to the ribs at those locations. Be careful not to get any glue inside the tubes.



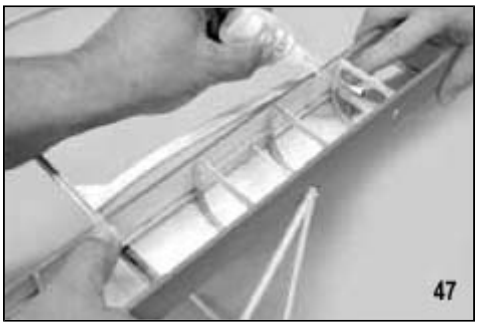
46. Use a sharp #11 hobby knife to make 3/8" dia. holes in the fuselage side sheeting where the trailing edges of the wings will be mounted. Make sure the bottom of the hole is flush with the top of the rear dihedral brace RDB.

Tip: Before starting the hole, locate the top edge of RDB precisely on the outside of the fuselage by pushing a pin thru the side sheeting from the inside. Then mark and cut the 3/8" dia. hole from that point. Due to the fragile nature of the side sheeting, it's best to make the hole undersize first, and then gradually open it up closer to finished size. Finish shaping and sizing the hole with sandpaper wrapped around a scap of 1/4" dowel.

47. Sand the outside of the four 1/4" id x1" Aluminum Wing Mount Tubes with 220 grit sandpaper to improve glue adhesion.

Then slip the wing mount tubes onto the root ends of the leading and trailing edges of both wing panels.

Now trial fit one of the wing panels to the fuselage, resting the wing mount tubes in position against the FDB and RDB dihedral braces in the fuselage. When you have the wing panel lined up properly, have a helper put a single drop of thin CA glue between the aluminum tube and dihedral brace.



Don't over glue at this point or the excess glue might seep inside the tube, permanently gluing your wing panel into the tubes. After tack gluing both the front and rear tubes to the dihedral braces, have your helper slowly pull the wing out of the tubes, while you continue to hold pressure against the tubes, keeping them from breaking loose.

After the wing is removed, reglue the wing mount tubes securely to the surrounding fuselage structure with medium or slow CA. Avoid getting any glue inside the aluminum tubes.

48. After one set of wing mount tubes has been installed, repeat the same procedure to install the wing mount tubes for the opposite wing panel.

Set the wings aside until needed later.

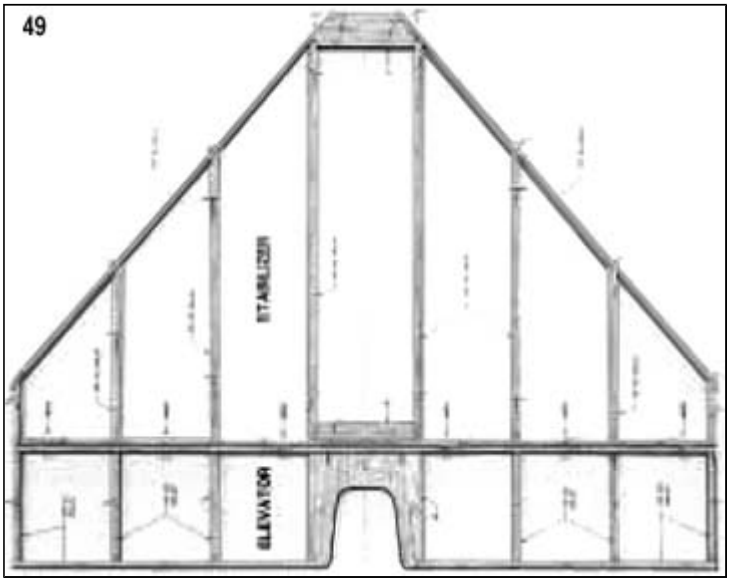
TAIL SURFACES

48. Cover the Stabilizer/Elevator plan with wax paper or plastic wrap for protection. Use 1/8" square balsa sticks and laser-cut parts S1 and S2 to construct the Stabilizer directly over the drawing.

    Note: Remember to cut the longest pieces of 1/8" sq. balsa first, then the shorter pieces, in order to make the most efficient use of the stock 36" long sticks.

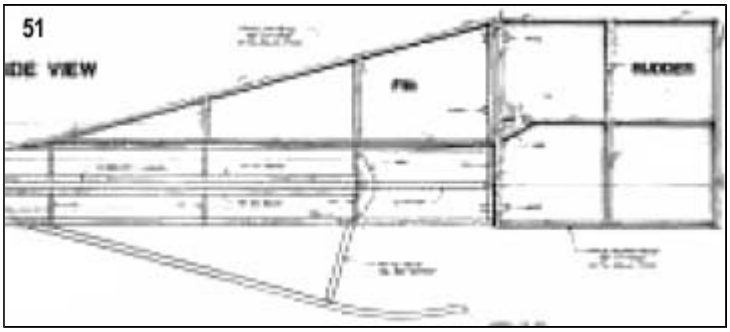
49. Use 1/8" square balsa sticks and laser-cut part S3 to construct the Elevator directly over the drawing.

    When dry, unpin both the Stabilizer and Elevator from the plan and lightly sand all the glue joints smooth.

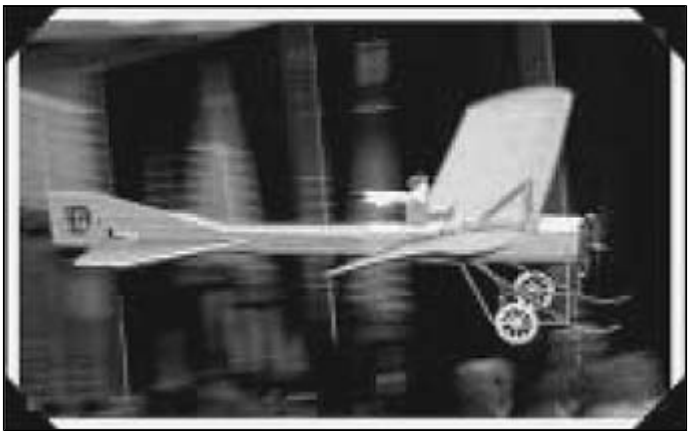


50. Cover the Fin/Rudder plan with wax paper or plastic wrap for protection. Use 1/8" square balsa sticks to construct the Fin directly over the drawing.

    When dry, unpin the Fin from the plan and lightly sand all the glue joints smooth.



51. Use 1/8" square balsa sticks and laser-cut part CHN to construct the Rudder directly over the drawing. When dry, unpin the Rudder from the plan and lightly sand all the glue joints smooth.



COVERING

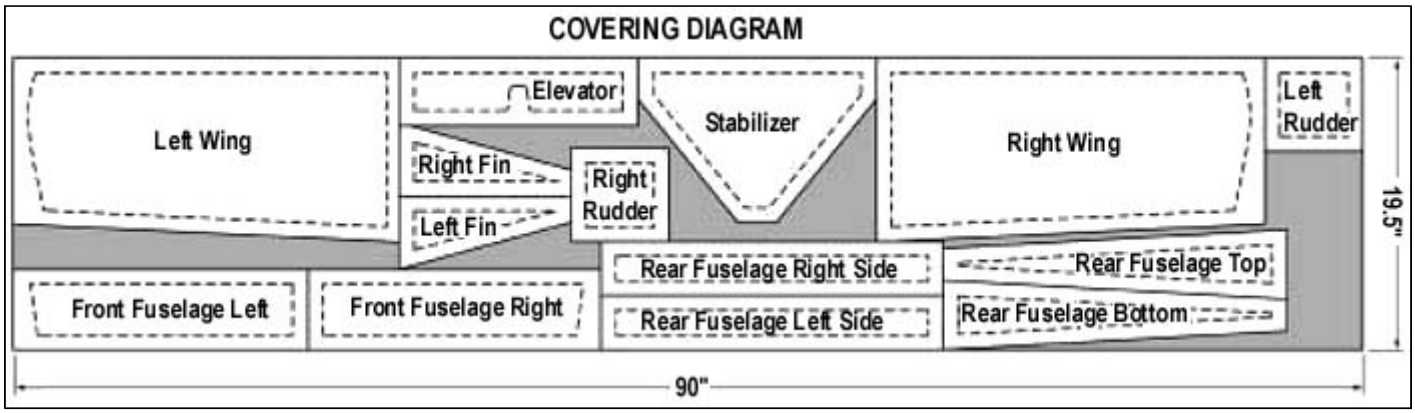
The covering material included in this kit is Litespan, by Solarfilm. It is a strong, tough, heat-shrinkable synthetic covering material. Litespan is very light weight, approximately 32 grams per sq. yard. Litespan is heat shrinkable, however it does not have glue already on it. You must first apply adhesive to the model structure where you want the covering to stick, using a heat-activated liquid adhesive such as SIG Stix-It or Solarfilm Balsaloc (not supplied).

The following parts of the Deperdussin need to be covered:

- Wings - cover top only
- Stabilizer and Elevator - cover top only
- Fin and Rudder - cover both sides
- Fuselage Sides - cover from former F1 to the tail post
- Fuselage Top - cover from former F7 to the tail post

Note: When covering the stabilizer, study the plan carefully to determine which side is the top. The determining factor is the location of the control horn. It must end up on the left side of the airplane.

Refer to the "COVERING DIAGRAM" to see how to make best use of the covering material provided.



Surface Preparation

Lightly sand the parts to be covered, removing any bumps and unevenness that would show through the covering. Start with 80 or 100 grit sandpaper on a sanding block, and finish with 220 grit or finer sandpaper. Fill all cracks and hollows with light weight model filler and sand smooth. Coat the areas where you want the covering to stick with the heat-activated adhesive, following the manufacturer's instructions. On both wing panels, apply adhesive to the leading and trailing edges, the tip and root ribs and to the top surface of each wing rib. Allow the adhesive to dry to the touch.

