

Air Camper (100)



By Stevens AeroModel

Length 15.25 inches | Span 23.75 inches | Area: 100 inches² | Flying Weight 2.1 oz.

Version 1.0

WARRANTY

Stevens AeroModel guarantees this kit to be free from defects in both material and workmanship at the date of purchase. This warranty does not cover any component parts damaged by use or modification. In no case shall Stevens AeroModel's liability exceed the original cost of the purchased kit. Further, Stevens AeroModel reserves the right to change or modify this warranty without notice.

LIABILITY RELEASE

In that Stevens AeroModel has no control over the final assembly or material used for final assembly, no liability shall be assumed nor accepted for any damage resulting from the use by the user of the final user-assembled product. By the act of using the user-assembled product, the user accepts all resulting liability.

If the buyer is not prepared to accept the liability associated with the use of this product, the buyer is advised to return this kit immediately in new and unused condition to the place of purchase.

THIS PRODUCT IS NOT INTENDED FOR CHILDREN 12 YEARS OF AGE OR YOUNGER

WARNING: This product may contain chemicals known to the State of California to cause cancer and or birth defects or other reproductive harm.

PRODUCT SUPPORT

This product has been engineered to function properly and perform as advertised with the suggested power system and supporting electronics as outlined within this product manual. Product support cannot be provided nor can Stevens AeroModel assist in determining the suitability or use of electronics, hardware, or power systems not explicitly recommended by Stevens AeroModel.

For product assembly support, replacement parts, hardware, and electronics to complete this model please contact Stevens AeroModel on-line at www.stevensaero.com.

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Project Checklist

Kit Contents

- Laser cut wood (9 Sheets)
- Build Instructions
- Computer drawn plan set (2 Pages)

Taped to back of wood brick:

- 1 - 1/32 in. x 18 in. wire
- 2 - 0.015 in. x 18 in. wire
- Hardware Bag
 - 1 - 4 in. length of 1/16 in. Heat Shrink Tube [*]
 - 1 - 2 in. length of 3/32 in. Aluminum Tube [*]
 - 1 - Basswood Elevator Joiner "E6" [*]
 - 1 - Plastic Mesh [*]
 - 2 - Acetate Windscreens [*]
 - 2 - 2 in. Wheels [DUB200ML]
 - 4 - 1/8 in. x 1/16 in. Neo-Magnets [4013]
 - 4 - 1/8 in. I.D. x 1/4 in. O.D. O-rings [4012]

Suggested Electronics (Available at StevensAero.com)

- Spektrum DSM2 2.4ghz transmitter with at least 3 channels
- Parkzone or Spektrum ultra micro receiver/esc/servo "brick" [PKZ3351], [UA1151], or [SPMAR6400]*
- Parkzone motor and gearbox [PKZ3624]
- 130mm x 70mm Propeller [EFL9051]
- 3.7V 120-160mAh LiPo compatible with Parkzone / Spektrum "brick"

Required Building Supplies and Tools

- 1/4 oz. Thick CA Glue
- 1/4 oz. Medium CA Glue
- 1/4 oz. Thin CA Glue
- CA glue applicator tips
- CA glue accelerator (kicker)
- Balsa filler
- Hobby Knife with ample supply of #11 blades
- Sanding block with 400 and 600 grit paper
- Heat Gun and Covering Iron
- Small Needle Nose Pliers
- 1/2 in. wide clear tape
- Servo mounting tape (optional)
- Soldering Iron

Optional Building Supplies and Tools

- Modeling Clay for Ballast
- CA glue de-bonder
- Long sanding bar
- Masking Tape (Low tack painters tape)

General Assembly Instructions

Thank you, for purchasing this Stevens **Air Camper™** (100). A micro indoor scale flyer of the 1928 Pietenpol Air Camper. This product has been developed and manufactured using state of the art CAD/CAM systems and features a unique interlocking construction process that, when compared to traditional methods found in other model aircraft kits, save countless hours of measuring, cutting, sanding, and fitting. We are certain that you'll find our kit to offer a truly exceptional build experience. As this kit is recommended for the novice model builder and pilot; we invite beginners who have purchased this kit to seek the help of a seasoned builder and pilot. At any time should one run across a term or technique that is foreign please don't hesitate to contact our staff with your questions.

READ THIS!

