

My Balsa & Glass Workshop

1914 Rumpler 4C Taube Build Description

Updated as of 23 October 2026

While working on the coding for the January 2027 edition to my "Build of the Month Series," I found the model selection so interesting that I decided to make it another scratch build project.



Image Source: Outerzone.co.uk.

Figure 1 - Rumpler 4C Taube RC Model

Taubes became popular in Europe, as both civilian and military aircraft, during the four years preceding World War I. In 1910, the German firm of Rumpler gained a license from Etrich to manufacture the Taube design. By 1914, Rumpler improved on the basic design to develop the 4C, which was built to military specifications for numerous roles including flight training, observation, communications, and bombing.

Rudy Hergenrother developed his Rumpler 4C Taube RC Model using the Balsa USA Taube 40 kit (which is based on the original Etrich design of 1910) as a basis, employing many of its precut structural parts. His resulting Rumpler 4C Taube design has an entirely different tail, a modified landing gear, and fuselage, and a wing which employs a modified airfoil and ailerons. The tail control surfaces of the 4C are much larger than that of the Etrich, improving low speed maneuverability. As a result, the flight

characteristics of the 4C showed an improvement over the original Balsa USA Taube 40 kit in the areas of inverted flight, outside maneuvers, speed range, rolls, and spins.

The Rumpler 4C Taube RC Model wing is built flat on the building table over the wing plan (using a total of 39 ribs). The wing is built as left & right halves, then joined together using the plywood dihedral joints and the two 1/8"x2"x3/4" plywood wing mount blocks. A dihedral of 3/4" per wing half should be used. Locate the aileron control servo between the lower spars and at the center of the wing. Use NyRods to actuate the ailerons with the ailerons hinged at the bottom of the wing with the pushrods exiting the wing on the top surface ahead of the aileron, and the control horn attached to the top of the ailerons. Use an aileron throw of 1" in each direction.

The tail feathers can be entirely built using 3/16" sheet balsa and using a balsa stripper for the balsa sticks. Again, these are built flat on the building board directly over the plans. Rudy recommends assembly of the rudder and elevator using the full length of the 3/16"x 3/8" leading edges. When dry, cut the elevators and rudder away from the stabilizer and fin. This ensures correct alignment. Before cutting the 3/16"x3/8" leading edge of the elevators at the center, drill, insert, and cement the 3/32" music wire, linking the elevator halves.

The fuselage is just a simple modified box build, with the sides and bottom cut from 1/8" medium grade balsa sheet, and the top sheeted with 3/32" balsa. All the fuselage formers are cut from 1/8" plywood except for the engine firewall which uses 1/4" plywood. An important step in the fuselage build is joining it with the wing. Lay the wing in place on the fuselage and drill the wing mount holes through both the wing and fuselage plywood mounting blocks. Be sure that the wing is properly located and aligned when this is done. Tap the wing mounting blocks in the fuselage for the 1/4-20 nylon mounting bolts. Per the plans, the wing wires are threaded through solder lugs that are held by the pylon bolts and attached to the wings by small screw eyes screwed into the 1/4" square vertical posts in the wings at the locations shown on the plans.

This model should weigh in at 68 oz. depending on power system, producing a low wing loading of 15 oz./sq. ft. The low wing loading and high power to weight ratio give the model a large flying speed range and good maneuverability. The large, wheeled taildragger configuration makes for excellent grass and rough field performance. Using full power on take-off, the model travels about 10 feet in about one second to become airborne. Reduced power achieves realistic slow flight and engine sound. The plane is easy to fly and aerobatic. If you have built at least one RC plane and understand basic construction techniques, you can build this 4C Taube.

Rumpler 4C Taube RC Model Specifications:

Model Type: 1/8th Stand-Off Scale Pioneer Aviation

Flight Performance Category: General Sport

Wingspan: 62"

Wing Chord: 10" Average

Wing Area: 650 sq.in.

Wing Location: Shoulder Wing

Wing Dihedral: 0.75" at wingtips

Horizontal Stab/Elevator Span: 17.5"

Horizontal Stab/Elevator Chord: 7"

Vertical Stab/Rudder Height: 5.5"

Vertical Stab/Rudder Chord: 9.5"

Overall Fuselage Length: 43"

Center of Gravity Location: approx. 3.9" aft of Wing LE

Required No. of Channels: 4 or 5 - Throttle, Ailerons, Rudder, Elevator, and Bomb Drop

Landing Gear: Conventional Tail Dragger

Glow Fuel Engines: .40 4-stroke

Electric Powered: Output of 800 Watts, 60-80 amp ESC, 4-Cell 4,000mah LiPo

Ready to Fly Weight: 68 oz. depending on power system

Wing Loading: 15 oz/sq. ft.

My 4C Taube will be built using a great set of **free** full size plans (Figure 2 below), and the Rudy Hergenrother article from the August 1994 edition of RCModeler. Both are available for download from Outerzone.co.uk (https://outerzone.co.uk/plan_details.asp?ID=6007). So, how about we get started with this scratch build!