Pre-Shrinking

Litespan is capable of shrinking a great deal. We have tried several methods to control this tendency, including preshrinking the material. Doing this tends to take some (not all) of the "shrink" out of the material. This can be desirable when trying to minimize any tendency to warp the part being covered. To do this, first cut the piece to shape (such as one of the wing panels), leaving at least an inch or so of material around all edges. Place the material on a clean, flat heat-resistant surface (dull side up). With your iron set to about 200 deg. F, iron the material smooth, shrinking it in the process. The piece is now ready to apply as described below.

Adhering

Set your covering iron temperature to between 195 deg. F and 210 deg. F. Lay the Litespan on the framework and smooth out the wrinkles. Tack the Litespan in place at a few points around the edges, using the toe of the iron. While tacking, gently pull the Litespan to get a smooth fit without large wrinkles. Do not try to pull the Litespan drum tight, just smooth and wrinkle free. Reheating and peeling back while hot allows the Litespan to be repositioned. Then seal the Litespan all around the edges of the wing with the iron. Trim surplus Litespan from around the edges with a sharp blade and reseal the edges if necessary.

Shrinking

Increase the iron temperature to between 250 deg. F and 285 deg. F. Shrink the Litespan by slowly sliding the iron across the surface of the Litespan - just lightly touching the surface. Be very careful not to over-shrink the Litespan because it will warp the light weight structure of the Deperdussin. Do not try to shrink out every last little wrinkle. Just get rid of the largest ones. Remember; the full-scale Deperdussin also had wrinkles in the covering.

Notes On Covering Irons

We've found that a small "trim iron" works better than a full-size covering iron when working with the Litespan on light weight model structures like the Deperdussin. In fact, we use a trim iron for the entire covering process, both adhering the Litespan and then shrinking it. The small size of the trim irons' shoe places heat in a small area, allowing a lot of control. We can also tell you from experience that using a heat gun on Litespan is not a good idea. The heat from a heat gun is difficult to control and can cause uneven shrinking, which in turn causes warps.

Decals

After you have covered the fin and rudder, put the decals on those parts. It's a lot easier to do it before the parts are installed on the model.
The decals provided in the kit are self-stick mylar stickers. They should not be dipped in water! Simply cut out the decal design with a sharp hobby knife or scissors, cutting as close to the image as possible. Remove the design off the backing paper with a tweezers and carefully place it position on the model part. Gently rub the decal onto the part with the tip of your finger.

FINAL ASSEMBLY

52. A single SIG Easy Hinge, measuring 3/4"x1", is provided for hinging the elevator and rudder. Cut the Easy Hinge into 8 pieces that measure 1/8"x1/2".

53a. Refer to the plans and mark the locations for (6) Easy Hinges on the leading edge of the elevator and on the trailing edge of the stabilizer.

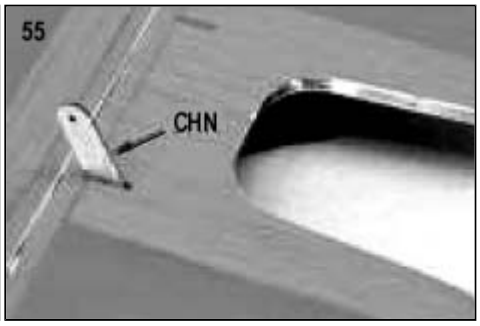
b. Using a sharp #11 hobby knife, carefully cut small slits in the parts to accept the Easy Hinges.

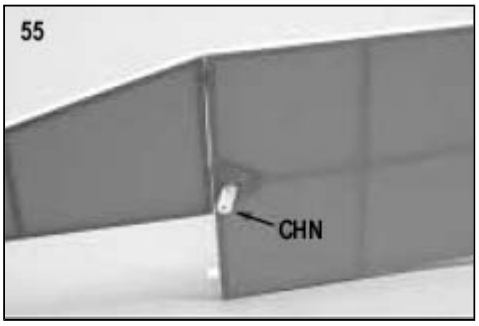
c. Insert an Easy Hinge halfway into each slit in the stabilizer. DO NOT GLUE THE HINGES IN AT THIS TIME.

d. Now carefully slide the elevator onto the exposed half of the hinges. You will find it easiest to slide the part onto the hinges at an angle, one hinge at a time. To set the proper amount of gap between the parts simply deflect the control surface to the maximum amount of travel desired in each direction. This will automatically set the proper hinge gap.

e. Place a single small drop of Thin CA glue directly onto the hinges in the gap. You will notice that the glue is quickly wicked into the slit as it penetrates both the wood and the hinge. Because the hinges are so small, there is no need to put glue on both sides. The glue you put on the first side will flow around to the other side. Let the hinged parts dry before flexing.
CAUTION: SIG Easy Hinges are designed to be used with any THIN CA adhesive. Make sure you are using the thinnest variety. Do not use medium or thick CA, or any other type of glue, on Easy Hinges. Also, never use CA accelerator on Easy Hinges.

54. Repeat step 53 to hinge the rudder to the back of the fin with (2) Easy Hinges. Also cut a slot near the bottom of the rudder for the 3rd rudder hinge, but don't glue that hinge in yet.





55. Notice at the center of the elevator, near the front, that there are two small slots in the balsa underneath the covering. Cut away the covering material over the slot which will be on the LEFT side of the airplane, so the plywood control horn CHN can be put in place. Insert CHN into the slot, center the horn, and then glue with Thin CA.

    Repeat the process to install a CHN control horn in the rudder.

56. Slide the stabilizer/elevator assembly in place in the fuselage. Align carefully, and then glue in place with thin CA.

57a. Slot the tail post at the back of the fuselage to receive the bottom rudder hinge.

b. Trial fit the fin/rudder assembly on the fuselage, inserting the bottom hinge into the tail post at the same time. Align carefully, making sure the fin rests squarely on the stabilizer and that everything lines up properly.

c. Glue the fin to the stabilizer. Also glue the bottom hinge.

RADIO INSTALLATION

Rudder

58a. Study the side and top view plans and cross-section F5 to understand how the rudder servo is mounted in the fuselage.

b. A piece of 1/8"x3/16"x3" long basswood is provided for making the rudder servo mounts. Cut one piece 1/2" long for the rear mount, and cut another piece 2-9/16" long for the front mount.

c. Glue the 1/2" long rear mount onto the front of former F5. Center the mount, left to right, on the former. The top of the mount should be 1/8" below to top of the former, making the bottom of the mount flush with the opening in the former.

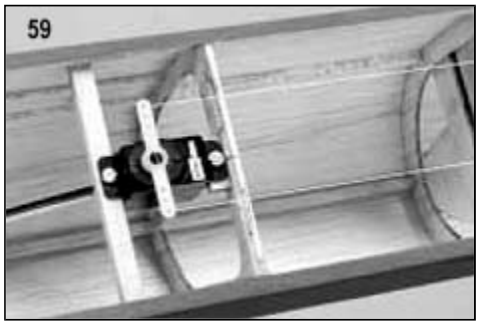
d. Measure the length of your rudder servo's case and install the 2-9/16" long front servo mount in the fuselage accordingly.

e. Install your rudder servo on the basswood servo mounts with the screws that came with the servo. Be sure to drill pilot holes in the hardwood mounts so the screws won't split the wood.

59. Pull-pull control lines are used to connect the rudder servo to the rudder control horn. A 10 foot long piece of monofilament fishing line is provided for the pull-pull lines.

a. Cut the monofilament fishing line into two 5 foot long pieces, one for the rudder and one to use later for the elevator.

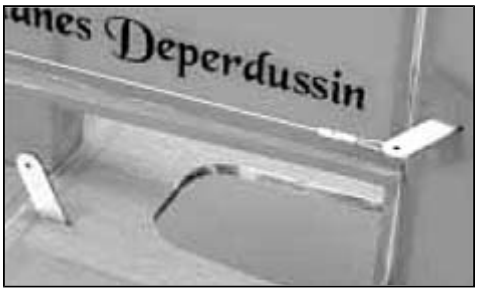
b. Begin by slipping one of the 1/16" od aluminum swage tubes over one end of the monofilament line. Slide the tube up the line a little ways, leaving you about 4-5 inches of line to work with. Now stick that short end of the line through the hole in left side of the rudder control horn. Then loop the end of the line back through the aluminum swage tube. Slide the tube up close to, but not touching, the control horn. Use needle nose pliers to crimp the swage tube flat, tight against the lines. Trim off the short end of the line close to the swage tube.



c. Next poke the other end of the monofilament line through the outermost hole on the left side of the rudder servo control arm. Take the line all the way across the top of the control arm and down through the outermost hole on the right side of the arm. Then run the line back to the right side of the rudder control horn. Swage the line to the right side of the control horn in the same manner you did the left side. Make sure you pull all the slack out of the monofilament line on both sides of the rudder servo before you crimp the swage tube flat. Snug it up, but not so tight that you distort the airplane's light structure. And don't worry about getting the rudder exactly centered at this time. That's the next step.

d. After you have your radio system hooked up and functional, you can adjust the pull-pull lines to center your rudder in neutral position. First center your rudder servo arm in neutral position. Then adjust the rudder to neutral position by sliding the monofilament line through the servo arm, lengthening one side while you shorten the other side at the same time. When you have the rudder properly neutralized, secure the pull-pull line by placing a single small drop of glue on the line where it passes through one of the holes in the servo output arm.

NOTE:
In all the hours of indoor flying we've done with the Deperdussin and other models, we've never found it necessary to re-adjust the neutral position of the rudder or elevator once they were secured in position. If your rudder servo is perfectly neutral (including the trim lever on your transmitter) and your rudder is perfectly centered when you glue the line to the servo arm, the trim lever on your transmitter will easily cover any flight trimming adjustments that may be needed. If you ever need to replace the pull-pull lines, it's a simple matter to chip the glue off the nylon servo arm, re-drill the hole if needed, and put in new lines. Or simply replace the output arm with a new one.



