

Material	Quantity	Thick	Width	Length	Plans Use & Piece-Size Callout	List Version 3
<b><u>Spar Stock - all S4S</u></b>						
Spruce	2	3/4"	6"	13'	3/4" x 6" x 13' Wing - Front spars	
Spruce	2	3/4"	4 1/2"	13'	3/4" x 4.5 x 13' Wing - Rear spars	
Spruce	5	3/4"	5	2'	3/4" x 5" x 22-1/2" Fuselage - Station 2-54 X-piece.	
Spruce	1	3/8"	3"	1'	3/8" x 3" x 3" Fuselage - Fin filler	
Spruce	16	1/4"	5"	3'	1/4"x5"x36' Landing Gear - Struts - NOTE: Can be Fir or Pine	
<b><u>Finished Capstrips, Longerons, &amp; Stringers Stock</u></b>						
Spruce	4	3/4"	3/4"	15'	3/4 x 3/4 x 15 Fuselage - Longerons, diagonals	
Spruce	2	3/4"	3/4"	15'	3/4 x 3/4 x 7 Fuselage - Longerons, diagonals	
Spruce	2	3/4"	1 1/2"	1'	3/4" x 1-1/2" x 12" Fuselage Station 11 Uprights	
Spruce	3	1/2"	3/4"	10'	3/4" x 1/2" - 25 feet total Fuselage diagonals	
Spruce	1	1/2"	2"	1'	1/2" x 2" x 4" Fuselage - hinge tube supports	
Spruce	4	1/2"	1/2"	9'	1/2" x 1/2" - 32 feet total Wing - Spar Flanges	
Spruce	8	1/2"	1/2"	2'	1/2" x 1/2" x 18" Fuselage - Floor beam flanges	
Spruce	3	3/8"	5/8"	12'	3/8" x 5/8" - 12 feet Tail Leading Edges Wing leading Edges	
Spruce	2	3/8"	5/8"	7'	3/8" x 5/8" - 7 feet Aileron spar flanges	
Spruce	6	3/8"	3/8"	7'	3/8" x 3/8" - 7 feet Aileron mounting spar Tail - Fin flanges	

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Spruce	2	3/8"	3/4"	7'	<b>3/8" x 3/4" - 7 feet</b> Aileron spar flanges (bottom)	
Spruce	1	3/8"	2"	1'	<b>3/8" x 2" - 1 foot</b> Tail - Fin Filler	
Spruce	8	1/4"	3/8"	13'	<b>1/4" x 3/8" - 100 feet</b> Wing - Front spar filler	
Spruce	12	1/4"	1/4"	10'	<b>1/4" x 1/4" - 50 feet</b> Tail - Cap strip filler Wing - Intercostal cap strips Fuselage - underfin flanges	
Spruce	16	1/4"	1/2"	10'	<b>1/4" x 1/2" - 160 feet</b> Wing - Slotted Cap Strip	
Spruce	7	1/4"	1"	6'	<b>1/4" x 1" x 6'</b> Fuselage - Turtledeck stringers	
Spruce	24	1/8"	2.5"	11'	<b>1/8" x 2.5" x 10' plus</b> Wing Tips Bows	
Spruce	30	1/8"	5/8"	7	<b>1/8" x 5/8" x 80" plus</b> Tail - Bows for Rudder and Elevators	
NOTE: Tail bow wood does not need to be spruce. See Page 3-5 of Plans)						
<b><u>Specialty Spruce</u></b>						
Spruce	1	1/2"	1/2"	75'	<b>1/2" x 1/2" Triangle</b> Wing - Rib corner blocks	

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<b><u>Plywood</u></b>					
<b>Mahogany</b> (Note - some builders say 8 sheets is more realistic)	7	1/8"	4'	8'	<b>1/8" x 4' x 8'</b> Fuselage Sides and Gussets (4 sheets of the total) Wing Ribs Wing - Aileron mounts and spar webs Wing - Root Rib Walkways
<b>Mahogany</b>	1	1/8"	4'	4'	<b>1/8" x 4' x 4'</b> Tail Ribs Tail diagonal spar Tail - Stabilizer & elevator spars Tail - Stabilizer Diagonal Spar
<b>Fir</b>	1	1/4"	4'	8'	<b>1/4" x 4' x 8'</b> Fuselage Formers and Anchors Wing Nose Ribs Tail Nose Ribs
<b>Fir</b>	1	3/8"	4'	4'	<b>3/8" x 2' x 4'</b> Fuselage - Firewall Former Fuselage - Floorboards Figure 6-7
<b>Fir</b>	1	3/4"	2'	4'	<b>3/4" x 2' x 4'</b> Fuselage gussets & bows, tail tip bows
<b><u>Other Wood</u></b>					
<b>Any Wood</b>	8	3/8"	3/8"	15'	<b>3/8" x 3/8" up to 15'</b> Fuselage - Belly Stringers
<b>Hardwood</b>	1	1"	2"	9"	<b>1" x 2" x 9"</b> Fuselage - Tail Spring anchor
<b>Hardwood</b>	2	3/4"	1 1/2"	20"	<b>3/4" x 1-1/2" x 20"</b> Fuselage - Station 1 Uprights
<b>Maple, Oak, or Birch</b>	2	5/8"	4"	24"	<b>5/8" x 4" x 24"</b> Wire support pads

