

Pike Perfect

Congratulations for choosing the right model! Your new Pike Perfect.
 The model is a handmade product, carefully packed for your convenience.
 Please check that all items ordered are included and not damaged during transportation.

A basic model includes:

- 2 tips
- 1 midsection
- 1 fuse with canopy
- 2 elevators with carbon joiner
- 2 pcs carbon joiners
- Aileron and flaps brass horns
- 2 pcs Rudder and elevator clevises
- 2 pcs clevis couplers 2mm
- Wing screws

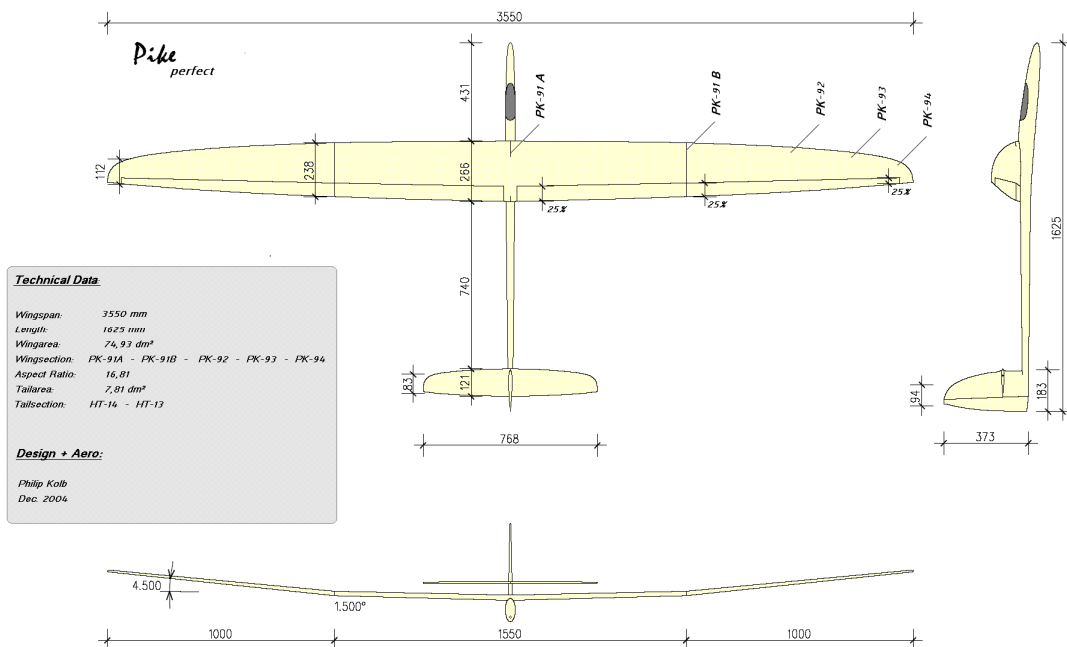


Additional you can order:

- Ballast set
- Wiring harness
- Wing bags

To complete a model you will need:

- 4 pcs metal geared servos for the wings. Min. 25Ncm/35oz.in
- 1 pcs 15mm servo for elevator. Min. 30Ncm/42oz.in
- 1 pcs 13mm servo for rudder. Min. 20Ncm/30oz.in
- 8 clevises and 2mm threaded rods for the wings (or better 2,5mm)
- 4xAA Rx battery and a good switch
- A good receiver and some extra antenna wire outside the fuse
- Epoxy to glue in the servos and thin Cyano (CA) to secure clevises
- Good clear tape (12mm wide) to join the tips to the midsection
- 75w soldering iron, soldering paste and soldering tin



Assembling the wing:

1. Make and install the wing harness. The 9 pin plug can be secured both by screws or by a silicone based glue. It is useful that this can be removed at a later time. Holes need to be drilled between the midsection and tips for the harness. These holes shall be drilled between the joiner pocket and the aft locator pin.
2. Roughen the surface of the servos and servo bay where the servo is to be glued.
3. Connect the servos and the fuse harness to the respective channels on the receiver. Check that the aileron servo arms are set 90 degrees on the servo and that the transmitter also is set to neutral. Check that the flap servo arms are set identically to approximately 20 degrees (measured from the 90°-angle) towards the flap. The transmitter should later be set to an offset so that the flap servo arms are 90 degrees on the servo. With full down landing flap the servo arms on the flaps are almost straight towards the flap. This ensures full down deflection of the Flaps.
4. Check again the servo settings and also set the offset of the flap servos. Check also that the servos move the right way.
5. Mark where the servo will be glued in place by a pencil in the servo trays and ensure that the arm is aligned (straight line) to the hole in the sub spar and the surface horn. Some like to glue the servo towards the spar. This ensures a very tight and slop free servo install since the wing surface can bend a little.
6. Screw in the brass horns into the ready made holes in the surfaces. There is a nut glued inside the surface for your convenience. Secure the nut with a tiny drop of thin CA.
7. Glue the servos in using epoxy. Use a proper amount of epoxy so that some epoxy is pressed out on the side of the servo when you push them in. Use some weight fixing the servos as long as the epoxy hardens to ensure that the servo fits perfect. If the epoxy is thin it is possible to add some thixotropy agent (filler).
If your servos offer mounts, wrap the servo with some thin plastic, install them in their mounts, then coat the entire bottom of the mount and twist into place to insure that the epoxy 'pots' around the servo body and provides a good bond to the mount.
8. Size the linkage lengths so that the servo arm is 90 degrees on the servo when the surface is in neutral. Secure the threaded linkage rod to the clevis with extra thin CA as this is a place with some slop. Check also thoroughly the clevis pin that goes into the brass horn and servo end, to insure that the fit is snug. Too tight is better than too loose when it comes to the clevis pin to the horn or arm holes, a drop of CA there once the pin is in the arm or horn, will insure a snug fit, but will still rotate once broke loose.
9. It is recommended to install clear tape on the adjoining ends of the midsection and tips. This will prevent the paint from coming off when joining tape is applied / removed every time you go flying.
10. Adjust the aileron throw to 14/13mm.
11. Adjust the aileron throw on flaps to 8/6mm
12. Adjust the landing flaps to as much down as possible (70-85 degrees)
13. Adjust the landing crow on ailerons to 6mm up
14. Adjust the camber for launch to 10mm flap and 2mm aileron down (measured on outer tip).
Camber for thermal/speed is +/- 3mm measured on flaps and equal along the whole trailing edge.
15. Cut the servo covers carefully so that servo horn fit underneath the bumps.

Assembling the fuse:

1. Install the "fuse to wing"-harness in the fuselage
2. Install the fuse servos
3. Glue or solder the 2mm clevis couplers to the pushrods.
 - To solder one need at least 75w soldering iron and some extra solder paste. Rub the pushrods a bit to get the soldering easier. Check the soldering thoroughly.
 - For gluing it is possible to put a smaller short pushrod steel wire inside the pushrod tubing, install the clevis pushrod coupler and crimp it gently a side cutter. Secure with thin CA. Sanding the surface of the pushrod also helps bonding. Check the connection thoroughly.
4. Drill a hole on the side 5mm in front of the rudder hinge-line and just inside thru the rudder post. From this hole pull antenna wire all the way inside to the front of the servo bay. This wire should be soldered and secured with heat shrinking tube to the antenna wire of the receiver. Pull the wire back and leave 40cm hanging out the end of the fuse.



5. Install the receiver battery and receiver. 2+2 AA batteries are recommended though four in a square can also be fitted. It is recommended to pack the receiver in bubble plastic or equal to absorb shocks.
6. Adjust the elevator so that the distance between the elevators trailing edge and the bottom of the fuselage (straight down the hingeline of the rudder) is 113mm. Full throw is 13mm up and 19mm down. At full crow the elevator goes down approximately 10mm.

Assembling the model:

1. Attach the two elevators to the fuse and secure with a tiny piece of tape in front of the rudders leading edge. The elevator locator pin is "floating" and it is easier to install this part before the carbon joiner.
2. Adjust the tow hook to 105mm from the leading edge.
3. Attach the wing with the supplied bolts. The longer bolt in front.
4. Insert the tips and secure with clear tape.
5. Check and adjust the CG (center of gravity). A suitable CG to start off is 109mm from leading edge. Do not balance to 'taste', balance for performance, then *learn* to fly the new higher performance this sailplane offers!
6. Check range with transmitter antenna collapsed. On a handheld transmitter you should have one section of the antenna pulled out. With the model at 1m height you should be able to walk 100 steps away with full control. This can be less if there are other transmitters on at the field or a wet ground.

If you can not get 100 steps away you need to:

- 1) Try another transmitter
- 2) Try another set of crystals
- 3) Try another receiver (Some receivers are more susceptible to the this type of environment than others. The fuse is made from Kevlar/carbon that will block signal from coming in. Carbon is a metal.) Carbon has an equivalent resistance to metals. Nevertheless there are receivers on the market that can handle carbon absolutely problem free.
- 4) It is also possible to have the antenna located outside the fuse up to the tail, or looped below the fuse tail boom in fuse different ways to correct the problem, however taping it along the fuse boom is not a good idea. Though to have 40cm hanging free from the back has proved to be a very good method.
- 5) In any case, always do a ground range test which produces at least 100 steps away from your Perfect!

Settings:

- All the newest detailed settings can be found on www.F3J.com. These are settings from some of the world's best pilots. You will find these setting a very good starting point.

We hope you will be satisfied with your new model. If you have any questions be sure to look at our webpage's. Additional info on both setup and detailed pictures can be found there.

Regards
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