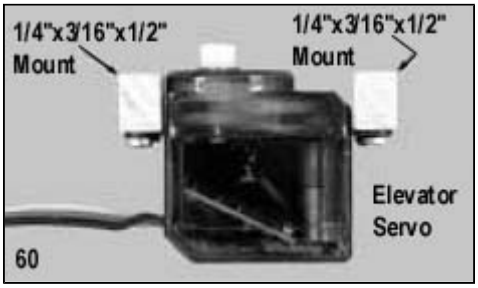
Elevator

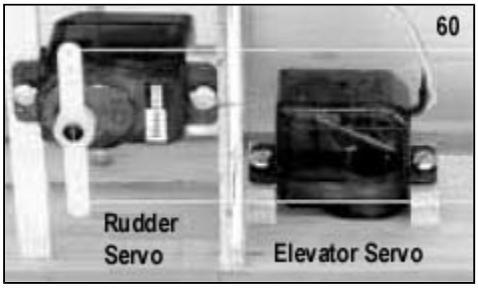
60. Study the side and top view plans and cross-section F5 to understand how the elevator servo is mounted in the fuselage.

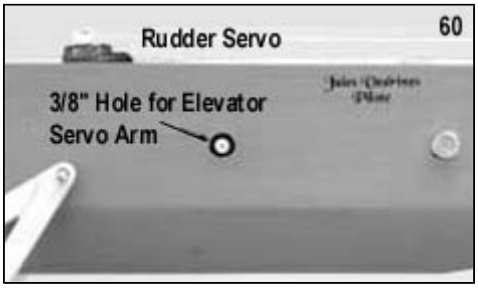
a. A piece of 1/4" x 3/16" x 3" long basswood is provided for making the elevator servo mounts. Cut two pieces 1/2" long. Mount your elevator servo on the basswood servo mounts using the screws that came with the servo. Be sure to drill pilot holes in the hardwood mounts so the screws won't split the wood.

b. Make a 5/16" - 3/8" dia. hole in the left fuselage side for the elevator servo output arm to come through. Notice on the side view plan that the hole should be the same height as the rear wing mount tube, and just far enough aft of former F5 to fit your particular servo.

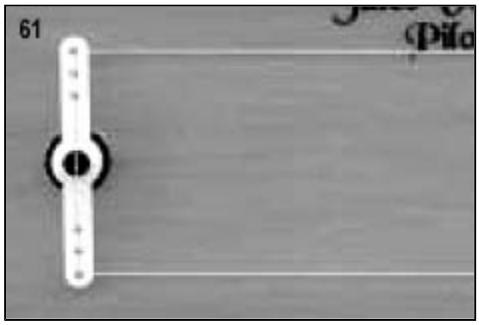
c. Install the elevator servo inside the fuselage, gluing the hardwood servo mounts to the fuselage side.

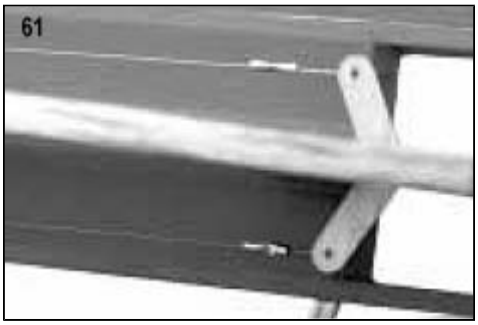






61. Install monofilament pull-pull control lines to connect the elevator servo to the elevator control horn. Use the same procedures you used for the rudder hookup.





Receiver

Install your radio receiver between formers F3 and F4. For the receiver antenna, drill a small hole in the bottom of the fuselage right in front of F6. Run the antenna through the hole and use a couple small pieces of clear tape to secure it to the bottom of the fuselage.

Battery

Velcro is supplied to mount your battery pack to the balsa BTM battery mount located in front of former F3.

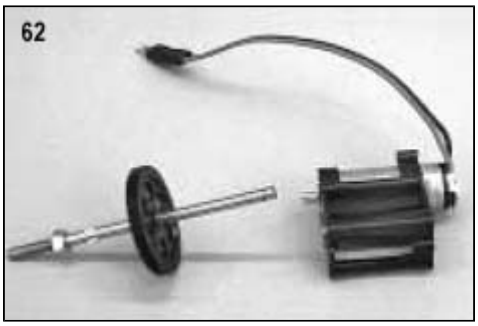
Control Movements

The control surface movements are based on our many hours of flying time with our Deperdussin models. Note: These measurements were taken at the rearmost tip of the rudder and elevator.

Control Movements	
Rudder	2" Right, 2" Left
Elevator	3/4" Up, 3/4" Down

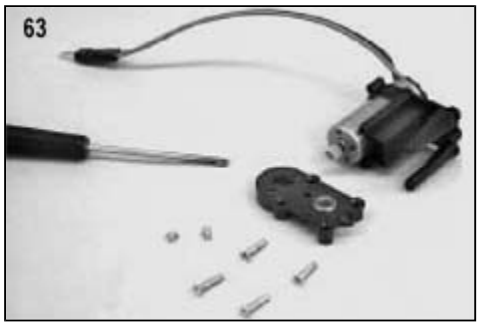
ELECTRIC MOTOR INSTALLATION

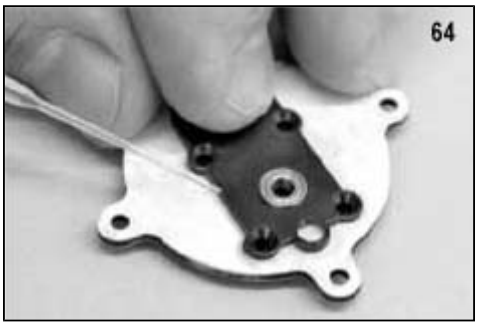
62. A laser-cut 1/16" plywood Motor Mount is used to adapt the SIGEPU001 electric motor for "firewall" mounting in the Deperdussin. To install the Motor Mount, we need to partly disassemble the motor's gearbox. Use a small screwdriver to remove the gear shaft split ring and washer from the back of the motor assembly. Pull the gear shaft and gear out of the plastic housing. Set aside these parts for re-assembly later.



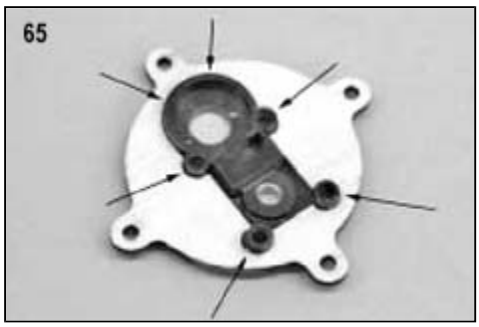
63. With a small Phillips screwdriver, remove the four screws from the front of the motor's plastic gearbox. Also remove the two smaller screws that hold the motor to the front of the plastic gearbox. Then separate the front of the plastic gearbox from the rest of the motor unit.

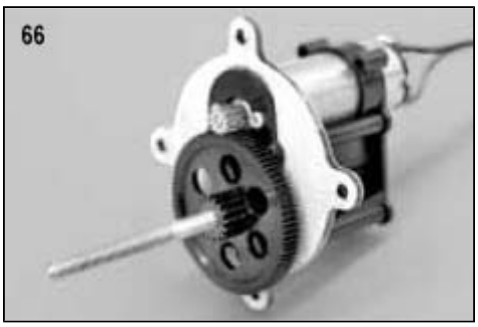
64. Set the front of the plastic gearbox in the cutout in the plywood Motor Mount - it will slip in place and bottom out against the face of the Motor Mount. While holding the plastic part tight against the plywood, place a single drop of Thin CA glue at the three points shown in the photo. This tack glues the plastic part to the plywood.





65. Turn the assembly over and place a small drop of Med CA at the points shown and set the glue with CA Accelerator. The plywood Motor Mount is now adequately attached to the electric motor for normal flight, and yet, it can be easily broken loose and removed later, if the need should arise.





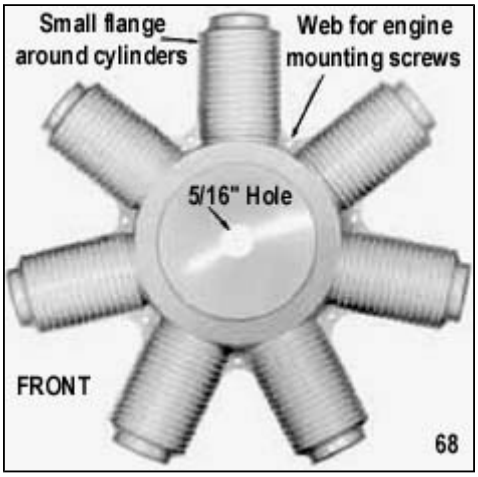
66. Re-assemble the electric motor and plastic gearbox assembly.

67. Mount the electric motor assembly to former F1 using the four #2 x1/4" Sheet Metal Screws provided. Notice that small pilot holes for the screws are already laser-cut in former F1.

    Tip: Put the bottom mounting screw in first! The big gear on the front of the motor partly blocks access to the bottom mounting screw. So while you still have the motor assembly in your hands, put a screw through the bottom hole of the plywood motor mount, angling it past the gear. Flex the plywood mount just enough to get the screw all the way in the hole. Then mount to F1.

Scale Dummy Engine

Two identical 7-cylinder engine moldings are provided for making a scale-like dummy engine for the nose of your Deperdussin. They are molded from .010" thick ABS plastic. One molding is used to make the front of the dummy engine, the other makes the back.



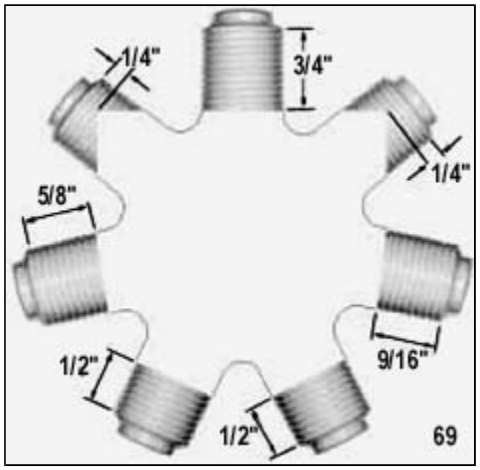
68. **FRONT OF ENGINE**:
    Cut out one of the 7-cylinder plastic engine moldings as shown in the picture.

    a. Trim as close to the sides and tops of the cylinders as possible, leaving just a small flange around the perimeter. The flange will be an aid later when gluing on the back halves of the engine cylinders.

    b. Leave a web of flange plastic in the deepest part of the vee between each pair of cylinders, to provide an area for the screws that will mount the dummy engine to the fuselage Drill a tiny (1/32" dia. or less) hole in the middle of each web for the screw.

c. Make a 5/16" dia. hole in the center of the crankcase for the prop shaft to go through.

