Rumpler 4C Taube Scratch Build Planning

As with all my scratch builds, my first task is to print out the full-size plans using my Canon TS9120, and then I put all the pages together resulting in a full-size set of plans. You can also have the plans printed out on the large format printers at your local FedEx store for a little over $25. From the plan sheets I develop a detail list (as seen below) of all required materials and hardware that I will need for this build. Any balsa, basswood, birch and Lite plywood that I do not have in my back stock will be ordered from Balsa USA. I will pick up any required hardware, servos, fuel tank, etc. from my local hobby shop, Anderson RC. I plan to use an old O.S. .46 LA 2-stroke that I have sitting on the shelf for power. I also plan to use wire pull-pull control cables for the elevator and rudder. *I will try and note any changes or deviations I make from the Rudy plans during my scratch build in this document.*

Rumpler 4C Taube Materials and Hardware List

Amount	Description	Use
Balsa		
2	3/32" x 3" x 36" balsa sheet	fuselage top surface sheeting
7	1/8" x 3" x 36" balsa sheet	wing ribs R1-R9 & R11
6	1/8" x 4" x 36" balsa sheet	fuselage sides & bottom, wing trailing edges & center section sheeting, fuselage formers F6, F7 & F9
3	3/16" x 4" x 36" balsa sheet	horizontal stab/elevator & vertical stab/rudder structure, wing spars sheer webbing
2	1/4" x 3" x 24" balsa sheet	wing trailing edges, R10, aileron filler blocks
1	3/8" x 3" x 24" balsa sheet	fuselage engine compartment
1	1/2" x 3" x 24" balsa sheet	wing tips
12	1/8" x 1/4" x 36" balsa sticks	wing ribs top cap strips
1	1/4" x 1/4" x 36" balsa sticks	aft fuselage structure
2	1/4" x 3/8" x 36" balsa sticks	fuselage bottom longerons
2	1/4" x 1/2" x 36" balsa sticks	fuselage top longerons
2	3/8" x 3/4" x 36" balsa sticks	wing leading edge
Basswood/Hardwood		
6	1/4" x 1/4" x 36" basswood sticks	wing aft & diagonal top & bottom main spars
4	1/4" x 3/8" x 24" basswood sticks	wing front top & bottom main spars
1	1/4" x 1/4" x 24" hardwood sticks	wing flying wire rigging blocks
1	3/8" x 3/4" x 12" maple grooved MLG mount (1/8")	
Plywood		
1	1/16" x 6" x 6" birch plywood	wing aileron servo hatch covers
1	1/8" x 12" x 12" poplar Lite plywood	fuselage doublers & formers F3, F4
1	1/8" x 12" x 24" birch plywood	fuselage formers F2, F5, F8 & F10, wing mounting bolt plates & front/aft dihedral braces
1	1/4" x 6" x 6" birch ply	fuselage F1 (engine firewall), wing bolt blocks
1	1/64th scrap birch plywood	strengthen elevator/rudder control horn areas

Flight Control System

1	Spektrum RC AR6200 6-Channel 2.4GHz DSMX receiver	
1	Hitec HS-225BB Mini Servo	throttle
2	Hitec HS-425BB Dual Ball Bearing Servo	elevator/rubber
2	Hitec HS-81 Mini Servo	aileron servos
1	6-volt 5-cell 2,700mAh NiMH receiver battery pack	
1	6" servo lead extension	fuselage aileron channel lead
1	servo channel lead "Y"	wing ailerons servo lead
2	14" servo leads extension	wing ailerons servo leads
1	receiver power/battery charging switch harness	
1	receiver battery pack digital voltage display	

Glow Fuel Power System

1	O.S. .46 LA 2-stroke RC engine	
1	adjustable nylon engine mount (medium: 40-70 size)	
1	6-8 oz. Sullivan Flex-Tank slant style	
1 set	Du-Bro #892 Medium Silicone Tubing	engine fuel & air lines
1	10x6 or 11x5 wooden prop	
1	Brass Heavy Spinner Nut	