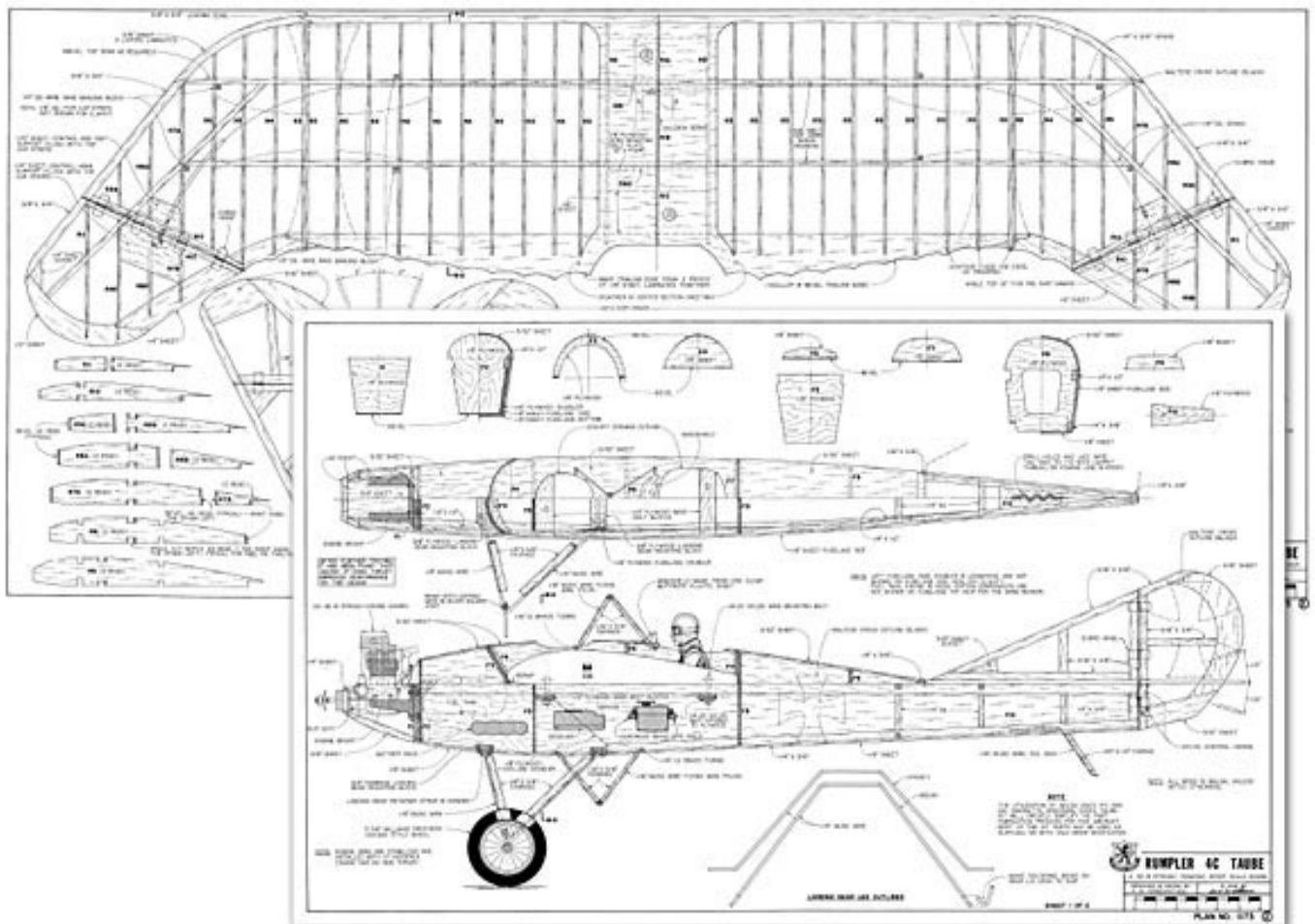


Image Source: Outerzone.co.uk.

Figure 2 - Rumpler 4C Taube Plans

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. From the plans I develop a detail listing (as seen below) of all required materials and hardware that will be needed for this build. Any balsa, basswood, 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. .35 SX 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 (Still In Work)