69. **REAR OF ENGINE**:
The second 7-cylinder plastic engine molding provided is used to make the back of the dummy engine. We will only use a portion of the top of each cylinder on the back of the engine. The crankcase is not used, so that the dummy engine will fit over the nose of the airplane. Look ahead at all pictures in this manual that show the dummy engine to familiarize yourself with how it should look then it's finished and how it mounts to the fuselage.



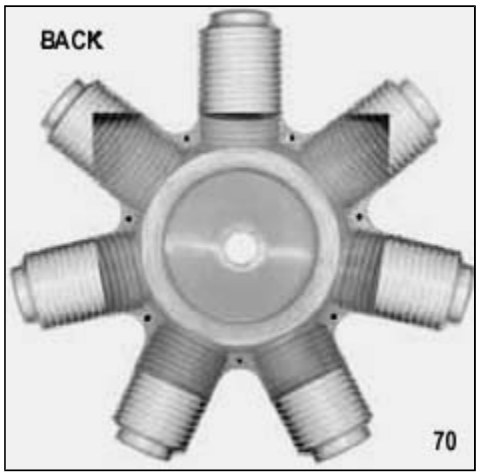
a. Use a fine-point felt-tip pen to mark each cylinder according to the dimensions shown in the last photo. Also number the cylinders 1 through 7, so that you can tell later which cylinder is which.

b. Hold the molding in position against the nose of your fuselage. Check all the way around and then adjust the marks if necessary.

c. Carefully trim out the cylinders. Note: A sharp pair of miniature scissors works great for cutting these light weight plastic dummy engine parts.

70. Glue the backs of the seven cylinders onto the back of the dummy engine assembly as follows:

a. Working on one cylinder at a time, hold the rear portion of the cylinder in alignment with the front. When properly lined up, tack glue the parts together with a tiny drop of thin CA, placed right at the top of the cylinder. The thin CA will flow along the flanges, instantly gluing the parts together. Apply additional tiny drops of glue as needed. Use glue sparingly! Too much glue will run under your fingers and stick you to the parts! When dry, reinforce the seam by applying a little thick CA glue on the inside of the cylinder. Let dry.

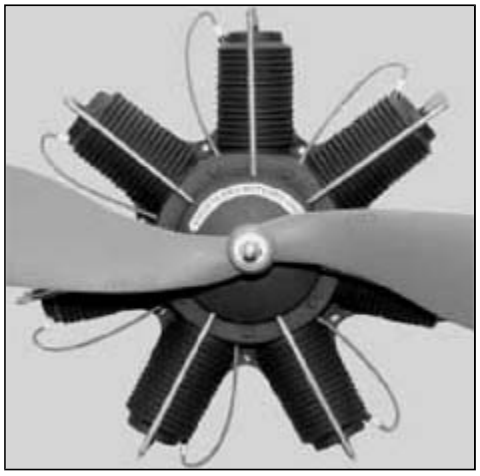


b. Continue on gluing all the rear cylinder portions to the front engine molding. Be certain that you are locating the rear cylinders in the proper order, according to the photos. When done the back of the dummy engine should look like this.

c. Trial fit the dummy engine assembly on the front of the airplane and alter any of the rear cylinders as needed to clear the fuselage.

71. The dummy engine will be mounted to the front of the fuselage with the seven #1 x3/8" sheet metal screws provided. First drill a 3/64" (.046") dia. hole in the deep vee between each engine cylinder for the mounting screws. Then hold the dummy engine in place on the front of the fuselage while you mark the locations of the mounting holes holes on F1. Drill pilot holes on the marks. Trial mount the dummy engine to the airplane with the screws. If all is OK, proceed to the next step.

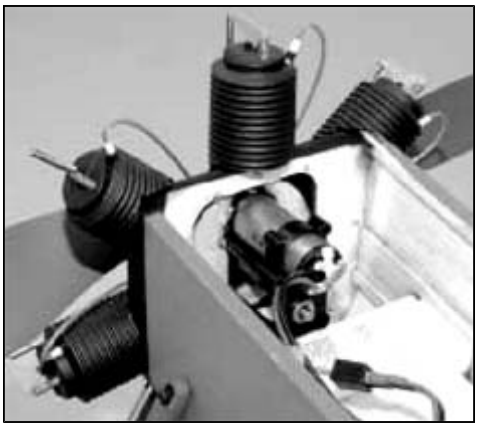
72. The dummy engine as provided in the kit is now basically complete. Take it off the airplane and paint it with a coat of flat black paint. Let dry. Then apply the "Gnome" engine decal to the front of the crankcase.



OPTIONAL DETAILS:
Many modelers will consider the basic black engine as good enough at this point, and they will want to move on. However, there will also be those who want to add a few more scale details to their engine. For these folks, we'll share some additional detailing tips that we used on our dummy engines. Note: Materials for these additional details are not provided.

The spark plugs were made from 1/32" K&S™ Aluminum Tubing. Spray or brush the tubing with Flat White or Flat White Primer and allow to dry. Cut 1/4" lengths of the painted tubing for the spark plug bodies. Cut 3/8" lengths of .031 music wire for the spark plug tips. Glue one of the music wire pieces into each spark plug body, leaving 1/8" of wire exposed. Use medium CA glue to install the spark plugs into pre-drilled holes in the top of each cylinder head.

The spark plug wires were made from ordinary light gauge black or gray R/C hook-up or antenna wire. Cut the seven spark plug wires to length, plus an extra inch on each one to work with. Use a pliers to pull the metal wire out of the plastic insulation. One end of the plug wire is placed over the wire tip of each spark plug (warming the tubing with a little heat relaxes it enough to do this). The other end of the tube can be inserted into a small hole drilled into the side of the crankcase. Done neatly, the overall effect can be very convincing!



The rocker arms were made from .010" thick ABS plastic leftover from the dummy engine molding. We used pieces of .060" O.D. aluminum tubing to simulate a pushrod on the front of each cylinder.

To make the propeller more realistic, we painted ours a wood color.

First balance the prop with a prop balancer. If needed, sand the backside of the heavier blade to bring the prop into balance. Lightly sand the entire prop with worn out 220 grit sandpaper and wipe it down with alcohol to clean the surface. For our props, we used Model Master spray paints - either Light Earth or Sand Beige will create a nice wood look.

FINISHING

Cabane Struts

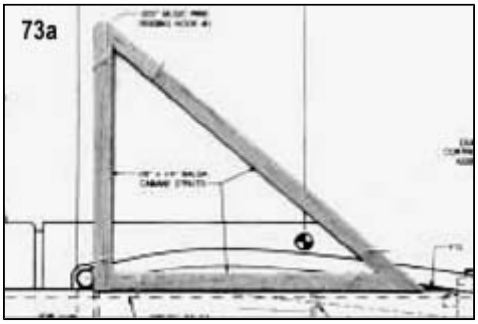
73. The cabane struts on our model Deperdussin are decorative only. They do not contribute to the strength of the wing, therefore they can be made of balsa wood with simple butt joints.

a. Cut pieces of 1/8"x1/4" balsa stick to build the cabane struts. Glue the pieces together over the plan to achieve the proper angle between the struts.

b. When dry, remove from the plan and sand the edges smooth. Build two sets of cabane struts, one for the right side of the fuselage and one for the left.

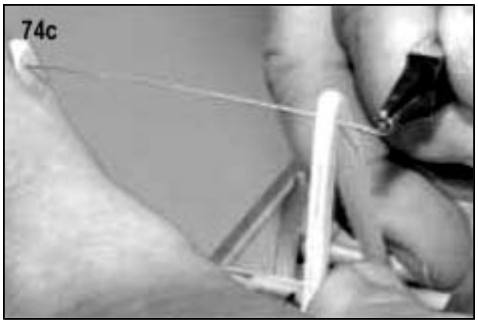
c. Drill a 1/32" (.031") dia. hole near the top of each cabane strut for the wire rigging hook.

d. Glue the cabane strut assemblies in place on the fuselage.

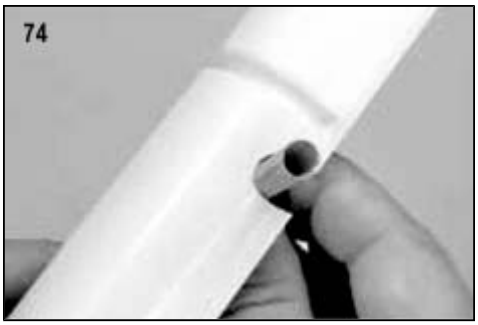


74a. Cut a piece of .020" dia.music wire for Rigging Hook #1.

b. Bend a half loop in one end of the wire as shown by the full-size pattern on the plan. Note: A small round or "snipe" nose pliers (such as X-Axto #75070) is the best tool for making a smooth perfectly round bend.