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<b>4130 Steel Angle</b>	1	0.125	1.5	48	<b>4130 Angle</b> Fuselage - Engine mount anchors- 2 pieces 1/8" x 1-1/2" x 22" angle
<b>4130 Steel Strips</b>	1	0.063	0.75	12	<b>0.063 3/4" steel strip</b> Wing - Swing link support - 2 pieces 3/4" x 5.5" x .063" min.
	1	0.063	1	30	<b>0.063 1" steel strip</b> Wing - Swing link - 4 Pieces 1" x 5" x .064" min. Tail spring attach - 1 piece .063" x 1" x 6"
	1	0.063	2	24	<b>0.063 2" steel strip</b> Wing - Compression rib ends - 8 pieces 2" x 2" x .064" min.
<b>4130 Steel Plate</b>	3	0.032	6	12	<b>0.032 steel plate</b> Fuselage - Tail post anchor 1 piece 4.5" x 1.5" <i>NOTE: The parts list in the plans says this piece should be 0.063 steel, but Figure 1-11 says 0.032". Experience by builders indicates that 0.032" is acceptable.</i>
	3	0.063	9	18	<b>0.063 steel plate</b> (Fuselage - Tail post anchor 1 piece 4.5" x 1.5" - SEE ABOVE NOTE)  Wing - Aileron horn 4 pieces 2.375 x 3 Wing - Aileron crank 4 pieces 3 x 4 Wing - Aileron crank support 4 pieces 3 x 4.125 Landing Gear - inner fittings 8 pieces 3.375x3.75 Tail - metal fittings Fuselage - Walking Beam - Figure 6-5 Fuselage - Walking Beam Support - Figure 6-5
	3	0.1	18	18	<b>0.100 steel plate (replace 0.093" on plans)</b>

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					Landing Gear - Lower wire fitting 1 Pieces .093" x 1" x 2-3/4" Wing - Comp. Rib ends, wing hinge 8 Pieces 1-3/4" x 3" x .093 min.  Wing - Wing hinge supports 2 Pieces 2-1/2" x 3.25 x .093 min. Wing - Spar fittings 8 Pieces 3" x 9 x .093" min. Wing - Wing hinge supports 2 Pieces 3" x 8" x .093 min. Fuselage - Wing wire anchors 4 Pieces .093" x 3-3/8" x 5-1/8" Landing Gear - Fuselage fitting 8 Pieces .093" x 4" x 5" Landing Gear - Strut fitting 4 Pieces .093" x 4" x 4-3/4" Landing Gear - Axle fitting 4 Pieces .093" x 4" x 4-1/2" Landing Gear - Upper wire fitting 2 Pieces .093" x 4" x 4-3/8" Landing Gear - Brake plate 2 Pieces .093" to fit brake Tail - Rudder Horn and Cable adjustment links - Fig 6-2 Fuselage - Aileron push rod yoke Figure 6-3 Tail - Tail wheel steering horn - Figure 6-6 Wing - Flying and Landing wire attachment plates - Figure 8-2
	1	0.19	6	12	<b>0.19 steel plate</b> Fuselage - Landing Wire Terminals - Figure 8-1
	1	0.25	-	36	<b>0.25 steel plate</b> Landing Gear - Flying wire anchor. Width depends on inside diameter of axle tube (see below). Typical width 1" to 1-1/4"
<b><u>4130 Steel Tube</u></b>		<b>Wall Size</b>	<b>Diam.</b>	<b>Length</b>	
	1	0.12	0.5	24	<b>1/4" steel tube 0.035" wall</b> Wing - Swing Link & aileron crank - plans call for 3/16" ID and 0.032" minimum wall
	8	0.12	0.5	27	<b>5/8" steel tube 0.035" wall</b> Wing - Compression Ribs
	1	0.12	0.5	24	<b>1/2" steel tube 0.12" wall</b>

Material	Quantity	Thick	Width (Inches)	Length (inches)	Plans Use & Piece-Size Callout
					Landing Gear - Attachments - Plans call for 0.093" minimum wall and 1/4" ID
	1	0.035	0.5	225	<b>1/2" steel tube 0.35" wall</b> Fuselage - Rudder Pedals - Figure 6-2 Wing - Aileron push rods - Figure 6-4 Fuselage - elevator push rod Figure 6-5
	1	0.065	1	36	<b>1" steel tube 0.065" wall</b> Fuselage - Control stick and aileron torque tube Figure 6-3
	1	0.095	1	6.25	<b>1" steel tube 0.095" wall</b> Tail - elevator torque tube - 1" OD x 0.09" minimum wall
	1	0.095	1	6.25	<b>1.25" steel tube 0.095 or 0.12" wall</b> Tail - bellcrank torque tube - 1" ID x 0.09" minimum wall - slides over above elevator torque tube
	1	0.095	*	72	<b>1.25" or 1.5" steel tube .095 wall (minimum)</b> Landing gear - axle. Selection of outside diameter depends on whether 1.25" or 1.5" wheels are chosen
	1	0.095 min	*	72	<b>Steel Tube to fit over above axle tube</b> Landing gear - brake support. OD and wall thickness selected to slide over axle tube listed above. For instance: If a 1.5" OD axle is selected, a 1.75" x 0.094 or 0.120 wall tube is needed if a 1.25" OD axle is selected, a 1.5" x 0.094 or 0.12 wall tube is needed