Please **READ** and **RE-READ** these instructions along with any other included documentation prior to starting your build and/or contacting our staff for builder support.

Pre-sanding

Do not skip this step. Prior to removing any parts from the laser cut sheet wood use a sanding block loaded with 250-400 grit paper and lightly sand the back side of each sheet of wood. This step removes any residue produced as a result of the laser cutting process and, as we have found that most stock wood sizes run several thousandths of an inch over sized, slightly reduces the thickness of each sheet.

Leave your pre-sanded parts in the sheet until required in the assembly process.

Protecting your worktable

Use the poly tube that this kit was shipped in as a non-stick barrier between your worktable and the product assembly. Promptly clean up any epoxy spills with rubbing alcohol and a disposable towel.

Bonding the assembly

As this product tabs, notches, and otherwise interlocks like a 3D puzzle we suggest that when fitting parts you dry fit (use no glue) the parts together first. It's advised to work 1-2 steps ahead in the instructions using this dry-fit technique which allows ample opportunity to inspect the fit and location of assembled

components and realizes a benefit as each successive part contributes to pulling the entire assembly square. Once you arrive at the end of a major assembly sequence square your work on top of a flat building table and revisit the dry fit joints with glue. Using the dry-fit process you'll be able to recover from a minor build mistake and will ultimately end up with a more square and true assembly.

Unless otherwise noted in the instructions we find it easier to tack glue part (temporarily bonding parts in assembly using a small dot of glue) using medium CA glue applied with a fine-tip CA glue applicator tip. Tight fitting joints should be bonded using thin CA glue applied, sparingly, with a CA glue applicator tip.

Never force the fit!

Remember this is a precision cut kit our machines cut to within 5 thousandth of an inch in accuracy. Yet the wood stock supplied by the mill may vary in thickness by up to 20 thousandths. This variance in the wood stock can cause some tabs/notches to fit very tight. With this in mind, consider lightly sanding, or lightly pinching, a tight fitting tab rather than crushing and forcing your parts together. You'll break fewer parts in assembly and will end up with a more square and true airframe.

Manual Updates

Please check our web-site for updates to these instructions prior to commencing the build.

While not required for proper assembly of this model, full-color photos following the build sequence given in this instruction manual are available to download at www.stevensaero.com

To obtain downloads and updates relative to this model aircraft kit, please visit the corresponding product page at StevensAero.com

Fuselage

Fuselage parts are designated with a "F" followed by a numeric. Parts have been numbered so that the fuselage assembly and required parts follows in numeric order from F1 to F33 (F3 is used in the final assembly of the model).

The fuselage is of traditional sheet side with central crutch assembly. Many of the formers will need to be installed in a forward and top orientation. Unless otherwise specified, formers should be installed with the etched part number facing the front of the assembly and any top or bottom designations followed. If no top or bottom designation is given on the part, then parts will be installed with engraved part number right side up and facing front of model.

You will "fit" (use no glue) the majority of this fuselage assembly together "bonding" (thoroughly gluing) only as instructed. When parts cannot easily be retained with friction, use a single tiny drop of medium CA glue applied sparingly through a CA glue applicator tip to "Tack Glue" the part in place. Should you commit an error in assembly it will be easier to recover from the mistake and remove or correct the part fit in error if you do not slather the assembly in glue after each step! Further this method of assembly will allow our interlocking design to do it's job as each successive part installed within the fuselage will help pull the entire structure square and true.

1. Assemble the center crutch. Locate center crutch F1 and dry fit to formers F2 and F3. Ensure etched side of F1 faces DOWN, round edge of F2 and F3 face top, and etching on F3 faces AFT.
2. Assemble fuselage side frame main frame F4 and uprights A and B. Ensure that the ends of the uprights marked A and B fit to slots also marked A and B. Bond uprights within F4.

Repeat above process for F5 fuselage side.
3. Dry fit crutch assembly (from step 1) to fuselage side F4.
4. Dry fit fuselage side F5 to assembly. Square assembly on a flat surface and bond all mating surfaces with thin CA.
5. Tack glue former F6 to notches in fuselage sides where indicated on plan. Ensure etching on former faces AFT.