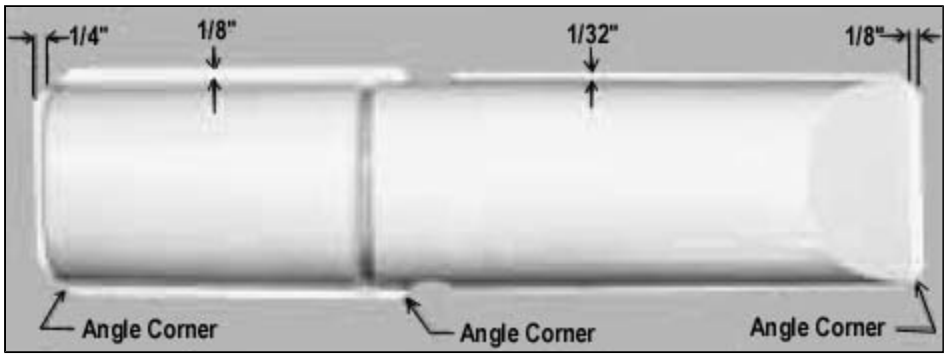
c. Insert the unbent end of the rigging hook through the holes in the top of both cabane struts. Carefully bend a half loop in the unbent end of the wire, making sure that this loop is bent in the same direction as the first one.



Plastic Top Deck

74. The first step in preparing the molded plastic top deck for installion is to cut open the two spots, one on each side, for the wing leading edge tubes. Follow the guidelines that are molded into the top deck. A sharp hobby knife works well for making the preliminary cuts, and then finish the edges with a rolled up piece of fine grit sandpaper.

75. Trim the edges of the top deck according to the dimensions shown here.



a. At the rear end of the top deck, leave a 1/8" wide flange of plastic.

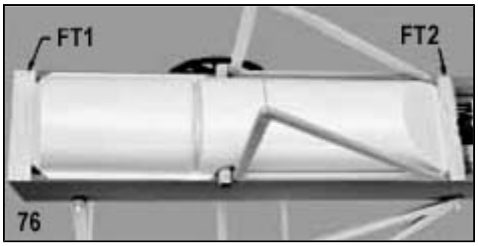
b. On both sides of the top deck, from the rear end forward to the wing tube cutouts, leave a small 1/32" wide flange.

c. From the wing tube cutouts all the way to the front of the part, on both sides, leave a 1/8"+ wide flange.

d. At the front of the part, leave a 1/4" wide flange.

e. Trim the corners as shown.

f. Trial fit the top deck on the fuselage and adjust as necessary to get a good fit.



76a. With the plastic top deck off the model, glue balsa part FT1 to the top of the fuselage as shown on the plan side view. The purpose of FT1 is to hold the front of the plastic top deck in place. When the glue is dry, trial fit the plastic top deck back on the fuselage, slipping the front plastic flange of the deck under FT1.

b. At the rear of the top deck, determine where balsa part FT2 should be glued to the fusalage to provide a similar hold-down for the rear flange of the plastic top deck.

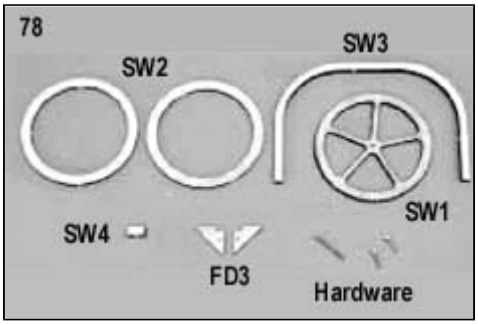
c. The plastic top deck is flexible enough that it can be bowed slightly when taking it off and on the fuselage to engage the FT1 and FT2 hold-downs.

77. Refer to the PAINT section for advice on what types of paint can be used on the top deck. We painted the rear section of our top deck red to match the rest of the fuselage. The front section, which is meant to simulate the fuel tank of the real airplane, is painted copper color. The two straps over the tank are black striping tape. The gas cap is made of scrap balsa, and painted red.

Steering Wheel

The large "Captain's Wheel" and control yoke add so much to the vintage look of the Deperdussin that you won't want to leave this scale detail off your model. While the parts are very small and a bit tedious to assemble, the results are well worth the effort.

78. The first thing to do is to gather all the parts:

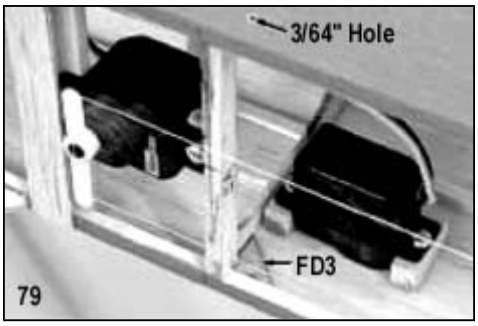


2	FD3	1/32" plywood laser-cut fuselage doublers	1	00-90x1/2" Brass Rd-Hd Bolt
1	SW1	1/32" plywood laser-cut steering wheel core	2	00-90x1/4" Brass Rd-Hd Bolts
2	SW2	1/16" balsa laser-cut steering wheel grips	1	00-90 Brass Hex Nut
1	SW3	1/8" Lite-Ply laser-cut control yoke	4	00-90 Brass Flat Washers
1	SW4	1/8" Lite-Ply laser-cut steering wheel post		

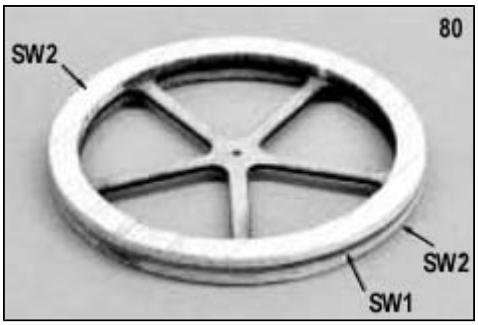
79a. Glue a FD3 plywood doubler inside each fuselage side, behind the top rear corner of former F5. Let dry.

b. From the inside, poke a pin through the hole in FD3 and on through the fuselage side.

c. From the outside, use a 3/64" (.046") dia. drill bit to enlarge and clean up the hole.



80. Glue a balsa SW2 steering wheel grip on each side of the plywood SW1 steering wheel core. Align the edges carefully. When dry, sand the edges of the balsa steering wheel grips to a pleasing, round shape. Drill out the hole in the center of the steering wheel with a 3/64" (.046") dia. drill bit.



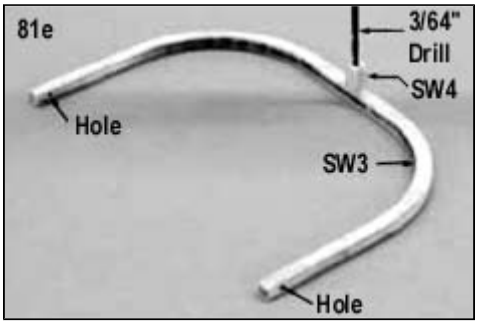
81a. Glue steering wheel post SW4 in place at the top center of the control yoke SW3. Put a good size fillet of medium or slow CA glue around the joint and set with accelerator.

b. To give it more strength, saturate all the edges of the control yoke assembly with thin CA. Let dry.

c. Lightly sand all the surfaces of the control yoke assembly until smooth. You can round the edges of these parts a little bit if you desire, but not too much as it can weaken them.

d. Drill a 3/64" (.046") dia. hole at the bottom of each leg of the control yoke.

e. Drill a 3/64" (.046") dia. hole through the length of the steering wheel post.

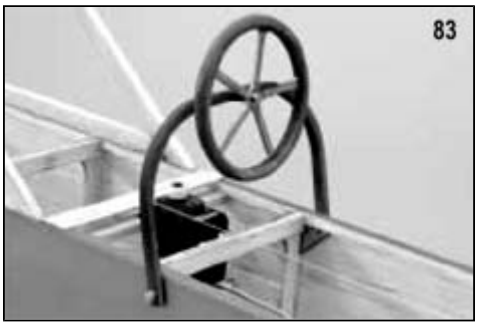


82. Paint all the steering wheel and control yoke parts at this time, before assembly. We painted the center spokes of the steering wheel "brass" color, and the crip part of the wheel is painted dark brown. The control yoke looks good painted either brown to look like wood, or silver for metal.

83a. Bolt the steering wheel in place on the control yoke with the 00-90 x1/2" brass round-head bolt provided. Use a flat washer under the head of the bolt, and another washer under the hex nut.

b. Insert a 00-90 x1/4" brass round-head bolt, with a flat washer under the head, into the hole at the bottom of each leg of the control yoke. Put a small drop of thin CA glue on the bolt to keep it in place. Let dry.

c. Install the control yoke on the airplane by carefully spreading the legs of the yoke just enough to allow the two bolts to go into the holes in the fuselage sides.



d. Hold the control yoke at a slight forward angle (see side view plan) while placing a small drop of thin CA glue on the shank of each bolt inside the fuselage.

Pilot

84. Cut the parts of the printed cardboard pilot from the sheet with a sharp #11 hobby knife or scissors. Cut as accurately and close to the image as possible.

85. Glue the mating parts of the pilot together with a common glue stick, being careful to keep all the edges matched up.

86. Drill a 3/64" dia. hole in the shoulders and elbows of the pilot parts, where indicated by the black dots.

87. Assemble the arms to the body using the 00-90 x1/8" long brass bolts, hex nuts, and washers that are provided.

88. Cut a piece of 1/8" sq. balsa stick to fit between formers F5 and F6, at the top of the fuselage. Glue the stick in place, in the middle of the fuselage. Then glue the pilot to the stick. Bend the pilot's arms outward so his hands are on the steering wheel.

Optional Rigging Wires

Installing scale-like "rigging wires" on your Deperdussin is well worth the small effort it takes ... and it really makes the airplane come alive! The process of installing it is easier and quicker than you may think.

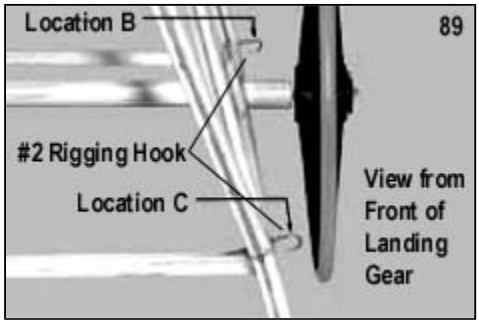
For reference, we've included a 3-view "RIGGING DIAGRAM" of the Deperdussin on the last page of this manual. This drawing shows and identifies the basic rigging locations. The "rigging wires" are actually black elastic thread, and an 8 yard long piece is included in this kit to make all of the rigging you see in the diagram. You will also need the remaining 1/16"od x1/4" aluminum tubes, a good pair of small needle nose pliers, a sharp #11 blade, and some thin CA glue.

