

PRODUCT IMPROVEMENT SHEET

Pitts Special ARF

SAFETY WARNING: The cowl, wheel pants and interplane struts are made of fiberglass, the fibers of which may cause eye, skin and respiratory tract irritation. Never blow into a hollow part (wheel pant, cowl) to remove fiberglass dust, as the dust will blow back into your eyes. Use protective equipment (safety goggles, particle mask, rubber gloves) when grinding, drilling and sanding fiberglass parts. Vacuum the parts and the work area thoroughly after working with fiberglass parts.

PAGE 7, PARTS LIST CHANGES:

Large Plywood Plates (for wheel pants) (4) (See "PAGE 19..."section below)

Small Plywood Plates (for wheel pants) (4) (See "PAGE 19..." section below)

Wing Bolt Mounting Plate (no longer a separate component) (See "PAGE 11..."section below)

#2 Flat Washer (attaching cowl) (6) (Listed in manual as being for wheel pants)

2-56 x 5/8" Machine Screw (wheel pants)(6). **Changed to:** 4-40 x 5/8" Machine Screw (6) (See "PAGE 20..."section below)

2-56 Threaded Brass Ends (flying wires) (12) *NOTE: Listed twice by mistake, please disregard.*

PARTS INCLUDED WITH THIS PRODUCT IMPROVEMENT SHEET:

4-40 X 1" Socket Head Cap Screws (16) (SCRW059)

Large Control Horn Back Plate (4) (NYLON189)

PAGE 7, Install the Ailerons, Important Note: If you choose the option of using only two servos to control all four ailerons by connecting the lower ailerons with the top ailerons, note that included with this model are 4 small control horns and two 2-56 x 17-1/2" threaded on one end wires that can be used for this purpose. It is up to you to decide on how to do it and other supplies you will need.

PAGE 9, STEP 12: This step in the manual describes attaching the control horns to the ailerons with sheet metal screws. This method should only be used if there are hardwood blocks or plywood plates built into the ailerons. Some of the early production kits do not have this improvement. You can probe the horn mounting area with a pin to determine what lies underneath the covering. If the material is balsa, you must use one of the following methods for mounting the horns.

METHOD 1: Position the control horn and mark the location of the mounting holes as shown in the manual. Drill 1/8" holes all the way through the ailerons in these four locations. Use a drill press if you have one, to keep all the holes parallel. Trial fit the bolts, making sure they will line up with the back plate holes, adjusting the holes as necessary. Saturate the holes with thin CA. After the CA has cured, re-drill the holes and mount the horns on the bottom of the ailerons with the back plates on the top of the ailerons, using the 4-40 x 1-1/2" socket head cap screws included in this package. **NOTE:** This change will leave a surplus of 16 #4 x 1/2" sheet metal screws, which will not be used.

METHOD 2: Should you want a cleaner look for your model and do not wish to use the back plates for the control horns, you may do so by using the following procedure for each aileron. Position and mark the location for the control horn. Cut a 1/8" x 1" x 1-1/2" plywood plate (not supplied) to serve as a control horn base. Countersink these plywood inserts into the ailerons by cutting away portions of the ailerons, which will allow your blocks to fit flush. Glue this block into place with **epoxy**. Cover these plates with "True Red" MonoKote. Again, mark the location of the control horn and drill 5/64" holes in these locations. Screw in the #4 sheet metal screws, and back them out, creating "threads" in the wood. Saturate the holes with thin CA. After the CA has cured, attach the control horns with the #4 x 1/2" sheet metal screws.

PAGE 10, STEP 14: In this step you are asked to perform a soldering task. Please refer to the following tips to make these solder joints as strong as possible:

How to Solder

A. Use denatured alcohol or other solvent to remove residual oil from the pushrod.

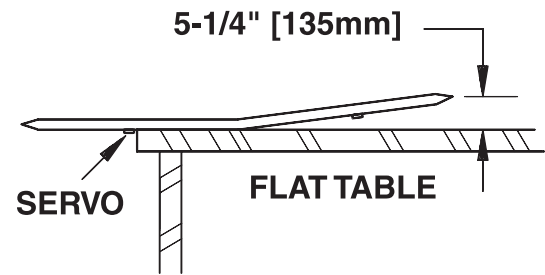
B. Use coarse sandpaper to thoroughly roughen the end of the pushrod where it is to be soldered.

C. Apply a few drops of soldering flux to the end of the pushrod, then use a soldering iron or a torch to heat it. Coat the end of the pushrod with silver solder (GPMR8070) by touching the solder to it. The heat of the pushrod should melt the solder—not the flame of the torch or soldering iron—thus allowing the solder to flow. Note: Do not use silver solder for electrical soldering.