6. Tack glue former F7 to notches in fuselage sides where indicated on plan.
7. Tack glue former F8 to fuselage sides where indicated on plan.
8. Tack glue former F9 to fuselage sides with medium CA.
9. Tack glue F10 to fuselage sides.
10. Tack glue F11a to fuselage sides. Tip: square fuselage and temporarily tape fuselage sides together behind F11a.
11. Tack F11b to fuselage side behind F11a.
12. Fit fuselage bottom F12 to fuselage sides. Square assembly on a flat surface and bond all mating surfaces between fuselage sides, formers and bottom.
13. Assemble bottom sheeting F13 from parts F13a and F13b. Bond.
14. Fit and bond F13 to fuselage with thin CA. Note: "U" shape cut-out in F13 opens to front of model.
15. Dry fit ply landing gear brace F14 where indicated on plan.
16. Fit ply spacer F15 behind F14.
17. Fit ply part F16 behind F15. Bond F14, F15, an F16 by wicking thin CA around edges. **Do not fill pocket with glue!**
18. Fit and bond F17 to bottom of fuselage in front of the landing gear pocket.
19. Moisten one side of F18 fuselage decking with glass cleaner. Fit F18 to fuselage spanning F2 and F6 with the wet side out. Hold in place with masking tape until dry. Repeat with F19, spanning formers F7 and F3. Note: It's important to properly match edges of the strut pocket cut-outs within F18 decking and F4/F5 fuselage sides.
20. When F18 and F19 are dry, remove tape and tack glue in place with small drops of medium CA. When you are satisfied with the placement, final bond with thin CA.
21. Fit two inner stringers F20 to notches closest to the center of formers F3, F10, F9, and F11a.

22. Fit two outer stringers F21 to notches just outside of inner stringers on formers F3, F10, F9, and F11a.

Complete stringer installation from steps 21 and 22 by squaring fuselage to work table and thoroughly bonding stringers within assembly.

23. Position ply doublers F22 over left and right fuselage sides where indicated on plan. Align upper edge of F22 with the upper edge of the F4/F5 fuselage side, and the leading edge flush with the end of the fuselage side at F2 firewall.
24. Fit and bond shape stringers F23 to fuselage sides.
25. Tack glue part F24 to former F2.
26. Fit part F25 to parts F24 and former F2. Bond F24, F25, and F2 with thin CA.
27. Turn the fuselage over, and fit lower cowl block F26 to part F24. **Do not bond!**
28. Fit side cowl blocks F27 to tabs on each side of F25. Check that the mating surfaces between F27, F26, and former F2 are all flush. Bond cowl assembly parts and assembly to fuselage at F2 firewall with medium CA.
29. Gently sand the corners of the ends of F26 on both F27's, just until flat. Don't over sand this area! You are just creating a flat place for F29 to rest in a later step. Tip: It's very helpful to dry fit parts F28 and F29 and use these parts as a reference to prevent over-sanding.
30. Fit and bond ply motor mount F28 to notches in the top of the cowl side blocks F27. Ensure that the side marked "Top" faces UP. This will set the correct right thrust offset for the motor.
31. Fit ply nose ring F29 to tabs in F28, and rest on the flat surface you created in step 29. Bond with thin CA.
32. Fit balsa motor spacer F30 (observing "top" orientation) to slot in former F2, covering - and aligning with - motor mount F28. Lift F30 and spread medium CA between the two parts, and re-position.

33. Coat F30 with medium CA and position upper cowl block F31 over F30, carefully aligning edges.

34. Repeat step 33 for part F32, carefully aligning it over part F31.

35. Sand cowl to shape. Taper bottom and sides to flow from the flat surfaces around former F2 into the rounded shape of the ply nose ring F29. Taper the top surface from the round profile at the top of the fuselage to a point just above F29. Sand as if F29 nose ring were a complete circle, flowing the balsa into this shape. Tip: Wrap low tack masking tape over fuselage decking and sides just aft of cowl to prevent over-sanding these areas while shaping the cowl.

Sand side stringers to smoothly taper into the fuselage at each end. Give the entire fuselage a light sanding in preparation for covering at a later step.

36. Install four 1/8 in. x 1/16 in. ring neo-magnets in holes along the bottom of each fuselage side. Retain with a small drop of thin CA, ensuring that the center hole remains free of glue.

Finish bonding of all interior joints of assembly for those parts that were tack glued in place.

Set fuselage aside until final assembly.

Tail Group.