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<b>3003 Aluminum</b>						
	1	0.032	1/4" OD	16'	<b>3003-0 Versatube</b> Wing - static/Pitot system	
	5	0.025	1.25	120	<b>3003H14 Trailing Edge</b> Wing - .025 metal channel for trailing edge - See Figure 4-1	
<b>2024T-3 Aluminum</b>						
	2	0.5	1	24	<b>0.5" 2024T-3 Aluminum Plate</b> Fuselage - Wing wire anchors - 1/2" x 1" x 3-3/8" each	
	1	0.025	48	96	<b>0.025" 2024T-3 Aluminum Sheet</b> Fuselage - Forward and aft turtledecks, inspection panels	
<b>6061T-6 Aluminum</b>						
	2	0.058	1	12	<b>1" 6061T6 Aluminum tubing 0.058" wall</b> Wing - Folding hinges Figure 6-13	
<b><u>Aluminum Flashing</u></b>						
	1	0.016	14	75 Feet	<b>14" wide half-hard aluminum flashing 0.016" thick</b> Wing - Leading edge reinforcement (buy at hardware store/builder's supply)	

Quantity	Wing Only	Part Number	Description	Component - Use	List Version 3
200 feet	150	Control Cable	1/8" 1x19 stainless	150 feet for wing, rest for landing gear and controls	
60	36	AN-28-3-M	1/8" Nicopress sleeves, plated	36 wing, 24 fuselage	
60	36	AN-100-C4	1/8" wire thimbles	36 wing, 24 fuselage	
2		AN115-61	clevis	Landing Gear -	
40	28	AN-130 -16S	1600-lb. Turnbuckles	28 wing, rest for landing gear and controls	
1		AN-150-80L	Turnbuckle	Master Turnbuckle	
36"	36"	MS20257C5	Stainless Steel 2" piano	Wing - Ailerons	
10	10	AN-310-3	Castle nuts	Wing -	
10		AN-310-4	"	Landing Gear - Vee-to-fuselage	
20		AN-310-6	"	Fuselage -	
2		AN-3-5A	Undrilled Bolt		
2		AN-3-7A	Undrilled Bolt		
20		AN-3-10A	Undrilled Bolt		
70		AN-3-12A	Undrilled Bolt		
25		AN-3-13A	Undrilled Bolt		
25		AN-3-14A	Undrilled Bolt		
25		AN-3-22A	Undrilled Bolt		
5		AN-3-23	Drilled Bolt	Wing - Swing link pivot	
20		AN-3-23A	Undrilled Bolt	Wing - Aileron system fittings on front spar	
10		AN-3-26A	Undrilled Bolt		
10		AN-3-30A	Undrilled Bolt		
8	8	AN-3-54A	Undrilled Bolt	Wing Anchor Wires	
4	4	AN-3-64A	Undrilled Bolt	Wing Anchor Wires	
4	4	AN-3-66A	Undrilled Bolt	Wing Anchor Wires	
10		AN-4-6A	Undrilled Bolt		
50		AN-4-14A	Undrilled Bolt		
2		AN-4-35	Drilled Bolt		
4		AN-4-40	Drilled Bolt		
6		AN-5-13A	Undrilled Bolt		
2		AN-5-26A	Undrilled Bolt		
20		AN-6-14A	Undrilled Bolt		

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Quantity	Wing Only	Part Number	Description	Component - Use
7		AN-6-16	Drilled Bolt	
4		AN-8-24	Undrilled Bolt	Spar pins (Modify)
150		AN-365-1032A	Nut	
50		AN-365-428A	Nut	
10		AN-365-524A	Nut	
20		AN-365-624A	Nut	
75		AN-366-F-832	Anchor Nuts	
50		AN-380-2-2	Cotter pins	
20		AN-380-3-3	cotter pins	
2		AN-393-20	Clevis pins	Wing - Bell crank
25		AN-393-7	Clevis pins	
10		AN-394-81	hinge pin	
2		AN-396-19	Clevis pins	
12		MS20392-2C11	Clevis pins	
2		AN-416-1	safety pin	Landing Gear -
125	125	AN-545-4-4	Wood screws	Wing - Aileron nutplates
200		AN-960-10	washers	
25		AN-960-10L	Washers (thin)	
100		AN-970-3	Wide Flat Washer	
24	24	AN-525-8R20	Wood screws	Aileron hinge attachment
24	24	AN-525-8R24	Wood screws	Aileron hinge attachment
1/2 lb		Aircraft Nails	1/2" #20	
1/2 lb		Aircraft Nails	5/8" #20	
8		Rod-end bearings for control pushrods		
		spring steel 26" long to suit tailwheel		
		tail wheel unit		
		wheel and brake assemblies to suit the builder		