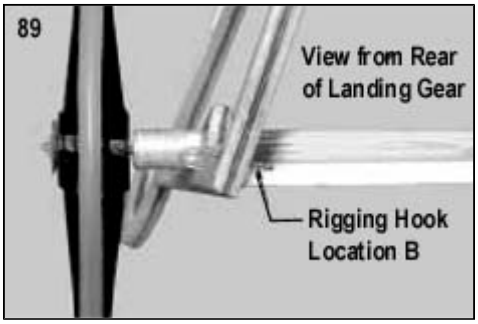
TENSIONING: A little information about the elastic thread and how to use it will be helpful. Because it's difficult to convey "how much" to stretch this thread during the rigging process, we'll tell you that we use a 2:1 ratio. This means that to get adequate tension on all rigging lines, stretch them to approximately twice their relaxed length. For example, a relaxed 12" length of thread is stretched to about 24", providing the right tension. With this in mind, the 8 yards of rigging thread included in the kit is really 16 yards in actual use - more than enough to complete the model.

89. Before you begin installing the rigging wires, you need to make and install four wire rigging attachment points for the bottom of the landing gear. These are called Rigging Hook #2 on the plans. You will need four of them, two on each side of the airplane.

a. Cut and bend four #2 Rigging Hooks from .020" dia. wire, according to the full-size pattern on the plan.

b. Drill a 1/32" dia. hole at the bottom of each of the four main landing gear struts, approximately where shown on the side view plan (corresponding to locations B and C in the RIGGING DiAGRAM). Try to judge the exact location for each hole so that when the rigging hook is poked through the hole in the next step, the shank of the wire will lay against the 1/8" sq. balsa cross bars.





c. Insert a #2 Rigging Hook in each hole. Orient the rigging hook with the looped end pointing down, and while you hold the looped end in that position, apply a single drop of medium or slow CA glue to other end of the rigging hook to bond it to the landing gear. Set the glue with accelerator.

90. In preparation for installing the rigging wires on the wings, you must first pierce a hole in the covering material over each aluminum tube rigging point in the wing to allow the rigging lines to pass through the tubes. The easiest and neatest way to do this is with a sharpened metal point, such as an awl or a thin nail. Use a lighter or torch to heat the metal point and press it through the covering, into the aluminum tube. This makes a neat, perfectly round hole that is sealed around its edges. Open all eight tubing holes on both wing panels.

91. Referring to the RIGGING DIAGRAM, the first rigging wire we're going to install runs from rigging point A at the top fo the cabane struts, through tube E in the left wing panel, and then down to rigging point B at the back of the landing gear. We will put loops on both ends of this rigging wire so that it can be detached from the fuselage when you want to take the wing off. Proceed as follows:

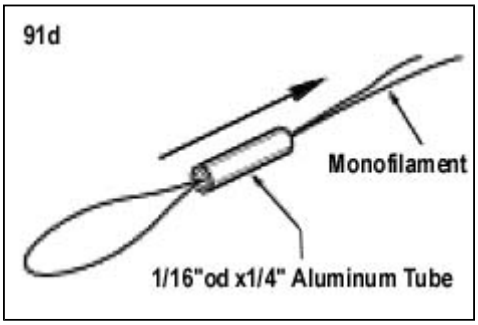
a. Cut a 13" length (unstretched) of elastic thread. Tip: When cutting the elastic thread, avoid fraying by using a sharp new razor blade.

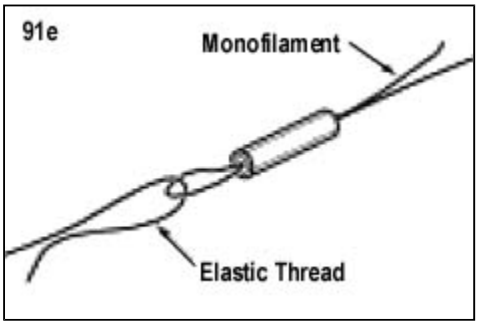
b. At one end of the elastic thread, apply a single drop of Thin CA glue to the tip of the thread and harden it with CA Accelerator. Use a razor blade to cut the hardened tip at a sharp angle, leaving a "point". The pointed end of the thread will be used as a needle to route the rigging thread through the various rigging point locations.

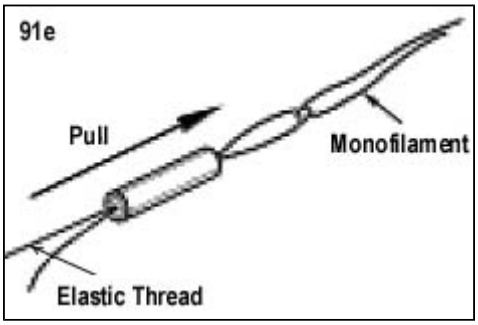
c. Push the needle end of the elastic thread through the aluminum tube at location E starting from the bottom, and out to the top surface of the wing. Pull approximately half of the elastic thread through the tube to the topside of the wing.

d. Get a short (6" or so) length of scrap monofilament line leftover from the pull-pull control installation. Hold the two ends of the monofilament line closely together and insert them both into one end of a 1/4" aluminum swage tube. Push the two ends through the tube, leaving a small loop of monofilament line sticking out of the tube, as shown here.

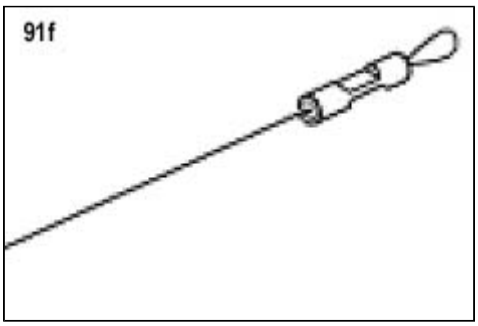
e. Insert about 1" of elastic thread through the monofilament loop and back against itself. Hold the elastic thread loop tightly with your fingers. Pull the monofilament loop through the aluminum swage tube, along with the elastic thread loop until about 1/4" (relaxed, not stretched) of looped thread is showing from the end of the tube.







f. Remove the monofilament line and use small needle nose pliers to crush the middle of the swage tube, locking the thread loop in place. Trim off the short length of excess thread. This end of the rigging wire is done.



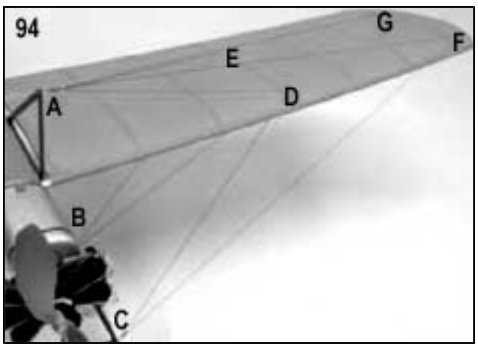
g. Repeat steps 91e, 91f, and 91g to make a swaged loop on the other end of the rigging wire.

h. Hook the loop ends of the rigging wire to the Rigging Hooks at points A and B. Adjust the elastic thread to equalize the tension above and below the wing.

92. Repeat Step 91 in its entirety to install a 14" length (unstretched) of elastic thread from point A at the top of the cabane struts, through tube D in the left wing panel, and then down to rigging point C at the front of the landing gear.

93. Repeat Step 91 in its entirety to install a 24" length (unstretched) of elastic thread from point A at the top of the cabane struts, through tube G in the left wing panel, and then down to rigging point B at the rear of the landing gear.

94. Repeat Step 91 in its entirety to install a 24" length (unstretched) of elastic thread from point A at the top fo the cabane struts, through tube F in the left wing panel, and then down to rigging point C at the front of the landing gear.



95. Now repeat Steps 91, 92, 93, and 94 to install the same rigging wires on the other wing panel.

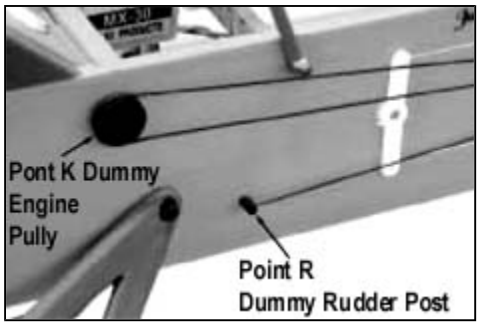
96. As you know, the pull-pull control lines that you installed from the servos to the elevator and rudder are clear monofilament fishing line and nearly invisible. So to simulate the pull-pull control cables that were on the real Deperdussin, we used the same elastic thread as we just used for the wing rigging.

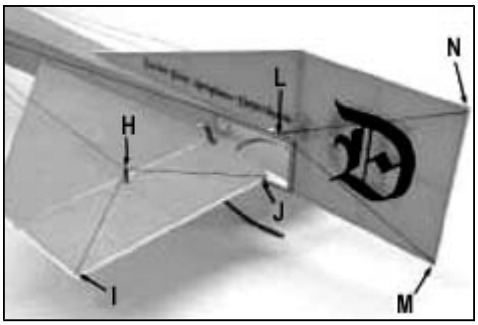
a. The first step is to make a small disc out of scrap balsa to simulate a pulley for the elevator cables on the left side of the cockpit (point K in the RIGGING DIAGRAM). For the rudder, make and install a small 1/8" sq. scrap balsa stick on each side of the the cockpit to simulate a rudder control bar (point R). We painted both these items black.

b. Take some more scrap 1/8" sq. balsa stick and install a dummy elevator control horn at the middle of the leading edge of each elevator (point H in the RIGGING DIAGRAM).

c. Install elastic thread from point K (the dummy elevator pulley), back to H (the dummy control horns), and then from H to points I and J. All it takes is a small drop of CA glue to adhere the elastic thread to the structure.