The horizontal and vertical stabilizers, rudder, and elevator are designated with a "H", "V", "R", or "E", as appropriate, followed by a numeric. Parts have been numbered so that the assembly and required parts follows in numeric order. *Assemble parts over the plan, protecting the plan with the poly bag that this kit was shipped in.*

37. Dry assemble horizontal stabilizer over the plan, from parts H1 through H5. Bond with thin CA. Lightly sand the stabilizer, rounding the leading edge and leaving the trailing edge square.
38. Dry assemble the elevator halves over the plans, from parts E1 through E5. Bond with thin CA. Lightly sand the elevator halves, leaving the edges square.

39. Join the elevator halves with the hardwood elevator joiner E6. Bond with medium CA.
40. Dry assemble the vertical stabilizer over the plans, from parts V1 through V4. Bond with thin CA. Lightly sand the stabilizer, rounding the leading edge and leaving the trailing edge square.
41. Dry assemble the rudder over the plan from parts R1 through R5. Bond with thin CA. Lightly sand the rudder leaving the edges square.
42. Follow the "Tape Hinge Diagram" on the plan sets, and bevel the leading edges of both the rudder and the elevator.

Set tail group aside until final assembly.

Wing.

The wing is composed of one spar, leading edge, trailing edge, ribs and tip sheeting. Wing parts are designated with a "W" followed by a numeric. Parts have been numbered so that the wing assembly and required parts follows in numeric order from W1 to W28.

The wing is assembled one section at a time - center, left, then right. When a part is required in the build sequence (for instance "W3") refer to the plan set for part placement.

You will "fit" (use no glue) the majority of this fuselage assembly together "bonding" (thoroughly gluing) only as instructed. When parts cannot easily be retained with friction, use a single tiny drop of medium CA glue applied sparingly through a CA glue applicator tip to "tack glue" the part in place. Should you commit an error in assembly it will be easier to recover from the mistake and remove or correct the part fit in error if you do not slather the assembly in glue after each step! Further, this method of assembly will allow our interlocking design to do it's job as each successive part installed within the wing will help pull the entire structure square and true.

43. Begin by building "center" section of wing. Locate parts W1 (main spar), and two each of ribs W2 and W3. Using the plan set as a guide, dry fit ribs W2 and W3 to slots within spar W1. The W2 ribs should be innermost with the W3 ribs outboard of the W2 ribs. Note: The bottoms of all ribs should seat flush with bottom of spars.

44. Slide sub spar W4 through the slot in the ribs behind and against the main spar. Center sub spar so that the etch marks and arrows line up with the inner face of the ribs W2. Bond to W1 and ribs W2 / W3.

45. Fit trailing edge W5 to ribs W2.

46. Fit gussets W6 between trailing edge W5 and ribs W2.

Tack glue trailing edge parts from steps 45 and 46 to retain.

47. Begin "left" wing section. Fit and tack glue leading edge web W7 to front of ribs W2.

48. Fit and tack glue leading edge W8 to web W7. Square center section on a flat surface and final bond all mating surfaces with medium CA.

49. Fit and tack glue rib W9 to the end of the spar W1.

50. Tack glue the trailing edge W10 to ribs W3 and W9. Note: Arrow engraved on part W10 should face center section of wing.

51. Tack glue gusset W11 between rib W3 and trailing edge W10.

52. Tack glue gusset W12 between rib W9 and trailing edge W10.

53. Tack glue leading edge web W13 to front of ribs W3 and W9.

54. Fit ribs W14 through W18 to wing frame in order from the center of the wing out, as indicated on the plan.

55. Fit leading edge W19 to leading edge W13 and tack glue to W13 with medium CA. Note: Arrow engraved on part W19 should face center section of wing.

56. Fit diagonals W20 through W25 - in order from the center out as indicated on the plan - to ribs, spar, and notches in leading edge web W13.

Hold wing down on a flat surface, make sure all ribs and diagonals are seated properly, and final bond all mating surfaces between ribs, spar, diagonals, leading and trailing edges with thin CA. Don't forget to wick thin CA between the spar and the sub-spar W4.

Build up a fillet of medium CA where the spar, leading and trailing edges contact rib W3.

57. Assemble wing tip W26 from parts W26a and W26b. Note: It's important to orient parts W26a/b so that tabs align on same side of part. Bond. Fit wing tip W26 to slots in rib W9. Bond W26 wing tip to rib, leading and trailing edges.
58. Fit and bond strut fitting support W27 to bottom of rib W16, leading and trailing edges, and spar.
59. Fit and bond strut support W28 to rib W2, leading and trailing edges, and spar.