Amount	Description	Use
Balsa		
9	3/32" x 2" x 36" med. balsa sheet	wing ribs
1	1/4" x 4" x 36" soft balsa sheet	wing tips, braces
1	1/4" x 1-1/4" x 36" Aileron/Elevator Stock	ailerons
3	1/16" x 3" x 36" med. balsa sheet	wing trailing edge sheet, vertical grain webbing
1	3/16" x 2" x 36" med. balsa sheet	tail surfaces
1	3/4" x 4" x 12" soft balsa sheet	fuselage top block
2	1/4" x 1/4" x 36" med. balsa sticks	leading edge
4	1/16" x 3/16" x 36" balsa strips	tail feathers curved outer profiles
4	3/16" x 3/16" x 36" med. balsa sticks	rear spars, tail surfaces
1	1/8" x 4" x 4" scrap balsa sheet	F-4
1	3/8" x 36" triangular balsa stock	firewall backup brace
Basswood		
4	1/4" x 1/4" x 36" basswood sticks	top and bottom main spars
8	3/16" x 3/16" x 36" basswood sticks	fuselage longerons, and cross members
13	1/8" x 3/16" x 36" basswood sticks	diagonal braces, tail surfaces
Plywood		
1	1/8" x 12" x 24" 24" Poplar Lite Plywood	fuselage sides, cockpit structure, F-2, F-3
1	1/32" x 12" x 24" Birch plywood	wing center section, fuselage sheeting gussets
1	1/16" x 6" x 12" Birch plywood	main spars dihedral braces
1	3/16" x 6" x 12" Birch plywood	fuselage firewall, bottom, rear dihedral brace
1	3/32" scrap Birch plywood	rudder/elevator control horns, aileron hatch
covers		
2	3/8" scrap Birch plywood	wing hold-down blocks
1	1/64 th scrap Birch plywood	strengthen elevator/rudder control horn areas
Flight Control System		
1	Spektrum RC AR400 4-Channel 2.4GHz DSMX receiver	
4	Hitec HS-225BB 27.7g Cored Nylon Gear 24T Analog Mini Servos	
1	6-volt 5-cell 2,000mAh NiMH receiver battery pack	
1	6" servo extension lead	receiver aileron channel lead
1	receiver power/battery charging switch harness	
Glow Fuel Power System		
1	.35 2-stroke RC engine & mount	
1	6-8 oz. Sullivan Flex-Tank slant style	
1 set	Du-Bro #892 Medium Silicone Tubing	engine fuel/air lines

1 10x6 wooden prop

Miscellaneous Items

8	$\frac{1}{4}$ " thick small hardwood corner blocks	wing and tail wire rigging attachment points
1	3/16" x 36" hardwood dowel	wing flying wires tripod on top of fuselage
1	1/8" x 36" music wire	main landing gear
4	1/8" wheel collars	main landing gear wheels
1 set	3.5" to 4" main wheels	
1	1/16" x 36" music wire	main landing gear cross brace
1	1-2" small metal spring	main landing gear cross brace shock absorber
1	soft copper wire and 50/50 solder	main landing gear assembly
1	brass flat stock	fabrication of flying wires mounting fixtures
1	Du-Bro #517 2-56 Pull-Pull System	wire control cables/connectors for the

rudder/elevator

1	Sullivan Gold-N-Cable #508 Control Rod Set	throttle control cable
1	Du-Bro #121 E/Z Connectors	throttle cable connections
12	Du-Bro #116 Standard Nylon Hinges	hinging of rudder, elevator, and ailerons
2	Du-Bro #237 T-style Nylon Control Horns	aileron rigging
26	Du-Bro #600 2-56 Spring Steel Kwik-Link Clevises	aileron, flying wires, and pull-pull

cables rigging

2	Du-Bro #855 E/Z Links	aileron rigging
2	6" 2-56 control rods	aileron rigging
1 pack	Aanraku Stained Glass black covered hanging line and crimps	flying wires
24	Du-Bro #201 2-56 Rigging Couplers	connect flying wires and pull-pull cables to

clevises

24	2-56 nuts	connect flying wires and pull-pull cables to
----	-----------	--

clevises

8	Du-Bro #895 Crimps	connect pull-pull cables to clevises
1	Du-Bro #375 steerable tail wheel assembly	steerable tail wheel bracket
1	Du-Bro #75TW $\frac{3}{4}$ " tail wheel	tail wheel
3	1/16" wheel collars	tail wheel mounting
6	Du-Bro #135 4-40 blind nuts & bolts	engine mounting and wing hold-down
2	$\frac{1}{4}$ " x 20 nylon wing bolts	wing hold downs
2	$\frac{1}{4}$ " x 20 brass threaded inserts	wing hold-down blocks
4	Du-Bro #238 1/8" Nylon Landing Gear Clips	attach landing gear to fuselage
1	8" scrap of Sullivan inner Gold-N-Rod	wire control cable guides thru F3 and F4
2	pilot figures of your choice	
10	#2 x 5/16" button head screws	attach wing flying wire fixtures
8	#1 x 3/8" pan head screws	aileron hatch covers
1 bottle	Titebond Ultimate III wood glue	
1 set	15-minute epoxy	
1 can	Krylon Matt Finish Clear Lacquer spray paint	used on fuselage open truss structure

1 jar	Flat Black Enamel	used to paint cockpit interior
1 can	Coverite Balsarite or Deluxe Materials Cover-Grip	preps plywood surfaces for covering
2 rolls	Flat Tan Top Flite MonoKote Covering Film	for fuselage, wing and tail feathers

The only modifications that I currently see needed for this scratch build will be to substitute basswood for anything that is called out in the plan requiring **spruce**, and using wire pull-pull cables to control the elevator and rudder. I also plan to add full-up wing rigging top and bottom. Figure 3 shows everything that will be needed for this scratch build.

Image Coming Soon!

Figure 3 - Rumpler 4C Taube Materials and Hardware