   Do this on both top and bottom of the elevator.





d. Install elastic thread from point R (the dummy rudder bar), back to point L (the tip of the rudder control horn), and then back to points M and N.

   Do this on both the right and left sides of the rudder.

97. Now that you've finished the wing rigging and the dummy control cables, you are well versed in the basic methods we used for adding these eye catching details to our prototype models. You can stop here, or you can continue to add more simulated rigging wires to your Deperdussin for even more scale "wow" factor.

    If you study the photographs in this manual of our finished models and of the full-size Deperdussins, you'll discover that there are many more rigging wires that could be added using the elastic thread techniques. For instance, we also put rigging wires at the front and rear of our main landing gear struts. These are in the form of the typical crossed "X" from on corner of the structure to the other. These do not have to be removable, so they were installed simply by drilling a tiny hole through the wood struts, hardening the end of the thread to create a needle point, poking the point through the hole, stretching the thread an appropriate amount, applying a tiny drop of Thin CA glue to the thread at the hole, and then cutting off the excess thread flush with the outside of the strut.

    You can add as much or as little extra scale details are you desire. It's your option. If you run out of the elastic thread, you can buy more wherever sewing thread is sold. It's a common item.

Balance

As shown on the plans, your Deperdussin should balance approximately 3-3/8" back from the leading edge of the wing, measured at the fuselage sides. We've achieved this balance point on all our prototype models, without having to add any additional weight, by mounting the battery pack on the forward BTM mount in front of former F3.

FLYING

Whether or not the Deperdussin is your first indoor R/C model, we strongly suggest that you pay close attention to the following information! If you have access to an indoor basketball court or a clear gym space of about the same size, you can quickly get the take-off and landing procedures understood with little problem. If you don't have this kind of indoor space available, find a large paved surface outdoors, and remember you cannot fly this airplane in any kind of wind! In all of the following instructions, remember that altitude is best controlled with the throttle. As you gain experience flying the Deperdussin, you will do this automatically. Finally, remember that the flight controls are on the right stick (for Mode II transmitters) and that trying to correct with "rudder" on the left stick will do nothing! This might seem a little obvious but if you are normally a 4-channel pilot, it can be a very real issue.

Taking off the Deperdussin could not be easier. Simply throttle up smoothly (do not "punch it"), correcting the take-off run with a little rudder, if needed, and it will lift off by itself in a very short distance. Typical take-off runs for the Deperdussin are about 6' - 10'. As soon as the airplane lifts off, smoothly throttle back the motor, WITHOUT TURNING IT OFF, allowing the airplane to lightly settle back down to the "runway" for a landing under power. All of this should be done in a straight line. Repeat this exercise enough times to become familiar with the way the airplane responds to throttle and your small control inputs. If you learn nothing else, learn this; the Deperdussin will not continue flying with the motor off. With the motor off, it will almost immediately stop flying and drop to the ground. This characteristic is shared with the full-scale Deperdussin, as well as most, if not all, early pioneer aircraft.

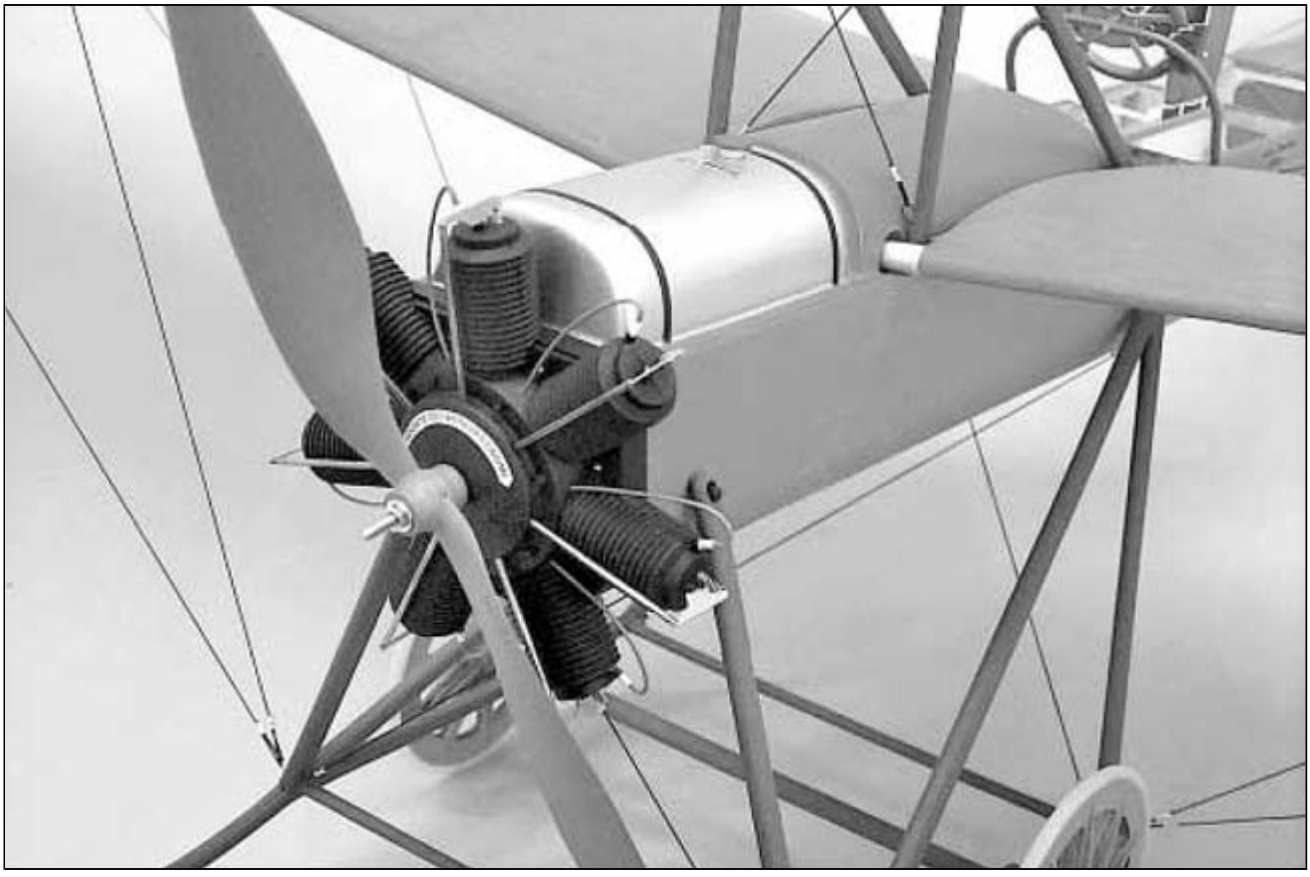
Once you've mastered the take-off and landing techniques, you're ready to fly the airplane. Take-off and use the throttle to establish a "cruise" altitude of about 6' to 8' in the air. Make the turns smooth, keeping the nose level or slightly down to avoid stalling and to maintain forward speed. This turning technique is very useful throughout the Deperdussin's flight envelope. After making just a few turns, you'll realize that the control authority, provided by the full-flying tail group, is remarkably smooth and sure, without being "twitchy". If flying indoors and the ceiling height permits, take the airplane up higher, using throttle to seek and then hold any given altitude. This is a good exercise in learning how to fly this model. It won't be long before you're perfectly comfortable with this very nice flying scale model. Make a few low, slow passes and listen to your flying buddy's comments!

When you're ready to land, remember the landing technique that you practiced earlier - you must land under power! Set up for a landing by lowering the throttle setting just enough to let the airplane begin descending on its own. Line-up the final approach to take advantage of the longest part of your "runway", keeping the airplane straight while it settles to the ground under low power. Use elevator input only sparingly to avoid killing off too much forward speed and to flare very slightly immediately before touchdown. Turn the motor off, allowing the model to stop. On the smooth wooden floors of indoor gyms and basketball courts we've learned to "taxi" our Deperdussin back to the flight station, using coordinated rudder and throttle inputs.

As you gain air time and experience, you'll be able to perform wingovers, touch and go landings, and of course, those lovely low, slow fly-bys. We've tried to loop the Deperdussin many times but its relatively low speed, high-lift airfoil, and lack of mass tend to combine, making a loop nothing more than a powered stall. Hey, the full-scale Deperdussin didn't loop either! Remember, we're talking 1909 - the first loop wasn't done with any airplane until 1913!

Finally, make it a habit to check over the airframe of your Deperdussin after each flight. Check for any loose joints, etc. Bringing a little CA glue to your flying sessions is highly recommended for the first few outings. We sincerely hope that building and flying your Deperdussin has been a rewarding and interesting experience. We also hope that you now have a little better appreciation for the very real contributions that early aviation pioneers made in refining and furthering one of man's grandest dreams!

Good luck and safe flying!



DEPERDUSSIN PILOTS EXTRAORDINAIRE

Jules Vedrines

This boisterous French pilot was the fastest man alive in 1912, often breaking his own world speed record day after day in his Deperdussin.

January	13	1912	Sets new world speed record of 90.9 mph.
February	22	1912	Sets new world speed record of 100.2 mph - the first man to fly faster than 100 mph!
February	29	1912	Sets new world speed record of 100.9 mph.
March	1	1912	Sets new world speed record of 103.6 mph.
March	2	1912	Sets new world speed record of 104.3 mph.
July	13	1912	Sets new world speed record of 106.1 mph.
September	9	1912	Vedrines wins the prestigious Gordon Bennett Race held in Chicago, setting a new world speed record of 108.1 mph. Second place was another Deperdussin flown by Frenchman Maurice Prevost. Upon landing, Vedrines was quoted as saying, “The force of the wind blew the buttons off my hat!”

Rene Vidart

Like other wealthy young French sportsman of the era, Rene Vidart became fascinated with aeroplanes the first time he saw one. He took his first airplane flight in June 1910 at Rheims. Three days later he was issued French pilot certificate no. 133. He quickly gained notoriety for his flying ability.