Repeat steps 47 through 59 to build the "right" half of the wing.

60. Revisit tack glued parts and thoroughly bond wing assembly. Now, lightly sand finished wing. Round the leading edge to match the profile on the plan. Leave the trailing edge square.

Final Assembly

61. Cover model with a lightweight material. We suggest AeroLITE, available at stevensaero.com. Using heavier than recommended films will create weight and balance issues and or warp the airframe. Leave lower rear portion of the fuselage uncovered for now. This will be covered later after pushrods have been installed.
62. Assemble receiver tray from two ply parts RT and one nylon clip. Position tray within underside of model using slots in F1 to locate tray. Install tray so that long "release" arm of the nylon clip is nearest the landing gear pocket. Bond with medium CA glue. See plan set for more detail on receiver tray part location and assembly.
63. Open covering over push-rod exit slots in rear of the fuselage sides. Follow "Pushrod Detail" on wing plan sheet to create and install pushrods.
64. Having connected the pushrods to their respective servos, install the receiver brick by inserting the rear edge of the circuit board in the notch in the rear arm of the receiver tray.
65. Press the forward edge of the circuit board down until it engages the notch in the long arm of the tray. Should you need to remove the receiver, simply push the long arm toward the front of the plane to release the circuit board.
66. Once the receiver/pushrod installation is complete, cover the bottom of the fuselage.
67. Following "Landing Gear Detail" on plan set to accurately bend landing gear using needle nose pliers and included 1/32 in. wire.
68. Trim covering on fuselage to expose landing gear pocket. Test fit landing gear within gear pocket of fuselage. make any adjustments to the bends necessary, and reinstall the landing gear wire. Retain wire with 1/32 in. ply part F33 as illustrated on plan set.
69. Assemble landing gear struts from 1/32 in. ply parts LG1 and LG2. Bond with medium CA.
70. Open slots in fuselage bottom to receive landing gear struts. Dry fit struts in slots - **DO NOT BOND!** Fit ply spreader bar LG3 to landing gear struts. Center assembly and square with fuselage, then bond LG3 to struts with medium CA.
71. Remove strut assembly and paint desired color.
72. Re-install the strut assembly and final bond to fuselage with medium CA.
73. Paint ply tail skid part TS desired color and install to slot in the bottom of the end of the fuselage.
74. Bond balsa wheel discs to each side of the supplied wheels [DUB200ML]. Sand discs to a streamlined shape as illustrated on the plans. Paint or cover wheels to match your color scheme.
75. Install wheels on wire landing gear with retainers supplies with your wheels.
76. Follow "Tape Hinge Diagram" on plans to attach elevator and rudder to horizontal and vertical stabilizers with clear tape.
77. Install the ply control horns in the slots in the elevator and rudder. Rudder horn R extends from the RIGHT side of the rudder. Elevator