3D Printing Materials

Creality CR-PETG: Gray	pilot & observer busts, MLG vintage spoke wheels
Creality CR-PETG: Beige	tail braces, wing & fuselage flying wire fixtures
Creality CR-PETG: Transparent	fuselage servo tray
Giantarm TPU: Black	MLG tires
Geeetech PETG: Silver	dummy vintage external fuel tank & small WW1 bomb

Miscellaneous Hardware Items & 3D Printed Parts

1	1/8" x 36" music wire	main landing gear assembly, elevator coupler
1	soft copper wire and 50/50 solder	main landing gear assembly
1 set	3.75" to 4" vintage scale wheels	3D printed main landing gear wheels & tires
1 set	Du-Bro #139 1/8" wheel collars	main landing gear wheels
1 set	Du-Bro #158 Steel Landing Gear Straps & Screws	
1	1/16" x 36" music wire	fabrication of upper & lower flying wire pylons, tail skid wire
1	1/16" ID x 12" brass tubing	fabrication of upper & lower flying wire pylons
1	3/16" OD x 4" brass tubing	fabrication of upper & lower flying wire pylons
1	Du-Bro #517 2-56 Pull-Pull System	wire control cables & connectors for rudder & elevator
3	36" nylon antenna housing tubes	rudder & elevator control cable fuselage guides
1	Sullivan Gold-N-Cable #508 Control Rod Set	throttle control cable
1	Du-Bro #121 E/Z Connectors	throttle cable connections

1	Du-Bro #117 Standard Nylon Hinges (15/pk)	hinging of rudder, elevator, and ailerons
3 sets	Du-Bro #237 T-style Nylon Control Horns	rudder, elevator, and ailerons rigging
2	Du-Bro #855 E/Z Links	aileron rigging
2	6" 2-56 control rods	aileron rigging
12	Du-Bro #600 2-56 Spring Steel Kwik-Link Clevises	flying wires cables & aileron rigging
1 pack	Aanraku Stained Glass black covered hanging line and crimps	flying wires
8	Du-Bro #201 2-56 Rigging Couplers	connect flying wires to clevises
2	M3-25mm socket head bolts & nuts	upper & lower flying wire pylons hardware
12	2-56 nuts	connect flying wires to clevises, aileron rigging
1 set	Du-Bro #129 4-40 blind nuts & bolts	engine mount
4	#6 x 3/4" hex head screws	connect engine to engine mount
2	1/4" x 20 nylon wing bolts	wing hold-downs
2	1/4" x 20 brass threaded inserts	wing hold-down blocks
8	#1 x 3/8" pan head screws	wing aileron servos hatch covers
1	.030 clear plastic sheet	aft cockpit windshield
1	12" small black heat shrink tubing	secure flying wire clevises
1	pilot bust figure of your choice	3D printed
1	observer bust figure of your choice	3D printed
1	1" diam. dummy Vintage external fuel tank	3D printed
1	3/4" diam. WW1 bomb	3D printed
2	tail feather braces	3D printed
16	wing FWF-1 flying wire fixtures	3D printed
4	fuselage FWF-2 flying wire fixtures	3D printed
1	fuselage servo tray for HS-425 & HS-225 servos	3D printed
1 bottle	Titebond Ultimate III wood glue	
1	20ml Glue Applicator Syringe with 18G 4" Blunt Tip Long Needle &Cap	
1 set	15 or 30 minute two-part epoxy	
1 can	Deluxe Materials Model Lite Balsa Filler	
1 sheet each	120 & 220 grit sandpaper	
1 can	Krylon Matt Finish Clear Lacquer spray paint	used on fuselage and wing covering
1 jar	Flat Black Enamel	used to paint cockpit interior
1 can	Coverite Balsarite or Deluxe Materials Cover-Grip	preps wood surfaces for covering
1 roll	Silver or Light Gray Top Flite MonoKote Covering Film	forward section of fuselage
2 rolls	Flat Tan Top Flite MonoKote Covering Film	fuselage, wing, and tail feathers
1 set	Maltese Cross Decals	from Callie Graphics (callie@callie-graphics.com)