

PIKE PERFECTION

Congratulations for choosing the right model! Your new Pike Perfection.
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 wing sections (left and right)
- 1 fuselage with canopy
- 1 elevator
- 1 rudder
- 1 carbon joiner
- 3 types available and marked SL 77 g, Standard 102 g and F5J 62 g
- aileron and flaps brass horns
- 2 pcs clevis couplers
- 2 pcs elevator bolts
- Wire harness

Additionally you can order:

- ballast set
- wing bags
- Fuse cover for sun protection

To complete a model you will need:

- 4 pcs metal geared servos for the wings. Min. 25Ncm/35oz.in
We recommend lighter servos Graupner DES 488 BBMG or similar for the ailerons of SL version.
- 2 pcs 13mm servo for elevator and rudder. Min. 20Ncm/30oz.in
- 8 clevises and 2mm threaded rods for the wings (or better 2,5mm)
- 4xAA Rx battery or equal and a sufficient switch
- a high quality receiver
- epoxy to glue in the servos and thin cyano (CA) to secure clevises
- strong clear tape (12mm wide) to join the wings and rudder to the fuselage

Assembling the wing:

- Sand the surface of the servos and the servo trays where the servos will be glued.
- 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 servos. With full butterfly the servo arms on the flaps are almost straight towards the flap. This ensures full deflection of the flaps for butterfly brake.
- Check again the servo settings and also set the offset of the flap servos. Check also that the servos move the right way.
- Mark where the servos will be glued in place by a pencil in the servo trays and ensure that the servo arm is aligned (straight line) to the line defined by the hole in the subspar and the flap horn. Some like to fix their servos to the spar. This ensures a very tight and slop free servo installation as the wing surface can bend a little.
- 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.



- Glue the servos in using epoxy. Use a proper amount of epoxy so that some epoxy will be pressed out on the sides of the servos 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.
- Install the threads and clevises whilst the servo arms are set 90 degrees on the servos and the ailerons / flaps are set in neutral position. Secure the thread to the clevis with extra thin CA as this is a place with some slop. Oil the hole in the brass horn with a tiny drop of oil. Check also thoroughly the clevis pins going into the brass horns and servo arms. There are clevises that can be poorly made in this special detail. Use the inner most hole on the servo arms possible to ensure full power of the servo yet providing full throw.
- It is recommended to install clear tape on the ends of the wings. This will prevent the paint being ripped off when the tape is applied / removed every time you go flying.
- Adjust the aileron throw to:
 - Speed, thermal and neutral to 30/12mm.
 - Launch 30/0mm (100% differential)
 - 20% expo
- Adjust the aileron throw on flaps to
 - Speed and neutral 10/8mm
 - Thermal and launch 0/0mm
- Adjust the crow brake flaps to as much as possible (70-85 degrees is good)
- Adjust the crowbrake on ailerons to 12mm up
- Adjust the camber for launch to 10mm flap and aileron equal.
Camber for thermal/speed is +/- 1,5mm measured on flaps and equal along the whole trailing edge. More thermal camber might be used in special weather conditions.
Camber for distance is 1,5mm up and for speed/zoom 3mm up.
- Cut the servo covers carefully so that the servo horns fit underneath the bumps if needed.

Assembling the fuselage:

- Install the "fuse to wing"-harness in the fuselage. Roughen the green connector and fuselage fitting before you glue it.
- Install the receiver battery and receiver before servos. 2+2 AA batteries are recommended though 2+3 can also be fitted. It is recommended to pack the receiver in bubble plastic or equal to absorb shocks.
New LiFe battery is possible. Ensure servos can use the voltage and secure the front end of the battery to absorb shocks. Use a voltage regulator if needed.
- Install the fuselage servos (after receiver battery)
- Glue the 2mm clevis couplers to the pushrods after removing the outer Teflon layer of the pushrods and roughening the glassfiber surface. Pinch the coupler with a plier to ensure tight fit.
Check the connection thoroughly.
Glue the pushrod tube to the fuselage between canopy and the leading edge
- If the elevator pin does not go freely in the fuselage opening it is necessary to turn the pushrod slightly.
- The pin must be fully inserted into the elevator tube to assure correct throw.
- Screw the elevator to the fuse with adequate force not over tightening as it will result in damage inside the elevator.
- Adjust the elevator (X-tail) so that it is in neutral checking top and bottom airfoil (20,5mm measured to fuse). Full throw is 8mm up and 12mm down (possible 10/17 in thermal/land mode). 40% expo might be needed for some. At full crow the elevator goes down approximately 7mm depending on crow settings for wing. It is good to ensure more down throw (+8mm) possible after crow brake is set.



Launch setting is 0 to -1mm depending on launch type (F3J or winch)
Rudder throw +/- 30mm

- V-tail: Adjust each v-tail servo so that you get 12mm up and down movement (measured at root). Elevator should have 12mm up and 12mm down movement with 30% exponential. Rudder should have 11mm up and 8mm down movement and 30% exponential. Neutral is almost equal in both launch, cruise, speed and thermal camber with slight deviations according to flying style and CG. Elevator compensation on butterfly/brake is about 5mm down depending on flap/aileron settings. Check neutral with ruler/flat surface on hingeline top/bottom.

Assembling the model:

- Attach the rudder to the fuse and secure with a tiny piece of tape round the front and in the hingeline lower part. The elevator locator pin is "floating" and is just slid over the fuse part. It is not glued. Elevator is attached with the two bolts supplied.
- Adjust the tow hook inside to 110mm from the leading edge.
- Attach the wing with clear tape to secure at top and around leading edge.
- Check and adjust the CG (center of gravity). A suitable CG to start off is 108-109mm from leading edge. Some pilots might use 110-112mm depending on conditions.
- Check range according to transmitter specifications.
If you can not get the necessary range you need to:
 - 1) Check antenna locations
 - 2) Try another transmitter
 - 3) Try another receiver
- There are supplied 3 kinds of joiners S (standard) 99 g, SL 75g, F5J 61 g. It is necessary to always use the correct joiner as the use of wrong joiner might cause the joiner to break and damage of complete model can occur. Joiners are designed to not break on launch. After harder landings it is necessary to check the joiner and look for cracks as it could cause failure of complete model in the next flights.

Settings:

- All the latest 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.

Model can not stay long in the sun without silver protection covers (including fuselage) to prevent excessive heating up of the model as there could appear some deformations of model parts when model is overheated or the surface could get distortions.

We hope you will be satisfied with your new model. If you have any questions be sure to look at our webpages. Additional info about the setup and detailed pictures can be found there.

Regards
Samba Model
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