- horn E extends from the LOWER LEFT side of the elevator.
78. Open the covering over the holes in the horizontal stabilizer for the vertical stabilizer tabs. Mount the vertical stabilizer tabs through the horizontal stabilizer, and into the slots in the rear of the fuselage. Ensure surfaces are square to each other and perpendicular to the fuselage, and bond with medium CA.
 79. Follow the "Push Rod Detail" on the plan to connect the control surfaces to the pushrods.
 80. Insert the motor in the slots in the cowl, with the propeller shaft below the motor. Mark the tabs where they extend beyond the cowling.
 81. Remove the motor and sand the tabs down to your mark. **Be careful not to contact the gearing with the sandpaper.** Apply a small drop of thick CA on each side of the motor mount plate where the tabs will rest, and re-install the motor.
 82. Assemble Dummy engine from parts M1 through M7 in order as shown on the plan. Bond with thin CA. M1 and M2 are at the rear of the motor. The slots in M5 should face left. Sand the motor smooth, slightly rounding the edges, and paint desired color.
 83. Cut the 3/32 in. aluminum tube into 1/2 in. lengths. Insert tubes into slots in dummy motor to create exhaust stacks. Bond with medium CA glue.
 84. Mount the dummy engine by applying thick CA to the bottom of M1 and inserting engine in the opening behind the motor. The dummy engine will extend over the motor. Do not glue the dummy engine to the motor itself. This will allow the motor to be removed if necessary.
 85. Fit the radiator frame from parts RA1, RA2 and RA3. Note: Tabs on parts RA1 should face common side of radiator assembly.
 86. Fit the radiator face RA4 to the frame and bond. Sand radiator smooth, rounding the corners slightly at the top of the radiator.
 87. Tack glue parts RA5 and RA6 to create the radiator inner frame. Paint radiator parts flat black.
 88. Lay the plastic mesh inside the radiator from the back.
 89. Secure the screen by inserting the radiator inner frame into the back of the radiator. Seat the frame all the way into the radiator and bond with thin CA. Set the radiator aside for now.
 90. Paint the ply cabane struts C1 and C2 to match your planes color scheme. Open the covering over the holes in the fuselage deck and dry fit the struts. C1 goes in the front holes, C2 in the rear holes. **Ensure the arrows on the struts point forward and that the struts seat completely within pockets at fuselage sides.** Check the alignment from the front and sides of the plane. The four struts should be parallel to each other and perpendicular to the fuselage. Bond the struts to the fuselage by wicking thin CA around the base of the struts.
 91. Assemble the pilot profiles from parts Pa and Pb. Bond with thin CA. Paint profiles flat black.
 92. Install the pilot profiles to the slots in formers F7 and F8 with thin CA.
 93. Install acetate windscreens by positioning them where indicated on the plan. Mark the points where the spikes on the lower edge of the windscreen will contact the fuselage decking. With a sharp hobby knife, cut two small slots in the fuselage deck on your marks. Fit windscreen to slots and bond with a tiny drop of thin CA or canopy glue.
 94. Paint the cabane stubs C3 and C4 to match the cabane struts C1 and C2. Open the covering over the holes in the center section of the wing and install the stubs. Ensure the arrows on the stubs point toward the leading edge of the wing. Install C3 in the front holes, and C4 in the rear holes nesting within pockets at wing center section. Bond stubs to the wing with thin CA.
 95. Open the covering over the slots in W27 to receive the ply flying strut attachments SA. Bond attachments to wing with thin CA.
 96. Slide four 1/8 in. I.D. x 1/4 in. O.D. rubber o-rings over cabane struts. Fit cabane struts to stubs in wing center section. Slide o-rings over joint in cabane struts to secure wing to fuselage.

97. Position radiator on fuselage just in front of the wing. ensure radiator is perpendicular to fuselage from the front and sides, and bond to fuselage decking with medium CA. **Do not bond radiator to wing.**
98. Trim a length of 1/16 in. heat shrink tube to fit between the dummy engine and radiator as shown on the plans, to simulate the radiator hose. Bond tubing to radiator and engine with medium CA.
99. Using a piece of .025 in. wire, scrape away the etched area on the basswood flying struts to create a recess for the strut fittings to rest in.
100. Create the strut fittings by making a 90 degree bend 1/8 in. from one end of a length of .025 in. wire. Trim bend to 1/32 in. long, and cut fitting to 1 in. in length. Insert bend of fitting into hole in the struts and rest fitting within recess. Bond fitting to strut with thin CA. *See plan set for good detail of proper fitting finished lengths and install positions.*
101. At one end of each strut, bend the fitting 90 degrees AWAY from the strut. Trim to 1/8 in. in length. *See plan set for good detail of proper fitting finished lengths and install positions.*
102. At the other end of the strut trim the fitting to extend 1/8 in beyond the end of the strut. *See plan set for good detail of proper fitting finished lengths and install positions.*
103. Hook bent end of struts through strut attachments in outer wing panels.
104. Open covering over hole in magnets installed in fuselage. Fit straight end of struts into the hole in the magnet. If strut fitting seems too long, trim the fitting slightly until it can be place in the hole without distorting the wing.

Congratulations! You've now completed your model of the 1928 Pietenpol **Air Camper™**! Run around the living room with it while making appropriate engine sounds until your kids roll their eyes at you.

Flight Control Setup

- Inspect wing for any warps that may have worked their way in when covering, or while

the model was in storage, and remove prior to flight. **DO NOT ATTEMPT FLIGHT IF WING IS WARPED.** Lack of aileron control on this model will make contending with a warped wing very difficult. **FIX THE WARP.**

- Center control surface then set direction, rate of travel, and dampening (expo).