D. Join the clevis to the pushrod. Add another drop of flux, then heat and add solder. The same as before, the heat of the parts being soldered should melt the solder, thus allowing it to flow. Allow the joint to cool without disturbing it. Avoid excess blobs, but make certain the joint is thoroughly soldered. The solder should be shiny, not rough. If necessary, heat the joint again and allow to cool slowly without disturbing it.

E. After the joint has solidified but while it is still hot, carefully use a damp cloth to wipe away the excess soldering flux. Important: After the joint cools, coat it with oil to protect it from rusting.

PAGE 10, STEP 3: In order to check the correct dihedral angle of the bottom wing with the aileron servos installed you will need to use the method as shown in this sketch.



PAGE 11, STEPS 5, 6 AND 7: An improvement has been made in the bottom wing attachment process. The wing bolt plate is now part of the belly pan that is glued onto the bottom wing as one unit. Therefore, disregard steps 5, 6, and 7 in the manual. The wing bolt plate will automatically be installed when you mount the belly pan (*page 12*).

PAGE 14, STEP 10 and 11: An improvement has been made in the interplane struts resulting in a change of the mounting procedure. On the bottom wing measure from the TE of the aileron to the rear tip of the bottom of the interplane strut. Adjust its placement until the distance is 3-1/4" (83mm). When satisfied with the position, mark the location for the attachment bolt holes in the interplane struts. Remove the interplane strut and drill the two holes with a 1/8" (3mm) drill bit. Saturate the holes with thin CA. The placement of the strut in relation to the top wing as mentioned in the manual, is no longer at 3" but is determined in the following manner. To align properly, attach both interplane struts on the bottom wing as directed in STEP 11. Measure the distance of the top rear tip of both interplane struts to the trailing edge of the top wing. If necessary, move the top wing in order to make both distances equal. When satisfied with the alignment, mount the top of the interplane struts to the brackets installed in the top wing using the same method as the bottom of the interplane struts.

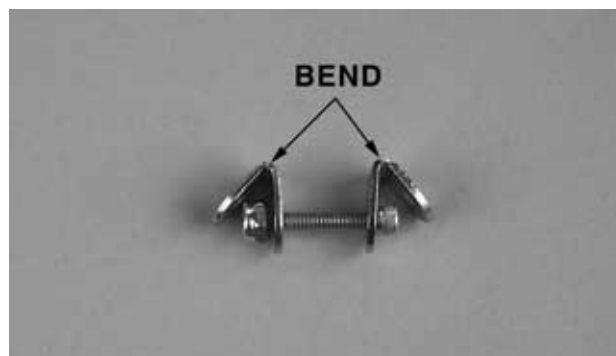
PAGE 16, STEP 1: When cutting the covering from the servo bays, refer to the photograph in STEP 8 on PAGE 17 for proper placement of servos. Cut the covering from two servo bays on the right side of the fuselage. On the left side of the fuselage cut only the covering from the servo bay closest to the stab.

PAGE 17, STEP 9: When locating the tail gear on the fuselage, locate it in the same manner but do so at 4-3/4" (121mm) and not 5" (127mm) as stated.

PAGE 19, STEPS 5 AND 7: The two "large plywood doublers" for mounting the wheel pants are now being provided as **four** 3/32"(2.4mm) x 1"(25mm) x 2"(51mm) plywood plates that will require gluing together to make two large doublers. The two "wheel pant bearing blocks" are now being provided as **four** 3/32"(2.4mm) x 1"(25mm) x 1"(25mm) plywood pieces that will require gluing together to make two large blocks. We suggest using 6-minute epoxy for this process.

PAGE 20, STEP 10: The opening in the wheel pants may require enlargement for the wheels. If necessary this can be done with a rotary tool. Be sure to follow the warning at the beginning of this document concerning working with fiberglass.

PAGE 20, STEPS 8, 12 and 13: These steps refer to the attachment of the wheel pants to the landing gear using 2-56 socket head cap screws and blind nuts. Please note that this hardware is incorrectly listed as 2-56, 4-40 is the correct size. Refer to the parts list on page 6.



PAGE 27, STEP 3 and 4: The brackets for the flying wires that attach to the fin and stab are referred to as 70-degree brackets. They have been re-designed and shown in the photograph above. They are mounted on the fin as shown with the bend at the top. The brackets that are mounted on the stab have the bend toward the outboard end of the stab. Note: The fit of the 4-40 x 3/4" socket head bolts into the bracket is a bit tight but will fit; you may need to thread it into place.