December	1910	Set speed record “with passenger” in a 2-place Deperdussin.
June	1911	Won 3rd place in Circuit of Europe Race with Deperdussin.
August	1911	Winner of Geneva air meet with Deperdussin.
August	1911	Set Swiss altitude record of 2,132 ft. with Deperdussin.
	1912	Opened his own flight school.
A military pilot in World War I, a severe arm wound ended his flying career.		

Jules Vedrines rounds the final pylon to win the 1912 Gordon Bennett Race in Chicago at 108.1 mph. Second place was won by Maurice Prevost in another Deperdussin at 102.2 mph. The next year Prevost would set a new world speed record of 126.6 mph while winning both the 1913 Gordon Bennett race and the Schneider Trophy race.

Beautiful old picture of a Deperdussin 2-seater at sunset. Armand Deperdussin, Founder and President of the company building the world's fastest airplanes in 1910-1913. His legal problems killed the company at the height of it's success. From the ashes came the SPAD company of World War I fame.

Customer Service

SIG MFG. CO., INC. is totally committed to your success in both assembling and flying the 1910 DEPERDUSSIN kit. Should you encounter any problem building this kit or discover any missing or damaged parts, please feel free to contact us by mail or telephone.

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	SIG MODELER S HOTLINE (for technical support)	1-641-623-0215
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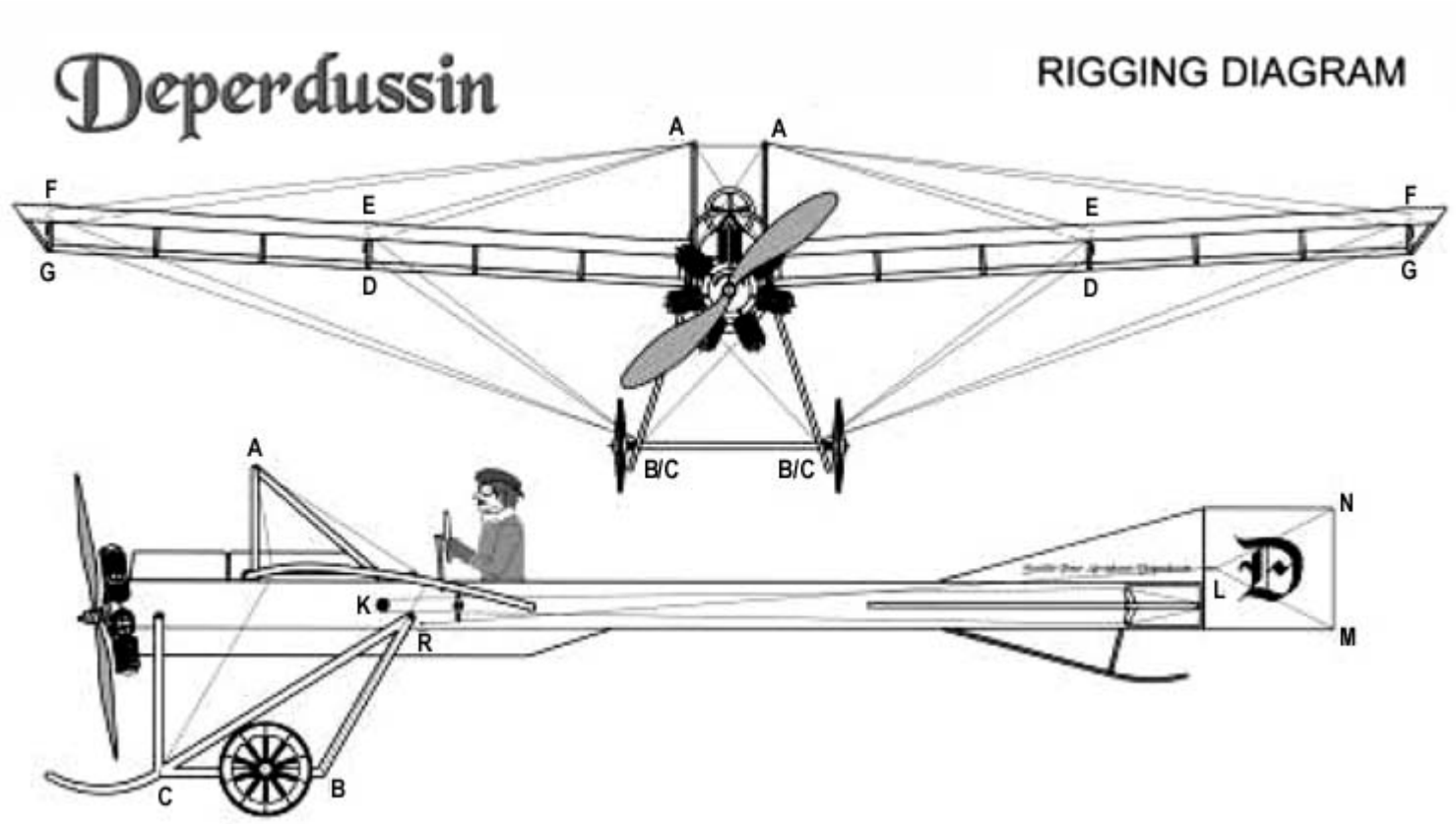
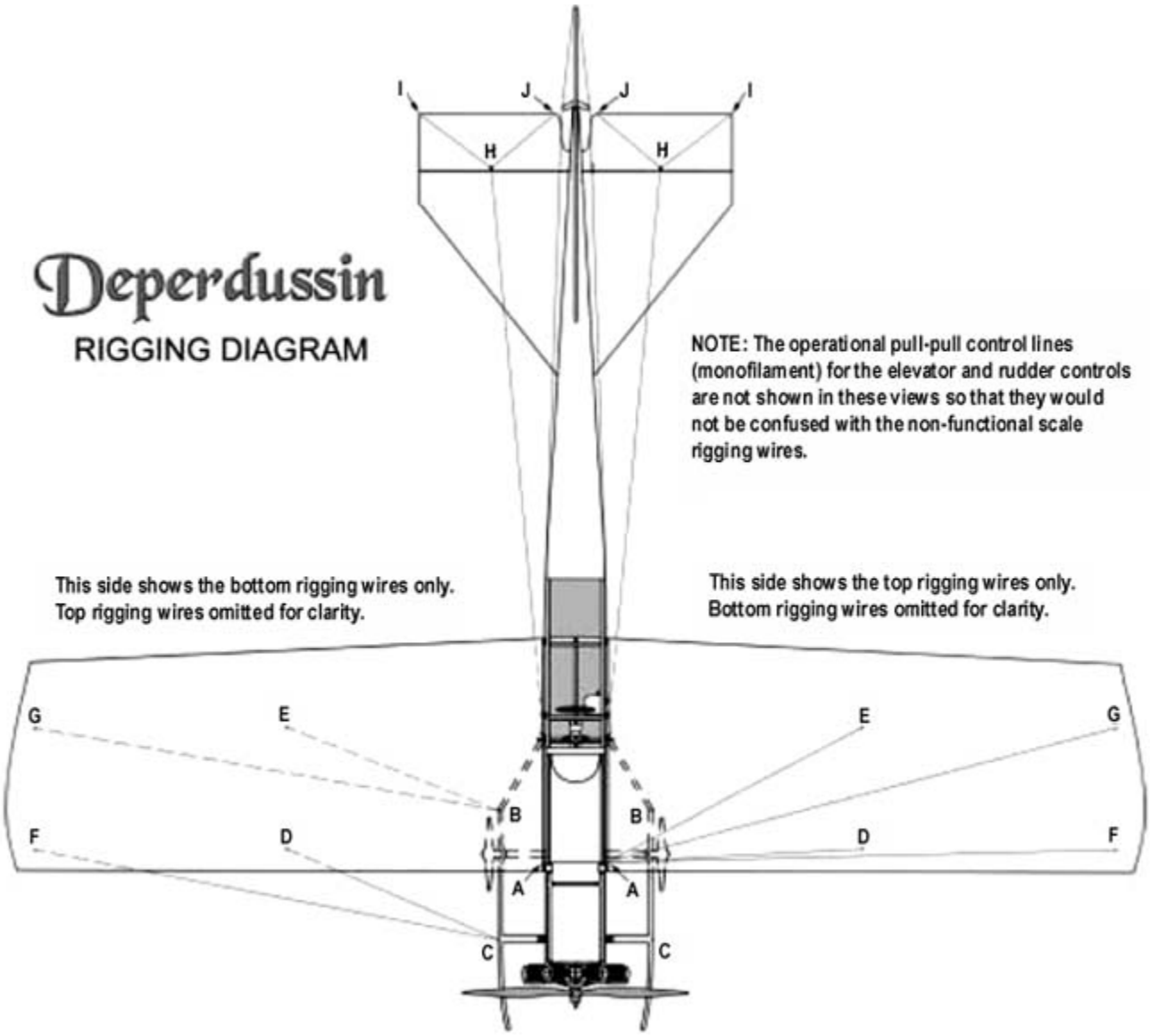


Deperdussin

RIGGING DIAGRAM



Warning! This is not a toy!

Flying machines of any form, either model-size or full-size, are not toys! Because of the speeds that airplanes must achieve in order to fly, they are capable of causing serious bodily harm and property damage if they crash. IT IS YOUR RESPONSIBILITY AND YOURS ALONE to assemble this model airplane correctly according to the plans and instructions, to ground test the finished model before each flight to make sure it is completely airworthy, and to always fly your model in a safe location and in a safe manner. The first test flights should only be made by an experienced R/C flyer, familiar with high performance R/C aircraft.

The governing body for radio-control model airplanes in the United States is the ACADEMY OF MODEL AERONAUTICS, commonly called the AMA. The AMA SAFETY CODE provides guidelines for the safe operation of R/C model airplanes. While AMA membership is not necessarily mandatory, it is required by most R/C flying clubs in the U.S. and provides you with important liability insurance in case your R/C model should ever cause serious property damage or personal injury to someone else. For more information, contact:

ACADEMY OF MODEL AERONAUTICS
Telephone: (765) 287-1256

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