Rudder servo should be controlled by the Aileron channel of your radio as rudder on this model also controls roll of the aircraft. Rudder should follow Aileron stick travel i.e. moving Aileron stick to right should move Rudder to right of aircraft. Likewise, left Aileron stick input will move Rudder left.

Elevator servo will be controlled by Elevator channel of your radio. Pulling back on the Elevator stick should result in the Elevator moving UP! Likewise, forward stick results in the Elevator moving DOWN!

The **Air Camper™** is designed to be a very docile flyer, therefore the flight controls are set up for fairly minimal throws. The Rudder and Elevator throws should be as follows:

Rudder Travel
Rate +/- 15 degrees 30% expo

Elevator Travel
Rate +/- 10 degrees 30% expo

The above exponential settings apply only to computer radios.

Pre-Flight

Have an experienced pilot assist you with pre-flighting your new model. Just like having someone proof read something you've written, having a second **fresh** set of eyes to inspect your final product is often helpful at avoiding disaster.

While not an exhaustive pre-flight check these are some of the major items that you should consider using when developing your own pre-flight check list. Get in the habit of always pre-flighting your models before each and every flight.

- Weight and Balance** - Check the **Air Camper's™** balance. The model should balance 1/8 inch behind the main wing spar. Use a permanent marker or trim tape to mark the underside of the left and right wing half at the CG measurement as given above.

- Use your right and left hand index fingers and suspend the model from below, between the marked CG measurements. Site from profile of aircraft against horizon. If the upper edge of the fuselage side along appears to hang level with horizon line, then the **Air Camper** is properly balanced to fly. Move equipment and or battery within fuselage to obtain proper balance.
- Check Weather** - The **Air Camper's** first flight should be outdoors and in **zero** wind conditions. The **Air Camper** is capable of flying in winds up to 5-8 mph so long as the pilot is capable.
- Inspect airframe** for warps and obvious signs of wear or damage. Do not fly a damaged or warped model.
- Inspect control surfaces** for center, proper direction of travel, rate of throw, secure pushrod connections, hinges, and receiver/servo mounting hardware.
- Check wing attach points** for damage and/or wear. Inspect o-rings, that they are installed correctly and in good condition to adequately retain wing.
- Inspect battery for full charge.** Never begin a flight with a partially charged battery.
- Clear prop!** Before applying power to the model, clear and keep clear of the prop arc.
- Range check radio.** Follow the radio makers guidelines for performing a proper range check.
- Check for traffic.** Proceed to the flight line (With your mentor/instructor if you are a novice pilot) and observe other RC traffic. If the runway is clear, and no one is in the pattern to land, loudly announce your intentions to take off. Remember etiquette dictates that all aircraft on ground must yield the runway to those landing.
- Go flying.** Point model into wind (if present) and steadily advance throttle to full. Use rudder to correct track while on ground roll. Within several feet the model should be airborne. Fly model to a comfortable 1-2 mistake high altitude, reduce throttle to stop climb, then trim model for straight and level flight at a comfortable cruise speed (Depending on speed control responsiveness,

the **Air Camper** will typically cruise at about 1/2 throttle).

- Setup for landing.** Clearly announce your intention to land. Make landings into the wind. With rudder/elevator control and no ailerons setting up landings in cross-winds should be avoided until you are comfortable with the model's in-flight behavior.

Congratulations!

You've completed your first flight(s) on the Pietenpol **Air Camper**

By now you'll have noticed that the **Air Camper** is a very stable airplane. When built straight, and trimmed for level flight, the **Air Camper** should always return to wings level from any attitude. We've found the **Air Camper** to capture the imagination of prospective pilots both young and old. We hope you will enjoy many hours of pleasurable flying with your Stevens Aero Pietenpol **Air Camper**.

If your first flight was a bit more exciting than you'd have liked and are having problems with erratic flight performance; please inspect your equipment and airframe for damage, improper installation, and/or twists and warps. The most common mistake is to try and fly with a warped or twisted wing or a model that's badly out of balance.

We are committed to improving your build and flying experience and are constantly refining our processes, designs, and manuals to reflect customer feedback. You may correspond with Stevens AeroModel staff using any of the following methods:

E-Mail - support@stevensaero.com

RCGroups.com - Forum Build Threads

Facebook.com - Search for Stevens AeroModel

Phone - 719-387-4187